

August 8, 2022

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

RE: Notice of Exempt Modification
45 Fargo Road, Waterford, CT 06385
Latitude: 41.389339
Longitude: -72.171408
T-Mobile Site #: CT11473A_Anchor

Dear Ms. Bachman:

T-Mobile currently maintains nine (9) antennas at the 153-foot level of the existing 183-foot Monopole Tower at 45 Fargo Rd., Waterford, CT. The 183-foot tower is owned by SBA Properties, LLC. The property is owned by the Town of Waterford. T-Mobile now intends to remove six (6) L700/L600 MHz antennas and install (3) new L600/L700, 1900/2100 and three (3) new L2500/N2500 MHz antennas.

Planned Modifications:

TOWER

Remove and Replace:

- ◆(3) Ericsson AIR21 KRC118023-1 B2P/B4A(remove) – (3) Commscope W-65A-R1 (replace)
- ◆(3) Ericsson AIR21 KRC118023-1 B2P/B4A(remove) – (3) AIR6419 B41 antennas (replace)

Install New:

- ◆(3) Ericsson Radio 4460 B25+B66 RRU

Existing Equipment to Remain:

- (3) RS APXVAALL24_43-U-NA20 antennas
- (3) Ericsson Radio 4449 B71+B85 RRU
- (3) Ericsson- KRY 112 144/1- TMA*

*Equipment shown for entitlement purposes only

GROUND

Remove:

- (1) 100A – 2P Breaker

Install New:

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

This facility was approved by the Town of Waterford Planning and Zoning Commission on April 27, 1999. 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 Waterford's First Selectman, Robert J. Brule, and Zoning Official, Jill Pisechko, 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,

Elizabeth Jamieson
Site Development Specialist II
SBA COMMUNICATIONS CORPORATION
134 Flanders Rd., Suite 125
Westborough, MA 01581 508.251.0720 x3807 + T
860.605.7808 + C
ejamieson@sbsite.com

- Exhibit 1 Check Copy*
- Exhibit 2 Notification Receipts*
- Exhibit 3 Property Card*
- Exhibit 4 Property Map*
- Exhibit 5 Original Zoning Approval*
- Exhibit 6 Construction Drawings*
- Exhibit 7 Structural Analysis*
- Exhibit 8 Mount Analysis*
- Exhibit 9 EME Report*

Attachments

Jill Pisechko, Zoning Official / with attachments
Town of Waterford, 15 Rope Ferry Road, Waterford, CT 06385
Angioletta LLC, Rudolph T Chieka, Trustee / with attachments
45 Fargo Road, Waterford, CT 06385

EXHIBIT 1

EXHIBIT 2

ORIGIN ID: BBFA (860) 605-7808
ELIZABETH JAMIESON
134 FLANDERS RD SUITE 125
WESTBOROUGH, MA 01581
UNITED STATES US

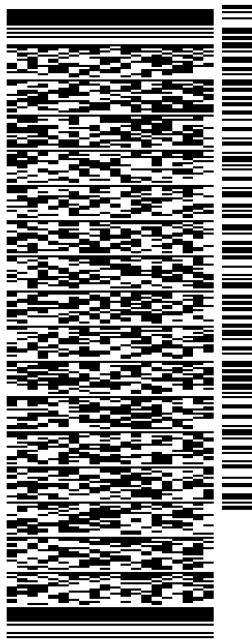
SHIP DATE: 15AUG22
ACTWGT: 1.00 LB
CAD: 255382542INNET4490

BILL SENDER

TO **MELANIE BACHMAN**
CONNECTICUT SITING COUNCIL
10 FRANKLIN SQUARE

NEW BRITAIN CT 06051

(860) 827-2935 REF: 10-56-92009-6089
INV: DEPT:
PO:



J222022041201uv

581J2/F39D/FE4A

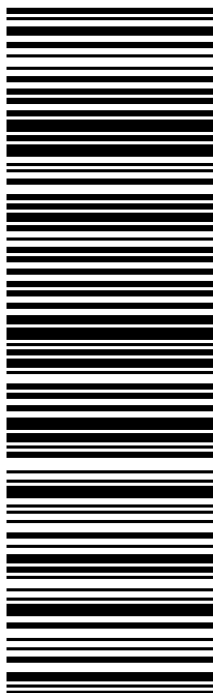
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0201

WED - 17 AUG 4:30P

** 2DAY **

SEBDLA

06051
CT-US BDL



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ORIGIN ID: BFEA (860) 605-7808
ELIZABETH JAMIESON
134 FLANDERS RD SUITE 125
WESTBOROUGH, MA 01581
UNITED STATES US

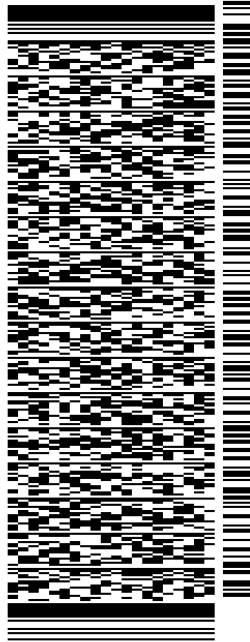
SHIP DATE: 05AUG22
ACTWGT: 1.00 LB
CAD: 255382542INMET4490
BILL SENDER

TO **CHIEKA, TRUSTEE, RUDOLPH T.**

199 NANTIC RIVER ROAD

WATERFORD CT 06385

REF: 10:56:92009:6089
(860) 442-0826
INV:
PO: DEPT:



581J2/F39D/FE4A

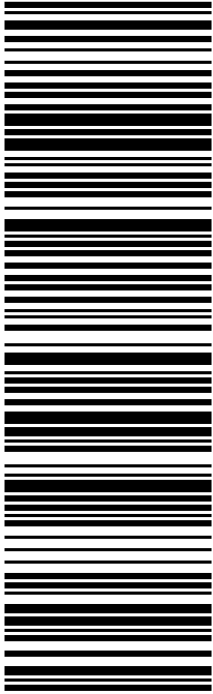
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TUE - 09 AUG 4:30P

** 2DAY **

SE SKKA

06385
CT-US BDL



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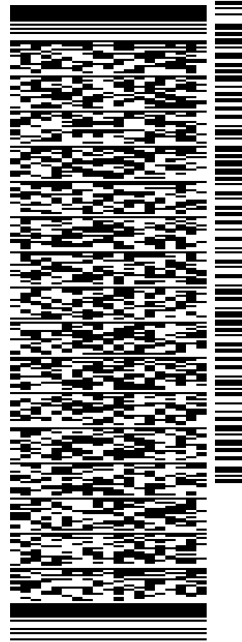
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WESTBOROUGH, MA 01581
UNITED STATES US

SHIP DATE: 05AUG22
ACTWGT: 1.00 LB
CAD: 255382542INNET4490
BILL SENDER

TO DANIEL M. STEWARD
TOWN OF WATERFORD
15 ROPE FERRY RD.

WATERFORD CT 06385

(860) 444-5826 REF: 10-56-92009-6089
INV/ DEPT
PO



581J2F39D/FE4A

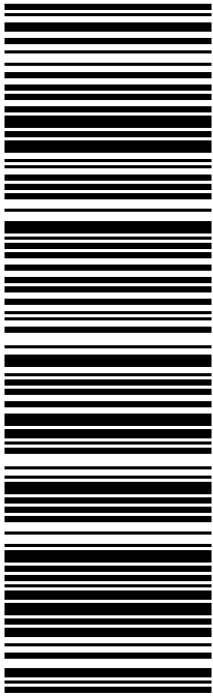
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TUE - 09 AUG 4:30P

** 2DAY **

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06385
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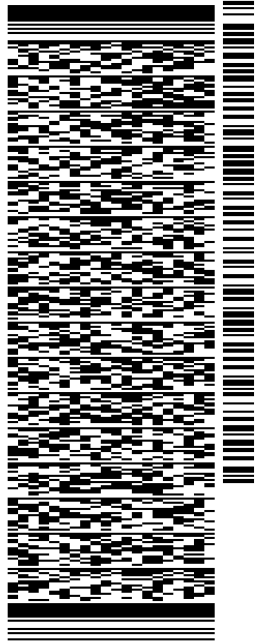
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WESTBOROUGH, MA 01581
UNITED STATES US

SHIP DATE: 05AUG22
ACTWGT: 1.00 LB
CAD: 255382542INNET4490
BILL SENDER

TO **MARK A. WUJTEWICZ**
PLANNING AND ZONING DEPT.
15 ROPE FERRY RD.

WATERFORD CT 06385

(860) 444-5826 REF: 10:56:92009:6089
INV: DEPT:
PO:



581J2F39D/FE4A

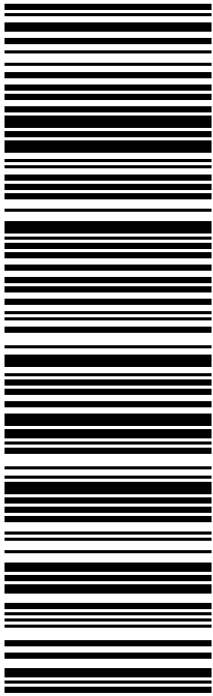
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** 2DAY **

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EXHIBIT 3

45 FARGO ROAD

Location 45 FARGO ROAD

Mblu 71 / / 2307 / /

Acct# 00201800

Owner ANGIOLETTO LLC

Assessment \$62,740

Appraisal \$640,830

PID 2307

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2017	\$3,600	\$637,230	\$640,830

Assessment			
Valuation Year	Improvements	Land	Total
2017	\$2,520	\$60,220	\$62,740

Parcel Addresses

Additional Addresses
No Additional Addresses available for this parcel

Owner of Record

Owner ANGIOLETTO LLC

Sale Price \$0

Co-Owner

Certificate

Book & Page 1323/0097

Sale Date 08/09/2013

Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
ANGIOLETTO LLC	\$0		1323/0097	08/09/2013
ANGIOLETTA LLC	\$0		1323/0095	08/09/2013
CHIEKA RUDOLPH ETALS	\$0		0413/0333	12/29/1992

Building Information

Building 1 : Section 1

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

Building Attributes

Field	Description
Style	Conventional
Model	
Grade:	
Stories	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Percent	
Total Bedrooms:	
Full Bthrms:	
Half Baths:	
Extra Fixtures	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Num Kitchens	
Fireplace(s)	
Extra Opening(s)	
Gas Fireplace(s)	
% Attic Fin	
LF Dormer	
Foundation	
Bsmt Gar(s)	
Bsmt %	
SF FBM	
SF Rec Rm	

Building Photo



(<http://images.vgsi.com/photos/WaterfordCTPhotos//A00V01\69\12.jpg>)

Building Layout

Building Layout

(http://images.vgsi.com/photos/WaterfordCTPhotos//Sketches/2307_2307.j)

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

Fin Bsmt Qual	
Bsmt Access	
Usrflid 300	
Usrflid 301	

Extra Features

Extra Features	<u>Legend</u>
No Data for Extra Features	

Land

Land Use

Use Code	109
Description	Vacant W/ OB
Zone	RU120
Neighborhood	300
Alt Land Appr Category	No

Land Line Valuation

Size (Acres)	74.03
Frontage	1112
Depth	0
Assessed Value	\$60,220
Appraised Value	\$637,230

Outbuildings

Outbuildings						<u>Legend</u>
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
SHD1	Shed	MS	Masonry	400.00 S.F.	\$3,600	1

Valuation History

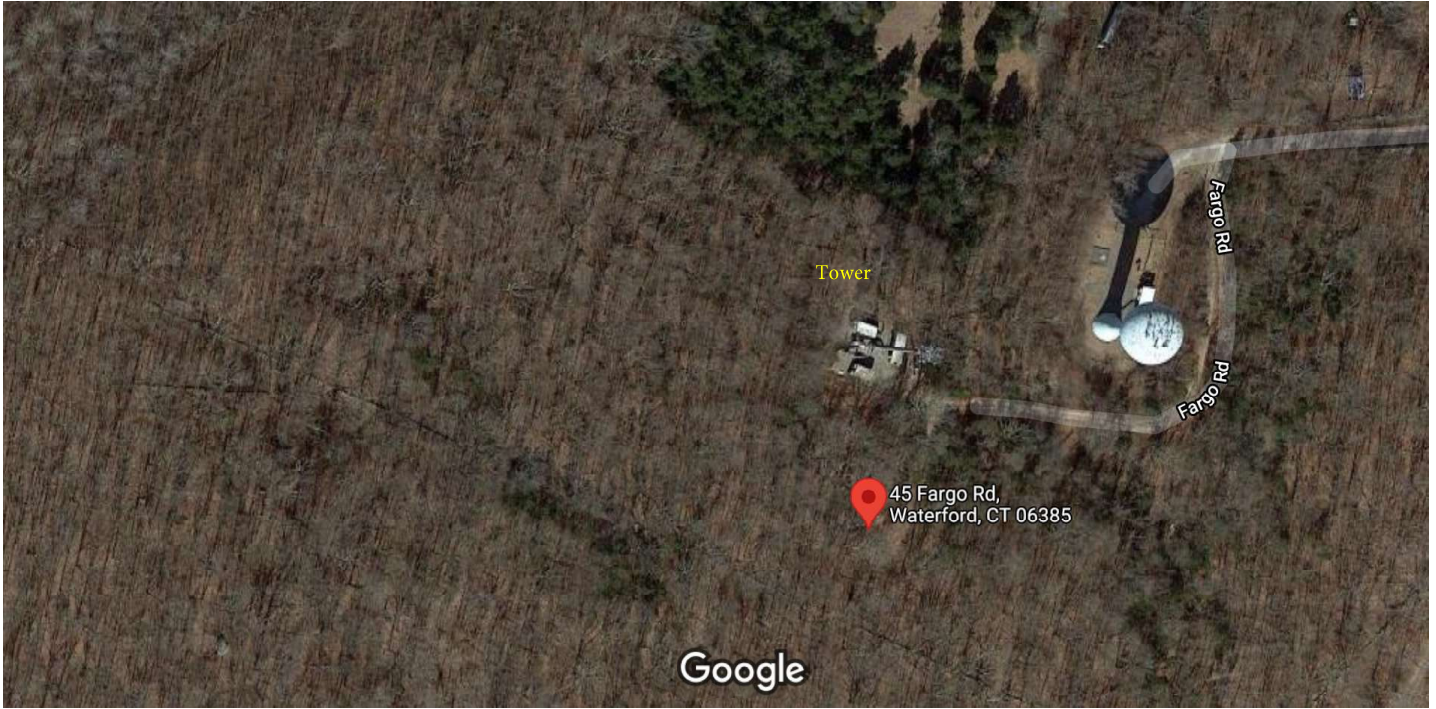
Appraisal			
Valuation Year	Improvements	Land	Total
2020	\$3,600	\$637,230	\$640,830
4000	\$3,600	\$637,230	\$640,830

Assessment			
Valuation Year	Improvements	Land	Total
2020	\$2,520	\$60,220	\$62,740
4000	\$2,520	\$60,220	\$62,740

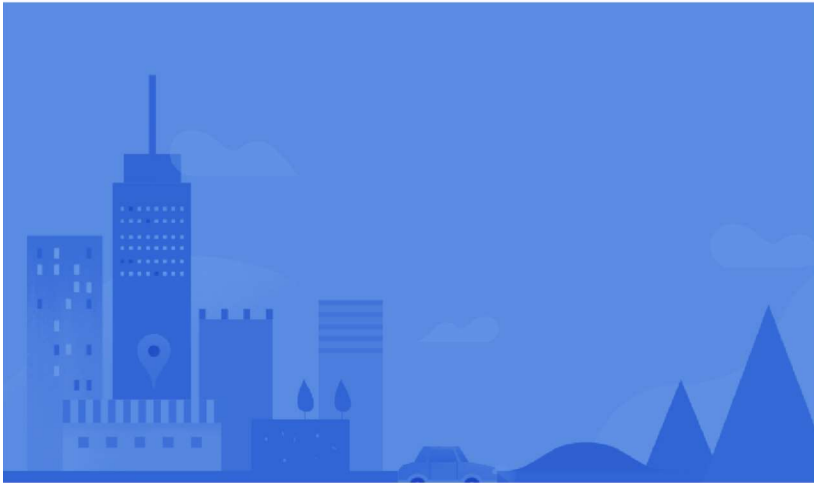
EXHIBIT 4








45 Fargo Rd



Imagery ©2021 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2021 100 ft



45 Fargo Rd

- 
Directions
- 
Save
- 
Nearby
- 
Send to your phone
- 
Share

 45 Fargo Rd, Waterford, CT 06385


 9RQH+GC Waterford, Connecticut

EXHIBIT 5



April 27, 1999

SBA Inc./Nextel Communications, Inc.
125 Shaw Street
Suite 116
New London, CT 06320

RE: #99-101/301 SBA COMMUNICATIONS TOWER
45 FARGO ROAD

Dear Sir or Madam:

At its meeting on Monday, April 26, 1999, the Town of Waterford Planning and Zoning Commission took the following action in regards to the above referenced application:

APPROVED WITH CONDITIONS: #99-101/301. Request of Rudolph Chieka, ET ALS, owners; SBA, Inc./Nextel Communications, Inc. applicants; Scott Thomae, agent; for special permit and site plan approval to locate a telecommunications tower at 45 Fargo Road, RU-120 Zone, in accordance with Section 3.6 of the Zoning Regulations and as shown on plans entitled "SBA, Inc., In Conjunction With Nextel Communications Of The Mid-Atlantic, Inc., SBA Site #4284 Waterford, 45 Fargo Road", dated January 14, 1999. This property is also known as parcel #5 on Assessor's Map #109.

Please refer to the attached minutes and special permit for the conditions of the approval.

In order to comply with the records retention schedule required by the State of Connecticut you are required to file a signed site plan with the Waterford Town Clerk.

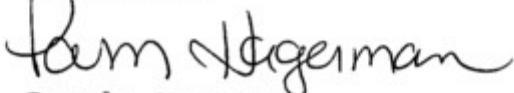
Please submit one mylar and ten (10) copies of the plans to this office for the Chairman's signature. You will be notified when the plans have been signed and you will then be required to record the mylar with the Town Clerk. After

April 27, 1999

Page 2

recording, signed plans will be distributed to various agencies and 2 copies will be returned to you.

Sincerely,



Pamela Hagerman
Planning and Zoning Commission

Enclosure: Minutes
Notice of Action

Certified #: P 378 011 124

cc: Scott Thomae, agent w/enclosures
Rudolph Chieka, ET ALS, owner

Mr. Visco reviewed the site plan. He explained that there will be one building (130 units) with a circular access drive, walking trails and a majority of the site will be open space. The rear portion of the building will be for residents with early dimensia. He also stated that the buildings will constructed to fit in with the residential area.

Mr. Visco also explained that the facility will be staffed by approximately 60 full time employees, with the largest shift being 30-35 people. Most of the traffic generated by the facility would be on weekends and early evening when visitors stop by. A majority of the residents will utilize the transportation provide; approximately 5% of the residents own a vehicle.

D. Martin stated that the applicants should consider another name for the facility because the Fire Marshal commented that there is already a street named "Clark Place" in town.

This application was tabled until the May 10, 1999 meeting.

#99-101/301. Request of Rudolph Chieka, ET ALS, owners; SBA, Inc./Nextel Communications, Inc. applicants; Scott Thomae, agent; for special permit and site plan approval to locate a telecommunications tower at 45 Fargo Road, RU-120 Zone, in accordance with Section 3.6 of the Zoning Regulations and as shown on plans entitled "SBA, Inc., In Conjunction With Nextel Communications Of The Mid-Atlantic, Inc., SBA Site #4284 Waterford, 45 Fargo Road" , dated January 14, 1999. This property is also known as parcel #5 on Assessor's Map #109.

D. Martin reviewed the draft Special Permit findings review including the conditions/stipulations.

MOTION: Motion made by G. Lombardi, second by G. Blinderman to approve the communications tower with conditions/stipulations listed in Special Permit #99-101/301 (Attachment A) with the following addition:

1. Property owner(s) and SBA, Inc. are equally responsible for ensuring that the property is properly restored should the tower no longer be utilized.

VOTE: 5-0

Attachment A
Minutes of April 26, 1999
Special Permit and Site Plan

Application: #99-101/301
Owner: Rudolph Chieka, ET ALS
Applicant: SBA, Inc./Nextel Communications, Inc.
Location: 45 Fargo Road
Public Hearing Date: March 8, 1999
Public Hearing Advertisement Dates: February 24 and March 3, 1999.
Zoning Districts: RU-120
Use: Telecommunication antennae tower together with support equipment.

Description of Project: SBA, Inc./Nextel Communications, Inc. have made application to construct a 185 foot monopole type antennae structure and associated base equipment for use as a digital, cellular, two-way radio and paging communications facility on the property located at 45 Fargo Road. The subject site is undeveloped, wooded and 3.15 acres in area.

23.5 FINDINGS:

A Special Permit shall not be granted until the Planning & Zoning Commission has determined that all of the following conditions have been satisfied:

23.5.1 COMPLIANCE WITH THE ADOPTED LAND USE PLAN AND THE ZONING REGULATIONS:

Land Use Plan Designation: Lowest Density Residential

Consistency: The adopted Plan of Preservation, Conservation and Development describes the lowest density residential as areas not intended to be served by public sewer or water and where residential development is expected to occur at densities less than one unit per three acres, due to environmental and/or access constraints and desired development patterns. The Commission finds the construction of the proposed communications tower to be consistent with the adopted land use plan in that it is compatible with nearby development and the tower will not create any sewer or water demands.

Pertinent Regulations Specially Permitting the Use: Sections 3.6 and 6.2.1

23.5.2 ORDERLY DEVELOPMENT

TYPE OF STRUCTURE AND IMPROVEMENTS: The communications tower proposed is of the monopole type construction and 185' in height together with support equipment. Construction of this communications tower itself will involve little clearing of land. The plan includes access improvements, installation of underground utilities, equipment buildings, protective fencing, and landscaping.

PRESENT LAND USE OF PARCEL: The subject parcel is currently wooded and undeveloped.

ABUTTING USES: The adjacent property to the north, west and south is wooded and undeveloped. The lot adjacent to the east has been developed as a municipal water tower site. The water tower structure will be approximately 231 feet away from the communication tower itself.

ADJACENT PROPERTY EFFECT: The Commission finds after a public hearing and upon the hearing record that this proposed tower will not have any significant negative effect on adjacent properties. The Commission has also determined that the establishment of a telecommunications tower will not discourage the appropriate development and use of adjacent property.

23.5.3 PROPERTY VALUES AND CHARACTER:

The proposed use will not depreciate adjacent property values and the size and height of all proposed buildings and the extent of all proposed site improvements shall both be such as to harmonize with the existing character of the neighborhood in which such use is to be established.

STRUCTURE PLACEMENT: The proposed tower has been located on the site to limit the amount of land disturbance and clearing of existing vegetation.

NEIGHBORHOOD CHARACTERISTICS/EFFECT: The Commission finds that the construction of this communications tower will not depreciate adjacent property values in this residential area of Town. Evidence by a qualified individual was not placed into the hearing record that would demonstrate any negative

23.5.5 TRAFFIC CONSIDERATIONS:

ADEQUANCY OF PUBLIC ROADS SERVING DEVELOPMENT: The Commission finds the public road serving access to this site is more than adequate to carry all anticipated traffic

PROVISIONS FOR ACCESS TO AND FROM THE SITE; HAZARD OR CONGESTION RESULTING: The Commission finds no evidence has been placed in the record indicating any hazards or congestion will result. The amount of additional traffic anticipated (occasional service vehicles) does not warrant any further improvements to the public road system.

CONTINUATION OF STREET SYSTEM: The Commission finds the scope of this proposal and the topography of the lot does not warrant any provisions for the continuation of any street or for the provision for interlot access.

SECTION 20 COMPLIANCE: The Commission finds this proposal complies with the provisions of Section 20 of the Zoning Regulations. Sufficient parking is provided on site for both cars and trucks. The general public does not visit this property. Only occasional authorized service vehicles of the communication companies with antennas on the tower are required to access this site.

23.5.6 LANDSCAPING AND BUFFERS:

The Commission finds adequate buffers exist, and will continue to exist, after the proposed development occurs. The general area is wooded and clearing is limited to the area shown on the plan of record. The base of the tower including the equipment buildings, will be screened by a 6' high chain link fence with 1' of barbed wire on top. Additional landscape plantings are proposed along the perimeter of the security fence

23.5.7 RELATIONSHIP TO UTILITY SYSTEMS, DRAINAGE SYSTEMS, AND IMPACT ON COMMUNITY FACILITIES:

Adequate provision for stormwater drainage can be provided without adversely affecting neighboring properties or adjacent public drainage systems, and the proposed use will not adversely impact existing community facilities.

WATER: Not required by this project.

SEWER: Not required by this project.

DRAINAGE: Site improvements planned do not include a significant amount of impervious surfaces. The access drive and tower base area are not paved decreasing surface runoff. The plan limits the amount of clearing and site disturbance.

23.5.8 COMPLIANCE WITH ZONING REGULATIONS:

In addition to meeting the other conditions described herein, the proposed use and the arrangement of all proposed buildings, structures, facilities, and other site improvements shall comply with all applicable provisions of these Zoning Regulations.

SECTION 22 COMPLIANCE:

The site plan prepared and submitted with this application for special permit, as modified by the Commission, complies with the provisions of Section 22 of the Zoning Regulations.

SEAMLESS WEB/COVERAGE ANALYSIS:

Upon request of the Commission, SBA/Nextel submitted for the record a coverage analysis for the proposed communications tower. The Commission conducted a review of all co-location possibilities examining all towers existing, approved and under construction within Waterford and surrounding municipalities which could serve Waterford. The Commission has determined the subject site is most suitable for the tower because it provides a large service coverage area. This will become important when other communications companies wish to locate in Waterford. They may co-locate on the subject tower reducing the need to construct additional towers.

Along with this application, the Commission reviewed the Town's overall telecommunications cellular coverage both existing and future. This cell site will cover a substantial portion of northwest Waterford and major highways, which will supplement the communications tower recently approved on Industrial Drive. The Commission finds this particular site provides good coverage, is remote, and with co-location possibilities is a good choice to provide a significant portion of the seamless communications web that has been developed during recent years within the Town of Waterford.

STIPULATIONS AND CONDITIONS:

1. SBA/Nextel shall allow co-location on the subject tower by other communication companies requesting same using industry standard lease agreements.
2. Zoning Compliance Chart on Sheet 1 incomplete. All bulk requirements for zone district and this project shall be referenced and provided column completed with actual figures. Include frontage, maximum building height, buildable area, lot size etc. Example: front yard setback >50' not acceptable. Insert actual setback. Maximum building height. Insert height of tower.
3. The tower removal & obsolescence notes on Sheet C-4 must be modified to include the following provision:
 - a. This site will be restored at the time when the tower is no longer being used for either transmission or reception of wireless communications signal by any carrier. At the termination of this project the described removal work will be completed within six months.
4. Plan indicates access drive entrance and equipment compound are planned to be gated. The Police and Fire Departments must be provided keys for emergency entry. Contact those Departments to work out method.
5. Plans must be revised to include the location, type and fuel storage provisions for any emergency generator planned and approved by the Fire Marshal.
6. An excavation permit for any type of work within the public right-of-way is required from the Department of Public Works. Any damage to the paved access drive serving the municipal water tank must be repaired.
7. Submission of tower construction details for this particular tower to Commission staff upon final design for review for consistency with application and support materials shall be provided.
8. Limits of clearing shall be flagged in the field and verified by the Zoning Official before any clearing (tree cutting) and grading begins. (48 Hours Notice Required) If more clearing is done than is shown on the approved plan, the site will have to be restored.
9. All erosion and sedimentation controls shall be in place and inspected by Zoning Official prior to any land disturbance. (48 Hours Notice Required)
10. Submission of all building plans to Building Official and Fire Marshal for approval prior to the issuance of a Zoning Compliance Permit to begin work.

11. All disturbed areas shall be restored using 4" of topsoil, seeded and mulched. Note 10 on sheet C-4 shall be modified to this effect. If soil stabilization has not been completed due to the time of year, a performance bond will be required.
12. General note 4 on Sheet C-4 shall be modified to state that no changes to approved plans shall occur without Town of Waterford authorization.
13. This project will not be phased. All site improvements shown shall be completed at same time.
14. The Commission also acknowledges the applicant's offer in the interest of public safety to permit a Town of Waterford emergency communications antennae, with no compensation to applicant on this tower.
15. The access drive construction detail on sheet C-4 indicates an incorrect driveway width. The final plan must be modified to indicate a width of 12'.
16. The final plans shall be modified to include a temporary earth material stockpile area, including E/S controls.
17. Property owner(s) and SBA, Inc., are equally responsible for ensuring that the property is properly restored should the tower no longer be utilized.

COMMISSION ACTION:

The Commission approves application #99-101/301 for special permit and site plan review subject to the findings, stipulations and conditions contained herein. All potential adverse impacts have been addressed as modified herein.

MODIFICATION, REVISIONS, EXTENSIONS:

All revisions, extensions, and modifications to any items, conditions or stipulations in this permit shall be governed by the provisions of Section 23.9 of the Waterford Zoning Regulations.

VIOLATIONS:

Any violations of the findings, stipulations or conditions of this permit shall be subject to Section 23.8 of the Waterford Zoning Regulations.

LIST OF EXHIBITS:

EXHIBIT A - Notice of Public Hearing advertised in The Day on February 24, 1999 and March 3, 1999.

EXHIBIT 6

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

WATERFORD/RT 85/DOUGLAS

45 FARGO ROAD
 WATERFORD, CT 06385
 NEW LONDON COUNTY

SITE NO.: CT11473A

SITE TYPE: 183'± MONOPOLE

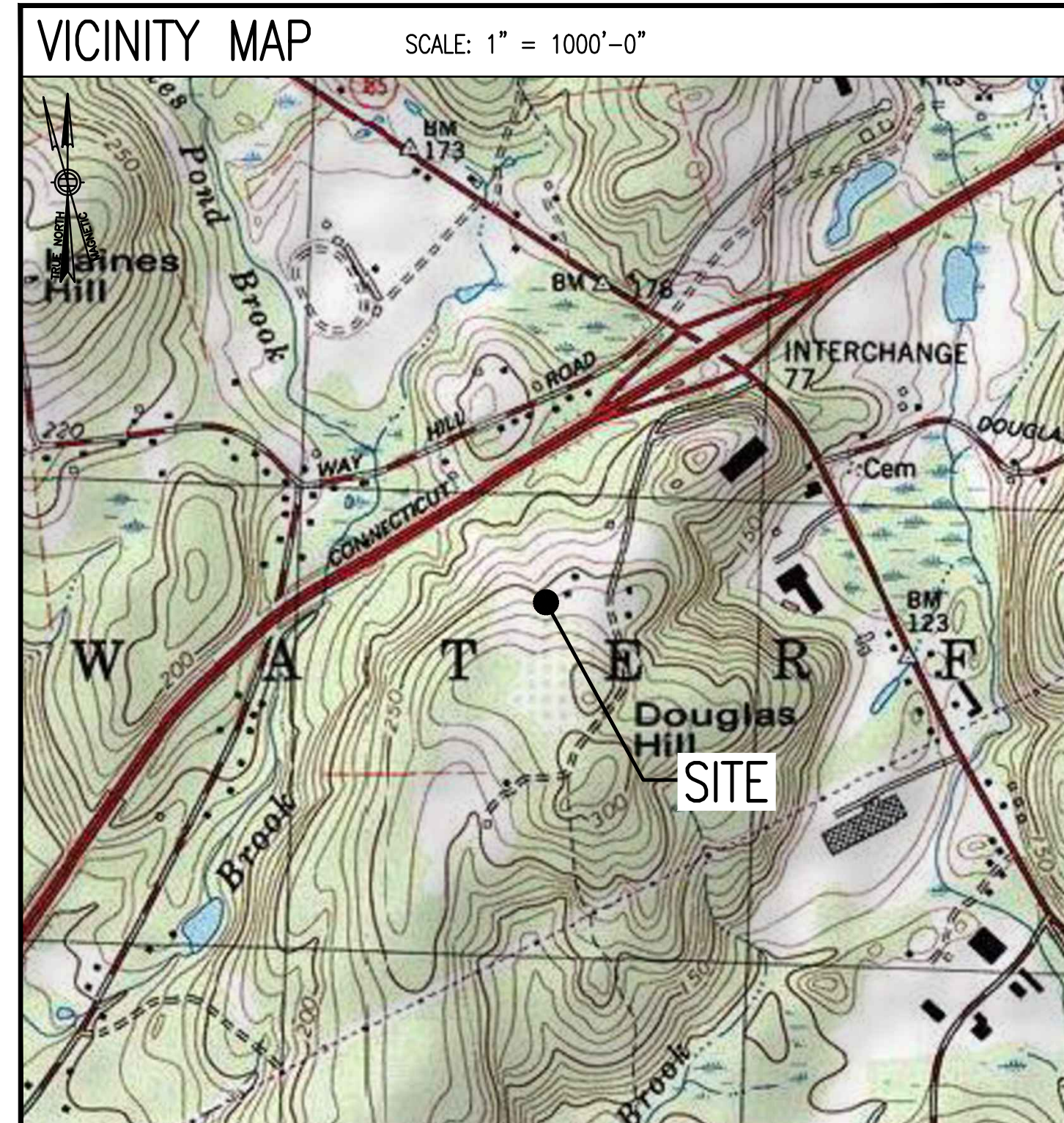
RF DESIGN GUIDELINE: 67D5D998E OUTDOOR

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

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

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.	SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
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.	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.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE OMBUDSMAN 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.	14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
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.	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.
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.	16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
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.	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.
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	

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



DIRECTIONS

MERGE ONTO I-495 NORTH TOWER MANSFIELD/MARLBORO. TAKE EXIT 33B FOR I-95 SOUTH TOWARD PROVIDENCE RI. ENTER RI. KEEP LEFT TO CONTINUE ON I-95 SOUTH. KEEP LEFT AT FORK TO CONTINUE ON I-95 SOUTH. ENTER CT. TAKE EXIT 82 FOR CT-85/BROAD STREET TOWARD WATERFORD. TURN RIGHT ONTO CT-85 NORTH. TURN LEFT ONTO FARGO ROAD. CONTINUE STRAIGHT ON FARGO ROAD. TURN RIGHT AT WATER TOWER ENTRANCE. TURN LEFT. SITE IS LOCATED AT THE END OF THE GRAVEL ROAD.

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

DO NOT SCALE DRAWINGS

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

PROJECT SUMMARY	
SITE NUMBER:	CT11473A
SITE NAME:	WATERFORD/RT 85/DOUGLAS
SBA SITE NUMBER:	CT01002-S
SBA SITE NAME:	WATERFORD
SITE ADDRESS:	45 FARGO ROAD WATERFORD, CT 06385
PROPERTY OWNER:	RUDOLPH T. CHIEKA, TRUSTEE 199 NIANCT RIVER WATERFORD, CT 06385
TOWER OWNER:	SBA PROPERTIES, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	NEW LONDON
ZONING DISTRICT:	RURAL RESIDENTIAL
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	183'±
APPLICANT:	T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766
ARCHITECT:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
STRUCTURAL ENGINEER:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
SITE CONTROL POINT:	LATITUDE: 41.389343° N41°23'21.63" LONGITUDE: -72.171434° W72°10'17.16"

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).

SCOPE OF WORK	
REMOVE:	INSTALL:
<ul style="list-style-type: none"> 6 ANTENNAS 1 100A-2P BREAKER 	<ul style="list-style-type: none"> 6 ANTENNAS 3 RADIOS 1 6160 CABINET 1 B160 CABINET 1 SLACKBOX 1 200A PPC 2 125A-2P BREAKERS 1 25A-1P BREAKER

- SITE NOTES**
- 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.
 - 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.
 - 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.

T-MOBILE NORTHEAST LLC

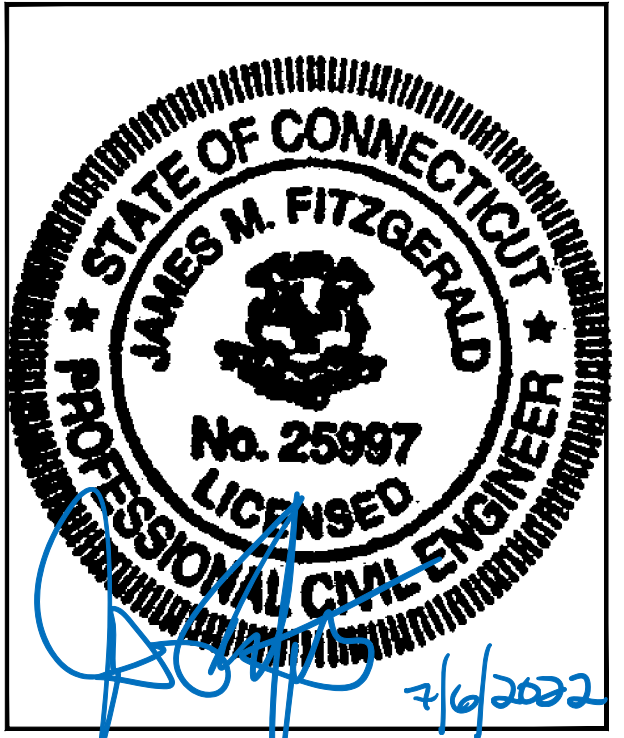
15 COMMERCE WAY, SUITE B
 NORTON, MA 02766
 (508) 286-2700

SBA

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

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



CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	07/06/22	ISSUED FOR CONSTRUCTION	CMC
0	06/16/22	ISSUED FOR REVIEW	CMC

SITE NUMBER:
CT11473A

SITE ADDRESS:
 45 FARGO ROAD
 WATERFORD, CT 06385

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

GENERAL NOTES:

- 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
- 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.
- 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.
- 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.
- DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
- 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.
- 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.
- SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION AND RETURN DISTURBED AREAS TO ORIGINAL CONDITIONS.
- 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.
- 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.
- CONSTRUCTION SHALL COMPLY WITH ALL T-MOBILE STANDARDS AND SPECIFICATIONS.
- 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.
- 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.
- 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:

- THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- 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.
- ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
- 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.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- 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.
- 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.
- 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.
- THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE T-MOBILE SPECIFICATION FOR SITE SIGNAGE.

CONCRETE AND REINFORCING STEEL NOTES:

- 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.
- 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
- 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, UNDO.
- 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 LARGER2 IN.
#5 AND SMALLER & WWF1½ IN.
CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
SLAB AND WALL¾ IN.
BEAMS AND COLUMNS½ IN.
- A CHAMFER ¾" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- 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.
- 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.
- 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.
- 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:

- 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".
- 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.
- BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (¾") AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE GALVANIZED OR STAINLESS STEEL.
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE ¾" DIA. ASTM A 307 BOLTS (GALV) UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL
- ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

- EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.
- COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.
- 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.
- 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.
- 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:

- HAND OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

CONSTRUCTION NOTES:

- FIELD VERIFICATION:
SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, T-MOBILE ANTENNA PLATFORM LOCATION AND UTILITY TRENCHWORK.
- COORDINATION OF WORK:
SUBCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.
- 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:

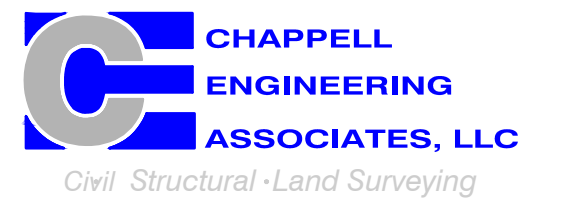
- WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
- SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLEING TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
- CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
- 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.
- POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC AND OSHA.
- 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).
- PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- 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.
- 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.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.
- 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.
- 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).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANS/IEEE AND NEC.
- NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- 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.
- ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
- 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.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANS/IEEE AND NEC.
- CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- 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.
- 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.
- 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.
- 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.
- THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- 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.
- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

**T-MOBILE
NORTHEAST LLC**

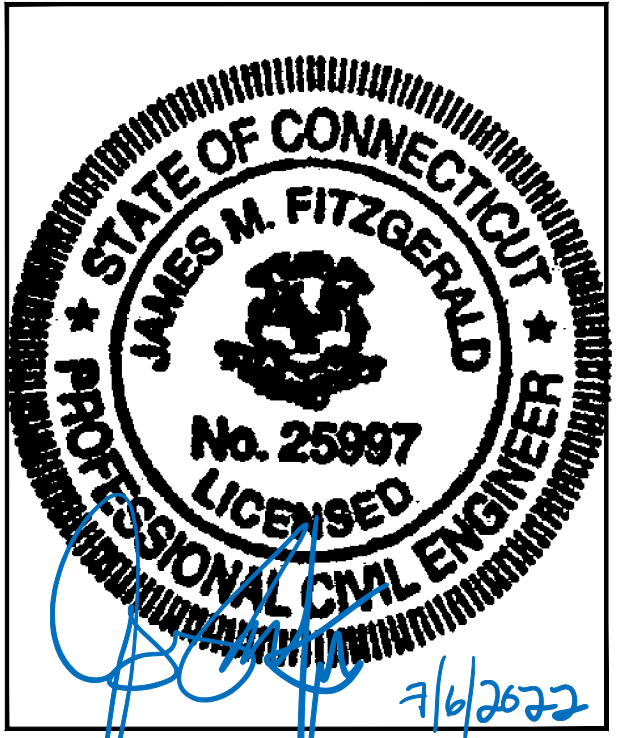
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0	06/16/22	ISSUED FOR REVIEW	CMC

SITE NUMBER:
CT11473A

SITE ADDRESS:
45 FARGO ROAD
WATERFORD, CT 06385

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

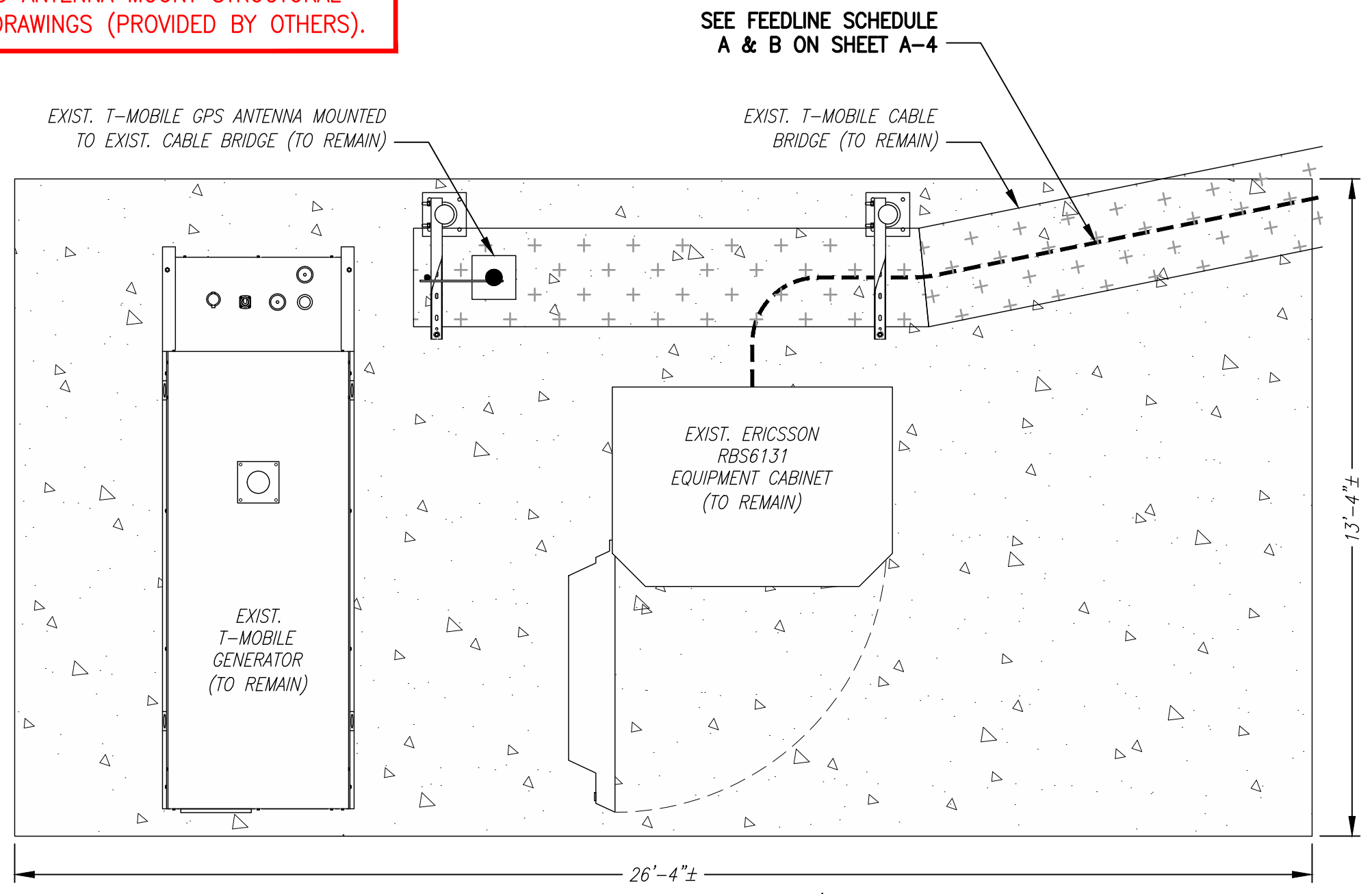
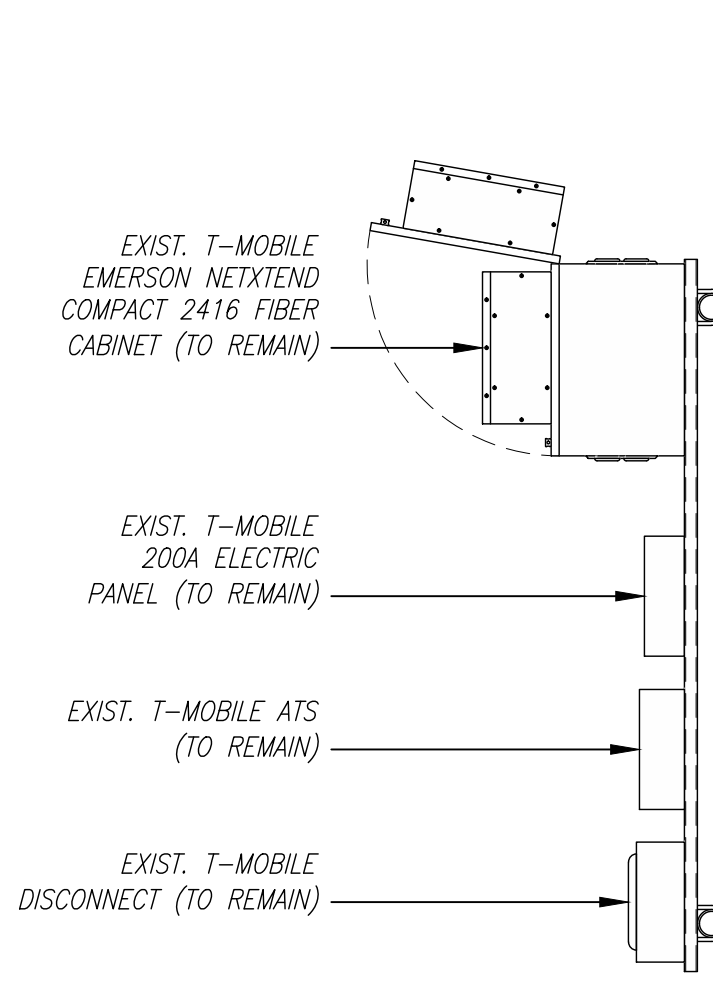
GN-1

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

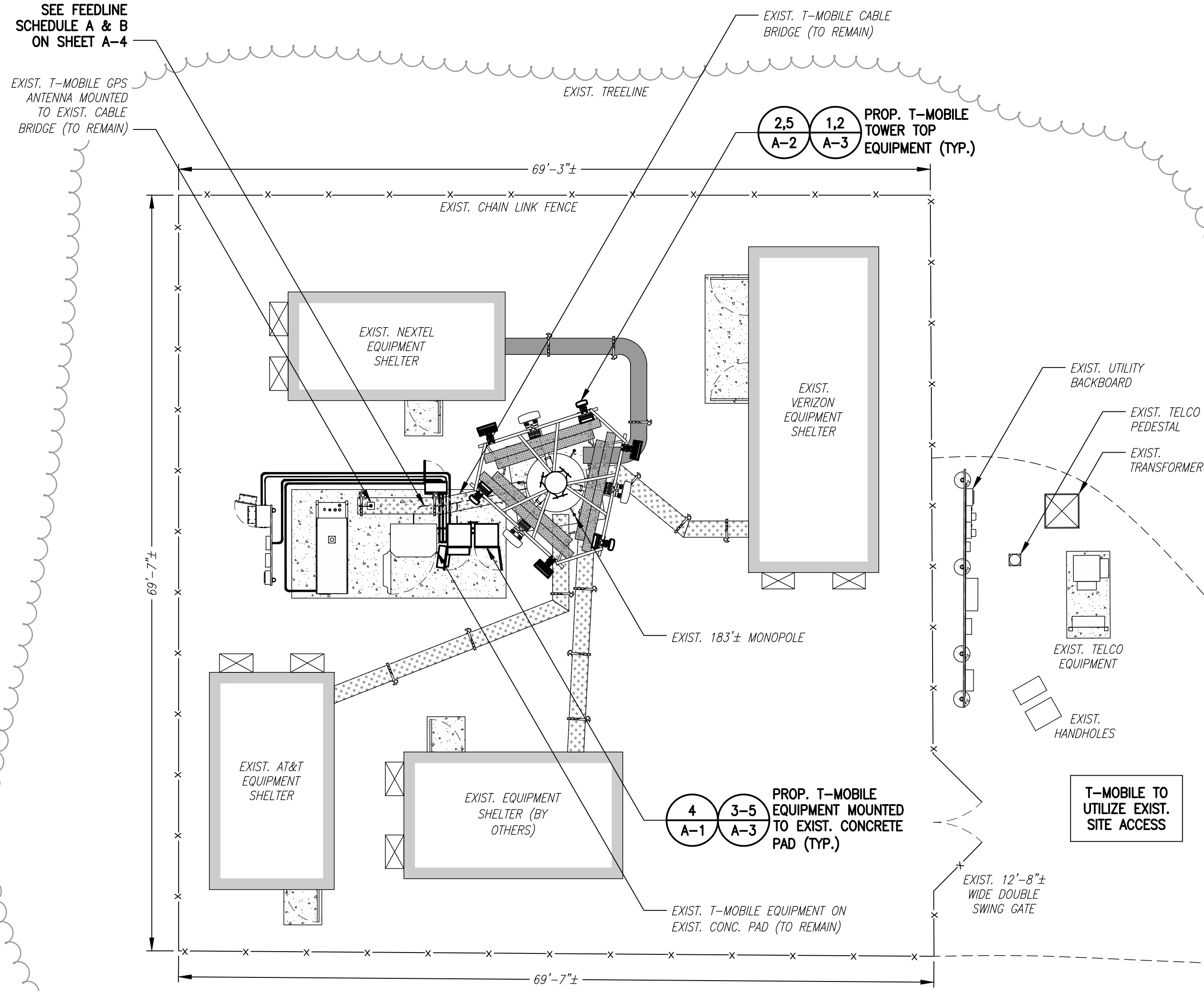
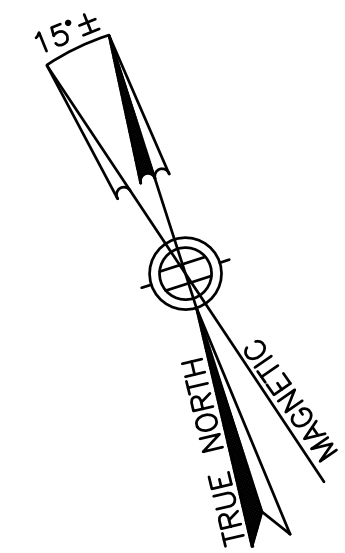
SPECIAL CONSTRUCTION NOTE:
 GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT T-MOBILE'S RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED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



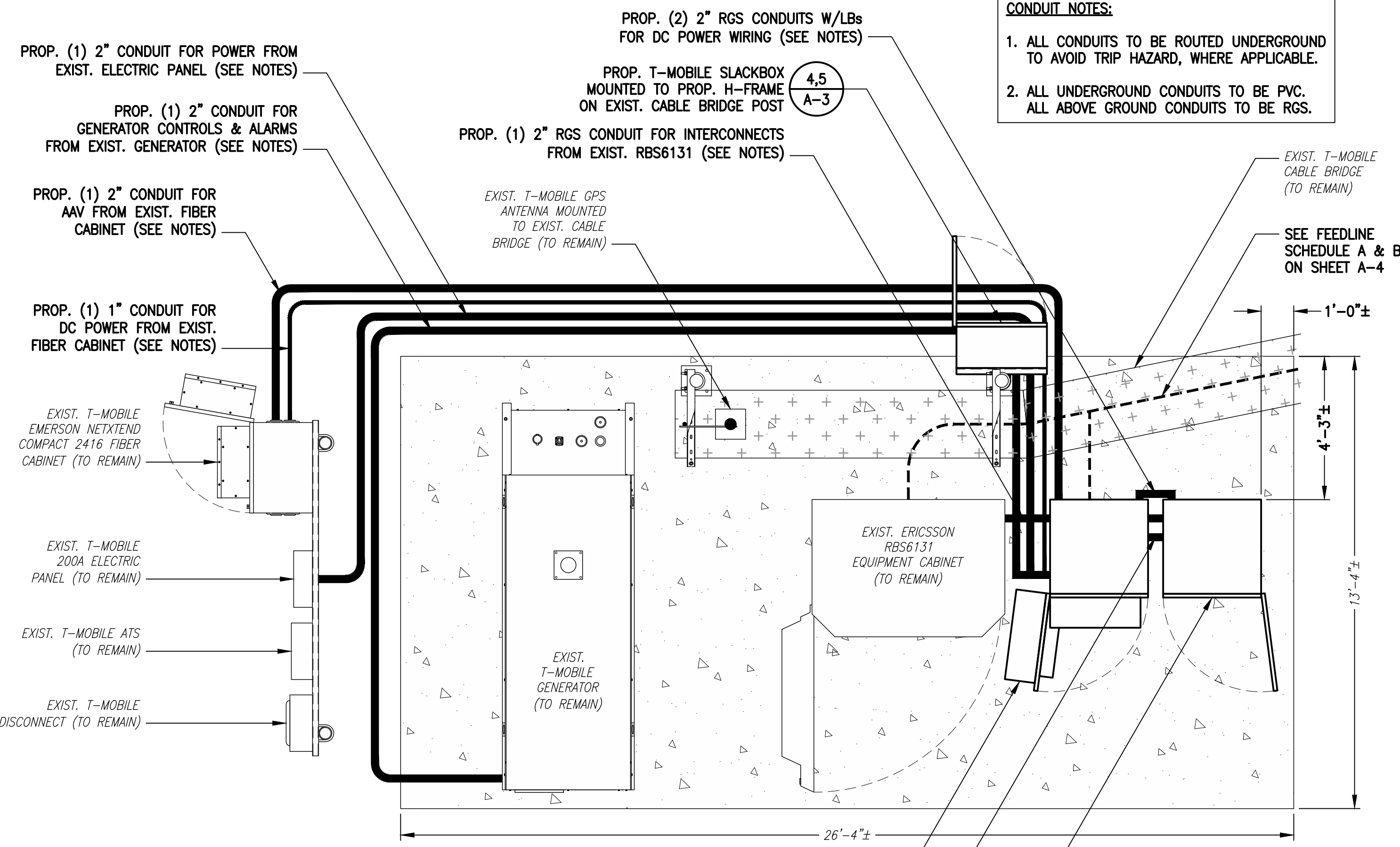
EXISTING EQUIPMENT PHOTO 2
 SCALE: N.T.S.



EXISTING EQUIPMENT PLAN 3
 SCALE: 1/2" = 1'-0"



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



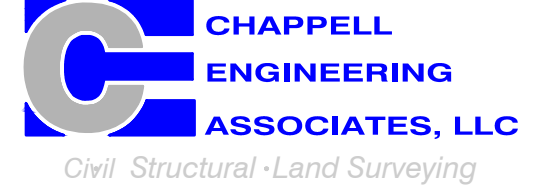
PROPOSED EQUIPMENT PLAN 4
 SCALE: 1/2" = 1'-0"

**T-MOBILE
 NORTHEAST LLC**

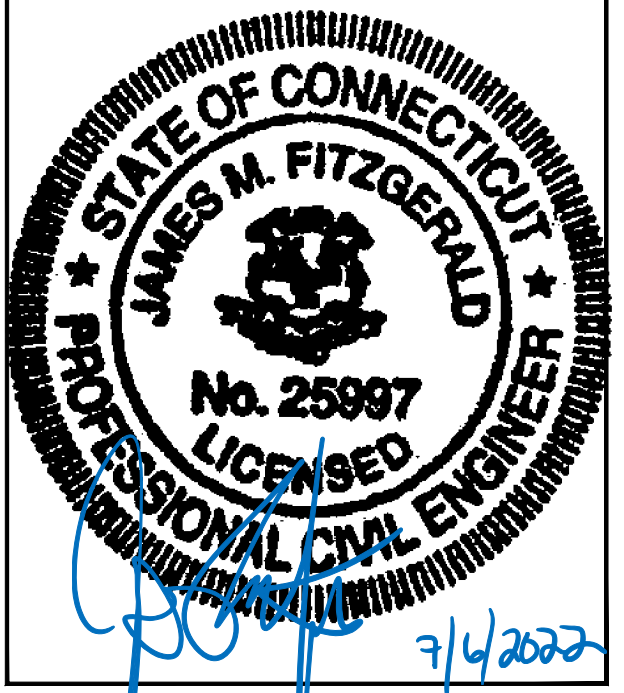
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SHEET TITLE
**COMPOUND &
 EQUIPMENT PLANS**

SHEET NUMBER
A-1

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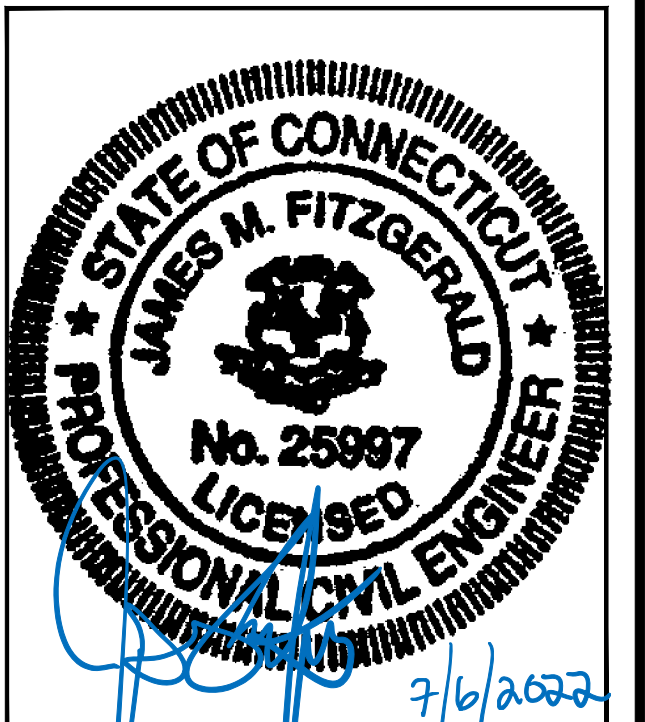
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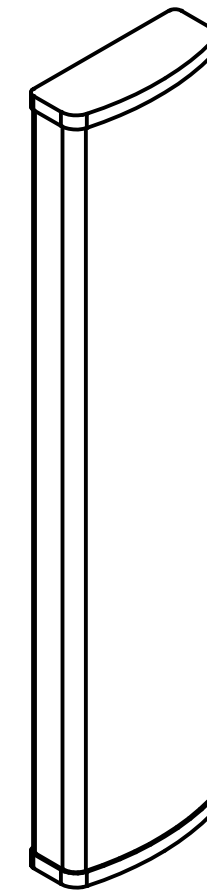
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SHEET TITLE
SITE DETAILS

SHEET NUMBER
A-3

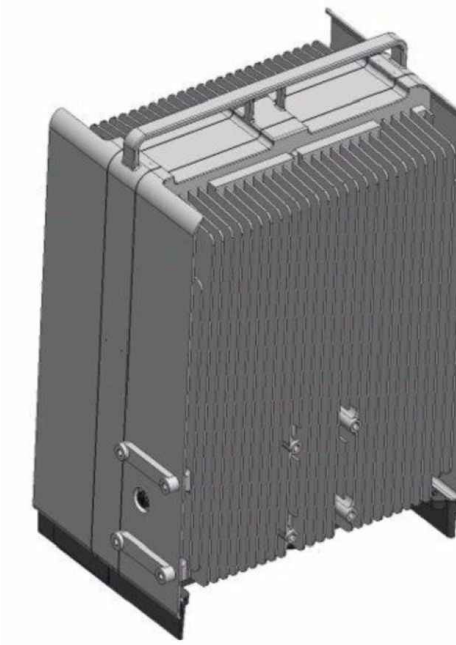
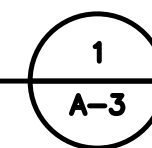


COMMSCOPE WV-65A-R1 ANTENNA
DIMENSIONS: 54.7"H x 12.1"W x 4.6"D
WEIGHT: 23.8 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3



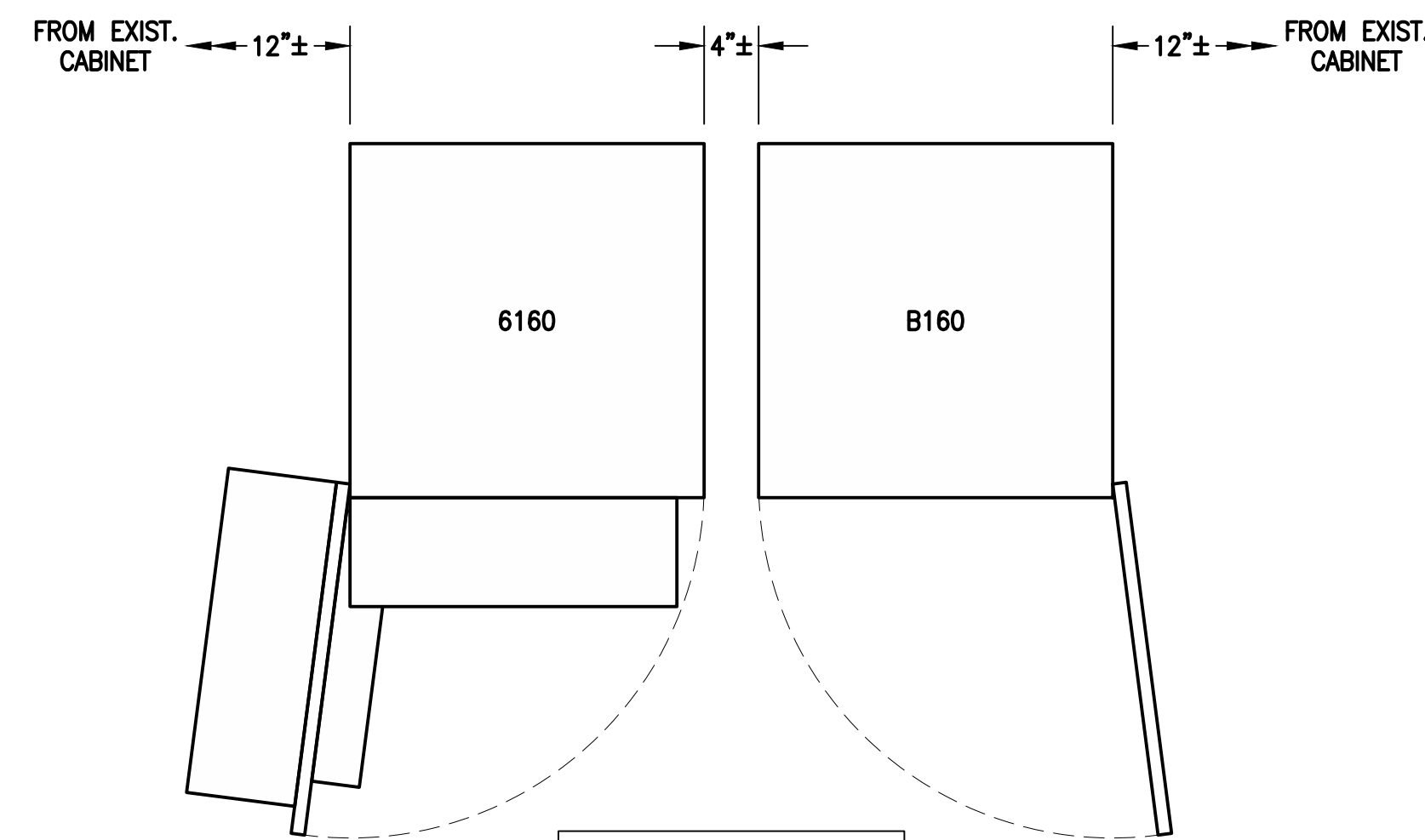
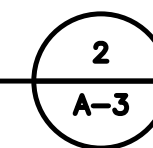
ERICSSON M-MIMO AIR6419 B41 ANTENNA
DIMENSIONS: 36.3"H x 20.9"W x 9.0"D
WEIGHT: 83.3 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

ANTENNA DETAILS
SCALE: N.T.S.



ERICSSON RADIO 4460 B25+B66
DIMENSIONS: 17.0"H x 15.1"W x 11.9"D
WEIGHT: 104.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

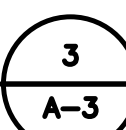
RADIO DETAIL
SCALE: N.T.S.



ERICSSON 6160 SITE SUPPORT CABINET
DIMENSIONS: 63.25"H x 26.0"W x 34.0"D
QUANTITY: TOTAL OF 1

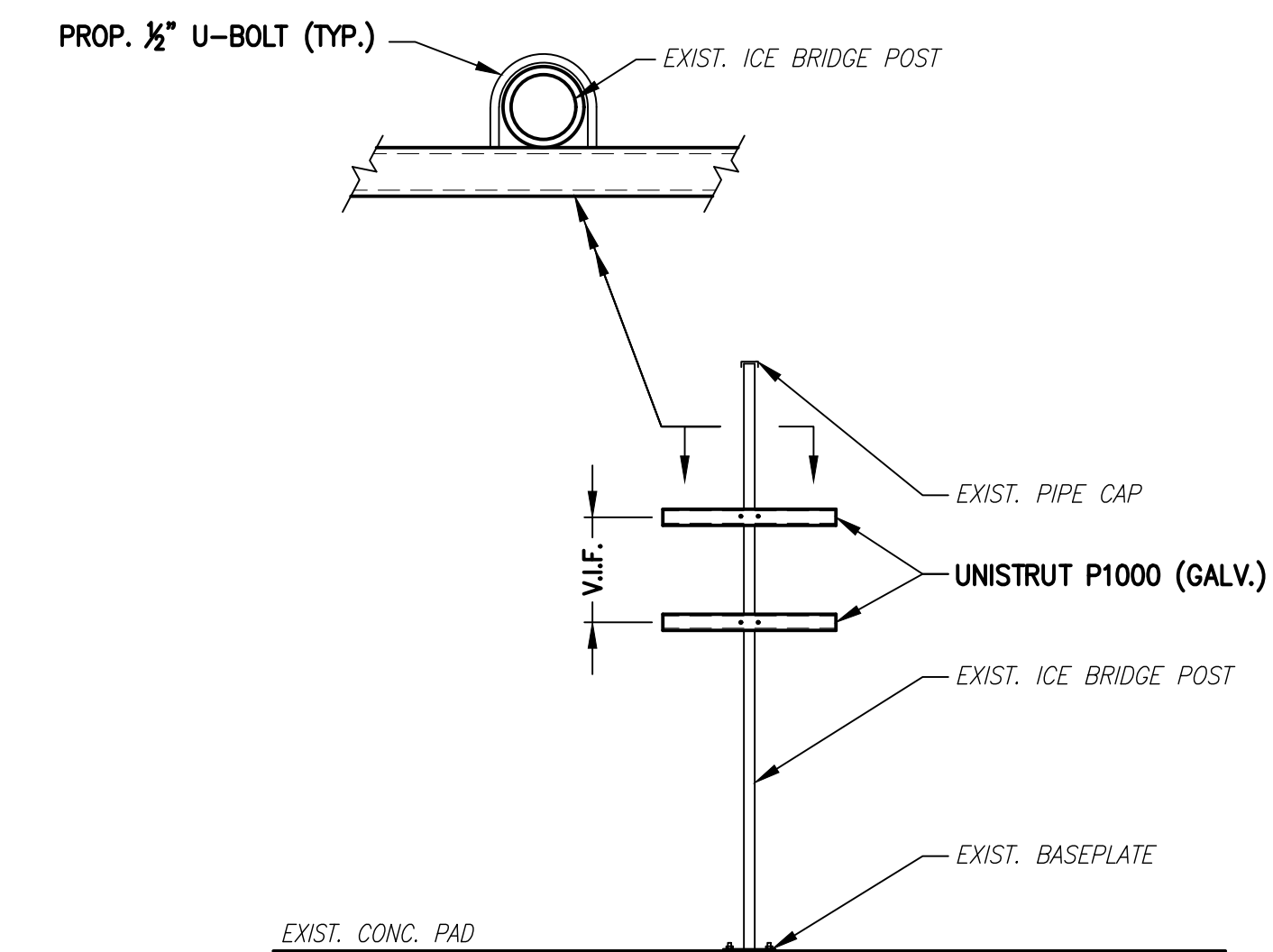
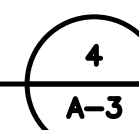
ERICSSON B160 BATTERY CABINET
DIMENSIONS: 63.25"H x 26.0"W x 26.0"D
QUANTITY: TOTAL OF 1

EQUIPMENT DETAIL
SCALE: N.T.S.

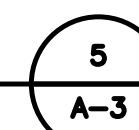


**SLACKBOX - HOFFMAN 32FH91
NEMA 3R ENCLOSURE**
DIMENSIONS: 24.0"H x 24.0"W x 12.0"D
QUANTITY: TOTAL OF 1

SSC DETAILS
SCALE: N.T.S.



H-FRAME DETAIL
SCALE: N.T.S.



FINAL ANTENNA CONFIGURATION								
SECTOR	ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	CABLES
ALPHA	A1 ERICSSON M-MIMO AIR6419 B41	153'± AGL	0°	0°	2'	L2500/N2500	-	EXIST. (3) 2" (6x12) HCS FIBER CABLE
	A2 <i>RFS</i> APXVAALL24_43-U-NA20	153'± AGL	0°	0°	2'	L700/L600/N600	ERICSSON RADIO 4449 B71+B85	
	A3 COMMSCOPE VV-65A-R1	153'± AGL	0°	0°	2'	L2100/L1900/G1900	ERICSSON RADIO 4460 B25+B66	
BETA	B1 ERICSSON M-MIMO AIR6419 B41	153'± AGL	120°	0°	2'	L2500/N2500	-	
	B2 <i>RFS</i> APXVAALL24_43-U-NA20	153'± AGL	120°	0°	2'	L700/L600/N600	ERICSSON RADIO 4449 B71+B85	
	B3 COMMSCOPE VV-65A-R1	153'± AGL	120°	0°	2'	L2100/L1900/G1900	ERICSSON RADIO 4460 B25+B66	
GAMMA	G1 ERICSSON M-MIMO AIR6419 B41	153'± AGL	240°	0°	2'	L2500/N2500	-	
	G2 <i>RFS</i> APXVAALL24_43-U-NA20	153'± AGL	240°	0°	2'	L700/L600/N600	ERICSSON RADIO 4449 B71+B85	
	G3 COMMSCOPE VV-65A-R1	153'± AGL	240°	0°	2'	L2100/L1900/G1900	ERICSSON RADIO 4460 B25+B66	

CABLE NOTE: SEE FEEDLINE SCHEDULE A & B BELOW.

NOTE: RFDS REV4 - 04/20/22

FEEDLINE SCHEDULE		
SCHEDULE	FEEDLINES	LOCATION
A	EXISTING TO REMAIN: (1) 1/2" COAX FOR GPS ANTENNA (3) 2" (6x24) HCS FIBER CABLE EXISTING TO BE REMOVED: NONE	ROUTED PER STRUCTURAL ANALYSIS
B	PROPOSED: NONE	

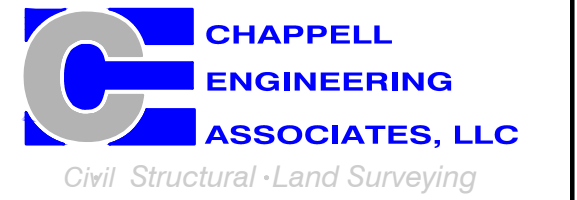
NOTE:
EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER.

T-MOBILE NORTHEAST LLC

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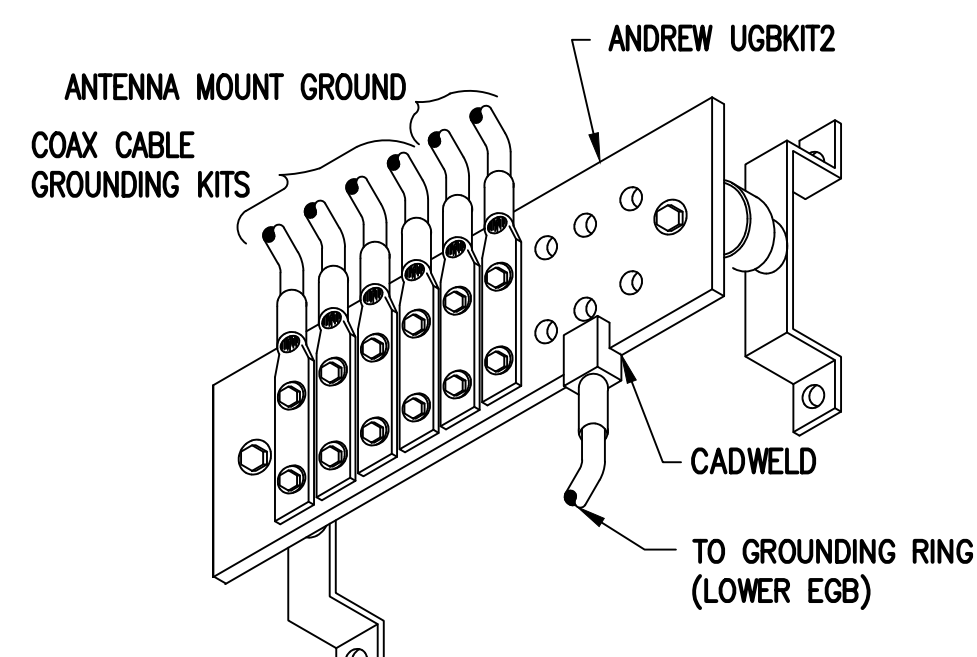
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SHEET TITLE
ANTENNA & FEEDLINE CHARTS

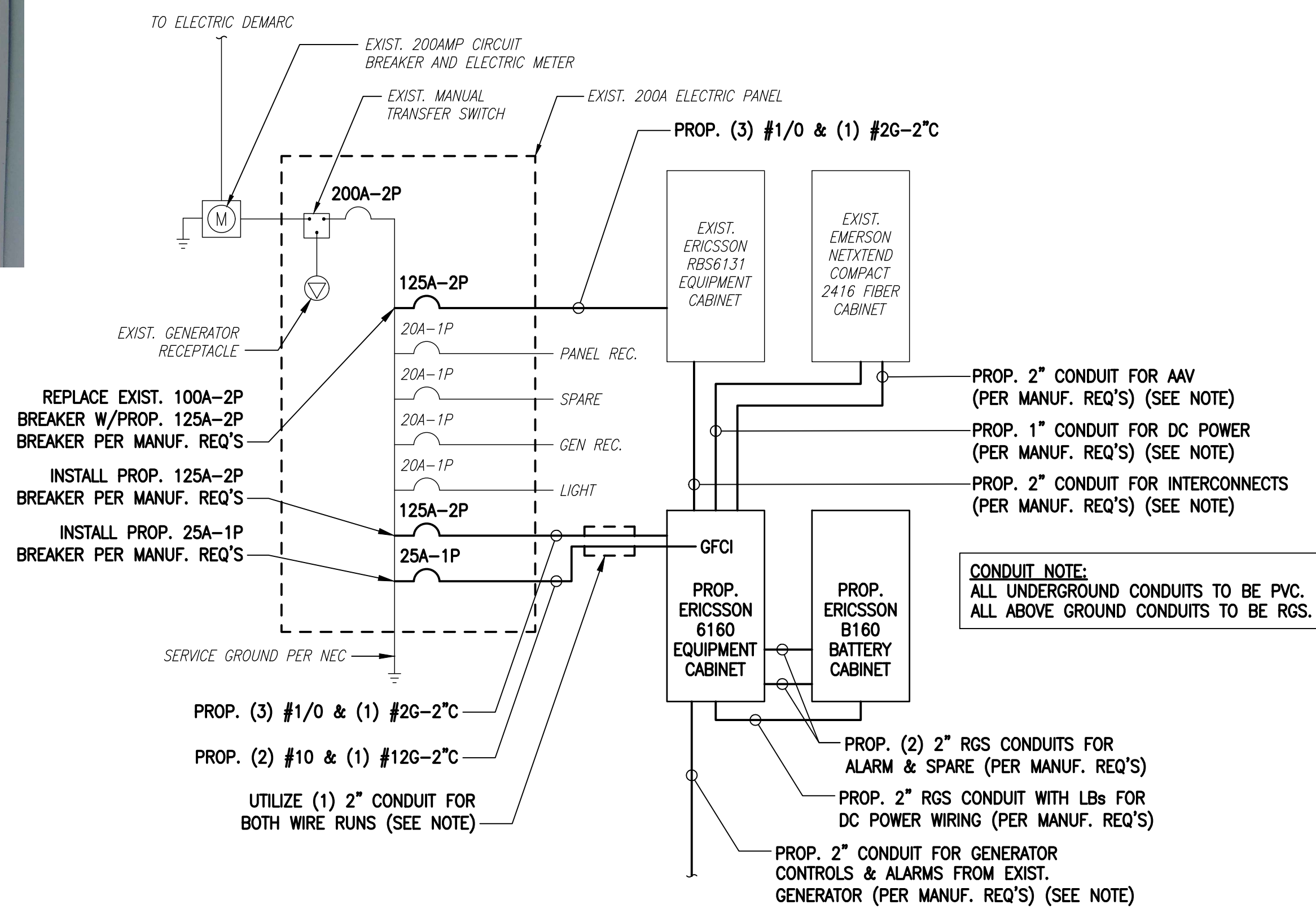
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A-4



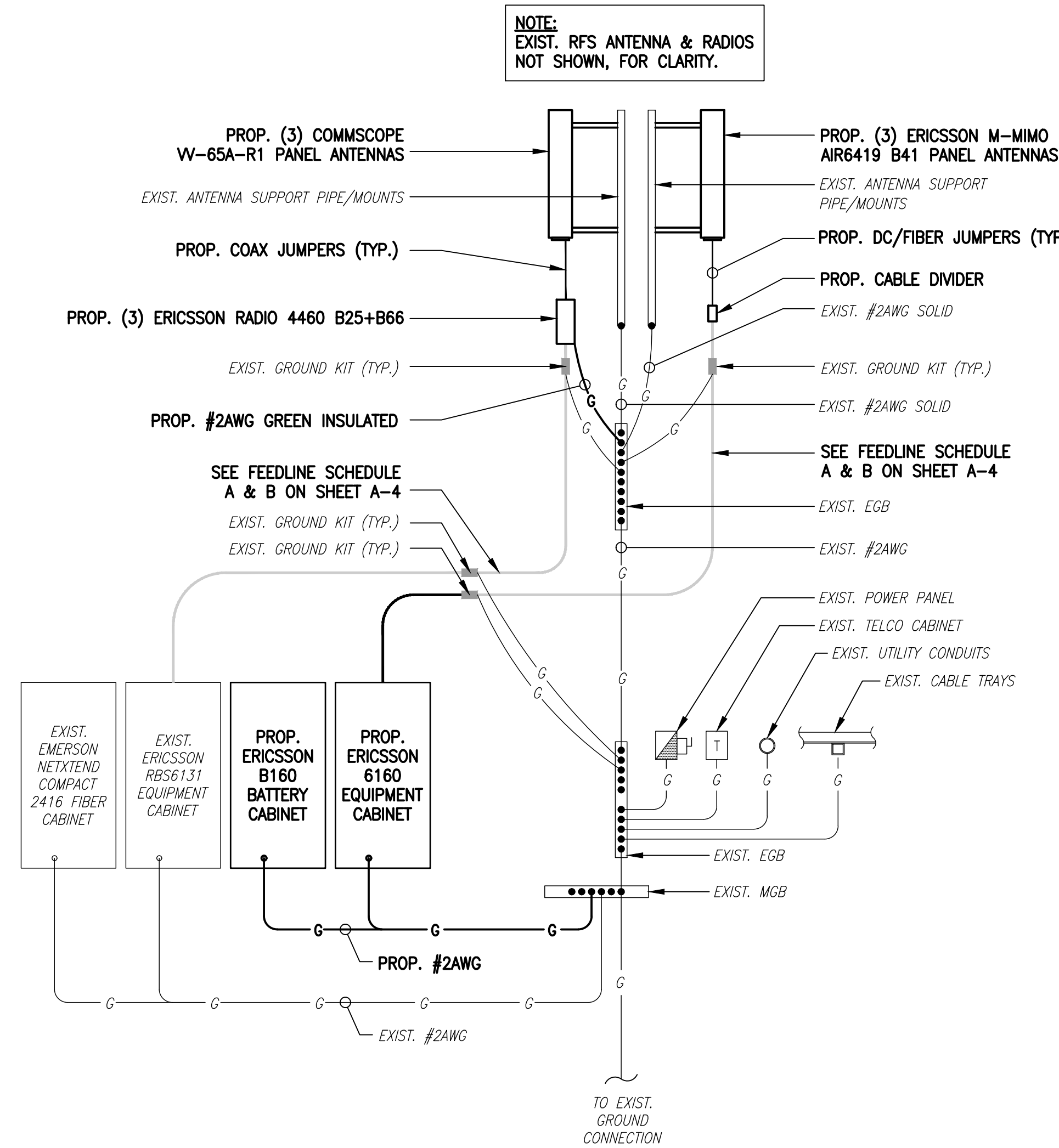
EXISTING POWER PANEL PHOTOS
SCALE: NOT TO SCALE



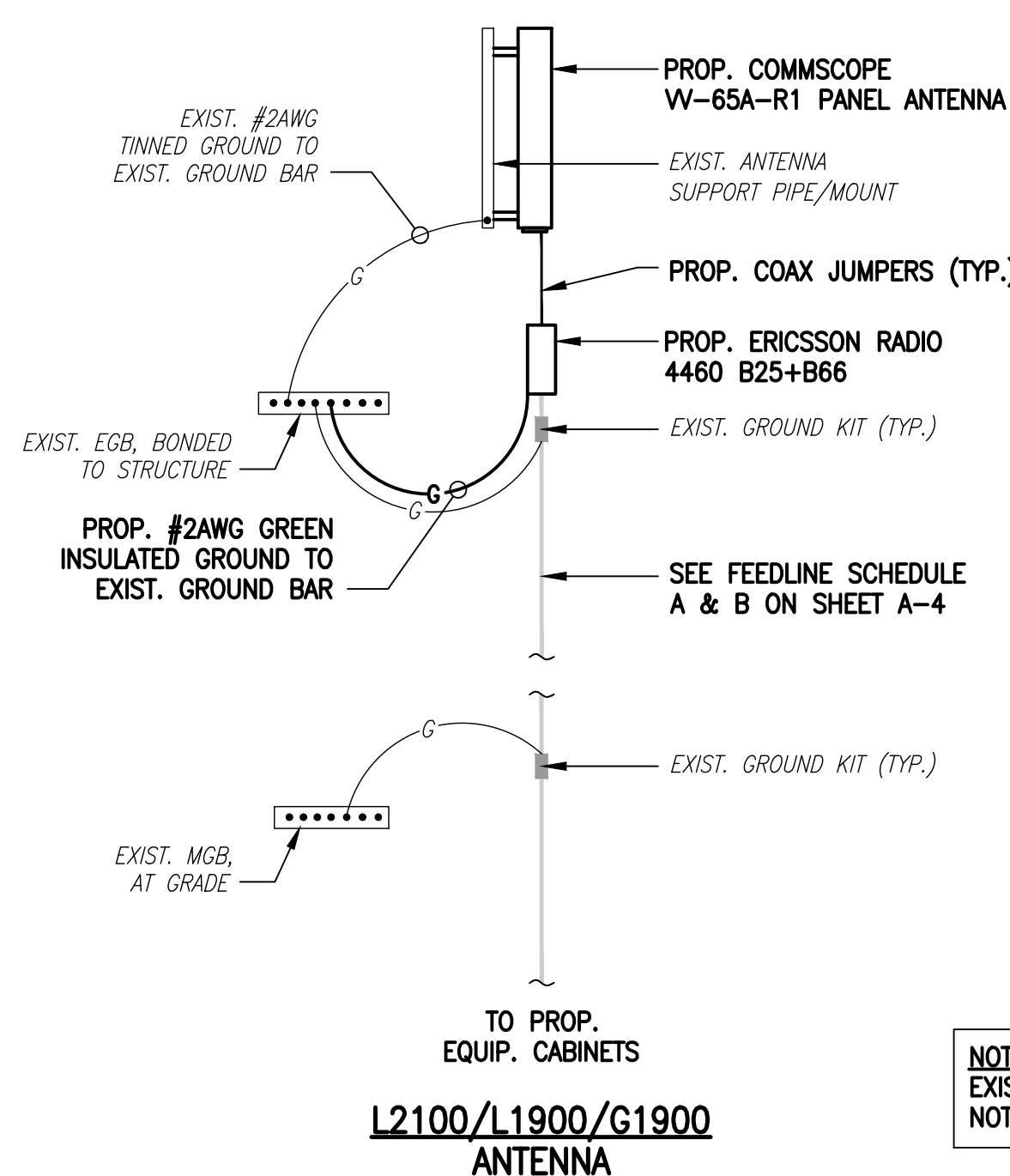
GROUND BAR (EGB)
SCALE: NOT TO SCALE



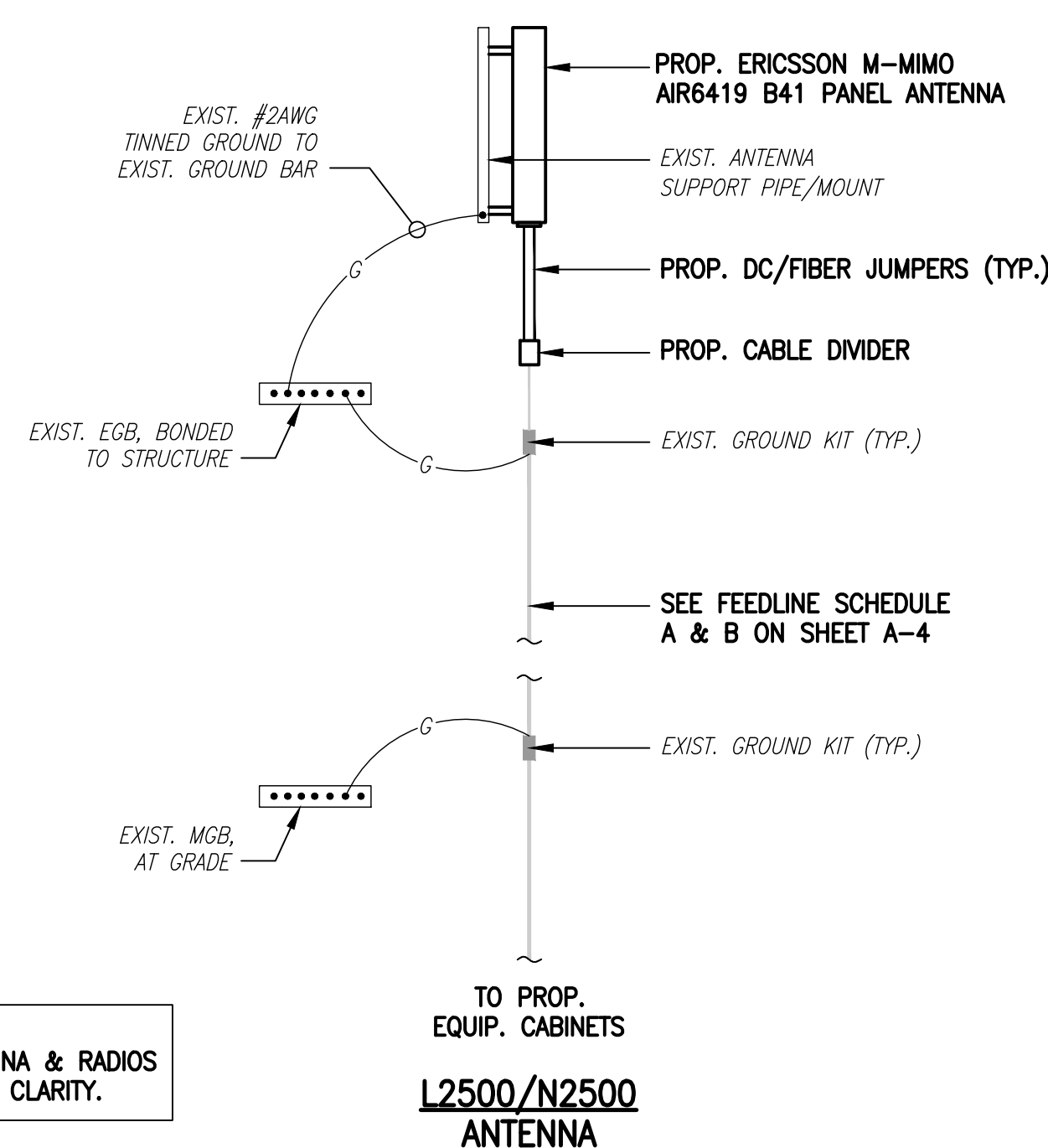
ONE LINE DIAGRAM
SCALE: NOT TO SCALE



GROUNDING RISER DIAGRAM
SCALE: NOT TO SCALE



COAX CABLE CONNECTION AND GROUNDING DETAIL
SCALE: NOT TO SCALE



TYPICAL GROUND BAR CONNECTIONS DETAIL
SCALE: NOT TO SCALE

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

ELECTRICAL AND GROUNDING NOTES

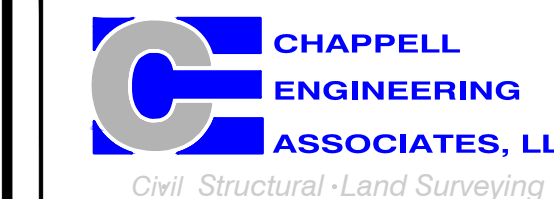
- ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
- ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
- THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
- GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
- 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.
- BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
- ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THININSULATION.
- 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.
- 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.
- 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.
- ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
- PPC SUPPLIED BY PROJECT OWNER.
- 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".
- GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
- 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.
- ALL GROUND CONNECTIONS TO BE BURNDY HYDRON COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
- 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.
- CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
- APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
- 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.
- CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MINIMUM RESISTANCE REQUIRED.
- CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE-OUT.

T-MOBILE NORTHEAST LLC

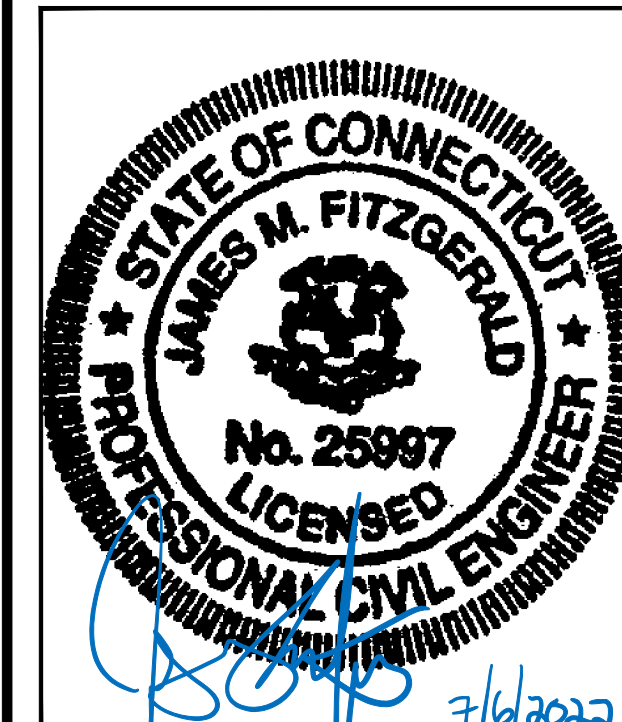
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700



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



R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com



CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	07/06/22	ISSUED FOR CONSTRUCTION	CMC
0	06/16/22	ISSUED FOR REVIEW	CMC

SITE NUMBER:
CT11473A

SITE ADDRESS:
45 FARGO ROAD
WATERFORD, CT 06385

SHEET TITLE
ELECTRIC & GROUNDING DETAILS

SHEET NUMBER
E-1

EXHIBIT 7



Tower Engineering Solutions

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

Structural Analysis Report

Existing 183 ft Nudd Corporation Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT01002-S

Customer Site Name: Waterford

Carrier Name: T-Mobile (App#: 197458, V#1)

Carrier Site ID / Name: CT11473A / Waterford/RT 85/Douglas

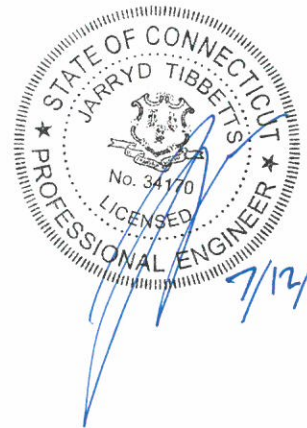
Site Location: 45 Fargo Road

Waterford, Connecticut

New London County

Latitude: 41.389339

Longitude: -72.171408



Analysis Result:

Max Structural Usage: 74.6% [Pass]

Max Foundation Usage: 45.0% [Pass]

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

Report Prepared By: Ikram Efaz

Introduction

The purpose of this report is to summarize the analysis results on the 183 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	A.Nudd Corp. Project #6637, dated May 7, 1999
Foundation Drawing	A.Nudd Corp. Project #6637, dated May 7, 1999
Geotechnical Report	Jaworski Geotech Inc Project #C98392G, dated September 18, 1998
Modification Drawings	Semaan Engineering Solutions, Inc.analysis and Modifications Package, dated May 7, 2002 FDH Engineering Inc. Project #10-08045E S2, dated November 4, 2010
Mount Analysis	TES, Project #130525, dated 07/01/2022

Analysis Criteria

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

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed $V_{ult} = 135.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 105.0$ mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	$S_S = 0.164$, $S_1 = 0.059$

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

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	181.0	-	-	Empty Low profile platform	-	-
2	173.0	4	Antel LPA-80080/4CF ___ - Panel	(3) Modified 14.5' T-Arms W/ (3) Commscope BSAMNT-SBS-2-2	(12) 1 5/8" (2) 1 5/8" Hybrid	Verizon
3		2	Rfs Celwave APL866513-42T0- Panel			
4		6	Andrew JAHH-65B-R3B - Panel			
5		3	Samsung MT6407-77A - Panel			
6		3	Commscope CBC78T-DS-43/E14F05P19			
7		3	Samsung B2/B66 RRH BR049			
8		3	Samsung B5/B13 RRH BR04C			
9		2	RFS DB-T1-6Z-8AB-0Z-OVP Box			
10	158.0	-	-	Empty Low profile platform	--	-
-	153.0	3	Ericsson Air 21 B2A/B4P - Panel	(3) Modified T-Arms W/ (1) Sitepro PRK-1245L (Platform reinforcement kit), (1) Sitepro PRK-SFS-L (V-brace kit) & (3) Sitepro SPTB (Tie back kit)	(3) 1.9" Fiber (9) 1 5/8"	T-Mobile
-		3	Ericsson Air 21 B4A/B2P - Panel			
-		3	RFS APXVAALL24-43-U-NA20 - Panel			
-		3	Ericsson KRY 112 144/1-TMA			
-		3	Ericsson 4449 B71 + B85 RRU			
17	143.0	1	Quintel QS46512-2 - Panel	Low Profile Platform w/ SitePro 1 Handrail Kit (P/N HRK 14-U) and (6) 2-1/2" std. mast pipes.	(12) 1 5/8" Coax (2) 3/4" DC (1) 5/16" Fiber	AT&T
18		1	Cci OPA-65R-LCUU-H4 - Panel			
19		2	Cci TPA-65R-LCUUUU-H8 - Panel			
20		2	Cci OPA-65R-LCUU-H8 - Panel			
21		3	Cci DTMABP7819VG12A TMA			
22		3	Kaelus DBC0061F1V51-2 - Diplexer			
23		3	Ericsson RRUS 32 B2			
24		3	Powerwave 7770 - Panel			
25		3	ADC ClearGain 850-1900 Dual Band - TMA			
26		3	Ericsson RRUS 11			
27		3	Css DBC-750			
28	1	Raycap DC6-48-60-18-8F				

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
11	153.0	3	Ericsson- AIR6419 B41 - Panel	(3) T-Arms (1) Sitepro PRK-1245L- (Platform reinforcement kit) (1) Sitepro PRK-SFS-L- (V-brace kit) (3) Sitepro SPTB- (Tie back kit)	(9) 1-5/8" Coax (3) 1.9" Fiber	T-Mobile
12		3	Commscope- VV-65A-R1 - Panel			
13		3	RFS- APXVAALL24-43-U-NA20 - Panel			
14		3	Ericsson- KRY 112 144/1- TMA			
15		3	Ericsson- 4449 B71 + B85- RRU			
16		3	Ericsson- 4460 B25+ B66- RRU			

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

Analysis Results

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

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	69.8%	52.0%	74.6%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	4711.9	37.0	60.2

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

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.1482 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 69.85% at 0.0ft

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-G
Exposure: B
Gh: 1.1

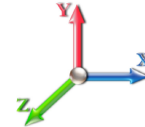
7/12/2022



Page: 1

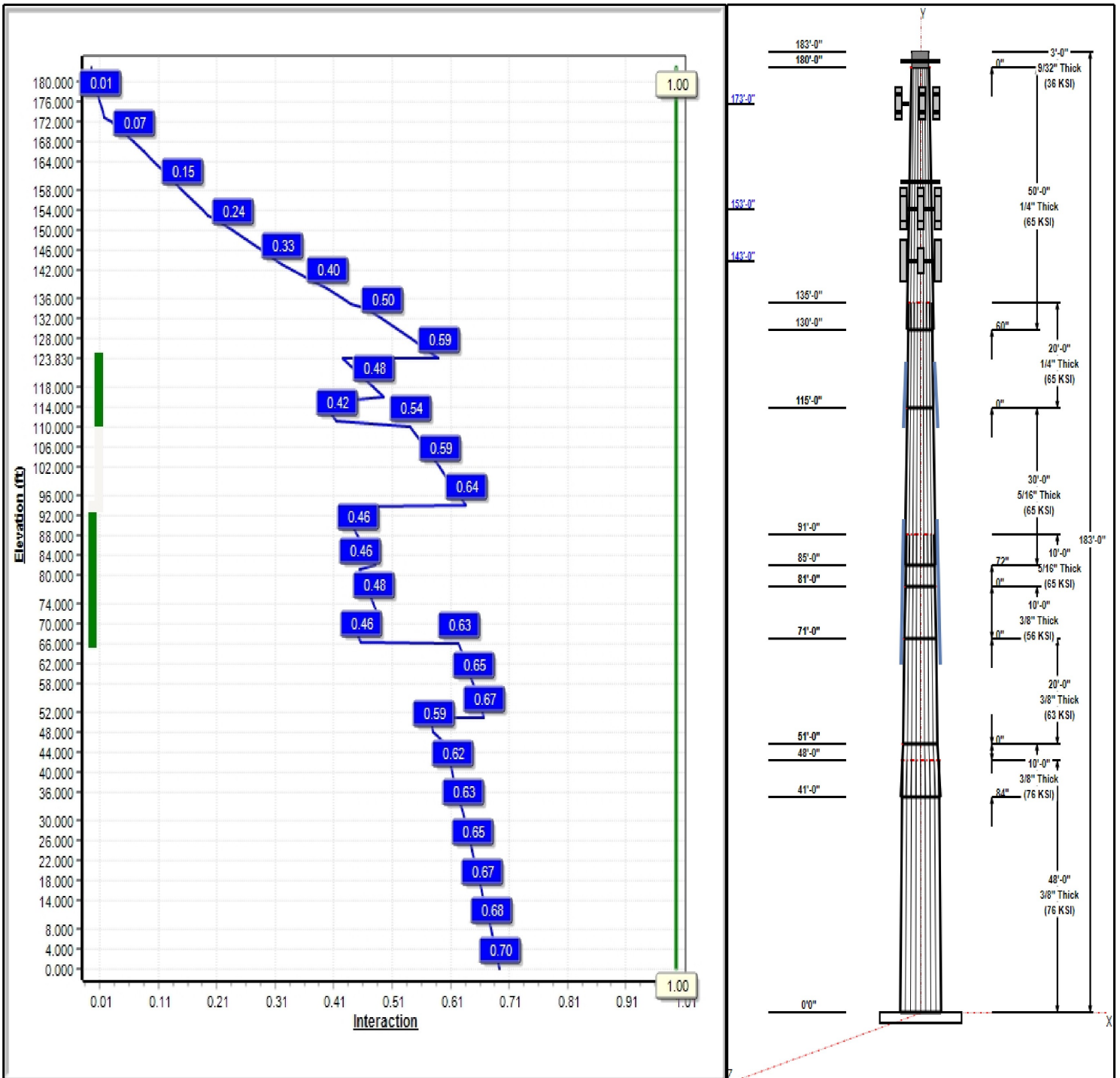
Dead Load Factor: 1.20
Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 105 mph Wind



Iterations: 29

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Structure: CT01002-S-SBA

Type: Custom
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23542

7/12/2022

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Shaft Properties

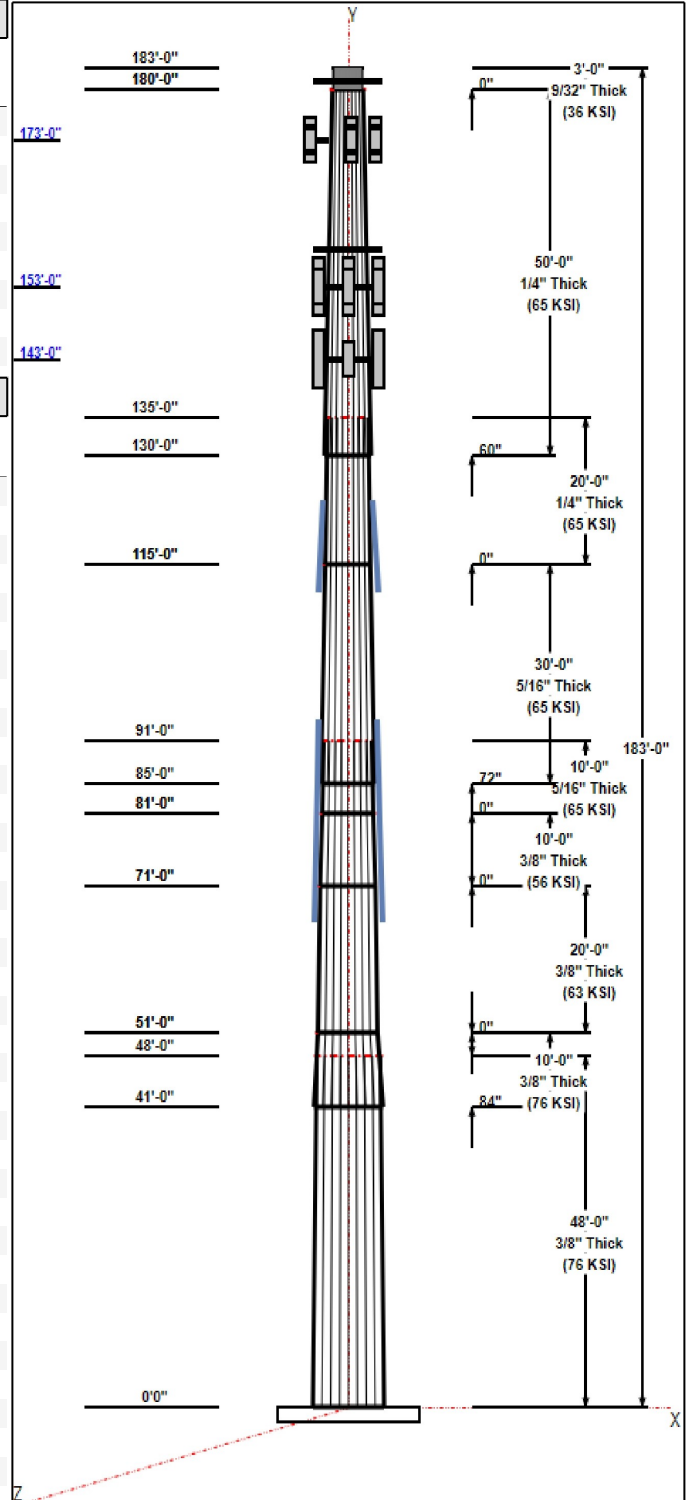
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	48.00	53.20	64.50	0.375		0.23542	76
2	10.00	53.24	55.60	0.375	Slip	0.23542	76
3	20.00	48.53	53.24	0.375	Butt	0.23542	63
4	10.00	46.18	48.53	0.375	Butt	0.23542	56
5	10.00	43.83	46.18	0.313	Butt	0.23542	65
6	30.00	38.80	45.87	0.313	Slip	0.23542	65
7	20.00	34.09	38.80	0.250	Butt	0.23542	65
8	50.00	24.00	35.77	0.250	Slip	0.23542	65
9	3.00	24.00	24.00	0.281	Butt	0.00000	36

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
181.00	181.00	1	Low Profile	-
173.00	173.00	1	(3) T-Arms	Verizon
173.00	173.00	4	LPA-80080-4CF-EDIN-0	Verizon
173.00	173.00	2	APL866513-42T0	Verizon
173.00	173.00	2	DB-T1-6Z-8AB-OZ	Verizon
173.00	173.00	6	Andrew JAHH-65B-R3B	Verizon
173.00	173.00	3	Samsung MT6407-77A	Verizon
173.00	173.00	3	BSAMNT-SBS-1-2	Verizon
173.00	173.00	3	CBC78T-DS-43/E14F05P1	Verizon
173.00	173.00	3	Samsung B2/B66 RRH	Verizon
173.00	173.00	3	Samsung B5/B13 RRH	Verizon
158.00	158.00	1	Low Profile	-
153.00	153.00	3	RFS	T-Mobile
153.00	153.00	1	Low Profile Platform	T-Mobile
153.00	153.00	3	KRY 112 144/1	T-Mobile
153.00	153.00	1	PRK-1245 (kicker kit)	T-Mobile
153.00	153.00	1	SPTB(Tie back Kit)	T-Mobile
153.00	153.00	1	V-brace kit	T-Mobile
153.00	153.00	3	AIR6419 B41	T-Mobile
153.00	153.00	3	VV-65A-R1	T-Mobile
153.00	153.00	3	4460 Radio	T-Mobile
153.00	153.00	3	Ericsson 4449 B71 + B85	T-Mobile
143.00	143.00	1	HRK14	AT&T
143.00	143.00	1	QS46512-2	AT&T
143.00	143.00	1	OPA-65R-LCUU-H4	AT&T
143.00	143.00	2	TPA-65R-LCUUUU-H8	AT&T
143.00	143.00	2	OPA-65R-LCUU-H8	AT&T
143.00	143.00	3	DTMABP7819VG12A	AT&T
143.00	143.00	3	DBC0061F1V51-2	AT&T
143.00	143.00	3	RRUS 32 B2	AT&T
143.00	143.00	3	Powerwave 7770.00	AT&T
143.00	143.00	1	Low Profile	AT&T
143.00	143.00	3	850-1900 Dual Band	AT&T
143.00	143.00	3	RRUS 11	AT&T
143.00	143.00	3	DBC-750	AT&T
143.00	143.00	1	DC6-48-60-18-8F	AT&T

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	183.00	Outside	Safety Cable	



Structure: CT01002-S-SBA

Type: Custom
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.00000

7/12/2022

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0.00	183.00	Outside	Step bolts (ladder)	
0.00	173.00	Outside	1 5/8" Coax	Verizon
0.00	173.00	Inside	1 5/8" Coax	Verizon
0.00	173.00	Inside	1 5/8" Hybrid	Verizon
0.00	153.00	Inside	1 5/8" Coax	T-Mobile
0.00	153.00	Inside	1.9" Fiber	T-Mobile
0.00	143.00	Inside	1 5/8" Coax	AT&T
0.00	143.00	Inside	3/4" DC	AT&T
0.00	143.00	Inside	5/16" Fiber	AT&T
110.00	125.00	Outside	C6X10.5 Reinforcing	
65.00	95.00	Outside	C6X10.5 Reinforcing	

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
24	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 + 1.6W 105 mph Wind	4711.9	37.0	60.2
0.9D + 1.6W 105 mph Wind	4654.4	37.0	45.1
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1171.4	9.2	94.6
1.2D + 1.0E	245.0	1.8	60.2
0.9D + 1.0E	241.7	1.8	45.1
1.0D + 1.0W 60 mph Wind	954.9	7.6	50.1

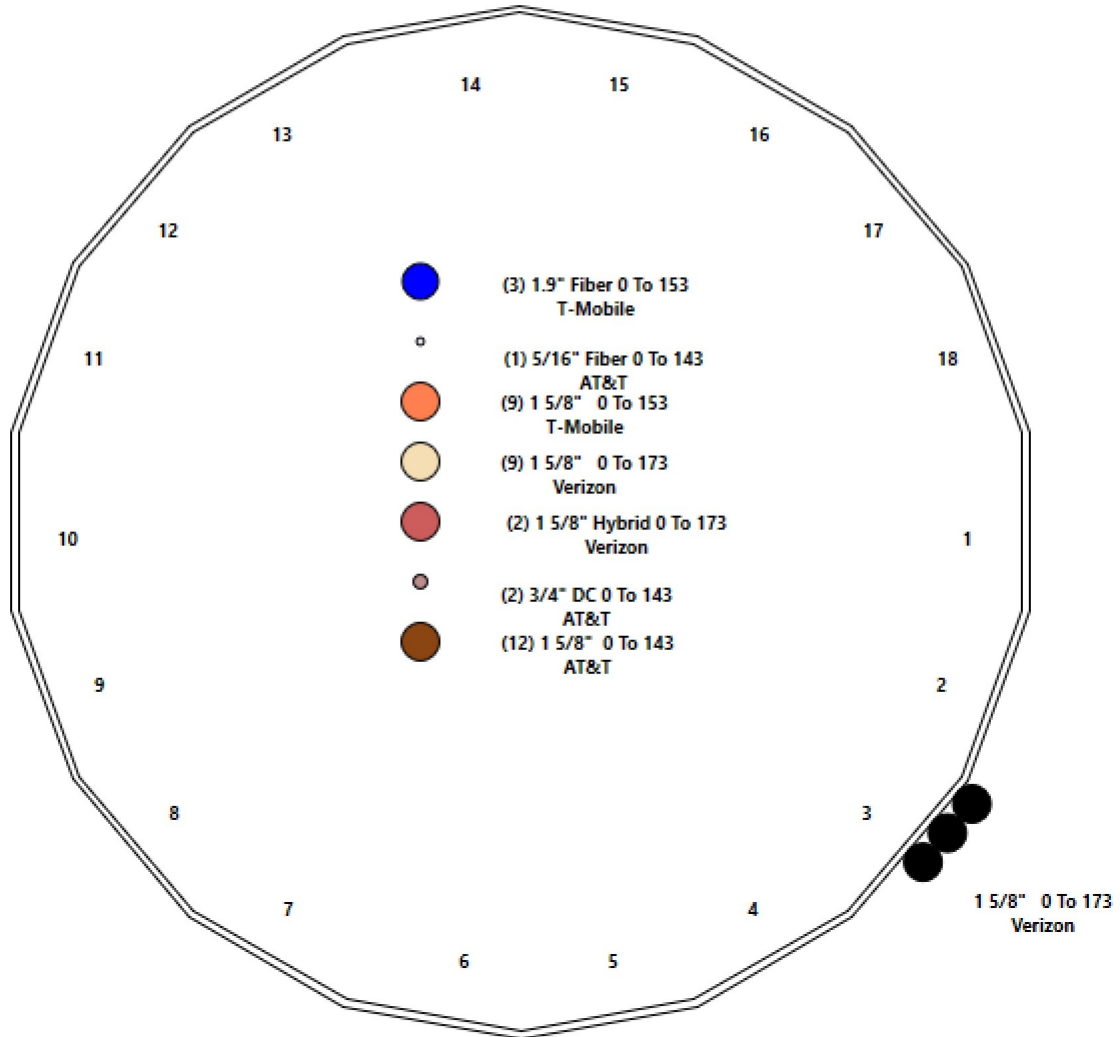
Structure: CT01002-S-SBA - Coax Line Placement

Type: Monopole
Site Name: Waterford
Height: 183.00 (ft)

7/12/2022



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Shaft Properties

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	48.000	0.3750	76		0.00	11,368
2	18	10.000	0.3750	76	Slip	84.00	2,189
3	18	20.000	0.3750	63	Flange	0.00	4,092
4	18	10.000	0.3750	56	Flange	0.00	1,903
5	18	10.000	0.3125	65	Flange	0.00	1,508
6	18	30.000	0.3125	65	Slip	72.00	4,255
7	18	20.000	0.2500	65	Flange	0.00	1,955
8	18	50.000	0.2500	65	Slip	60.00	4,001
9	R	3.000	0.2810	36	Flange	0.00	214
Total Shaft Weight:							31,483

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	76.32	39651.33	28.92	172.00	53.20	48.00	62.87	22166.3	23.60	141.8	0.235417
2	55.60	41.00	65.73	25324.19	24.73	148.26	53.24	51.00	62.92	22221.5	23.62	141.9	0.235417
3	53.24	51.00	62.93	22221.78	23.62	141.98	48.53	71.00	57.32	16797.8	21.41	129.4	0.235417
4	48.53	71.00	57.32	16797.13	21.41	129.43	46.18	81.00	54.52	14452.3	20.30	123.1	0.235417
5	46.18	81.00	45.49	12093.11	24.65	147.78	43.83	91.00	43.16	10325.0	23.32	140.2	0.235417
6	45.87	85.00	45.18	11844.89	24.47	146.77	38.80	115.00	38.18	7145.58	20.48	124.1	0.235417
7	38.80	115.0	30.59	5744.14	25.96	155.21	34.09	135.00	26.85	3886.12	22.64	136.3	0.235417
8	35.77	130.0	28.18	4493.04	23.82	143.08	24.00	180.00	18.85	1343.02	15.52	96.00	0.235417
9	24.00	180.0	20.94	1473.63	0.00	85.41	24.00	183.00	20.94	1473.63	0.00	85.41	0.000000

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Fu (ksi)	Offset (in)	Intermediate Connectors		Termination Connectors			
							Description	Spacing (in)	Description	Spacing (in)	Lower Qty	Upper Qty
66.17	93.83	6	PLT C6x10.5(1.5" Hole)	65	80	0.85	5/8" Hollo Bolt	0.00	5/8" Hollo Bolt	24.00		
111.1	123.8	3	PLT C6x10.5(1.5" Hole)	65	80	0.85	5/8" Hollo Bolt	0.00	5/8" Hollo Bolt	24.00		

Load Summary

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	181.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	2833.73	39.996	1.00	0.00	0.00
2	173.00	(3) T-Arms	1	1500.00	30.00	1.00	2827.72	54.430	1.00	0.00	0.00
3	173.00	LPA-80080-4CF-EDIN-0	4	12.00	2.61	1.70	129.28	3.521	1.70	0.00	0.00
4	173.00	APL866513-42T0	2	15.70	4.05	0.93	126.47	5.940	0.93	0.00	0.00
5	173.00	DB-T1-6Z-8AB-OZ	2	44.00	4.80	0.75	190.17	5.687	0.75	0.00	0.00
6	173.00	Andrew JAHH-65B-R3B	6	63.30	9.11	0.83	297.66	10.477	0.83	0.00	0.00
7	173.00	Samsung MT6407-77A	3	79.40	4.69	0.70	201.03	5.651	0.70	0.00	0.00
8	173.00	BSAMNT-SBS-1-2	3	25.35	0.00	1.00	43.30	0.000	1.00	0.00	0.00
9	173.00	CBC78T-DS-43/E14F05P19	3	10.40	0.37	0.67	31.58	0.658	0.67	0.00	0.00
10	173.00	Samsung B2/B66 RRH BR049	3	84.40	1.87	0.67	162.33	2.452	0.67	0.00	0.00
11	173.00	Samsung B5/B13 RRH BR04C	3	70.30	1.87	0.67	140.92	2.452	0.67	0.00	0.00
12	158.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	2815.73	39.754	1.00	0.00	0.00
13	153.00	RFS APXVAALL24-43-U-NA20	3	122.80	20.24	0.70	541.67	22.144	0.70	0.00	0.00
14	153.00	Low Profile Platform	1	1200.00	25.00	1.00	2249.20	45.984	1.00	0.00	0.00
15	153.00	KRY 112 144/1	3	11.00	0.41	0.70	21.80	0.886	0.70	0.00	0.00
16	153.00	PRK-1245 (kicker kit)	1	464.91	9.50	1.00	790.10	19.467	1.00	0.00	0.00
17	153.00	SPTB(Tie back Kit)	1	140.00	3.70	1.00	316.27	7.582	1.00	0.00	0.00
18	153.00	V-brace kit	1	230.00	2.70	1.00	551.76	5.533	1.00	0.00	0.00
19	153.00	AIR6419 B41	3	66.10	3.80	0.76	162.50	4.597	0.76	0.00	0.00
20	153.00	VV-65A-R1	3	52.90	6.69	0.83	235.06	7.810	0.83	0.00	0.00
21	153.00	4460 Radio	3	109.00	2.85	0.67	181.05	3.526	0.67	0.00	0.00
22	153.00	Ericsson 4449 B71 + B85 RRU	3	73.20	1.97	0.67	131.06	2.541	0.67	0.00	0.00
23	143.00	HRK14	1	352.36	10.13	1.00	768.53	19.983	1.00	0.00	0.00
24	143.00	QS46512-2	1	27.30	5.55	1.00	195.54	14.338	1.00	0.00	0.00
25	143.00	OPA-65R-LCUU-H4	1	57.00	5.94	1.00	214.71	6.967	1.00	0.00	0.00
26	143.00	TPA-65R-LCUUUU-H8	2	75.00	13.30	0.83	385.41	14.938	0.83	0.00	0.00
27	143.00	OPA-65R-LCUU-H8	2	95.00	12.75	0.79	375.65	14.349	0.79	0.00	0.00
28	143.00	DTMABP7819VG12A	3	19.20	1.14	0.67	44.60	1.906	0.67	0.00	0.00
29	143.00	DBC0061F1V51-2	3	25.40	0.43	0.67	39.87	0.714	0.67	0.00	0.00
30	143.00	RRUS 32 B2	3	53.00	2.74	0.67	140.49	3.465	0.67	0.00	0.00
31	143.00	Powerwave 7770.00	3	35.00	5.50	0.73	169.38	6.560	0.73	0.00	0.00
32	143.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	2802.67	39.577	1.00	0.00	0.00
33	143.00	850-1900 Dual Band	3	5.50	0.52	0.66	17.09	1.048	0.66	0.00	0.00
34	143.00	RRUS 11	3	50.70	2.52	0.67	139.37	3.168	0.67	0.00	0.00
35	143.00	DBC-750	3	4.80	0.51	0.50	14.42	1.037	0.50	0.00	0.00
36	143.00	DC6-48-60-18-8F	1	31.80	1.47	1.00	93.33	2.167	1.00	0.00	0.00
Totals:			84	12,085.92			28,170.30				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	183.00	(1) Safety Cable	0.00	Outside
0.00	183.00	(1) Step bolts (ladder)	0.00	Outside
0.00	173.00	(3) 1 5/8" Coax	1.98	Outside
0.00	173.00	(9) 1 5/8" Coax	0.00	Inside
0.00	173.00	(2) 1 5/8" Hybrid	0.00	Inside

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
0.00	153.00	(9) 1 5/8" Coax		0.00							
0.00	153.00	(3) 1.9" Fiber		0.00							
0.00	143.00	(12) 1 5/8" Coax		0.00							
0.00	143.00	(2) 3/4" DC		0.00							
0.00	143.00	(1) 5/16" Fiber		0.00							
110.0	125.00	(3) C6X10.5 Reinforcing plate		2.03							
65.00	95.00	(6) C6X10.5 Reinforcing plate		4.06							

Shaft Section Properties

Structure: CT01002-S-SBA

Code: TIA-222-G

7/12/2022

Site Name: Waterford

Exposure: B

Height: 183.00 (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



Increment Length: 2 (ft)

Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing			
											Area (in^2)	Ixp (in^4)	Iyp (in^4)	Weight (lb)
0.00		0.3750	64.500	76.322	39651.3	28.92	172.00	76	76	0.0				
2.00		0.3750	64.029	75.762	38784.3	28.70	170.74	76	76	517.5				
4.00		0.3750	63.558	75.201	37930.0	28.47	169.49	76	76	513.7				
6.00		0.3750	63.087	74.641	37088.4	28.25	168.23	76	77	509.9				
8.00		0.3750	62.617	74.080	36259.3	28.03	166.98	76	77	506.1				
10.00		0.3750	62.146	73.520	35442.6	27.81	165.72	76	77	502.3				
12.00		0.3750	61.675	72.960	34638.3	27.59	164.47	76	78	498.4				
14.00		0.3750	61.204	72.399	33846.3	27.37	163.21	76	78	494.6				
16.00		0.3750	60.733	71.839	33066.4	27.15	161.96	76	78	490.8				
18.00		0.3750	60.262	71.279	32298.6	26.93	160.70	76	79	487.0				
20.00		0.3750	59.792	70.718	31542.8	26.70	159.44	76	79	483.2				
22.00		0.3750	59.321	70.158	30798.9	26.48	158.19	76	79	479.4				
24.00		0.3750	58.850	69.597	30066.7	26.26	156.93	76	80	475.6				
26.00		0.3750	58.379	69.037	29346.3	26.04	155.68	76	80	471.7				
28.00		0.3750	57.908	68.477	28637.4	25.82	154.42	76	80	467.9				
30.00		0.3750	57.437	67.916	27940.1	25.60	153.17	76	80	464.1				
32.00		0.3750	56.967	67.356	27254.2	25.38	151.91	76	81	460.3				
34.00		0.3750	56.496	66.795	26579.6	25.15	150.66	76	81	456.5				
36.00		0.3750	56.025	66.235	25916.2	24.93	149.40	76	81	452.7				
38.00		0.3750	55.554	65.675	25263.9	24.71	148.14	76	82	448.9				
40.00		0.3750	55.083	65.114	24622.7	24.49	146.89	76	82	445.0				
41.00	Bot - Section 2	0.3750	54.848	64.834	24306.2	24.38	146.26	76	82	221.1				
42.00		0.3750	54.612	64.554	23992.4	24.27	145.63	76	82	443.3				
44.00		0.3750	54.142	63.993	23373.0	24.05	144.38	76	83	880.9				
46.00		0.3750	53.671	63.433	22764.3	23.83	143.12	76	83	873.3				
48.00	Top - Section 1	0.3750	53.950	63.765	23124.1	23.96	143.87	76	83	865.7				
50.00		0.3750	53.479	63.205	22519.7	23.74	142.61	76	83	432.1				
51.00	Top - Section 2	0.3750	53.244	62.925	22221.6	23.62	141.98	76	83	214.6				
51.00	Bot - Section 3	0.3750	53.244	62.925	22221.8	23.62	141.98	63	72					
52.00		0.3750	53.009	62.645	21926.3	23.51	141.36	63	72	213.6				
54.00		0.3750	52.538	62.084	21343.1	23.29	140.10	63	72	424.4				
56.00		0.3750	52.067	61.524	20770.3	23.07	138.85	63	72	420.6				
58.00		0.3750	51.596	60.964	20207.9	22.85	137.59	63	73	416.8				
60.00		0.3750	51.125	60.403	19655.8	22.63	136.33	63	73	413.0				
62.00		0.3750	50.654	59.843	19113.8	22.41	135.08	63	73	409.2				
64.00		0.3750	50.184	59.283	18581.8	22.19	133.82	63	73	405.4				
66.00		0.3750	49.713	58.722	18059.8	21.96	132.57	63	74	401.5				
66.17	RB1	0.3750	49.673	58.675	18015.9	21.95	132.46	63	74	34.0	18.48	6572.7	6572.7	10.7
68.00		0.3750	49.242	58.162	17547.7	21.74	131.31	63	74	363.8	18.48	6467.0	6467.0	115.3
70.00		0.3750	48.771	57.601	17045.4	21.52	130.06	63	74	393.9	18.48	6352.5	6352.5	126.0
71.00	Top - Section 3	0.3750	48.536	57.321	16797.8	21.41	129.43	63	74	195.5	18.48	6295.6	6295.6	63.0
71.00	Bot - Section 4	0.3750	48.535	57.320	16797.1	21.41	129.43	56	67					
72.00		0.3750	48.300	57.040	16552.0	21.30	128.80	56	67	194.6	18.48	6238.8	6238.8	63.0
74.00		0.3750	47.829	56.480	16068.9	21.08	127.54	56	68	386.3	18.48	6126.3	6126.3	126.0
76.00		0.3750	47.358	55.919	15595.4	20.86	126.29	56	68	382.5	18.48	6014.8	6014.8	126.0
78.00		0.3750	46.887	55.359	15131.2	20.64	125.03	56	68	378.7	18.48	5904.4	5904.4	126.0
80.00		0.3750	46.416	54.799	14676.3	20.41	123.78	56	68	374.8	18.48	5795.0	5795.0	126.0
81.00	Top - Section 4	0.3750	46.181	54.518	14452.3	20.30	123.15	56	68	186.0	18.48	5740.7	5740.7	63.0
81.00	Bot - Section 5	0.3125	46.181	45.494	12093.1	24.36	147.78	65	72					
82.00		0.3125	45.946	45.261	11907.9	24.51	147.03	65	73	154.4	18.48	5686.6	5686.6	63.0

Increment Length: 2 (ft)

Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing			
											Area (in^2)	Ixp (in^4)	Iyp (in^4)	Weight (lb)
84.00		0.3125	45.475	44.794	11543.1	24.25	145.52	65	73	306.4	18.48	5579.3	5579.3	126.0
85.00	Bot - Section 6	0.3125	45.239	44.560	11363.5	24.12	144.77	65	73	152.0	18.48	5526.0	5526.0	63.0
86.00		0.3125	45.004	44.327	11185.8	23.98	144.01	65	73	304.6	18.48	5614.5	5614.5	63.0
88.00		0.3125	44.533	43.860	10836.0	23.72	142.51	65	74	604.4	18.48	5507.8	5507.8	126.0
90.00		0.3125	44.062	43.393	10493.5	23.45	141.00	65	74	598.0	18.48	5402.1	5402.1	126.0
91.00	Top - Section 5	0.3125	44.452	43.780	10776.8	23.67	142.25	65	74	296.6	18.48	5349.7	5349.7	63.0
92.00		0.3125	44.217	43.546	10605.3	23.54	141.49	65	74	148.6	18.48	5297.5	5297.5	63.0
93.83	RT1	0.3125	43.786	43.119	10296.2	23.30	140.12	65	74	269.8	18.48	5202.6	5202.6	115.3
94.00		0.3125	43.746	43.079	10267.8	23.27	139.99	65	74	24.9				
96.00		0.3125	43.275	42.612	9937.5	23.01	138.48	65	74	291.6				
98.00		0.3125	42.805	42.145	9614.3	22.74	136.97	65	75	288.4				
100.00		0.3125	42.334	41.678	9298.2	22.48	135.47	65	75	285.2				
102.00		0.3125	41.863	41.211	8989.2	22.21	133.96	65	75	282.1				
104.00		0.3125	41.392	40.744	8687.0	21.94	132.45	65	76	278.9				
106.00		0.3125	40.921	40.277	8391.8	21.68	130.95	65	76	275.7				
108.00		0.3125	40.450	39.810	8103.2	21.41	129.44	65	76	272.5				
110.00		0.3125	39.980	39.343	7821.4	21.15	127.93	65	77	269.3				
111.17	RB2	0.3125	39.704	39.070	7659.6	20.99	127.05	65	77	156.1	9.24	2173.3	2173.3	36.9
112.00		0.3125	39.509	38.876	7546.2	20.88	126.43	65	77	110.1	9.24	2153.7	2153.7	26.1
114.00		0.3125	39.038	38.409	7277.5	20.62	124.92	65	77	263.0	9.24	2107.0	2107.0	63.0
115.00	Top - Section 6	0.3125	38.802	38.176	7145.6	20.48	124.17	65	77	130.3	9.24	2083.9	2083.9	31.5
115.00	Bot - Section 7	0.2500	38.802	30.590	5744.1	25.60	155.21	65	71					
116.00		0.2500	38.567	30.403	5639.6	25.79	154.27	65	71	103.8	9.24	2060.8	2060.8	31.5
118.00		0.2500	38.096	30.030	5434.2	25.46	152.38	65	71	205.6	9.24	2015.2	2015.2	63.0
120.00		0.2500	37.625	29.656	5233.9	25.13	150.50	65	72	203.1	9.24	1970.0	1970.0	63.0
122.00		0.2500	37.154	29.282	5038.6	24.79	148.62	65	72	200.6	9.24	1925.4	1925.4	63.0
123.83	RT2	0.2500	36.723	28.940	4864.2	24.49	146.89	65	73	181.3	9.24	1885.0	1885.0	57.6
124.00		0.2500	36.683	28.909	4848.2	24.46	146.73	65	73	16.7				
126.00		0.2500	36.212	28.535	4662.6	24.13	144.85	65	73	195.5				
128.00		0.2500	35.742	28.162	4481.9	23.80	142.97	65	73	192.9				
130.00	Bot - Section 8	0.2500	35.271	27.788	4305.9	23.47	141.08	65	74	190.4				
132.00		0.2500	34.800	27.414	4134.5	23.13	139.20	65	74	378.4				
134.00		0.2500	34.329	27.041	3967.8	22.80	137.32	65	75	373.3				
135.00	Top - Section 7	0.2500	34.594	27.251	4061.0	22.99	138.38	65	74	184.7				
136.00		0.2500	34.358	27.064	3978.1	22.82	137.43	65	75	92.4				
138.00		0.2500	33.888	26.691	3815.6	22.49	135.55	65	75	182.9				
140.00		0.2500	33.417	26.317	3657.6	22.16	133.67	65	75	180.4				
142.00		0.2500	32.946	25.943	3504.0	21.83	131.78	65	76	177.8				
143.00		0.2500	32.711	25.757	3428.9	21.66	130.84	65	76	88.0				
144.00		0.2500	32.475	25.570	3354.8	21.49	129.90	65	76	87.3				
146.00		0.2500	32.004	25.196	3209.9	21.16	128.02	65	77	172.7				
148.00		0.2500	31.533	24.823	3069.2	20.83	126.13	65	77	170.2				
150.00		0.2500	31.063	24.449	2932.7	20.50	124.25	65	77	167.7				
152.00		0.2500	30.592	24.075	2800.3	20.17	122.37	65	78	165.1				
153.00		0.2500	30.356	23.889	2735.7	20.00	121.43	65	78	81.6				
154.00		0.2500	30.121	23.702	2672.0	19.83	120.48	65	78	81.0				
156.00		0.2500	29.650	23.328	2547.6	19.50	118.60	65	78	160.0				
158.00		0.2500	29.179	22.955	2427.2	19.17	116.72	65	79	157.5				
160.00		0.2500	28.708	22.581	2310.6	18.84	114.83	65	79	154.9				
162.00		0.2500	28.238	22.207	2197.8	18.51	112.95	65	80	152.4				
164.00		0.2500	27.767	21.834	2088.7	18.17	111.07	65	80	149.9				
166.00		0.2500	27.296	21.460	1983.3	17.84	109.18	65	80	147.3				
168.00		0.2500	26.825	21.087	1881.5	17.51	107.30	65	81	144.8				
170.00		0.2500	26.354	20.713	1783.3	17.18	105.42	65	81	142.2				
172.00		0.2500	25.883	20.339	1688.5	16.85	103.53	65	82	139.7				
173.00		0.2500	25.648	20.153	1642.4	16.68	102.59	65	82	68.9				
174.00		0.2500	25.413	19.966	1597.2	16.51	101.65	65	82	68.3				
176.00		0.2500	24.942	19.592	1509.2	16.18	99.77	65	82	134.6				
178.00		0.2500	24.471	19.219	1424.5	15.85	97.88	65	83	132.1				
180.00	Top - Section 8	0.2500	24.000	18.845	1343.0	15.52	96.00	65	83	129.5				

Increment Length: 2 (ft)

Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Additional Reinforcing			
											Area (in ²)	Ixp (in ⁴)	Iyp (in ⁴)	Weight (lb)
180.00	Bot - Section 9	0.2810	24.000	20.939	1473.6	13.81	85.41	36	36					
181.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36	36	71.3				
182.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36	36	71.3				
183.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36	36	71.3				
Total Weight										31483.2				2188.9

Wind Loading - Shaft

Structure: CT01002-S-SBA

Code: TIA-222-G

7/12/2022

Site Name: Waterford

Exposure: B

Height: 183.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

Page: 11



Load Case: 1.2D + 1.6W 105 mph Wind

Iterations 29

Dead Load Factor 1.20

Wind Load Factor 1.60



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	18.769	20.65	479.47	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	18.769	20.65	475.97	0.650	0.000	2.00	10.876	7.07	233.5	0.0	621.0
4.00		1.00	0.70	18.769	20.65	472.47	0.650	0.000	2.00	10.796	7.02	231.8	0.0	616.4
6.00		1.00	0.70	18.769	20.65	468.97	0.650	0.000	2.00	10.717	6.97	230.1	0.0	611.9
8.00		1.00	0.70	18.769	20.65	465.47	0.650	0.000	2.00	10.637	6.91	228.4	0.0	607.3
10.00		1.00	0.70	18.769	20.65	461.97	0.650	0.000	2.00	10.557	6.86	226.7	0.0	602.7
12.00		1.00	0.70	18.769	20.65	458.47	0.650	0.000	2.00	10.478	6.81	225.0	0.0	598.1
14.00		1.00	0.70	18.769	20.65	454.97	0.650	0.000	2.00	10.398	6.76	223.3	0.0	593.5
16.00		1.00	0.70	18.769	20.65	451.47	0.650	0.000	2.00	10.318	6.71	221.5	0.0	589.0
18.00		1.00	0.70	18.769	20.65	447.97	0.650	0.000	2.00	10.239	6.66	219.8	0.0	584.4
20.00		1.00	0.70	18.769	20.65	444.47	0.650	0.000	2.00	10.159	6.60	218.1	0.0	579.8
22.00		1.00	0.70	18.769	20.65	440.97	0.650	0.000	2.00	10.079	6.55	216.4	0.0	575.2
24.00		1.00	0.70	18.769	20.65	437.47	0.650	0.000	2.00	9.999	6.50	214.7	0.0	570.7
26.00		1.00	0.70	18.769	20.65	433.97	0.650	0.000	2.00	9.920	6.45	213.0	0.0	566.1
28.00		1.00	0.70	18.769	20.65	430.47	0.650	0.000	2.00	9.840	6.40	211.3	0.0	561.5
30.00		1.00	0.70	18.785	20.66	427.15	0.650	0.000	2.00	9.760	6.34	209.7	0.0	556.9
32.00		1.00	0.71	19.134	21.05	427.58	0.650	0.000	2.00	9.681	6.29	211.9	0.0	552.4
34.00		1.00	0.73	19.469	21.42	427.73	0.650	0.000	2.00	9.601	6.24	213.8	0.0	547.8
36.00		1.00	0.74	19.789	21.77	427.64	0.650	0.000	2.00	9.521	6.19	215.6	0.0	543.2
38.00		1.00	0.75	20.097	22.11	427.34	0.650	0.000	2.00	9.442	6.14	217.1	0.0	538.6
40.00		1.00	0.76	20.394	22.43	426.83	0.650	0.000	2.00	9.362	6.09	218.4	0.0	534.1
41.00	Bot - Section 2	1.00	0.77	20.538	22.59	426.51	0.650	0.000	1.00	4.651	3.02	109.3	0.0	265.3
42.00		1.00	0.77	20.680	22.75	426.14	0.650	0.000	1.00	4.695	3.05	111.1	0.0	532.0
44.00		1.00	0.78	20.957	23.05	425.29	0.650	0.000	2.00	9.330	6.06	223.7	0.0	1057.1
46.00		1.00	0.79	21.225	23.35	424.27	0.650	0.000	2.00	9.250	6.01	224.6	0.0	1047.9
48.00	Top - Section 1	1.00	0.80	21.485	23.63	423.12	0.650	0.000	2.00	9.170	5.96	225.4	0.0	1038.8
50.00		1.00	0.81	21.737	23.91	427.83	0.650	0.000	2.00	9.091	5.91	226.1	0.0	518.5
51.00	Top - Section 2	1.00	0.82	21.860	24.05	427.15	0.650	0.000	1.00	4.515	2.94	112.9	0.0	257.5
52.00		1.00	0.82	21.982	24.18	426.44	0.650	0.000	1.00	4.495	2.92	113.0	0.0	256.4
54.00		1.00	0.83	22.220	24.44	424.94	0.650	0.000	2.00	8.931	5.81	227.0	0.0	509.3
56.00		1.00	0.84	22.452	24.70	423.33	0.650	0.000	2.00	8.852	5.75	227.4	0.0	504.7
58.00		1.00	0.85	22.678	24.95	421.61	0.650	0.000	2.00	8.772	5.70	227.6	0.0	500.2
60.00		1.00	0.85	22.899	25.19	419.79	0.650	0.000	2.00	8.692	5.65	227.7	0.0	495.6
62.00		1.00	0.86	23.114	25.43	417.87	0.650	0.000	2.00	8.612	5.60	227.7	0.0	491.0
64.00		1.00	0.87	23.325	25.66	415.87	0.650	0.000	2.00	8.533	5.55	227.7	0.0	486.4
66.00		1.00	0.88	23.531	25.88	413.78	0.650	0.000	2.00	8.453	5.49	227.6	0.0	481.9
66.17	RB1	1.00	0.88	23.548	25.90	413.60	0.688*	0.000	0.17	0.715	0.49	20.4	0.0	40.7
68.00		1.00	0.89	23.733	26.11	411.62	0.690*	0.000	1.83	7.659	5.28	220.6	0.0	436.5
70.00		1.00	0.89	23.930	26.32	409.37	0.692*	0.000	2.00	8.294	5.74	241.6	0.0	472.7
71.00	Top - Section 3	1.00	0.90	24.027	26.43	408.22	0.693*	0.000	1.00	4.117	2.85	120.7	0.0	234.6
72.00		1.00	0.90	24.123	26.54	407.05	0.695*	0.000	1.00	4.097	2.85	120.8	0.0	233.5
74.00		1.00	0.91	24.313	26.74	404.66	0.696*	0.000	2.00	8.134	5.66	242.4	0.0	463.5
76.00		1.00	0.91	24.499	26.95	402.21	0.699*	0.000	2.00	8.055	5.63	242.7	0.0	459.0
78.00		1.00	0.92	24.681	27.15	399.69	0.701*	0.000	2.00	7.975	5.59	242.9	0.0	454.4
80.00		1.00	0.93	24.861	27.35	397.11	0.704*	0.000	2.00	7.895	5.56	243.1	0.0	449.8
81.00	Top - Section 4	1.00	0.93	24.949	27.44	395.80	0.706*	0.000	1.00	3.918	2.76	121.4	0.0	223.2
82.00		1.00	0.93	25.037	27.54	394.47	0.707*	0.000	1.00	3.898	2.76	121.4	0.0	185.3

Wind Loading - Shaft

Structure: CT01002-S-SBA

Code: TIA-222-G

7/12/2022

Site Name: Waterford

Exposure: B

Height: 183.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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84.00	1.00	0.94	25.210	27.73	391.78	0.709 *	0.000	2.00	7.736	5.48	243.3	0.0	367.7
85.00 Bot - Section 6	1.00	0.94	25.295	27.82	390.41	0.711 *	0.000	1.00	3.838	2.73	121.4	0.0	182.4
86.00	1.00	0.95	25.380	27.92	389.03	0.712 *	0.000	1.00	3.871	2.76	123.1	0.0	365.5
88.00	1.00	0.95	25.547	28.10	386.22	0.714 *	0.000	2.00	7.682	5.49	246.7	0.0	725.3
90.00	1.00	0.96	25.711	28.28	383.37	0.717 *	0.000	2.00	7.603	5.45	246.6	0.0	717.6
91.00 Top - Section 5	1.00	0.96	25.793	28.37	381.92	0.719 *	0.000	1.00	3.771	2.71	123.1	0.0	356.0
92.00	1.00	0.96	25.873	28.46	385.92	0.717 *	0.000	1.00	3.752	2.69	122.4	0.0	178.3
93.83 RT1	1.00	0.97	26.019	28.62	383.24	0.719 *	0.000	1.83	6.814	4.90	224.2	0.0	323.8
94.00	1.00	0.97	26.033	28.64	382.99	0.720 *	0.000	0.17	0.630	0.45	20.8	0.0	29.9
96.00	1.00	0.98	26.190	28.81	380.01	0.650	0.000	2.00	7.364	4.79	220.6	0.0	349.9
98.00	1.00	0.98	26.345	28.98	376.98	0.650	0.000	2.00	7.284	4.73	219.5	0.0	346.1
100.00	1.00	0.99	26.497	29.15	373.91	0.650	0.000	2.00	7.204	4.68	218.4	0.0	342.3
102.00	1.00	0.99	26.648	29.31	370.80	0.650	0.000	2.00	7.125	4.63	217.2	0.0	338.5
104.00	1.00	1.00	26.796	29.48	367.65	0.650	0.000	2.00	7.045	4.58	216.0	0.0	334.7
106.00	1.00	1.00	26.942	29.64	364.46	0.650	0.000	2.00	6.965	4.53	214.7	0.0	330.8
108.00	1.00	1.01	27.086	29.79	361.23	0.650	0.000	2.00	6.886	4.48	213.4	0.0	327.0
110.00	1.00	1.02	27.229	29.95	357.96	0.650	0.000	2.00	6.806	4.42	212.0	0.0	323.2
111.17 RB2	1.00	1.02	27.311	30.04	356.03	0.650	0.000	1.17	3.945	2.56	123.2	0.0	187.3
112.00	1.00	1.02	27.369	30.11	354.66	0.650	0.000	0.83	2.782	1.81	87.1	0.0	132.1
114.00	1.00	1.03	27.508	30.26	351.32	0.651 *	0.000	2.00	6.647	4.33	209.5	0.0	315.6
115.00 Top - Section 6	1.00	1.03	27.577	30.33	349.64	0.653 *	0.000	1.00	3.293	2.15	104.4	0.0	156.4
116.00	1.00	1.03	27.645	30.41	347.94	0.654 *	0.000	1.00	3.273	2.14	104.2	0.0	124.5
118.00	1.00	1.04	27.780	30.56	344.53	0.656 *	0.000	2.00	6.487	4.25	208.0	0.0	246.8
120.00	1.00	1.04	27.914	30.71	341.09	0.658 *	0.000	2.00	6.407	4.22	207.3	0.0	243.7
122.00	1.00	1.05	28.046	30.85	337.62	0.661 *	0.000	2.00	6.328	4.18	206.4	0.0	240.7
123.83 RT2	1.00	1.05	28.166	30.98	334.42	0.663 *	0.000	1.83	5.720	3.80	188.1	0.0	217.5
124.00	1.00	1.05	28.177	30.99	334.12	0.665 *	0.000	0.17	0.528	0.35	17.4	0.0	20.1
126.00	1.00	1.06	28.306	31.14	330.58	0.650	0.000	2.00	6.168	4.01	199.7	0.0	234.6
128.00	1.00	1.06	28.434	31.28	327.02	0.650	0.000	2.00	6.089	3.96	198.1	0.0	231.5
130.00 Bot - Section 8	1.00	1.07	28.560	31.42	323.43	0.650	0.000	2.00	6.009	3.91	196.3	0.0	228.5
132.00	1.00	1.07	28.685	31.55	319.81	0.650	0.000	2.00	6.014	3.91	197.4	0.0	454.1
134.00	1.00	1.07	28.808	31.69	316.16	0.650	0.000	2.00	5.934	3.86	195.6	0.0	448.0
135.00 Top - Section 7	1.00	1.08	28.869	31.76	314.32	0.650	0.000	1.00	2.937	1.91	97.0	0.0	221.7
136.00	1.00	1.08	28.930	31.82	317.10	0.650	0.000	1.00	2.917	1.90	96.6	0.0	110.9
138.00	1.00	1.08	29.051	31.96	313.41	0.650	0.000	2.00	5.775	3.75	191.9	0.0	219.5
140.00	1.00	1.09	29.171	32.09	309.69	0.650	0.000	2.00	5.695	3.70	190.1	0.0	216.4
142.00	1.00	1.09	29.289	32.22	305.95	0.650	0.000	2.00	5.616	3.65	188.2	0.0	213.4
143.00 Appurtenance(s)	1.00	1.09	29.348	32.28	304.06	0.650	0.000	1.00	2.778	1.81	93.3	0.0	105.6
144.00	1.00	1.10	29.407	32.35	302.18	0.650	0.000	1.00	2.758	1.79	92.8	0.0	104.8
146.00	1.00	1.10	29.523	32.48	298.38	0.650	0.000	2.00	5.456	3.55	184.3	0.0	207.3
148.00	1.00	1.11	29.638	32.60	294.56	0.650	0.000	2.00	5.376	3.49	182.3	0.0	204.2
150.00	1.00	1.11	29.752	32.73	290.72	0.650	0.000	2.00	5.297	3.44	180.3	0.0	201.2
152.00	1.00	1.11	29.865	32.85	286.86	0.650	0.000	2.00	5.217	3.39	178.2	0.0	198.1
153.00 Appurtenance(s)	1.00	1.12	29.921	32.91	284.92	0.650	0.000	1.00	2.579	1.68	88.3	0.0	97.9
154.00	1.00	1.12	29.976	32.97	282.97	0.650	0.000	1.00	2.559	1.66	87.7	0.0	97.2
156.00	1.00	1.12	30.087	33.10	279.06	0.650	0.000	2.00	5.058	3.29	174.1	0.0	192.0
158.00 Appurtenance(s)	1.00	1.13	30.197	33.22	275.13	0.650	0.000	2.00	4.978	3.24	172.0	0.0	189.0
160.00	1.00	1.13	30.305	33.34	271.18	0.650	0.000	2.00	4.898	3.18	169.8	0.0	185.9
162.00	1.00	1.13	30.413	33.45	267.21	0.650	0.000	2.00	4.819	3.13	167.7	0.0	182.9
164.00	1.00	1.14	30.520	33.57	263.21	0.650	0.000	2.00	4.739	3.08	165.5	0.0	179.8
166.00	1.00	1.14	30.626	33.69	259.20	0.650	0.000	2.00	4.659	3.03	163.2	0.0	176.8
168.00	1.00	1.15	30.731	33.80	255.16	0.650	0.000	2.00	4.580	2.98	161.0	0.0	173.7
170.00	1.00	1.15	30.835	33.92	251.11	0.650	0.000	2.00	4.500	2.92	158.7	0.0	170.7
172.00	1.00	1.15	30.938	34.03	247.03	0.650	0.000	2.00	4.420	2.87	156.4	0.0	167.6
173.00 Appurtenance(s)	1.00	1.16	30.989	34.09	244.99	0.650	0.000	1.00	2.180	1.42	77.3	0.0	82.7
174.00	1.00	1.16	31.041	34.14	242.94	0.650	0.000	1.00	2.160	1.40	76.7	0.0	81.9
176.00	1.00	1.16	31.142	34.26	238.83	0.650	0.000	2.00	4.261	2.77	151.8	0.0	161.5

Wind Loading - Shaft

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 13
	Struct Class: II	



178.00	1.00	1.17	31.243	34.37	234.70	0.650	0.000	2.00	4.181	2.72	149.4	0.0	158.5
180.00 Top - Section 8	1.00	1.17	31.343	34.48	230.55	0.650	0.000	2.00	4.102	2.67	147.1	0.0	155.4
181.00 Appurtenance(s)	1.00	1.17	31.392	34.53	227.23	0.600	0.000	1.00	2.000	1.20	66.3	0.0	85.5
182.00	1.00	1.17	31.442	34.59	227.41	0.600	0.000	1.00	2.000	1.20	66.4	0.0	85.5
183.00	1.00	1.17	31.491	34.64	227.58	0.600	0.000	1.00	2.000	1.20	66.5	0.0	85.5
Totals:								183.00			19,063.7		37,779.9

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

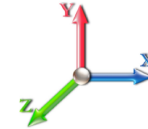
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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	181.00	Low Profile	1	31.392	34.532	1.00	1.00	22.00	1800.00	0.000	0.000	1215.51	0.00	0.00			
2	173.00	Samsung B2/B66 RRH	3	30.989	34.088	0.54	0.80	3.01	303.84	0.000	0.000	164.00	0.00	0.00			
3	173.00	Andrew JAHH-65B-R3B	6	30.989	34.088	0.66	0.80	36.29	455.76	0.000	0.000	1979.54	0.00	0.00			
4	173.00	Samsung MT6407-77A	3	30.989	34.088	0.56	0.80	7.88	285.84	0.000	0.000	429.74	0.00	0.00			
5	173.00	CBC78T-DS-43/E14F05P	3	30.989	34.088	0.54	0.80	0.59	37.44	0.000	0.000	32.45	0.00	0.00			
6	173.00	BSAMNT-SBS-1-2	3	30.989	34.088	0.75	0.75	0.00	91.26	0.000	0.000	0.00	0.00	0.00			
7	173.00	Samsung B5/B13 RRH	3	30.989	34.088	0.54	0.80	3.01	253.08	0.000	0.000	164.00	0.00	0.00			
8	173.00	(3) T-Arms	1	30.989	34.088	0.75	0.75	22.50	1800.00	0.000	0.000	1227.18	0.00	0.00			
9	173.00	LPA-80080-4CF-EDIN-0	4	30.989	34.088	1.36	0.80	14.20	57.60	0.000	0.000	774.40	0.00	0.00			
10	173.00	APL866513-42T0	2	30.989	34.088	0.74	0.80	6.03	37.68	0.000	0.000	328.69	0.00	0.00			
11	173.00	DB-T1-6Z-8AB-OZ	2	30.989	34.088	0.60	0.80	5.76	105.60	0.000	0.000	314.16	0.00	0.00			
12	158.00	Low Profile	1	30.197	33.216	1.00	1.00	22.00	1800.00	0.000	0.000	1169.22	0.00	0.00			
13	153.00	4460 Radio	3	29.921	32.913	0.50	0.75	4.30	392.40	0.000	0.000	226.25	0.00	0.00			
14	153.00	VV-65A-R1	3	29.921	32.913	0.62	0.75	12.49	190.44	0.000	0.000	657.91	0.00	0.00			
15	153.00	AIR6419 B41	3	29.921	32.913	0.57	0.75	6.50	237.96	0.000	0.000	342.19	0.00	0.00			
16	153.00	Ericsson 4449 B71 + B85	3	29.921	32.913	0.50	0.75	2.97	263.52	0.000	0.000	156.39	0.00	0.00			
17	153.00	V-brace kit	1	29.921	32.913	1.00	1.00	2.70	276.00	0.000	0.000	142.18	0.00	0.00			
18	153.00	SPTB(Tie back Kit)	1	29.921	32.913	1.00	1.00	3.70	168.00	0.000	0.000	194.84	0.00	0.00			
19	153.00	PRK-1245 (kicker kit)	1	29.921	32.913	1.00	1.00	9.50	557.89	0.000	0.000	500.27	0.00	0.00			
20	153.00	Low Profile Platform	1	29.921	32.913	1.00	1.00	25.00	1440.00	0.000	0.000	1316.50	0.00	0.00			
21	153.00	RFS	3	29.921	32.913	0.52	0.75	31.88	442.08	0.000	0.000	1678.70	0.00	0.00			
22	153.00	KRY 112 144/1	3	29.921	32.913	0.52	0.75	0.65	39.60	0.000	0.000	34.01	0.00	0.00			
23	143.00	DC6-48-60-18-8F	1	29.348	32.283	0.75	0.75	1.10	38.16	0.000	0.000	56.95	0.00	0.00			
24	143.00	HRK14	1	29.348	32.283	1.00	1.00	10.13	422.83	0.000	0.000	523.24	0.00	0.00			
25	143.00	Powerwave 7770.00	3	29.348	32.283	0.55	0.75	9.03	126.00	0.000	0.000	466.62	0.00	0.00			
26	143.00	Low Profile	1	29.348	32.283	1.00	1.00	22.00	1800.00	0.000	0.000	1136.36	0.00	0.00			
27	143.00	850-1900 Dual Band	3	29.348	32.283	0.49	0.75	0.77	19.80	0.000	0.000	39.89	0.00	0.00			
28	143.00	RRUS 11	3	29.348	32.283	0.50	0.75	3.80	182.52	0.000	0.000	196.22	0.00	0.00			
29	143.00	DBC-750	3	29.348	32.283	0.38	0.75	0.57	17.28	0.000	0.000	29.64	0.00	0.00			
30	143.00	OPA-65R-LCUU-H4	1	29.348	32.283	0.75	0.75	4.46	68.40	0.000	0.000	230.11	0.00	0.00			
31	143.00	QS46512-2	1	29.348	32.283	0.75	0.75	4.16	32.76	0.000	0.000	215.01	0.00	0.00			
32	143.00	TPA-65R-LCUUUU-H8	2	29.348	32.283	0.62	0.75	16.56	180.00	0.000	0.000	855.30	0.00	0.00			
33	143.00	OPA-65R-LCUU-H8	2	29.348	32.283	0.59	0.75	15.11	228.00	0.000	0.000	780.41	0.00	0.00			
34	143.00	DTMABP7819VG12A	3	29.348	32.283	0.50	0.75	1.72	69.12	0.000	0.000	88.77	0.00	0.00			
35	143.00	DBC0061F1V51-2	3	29.348	32.283	0.50	0.75	0.65	91.44	0.000	0.000	33.48	0.00	0.00			
36	143.00	RRUS 32 B2	3	29.348	32.283	0.50	0.75	4.13	190.80	0.000	0.000	213.36	0.00	0.00			
Totals:								14,503.10							17,913.50		

Total Applied Force Summary

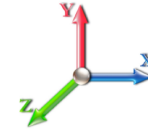
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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
2.00		233.53	721.12	0.00	0.00
4.00		231.82	716.54	0.00	0.00
6.00		230.10	711.97	0.00	0.00
8.00		228.39	707.39	0.00	0.00
10.00		226.68	702.81	0.00	0.00
12.00		224.97	698.24	0.00	0.00
14.00		223.26	693.66	0.00	0.00
16.00		221.55	689.08	0.00	0.00
18.00		219.84	684.51	0.00	0.00
20.00		218.13	679.93	0.00	0.00
22.00		216.42	675.35	0.00	0.00
24.00		214.71	670.78	0.00	0.00
26.00		212.99	666.20	0.00	0.00
28.00		211.28	661.62	0.00	0.00
30.00		209.75	657.05	0.00	0.00
32.00		211.91	652.47	0.00	0.00
34.00		213.84	647.90	0.00	0.00
36.00		215.55	643.32	0.00	0.00
38.00		217.08	638.74	0.00	0.00
40.00		218.42	634.17	0.00	0.00
41.00		109.28	315.37	0.00	0.00
42.00		111.07	582.03	0.00	0.00
44.00		223.68	1157.21	0.00	0.00
46.00		224.60	1148.05	0.00	0.00
48.00		225.39	1138.90	0.00	0.00
50.00		226.05	618.57	0.00	0.00
51.00		112.92	307.57	0.00	0.00
52.00		113.05	306.43	0.00	0.00
54.00		227.03	609.42	0.00	0.00
56.00		227.35	604.85	0.00	0.00
58.00		227.58	600.27	0.00	0.00
60.00		227.70	595.69	0.00	0.00
62.00		227.74	591.12	0.00	0.00
64.00		227.69	586.54	0.00	0.00
66.00		227.55	581.96	0.00	0.00
66.17		20.40	49.26	0.00	0.00
68.00		220.58	528.13	0.00	0.00
70.00		241.61	572.81	0.00	0.00
71.00		120.72	284.69	0.00	0.00
72.00		120.82	283.54	0.00	0.00
74.00		242.37	563.65	0.00	0.00
76.00		242.66	559.07	0.00	0.00
78.00		242.89	554.50	0.00	0.00
80.00		243.07	549.92	0.00	0.00
81.00		121.37	273.24	0.00	0.00
82.00		121.40	235.35	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00	243.27	467.83	0.00	0.00	
85.00	121.44	232.49	0.00	0.00	
86.00	123.13	415.54	0.00	0.00	
88.00	246.66	825.37	0.00	0.00	
90.00	246.62	817.74	0.00	0.00	
91.00	123.09	406.01	0.00	0.00	
92.00	122.43	228.35	0.00	0.00	
93.83	224.23	415.40	0.00	0.00	
94.00	20.77	38.43	0.00	0.00	
96.00	220.63	450.02	0.00	0.00	
98.00	219.53	446.20	0.00	0.00	
100.00	218.38	442.39	0.00	0.00	
102.00	217.19	438.58	0.00	0.00	
104.00	215.96	434.76	0.00	0.00	
106.00	214.68	430.95	0.00	0.00	
108.00	213.36	427.14	0.00	0.00	
110.00	212.00	423.32	0.00	0.00	
111.17	123.24	245.88	0.00	0.00	
112.00	87.10	173.63	0.00	0.00	
114.00	209.51	415.69	0.00	0.00	
115.00	104.36	206.42	0.00	0.00	
116.00	104.17	174.58	0.00	0.00	
118.00	208.04	346.88	0.00	0.00	
120.00	207.26	343.83	0.00	0.00	
122.00	206.45	340.78	0.00	0.00	
123.83	188.13	309.14	0.00	0.00	
124.00	17.41	28.59	0.00	0.00	
126.00	199.74	334.67	0.00	0.00	
128.00	198.05	331.62	0.00	0.00	
130.00	196.33	328.57	0.00	0.00	
132.00	197.35	554.17	0.00	0.00	
134.00	195.57	548.07	0.00	0.00	
135.00	97.01	271.75	0.00	0.00	
136.00	96.55	160.95	0.00	0.00	
138.00	191.93	319.61	0.00	0.00	
140.00	190.06	316.56	0.00	0.00	
142.00	188.16	313.51	0.00	0.00	
143.00	(30) attachments	4958.62	3622.72	0.00	0.00
144.00		92.78	138.81	0.00	0.00
146.00		184.28	275.34	0.00	0.00
148.00		182.29	272.29	0.00	0.00
150.00		180.28	269.24	0.00	0.00
152.00		178.24	266.19	0.00	0.00
153.00	(22) attachments	5337.51	4139.84	0.00	0.00
154.00		87.75	116.36	0.00	0.00
156.00		174.09	230.42	0.00	0.00
158.00	(1) attachments	1341.19	2027.37	0.00	0.00
160.00		169.82	224.32	0.00	0.00
162.00		167.66	221.27	0.00	0.00
164.00		165.46	218.22	0.00	0.00
166.00		163.25	215.17	0.00	0.00
168.00		161.00	212.12	0.00	0.00
170.00		158.74	209.07	0.00	0.00
172.00		156.45	206.01	0.00	0.00
173.00	(30) attachments	5491.47	3529.96	0.00	0.00
174.00		76.71	83.48	0.00	0.00
176.00		151.80	164.68	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (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



178.00	149.45	161.63	0.00	0.00
180.00	147.07	158.58	0.00	0.00
181.00 (1) attachments	1281.81	1887.08	0.00	0.00
182.00	66.40	87.08	0.00	0.00
183.00	66.51	87.08	0.00	0.00
Totals:	36,977.19	60,180.73	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

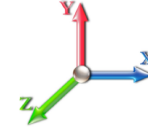


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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 29

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)
2.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.030	0.000	18.769	0.00	0.66
2.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.030	0.000	18.769	0.00	2.50
2.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.030	0.000	18.769	0.00	7.49
4.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	0.66
4.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	2.50
4.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.031	0.000	18.769	0.00	7.49
6.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	0.66
6.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	2.50
6.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.031	0.000	18.769	0.00	7.49
8.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	0.66
8.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	2.50
8.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.031	0.000	18.769	0.00	7.49
10.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	0.66
10.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	2.50
10.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.031	0.000	18.769	0.00	7.49
12.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	0.66
12.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	2.50
12.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.031	0.000	18.769	0.00	7.49
14.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	18.769	0.00	0.66
14.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	18.769	0.00	2.50
14.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.032	0.000	18.769	0.00	7.49
16.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	18.769	0.00	0.66
16.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	18.769	0.00	2.50
16.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.032	0.000	18.769	0.00	7.49
18.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	18.769	0.00	0.66
18.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	18.769	0.00	2.50
18.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.032	0.000	18.769	0.00	7.49
20.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	18.769	0.00	0.66
20.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	18.769	0.00	2.50
20.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.032	0.000	18.769	0.00	7.49
22.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	18.769	0.00	0.66
22.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	18.769	0.00	2.50
22.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.033	0.000	18.769	0.00	7.49
24.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	18.769	0.00	0.66
24.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	18.769	0.00	2.50
24.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.033	0.000	18.769	0.00	7.49
26.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	18.769	0.00	0.66
26.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	18.769	0.00	2.50
26.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.033	0.000	18.769	0.00	7.49
28.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	18.769	0.00	0.66
28.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	18.769	0.00	2.50
28.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.034	0.000	18.769	0.00	7.49
30.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	18.785	0.00	0.66
30.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	18.785	0.00	2.50
30.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.034	0.000	18.785	0.00	7.49
32.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	19.134	0.00	0.66
32.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	19.134	0.00	2.50

Linear Appurtenance Segment Forces (Factored)

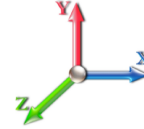
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60

Iterations 29



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)
32.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.034	0.000	19.134	0.00	7.49
34.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	19.469	0.00	0.66
34.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	19.469	0.00	2.50
34.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.034	0.000	19.469	0.00	7.49
36.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	19.789	0.00	0.66
36.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	19.789	0.00	2.50
36.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.035	0.000	19.789	0.00	7.49
38.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	20.097	0.00	0.66
38.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	20.097	0.00	2.50
38.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.035	0.000	20.097	0.00	7.49
40.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	20.394	0.00	0.66
40.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	20.394	0.00	2.50
40.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.035	0.000	20.394	0.00	7.49
41.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.035	0.000	20.538	0.00	0.33
41.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.035	0.000	20.538	0.00	1.25
41.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.035	0.000	20.538	0.00	3.74
42.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.036	0.000	20.680	0.00	0.33
42.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.036	0.000	20.680	0.00	1.25
42.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.036	0.000	20.680	0.00	3.74
44.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	20.957	0.00	0.66
44.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	20.957	0.00	2.50
44.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.036	0.000	20.957	0.00	7.49
46.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	21.225	0.00	0.66
46.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	21.225	0.00	2.50
46.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.036	0.000	21.225	0.00	7.49
48.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	21.485	0.00	0.66
48.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	21.485	0.00	2.50
48.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.036	0.000	21.485	0.00	7.49
50.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	21.737	0.00	0.66
50.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	21.737	0.00	2.50
50.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.036	0.000	21.737	0.00	7.49
51.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.037	0.000	21.860	0.00	0.33
51.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.037	0.000	21.860	0.00	1.25
51.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.037	0.000	21.860	0.00	3.74
52.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.037	0.000	21.982	0.00	0.33
52.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.037	0.000	21.982	0.00	1.25
52.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.037	0.000	21.982	0.00	3.74
54.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.037	0.000	22.220	0.00	0.66
54.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.037	0.000	22.220	0.00	2.50
54.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.037	0.000	22.220	0.00	7.49
56.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.037	0.000	22.452	0.00	0.66
56.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.037	0.000	22.452	0.00	2.50
56.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.037	0.000	22.452	0.00	7.49
58.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	22.678	0.00	0.66
58.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	22.678	0.00	2.50
58.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.038	0.000	22.678	0.00	7.49
60.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	22.899	0.00	0.66

Linear Appurtenance Segment Forces (Factored)

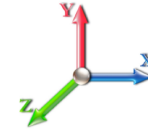
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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)
60.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	22.899	0.00	2.50
60.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.038	0.000	22.899	0.00	7.49
62.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	23.114	0.00	0.66
62.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	23.114	0.00	2.50
62.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.038	0.000	23.114	0.00	7.49
64.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.039	0.000	23.325	0.00	0.66
64.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.039	0.000	23.325	0.00	2.50
64.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.039	0.000	23.325	0.00	7.49
66.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.079	0.000	23.531	0.00	0.66
66.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.079	0.000	23.531	0.00	2.50
66.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.079	0.000	23.531	0.00	7.49
66.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.079	0.000	23.531	0.00	0.00
66.17	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.120	1.059	23.548	0.00	0.06
66.17	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.120	1.059	23.548	0.00	0.21
66.17	1 5/8" Coax	Yes	0.17	0.000	1.98	0.03	0.00	0.120	1.059	23.548	0.00	0.64
66.17	C6X10.5 Reinforcing	Yes	0.17	0.000	4.06	0.06	0.00	0.120	1.059	23.548	0.00	0.00
68.00	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.120	1.061	23.733	0.00	0.60
68.00	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.120	1.061	23.733	0.00	2.28
68.00	1 5/8" Coax	Yes	1.83	0.000	1.98	0.30	0.00	0.120	1.061	23.733	0.00	6.85
68.00	C6X10.5 Reinforcing	Yes	1.83	0.000	4.06	0.62	0.00	0.120	1.061	23.733	0.00	0.00
70.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.121	1.064	23.930	0.00	0.66
70.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.121	1.064	23.930	0.00	2.50
70.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.121	1.064	23.930	0.00	7.49
70.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.121	1.064	23.930	0.00	0.00
71.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.122	1.067	24.027	0.00	0.33
71.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.122	1.067	24.027	0.00	1.25
71.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.122	1.067	24.027	0.00	3.74
71.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.122	1.067	24.027	0.00	0.00
72.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.123	1.069	24.123	0.00	0.33
72.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.123	1.069	24.123	0.00	1.25
72.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.123	1.069	24.123	0.00	3.74
72.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.123	1.069	24.123	0.00	0.00
74.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.124	1.071	24.313	0.00	0.66
74.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.124	1.071	24.313	0.00	2.50
74.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.124	1.071	24.313	0.00	7.49
74.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.124	1.071	24.313	0.00	0.00
76.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.125	1.075	24.499	0.00	0.66
76.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.125	1.075	24.499	0.00	2.50
76.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.125	1.075	24.499	0.00	7.49
76.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.125	1.075	24.499	0.00	0.00
78.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.126	1.079	24.681	0.00	0.66
78.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.126	1.079	24.681	0.00	2.50
78.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.126	1.079	24.681	0.00	7.49
78.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.126	1.079	24.681	0.00	0.00
80.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.128	1.083	24.861	0.00	0.66
80.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.128	1.083	24.861	0.00	2.50
80.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.128	1.083	24.861	0.00	7.49

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



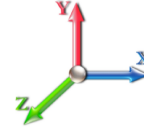
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Load Case: 1.2D + 1.6W 105 mph Wind

Iterations 29

Dead Load Factor 1.20

Wind Load Factor 1.60



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)
80.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.128	1.083	24.861	0.00	0.00
81.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.128	1.085	24.949	0.00	0.33
81.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.128	1.085	24.949	0.00	1.25
81.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.128	1.085	24.949	0.00	3.74
81.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.128	1.085	24.949	0.00	0.00
82.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.129	1.087	25.037	0.00	0.33
82.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.129	1.087	25.037	0.00	1.25
82.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.129	1.087	25.037	0.00	3.74
82.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.129	1.087	25.037	0.00	0.00
84.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.130	1.090	25.210	0.00	0.66
84.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.130	1.090	25.210	0.00	2.50
84.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.130	1.090	25.210	0.00	7.49
84.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.130	1.090	25.210	0.00	0.00
85.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.131	1.093	25.295	0.00	0.33
85.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.131	1.093	25.295	0.00	1.25
85.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.131	1.093	25.295	0.00	3.74
85.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.131	1.093	25.295	0.00	0.00
86.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.132	1.095	25.380	0.00	0.33
86.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.132	1.095	25.380	0.00	1.25
86.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.132	1.095	25.380	0.00	3.74
86.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.132	1.095	25.380	0.00	0.00
88.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.133	1.099	25.547	0.00	0.66
88.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.133	1.099	25.547	0.00	2.50
88.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.133	1.099	25.547	0.00	7.49
88.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.133	1.099	25.547	0.00	0.00
90.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.134	1.103	25.711	0.00	0.66
90.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.134	1.103	25.711	0.00	2.50
90.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.134	1.103	25.711	0.00	7.49
90.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.134	1.103	25.711	0.00	0.00
91.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.135	1.106	25.793	0.00	0.33
91.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.135	1.106	25.793	0.00	1.25
91.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.135	1.106	25.793	0.00	3.74
91.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.135	1.106	25.793	0.00	0.00
92.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.134	1.102	25.873	0.00	0.33
92.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.134	1.102	25.873	0.00	1.25
92.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.134	1.102	25.873	0.00	3.74
92.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.134	1.102	25.873	0.00	0.00
93.83	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.135	1.106	26.019	0.00	0.60
93.83	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.135	1.106	26.019	0.00	2.28
93.83	1 5/8" Coax	Yes	1.83	0.000	1.98	0.30	0.00	0.135	1.106	26.019	0.00	6.85
93.83	C6X10.5 Reinforcing	Yes	1.83	0.000	4.06	0.62	0.00	0.135	1.106	26.019	0.00	0.00
94.00	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.136	1.108	26.033	0.00	0.06
94.00	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.136	1.108	26.033	0.00	0.21
94.00	1 5/8" Coax	Yes	0.17	0.000	1.98	0.03	0.00	0.136	1.108	26.033	0.00	0.64
94.00	C6X10.5 Reinforcing	Yes	0.17	0.000	4.06	0.06	0.00	0.136	1.108	26.033	0.00	0.00
96.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.091	0.000	26.190	0.00	0.66
96.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.091	0.000	26.190	0.00	2.50

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

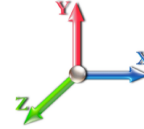


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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60

Iterations 29



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)
96.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.091	0.000	26.190	0.00	7.49
96.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.091	0.000	26.190	0.00	0.00
98.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.045	0.000	26.345	0.00	0.66
98.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.045	0.000	26.345	0.00	2.50
98.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.045	0.000	26.345	0.00	7.49
100.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.046	0.000	26.497	0.00	0.66
100.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.046	0.000	26.497	0.00	2.50
100.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.046	0.000	26.497	0.00	7.49
102.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.046	0.000	26.648	0.00	0.66
102.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.046	0.000	26.648	0.00	2.50
102.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.046	0.000	26.648	0.00	7.49
104.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	26.796	0.00	0.66
104.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	26.796	0.00	2.50
104.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.047	0.000	26.796	0.00	7.49
106.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	26.942	0.00	0.66
106.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	26.942	0.00	2.50
106.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.047	0.000	26.942	0.00	7.49
108.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.048	0.000	27.086	0.00	0.66
108.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.048	0.000	27.086	0.00	2.50
108.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.048	0.000	27.086	0.00	7.49
110.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.048	0.000	27.229	0.00	0.66
110.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.048	0.000	27.229	0.00	2.50
110.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.048	0.000	27.229	0.00	7.49
111.17	Safety Cable	Yes	1.17	0.000	0.00	0.00	0.00	0.099	0.000	27.311	0.00	0.38
111.17	Step bolts (ladder)	Yes	1.17	0.000	0.00	0.00	0.00	0.099	0.000	27.311	0.00	1.46
111.17	1 5/8" Coax	Yes	1.17	0.000	1.98	0.19	0.00	0.099	0.000	27.311	0.00	4.38
111.17	C6X10.5 Reinforcing	Yes	1.17	0.000	2.03	0.20	0.00	0.099	0.000	27.311	0.00	0.00
112.00	Safety Cable	Yes	0.83	0.000	0.00	0.00	0.00	0.100	0.000	27.369	0.00	0.27
112.00	Step bolts (ladder)	Yes	0.83	0.000	0.00	0.00	0.00	0.100	0.000	27.369	0.00	1.04
112.00	1 5/8" Coax	Yes	0.83	0.000	1.98	0.14	0.00	0.100	0.000	27.369	0.00	3.11
112.00	C6X10.5 Reinforcing	Yes	0.83	0.000	2.03	0.14	0.00	0.100	0.000	27.369	0.00	0.00
114.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.101	1.002	27.508	0.00	0.66
114.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.101	1.002	27.508	0.00	2.50
114.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.101	1.002	27.508	0.00	7.49
114.00	C6X10.5 Reinforcing	Yes	2.00	0.000	2.03	0.34	0.00	0.101	1.002	27.508	0.00	0.00
115.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.101	1.004	27.577	0.00	0.33
115.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.101	1.004	27.577	0.00	1.25
115.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.101	1.004	27.577	0.00	3.74
115.00	C6X10.5 Reinforcing	Yes	1.00	0.000	2.03	0.17	0.00	0.101	1.004	27.577	0.00	0.00
116.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.102	1.006	27.645	0.00	0.33
116.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.102	1.006	27.645	0.00	1.25
116.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.102	1.006	27.645	0.00	3.74
116.00	C6X10.5 Reinforcing	Yes	1.00	0.000	2.03	0.17	0.00	0.102	1.006	27.645	0.00	0.00
118.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.103	1.009	27.780	0.00	0.66
118.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.103	1.009	27.780	0.00	2.50
118.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.103	1.009	27.780	0.00	7.49
118.00	C6X10.5 Reinforcing	Yes	2.00	0.000	2.03	0.34	0.00	0.103	1.009	27.780	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

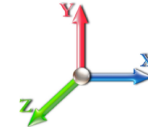
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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)
120.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.104	1.013	27.914	0.00	0.66
120.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.104	1.013	27.914	0.00	2.50
120.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.104	1.013	27.914	0.00	7.49
120.00	C6X10.5 Reinforcing	Yes	2.00	0.000	2.03	0.34	0.00	0.104	1.013	27.914	0.00	0.00
122.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.106	1.017	28.046	0.00	0.66
122.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.106	1.017	28.046	0.00	2.50
122.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.106	1.017	28.046	0.00	7.49
122.00	C6X10.5 Reinforcing	Yes	2.00	0.000	2.03	0.34	0.00	0.106	1.017	28.046	0.00	0.00
123.83	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.107	1.021	28.166	0.00	0.60
123.83	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.107	1.021	28.166	0.00	2.28
123.83	1 5/8" Coax	Yes	1.83	0.000	1.98	0.30	0.00	0.107	1.021	28.166	0.00	6.85
123.83	C6X10.5 Reinforcing	Yes	1.83	0.000	2.03	0.31	0.00	0.107	1.021	28.166	0.00	0.00
124.00	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.108	1.023	28.177	0.00	0.06
124.00	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.108	1.023	28.177	0.00	0.21
124.00	1 5/8" Coax	Yes	0.17	0.000	1.98	0.03	0.00	0.108	1.023	28.177	0.00	0.64
124.00	C6X10.5 Reinforcing	Yes	0.17	0.000	2.03	0.03	0.00	0.108	1.023	28.177	0.00	0.00
126.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.081	0.000	28.306	0.00	0.66
126.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.081	0.000	28.306	0.00	2.50
126.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.081	0.000	28.306	0.00	7.49
126.00	C6X10.5 Reinforcing	Yes	1.00	0.000	2.03	0.17	0.00	0.081	0.000	28.306	0.00	0.00
128.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.054	0.000	28.434	0.00	0.66
128.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.054	0.000	28.434	0.00	2.50
128.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.054	0.000	28.434	0.00	7.49
130.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.055	0.000	28.560	0.00	0.66
130.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.055	0.000	28.560	0.00	2.50
130.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.055	0.000	28.560	0.00	7.49
132.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.056	0.000	28.685	0.00	0.66
132.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.056	0.000	28.685	0.00	2.50
132.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.056	0.000	28.685	0.00	7.49
134.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.056	0.000	28.808	0.00	0.66
134.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.056	0.000	28.808	0.00	2.50
134.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.056	0.000	28.808	0.00	7.49
135.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.057	0.000	28.869	0.00	0.33
135.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.057	0.000	28.869	0.00	1.25
135.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.057	0.000	28.869	0.00	3.74
136.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.057	0.000	28.930	0.00	0.33
136.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.057	0.000	28.930	0.00	1.25
136.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.057	0.000	28.930	0.00	3.74
138.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.057	0.000	29.051	0.00	0.66
138.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.057	0.000	29.051	0.00	2.50
138.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.057	0.000	29.051	0.00	7.49
140.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.058	0.000	29.171	0.00	0.66
140.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.058	0.000	29.171	0.00	2.50
140.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.058	0.000	29.171	0.00	7.49
142.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.059	0.000	29.289	0.00	0.66
142.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.059	0.000	29.289	0.00	2.50
142.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.059	0.000	29.289	0.00	7.49

Linear Appurtenance Segment Forces (Factored)

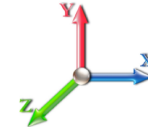
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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)
143.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.059	0.000	29.348	0.00	0.33
143.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.059	0.000	29.348	0.00	1.25
143.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.059	0.000	29.348	0.00	3.74
144.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.060	0.000	29.407	0.00	0.33
144.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.060	0.000	29.407	0.00	1.25
144.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.060	0.000	29.407	0.00	3.74
146.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.060	0.000	29.523	0.00	0.66
146.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.060	0.000	29.523	0.00	2.50
146.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.060	0.000	29.523	0.00	7.49
148.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.061	0.000	29.638	0.00	0.66
148.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.061	0.000	29.638	0.00	2.50
148.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.061	0.000	29.638	0.00	7.49
150.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.062	0.000	29.752	0.00	0.66
150.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.062	0.000	29.752	0.00	2.50
150.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.062	0.000	29.752	0.00	7.49
152.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	29.865	0.00	0.66
152.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	29.865	0.00	2.50
152.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.063	0.000	29.865	0.00	7.49
153.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.064	0.000	29.921	0.00	0.33
153.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.064	0.000	29.921	0.00	1.25
153.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.064	0.000	29.921	0.00	3.74
154.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.064	0.000	29.976	0.00	0.33
154.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.064	0.000	29.976	0.00	1.25
154.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.064	0.000	29.976	0.00	3.74
156.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	30.087	0.00	0.66
156.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	30.087	0.00	2.50
156.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.065	0.000	30.087	0.00	7.49
158.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	30.197	0.00	0.66
158.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	30.197	0.00	2.50
158.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.066	0.000	30.197	0.00	7.49
160.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.067	0.000	30.305	0.00	0.66
160.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.067	0.000	30.305	0.00	2.50
160.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.067	0.000	30.305	0.00	7.49
162.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	30.413	0.00	0.66
162.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	30.413	0.00	2.50
162.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.068	0.000	30.413	0.00	7.49
164.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.070	0.000	30.520	0.00	0.66
164.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.070	0.000	30.520	0.00	2.50
164.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.070	0.000	30.520	0.00	7.49
166.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.071	0.000	30.626	0.00	0.66
166.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.071	0.000	30.626	0.00	2.50
166.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.071	0.000	30.626	0.00	7.49
168.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.072	0.000	30.731	0.00	0.66
168.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.072	0.000	30.731	0.00	2.50
168.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.072	0.000	30.731	0.00	7.49
170.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.073	0.000	30.835	0.00	0.66
170.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.073	0.000	30.835	0.00	2.50

Linear Appurtenance Segment Forces (Factored)

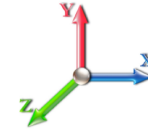
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 29

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)
170.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.073	0.000	30.835	0.00	7.49
172.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.075	0.000	30.938	0.00	0.66
172.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.075	0.000	30.938	0.00	2.50
172.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.075	0.000	30.938	0.00	7.49
173.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.076	0.000	30.989	0.00	0.33
173.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.076	0.000	30.989	0.00	1.25
173.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.076	0.000	30.989	0.00	3.74
174.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.041	0.00	0.33
174.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.041	0.00	1.25
176.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.142	0.00	0.66
176.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.142	0.00	2.50
178.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.243	0.00	0.66
178.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.243	0.00	2.50
180.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.343	0.00	0.66
180.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.343	0.00	2.50
181.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.392	0.00	0.33
181.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.392	0.00	1.25
182.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.442	0.00	0.33
182.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.442	0.00	1.25
183.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.491	0.00	0.33
183.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.491	0.00	1.25
Totals:											0.0	936.0

Calculated Forces

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

7/12/2022

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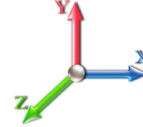


Load Case: 1.2D + 1.6W 105 mph Wind

Iterations 29

Dead Load Factor 1.20

Wind Load Factor 1.60



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-60.16	-37.01	0.00	-4711.8	0.00	4711.89	5190.16	2595.08	13702.9	6861.66	0.00	0.000	0.000	0.698
2.00	-59.39	-36.85	0.00	-4637.8	0.00	4637.87	5174.50	2587.25	13560.7	6790.43	0.01	-0.067	0.000	0.695
4.00	-58.63	-36.68	0.00	-4564.1	0.00	4564.18	5158.51	2579.25	13418.2	6719.08	0.06	-0.135	0.000	0.691
6.00	-57.88	-36.52	0.00	-4490.8	0.00	4490.82	5142.18	2571.09	13275.4	6647.61	0.13	-0.203	0.000	0.687
8.00	-57.13	-36.36	0.00	-4417.7	0.00	4417.78	5125.52	2562.76	13132.5	6576.03	0.23	-0.271	0.000	0.683
10.00	-56.38	-36.19	0.00	-4345.0	0.00	4345.07	5108.53	2554.27	12989.4	6504.36	0.36	-0.340	0.000	0.679
12.00	-55.64	-36.03	0.00	-4272.6	0.00	4272.68	5091.21	2545.61	12846.0	6432.60	0.52	-0.409	0.000	0.675
14.00	-54.91	-35.87	0.00	-4200.6	0.00	4200.61	5073.56	2536.78	12702.6	6360.75	0.70	-0.478	0.000	0.671
16.00	-54.18	-35.71	0.00	-4128.8	0.00	4128.88	5055.57	2527.79	12559.0	6288.85	0.92	-0.548	0.000	0.667
18.00	-53.45	-35.55	0.00	-4057.4	0.00	4057.46	5037.25	2518.63	12415.3	6216.88	1.16	-0.619	0.000	0.663
20.00	-52.73	-35.39	0.00	-3986.3	0.00	3986.36	5018.60	2509.30	12271.4	6144.86	1.44	-0.690	0.000	0.659
22.00	-52.01	-35.23	0.00	-3915.5	0.00	3915.59	4999.62	2499.81	12127.5	6072.81	1.74	-0.761	0.000	0.655
24.00	-51.30	-35.07	0.00	-3845.1	0.00	3845.13	4980.31	2490.15	11983.6	6000.72	2.08	-0.833	0.000	0.651
26.00	-50.60	-34.91	0.00	-3775.0	0.00	3775.00	4960.66	2480.33	11839.6	5928.62	2.44	-0.905	0.000	0.647
28.00	-49.89	-34.75	0.00	-3705.1	0.00	3705.18	4940.68	2470.34	11695.6	5856.50	2.84	-0.977	0.000	0.643
30.00	-49.20	-34.59	0.00	-3635.6	0.00	3635.68	4920.37	2460.19	11551.6	5784.39	3.26	-1.050	0.000	0.639
32.00	-48.50	-34.43	0.00	-3566.5	0.00	3566.50	4899.73	2449.87	11407.6	5712.28	3.72	-1.124	0.000	0.634
34.00	-47.82	-34.26	0.00	-3497.6	0.00	3497.64	4878.76	2439.38	11263.6	5640.19	4.21	-1.197	0.000	0.630
36.00	-47.13	-34.10	0.00	-3429.1	0.00	3429.12	4857.45	2428.72	11119.7	5568.14	4.72	-1.271	0.000	0.626
38.00	-46.46	-33.93	0.00	-3360.9	0.00	3360.92	4835.81	2417.91	10975.9	5496.12	5.27	-1.346	0.000	0.621
40.00	-45.79	-33.74	0.00	-3293.0	0.00	3293.07	4813.84	2406.92	10832.2	5424.15	5.85	-1.421	0.000	0.617
41.00	-45.46	-33.65	0.00	-3259.3	0.00	3259.34	4802.73	2401.36	10760.3	5388.18	6.16	-1.459	0.000	0.615
42.00	-44.85	-33.57	0.00	-3225.6	0.00	3225.69	4791.54	2395.77	10688.5	5352.24	6.47	-1.497	0.000	0.612
44.00	-43.65	-33.37	0.00	-3158.5	0.00	3158.55	4768.90	2384.45	10545.1	5280.39	7.11	-1.572	0.000	0.608
46.00	-42.47	-33.17	0.00	-3091.8	0.00	3091.81	4745.94	2372.97	10401.7	5208.63	7.78	-1.648	0.000	0.603
48.00	-41.29	-32.97	0.00	-3025.4	0.00	3025.47	4759.60	2379.80	10486.7	5251.18	8.49	-1.725	0.000	0.585
50.00	-40.65	-32.76	0.00	-2959.5	0.00	2959.54	4736.50	2368.25	10343.5	5179.45	9.23	-1.802	0.000	0.580
51.00	-40.32	-32.67	0.00	-2926.7	0.00	2926.78	4724.82	2362.41	10271.9	5143.62	9.61	-1.839	0.000	0.578
51.00	-40.32	-32.67	0.00	-2926.7	0.00	2926.78	4064.30	2032.15	8835.99	4424.56	9.61	-1.839	0.000	0.672
52.00	-39.99	-32.58	0.00	-2894.1	0.00	2894.11	4053.20	2026.60	8772.35	4392.70	10.00	-1.876	0.000	0.669
54.00	-39.34	-32.39	0.00	-2828.9	0.00	2828.95	4030.83	2015.41	8645.34	4329.09	10.80	-1.950	0.000	0.663
56.00	-38.70	-32.19	0.00	-2764.1	0.00	2764.17	4008.20	2004.10	8518.66	4265.66	11.64	-2.025	0.000	0.658
58.00	-38.07	-31.99	0.00	-2699.8	0.00	2699.80	3985.33	1992.66	8392.33	4202.40	12.50	-2.100	0.000	0.652
60.00	-37.44	-31.79	0.00	-2635.8	0.00	2635.82	3962.20	1981.10	8266.38	4139.33	13.40	-2.175	0.000	0.646
62.00	-36.82	-31.59	0.00	-2572.2	0.00	2572.24	3938.82	1969.41	8140.81	4076.46	14.33	-2.250	0.000	0.641
64.00	-36.20	-31.38	0.00	-2509.0	0.00	2509.07	3915.19	1957.60	8015.64	4013.78	15.28	-2.326	0.000	0.635
66.00	-35.61	-31.16	0.00	-2446.3	0.00	2446.30	3891.31	1945.66	7890.88	3951.30	16.28	-2.402	0.000	0.629
66.17	-35.54	-31.15	0.00	-2441.0	0.00	2441.01	3889.27	1944.64	7880.29	3946.00	16.36	-2.408	0.000	0.460
68.00	-35.00	-30.94	0.00	-2384.0	0.00	2384.00	3867.19	1933.59	7766.55	3889.05	17.29	-2.459	0.000	0.455
70.00	-34.41	-30.70	0.00	-2322.1	0.00	2322.11	3842.81	1921.40	7642.66	3827.01	18.34	-2.515	0.000	0.449
71.00	-34.12	-30.59	0.00	-2291.4	0.00	2291.41	3830.52	1915.26	7580.89	3796.08	18.87	-2.543	0.000	0.446
71.00	-34.12	-30.59	0.00	-2291.4	0.00	2291.41	3467.89	1733.95	6863.13	3436.66	18.87	-2.543	0.000	0.493
72.00	-33.82	-30.48	0.00	-2260.8	0.00	2260.82	3456.29	1728.14	6806.46	3408.29	19.40	-2.571	0.000	0.489
74.00	-33.24	-30.24	0.00	-2199.8	0.00	2199.87	3432.92	1716.46	6693.50	3351.73	20.49	-2.627	0.000	0.483
76.00	-32.66	-30.01	0.00	-2139.3	0.00	2139.39	3409.33	1704.67	6581.05	3295.42	21.60	-2.683	0.000	0.476
78.00	-32.09	-29.77	0.00	-2079.3	0.00	2079.38	3385.54	1692.77	6469.11	3239.36	22.74	-2.738	0.000	0.469
80.00	-31.53	-29.52	0.00	-2019.8	0.00	2019.84	3361.54	1680.77	6357.71	3183.58	23.90	-2.794	0.000	0.462
81.00	-31.25	-29.40	0.00	-1990.3	0.00	1990.32	3349.46	1674.73	6302.21	3155.79	24.49	-2.821	0.000	0.459

Calculated Forces

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (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



81.00	-31.25	-29.40	0.00	-1990.3	0.00	1990.32	2964.88	1482.44	5593.85	2801.08	24.49	-2.821	0.000	0.432
82.00	-31.00	-29.29	0.00	-1960.9	0.00	1960.92	2956.03	1478.01	5548.33	2778.29	25.08	-2.849	0.000	0.486
84.00	-30.52	-29.05	0.00	-1902.3	0.00	1902.34	2938.12	1469.06	5457.44	2732.78	26.29	-2.912	0.000	0.477
85.00	-30.28	-28.94	0.00	-1873.2	0.00	1873.28	2929.07	1464.54	5412.08	2710.06	26.90	-2.943	0.000	0.473
86.00	-29.84	-28.82	0.00	-1844.3	0.00	1844.35	2919.96	1459.98	5366.77	2687.37	27.52	-2.974	0.000	0.465
88.00	-29.00	-28.56	0.00	-1786.7	0.00	1786.72	2901.53	1450.76	5276.32	2642.08	28.78	-3.036	0.000	0.456
90.00	-28.18	-28.29	0.00	-1729.6	0.00	1729.61	2882.84	1441.42	5186.12	2596.92	30.06	-3.097	0.000	0.447
91.00	-27.76	-28.16	0.00	-1701.3	0.00	1701.32	2898.35	1449.17	5260.87	2634.34	30.72	-3.128	0.000	0.451
92.00	-27.52	-28.04	0.00	-1673.1	0.00	1673.16	2889.01	1444.51	5215.76	2611.76	31.37	-3.158	0.000	0.434
93.83	-27.10	-27.81	0.00	-1621.8	0.00	1621.84	2871.76	1435.88	5133.38	2570.50	32.60	-3.212	0.000	0.426
93.83	-27.10	-27.81	0.00	-1621.8	0.00	1621.84	2871.76	1435.88	5133.38	2570.50	32.60	-3.212	0.000	0.426
94.00	-27.04	-27.81	0.00	-1617.1	0.00	1617.11	2870.15	1435.07	5125.73	2566.68	32.71	-3.217	0.000	0.640
96.00	-26.56	-27.61	0.00	-1561.4	0.00	1561.49	2851.02	1425.51	5035.98	2521.73	34.08	-3.306	0.000	0.629
98.00	-26.09	-27.40	0.00	-1506.2	0.00	1506.28	2831.62	1415.81	4946.52	2476.93	35.48	-3.393	0.000	0.618
100.00	-25.62	-27.20	0.00	-1451.4	0.00	1451.48	2811.97	1405.98	4857.35	2432.29	36.92	-3.481	0.000	0.606
102.00	-25.15	-26.99	0.00	-1397.0	0.00	1397.09	2792.05	1396.03	4768.51	2387.80	38.40	-3.568	0.000	0.594
104.00	-24.69	-26.78	0.00	-1343.1	0.00	1343.11	2771.87	1385.94	4680.00	2343.48	39.91	-3.655	0.000	0.582
106.00	-24.24	-26.58	0.00	-1289.5	0.00	1289.54	2751.43	1375.71	4591.84	2299.33	41.46	-3.741	0.000	0.570
108.00	-23.79	-26.37	0.00	-1236.3	0.00	1236.39	2730.72	1365.36	4504.04	2255.37	43.04	-3.827	0.000	0.557
110.00	-23.35	-26.16	0.00	-1183.6	0.00	1183.64	2709.75	1354.88	4416.62	2211.59	44.66	-3.912	0.000	0.544
111.17	-23.09	-26.04	0.00	-1153.0	0.00	1153.04	2697.36	1348.68	4365.66	2186.08	45.63	-3.961	0.000	0.418
112.00	-22.91	-25.96	0.00	-1131.4	0.00	1131.43	2688.52	1344.26	4329.60	2168.02	46.32	-3.989	0.000	0.413
114.00	-22.48	-25.74	0.00	-1079.5	0.00	1079.52	2667.03	1333.51	4242.98	2124.64	48.00	-4.054	0.000	0.401
115.00	-22.27	-25.63	0.00	-1053.7	0.00	1053.78	2656.18	1328.09	4199.83	2103.04	48.86	-4.086	0.000	0.395
115.00	-22.27	-25.63	0.00	-1053.7	0.00	1053.78	1951.15	975.57	3095.05	1549.82	48.86	-4.086	0.000	0.431
116.00	-22.08	-25.53	0.00	-1028.1	0.00	1028.15	1944.57	972.29	3065.67	1535.11	49.71	-4.118	0.000	0.500
118.00	-21.72	-25.33	0.00	-977.08	0.00	977.08	1931.24	965.62	3006.98	1505.73	51.45	-4.192	0.000	0.483
120.00	-21.36	-25.12	0.00	-926.42	0.00	926.42	1917.63	958.82	2948.42	1476.40	53.23	-4.265	0.000	0.465
122.00	-21.00	-24.92	0.00	-876.18	0.00	876.18	1903.77	951.88	2889.98	1447.14	55.03	-4.336	0.000	0.447
123.83	-20.69	-24.72	0.00	-830.58	0.00	830.58	1890.85	945.43	2836.64	1420.43	56.70	-4.400	0.000	0.430
123.83	-20.69	-24.72	0.00	-830.58	0.00	830.58	1890.85	945.43	2836.64	1420.43	56.70	-4.400	0.000	0.430
124.00	-20.65	-24.72	0.00	-826.37	0.00	826.37	1889.64	944.82	2831.69	1417.95	56.86	-4.406	0.000	0.594
126.00	-20.29	-24.53	0.00	-776.94	0.00	776.94	1875.25	937.63	2773.56	1388.84	58.72	-4.500	0.000	0.571
128.00	-19.93	-24.33	0.00	-727.89	0.00	727.89	1860.60	930.30	2715.62	1359.83	60.62	-4.592	0.000	0.547
130.00	-19.59	-24.14	0.00	-679.22	0.00	679.22	1845.69	922.84	2657.86	1330.91	62.57	-4.681	0.000	0.522
132.00	-19.01	-23.93	0.00	-630.94	0.00	630.94	1830.51	915.25	2600.31	1302.09	64.54	-4.768	0.000	0.496
134.00	-18.46	-23.71	0.00	-583.08	0.00	583.08	1815.07	907.53	2542.99	1273.39	66.56	-4.851	0.000	0.469
135.00	-18.18	-23.60	0.00	-559.38	0.00	559.38	1823.79	911.89	2575.21	1289.52	67.58	-4.892	0.000	0.444
136.00	-18.00	-23.51	0.00	-535.78	0.00	535.78	1816.04	908.02	2546.57	1275.18	68.61	-4.932	0.000	0.431
138.00	-17.67	-23.31	0.00	-488.76	0.00	488.76	1800.35	900.18	2489.47	1246.58	70.69	-5.005	0.000	0.403
140.00	-17.35	-23.11	0.00	-442.14	0.00	442.14	1784.41	892.20	2432.62	1218.12	72.80	-5.075	0.000	0.373
142.00	-17.03	-22.91	0.00	-395.91	0.00	395.91	1768.19	884.10	2376.04	1189.79	74.94	-5.140	0.000	0.343
143.00	-13.86	-17.66	0.00	-373.00	0.00	373.00	1759.99	879.99	2347.86	1175.68	76.01	-5.171	0.000	0.326
144.00	-13.72	-17.56	0.00	-355.35	0.00	355.35	1751.72	875.86	2319.75	1161.60	77.10	-5.201	0.000	0.314
146.00	-13.44	-17.37	0.00	-320.22	0.00	320.22	1734.98	867.49	2263.76	1133.56	79.29	-5.259	0.000	0.291
148.00	-13.17	-17.17	0.00	-285.49	0.00	285.49	1717.98	858.99	2208.08	1105.68	81.50	-5.312	0.000	0.266
150.00	-12.91	-16.98	0.00	-251.15	0.00	251.15	1700.72	850.36	2152.74	1077.97	83.73	-5.362	0.000	0.241
152.00	-12.65	-16.78	0.00	-217.19	0.00	217.19	1683.20	841.60	2097.74	1050.43	85.99	-5.408	0.000	0.215
153.00	-9.03	-11.08	0.00	-200.41	0.00	200.41	1674.33	837.17	2070.37	1036.72	87.12	-5.429	0.000	0.199
154.00	-8.92	-10.99	0.00	-189.33	0.00	189.33	1665.41	832.70	2043.10	1023.07	88.26	-5.449	0.000	0.191
156.00	-8.70	-10.80	0.00	-167.35	0.00	167.35	1647.36	823.68	1988.83	995.90	90.55	-5.487	0.000	0.173
158.00	-6.80	-9.27	0.00	-145.76	0.00	145.76	1629.04	814.52	1934.96	968.92	92.85	-5.522	0.000	0.155
160.00	-6.59	-9.09	0.00	-127.21	0.00	127.21	1610.47	805.23	1881.50	942.15	95.17	-5.554	0.000	0.139
162.00	-6.38	-8.90	0.00	-109.04	0.00	109.04	1591.63	795.82	1828.46	915.59	97.50	-5.583	0.000	0.123
164.00	-6.18	-8.72	0.00	-91.24	0.00	91.24	1572.53	786.27	1775.86	889.25	99.84	-5.609	0.000	0.107
166.00	-5.98	-8.54	0.00	-73.81	0.00	73.81	1553.17	776.58	1723.71	863.13	102.19	-5.632	0.000	0.089
168.00	-5.78	-8.36	0.00	-56.73	0.00	56.73	1533.54	766.77	1672.03	837.26	104.55	-5.650	0.000	0.072

Calculated Forces

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 28
	Struct Class: II	



170.00	-5.58	-8.18	0.00	-40.02	0.00	40.02	1513.65	756.83	1620.83	811.62	106.92	-5.665	0.000	0.053
172.00	-5.39	-8.00	0.00	-23.66	0.00	23.66	1493.50	746.75	1570.13	786.23	109.29	-5.675	0.000	0.034
173.00	-2.42	-2.19	0.00	-15.66	0.00	15.66	1483.33	741.66	1544.98	773.64	110.48	-5.678	0.000	0.022
174.00	-2.35	-2.11	0.00	-13.47	0.00	13.47	1473.09	736.54	1519.95	761.10	111.66	-5.681	0.000	0.019
176.00	-2.20	-1.94	0.00	-9.26	0.00	9.26	1452.41	726.20	1470.30	736.24	114.04	-5.685	0.000	0.014
178.00	-2.05	-1.77	0.00	-5.38	0.00	5.38	1427.85	713.93	1417.60	709.85	116.42	-5.688	0.000	0.009
180.00	-1.91	-1.61	0.00	-1.84	0.00	1.84	1400.09	700.05	1362.74	682.38	118.80	-5.689	0.000	0.004
180.00	-1.91	-1.61	0.00	-1.84	0.00	1.84	678.42	339.21	662.23	396.30	118.80	-5.689	0.000	0.007
181.00	-0.16	-0.15	0.00	-0.22	0.00	0.22	678.42	339.21	662.23	396.30	119.99	-5.689	0.000	0.001
182.00	-0.08	-0.07	0.00	-0.07	0.00	0.07	678.42	339.21	662.23	396.30	121.18	-5.689	0.000	0.000
183.00	0.00	-0.07	0.00	0.00	0.00	0.00	678.42	339.21	662.23	396.30	122.37	-5.689	0.000	0.000

Wind Loading - Shaft

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 29

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	18.769	20.65	479.47	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	18.769	20.65	475.97	0.650	0.000	2.00	10.876	7.07	233.5	0.0	465.8
4.00		1.00	0.70	18.769	20.65	472.47	0.650	0.000	2.00	10.796	7.02	231.8	0.0	462.3
6.00		1.00	0.70	18.769	20.65	468.97	0.650	0.000	2.00	10.717	6.97	230.1	0.0	458.9
8.00		1.00	0.70	18.769	20.65	465.47	0.650	0.000	2.00	10.637	6.91	228.4	0.0	455.5
10.00		1.00	0.70	18.769	20.65	461.97	0.650	0.000	2.00	10.557	6.86	226.7	0.0	452.0
12.00		1.00	0.70	18.769	20.65	458.47	0.650	0.000	2.00	10.478	6.81	225.0	0.0	448.6
14.00		1.00	0.70	18.769	20.65	454.97	0.650	0.000	2.00	10.398	6.76	223.3	0.0	445.2
16.00		1.00	0.70	18.769	20.65	451.47	0.650	0.000	2.00	10.318	6.71	221.5	0.0	441.7
18.00		1.00	0.70	18.769	20.65	447.97	0.650	0.000	2.00	10.239	6.66	219.8	0.0	438.3
20.00		1.00	0.70	18.769	20.65	444.47	0.650	0.000	2.00	10.159	6.60	218.1	0.0	434.9
22.00		1.00	0.70	18.769	20.65	440.97	0.650	0.000	2.00	10.079	6.55	216.4	0.0	431.4
24.00		1.00	0.70	18.769	20.65	437.47	0.650	0.000	2.00	9.999	6.50	214.7	0.0	428.0
26.00		1.00	0.70	18.769	20.65	433.97	0.650	0.000	2.00	9.920	6.45	213.0	0.0	424.6
28.00		1.00	0.70	18.769	20.65	430.47	0.650	0.000	2.00	9.840	6.40	211.3	0.0	421.1
30.00		1.00	0.70	18.785	20.66	427.15	0.650	0.000	2.00	9.760	6.34	209.7	0.0	417.7
32.00		1.00	0.71	19.134	21.05	427.58	0.650	0.000	2.00	9.681	6.29	211.9	0.0	414.3
34.00		1.00	0.73	19.469	21.42	427.73	0.650	0.000	2.00	9.601	6.24	213.8	0.0	410.8
36.00		1.00	0.74	19.789	21.77	427.64	0.650	0.000	2.00	9.521	6.19	215.6	0.0	407.4
38.00		1.00	0.75	20.097	22.11	427.34	0.650	0.000	2.00	9.442	6.14	217.1	0.0	404.0
40.00		1.00	0.76	20.394	22.43	426.83	0.650	0.000	2.00	9.362	6.09	218.4	0.0	400.5
41.00	Bot - Section 2	1.00	0.77	20.538	22.59	426.51	0.650	0.000	1.00	4.651	3.02	109.3	0.0	199.0
42.00		1.00	0.77	20.680	22.75	426.14	0.650	0.000	1.00	4.695	3.05	111.1	0.0	399.0
44.00		1.00	0.78	20.957	23.05	425.29	0.650	0.000	2.00	9.330	6.06	223.7	0.0	792.8
46.00		1.00	0.79	21.225	23.35	424.27	0.650	0.000	2.00	9.250	6.01	224.6	0.0	786.0
48.00	Top - Section 1	1.00	0.80	21.485	23.63	423.12	0.650	0.000	2.00	9.170	5.96	225.4	0.0	779.1
50.00		1.00	0.81	21.737	23.91	427.83	0.650	0.000	2.00	9.091	5.91	226.1	0.0	388.8
51.00	Top - Section 2	1.00	0.82	21.860	24.05	427.15	0.650	0.000	1.00	4.515	2.94	112.9	0.0	193.1
52.00		1.00	0.82	21.982	24.18	426.44	0.650	0.000	1.00	4.495	2.92	113.0	0.0	192.3
54.00		1.00	0.83	22.220	24.44	424.94	0.650	0.000	2.00	8.931	5.81	227.0	0.0	382.0
56.00		1.00	0.84	22.452	24.70	423.33	0.650	0.000	2.00	8.852	5.75	227.4	0.0	378.6
58.00		1.00	0.85	22.678	24.95	421.61	0.650	0.000	2.00	8.772	5.70	227.6	0.0	375.1
60.00		1.00	0.85	22.899	25.19	419.79	0.650	0.000	2.00	8.692	5.65	227.7	0.0	371.7
62.00		1.00	0.86	23.114	25.43	417.87	0.650	0.000	2.00	8.612	5.60	227.7	0.0	368.3
64.00		1.00	0.87	23.325	25.66	415.87	0.650	0.000	2.00	8.533	5.55	227.7	0.0	364.8
66.00		1.00	0.88	23.531	25.88	413.78	0.650	0.000	2.00	8.453	5.49	227.6	0.0	361.4
66.17	RB1	1.00	0.88	23.548	25.90	413.60	0.688*	0.000	0.17	0.715	0.49	20.4	0.0	30.6
68.00		1.00	0.89	23.733	26.11	411.62	0.690*	0.000	1.83	7.659	5.28	220.6	0.0	327.4
70.00		1.00	0.89	23.930	26.32	409.37	0.692*	0.000	2.00	8.294	5.74	241.6	0.0	354.5
71.00	Top - Section 3	1.00	0.90	24.027	26.43	408.22	0.693*	0.000	1.00	4.117	2.85	120.7	0.0	176.0
72.00		1.00	0.90	24.123	26.54	407.05	0.695*	0.000	1.00	4.097	2.85	120.8	0.0	175.1
74.00		1.00	0.91	24.313	26.74	404.66	0.696*	0.000	2.00	8.134	5.66	242.4	0.0	347.7
76.00		1.00	0.91	24.499	26.95	402.21	0.699*	0.000	2.00	8.055	5.63	242.7	0.0	344.2
78.00		1.00	0.92	24.681	27.15	399.69	0.701*	0.000	2.00	7.975	5.59	242.9	0.0	340.8
80.00		1.00	0.93	24.861	27.35	397.11	0.704*	0.000	2.00	7.895	5.56	243.1	0.0	337.4
81.00	Top - Section 4	1.00	0.93	24.949	27.44	395.80	0.706*	0.000	1.00	3.918	2.76	121.4	0.0	167.4
82.00		1.00	0.93	25.037	27.54	394.47	0.707*	0.000	1.00	3.898	2.76	121.4	0.0	139.0

Wind Loading - Shaft

Structure: CT01002-S-SBA

Code: TIA-222-G

7/12/2022

Site Name: Waterford

Exposure: B

Height: 183.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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84.00	1.00	0.94	25.210	27.73	391.78	0.709 *	0.000	2.00	7.736	5.48	243.3	0.0	275.8
85.00 Bot - Section 6	1.00	0.94	25.295	27.82	390.41	0.711 *	0.000	1.00	3.838	2.73	121.4	0.0	136.8
86.00	1.00	0.95	25.380	27.92	389.03	0.712 *	0.000	1.00	3.871	2.76	123.1	0.0	274.1
88.00	1.00	0.95	25.547	28.10	386.22	0.714 *	0.000	2.00	7.682	5.49	246.7	0.0	543.9
90.00	1.00	0.96	25.711	28.28	383.37	0.717 *	0.000	2.00	7.603	5.45	246.6	0.0	538.2
91.00 Top - Section 5	1.00	0.96	25.793	28.37	381.92	0.719 *	0.000	1.00	3.771	2.71	123.1	0.0	267.0
92.00	1.00	0.96	25.873	28.46	385.92	0.717 *	0.000	1.00	3.752	2.69	122.4	0.0	133.7
93.83 RT1	1.00	0.97	26.019	28.62	383.24	0.719 *	0.000	1.83	6.814	4.90	224.2	0.0	242.9
94.00	1.00	0.97	26.033	28.64	382.99	0.720 *	0.000	0.17	0.630	0.45	20.8	0.0	22.4
96.00	1.00	0.98	26.190	28.81	380.01	0.650	0.000	2.00	7.364	4.79	220.6	0.0	262.4
98.00	1.00	0.98	26.345	28.98	376.98	0.650	0.000	2.00	7.284	4.73	219.5	0.0	259.6
100.00	1.00	0.99	26.497	29.15	373.91	0.650	0.000	2.00	7.204	4.68	218.4	0.0	256.7
102.00	1.00	0.99	26.648	29.31	370.80	0.650	0.000	2.00	7.125	4.63	217.2	0.0	253.8
104.00	1.00	1.00	26.796	29.48	367.65	0.650	0.000	2.00	7.045	4.58	216.0	0.0	251.0
106.00	1.00	1.00	26.942	29.64	364.46	0.650	0.000	2.00	6.965	4.53	214.7	0.0	248.1
108.00	1.00	1.01	27.086	29.79	361.23	0.650	0.000	2.00	6.886	4.48	213.4	0.0	245.3
110.00	1.00	1.02	27.229	29.95	357.96	0.650	0.000	2.00	6.806	4.42	212.0	0.0	242.4
111.17 RB2	1.00	1.02	27.311	30.04	356.03	0.650	0.000	1.17	3.945	2.56	123.2	0.0	140.5
112.00	1.00	1.02	27.369	30.11	354.66	0.650	0.000	0.83	2.782	1.81	87.1	0.0	99.1
114.00	1.00	1.03	27.508	30.26	351.32	0.651 *	0.000	2.00	6.647	4.33	209.5	0.0	236.7
115.00 Top - Section 6	1.00	1.03	27.577	30.33	349.64	0.653 *	0.000	1.00	3.293	2.15	104.4	0.0	117.3
116.00	1.00	1.03	27.645	30.41	347.94	0.654 *	0.000	1.00	3.273	2.14	104.2	0.0	93.4
118.00	1.00	1.04	27.780	30.56	344.53	0.656 *	0.000	2.00	6.487	4.25	208.0	0.0	185.1
120.00	1.00	1.04	27.914	30.71	341.09	0.658 *	0.000	2.00	6.407	4.22	207.3	0.0	182.8
122.00	1.00	1.05	28.046	30.85	337.62	0.661 *	0.000	2.00	6.328	4.18	206.4	0.0	180.5
123.83 RT2	1.00	1.05	28.166	30.98	334.42	0.663 *	0.000	1.83	5.720	3.80	188.1	0.0	163.2
124.00	1.00	1.05	28.177	30.99	334.12	0.665 *	0.000	0.17	0.528	0.35	17.4	0.0	15.1
126.00	1.00	1.06	28.306	31.14	330.58	0.650	0.000	2.00	6.168	4.01	199.7	0.0	175.9
128.00	1.00	1.06	28.434	31.28	327.02	0.650	0.000	2.00	6.089	3.96	198.1	0.0	173.6
130.00 Bot - Section 8	1.00	1.07	28.560	31.42	323.43	0.650	0.000	2.00	6.009	3.91	196.3	0.0	171.3
132.00	1.00	1.07	28.685	31.55	319.81	0.650	0.000	2.00	6.014	3.91	197.4	0.0	340.5
134.00	1.00	1.07	28.808	31.69	316.16	0.650	0.000	2.00	5.934	3.86	195.6	0.0	336.0
135.00 Top - Section 7	1.00	1.08	28.869	31.76	314.32	0.650	0.000	1.00	2.937	1.91	97.0	0.0	166.3
136.00	1.00	1.08	28.930	31.82	317.10	0.650	0.000	1.00	2.917	1.90	96.6	0.0	83.2
138.00	1.00	1.08	29.051	31.96	313.41	0.650	0.000	2.00	5.775	3.75	191.9	0.0	164.6
140.00	1.00	1.09	29.171	32.09	309.69	0.650	0.000	2.00	5.695	3.70	190.1	0.0	162.3
142.00	1.00	1.09	29.289	32.22	305.95	0.650	0.000	2.00	5.616	3.65	188.2	0.0	160.0
143.00 Appurtenance(s)	1.00	1.09	29.348	32.28	304.06	0.650	0.000	1.00	2.778	1.81	93.3	0.0	79.2
144.00	1.00	1.10	29.407	32.35	302.18	0.650	0.000	1.00	2.758	1.79	92.8	0.0	78.6
146.00	1.00	1.10	29.523	32.48	298.38	0.650	0.000	2.00	5.456	3.55	184.3	0.0	155.5
148.00	1.00	1.11	29.638	32.60	294.56	0.650	0.000	2.00	5.376	3.49	182.3	0.0	153.2
150.00	1.00	1.11	29.752	32.73	290.72	0.650	0.000	2.00	5.297	3.44	180.3	0.0	150.9
152.00	1.00	1.11	29.865	32.85	286.86	0.650	0.000	2.00	5.217	3.39	178.2	0.0	148.6
153.00 Appurtenance(s)	1.00	1.12	29.921	32.91	284.92	0.650	0.000	1.00	2.579	1.68	88.3	0.0	73.4
154.00	1.00	1.12	29.976	32.97	282.97	0.650	0.000	1.00	2.559	1.66	87.7	0.0	72.9
156.00	1.00	1.12	30.087	33.10	279.06	0.650	0.000	2.00	5.058	3.29	174.1	0.0	144.0
158.00 Appurtenance(s)	1.00	1.13	30.197	33.22	275.13	0.650	0.000	2.00	4.978	3.24	172.0	0.0	141.7
160.00	1.00	1.13	30.305	33.34	271.18	0.650	0.000	2.00	4.898	3.18	169.8	0.0	139.5
162.00	1.00	1.13	30.413	33.45	267.21	0.650	0.000	2.00	4.819	3.13	167.7	0.0	137.2
164.00	1.00	1.14	30.520	33.57	263.21	0.650	0.000	2.00	4.739	3.08	165.5	0.0	134.9
166.00	1.00	1.14	30.626	33.69	259.20	0.650	0.000	2.00	4.659	3.03	163.2	0.0	132.6
168.00	1.00	1.15	30.731	33.80	255.16	0.650	0.000	2.00	4.580	2.98	161.0	0.0	130.3
170.00	1.00	1.15	30.835	33.92	251.11	0.650	0.000	2.00	4.500	2.92	158.7	0.0	128.0
172.00	1.00	1.15	30.938	34.03	247.03	0.650	0.000	2.00	4.420	2.87	156.4	0.0	125.7
173.00 Appurtenance(s)	1.00	1.16	30.989	34.09	244.99	0.650	0.000	1.00	2.180	1.42	77.3	0.0	62.0
174.00	1.00	1.16	31.041	34.14	242.94	0.650	0.000	1.00	2.160	1.40	76.7	0.0	61.4
176.00	1.00	1.16	31.142	34.26	238.83	0.650	0.000	2.00	4.261	2.77	151.8	0.0	121.1

Wind Loading - Shaft

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 31
	Struct Class: II	



178.00	1.00	1.17	31.243	34.37	234.70	0.650	0.000	2.00	4.181	2.72	149.4	0.0	118.9
180.00 Top - Section 8	1.00	1.17	31.343	34.48	230.55	0.650	0.000	2.00	4.102	2.67	147.1	0.0	116.6
181.00 Appurtenance(s)	1.00	1.17	31.392	34.53	227.23	0.600	0.000	1.00	2.000	1.20	66.3	0.0	64.1
182.00	1.00	1.17	31.442	34.59	227.41	0.600	0.000	1.00	2.000	1.20	66.4	0.0	64.1
183.00	1.00	1.17	31.491	34.64	227.58	0.600	0.000	1.00	2.000	1.20	66.5	0.0	64.1
Totals:								183.00			19,063.7		28,334.9

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

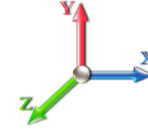
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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	181.00	Low Profile	1	31.392	34.532	1.00	1.00	22.00	1350.00	0.000	0.000	1215.51	0.00	0.00	
2	173.00	Samsung B2/B66 RRH	3	30.989	34.088	0.54	0.80	3.01	227.88	0.000	0.000	164.00	0.00	0.00	
3	173.00	Andrew JAHH-65B-R3B	6	30.989	34.088	0.66	0.80	36.29	341.82	0.000	0.000	1979.54	0.00	0.00	
4	173.00	Samsung MT6407-77A	3	30.989	34.088	0.56	0.80	7.88	214.38	0.000	0.000	429.74	0.00	0.00	
5	173.00	CBC78T-DS-43/E14F05P	3	30.989	34.088	0.54	0.80	0.59	28.08	0.000	0.000	32.45	0.00	0.00	
6	173.00	BSAMNT-SBS-1-2	3	30.989	34.088	0.75	0.75	0.00	68.45	0.000	0.000	0.00	0.00	0.00	
7	173.00	Samsung B5/B13 RRH	3	30.989	34.088	0.54	0.80	3.01	189.81	0.000	0.000	164.00	0.00	0.00	
8	173.00	(3) T-Arms	1	30.989	34.088	0.75	0.75	22.50	1350.00	0.000	0.000	1227.18	0.00	0.00	
9	173.00	LPA-80080-4CF-EDIN-0	4	30.989	34.088	1.36	0.80	14.20	43.20	0.000	0.000	774.40	0.00	0.00	
10	173.00	APL866513-42T0	2	30.989	34.088	0.74	0.80	6.03	28.26	0.000	0.000	328.69	0.00	0.00	
11	173.00	DB-T1-6Z-8AB-OZ	2	30.989	34.088	0.60	0.80	5.76	79.20	0.000	0.000	314.16	0.00	0.00	
12	158.00	Low Profile	1	30.197	33.216	1.00	1.00	22.00	1350.00	0.000	0.000	1169.22	0.00	0.00	
13	153.00	4460 Radio	3	29.921	32.913	0.50	0.75	4.30	294.30	0.000	0.000	226.25	0.00	0.00	
14	153.00	VV-65A-R1	3	29.921	32.913	0.62	0.75	12.49	142.83	0.000	0.000	657.91	0.00	0.00	
15	153.00	AIR6419 B41	3	29.921	32.913	0.57	0.75	6.50	178.47	0.000	0.000	342.19	0.00	0.00	
16	153.00	Ericsson 4449 B71 + B85	3	29.921	32.913	0.50	0.75	2.97	197.64	0.000	0.000	156.39	0.00	0.00	
17	153.00	V-brace kit	1	29.921	32.913	1.00	1.00	2.70	207.00	0.000	0.000	142.18	0.00	0.00	
18	153.00	SPTB(Tie back Kit)	1	29.921	32.913	1.00	1.00	3.70	126.00	0.000	0.000	194.84	0.00	0.00	
19	153.00	PRK-1245 (kicker kit)	1	29.921	32.913	1.00	1.00	9.50	418.42	0.000	0.000	500.27	0.00	0.00	
20	153.00	Low Profile Platform	1	29.921	32.913	1.00	1.00	25.00	1080.00	0.000	0.000	1316.50	0.00	0.00	
21	153.00	RFS	3	29.921	32.913	0.52	0.75	31.88	331.56	0.000	0.000	1678.70	0.00	0.00	
22	153.00	KRY 112 144/1	3	29.921	32.913	0.52	0.75	0.65	29.70	0.000	0.000	34.01	0.00	0.00	
23	143.00	DC6-48-60-18-8F	1	29.348	32.283	0.75	0.75	1.10	28.62	0.000	0.000	56.95	0.00	0.00	
24	143.00	HRK14	1	29.348	32.283	1.00	1.00	10.13	317.12	0.000	0.000	523.24	0.00	0.00	
25	143.00	Powerwave 7770.00	3	29.348	32.283	0.55	0.75	9.03	94.50	0.000	0.000	466.62	0.00	0.00	
26	143.00	Low Profile	1	29.348	32.283	1.00	1.00	22.00	1350.00	0.000	0.000	1136.36	0.00	0.00	
27	143.00	850-1900 Dual Band	3	29.348	32.283	0.49	0.75	0.77	14.85	0.000	0.000	39.89	0.00	0.00	
28	143.00	RRUS 11	3	29.348	32.283	0.50	0.75	3.80	136.89	0.000	0.000	196.22	0.00	0.00	
29	143.00	DBC-750	3	29.348	32.283	0.38	0.75	0.57	12.96	0.000	0.000	29.64	0.00	0.00	
30	143.00	OPA-65R-LCUU-H4	1	29.348	32.283	0.75	0.75	4.46	51.30	0.000	0.000	230.11	0.00	0.00	
31	143.00	QS46512-2	1	29.348	32.283	0.75	0.75	4.16	24.57	0.000	0.000	215.01	0.00	0.00	
32	143.00	TPA-65R-LCUUUU-H8	2	29.348	32.283	0.62	0.75	16.56	135.00	0.000	0.000	855.30	0.00	0.00	
33	143.00	OPA-65R-LCUU-H8	2	29.348	32.283	0.59	0.75	15.11	171.00	0.000	0.000	780.41	0.00	0.00	
34	143.00	DTMABP7819VG12A	3	29.348	32.283	0.50	0.75	1.72	51.84	0.000	0.000	88.77	0.00	0.00	
35	143.00	DBC0061F1V51-2	3	29.348	32.283	0.50	0.75	0.65	68.58	0.000	0.000	33.48	0.00	0.00	
36	143.00	RRUS 32 B2	3	29.348	32.283	0.50	0.75	4.13	143.10	0.000	0.000	213.36	0.00	0.00	
Totals:									10,877.33						17,913.50

Total Applied Force Summary

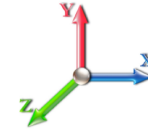
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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
2.00		233.53	540.84	0.00	0.00
4.00		231.82	537.41	0.00	0.00
6.00		230.10	533.97	0.00	0.00
8.00		228.39	530.54	0.00	0.00
10.00		226.68	527.11	0.00	0.00
12.00		224.97	523.68	0.00	0.00
14.00		223.26	520.25	0.00	0.00
16.00		221.55	516.81	0.00	0.00
18.00		219.84	513.38	0.00	0.00
20.00		218.13	509.95	0.00	0.00
22.00		216.42	506.52	0.00	0.00
24.00		214.71	503.08	0.00	0.00
26.00		212.99	499.65	0.00	0.00
28.00		211.28	496.22	0.00	0.00
30.00		209.75	492.79	0.00	0.00
32.00		211.91	489.35	0.00	0.00
34.00		213.84	485.92	0.00	0.00
36.00		215.55	482.49	0.00	0.00
38.00		217.08	479.06	0.00	0.00
40.00		218.42	475.62	0.00	0.00
41.00		109.28	236.52	0.00	0.00
42.00		111.07	436.53	0.00	0.00
44.00		223.68	867.90	0.00	0.00
46.00		224.60	861.04	0.00	0.00
48.00		225.39	854.17	0.00	0.00
50.00		226.05	463.93	0.00	0.00
51.00		112.92	230.68	0.00	0.00
52.00		113.05	229.82	0.00	0.00
54.00		227.03	457.07	0.00	0.00
56.00		227.35	453.63	0.00	0.00
58.00		227.58	450.20	0.00	0.00
60.00		227.70	446.77	0.00	0.00
62.00		227.74	443.34	0.00	0.00
64.00		227.69	439.91	0.00	0.00
66.00		227.55	436.47	0.00	0.00
66.17		20.40	36.94	0.00	0.00
68.00		220.58	396.10	0.00	0.00
70.00		241.61	429.61	0.00	0.00
71.00		120.72	213.52	0.00	0.00
72.00		120.82	212.66	0.00	0.00
74.00		242.37	422.74	0.00	0.00
76.00		242.66	419.31	0.00	0.00
78.00		242.89	415.87	0.00	0.00
80.00		243.07	412.44	0.00	0.00
81.00		121.37	204.93	0.00	0.00
82.00		121.40	176.51	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00	243.27	350.87	0.00	0.00	
85.00	121.44	174.36	0.00	0.00	
86.00	123.13	311.66	0.00	0.00	
88.00	246.66	619.03	0.00	0.00	
90.00	246.62	613.31	0.00	0.00	
91.00	123.09	304.51	0.00	0.00	
92.00	122.43	171.26	0.00	0.00	
93.83	224.23	311.55	0.00	0.00	
94.00	20.77	28.82	0.00	0.00	
96.00	220.63	337.51	0.00	0.00	
98.00	219.53	334.65	0.00	0.00	
100.00	218.38	331.79	0.00	0.00	
102.00	217.19	328.93	0.00	0.00	
104.00	215.96	326.07	0.00	0.00	
106.00	214.68	323.21	0.00	0.00	
108.00	213.36	320.35	0.00	0.00	
110.00	212.00	317.49	0.00	0.00	
111.17	123.24	184.41	0.00	0.00	
112.00	87.10	130.22	0.00	0.00	
114.00	209.51	311.77	0.00	0.00	
115.00	104.36	154.81	0.00	0.00	
116.00	104.17	130.94	0.00	0.00	
118.00	208.04	260.16	0.00	0.00	
120.00	207.26	257.87	0.00	0.00	
122.00	206.45	255.58	0.00	0.00	
123.83	188.13	231.85	0.00	0.00	
124.00	17.41	21.44	0.00	0.00	
126.00	199.74	251.01	0.00	0.00	
128.00	198.05	248.72	0.00	0.00	
130.00	196.33	246.43	0.00	0.00	
132.00	197.35	415.63	0.00	0.00	
134.00	195.57	411.05	0.00	0.00	
135.00	97.01	203.81	0.00	0.00	
136.00	96.55	120.71	0.00	0.00	
138.00	191.93	239.71	0.00	0.00	
140.00	190.06	237.42	0.00	0.00	
142.00	188.16	235.13	0.00	0.00	
143.00	(30) attachments	4958.62	2717.04	0.00	0.00
144.00		92.78	104.11	0.00	0.00
146.00		184.28	206.51	0.00	0.00
148.00		182.29	204.22	0.00	0.00
150.00		180.28	201.93	0.00	0.00
152.00		178.24	199.64	0.00	0.00
153.00	(22) attachments	5337.51	3104.88	0.00	0.00
154.00		87.75	87.27	0.00	0.00
156.00		174.09	172.82	0.00	0.00
158.00	(1) attachments	1341.19	1520.53	0.00	0.00
160.00		169.82	168.24	0.00	0.00
162.00		167.66	165.95	0.00	0.00
164.00		165.46	163.66	0.00	0.00
166.00		163.25	161.38	0.00	0.00
168.00		161.00	159.09	0.00	0.00
170.00		158.74	156.80	0.00	0.00
172.00		156.45	154.51	0.00	0.00
173.00	(30) attachments	5491.47	2647.47	0.00	0.00
174.00		76.71	62.61	0.00	0.00
176.00		151.80	123.51	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (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



178.00	149.45	121.22	0.00	0.00
180.00	147.07	118.93	0.00	0.00
181.00 (1) attachments	1281.81	1415.31	0.00	0.00
182.00	66.40	65.31	0.00	0.00
183.00	66.51	65.31	0.00	0.00
Totals:	36,977.19	45,135.55	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

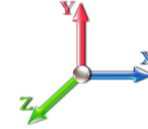
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 29

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)
2.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.030	0.000	18.769	0.00	0.49
2.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.030	0.000	18.769	0.00	1.87
2.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.030	0.000	18.769	0.00	5.62
4.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	0.49
4.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	1.87
4.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.031	0.000	18.769	0.00	5.62
6.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	0.49
6.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	1.87
6.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.031	0.000	18.769	0.00	5.62
8.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	0.49
8.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	1.87
8.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.031	0.000	18.769	0.00	5.62
10.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	0.49
10.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	1.87
10.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.031	0.000	18.769	0.00	5.62
12.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	0.49
12.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	18.769	0.00	1.87
12.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.031	0.000	18.769	0.00	5.62
14.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	18.769	0.00	0.49
14.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	18.769	0.00	1.87
14.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.032	0.000	18.769	0.00	5.62
16.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	18.769	0.00	0.49
16.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	18.769	0.00	1.87
16.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.032	0.000	18.769	0.00	5.62
18.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	18.769	0.00	0.49
18.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	18.769	0.00	1.87
18.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.032	0.000	18.769	0.00	5.62
20.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	18.769	0.00	0.49
20.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	18.769	0.00	1.87
20.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.032	0.000	18.769	0.00	5.62
22.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	18.769	0.00	0.49
22.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	18.769	0.00	1.87
22.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.033	0.000	18.769	0.00	5.62
24.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	18.769	0.00	0.49
24.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	18.769	0.00	1.87
24.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.033	0.000	18.769	0.00	5.62
26.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	18.769	0.00	0.49
26.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	18.769	0.00	1.87
26.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.033	0.000	18.769	0.00	5.62
28.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	18.769	0.00	0.49
28.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	18.769	0.00	1.87
28.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.034	0.000	18.769	0.00	5.62
30.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	18.785	0.00	0.49
30.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	18.785	0.00	1.87
30.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.034	0.000	18.785	0.00	5.62
32.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	19.134	0.00	0.49
32.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	19.134	0.00	1.87

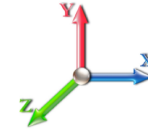
Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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)
32.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.034	0.000	19.134	0.00	5.62
34.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	19.469	0.00	0.49
34.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	19.469	0.00	1.87
34.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.034	0.000	19.469	0.00	5.62
36.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	19.789	0.00	0.49
36.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	19.789	0.00	1.87
36.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.035	0.000	19.789	0.00	5.62
38.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	20.097	0.00	0.49
38.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	20.097	0.00	1.87
38.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.035	0.000	20.097	0.00	5.62
40.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	20.394	0.00	0.49
40.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	20.394	0.00	1.87
40.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.035	0.000	20.394	0.00	5.62
41.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.035	0.000	20.538	0.00	0.25
41.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.035	0.000	20.538	0.00	0.94
41.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.035	0.000	20.538	0.00	2.81
42.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.036	0.000	20.680	0.00	0.25
42.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.036	0.000	20.680	0.00	0.94
42.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.036	0.000	20.680	0.00	2.81
44.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	20.957	0.00	0.49
44.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	20.957	0.00	1.87
44.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.036	0.000	20.957	0.00	5.62
46.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	21.225	0.00	0.49
46.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	21.225	0.00	1.87
46.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.036	0.000	21.225	0.00	5.62
48.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	21.485	0.00	0.49
48.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	21.485	0.00	1.87
48.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.036	0.000	21.485	0.00	5.62
50.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	21.737	0.00	0.49
50.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	21.737	0.00	1.87
50.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.036	0.000	21.737	0.00	5.62
51.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.037	0.000	21.860	0.00	0.25
51.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.037	0.000	21.860	0.00	0.94
51.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.037	0.000	21.860	0.00	2.81
52.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.037	0.000	21.982	0.00	0.25
52.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.037	0.000	21.982	0.00	0.94
52.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.037	0.000	21.982	0.00	2.81
54.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.037	0.000	22.220	0.00	0.49
54.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.037	0.000	22.220	0.00	1.87
54.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.037	0.000	22.220	0.00	5.62
56.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.037	0.000	22.452	0.00	0.49
56.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.037	0.000	22.452	0.00	1.87
56.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.037	0.000	22.452	0.00	5.62
58.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	22.678	0.00	0.49
58.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	22.678	0.00	1.87
58.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.038	0.000	22.678	0.00	5.62
60.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	22.899	0.00	0.49

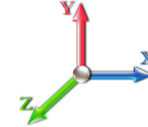
Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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)
60.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	22.899	0.00	1.87
60.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.038	0.000	22.899	0.00	5.62
62.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	23.114	0.00	0.49
62.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	23.114	0.00	1.87
62.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.038	0.000	23.114	0.00	5.62
64.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.039	0.000	23.325	0.00	0.49
64.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.039	0.000	23.325	0.00	1.87
64.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.039	0.000	23.325	0.00	5.62
66.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.079	0.000	23.531	0.00	0.49
66.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.079	0.000	23.531	0.00	1.87
66.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.079	0.000	23.531	0.00	5.62
66.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.079	0.000	23.531	0.00	0.00
66.17	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.120	1.059	23.548	0.00	0.04
66.17	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.120	1.059	23.548	0.00	0.16
66.17	1 5/8" Coax	Yes	0.17	0.000	1.98	0.03	0.00	0.120	1.059	23.548	0.00	0.48
66.17	C6X10.5 Reinforcing	Yes	0.17	0.000	4.06	0.06	0.00	0.120	1.059	23.548	0.00	0.00
68.00	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.120	1.061	23.733	0.00	0.45
68.00	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.120	1.061	23.733	0.00	1.71
68.00	1 5/8" Coax	Yes	1.83	0.000	1.98	0.30	0.00	0.120	1.061	23.733	0.00	5.14
68.00	C6X10.5 Reinforcing	Yes	1.83	0.000	4.06	0.62	0.00	0.120	1.061	23.733	0.00	0.00
70.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.121	1.064	23.930	0.00	0.49
70.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.121	1.064	23.930	0.00	1.87
70.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.121	1.064	23.930	0.00	5.62
70.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.121	1.064	23.930	0.00	0.00
71.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.122	1.067	24.027	0.00	0.25
71.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.122	1.067	24.027	0.00	0.94
71.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.122	1.067	24.027	0.00	2.81
71.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.122	1.067	24.027	0.00	0.00
72.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.123	1.069	24.123	0.00	0.25
72.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.123	1.069	24.123	0.00	0.94
72.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.123	1.069	24.123	0.00	2.81
72.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.123	1.069	24.123	0.00	0.00
74.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.124	1.071	24.313	0.00	0.49
74.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.124	1.071	24.313	0.00	1.87
74.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.124	1.071	24.313	0.00	5.62
74.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.124	1.071	24.313	0.00	0.00
76.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.125	1.075	24.499	0.00	0.49
76.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.125	1.075	24.499	0.00	1.87
76.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.125	1.075	24.499	0.00	5.62
76.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.125	1.075	24.499	0.00	0.00
78.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.126	1.079	24.681	0.00	0.49
78.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.126	1.079	24.681	0.00	1.87
78.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.126	1.079	24.681	0.00	5.62
78.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.126	1.079	24.681	0.00	0.00
80.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.128	1.083	24.861	0.00	0.49
80.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.128	1.083	24.861	0.00	1.87
80.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.128	1.083	24.861	0.00	5.62

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



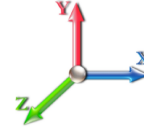
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Load Case: 0.9D + 1.6W 105 mph Wind

Iterations 29

Dead Load Factor 0.90

Wind Load Factor 1.60



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)
80.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.128	1.083	24.861	0.00	0.00
81.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.128	1.085	24.949	0.00	0.25
81.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.128	1.085	24.949	0.00	0.94
81.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.128	1.085	24.949	0.00	2.81
81.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.128	1.085	24.949	0.00	0.00
82.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.129	1.087	25.037	0.00	0.25
82.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.129	1.087	25.037	0.00	0.94
82.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.129	1.087	25.037	0.00	2.81
82.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.129	1.087	25.037	0.00	0.00
84.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.130	1.090	25.210	0.00	0.49
84.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.130	1.090	25.210	0.00	1.87
84.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.130	1.090	25.210	0.00	5.62
84.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.130	1.090	25.210	0.00	0.00
85.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.131	1.093	25.295	0.00	0.25
85.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.131	1.093	25.295	0.00	0.94
85.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.131	1.093	25.295	0.00	2.81
85.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.131	1.093	25.295	0.00	0.00
86.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.132	1.095	25.380	0.00	0.25
86.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.132	1.095	25.380	0.00	0.94
86.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.132	1.095	25.380	0.00	2.81
86.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.132	1.095	25.380	0.00	0.00
88.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.133	1.099	25.547	0.00	0.49
88.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.133	1.099	25.547	0.00	1.87
88.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.133	1.099	25.547	0.00	5.62
88.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.133	1.099	25.547	0.00	0.00
90.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.134	1.103	25.711	0.00	0.49
90.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.134	1.103	25.711	0.00	1.87
90.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.134	1.103	25.711	0.00	5.62
90.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.134	1.103	25.711	0.00	0.00
91.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.135	1.106	25.793	0.00	0.25
91.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.135	1.106	25.793	0.00	0.94
91.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.135	1.106	25.793	0.00	2.81
91.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.135	1.106	25.793	0.00	0.00
92.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.134	1.102	25.873	0.00	0.25
92.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.134	1.102	25.873	0.00	0.94
92.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.134	1.102	25.873	0.00	2.81
92.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.134	1.102	25.873	0.00	0.00
93.83	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.135	1.106	26.019	0.00	0.45
93.83	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.135	1.106	26.019	0.00	1.71
93.83	1 5/8" Coax	Yes	1.83	0.000	1.98	0.30	0.00	0.135	1.106	26.019	0.00	5.14
93.83	C6X10.5 Reinforcing	Yes	1.83	0.000	4.06	0.62	0.00	0.135	1.106	26.019	0.00	0.00
94.00	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.136	1.108	26.033	0.00	0.04
94.00	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.136	1.108	26.033	0.00	0.16
94.00	1 5/8" Coax	Yes	0.17	0.000	1.98	0.03	0.00	0.136	1.108	26.033	0.00	0.48
94.00	C6X10.5 Reinforcing	Yes	0.17	0.000	4.06	0.06	0.00	0.136	1.108	26.033	0.00	0.00
96.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.091	0.000	26.190	0.00	0.49
96.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.091	0.000	26.190	0.00	1.87

Linear Appurtenance Segment Forces (Factored)

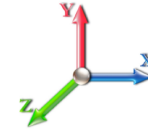
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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)
96.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.091	0.000	26.190	0.00	5.62
96.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.091	0.000	26.190	0.00	0.00
98.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.045	0.000	26.345	0.00	0.49
98.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.045	0.000	26.345	0.00	1.87
98.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.045	0.000	26.345	0.00	5.62
100.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.046	0.000	26.497	0.00	0.49
100.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.046	0.000	26.497	0.00	1.87
100.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.046	0.000	26.497	0.00	5.62
102.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.046	0.000	26.648	0.00	0.49
102.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.046	0.000	26.648	0.00	1.87
102.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.046	0.000	26.648	0.00	5.62
104.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	26.796	0.00	0.49
104.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	26.796	0.00	1.87
104.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.047	0.000	26.796	0.00	5.62
106.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	26.942	0.00	0.49
106.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	26.942	0.00	1.87
106.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.047	0.000	26.942	0.00	5.62
108.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.048	0.000	27.086	0.00	0.49
108.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.048	0.000	27.086	0.00	1.87
108.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.048	0.000	27.086	0.00	5.62
110.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.048	0.000	27.229	0.00	0.49
110.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.048	0.000	27.229	0.00	1.87
110.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.048	0.000	27.229	0.00	5.62
111.17	Safety Cable	Yes	1.17	0.000	0.00	0.00	0.00	0.099	0.000	27.311	0.00	0.29
111.17	Step bolts (ladder)	Yes	1.17	0.000	0.00	0.00	0.00	0.099	0.000	27.311	0.00	1.10
111.17	1 5/8" Coax	Yes	1.17	0.000	1.98	0.19	0.00	0.099	0.000	27.311	0.00	3.29
111.17	C6X10.5 Reinforcing	Yes	1.17	0.000	2.03	0.20	0.00	0.099	0.000	27.311	0.00	0.00
112.00	Safety Cable	Yes	0.83	0.000	0.00	0.00	0.00	0.100	0.000	27.369	0.00	0.20
112.00	Step bolts (ladder)	Yes	0.83	0.000	0.00	0.00	0.00	0.100	0.000	27.369	0.00	0.78
112.00	1 5/8" Coax	Yes	0.83	0.000	1.98	0.14	0.00	0.100	0.000	27.369	0.00	2.33
112.00	C6X10.5 Reinforcing	Yes	0.83	0.000	2.03	0.14	0.00	0.100	0.000	27.369	0.00	0.00
114.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.101	1.002	27.508	0.00	0.49
114.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.101	1.002	27.508	0.00	1.87
114.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.101	1.002	27.508	0.00	5.62
114.00	C6X10.5 Reinforcing	Yes	2.00	0.000	2.03	0.34	0.00	0.101	1.002	27.508	0.00	0.00
115.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.101	1.004	27.577	0.00	0.25
115.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.101	1.004	27.577	0.00	0.94
115.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.101	1.004	27.577	0.00	2.81
115.00	C6X10.5 Reinforcing	Yes	1.00	0.000	2.03	0.17	0.00	0.101	1.004	27.577	0.00	0.00
116.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.102	1.006	27.645	0.00	0.25
116.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.102	1.006	27.645	0.00	0.94
116.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.102	1.006	27.645	0.00	2.81
116.00	C6X10.5 Reinforcing	Yes	1.00	0.000	2.03	0.17	0.00	0.102	1.006	27.645	0.00	0.00
118.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.103	1.009	27.780	0.00	0.49
118.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.103	1.009	27.780	0.00	1.87
118.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.103	1.009	27.780	0.00	5.62
118.00	C6X10.5 Reinforcing	Yes	2.00	0.000	2.03	0.34	0.00	0.103	1.009	27.780	0.00	0.00

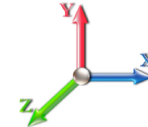
Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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)
120.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.104	1.013	27.914	0.00	0.49
120.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.104	1.013	27.914	0.00	1.87
120.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.104	1.013	27.914	0.00	5.62
120.00	C6X10.5 Reinforcing	Yes	2.00	0.000	2.03	0.34	0.00	0.104	1.013	27.914	0.00	0.00
122.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.106	1.017	28.046	0.00	0.49
122.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.106	1.017	28.046	0.00	1.87
122.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.106	1.017	28.046	0.00	5.62
122.00	C6X10.5 Reinforcing	Yes	2.00	0.000	2.03	0.34	0.00	0.106	1.017	28.046	0.00	0.00
123.83	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.107	1.021	28.166	0.00	0.45
123.83	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.107	1.021	28.166	0.00	1.71
123.83	1 5/8" Coax	Yes	1.83	0.000	1.98	0.30	0.00	0.107	1.021	28.166	0.00	5.14
123.83	C6X10.5 Reinforcing	Yes	1.83	0.000	2.03	0.31	0.00	0.107	1.021	28.166	0.00	0.00
124.00	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.108	1.023	28.177	0.00	0.04
124.00	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.108	1.023	28.177	0.00	0.16
124.00	1 5/8" Coax	Yes	0.17	0.000	1.98	0.03	0.00	0.108	1.023	28.177	0.00	0.48
124.00	C6X10.5 Reinforcing	Yes	0.17	0.000	2.03	0.03	0.00	0.108	1.023	28.177	0.00	0.00
126.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.081	0.000	28.306	0.00	0.49
126.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.081	0.000	28.306	0.00	1.87
126.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.081	0.000	28.306	0.00	5.62
126.00	C6X10.5 Reinforcing	Yes	1.00	0.000	2.03	0.17	0.00	0.081	0.000	28.306	0.00	0.00
128.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.054	0.000	28.434	0.00	0.49
128.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.054	0.000	28.434	0.00	1.87
128.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.054	0.000	28.434	0.00	5.62
130.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.055	0.000	28.560	0.00	0.49
130.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.055	0.000	28.560	0.00	1.87
130.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.055	0.000	28.560	0.00	5.62
132.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.056	0.000	28.685	0.00	0.49
132.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.056	0.000	28.685	0.00	1.87
132.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.056	0.000	28.685	0.00	5.62
134.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.056	0.000	28.808	0.00	0.49
134.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.056	0.000	28.808	0.00	1.87
134.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.056	0.000	28.808	0.00	5.62
135.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.057	0.000	28.869	0.00	0.25
135.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.057	0.000	28.869	0.00	0.94
135.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.057	0.000	28.869	0.00	2.81
136.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.057	0.000	28.930	0.00	0.25
136.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.057	0.000	28.930	0.00	0.94
136.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.057	0.000	28.930	0.00	2.81
138.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.057	0.000	29.051	0.00	0.49
138.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.057	0.000	29.051	0.00	1.87
138.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.057	0.000	29.051	0.00	5.62
140.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.058	0.000	29.171	0.00	0.49
140.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.058	0.000	29.171	0.00	1.87
140.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.058	0.000	29.171	0.00	5.62
142.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.059	0.000	29.289	0.00	0.49
142.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.059	0.000	29.289	0.00	1.87
142.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.059	0.000	29.289	0.00	5.62

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

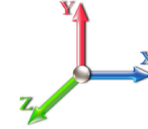


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Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 29

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)
143.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.059	0.000	29.348	0.00	0.25
143.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.059	0.000	29.348	0.00	0.94
143.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.059	0.000	29.348	0.00	2.81
144.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.060	0.000	29.407	0.00	0.25
144.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.060	0.000	29.407	0.00	0.94
144.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.060	0.000	29.407	0.00	2.81
146.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.060	0.000	29.523	0.00	0.49
146.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.060	0.000	29.523	0.00	1.87
146.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.060	0.000	29.523	0.00	5.62
148.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.061	0.000	29.638	0.00	0.49
148.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.061	0.000	29.638	0.00	1.87
148.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.061	0.000	29.638	0.00	5.62
150.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.062	0.000	29.752	0.00	0.49
150.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.062	0.000	29.752	0.00	1.87
150.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.062	0.000	29.752	0.00	5.62
152.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	29.865	0.00	0.49
152.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	29.865	0.00	1.87
152.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.063	0.000	29.865	0.00	5.62
153.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.064	0.000	29.921	0.00	0.25
153.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.064	0.000	29.921	0.00	0.94
153.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.064	0.000	29.921	0.00	2.81
154.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.064	0.000	29.976	0.00	0.25
154.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.064	0.000	29.976	0.00	0.94
154.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.064	0.000	29.976	0.00	2.81
156.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	30.087	0.00	0.49
156.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	30.087	0.00	1.87
156.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.065	0.000	30.087	0.00	5.62
158.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	30.197	0.00	0.49
158.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	30.197	0.00	1.87
158.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.066	0.000	30.197	0.00	5.62
160.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.067	0.000	30.305	0.00	0.49
160.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.067	0.000	30.305	0.00	1.87
160.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.067	0.000	30.305	0.00	5.62
162.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	30.413	0.00	0.49
162.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	30.413	0.00	1.87
162.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.068	0.000	30.413	0.00	5.62
164.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.070	0.000	30.520	0.00	0.49
164.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.070	0.000	30.520	0.00	1.87
164.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.070	0.000	30.520	0.00	5.62
166.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.071	0.000	30.626	0.00	0.49
166.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.071	0.000	30.626	0.00	1.87
166.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.071	0.000	30.626	0.00	5.62
168.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.072	0.000	30.731	0.00	0.49
168.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.072	0.000	30.731	0.00	1.87
168.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.072	0.000	30.731	0.00	5.62
170.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.073	0.000	30.835	0.00	0.49
170.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.073	0.000	30.835	0.00	1.87

Linear Appurtenance Segment Forces (Factored)

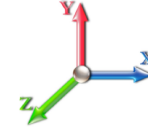
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 29

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)
170.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.073	0.000	30.835	0.00	5.62
172.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.075	0.000	30.938	0.00	0.49
172.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.075	0.000	30.938	0.00	1.87
172.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.075	0.000	30.938	0.00	5.62
173.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.076	0.000	30.989	0.00	0.25
173.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.076	0.000	30.989	0.00	0.94
173.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.076	0.000	30.989	0.00	2.81
174.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.041	0.00	0.25
174.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.041	0.00	0.94
176.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.142	0.00	0.49
176.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.142	0.00	1.87
178.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.243	0.00	0.49
178.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.243	0.00	1.87
180.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.343	0.00	0.49
180.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.343	0.00	1.87
181.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.392	0.00	0.25
181.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.392	0.00	0.94
182.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.442	0.00	0.25
182.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.442	0.00	0.94
183.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.491	0.00	0.25
183.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.491	0.00	0.94
Totals:											0.0	702.0

Calculated Forces

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

7/12/2022

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Load Case: 0.9D + 1.6W 105 mph Wind

Iterations 29

Dead Load Factor 0.90

Wind Load Factor 1.60



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-45.11	-37.00	0.00	-4654.4	0.00	4654.45	5190.16	2595.08	13702.9	6861.66	0.00	0.000	0.000	0.687
2.00	-44.53	-36.82	0.00	-4580.4	0.00	4580.44	5174.50	2587.25	13560.7	6790.43	0.01	-0.066	0.000	0.683
4.00	-43.95	-36.64	0.00	-4506.8	0.00	4506.81	5158.51	2579.25	13418.2	6719.08	0.06	-0.133	0.000	0.679
6.00	-43.37	-36.46	0.00	-4433.5	0.00	4433.53	5142.18	2571.09	13275.4	6647.61	0.13	-0.200	0.000	0.676
8.00	-42.80	-36.28	0.00	-4360.6	0.00	4360.62	5125.52	2562.76	13132.5	6576.03	0.23	-0.267	0.000	0.672
10.00	-42.23	-36.10	0.00	-4288.0	0.00	4288.06	5108.53	2554.27	12989.4	6504.36	0.35	-0.335	0.000	0.668
12.00	-41.67	-35.92	0.00	-4215.8	0.00	4215.87	5091.21	2545.61	12846.0	6432.60	0.51	-0.404	0.000	0.664
14.00	-41.11	-35.74	0.00	-4144.0	0.00	4144.03	5073.56	2536.78	12702.6	6360.75	0.69	-0.472	0.000	0.660
16.00	-40.55	-35.57	0.00	-4072.5	0.00	4072.55	5055.57	2527.79	12559.0	6288.85	0.91	-0.541	0.000	0.656
18.00	-39.99	-35.39	0.00	-4001.4	0.00	4001.42	5037.25	2518.63	12415.3	6216.88	1.15	-0.611	0.000	0.652
20.00	-39.44	-35.21	0.00	-3930.6	0.00	3930.64	5018.60	2509.30	12271.4	6144.86	1.42	-0.681	0.000	0.648
22.00	-38.90	-35.04	0.00	-3860.2	0.00	3860.22	4999.62	2499.81	12127.5	6072.81	1.72	-0.751	0.000	0.644
24.00	-38.35	-34.86	0.00	-3790.1	0.00	3790.14	4980.31	2490.15	11983.6	6000.72	2.05	-0.822	0.000	0.640
26.00	-37.81	-34.69	0.00	-3720.4	0.00	3720.41	4960.66	2480.33	11839.6	5928.62	2.41	-0.893	0.000	0.635
28.00	-37.28	-34.52	0.00	-3651.0	0.00	3651.03	4940.68	2470.34	11695.6	5856.50	2.80	-0.964	0.000	0.631
30.00	-36.75	-34.35	0.00	-3582.0	0.00	3582.00	4920.37	2460.19	11551.6	5784.39	3.22	-1.036	0.000	0.627
32.00	-36.22	-34.17	0.00	-3513.3	0.00	3513.31	4899.73	2449.87	11407.6	5712.28	3.67	-1.108	0.000	0.623
34.00	-35.69	-33.99	0.00	-3444.9	0.00	3444.97	4878.76	2439.38	11263.6	5640.19	4.15	-1.181	0.000	0.618
36.00	-35.17	-33.81	0.00	-3376.9	0.00	3376.98	4857.45	2428.72	11119.7	5568.14	4.66	-1.254	0.000	0.614
38.00	-34.65	-33.63	0.00	-3309.3	0.00	3309.36	4835.81	2417.91	10975.9	5496.12	5.20	-1.327	0.000	0.609
40.00	-34.15	-33.43	0.00	-3242.1	0.00	3242.11	4813.84	2406.92	10832.2	5424.15	5.77	-1.401	0.000	0.605
41.00	-33.90	-33.34	0.00	-3208.6	0.00	3208.67	4802.73	2401.36	10760.3	5388.18	6.07	-1.438	0.000	0.603
42.00	-33.43	-33.25	0.00	-3175.3	0.00	3175.34	4791.54	2395.77	10688.5	5352.24	6.38	-1.476	0.000	0.600
44.00	-32.53	-33.05	0.00	-3108.8	0.00	3108.84	4768.90	2384.45	10545.1	5280.39	7.01	-1.550	0.000	0.596
46.00	-31.63	-32.84	0.00	-3042.7	0.00	3042.75	4745.94	2372.97	10401.7	5208.63	7.68	-1.625	0.000	0.591
48.00	-30.74	-32.63	0.00	-2977.0	0.00	2977.07	4759.60	2379.80	10486.7	5251.18	8.38	-1.700	0.000	0.574
50.00	-30.25	-32.42	0.00	-2911.8	0.00	2911.82	4736.50	2368.25	10343.5	5179.45	9.10	-1.776	0.000	0.569
51.00	-30.00	-32.32	0.00	-2879.4	0.00	2879.40	4724.82	2362.41	10271.9	5143.62	9.48	-1.812	0.000	0.566
51.00	-30.00	-32.32	0.00	-2879.4	0.00	2879.40	4064.30	2032.15	8835.99	4424.56	9.48	-1.812	0.000	0.658
52.00	-29.74	-32.23	0.00	-2847.0	0.00	2847.08	4053.20	2026.60	8772.35	4392.70	9.86	-1.849	0.000	0.656
54.00	-29.25	-32.02	0.00	-2782.6	0.00	2782.63	4030.83	2015.41	8645.34	4329.09	10.66	-1.922	0.000	0.650
56.00	-28.77	-31.82	0.00	-2718.5	0.00	2718.59	4008.20	2004.10	8518.66	4265.66	11.48	-1.996	0.000	0.645
58.00	-28.29	-31.61	0.00	-2654.9	0.00	2654.96	3985.33	1992.66	8392.33	4202.40	12.33	-2.069	0.000	0.639
60.00	-27.81	-31.40	0.00	-2591.7	0.00	2591.75	3962.20	1981.10	8266.38	4139.33	13.21	-2.143	0.000	0.633
62.00	-27.33	-31.19	0.00	-2528.9	0.00	2528.95	3938.82	1969.41	8140.81	4076.46	14.13	-2.217	0.000	0.628
64.00	-26.86	-30.98	0.00	-2466.5	0.00	2466.57	3915.19	1957.60	8015.64	4013.78	15.07	-2.291	0.000	0.622
66.00	-26.41	-30.75	0.00	-2404.6	0.00	2404.60	3891.31	1945.66	7890.88	3951.30	16.05	-2.366	0.000	0.616
66.17	-26.36	-30.75	0.00	-2399.3	0.00	2399.38	3889.27	1944.64	7880.29	3946.00	16.13	-2.372	0.000	0.451
68.00	-25.95	-30.53	0.00	-2343.1	0.00	2343.11	3867.19	1933.59	7766.55	3889.05	17.05	-2.423	0.000	0.446
70.00	-25.51	-30.29	0.00	-2282.0	0.00	2282.05	3842.81	1921.40	7642.66	3827.01	18.08	-2.477	0.000	0.440
71.00	-25.28	-30.17	0.00	-2251.7	0.00	2251.76	3830.52	1915.26	7580.89	3796.08	18.60	-2.505	0.000	0.437
71.00	-25.28	-30.17	0.00	-2251.7	0.00	2251.76	3467.89	1733.95	6863.13	3436.66	18.60	-2.505	0.000	0.482
72.00	-25.06	-30.06	0.00	-2221.5	0.00	2221.58	3456.29	1728.14	6806.46	3408.29	19.13	-2.533	0.000	0.479
74.00	-24.62	-29.82	0.00	-2161.4	0.00	2161.46	3432.92	1716.46	6693.50	3351.73	20.20	-2.587	0.000	0.473
76.00	-24.18	-29.59	0.00	-2101.8	0.00	2101.81	3409.33	1704.67	6581.05	3295.42	21.29	-2.642	0.000	0.466
78.00	-23.75	-29.35	0.00	-2042.6	0.00	2042.64	3385.54	1692.77	6469.11	3239.36	22.41	-2.697	0.000	0.459
80.00	-23.33	-29.10	0.00	-1983.9	0.00	1983.95	3361.54	1680.77	6357.71	3183.58	23.55	-2.751	0.000	0.452
81.00	-23.11	-28.98	0.00	-1954.8	0.00	1954.85	3349.46	1674.73	6302.21	3155.79	24.13	-2.778	0.000	0.449

Calculated Forces

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 45



81.00	-23.11	-28.98	0.00	-1954.8	0.00	1954.85	2964.88	1482.44	5593.85	2801.08	24.13	-2.778	0.000	0.423
82.00	-22.92	-28.87	0.00	-1925.8	0.00	1925.87	2956.03	1478.01	5548.33	2778.29	24.72	-2.806	0.000	0.475
84.00	-22.56	-28.63	0.00	-1868.1	0.00	1868.14	2938.12	1469.06	5457.44	2732.78	25.91	-2.867	0.000	0.467
85.00	-22.38	-28.51	0.00	-1839.5	0.00	1839.51	2929.07	1464.54	5412.08	2710.06	26.51	-2.898	0.000	0.462
86.00	-22.05	-28.39	0.00	-1811.0	0.00	1811.00	2919.96	1459.98	5366.77	2687.37	27.12	-2.929	0.000	0.454
88.00	-21.41	-28.13	0.00	-1754.2	0.00	1754.23	2901.53	1450.76	5276.32	2642.08	28.36	-2.989	0.000	0.446
90.00	-20.79	-27.87	0.00	-1697.9	0.00	1697.97	2882.84	1441.42	5186.12	2596.92	29.63	-3.049	0.000	0.437
91.00	-20.48	-27.74	0.00	-1670.1	0.00	1670.10	2898.35	1449.17	5260.87	2634.34	30.27	-3.079	0.000	0.441
92.00	-20.30	-27.62	0.00	-1642.3	0.00	1642.36	2889.01	1444.51	5215.76	2611.76	30.92	-3.109	0.000	0.425
93.83	-19.98	-27.39	0.00	-1591.8	0.00	1591.81	2871.76	1435.88	5133.38	2570.50	32.12	-3.162	0.000	0.417
93.83	-19.98	-27.39	0.00	-1591.8	0.00	1591.81	2871.76	1435.88	5133.38	2570.50	32.12	-3.162	0.000	0.417
94.00	-19.93	-27.39	0.00	-1587.1	0.00	1587.15	2870.15	1435.07	5125.73	2566.68	32.23	-3.167	0.000	0.626
96.00	-19.57	-27.18	0.00	-1532.3	0.00	1532.38	2851.02	1425.51	5035.98	2521.73	33.57	-3.254	0.000	0.615
98.00	-19.21	-26.97	0.00	-1478.0	0.00	1478.03	2831.62	1415.81	4946.52	2476.93	34.96	-3.340	0.000	0.604
100.00	-18.85	-26.76	0.00	-1424.0	0.00	1424.09	2811.97	1405.98	4857.35	2432.29	36.37	-3.426	0.000	0.593
102.00	-18.49	-26.55	0.00	-1370.5	0.00	1370.58	2792.05	1396.03	4768.51	2387.80	37.83	-3.511	0.000	0.581
104.00	-18.14	-26.34	0.00	-1317.4	0.00	1317.48	2771.87	1385.94	4680.00	2343.48	39.32	-3.596	0.000	0.569
106.00	-17.79	-26.13	0.00	-1264.8	0.00	1264.80	2751.43	1375.71	4591.84	2299.33	40.84	-3.681	0.000	0.557
108.00	-17.45	-25.92	0.00	-1212.5	0.00	1212.54	2730.72	1365.36	4504.04	2255.37	42.40	-3.765	0.000	0.544
110.00	-17.12	-25.71	0.00	-1160.6	0.00	1160.69	2709.75	1354.88	4416.62	2211.59	43.99	-3.848	0.000	0.531
111.17	-16.93	-25.59	0.00	-1130.6	0.00	1130.61	2697.36	1348.68	4365.66	2186.08	44.94	-3.897	0.000	0.408
112.00	-16.78	-25.50	0.00	-1109.3	0.00	1109.37	2688.52	1344.26	4329.60	2168.02	45.62	-3.924	0.000	0.403
114.00	-16.46	-25.29	0.00	-1058.3	0.00	1058.37	2667.03	1333.51	4242.98	2124.64	47.28	-3.987	0.000	0.392
115.00	-16.30	-25.18	0.00	-1033.0	0.00	1033.08	2656.18	1328.09	4199.83	2103.04	48.12	-4.019	0.000	0.386
115.00	-16.30	-25.18	0.00	-1033.0	0.00	1033.08	1951.15	975.57	3095.05	1549.82	48.12	-4.019	0.000	0.421
116.00	-16.16	-25.08	0.00	-1007.9	0.00	1007.90	1944.57	972.29	3065.67	1535.11	48.96	-4.051	0.000	0.488
118.00	-15.88	-24.88	0.00	-957.74	0.00	957.74	1931.24	965.62	3006.98	1505.73	50.67	-4.123	0.000	0.471
120.00	-15.61	-24.67	0.00	-907.98	0.00	907.98	1917.63	958.82	2948.42	1476.40	52.41	-4.194	0.000	0.454
122.00	-15.34	-24.46	0.00	-858.64	0.00	858.64	1903.77	951.88	2889.98	1447.14	54.19	-4.264	0.000	0.436
123.83	-15.11	-24.27	0.00	-813.87	0.00	813.87	1890.85	945.43	2836.64	1420.43	55.83	-4.327	0.000	0.420
123.83	-15.11	-24.27	0.00	-813.87	0.00	813.87	1890.85	945.43	2836.64	1420.43	55.83	-4.327	0.000	0.420
124.00	-15.07	-24.26	0.00	-809.75	0.00	809.75	1889.64	944.82	2831.69	1417.95	55.99	-4.333	0.000	0.580
126.00	-14.79	-24.07	0.00	-761.23	0.00	761.23	1875.25	937.63	2773.56	1388.84	57.82	-4.425	0.000	0.557
128.00	-14.53	-23.87	0.00	-713.09	0.00	713.09	1860.60	930.30	2715.62	1359.83	59.69	-4.515	0.000	0.533
130.00	-14.26	-23.68	0.00	-665.35	0.00	665.35	1845.69	922.84	2657.86	1330.91	61.60	-4.602	0.000	0.508
132.00	-13.83	-23.47	0.00	-617.99	0.00	617.99	1830.51	915.25	2600.31	1302.09	63.55	-4.687	0.000	0.483
134.00	-13.41	-23.25	0.00	-571.05	0.00	571.05	1815.07	907.53	2542.99	1273.39	65.53	-4.769	0.000	0.456
135.00	-13.20	-23.15	0.00	-547.80	0.00	547.80	1823.79	911.89	2575.21	1289.52	66.53	-4.809	0.000	0.433
136.00	-13.06	-23.06	0.00	-524.65	0.00	524.65	1816.04	908.02	2546.57	1275.18	67.54	-4.848	0.000	0.419
138.00	-12.81	-22.86	0.00	-478.54	0.00	478.54	1800.35	900.18	2489.47	1246.58	69.58	-4.920	0.000	0.392
140.00	-12.57	-22.66	0.00	-432.82	0.00	432.82	1784.41	892.20	2432.62	1218.12	71.66	-4.988	0.000	0.363
142.00	-12.33	-22.47	0.00	-387.49	0.00	387.49	1768.19	884.10	2376.04	1189.79	73.76	-5.052	0.000	0.333
143.00	-10.05	-17.29	0.00	-365.03	0.00	365.03	1759.99	879.99	2347.86	1175.68	74.82	-5.082	0.000	0.317
144.00	-9.95	-17.20	0.00	-347.73	0.00	347.73	1751.72	875.86	2319.75	1161.60	75.89	-5.112	0.000	0.305
146.00	-9.74	-17.01	0.00	-313.34	0.00	313.34	1734.98	867.49	2263.76	1133.56	78.04	-5.168	0.000	0.282
148.00	-9.54	-16.81	0.00	-279.32	0.00	279.32	1717.98	858.99	2208.08	1105.68	80.21	-5.220	0.000	0.259
150.00	-9.34	-16.62	0.00	-245.70	0.00	245.70	1700.72	850.36	2152.74	1077.97	82.41	-5.269	0.000	0.234
152.00	-9.15	-16.43	0.00	-212.45	0.00	212.45	1683.20	841.60	2097.74	1050.43	84.62	-5.313	0.000	0.208
153.00	-6.55	-10.83	0.00	-196.02	0.00	196.02	1674.33	837.17	2070.37	1036.72	85.74	-5.334	0.000	0.193
154.00	-6.47	-10.74	0.00	-185.18	0.00	185.18	1665.41	832.70	2043.10	1023.07	86.85	-5.354	0.000	0.185
156.00	-6.30	-10.56	0.00	-163.70	0.00	163.70	1647.36	823.68	1988.83	995.90	89.10	-5.391	0.000	0.168
158.00	-4.91	-9.08	0.00	-142.59	0.00	142.59	1629.04	814.52	1934.96	968.92	91.36	-5.425	0.000	0.150
160.00	-4.75	-8.90	0.00	-124.43	0.00	124.43	1610.47	805.23	1881.50	942.15	93.64	-5.457	0.000	0.135
162.00	-4.60	-8.72	0.00	-106.64	0.00	106.64	1591.63	795.82	1828.46	915.59	95.93	-5.485	0.000	0.119
164.00	-4.45	-8.54	0.00	-89.21	0.00	89.21	1572.53	786.27	1775.86	889.25	98.23	-5.511	0.000	0.103
166.00	-4.30	-8.36	0.00	-72.13	0.00	72.13	1553.17	776.58	1723.71	863.13	100.54	-5.532	0.000	0.086
168.00	-4.16	-8.19	0.00	-55.41	0.00	55.41	1533.54	766.77	1672.03	837.26	102.86	-5.551	0.000	0.069

Calculated Forces

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 46
	Struct Class: II	



170.00	-4.01	-8.01	0.00	-39.04	0.00	39.04	1513.65	756.83	1620.83	811.62	105.18	-5.565	0.000	0.051
172.00	-3.88	-7.84	0.00	-23.01	0.00	23.01	1493.50	746.75	1570.13	786.23	107.51	-5.575	0.000	0.032
173.00	-1.77	-2.12	0.00	-15.16	0.00	15.16	1483.33	741.66	1544.98	773.64	108.68	-5.578	0.000	0.021
174.00	-1.72	-2.04	0.00	-13.04	0.00	13.04	1473.09	736.54	1519.95	761.10	109.85	-5.581	0.000	0.018
176.00	-1.61	-1.88	0.00	-8.96	0.00	8.96	1452.41	726.20	1470.30	736.24	112.18	-5.585	0.000	0.013
178.00	-1.50	-1.72	0.00	-5.21	0.00	5.21	1427.85	713.93	1417.60	709.85	114.52	-5.587	0.000	0.008
180.00	-1.40	-1.56	0.00	-1.78	0.00	1.78	1400.09	700.05	1362.74	682.38	116.86	-5.589	0.000	0.004
180.00	-1.40	-1.56	0.00	-1.78	0.00	1.78	678.42	339.21	662.23	396.30	116.86	-5.589	0.000	0.007
181.00	-0.12	-0.14	0.00	-0.22	0.00	0.22	678.42	339.21	662.23	396.30	118.02	-5.589	0.000	0.001
182.00	-0.06	-0.07	0.00	-0.07	0.00	0.07	678.42	339.21	662.23	396.30	119.19	-5.589	0.000	0.000
183.00	0.00	-0.07	0.00	0.00	0.00	0.00	678.42	339.21	662.23	396.30	120.36	-5.589	0.000	0.000

Wind Loading - Shaft

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

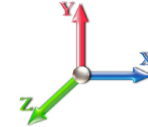
7/12/2022

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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

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	4.256	4.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	4.256	4.68	0.00	1.200	1.133	2.00	11.254	13.50	63.2	183.2	804.2
4.00		1.00	0.70	4.256	4.68	0.00	1.200	1.215	2.00	11.201	13.44	62.9	195.2	811.6
6.00		1.00	0.70	4.256	4.68	0.00	1.200	1.265	2.00	11.138	13.37	62.6	201.9	813.8
8.00		1.00	0.70	4.256	4.68	0.00	1.200	1.302	2.00	11.071	13.29	62.2	206.4	813.7
10.00		1.00	0.70	4.256	4.68	0.00	1.200	1.331	2.00	11.001	13.20	61.8	209.6	812.3
12.00		1.00	0.70	4.256	4.68	0.00	1.200	1.356	2.00	10.929	13.12	61.4	211.9	810.1
14.00		1.00	0.70	4.256	4.68	0.00	1.200	1.377	2.00	10.857	13.03	61.0	213.7	807.2
16.00		1.00	0.70	4.256	4.68	0.00	1.200	1.395	2.00	10.783	12.94	60.6	215.0	804.0
18.00		1.00	0.70	4.256	4.68	0.00	1.200	1.412	2.00	10.709	12.85	60.2	216.0	800.4
20.00		1.00	0.70	4.256	4.68	0.00	1.200	1.427	2.00	10.634	12.76	59.7	216.6	796.5
22.00		1.00	0.70	4.256	4.68	0.00	1.200	1.440	2.00	10.559	12.67	59.3	217.1	792.3
24.00		1.00	0.70	4.256	4.68	0.00	1.200	1.453	2.00	10.484	12.58	58.9	217.3	788.0
26.00		1.00	0.70	4.256	4.68	0.00	1.200	1.465	2.00	10.408	12.49	58.5	217.4	783.5
28.00		1.00	0.70	4.256	4.68	0.00	1.200	1.476	2.00	10.332	12.40	58.0	217.3	778.8
30.00		1.00	0.70	4.260	4.69	0.00	1.200	1.486	2.00	10.256	12.31	57.7	217.1	774.1
32.00		1.00	0.71	4.339	4.77	0.00	1.200	1.495	2.00	10.179	12.22	58.3	216.8	769.2
34.00		1.00	0.73	4.415	4.86	0.00	1.200	1.504	2.00	10.103	12.12	58.9	216.4	764.2
36.00		1.00	0.74	4.487	4.94	0.00	1.200	1.513	2.00	10.026	12.03	59.4	215.9	759.1
38.00		1.00	0.75	4.557	5.01	0.00	1.200	1.521	2.00	9.949	11.94	59.8	215.4	754.0
40.00		1.00	0.76	4.625	5.09	0.00	1.200	1.529	2.00	9.872	11.85	60.3	214.7	748.8
41.00	Bot - Section 2	1.00	0.77	4.657	5.12	0.00	1.200	1.533	1.00	4.907	5.89	30.2	107.2	372.5
42.00		1.00	0.77	4.689	5.16	0.00	1.200	1.537	1.00	4.951	5.94	30.6	108.4	640.4
44.00		1.00	0.78	4.752	5.23	0.00	1.200	1.544	2.00	9.844	11.81	61.8	216.1	1273.2
46.00		1.00	0.79	4.813	5.29	0.00	1.200	1.551	2.00	9.767	11.72	62.0	215.3	1263.2
48.00	Top - Section 1	1.00	0.80	4.872	5.36	0.00	1.200	1.557	2.00	9.689	11.63	62.3	214.4	1253.2
50.00		1.00	0.81	4.929	5.42	0.00	1.200	1.564	2.00	9.612	11.53	62.5	213.5	731.9
51.00	Top - Section 2	1.00	0.82	4.957	5.45	0.00	1.200	1.567	1.00	4.777	5.73	31.3	106.5	364.0
52.00		1.00	0.82	4.984	5.48	0.00	1.200	1.570	1.00	4.757	5.71	31.3	106.2	362.6
54.00		1.00	0.83	5.039	5.54	0.00	1.200	1.576	2.00	9.456	11.35	62.9	211.5	720.8
56.00		1.00	0.84	5.091	5.60	0.00	1.200	1.581	2.00	9.379	11.25	63.0	210.4	715.1
58.00		1.00	0.85	5.142	5.66	0.00	1.200	1.587	2.00	9.301	11.16	63.1	209.3	709.5
60.00		1.00	0.85	5.193	5.71	0.00	1.200	1.592	2.00	9.223	11.07	63.2	208.2	703.8
62.00		1.00	0.86	5.241	5.77	0.00	1.200	1.598	2.00	9.145	10.97	63.3	207.0	698.0
64.00		1.00	0.87	5.289	5.82	0.00	1.200	1.603	2.00	9.067	10.88	63.3	205.8	692.3
66.00		1.00	0.88	5.336	5.87	0.00	1.200	1.608	2.00	8.989	10.79	63.3	204.6	686.5
66.17	RB1	1.00	0.88	5.340	5.87	0.00	1.271 *	1.608	0.17	0.760	0.97	5.7	17.4	58.1
68.00		1.00	0.89	5.382	5.92	0.00	1.273 *	1.612	1.83	8.150	10.38	61.4	186.1	622.6
70.00		1.00	0.89	5.426	5.97	0.00	1.277 *	1.617	2.00	8.833	11.28	67.3	202.1	674.8
71.00	Top - Section 3	1.00	0.90	5.448	5.99	0.00	1.280 *	1.619	1.00	4.387	5.62	33.7	100.7	335.3
72.00		1.00	0.90	5.470	6.02	0.00	1.282 *	1.622	1.00	4.367	5.60	33.7	100.4	333.9
74.00		1.00	0.91	5.513	6.06	0.00	1.286 *	1.626	2.00	8.676	11.15	67.6	199.4	663.0
76.00		1.00	0.91	5.555	6.11	0.00	1.290 *	1.631	2.00	8.598	11.09	67.8	198.1	657.0
78.00		1.00	0.92	5.597	6.16	0.00	1.294 *	1.635	2.00	8.520	11.03	67.9	196.7	651.1
80.00		1.00	0.93	5.637	6.20	0.00	1.299 *	1.639	2.00	8.442	10.97	68.0	195.3	645.1
81.00	Top - Section 4	1.00	0.93	5.657	6.22	0.00	1.303 *	1.641	1.00	4.191	5.46	34.0	97.3	320.5
82.00		1.00	0.93	5.677	6.24	0.00	1.305 *	1.643	1.00	4.172	5.44	34.0	96.9	282.2

Wind Loading - Shaft

Structure: CT01002-S-SBA

Code: TIA-222-G

7/12/2022

Site Name: Waterford

Exposure: B

Height: 183.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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84.00	1.00	0.94	5.716	6.29	0.00	1.308 *	1.647	2.00	8.285	10.84	68.2	192.4	560.2
85.00 Bot - Section 6	1.00	0.94	5.736	6.31	0.00	1.312 *	1.649	1.00	4.113	5.40	34.0	95.9	278.3
86.00	1.00	0.95	5.755	6.33	0.00	1.315 *	1.651	1.00	4.146	5.45	34.5	96.8	462.3
88.00	1.00	0.95	5.793	6.37	0.00	1.318 *	1.655	2.00	8.234	10.85	69.2	192.1	917.3
90.00	1.00	0.96	5.830	6.41	0.00	1.323 *	1.658	2.00	8.155	10.79	69.2	190.6	908.2
91.00 Top - Section 5	1.00	0.96	5.849	6.43	0.00	1.327 *	1.660	1.00	4.048	5.37	34.6	94.9	450.9
92.00	1.00	0.96	5.867	6.45	0.00	1.323 *	1.662	1.00	4.029	5.33	34.4	94.5	272.8
93.83 RT1	1.00	0.97	5.900	6.49	0.00	1.327 *	1.665	1.83	7.322	9.71	63.0	171.7	495.5
94.00	1.00	0.97	5.903	6.49	0.00	1.329 *	1.666	0.17	0.677	0.90	5.8	15.9	45.9
96.00	1.00	0.98	5.939	6.53	0.00	1.200	1.669	2.00	7.920	9.50	62.1	186.0	535.9
98.00	1.00	0.98	5.974	6.57	0.00	1.200	1.672	2.00	7.841	9.41	61.8	184.5	530.6
100.00	1.00	0.99	6.008	6.61	0.00	1.200	1.676	2.00	7.763	9.32	61.6	182.9	525.2
102.00	1.00	0.99	6.043	6.65	0.00	1.200	1.679	2.00	7.684	9.22	61.3	181.3	519.8
104.00	1.00	1.00	6.076	6.68	0.00	1.200	1.682	2.00	7.606	9.13	61.0	179.7	514.4
106.00	1.00	1.00	6.109	6.72	0.00	1.200	1.686	2.00	7.527	9.03	60.7	178.1	508.9
108.00	1.00	1.01	6.142	6.76	0.00	1.200	1.689	2.00	7.449	8.94	60.4	176.5	503.5
110.00	1.00	1.02	6.174	6.79	0.00	1.200	1.692	2.00	7.370	8.84	60.1	174.8	498.0
111.17 RB2	1.00	1.02	6.193	6.81	0.00	1.200	1.694	1.17	4.275	5.13	34.9	101.7	289.0
112.00	1.00	1.02	6.206	6.83	0.00	1.200	1.695	0.83	3.016	3.62	24.7	71.9	204.0
114.00	1.00	1.03	6.238	6.86	0.00	1.202 *	1.698	2.00	7.213	8.67	59.5	171.5	487.1
115.00 Top - Section 6	1.00	1.03	6.253	6.88	0.00	1.205 *	1.699	1.00	3.577	4.31	29.7	85.3	241.7
116.00	1.00	1.03	6.269	6.90	0.00	1.208 *	1.701	1.00	3.557	4.29	29.6	84.9	209.4
118.00	1.00	1.04	6.299	6.93	0.00	1.211 *	1.704	2.00	7.055	8.54	59.2	168.1	414.9
120.00	1.00	1.04	6.330	6.96	0.00	1.216 *	1.707	2.00	6.976	8.48	59.0	166.4	410.2
122.00	1.00	1.05	6.360	7.00	0.00	1.220 *	1.710	2.00	6.898	8.42	58.9	164.7	405.4
123.83 RT2	1.00	1.05	6.387	7.03	0.00	1.225 *	1.712	1.83	6.242	7.65	53.7	149.3	366.8
124.00	1.00	1.05	6.389	7.03	0.00	1.227 *	1.712	0.17	0.576	0.71	5.0	13.9	33.9
126.00	1.00	1.06	6.419	7.06	0.00	1.200	1.715	2.00	6.740	8.09	57.1	161.3	395.8
128.00	1.00	1.06	6.448	7.09	0.00	1.200	1.718	2.00	6.661	7.99	56.7	159.5	391.1
130.00 Bot - Section 8	1.00	1.07	6.476	7.12	0.00	1.200	1.720	2.00	6.582	7.90	56.3	157.8	386.3
132.00	1.00	1.07	6.504	7.15	0.00	1.200	1.723	2.00	6.588	7.91	56.6	158.2	612.2
134.00	1.00	1.07	6.532	7.19	0.00	1.200	1.726	2.00	6.509	7.81	56.1	156.4	604.4
135.00 Top - Section 7	1.00	1.08	6.546	7.20	0.00	1.200	1.727	1.00	3.225	3.87	27.9	77.8	299.4
136.00	1.00	1.08	6.560	7.22	0.00	1.200	1.728	1.00	3.205	3.85	27.8	77.3	188.2
138.00	1.00	1.08	6.588	7.25	0.00	1.200	1.731	2.00	6.352	7.62	55.2	152.8	372.3
140.00	1.00	1.09	6.615	7.28	0.00	1.200	1.733	2.00	6.273	7.53	54.8	151.0	367.5
142.00	1.00	1.09	6.642	7.31	0.00	1.200	1.736	2.00	6.194	7.43	54.3	149.2	362.6
143.00 Appurtenance(s)	1.00	1.09	6.655	7.32	0.00	1.200	1.737	1.00	3.067	3.68	26.9	74.2	179.7
144.00	1.00	1.10	6.668	7.34	0.00	1.200	1.738	1.00	3.048	3.66	26.8	73.7	178.5
146.00	1.00	1.10	6.695	7.36	0.00	1.200	1.741	2.00	6.036	7.24	53.3	145.6	352.9
148.00	1.00	1.11	6.721	7.39	0.00	1.200	1.743	2.00	5.957	7.15	52.8	143.8	348.0
150.00	1.00	1.11	6.746	7.42	0.00	1.200	1.745	2.00	5.879	7.05	52.4	141.9	343.1
152.00	1.00	1.11	6.772	7.45	0.00	1.200	1.748	2.00	5.800	6.96	51.8	140.1	338.2
153.00 Appurtenance(s)	1.00	1.12	6.785	7.46	0.00	1.200	1.749	1.00	2.870	3.44	25.7	69.6	167.5
154.00	1.00	1.12	6.797	7.48	0.00	1.200	1.750	1.00	2.850	3.42	25.6	69.1	166.3
156.00	1.00	1.12	6.822	7.50	0.00	1.200	1.752	2.00	5.642	6.77	50.8	136.4	328.4
158.00 Appurtenance(s)	1.00	1.13	6.847	7.53	0.00	1.200	1.754	2.00	5.563	6.68	50.3	134.5	323.5
160.00	1.00	1.13	6.872	7.56	0.00	1.200	1.757	2.00	5.484	6.58	49.7	132.7	318.6
162.00	1.00	1.13	6.896	7.59	0.00	1.200	1.759	2.00	5.405	6.49	49.2	130.8	313.7
164.00	1.00	1.14	6.921	7.61	0.00	1.200	1.761	2.00	5.326	6.39	48.7	128.9	308.7
166.00	1.00	1.14	6.945	7.64	0.00	1.200	1.763	2.00	5.247	6.30	48.1	127.0	303.8
168.00	1.00	1.15	6.968	7.67	0.00	1.200	1.765	2.00	5.168	6.20	47.5	125.1	298.8
170.00	1.00	1.15	6.992	7.69	0.00	1.200	1.767	2.00	5.089	6.11	47.0	123.2	293.9
172.00	1.00	1.15	7.015	7.72	0.00	1.200	1.769	2.00	5.010	6.01	46.4	121.3	288.9
173.00 Appurtenance(s)	1.00	1.16	7.027	7.73	0.00	1.200	1.770	1.00	2.475	2.97	23.0	60.2	142.8
174.00	1.00	1.16	7.039	7.74	0.00	1.200	1.771	1.00	2.456	2.95	22.8	59.7	141.6
176.00	1.00	1.16	7.062	7.77	0.00	1.200	1.773	2.00	4.852	5.82	45.2	117.4	279.0

Wind Loading - Shaft

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 49
	Struct Class: II	



178.00	1.00	1.17	7.085	7.79	0.00	1.200	1.775	2.00	4.773	5.73	44.6	115.5	274.0
180.00 Top - Section 8	1.00	1.17	7.107	7.82	0.00	1.200	1.777	2.00	4.694	5.63	44.0	113.6	269.0
181.00 Appurtenance(s)	1.00	1.17	7.118	7.83	0.00	1.200	1.778	1.00	2.296	2.76	21.6	56.0	141.5
182.00	1.00	1.17	7.130	7.84	0.00	1.200	1.779	1.00	2.297	2.76	21.6	56.0	141.5
183.00	1.00	1.17	7.141	7.85	0.00	1.200	1.780	1.00	2.297	2.76	21.6	56.1	141.6
								Totals:	183.00			5,376.3	54,169.7

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

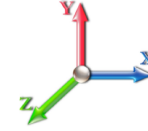
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

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	181.00	Low Profile	1	7.118	7.830	1.00	1.00	40.00	2833.73	0.000	0.000	313.18	0.00	0.00
2	173.00	Samsung B2/B66 RRH	3	7.027	7.730	0.54	0.80	3.94	537.62	0.000	0.000	30.48	0.00	0.00
3	173.00	Andrew JAHH-65B-R3B	6	7.027	7.730	0.66	0.80	41.74	1861.92	0.000	0.000	322.66	0.00	0.00
4	173.00	Samsung MT6407-77A	3	7.027	7.730	0.56	0.80	9.49	650.72	0.000	0.000	73.39	0.00	0.00
5	173.00	CBC78T-DS-43/E14F05P	3	7.027	7.730	0.54	0.80	1.06	100.99	0.000	0.000	8.18	0.00	0.00
6	173.00	BSAMNT-SBS-1-2	3	7.027	7.730	0.75	0.75	0.00	141.66	0.000	0.000	0.00	0.00	0.00
7	173.00	Samsung B5/B13 RRH	3	7.027	7.730	0.54	0.80	3.94	464.93	0.000	0.000	30.48	0.00	0.00
8	173.00	(3) T-Arms	1	7.027	7.730	0.75	0.75	40.82	2827.72	0.000	0.000	315.55	0.00	0.00
9	173.00	LPA-80080-4CF-EDIN-0	4	7.027	7.730	1.36	0.80	19.16	394.32	0.000	0.000	148.06	0.00	0.00
10	173.00	APL866513-42T0	2	7.027	7.730	0.74	0.80	8.84	196.63	0.000	0.000	68.32	0.00	0.00
11	173.00	DB-T1-6Z-8AB-OZ	2	7.027	7.730	0.60	0.80	6.82	397.93	0.000	0.000	52.75	0.00	0.00
12	158.00	Low Profile	1	6.847	7.532	1.00	1.00	39.75	2815.73	0.000	0.000	299.43	0.00	0.00
13	153.00	4460 Radio	3	6.785	7.463	0.50	0.75	5.32	557.55	0.000	0.000	39.67	0.00	0.00
14	153.00	VV-65A-R1	3	6.785	7.463	0.62	0.75	14.59	736.93	0.000	0.000	108.86	0.00	0.00
15	153.00	AIR6419 B41	3	6.785	7.463	0.57	0.75	7.86	459.06	0.000	0.000	58.67	0.00	0.00
16	153.00	Ericsson 4449 B71 + B85	3	6.785	7.463	0.50	0.75	3.83	261.89	0.000	0.000	28.58	0.00	0.00
17	153.00	V-brace kit	1	6.785	7.463	1.00	1.00	5.53	496.76	0.000	0.000	41.29	0.00	0.00
18	153.00	SPTB(Tie back Kit)	1	6.785	7.463	1.00	1.00	7.58	284.27	0.000	0.000	56.59	0.00	0.00
19	153.00	PRK-1245 (kicker kit)	1	6.785	7.463	1.00	1.00	19.47	787.99	0.000	0.000	145.29	0.00	0.00
20	153.00	Low Profile Platform	1	6.785	7.463	1.00	1.00	45.98	2189.20	0.000	0.000	343.19	0.00	0.00
21	153.00	RFS	3	6.785	7.463	0.52	0.75	34.88	1698.68	0.000	0.000	260.29	0.00	0.00
22	153.00	KRY 112 144/1	3	6.785	7.463	0.52	0.75	1.40	62.71	0.000	0.000	10.42	0.00	0.00
23	143.00	DC6-48-60-18-8F	1	6.655	7.320	0.75	0.75	1.62	81.99	0.000	0.000	11.89	0.00	0.00
24	143.00	HRK14	1	6.655	7.320	1.00	1.00	19.98	1191.36	0.000	0.000	146.28	0.00	0.00
25	143.00	Powerwave 7770.00	3	6.655	7.320	0.55	0.75	10.77	529.15	0.000	0.000	78.87	0.00	0.00
26	143.00	Low Profile	1	6.655	7.320	1.00	1.00	39.58	2802.67	0.000	0.000	289.72	0.00	0.00
27	143.00	850-1900 Dual Band	3	6.655	7.320	0.49	0.75	1.56	44.66	0.000	0.000	11.39	0.00	0.00
28	143.00	RRUS 11	3	6.655	7.320	0.50	0.75	4.78	448.54	0.000	0.000	34.96	0.00	0.00
29	143.00	DBC-750	3	6.655	7.320	0.38	0.75	1.17	37.44	0.000	0.000	8.54	0.00	0.00
30	143.00	OPA-65R-LCUU-H4	1	6.655	7.320	0.75	0.75	5.23	226.11	0.000	0.000	38.25	0.00	0.00
31	143.00	QS46512-2	1	6.655	7.320	0.75	0.75	10.75	152.60	0.000	0.000	78.72	0.00	0.00
32	143.00	TPA-65R-LCUUUU-H8	2	6.655	7.320	0.62	0.75	18.60	800.81	0.000	0.000	136.14	0.00	0.00
33	143.00	OPA-65R-LCUU-H8	2	6.655	7.320	0.59	0.75	17.00	789.31	0.000	0.000	124.47	0.00	0.00
34	143.00	DTMABP7819VG12A	3	6.655	7.320	0.50	0.75	2.87	123.41	0.000	0.000	21.03	0.00	0.00
35	143.00	DBC0061F1V51-2	3	6.655	7.320	0.50	0.75	1.08	124.35	0.000	0.000	7.88	0.00	0.00
36	143.00	RRUS 32 B2	3	6.655	7.320	0.50	0.75	5.22	453.26	0.000	0.000	38.24	0.00	0.00
Totals:									28,564.60			3,781.72		

Total Applied Force Summary

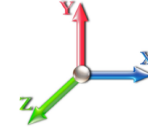
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

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
2.00		63.22	928.00	0.00	0.00
4.00		62.93	937.67	0.00	0.00
6.00		62.57	941.31	0.00	0.00
8.00		62.20	942.31	0.00	0.00
10.00		61.80	941.82	0.00	0.00
12.00		61.40	940.34	0.00	0.00
14.00		60.99	938.17	0.00	0.00
16.00		60.58	935.47	0.00	0.00
18.00		60.16	932.37	0.00	0.00
20.00		59.74	928.94	0.00	0.00
22.00		59.32	925.24	0.00	0.00
24.00		58.90	921.31	0.00	0.00
26.00		58.47	917.18	0.00	0.00
28.00		58.04	912.89	0.00	0.00
30.00		57.66	908.45	0.00	0.00
32.00		58.30	903.89	0.00	0.00
34.00		58.87	899.20	0.00	0.00
36.00		59.39	894.41	0.00	0.00
38.00		59.85	889.53	0.00	0.00
40.00		60.26	884.57	0.00	0.00
41.00		30.16	440.45	0.00	0.00
42.00		30.65	708.43	0.00	0.00
44.00		61.75	1409.47	0.00	0.00
46.00		62.05	1399.73	0.00	0.00
48.00		62.31	1389.92	0.00	0.00
50.00		62.54	868.88	0.00	0.00
51.00		31.25	432.54	0.00	0.00
52.00		31.30	431.20	0.00	0.00
54.00		62.89	858.15	0.00	0.00
56.00		63.03	852.72	0.00	0.00
58.00		63.13	847.24	0.00	0.00
60.00		63.22	841.72	0.00	0.00
62.00		63.27	836.16	0.00	0.00
64.00		63.30	830.56	0.00	0.00
66.00		63.31	838.25	0.00	0.00
66.17		5.68	72.16	0.00	0.00
68.00		61.42	773.91	0.00	0.00
70.00		67.32	840.39	0.00	0.00
71.00		33.66	418.22	0.00	0.00
72.00		33.70	416.80	0.00	0.00
74.00		67.64	829.08	0.00	0.00
76.00		67.78	823.38	0.00	0.00
78.00		67.89	817.66	0.00	0.00
80.00		68.00	811.91	0.00	0.00
81.00		33.97	403.94	0.00	0.00
82.00		33.99	365.74	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00	68.17	727.40	0.00	0.00	
85.00	34.05	361.96	0.00	0.00	
86.00	34.50	545.99	0.00	0.00	
88.00	69.17	1084.99	0.00	0.00	
90.00	69.22	1076.07	0.00	0.00	
91.00	34.57	534.85	0.00	0.00	
92.00	34.40	356.86	0.00	0.00	
93.83	63.04	649.47	0.00	0.00	
94.00	5.84	60.16	0.00	0.00	
96.00	62.09	690.45	0.00	0.00	
98.00	61.83	671.28	0.00	0.00	
100.00	61.57	666.01	0.00	0.00	
102.00	61.29	660.73	0.00	0.00	
104.00	61.00	655.43	0.00	0.00	
106.00	60.70	650.12	0.00	0.00	
108.00	60.39	644.79	0.00	0.00	
110.00	60.07	639.45	0.00	0.00	
111.17	34.95	382.12	0.00	0.00	
112.00	24.71	270.03	0.00	0.00	
114.00	59.48	646.45	0.00	0.00	
115.00	29.65	321.41	0.00	0.00	
116.00	29.62	289.20	0.00	0.00	
118.00	59.20	574.56	0.00	0.00	
120.00	59.04	569.95	0.00	0.00	
122.00	58.88	565.34	0.00	0.00	
123.83	53.72	513.29	0.00	0.00	
124.00	4.97	47.54	0.00	0.00	
126.00	57.11	547.07	0.00	0.00	
128.00	56.69	533.39	0.00	0.00	
130.00	56.27	528.68	0.00	0.00	
132.00	56.57	754.76	0.00	0.00	
134.00	56.13	746.98	0.00	0.00	
135.00	27.87	370.78	0.00	0.00	
136.00	27.76	259.56	0.00	0.00	
138.00	55.23	515.14	0.00	0.00	
140.00	54.77	510.39	0.00	0.00	
142.00	54.30	505.62	0.00	0.00	
143.00	(30) attachments	1053.34	8056.90	0.00	0.00
144.00		26.83	234.01	0.00	0.00
146.00		53.34	464.00	0.00	0.00
148.00		52.85	459.21	0.00	0.00
150.00		52.35	454.41	0.00	0.00
152.00		51.84	449.60	0.00	0.00
153.00	(22) attachments	1118.55	7758.25	0.00	0.00
154.00		25.58	207.18	0.00	0.00
156.00		50.81	410.29	0.00	0.00
158.00	(1) attachments	349.71	3221.18	0.00	0.00
160.00		49.74	400.61	0.00	0.00
162.00		49.20	395.76	0.00	0.00
164.00		48.65	390.90	0.00	0.00
166.00		48.10	386.03	0.00	0.00
168.00		47.54	381.16	0.00	0.00
170.00		46.97	376.27	0.00	0.00
172.00		46.40	371.38	0.00	0.00
173.00	(30) attachments	1072.84	7758.53	0.00	0.00
174.00		22.81	152.25	0.00	0.00
176.00		45.23	300.32	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 53



178.00	44.64	295.38	0.00	0.00
180.00	44.04	290.42	0.00	0.00
181.00 (1) attachments	334.76	2985.97	0.00	0.00
182.00	21.61	152.28	0.00	0.00
183.00	21.65	152.32	0.00	0.00
Totals:	9,158.05	94,614.54	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

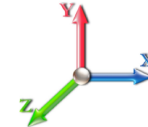
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

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)
2.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.030	0.000	4.256	0.00	4.48
2.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.030	0.000	4.256	0.00	6.80
2.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.71	0.00	0.030	0.000	4.256	0.00	23.06
4.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	4.256	0.00	4.99
4.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	4.256	0.00	7.35
4.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.73	0.00	0.031	0.000	4.256	0.00	24.28
6.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	4.256	0.00	5.33
6.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	4.256	0.00	7.70
6.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.75	0.00	0.031	0.000	4.256	0.00	25.05
8.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	4.256	0.00	5.58
8.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	4.256	0.00	7.97
8.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.76	0.00	0.031	0.000	4.256	0.00	25.62
10.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	4.256	0.00	5.79
10.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	4.256	0.00	8.19
10.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.77	0.00	0.031	0.000	4.256	0.00	26.08
12.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	4.256	0.00	5.96
12.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	4.256	0.00	8.37
12.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.78	0.00	0.031	0.000	4.256	0.00	26.47
14.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	4.256	0.00	6.11
14.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	4.256	0.00	8.53
14.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.79	0.00	0.032	0.000	4.256	0.00	26.80
16.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	4.256	0.00	6.25
16.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	4.256	0.00	8.67
16.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.80	0.00	0.032	0.000	4.256	0.00	27.10
18.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	4.256	0.00	6.37
18.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	4.256	0.00	8.80
18.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.80	0.00	0.032	0.000	4.256	0.00	27.37
20.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	4.256	0.00	6.48
20.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	4.256	0.00	8.92
20.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.81	0.00	0.032	0.000	4.256	0.00	27.61
22.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	4.256	0.00	6.59
22.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	4.256	0.00	9.03
22.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.81	0.00	0.033	0.000	4.256	0.00	27.83
24.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	4.256	0.00	6.68
24.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	4.256	0.00	9.13
24.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.81	0.00	0.033	0.000	4.256	0.00	28.04
26.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	4.256	0.00	6.77
26.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	4.256	0.00	9.23
26.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.82	0.00	0.033	0.000	4.256	0.00	28.23
28.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	4.256	0.00	6.86
28.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	4.256	0.00	9.32
28.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.82	0.00	0.034	0.000	4.256	0.00	28.41
30.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	4.260	0.00	6.94
30.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	4.260	0.00	9.40
30.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.83	0.00	0.034	0.000	4.260	0.00	28.57
32.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	4.339	0.00	7.02
32.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	4.339	0.00	9.48

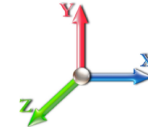
Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

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)
32.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.83	0.00	0.034	0.000	4.339	0.00	28.73
34.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	4.415	0.00	7.09
34.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	4.415	0.00	9.55
34.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.83	0.00	0.034	0.000	4.415	0.00	28.88
36.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	4.487	0.00	7.16
36.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	4.487	0.00	9.63
36.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.83	0.00	0.035	0.000	4.487	0.00	29.03
38.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	4.557	0.00	7.22
38.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	4.557	0.00	9.70
38.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.84	0.00	0.035	0.000	4.557	0.00	29.16
40.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	4.625	0.00	7.28
40.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	4.625	0.00	9.76
40.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.84	0.00	0.035	0.000	4.625	0.00	29.29
41.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.035	0.000	4.657	0.00	3.66
41.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.035	0.000	4.657	0.00	4.90
41.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.42	0.00	0.035	0.000	4.657	0.00	14.68
42.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.036	0.000	4.689	0.00	3.67
42.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.036	0.000	4.689	0.00	4.91
42.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.42	0.00	0.036	0.000	4.689	0.00	14.71
44.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	4.752	0.00	7.40
44.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	4.752	0.00	9.89
44.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.84	0.00	0.036	0.000	4.752	0.00	29.54
46.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	4.813	0.00	7.46
46.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	4.813	0.00	9.94
46.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.85	0.00	0.036	0.000	4.813	0.00	29.65
48.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	4.872	0.00	7.51
48.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	4.872	0.00	10.00
48.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.85	0.00	0.036	0.000	4.872	0.00	29.77
50.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	4.929	0.00	7.56
50.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	4.929	0.00	10.06
50.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.85	0.00	0.036	0.000	4.929	0.00	29.87
51.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.037	0.000	4.957	0.00	3.80
51.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.037	0.000	4.957	0.00	5.04
51.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.43	0.00	0.037	0.000	4.957	0.00	14.96
52.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.037	0.000	4.984	0.00	3.81
52.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.037	0.000	4.984	0.00	5.05
52.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.43	0.00	0.037	0.000	4.984	0.00	14.99
54.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.037	0.000	5.039	0.00	7.66
54.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.037	0.000	5.039	0.00	10.16
54.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.86	0.00	0.037	0.000	5.039	0.00	30.08
56.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.037	0.000	5.091	0.00	7.71
56.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.037	0.000	5.091	0.00	10.21
56.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.86	0.00	0.037	0.000	5.091	0.00	30.17
58.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	5.142	0.00	7.76
58.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	5.142	0.00	10.26
58.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.86	0.00	0.038	0.000	5.142	0.00	30.27
60.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	5.193	0.00	7.80

Linear Appurtenance Segment Forces (Factored)

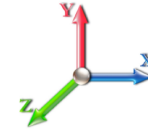
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

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)
60.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	5.193	0.00	10.31
60.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.86	0.00	0.038	0.000	5.193	0.00	30.36
62.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	5.241	0.00	7.85
62.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	5.241	0.00	10.35
62.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.86	0.00	0.038	0.000	5.241	0.00	30.45
64.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.039	0.000	5.289	0.00	7.89
64.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.039	0.000	5.289	0.00	10.40
64.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.86	0.00	0.039	0.000	5.289	0.00	30.54
66.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.079	0.000	5.336	0.00	7.93
66.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.079	0.000	5.336	0.00	10.44
66.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.87	0.00	0.079	0.000	5.336	0.00	30.62
66.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.61	0.00	0.079	0.000	5.336	0.00	13.32
66.17	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.120	1.059	5.340	0.00	0.67
66.17	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.120	1.059	5.340	0.00	0.89
66.17	1 5/8" Coax	Yes	0.17	0.000	1.98	0.07	0.00	0.120	1.059	5.340	0.00	2.60
66.17	C6X10.5 Reinforcing	Yes	0.17	0.000	4.06	0.10	0.00	0.120	1.059	5.340	0.00	2.26
68.00	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.120	1.061	5.382	0.00	7.29
68.00	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.120	1.061	5.382	0.00	9.59
68.00	1 5/8" Coax	Yes	1.83	0.000	1.98	0.79	0.00	0.120	1.061	5.382	0.00	28.09
68.00	C6X10.5 Reinforcing	Yes	1.83	0.000	4.06	1.11	0.00	0.120	1.061	5.382	0.00	24.46
70.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.121	1.064	5.426	0.00	8.01
70.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.121	1.064	5.426	0.00	10.52
70.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.87	0.00	0.121	1.064	5.426	0.00	30.78
70.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	1.22	0.00	0.121	1.064	5.426	0.00	26.82
71.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.122	1.067	5.448	0.00	4.02
71.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.122	1.067	5.448	0.00	5.27
71.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.43	0.00	0.122	1.067	5.448	0.00	15.41
71.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.61	0.00	0.122	1.067	5.448	0.00	13.43
72.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.123	1.069	5.470	0.00	4.03
72.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.123	1.069	5.470	0.00	5.28
72.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.44	0.00	0.123	1.069	5.470	0.00	15.43
72.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.61	0.00	0.123	1.069	5.470	0.00	13.46
74.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.124	1.071	5.513	0.00	8.09
74.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.124	1.071	5.513	0.00	10.60
74.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.87	0.00	0.124	1.071	5.513	0.00	30.94
74.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	1.22	0.00	0.124	1.071	5.513	0.00	27.00
76.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.125	1.075	5.555	0.00	8.13
76.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.125	1.075	5.555	0.00	10.64
76.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.87	0.00	0.125	1.075	5.555	0.00	31.01
76.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	1.22	0.00	0.125	1.075	5.555	0.00	27.08
78.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.126	1.079	5.597	0.00	8.16
78.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.126	1.079	5.597	0.00	10.68
78.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.87	0.00	0.126	1.079	5.597	0.00	31.09
78.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	1.22	0.00	0.126	1.079	5.597	0.00	27.17
80.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.128	1.083	5.637	0.00	8.20
80.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.128	1.083	5.637	0.00	10.72
80.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.88	0.00	0.128	1.083	5.637	0.00	31.16

Linear Appurtenance Segment Forces (Factored)

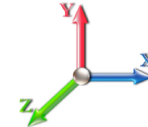
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 57

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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

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)
80.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	1.22	0.00	0.128	1.083	5.637	0.00	27.25
81.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.128	1.085	5.657	0.00	4.11
81.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.128	1.085	5.657	0.00	5.37
81.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.44	0.00	0.128	1.085	5.657	0.00	15.60
81.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.61	0.00	0.128	1.085	5.657	0.00	13.64
82.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.129	1.087	5.677	0.00	4.12
82.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.129	1.087	5.677	0.00	5.38
82.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.44	0.00	0.129	1.087	5.677	0.00	15.61
82.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.61	0.00	0.129	1.087	5.677	0.00	13.66
84.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.130	1.090	5.716	0.00	8.27
84.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.130	1.090	5.716	0.00	10.79
84.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.88	0.00	0.130	1.090	5.716	0.00	31.30
84.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	1.23	0.00	0.130	1.090	5.716	0.00	27.41
85.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.131	1.093	5.736	0.00	4.14
85.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.131	1.093	5.736	0.00	5.40
85.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.44	0.00	0.131	1.093	5.736	0.00	15.66
85.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.61	0.00	0.131	1.093	5.736	0.00	13.72
86.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.132	1.095	5.755	0.00	4.15
86.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.132	1.095	5.755	0.00	5.41
86.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.44	0.00	0.132	1.095	5.755	0.00	15.68
86.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.61	0.00	0.132	1.095	5.755	0.00	13.74
88.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.133	1.099	5.793	0.00	8.33
88.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.133	1.099	5.793	0.00	10.86
88.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.88	0.00	0.133	1.099	5.793	0.00	31.43
88.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	1.23	0.00	0.133	1.099	5.793	0.00	27.56
90.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.134	1.103	5.830	0.00	8.37
90.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.134	1.103	5.830	0.00	10.89
90.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.88	0.00	0.134	1.103	5.830	0.00	31.49
90.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	1.23	0.00	0.134	1.103	5.830	0.00	27.63
91.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.135	1.106	5.849	0.00	4.19
91.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.135	1.106	5.849	0.00	5.45
91.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.44	0.00	0.135	1.106	5.849	0.00	15.76
91.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.62	0.00	0.135	1.106	5.849	0.00	13.83
92.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.134	1.102	5.867	0.00	4.20
92.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.134	1.102	5.867	0.00	5.46
92.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.44	0.00	0.134	1.102	5.867	0.00	15.78
92.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.62	0.00	0.134	1.102	5.867	0.00	13.85
93.83	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.135	1.106	5.900	0.00	7.71
93.83	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.135	1.106	5.900	0.00	10.02
93.83	1 5/8" Coax	Yes	1.83	0.000	1.98	0.81	0.00	0.135	1.106	5.900	0.00	28.93
93.83	C6X10.5 Reinforcing	Yes	1.83	0.000	4.06	1.13	0.00	0.135	1.106	5.900	0.00	25.41
94.00	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.136	1.108	5.903	0.00	0.72
94.00	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.136	1.108	5.903	0.00	0.93
94.00	1 5/8" Coax	Yes	0.17	0.000	1.98	0.08	0.00	0.136	1.108	5.903	0.00	2.69
94.00	C6X10.5 Reinforcing	Yes	0.17	0.000	4.06	0.10	0.00	0.136	1.108	5.903	0.00	2.36
96.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.091	0.000	5.939	0.00	8.46
96.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.091	0.000	5.939	0.00	10.99

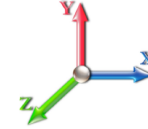
Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

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)
96.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.89	0.00	0.091	0.000	5.939	0.00	31.68
96.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.62	0.00	0.091	0.000	5.939	0.00	13.92
98.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.045	0.000	5.974	0.00	8.49
98.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.045	0.000	5.974	0.00	11.02
98.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.89	0.00	0.045	0.000	5.974	0.00	31.74
100.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.046	0.000	6.008	0.00	8.52
100.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.046	0.000	6.008	0.00	11.05
100.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.89	0.00	0.046	0.000	6.008	0.00	31.80
102.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.046	0.000	6.043	0.00	8.55
102.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.046	0.000	6.043	0.00	11.08
102.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.89	0.00	0.046	0.000	6.043	0.00	31.86
104.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	6.076	0.00	8.58
104.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	6.076	0.00	11.11
104.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.89	0.00	0.047	0.000	6.076	0.00	31.91
106.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	6.109	0.00	8.60
106.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	6.109	0.00	11.14
106.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.89	0.00	0.047	0.000	6.109	0.00	31.97
108.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.048	0.000	6.142	0.00	8.63
108.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.048	0.000	6.142	0.00	11.17
108.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.89	0.00	0.048	0.000	6.142	0.00	32.02
110.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.048	0.000	6.174	0.00	8.66
110.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.048	0.000	6.174	0.00	11.20
110.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.89	0.00	0.048	0.000	6.174	0.00	32.08
111.17	Safety Cable	Yes	1.17	0.000	0.00	0.00	0.00	0.099	0.000	6.193	0.00	5.08
111.17	Step bolts (ladder)	Yes	1.17	0.000	0.00	0.00	0.00	0.099	0.000	6.193	0.00	6.56
111.17	1 5/8" Coax	Yes	1.17	0.000	1.98	0.52	0.00	0.099	0.000	6.193	0.00	18.78
111.17	C6X10.5 Reinforcing	Yes	1.17	0.000	2.03	0.53	0.00	0.099	0.000	6.193	0.00	10.34
112.00	Safety Cable	Yes	0.83	0.000	0.00	0.00	0.00	0.100	0.000	6.206	0.00	3.61
112.00	Step bolts (ladder)	Yes	0.83	0.000	0.00	0.00	0.00	0.100	0.000	6.206	0.00	4.66
112.00	1 5/8" Coax	Yes	0.83	0.000	1.98	0.37	0.00	0.100	0.000	6.206	0.00	13.33
112.00	C6X10.5 Reinforcing	Yes	0.83	0.000	2.03	0.37	0.00	0.100	0.000	6.206	0.00	7.34
114.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.101	1.002	6.238	0.00	8.71
114.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.101	1.002	6.238	0.00	11.26
114.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.90	0.00	0.101	1.002	6.238	0.00	32.19
114.00	C6X10.5 Reinforcing	Yes	2.00	0.000	2.03	0.90	0.00	0.101	1.002	6.238	0.00	17.73
115.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.101	1.004	6.253	0.00	4.36
115.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.101	1.004	6.253	0.00	5.64
115.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.45	0.00	0.101	1.004	6.253	0.00	16.11
115.00	C6X10.5 Reinforcing	Yes	1.00	0.000	2.03	0.45	0.00	0.101	1.004	6.253	0.00	8.88
116.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.102	1.006	6.269	0.00	4.37
116.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.102	1.006	6.269	0.00	5.64
116.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.45	0.00	0.102	1.006	6.269	0.00	16.12
116.00	C6X10.5 Reinforcing	Yes	1.00	0.000	2.03	0.45	0.00	0.102	1.006	6.269	0.00	8.89
118.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.103	1.009	6.299	0.00	8.77
118.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.103	1.009	6.299	0.00	11.31
118.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.90	0.00	0.103	1.009	6.299	0.00	32.29
118.00	C6X10.5 Reinforcing	Yes	2.00	0.000	2.03	0.91	0.00	0.103	1.009	6.299	0.00	17.81

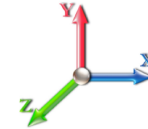
Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

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)
120.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.104	1.013	6.330	0.00	8.79
120.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.104	1.013	6.330	0.00	11.34
120.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.90	0.00	0.104	1.013	6.330	0.00	32.34
120.00	C6X10.5 Reinforcing	Yes	2.00	0.000	2.03	0.91	0.00	0.104	1.013	6.330	0.00	17.86
122.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.106	1.017	6.360	0.00	8.82
122.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.106	1.017	6.360	0.00	11.36
122.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.90	0.00	0.106	1.017	6.360	0.00	32.39
122.00	C6X10.5 Reinforcing	Yes	2.00	0.000	2.03	0.91	0.00	0.106	1.017	6.360	0.00	17.90
123.83	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.107	1.021	6.387	0.00	8.09
123.83	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.107	1.021	6.387	0.00	10.42
123.83	1 5/8" Coax	Yes	1.83	0.000	1.98	0.82	0.00	0.107	1.021	6.387	0.00	29.68
123.83	C6X10.5 Reinforcing	Yes	1.83	0.000	2.03	0.83	0.00	0.107	1.021	6.387	0.00	16.41
124.00	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.108	1.023	6.389	0.00	0.75
124.00	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.108	1.023	6.389	0.00	0.97
124.00	1 5/8" Coax	Yes	0.17	0.000	1.98	0.08	0.00	0.108	1.023	6.389	0.00	2.76
124.00	C6X10.5 Reinforcing	Yes	0.17	0.000	2.03	0.08	0.00	0.108	1.023	6.389	0.00	1.52
126.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.081	0.000	6.419	0.00	8.87
126.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.081	0.000	6.419	0.00	11.42
126.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.90	0.00	0.081	0.000	6.419	0.00	32.49
126.00	C6X10.5 Reinforcing	Yes	1.00	0.000	2.03	0.46	0.00	0.081	0.000	6.419	0.00	8.99
128.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.054	0.000	6.448	0.00	8.89
128.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.054	0.000	6.448	0.00	11.44
128.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.90	0.00	0.054	0.000	6.448	0.00	32.53
130.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.055	0.000	6.476	0.00	8.91
130.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.055	0.000	6.476	0.00	11.47
130.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.90	0.00	0.055	0.000	6.476	0.00	32.58
132.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.056	0.000	6.504	0.00	8.94
132.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.056	0.000	6.504	0.00	11.49
132.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.90	0.00	0.056	0.000	6.504	0.00	32.63
134.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.056	0.000	6.532	0.00	8.96
134.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.056	0.000	6.532	0.00	11.52
134.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.91	0.00	0.056	0.000	6.532	0.00	32.67
135.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.057	0.000	6.546	0.00	4.49
135.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.057	0.000	6.546	0.00	5.76
135.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.45	0.00	0.057	0.000	6.546	0.00	16.35
136.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.057	0.000	6.560	0.00	4.49
136.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.057	0.000	6.560	0.00	5.77
136.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.45	0.00	0.057	0.000	6.560	0.00	16.36
138.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.057	0.000	6.588	0.00	9.01
138.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.057	0.000	6.588	0.00	11.56
138.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.91	0.00	0.057	0.000	6.588	0.00	32.76
140.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.058	0.000	6.615	0.00	9.03
140.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.058	0.000	6.615	0.00	11.59
140.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.91	0.00	0.058	0.000	6.615	0.00	32.81
142.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.059	0.000	6.642	0.00	9.05
142.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.059	0.000	6.642	0.00	11.61
142.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.91	0.00	0.059	0.000	6.642	0.00	32.85

Linear Appurtenance Segment Forces (Factored)

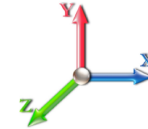
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

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)
143.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.059	0.000	6.655	0.00	4.53
143.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.059	0.000	6.655	0.00	5.81
143.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.45	0.00	0.059	0.000	6.655	0.00	16.44
144.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.060	0.000	6.668	0.00	4.54
144.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.060	0.000	6.668	0.00	5.82
144.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.45	0.00	0.060	0.000	6.668	0.00	16.45
146.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.060	0.000	6.695	0.00	9.10
146.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.060	0.000	6.695	0.00	11.66
146.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.91	0.00	0.060	0.000	6.695	0.00	32.94
148.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.061	0.000	6.721	0.00	9.12
148.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.061	0.000	6.721	0.00	11.68
148.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.91	0.00	0.061	0.000	6.721	0.00	32.98
150.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.062	0.000	6.746	0.00	9.14
150.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.062	0.000	6.746	0.00	11.70
150.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.91	0.00	0.062	0.000	6.746	0.00	33.02
152.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	6.772	0.00	9.16
152.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	6.772	0.00	11.72
152.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.91	0.00	0.063	0.000	6.772	0.00	33.06
153.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.064	0.000	6.785	0.00	4.59
153.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.064	0.000	6.785	0.00	5.87
153.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.46	0.00	0.064	0.000	6.785	0.00	16.54
154.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.064	0.000	6.797	0.00	4.59
154.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.064	0.000	6.797	0.00	5.87
154.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.46	0.00	0.064	0.000	6.797	0.00	16.55
156.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	6.822	0.00	9.20
156.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	6.822	0.00	11.77
156.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.91	0.00	0.065	0.000	6.822	0.00	33.14
158.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	6.847	0.00	9.22
158.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	6.847	0.00	11.79
158.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.91	0.00	0.066	0.000	6.847	0.00	33.18
160.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.067	0.000	6.872	0.00	9.24
160.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.067	0.000	6.872	0.00	11.81
160.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.92	0.00	0.067	0.000	6.872	0.00	33.22
162.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	6.896	0.00	9.26
162.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	6.896	0.00	11.83
162.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.92	0.00	0.068	0.000	6.896	0.00	33.26
164.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.070	0.000	6.921	0.00	9.28
164.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.070	0.000	6.921	0.00	11.85
164.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.92	0.00	0.070	0.000	6.921	0.00	33.30
166.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.071	0.000	6.945	0.00	9.30
166.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.071	0.000	6.945	0.00	11.87
166.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.92	0.00	0.071	0.000	6.945	0.00	33.34
168.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.072	0.000	6.968	0.00	9.32
168.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.072	0.000	6.968	0.00	11.89
168.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.92	0.00	0.072	0.000	6.968	0.00	33.37
170.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.073	0.000	6.992	0.00	9.34
170.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.073	0.000	6.992	0.00	11.91

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

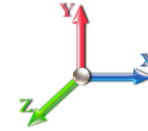


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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 29

Dead Load Factor 1.20
Wind Load Factor 1.00



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)
170.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.92	0.00	0.073	0.000	6.992	0.00	33.41
172.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.075	0.000	7.015	0.00	9.36
172.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.075	0.000	7.015	0.00	11.93
172.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.92	0.00	0.075	0.000	7.015	0.00	33.45
173.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.076	0.000	7.027	0.00	4.68
173.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.076	0.000	7.027	0.00	5.97
173.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.46	0.00	0.076	0.000	7.027	0.00	16.73
174.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.039	0.00	4.69
174.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.039	0.00	5.97
176.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.062	0.00	9.40
176.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.062	0.00	11.97
178.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.085	0.00	9.42
178.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.085	0.00	11.99
180.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.107	0.00	9.43
180.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.107	0.00	12.01
181.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.118	0.00	4.72
181.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.118	0.00	6.01
182.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.130	0.00	4.73
182.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.130	0.00	6.01
183.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.141	0.00	4.73
183.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.141	0.00	6.02
Totals:											0.0	4,918.6

Calculated Forces

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

7/12/2022

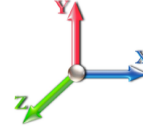
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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 29

Dead Load Factor 1.20
Wind Load 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	-94.61	-9.17	0.00	-1171.4	0.00	1171.40	5190.16	2595.08	13702.9	6861.66	0.00	0.000	0.000	0.189
2.00	-93.68	-9.14	0.00	-1153.0	0.00	1153.06	5174.50	2587.25	13560.7	6790.43	0.00	-0.017	0.000	0.188
4.00	-92.74	-9.10	0.00	-1134.7	0.00	1134.79	5158.51	2579.25	13418.2	6719.08	0.01	-0.033	0.000	0.187
6.00	-91.80	-9.06	0.00	-1116.5	0.00	1116.59	5142.18	2571.09	13275.4	6647.61	0.03	-0.050	0.000	0.186
8.00	-90.85	-9.03	0.00	-1098.4	0.00	1098.46	5125.52	2562.76	13132.5	6576.03	0.06	-0.067	0.000	0.185
10.00	-89.91	-8.99	0.00	-1080.4	0.00	1080.41	5108.53	2554.27	12989.4	6504.36	0.09	-0.084	0.000	0.184
12.00	-88.97	-8.95	0.00	-1062.4	0.00	1062.43	5091.21	2545.61	12846.0	6432.60	0.13	-0.102	0.000	0.183
14.00	-88.03	-8.92	0.00	-1044.5	0.00	1044.52	5073.56	2536.78	12702.6	6360.75	0.17	-0.119	0.000	0.182
16.00	-87.09	-8.88	0.00	-1026.6	0.00	1026.68	5055.57	2527.79	12559.0	6288.85	0.23	-0.136	0.000	0.180
18.00	-86.15	-8.85	0.00	-1008.9	0.00	1008.92	5037.25	2518.63	12415.3	6216.88	0.29	-0.154	0.000	0.179
20.00	-85.22	-8.81	0.00	-991.22	0.00	991.22	5018.60	2509.30	12271.4	6144.86	0.36	-0.171	0.000	0.178
22.00	-84.29	-8.77	0.00	-973.60	0.00	973.60	4999.62	2499.81	12127.5	6072.81	0.43	-0.189	0.000	0.177
24.00	-83.37	-8.74	0.00	-956.06	0.00	956.06	4980.31	2490.15	11983.6	6000.72	0.52	-0.207	0.000	0.176
26.00	-82.45	-8.70	0.00	-938.58	0.00	938.58	4960.66	2480.33	11839.6	5928.62	0.61	-0.225	0.000	0.175
28.00	-81.53	-8.67	0.00	-921.18	0.00	921.18	4940.68	2470.34	11695.6	5856.50	0.71	-0.243	0.000	0.174
30.00	-80.62	-8.63	0.00	-903.84	0.00	903.84	4920.37	2460.19	11551.6	5784.39	0.81	-0.261	0.000	0.173
32.00	-79.72	-8.59	0.00	-886.58	0.00	886.58	4899.73	2449.87	11407.6	5712.28	0.92	-0.279	0.000	0.171
34.00	-78.82	-8.55	0.00	-869.40	0.00	869.40	4878.76	2439.38	11263.6	5640.19	1.05	-0.298	0.000	0.170
36.00	-77.92	-8.52	0.00	-852.29	0.00	852.29	4857.45	2428.72	11119.7	5568.14	1.17	-0.316	0.000	0.169
38.00	-77.03	-8.48	0.00	-835.26	0.00	835.26	4835.81	2417.91	10975.9	5496.12	1.31	-0.335	0.000	0.168
40.00	-76.14	-8.43	0.00	-818.31	0.00	818.31	4813.84	2406.92	10832.2	5424.15	1.46	-0.353	0.000	0.167
41.00	-75.70	-8.41	0.00	-809.88	0.00	809.88	4802.73	2401.36	10760.3	5388.18	1.53	-0.363	0.000	0.166
42.00	-74.99	-8.39	0.00	-801.47	0.00	801.47	4791.54	2395.77	10688.5	5352.24	1.61	-0.372	0.000	0.165
44.00	-73.58	-8.34	0.00	-784.69	0.00	784.69	4768.90	2384.45	10545.1	5280.39	1.77	-0.391	0.000	0.164
46.00	-72.17	-8.30	0.00	-768.00	0.00	768.00	4745.94	2372.97	10401.7	5208.63	1.94	-0.410	0.000	0.163
48.00	-70.78	-8.25	0.00	-751.41	0.00	751.41	4759.60	2379.80	10486.7	5251.18	2.11	-0.429	0.000	0.158
50.00	-69.91	-8.20	0.00	-734.91	0.00	734.91	4736.50	2368.25	10343.5	5179.45	2.30	-0.448	0.000	0.157
51.00	-69.48	-8.17	0.00	-726.72	0.00	726.72	4724.82	2362.41	10271.9	5143.62	2.39	-0.457	0.000	0.156
51.00	-69.48	-8.17	0.00	-726.72	0.00	726.72	4064.30	2032.15	8835.99	4424.56	2.39	-0.457	0.000	0.181
52.00	-69.05	-8.15	0.00	-718.54	0.00	718.54	4053.20	2026.60	8772.35	4392.70	2.49	-0.466	0.000	0.181
54.00	-68.19	-8.11	0.00	-702.23	0.00	702.23	4030.83	2015.41	8645.34	4329.09	2.69	-0.485	0.000	0.179
56.00	-67.33	-8.06	0.00	-686.02	0.00	686.02	4008.20	2004.10	8518.66	4265.66	2.89	-0.503	0.000	0.178
58.00	-66.48	-8.01	0.00	-669.91	0.00	669.91	3985.33	1992.66	8392.33	4202.40	3.11	-0.522	0.000	0.176
60.00	-65.64	-7.96	0.00	-653.89	0.00	653.89	3962.20	1981.10	8266.38	4139.33	3.33	-0.541	0.000	0.175
62.00	-64.80	-7.91	0.00	-637.97	0.00	637.97	3938.82	1969.41	8140.81	4076.46	3.56	-0.559	0.000	0.173
64.00	-63.97	-7.86	0.00	-622.16	0.00	622.16	3915.19	1957.60	8015.64	4013.78	3.80	-0.578	0.000	0.171
66.00	-63.13	-7.80	0.00	-606.44	0.00	606.44	3891.31	1945.66	7890.88	3951.30	4.05	-0.597	0.000	0.170
66.17	-63.06	-7.80	0.00	-605.11	0.00	605.11	3889.27	1944.64	7880.29	3946.00	4.07	-0.598	0.000	0.125
68.00	-62.28	-7.74	0.00	-590.84	0.00	590.84	3867.19	1933.59	7766.55	3889.05	4.30	-0.611	0.000	0.123
70.00	-61.44	-7.68	0.00	-575.36	0.00	575.36	3842.81	1921.40	7642.66	3827.01	4.56	-0.625	0.000	0.122
71.00	-61.02	-7.65	0.00	-567.68	0.00	567.68	3830.52	1915.26	7580.89	3796.08	4.69	-0.632	0.000	0.121
71.00	-61.02	-7.65	0.00	-567.68	0.00	567.68	3467.89	1733.95	6863.13	3436.66	4.69	-0.632	0.000	0.133
72.00	-60.60	-7.62	0.00	-560.03	0.00	560.03	3456.29	1728.14	6806.46	3408.29	4.82	-0.639	0.000	0.133
74.00	-59.77	-7.56	0.00	-544.79	0.00	544.79	3432.92	1716.46	6693.50	3351.73	5.09	-0.653	0.000	0.131
76.00	-58.95	-7.49	0.00	-529.67	0.00	529.67	3409.33	1704.67	6581.05	3295.42	5.37	-0.666	0.000	0.129
78.00	-58.13	-7.43	0.00	-514.69	0.00	514.69	3385.54	1692.77	6469.11	3239.36	5.65	-0.680	0.000	0.127
80.00	-57.32	-7.36	0.00	-499.82	0.00	499.82	3361.54	1680.77	6357.71	3183.58	5.94	-0.694	0.000	0.125
81.00	-56.91	-7.33	0.00	-492.46	0.00	492.46	3349.46	1674.73	6302.21	3155.79	6.09	-0.701	0.000	0.124

Calculated Forces

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 63



81.00	-56.91	-7.33	0.00	-492.46	0.00	492.46	2964.88	1482.44	5593.85	2801.08	6.09	-0.701	0.000	0.117
82.00	-56.55	-7.30	0.00	-485.13	0.00	485.13	2956.03	1478.01	5548.33	2778.29	6.23	-0.708	0.000	0.132
84.00	-55.82	-7.24	0.00	-470.52	0.00	470.52	2938.12	1469.06	5457.44	2732.78	6.53	-0.723	0.000	0.130
85.00	-55.46	-7.21	0.00	-463.28	0.00	463.28	2929.07	1464.54	5412.08	2710.06	6.69	-0.731	0.000	0.128
86.00	-54.91	-7.18	0.00	-456.08	0.00	456.08	2919.96	1459.98	5366.77	2687.37	6.84	-0.739	0.000	0.126
88.00	-53.82	-7.11	0.00	-441.72	0.00	441.72	2901.53	1450.76	5276.32	2642.08	7.15	-0.754	0.000	0.124
90.00	-52.75	-7.03	0.00	-427.51	0.00	427.51	2882.84	1441.42	5186.12	2596.92	7.47	-0.769	0.000	0.122
91.00	-52.21	-7.00	0.00	-420.47	0.00	420.47	2898.35	1449.17	5260.87	2634.34	7.63	-0.776	0.000	0.123
92.00	-51.85	-6.97	0.00	-413.47	0.00	413.47	2889.01	1444.51	5215.76	2611.76	7.80	-0.784	0.000	0.118
93.83	-51.20	-6.90	0.00	-400.72	0.00	400.72	2871.76	1435.88	5133.38	2570.50	8.10	-0.797	0.000	0.116
93.83	-51.20	-6.90	0.00	-400.72	0.00	400.72	2871.76	1435.88	5133.38	2570.50	8.10	-0.797	0.000	0.116
94.00	-51.14	-6.91	0.00	-399.55	0.00	399.55	2870.15	1435.07	5125.73	2566.68	8.13	-0.799	0.000	0.174
96.00	-50.45	-6.86	0.00	-385.73	0.00	385.73	2851.02	1425.51	5035.98	2521.73	8.47	-0.820	0.000	0.171
98.00	-49.78	-6.80	0.00	-372.02	0.00	372.02	2831.62	1415.81	4946.52	2476.93	8.82	-0.842	0.000	0.168
100.00	-49.11	-6.75	0.00	-358.42	0.00	358.42	2811.97	1405.98	4857.35	2432.29	9.17	-0.864	0.000	0.165
102.00	-48.45	-6.70	0.00	-344.92	0.00	344.92	2792.05	1396.03	4768.51	2387.80	9.54	-0.885	0.000	0.162
104.00	-47.79	-6.64	0.00	-331.52	0.00	331.52	2771.87	1385.94	4680.00	2343.48	9.92	-0.907	0.000	0.159
106.00	-47.14	-6.59	0.00	-318.24	0.00	318.24	2751.43	1375.71	4591.84	2299.33	10.30	-0.928	0.000	0.156
108.00	-46.49	-6.54	0.00	-305.06	0.00	305.06	2730.72	1365.36	4504.04	2255.37	10.69	-0.949	0.000	0.152
110.00	-45.85	-6.48	0.00	-291.99	0.00	291.99	2709.75	1354.88	4416.62	2211.59	11.10	-0.970	0.000	0.149
111.17	-45.47	-6.44	0.00	-284.41	0.00	284.41	2697.36	1348.68	4365.66	2186.08	11.34	-0.982	0.000	0.115
112.00	-45.20	-6.42	0.00	-279.06	0.00	279.06	2688.52	1344.26	4329.60	2168.02	11.51	-0.989	0.000	0.114
114.00	-44.55	-6.36	0.00	-266.21	0.00	266.21	2667.03	1333.51	4242.98	2124.64	11.93	-1.005	0.000	0.111
115.00	-44.23	-6.33	0.00	-259.85	0.00	259.85	2656.18	1328.09	4199.83	2103.04	12.14	-1.013	0.000	0.109
115.00	-44.23	-6.33	0.00	-259.85	0.00	259.85	1951.15	975.57	3095.05	1549.82	12.14	-1.013	0.000	0.119
116.00	-43.94	-6.31	0.00	-253.52	0.00	253.52	1944.57	972.29	3065.67	1535.11	12.35	-1.021	0.000	0.138
118.00	-43.37	-6.25	0.00	-240.90	0.00	240.90	1931.24	965.62	3006.98	1505.73	12.78	-1.039	0.000	0.134
120.00	-42.80	-6.20	0.00	-228.40	0.00	228.40	1917.63	958.82	2948.42	1476.40	13.22	-1.057	0.000	0.129
122.00	-42.23	-6.14	0.00	-216.00	0.00	216.00	1903.77	951.88	2889.98	1447.14	13.67	-1.075	0.000	0.125
123.83	-41.72	-6.08	0.00	-204.77	0.00	204.77	1890.85	945.43	2836.64	1420.43	14.08	-1.090	0.000	0.121
123.83	-41.72	-6.08	0.00	-204.77	0.00	204.77	1890.85	945.43	2836.64	1420.43	14.08	-1.090	0.000	0.121
124.00	-41.67	-6.09	0.00	-203.74	0.00	203.74	1889.64	944.82	2831.69	1417.95	14.12	-1.092	0.000	0.166
126.00	-41.12	-6.03	0.00	-191.57	0.00	191.57	1875.25	937.63	2773.56	1388.84	14.58	-1.115	0.000	0.160
128.00	-40.58	-5.98	0.00	-179.50	0.00	179.50	1860.60	930.30	2715.62	1359.83	15.06	-1.138	0.000	0.154
130.00	-40.05	-5.93	0.00	-167.53	0.00	167.53	1845.69	922.84	2657.86	1330.91	15.54	-1.160	0.000	0.148
132.00	-39.30	-5.87	0.00	-155.67	0.00	155.67	1830.51	915.25	2600.31	1302.09	16.03	-1.181	0.000	0.141
134.00	-38.55	-5.81	0.00	-143.92	0.00	143.92	1815.07	907.53	2542.99	1273.39	16.53	-1.202	0.000	0.134
135.00	-38.18	-5.78	0.00	-138.11	0.00	138.11	1823.79	911.89	2575.21	1289.52	16.78	-1.212	0.000	0.128
136.00	-37.92	-5.76	0.00	-132.33	0.00	132.33	1816.04	908.02	2546.57	1275.18	17.04	-1.222	0.000	0.125
138.00	-37.41	-5.70	0.00	-120.81	0.00	120.81	1800.35	900.18	2489.47	1246.58	17.55	-1.240	0.000	0.118
140.00	-36.89	-5.65	0.00	-109.40	0.00	109.40	1784.41	892.20	2432.62	1218.12	18.07	-1.257	0.000	0.111
142.00	-36.39	-5.59	0.00	-98.10	0.00	98.10	1768.19	884.10	2376.04	1189.79	18.60	-1.273	0.000	0.103
143.00	-28.36	-4.36	0.00	-92.51	0.00	92.51	1759.99	879.99	2347.86	1175.68	18.87	-1.281	0.000	0.095
144.00	-28.12	-4.34	0.00	-88.15	0.00	88.15	1751.72	875.86	2319.75	1161.60	19.14	-1.288	0.000	0.092
146.00	-27.66	-4.28	0.00	-79.47	0.00	79.47	1734.98	867.49	2263.76	1133.56	19.68	-1.303	0.000	0.086
148.00	-27.20	-4.22	0.00	-70.92	0.00	70.92	1717.98	858.99	2208.08	1105.68	20.23	-1.316	0.000	0.080
150.00	-26.75	-4.16	0.00	-62.47	0.00	62.47	1700.72	850.36	2152.74	1077.97	20.79	-1.328	0.000	0.074
152.00	-26.30	-4.11	0.00	-54.15	0.00	54.15	1683.20	841.60	2097.74	1050.43	21.35	-1.340	0.000	0.067
153.00	-18.57	-2.81	0.00	-50.04	0.00	50.04	1674.33	837.17	2070.37	1036.72	21.63	-1.345	0.000	0.059
154.00	-18.36	-2.78	0.00	-47.23	0.00	47.23	1665.41	832.70	2043.10	1023.07	21.91	-1.350	0.000	0.057
156.00	-17.95	-2.72	0.00	-41.68	0.00	41.68	1647.36	823.68	1988.83	995.90	22.48	-1.359	0.000	0.053
158.00	-14.74	-2.30	0.00	-36.23	0.00	36.23	1629.04	814.52	1934.96	968.92	23.05	-1.368	0.000	0.046
160.00	-14.34	-2.24	0.00	-31.64	0.00	31.64	1610.47	805.23	1881.50	942.15	23.62	-1.376	0.000	0.042
162.00	-13.94	-2.18	0.00	-27.16	0.00	27.16	1591.63	795.82	1828.46	915.59	24.20	-1.383	0.000	0.038
164.00	-13.55	-2.13	0.00	-22.79	0.00	22.79	1572.53	786.27	1775.86	889.25	24.78	-1.390	0.000	0.034
166.00	-13.17	-2.07	0.00	-18.54	0.00	18.54	1553.17	776.58	1723.71	863.13	25.37	-1.395	0.000	0.030
168.00	-12.79	-2.01	0.00	-14.40	0.00	14.40	1533.54	766.77	1672.03	837.26	25.95	-1.400	0.000	0.026

Calculated Forces

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 64
	Struct Class: II	



170.00	-12.41	-1.96	0.00	-10.37	0.00	10.37	1513.65	756.83	1620.83	811.62	26.54	-1.404	0.000	0.021
172.00	-12.04	-1.90	0.00	-6.45	0.00	6.45	1493.50	746.75	1570.13	786.23	27.13	-1.406	0.000	0.016
173.00	-4.31	-0.64	0.00	-4.55	0.00	4.55	1483.33	741.66	1544.98	773.64	27.42	-1.407	0.000	0.009
174.00	-4.16	-0.61	0.00	-3.91	0.00	3.91	1473.09	736.54	1519.95	761.10	27.72	-1.408	0.000	0.008
176.00	-3.86	-0.56	0.00	-2.68	0.00	2.68	1452.41	726.20	1470.30	736.24	28.31	-1.409	0.000	0.006
178.00	-3.57	-0.51	0.00	-1.55	0.00	1.55	1427.85	713.93	1417.60	709.85	28.90	-1.410	0.000	0.005
180.00	-3.28	-0.46	0.00	-0.53	0.00	0.53	1400.09	700.05	1362.74	682.38	29.49	-1.411	0.000	0.003
180.00	-3.28	-0.46	0.00	-0.53	0.00	0.53	678.42	339.21	662.23	396.30	29.49	-1.411	0.000	0.006
181.00	-0.30	-0.05	0.00	-0.08	0.00	0.08	678.42	339.21	662.23	396.30	29.78	-1.411	0.000	0.001
182.00	-0.15	-0.03	0.00	-0.03	0.00	0.03	678.42	339.21	662.23	396.30	30.08	-1.411	0.000	0.000
183.00	0.00	-0.02	0.00	0.00	0.00	0.00	678.42	339.21	662.23	396.30	30.37	-1.411	0.000	0.000

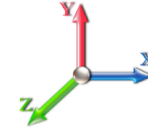
Seismic Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0E				Iterations 26
Gust Response Factor	1.10	Sds	0.17	Ss 0.16
Dead Load Factor	1.20	Seismic Load Factor	1.00	S1 0.06
Wind Load Factor	0.00	Structure Frequency (f1)	0.29	SA 0.03
				Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
2.00		517.51	0.00	0.01	0.01	4.24	
4.00		513.69	0.00	0.02	0.01	7.18	
6.00		509.88	0.00	0.03	0.02	9.32	
8.00		506.07	0.00	0.04	0.02	10.90	
10.00		502.25	0.01	0.05	0.03	12.09	
12.00		498.44	0.01	0.05	0.03	12.98	
14.00		494.62	0.01	0.06	0.03	13.65	
16.00		490.81	0.01	0.06	0.04	14.15	
18.00		487.00	0.02	0.06	0.04	14.51	
20.00		483.18	0.02	0.07	0.04	14.78	
22.00		479.37	0.03	0.07	0.04	14.96	
24.00		475.56	0.03	0.07	0.04	15.08	
26.00		471.74	0.04	0.07	0.04	15.16	
28.00		467.93	0.04	0.07	0.04	15.21	
30.00		464.11	0.05	0.07	0.04	15.23	
32.00		460.30	0.06	0.07	0.04	15.24	
34.00		456.49	0.07	0.07	0.04	15.24	
36.00		452.67	0.07	0.07	0.04	15.23	
38.00		448.86	0.08	0.07	0.04	15.22	
40.00		445.05	0.09	0.07	0.04	15.22	
41.00	Bot - Section 2	221.09	0.09	0.07	0.04	7.59	
42.00		443.32	0.10	0.07	0.04	15.28	
44.00		880.91	0.11	0.07	0.04	30.60	
46.00		873.28	0.12	0.07	0.03	30.57	
48.00	Top - Section 1	865.66	0.13	0.07	0.03	30.54	
50.00		432.05	0.14	0.07	0.03	15.35	
51.00	Top - Section 2	214.60	0.15	0.07	0.03	7.65	
52.00		213.64	0.15	0.07	0.03	7.64	
54.00		424.43	0.16	0.07	0.03	15.26	
56.00		420.61	0.18	0.07	0.03	15.18	
58.00		416.80	0.19	0.06	0.02	15.07	
60.00		412.98	0.20	0.06	0.02	14.92	
62.00		409.17	0.22	0.06	0.02	14.72	
64.00		405.36	0.23	0.06	0.02	14.47	
66.00		401.54	0.25	0.06	0.02	14.16	
66.17	RB1	33.96	0.25	0.06	0.02	1.20	
68.00		363.77	0.26	0.05	0.02	12.60	
70.00		393.92	0.28	0.05	0.01	13.30	
71.00	Top - Section 3	195.53	0.28	0.05	0.01	6.50	
72.00		194.57	0.29	0.05	0.01	6.35	
74.00		386.28	0.31	0.04	0.01	12.06	
76.00		382.47	0.33	0.04	0.01	11.27	
78.00		378.66	0.34	0.03	0.01	10.37	
80.00		374.84	0.36	0.03	0.01	9.33	
81.00	Top - Section 4	185.99	0.37	0.03	0.01	4.37	

Seismic Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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82.00		154.41	0.38	0.02	0.01	3.40
84.00		306.44	0.40	0.02	0.01	5.76
85.00	Bot - Section 6	152.03	0.41	0.02	0.01	2.59
86.00		304.57	0.42	0.01	0.01	4.62
88.00		604.38	0.44	0.01	0.01	6.76
90.00		598.02	0.46	0.00	0.01	4.13
91.00	Top - Section 5	296.63	0.47	0.00	0.01	1.39
92.00		148.58	0.48	-0.01	0.01	0.36
93.83	RT1	269.84	0.50	-0.01	0.01	-0.50
94.00		24.93	0.50	-0.02	0.01	-0.06
96.00		291.59	0.52	-0.02	0.01	-2.03
98.00		288.41	0.54	-0.03	0.01	-3.35
100.00		285.23	0.56	-0.04	0.01	-4.59
102.00		282.06	0.59	-0.05	0.01	-5.74
104.00		278.88	0.61	-0.06	0.02	-6.77
106.00		275.70	0.63	-0.07	0.02	-7.66
108.00		272.52	0.66	-0.07	0.02	-8.40
110.00		269.34	0.68	-0.08	0.03	-9.00
111.17	RB2	156.09	0.70	-0.09	0.03	-5.41
112.00		110.07	0.71	-0.09	0.03	-3.90
114.00		262.99	0.73	-0.10	0.04	-9.73
115.00	Top - Section 6	130.30	0.75	-0.10	0.04	-4.89
116.00		103.77	0.76	-0.10	0.04	-3.94
118.00		205.64	0.79	-0.11	0.05	-7.90
120.00		203.10	0.81	-0.11	0.06	-7.79
122.00		200.55	0.84	-0.12	0.07	-7.57
123.83	RT2	181.28	0.87	-0.12	0.07	-6.66
124.00		16.73	0.87	-0.12	0.08	-0.61
126.00		195.47	0.90	-0.12	0.09	-6.85
128.00		192.93	0.92	-0.12	0.10	-6.35
130.00	Bot - Section 8	190.38	0.95	-0.12	0.11	-5.76
132.00		378.38	0.98	-0.11	0.12	-10.28
134.00		373.30	1.01	-0.11	0.14	-8.80
135.00	Top - Section 7	184.74	1.03	-0.10	0.15	-3.99
136.00		92.41	1.04	-0.10	0.15	-1.80
138.00		182.92	1.07	-0.08	0.17	-2.73
140.00		180.37	1.11	-0.07	0.19	-1.78
142.00		177.83	1.14	-0.05	0.21	-0.77
143.00	Appurtenance(s)	2977.2	1.15	-0.03	0.22	-4.19
144.00		87.33	1.17	-0.02	0.23	0.14
146.00		172.75	1.20	0.01	0.26	1.41
148.00		170.20	1.24	0.04	0.28	2.57
150.00		167.66	1.27	0.08	0.31	3.79
152.00		165.12	1.30	0.13	0.34	5.04
153.00	Appurtenance(s)	3421.5	1.32	0.15	0.36	118.66
154.00		80.97	1.34	0.18	0.37	3.15
156.00		160.03	1.37	0.24	0.40	7.67
158.00	Appurtenance(s)	1657.4	1.41	0.30	0.44	95.02
160.00		154.95	1.44	0.37	0.48	10.42
162.00		152.40	1.48	0.46	0.52	11.84
164.00		149.86	1.52	0.55	0.56	13.29
166.00		147.32	1.56	0.65	0.61	14.75
168.00		144.78	1.59	0.76	0.66	16.23
170.00		142.23	1.63	0.88	0.71	17.73
172.00		139.69	1.67	1.01	0.77	19.23
173.00	Appurtenance(s)	2925.6	1.69	1.08	0.80	422.40
174.00		68.26	1.71	1.16	0.83	10.32

Seismic Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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176.00	134.61	1.75	1.31	0.89	22.26
178.00	132.06	1.79	1.49	0.96	23.77
180.00 Top - Section 8	129.52	1.83	1.67	1.03	25.28
181.00 Appurtenance(s)	1571.2	1.85	1.77	1.06	318.92
182.00	71.25	1.87	1.87	1.10	15.03
183.00	71.25	1.89	1.98	1.14	15.60
Totals:	43,569.1				1,665.7
					Total Wind: 36,977.2

Calculated Forces

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Code: TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II
Topography: 1

7/12/2022



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Load Case: 1.2D + 1.0E

Iterations 26

Gust Response Factor 1.10

Sds 0.17

Ss 0.16

Dead Load Factor 1.20

Seismic Load Factor 1.00

Sd1 0.09

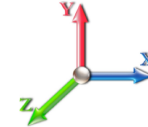
S1 0.06

Wind Load Factor 0.00

Structure Frequency (f1) 0.29

SA 0.03

Seismic Importance Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-60.18	-1.82	0.00	-244.97	0.00	244.97	5190.16	2595.08	13702.9	6861.66	0.00	0.00	0.00	0.047
2.00	-59.46	-1.82	0.00	-241.32	0.00	241.32	5174.50	2587.25	13560.7	6790.43	0.00	0.00	0.00	0.047
4.00	-58.74	-1.82	0.00	-237.67	0.00	237.67	5158.51	2579.25	13418.2	6719.08	0.00	-0.01	0.00	0.047
6.00	-58.03	-1.81	0.00	-234.03	0.00	234.03	5142.18	2571.09	13275.4	6647.61	0.01	-0.01	0.00	0.046
8.00	-57.32	-1.81	0.00	-230.40	0.00	230.40	5125.52	2562.76	13132.5	6576.03	0.01	-0.01	0.00	0.046
10.00	-56.62	-1.80	0.00	-226.79	0.00	226.79	5108.53	2554.27	12989.4	6504.36	0.02	-0.02	0.00	0.046
12.00	-55.92	-1.79	0.00	-223.19	0.00	223.19	5091.21	2545.61	12846.0	6432.60	0.03	-0.02	0.00	0.046
14.00	-55.23	-1.78	0.00	-219.61	0.00	219.61	5073.56	2536.78	12702.6	6360.75	0.04	-0.02	0.00	0.045
16.00	-54.54	-1.77	0.00	-216.06	0.00	216.06	5055.57	2527.79	12559.0	6288.85	0.05	-0.03	0.00	0.045
18.00	-53.85	-1.76	0.00	-212.52	0.00	212.52	5037.25	2518.63	12415.3	6216.88	0.06	-0.03	0.00	0.045
20.00	-53.17	-1.74	0.00	-209.01	0.00	209.01	5018.60	2509.30	12271.4	6144.86	0.07	-0.04	0.00	0.045
22.00	-52.50	-1.73	0.00	-205.53	0.00	205.53	4999.62	2499.81	12127.5	6072.81	0.09	-0.04	0.00	0.044
24.00	-51.83	-1.72	0.00	-202.06	0.00	202.06	4980.31	2490.15	11983.6	6000.72	0.11	-0.04	0.00	0.044
26.00	-51.16	-1.71	0.00	-198.62	0.00	198.62	4960.66	2480.33	11839.6	5928.62	0.13	-0.05	0.00	0.044
28.00	-50.50	-1.70	0.00	-195.21	0.00	195.21	4940.68	2470.34	11695.6	5856.50	0.15	-0.05	0.00	0.044
30.00	-49.84	-1.68	0.00	-191.82	0.00	191.82	4920.37	2460.19	11551.6	5784.39	0.17	-0.05	0.00	0.043
32.00	-49.19	-1.67	0.00	-188.45	0.00	188.45	4899.73	2449.87	11407.6	5712.28	0.19	-0.06	0.00	0.043
34.00	-48.54	-1.66	0.00	-185.11	0.00	185.11	4878.76	2439.38	11263.6	5640.19	0.22	-0.06	0.00	0.043
36.00	-47.90	-1.64	0.00	-181.80	0.00	181.80	4857.45	2428.72	11119.7	5568.14	0.25	-0.07	0.00	0.043
38.00	-47.26	-1.63	0.00	-178.51	0.00	178.51	4835.81	2417.91	10975.9	5496.12	0.28	-0.07	0.00	0.042
40.00	-46.63	-1.62	0.00	-175.24	0.00	175.24	4813.84	2406.92	10832.2	5424.15	0.31	-0.07	0.00	0.042
41.00	-46.31	-1.61	0.00	-173.62	0.00	173.62	4802.73	2401.36	10760.3	5388.18	0.32	-0.08	0.00	0.042
42.00	-45.73	-1.60	0.00	-172.01	0.00	172.01	4791.54	2395.77	10688.5	5352.24	0.34	-0.08	0.00	0.042
44.00	-44.57	-1.57	0.00	-168.81	0.00	168.81	4768.90	2384.45	10545.1	5280.39	0.37	-0.08	0.00	0.041
46.00	-43.42	-1.54	0.00	-165.67	0.00	165.67	4745.94	2372.97	10401.7	5208.63	0.41	-0.09	0.00	0.041
48.00	-42.28	-1.51	0.00	-162.59	0.00	162.59	4759.60	2379.80	10486.7	5251.18	0.44	-0.09	0.00	0.040
50.00	-41.67	-1.50	0.00	-159.57	0.00	159.57	4736.50	2368.25	10343.5	5179.45	0.48	-0.09	0.00	0.040
51.00	-41.36	-1.49	0.00	-158.07	0.00	158.07	4724.82	2362.41	10271.9	5143.62	0.50	-0.10	0.00	0.039
51.00	-41.36	-1.49	0.00	-158.07	0.00	158.07	4064.30	2032.15	8835.99	4424.56	0.50	-0.10	0.00	0.046
52.00	-41.05	-1.48	0.00	-156.58	0.00	156.58	4053.20	2026.60	8772.35	4392.70	0.52	-0.10	0.00	0.046
54.00	-40.44	-1.47	0.00	-153.62	0.00	153.62	4030.83	2015.41	8645.34	4329.09	0.57	-0.10	0.00	0.046
56.00	-39.84	-1.46	0.00	-150.67	0.00	150.67	4008.20	2004.10	8518.66	4265.66	0.61	-0.11	0.00	0.045
58.00	-39.24	-1.44	0.00	-147.76	0.00	147.76	3985.33	1992.66	8392.33	4202.40	0.66	-0.11	0.00	0.045
60.00	-38.64	-1.43	0.00	-144.87	0.00	144.87	3962.20	1981.10	8266.38	4139.33	0.70	-0.12	0.00	0.045
62.00	-38.05	-1.42	0.00	-142.01	0.00	142.01	3938.82	1969.41	8140.81	4076.46	0.75	-0.12	0.00	0.044
64.00	-37.46	-1.40	0.00	-139.18	0.00	139.18	3915.19	1957.60	8015.64	4013.78	0.80	-0.12	0.00	0.044
66.00	-36.88	-1.39	0.00	-136.37	0.00	136.37	3891.31	1945.66	7890.88	3951.30	0.86	-0.13	0.00	0.044
66.17	-36.83	-1.39	0.00	-136.13	0.00	136.13	3889.27	1944.64	7880.29	3946.00	0.86	-0.13	0.00	0.032
68.00	-36.30	-1.38	0.00	-133.59	0.00	133.59	3867.19	1933.59	7766.55	3889.05	0.91	-0.13	0.00	0.032
70.00	-35.73	-1.37	0.00	-130.83	0.00	130.83	3842.81	1921.40	7642.66	3827.01	0.97	-0.13	0.00	0.032
71.00	-35.45	-1.36	0.00	-129.46	0.00	129.46	3830.52	1915.26	7580.89	3796.08	1.00	-0.14	0.00	0.032
71.00	-35.45	-1.36	0.00	-129.46	0.00	129.46	3467.89	1733.95	6863.13	3436.66	1.00	-0.14	0.00	0.035
72.00	-35.16	-1.35	0.00	-128.11	0.00	128.11	3456.29	1728.14	6806.46	3408.29	1.02	-0.14	0.00	0.035
74.00	-34.60	-1.34	0.00	-125.40	0.00	125.40	3432.92	1716.46	6693.50	3351.73	1.08	-0.14	0.00	0.035
76.00	-34.04	-1.33	0.00	-122.71	0.00	122.71	3409.33	1704.67	6581.05	3295.42	1.14	-0.14	0.00	0.034
78.00	-33.48	-1.32	0.00	-120.05	0.00	120.05	3385.54	1692.77	6469.11	3239.36	1.20	-0.15	0.00	0.034
80.00	-32.93	-1.31	0.00	-117.41	0.00	117.41	3361.54	1680.77	6357.71	3183.58	1.26	-0.15	0.00	0.034

Calculated Forces

Structure: CT01002-S-SBA

Code: TIA-222-G

7/12/2022

Site Name: Waterford

Exposure: B



Height: 183.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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81.00	-32.66	-1.31	0.00	-116.10	0.00	116.10	3349.46	1674.73	6302.21	3155.79	1.30	-0.15	0.034
81.00	-32.66	-1.31	0.00	-116.10	0.00	116.10	2964.88	1482.44	5593.85	2801.08	1.30	-0.15	0.032
82.00	-32.43	-1.31	0.00	-114.79	0.00	114.79	2956.03	1478.01	5548.33	2778.29	1.33	-0.15	0.036
84.00	-31.96	-1.30	0.00	-112.18	0.00	112.18	2938.12	1469.06	5457.44	2732.78	1.39	-0.16	0.035
85.00	-31.73	-1.30	0.00	-110.88	0.00	110.88	2929.07	1464.54	5412.08	2710.06	1.43	-0.16	0.035
86.00	-31.31	-1.29	0.00	-109.58	0.00	109.58	2919.96	1459.98	5366.77	2687.37	1.46	-0.16	0.035
88.00	-30.48	-1.29	0.00	-106.99	0.00	106.99	2901.53	1450.76	5276.32	2642.08	1.53	-0.16	0.034
90.00	-29.67	-1.28	0.00	-104.42	0.00	104.42	2882.84	1441.42	5186.12	2596.92	1.60	-0.17	0.034
91.00	-29.26	-1.28	0.00	-103.14	0.00	103.14	2898.35	1449.17	5260.87	2634.34	1.63	-0.17	0.034
92.00	-29.03	-1.28	0.00	-101.86	0.00	101.86	2889.01	1444.51	5215.76	2611.76	1.67	-0.17	0.033
93.83	-28.62	-1.28	0.00	-99.52	0.00	99.52	2871.76	1435.88	5133.38	2570.50	1.74	-0.18	0.033
93.83	-28.62	-1.28	0.00	-99.52	0.00	99.52	2871.76	1435.88	5133.38	2570.50	1.74	-0.18	0.033
94.00	-28.58	-1.28	0.00	-99.30	0.00	99.30	2870.15	1435.07	5125.73	2566.68	1.74	-0.18	0.049
96.00	-28.13	-1.28	0.00	-96.74	0.00	96.74	2851.02	1425.51	5035.98	2521.73	1.82	-0.18	0.048
98.00	-27.68	-1.28	0.00	-94.17	0.00	94.17	2831.62	1415.81	4946.52	2476.93	1.89	-0.19	0.048
100.00	-27.24	-1.28	0.00	-91.61	0.00	91.61	2811.97	1405.98	4857.35	2432.29	1.97	-0.19	0.047
102.00	-26.80	-1.29	0.00	-89.04	0.00	89.04	2792.05	1396.03	4768.51	2387.80	2.05	-0.20	0.047
104.00	-26.37	-1.29	0.00	-86.47	0.00	86.47	2771.87	1385.94	4680.00	2343.48	2.14	-0.20	0.046
106.00	-25.94	-1.29	0.00	-83.89	0.00	83.89	2751.43	1375.71	4591.84	2299.33	2.22	-0.21	0.046
108.00	-25.51	-1.29	0.00	-81.32	0.00	81.32	2730.72	1365.36	4504.04	2255.37	2.31	-0.21	0.045
110.00	-25.08	-1.29	0.00	-78.74	0.00	78.74	2709.75	1354.88	4416.62	2211.59	2.40	-0.22	0.045
111.17	-24.84	-1.29	0.00	-77.23	0.00	77.23	2697.36	1348.68	4365.66	2186.08	2.46	-0.22	0.035
112.00	-24.66	-1.29	0.00	-76.16	0.00	76.16	2688.52	1344.26	4329.60	2168.02	2.50	-0.22	0.035
114.00	-24.25	-1.29	0.00	-73.58	0.00	73.58	2667.03	1333.51	4242.98	2124.64	2.59	-0.23	0.034
115.00	-24.04	-1.29	0.00	-72.29	0.00	72.29	2656.18	1328.09	4199.83	2103.04	2.64	-0.23	0.034
115.00	-24.04	-1.29	0.00	-72.29	0.00	72.29	1951.15	975.57	3095.05	1549.82	2.64	-0.23	0.037
116.00	-23.87	-1.29	0.00	-71.00	0.00	71.00	1944.57	972.29	3065.67	1535.11	2.69	-0.23	0.043
118.00	-23.52	-1.29	0.00	-68.42	0.00	68.42	1931.24	965.62	3006.98	1505.73	2.79	-0.24	0.042
120.00	-23.18	-1.29	0.00	-65.84	0.00	65.84	1917.63	958.82	2948.42	1476.40	2.89	-0.24	0.042
122.00	-22.84	-1.29	0.00	-63.25	0.00	63.25	1903.77	951.88	2889.98	1447.14	2.99	-0.25	0.041
123.83	-22.53	-1.29	0.00	-60.89	0.00	60.89	1890.85	945.43	2836.64	1420.43	3.09	-0.25	0.040
123.83	-22.53	-1.29	0.00	-60.89	0.00	60.89	1890.85	945.43	2836.64	1420.43	3.09	-0.25	0.040
124.00	-22.50	-1.29	0.00	-60.67	0.00	60.67	1889.64	944.82	2831.69	1417.95	3.10	-0.25	0.055
126.00	-22.16	-1.30	0.00	-58.08	0.00	58.08	1875.25	937.63	2773.56	1388.84	3.21	-0.26	0.054
128.00	-21.83	-1.30	0.00	-55.49	0.00	55.49	1860.60	930.30	2715.62	1359.83	3.32	-0.27	0.053
130.00	-21.50	-1.30	0.00	-52.90	0.00	52.90	1845.69	922.84	2657.86	1330.91	3.43	-0.27	0.051
132.00	-20.95	-1.30	0.00	-50.30	0.00	50.30	1830.51	915.25	2600.31	1302.09	3.55	-0.28	0.050
134.00	-20.40	-1.30	0.00	-47.71	0.00	47.71	1815.07	907.53	2542.99	1273.39	3.67	-0.29	0.049
135.00	-20.13	-1.30	0.00	-46.41	0.00	46.41	1823.79	911.89	2575.21	1289.52	3.73	-0.29	0.047
136.00	-19.97	-1.30	0.00	-45.12	0.00	45.12	1816.04	908.02	2546.57	1275.18	3.79	-0.30	0.046
138.00	-19.65	-1.30	0.00	-42.52	0.00	42.52	1800.35	900.18	2489.47	1246.58	3.91	-0.30	0.045
140.00	-19.33	-1.30	0.00	-39.93	0.00	39.93	1784.41	892.20	2432.62	1218.12	4.04	-0.31	0.044
142.00	-19.02	-1.30	0.00	-37.33	0.00	37.33	1768.19	884.10	2376.04	1189.79	4.17	-0.31	0.042
143.00	-15.39	-1.28	0.00	-36.03	0.00	36.03	1759.99	879.99	2347.86	1175.68	4.24	-0.32	0.039
144.00	-15.26	-1.28	0.00	-34.76	0.00	34.76	1751.72	875.86	2319.75	1161.60	4.30	-0.32	0.039
146.00	-14.98	-1.28	0.00	-32.20	0.00	32.20	1734.98	867.49	2263.76	1133.56	4.44	-0.33	0.037
148.00	-14.71	-1.27	0.00	-29.64	0.00	29.64	1717.98	858.99	2208.08	1105.68	4.58	-0.33	0.035
150.00	-14.44	-1.27	0.00	-27.09	0.00	27.09	1700.72	850.36	2152.74	1077.97	4.72	-0.34	0.034
152.00	-14.17	-1.27	0.00	-24.55	0.00	24.55	1683.20	841.60	2097.74	1050.43	4.86	-0.34	0.032
153.00	-10.03	-1.12	0.00	-23.29	0.00	23.29	1674.33	837.17	2070.37	1036.72	4.93	-0.34	0.028
154.00	-9.92	-1.12	0.00	-22.17	0.00	22.17	1665.41	832.70	2043.10	1023.07	5.00	-0.35	0.028
156.00	-9.69	-1.11	0.00	-19.93	0.00	19.93	1647.36	823.68	1988.83	995.90	5.15	-0.35	0.026
158.00	-7.66	-1.00	0.00	-17.71	0.00	17.71	1629.04	814.52	1934.96	968.92	5.30	-0.35	0.023
160.00	-7.44	-0.99	0.00	-15.70	0.00	15.70	1610.47	805.23	1881.50	942.15	5.45	-0.36	0.021
162.00	-7.21	-0.98	0.00	-13.71	0.00	13.71	1591.63	795.82	1828.46	915.59	5.60	-0.36	0.020
164.00	-7.00	-0.97	0.00	-11.75	0.00	11.75	1572.53	786.27	1775.86	889.25	5.75	-0.37	0.018
166.00	-6.78	-0.95	0.00	-9.82	0.00	9.82	1553.17	776.58	1723.71	863.13	5.90	-0.37	0.016

Calculated Forces

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 70
	Struct Class: II	



168.00	-6.57	-0.93	0.00	-7.92	0.00	7.92	1533.54	766.77	1672.03	837.26	6.06	-0.37	0.014
170.00	-6.36	-0.91	0.00	-6.06	0.00	6.06	1513.65	756.83	1620.83	811.62	6.21	-0.37	0.012
172.00	-6.15	-0.89	0.00	-4.23	0.00	4.23	1493.50	746.75	1570.13	786.23	6.37	-0.37	0.010
173.00	-2.63	-0.45	0.00	-3.34	0.00	3.34	1483.33	741.66	1544.98	773.64	6.45	-0.38	0.006
174.00	-2.54	-0.44	0.00	-2.89	0.00	2.89	1473.09	736.54	1519.95	761.10	6.53	-0.38	0.006
176.00	-2.38	-0.41	0.00	-2.02	0.00	2.02	1452.41	726.20	1470.30	736.24	6.69	-0.38	0.004
178.00	-2.22	-0.39	0.00	-1.19	0.00	1.19	1427.85	713.93	1417.60	709.85	6.84	-0.38	0.003
180.00	-2.06	-0.36	0.00	-0.41	0.00	0.41	1400.09	700.05	1362.74	682.38	7.00	-0.38	0.002
180.00	-2.06	-0.36	0.00	-0.41	0.00	0.41	678.42	339.21	662.23	396.30	7.00	-0.38	0.004
181.00	-0.17	-0.03	0.00	-0.05	0.00	0.05	678.42	339.21	662.23	396.30	7.08	-0.38	0.000
182.00	-0.09	-0.02	0.00	-0.02	0.00	0.02	678.42	339.21	662.23	396.30	7.16	-0.38	0.000
183.00	0.00	-0.02	0.00	0.00	0.00	0.00	678.42	339.21	662.23	396.30	7.24	-0.38	0.000

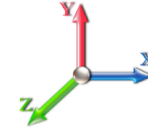
Seismic Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0E				Iterations 26
Gust Response Factor	1.10	Sds	0.17	Ss 0.16
Dead Load Factor	0.90	Seismic Load Factor	1.00	S1 0.06
Wind Load Factor	0.00	Structure Frequency (f1)	0.29	SA 0.03
				Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
2.00		517.51	0.00	0.01	0.01	4.24	
4.00		513.69	0.00	0.02	0.01	7.18	
6.00		509.88	0.00	0.03	0.02	9.32	
8.00		506.07	0.00	0.04	0.02	10.90	
10.00		502.25	0.01	0.05	0.03	12.09	
12.00		498.44	0.01	0.05	0.03	12.98	
14.00		494.62	0.01	0.06	0.03	13.65	
16.00		490.81	0.01	0.06	0.04	14.15	
18.00		487.00	0.02	0.06	0.04	14.51	
20.00		483.18	0.02	0.07	0.04	14.78	
22.00		479.37	0.03	0.07	0.04	14.96	
24.00		475.56	0.03	0.07	0.04	15.08	
26.00		471.74	0.04	0.07	0.04	15.16	
28.00		467.93	0.04	0.07	0.04	15.21	
30.00		464.11	0.05	0.07	0.04	15.23	
32.00		460.30	0.06	0.07	0.04	15.24	
34.00		456.49	0.07	0.07	0.04	15.24	
36.00		452.67	0.07	0.07	0.04	15.23	
38.00		448.86	0.08	0.07	0.04	15.22	
40.00		445.05	0.09	0.07	0.04	15.22	
41.00	Bot - Section 2	221.09	0.09	0.07	0.04	7.59	
42.00		443.32	0.10	0.07	0.04	15.28	
44.00		880.91	0.11	0.07	0.04	30.60	
46.00		873.28	0.12	0.07	0.03	30.57	
48.00	Top - Section 1	865.66	0.13	0.07	0.03	30.54	
50.00		432.05	0.14	0.07	0.03	15.35	
51.00	Top - Section 2	214.60	0.15	0.07	0.03	7.65	
52.00		213.64	0.15	0.07	0.03	7.64	
54.00		424.43	0.16	0.07	0.03	15.26	
56.00		420.61	0.18	0.07	0.03	15.18	
58.00		416.80	0.19	0.06	0.02	15.07	
60.00		412.98	0.20	0.06	0.02	14.92	
62.00		409.17	0.22	0.06	0.02	14.72	
64.00		405.36	0.23	0.06	0.02	14.47	
66.00		401.54	0.25	0.06	0.02	14.16	
66.17	RB1	33.96	0.25	0.06	0.02	1.20	
68.00		363.77	0.26	0.05	0.02	12.60	
70.00		393.92	0.28	0.05	0.01	13.30	
71.00	Top - Section 3	195.53	0.28	0.05	0.01	6.50	
72.00		194.57	0.29	0.05	0.01	6.35	
74.00		386.28	0.31	0.04	0.01	12.06	
76.00		382.47	0.33	0.04	0.01	11.27	
78.00		378.66	0.34	0.03	0.01	10.37	
80.00		374.84	0.36	0.03	0.01	9.33	
81.00	Top - Section 4	185.99	0.37	0.03	0.01	4.37	

Seismic Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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82.00		154.41	0.38	0.02	0.01	3.40
84.00		306.44	0.40	0.02	0.01	5.76
85.00	Bot - Section 6	152.03	0.41	0.02	0.01	2.59
86.00		304.57	0.42	0.01	0.01	4.62
88.00		604.38	0.44	0.01	0.01	6.76
90.00		598.02	0.46	0.00	0.01	4.13
91.00	Top - Section 5	296.63	0.47	0.00	0.01	1.39
92.00		148.58	0.48	-0.01	0.01	0.36
93.83	RT1	269.84	0.50	-0.01	0.01	-0.50
94.00		24.93	0.50	-0.02	0.01	-0.06
96.00		291.59	0.52	-0.02	0.01	-2.03
98.00		288.41	0.54	-0.03	0.01	-3.35
100.00		285.23	0.56	-0.04	0.01	-4.59
102.00		282.06	0.59	-0.05	0.01	-5.74
104.00		278.88	0.61	-0.06	0.02	-6.77
106.00		275.70	0.63	-0.07	0.02	-7.66
108.00		272.52	0.66	-0.07	0.02	-8.40
110.00		269.34	0.68	-0.08	0.03	-9.00
111.17	RB2	156.09	0.70	-0.09	0.03	-5.41
112.00		110.07	0.71	-0.09	0.03	-3.90
114.00		262.99	0.73	-0.10	0.04	-9.73
115.00	Top - Section 6	130.30	0.75	-0.10	0.04	-4.89
116.00		103.77	0.76	-0.10	0.04	-3.94
118.00		205.64	0.79	-0.11	0.05	-7.90
120.00		203.10	0.81	-0.11	0.06	-7.79
122.00		200.55	0.84	-0.12	0.07	-7.57
123.83	RT2	181.28	0.87	-0.12	0.07	-6.66
124.00		16.73	0.87	-0.12	0.08	-0.61
126.00		195.47	0.90	-0.12	0.09	-6.85
128.00		192.93	0.92	-0.12	0.10	-6.35
130.00	Bot - Section 8	190.38	0.95	-0.12	0.11	-5.76
132.00		378.38	0.98	-0.11	0.12	-10.28
134.00		373.30	1.01	-0.11	0.14	-8.80
135.00	Top - Section 7	184.74	1.03	-0.10	0.15	-3.99
136.00		92.41	1.04	-0.10	0.15	-1.80
138.00		182.92	1.07	-0.08	0.17	-2.73
140.00		180.37	1.11	-0.07	0.19	-1.78
142.00		177.83	1.14	-0.05	0.21	-0.77
143.00	Appurtenance(s)	2977.2	1.15	-0.03	0.22	-4.19
144.00		87.33	1.17	-0.02	0.23	0.14
146.00		172.75	1.20	0.01	0.26	1.41
148.00		170.20	1.24	0.04	0.28	2.57
150.00		167.66	1.27	0.08	0.31	3.79
152.00		165.12	1.30	0.13	0.34	5.04
153.00	Appurtenance(s)	3421.5	1.32	0.15	0.36	118.66
154.00		80.97	1.34	0.18	0.37	3.15
156.00		160.03	1.37	0.24	0.40	7.67
158.00	Appurtenance(s)	1657.4	1.41	0.30	0.44	95.02
160.00		154.95	1.44	0.37	0.48	10.42
162.00		152.40	1.48	0.46	0.52	11.84
164.00		149.86	1.52	0.55	0.56	13.29
166.00		147.32	1.56	0.65	0.61	14.75
168.00		144.78	1.59	0.76	0.66	16.23
170.00		142.23	1.63	0.88	0.71	17.73
172.00		139.69	1.67	1.01	0.77	19.23
173.00	Appurtenance(s)	2925.6	1.69	1.08	0.80	422.40
174.00		68.26	1.71	1.16	0.83	10.32

Seismic Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 73



176.00	134.61	1.75	1.31	0.89	22.26
178.00	132.06	1.79	1.49	0.96	23.77
180.00 Top - Section 8	129.52	1.83	1.67	1.03	25.28
181.00 Appurtenance(s)	1571.2	1.85	1.77	1.06	318.92
182.00	71.25	1.87	1.87	1.10	15.03
183.00	71.25	1.89	1.98	1.14	15.60
Totals:	43,569.1				1,665.7
					Total Wind: 36,977.2

Calculated Forces

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Code: TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

7/12/2022



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Load Case: 0.9D + 1.0E

Iterations 26

Gust Response Factor 1.10

Sds 0.17

Ss 0.16

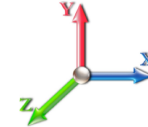
Dead Load Factor 0.90 **Seismic Load Factor** 1.00

Sd1 0.09

S1 0.06

Wind Load Factor 0.00 **Structure Frequency (f1)** 0.29

SA 0.03 **Seismic Importance Factor** 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-45.14	-1.82	0.00	-241.75	0.00	241.75	5190.16	2595.08	13702.9	6861.66	0.00	0.00	0.00	0.044
2.00	-44.59	-1.82	0.00	-238.10	0.00	238.10	5174.50	2587.25	13560.7	6790.43	0.00	0.00	0.00	0.044
4.00	-44.06	-1.82	0.00	-234.46	0.00	234.46	5158.51	2579.25	13418.2	6719.08	0.00	-0.01	0.00	0.043
6.00	-43.52	-1.81	0.00	-230.82	0.00	230.82	5142.18	2571.09	13275.4	6647.61	0.01	-0.01	0.00	0.043
8.00	-42.99	-1.80	0.00	-227.20	0.00	227.20	5125.52	2562.76	13132.5	6576.03	0.01	-0.01	0.00	0.043
10.00	-42.47	-1.79	0.00	-223.59	0.00	223.59	5108.53	2554.27	12989.4	6504.36	0.02	-0.02	0.00	0.043
12.00	-41.94	-1.78	0.00	-220.00	0.00	220.00	5091.21	2545.61	12846.0	6432.60	0.03	-0.02	0.00	0.042
14.00	-41.42	-1.77	0.00	-216.44	0.00	216.44	5073.56	2536.78	12702.6	6360.75	0.04	-0.02	0.00	0.042
16.00	-40.90	-1.76	0.00	-212.90	0.00	212.90	5055.57	2527.79	12559.0	6288.85	0.05	-0.03	0.00	0.042
18.00	-40.39	-1.75	0.00	-209.38	0.00	209.38	5037.25	2518.63	12415.3	6216.88	0.06	-0.03	0.00	0.042
20.00	-39.88	-1.74	0.00	-205.88	0.00	205.88	5018.60	2509.30	12271.4	6144.86	0.07	-0.04	0.00	0.041
22.00	-39.37	-1.72	0.00	-202.41	0.00	202.41	4999.62	2499.81	12127.5	6072.81	0.09	-0.04	0.00	0.041
24.00	-38.87	-1.71	0.00	-198.97	0.00	198.97	4980.31	2490.15	11983.6	6000.72	0.11	-0.04	0.00	0.041
26.00	-38.37	-1.70	0.00	-195.55	0.00	195.55	4960.66	2480.33	11839.6	5928.62	0.13	-0.05	0.00	0.041
28.00	-37.87	-1.68	0.00	-192.16	0.00	192.16	4940.68	2470.34	11695.6	5856.50	0.15	-0.05	0.00	0.040
30.00	-37.38	-1.67	0.00	-188.79	0.00	188.79	4920.37	2460.19	11551.6	5784.39	0.17	-0.05	0.00	0.040
32.00	-36.89	-1.66	0.00	-185.45	0.00	185.45	4899.73	2449.87	11407.6	5712.28	0.19	-0.06	0.00	0.040
34.00	-36.41	-1.64	0.00	-182.14	0.00	182.14	4878.76	2439.38	11263.6	5640.19	0.22	-0.06	0.00	0.040
36.00	-35.92	-1.63	0.00	-178.85	0.00	178.85	4857.45	2428.72	11119.7	5568.14	0.24	-0.07	0.00	0.040
38.00	-35.44	-1.62	0.00	-175.59	0.00	175.59	4835.81	2417.91	10975.9	5496.12	0.27	-0.07	0.00	0.039
40.00	-34.97	-1.60	0.00	-172.36	0.00	172.36	4813.84	2406.92	10832.2	5424.15	0.30	-0.07	0.00	0.039
41.00	-34.73	-1.60	0.00	-170.75	0.00	170.75	4802.73	2401.36	10760.3	5388.18	0.32	-0.08	0.00	0.039
42.00	-34.30	-1.58	0.00	-169.16	0.00	169.16	4791.54	2395.77	10688.5	5352.24	0.33	-0.08	0.00	0.039
44.00	-33.43	-1.55	0.00	-165.99	0.00	165.99	4768.90	2384.45	10545.1	5280.39	0.37	-0.08	0.00	0.038
46.00	-32.57	-1.52	0.00	-162.89	0.00	162.89	4745.94	2372.97	10401.7	5208.63	0.40	-0.09	0.00	0.038
48.00	-31.71	-1.49	0.00	-159.84	0.00	159.84	4759.60	2379.80	10486.7	5251.18	0.44	-0.09	0.00	0.037
50.00	-31.25	-1.48	0.00	-156.86	0.00	156.86	4736.50	2368.25	10343.5	5179.45	0.48	-0.09	0.00	0.037
51.00	-31.02	-1.47	0.00	-155.38	0.00	155.38	4724.82	2362.41	10271.9	5143.62	0.50	-0.10	0.00	0.037
51.00	-31.02	-1.47	0.00	-155.38	0.00	155.38	4064.30	2032.15	8835.99	4424.56	0.50	-0.10	0.00	0.043
52.00	-30.79	-1.47	0.00	-153.90	0.00	153.90	4053.20	2026.60	8772.35	4392.70	0.52	-0.10	0.00	0.043
54.00	-30.33	-1.45	0.00	-150.97	0.00	150.97	4030.83	2015.41	8645.34	4329.09	0.56	-0.10	0.00	0.042
56.00	-29.88	-1.44	0.00	-148.07	0.00	148.07	4008.20	2004.10	8518.66	4265.66	0.60	-0.11	0.00	0.042
58.00	-29.43	-1.42	0.00	-145.19	0.00	145.19	3985.33	1992.66	8392.33	4202.40	0.65	-0.11	0.00	0.042
60.00	-28.98	-1.41	0.00	-142.35	0.00	142.35	3962.20	1981.10	8266.38	4139.33	0.69	-0.11	0.00	0.042
62.00	-28.54	-1.40	0.00	-139.53	0.00	139.53	3938.82	1969.41	8140.81	4076.46	0.74	-0.12	0.00	0.041
64.00	-28.10	-1.38	0.00	-136.73	0.00	136.73	3915.19	1957.60	8015.64	4013.78	0.79	-0.12	0.00	0.041
66.00	-27.66	-1.37	0.00	-133.97	0.00	133.97	3891.31	1945.66	7890.88	3951.30	0.84	-0.13	0.00	0.041
66.17	-27.62	-1.37	0.00	-133.73	0.00	133.73	3889.27	1944.64	7880.29	3946.00	0.85	-0.13	0.00	0.030
68.00	-27.23	-1.36	0.00	-131.23	0.00	131.23	3867.19	1933.59	7766.55	3889.05	0.90	-0.13	0.00	0.030
70.00	-26.80	-1.34	0.00	-128.52	0.00	128.52	3842.81	1921.40	7642.66	3827.01	0.95	-0.13	0.00	0.030
71.00	-26.58	-1.34	0.00	-127.17	0.00	127.17	3830.52	1915.26	7580.89	3796.08	0.98	-0.13	0.00	0.030
71.00	-26.58	-1.34	0.00	-127.17	0.00	127.17	3467.89	1733.95	6863.13	3436.66	0.98	-0.13	0.00	0.033
72.00	-26.37	-1.33	0.00	-125.84	0.00	125.84	3456.29	1728.14	6806.46	3408.29	1.01	-0.14	0.00	0.033
74.00	-25.95	-1.32	0.00	-123.17	0.00	123.17	3432.92	1716.46	6693.50	3351.73	1.07	-0.14	0.00	0.032
76.00	-25.53	-1.31	0.00	-120.53	0.00	120.53	3409.33	1704.67	6581.05	3295.42	1.12	-0.14	0.00	0.032
78.00	-25.11	-1.30	0.00	-117.92	0.00	117.92	3385.54	1692.77	6469.11	3239.36	1.18	-0.14	0.00	0.032
80.00	-24.70	-1.29	0.00	-115.32	0.00	115.32	3361.54	1680.77	6357.71	3183.58	1.25	-0.15	0.00	0.031

Calculated Forces

Structure: CT01002-S-SBA

Code: TIA-222-G

7/12/2022

Site Name: Waterford

Exposure: B

Height: 183.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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81.00	-24.50	-1.29	0.00	-114.03	0.00	114.03	3349.46	1674.73	6302.21	3155.79	1.28	-0.15	0.031
81.00	-24.50	-1.29	0.00	-114.03	0.00	114.03	2964.88	1482.44	5593.85	2801.08	1.28	-0.15	0.030
82.00	-24.32	-1.28	0.00	-112.74	0.00	112.74	2956.03	1478.01	5548.33	2778.29	1.31	-0.15	0.033
84.00	-23.97	-1.28	0.00	-110.18	0.00	110.18	2938.12	1469.06	5457.44	2732.78	1.37	-0.15	0.033
85.00	-23.79	-1.27	0.00	-108.90	0.00	108.90	2929.07	1464.54	5412.08	2710.06	1.40	-0.16	0.033
86.00	-23.48	-1.27	0.00	-107.63	0.00	107.63	2919.96	1459.98	5366.77	2687.37	1.44	-0.16	0.032
88.00	-22.86	-1.26	0.00	-105.09	0.00	105.09	2901.53	1450.76	5276.32	2642.08	1.50	-0.16	0.032
90.00	-22.25	-1.26	0.00	-102.56	0.00	102.56	2882.84	1441.42	5186.12	2596.92	1.57	-0.17	0.031
91.00	-21.94	-1.26	0.00	-101.30	0.00	101.30	2898.35	1449.17	5260.87	2634.34	1.61	-0.17	0.032
92.00	-21.77	-1.26	0.00	-100.04	0.00	100.04	2889.01	1444.51	5215.76	2611.76	1.64	-0.17	0.031
93.83	-21.46	-1.26	0.00	-97.74	0.00	97.74	2871.76	1435.88	5133.38	2570.50	1.71	-0.17	0.030
93.83	-21.46	-1.26	0.00	-97.74	0.00	97.74	2871.76	1435.88	5133.38	2570.50	1.71	-0.17	0.030
94.00	-21.43	-1.26	0.00	-97.53	0.00	97.53	2870.15	1435.07	5125.73	2566.68	1.71	-0.17	0.045
96.00	-21.10	-1.26	0.00	-95.01	0.00	95.01	2851.02	1425.51	5035.98	2521.73	1.79	-0.18	0.045
98.00	-20.76	-1.26	0.00	-92.50	0.00	92.50	2831.62	1415.81	4946.52	2476.93	1.86	-0.18	0.045
100.00	-20.43	-1.26	0.00	-89.98	0.00	89.98	2811.97	1405.98	4857.35	2432.29	1.94	-0.19	0.044
102.00	-20.10	-1.26	0.00	-87.46	0.00	87.46	2792.05	1396.03	4768.51	2387.80	2.02	-0.19	0.044
104.00	-19.77	-1.26	0.00	-84.93	0.00	84.93	2771.87	1385.94	4680.00	2343.48	2.10	-0.20	0.043
106.00	-19.45	-1.26	0.00	-82.41	0.00	82.41	2751.43	1375.71	4591.84	2299.33	2.19	-0.21	0.043
108.00	-19.13	-1.26	0.00	-79.88	0.00	79.88	2730.72	1365.36	4504.04	2255.37	2.28	-0.21	0.042
110.00	-18.81	-1.26	0.00	-77.36	0.00	77.36	2709.75	1354.88	4416.62	2211.59	2.37	-0.22	0.042
111.17	-18.63	-1.26	0.00	-75.88	0.00	75.88	2697.36	1348.68	4365.66	2186.08	2.42	-0.22	0.033
112.00	-18.50	-1.26	0.00	-74.83	0.00	74.83	2688.52	1344.26	4329.60	2168.02	2.46	-0.22	0.032
114.00	-18.19	-1.26	0.00	-72.30	0.00	72.30	2667.03	1333.51	4242.98	2124.64	2.55	-0.23	0.032
115.00	-18.03	-1.26	0.00	-71.04	0.00	71.04	2656.18	1328.09	4199.83	2103.04	2.60	-0.23	0.032
115.00	-18.03	-1.26	0.00	-71.04	0.00	71.04	1951.15	975.57	3095.05	1549.82	2.60	-0.23	0.034
116.00	-17.90	-1.27	0.00	-69.77	0.00	69.77	1944.57	972.29	3065.67	1535.11	2.65	-0.23	0.040
118.00	-17.64	-1.27	0.00	-67.24	0.00	67.24	1931.24	965.62	3006.98	1505.73	2.74	-0.23	0.040
120.00	-17.38	-1.27	0.00	-64.71	0.00	64.71	1917.63	958.82	2948.42	1476.40	2.84	-0.24	0.039
122.00	-17.13	-1.27	0.00	-62.18	0.00	62.18	1903.77	951.88	2889.98	1447.14	2.94	-0.24	0.038
123.83	-16.89	-1.27	0.00	-59.86	0.00	59.86	1890.85	945.43	2836.64	1420.43	3.04	-0.25	0.037
123.83	-16.89	-1.27	0.00	-59.86	0.00	59.86	1890.85	945.43	2836.64	1420.43	3.04	-0.25	0.037
124.00	-16.87	-1.27	0.00	-59.64	0.00	59.64	1889.64	944.82	2831.69	1417.95	3.05	-0.25	0.051
126.00	-16.62	-1.27	0.00	-57.11	0.00	57.11	1875.25	937.63	2773.56	1388.84	3.15	-0.26	0.050
128.00	-16.37	-1.27	0.00	-54.57	0.00	54.57	1860.60	930.30	2715.62	1359.83	3.26	-0.26	0.049
130.00	-16.13	-1.27	0.00	-52.03	0.00	52.03	1845.69	922.84	2657.86	1330.91	3.38	-0.27	0.048
132.00	-15.71	-1.27	0.00	-49.49	0.00	49.49	1830.51	915.25	2600.31	1302.09	3.49	-0.28	0.047
134.00	-15.30	-1.27	0.00	-46.95	0.00	46.95	1815.07	907.53	2542.99	1273.39	3.61	-0.28	0.045
135.00	-15.09	-1.27	0.00	-45.69	0.00	45.69	1823.79	911.89	2575.21	1289.52	3.67	-0.29	0.044
136.00	-14.97	-1.27	0.00	-44.42	0.00	44.42	1816.04	908.02	2546.57	1275.18	3.73	-0.29	0.043
138.00	-14.73	-1.27	0.00	-41.88	0.00	41.88	1800.35	900.18	2489.47	1246.58	3.85	-0.30	0.042
140.00	-14.50	-1.27	0.00	-39.34	0.00	39.34	1784.41	892.20	2432.62	1218.12	3.98	-0.30	0.040
142.00	-14.26	-1.27	0.00	-36.80	0.00	36.80	1768.19	884.10	2376.04	1189.79	4.10	-0.31	0.039
143.00	-11.54	-1.26	0.00	-35.53	0.00	35.53	1759.99	879.99	2347.86	1175.68	4.17	-0.31	0.037
144.00	-11.44	-1.26	0.00	-34.27	0.00	34.27	1751.72	875.86	2319.75	1161.60	4.24	-0.31	0.036
146.00	-11.23	-1.26	0.00	-31.76	0.00	31.76	1734.98	867.49	2263.76	1133.56	4.37	-0.32	0.034
148.00	-11.03	-1.25	0.00	-29.25	0.00	29.25	1717.98	858.99	2208.08	1105.68	4.50	-0.33	0.033
150.00	-10.83	-1.25	0.00	-26.74	0.00	26.74	1700.72	850.36	2152.74	1077.97	4.64	-0.33	0.031
152.00	-10.63	-1.24	0.00	-24.25	0.00	24.25	1683.20	841.60	2097.74	1050.43	4.78	-0.34	0.029
153.00	-7.52	-1.11	0.00	-23.00	0.00	23.00	1674.33	837.17	2070.37	1036.72	4.85	-0.34	0.027
154.00	-7.44	-1.10	0.00	-21.90	0.00	21.90	1665.41	832.70	2043.10	1023.07	4.92	-0.34	0.026
156.00	-7.26	-1.10	0.00	-19.69	0.00	19.69	1647.36	823.68	1988.83	995.90	5.07	-0.34	0.024
158.00	-5.74	-0.99	0.00	-17.50	0.00	17.50	1629.04	814.52	1934.96	968.92	5.21	-0.35	0.022
160.00	-5.58	-0.98	0.00	-15.52	0.00	15.52	1610.47	805.23	1881.50	942.15	5.36	-0.35	0.020
162.00	-5.41	-0.97	0.00	-13.56	0.00	13.56	1591.63	795.82	1828.46	915.59	5.51	-0.36	0.018
164.00	-5.25	-0.95	0.00	-11.62	0.00	11.62	1572.53	786.27	1775.86	889.25	5.66	-0.36	0.016
166.00	-5.08	-0.94	0.00	-9.71	0.00	9.71	1553.17	776.58	1723.71	863.13	5.81	-0.36	0.015

Calculated Forces

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 76



168.00	-4.93	-0.92	0.00	-7.84	0.00	7.84	1533.54	766.77	1672.03	837.26	5.96	-0.36	0.013
170.00	-4.77	-0.90	0.00	-5.99	0.00	5.99	1513.65	756.83	1620.83	811.62	6.11	-0.37	0.011
172.00	-4.61	-0.88	0.00	-4.19	0.00	4.19	1493.50	746.75	1570.13	786.23	6.27	-0.37	0.008
173.00	-1.97	-0.44	0.00	-3.31	0.00	3.31	1483.33	741.66	1544.98	773.64	6.34	-0.37	0.006
174.00	-1.91	-0.43	0.00	-2.86	0.00	2.86	1473.09	736.54	1519.95	761.10	6.42	-0.37	0.005
176.00	-1.78	-0.41	0.00	-2.00	0.00	2.00	1452.41	726.20	1470.30	736.24	6.58	-0.37	0.004
178.00	-1.66	-0.39	0.00	-1.18	0.00	1.18	1427.85	713.93	1417.60	709.85	6.73	-0.37	0.003
180.00	-1.54	-0.36	0.00	-0.41	0.00	0.41	1400.09	700.05	1362.74	682.38	6.89	-0.37	0.002
180.00	-1.54	-0.36	0.00	-0.41	0.00	0.41	678.42	339.21	662.23	396.30	6.89	-0.37	0.003
181.00	-0.13	-0.03	0.00	-0.05	0.00	0.05	678.42	339.21	662.23	396.30	6.97	-0.37	0.000
182.00	-0.07	-0.02	0.00	-0.02	0.00	0.02	678.42	339.21	662.23	396.30	7.04	-0.37	0.000
183.00	0.00	-0.02	0.00	0.00	0.00	0.00	678.42	339.21	662.23	396.30	7.12	-0.37	0.000

Wind Loading - Shaft

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

7/12/2022

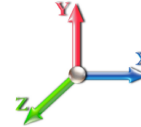
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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00

Iterations 28



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	6.129	6.74	273.99	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	6.129	6.74	271.99	0.650	0.000	2.00	10.876	7.07	47.7	0.0	517.5
4.00		1.00	0.70	6.129	6.74	269.99	0.650	0.000	2.00	10.796	7.02	47.3	0.0	513.7
6.00		1.00	0.70	6.129	6.74	267.99	0.650	0.000	2.00	10.717	6.97	47.0	0.0	509.9
8.00		1.00	0.70	6.129	6.74	265.99	0.650	0.000	2.00	10.637	6.91	46.6	0.0	506.1
10.00		1.00	0.70	6.129	6.74	263.99	0.650	0.000	2.00	10.557	6.86	46.3	0.0	502.3
12.00		1.00	0.70	6.129	6.74	261.99	0.650	0.000	2.00	10.478	6.81	45.9	0.0	498.4
14.00		1.00	0.70	6.129	6.74	259.99	0.650	0.000	2.00	10.398	6.76	45.6	0.0	494.6
16.00		1.00	0.70	6.129	6.74	257.99	0.650	0.000	2.00	10.318	6.71	45.2	0.0	490.8
18.00		1.00	0.70	6.129	6.74	255.99	0.650	0.000	2.00	10.239	6.66	44.9	0.0	487.0
20.00		1.00	0.70	6.129	6.74	253.99	0.650	0.000	2.00	10.159	6.60	44.5	0.0	483.2
22.00		1.00	0.70	6.129	6.74	251.99	0.650	0.000	2.00	10.079	6.55	44.2	0.0	479.4
24.00		1.00	0.70	6.129	6.74	249.99	0.650	0.000	2.00	9.999	6.50	43.8	0.0	475.6
26.00		1.00	0.70	6.129	6.74	247.98	0.650	0.000	2.00	9.920	6.45	43.5	0.0	471.7
28.00		1.00	0.70	6.129	6.74	245.98	0.650	0.000	2.00	9.840	6.40	43.1	0.0	467.9
30.00		1.00	0.70	6.134	6.75	244.09	0.650	0.000	2.00	9.760	6.34	42.8	0.0	464.1
32.00		1.00	0.71	6.248	6.87	244.33	0.650	0.000	2.00	9.681	6.29	43.2	0.0	460.3
34.00		1.00	0.73	6.357	6.99	244.42	0.650	0.000	2.00	9.601	6.24	43.6	0.0	456.5
36.00		1.00	0.74	6.462	7.11	244.37	0.650	0.000	2.00	9.521	6.19	44.0	0.0	452.7
38.00		1.00	0.75	6.562	7.22	244.19	0.650	0.000	2.00	9.442	6.14	44.3	0.0	448.9
40.00		1.00	0.76	6.659	7.33	243.90	0.650	0.000	2.00	9.362	6.09	44.6	0.0	445.0
41.00	Bot - Section 2	1.00	0.77	6.706	7.38	243.72	0.650	0.000	1.00	4.651	3.02	22.3	0.0	221.1
42.00		1.00	0.77	6.753	7.43	243.51	0.650	0.000	1.00	4.695	3.05	22.7	0.0	443.3
44.00		1.00	0.78	6.843	7.53	243.02	0.650	0.000	2.00	9.330	6.06	45.6	0.0	880.9
46.00		1.00	0.79	6.931	7.62	242.44	0.650	0.000	2.00	9.250	6.01	45.8	0.0	873.3
48.00	Top - Section 1	1.00	0.80	7.015	7.72	241.78	0.650	0.000	2.00	9.170	5.96	46.0	0.0	865.7
50.00		1.00	0.81	7.098	7.81	244.47	0.650	0.000	2.00	9.091	5.91	46.1	0.0	432.1
51.00	Top - Section 2	1.00	0.82	7.138	7.85	244.09	0.650	0.000	1.00	4.515	2.94	23.0	0.0	214.6
52.00		1.00	0.82	7.178	7.90	243.68	0.650	0.000	1.00	4.495	2.92	23.1	0.0	213.6
54.00		1.00	0.83	7.255	7.98	242.82	0.650	0.000	2.00	8.931	5.81	46.3	0.0	424.4
56.00		1.00	0.84	7.331	8.06	241.90	0.650	0.000	2.00	8.852	5.75	46.4	0.0	420.6
58.00		1.00	0.85	7.405	8.15	240.92	0.650	0.000	2.00	8.772	5.70	46.4	0.0	416.8
60.00		1.00	0.85	7.477	8.22	239.88	0.650	0.000	2.00	8.692	5.65	46.5	0.0	413.0
62.00		1.00	0.86	7.548	8.30	238.78	0.650	0.000	2.00	8.612	5.60	46.5	0.0	409.2
64.00		1.00	0.87	7.616	8.38	237.64	0.650	0.000	2.00	8.533	5.55	46.5	0.0	405.4
66.00		1.00	0.88	7.684	8.45	236.45	0.650	0.000	2.00	8.453	5.49	46.4	0.0	401.5
66.17	RB1	1.00	0.88	7.689	8.46	236.34	0.688*	0.000	0.17	0.715	0.49	4.2	0.0	34.0
68.00		1.00	0.89	7.749	8.52	235.21	0.690*	0.000	1.83	7.659	5.28	45.0	0.0	363.8
70.00		1.00	0.89	7.814	8.60	233.93	0.692*	0.000	2.00	8.294	5.74	49.3	0.0	393.9
71.00	Top - Section 3	1.00	0.90	7.846	8.63	233.27	0.693*	0.000	1.00	4.117	2.85	24.6	0.0	195.5
72.00		1.00	0.90	7.877	8.66	232.60	0.695*	0.000	1.00	4.097	2.85	24.7	0.0	194.6
74.00		1.00	0.91	7.939	8.73	231.24	0.696*	0.000	2.00	8.134	5.66	49.5	0.0	386.3
76.00		1.00	0.91	8.000	8.80	229.83	0.699*	0.000	2.00	8.055	5.63	49.5	0.0	382.5
78.00		1.00	0.92	8.059	8.87	228.39	0.701*	0.000	2.00	7.975	5.59	49.6	0.0	378.7
80.00		1.00	0.93	8.118	8.93	226.92	0.704*	0.000	2.00	7.895	5.56	49.6	0.0	374.8
81.00	Top - Section 4	1.00	0.93	8.147	8.96	226.17	0.706*	0.000	1.00	3.918	2.76	24.8	0.0	186.0
82.00		1.00	0.93	8.175	8.99	225.41	0.707*	0.000	1.00	3.898	2.76	24.8	0.0	154.4

Wind Loading - Shaft

Structure: CT01002-S-SBA

Code: TIA-222-G

7/12/2022

Site Name: Waterford

Exposure: B

Height: 183.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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84.00	1.00	0.94	8.232	9.05	223.87	0.709 *	0.000	2.00	7.736	5.48	49.6	0.0	306.4
85.00 Bot - Section 6	1.00	0.94	8.260	9.09	223.09	0.711 *	0.000	1.00	3.838	2.73	24.8	0.0	152.0
86.00	1.00	0.95	8.287	9.12	222.30	0.712 *	0.000	1.00	3.871	2.76	25.1	0.0	304.6
88.00	1.00	0.95	8.342	9.18	220.70	0.714 *	0.000	2.00	7.682	5.49	50.3	0.0	604.4
90.00	1.00	0.96	8.396	9.24	219.07	0.717 *	0.000	2.00	7.603	5.45	50.3	0.0	598.0
91.00 Top - Section 5	1.00	0.96	8.422	9.26	218.24	0.719 *	0.000	1.00	3.771	2.71	25.1	0.0	296.6
92.00	1.00	0.96	8.448	9.29	220.53	0.717 *	0.000	1.00	3.752	2.69	25.0	0.0	148.6
93.83 RT1	1.00	0.97	8.496	9.35	219.00	0.719 *	0.000	1.83	6.814	4.90	45.8	0.0	269.8
94.00	1.00	0.97	8.501	9.35	218.85	0.720 *	0.000	0.17	0.630	0.45	4.2	0.0	24.9
96.00	1.00	0.98	8.552	9.41	217.15	0.650	0.000	2.00	7.364	4.79	45.0	0.0	291.6
98.00	1.00	0.98	8.602	9.46	215.42	0.650	0.000	2.00	7.284	4.73	44.8	0.0	288.4
100.00	1.00	0.99	8.652	9.52	213.67	0.650	0.000	2.00	7.204	4.68	44.6	0.0	285.2
102.00	1.00	0.99	8.701	9.57	211.89	0.650	0.000	2.00	7.125	4.63	44.3	0.0	282.1
104.00	1.00	1.00	8.750	9.62	210.09	0.650	0.000	2.00	7.045	4.58	44.1	0.0	278.9
106.00	1.00	1.00	8.797	9.68	208.26	0.650	0.000	2.00	6.965	4.53	43.8	0.0	275.7
108.00	1.00	1.01	8.845	9.73	206.42	0.650	0.000	2.00	6.886	4.48	43.5	0.0	272.5
110.00	1.00	1.02	8.891	9.78	204.55	0.650	0.000	2.00	6.806	4.42	43.3	0.0	269.3
111.17 RB2	1.00	1.02	8.918	9.81	203.45	0.650	0.000	1.17	3.945	2.56	25.2	0.0	156.1
112.00	1.00	1.02	8.937	9.83	202.66	0.650	0.000	0.83	2.782	1.81	17.8	0.0	110.1
114.00	1.00	1.03	8.982	9.88	200.75	0.651 *	0.000	2.00	6.647	4.33	42.8	0.0	263.0
115.00 Top - Section 6	1.00	1.03	9.005	9.91	199.79	0.653 *	0.000	1.00	3.293	2.15	21.3	0.0	130.3
116.00	1.00	1.03	9.027	9.93	198.82	0.654 *	0.000	1.00	3.273	2.14	21.3	0.0	103.8
118.00	1.00	1.04	9.071	9.98	196.88	0.656 *	0.000	2.00	6.487	4.25	42.5	0.0	205.6
120.00	1.00	1.04	9.115	10.03	194.91	0.658 *	0.000	2.00	6.407	4.22	42.3	0.0	203.1
122.00	1.00	1.05	9.158	10.07	192.93	0.661 *	0.000	2.00	6.328	4.18	42.1	0.0	200.6
123.83 RT2	1.00	1.05	9.197	10.12	191.10	0.663 *	0.000	1.83	5.720	3.80	38.4	0.0	181.3
124.00	1.00	1.05	9.201	10.12	190.92	0.665 *	0.000	0.17	0.528	0.35	3.6	0.0	16.7
126.00	1.00	1.06	9.243	10.17	188.91	0.650	0.000	2.00	6.168	4.01	40.8	0.0	195.5
128.00	1.00	1.06	9.284	10.21	186.87	0.650	0.000	2.00	6.089	3.96	40.4	0.0	192.9
130.00 Bot - Section 8	1.00	1.07	9.326	10.26	184.82	0.650	0.000	2.00	6.009	3.91	40.1	0.0	190.4
132.00	1.00	1.07	9.366	10.30	182.75	0.650	0.000	2.00	6.014	3.91	40.3	0.0	378.4
134.00	1.00	1.07	9.407	10.35	180.66	0.650	0.000	2.00	5.934	3.86	39.9	0.0	373.3
135.00 Top - Section 7	1.00	1.08	9.427	10.37	179.61	0.650	0.000	1.00	2.937	1.91	19.8	0.0	184.7
136.00	1.00	1.08	9.447	10.39	181.20	0.650	0.000	1.00	2.917	1.90	19.7	0.0	92.4
138.00	1.00	1.08	9.486	10.43	179.09	0.650	0.000	2.00	5.775	3.75	39.2	0.0	182.9
140.00	1.00	1.09	9.525	10.48	176.97	0.650	0.000	2.00	5.695	3.70	38.8	0.0	180.4
142.00	1.00	1.09	9.564	10.52	174.83	0.650	0.000	2.00	5.616	3.65	38.4	0.0	177.8
143.00 Appurtenance(s)	1.00	1.09	9.583	10.54	173.75	0.650	0.000	1.00	2.778	1.81	19.0	0.0	88.0
144.00	1.00	1.10	9.602	10.56	172.67	0.650	0.000	1.00	2.758	1.79	18.9	0.0	87.3
146.00	1.00	1.10	9.640	10.60	170.50	0.650	0.000	2.00	5.456	3.55	37.6	0.0	172.7
148.00	1.00	1.11	9.678	10.65	168.32	0.650	0.000	2.00	5.376	3.49	37.2	0.0	170.2
150.00	1.00	1.11	9.715	10.69	166.13	0.650	0.000	2.00	5.297	3.44	36.8	0.0	167.7
152.00	1.00	1.11	9.752	10.73	163.92	0.650	0.000	2.00	5.217	3.39	36.4	0.0	165.1
153.00 Appurtenance(s)	1.00	1.12	9.770	10.75	162.81	0.650	0.000	1.00	2.579	1.68	18.0	0.0	81.6
154.00	1.00	1.12	9.788	10.77	161.70	0.650	0.000	1.00	2.559	1.66	17.9	0.0	81.0
156.00	1.00	1.12	9.824	10.81	159.46	0.650	0.000	2.00	5.058	3.29	35.5	0.0	160.0
158.00 Appurtenance(s)	1.00	1.13	9.860	10.85	157.22	0.650	0.000	2.00	4.978	3.24	35.1	0.0	157.5
160.00	1.00	1.13	9.896	10.89	154.96	0.650	0.000	2.00	4.898	3.18	34.7	0.0	154.9
162.00	1.00	1.13	9.931	10.92	152.69	0.650	0.000	2.00	4.819	3.13	34.2	0.0	152.4
164.00	1.00	1.14	9.966	10.96	150.41	0.650	0.000	2.00	4.739	3.08	33.8	0.0	149.9
166.00	1.00	1.14	10.000	11.00	148.11	0.650	0.000	2.00	4.659	3.03	33.3	0.0	147.3
168.00	1.00	1.15	10.035	11.04	145.81	0.650	0.000	2.00	4.580	2.98	32.9	0.0	144.8
170.00	1.00	1.15	10.069	11.08	143.49	0.650	0.000	2.00	4.500	2.92	32.4	0.0	142.2
172.00	1.00	1.15	10.102	11.11	141.16	0.650	0.000	2.00	4.420	2.87	31.9	0.0	139.7
173.00 Appurtenance(s)	1.00	1.16	10.119	11.13	139.99	0.650	0.000	1.00	2.180	1.42	15.8	0.0	68.9
174.00	1.00	1.16	10.136	11.15	138.82	0.650	0.000	1.00	2.160	1.40	15.7	0.0	68.3
176.00	1.00	1.16	10.169	11.19	136.47	0.650	0.000	2.00	4.261	2.77	31.0	0.0	134.6

Wind Loading - Shaft

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 79
	Struct Class: II	



178.00	1.00	1.17	10.202	11.22	134.11	0.650	0.000	2.00	4.181	2.72	30.5	0.0	132.1
180.00 Top - Section 8	1.00	1.17	10.234	11.26	131.74	0.650	0.000	2.00	4.102	2.67	30.0	0.0	129.5
181.00 Appurtenance(s)	1.00	1.17	10.251	11.28	129.84	0.600	0.000	1.00	2.000	1.20	13.5	0.0	71.3
182.00	1.00	1.17	10.267	11.29	129.95	0.600	0.000	1.00	2.000	1.20	13.6	0.0	71.3
183.00	1.00	1.17	10.283	11.31	130.05	0.600	0.000	1.00	2.000	1.20	13.6	0.0	71.3
Totals:								183.00			3,890.5		31,483.2

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

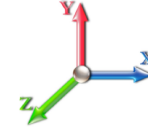
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

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	181.00	Low Profile	1	10.251	11.276	1.00	1.00	22.00	1500.00	0.000	0.000	248.06	0.00	0.00	
2	173.00	Samsung B2/B66 RRH	3	10.119	11.131	0.54	0.80	3.01	253.20	0.000	0.000	33.47	0.00	0.00	
3	173.00	Andrew JAHH-65B-R3B	6	10.119	11.131	0.66	0.80	36.29	379.80	0.000	0.000	403.99	0.00	0.00	
4	173.00	Samsung MT6407-77A	3	10.119	11.131	0.56	0.80	7.88	238.20	0.000	0.000	87.70	0.00	0.00	
5	173.00	CBC78T-DS-43/E14F05P	3	10.119	11.131	0.54	0.80	0.59	31.20	0.000	0.000	6.62	0.00	0.00	
6	173.00	BSAMNT-SBS-1-2	3	10.119	11.131	0.75	0.75	0.00	76.05	0.000	0.000	0.00	0.00	0.00	
7	173.00	Samsung B5/B13 RRH	3	10.119	11.131	0.54	0.80	3.01	210.90	0.000	0.000	33.47	0.00	0.00	
8	173.00	(3) T-Arms	1	10.119	11.131	0.75	0.75	22.50	1500.00	0.000	0.000	250.45	0.00	0.00	
9	173.00	LPA-80080-4CF-EDIN-0	4	10.119	11.131	1.36	0.80	14.20	48.00	0.000	0.000	158.04	0.00	0.00	
10	173.00	APL866513-42T0	2	10.119	11.131	0.74	0.80	6.03	31.40	0.000	0.000	67.08	0.00	0.00	
11	173.00	DB-T1-6Z-8AB-OZ	2	10.119	11.131	0.60	0.80	5.76	88.00	0.000	0.000	64.11	0.00	0.00	
12	158.00	Low Profile	1	9.860	10.846	1.00	1.00	22.00	1500.00	0.000	0.000	238.62	0.00	0.00	
13	153.00	4460 Radio	3	9.770	10.747	0.50	0.75	4.30	327.00	0.000	0.000	46.17	0.00	0.00	
14	153.00	VV-65A-R1	3	9.770	10.747	0.62	0.75	12.49	158.70	0.000	0.000	134.27	0.00	0.00	
15	153.00	AIR6419 B41	3	9.770	10.747	0.57	0.75	6.50	198.30	0.000	0.000	69.83	0.00	0.00	
16	153.00	Ericsson 4449 B71 + B85	3	9.770	10.747	0.50	0.75	2.97	219.60	0.000	0.000	31.92	0.00	0.00	
17	153.00	V-brace kit	1	9.770	10.747	1.00	1.00	2.70	230.00	0.000	0.000	29.02	0.00	0.00	
18	153.00	SPTB(Tie back Kit)	1	9.770	10.747	1.00	1.00	3.70	140.00	0.000	0.000	39.76	0.00	0.00	
19	153.00	PRK-1245 (kicker kit)	1	9.770	10.747	1.00	1.00	9.50	464.91	0.000	0.000	102.10	0.00	0.00	
20	153.00	Low Profile Platform	1	9.770	10.747	1.00	1.00	25.00	1200.00	0.000	0.000	268.67	0.00	0.00	
21	153.00	RFS	3	9.770	10.747	0.52	0.75	31.88	368.40	0.000	0.000	342.59	0.00	0.00	
22	153.00	KRY 112 144/1	3	9.770	10.747	0.52	0.75	0.65	33.00	0.000	0.000	6.94	0.00	0.00	
23	143.00	DC6-48-60-18-8F	1	9.583	10.541	0.75	0.75	1.10	31.80	0.000	0.000	11.62	0.00	0.00	
24	143.00	HRK14	1	9.583	10.541	1.00	1.00	10.13	352.36	0.000	0.000	106.78	0.00	0.00	
25	143.00	Powerwave 7770.00	3	9.583	10.541	0.55	0.75	9.03	105.00	0.000	0.000	95.23	0.00	0.00	
26	143.00	Low Profile	1	9.583	10.541	1.00	1.00	22.00	1500.00	0.000	0.000	231.91	0.00	0.00	
27	143.00	850-1900 Dual Band	3	9.583	10.541	0.49	0.75	0.77	16.50	0.000	0.000	8.14	0.00	0.00	
28	143.00	RRUS 11	3	9.583	10.541	0.50	0.75	3.80	152.10	0.000	0.000	40.05	0.00	0.00	
29	143.00	DBC-750	3	9.583	10.541	0.38	0.75	0.57	14.40	0.000	0.000	6.05	0.00	0.00	
30	143.00	OPA-65R-LCUU-H4	1	9.583	10.541	0.75	0.75	4.46	57.00	0.000	0.000	46.96	0.00	0.00	
31	143.00	QS46512-2	1	9.583	10.541	0.75	0.75	4.16	27.30	0.000	0.000	43.88	0.00	0.00	
32	143.00	TPA-65R-LCUUUU-H8	2	9.583	10.541	0.62	0.75	16.56	150.00	0.000	0.000	174.55	0.00	0.00	
33	143.00	OPA-65R-LCUU-H8	2	9.583	10.541	0.59	0.75	15.11	190.00	0.000	0.000	159.27	0.00	0.00	
34	143.00	DTMABP7819VG12A	3	9.583	10.541	0.50	0.75	1.72	57.60	0.000	0.000	18.12	0.00	0.00	
35	143.00	DBC0061F1V51-2	3	9.583	10.541	0.50	0.75	0.65	76.20	0.000	0.000	6.83	0.00	0.00	
36	143.00	RRUS 32 B2	3	9.583	10.541	0.50	0.75	4.13	159.00	0.000	0.000	43.54	0.00	0.00	
Totals:									12,085.92						3,655.82

Total Applied Force Summary

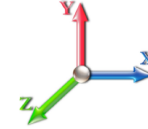
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

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
2.00		47.66	600.93	0.00	0.00
4.00		47.31	597.12	0.00	0.00
6.00		46.96	593.31	0.00	0.00
8.00		46.61	589.49	0.00	0.00
10.00		46.26	585.68	0.00	0.00
12.00		45.91	581.86	0.00	0.00
14.00		45.56	578.05	0.00	0.00
16.00		45.21	574.24	0.00	0.00
18.00		44.87	570.42	0.00	0.00
20.00		44.52	566.61	0.00	0.00
22.00		44.17	562.80	0.00	0.00
24.00		43.82	558.98	0.00	0.00
26.00		43.47	555.17	0.00	0.00
28.00		43.12	551.35	0.00	0.00
30.00		42.81	547.54	0.00	0.00
32.00		43.25	543.73	0.00	0.00
34.00		43.64	539.91	0.00	0.00
36.00		43.99	536.10	0.00	0.00
38.00		44.30	532.29	0.00	0.00
40.00		44.58	528.47	0.00	0.00
41.00		22.30	262.81	0.00	0.00
42.00		22.67	485.03	0.00	0.00
44.00		45.65	964.34	0.00	0.00
46.00		45.84	956.71	0.00	0.00
48.00		46.00	949.08	0.00	0.00
50.00		46.13	515.48	0.00	0.00
51.00		23.04	256.31	0.00	0.00
52.00		23.07	255.36	0.00	0.00
54.00		46.33	507.85	0.00	0.00
56.00		46.40	504.04	0.00	0.00
58.00		46.44	500.22	0.00	0.00
60.00		46.47	496.41	0.00	0.00
62.00		46.48	492.60	0.00	0.00
64.00		46.47	488.78	0.00	0.00
66.00		46.44	484.97	0.00	0.00
66.17		4.16	41.05	0.00	0.00
68.00		45.02	440.11	0.00	0.00
70.00		49.31	477.34	0.00	0.00
71.00		24.64	237.24	0.00	0.00
72.00		24.66	236.28	0.00	0.00
74.00		49.46	469.71	0.00	0.00
76.00		49.52	465.90	0.00	0.00
78.00		49.57	462.08	0.00	0.00
80.00		49.61	458.27	0.00	0.00
81.00		24.77	227.70	0.00	0.00
82.00		24.78	196.12	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00		49.65	389.86	0.00	0.00
85.00		24.78	193.74	0.00	0.00
86.00		25.13	346.29	0.00	0.00
88.00		50.34	687.81	0.00	0.00
90.00		50.33	681.45	0.00	0.00
91.00		25.12	338.34	0.00	0.00
92.00		24.98	190.29	0.00	0.00
93.83		45.76	346.17	0.00	0.00
94.00		4.24	32.02	0.00	0.00
96.00		45.03	375.02	0.00	0.00
98.00		44.80	371.84	0.00	0.00
100.00		44.57	368.66	0.00	0.00
102.00		44.33	365.48	0.00	0.00
104.00		44.07	362.30	0.00	0.00
106.00		43.81	359.12	0.00	0.00
108.00		43.54	355.95	0.00	0.00
110.00		43.27	352.77	0.00	0.00
111.17		25.15	204.90	0.00	0.00
112.00		17.77	144.69	0.00	0.00
114.00		42.76	346.41	0.00	0.00
115.00		21.30	172.01	0.00	0.00
116.00		21.26	145.49	0.00	0.00
118.00		42.46	289.06	0.00	0.00
120.00		42.30	286.52	0.00	0.00
122.00		42.13	283.98	0.00	0.00
123.83		38.39	257.61	0.00	0.00
124.00		3.55	23.82	0.00	0.00
126.00		40.76	278.89	0.00	0.00
128.00		40.42	276.35	0.00	0.00
130.00		40.07	273.81	0.00	0.00
132.00		40.28	461.81	0.00	0.00
134.00		39.91	456.72	0.00	0.00
135.00		19.80	226.46	0.00	0.00
136.00		19.70	134.12	0.00	0.00
138.00		39.17	266.34	0.00	0.00
140.00		38.79	263.80	0.00	0.00
142.00		38.40	261.26	0.00	0.00
143.00	(30) attachments	1011.96	3018.93	0.00	0.00
144.00		18.94	115.68	0.00	0.00
146.00		37.61	229.45	0.00	0.00
148.00		37.20	226.91	0.00	0.00
150.00		36.79	224.37	0.00	0.00
152.00		36.38	221.82	0.00	0.00
153.00	(22) attachments	1089.29	3449.87	0.00	0.00
154.00		17.91	96.96	0.00	0.00
156.00		35.53	192.02	0.00	0.00
158.00	(1) attachments	273.71	1689.48	0.00	0.00
160.00		34.66	186.93	0.00	0.00
162.00		34.22	184.39	0.00	0.00
164.00		33.77	181.85	0.00	0.00
166.00		33.32	179.31	0.00	0.00
168.00		32.86	176.76	0.00	0.00
170.00		32.40	174.22	0.00	0.00
172.00		31.93	171.68	0.00	0.00
173.00	(30) attachments	1120.71	2941.64	0.00	0.00
174.00		15.66	69.57	0.00	0.00
176.00		30.98	137.23	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 83



178.00	30.50	134.69	0.00	0.00
180.00	30.01	132.15	0.00	0.00
181.00 (1) attachments	261.59	1572.56	0.00	0.00
182.00	13.55	72.56	0.00	0.00
183.00	13.57	72.56	0.00	0.00
Totals:	7,546.36	50,150.61	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

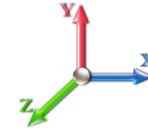
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

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)
2.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.030	0.000	6.129	0.00	0.55
2.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.030	0.000	6.129	0.00	2.08
2.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.030	0.000	6.129	0.00	6.24
4.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	6.129	0.00	0.55
4.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	6.129	0.00	2.08
4.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.031	0.000	6.129	0.00	6.24
6.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	6.129	0.00	0.55
6.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	6.129	0.00	2.08
6.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.031	0.000	6.129	0.00	6.24
8.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	6.129	0.00	0.55
8.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	6.129	0.00	2.08
8.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.031	0.000	6.129	0.00	6.24
10.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	6.129	0.00	0.55
10.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	6.129	0.00	2.08
10.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.031	0.000	6.129	0.00	6.24
12.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	6.129	0.00	0.55
12.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.031	0.000	6.129	0.00	2.08
12.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.031	0.000	6.129	0.00	6.24
14.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	6.129	0.00	0.55
14.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	6.129	0.00	2.08
14.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.032	0.000	6.129	0.00	6.24
16.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	6.129	0.00	0.55
16.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	6.129	0.00	2.08
16.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.032	0.000	6.129	0.00	6.24
18.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	6.129	0.00	0.55
18.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	6.129	0.00	2.08
18.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.032	0.000	6.129	0.00	6.24
20.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	6.129	0.00	0.55
20.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.032	0.000	6.129	0.00	2.08
20.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.032	0.000	6.129	0.00	6.24
22.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	6.129	0.00	0.55
22.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	6.129	0.00	2.08
22.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.033	0.000	6.129	0.00	6.24
24.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	6.129	0.00	0.55
24.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	6.129	0.00	2.08
24.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.033	0.000	6.129	0.00	6.24
26.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	6.129	0.00	0.55
26.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.033	0.000	6.129	0.00	2.08
26.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.033	0.000	6.129	0.00	6.24
28.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	6.129	0.00	0.55
28.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	6.129	0.00	2.08
28.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.034	0.000	6.129	0.00	6.24
30.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	6.134	0.00	0.55
30.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	6.134	0.00	2.08
30.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.034	0.000	6.134	0.00	6.24
32.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	6.248	0.00	0.55
32.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	6.248	0.00	2.08

Linear Appurtenance Segment Forces (Factored)

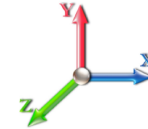
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

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)
32.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.034	0.000	6.248	0.00	6.24
34.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	6.357	0.00	0.55
34.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.034	0.000	6.357	0.00	2.08
34.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.034	0.000	6.357	0.00	6.24
36.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	6.462	0.00	0.55
36.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	6.462	0.00	2.08
36.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.035	0.000	6.462	0.00	6.24
38.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	6.562	0.00	0.55
38.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	6.562	0.00	2.08
38.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.035	0.000	6.562	0.00	6.24
40.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	6.659	0.00	0.55
40.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.035	0.000	6.659	0.00	2.08
40.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.035	0.000	6.659	0.00	6.24
41.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.035	0.000	6.706	0.00	0.27
41.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.035	0.000	6.706	0.00	1.04
41.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.035	0.000	6.706	0.00	3.12
42.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.036	0.000	6.753	0.00	0.27
42.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.036	0.000	6.753	0.00	1.04
42.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.036	0.000	6.753	0.00	3.12
44.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	6.843	0.00	0.55
44.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	6.843	0.00	2.08
44.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.036	0.000	6.843	0.00	6.24
46.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	6.931	0.00	0.55
46.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	6.931	0.00	2.08
46.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.036	0.000	6.931	0.00	6.24
48.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	7.015	0.00	0.55
48.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	7.015	0.00	2.08
48.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.036	0.000	7.015	0.00	6.24
50.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	7.098	0.00	0.55
50.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.036	0.000	7.098	0.00	2.08
50.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.036	0.000	7.098	0.00	6.24
51.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.037	0.000	7.138	0.00	0.27
51.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.037	0.000	7.138	0.00	1.04
51.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.037	0.000	7.138	0.00	3.12
52.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.037	0.000	7.178	0.00	0.27
52.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.037	0.000	7.178	0.00	1.04
52.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.037	0.000	7.178	0.00	3.12
54.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.037	0.000	7.255	0.00	0.55
54.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.037	0.000	7.255	0.00	2.08
54.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.037	0.000	7.255	0.00	6.24
56.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.037	0.000	7.331	0.00	0.55
56.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.037	0.000	7.331	0.00	2.08
56.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.037	0.000	7.331	0.00	6.24
58.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	7.405	0.00	0.55
58.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	7.405	0.00	2.08
58.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.038	0.000	7.405	0.00	6.24
60.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	7.477	0.00	0.55

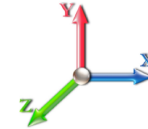
Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

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)
60.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	7.477	0.00	2.08
60.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.038	0.000	7.477	0.00	6.24
62.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	7.548	0.00	0.55
62.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.038	0.000	7.548	0.00	2.08
62.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.038	0.000	7.548	0.00	6.24
64.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.039	0.000	7.616	0.00	0.55
64.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.039	0.000	7.616	0.00	2.08
64.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.039	0.000	7.616	0.00	6.24
66.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.079	0.000	7.684	0.00	0.55
66.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.079	0.000	7.684	0.00	2.08
66.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.079	0.000	7.684	0.00	6.24
66.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.079	0.000	7.684	0.00	0.00
66.17	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.120	1.059	7.689	0.00	0.05
66.17	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.120	1.059	7.689	0.00	0.18
66.17	1 5/8" Coax	Yes	0.17	0.000	1.98	0.03	0.00	0.120	1.059	7.689	0.00	0.53
66.17	C6X10.5 Reinforcing	Yes	0.17	0.000	4.06	0.06	0.00	0.120	1.059	7.689	0.00	0.00
68.00	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.120	1.061	7.749	0.00	0.50
68.00	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.120	1.061	7.749	0.00	1.90
68.00	1 5/8" Coax	Yes	1.83	0.000	1.98	0.30	0.00	0.120	1.061	7.749	0.00	5.71
68.00	C6X10.5 Reinforcing	Yes	1.83	0.000	4.06	0.62	0.00	0.120	1.061	7.749	0.00	0.00
70.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.121	1.064	7.814	0.00	0.55
70.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.121	1.064	7.814	0.00	2.08
70.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.121	1.064	7.814	0.00	6.24
70.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.121	1.064	7.814	0.00	0.00
71.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.122	1.067	7.846	0.00	0.27
71.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.122	1.067	7.846	0.00	1.04
71.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.122	1.067	7.846	0.00	3.12
71.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.122	1.067	7.846	0.00	0.00
72.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.123	1.069	7.877	0.00	0.27
72.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.123	1.069	7.877	0.00	1.04
72.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.123	1.069	7.877	0.00	3.12
72.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.123	1.069	7.877	0.00	0.00
74.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.124	1.071	7.939	0.00	0.55
74.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.124	1.071	7.939	0.00	2.08
74.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.124	1.071	7.939	0.00	6.24
74.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.124	1.071	7.939	0.00	0.00
76.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.125	1.075	8.000	0.00	0.55
76.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.125	1.075	8.000	0.00	2.08
76.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.125	1.075	8.000	0.00	6.24
76.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.125	1.075	8.000	0.00	0.00
78.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.126	1.079	8.059	0.00	0.55
78.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.126	1.079	8.059	0.00	2.08
78.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.126	1.079	8.059	0.00	6.24
78.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.126	1.079	8.059	0.00	0.00
80.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.128	1.083	8.118	0.00	0.55
80.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.128	1.083	8.118	0.00	2.08
80.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.128	1.083	8.118	0.00	6.24

Linear Appurtenance Segment Forces (Factored)

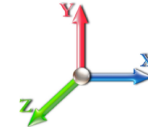
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

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)
80.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.128	1.083	8.118	0.00	0.00
81.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.128	1.085	8.147	0.00	0.27
81.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.128	1.085	8.147	0.00	1.04
81.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.128	1.085	8.147	0.00	3.12
81.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.128	1.085	8.147	0.00	0.00
82.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.129	1.087	8.175	0.00	0.27
82.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.129	1.087	8.175	0.00	1.04
82.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.129	1.087	8.175	0.00	3.12
82.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.129	1.087	8.175	0.00	0.00
84.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.130	1.090	8.232	0.00	0.55
84.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.130	1.090	8.232	0.00	2.08
84.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.130	1.090	8.232	0.00	6.24
84.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.130	1.090	8.232	0.00	0.00
85.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.131	1.093	8.260	0.00	0.27
85.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.131	1.093	8.260	0.00	1.04
85.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.131	1.093	8.260	0.00	3.12
85.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.131	1.093	8.260	0.00	0.00
86.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.132	1.095	8.287	0.00	0.27
86.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.132	1.095	8.287	0.00	1.04
86.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.132	1.095	8.287	0.00	3.12
86.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.132	1.095	8.287	0.00	0.00
88.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.133	1.099	8.342	0.00	0.55
88.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.133	1.099	8.342	0.00	2.08
88.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.133	1.099	8.342	0.00	6.24
88.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.133	1.099	8.342	0.00	0.00
90.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.134	1.103	8.396	0.00	0.55
90.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.134	1.103	8.396	0.00	2.08
90.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.134	1.103	8.396	0.00	6.24
90.00	C6X10.5 Reinforcing	Yes	2.00	0.000	4.06	0.68	0.00	0.134	1.103	8.396	0.00	0.00
91.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.135	1.106	8.422	0.00	0.27
91.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.135	1.106	8.422	0.00	1.04
91.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.135	1.106	8.422	0.00	3.12
91.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.135	1.106	8.422	0.00	0.00
92.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.134	1.102	8.448	0.00	0.27
92.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.134	1.102	8.448	0.00	1.04
92.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.134	1.102	8.448	0.00	3.12
92.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.134	1.102	8.448	0.00	0.00
93.83	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.135	1.106	8.496	0.00	0.50
93.83	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.135	1.106	8.496	0.00	1.90
93.83	1 5/8" Coax	Yes	1.83	0.000	1.98	0.30	0.00	0.135	1.106	8.496	0.00	5.71
93.83	C6X10.5 Reinforcing	Yes	1.83	0.000	4.06	0.62	0.00	0.135	1.106	8.496	0.00	0.00
94.00	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.136	1.108	8.501	0.00	0.05
94.00	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.136	1.108	8.501	0.00	0.18
94.00	1 5/8" Coax	Yes	0.17	0.000	1.98	0.03	0.00	0.136	1.108	8.501	0.00	0.53
94.00	C6X10.5 Reinforcing	Yes	0.17	0.000	4.06	0.06	0.00	0.136	1.108	8.501	0.00	0.00
96.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.091	0.000	8.552	0.00	0.55
96.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.091	0.000	8.552	0.00	2.08

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



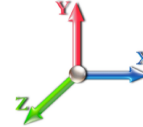
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Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 28

Dead Load Factor 1.00

Wind Load Factor 1.00



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)
96.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.091	0.000	8.552	0.00	6.24
96.00	C6X10.5 Reinforcing	Yes	1.00	0.000	4.06	0.34	0.00	0.091	0.000	8.552	0.00	0.00
98.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.045	0.000	8.602	0.00	0.55
98.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.045	0.000	8.602	0.00	2.08
98.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.045	0.000	8.602	0.00	6.24
100.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.046	0.000	8.652	0.00	0.55
100.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.046	0.000	8.652	0.00	2.08
100.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.046	0.000	8.652	0.00	6.24
102.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.046	0.000	8.701	0.00	0.55
102.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.046	0.000	8.701	0.00	2.08
102.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.046	0.000	8.701	0.00	6.24
104.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	8.750	0.00	0.55
104.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	8.750	0.00	2.08
104.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.047	0.000	8.750	0.00	6.24
106.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	8.797	0.00	0.55
106.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.047	0.000	8.797	0.00	2.08
106.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.047	0.000	8.797	0.00	6.24
108.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.048	0.000	8.845	0.00	0.55
108.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.048	0.000	8.845	0.00	2.08
108.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.048	0.000	8.845	0.00	6.24
110.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.048	0.000	8.891	0.00	0.55
110.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.048	0.000	8.891	0.00	2.08
110.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.048	0.000	8.891	0.00	6.24
111.17	Safety Cable	Yes	1.17	0.000	0.00	0.00	0.00	0.099	0.000	8.918	0.00	0.32
111.17	Step bolts (ladder)	Yes	1.17	0.000	0.00	0.00	0.00	0.099	0.000	8.918	0.00	1.22
111.17	1 5/8" Coax	Yes	1.17	0.000	1.98	0.19	0.00	0.099	0.000	8.918	0.00	3.65
111.17	C6X10.5 Reinforcing	Yes	1.17	0.000	2.03	0.20	0.00	0.099	0.000	8.918	0.00	0.00
112.00	Safety Cable	Yes	0.83	0.000	0.00	0.00	0.00	0.100	0.000	8.937	0.00	0.23
112.00	Step bolts (ladder)	Yes	0.83	0.000	0.00	0.00	0.00	0.100	0.000	8.937	0.00	0.86
112.00	1 5/8" Coax	Yes	0.83	0.000	1.98	0.14	0.00	0.100	0.000	8.937	0.00	2.59
112.00	C6X10.5 Reinforcing	Yes	0.83	0.000	2.03	0.14	0.00	0.100	0.000	8.937	0.00	0.00
114.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.101	1.002	8.982	0.00	0.55
114.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.101	1.002	8.982	0.00	2.08
114.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.101	1.002	8.982	0.00	6.24
114.00	C6X10.5 Reinforcing	Yes	2.00	0.000	2.03	0.34	0.00	0.101	1.002	8.982	0.00	0.00
115.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.101	1.004	9.005	0.00	0.27
115.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.101	1.004	9.005	0.00	1.04
115.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.101	1.004	9.005	0.00	3.12
115.00	C6X10.5 Reinforcing	Yes	1.00	0.000	2.03	0.17	0.00	0.101	1.004	9.005	0.00	0.00
116.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.102	1.006	9.027	0.00	0.27
116.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.102	1.006	9.027	0.00	1.04
116.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.102	1.006	9.027	0.00	3.12
116.00	C6X10.5 Reinforcing	Yes	1.00	0.000	2.03	0.17	0.00	0.102	1.006	9.027	0.00	0.00
118.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.103	1.009	9.071	0.00	0.55
118.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.103	1.009	9.071	0.00	2.08
118.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.103	1.009	9.071	0.00	6.24
118.00	C6X10.5 Reinforcing	Yes	2.00	0.000	2.03	0.34	0.00	0.103	1.009	9.071	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA

Code: TIA-222-G

7/12/2022

Site Name: Waterford

Exposure: B

Height: 183.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

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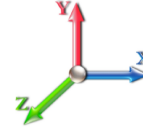


Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 28

Dead Load Factor 1.00

Wind Load Factor 1.00



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)
120.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.104	1.013	9.115	0.00	0.55
120.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.104	1.013	9.115	0.00	2.08
120.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.104	1.013	9.115	0.00	6.24
120.00	C6X10.5 Reinforcing	Yes	2.00	0.000	2.03	0.34	0.00	0.104	1.013	9.115	0.00	0.00
122.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.106	1.017	9.158	0.00	0.55
122.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.106	1.017	9.158	0.00	2.08
122.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.106	1.017	9.158	0.00	6.24
122.00	C6X10.5 Reinforcing	Yes	2.00	0.000	2.03	0.34	0.00	0.106	1.017	9.158	0.00	0.00
123.83	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.107	1.021	9.197	0.00	0.50
123.83	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.107	1.021	9.197	0.00	1.90
123.83	1 5/8" Coax	Yes	1.83	0.000	1.98	0.30	0.00	0.107	1.021	9.197	0.00	5.71
123.83	C6X10.5 Reinforcing	Yes	1.83	0.000	2.03	0.31	0.00	0.107	1.021	9.197	0.00	0.00
124.00	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.108	1.023	9.201	0.00	0.05
124.00	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.108	1.023	9.201	0.00	0.18
124.00	1 5/8" Coax	Yes	0.17	0.000	1.98	0.03	0.00	0.108	1.023	9.201	0.00	0.53
124.00	C6X10.5 Reinforcing	Yes	0.17	0.000	2.03	0.03	0.00	0.108	1.023	9.201	0.00	0.00
126.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.081	0.000	9.243	0.00	0.55
126.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.081	0.000	9.243	0.00	2.08
126.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.081	0.000	9.243	0.00	6.24
126.00	C6X10.5 Reinforcing	Yes	1.00	0.000	2.03	0.17	0.00	0.081	0.000	9.243	0.00	0.00
128.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.054	0.000	9.284	0.00	0.55
128.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.054	0.000	9.284	0.00	2.08
128.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.054	0.000	9.284	0.00	6.24
130.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.055	0.000	9.326	0.00	0.55
130.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.055	0.000	9.326	0.00	2.08
130.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.055	0.000	9.326	0.00	6.24
132.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.056	0.000	9.366	0.00	0.55
132.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.056	0.000	9.366	0.00	2.08
132.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.056	0.000	9.366	0.00	6.24
134.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.056	0.000	9.407	0.00	0.55
134.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.056	0.000	9.407	0.00	2.08
134.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.056	0.000	9.407	0.00	6.24
135.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.057	0.000	9.427	0.00	0.27
135.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.057	0.000	9.427	0.00	1.04
135.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.057	0.000	9.427	0.00	3.12
136.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.057	0.000	9.447	0.00	0.27
136.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.057	0.000	9.447	0.00	1.04
136.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.057	0.000	9.447	0.00	3.12
138.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.057	0.000	9.486	0.00	0.55
138.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.057	0.000	9.486	0.00	2.08
138.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.057	0.000	9.486	0.00	6.24
140.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.058	0.000	9.525	0.00	0.55
140.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.058	0.000	9.525	0.00	2.08
140.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.058	0.000	9.525	0.00	6.24
142.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.059	0.000	9.564	0.00	0.55
142.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.059	0.000	9.564	0.00	2.08
142.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.059	0.000	9.564	0.00	6.24

Linear Appurtenance Segment Forces (Factored)

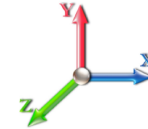
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

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)
143.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.059	0.000	9.583	0.00	0.27
143.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.059	0.000	9.583	0.00	1.04
143.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.059	0.000	9.583	0.00	3.12
144.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.060	0.000	9.602	0.00	0.27
144.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.060	0.000	9.602	0.00	1.04
144.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.060	0.000	9.602	0.00	3.12
146.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.060	0.000	9.640	0.00	0.55
146.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.060	0.000	9.640	0.00	2.08
146.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.060	0.000	9.640	0.00	6.24
148.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.061	0.000	9.678	0.00	0.55
148.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.061	0.000	9.678	0.00	2.08
148.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.061	0.000	9.678	0.00	6.24
150.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.062	0.000	9.715	0.00	0.55
150.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.062	0.000	9.715	0.00	2.08
150.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.062	0.000	9.715	0.00	6.24
152.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	9.752	0.00	0.55
152.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	9.752	0.00	2.08
152.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.063	0.000	9.752	0.00	6.24
153.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.064	0.000	9.770	0.00	0.27
153.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.064	0.000	9.770	0.00	1.04
153.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.064	0.000	9.770	0.00	3.12
154.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.064	0.000	9.788	0.00	0.27
154.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.064	0.000	9.788	0.00	1.04
154.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.064	0.000	9.788	0.00	3.12
156.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	9.824	0.00	0.55
156.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.065	0.000	9.824	0.00	2.08
156.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.065	0.000	9.824	0.00	6.24
158.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	9.860	0.00	0.55
158.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.066	0.000	9.860	0.00	2.08
158.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.066	0.000	9.860	0.00	6.24
160.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.067	0.000	9.896	0.00	0.55
160.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.067	0.000	9.896	0.00	2.08
160.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.067	0.000	9.896	0.00	6.24
162.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	9.931	0.00	0.55
162.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.068	0.000	9.931	0.00	2.08
162.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.068	0.000	9.931	0.00	6.24
164.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.070	0.000	9.966	0.00	0.55
164.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.070	0.000	9.966	0.00	2.08
164.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.070	0.000	9.966	0.00	6.24
166.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.071	0.000	10.000	0.00	0.55
166.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.071	0.000	10.000	0.00	2.08
166.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.071	0.000	10.000	0.00	6.24
168.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.072	0.000	10.035	0.00	0.55
168.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.072	0.000	10.035	0.00	2.08
168.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.072	0.000	10.035	0.00	6.24
170.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.073	0.000	10.069	0.00	0.55
170.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.073	0.000	10.069	0.00	2.08

Linear Appurtenance Segment Forces (Factored)

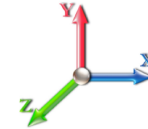
Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

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)
170.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.073	0.000	10.069	0.00	6.24
172.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.075	0.000	10.102	0.00	0.55
172.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.075	0.000	10.102	0.00	2.08
172.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.075	0.000	10.102	0.00	6.24
173.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.076	0.000	10.119	0.00	0.27
173.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.076	0.000	10.119	0.00	1.04
173.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.076	0.000	10.119	0.00	3.12
174.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.136	0.00	0.27
174.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.136	0.00	1.04
176.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.169	0.00	0.55
176.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.169	0.00	2.08
178.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.202	0.00	0.55
178.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.202	0.00	2.08
180.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.234	0.00	0.55
180.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.234	0.00	2.08
181.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.251	0.00	0.27
181.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.251	0.00	1.04
182.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.267	0.00	0.27
182.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.267	0.00	1.04
183.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.283	0.00	0.27
183.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.283	0.00	1.04
Totals:											0.0	780.0

Calculated Forces

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Code: TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

7/12/2022

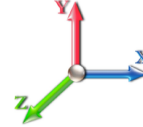


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Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 28

Dead Load Factor 1.00
Wind Load 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	-50.15	-7.55	0.00	-954.91	0.00	954.91	5190.16	2595.08	13702.9	6861.66	0.00	0.000	0.000	0.149
2.00	-49.55	-7.52	0.00	-939.81	0.00	939.81	5174.50	2587.25	13560.7	6790.43	0.00	-0.014	0.000	0.148
4.00	-48.95	-7.48	0.00	-924.78	0.00	924.78	5158.51	2579.25	13418.2	6719.08	0.01	-0.027	0.000	0.147
6.00	-48.35	-7.44	0.00	-909.82	0.00	909.82	5142.18	2571.09	13275.4	6647.61	0.03	-0.041	0.000	0.146
8.00	-47.76	-7.41	0.00	-894.94	0.00	894.94	5125.52	2562.76	13132.5	6576.03	0.05	-0.055	0.000	0.145
10.00	-47.17	-7.37	0.00	-880.12	0.00	880.12	5108.53	2554.27	12989.4	6504.36	0.07	-0.069	0.000	0.145
12.00	-46.59	-7.34	0.00	-865.38	0.00	865.38	5091.21	2545.61	12846.0	6432.60	0.10	-0.083	0.000	0.144
14.00	-46.01	-7.30	0.00	-850.70	0.00	850.70	5073.56	2536.78	12702.6	6360.75	0.14	-0.097	0.000	0.143
16.00	-45.43	-7.27	0.00	-836.10	0.00	836.10	5055.57	2527.79	12559.0	6288.85	0.19	-0.111	0.000	0.142
18.00	-44.86	-7.23	0.00	-821.56	0.00	821.56	5037.25	2518.63	12415.3	6216.88	0.24	-0.125	0.000	0.141
20.00	-44.29	-7.20	0.00	-807.10	0.00	807.10	5018.60	2509.30	12271.4	6144.86	0.29	-0.140	0.000	0.140
22.00	-43.73	-7.16	0.00	-792.70	0.00	792.70	4999.62	2499.81	12127.5	6072.81	0.35	-0.154	0.000	0.139
24.00	-43.17	-7.13	0.00	-778.37	0.00	778.37	4980.31	2490.15	11983.6	6000.72	0.42	-0.169	0.000	0.138
26.00	-42.61	-7.09	0.00	-764.12	0.00	764.12	4960.66	2480.33	11839.6	5928.62	0.49	-0.183	0.000	0.137
28.00	-42.06	-7.06	0.00	-749.93	0.00	749.93	4940.68	2470.34	11695.6	5856.50	0.57	-0.198	0.000	0.137
30.00	-41.51	-7.03	0.00	-735.81	0.00	735.81	4920.37	2460.19	11551.6	5784.39	0.66	-0.213	0.000	0.136
32.00	-40.96	-6.99	0.00	-721.76	0.00	721.76	4899.73	2449.87	11407.6	5712.28	0.75	-0.228	0.000	0.135
34.00	-40.42	-6.96	0.00	-707.77	0.00	707.77	4878.76	2439.38	11263.6	5640.19	0.85	-0.242	0.000	0.134
36.00	-39.89	-6.92	0.00	-693.86	0.00	693.86	4857.45	2428.72	11119.7	5568.14	0.96	-0.257	0.000	0.133
38.00	-39.35	-6.88	0.00	-680.02	0.00	680.02	4835.81	2417.91	10975.9	5496.12	1.07	-0.273	0.000	0.132
40.00	-38.82	-6.84	0.00	-666.25	0.00	666.25	4813.84	2406.92	10832.2	5424.15	1.19	-0.288	0.000	0.131
41.00	-38.56	-6.83	0.00	-659.41	0.00	659.41	4802.73	2401.36	10760.3	5388.18	1.25	-0.295	0.000	0.130
42.00	-38.07	-6.81	0.00	-652.58	0.00	652.58	4791.54	2395.77	10688.5	5352.24	1.31	-0.303	0.000	0.130
44.00	-37.11	-6.77	0.00	-638.96	0.00	638.96	4768.90	2384.45	10545.1	5280.39	1.44	-0.318	0.000	0.129
46.00	-36.15	-6.73	0.00	-625.43	0.00	625.43	4745.94	2372.97	10401.7	5208.63	1.58	-0.334	0.000	0.128
48.00	-35.20	-6.68	0.00	-611.98	0.00	611.98	4759.60	2379.80	10486.7	5251.18	1.72	-0.349	0.000	0.124
50.00	-34.68	-6.64	0.00	-598.61	0.00	598.61	4736.50	2368.25	10343.5	5179.45	1.87	-0.365	0.000	0.123
51.00	-34.42	-6.62	0.00	-591.97	0.00	591.97	4724.82	2362.41	10271.9	5143.62	1.95	-0.372	0.000	0.122
51.00	-34.42	-6.62	0.00	-591.97	0.00	591.97	4064.30	2032.15	8835.99	4424.56	1.95	-0.372	0.000	0.142
52.00	-34.17	-6.60	0.00	-585.34	0.00	585.34	4053.20	2026.60	8772.35	4392.70	2.03	-0.380	0.000	0.142
54.00	-33.66	-6.56	0.00	-572.14	0.00	572.14	4030.83	2015.41	8645.34	4329.09	2.19	-0.395	0.000	0.141
56.00	-33.15	-6.52	0.00	-559.01	0.00	559.01	4008.20	2004.10	8518.66	4265.66	2.36	-0.410	0.000	0.139
58.00	-32.65	-6.48	0.00	-545.97	0.00	545.97	3985.33	1992.66	8392.33	4202.40	2.53	-0.425	0.000	0.138
60.00	-32.15	-6.44	0.00	-533.01	0.00	533.01	3962.20	1981.10	8266.38	4139.33	2.71	-0.440	0.000	0.137
62.00	-31.66	-6.40	0.00	-520.13	0.00	520.13	3938.82	1969.41	8140.81	4076.46	2.90	-0.455	0.000	0.136
64.00	-31.17	-6.35	0.00	-507.34	0.00	507.34	3915.19	1957.60	8015.64	4013.78	3.10	-0.471	0.000	0.134
66.00	-30.68	-6.31	0.00	-494.63	0.00	494.63	3891.31	1945.66	7890.88	3951.30	3.30	-0.486	0.000	0.133
66.17	-30.64	-6.31	0.00	-493.56	0.00	493.56	3889.27	1944.64	7880.29	3946.00	3.31	-0.487	0.000	0.098
68.00	-30.20	-6.26	0.00	-482.02	0.00	482.02	3867.19	1933.59	7766.55	3889.05	3.50	-0.498	0.000	0.097
70.00	-29.72	-6.21	0.00	-469.49	0.00	469.49	3842.81	1921.40	7642.66	3827.01	3.71	-0.509	0.000	0.095
71.00	-29.49	-6.19	0.00	-463.28	0.00	463.28	3830.52	1915.26	7580.89	3796.08	3.82	-0.515	0.000	0.095
71.00	-29.49	-6.19	0.00	-463.28	0.00	463.28	3467.89	1733.95	6863.13	3436.66	3.82	-0.515	0.000	0.104
72.00	-29.25	-6.17	0.00	-457.09	0.00	457.09	3456.29	1728.14	6806.46	3408.29	3.93	-0.520	0.000	0.104
74.00	-28.78	-6.12	0.00	-444.75	0.00	444.75	3432.92	1716.46	6693.50	3351.73	4.15	-0.532	0.000	0.102
76.00	-28.31	-6.07	0.00	-432.51	0.00	432.51	3409.33	1704.67	6581.05	3295.42	4.37	-0.543	0.000	0.101
78.00	-27.85	-6.02	0.00	-420.37	0.00	420.37	3385.54	1692.77	6469.11	3239.36	4.60	-0.554	0.000	0.100
80.00	-27.39	-5.97	0.00	-408.32	0.00	408.32	3361.54	1680.77	6357.71	3183.58	4.84	-0.565	0.000	0.098
81.00	-27.16	-5.95	0.00	-402.35	0.00	402.35	3349.46	1674.73	6302.21	3155.79	4.96	-0.571	0.000	0.097

Calculated Forces

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 93



81.00	-27.16	-5.95	0.00	-402.35	0.00	402.35	2964.88	1482.44	5593.85	2801.08	4.96	-0.571	0.000	0.092
82.00	-26.97	-5.93	0.00	-396.40	0.00	396.40	2956.03	1478.01	5548.33	2778.29	5.08	-0.577	0.000	0.103
84.00	-26.58	-5.88	0.00	-384.55	0.00	384.55	2938.12	1469.06	5457.44	2732.78	5.32	-0.589	0.000	0.101
85.00	-26.38	-5.85	0.00	-378.67	0.00	378.67	2929.07	1464.54	5412.08	2710.06	5.45	-0.596	0.000	0.100
86.00	-26.03	-5.83	0.00	-372.81	0.00	372.81	2919.96	1459.98	5366.77	2687.37	5.57	-0.602	0.000	0.099
88.00	-25.35	-5.78	0.00	-361.16	0.00	361.16	2901.53	1450.76	5276.32	2642.08	5.83	-0.614	0.000	0.097
90.00	-24.66	-5.72	0.00	-349.60	0.00	349.60	2882.84	1441.42	5186.12	2596.92	6.09	-0.627	0.000	0.095
91.00	-24.33	-5.70	0.00	-343.88	0.00	343.88	2898.35	1449.17	5260.87	2634.34	6.22	-0.633	0.000	0.096
92.00	-24.13	-5.67	0.00	-338.18	0.00	338.18	2889.01	1444.51	5215.76	2611.76	6.35	-0.639	0.000	0.092
93.83	-23.79	-5.63	0.00	-327.80	0.00	327.80	2871.76	1435.88	5133.38	2570.50	6.60	-0.650	0.000	0.091
93.83	-23.79	-5.63	0.00	-327.80	0.00	327.80	2871.76	1435.88	5133.38	2570.50	6.60	-0.650	0.000	0.091
94.00	-23.76	-5.63	0.00	-326.84	0.00	326.84	2870.15	1435.07	5125.73	2566.68	6.62	-0.651	0.000	0.136
96.00	-23.38	-5.58	0.00	-315.59	0.00	315.59	2851.02	1425.51	5035.98	2521.73	6.90	-0.669	0.000	0.133
98.00	-23.01	-5.54	0.00	-304.43	0.00	304.43	2831.62	1415.81	4946.52	2476.93	7.18	-0.687	0.000	0.131
100.00	-22.64	-5.50	0.00	-293.34	0.00	293.34	2811.97	1405.98	4857.35	2432.29	7.47	-0.704	0.000	0.129
102.00	-22.27	-5.46	0.00	-282.34	0.00	282.34	2792.05	1396.03	4768.51	2387.80	7.77	-0.722	0.000	0.126
104.00	-21.91	-5.42	0.00	-271.43	0.00	271.43	2771.87	1385.94	4680.00	2343.48	8.08	-0.739	0.000	0.124
106.00	-21.55	-5.37	0.00	-260.60	0.00	260.60	2751.43	1375.71	4591.84	2299.33	8.39	-0.757	0.000	0.121
108.00	-21.19	-5.33	0.00	-249.85	0.00	249.85	2730.72	1365.36	4504.04	2255.37	8.71	-0.774	0.000	0.119
110.00	-20.84	-5.29	0.00	-239.19	0.00	239.19	2709.75	1354.88	4416.62	2211.59	9.04	-0.791	0.000	0.116
111.17	-20.63	-5.26	0.00	-233.00	0.00	233.00	2697.36	1348.68	4365.66	2186.08	9.24	-0.801	0.000	0.089
112.00	-20.49	-5.25	0.00	-228.63	0.00	228.63	2688.52	1344.26	4329.60	2168.02	9.38	-0.807	0.000	0.088
114.00	-20.14	-5.20	0.00	-218.14	0.00	218.14	2667.03	1333.51	4242.98	2124.64	9.72	-0.820	0.000	0.086
115.00	-19.97	-5.18	0.00	-212.94	0.00	212.94	2656.18	1328.09	4199.83	2103.04	9.89	-0.826	0.000	0.084
115.00	-19.97	-5.18	0.00	-212.94	0.00	212.94	1951.15	975.57	3095.05	1549.82	9.89	-0.826	0.000	0.092
116.00	-19.82	-5.16	0.00	-207.76	0.00	207.76	1944.57	972.29	3065.67	1535.11	10.06	-0.833	0.000	0.107
118.00	-19.53	-5.12	0.00	-197.43	0.00	197.43	1931.24	965.62	3006.98	1505.73	10.42	-0.848	0.000	0.103
120.00	-19.24	-5.08	0.00	-187.19	0.00	187.19	1917.63	958.82	2948.42	1476.40	10.78	-0.863	0.000	0.100
122.00	-18.96	-5.04	0.00	-177.04	0.00	177.04	1903.77	951.88	2889.98	1447.14	11.14	-0.877	0.000	0.096
123.83	-18.70	-5.00	0.00	-167.82	0.00	167.82	1890.85	945.43	2836.64	1420.43	11.48	-0.890	0.000	0.093
123.83	-18.70	-5.00	0.00	-167.82	0.00	167.82	1890.85	945.43	2836.64	1420.43	11.48	-0.890	0.000	0.093
124.00	-18.68	-5.00	0.00	-166.97	0.00	166.97	1889.64	944.82	2831.69	1417.95	11.51	-0.891	0.000	0.128
126.00	-18.40	-4.96	0.00	-156.98	0.00	156.98	1875.25	937.63	2773.56	1388.84	11.89	-0.910	0.000	0.123
128.00	-18.12	-4.92	0.00	-147.07	0.00	147.07	1860.60	930.30	2715.62	1359.83	12.27	-0.929	0.000	0.118
130.00	-17.85	-4.88	0.00	-137.23	0.00	137.23	1845.69	922.84	2657.86	1330.91	12.67	-0.947	0.000	0.113
132.00	-17.38	-4.84	0.00	-127.48	0.00	127.48	1830.51	915.25	2600.31	1302.09	13.07	-0.964	0.000	0.107
134.00	-16.93	-4.79	0.00	-117.81	0.00	117.81	1815.07	907.53	2542.99	1273.39	13.47	-0.981	0.000	0.102
135.00	-16.70	-4.77	0.00	-113.01	0.00	113.01	1823.79	911.89	2575.21	1289.52	13.68	-0.989	0.000	0.097
136.00	-16.56	-4.75	0.00	-108.24	0.00	108.24	1816.04	908.02	2546.57	1275.18	13.89	-0.997	0.000	0.094
138.00	-16.30	-4.71	0.00	-98.74	0.00	98.74	1800.35	900.18	2489.47	1246.58	14.31	-1.012	0.000	0.088
140.00	-16.03	-4.67	0.00	-89.31	0.00	89.31	1784.41	892.20	2432.62	1218.12	14.74	-1.026	0.000	0.082
142.00	-15.77	-4.63	0.00	-79.97	0.00	79.97	1768.19	884.10	2376.04	1189.79	15.17	-1.039	0.000	0.076
143.00	-12.77	-3.57	0.00	-75.34	0.00	75.34	1759.99	879.99	2347.86	1175.68	15.39	-1.046	0.000	0.071
144.00	-12.66	-3.55	0.00	-71.77	0.00	71.77	1751.72	875.86	2319.75	1161.60	15.61	-1.052	0.000	0.069
146.00	-12.43	-3.51	0.00	-64.68	0.00	64.68	1734.98	867.49	2263.76	1133.56	16.05	-1.063	0.000	0.064
148.00	-12.20	-3.47	0.00	-57.66	0.00	57.66	1717.98	858.99	2208.08	1105.68	16.50	-1.074	0.000	0.059
150.00	-11.98	-3.43	0.00	-50.72	0.00	50.72	1700.72	850.36	2152.74	1077.97	16.95	-1.084	0.000	0.054
152.00	-11.75	-3.39	0.00	-43.86	0.00	43.86	1683.20	841.60	2097.74	1050.43	17.41	-1.093	0.000	0.049
153.00	-8.33	-2.24	0.00	-40.47	0.00	40.47	1674.33	837.17	2070.37	1036.72	17.64	-1.098	0.000	0.044
154.00	-8.23	-2.22	0.00	-38.23	0.00	38.23	1665.41	832.70	2043.10	1023.07	17.87	-1.102	0.000	0.042
156.00	-8.04	-2.18	0.00	-33.80	0.00	33.80	1647.36	823.68	1988.83	995.90	18.33	-1.110	0.000	0.039
158.00	-6.35	-1.87	0.00	-29.44	0.00	29.44	1629.04	814.52	1934.96	968.92	18.80	-1.117	0.000	0.034
160.00	-6.17	-1.84	0.00	-25.69	0.00	25.69	1610.47	805.23	1881.50	942.15	19.27	-1.123	0.000	0.031
162.00	-5.98	-1.80	0.00	-22.02	0.00	22.02	1591.63	795.82	1828.46	915.59	19.74	-1.129	0.000	0.028
164.00	-5.80	-1.76	0.00	-18.42	0.00	18.42	1572.53	786.27	1775.86	889.25	20.21	-1.134	0.000	0.024
166.00	-5.62	-1.73	0.00	-14.90	0.00	14.90	1553.17	776.58	1723.71	863.13	20.69	-1.139	0.000	0.021
168.00	-5.45	-1.69	0.00	-11.45	0.00	11.45	1533.54	766.77	1672.03	837.26	21.17	-1.142	0.000	0.017

Calculated Forces

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 94
	Struct Class: II	



170.00	-5.27	-1.65	0.00	-8.07	0.00	8.07	1513.65	756.83	1620.83	811.62	21.65	-1.145	0.000	0.013
172.00	-5.10	-1.62	0.00	-4.76	0.00	4.76	1493.50	746.75	1570.13	786.23	22.13	-1.147	0.000	0.009
173.00	-2.18	-0.44	0.00	-3.14	0.00	3.14	1483.33	741.66	1544.98	773.64	22.37	-1.148	0.000	0.006
174.00	-2.11	-0.42	0.00	-2.70	0.00	2.70	1473.09	736.54	1519.95	761.10	22.61	-1.149	0.000	0.005
176.00	-1.98	-0.39	0.00	-1.86	0.00	1.86	1452.41	726.20	1470.30	736.24	23.09	-1.149	0.000	0.004
178.00	-1.84	-0.36	0.00	-1.08	0.00	1.08	1427.85	713.93	1417.60	709.85	23.57	-1.150	0.000	0.003
180.00	-1.71	-0.32	0.00	-0.37	0.00	0.37	1400.09	700.05	1362.74	682.38	24.05	-1.150	0.000	0.002
180.00	-1.71	-0.32	0.00	-0.37	0.00	0.37	678.42	339.21	662.23	396.30	24.05	-1.150	0.000	0.003
181.00	-0.14	-0.03	0.00	-0.04	0.00	0.04	678.42	339.21	662.23	396.30	24.29	-1.150	0.000	0.000
182.00	-0.07	-0.01	0.00	-0.01	0.00	0.01	678.42	339.21	662.23	396.30	24.54	-1.150	0.000	0.000
183.00	0.00	-0.01	0.00	0.00	0.00	0.00	678.42	339.21	662.23	396.30	24.78	-1.150	0.000	0.000

Final Analysis Summary

Structure: CT01002-S-SBA	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 105 mph Wind	37.0	0.00	60.16	0.00	0.00	4711.89
0.9D + 1.6W 105 mph Wind	37.0	0.00	45.11	0.00	0.00	4654.45
1.2D + 1.0Di + 1.0Wi 50 mph Wind	9.2	0.00	94.61	0.00	0.00	1171.40
1.2D + 1.0E	1.8	0.00	60.18	0.00	0.00	244.97
0.9D + 1.0E	1.8	0.00	45.14	0.00	0.00	241.75
1.0D + 1.0W 60 mph Wind	7.6	0.00	50.15	0.00	0.00	954.91

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 105 mph Wind	-60.16	-37.01	0.00	-4711.8	0.00	-4711.8	5190.16	2595.0	13702.9	6861.66	0.00	0.698
0.9D + 1.6W 105 mph Wind	-45.11	-37.00	0.00	-4654.4	0.00	-4654.4	5190.16	2595.0	13702.9	6861.66	0.00	0.687
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-94.61	-9.17	0.00	-1171.4	0.00	-1171.4	5190.16	2595.0	13702.9	6861.66	0.00	0.189
1.2D + 1.0E	-22.50	-1.29	0.00	-60.67	0.00	-60.67	1889.64	944.82	2831.69	1417.95	124.00	0.055
0.9D + 1.0E	-16.87	-1.27	0.00	-59.64	0.00	-59.64	1889.64	944.82	2831.69	1417.95	124.00	0.051
1.0D + 1.0W 60 mph Wind	-50.15	-7.55	0.00	-954.91	0.00	-954.91	5190.16	2595.0	13702.9	6861.66	0.00	0.149

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors			Lower Termination				Upper Termination				Max Member			
			VQ/I (lb/in)	Vu (kips)	phi Vn (kips)	MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	Pu (kips)	phi Pn (kips)	phi Tn (kips)	Ratio
66.2	93.8	(6) PLT-C6x10.5(1.5" Hole)	133.1	0.00	25.3	97.8	25.3	4	0	91.7	25.3	4	0	102.15	180.2	155.36	0.657
111.2	123.8	(3) PLT-C6x10.5(1.5" Hole)	227.7	0.00	25.3	93.9	25.3	4	0	91.8	25.3	4	0	104.17	180.2	155.36	0.670

Base Plate Summary

Structure: CT01002-S-SB	Code: TIA-222-G	7/12/2022
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 96



Reactions	Base Plate	Anchor Bolts
Original Design	Yield (ksi): 50.00	Bolt Circle: 58.00
Moment (kip-ft): 0.00	Width (in): 64.50	Number Bolts: 24.00
Axial (kip): 0.00	Style: Round	Bolt Type: 2.00" A687
Shear (kip): 0.00	Polygon Sides: 0.00	Bolt Diameter (in): 2.00
Analysis (1.2D + 1.6W)	Clip Length (in): 0.00	Yield (ksi): 105.00
Moment (kip-ft): 4711.89	Effective Len (in): 8.53	Ultimate (ksi): 150.00
Axial (kip): 60.16	Moment (kip-in): -540.87	Arrangement: Radial
Shear (kip): 37.01	Allow Stress (ksi): 81.00	Cluster Dist (in): 0.00
	Applied Stress (ksi): -169.29	Start Angle (deg): 0.00
	Stress Ratio: -2.09	Compression
		Force (kip): 166.42
		Allowable (kip): 300.00
		Ratio: 0.57
		Tension
		Force (kip): 158.54
		Allowable (kip): 300.00
		Ratio: 0.54



Monopole Mat Foundation Design

Date

7/12/2022

Customer Name:	T-Mobile	TIA Standard:	TIA-222-G
Site Name:		Structure Height (Ft.):	183
Site Number:	CT01002-S-SBA	Engineer Name:	I. Hasan Efaz
Engr. Number:	131441	Engineer Login ID:	

Foundation Info Obtained from:

Drawings/Calculations
Monopole
Analysis

Structure Type:

Analysis or Design?

Base Reactions (Factored):

Axial Load (Kips):	60.2	Shear Force (Kips):	37.0
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4711.9

Allowable overstress %: 5.0%

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	8.0	Depth of Base BG (ft.):	8.0
Pier Height A. G. (ft.):	0.25	Thickness of Pad (ft):	4.00
Length of Pad (ft.):	32	Width of Pad (ft.):	32

Final Length of pad (ft)	32.0	Final width of pad (ft):	32.0
--------------------------	------	--------------------------	------

Material Properties and Rebar Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	73	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

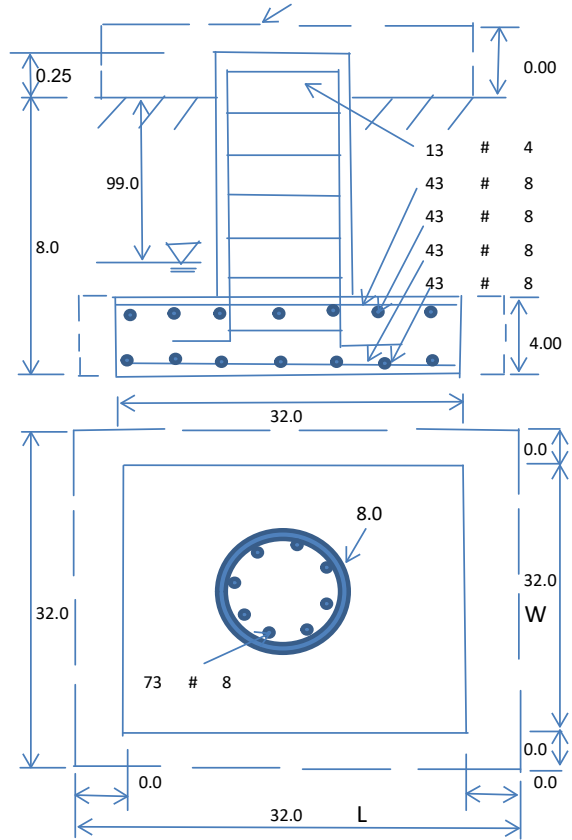
Rebar at the bottom of the concrete pad:			
Qty. of Rebar in Pad (L):	43	Qty. of Rebar in Pad (W):	43

Rebar at the top of the concrete pad:			
Qty. of Rebar in Pad (L):	43	Qty. of Rebar in Pad (W):	43

Apply 1.35 factor for e/w Per G: 1.35

Soil Design Parameters:

Soil Unit Weight (pcf):	120.0	Soil Buoyant Weight:	50.0	Pcf		
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	20000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	Yes	Reduction factor on the maximum soil bearing pressure:	1.00			



Foundation Analysis and Design:	Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):		3894.94	Total Dry Soil Weight (Kips):	467.39
Total Buoyant Soil Volume (cu. Ft.):		0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):		467.39	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):		4309.63	Total Dry Concrete Weight (Kips):	646.44
Total Buoyant Concrete Volume (cu. Ft.):		0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):		646.44	Total Vertical Load on Base (Kips):	1174.04

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	1702	<	Allowable Factored Soil Bearing (psf):	15000	0.11	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	17002.5	>	Design Factored Momont (kips-ft):	4573	0.27	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	3.72					OK!

Load/
Capacity
Ratio

Check the capacities of Reinforcing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75
Strength reduction factor (Axial compression):	0.65	Wind Load Factor on Concrete Design:	1.00

Load/
Capacity
Ratio

(1) Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):	0.79	Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	10833.7	> Design Factored Moment (Mu, Kips-F	4869.2	0.45	OK!
Calculated Shear Capacity (Kips):	917.1	> Design Factored Shear (Kips):	37.0	0.04	OK!
Calculated Tension Capacity (Tn, Kips):	3114.2	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	12695.2	> Design Factored Axial Load (Pu Kips):	60.2	0.00	OK!
Moment & Axial Strength Combination:	0.45	OK! Check Tie Spacing (Design/Required):		0.6667	OK!
Pier Reinforcement Ratio:	0.008	Reinforcement Ratio is satisfied per ACI			

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	1621.1	> One-Way Factored Shear (L-D. Kips):	292.6	0.18	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1621.1	> One-Way Factored Shear (W-D., Kips)	292.6	0.18	OK!
One-Way Design Shear Capacity (Corner-Corner, Kips):	1511.6	> One-Way Factored Shear (C-C, Kips):	248.6	0.16	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0020	OK! Lower Steel Pad Reinf. Ratio (W-Direc	0.0020		
Lower Steel Pad Moment Capacity (L-Direction, Kips-ft):	6683.2	> Moment at Bottom (L-Dir. K-Ft):	2209.6	0.33	OK!
Lower Steel Pad Moment Capacity (W-Direction, Kips-ft):	6683.2	> Moment at Bottom (W-Dir. K-Ft):	2209.6	0.33	OK!
Lower Steel Pad Moment Capacity (Corner-Corner, K-ft):	9415.2	> Moment at Bottom (C-C Dir. K-Ft):	3124.9	0.33	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0020	OK! Upper Steel Reinf. Ratio (W-Dir.):	0.0020		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	6683.2	> Moment at the top (L-Dir K-Ft):	803.1	0.12	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	6683.2	> Moment at the top (W-Dir K-Ft):	803.1	0.12	OK!
Upper Steel Pad Moment Capacity (Corner-Corner, K-ft):	9415.2	> Moment at the top (C-C Dir. K-Ft):	751.0	0.08	OK!

(3).Check Punching Shear Capacity due to Moment in the Pier:

Moment transferred by punching shear:	1884.8	k-ft.	Max. factored shear stress $v_{u,CD}$:	2.8	Psi
Max. factored shear stress $v_{u,AB}$:	7.5	Psi	Factored shear Strength ϕv_n :	189.7	Psi
Max. factored shear stress v_u :	7.5	Psi	Check Usage of Punching Shear Capacity:	0.04	OK!

EXHIBIT 8



Tower Engineering Solutions

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

Antenna Mount Analysis Report

Existing Monopole Tower

Customer Name: SBA Communications Corp

Customer Site Number: CT01002-S-SBA

Customer Site Name: Waterford

Carrier Name: T-Mobile (App#: 197458, V1)

Carrier Site ID / Name: CT11473A / Waterford/RT 85/Douglas

Site Location: 45 Fargo Road

Waterford, Connecticut

New London County

Latitude: 41.389339

Longitude: -72.171408



Analysis Result:

Max Structural Usage: 82.2% [Pass]

Report Prepared By: Venkata Annamreddy



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Report Prepared By: Venkata Annamreddy

Introduction

The purpose of this report is to summarize the analysis results on the (3) T-Arms + (1) Sitepro PRK-1245L + (1) PRK-SFS-L + (3) SPTB at 153.00' elevation to support the proposed antenna configuration. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Mount Drawings	Mount Information provided by SBA; Previous MA and Mod drawings
Antenna Loading	SBA, Application #: 197458, v1; dated:6/14/2022
Modification Drawings	N/A
Recent Site Pictures	Provided by SBA

Analysis Criteria

Basic Wind Speed Used in the Analysis: $V_{ULT} = 135$ mph (3-Sec. Gust) / Equivalent to
 $V_{ASD} = 105$ 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

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

(3) T-Arms + (1) Sitepro PRK-1245L + (1) PRK-SFS-L + (3) SPTB at 153.00' elevation

Final Antenna Configuration

- 3 Ericsson AIR6419 B41
- 3 Commscope VV-65A-R1
- 3 RFS APXVAALL24-43-U-NA20
- 3 Ericsson KRY 112 144/1
- 3 Ericsson 4449 B71 + B85
- 3 Ericsson 4460 B25 + B66

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

Analysis Results

Our calculations have determined that under design wind load the existing mounts will be structurally adequate to support the proposed antenna configuration. The maximum structural usage is 82.2%, which occurs in the angle stabilizer. 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
2. Antenna Placement Diagram
3. Analysis Calculations

Standard Conditions

1. The loading configuration as analyzed in this report is as provided from the customer. Any deviation from this design shall be communicated to TES to verify deviation will not adversely impact the analysis.
2. The analysis is based on the presumption that the antenna mount members and components along with any existing reinforcement items have been correctly and properly designed, manufactured, installed and maintained.
3. All the existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion. The mount analysis is not a condition assessment of the mount.
4. The mount analysis was performed in accordance with the loading provided, and if applicable the modification required to support the additional loading.
5. If the mount is modified, installation must adhere to the configuration communicated in the modification drawings.
6. The modification drawings are not intended to convey means or methods. These are the responsibility of the installing contractor.
7. Rigging plan review is available if the contractor requires for a construction class IV or other if required. Review fee would apply.
8. The mount modification package was created based upon information provided for the mount loading. The underlying tower is assumed to provide support and sufficient rigidity to support the mount loads as a tower analysis was not part of the mount analysis.
9. TES is not responsible for modifications to climbing facilities unless communicated to TES in writing.



Structure: CT01002-S-SBA - Waterford

Sector: A

7/1/2022

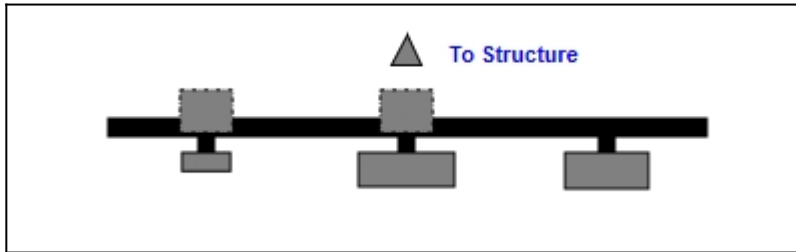
Structure Type: Monopole

Mount Elev: 153.00

Page: 1

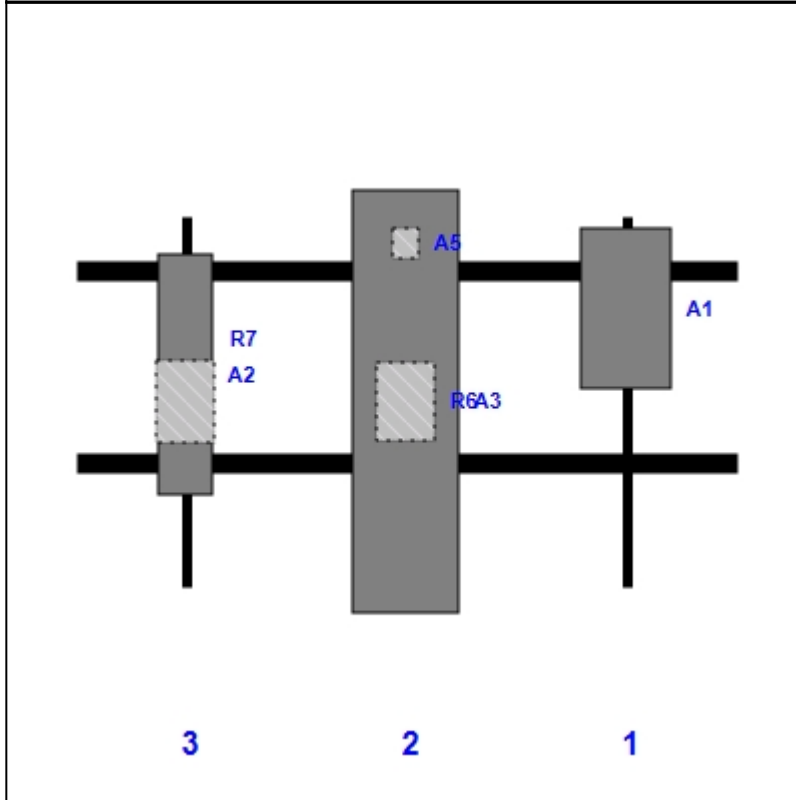


Plan View



Front View

Looking Toward Structure



Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	AIR6419 B41	36.30	20.90	125.00	1	a	Front	21.00		Added	
A3	APXVAALL24-43-U-NA20	95.90	24.00	75.00	2	b	Front	42.00		Leased	
A5	KRY 112 144/1	6.93	6.10	75.00	2	b	Behind	6.00		Leased	
R6	4449 B71 + B85	17.90	13.10	75.00	2	b	Behind	42.00		Leased	
A2	VV-65A-R1	54.72	12.08	25.00	3	a	Front	36.00		Added	
R7	4460 B25 + B66	19.00	13.10	25.00	3	b	Behind	42.00		Added	

Sector: **B**

7/1/2022

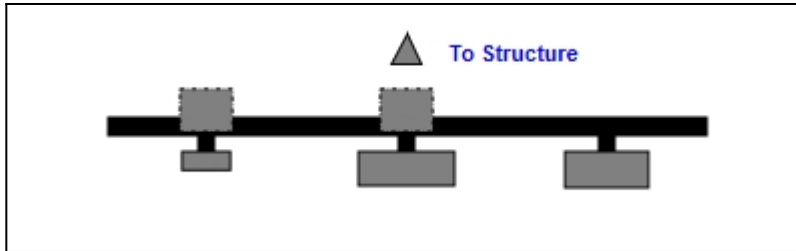
Structure Type: Monopole



Mount Elev: 153.00

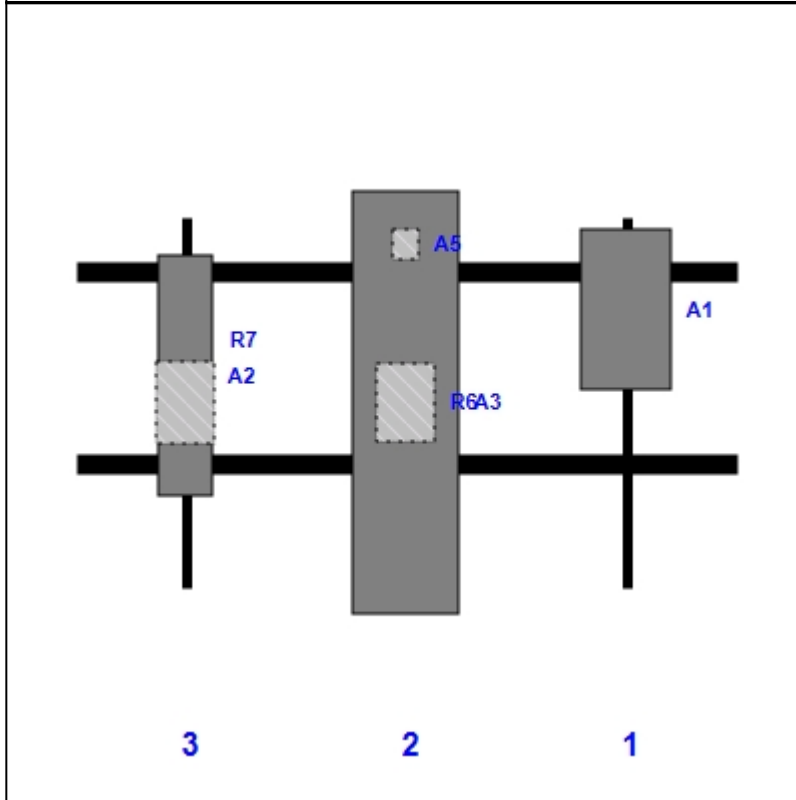
Page: 2

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
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A2	VV-65A-R1	54.72	12.08	25.00	3	a	Front	36.00		Added	
R7	4460 B25 + B66	19.00	13.10	25.00	3	b	Behind	42.00		Added	

Sector: **C**

7/1/2022

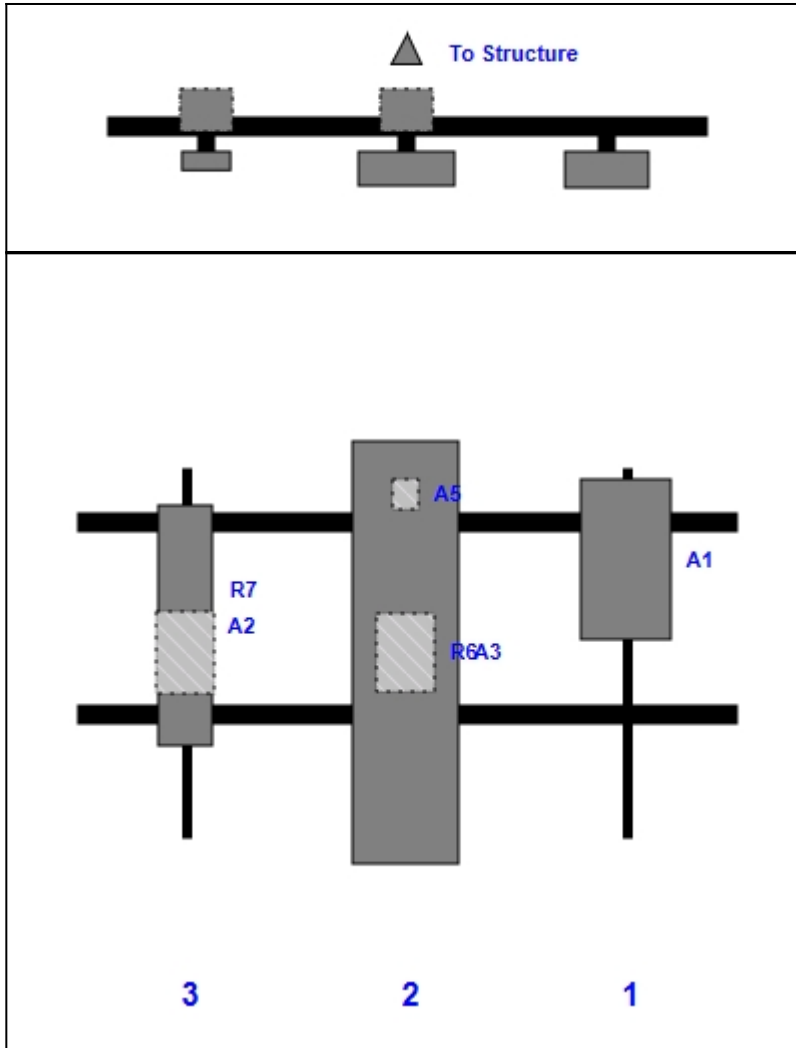
Structure Type: Monopole

Mount Elev: 153.00

Page: 3



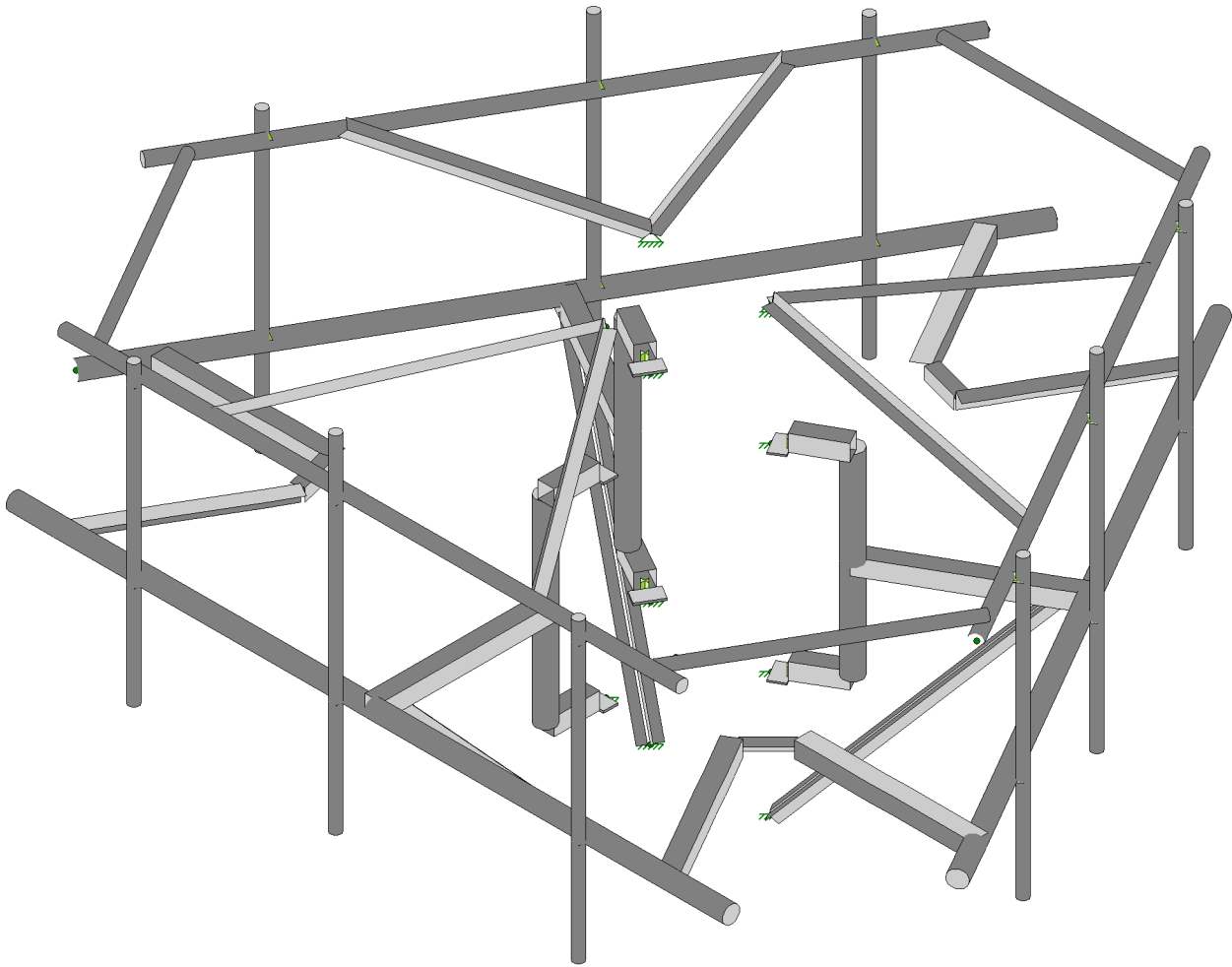
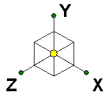
Plan View



Front View

Looking Toward Structure

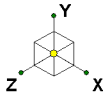
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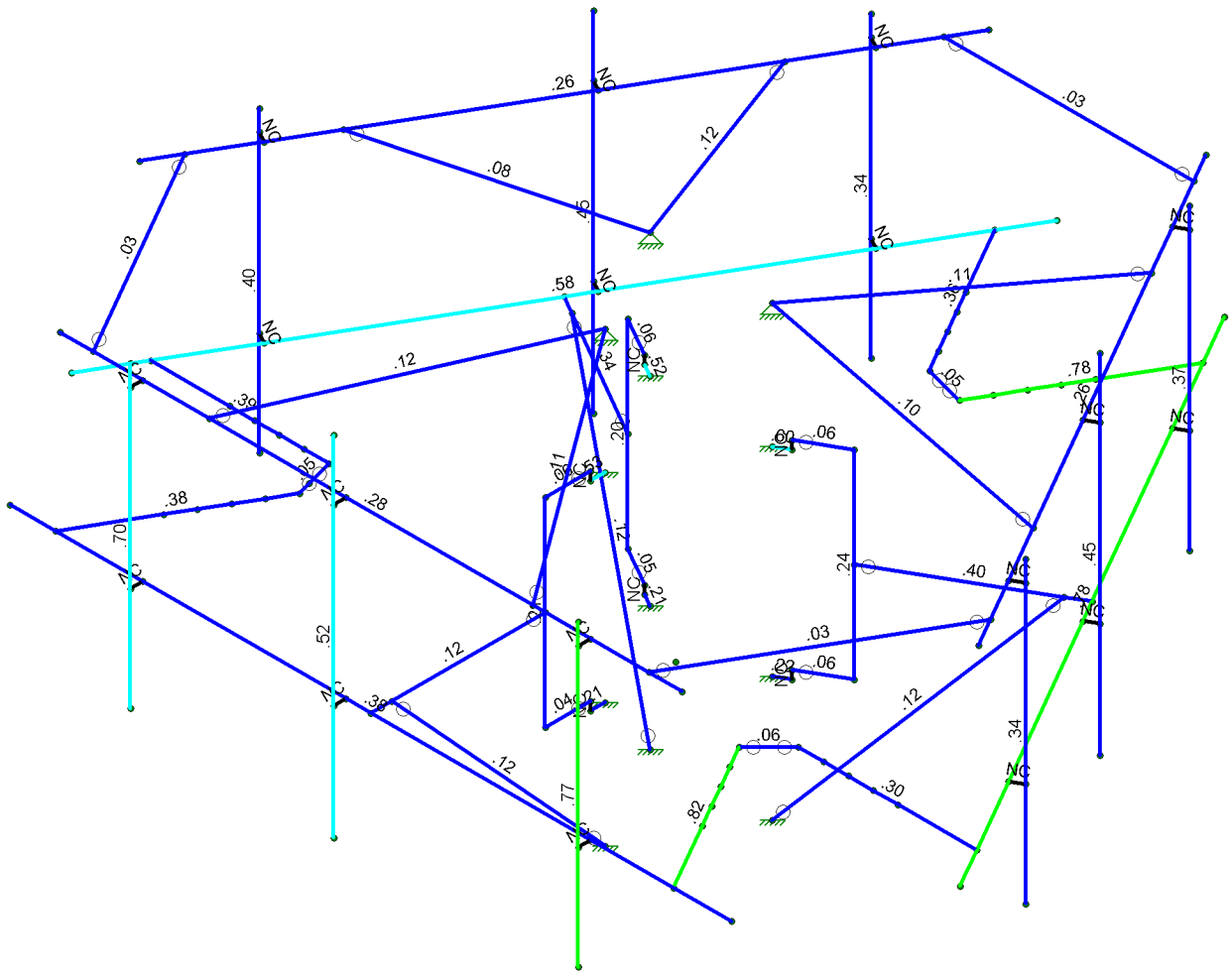
Tower Engineering Solutio...
TES Project No. 130525

CT01002-S-SBA_MT_LO_Loads Only_G

SK - 2
July 1, 2022 at 4:18 PM
CT01002-S-SBA_130525_G_RISA_...

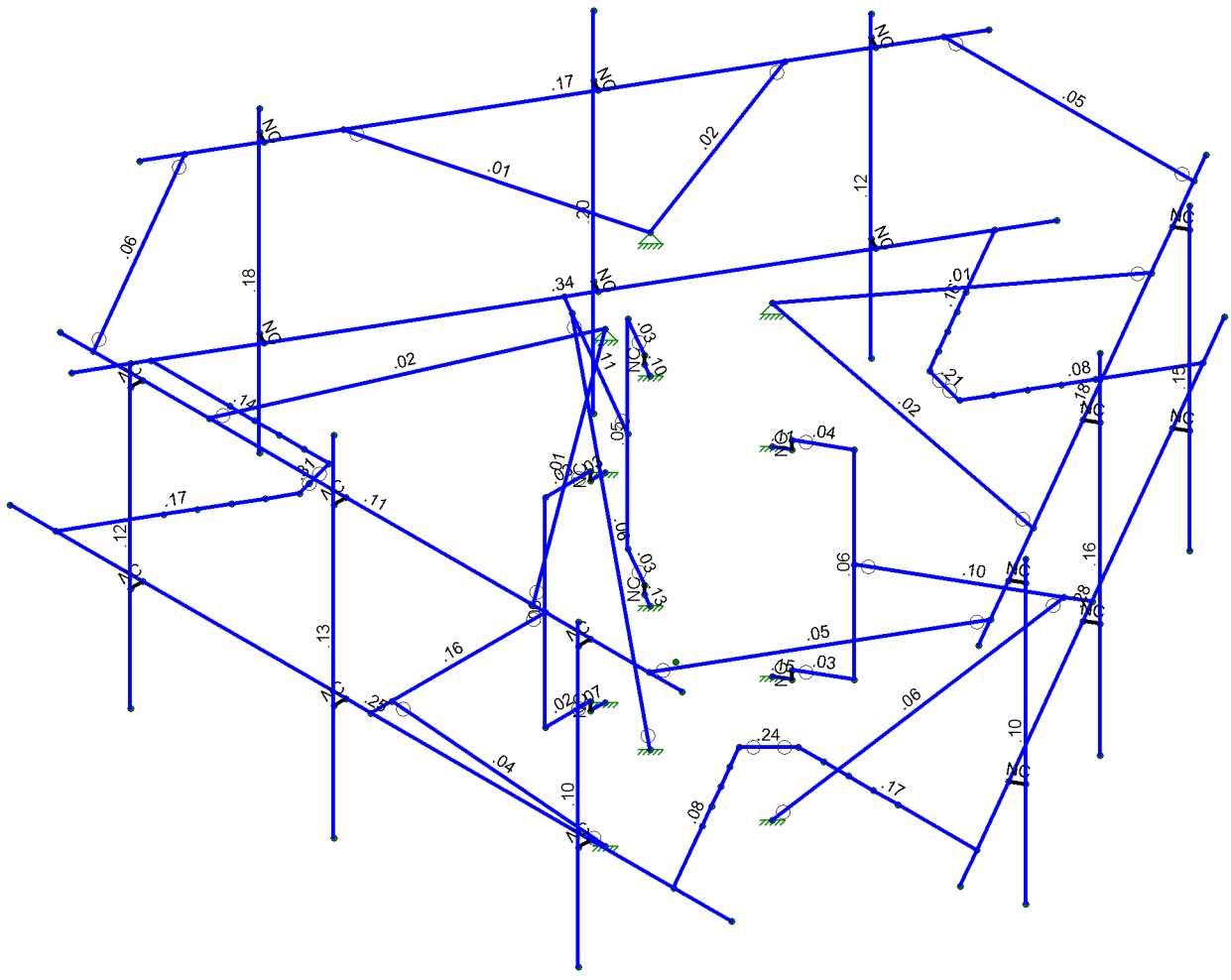
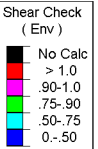
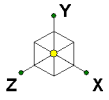


Code Check (Env)	
Black	No Calc
Red	> 1.0
Magenta	.90-1.0
Green	.75-.90
Cyan	.50-.75
Blue	0-.50



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

Tower Engineering Solutio...	CT01002-S-SBA_MT_LO_Loads Only_G	SK - 3
TES Project No. 130525		July 1, 2022 at 4:19 PM
		CT01002-S-SBA_130525_G_RISA_...



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

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TES Project No. 130525		CT01002-S-SBA_130525_G_RISA_...

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GJ	ÞH	FÉGG I I J	I	ÉÉÉ É H H	€	
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HF	ÞIÉ	FÉI J I I	I	ÉÉÉ I I F I	€	
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HH	ÞIG	FÉI J I I	I ÉI I I I	ÉÉÉ I I F I	€	
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EXHIBIT 9



Radio Frequency Exposure Analysis Report

July 15, 2022

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

T-Mobile Site Name: Waterford/ Rt 85 /Douglas
Site Number: CT11473A

Site Address: 45 Fargo Road, Waterford, CT 06385

Site Compliance Summary

T-Mobile Compliance Status:	Compliant
Cumulative Calculated Power Density (Ground Level):	3.24044 $\mu\text{W}/\text{cm}^2$
Cumulative General Population % MPE (Ground Level):	0.36431%



July 15, 2022

Centerline
Attn: J Meyer
750 W Center St, Suite 301
West Bridgewater, MA 02379

RF Exposure Analysis for Site: **Waterford/ Rt 85 /Douglas**

Centerline Communications, LLC (“Centerline”) was contracted to analyze the proposed T-Mobile facility at **45 Fargo Road, Waterford, CT 06385** for the purpose of determining whether the predictive exposure from the proposed facility is within specified federal limits.

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

All results were compared to the FCC radio frequency exposure rules as detailed in 47 CFR § 1.1307(b) to determine compliance with the MPE limits for General Population/Uncontrolled environments as defined below.

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

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits, as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means. Additional details can be found in FCC OET 65.



Calculation Methodology

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

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



Data & Results

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

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

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



Maximum Calculated Cumulative Power Density (Location: approximately 5' North of site)

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/Channel (watts)	ERP (watts)	Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	General Population MPE Limit ($\mu\text{W}/\text{cm}^2$)	General Population % MPE
T-Mobile A 1	ERICSSON SON_AIR6419 LTE	2500	22.85	153.00	2.00	80.00	30840.40	0.86818	1000.00	0.08682
T-Mobile A 1	ERICSSON SON_AIR6419 NR	2500	22.85	153.00	2.00	80.00	30840.40	0.86818	1000.00	0.08682
T-Mobile A 2	RFS APXVAARR24 43-U-NA20	700	13.20	153.00	4.00	40.00	3342.87	0.01717	466.67	0.00368
T-Mobile A 2	RFS APXVAARR24 43-U-NA20	600	13.14	153.00	4.00	40.00	3297.01	0.02427	400.00	0.00607
T-Mobile A 2	RFS APXVAARR24 43-U-NA20	600	13.14	153.00	4.00	30.00	2472.76	0.01820	400.00	0.00455
T-Mobile A 3	COMMSCOPE VV-65A-R1	2100	16.47	153.00	2.00	140.00	12421.04	0.01341	1000.00	0.00134
T-Mobile A 3	COMMSCOPE VV-65A-R1	1900	15.77	153.00	2.00	140.00	10572.02	0.01174	1000.00	0.00117
T-Mobile A 3	COMMSCOPE VV-65A-R1	1900	15.77	153.00	1.00	15.00	566.36	0.00063	1000.00	0.00006
T-Mobile B 4	ERICSSON SON_AIR6419 LTE	2500	22.85	153.00	2.00	80.00	30840.40	0.00042	1000.00	0.00004
T-Mobile B 4	ERICSSON SON_AIR6419 NR	2500	22.85	153.00	2.00	80.00	30840.40	0.00042	1000.00	0.00004
T-Mobile B 5	RFS APXVAARR24 43-U-NA20	700	13.20	153.00	4.00	40.00	3342.87	0.00005	466.67	0.00001
T-Mobile B 5	RFS APXVAARR24 43-U-NA20	600	13.14	153.00	4.00	40.00	3297.01	0.00003	400.00	0.00001
T-Mobile B 5	RFS APXVAARR24 43-U-NA20	600	13.14	153.00	4.00	30.00	2472.76	0.00002	400.00	0.00001
T-Mobile B 6	COMMSCOPE VV-65A-R1	2100	16.47	153.00	2.00	140.00	12421.04	0.00009	1000.00	0.00001
T-Mobile B 6	COMMSCOPE VV-65A-R1	1900	15.77	153.00	2.00	140.00	10572.02	0.00004	1000.00	0.00000
T-Mobile B 6	COMMSCOPE VV-65A-R1	1900	15.77	153.00	1.00	15.00	566.36	0.00000	1000.00	0.00000
T-Mobile C 7	ERICSSON SON_AIR6419 LTE	2500	22.85	153.00	2.00	80.00	30840.40	0.00737	1000.00	0.00074
T-Mobile C 7	ERICSSON SON_AIR6419 NR	2500	22.85	153.00	2.00	80.00	30840.40	0.00737	1000.00	0.00074
T-Mobile C 8	RFS APXVAARR24 43-U-NA20	700	13.20	153.00	4.00	40.00	3342.87	0.00005	466.67	0.00001
T-Mobile C 8	RFS APXVAARR24 43-U-NA20	600	13.14	153.00	4.00	40.00	3297.01	0.00002	400.00	0.00001
T-Mobile C 8	RFS APXVAARR24 43-U-NA20	600	13.14	153.00	4.00	30.00	2472.76	0.00001	400.00	0.00000
T-Mobile C 9	COMMSCOPE VV-65A-R1	2100	16.47	153.00	2.00	140.00	12421.04	0.00004	1000.00	0.00000
T-Mobile C 9	COMMSCOPE VV-65A-R1	1900	15.77	153.00	2.00	140.00	10572.02	0.00009	1000.00	0.00001
T-Mobile C 9	COMMSCOPE VV-65A-R1	1900	15.77	153.00	1.00	15.00	566.36	0.00001	1000.00	0.00000
Verizon A 10	AMPHENOL LPA-80080-4CF	850	12.50	173.00	7.00	20.00	2489.59	0.06011	566.67	0.01061
Verizon A 11	COMMSCOPE JAHH-65B-R3B	700	12.11	173.00	2.00	40.00	1300.44	0.02577	466.67	0.00552
Verizon A 11	COMMSCOPE JAHH-65B-R3B	850	12.81	173.00	2.00	40.00	1527.88	0.02781	566.67	0.00491
Verizon A 11	COMMSCOPE JAHH-65B-R3B	1900	15.72	173.00	4.00	40.00	5972.00	0.05642	1000.00	0.00564
Verizon A 12	COMMSCOPE JAHH-65B-R3B	700	12.11	173.00	2.00	40.00	1300.44	0.02577	466.67	0.00552
Verizon A 12	COMMSCOPE JAHH-65B-R3B	850	12.81	173.00	2.00	40.00	1527.88	0.02781	566.67	0.00491
Verizon A 12	COMMSCOPE JAHH-65B-R3B	2100	15.71	173.00	4.00	40.00	5958.27	0.05545	1000.00	0.00554
Verizon A 13	SAMSUNG SON_MT6407	3700	23.34	173.00	4.00	50.00	43154.89	0.57836	1000.00	0.05784
Verizon A 14	AMPHENOL LPA-80080-4CF	850	12.50	173.00	7.00	20.00	2489.59	0.06011	566.67	0.01061
Verizon B 15	AMPHENOL LPA-80080-4CF	850	12.50	173.00	7.00	20.00	2489.59	0.00002	566.67	0.00000
Verizon B 16	COMMSCOPE JAHH-65B-R3B	700	12.11	173.00	2.00	40.00	1300.44	0.00003	466.67	0.00001



Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	General Population MPE Limit ($\mu\text{W}/\text{cm}^2$)	General Population % MPE
Verizon B 16	COMMSCOPE JAHH-65B-R3B	850	12.81	173.00	2.00	40.00	1527.88	0.00002	566.67	0.00000
Verizon B 16	COMMSCOPE JAHH-65B-R3B	1900	15.72	173.00	4.00	40.00	5972.00	0.00005	1000.00	0.00000
Verizon B 17	COMMSCOPE JAHH-65B-R3B	700	12.11	173.00	2.00	40.00	1300.44	0.00003	466.67	0.00001
Verizon B 17	COMMSCOPE JAHH-65B-R3B	850	12.81	173.00	2.00	40.00	1527.88	0.00002	566.67	0.00000
Verizon B 17	COMMSCOPE JAHH-65B-R3B	2100	15.71	173.00	4.00	40.00	5958.27	0.00010	1000.00	0.00001
Verizon B 18	SAMSUNG SON_MT6407	3700	23.34	173.00	4.00	50.00	43154.89	0.01208	1000.00	0.00121
Verizon B 19	AMPHENOL LPA-80080-4CF	850	12.50	173.00	7.00	20.00	2489.59	0.00002	566.67	0.00000
Verizon C 20	RFS APL866513-42T6	850	12.60	173.00	7.00	20.00	2547.58	0.00012	566.67	0.00002
Verizon C 21	COMMSCOPE JAHH-65B-R3B	700	12.11	173.00	2.00	40.00	1300.44	0.00014	466.67	0.00003
Verizon C 21	COMMSCOPE JAHH-65B-R3B	850	12.81	173.00	2.00	40.00	1527.88	0.00009	566.67	0.00002
Verizon C 21	COMMSCOPE JAHH-65B-R3B	1900	15.72	173.00	4.00	40.00	5972.00	0.00005	1000.00	0.00001
Verizon C 22	COMMSCOPE JAHH-65B-R3B	700	12.11	173.00	2.00	40.00	1300.44	0.00014	466.67	0.00003
Verizon C 22	COMMSCOPE JAHH-65B-R3B	850	12.81	173.00	2.00	40.00	1527.88	0.00009	566.67	0.00002
Verizon C 22	COMMSCOPE JAHH-65B-R3B	2100	15.71	173.00	4.00	40.00	5958.27	0.00008	1000.00	0.00001
Verizon C 23	SAMSUNG SON_MT6407	3700	23.34	173.00	4.00	50.00	43154.89	0.01420	1000.00	0.00142
Verizon C 24	RFS APL866513-42T6	850	12.60	173.00	7.00	20.00	2547.58	0.00012	566.67	0.00002
AT&T A 25	QUINTEL QS46512-2	700	10.85	143.00	2.00	40.00	972.95	0.05544	466.67	0.01188
AT&T A 25	QUINTEL QS46512-2	850	10.45	143.00	2.00	40.00	887.34	0.05918	566.67	0.01044
AT&T A 26	CCI OPA-65R-LCUU-H4	1900	13.46	143.00	4.00	40.00	3549.11	0.11728	1000.00	0.01173
AT&T A 26	CCI OPA-65R-LCUU-H4	2100	14.16	143.00	4.00	40.00	4169.85	0.12093	1000.00	0.01209
AT&T A 26	CCI OPA-65R-LCUU-H4	2300	14.06	143.00	4.00	25.00	2546.83	0.08244	1000.00	0.00824
AT&T A 27	POWERWAVE 7770	850	11.35	143.00	1.00	40.00	545.83	0.02095	566.67	0.00370
AT&T B 28	CCI TPA-65R-LCUUUU-H8	850	13.35	143.00	2.00	40.00	1730.17	0.00004	566.67	0.00001
AT&T B 28	CCI TPA-65R-LCUUUU-H8	700	13.55	143.00	2.00	40.00	1811.72	0.00001	466.67	0.00000
AT&T B 29	CCI OPA-65R-LCUU-H8	850	14.76	143.00	4.00	40.00	4787.62	0.00013	566.67	0.00002
AT&T B 29	CCI OPA-65R-LCUU-H8	1900	14.96	143.00	4.00	40.00	5013.26	0.00015	1000.00	0.00002
AT&T B 29	CCI OPA-65R-LCUU-H8	2100	14.56	143.00	4.00	25.00	2857.59	0.00001	1000.00	0.00000
AT&T B 30	POWERWAVE 7770	2300	11.35	143.00	1.00	40.00	545.83	0.00015	1000.00	0.00002
AT&T C 31	CCI TPA-65R-LCUUUU-H8	850	13.35	143.00	2.00	40.00	1730.17	0.00007	566.67	0.00001
AT&T C 31	CCI TPA-65R-LCUUUU-H8	700	13.55	143.00	2.00	40.00	1811.72	0.00003	466.67	0.00001
AT&T C 32	CCI OPA-65R-LCUU-H8	850	14.76	143.00	4.00	40.00	4787.62	0.00012	566.67	0.00002
AT&T C 32	CCI OPA-65R-LCUU-H8	1900	14.96	143.00	4.00	40.00	5013.26	0.00010	1000.00	0.00001
AT&T C 32	CCI OPA-65R-LCUU-H8	2100	14.56	143.00	4.00	25.00	2857.59	0.00019	1000.00	0.00002
AT&T C 33	POWERWAVE 7770	2300	11.35	143.00	1.00	40.00	545.83	0.00045	1000.00	0.00005



Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/Channel (watts)	ERP (watts)	Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	General Population MPE Limit ($\mu\text{W}/\text{cm}^2$)	General Population % MPE
							Cumulative Power Density:	3.24044 $\mu\text{W}/\text{cm}^2$	Cumulative % MPE:	0.36431%



Summary

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

Michelle Stone

Michelle Stone

RF EME Technical Writer II

Centerline Communications, LLC