



NSS **NORTHEAST**
SITE SOLUTIONS
Turnkey Wireless Development

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

August 11, 2022

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

RE: Exempt Modification Application
229 Cheshire Road, Prospect, CT 06712
Latitude: 41.507880
Longitude: -72.951022
Site #: CT02694-B _CTNH303A_SBA/T-Mobile

Dear Ms. Bachman:

T-Mobile is requesting to file an exempt modification for an existing tower located 229 Cheshire Road, Prospect, CT 06712. T-Mobile currently maintains six (6) antennas at the 160-foot level of the existing 162-foot monopole tower. The property is owned by Boardman Kathan, and the tower is owned by SBA. T-Mobile now intends to replace three (3) antennas. The new antennas would be installed at the 160-foot level of the tower. This modification includes B2, B5 hardware that is both 4G (LTE), and 5G capable. Antenna mount modifications will be completed per the attached TES Mount Analysis dated May 25, 2022.

Remove:

(1) Fiber Line – 1-5/8”

Remove and Replace:

(3) COMMSCOPE LNX-6515DS-A1M Antennas (REMOVE) - (3) RFS APXVAALL24_43-U-NA20 Antennas (REPLACE)
(3) ERICSSON RRUS-11 B12 (REMOVE) - (3) ERICSSON 4480 B71+B85 RRU (REPLACE)

Install New:

(1) Hybrid Line – 1.9”

Existing to Remain:

(3) ERICSSON AIR21 B2P/B4A Antennas
(3) ERICSSON RRUS-11 B2 RRU
(3) RFS 1A20 TMA's *
(3) RFS 1CWA TMA's *
(11) COAX – 1-5/8” *

*Equipment shown for entitlement purposes only



The facility was approved by the Town of Prospect Planning & Zoning Commission on October 20, 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 Mayor Robert Chatfield and Mary Barton, Land Use Inspector for the Town of Prospect, as well as the property owner and the tower owner.

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

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

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

Sincerely,

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



NSS **NORTHEAST**
SITE SOLUTIONS
Turnkey Wireless Development

Attachments

Cc: Mayor Robert Chatfield

Prospect Town Hall
36 Center Street
Prospect, CT 06712

Mary Barton, Land Use Inspector
Prospect Town Hall
36 Center Street
Prospect, CT 06712

Boardman Kathan – Property Owner
229 Cheshire Road
Prospect, CT 06712

SBA - Tower Owner

Exhibit A

Original Facility Approval



PROSPECT PLANNING & ZONING COMMISSION

36 CENTER STREET
PROSPECT, CONNECTICUT 06712-1699

NOTICE OF APPROVAL

SITE # 1025-036

FILE TYPE _____

SECTION Zoning

Property Owner: Boardman W. Kathan
Property Location: 229 Cheshire Road
Date of Approval: October 20, 1999
Date of Notice: October 22, 1999

RESOLVED TO APPROVE, request for Special Permit under Section 300 for a Telecommunications Monopole and supporting equipment within a 100' x 100' parcel of land on property located at **229 Cheshire Road** in a residential zone and accessed from Cheshire Road. Owner: Boardman W. Kathan. Authorized agent: Sprint Spectrum L.P., 9 Barnes Industrial Road, Wallingford, CT 06492

PROVIDED THAT:

1. Construction of the access road and telecommunications facility will conform to drawings and detail sheets submitted by URS Greiner Woodward Clyde, 500 Enterprise Drive, Suite 3B, Rocky Hill, CT 06067, included in plans entitled "Sprint PCS, Site I.D. # CT33XC512, Kathan Parcel, 229 Cheshire Road, Prospect, Connecticut" with the latest revision date of 10/19/99.
2. The applicant will adhere to any and all requirements or conditions described in the permit granted to Boardman W. Kathan by Inland Wetlands on September 27, 1999 to construct an access road and install overhead utilities to this telecommunications monopole and facility.
3. The height of the monopole and accessory antennas will not exceed 150 feet above ground level. The monopole must be located a distance from the property line at least equal to the tower's height. No structure, other than those associated with this installation, shall be placed within the fall radius of the monopole and monopole attachments.
4. Utility connections from the property line to the proposed installation will be above ground.

5. The monopole will meet the design standards of the National Standards Institute and meet all pertinent FCC and OSHA requirements. A Geotechnical Study submitted to URS Greiner Woodward Clyde on the proposed telecommunications tower site dated October 14, 1999 and performed by Dr. Clarence Welti, P.E., P.C. offers acceptable alternate methods for installing the building and pole foundation over existing soil and bedrock conditions. The Land Use Office shall be advised as to the method utilized relative to this referenced report.
6. Prior to the initiation of any construction activity all erosion and sedimentation control measures shall be properly installed and fully functioning, and said measures shall be maintained in effective condition throughout the construction process.
7. The site supervisor and/or Project Manager shall ensure that no additional water runoff or increased water velocity will flow into the abutting Town of Prospect's Public Works property as a result of proposed roadway and drainage improvements, utility or facility installations. The Assistant Director of Public Works for Prospect is to be contacted by the Project Manager prior to initial construction and it is required that URS Greiner Woodward Clyde will accommodate any reasonable request or suggestion by the Town of Prospect to help prevent or divert increased water runoff from entering onto Town property.
8. It is advised that a gate and/or other means be installed at the beginning of the access road to restrict or alert incoming traffic to the presence of on site vehicles and thus prevent the situation where one or more vehicles must drive off the access road to allow other traffic to pass by. Town officials must have a means to access the property in the event of an emergency.
9. No public or private thoroughfare or driveway is to be blocked during any phase of this project by construction equipment or vehicles.
10. On-site storage of fuel or chemicals for any reason is prohibited.
11. All future tenant occupants must apply for and receive a Zoning Permit from the Land Use Inspector prior to their installation of equipment cabinets and antennas. Installation plans must also be submitted to Prospect's Building Official for approval.
12. The above-listed agent will be responsible for, and ensure his facility and his tenants comply with all FCC standards and guidelines for wireless facilities. Upon termination of the lease, or should the agent abandon use of the facility, Sprint Spectrum, L.P. as agent, shall remove all apparatus and aboveground structures from the site and restore the leased space to its original condition.
13. A performance bond in an amount to be determined by staff and in such form acceptable to the Town Attorney shall be posted with the Town of Prospect. The bond shall not be released until sufficient time (normally one year after completion) has elapsed to assure that all site stabilization and restoration requirements have been met.

14. **Reasons:** In granting the above Special Permit, the Planning & Zoning Commission of the Town of Prospect wishes to state upon its records that in the Commission's judgement, the subject project complies with Prospect's zoning regulations, provides an acceptable facility for wireless communications providers to utilize and will not exert a detrimental effect on the development of the area nor on the value of nearby properties.

Edward Miller (W)

Edward Miller

Edward Miller, Chairman
Planning & Zoning Commission

Exhibit B

Property Card

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2020.



www.townofprospect.org

Information on the Property Records for the Municipality of Prospect was last updated on 1/22/2022.



Parcel Information

Location:	229 CHESHIRE RD	Property Use:	Residential	Primary Use:	Residential
Unique ID:	K0150100	Map Block Lot:	118 33 229	Acres:	64.76
490 Acres:	63.84	Zone:	RA-1	Volume / Page:	0070/0767
Developers Map / Lot:		Census:	3471		

Value Information

	Appraised Value	Assessed Value
Land	231,084	85,340
Buildings	180,605	126,420
Detached Outbuildings	311,383	217,970

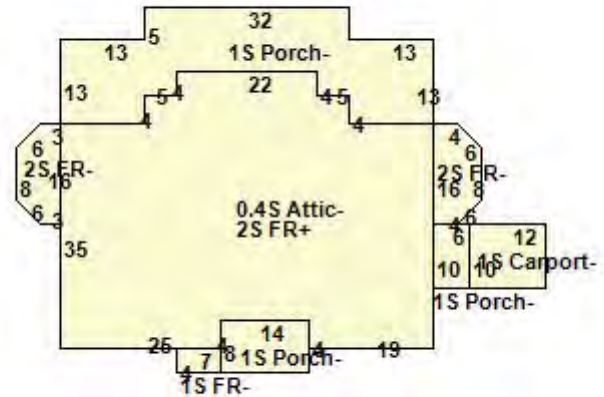
	Appraised Value	Assessed Value
Total	723,072	429,730

Owner's Information

Owner's Data

KATHAN BOARDMAN W
 229 CHESHIRE RD
 PROSPECT, CT 06712

Building 1



Building Use:	Single Family	Style:	Colonial	Living Area:	4,824
Stories:	2.00	Construction:	Wood Frame	Year Built:	1906
Total Rooms:	12	Bedrooms:	4	Full Baths:	2
Half Baths:	2	Fireplaces:	0	Heating:	Hot Water
Fuel:	Oil	Cooling Percent:	0	Basement Area:	2,190
Basement Finished Area:	0	Basement Garages:	0	Roof Material:	
Siding:	Wood Shingles	Units:	w/ Accessory Apt		

Special Features

Fireplace	2
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Attached Components

Type:	Year Built:	Area:
Unfinished Attic	1906	876
Frame Carport	1906	120
Open Porch	1906	112
Open Porch	1906	60

Detached Outbuildings

Type:	Year Built:	Length:	Width:	Area:
Frame Garage	1907	0.00	0.00	315
Frame Garage	1907	0.00	0.00	1,152
Cell Tower	1990	0.00	0.00	1

Building Permits

Permit Number	Permit Type	Date Opened	Reason
7589	Commercial	06/09/2016	REINFORCING TOWER TO BASE
7570	Commercial	05/18/2016	INSTALL 6 NEWER CELL ANTENNAS REMOVE 3 OLD ONES
6869	Electrical	07/19/2013	REPLACE 6 EXISTING CELL ANNTENNAS WITH 3 NEWER TECH ANTENNAE & EQUIP
6844	Electrical	06/19/2013	REINFORCEMENT OF EXISTING COMMUNICATION TOWER
6678	Residential	09/25/2012	REMOVE /REPLACE (6) ANTENNAS WITH 6 NEW ADD'L EQUIP EXSTNG SHEIT
6051		03/12/2010	REMOVE 10 ANTENNAE REPLACE WITH;10 ANTENNAE;

Permit Number	Permit Type	Date Opened	Reason
4847		04/05/2005	INSTALLATION OF VERIZON WIRELESS 12X20 COMMUNICATIONS EQUIP SHELTER & ANTENNAS AT EXIST COMM FAC.;C
4847		04/05/2005	INSTALLATION OF VERIZON WIRELESS 12X20 COMMUNICATIONS EQUIP SHELTER & ANTENNAS AT EXIST COMM FAC.;
3776		10/09/1999	CONSTRUCTED A 150' TELECOMMUNICATION TOWER; 1 ACRE PRICED AS INCOME INTENSIVE WITH TOWER. 150000 ADD

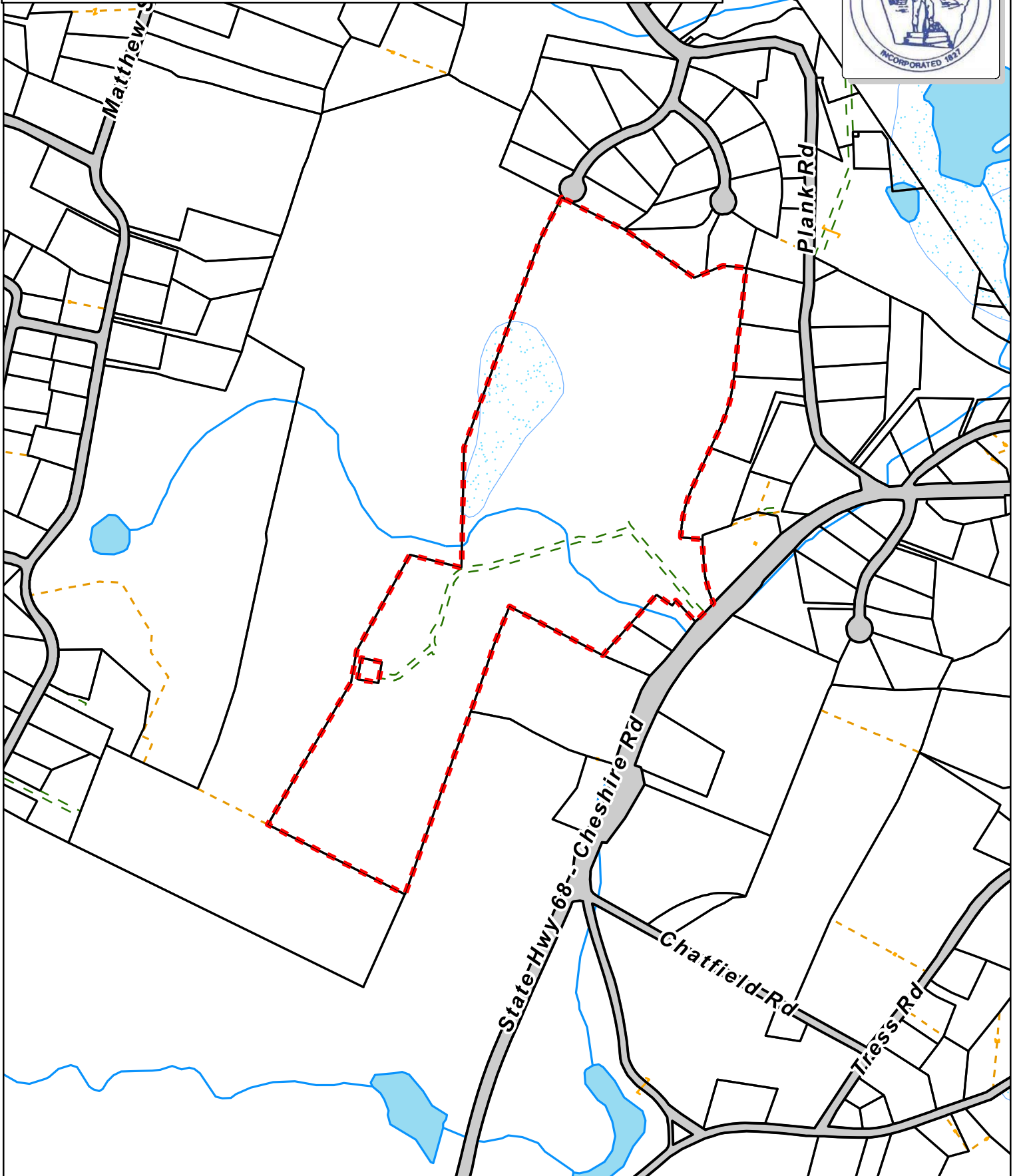
Information Published With Permission From The Assessor

Town of Prospect, Connecticut - Assessment Parcel Map

Unique ID: K0150100

Address: 229 CHESHIRE RD

MBL: 118-33-229



Approximate Scale:

1 inch = 800 feet

Disclaimer:

This map is for informational purposes only.
All information is subject to verification by any user.
The Town of Prospect and its mapping contractors
assume no legal responsibility for the information contained herein.

Map Produced
August 2021

Exhibit C

Construction Drawings

CTNH303/SBA PROSPECT ET

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).

APPROVALS

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

229 CHESHIRE ROAD
PROSPECT, CT 06712
NEW HAVEN COUNTY

SCOPE OF WORK

- REMOVE:
- 3 ANTENNAS
 - 3 RRUS
- INSTALL:
- 3 ANTENNAS
 - 3 RRUs
 - 1 HYBRID CABLES

SITE NO.: CTNH303A

SITE TYPE: 160'± MONOPOLE

RF DESIGN GUIDELINE: 67E05A

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 TECHNICIAN SITE SAFETY NOTES

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

GENERAL NOTES

- 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.
- 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.
- THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE ON-SITE 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
- 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.
- THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
- 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 UNLESS IT IS RESOLVED BY THE LESSEE/LICENSEE REPRESENTATIVE.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
- ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK.

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



VICINITY MAP

SCALE: 1" = 1000'-0"



DIRECTIONS

MERGE ONTO I-495 NORTH TOWARD MANSFIELD/MARLBORO. TAKE EXIT 3 TAKE EXIT 58 TOWARD I-90 W. KEEP LEFT AT THE FORK, FOLLOW SIGNS FOR I-90 W/SPRINGFIELD/ALBANY AND MERGE ONTO I-90 W TAKE EXIT 78 TOWARD I-84. CONTINUE ONTO I-84. TAKE EXIT 26 FOR CT-70 TOWARD CHESHIRE/PROSPECT. CONTINUE ON CT-70 E. DRIVE TO CT-68 W IN PROSPECT. TURN LEFT ONTO CT-70 E/STATE HWY 801. CONTINUE TO FOLLOW CT-70 E. TURN RIGHT ONTO CT-68 W. DESTINATION WILL BE ON THE RIGHT.

SHEET INDEX

SHT. NO.	DESCRIPTION	VER.
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A-2	TOWER ELEVATIONS & ANTENNA PLAN	1
A-3	SITE DETAILS, 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:	CTNH303A
SITE NAME:	CTNH303/SBA PROSPECT ET
SBA SITE NUMBER:	CT02694-B
SBA SITE NAME:	E-PROSPECT
SITE ADDRESS:	229 CHESHIRE ROAD PROSPECT, CT 06712
PROPERTY OWNER:	BOARDMAN W. KATHAN 229 CHESHIRE ROAD PROSPECT, CT 06712
TOWER OWNER:	SBA TOWERS, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	NEW HAVEN
ZONING DISTRICT:	RA-1 RESIDENTIAL
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	160'±
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: 41.507922° N41°30'28.52" LONGITUDE: -72.951008° W72°57'03.63"

SPECIAL ZONING NOTE:

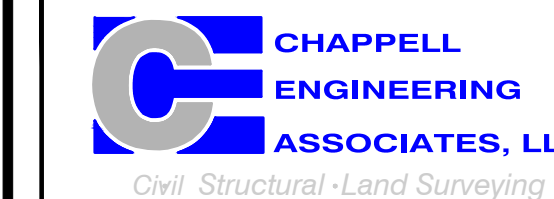
BASED ON INFORMATION PROVIDED BY T-MOBILE REGULATORY COMPLIANCE PROFESSIONALS AND LEGAL COUNSEL, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS CONSIDERED AN ELIGIBLE FACILITY UNDER THE MIDDLE CLASS TAX RELIEF AND JOB CREATION ACT OF 2012, 47 USC 1455(A), SECTION 6409(A), AND IS SUBJECT TO AN ELIGIBLE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

T-MOBILE NORTHEAST LLC

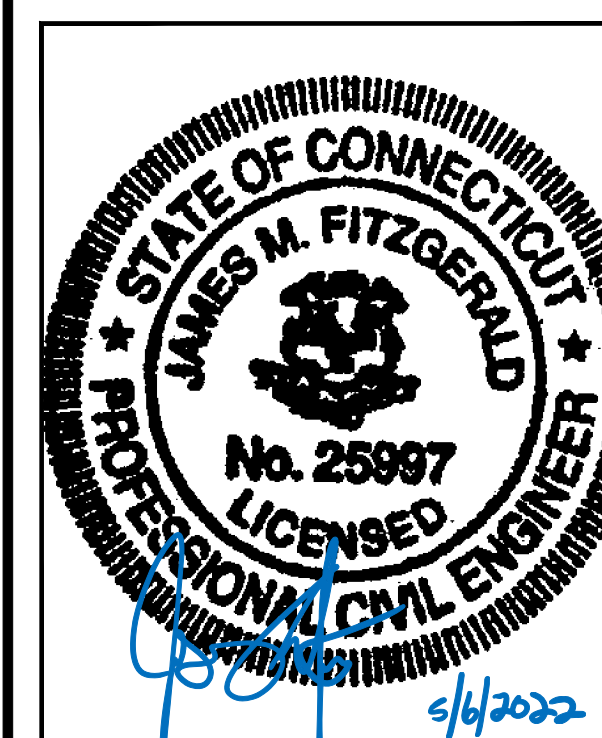
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700



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



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	05/06/22	ISSUED FOR CONSTRUCTION	JRV
0	04/18/22	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CTNH303A

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712

SHEET TITLE

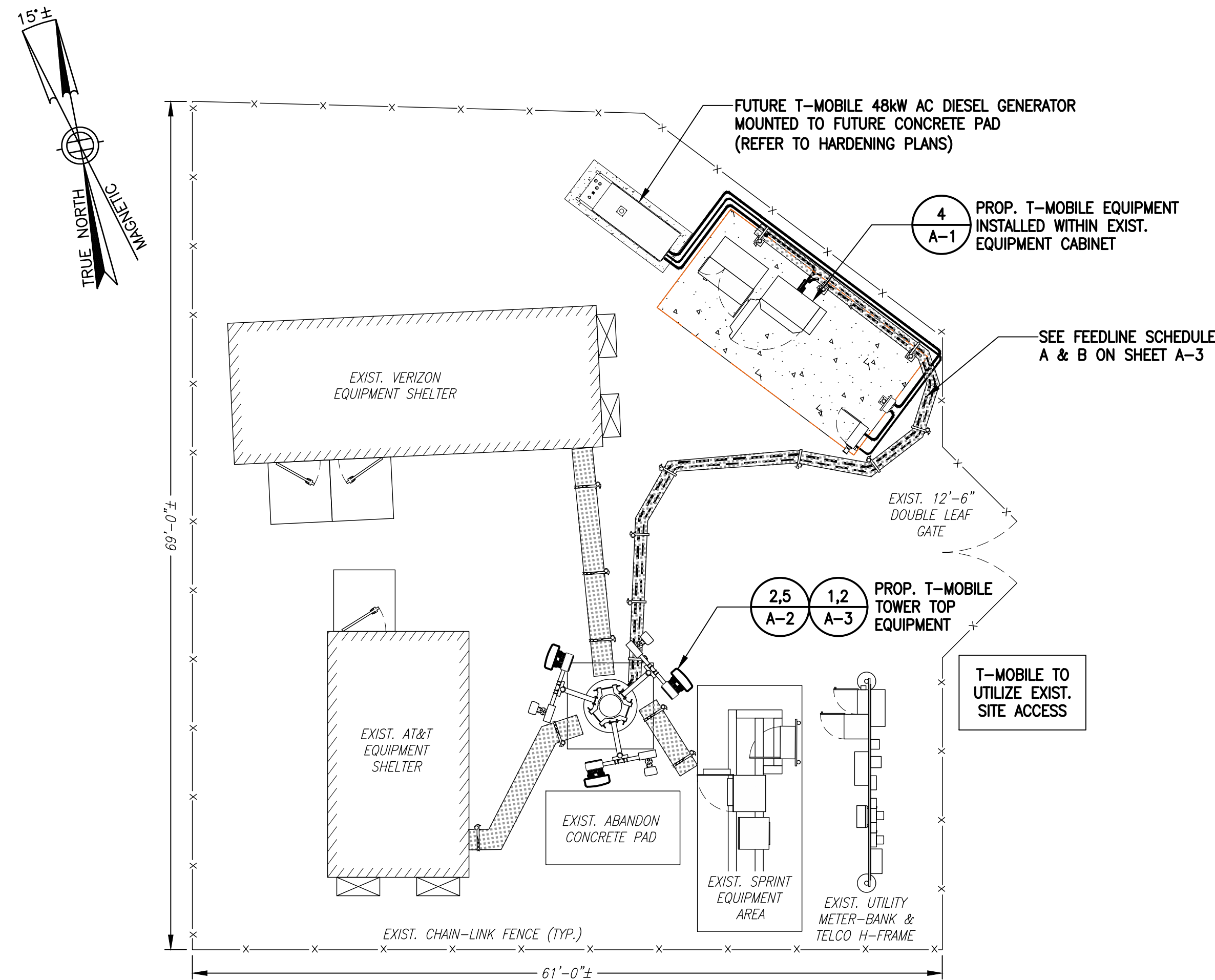
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SHEET NUMBER

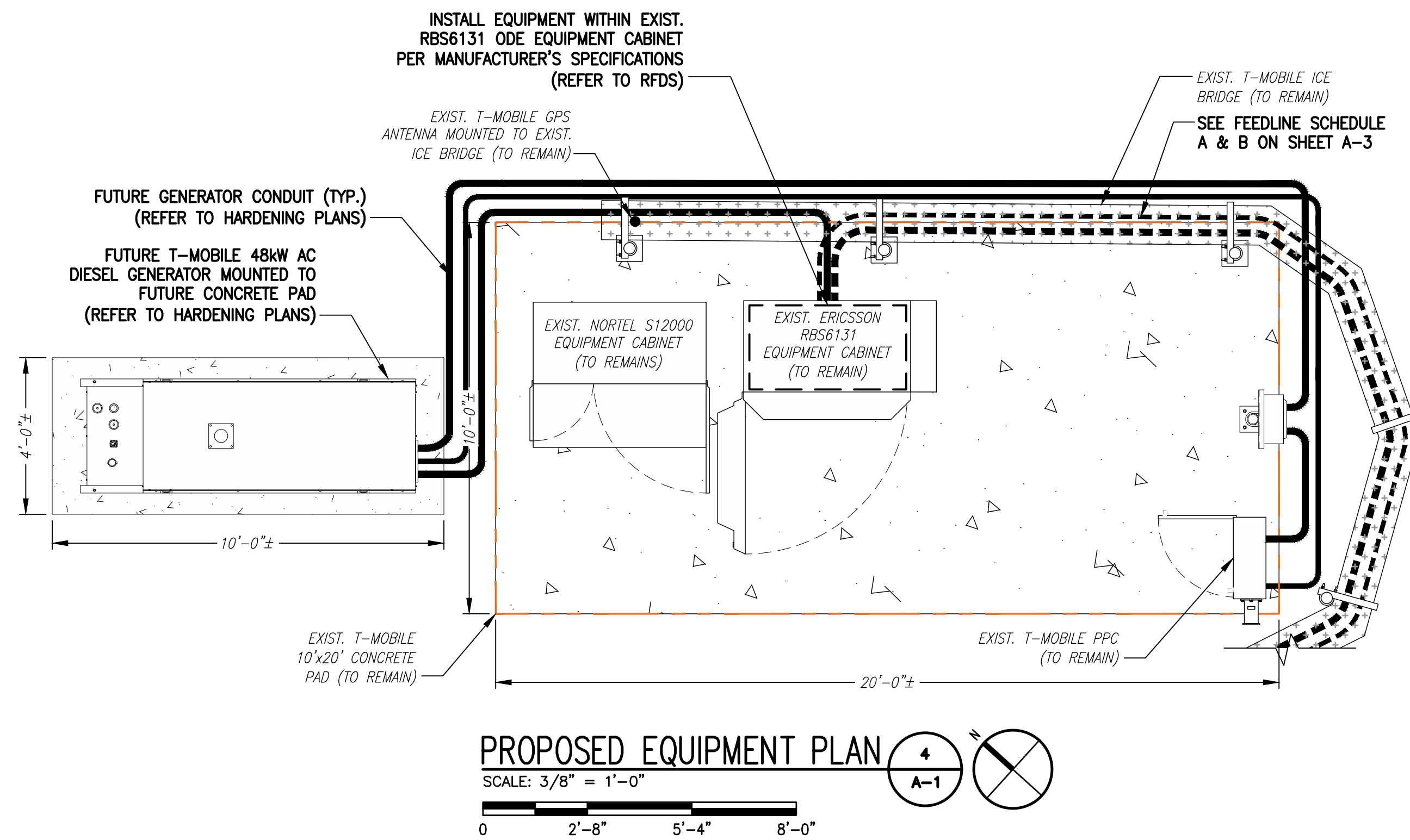
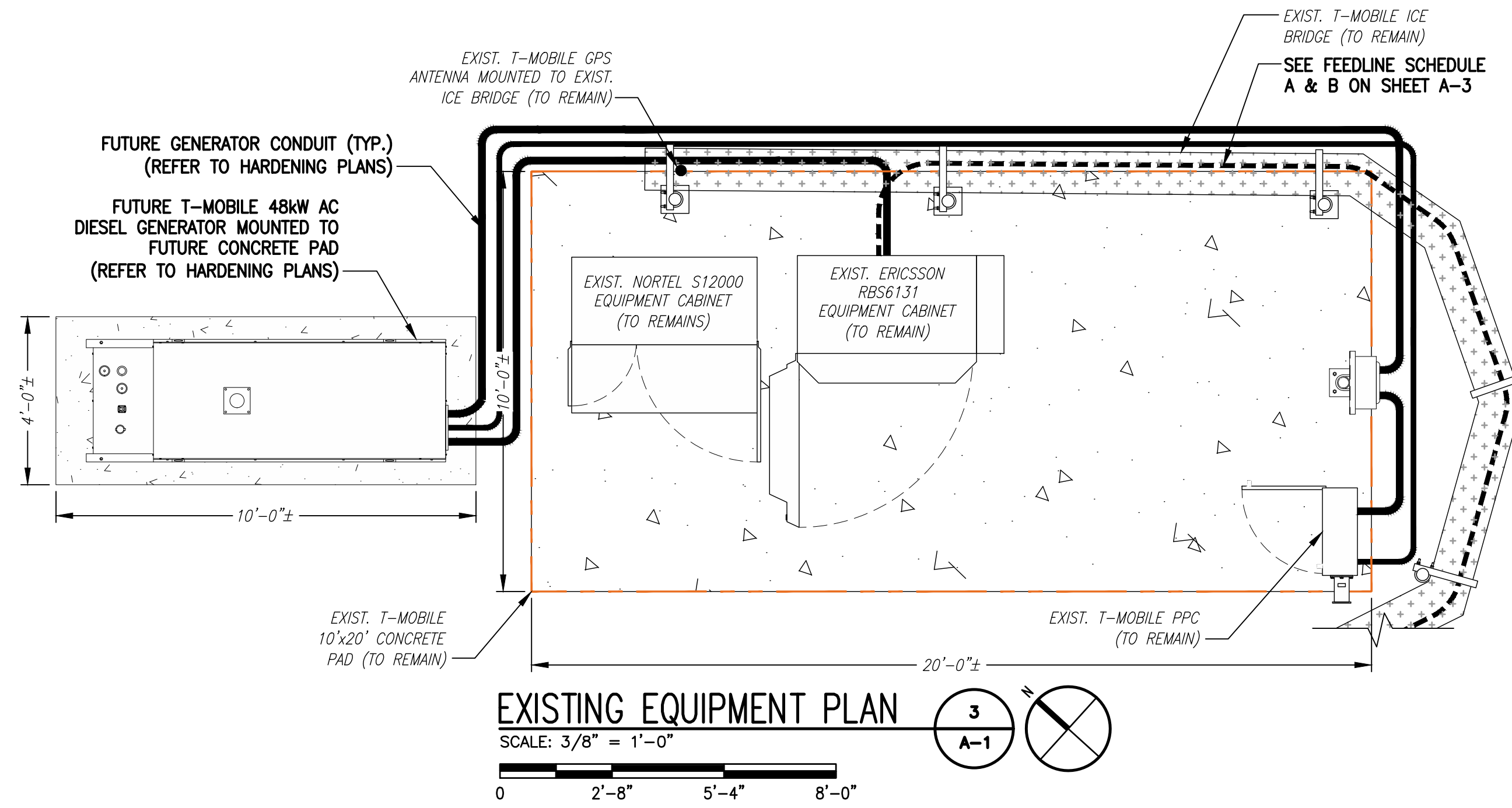
T-1

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
 SCALE: N.T.S.
 2 A-1

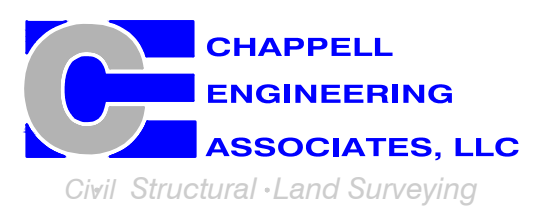


**T-MOBILE
 NORTHEAST LLC**

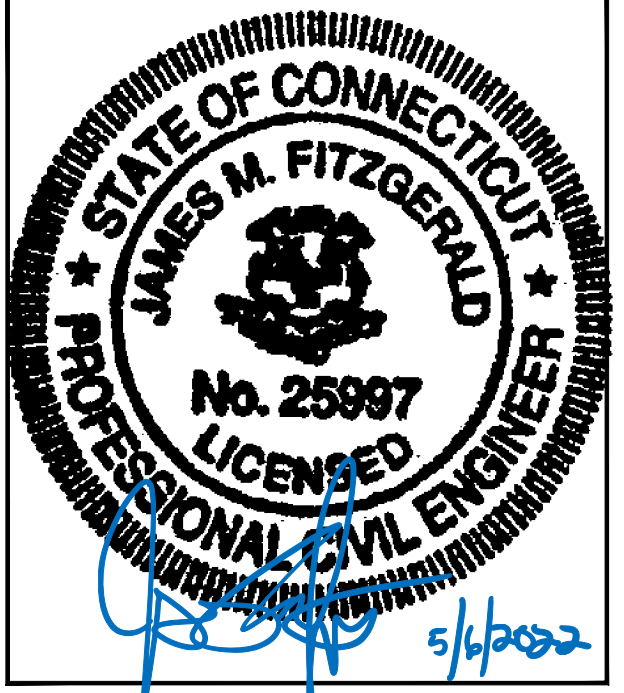
15 COMMERCE WAY, SUITE B
 NORTON, MA 02766
 (508) 286-2700



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	05/06/22	ISSUED FOR CONSTRUCTION	JRV
0	04/18/22	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CTNH303A

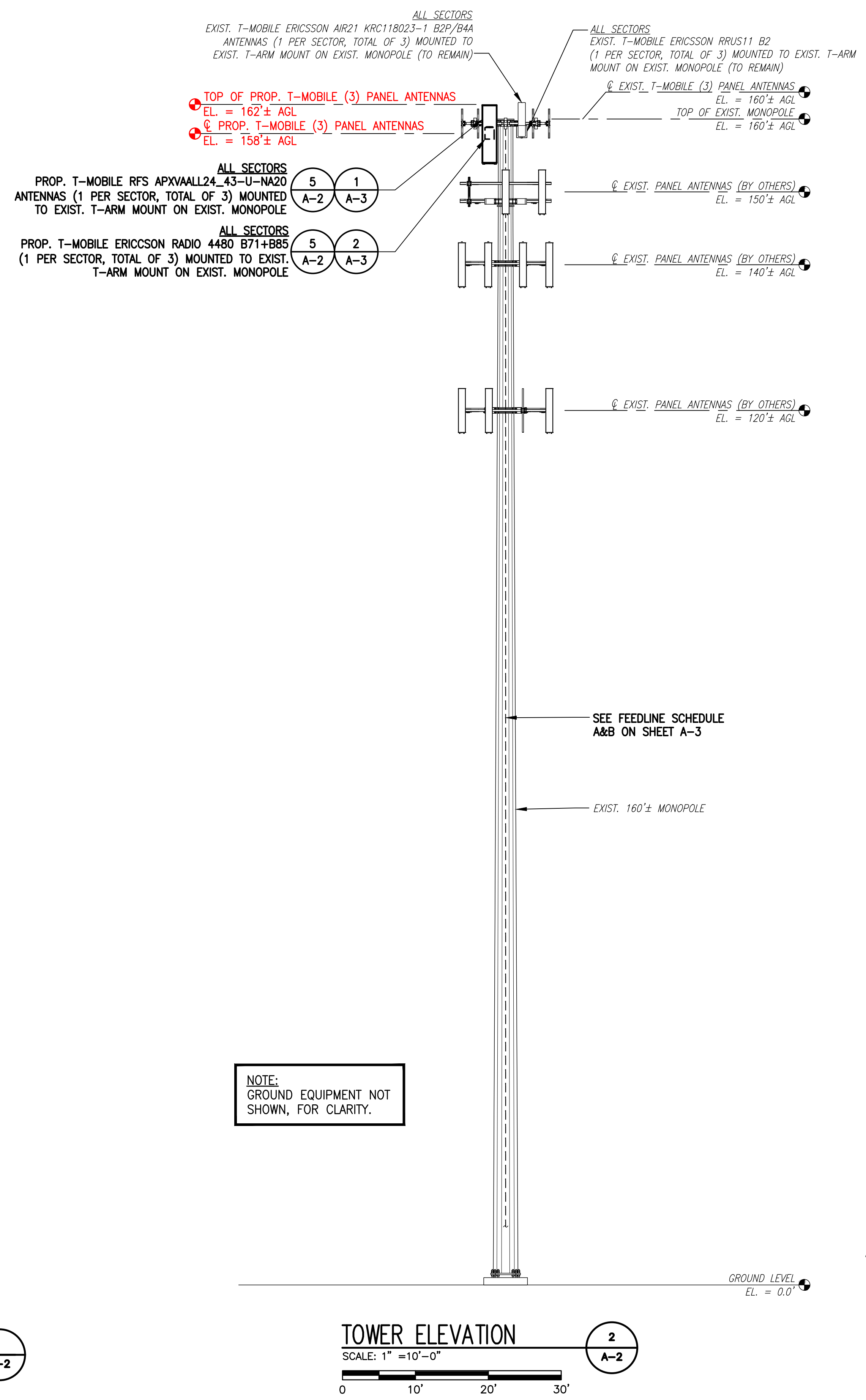
SITE ADDRESS:
 229 CHESHIRE ROAD
 PROSPECT, CT 06712

SHEET TITLE
**COMPOUND &
 EQUIPMENT PLANS**

SHEET NUMBER
A-1



EXISTING TOWER PHOTO
N.T.S. 1
A-2



NOTE:
GROUND EQUIPMENT NOT SHOWN, FOR CLARITY.

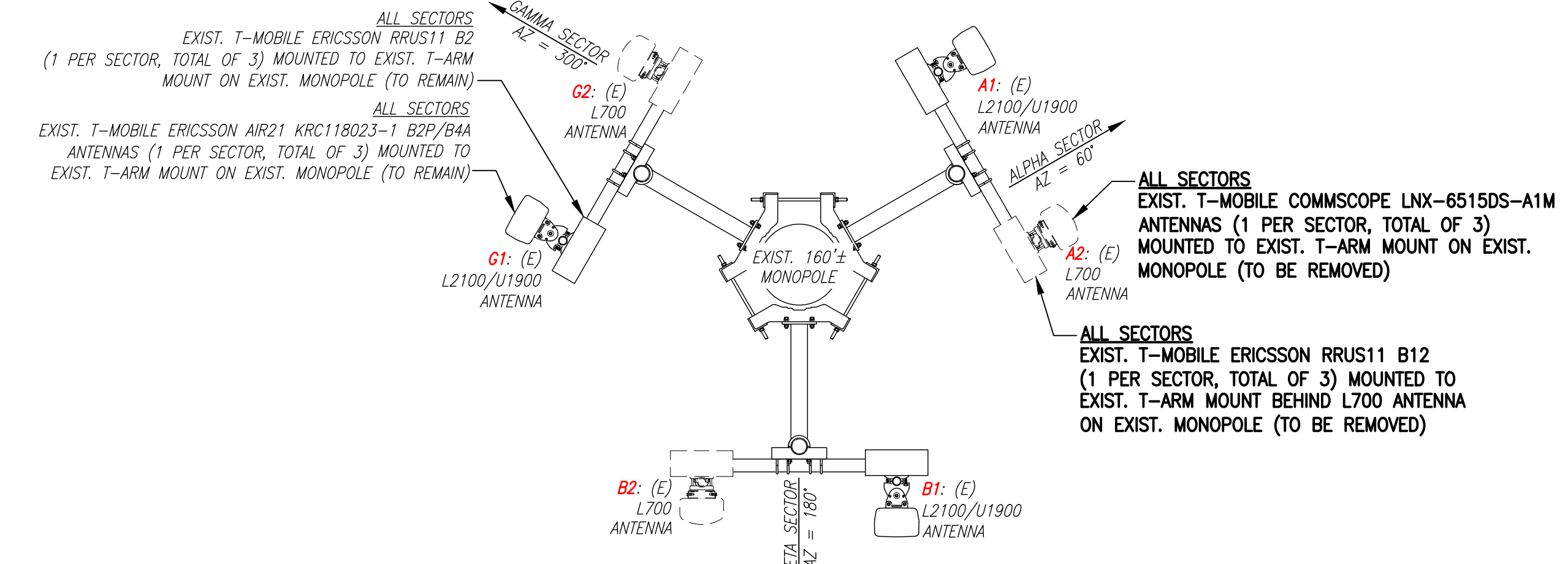
SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY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

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

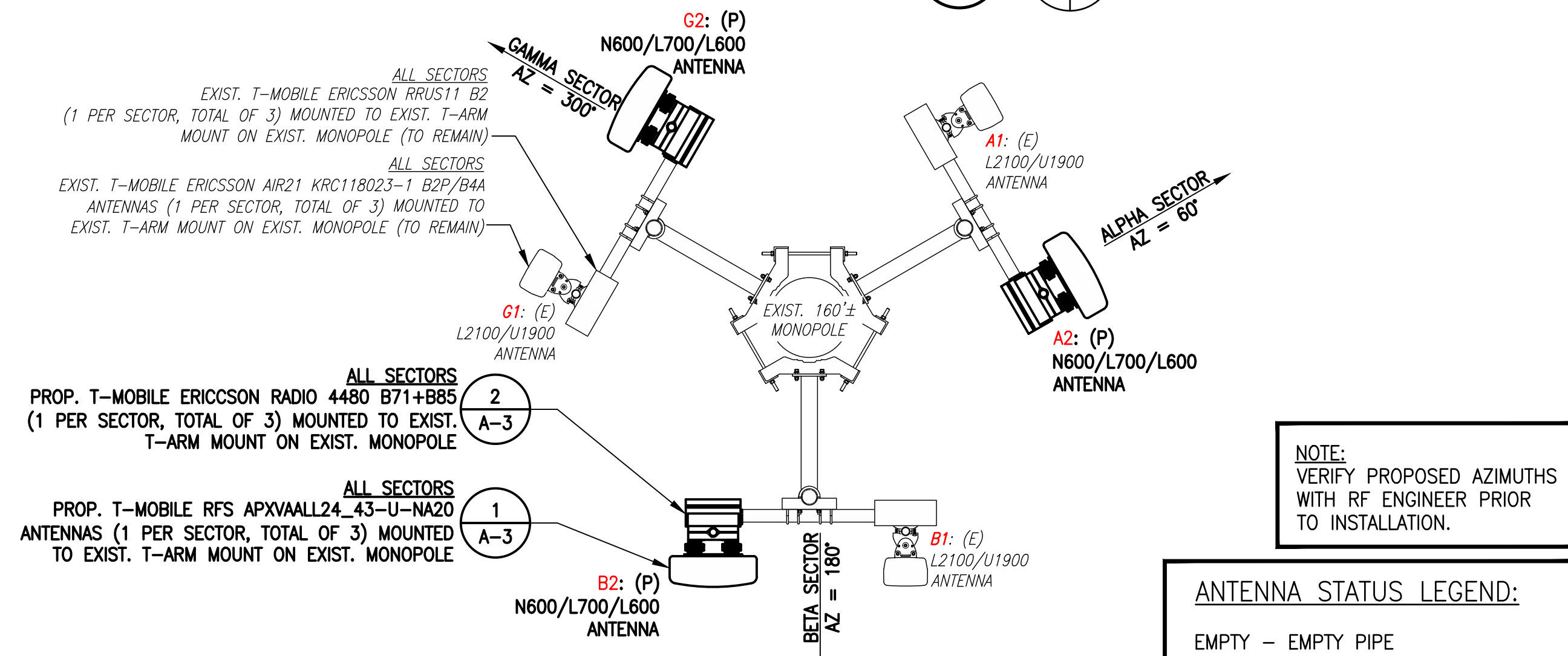
SPECIAL CONSTRUCTION NOTE:
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL T-ARM MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT T-MOBILE'S RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED T-ARM MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED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



EXISTING ANTENNA PHOTO
N.T.S. 3
A-2



EXISTING ANTENNA PLAN
SCALE: 1/2" = 1'-0"
4
A-2



PROPOSED ANTENNA PLAN
SCALE: 1/2" = 1'-0"
5
A-2

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

ANTENNA STATUS LEGEND:

EMPTY - EMPTY PIPE

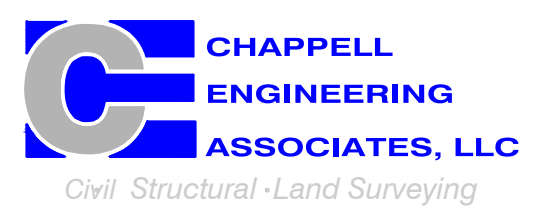
(E) - EXISTING
(P) - INSTALL
(F) - FUTURE

**T-MOBILE
NORTHEAST LLC**

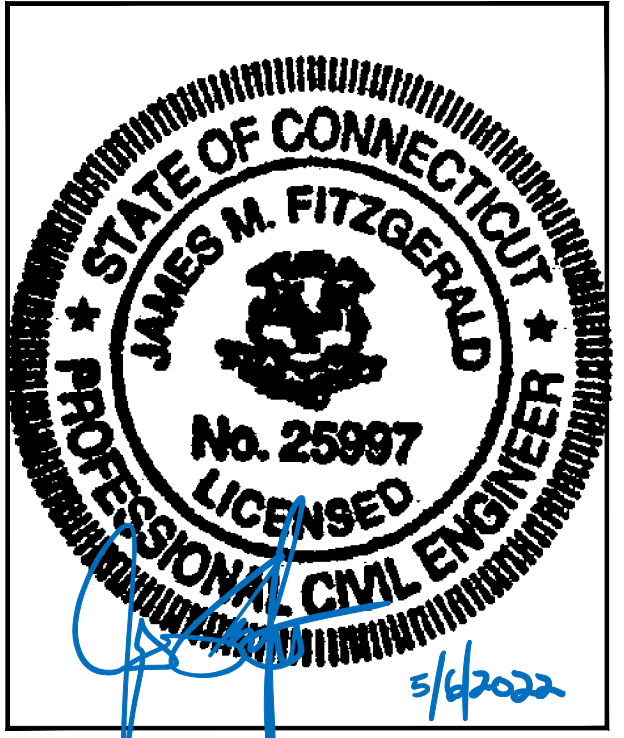
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700



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	05/06/22	ISSUED FOR CONSTRUCTION	JRV
0	04/18/22	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CTNH303A

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712

SHEET TITLE

TOWER ELEVATIONS &
ANTENNA PLANS

SHEET NUMBER

A-2

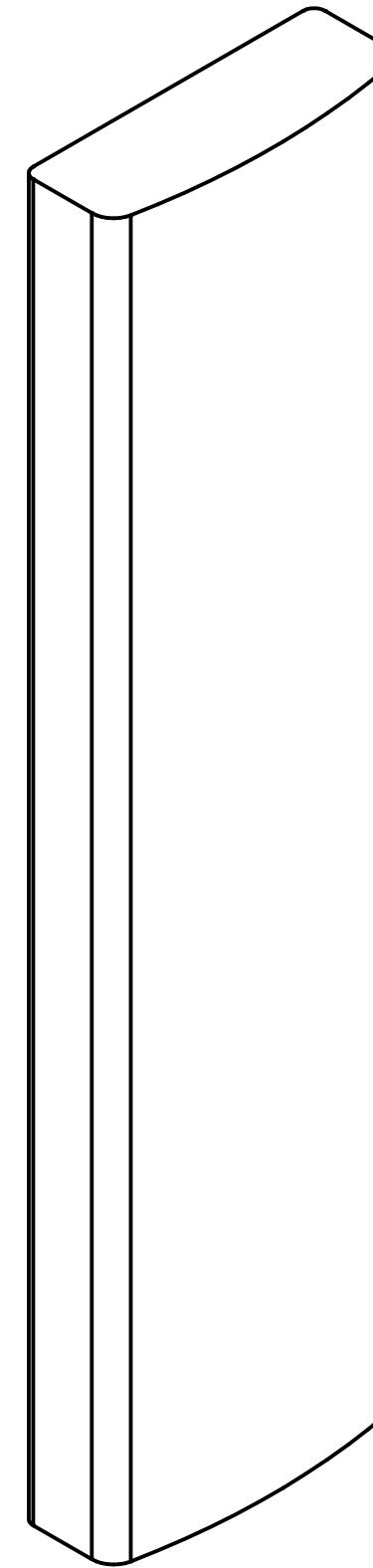
FINAL ANTENNA CONFIGURATION								
SECTOR	ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	SIGNAL CABLES
ALPHA	A1 ERICSSON AIR21 KRC118023-1 B2P/B4A	160'± AGL	60°	0°	4°	L2100/U1900	RRUS11 B12	(1) 1-3/8" (9x18) HCS FIBER CABLE (1) 2" (6x24) HCS FIBER CABLE
	A2 RFS APXVAALL24_43-U-NA20	158'± AGL	60°	0°	4°	L700/L600/N600	RADIO 4480 B71+B85	
BETA	B1 ERICSSON AIR21 KRC118023-1 B2P/B4A	160'± AGL	180°	0°	4°	L2100/U1900	RRUS11 B12	
	B2 RFS APXVAALL24_43-U-NA20	158'± AGL	180°	0°	4°	L700/L600/N600	RADIO 4480 B71+B85	
GAMMA	G1 ERICSSON AIR21 KRC118023-1 B2P/B4A	160'± AGL	300°	0°	4°	L2100/U1900	RRUS11 B12	
	G2 RFS APXVAALL24_43-U-NA20	158'± AGL	300°	0°	4°	L700/L600/N600	RADIO 4480 B71+B85	

CABLE NOTE: SEE FEEDLINE SCHEDULE A & B BELOW.

NOTE: RFDS REV5 - 03/09/22

FEEDLINE SCHEDULE		
SCHEDULE	FEEDLINES	LOCATION
A	EXISTING TO REMAIN: (1) 1/2" COAX CABLE FOR GPS ANTENNA (1) 1-3/8" (9x18) HCS FIBER CABLE EXISTING TO BE REMOVED: NONE	ROUTED PER STRUCTURAL ANALYSIS
B	PROPOSED: (1) 2" (6x24) HCS FIBER CABLE	

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



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

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



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

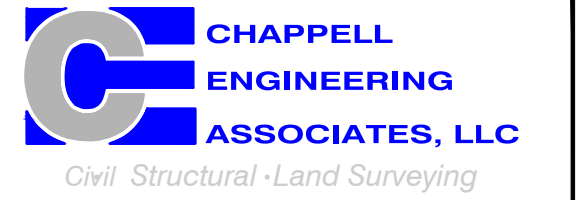
RADIO DETAILS 2
 SCALE: N.T.S. A-3

**T-MOBILE
NORTHEAST LLC**

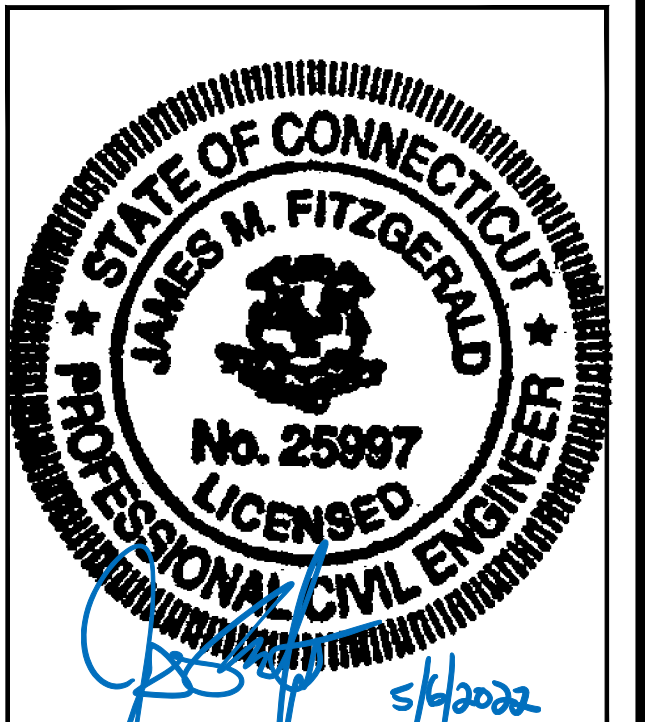
15 COMMERCE WAY, SUITE B
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SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	05/06/22	ISSUED FOR CONSTRUCTION	JRV
0	04/18/22	ISSUED FOR REVIEW	JRV

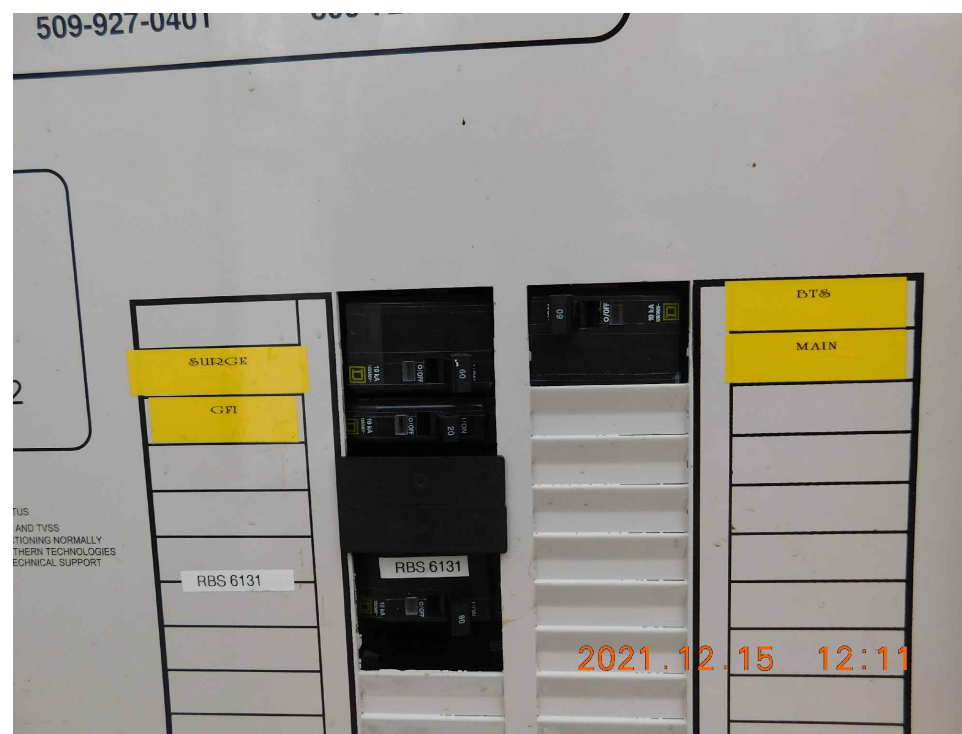
SITE NUMBER:
CTNH303A

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712

SHEET TITLE
**SITE DETAILS, ANTENNA
& FEEDLINE CHARTS**

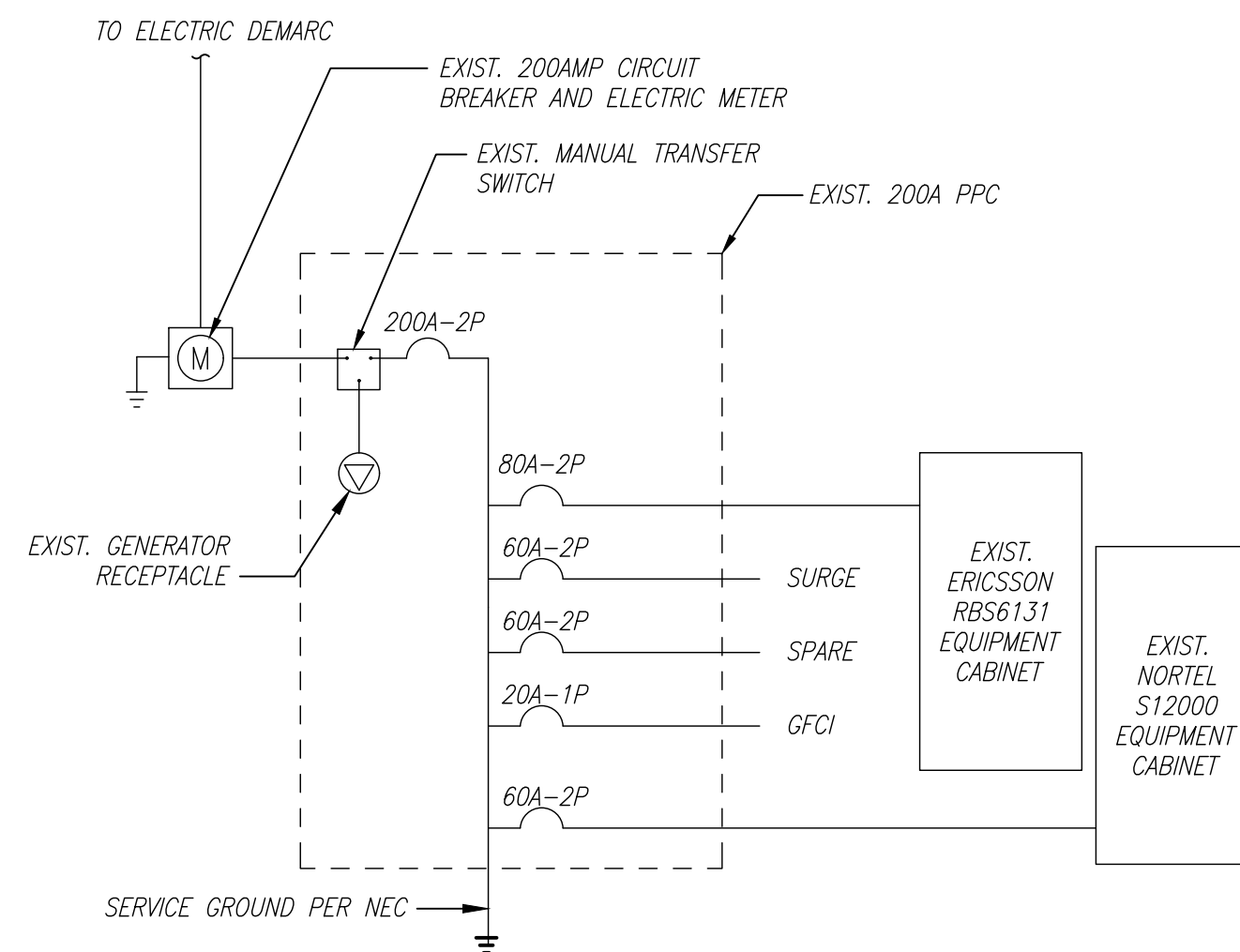
SHEET NUMBER

A-3



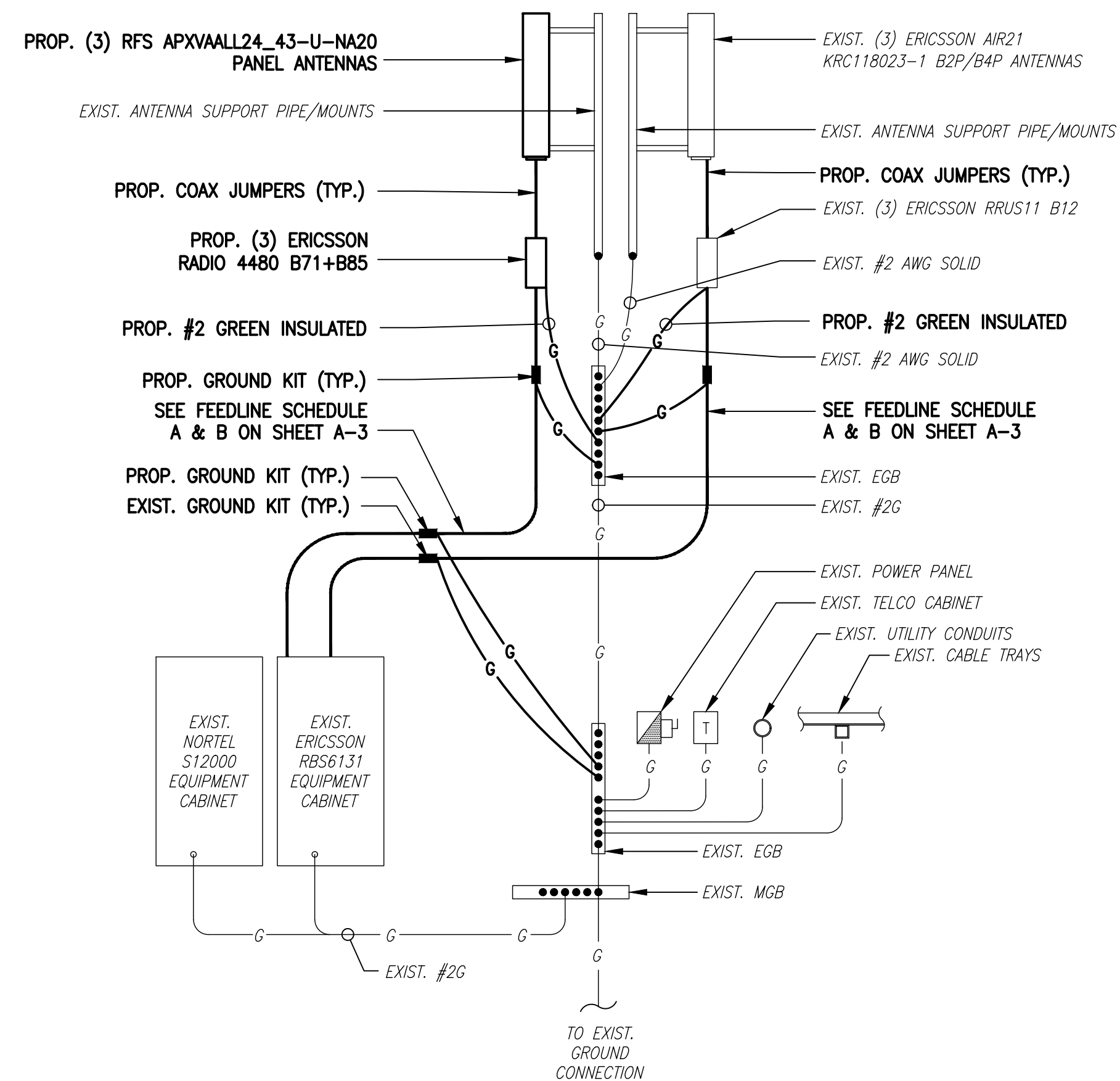
EXISTING POWER PANEL PHOTOS
SCALE: NOT TO SCALE

1
E-1



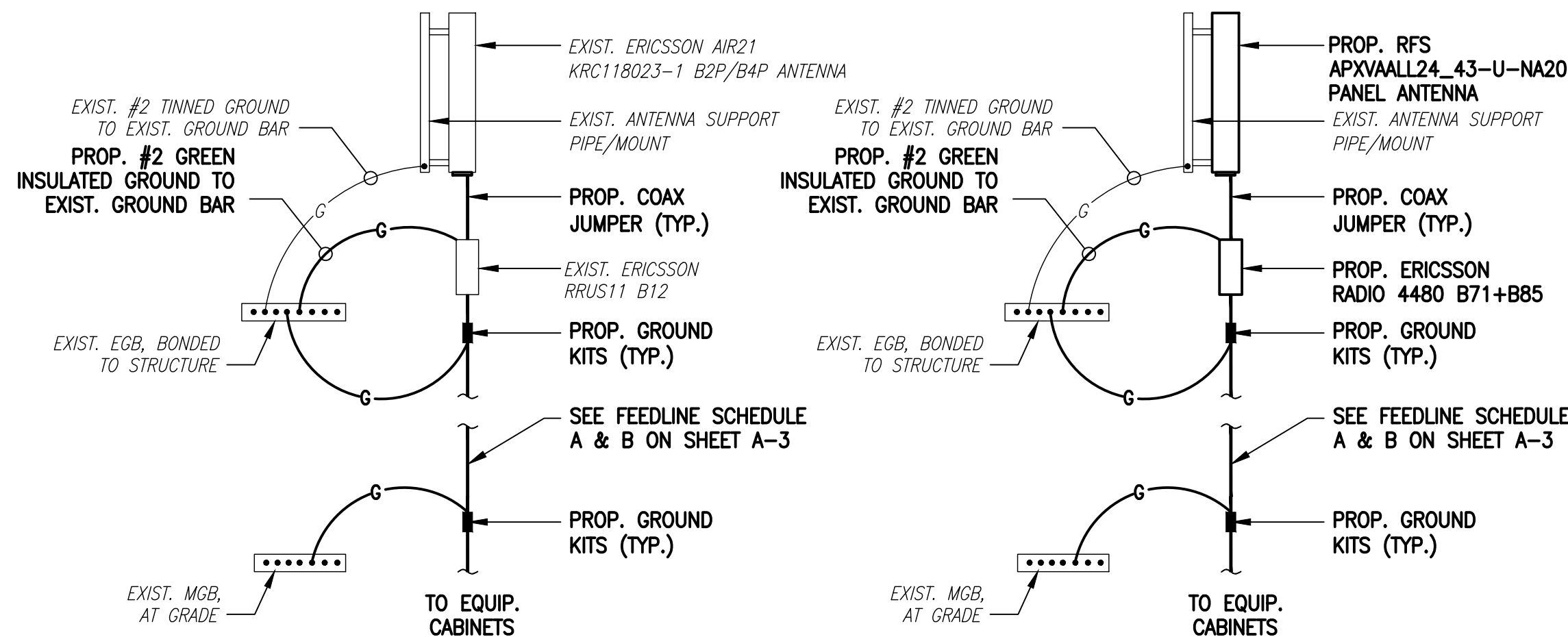
ONE LINE DIAGRAM
SCALE: NOT TO SCALE

2
E-1



GROUNDING RISER DIAGRAM
SCALE: NOT TO SCALE

3
E-1

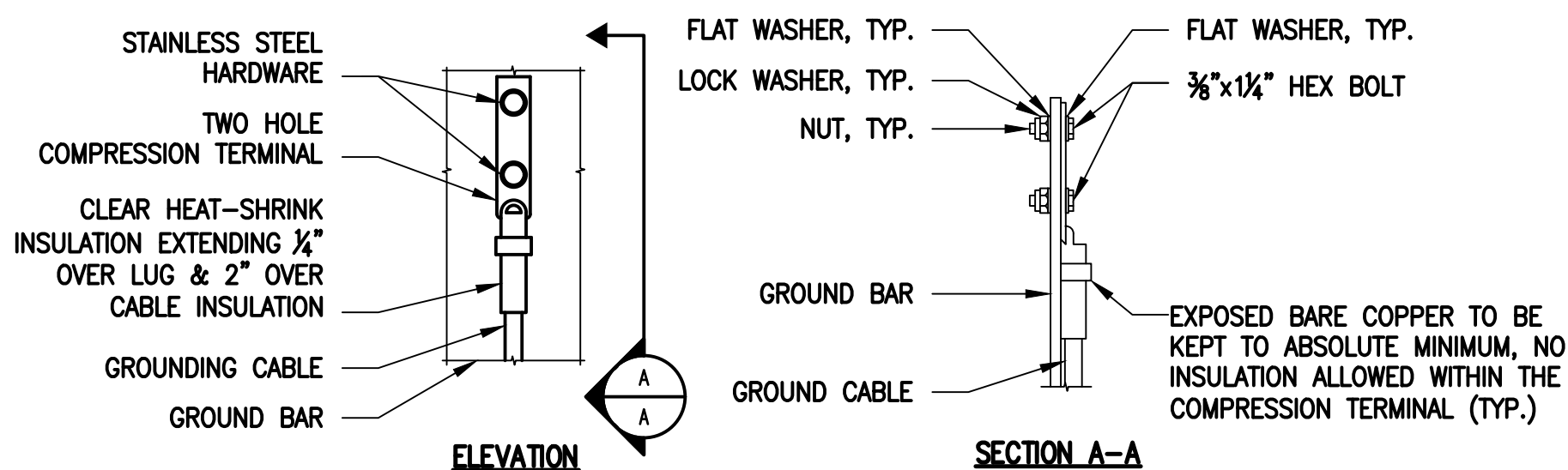


L2100/U1900 ANTENNA **L700/L600/N600 ANTENNA**

COAX CABLE CONNECTION AND GROUNDING DETAIL

SCALE: NOT TO SCALE

4
E-1



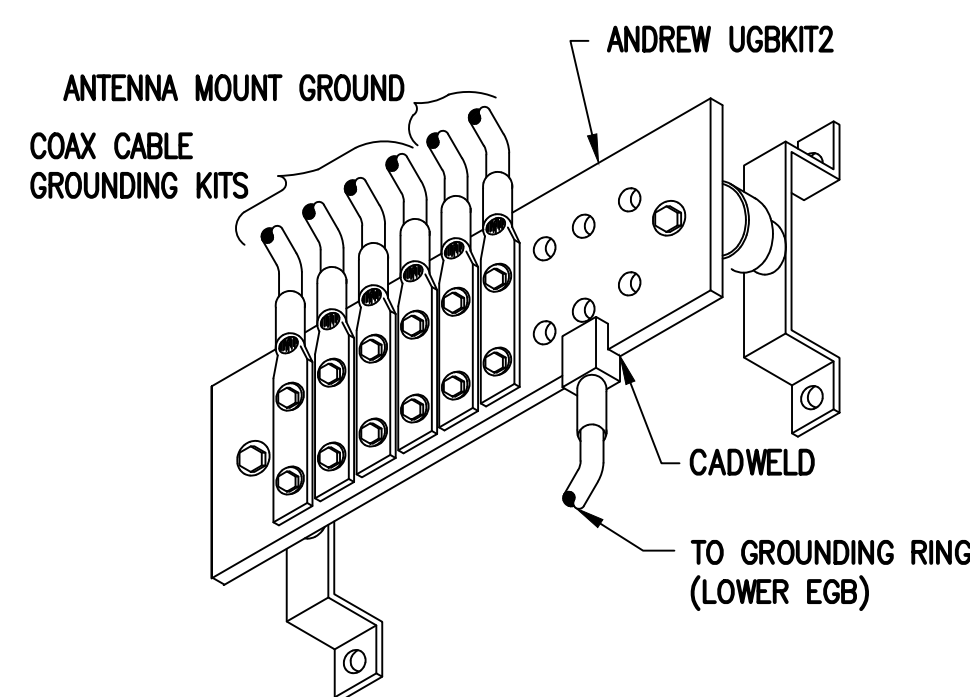
NOTES:

- "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.

TYPICAL GROUND BAR CONNECTIONS DETAIL

SCALE: NOT TO SCALE

5
E-1



GROUND BAR (EGB)

SCALE: NOT TO SCALE

6
E-1

ELECTRICAL AND GROUNDING NOTES

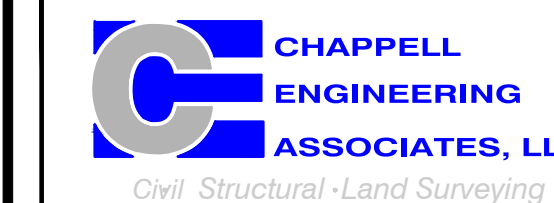
- ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
- ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
- THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED 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 BITS 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 BITS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BITS 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 BITS 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 DRAWINGS.
- ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
- 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

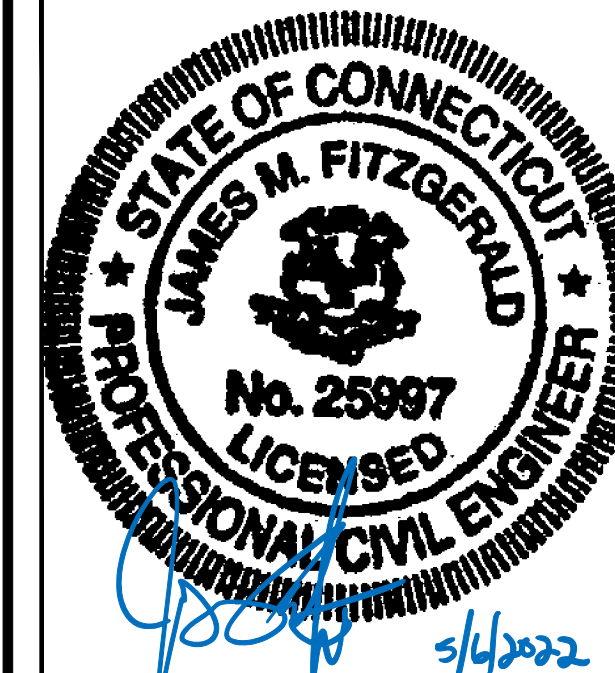
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CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	05/06/22	ISSUED FOR CONSTRUCTION	JRV
0	04/18/22	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CTNH303A

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712

SHEET TITLE
ELECTRIC & GROUNDING DETAILS

SHEET NUMBER

E-1

Exhibit D

Structural Analysis Report



Tower Engineering Solutions

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

Structural Analysis Report

Existing 162 ft Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT02694-B

Customer Site Name: E-Prospect

Carrier Name: T-Mobile (App#: 194486-2)

Carrier Site ID / Name: CTNH303A / CTNH303/SBA Prospect_ET

Site Location: 229 Cheshire Road

Prospect, Connecticut

New Haven County

Latitude: 41.507881

Longitude: -72.951025

Analysis Result:

Max Structural Usage: 96.6% [Pass]

Max Foundation Usage: 69.0% [Pass]

Additional Usage Caused by New Mount/Mount Modification: +2.9%



Report Prepared By: Kevin Azisllari



Tower Engineering Solutions

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

Structural Analysis Report

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Analysis Result:

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Max Foundation Usage: 69.0% [Pass]

Additional Usage Caused by New Mount/Mount Modification: +2.9%

Report Prepared By: Kevin Azisllari

Introduction

The purpose of this report is to summarize the analysis results on the 162 ft 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	EEL, Job # 5816, dated 10/15/1999
Foundation Drawing	EEL, Job # 5816, dated 10/21/1999
Geotechnical Report	DR. Clarence Welti, P.E, Dated 10/14/1999
Modification Drawings	FDH, Job # 05-09107E, dated 9/30/2005:FDH, Job # 1320001400, dated 6/13/2013 TES, MI, Job # 22620, dated 7/22/2016
Mount Analysis	TES 128141, dated 05/16/2022

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 $V_{ult} = 125.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 97.0$ 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:	$S_5 = 0.186, S_1 = 0.062$

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
-	160.0	3	RFS ATMAA1412D-1A20-TMAs	(3) CommScope MC-HPM1250-B	(12) 1 5/8"* (1) 1 5/8" Fiber*	T-Mobile
-		3	RFS ATMPP1412D-1CWA-TMAs			
-		3	Ericsson Air 21 B4A/B2P - Panel			
-		3	Ericsson S11B12-RRU			
-		3	Ericsson S11 B2-RRU			
-	158.0	3	Commscope LNX-6515DS-VTM - Panel			
7	137.0	6	Commscope JAHH-65B-R3B - Panel	Low Profile Platform +(12) VZWSMART VZWSMART-MSK1 + (3) VZWSMART VZWSMART-PLK3 + (3) VZWSMART VZWSMART-MSK2 +(1) SITE PRO 1 SQCX4-K + (3) 160" LONG, P2.5 STD Pipes + (3) 72" LONG, P2.5 STD Pipes + (1) 36" LONG, P2.0 STD Pipe + (3) 15" LONG, L3x3x1/4 Angles	(2) 1-5/8" hybrid (1) 1/2" Coax (12) 1-5/8" Coax	Verizon
8		3	Samsung MT6407-77A - Panel			
9		3	Samsung B2/B66A RRHBR049			
10		3	Samsung B5/B13 RRHBR04C			
11		1	RFS DB-C1-12C-24AB-0Z			
12		3	Commscope CBC78T-DS-43-2X			
13	117.0	4	Andrew SBNH-1D6565C - Panel	Low Profile Platform	(12) 1 5/8" (1) 3" Innerduct ((2) 3/4" DC (1) 1/2" Fiber, inside of Innerduct)	AT&T
14		6	CCI DTMABP7819VG12A			
15		3	CSS DBC-750			
16		3	Kathrein 800-10121 - Panel			
17		6	Kathrein 860 10025 RET			
18		2	KMW AM-X-CD-16-6500T - Panel			
19		3	Powerwave LGP 13519			
20	114.5	6	Ericsson RRUS 11 RRU			
21		3	Raycap DC6-48-60-18-8F			

*Lines outside of the pole

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

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	160.0	3	RFS ATMPP1412D-1CWA - TMA	(3) CommScope MC-HPM1250-B w/mods	(11) 1 5/8"* (1) 1.9" Fiber*	T-Mobile
2		3	RFS ATMAA1412D-1A20 TMA			
3		3	Ericsson 4480 B71 + B85 - RRU			
4		3	Ericsson S11 B2 - RRU			
5		3	Ericsson AIR 21 B4A B2P - Panel			
6	158.0	3	RFS APXVAALL24_43-U-NA20 - Panel			

*Lines outside of the pole

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:	96.6%	66.6%	93.0%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	3499.5	31.4	41.3

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 1.8652 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 70.42% at 0.0ft

Structure: CT02694-B-SBA
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

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

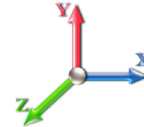
5/23/2022



Page: 1

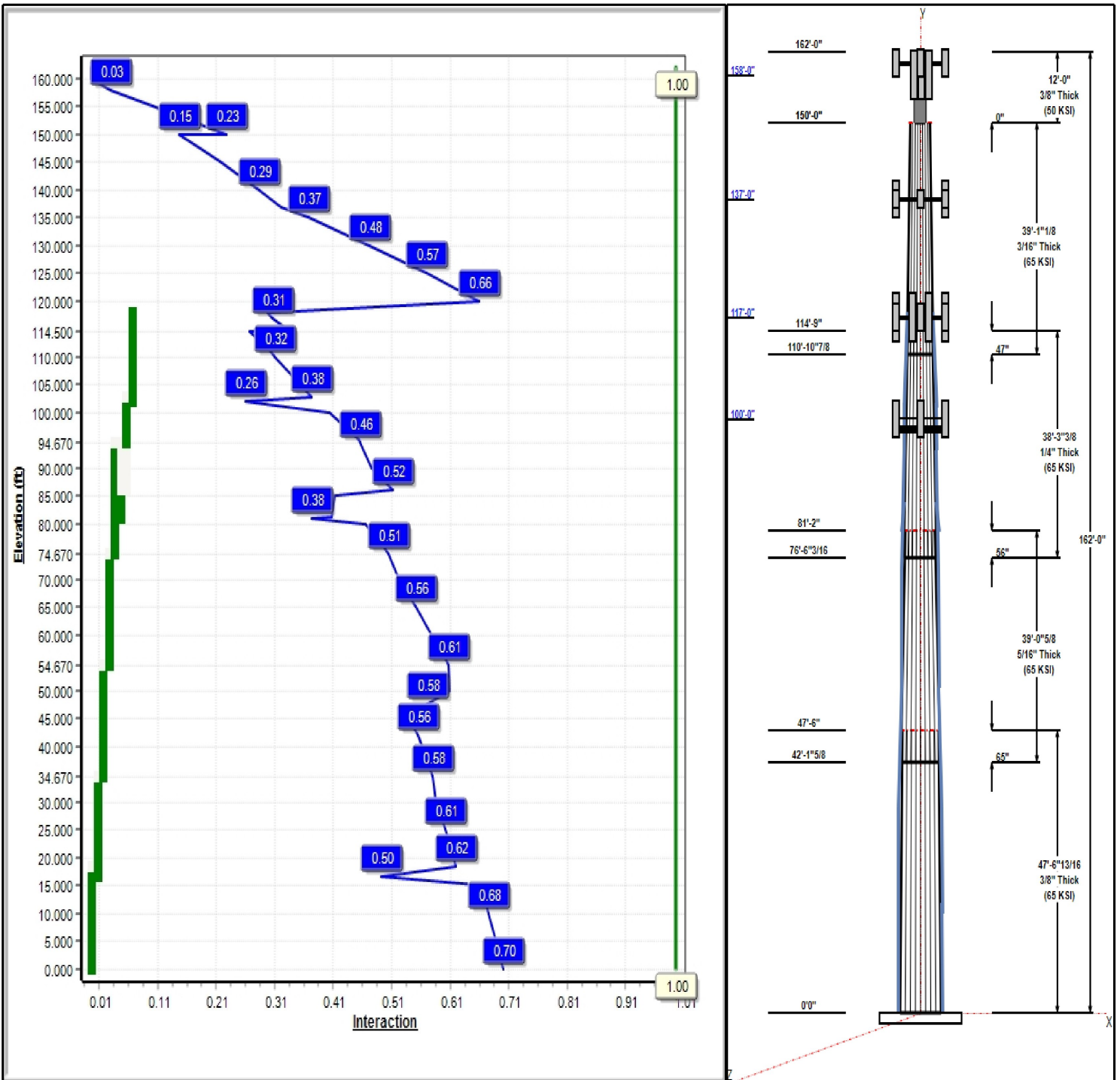
Dead Load Factor: 1.20
Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 97 mph Wind



Iterations: 27

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Structure: CT02694-B-SBA

Type: Custom
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.19333

5/23/2022

Page: 2



Shaft Properties

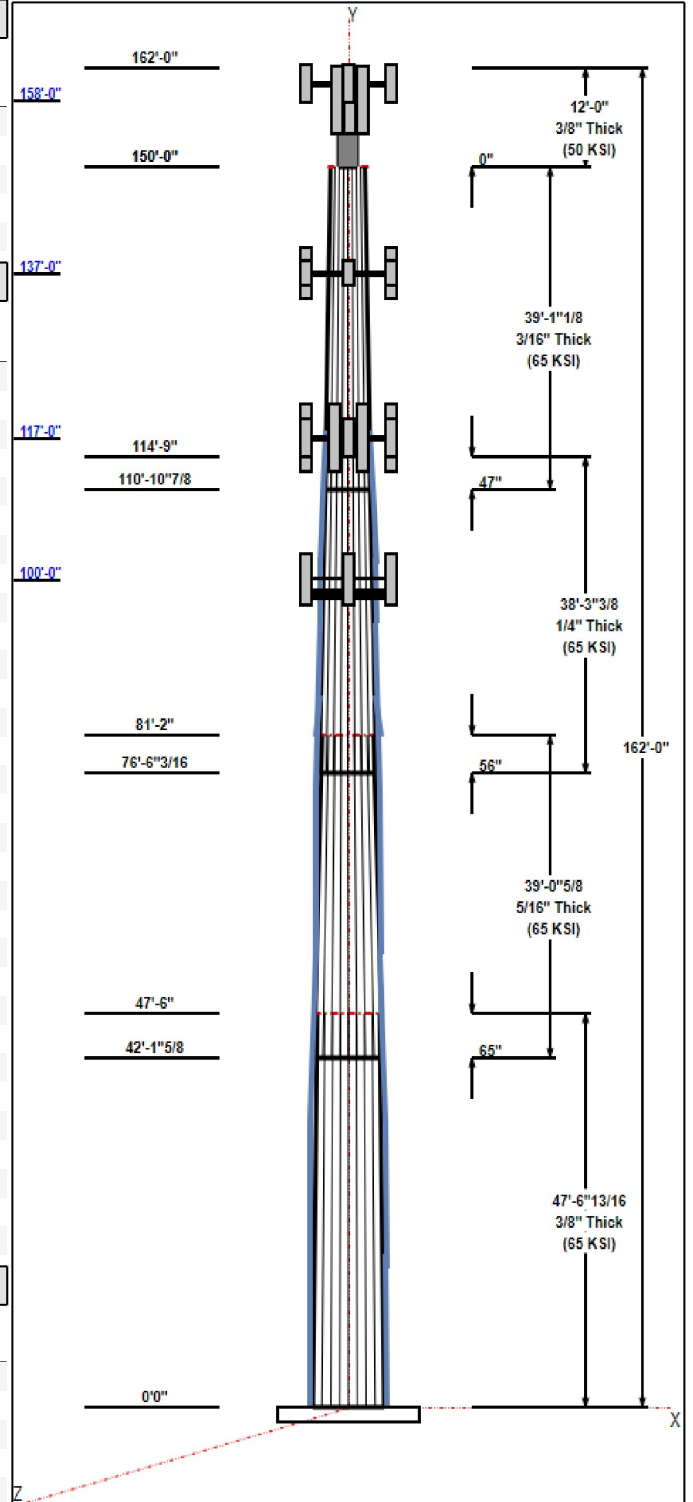
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	47.57	37.80	47.00	0.375		0.19333	65
2	39.05	31.93	39.48	0.313	Slip	0.19333	65
3	38.28	25.93	33.33	0.250	Slip	0.19333	65
4	39.09	19.50	27.06	0.188	Slip	0.19333	65
5	12.00	12.75	12.75	0.375	Butt	0.00000	50

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
160.00	160.00	1	CommScope	T-Mobile
160.00	160.00	3	RFS ATMP1412D-1CWA	T-Mobile
160.00	160.00	3	RFS ATMAA1412D-1A20	T-Mobile
160.00	160.00	3	Ericsson 4480 B71 + B85	T-Mobile
160.00	160.00	3	Ericsson S11 B2	T-Mobile
160.00	160.00	1	Mount Mods	T-Mobile
160.00	160.00	3	Ericsson AIR 21 B4A B2P	T-Mobile
158.00	158.00	3	RFS	T-Mobile
137.00	137.00	1	Low Profile Platform	Verizon
137.00	137.00	6	JAHH-65B-R3B	Verizon
137.00	137.00	3	MT6407-77A	Verizon
137.00	137.00	3	B2/B66A RRH-BR049	Verizon
137.00	137.00	3	B5/B13 RRH-BR04C	Verizon
137.00	137.00	1	DB-C1-12C-24AB-0Z	Verizon
137.00	137.00	3	CBC78T-DS-43	Verizon
137.00	137.00	1	MS-HRECP	Verizon
117.00	117.00	1	Low Profile Platform	AT&T
117.00	117.00	2	KMW AM-X-CD-16-6500T	AT&T
117.00	117.00	4	Andrew SBNH-1D6565C	AT&T
117.00	117.00	3	Kathrein 800-10121	AT&T
117.00	117.00	6	CCI DTMAPB7819VG12A	AT&T
117.00	117.00	3	Powerwave LGP 13519	AT&T
117.00	117.00	3	CSS DBC-750	AT&T
117.00	117.00	6	Kathrein 860 10025 RET	AT&T
114.50	114.50	3	Raycap DC6-48-60-18-8F	AT&T
114.50	114.50	6	Ericsson RRUS 11	AT&T
100.00	100.00	3	JMA Wireless	Dish Wireless
100.00	100.00	3	Fujitsu TA08025-B605	Dish Wireless
100.00	100.00	3	Fujitsu TA08025-B604	Dish Wireless
100.00	100.00	1	Raycap	Dish Wireless
100.00	100.00	1	Commscope MC-PK8-DSH	Dish Wireless

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	160.00	Outside	1 5/8" Coax	T-Mobile
0.00	160.00	Outside	1.9" Fiber	T-Mobile
0.00	137.00	Inside	1 5/8" Coax	Verizon
0.00	137.00	Inside	1 5/8" Hybrid	Verizon
0.00	137.00	Inside	1/2" Coax	Verizon
100.00	120.00	Outside	Reinforcing plate	
0.00	117.00	Inside	1 5/8" Coax	AT&T
0.00	117.00	Inside	1/2" Fiber	AT&T
0.00	117.00	Inside	3" Innerduct	AT&T
0.00	117.00	Inside	3/4" DC	AT&T



Structure: CT02694-B-SBA

Type: Custom	Base Shape: 18 Sided	5/23/2022
Site Name: E-Prospect	Taper: 0.00000	
Height: 162.00 (ft)		
Base Elev: 0.00 (ft)		Page: 3



0.00	104.70	Outside	Reinforcing plate
0.00	100.00	Inside	1.6" Hybrid Dish Wireless

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
12	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
1.7500	62.0	60.0	Round

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 97 mph Wind	3499.5	31.4	41.3
0.9D + 1.6W 97 mph Wind	3457.6	31.4	31.0
1.2D + 1.0Di + 1.0Wi 50 mph Wind	909.7	8.1	70.6
1.2D + 1.0E	183.1	1.5	41.4
0.9D + 1.0E	180.5	1.5	31.0
1.0D + 1.0W 60 mph Wind	854.8	7.7	34.5

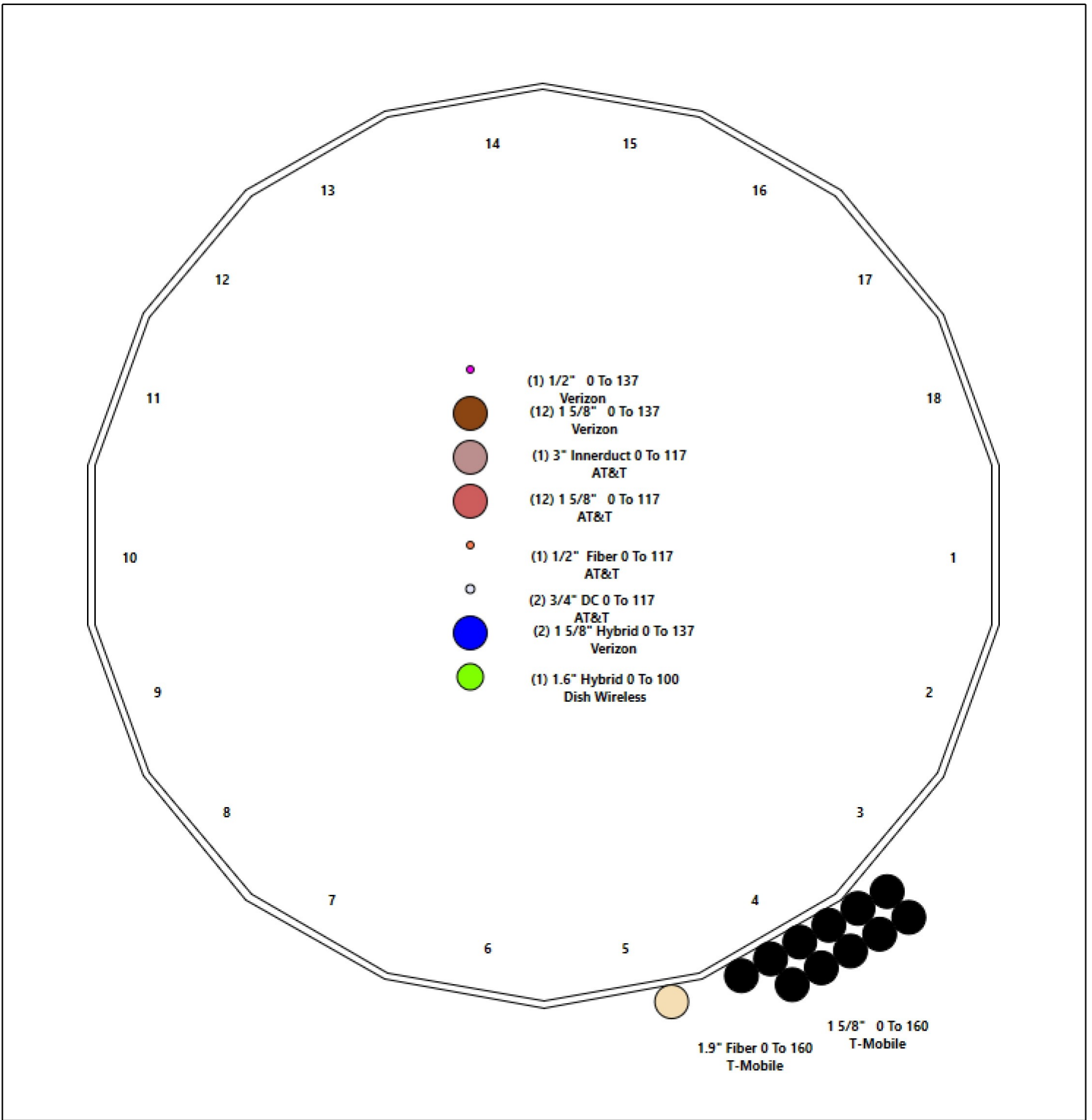
Structure: CT02694-B-SBA - Coax Line Placement

Type: Monopole
Site Name: E-Prospect
Height: 162.00 (ft)

5/23/2022



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Shaft Properties

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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	47.570	0.3750	65		0.00	8,097
2	18	39.050	0.3125	65	Slip	65.20	4,664
3	18	38.280	0.2500	65	Slip	56.04	3,037
4	18	39.095	0.1875	65	Slip	46.70	1,828
5	R	12.000	0.3750	50	Flange	0.00	595
Total Shaft Weight:							18,221

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	47.00	0.00	55.49	15241.66	20.69	125.33	37.80	47.57	44.55	7884.43	16.36	100.8	0.193333
2	39.48	42.14	38.85	7528.78	20.87	126.33	31.93	81.19	31.36	3960.34	16.61	102.1	0.193333
3	33.33	76.52	26.25	3629.53	22.10	133.33	25.93	114.80	20.38	1697.93	16.88	103.7	0.193333
4	27.06	110.9	15.99	1458.78	24.04	144.31	19.50	150.00	11.49	541.58	16.93	104.0	0.193333
5	12.75	150.0	14.58	279.29	0.00	34.00	12.75	162.00	14.58	279.29	0.00	34.00	0.000000

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Fu (ksi)	Offset (in)	Intermediate Connectors		Termination Connectors			
							Spacing (in)	Description	Spacing (in)	Lower Qty	Upper Qty	
0.00	18.50	3	PLT 6.5x1.25(1.25 Hole)	65	80	0.00	AJM20&sleeve	18.00	AJM20&sleeve		12	12
16.67	34.67	3	PLT 6"x1-1/4"(1.25" Hole)	65	80	0.00	AJM20&sleeve	18.00	AJM20&sleeve		11	
34.67	54.67	3	PLT 5.75x1.25(1.25 Hole)	65	80	0.00	AJM20&sleeve	18.00	AJM20&sleeve			
54.67	74.67	3	PLT 5.25"x1 1/4"(1.25"ho	65	80	0.00	AJM20&sleeve	18.00	AJM20&sleeve			
74.67	94.67	3	PLT 5"x1-1/4"(1.25"Hole)	65	80	0.00	AJM20&sleeve	18.00	AJM20&sleeve			
81.00	86.00	3	PLT C6x13 (1.25" hole)	50	65	0.00	5/8" Hollo Bolt	24.00	5/8" Hollo Bolt		8	8
94.67	102.6	3	PLT 4.5"x 1-1/4"(1.25"ho	65	80	0.00	AJM20&sleeve	18.00	AJM20&sleeve			8
102.0	118.0	3	LNP LP6X100-G-20TT	65	80	0.00	5/8" Hollo Bolt	24.00	5/8" Hollo Bolt		8	8

Load Summary

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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	160.00	CommScope MC-HPM1250-B	1	929.95	24.88	1.00	1844.69	54.597	1.00	0.00	0.00
2	160.00	RFS ATMPP1412D-1CWA	3	12.50	1.17	0.67	37.14	1.975	0.67	0.00	0.00
3	160.00	RFS ATMAA1412D-1A20 TMA	3	13.00	1.17	0.67	39.75	1.958	0.67	0.00	0.00
4	160.00	Ericsson 4480 B71 + B85	3	93.00	2.85	0.67	165.40	3.529	0.67	0.00	0.00
5	160.00	Ericsson S11 B2	3	51.00	2.83	0.67	121.05	3.506	0.67	0.00	0.00
6	160.00	Mount Mods	1	929.95	16.33	1.00	1844.69	35.835	1.00	0.00	0.00
7	160.00	Ericsson AIR 21 B4A B2P	3	90.40	6.09	0.86	260.59	7.195	0.86	0.00	0.00
8	158.00	RFS APXVAALL24_43-U-NA20	3	128.00	20.24	0.70	548.39	22.150	0.70	0.00	0.00
9	137.00	Low Profile Platform	1	1200.00	22.00	1.00	2237.68	39.502	1.00	0.00	0.00
10	137.00	JAHH-65B-R3B	6	63.30	9.11	0.83	291.33	10.444	0.83	0.00	0.00
11	137.00	MT6407-77A	3	79.40	4.69	0.70	197.64	5.628	0.70	0.00	0.00
12	137.00	B2/B66A RRH-BR049	3	84.40	1.87	0.67	160.10	2.438	0.67	0.00	0.00
13	137.00	B5/B13 RRH-BR04C (RFV01U-D2A)	3	70.30	1.87	0.67	138.87	2.438	0.67	0.00	0.00
14	137.00	DB-C1-12C-24AB-0Z	1	32.00	4.06	1.00	144.90	4.875	1.00	0.00	0.00
15	137.00	CBC78T-DS-43	3	10.40	0.37	0.50	30.87	0.650	0.50	0.00	0.00
16	137.00	MS-HRECP	1	514.00	12.25	1.00	1118.48	24.114	1.00	0.00	0.00
17	117.00	Low Profile Platform	1	1200.00	22.00	1.00	2221.43	39.228	1.00	0.00	0.00
18	117.00	KMW AM-X-CD-16-6500T	2	33.00	6.05	0.81	174.23	8.098	0.81	0.00	0.00
19	117.00	Andrew SBNH-1D6565C	4	66.10	11.47	0.80	290.35	14.641	0.80	0.00	0.00
20	117.00	Kathrein 800-10121	3	44.10	5.15	0.79	156.14	7.205	0.79	0.00	0.00
21	117.00	CCI DTMAPB7819VG12A	6	19.20	1.14	0.67	44.09	1.891	0.67	0.00	0.00
22	117.00	Powerwave LGP 13519	3	5.30	0.34	0.50	14.56	0.783	0.50	0.00	0.00
23	117.00	CSS DBC-750	3	4.80	0.51	0.50	14.23	1.026	0.50	0.00	0.00
24	117.00	Kathrein 860 10025 RET	6	1.20	0.18	0.50	7.05	0.550	0.50	0.00	0.00
25	114.50	Raycap DC6-48-60-18-8F	3	20.00	1.26	0.67	71.36	1.902	0.67	0.00	0.00
26	114.50	Ericsson RRUS 11	6	50.70	2.52	0.67	137.00	3.152	0.67	0.00	0.00
27	100.00	JMA Wireless MX08FRO665-21	3	64.50	12.49	0.74	343.81	13.897	0.74	0.00	0.00
28	100.00	Fujitsu TA08025-B605 RRU	3	75.00	1.96	0.67	125.23	2.499	0.67	0.00	0.00
29	100.00	Fujitsu TA08025-B604 RRU	3	63.90	1.96	0.67	112.52	2.499	0.67	0.00	0.00
30	100.00	Raycap RDIDC-9181-PF-48	1	21.90	2.01	1.00	73.03	2.556	1.00	0.00	0.00
31	100.00	Commscope MC-PK8-DSH	1	1727.00	37.59	1.00	3347.77	82.947	1.00	0.00	0.00
Totals:			89	10,421.60			24,832.30				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	160.00	(11) 1 5/8" Coax	5.94	Outside
0.00	160.00	(1) 1.9" Fiber	0.00	Outside
0.00	137.00	(12) 1 5/8" Coax	0.00	Inside
0.00	137.00	(2) 1 5/8" Hybrid	0.00	Inside
0.00	137.00	(1) 1/2" Coax	0.00	Inside
100.00	120.00	(1) Reinforcing plate	1.00	Outside
0.00	117.00	(12) 1 5/8" Coax	0.00	Inside
0.00	117.00	(1) 1/2" Fiber	0.00	Inside
0.00	117.00	(1) 3" Innerduct	0.00	Inside
0.00	117.00	(2) 3/4" DC	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	104.70	(1) Reinforcing plate		1.25		Outside					
0.00	100.00	(1) 1.6" Hybrid		0.00		Inside					

Shaft Section Properties

Structure: CT02694-B-SBA

Code: TIA-222-G

5/23/2022

Site Name: E-Prospect

Exposure: B

Height: 162.00 (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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Increment Length: 5 (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	RB1	0.3750	47.000	55.493	15241.7	20.69	125.33	65	77	0.0	24.38	8697.5	5479.8	
5.00		0.3750	46.033	54.343	14313.2	20.23	122.76	65	78	934.4	24.38	8353.3	5264.0	414.7
10.00		0.3750	45.067	53.192	13423.2	19.78	120.18	65	78	914.8	24.38	8016.1	5052.6	414.7
15.00		0.3750	44.100	52.042	12570.9	19.33	117.60	65	79	895.2	24.38	7685.9	4845.5	414.7
16.67	RB2	0.3750	43.777	51.658	12294.4	19.17	116.74	65	79	294.6	46.88	13327.7	10528.4	266.4
18.50	RT1	0.3750	43.423	51.236	11996.2	19.01	115.80	65	79	320.4	22.50	5648.1	5648.1	140.1
20.00		0.3750	43.133	50.891	11755.4	18.87	115.02	65	79	260.6	22.50	5575.5	5575.5	114.8
25.00		0.3750	42.167	49.741	10976.0	18.42	112.44	65	80	856.1	22.50	5336.8	5336.8	382.8
30.00		0.3750	41.200	48.590	10231.9	17.96	109.87	65	80	836.5	22.50	5103.3	5103.3	382.8
34.67	RT2 RB3	0.3750	40.297	47.516	9567.9	17.54	107.46	65	81	763.6	21.56	4683.7	4683.7	342.6
35.00		0.3750	40.233	47.440	9522.1	17.51	107.29	65	81	53.3	21.56	4669.4	4669.4	24.2
40.00		0.3750	39.267	46.289	8846.0	17.05	104.71	65	81	797.3	21.56	4455.7	4455.7	366.9
42.14	Bot - Section 2	0.3750	38.854	45.797	8567.1	16.86	103.61	65	82	334.8	21.56	4366.0	4366.0	156.8
45.00		0.3750	38.300	45.139	8202.6	16.60	102.13	65	82	818.8	21.56	4381.4	4381.4	210.1
47.57	Top - Section 1	0.3125	38.428	37.805	6939.1	20.27	122.97	65	78	724.9	21.56	4274.5	4274.5	188.6
50.00		0.3125	37.958	37.339	6685.7	20.01	121.47	65	78	310.7	21.56	4174.6	4174.6	178.3
54.67	RT3 RB4	0.3125	37.055	36.443	6216.1	19.50	118.58	65	78	586.2	19.69	3634.8	3634.8	312.8
55.00		0.3125	36.992	36.380	6183.8	19.46	118.37	65	79	40.9	19.69	3622.8	3622.8	22.1
60.00		0.3125	36.025	35.421	5707.6	18.92	115.28	65	79	610.8	19.69	3443.2	3443.2	334.9
65.00		0.3125	35.058	34.462	5256.6	18.37	112.19	65	80	594.5	19.69	3268.1	3268.1	334.9
70.00		0.3125	34.092	33.504	4829.9	17.83	109.09	65	80	578.2	19.69	3097.7	3097.7	334.9
74.67	RT4 RB5	0.3125	33.189	32.608	4452.9	17.32	106.20	65	81	525.3	18.75	2800.5	2800.5	297.9
75.00		0.3125	33.125	32.545	4427.0	17.28	106.00	65	81	36.6	18.75	2790.2	2790.2	21.0
76.52	Bot - Section 3	0.3125	32.832	32.254	4309.4	17.11	105.06	65	81	167.2	18.75	2743.2	2743.2	96.7
80.00		0.3125	32.158	31.586	4047.2	16.73	102.91	65	82	686.3	18.75	2715.5	2715.5	222.2
81.00	RB6	0.3125	31.965	31.394	3973.9	16.63	102.29	65	82	194.4	30.24	5083.0	4191.2	102.8
81.19	Top - Section 2	0.2500	32.429	25.533	3340.4	21.46	129.72	65	76	36.2	30.24	5072.6	4182.6	19.2
85.00		0.2500	31.692	24.948	3116.0	20.94	126.77	65	77	327.5	30.24	4862.4	4007.5	391.9
86.00	RT6	0.2500	31.498	24.795	3058.9	20.81	125.99	65	77	84.6	18.75	2534.3	2534.3	63.8
90.00		0.2500	30.725	24.181	2837.4	20.26	122.90	65	78	333.3	18.75	2417.0	2417.0	255.1
94.67	RT5 RB7	0.2500	29.822	23.465	2592.6	19.62	119.29	65	78	378.6	16.88	2051.9	2051.9	268.2
95.00		0.2500	29.758	23.414	2575.8	19.58	119.03	65	78	26.3	16.88	2043.5	2043.5	18.9
100.00		0.2500	28.792	22.647	2330.9	18.90	115.17	65	79	391.8	16.88	1919.1	1919.1	287.1
102.00	RB8	0.2500	28.405	22.340	2237.4	18.62	113.62	65	79	153.1	34.88	3843.6	3843.6	237.3
102.67	RT7	0.2500	28.275	22.237	2206.7	18.53	113.10	65	80	50.8	18.00	1956.1	1956.1	41.0
105.00		0.2500	27.825	21.880	2102.0	18.21	111.30	65	80	174.9	18.00	1897.2	1897.2	142.7
110.00		0.2500	26.858	21.113	1888.6	17.53	107.43	65	81	365.7	18.00	1773.9	1773.9	306.2
110.91	Bot - Section 4	0.2500	26.683	20.974	1851.6	17.41	106.73	65	81	64.8	18.00	1752.1	1752.1	55.4
114.50		0.2500	25.988	20.423	1709.3	16.92	103.95	65	82	446.3	18.00	1712.4	1712.4	220.2
114.80	Top - Section 3	0.1875	26.306	15.543	1339.6	23.33	140.30	65	74	36.3	18.00	1705.4	1705.4	18.2
115.00		0.1875	26.267	15.520	1333.6	23.29	140.09	65	74	10.7	18.00	1700.6	1700.6	12.5
117.00		0.1875	25.880	15.290	1275.2	22.93	138.03	65	74	104.8	18.00	1653.5	1653.5	122.5
118.00	RT8	0.1875	25.687	15.175	1246.6	22.75	137.00	65	75	51.8	18.00	1630.2	1630.2	61.2
120.00		0.1875	25.300	14.945	1190.7	22.38	134.93	65	75	102.5				
125.00		0.1875	24.333	14.369	1058.5	21.47	129.78	65	76	249.4				
130.00		0.1875	23.367	13.794	936.4	20.56	124.62	65	77	239.6				
135.00		0.1875	22.400	13.219	824.0	19.65	119.47	65	78	229.8				
137.00		0.1875	22.013	12.989	781.7	19.29	117.40	65	79	89.2				
140.00		0.1875	21.433	12.643	721.1	18.75	114.31	65	79	130.8				
145.00		0.1875	20.467	12.068	627.0	17.84	109.16	65	80	210.2				

Increment Length: 5 (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)
150.00	Top - Section 4	0.1875	19.500	11.493	541.6	16.93	104.00	65	81	200.4				
150.00	Bot - Section 5	0.3750	12.750	14.579	279.3	8.46	52.00	50	50					
155.00		0.3750	12.750	14.579	279.3	0.00	34.00	50	50	248.0				
158.00		0.3750	12.750	14.579	279.3	0.00	34.00	50	50	148.8				
160.00		0.3750	12.750	14.579	279.3	0.00	34.00	50	50	99.2				
162.00		0.3750	12.750	14.579	279.3	0.00	34.00	50	50	99.2				
Total Weight										18221.3	8600.4			

Wind Loading - Shaft

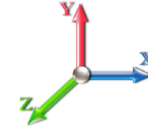
Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 27

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	RB1	1.00	0.70	16.018	17.62	322.76	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	16.018	17.62	316.13	0.752 *	0.000	5.00	19.681	14.80	417.1	0.0	1121.2
10.00		1.00	0.70	16.018	17.62	309.49	0.758 *	0.000	5.00	19.272	14.61	411.9	0.0	1097.8
15.00		1.00	0.70	16.018	17.62	302.85	0.765 *	0.000	5.00	18.863	14.42	406.6	0.0	1074.3
16.67	RB2	1.00	0.70	16.018	17.62	300.63	0.769 *	0.000	1.67	6.209	4.78	134.7	0.0	353.6
18.50	RT1	1.00	0.70	16.018	17.62	298.20	0.772 *	0.000	1.83	6.752	5.21	146.9	0.0	384.4
20.00		1.00	0.70	16.018	17.62	296.21	0.774 *	0.000	1.50	5.493	4.25	119.9	0.0	312.8
25.00		1.00	0.70	16.018	17.62	289.57	0.779 *	0.000	5.00	18.045	14.05	396.2	0.0	1027.3
30.00		1.00	0.70	16.031	17.63	283.05	0.786 *	0.000	5.00	17.636	13.87	391.2	0.0	1003.8
34.67	RT2 RB3	1.00	0.73	16.708	18.38	282.63	0.794 *	0.000	4.67	16.103	12.78	375.9	0.0	916.3
35.00		1.00	0.73	16.753	18.43	282.57	0.798 *	0.000	0.33	1.124	0.90	26.5	0.0	64.0
40.00		1.00	0.76	17.405	19.15	281.09	0.802 *	0.000	5.00	16.818	13.49	413.4	0.0	956.8
42.14	Bot - Section 2	1.00	0.77	17.665	19.43	280.21	0.808 *	0.000	2.14	7.062	5.71	177.5	0.0	401.7
45.00		1.00	0.79	18.000	19.80	278.82	0.813 *	0.000	2.86	9.498	7.72	244.6	0.0	982.6
47.57	Top - Section 1	1.00	0.80	18.288	20.12	277.40	0.818 *	0.000	2.57	8.411	6.88	221.4	0.0	869.9
50.00		1.00	0.81	18.551	20.41	280.52	0.817 *	0.000	2.43	7.853	6.41	209.4	0.0	372.8
54.67	RT3 RB4	1.00	0.83	19.030	20.93	277.37	0.823 *	0.000	4.67	14.822	12.20	408.6	0.0	703.5
55.00		1.00	0.83	19.063	20.97	277.13	0.828 *	0.000	0.33	1.034	0.86	28.7	0.0	49.1
60.00		1.00	0.85	19.543	21.50	273.26	0.833 *	0.000	5.00	15.446	12.87	442.7	0.0	733.0
65.00		1.00	0.87	19.995	21.99	268.99	0.843 *	0.000	5.00	15.037	12.68	446.4	0.0	713.4
70.00		1.00	0.89	20.422	22.46	264.36	1.200 *	0.000	5.00	14.628	17.55	631.0	0.0	693.8
74.67	RT4 RB5	1.00	0.91	20.803	22.88	259.74	1.200 *	0.000	4.67	13.294	15.95	584.1	0.0	630.3
75.00		1.00	0.91	20.829	22.91	259.40	1.200 *	0.000	0.33	0.926	1.11	40.7	0.0	43.9
76.52	Bot - Section 3	1.00	0.92	20.949	23.04	257.84	1.200 *	0.000	1.52	4.232	5.08	187.3	0.0	200.7
80.00		1.00	0.93	21.217	23.34	254.17	1.200 *	0.000	3.48	9.725	11.67	435.8	0.0	823.6
81.00	RB6	1.00	0.93	21.292	23.42	253.09	1.200 *	0.000	1.00	2.755	3.31	123.9	0.0	233.3
81.19	Top - Section 2	1.00	0.93	21.306	23.44	252.88	1.200 *	0.000	0.19	0.513	0.62	23.1	0.0	43.4
85.00		1.00	0.94	21.587	23.75	252.66	1.200 *	0.000	3.81	10.345	12.41	471.7	0.0	393.0
86.00	RT6	1.00	0.95	21.660	23.83	251.54	1.200 *	0.000	1.00	2.674	3.21	122.3	0.0	101.6
90.00		1.00	0.96	21.943	24.14	246.96	1.200 *	0.000	4.00	10.531	12.64	488.0	0.0	400.0
94.67	RT5 RB7	1.00	0.97	22.262	24.49	241.44	1.200 *	0.000	4.67	11.963	14.36	562.5	0.0	454.3
95.00		1.00	0.97	22.284	24.51	241.04	1.200 *	0.000	0.33	0.832	1.00	39.2	0.0	31.6
100.00	Appurtenance(s)	1.00	0.99	22.613	24.87	234.93	1.200 *	0.000	5.00	12.386	14.86	591.6	0.0	470.2
102.00	RB8	1.00	0.99	22.742	25.02	232.43	1.200 *	0.000	2.00	4.840	5.81	232.5	0.0	183.7
102.67	RT7	1.00	1.00	22.784	25.06	231.59	1.200 *	0.000	0.67	1.607	1.93	77.3	0.0	61.0
105.00		1.00	1.00	22.931	25.22	228.63	1.200 *	0.000	2.33	5.530	6.64	267.8	0.0	209.9
110.00		1.00	1.02	23.238	25.56	222.16	1.200 *	0.000	5.00	11.568	13.88	567.7	0.0	438.9
110.91	Bot - Section 4	1.00	1.02	23.292	25.62	220.97	1.200 *	0.000	0.91	2.050	2.46	100.9	0.0	77.8
114.50	Appurtenance(s)	1.00	1.03	23.505	25.86	216.20	1.200 *	0.000	3.59	8.126	9.75	403.4	0.0	535.5
114.80	Top - Section 3	1.00	1.03	23.523	25.88	215.80	1.200 *	0.000	0.30	0.661	0.79	32.8	0.0	43.6
115.00		1.00	1.03	23.535	25.89	218.65	1.200 *	0.000	0.20	0.452	0.54	22.5	0.0	12.9
117.00	Appurtenance(s)	1.00	1.03	23.651	26.02	215.96	1.200 *	0.000	2.00	4.413	5.30	220.4	0.0	125.8
118.00	RT8	1.00	1.04	23.708	26.08	214.61	1.200 *	0.000	1.00	2.182	2.62	109.2	0.0	62.2
120.00		1.00	1.04	23.823	26.20	211.89	1.200 *	0.000	2.00	4.314	5.18	217.1	0.0	123.0
125.00		1.00	1.05	24.102	26.51	204.98	1.200 *	0.000	5.00	10.500	12.60	534.5	0.0	299.2
130.00		1.00	1.07	24.374	26.81	197.94	1.200 *	0.000	5.00	10.091	12.11	519.4	0.0	287.5
135.00		1.00	1.08	24.638	27.10	190.78	1.200 *	0.000	5.00	9.682	11.62	503.8	0.0	275.8

Wind Loading - Shaft

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 11
	Struct Class: II	



137.00 Appurtenance(s)	1.00	1.08	24.742	27.22	187.88	1.200 *	0.000	2.00	3.758	4.51	196.4	0.0	107.0	
140.00	1.00	1.09	24.895	27.38	183.50	1.200 *	0.000	3.00	5.515	6.62	290.0	0.0	157.0	
145.00	1.00	1.10	25.146	27.66	176.10	1.200 *	0.000	5.00	8.864	10.64	470.7	0.0	252.3	
150.00 Top - Section 4	1.00	1.11	25.391	27.93	168.60	1.200 *	0.000	5.00	8.455	10.15	453.4	0.0	240.5	
155.00	1.00	1.12	25.630	28.19	109.07	1.200 *	0.000	5.00	5.313	6.38	287.6	0.0	297.7	
158.00 Appurtenance(s)	1.00	1.13	25.771	28.35	109.37	1.200 *	0.000	3.00	3.188	3.82	173.5	0.0	178.6	
160.00 Appurtenance(s)	1.00	1.13	25.863	28.45	109.57	1.200 *	0.000	2.00	2.125	2.55	116.1	0.0	119.1	
162.00	1.00	1.13	25.955	28.55	109.76	0.600	0.000	2.00	2.125	1.27	58.2	0.0	119.1	
Totals:								162.00				15,575.6	21,865.6	

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 27

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	160.00	Ericsson AIR 21 B4A B2P	3	25.863	28.450	0.69	0.80	12.57	325.44	0.000	0.000	572.17	0.00	0.00
2	160.00	Mount Mods	1	25.863	28.450	0.75	0.75	12.25	1115.94	0.000	0.000	557.50	0.00	0.00
3	160.00	Ericsson S11 B2	3	25.863	28.450	0.54	0.80	4.55	183.60	0.000	0.000	207.14	0.00	0.00
4	160.00	Ericsson 4480 B71 + B85	3	25.863	28.450	0.54	0.80	4.58	334.80	0.000	0.000	208.61	0.00	0.00
5	160.00	RFS ATMAA1412D-1A20	3	25.863	28.450	0.54	0.80	1.88	46.80	0.000	0.000	85.64	0.00	0.00
6	160.00	RFS ATMPP1412D-1CWA	3	25.863	28.450	0.54	0.80	1.88	45.00	0.000	0.000	85.64	0.00	0.00
7	160.00	CommScope	1	25.863	28.450	0.75	0.75	18.66	1115.94	0.000	0.000	849.40	0.00	0.00
8	158.00	RFS	3	25.771	28.348	0.56	0.80	34.00	460.80	0.000	0.000	1542.26	0.00	0.00
9	137.00	MS-HRECP	1	24.742	27.216	1.00	1.00	12.25	616.80	0.000	0.000	533.43	0.00	0.00
10	137.00	CBC78T-DS-43	3	24.742	27.216	0.38	0.75	0.42	37.44	0.000	0.000	18.13	0.00	0.00
11	137.00	DB-C1-12C-24AB-OZ	1	24.742	27.216	0.75	0.75	3.04	38.40	0.000	0.000	132.60	0.00	0.00
12	137.00	B5/B13 RRH-BR04C	3	24.742	27.216	0.50	0.75	2.82	253.08	0.000	0.000	122.76	0.00	0.00
13	137.00	B2/B66A RRH-BR049	3	24.742	27.216	0.50	0.75	2.82	303.84	0.000	0.000	122.76	0.00	0.00
14	137.00	MT6407-77A	3	24.742	27.216	0.52	0.75	7.39	285.84	0.000	0.000	321.66	0.00	0.00
15	137.00	JAHH-65B-R3B	6	24.742	27.216	0.62	0.75	34.03	455.76	0.000	0.000	1481.67	0.00	0.00
16	137.00	Low Profile Platform	1	24.742	27.216	1.00	1.00	22.00	1440.00	0.000	0.000	958.00	0.00	0.00
17	117.00	Kathrein 800-10121	3	23.651	26.016	0.63	0.80	9.76	158.76	0.000	0.000	406.45	0.00	0.00
18	117.00	Low Profile Platform	1	23.651	26.016	1.00	1.00	22.00	1440.00	0.000	0.000	915.76	0.00	0.00
19	117.00	KMW AM-X-CD-16-6500T	2	23.651	26.016	0.65	0.80	7.84	79.20	0.000	0.000	326.38	0.00	0.00
20	117.00	Andrew SBNH-1D6565C	4	23.651	26.016	0.64	0.80	29.36	317.28	0.000	0.000	1222.26	0.00	0.00
21	117.00	Kathrein 860 10025 RET	6	23.651	26.016	0.40	0.80	0.43	8.64	0.000	0.000	17.98	0.00	0.00
22	117.00	CCI DTMAPB7819VG12A	6	23.651	26.016	0.54	0.80	3.67	138.24	0.000	0.000	152.61	0.00	0.00
23	117.00	Powerwave LGP 13519	3	23.651	26.016	0.40	0.80	0.41	19.08	0.000	0.000	16.98	0.00	0.00
24	117.00	CSS DBC-750	3	23.651	26.016	0.40	0.80	0.61	17.28	0.000	0.000	25.47	0.00	0.00
25	114.50	Ericsson RRUS 11	6	23.505	25.856	0.54	0.80	8.10	365.04	0.000	0.000	335.27	0.00	0.00
26	114.50	Raycap DC6-48-60-18-8F	3	23.505	25.856	0.54	0.80	2.03	72.00	0.000	0.000	83.82	0.00	0.00
27	100.00	Commscope	1	22.613	24.875	1.00	1.00	37.59	2072.40	0.000	0.000	1496.07	0.00	0.00
28	100.00	Raycap	1	22.613	24.875	1.00	1.00	2.01	26.28	0.000	0.000	80.00	0.00	0.00
29	100.00	Fujitsu TA08025-B604	3	22.613	24.875	0.50	0.75	2.95	230.04	0.000	0.000	117.60	0.00	0.00
30	100.00	Fujitsu TA08025-B605	3	22.613	24.875	0.50	0.75	2.95	270.00	0.000	0.000	117.60	0.00	0.00
31	100.00	JMA Wireless	3	22.613	24.875	0.55	0.75	20.80	232.20	0.000	0.000	827.67	0.00	0.00
Totals:									12,505.92			13,941.24		

Total Applied Force Summary

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 27

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		417.14	1378.59	0.00	0.00
10.00		411.89	1355.10	0.00	0.00
15.00		406.65	1331.61	0.00	0.00
16.67		134.65	439.52	0.00	0.00
18.50		146.88	478.62	0.00	0.00
20.00		119.87	389.97	0.00	0.00
25.00		396.16	1284.63	0.00	0.00
30.00		391.24	1261.14	0.00	0.00
34.67		375.90	1156.68	0.00	0.00
35.00		26.45	80.96	0.00	0.00
40.00		413.36	1214.15	0.00	0.00
42.14		177.52	511.69	0.00	0.00
45.00		244.62	1129.96	0.00	0.00
47.57		221.42	1002.18	0.00	0.00
50.00		209.36	497.87	0.00	0.00
54.67		408.62	943.83	0.00	0.00
55.00		28.72	66.05	0.00	0.00
60.00		442.66	990.31	0.00	0.00
65.00		446.35	970.73	0.00	0.00
70.00		728.73	951.16	0.00	0.00
74.67		676.43	870.70	0.00	0.00
75.00		47.26	60.88	0.00	0.00
76.52		217.38	278.71	0.00	0.00
80.00		505.53	1002.86	0.00	0.00
81.00		143.97	284.74	0.00	0.00
81.19		26.81	53.00	0.00	0.00
85.00		548.83	589.29	0.00	0.00
86.00		142.58	153.03	0.00	0.00
90.00		569.78	605.84	0.00	0.00
94.67		658.80	694.64	0.00	0.00
95.00		45.96	48.57	0.00	0.00
100.00	(11) attachments	3334.59	3558.47	0.00	0.00
102.00		282.26	282.27	0.00	0.00
102.67		94.02	94.00	0.00	0.00
105.00		324.67	324.70	0.00	0.00
110.00		668.52	685.31	0.00	0.00
110.91		119.12	122.37	0.00	0.00
114.50	(9) attachments	895.43	1149.76	0.00	0.00
114.80		38.87	58.18	0.00	0.00
115.00		26.61	22.92	0.00	0.00
117.00	(28) attachments	3345.05	2402.85	0.00	0.00
118.00		129.65	95.05	0.00	0.00
120.00		257.99	188.70	0.00	0.00
125.00		616.29	463.53	0.00	0.00
130.00		601.72	451.78	0.00	0.00
135.00		586.51	440.04	0.00	0.00

Total Applied Force Summary

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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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137.00	(21) attachments	3920.52	3603.89	0.00	0.00
140.00		339.84	202.14	0.00	0.00
145.00		554.31	327.51	0.00	0.00
150.00		537.37	315.76	0.00	0.00
155.00		371.93	372.89	0.00	0.00
158.00	(3) attachments	1766.51	684.54	0.00	0.00
160.00	(17) attachments	2716.07	3316.68	0.00	0.00
162.00		58.24	119.06	0.00	0.00
Totals:		31,317.61	41,359.36	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

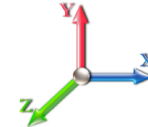
Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 27

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.152	1.157	16.018	0.00	68.64
5.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.152	1.157	16.018	0.00	6.60
5.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.152	1.157	16.018	0.00	0.00
10.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.155	1.166	16.018	0.00	68.64
10.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.155	1.166	16.018	0.00	6.60
10.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.155	1.166	16.018	0.00	0.00
15.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.159	1.176	16.018	0.00	68.64
15.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.159	1.176	16.018	0.00	6.60
15.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.159	1.176	16.018	0.00	0.00
16.67	1 5/8" Coax	Yes	1.67	0.000	5.94	0.83	0.00	0.161	1.183	16.018	0.00	22.93
16.67	1.9" Fiber	Yes	1.67	0.000	0.00	0.00	0.00	0.161	1.183	16.018	0.00	2.20
16.67	Reinforcing plate	Yes	1.67	0.000	1.25	0.17	0.00	0.161	1.183	16.018	0.00	0.00
18.50	1 5/8" Coax	Yes	1.83	0.000	5.94	0.91	0.00	0.162	1.187	16.018	0.00	25.12
18.50	1.9" Fiber	Yes	1.83	0.000	0.00	0.00	0.00	0.162	1.187	16.018	0.00	2.42
18.50	Reinforcing plate	Yes	1.83	0.000	1.25	0.19	0.00	0.162	1.187	16.018	0.00	0.00
20.00	1 5/8" Coax	Yes	1.50	0.000	5.94	0.74	0.00	0.164	1.191	16.018	0.00	20.59
20.00	1.9" Fiber	Yes	1.50	0.000	0.00	0.00	0.00	0.164	1.191	16.018	0.00	1.98
20.00	Reinforcing plate	Yes	1.50	0.000	1.25	0.16	0.00	0.164	1.191	16.018	0.00	0.00
25.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.166	1.198	16.018	0.00	68.64
25.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.166	1.198	16.018	0.00	6.60
25.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.166	1.198	16.018	0.00	0.00
30.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.170	1.210	16.031	0.00	68.64
30.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.170	1.210	16.031	0.00	6.60
30.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.170	1.210	16.031	0.00	0.00
34.67	1 5/8" Coax	Yes	4.67	0.000	5.94	2.31	0.00	0.174	1.221	16.708	0.00	64.11
34.67	1.9" Fiber	Yes	4.67	0.000	0.00	0.00	0.00	0.174	1.221	16.708	0.00	6.16
34.67	Reinforcing plate	Yes	4.67	0.000	1.25	0.49	0.00	0.174	1.221	16.708	0.00	0.00
35.00	1 5/8" Coax	Yes	0.33	0.000	5.94	0.16	0.00	0.176	1.228	16.753	0.00	4.53
35.00	1.9" Fiber	Yes	0.33	0.000	0.00	0.00	0.00	0.176	1.228	16.753	0.00	0.44
35.00	Reinforcing plate	Yes	0.33	0.000	1.25	0.03	0.00	0.176	1.228	16.753	0.00	0.00
40.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.178	1.234	17.405	0.00	68.64
40.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.178	1.234	17.405	0.00	6.60
40.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.178	1.234	17.405	0.00	0.00
42.14	1 5/8" Coax	Yes	2.14	0.000	5.94	1.06	0.00	0.181	1.244	17.665	0.00	29.33
42.14	1.9" Fiber	Yes	2.14	0.000	0.00	0.00	0.00	0.181	1.244	17.665	0.00	2.82
42.14	Reinforcing plate	Yes	2.14	0.000	1.25	0.22	0.00	0.181	1.244	17.665	0.00	0.00
45.00	1 5/8" Coax	Yes	2.86	0.000	5.94	1.42	0.00	0.184	1.251	18.000	0.00	39.31
45.00	1.9" Fiber	Yes	2.86	0.000	0.00	0.00	0.00	0.184	1.251	18.000	0.00	3.78
45.00	Reinforcing plate	Yes	2.86	0.000	1.25	0.30	0.00	0.184	1.251	18.000	0.00	0.00
47.57	1 5/8" Coax	Yes	2.57	0.000	5.94	1.27	0.00	0.186	1.258	18.288	0.00	35.28
47.57	1.9" Fiber	Yes	2.57	0.000	0.00	0.00	0.00	0.186	1.258	18.288	0.00	3.39
47.57	Reinforcing plate	Yes	2.57	0.000	1.25	0.27	0.00	0.186	1.258	18.288	0.00	0.00
50.00	1 5/8" Coax	Yes	2.43	0.000	5.94	1.20	0.00	0.185	1.256	18.551	0.00	33.36
50.00	1.9" Fiber	Yes	2.43	0.000	0.00	0.00	0.00	0.185	1.256	18.551	0.00	3.21
50.00	Reinforcing plate	Yes	2.43	0.000	1.25	0.25	0.00	0.185	1.256	18.551	0.00	0.00
54.67	1 5/8" Coax	Yes	4.67	0.000	5.94	2.31	0.00	0.189	1.266	19.030	0.00	64.11
54.67	1.9" Fiber	Yes	4.67	0.000	0.00	0.00	0.00	0.189	1.266	19.030	0.00	6.16

Linear Appurtenance Segment Forces (Factored)

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



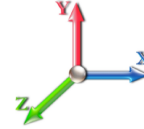
Page: 16

Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 27

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)
54.67	Reinforcing plate	Yes	4.67	0.000	1.25	0.49	0.00	0.189	1.266	19.030	0.00	0.00
55.00	1 5/8" Coax	Yes	0.33	0.000	5.94	0.16	0.00	0.191	1.274	19.063	0.00	4.53
55.00	1.9" Fiber	Yes	0.33	0.000	0.00	0.00	0.00	0.191	1.274	19.063	0.00	0.44
55.00	Reinforcing plate	Yes	0.33	0.000	1.25	0.03	0.00	0.191	1.274	19.063	0.00	0.00
60.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.194	1.282	19.543	0.00	68.64
60.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.194	1.282	19.543	0.00	6.60
60.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.194	1.282	19.543	0.00	0.00
65.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.199	1.298	19.995	0.00	68.64
65.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.199	1.298	19.995	0.00	6.60
65.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.199	1.298	19.995	0.00	0.00
70.00	1 5/8" Coax	Yes	5.00	0.847	5.94	2.48	2.10	0.205	0.000	20.422	75.31	68.64
70.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.205	0.000	20.422	0.00	6.60
70.00	Reinforcing plate	Yes	5.00	1.200	1.25	0.52	0.63	0.205	0.000	20.422	22.46	0.00
74.67	1 5/8" Coax	Yes	4.67	0.839	5.94	2.31	1.94	0.210	0.000	20.803	70.99	64.11
74.67	1.9" Fiber	Yes	4.67	0.000	0.00	0.00	0.00	0.210	0.000	20.803	0.00	6.16
74.67	Reinforcing plate	Yes	4.67	1.200	1.25	0.49	0.58	0.210	0.000	20.803	21.37	0.00
75.00	1 5/8" Coax	Yes	0.33	0.838	5.94	0.16	0.14	0.214	0.000	20.829	5.02	4.53
75.00	1.9" Fiber	Yes	0.33	0.000	0.00	0.00	0.00	0.214	0.000	20.829	0.00	0.44
75.00	Reinforcing plate	Yes	0.33	1.200	1.25	0.03	0.04	0.214	0.000	20.829	1.51	0.00
76.52	1 5/8" Coax	Yes	1.52	0.836	5.94	0.75	0.63	0.215	0.000	20.949	23.14	20.82
76.52	1.9" Fiber	Yes	1.52	0.000	0.00	0.00	0.00	0.215	0.000	20.949	0.00	2.00
76.52	Reinforcing plate	Yes	1.52	1.200	1.25	0.16	0.19	0.215	0.000	20.949	6.99	0.00
80.00	1 5/8" Coax	Yes	3.48	0.831	5.94	1.72	1.43	0.218	0.000	21.217	53.48	47.82
80.00	1.9" Fiber	Yes	3.48	0.000	0.00	0.00	0.00	0.218	0.000	21.217	0.00	4.60
80.00	Reinforcing plate	Yes	3.48	1.200	1.25	0.36	0.44	0.218	0.000	21.217	16.26	0.00
81.00	1 5/8" Coax	Yes	1.00	0.829	5.94	0.50	0.41	0.221	0.000	21.292	15.38	13.73
81.00	1.9" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.221	0.000	21.292	0.00	1.32
81.00	Reinforcing plate	Yes	1.00	1.200	1.25	0.10	0.13	0.221	0.000	21.292	4.68	0.00
81.19	1 5/8" Coax	Yes	0.19	0.829	5.94	0.09	0.08	0.222	0.000	21.306	2.87	2.56
81.19	1.9" Fiber	Yes	0.19	0.000	0.00	0.00	0.00	0.222	0.000	21.306	0.00	0.25
81.19	Reinforcing plate	Yes	0.19	1.200	1.25	0.02	0.02	0.222	0.000	21.306	0.87	0.00
85.00	1 5/8" Coax	Yes	3.81	0.823	5.94	1.89	1.55	0.221	0.000	21.587	59.05	52.35
85.00	1.9" Fiber	Yes	3.81	0.000	0.00	0.00	0.00	0.221	0.000	21.587	0.00	5.03
85.00	Reinforcing plate	Yes	3.81	1.200	1.25	0.40	0.48	0.221	0.000	21.587	18.11	0.00
86.00	1 5/8" Coax	Yes	1.00	0.822	5.94	0.50	0.41	0.224	0.000	21.660	15.51	13.73
86.00	1.9" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.224	0.000	21.660	0.00	1.32
86.00	Reinforcing plate	Yes	1.00	1.200	1.25	0.10	0.13	0.224	0.000	21.660	4.77	0.00
90.00	1 5/8" Coax	Yes	4.00	0.817	5.94	1.98	1.62	0.228	0.000	21.943	62.45	54.91
90.00	1.9" Fiber	Yes	4.00	0.000	0.00	0.00	0.00	0.228	0.000	21.943	0.00	5.28
90.00	Reinforcing plate	Yes	4.00	1.200	1.25	0.42	0.50	0.228	0.000	21.943	19.31	0.00
94.67	1 5/8" Coax	Yes	4.67	0.811	5.94	2.31	1.87	0.234	0.000	22.262	73.44	64.11
94.67	1.9" Fiber	Yes	4.67	0.000	0.00	0.00	0.00	0.234	0.000	22.262	0.00	6.16
94.67	Reinforcing plate	Yes	4.67	1.200	1.25	0.49	0.58	0.234	0.000	22.262	22.87	0.00
95.00	1 5/8" Coax	Yes	0.33	0.810	5.94	0.16	0.13	0.238	0.000	22.284	5.19	4.53
95.00	1.9" Fiber	Yes	0.33	0.000	0.00	0.00	0.00	0.238	0.000	22.284	0.00	0.44
95.00	Reinforcing plate	Yes	0.33	1.200	1.25	0.03	0.04	0.238	0.000	22.284	1.62	0.00
100.00	1 5/8" Coax	Yes	5.00	0.804	5.94	2.48	1.99	0.242	0.000	22.613	79.25	68.64

Linear Appurtenance Segment Forces (Factored)

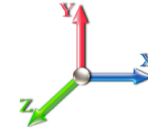
Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 27

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)
100.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.242	0.000	22.613	0.00	6.60
100.00	Reinforcing plate	Yes	5.00	1.200	1.25	0.52	0.63	0.242	0.000	22.613	24.87	0.00
102.00	1 5/8" Coax	Yes	2.00	0.802	5.94	0.99	0.79	0.282	0.000	22.742	31.79	27.46
102.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.282	0.000	22.742	0.00	2.64
102.00	Reinforcing plate	Yes	2.00	1.200	1.00	0.17	0.20	0.282	0.000	22.742	8.01	0.00
102.00	Reinforcing plate	Yes	2.00	1.200	1.25	0.21	0.25	0.282	0.000	22.742	10.01	0.00
102.67	1 5/8" Coax	Yes	0.67	0.801	5.94	0.33	0.27	0.285	0.000	22.784	10.66	9.20
102.67	1.9" Fiber	Yes	0.67	0.000	0.00	0.00	0.00	0.285	0.000	22.784	0.00	0.88
102.67	Reinforcing plate	Yes	0.67	1.200	1.00	0.06	0.07	0.285	0.000	22.784	2.69	0.00
102.67	Reinforcing plate	Yes	0.67	1.200	1.25	0.07	0.08	0.285	0.000	22.784	3.36	0.00
105.00	1 5/8" Coax	Yes	2.33	0.799	5.94	1.15	0.92	0.282	0.000	22.931	37.19	31.99
105.00	1.9" Fiber	Yes	2.33	0.000	0.00	0.00	0.00	0.282	0.000	22.931	0.00	3.08
105.00	Reinforcing plate	Yes	2.33	1.200	1.00	0.19	0.23	0.282	0.000	22.931	9.40	0.00
105.00	Reinforcing plate	Yes	2.03	1.200	1.25	0.21	0.25	0.282	0.000	22.931	10.24	0.00
110.00	1 5/8" Coax	Yes	5.00	0.794	5.94	2.48	1.96	0.250	0.000	23.238	80.33	68.64
110.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.250	0.000	23.238	0.00	6.60
110.00	Reinforcing plate	Yes	5.00	1.200	1.00	0.42	0.50	0.250	0.000	23.238	20.45	0.00
110.91	1 5/8" Coax	Yes	0.91	0.793	5.94	0.45	0.36	0.255	0.000	23.292	14.56	12.42
110.91	1.9" Fiber	Yes	0.91	0.000	0.00	0.00	0.00	0.255	0.000	23.292	0.00	1.19
110.91	Reinforcing plate	Yes	0.91	1.200	1.00	0.08	0.09	0.255	0.000	23.292	3.71	0.00
114.50	1 5/8" Coax	Yes	3.59	0.789	5.94	1.78	1.40	0.260	0.000	23.505	58.09	49.35
114.50	1.9" Fiber	Yes	3.59	0.000	0.00	0.00	0.00	0.260	0.000	23.505	0.00	4.75
114.50	Reinforcing plate	Yes	3.59	1.200	1.00	0.30	0.36	0.260	0.000	23.505	14.87	0.00
114.80	1 5/8" Coax	Yes	0.30	0.789	5.94	0.15	0.12	0.263	0.000	23.523	4.80	4.07
114.80	1.9" Fiber	Yes	0.30	0.000	0.00	0.00	0.00	0.263	0.000	23.523	0.00	0.39
114.80	Reinforcing plate	Yes	0.30	1.200	1.00	0.02	0.03	0.263	0.000	23.523	1.23	0.00
115.00	1 5/8" Coax	Yes	0.20	0.789	5.94	0.10	0.08	0.260	0.000	23.535	3.29	2.79
115.00	1.9" Fiber	Yes	0.20	0.000	0.00	0.00	0.00	0.260	0.000	23.535	0.00	0.27
115.00	Reinforcing plate	Yes	0.20	1.200	1.00	0.02	0.02	0.260	0.000	23.535	0.84	0.00
117.00	1 5/8" Coax	Yes	2.00	0.787	5.94	0.99	0.78	0.262	0.000	23.651	32.42	27.46
117.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.262	0.000	23.651	0.00	2.64
117.00	Reinforcing plate	Yes	2.00	1.200	1.00	0.17	0.20	0.262	0.000	23.651	8.33	0.00
118.00	1 5/8" Coax	Yes	1.00	0.786	5.94	0.50	0.39	0.265	0.000	23.708	16.23	13.73
118.00	1.9" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.265	0.000	23.708	0.00	1.32
118.00	Reinforcing plate	Yes	1.00	1.200	1.00	0.08	0.10	0.265	0.000	23.708	4.17	0.00
120.00	1 5/8" Coax	Yes	2.00	0.784	5.94	0.99	0.78	0.268	0.000	23.823	32.53	27.46
120.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.268	0.000	23.823	0.00	2.64
120.00	Reinforcing plate	Yes	2.00	1.200	1.00	0.17	0.20	0.268	0.000	23.823	8.39	0.00
125.00	1 5/8" Coax	Yes	5.00	0.779	5.94	2.48	1.93	0.236	0.000	24.102	81.81	68.64
125.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.236	0.000	24.102	0.00	6.60
130.00	1 5/8" Coax	Yes	5.00	0.775	5.94	2.48	1.92	0.245	0.000	24.374	82.27	68.64
130.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.245	0.000	24.374	0.00	6.60
135.00	1 5/8" Coax	Yes	5.00	0.771	5.94	2.48	1.91	0.256	0.000	24.638	82.72	68.64
135.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.256	0.000	24.638	0.00	6.60
137.00	1 5/8" Coax	Yes	2.00	0.769	5.94	0.99	0.76	0.263	0.000	24.742	33.16	27.46
137.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.263	0.000	24.742	0.00	2.64
140.00	1 5/8" Coax	Yes	3.00	0.767	5.94	1.49	1.14	0.269	0.000	24.895	49.89	41.18

Linear Appurtenance Segment Forces (Factored)

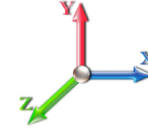
Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 27

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
140.00	1.9" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.269	0.000	24.895	0.00	3.96
145.00	1 5/8" Coax	Yes	5.00	0.763	5.94	2.48	1.89	0.279	0.000	25.146	83.57	68.64
145.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.279	0.000	25.146	0.00	6.60
150.00	1 5/8" Coax	Yes	5.00	0.759	5.94	2.48	1.88	0.293	0.000	25.391	83.97	68.64
150.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.293	0.000	25.391	0.00	6.60
155.00	1 5/8" Coax	Yes	5.00	0.756	5.94	2.48	1.87	0.466	0.000	25.630	84.37	68.64
155.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.466	0.000	25.630	0.00	6.60
158.00	1 5/8" Coax	Yes	3.00	0.754	5.94	1.49	1.12	0.466	0.000	25.771	50.76	41.18
158.00	1.9" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.466	0.000	25.771	0.00	3.96
160.00	1 5/8" Coax	Yes	2.00	0.752	5.94	0.99	0.74	0.466	0.000	25.863	33.90	27.46
160.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.466	0.000	25.863	0.00	2.64
Totals:											1,800.8	2,407.7

Calculated Forces

Structure: CT02694-B-SBA
Site Name: E-Prospect
Height: 162.00 (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

5/23/2022



Page: 19

Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 27

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	-41.29	-31.40	0.00	-3499.4	0.00	3499.46	3849.02	1924.51	7372.73	3691.85	0.00	0.000	0.000	0.704
5.00	-39.79	-31.15	0.00	-3342.4	0.00	3342.45	3795.37	1897.68	7118.03	3564.30	0.13	-0.235	0.000	0.692
10.00	-38.31	-30.89	0.00	-3186.7	0.00	3186.71	3740.61	1870.30	6865.59	3437.90	0.50	-0.472	0.000	0.680
15.00	-36.90	-30.57	0.00	-3032.2	0.00	3032.29	3684.74	1842.37	6615.55	3312.69	1.12	-0.711	0.000	0.667
16.67	-36.42	-30.48	0.00	-2981.2	0.00	2981.24	3665.83	1832.91	6532.59	3271.15	1.38	-0.793	0.000	0.496
18.50	-35.91	-30.37	0.00	-2925.4	0.00	2925.47	3644.97	1822.48	6442.01	3225.79	1.70	-0.860	0.000	0.624
20.00	-35.44	-30.33	0.00	-2879.9	0.00	2879.92	3627.76	1813.88	6368.03	3188.75	1.98	-0.930	0.000	0.620
25.00	-34.04	-30.05	0.00	-2728.2	0.00	2728.26	3569.68	1784.84	6123.18	3066.14	3.08	-1.160	0.000	0.606
30.00	-32.67	-29.76	0.00	-2578.0	0.00	2578.01	3510.49	1755.24	5881.13	2944.94	4.42	-1.392	0.000	0.591
34.67	-31.47	-29.42	0.00	-2439.0	0.00	2439.03	3454.20	1727.10	5657.69	2833.05	5.89	-1.609	0.000	0.585
35.00	-31.32	-29.46	0.00	-2429.3	0.00	2429.33	3450.19	1725.09	5642.00	2825.20	6.00	-1.625	0.000	0.583
40.00	-30.03	-29.10	0.00	-2282.0	0.00	2282.04	3388.79	1694.39	5405.94	2706.99	7.83	-1.861	0.000	0.567
42.14	-29.47	-28.96	0.00	-2219.8	0.00	2219.87	3362.21	1681.10	5306.03	2656.96	8.68	-1.964	0.000	0.560
45.00	-28.28	-28.74	0.00	-2136.9	0.00	2136.94	3326.27	1663.14	5173.07	2590.38	9.91	-2.101	0.000	0.544
47.57	-27.23	-28.54	0.00	-2063.0	0.00	2063.07	2638.80	1319.40	4131.44	2068.79	11.07	-2.223	0.000	0.575
50.00	-26.65	-28.39	0.00	-1993.7	0.00	1993.72	2616.75	1308.38	4046.02	2026.02	12.23	-2.339	0.000	0.613
54.67	-25.67	-28.00	0.00	-1861.1	0.00	1861.12	2573.65	1286.82	3883.14	1944.46	14.64	-2.574	0.000	0.611
55.00	-25.53	-28.03	0.00	-1851.8	0.00	1851.88	2570.56	1285.28	3871.70	1938.73	14.82	-2.592	0.000	0.609
60.00	-24.44	-27.65	0.00	-1711.7	0.00	1711.73	2523.27	1261.63	3699.46	1852.48	17.67	-2.851	0.000	0.583
65.00	-23.37	-27.26	0.00	-1573.4	0.00	1573.47	2474.87	1237.43	3529.43	1767.34	20.79	-3.106	0.000	0.555
70.00	-22.35	-26.57	0.00	-1437.1	0.00	1437.17	2425.36	1212.68	3361.74	1683.37	24.18	-3.357	0.000	0.526
74.67	-21.47	-25.89	0.00	-1313.0	0.00	1313.07	2378.12	1189.06	3207.34	1606.06	27.57	-3.588	0.000	0.508
75.00	-21.39	-25.86	0.00	-1304.5	0.00	1304.53	2374.74	1187.37	3196.52	1600.63	27.82	-3.605	0.000	0.506
76.52	-21.07	-25.67	0.00	-1265.3	0.00	1265.31	2359.17	1179.58	3146.91	1575.79	28.98	-3.681	0.000	0.497
80.00	-20.06	-25.14	0.00	-1175.9	0.00	1175.90	2323.02	1161.51	3033.91	1519.21	31.73	-3.853	0.000	0.469
81.00	-19.77	-24.98	0.00	-1150.7	0.00	1150.77	2312.54	1156.27	3001.71	1503.09	32.54	-3.902	0.000	0.377
81.19	-19.69	-24.98	0.00	-1146.1	0.00	1146.10	1750.09	875.04	2314.24	1158.84	32.69	-3.909	0.000	0.411
85.00	-19.10	-24.42	0.00	-1050.8	0.00	1050.85	1723.72	861.86	2226.75	1115.03	35.87	-4.056	0.000	0.418
86.00	-18.90	-24.31	0.00	-1026.4	0.00	1026.43	1716.70	858.35	2203.94	1103.61	36.73	-4.097	0.000	0.516
90.00	-18.25	-23.76	0.00	-929.19	0.00	929.19	1688.18	844.09	2113.26	1058.20	40.24	-4.296	0.000	0.481
94.67	-17.56	-23.09	0.00	-818.21	0.00	818.21	1653.98	826.99	2008.61	1005.80	44.55	-4.517	0.000	0.461
95.00	-17.47	-23.08	0.00	-810.59	0.00	810.59	1651.53	825.76	2001.27	1002.12	44.86	-4.533	0.000	0.458
100.00	-14.14	-19.51	0.00	-695.20	0.00	695.20	1613.77	806.88	1890.91	946.86	49.73	-4.765	0.000	0.408
102.00	-13.86	-19.21	0.00	-656.19	0.00	656.19	1598.36	799.18	1847.26	925.00	51.75	-4.856	0.000	0.265
102.67	-13.76	-19.13	0.00	-643.32	0.00	643.32	1593.15	796.58	1832.70	917.71	52.43	-4.876	0.000	0.377
105.00	-13.41	-18.81	0.00	-598.75	0.00	598.75	1574.90	787.45	1782.33	892.49	54.83	-4.975	0.000	0.358
110.00	-12.75	-18.11	0.00	-504.70	0.00	504.70	1534.93	767.47	1675.65	839.07	60.14	-5.171	0.000	0.315
110.91	-12.61	-18.00	0.00	-488.31	0.00	488.31	1527.58	763.79	1656.56	829.51	61.12	-5.206	0.000	0.307
114.50	-11.53	-17.01	0.00	-423.61	0.00	423.61	1498.01	749.01	1581.38	791.86	65.09	-5.336	0.000	0.272
114.80	-11.47	-16.97	0.00	-418.56	0.00	418.56	1034.66	517.33	1111.16	556.41	65.42	-5.346	0.000	0.302
115.00	-11.44	-16.95	0.00	-415.11	0.00	415.11	1033.71	516.86	1108.46	555.05	65.65	-5.353	0.000	0.335
117.00	-9.35	-13.40	0.00	-381.21	0.00	381.21	1024.27	512.13	1081.93	541.77	67.90	-5.428	0.000	0.311
118.00	-9.26	-13.28	0.00	-367.80	0.00	367.80	1019.48	509.74	1068.72	535.15	69.04	-5.464	0.000	0.303
118.00	-9.26	-13.28	0.00	-367.80	0.00	367.80	1019.48	509.74	1068.72	535.15	69.04	-5.464	0.000	0.303
120.00	-9.04	-13.04	0.00	-341.25	0.00	341.25	1009.78	504.89	1042.37	521.96	71.34	-5.534	0.000	0.663
125.00	-8.57	-12.43	0.00	-276.07	0.00	276.07	984.73	492.37	977.10	489.28	77.33	-5.903	0.000	0.574
130.00	-8.12	-11.83	0.00	-213.92	0.00	213.92	958.58	479.29	912.78	457.07	83.68	-6.232	0.000	0.477
135.00	-7.71	-11.22	0.00	-154.79	0.00	154.79	931.33	465.66	849.55	425.40	90.36	-6.512	0.000	0.373

Calculated Forces

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 20
	Struct Class: II	



137.00	-4.56	-6.92	0.00	-132.35	0.00	132.35	920.11	460.06	824.58	412.91	93.10	-6.611	0.000	0.326
140.00	-4.38	-6.57	0.00	-111.59	0.00	111.59	902.96	451.48	787.53	394.35	97.29	-6.745	0.000	0.288
145.00	-4.11	-6.00	0.00	-78.72	0.00	78.72	873.49	436.75	726.86	363.97	104.44	-6.932	0.000	0.221
150.00	-3.85	-5.43	0.00	-48.74	0.00	48.74	842.91	421.46	667.67	334.33	111.77	-7.077	0.000	0.151
150.00	-3.85	-5.43	0.00	-48.74	0.00	48.74	656.05	328.03	328.13	215.42	111.77	-7.077	0.000	0.232
155.00	-3.52	-5.02	0.00	-21.58	0.00	21.58	656.05	328.03	328.13	215.42	119.21	-7.169	0.000	0.106
158.00	-3.06	-3.18	0.00	-6.51	0.00	6.51	656.05	328.03	328.13	215.42	123.72	-7.212	0.000	0.035
160.00	-0.11	-0.07	0.00	-0.15	0.00	0.15	656.05	328.03	328.13	215.42	126.74	-7.219	0.000	0.001
162.00	0.00	-0.06	0.00	0.00	0.00	0.00	656.05	328.03	328.13	215.42	129.75	-7.219	0.000	0.000

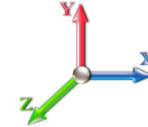
Wind Loading - Shaft

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 21



Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 27

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	RB1	1.00	0.70	16.018	17.62	322.76	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	16.018	17.62	316.13	0.752 *	0.000	5.00	19.681	14.80	417.1	0.0	840.9
10.00		1.00	0.70	16.018	17.62	309.49	0.758 *	0.000	5.00	19.272	14.61	411.9	0.0	823.3
15.00		1.00	0.70	16.018	17.62	302.85	0.765 *	0.000	5.00	18.863	14.42	406.6	0.0	805.7
16.67	RB2	1.00	0.70	16.018	17.62	300.63	0.769 *	0.000	1.67	6.209	4.78	134.7	0.0	265.2
18.50	RT1	1.00	0.70	16.018	17.62	298.20	0.772 *	0.000	1.83	6.752	5.21	146.9	0.0	288.3
20.00		1.00	0.70	16.018	17.62	296.21	0.774 *	0.000	1.50	5.493	4.25	119.9	0.0	234.6
25.00		1.00	0.70	16.018	17.62	289.57	0.779 *	0.000	5.00	18.045	14.05	396.2	0.0	770.5
30.00		1.00	0.70	16.031	17.63	283.05	0.786 *	0.000	5.00	17.636	13.87	391.2	0.0	752.8
34.67	RT2 RB3	1.00	0.73	16.708	18.38	282.63	0.794 *	0.000	4.67	16.103	12.78	375.9	0.0	687.2
35.00		1.00	0.73	16.753	18.43	282.57	0.798 *	0.000	0.33	1.124	0.90	26.5	0.0	48.0
40.00		1.00	0.76	17.405	19.15	281.09	0.802 *	0.000	5.00	16.818	13.49	413.4	0.0	717.6
42.14	Bot - Section 2	1.00	0.77	17.665	19.43	280.21	0.808 *	0.000	2.14	7.062	5.71	177.5	0.0	301.3
45.00		1.00	0.79	18.000	19.80	278.82	0.813 *	0.000	2.86	9.498	7.72	244.6	0.0	736.9
47.57	Top - Section 1	1.00	0.80	18.288	20.12	277.40	0.818 *	0.000	2.57	8.411	6.88	221.4	0.0	652.4
50.00		1.00	0.81	18.551	20.41	280.52	0.817 *	0.000	2.43	7.853	6.41	209.4	0.0	279.6
54.67	RT3 RB4	1.00	0.83	19.030	20.93	277.37	0.823 *	0.000	4.67	14.822	12.20	408.6	0.0	527.6
55.00		1.00	0.83	19.063	20.97	277.13	0.828 *	0.000	0.33	1.034	0.86	28.7	0.0	36.8
60.00		1.00	0.85	19.543	21.50	273.26	0.833 *	0.000	5.00	15.446	12.87	442.7	0.0	549.7
65.00		1.00	0.87	19.995	21.99	268.99	0.843 *	0.000	5.00	15.037	12.68	446.4	0.0	535.0
70.00		1.00	0.89	20.422	22.46	264.36	1.200 *	0.000	5.00	14.628	17.55	631.0	0.0	520.4
74.67	RT4 RB5	1.00	0.91	20.803	22.88	259.74	1.200 *	0.000	4.67	13.294	15.95	584.1	0.0	472.8
75.00		1.00	0.91	20.829	22.91	259.40	1.200 *	0.000	0.33	0.926	1.11	40.7	0.0	32.9
76.52	Bot - Section 3	1.00	0.92	20.949	23.04	257.84	1.200 *	0.000	1.52	4.232	5.08	187.3	0.0	150.5
80.00		1.00	0.93	21.217	23.34	254.17	1.200 *	0.000	3.48	9.725	11.67	435.8	0.0	617.7
81.00	RB6	1.00	0.93	21.292	23.42	253.09	1.200 *	0.000	1.00	2.755	3.31	123.9	0.0	175.0
81.19	Top - Section 2	1.00	0.93	21.306	23.44	252.88	1.200 *	0.000	0.19	0.513	0.62	23.1	0.0	32.5
85.00		1.00	0.94	21.587	23.75	252.66	1.200 *	0.000	3.81	10.345	12.41	471.7	0.0	294.8
86.00	RT6	1.00	0.95	21.660	23.83	251.54	1.200 *	0.000	1.00	2.674	3.21	122.3	0.0	76.2
90.00		1.00	0.96	21.943	24.14	246.96	1.200 *	0.000	4.00	10.531	12.64	488.0	0.0	300.0
94.67	RT5 RB7	1.00	0.97	22.262	24.49	241.44	1.200 *	0.000	4.67	11.963	14.36	562.5	0.0	340.7
95.00		1.00	0.97	22.284	24.51	241.04	1.200 *	0.000	0.33	0.832	1.00	39.2	0.0	23.7
100.00	Appurtenance(s)	1.00	0.99	22.613	24.87	234.93	1.200 *	0.000	5.00	12.386	14.86	591.6	0.0	352.7
102.00	RB8	1.00	0.99	22.742	25.02	232.43	1.200 *	0.000	2.00	4.840	5.81	232.5	0.0	137.8
102.67	RT7	1.00	1.00	22.784	25.06	231.59	1.200 *	0.000	0.67	1.607	1.93	77.3	0.0	45.7
105.00		1.00	1.00	22.931	25.22	228.63	1.200 *	0.000	2.33	5.530	6.64	267.8	0.0	157.4
110.00		1.00	1.02	23.238	25.56	222.16	1.200 *	0.000	5.00	11.568	13.88	567.7	0.0	329.2
110.91	Bot - Section 4	1.00	1.02	23.292	25.62	220.97	1.200 *	0.000	0.91	2.050	2.46	100.9	0.0	58.3
114.50	Appurtenance(s)	1.00	1.03	23.505	25.86	216.20	1.200 *	0.000	3.59	8.126	9.75	403.4	0.0	401.7
114.80	Top - Section 3	1.00	1.03	23.523	25.88	215.80	1.200 *	0.000	0.30	0.661	0.79	32.8	0.0	32.7
115.00		1.00	1.03	23.535	25.89	218.65	1.200 *	0.000	0.20	0.452	0.54	22.5	0.0	9.7
117.00	Appurtenance(s)	1.00	1.03	23.651	26.02	215.96	1.200 *	0.000	2.00	4.413	5.30	220.4	0.0	94.4
118.00	RT8	1.00	1.04	23.708	26.08	214.61	1.200 *	0.000	1.00	2.182	2.62	109.2	0.0	46.6
120.00		1.00	1.04	23.823	26.20	211.89	1.200 *	0.000	2.00	4.314	5.18	217.1	0.0	92.2
125.00		1.00	1.05	24.102	26.51	204.98	1.200 *	0.000	5.00	10.500	12.60	534.5	0.0	224.4
130.00		1.00	1.07	24.374	26.81	197.94	1.200 *	0.000	5.00	10.091	12.11	519.4	0.0	215.6
135.00		1.00	1.08	24.638	27.10	190.78	1.200 *	0.000	5.00	9.682	11.62	503.8	0.0	206.8

Wind Loading - Shaft

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 22
	Struct Class: II	



137.00 Appurtenance(s)	1.00	1.08	24.742	27.22	187.88	1.200 *	0.000	2.00	3.758	4.51	196.4	0.0	80.3	
140.00	1.00	1.09	24.895	27.38	183.50	1.200 *	0.000	3.00	5.515	6.62	290.0	0.0	117.7	
145.00	1.00	1.10	25.146	27.66	176.10	1.200 *	0.000	5.00	8.864	10.64	470.7	0.0	189.2	
150.00 Top - Section 4	1.00	1.11	25.391	27.93	168.60	1.200 *	0.000	5.00	8.455	10.15	453.4	0.0	180.4	
155.00	1.00	1.12	25.630	28.19	109.07	1.200 *	0.000	5.00	5.313	6.38	287.6	0.0	223.2	
158.00 Appurtenance(s)	1.00	1.13	25.771	28.35	109.37	1.200 *	0.000	3.00	3.188	3.82	173.5	0.0	133.9	
160.00 Appurtenance(s)	1.00	1.13	25.863	28.45	109.57	1.200 *	0.000	2.00	2.125	2.55	116.1	0.0	89.3	
162.00	1.00	1.13	25.955	28.55	109.76	0.600	0.000	2.00	2.125	1.27	58.2	0.0	89.3	
Totals:								162.00					15,575.6	16,399.2

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 27

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	160.00	Ericsson AIR 21 B4A B2P	3	25.863	28.450	0.69	0.80	12.57	244.08	0.000	0.000	572.17	0.00	0.00
2	160.00	Mount Mods	1	25.863	28.450	0.75	0.75	12.25	836.96	0.000	0.000	557.50	0.00	0.00
3	160.00	Ericsson S11 B2	3	25.863	28.450	0.54	0.80	4.55	137.70	0.000	0.000	207.14	0.00	0.00
4	160.00	Ericsson 4480 B71 + B85	3	25.863	28.450	0.54	0.80	4.58	251.10	0.000	0.000	208.61	0.00	0.00
5	160.00	RFS ATMAA1412D-1A20	3	25.863	28.450	0.54	0.80	1.88	35.10	0.000	0.000	85.64	0.00	0.00
6	160.00	RFS ATMPP1412D-1CWA	3	25.863	28.450	0.54	0.80	1.88	33.75	0.000	0.000	85.64	0.00	0.00
7	160.00	CommScope	1	25.863	28.450	0.75	0.75	18.66	836.96	0.000	0.000	849.40	0.00	0.00
8	158.00	RFS	3	25.771	28.348	0.56	0.80	34.00	345.60	0.000	0.000	1542.26	0.00	0.00
9	137.00	MS-HRECP	1	24.742	27.216	1.00	1.00	12.25	462.60	0.000	0.000	533.43	0.00	0.00
10	137.00	CBC78T-DS-43	3	24.742	27.216	0.38	0.75	0.42	28.08	0.000	0.000	18.13	0.00	0.00
11	137.00	DB-C1-12C-24AB-OZ	1	24.742	27.216	0.75	0.75	3.04	28.80	0.000	0.000	132.60	0.00	0.00
12	137.00	B5/B13 RRH-BR04C	3	24.742	27.216	0.50	0.75	2.82	189.81	0.000	0.000	122.76	0.00	0.00
13	137.00	B2/B66A RRH-BR049	3	24.742	27.216	0.50	0.75	2.82	227.88	0.000	0.000	122.76	0.00	0.00
14	137.00	MT6407-77A	3	24.742	27.216	0.52	0.75	7.39	214.38	0.000	0.000	321.66	0.00	0.00
15	137.00	JAHH-65B-R3B	6	24.742	27.216	0.62	0.75	34.03	341.82	0.000	0.000	1481.67	0.00	0.00
16	137.00	Low Profile Platform	1	24.742	27.216	1.00	1.00	22.00	1080.00	0.000	0.000	958.00	0.00	0.00
17	117.00	Kathrein 800-10121	3	23.651	26.016	0.63	0.80	9.76	119.07	0.000	0.000	406.45	0.00	0.00
18	117.00	Low Profile Platform	1	23.651	26.016	1.00	1.00	22.00	1080.00	0.000	0.000	915.76	0.00	0.00
19	117.00	KMW AM-X-CD-16-6500T	2	23.651	26.016	0.65	0.80	7.84	59.40	0.000	0.000	326.38	0.00	0.00
20	117.00	Andrew SBNH-1D6565C	4	23.651	26.016	0.64	0.80	29.36	237.96	0.000	0.000	1222.26	0.00	0.00
21	117.00	Kathrein 860 10025 RET	6	23.651	26.016	0.40	0.80	0.43	6.48	0.000	0.000	17.98	0.00	0.00
22	117.00	CCI DTMAPB7819VG12A	6	23.651	26.016	0.54	0.80	3.67	103.68	0.000	0.000	152.61	0.00	0.00
23	117.00	Powerwave LGP 13519	3	23.651	26.016	0.40	0.80	0.41	14.31	0.000	0.000	16.98	0.00	0.00
24	117.00	CSS DBC-750	3	23.651	26.016	0.40	0.80	0.61	12.96	0.000	0.000	25.47	0.00	0.00
25	114.50	Ericsson RRUS 11	6	23.505	25.856	0.54	0.80	8.10	273.78	0.000	0.000	335.27	0.00	0.00
26	114.50	Raycap DC6-48-60-18-8F	3	23.505	25.856	0.54	0.80	2.03	54.00	0.000	0.000	83.82	0.00	0.00
27	100.00	Commscope	1	22.613	24.875	1.00	1.00	37.59	1554.30	0.000	0.000	1496.07	0.00	0.00
28	100.00	Raycap	1	22.613	24.875	1.00	1.00	2.01	19.71	0.000	0.000	80.00	0.00	0.00
29	100.00	Fujitsu TA08025-B604	3	22.613	24.875	0.50	0.75	2.95	172.53	0.000	0.000	117.60	0.00	0.00
30	100.00	Fujitsu TA08025-B605	3	22.613	24.875	0.50	0.75	2.95	202.50	0.000	0.000	117.60	0.00	0.00
31	100.00	JMA Wireless	3	22.613	24.875	0.55	0.75	20.80	174.15	0.000	0.000	827.67	0.00	0.00
Totals:									9,379.44			13,941.24		

Total Applied Force Summary

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 27

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		417.14	1033.94	0.00	0.00
10.00		411.89	1016.32	0.00	0.00
15.00		406.65	998.70	0.00	0.00
16.67		134.65	329.64	0.00	0.00
18.50		146.88	358.97	0.00	0.00
20.00		119.87	292.48	0.00	0.00
25.00		396.16	963.47	0.00	0.00
30.00		391.24	945.85	0.00	0.00
34.67		375.90	867.51	0.00	0.00
35.00		26.45	60.72	0.00	0.00
40.00		413.36	910.62	0.00	0.00
42.14		177.52	383.76	0.00	0.00
45.00		244.62	847.47	0.00	0.00
47.57		221.42	751.63	0.00	0.00
50.00		209.36	373.40	0.00	0.00
54.67		408.62	707.88	0.00	0.00
55.00		28.72	49.54	0.00	0.00
60.00		442.66	742.73	0.00	0.00
65.00		446.35	728.05	0.00	0.00
70.00		728.73	713.37	0.00	0.00
74.67		676.43	653.03	0.00	0.00
75.00		47.26	45.66	0.00	0.00
76.52		217.38	209.03	0.00	0.00
80.00		505.53	752.14	0.00	0.00
81.00		143.97	213.56	0.00	0.00
81.19		26.81	39.75	0.00	0.00
85.00		548.83	441.97	0.00	0.00
86.00		142.58	114.77	0.00	0.00
90.00		569.78	454.38	0.00	0.00
94.67		658.80	520.98	0.00	0.00
95.00		45.96	36.43	0.00	0.00
100.00	(11) attachments	3334.59	2668.85	0.00	0.00
102.00		282.26	211.70	0.00	0.00
102.67		94.02	70.50	0.00	0.00
105.00		324.67	243.53	0.00	0.00
110.00		668.52	513.98	0.00	0.00
110.91		119.12	91.77	0.00	0.00
114.50	(9) attachments	895.43	862.32	0.00	0.00
114.80		38.87	43.64	0.00	0.00
115.00		26.61	17.19	0.00	0.00
117.00	(28) attachments	3345.05	1802.14	0.00	0.00
118.00		129.65	71.29	0.00	0.00
120.00		257.99	141.52	0.00	0.00
125.00		616.29	347.64	0.00	0.00
130.00		601.72	338.84	0.00	0.00
135.00		586.51	330.03	0.00	0.00

Total Applied Force Summary

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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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137.00	(21) attachments	3920.52	2702.91	0.00	0.00
140.00		339.84	151.61	0.00	0.00
145.00		554.31	245.63	0.00	0.00
150.00		537.37	236.82	0.00	0.00
155.00		371.93	279.67	0.00	0.00
158.00	(3) attachments	1766.51	513.40	0.00	0.00
160.00	(17) attachments	2716.07	2487.51	0.00	0.00
162.00		58.24	89.30	0.00	0.00
Totals:		31,317.61	31,019.52	0.00	0.00

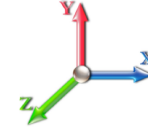
Linear Appurtenance Segment Forces (Factored)

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 27

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.152	1.157	16.018	0.00	51.48
5.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.152	1.157	16.018	0.00	4.95
5.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.152	1.157	16.018	0.00	0.00
10.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.155	1.166	16.018	0.00	51.48
10.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.155	1.166	16.018	0.00	4.95
10.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.155	1.166	16.018	0.00	0.00
15.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.159	1.176	16.018	0.00	51.48
15.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.159	1.176	16.018	0.00	4.95
15.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.159	1.176	16.018	0.00	0.00
16.67	1 5/8" Coax	Yes	1.67	0.000	5.94	0.83	0.00	0.161	1.183	16.018	0.00	17.19
16.67	1.9" Fiber	Yes	1.67	0.000	0.00	0.00	0.00	0.161	1.183	16.018	0.00	1.65
16.67	Reinforcing plate	Yes	1.67	0.000	1.25	0.17	0.00	0.161	1.183	16.018	0.00	0.00
18.50	1 5/8" Coax	Yes	1.83	0.000	5.94	0.91	0.00	0.162	1.187	16.018	0.00	18.84
18.50	1.9" Fiber	Yes	1.83	0.000	0.00	0.00	0.00	0.162	1.187	16.018	0.00	1.81
18.50	Reinforcing plate	Yes	1.83	0.000	1.25	0.19	0.00	0.162	1.187	16.018	0.00	0.00
20.00	1 5/8" Coax	Yes	1.50	0.000	5.94	0.74	0.00	0.164	1.191	16.018	0.00	15.44
20.00	1.9" Fiber	Yes	1.50	0.000	0.00	0.00	0.00	0.164	1.191	16.018	0.00	1.49
20.00	Reinforcing plate	Yes	1.50	0.000	1.25	0.16	0.00	0.164	1.191	16.018	0.00	0.00
25.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.166	1.198	16.018	0.00	51.48
25.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.166	1.198	16.018	0.00	4.95
25.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.166	1.198	16.018	0.00	0.00
30.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.170	1.210	16.031	0.00	51.48
30.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.170	1.210	16.031	0.00	4.95
30.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.170	1.210	16.031	0.00	0.00
34.67	1 5/8" Coax	Yes	4.67	0.000	5.94	2.31	0.00	0.174	1.221	16.708	0.00	48.08
34.67	1.9" Fiber	Yes	4.67	0.000	0.00	0.00	0.00	0.174	1.221	16.708	0.00	4.62
34.67	Reinforcing plate	Yes	4.67	0.000	1.25	0.49	0.00	0.174	1.221	16.708	0.00	0.00
35.00	1 5/8" Coax	Yes	0.33	0.000	5.94	0.16	0.00	0.176	1.228	16.753	0.00	3.40
35.00	1.9" Fiber	Yes	0.33	0.000	0.00	0.00	0.00	0.176	1.228	16.753	0.00	0.33
35.00	Reinforcing plate	Yes	0.33	0.000	1.25	0.03	0.00	0.176	1.228	16.753	0.00	0.00
40.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.178	1.234	17.405	0.00	51.48
40.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.178	1.234	17.405	0.00	4.95
40.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.178	1.234	17.405	0.00	0.00
42.14	1 5/8" Coax	Yes	2.14	0.000	5.94	1.06	0.00	0.181	1.244	17.665	0.00	22.00
42.14	1.9" Fiber	Yes	2.14	0.000	0.00	0.00	0.00	0.181	1.244	17.665	0.00	2.12
42.14	Reinforcing plate	Yes	2.14	0.000	1.25	0.22	0.00	0.181	1.244	17.665	0.00	0.00
45.00	1 5/8" Coax	Yes	2.86	0.000	5.94	1.42	0.00	0.184	1.251	18.000	0.00	29.48
45.00	1.9" Fiber	Yes	2.86	0.000	0.00	0.00	0.00	0.184	1.251	18.000	0.00	2.83
45.00	Reinforcing plate	Yes	2.86	0.000	1.25	0.30	0.00	0.184	1.251	18.000	0.00	0.00
47.57	1 5/8" Coax	Yes	2.57	0.000	5.94	1.27	0.00	0.186	1.258	18.288	0.00	26.46
47.57	1.9" Fiber	Yes	2.57	0.000	0.00	0.00	0.00	0.186	1.258	18.288	0.00	2.54
47.57	Reinforcing plate	Yes	2.57	0.000	1.25	0.27	0.00	0.186	1.258	18.288	0.00	0.00
50.00	1 5/8" Coax	Yes	2.43	0.000	5.94	1.20	0.00	0.185	1.256	18.551	0.00	25.02
50.00	1.9" Fiber	Yes	2.43	0.000	0.00	0.00	0.00	0.185	1.256	18.551	0.00	2.41
50.00	Reinforcing plate	Yes	2.43	0.000	1.25	0.25	0.00	0.185	1.256	18.551	0.00	0.00
54.67	1 5/8" Coax	Yes	4.67	0.000	5.94	2.31	0.00	0.189	1.266	19.030	0.00	48.08
54.67	1.9" Fiber	Yes	4.67	0.000	0.00	0.00	0.00	0.189	1.266	19.030	0.00	4.62

Linear Appurtenance Segment Forces (Factored)

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 27

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)
54.67	Reinforcing plate	Yes	4.67	0.000	1.25	0.49	0.00	0.189	1.266	19.030	0.00	0.00
55.00	1 5/8" Coax	Yes	0.33	0.000	5.94	0.16	0.00	0.191	1.274	19.063	0.00	3.40
55.00	1.9" Fiber	Yes	0.33	0.000	0.00	0.00	0.00	0.191	1.274	19.063	0.00	0.33
55.00	Reinforcing plate	Yes	0.33	0.000	1.25	0.03	0.00	0.191	1.274	19.063	0.00	0.00
60.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.194	1.282	19.543	0.00	51.48
60.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.194	1.282	19.543	0.00	4.95
60.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.194	1.282	19.543	0.00	0.00
65.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.199	1.298	19.995	0.00	51.48
65.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.199	1.298	19.995	0.00	4.95
65.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.199	1.298	19.995	0.00	0.00
70.00	1 5/8" Coax	Yes	5.00	0.847	5.94	2.48	2.10	0.205	0.000	20.422	75.31	51.48
70.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.205	0.000	20.422	0.00	4.95
70.00	Reinforcing plate	Yes	5.00	1.200	1.25	0.52	0.63	0.205	0.000	20.422	22.46	0.00
74.67	1 5/8" Coax	Yes	4.67	0.839	5.94	2.31	1.94	0.210	0.000	20.803	70.99	48.08
74.67	1.9" Fiber	Yes	4.67	0.000	0.00	0.00	0.00	0.210	0.000	20.803	0.00	4.62
74.67	Reinforcing plate	Yes	4.67	1.200	1.25	0.49	0.58	0.210	0.000	20.803	21.37	0.00
75.00	1 5/8" Coax	Yes	0.33	0.838	5.94	0.16	0.14	0.214	0.000	20.829	5.02	3.40
75.00	1.9" Fiber	Yes	0.33	0.000	0.00	0.00	0.00	0.214	0.000	20.829	0.00	0.33
75.00	Reinforcing plate	Yes	0.33	1.200	1.25	0.03	0.04	0.214	0.000	20.829	1.51	0.00
76.52	1 5/8" Coax	Yes	1.52	0.836	5.94	0.75	0.63	0.215	0.000	20.949	23.14	15.62
76.52	1.9" Fiber	Yes	1.52	0.000	0.00	0.00	0.00	0.215	0.000	20.949	0.00	1.50
76.52	Reinforcing plate	Yes	1.52	1.200	1.25	0.16	0.19	0.215	0.000	20.949	6.99	0.00
80.00	1 5/8" Coax	Yes	3.48	0.831	5.94	1.72	1.43	0.218	0.000	21.217	53.48	35.86
80.00	1.9" Fiber	Yes	3.48	0.000	0.00	0.00	0.00	0.218	0.000	21.217	0.00	3.45
80.00	Reinforcing plate	Yes	3.48	1.200	1.25	0.36	0.44	0.218	0.000	21.217	16.26	0.00
81.00	1 5/8" Coax	Yes	1.00	0.829	5.94	0.50	0.41	0.221	0.000	21.292	15.38	10.30
81.00	1.9" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.221	0.000	21.292	0.00	0.99
81.00	Reinforcing plate	Yes	1.00	1.200	1.25	0.10	0.13	0.221	0.000	21.292	4.68	0.00
81.19	1 5/8" Coax	Yes	0.19	0.829	5.94	0.09	0.08	0.222	0.000	21.306	2.87	1.92
81.19	1.9" Fiber	Yes	0.19	0.000	0.00	0.00	0.00	0.222	0.000	21.306	0.00	0.18
81.19	Reinforcing plate	Yes	0.19	1.200	1.25	0.02	0.02	0.222	0.000	21.306	0.87	0.00
85.00	1 5/8" Coax	Yes	3.81	0.823	5.94	1.89	1.55	0.221	0.000	21.587	59.05	39.26
85.00	1.9" Fiber	Yes	3.81	0.000	0.00	0.00	0.00	0.221	0.000	21.587	0.00	3.78
85.00	Reinforcing plate	Yes	3.81	1.200	1.25	0.40	0.48	0.221	0.000	21.587	18.11	0.00
86.00	1 5/8" Coax	Yes	1.00	0.822	5.94	0.50	0.41	0.224	0.000	21.660	15.51	10.30
86.00	1.9" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.224	0.000	21.660	0.00	0.99
86.00	Reinforcing plate	Yes	1.00	1.200	1.25	0.10	0.13	0.224	0.000	21.660	4.77	0.00
90.00	1 5/8" Coax	Yes	4.00	0.817	5.94	1.98	1.62	0.228	0.000	21.943	62.45	41.18
90.00	1.9" Fiber	Yes	4.00	0.000	0.00	0.00	0.00	0.228	0.000	21.943	0.00	3.96
90.00	Reinforcing plate	Yes	4.00	1.200	1.25	0.42	0.50	0.228	0.000	21.943	19.31	0.00
94.67	1 5/8" Coax	Yes	4.67	0.811	5.94	2.31	1.87	0.234	0.000	22.262	73.44	48.08
94.67	1.9" Fiber	Yes	4.67	0.000	0.00	0.00	0.00	0.234	0.000	22.262	0.00	4.62
94.67	Reinforcing plate	Yes	4.67	1.200	1.25	0.49	0.58	0.234	0.000	22.262	22.87	0.00
95.00	1 5/8" Coax	Yes	0.33	0.810	5.94	0.16	0.13	0.238	0.000	22.284	5.19	3.40
95.00	1.9" Fiber	Yes	0.33	0.000	0.00	0.00	0.00	0.238	0.000	22.284	0.00	0.33
95.00	Reinforcing plate	Yes	0.33	1.200	1.25	0.03	0.04	0.238	0.000	22.284	1.62	0.00
100.00	1 5/8" Coax	Yes	5.00	0.804	5.94	2.48	1.99	0.242	0.000	22.613	79.25	51.48

Linear Appurtenance Segment Forces (Factored)

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



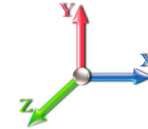
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Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 27

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)
100.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.242	0.000	22.613	0.00	4.95
100.00	Reinforcing plate	Yes	5.00	1.200	1.25	0.52	0.63	0.242	0.000	22.613	24.87	0.00
102.00	1 5/8" Coax	Yes	2.00	0.802	5.94	0.99	0.79	0.282	0.000	22.742	31.79	20.59
102.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.282	0.000	22.742	0.00	1.98
102.00	Reinforcing plate	Yes	2.00	1.200	1.00	0.17	0.20	0.282	0.000	22.742	8.01	0.00
102.00	Reinforcing plate	Yes	2.00	1.200	1.25	0.21	0.25	0.282	0.000	22.742	10.01	0.00
102.67	1 5/8" Coax	Yes	0.67	0.801	5.94	0.33	0.27	0.285	0.000	22.784	10.66	6.90
102.67	1.9" Fiber	Yes	0.67	0.000	0.00	0.00	0.00	0.285	0.000	22.784	0.00	0.66
102.67	Reinforcing plate	Yes	0.67	1.200	1.00	0.06	0.07	0.285	0.000	22.784	2.69	0.00
102.67	Reinforcing plate	Yes	0.67	1.200	1.25	0.07	0.08	0.285	0.000	22.784	3.36	0.00
105.00	1 5/8" Coax	Yes	2.33	0.799	5.94	1.15	0.92	0.282	0.000	22.931	37.19	23.99
105.00	1.9" Fiber	Yes	2.33	0.000	0.00	0.00	0.00	0.282	0.000	22.931	0.00	2.31
105.00	Reinforcing plate	Yes	2.33	1.200	1.00	0.19	0.23	0.282	0.000	22.931	9.40	0.00
105.00	Reinforcing plate	Yes	2.03	1.200	1.25	0.21	0.25	0.282	0.000	22.931	10.24	0.00
110.00	1 5/8" Coax	Yes	5.00	0.794	5.94	2.48	1.96	0.250	0.000	23.238	80.33	51.48
110.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.250	0.000	23.238	0.00	4.95
110.00	Reinforcing plate	Yes	5.00	1.200	1.00	0.42	0.50	0.250	0.000	23.238	20.45	0.00
110.91	1 5/8" Coax	Yes	0.91	0.793	5.94	0.45	0.36	0.255	0.000	23.292	14.56	9.32
110.91	1.9" Fiber	Yes	0.91	0.000	0.00	0.00	0.00	0.255	0.000	23.292	0.00	0.90
110.91	Reinforcing plate	Yes	0.91	1.200	1.00	0.08	0.09	0.255	0.000	23.292	3.71	0.00
114.50	1 5/8" Coax	Yes	3.59	0.789	5.94	1.78	1.40	0.260	0.000	23.505	58.09	37.01
114.50	1.9" Fiber	Yes	3.59	0.000	0.00	0.00	0.00	0.260	0.000	23.505	0.00	3.56
114.50	Reinforcing plate	Yes	3.59	1.200	1.00	0.30	0.36	0.260	0.000	23.505	14.87	0.00
114.80	1 5/8" Coax	Yes	0.30	0.789	5.94	0.15	0.12	0.263	0.000	23.523	4.80	3.05
114.80	1.9" Fiber	Yes	0.30	0.000	0.00	0.00	0.00	0.263	0.000	23.523	0.00	0.29
114.80	Reinforcing plate	Yes	0.30	1.200	1.00	0.02	0.03	0.263	0.000	23.523	1.23	0.00
115.00	1 5/8" Coax	Yes	0.20	0.789	5.94	0.10	0.08	0.260	0.000	23.535	3.29	2.09
115.00	1.9" Fiber	Yes	0.20	0.000	0.00	0.00	0.00	0.260	0.000	23.535	0.00	0.20
115.00	Reinforcing plate	Yes	0.20	1.200	1.00	0.02	0.02	0.260	0.000	23.535	0.84	0.00
117.00	1 5/8" Coax	Yes	2.00	0.787	5.94	0.99	0.78	0.262	0.000	23.651	32.42	20.59
117.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.262	0.000	23.651	0.00	1.98
117.00	Reinforcing plate	Yes	2.00	1.200	1.00	0.17	0.20	0.262	0.000	23.651	8.33	0.00
118.00	1 5/8" Coax	Yes	1.00	0.786	5.94	0.50	0.39	0.265	0.000	23.708	16.23	10.30
118.00	1.9" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.265	0.000	23.708	0.00	0.99
118.00	Reinforcing plate	Yes	1.00	1.200	1.00	0.08	0.10	0.265	0.000	23.708	4.17	0.00
120.00	1 5/8" Coax	Yes	2.00	0.784	5.94	0.99	0.78	0.268	0.000	23.823	32.53	20.59
120.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.268	0.000	23.823	0.00	1.98
120.00	Reinforcing plate	Yes	2.00	1.200	1.00	0.17	0.20	0.268	0.000	23.823	8.39	0.00
125.00	1 5/8" Coax	Yes	5.00	0.779	5.94	2.48	1.93	0.236	0.000	24.102	81.81	51.48
125.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.236	0.000	24.102	0.00	4.95
130.00	1 5/8" Coax	Yes	5.00	0.775	5.94	2.48	1.92	0.245	0.000	24.374	82.27	51.48
130.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.245	0.000	24.374	0.00	4.95
135.00	1 5/8" Coax	Yes	5.00	0.771	5.94	2.48	1.91	0.256	0.000	24.638	82.72	51.48
135.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.256	0.000	24.638	0.00	4.95
137.00	1 5/8" Coax	Yes	2.00	0.769	5.94	0.99	0.76	0.263	0.000	24.742	33.16	20.59
137.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.263	0.000	24.742	0.00	1.98
140.00	1 5/8" Coax	Yes	3.00	0.767	5.94	1.49	1.14	0.269	0.000	24.895	49.89	30.89

Linear Appurtenance Segment Forces (Factored)

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 27

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
140.00	1.9" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.269	0.000	24.895	0.00	2.97
145.00	1 5/8" Coax	Yes	5.00	0.763	5.94	2.48	1.89	0.279	0.000	25.146	83.57	51.48
145.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.279	0.000	25.146	0.00	4.95
150.00	1 5/8" Coax	Yes	5.00	0.759	5.94	2.48	1.88	0.293	0.000	25.391	83.97	51.48
150.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.293	0.000	25.391	0.00	4.95
155.00	1 5/8" Coax	Yes	5.00	0.756	5.94	2.48	1.87	0.466	0.000	25.630	84.37	51.48
155.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.466	0.000	25.630	0.00	4.95
158.00	1 5/8" Coax	Yes	3.00	0.754	5.94	1.49	1.12	0.466	0.000	25.771	50.76	30.89
158.00	1.9" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.466	0.000	25.771	0.00	2.97
160.00	1 5/8" Coax	Yes	2.00	0.752	5.94	0.99	0.74	0.466	0.000	25.863	33.90	20.59
160.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.466	0.000	25.863	0.00	1.98
Totals:											1,800.8	1,805.8

Calculated Forces

Structure: CT02694-B-SBA
Site Name: E-Prospect
Height: 162.00 (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

5/23/2022

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Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 27

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	-30.95	-31.38	0.00	-3457.5	0.00	3457.58	3849.02	1924.51	7372.73	3691.85	0.00	0.000	0.000	0.694
5.00	-29.80	-31.08	0.00	-3300.6	0.00	3300.68	3795.37	1897.68	7118.03	3564.30	0.12	-0.232	0.000	0.682
10.00	-28.66	-30.78	0.00	-3145.2	0.00	3145.27	3740.61	1870.30	6865.59	3437.90	0.49	-0.466	0.000	0.670
15.00	-27.58	-30.44	0.00	-2991.3	0.00	2991.36	3684.74	1842.37	6615.55	3312.69	1.11	-0.702	0.000	0.656
16.67	-27.21	-30.34	0.00	-2940.5	0.00	2940.52	3665.83	1832.91	6532.59	3271.15	1.37	-0.783	0.000	0.488
18.50	-26.82	-30.22	0.00	-2885.0	0.00	2885.00	3644.97	1822.48	6442.01	3225.79	1.68	-0.849	0.000	0.613
20.00	-26.45	-30.16	0.00	-2839.6	0.00	2839.68	3627.76	1813.88	6368.03	3188.75	1.96	-0.918	0.000	0.609
25.00	-25.37	-29.85	0.00	-2688.8	0.00	2688.87	3569.68	1784.84	6123.18	3066.14	3.04	-1.145	0.000	0.595
30.00	-24.32	-29.53	0.00	-2539.6	0.00	2539.62	3510.49	1755.24	5881.13	2944.94	4.36	-1.373	0.000	0.580
34.67	-23.41	-29.18	0.00	-2401.7	0.00	2401.71	3454.20	1727.10	5657.69	2833.05	5.81	-1.587	0.000	0.574
35.00	-23.28	-29.20	0.00	-2392.0	0.00	2392.08	3450.19	1725.09	5642.00	2825.20	5.92	-1.603	0.000	0.573
40.00	-22.30	-28.83	0.00	-2246.0	0.00	2246.07	3388.79	1694.39	5405.94	2706.99	7.72	-1.835	0.000	0.557
42.14	-21.87	-28.68	0.00	-2184.4	0.00	2184.48	3362.21	1681.10	5306.03	2656.96	8.57	-1.937	0.000	0.549
45.00	-20.97	-28.45	0.00	-2102.3	0.00	2102.35	3326.27	1663.14	5173.07	2590.38	9.77	-2.072	0.000	0.534
47.57	-20.16	-28.25	0.00	-2029.2	0.00	2029.22	2638.80	1319.40	4131.44	2068.79	10.92	-2.192	0.000	0.565
50.00	-19.71	-28.08	0.00	-1960.5	0.00	1960.58	2616.75	1308.38	4046.02	2026.02	12.07	-2.305	0.000	0.601
54.67	-18.97	-27.69	0.00	-1829.4	0.00	1829.44	2573.65	1286.82	3883.14	1944.46	14.44	-2.537	0.000	0.599
55.00	-18.85	-27.70	0.00	-1820.3	0.00	1820.30	2570.56	1285.28	3871.70	1938.73	14.61	-2.554	0.000	0.597
60.00	-18.01	-27.30	0.00	-1681.8	0.00	1681.81	2523.27	1261.63	3699.46	1852.48	17.42	-2.808	0.000	0.571
65.00	-17.19	-26.89	0.00	-1545.2	0.00	1545.29	2474.87	1237.43	3529.43	1767.34	20.50	-3.059	0.000	0.544
70.00	-16.41	-26.19	0.00	-1410.8	0.00	1410.82	2425.36	1212.68	3361.74	1683.37	23.83	-3.306	0.000	0.515
74.67	-15.74	-25.51	0.00	-1288.5	0.00	1288.50	2378.12	1189.06	3207.34	1606.06	27.18	-3.532	0.000	0.497
75.00	-15.68	-25.48	0.00	-1280.0	0.00	1280.08	2374.74	1187.37	3196.52	1600.63	27.42	-3.549	0.000	0.495
76.52	-15.43	-25.28	0.00	-1241.4	0.00	1241.44	2359.17	1179.58	3146.91	1575.79	28.56	-3.624	0.000	0.486
80.00	-14.67	-24.75	0.00	-1153.3	0.00	1153.38	2323.02	1161.51	3033.91	1519.21	31.27	-3.792	0.000	0.459
81.00	-14.45	-24.60	0.00	-1128.6	0.00	1128.63	2312.54	1156.27	3001.71	1503.09	32.07	-3.840	0.000	0.369
81.19	-14.38	-24.59	0.00	-1124.0	0.00	1124.04	1750.09	875.04	2314.24	1158.84	32.22	-3.848	0.000	0.402
85.00	-13.94	-24.04	0.00	-1030.2	0.00	1030.26	1723.72	861.86	2226.75	1115.03	35.35	-3.991	0.000	0.408
86.00	-13.79	-23.92	0.00	-1006.2	0.00	1006.22	1716.70	858.35	2203.94	1103.61	36.19	-4.032	0.000	0.504
90.00	-13.29	-23.36	0.00	-910.56	0.00	910.56	1688.18	844.09	2113.26	1058.20	39.64	-4.227	0.000	0.470
94.67	-12.77	-22.69	0.00	-801.46	0.00	801.46	1653.98	826.99	2008.61	1005.80	43.88	-4.443	0.000	0.450
95.00	-12.69	-22.67	0.00	-793.97	0.00	793.97	1651.53	825.76	2001.27	1002.12	44.19	-4.459	0.000	0.447
100.00	-10.25	-19.16	0.00	-680.61	0.00	680.61	1613.77	806.88	1890.91	946.86	48.98	-4.686	0.000	0.398
102.00	-10.04	-18.87	0.00	-642.29	0.00	642.29	1598.36	799.18	1847.26	925.00	50.96	-4.775	0.000	0.258
102.67	-9.96	-18.78	0.00	-629.65	0.00	629.65	1593.15	796.58	1832.70	917.71	51.63	-4.795	0.000	0.368
105.00	-9.70	-18.46	0.00	-585.88	0.00	585.88	1574.90	787.45	1782.33	892.49	53.99	-4.892	0.000	0.349
110.00	-9.21	-17.77	0.00	-493.56	0.00	493.56	1534.93	767.47	1675.65	839.07	59.21	-5.084	0.000	0.307
110.91	-9.10	-17.66	0.00	-477.48	0.00	477.48	1527.58	763.79	1656.56	829.51	60.18	-5.118	0.000	0.299
114.50	-8.31	-16.70	0.00	-414.00	0.00	414.00	1498.01	749.01	1581.38	791.86	64.08	-5.244	0.000	0.265
114.80	-8.26	-16.66	0.00	-409.05	0.00	409.05	1034.66	517.33	1111.16	556.41	64.40	-5.254	0.000	0.294
115.00	-8.24	-16.63	0.00	-405.66	0.00	405.66	1033.71	516.86	1108.46	555.05	64.63	-5.261	0.000	0.326
117.00	-6.74	-13.14	0.00	-372.40	0.00	372.40	1024.27	512.13	1081.93	541.77	66.84	-5.334	0.000	0.303
118.00	-6.67	-13.01	0.00	-359.26	0.00	359.26	1019.48	509.74	1068.72	535.15	67.96	-5.370	0.000	0.295
118.00	-6.67	-13.01	0.00	-359.26	0.00	359.26	1019.48	509.74	1068.72	535.15	67.96	-5.370	0.000	0.295
120.00	-6.50	-12.77	0.00	-333.23	0.00	333.23	1009.78	504.89	1042.37	521.96	70.23	-5.438	0.000	0.645
125.00	-6.14	-12.16	0.00	-269.39	0.00	269.39	984.73	492.37	977.10	489.28	76.11	-5.798	0.000	0.557
130.00	-5.81	-11.55	0.00	-208.60	0.00	208.60	958.58	479.29	912.78	457.07	82.35	-6.119	0.000	0.463
135.00	-5.51	-10.95	0.00	-150.83	0.00	150.83	931.33	465.66	849.55	425.40	88.90	-6.392	0.000	0.361

Calculated Forces

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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	



137.00	-3.25	-6.76	0.00	-128.93	0.00	128.93	920.11	460.06	824.58	412.91	91.59	-6.489	0.000	0.316
140.00	-3.12	-6.41	0.00	-108.65	0.00	108.65	902.96	451.48	787.53	394.35	95.70	-6.619	0.000	0.279
145.00	-2.93	-5.84	0.00	-76.58	0.00	76.58	873.49	436.75	726.86	363.97	102.72	-6.801	0.000	0.214
150.00	-2.75	-5.29	0.00	-47.37	0.00	47.37	842.91	421.46	667.67	334.33	109.91	-6.942	0.000	0.145
150.00	-2.75	-5.29	0.00	-47.37	0.00	47.37	656.05	328.03	328.13	215.42	109.91	-6.942	0.000	0.224
155.00	-2.51	-4.89	0.00	-20.94	0.00	20.94	656.05	328.03	328.13	215.42	117.21	-7.032	0.000	0.101
158.00	-2.22	-3.07	0.00	-6.28	0.00	6.28	656.05	328.03	328.13	215.42	121.64	-7.073	0.000	0.033
160.00	-0.08	-0.07	0.00	-0.14	0.00	0.14	656.05	328.03	328.13	215.42	124.59	-7.080	0.000	0.001
162.00	0.00	-0.06	0.00	0.00	0.00	0.00	656.05	328.03	328.13	215.42	127.55	-7.080	0.000	0.000

Wind Loading - Shaft

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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 26

Dead Load Factor 1.20

Wind Load Factor 1.00



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	RB1	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
5.00		1.00	0.70	4.256	4.68	0.00	1.388 *	1.242	5.00	20.716	28.75	134.6	364.1	1485.3
10.00		1.00	0.70	4.256	4.68	0.00	1.400 *	1.331	5.00	20.381	28.53	133.5	383.0	1480.7
15.00		1.00	0.70	4.256	4.68	0.00	1.412 *	1.386	5.00	20.018	28.26	132.3	391.0	1465.2
16.67	RB2	1.00	0.70	4.256	4.68	0.00	1.420 *	1.401	1.67	6.599	9.37	43.9	131.1	484.6
18.50	RT1	1.00	0.70	4.256	4.68	0.00	1.425 *	1.416	1.83	7.183	10.23	47.9	144.0	528.5
20.00		1.00	0.70	4.256	4.68	0.00	1.429 *	1.427	1.50	5.850	8.36	39.1	118.2	431.0
25.00		1.00	0.70	4.256	4.68	0.00	1.438 *	1.459	5.00	19.261	27.69	129.6	394.6	1421.9
30.00		1.00	0.70	4.260	4.69	0.00	1.452 *	1.486	5.00	18.874	27.40	128.4	393.2	1397.0
34.67	RT2 RB3	1.00	0.73	4.439	4.88	0.00	1.466 *	1.507	4.67	17.276	25.32	123.6	364.9	1281.2
35.00		1.00	0.73	4.451	4.90	0.00	1.473 *	1.509	0.33	1.207	1.78	8.7	25.8	89.7
40.00		1.00	0.76	4.625	5.09	0.00	1.481 *	1.529	5.00	18.092	26.80	136.3	386.7	1343.5
42.14	Bot - Section 2	1.00	0.77	4.694	5.16	0.00	1.493 *	1.537	2.14	7.610	11.36	58.6	164.5	566.2
45.00		1.00	0.79	4.783	5.26	0.00	1.501 *	1.547	2.86	10.237	15.36	80.8	222.3	1204.9
47.57	Top - Section 1	1.00	0.80	4.859	5.35	0.00	1.510 *	1.556	2.57	9.077	13.71	73.3	198.2	1068.1
50.00		1.00	0.81	4.929	5.42	0.00	1.507 *	1.564	2.43	8.487	12.79	69.4	186.2	559.0
54.67	RT3 RB4	1.00	0.83	5.056	5.56	0.00	1.520 *	1.578	4.67	16.050	24.39	135.7	352.9	1056.4
55.00		1.00	0.83	5.065	5.57	0.00	1.529 *	1.579	0.33	1.121	1.71	9.5	24.9	74.0
60.00		1.00	0.85	5.193	5.71	0.00	1.538 *	1.592	5.00	16.773	25.80	147.4	371.3	1104.3
65.00		1.00	0.87	5.313	5.84	0.00	1.557 *	1.605	5.00	16.375	25.50	149.0	364.8	1078.2
70.00		1.00	0.89	5.426	5.97	0.00	1.200 *	1.617	5.00	15.976	19.17	114.4	357.9	1051.8
74.67	RT4 RB5	1.00	0.91	5.527	6.08	0.00	1.200 *	1.628	4.67	14.560	17.47	106.2	328.1	958.4
75.00		1.00	0.91	5.534	6.09	0.00	1.200 *	1.628	0.33	1.015	1.22	7.4	23.2	67.0
76.52	Bot - Section 3	1.00	0.92	5.566	6.12	0.00	1.200 *	1.632	1.52	4.645	5.57	34.1	105.7	306.4
80.00		1.00	0.93	5.637	6.20	0.00	1.200 *	1.639	3.48	10.677	12.81	79.5	242.7	1066.3
81.00	RB6	1.00	0.93	5.657	6.22	0.00	1.200 *	1.641	1.00	3.029	3.63	22.6	69.4	302.7
81.19	Top - Section 2	1.00	0.93	5.661	6.23	0.00	1.200 *	1.641	0.19	0.564	0.68	4.2	12.9	56.3
85.00		1.00	0.94	5.736	6.31	0.00	1.200 *	1.649	3.81	11.393	13.67	86.3	259.9	652.9
86.00	RT6	1.00	0.95	5.755	6.33	0.00	1.200 *	1.651	1.00	2.949	3.54	22.4	67.8	169.4
90.00		1.00	0.96	5.830	6.41	0.00	1.200 *	1.658	4.00	11.636	13.96	89.6	266.3	666.2
94.67	RT5 RB7	1.00	0.97	5.915	6.51	0.00	1.200 *	1.667	4.67	13.260	15.91	103.5	303.8	758.1
95.00		1.00	0.97	5.921	6.51	0.00	1.200 *	1.667	0.33	0.924	1.11	7.2	21.4	53.0
100.00	Appurtenance(s)	1.00	0.99	6.008	6.61	0.00	1.200 *	1.676	5.00	13.783	16.54	109.3	316.5	786.7
102.00	RB8	1.00	0.99	6.043	6.65	0.00	1.200 *	1.679	2.00	5.400	6.48	43.1	125.2	308.9
102.67	RT7	1.00	1.00	6.054	6.66	0.00	1.200 *	1.680	0.67	1.794	2.15	14.3	41.8	102.8
105.00		1.00	1.00	6.093	6.70	0.00	1.200 *	1.684	2.33	6.184	7.42	49.7	143.5	353.4
110.00		1.00	1.02	6.174	6.79	0.00	1.200 *	1.692	5.00	12.978	15.57	105.8	299.4	738.2
110.91	Bot - Section 4	1.00	1.02	6.189	6.81	0.00	1.200 *	1.693	0.91	2.306	2.77	18.8	53.9	131.7
114.50	Appurtenance(s)	1.00	1.03	6.245	6.87	0.00	1.200 *	1.699	3.59	9.143	10.97	75.4	212.4	748.0
114.80	Top - Section 3	1.00	1.03	6.250	6.88	0.00	1.200 *	1.699	0.30	0.745	0.89	6.1	17.5	61.1
115.00		1.00	1.03	6.253	6.88	0.00	1.200 *	1.699	0.20	0.510	0.61	4.2	12.0	24.9
117.00	Appurtenance(s)	1.00	1.03	6.284	6.91	0.00	1.200 *	1.702	2.00	4.980	5.98	41.3	116.4	242.2
118.00	RT8	1.00	1.04	6.299	6.93	0.00	1.200 *	1.704	1.00	2.466	2.96	20.5	57.8	120.0
120.00		1.00	1.04	6.330	6.96	0.00	1.200 *	1.707	2.00	4.883	5.86	40.8	114.3	237.2
125.00		1.00	1.05	6.404	7.04	0.00	1.200 *	1.714	5.00	11.928	14.31	100.8	276.6	575.8
130.00		1.00	1.07	6.476	7.12	0.00	1.200 *	1.720	5.00	11.524	13.83	98.5	267.4	554.9
135.00		1.00	1.08	6.546	7.20	0.00	1.200 *	1.727	5.00	11.121	13.35	96.1	258.2	533.9

Wind Loading - Shaft

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 33
	Struct Class: II	



137.00 Appurtenance(s)	1.00	1.08	6.574	7.23	0.00	1.200 *	1.729	2.00	4.335	5.20	37.6	101.8	208.8
140.00	1.00	1.09	6.615	7.28	0.00	1.200 *	1.733	3.00	6.381	7.66	55.7	149.3	306.3
145.00	1.00	1.10	6.681	7.35	0.00	1.200 *	1.739	5.00	10.313	12.38	91.0	239.3	491.6
150.00 Top - Section 4	1.00	1.11	6.746	7.42	0.00	1.200 *	1.745	5.00	9.909	11.89	88.2	229.7	470.2
155.00	1.00	1.12	6.810	7.49	0.00	1.200 *	1.751	5.00	6.772	8.13	60.9	155.1	452.8
158.00 Appurtenance(s)	1.00	1.13	6.847	7.53	0.00	1.200 *	1.754	3.00	4.065	4.88	36.7	93.3	271.9
160.00 Appurtenance(s)	1.00	1.13	6.872	7.56	0.00	1.200 *	1.757	2.00	2.711	3.25	24.6	62.3	181.3
162.00	1.00	1.13	6.896	7.59	0.00	1.200	1.759	2.00	2.711	3.25	24.7	62.3	181.4
Totals:								162.00			3,703.5		32,312.2

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

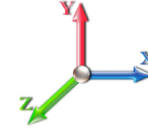
Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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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 26

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	160.00	Ericsson AIR 21 B4A B2P	3	6.872	7.559	0.69	0.80	14.85	836.02	0.000	0.000	112.26	0.00	0.00
2	160.00	Mount Mods	1	6.872	7.559	0.75	0.75	26.88	1860.63	0.000	0.000	203.16	0.00	0.00
3	160.00	Ericsson S11 B2	3	6.872	7.559	0.54	0.80	5.64	345.46	0.000	0.000	42.62	0.00	0.00
4	160.00	Ericsson 4480 B71 + B85	3	6.872	7.559	0.54	0.80	5.67	501.00	0.000	0.000	42.89	0.00	0.00
5	160.00	RFS ATMAA1412D-1A20	3	6.872	7.559	0.54	0.80	3.15	104.26	0.000	0.000	23.79	0.00	0.00
6	160.00	RFS ATMPP1412D-1CWA	3	6.872	7.559	0.54	0.80	3.18	97.91	0.000	0.000	24.00	0.00	0.00
7	160.00	CommScope	1	6.872	7.559	0.75	0.75	40.95	1860.63	0.000	0.000	309.53	0.00	0.00
8	158.00	RFS	3	6.847	7.532	0.56	0.80	37.21	1721.96	0.000	0.000	280.29	0.00	0.00
9	137.00	MS-HRECP	1	6.574	7.231	1.00	1.00	24.11	1735.28	0.000	0.000	174.38	0.00	0.00
10	137.00	CBC78T-DS-43	3	6.574	7.231	0.38	0.75	0.73	98.84	0.000	0.000	5.29	0.00	0.00
11	137.00	DB-C1-12C-24AB-OZ	1	6.574	7.231	0.75	0.75	3.66	122.70	0.000	0.000	26.44	0.00	0.00
12	137.00	B5/B13 RRH-BR04C	3	6.574	7.231	0.50	0.75	3.67	458.80	0.000	0.000	26.57	0.00	0.00
13	137.00	B2/B66A RRH-BR049	3	6.574	7.231	0.50	0.75	3.67	530.94	0.000	0.000	26.57	0.00	0.00
14	137.00	MT6407-77A	3	6.574	7.231	0.52	0.75	8.86	640.55	0.000	0.000	64.10	0.00	0.00
15	137.00	JAHH-65B-R3B	6	6.574	7.231	0.62	0.75	39.01	1823.94	0.000	0.000	282.09	0.00	0.00
16	137.00	Low Profile Platform	1	6.574	7.231	1.00	1.00	39.50	1877.68	0.000	0.000	285.65	0.00	0.00
17	117.00	Kathrein 800-10121	3	6.284	6.913	0.63	0.80	13.66	396.19	0.000	0.000	94.43	0.00	0.00
18	117.00	Low Profile Platform	1	6.284	6.913	1.00	1.00	39.23	1861.43	0.000	0.000	271.17	0.00	0.00
19	117.00	KMW AM-X-CD-16-6500T	2	6.284	6.913	0.65	0.80	10.49	278.67	0.000	0.000	72.54	0.00	0.00
20	117.00	Andrew SBNH-1D6565C	4	6.284	6.913	0.64	0.80	37.48	950.66	0.000	0.000	259.09	0.00	0.00
21	117.00	Kathrein 860 10025 RET	6	6.284	6.913	0.40	0.80	1.32	34.13	0.000	0.000	9.12	0.00	0.00
22	117.00	CCI DTMAPB7819VG12A	6	6.284	6.913	0.54	0.80	6.08	243.80	0.000	0.000	42.03	0.00	0.00
23	117.00	Powerwave LGP 13519	3	6.284	6.913	0.40	0.80	0.94	38.77	0.000	0.000	6.49	0.00	0.00
24	117.00	CSS DBC-750	3	6.284	6.913	0.40	0.80	1.23	36.87	0.000	0.000	8.51	0.00	0.00
25	114.50	Ericsson RRUS 11	6	6.245	6.870	0.54	0.80	10.14	882.82	0.000	0.000	69.65	0.00	0.00
26	114.50	Raycap DC6-48-60-18-8F	3	6.245	6.870	0.54	0.80	3.06	180.77	0.000	0.000	21.01	0.00	0.00
27	100.00	Commscope	1	6.008	6.609	1.00	1.00	82.95	3320.17	0.000	0.000	548.22	0.00	0.00
28	100.00	Raycap	1	6.008	6.609	1.00	1.00	2.56	64.71	0.000	0.000	16.89	0.00	0.00
29	100.00	Fujitsu TA08025-B604	3	6.008	6.609	0.50	0.75	3.77	339.59	0.000	0.000	24.90	0.00	0.00
30	100.00	Fujitsu TA08025-B605	3	6.008	6.609	0.50	0.75	3.77	382.88	0.000	0.000	24.90	0.00	0.00
31	100.00	JMA Wireless	3	6.008	6.609	0.55	0.75	23.14	868.54	0.000	0.000	152.92	0.00	0.00

Totals: 24,496.62 3,551.51

Total Applied Force Summary

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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 26

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		134.61	1905.46	0.00	0.00
10.00		133.55	1913.29	0.00	0.00
15.00		132.31	1905.64	0.00	0.00
16.67		43.87	632.45	0.00	0.00
18.50		47.91	691.22	0.00	0.00
20.00		39.14	564.89	0.00	0.00
25.00		129.64	1872.81	0.00	0.00
30.00		128.37	1851.84	0.00	0.00
34.67		123.64	1709.04	0.00	0.00
35.00		8.71	119.99	0.00	0.00
40.00		136.33	1804.81	0.00	0.00
42.14		58.64	763.81	0.00	0.00
45.00		80.83	1470.60	0.00	0.00
47.57		73.26	1307.27	0.00	0.00
50.00		69.36	785.67	0.00	0.00
54.67		135.65	1493.97	0.00	0.00
55.00		9.54	104.91	0.00	0.00
60.00		147.37	1575.03	0.00	0.00
65.00		149.02	1550.88	0.00	0.00
70.00		155.20	1526.25	0.00	0.00
74.67		145.14	1403.07	0.00	0.00
75.00		10.17	98.48	0.00	0.00
76.52		46.86	450.97	0.00	0.00
80.00		109.14	1399.16	0.00	0.00
81.00		31.18	398.27	0.00	0.00
81.19		5.81	74.18	0.00	0.00
85.00		119.43	1018.45	0.00	0.00
86.00		31.13	265.31	0.00	0.00
90.00		125.01	1050.85	0.00	0.00
94.67		145.64	1208.33	0.00	0.00
95.00		10.20	84.84	0.00	0.00
100.00	(11) attachments	923.05	6246.00	0.00	0.00
102.00		67.35	505.04	0.00	0.00
102.67		22.49	168.50	0.00	0.00
105.00		77.38	581.21	0.00	0.00
110.00		152.32	1213.25	0.00	0.00
110.91		27.28	217.68	0.00	0.00
114.50	(9) attachments	199.96	2153.83	0.00	0.00
114.80		8.95	89.31	0.00	0.00
115.00		6.13	44.24	0.00	0.00
117.00	(28) attachments	823.70	4273.38	0.00	0.00
118.00		30.03	198.98	0.00	0.00
120.00		59.97	395.30	0.00	0.00
125.00		133.82	954.14	0.00	0.00
130.00		131.93	934.15	0.00	0.00
135.00		129.92	914.00	0.00	0.00

Total Applied Force Summary

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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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137.00	(21) attachments	942.30	7649.69	0.00	0.00
140.00		76.25	481.40	0.00	0.00
145.00		125.57	784.27	0.00	0.00
150.00		123.24	763.73	0.00	0.00
155.00		96.24	747.04	0.00	0.00
158.00	(3) attachments	338.38	2170.66	0.00	0.00
160.00	(17) attachments	797.14	5905.25	0.00	0.00
162.00		24.68	181.41	0.00	0.00
Totals:		8,034.74	70,574.16	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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 26

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Coax	Yes	5.00	0.000	5.94	3.51	0.00	0.152	1.157	4.256	0.00	201.26
5.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.152	1.157	4.256	0.00	27.35
5.00	Reinforcing plate	Yes	5.00	0.000	1.25	1.56	0.00	0.152	1.157	4.256	0.00	9.42
10.00	1 5/8" Coax	Yes	5.00	0.000	5.94	3.58	0.00	0.155	1.166	4.256	0.00	210.21
10.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.155	1.166	4.256	0.00	29.45
10.00	Reinforcing plate	Yes	5.00	0.000	1.25	1.63	0.00	0.155	1.166	4.256	0.00	10.82
15.00	1 5/8" Coax	Yes	5.00	0.000	5.94	3.63	0.00	0.159	1.176	4.256	0.00	215.79
15.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.159	1.176	4.256	0.00	30.79
15.00	Reinforcing plate	Yes	5.00	0.000	1.25	1.68	0.00	0.159	1.176	4.256	0.00	11.74
16.67	1 5/8" Coax	Yes	1.67	0.000	5.94	1.22	0.00	0.161	1.183	4.256	0.00	72.57
16.67	1.9" Fiber	Yes	1.67	0.000	0.00	0.00	0.00	0.161	1.183	4.256	0.00	10.41
16.67	Reinforcing plate	Yes	1.67	0.000	1.25	0.56	0.00	0.161	1.183	4.256	0.00	4.00
18.50	1 5/8" Coax	Yes	1.83	0.000	5.94	1.34	0.00	0.162	1.187	4.256	0.00	80.07
18.50	1.9" Fiber	Yes	1.83	0.000	0.00	0.00	0.00	0.162	1.187	4.256	0.00	11.54
18.50	Reinforcing plate	Yes	1.83	0.000	1.25	0.62	0.00	0.162	1.187	4.256	0.00	4.48
20.00	1 5/8" Coax	Yes	1.50	0.000	5.94	1.10	0.00	0.164	1.191	4.256	0.00	65.97
20.00	1.9" Fiber	Yes	1.50	0.000	0.00	0.00	0.00	0.164	1.191	4.256	0.00	9.54
20.00	Reinforcing plate	Yes	1.50	0.000	1.25	0.51	0.00	0.164	1.191	4.256	0.00	3.73
25.00	1 5/8" Coax	Yes	5.00	0.000	5.94	3.69	0.00	0.166	1.198	4.256	0.00	223.21
25.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.166	1.198	4.256	0.00	32.62
25.00	Reinforcing plate	Yes	5.00	0.000	1.25	1.74	0.00	0.166	1.198	4.256	0.00	13.00
30.00	1 5/8" Coax	Yes	5.00	0.000	5.94	3.71	0.00	0.170	1.210	4.260	0.00	225.96
30.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.170	1.210	4.260	0.00	33.31
30.00	Reinforcing plate	Yes	5.00	0.000	1.25	1.76	0.00	0.170	1.210	4.260	0.00	13.48
34.67	1 5/8" Coax	Yes	4.67	0.000	5.94	3.48	0.00	0.174	1.221	4.439	0.00	213.13
34.67	1.9" Fiber	Yes	4.67	0.000	0.00	0.00	0.00	0.174	1.221	4.439	0.00	31.64
34.67	Reinforcing plate	Yes	4.67	0.000	1.25	1.66	0.00	0.174	1.221	4.439	0.00	12.96
35.00	1 5/8" Coax	Yes	0.33	0.000	5.94	0.25	0.00	0.176	1.228	4.451	0.00	15.07
35.00	1.9" Fiber	Yes	0.33	0.000	0.00	0.00	0.00	0.176	1.228	4.451	0.00	2.24
35.00	Reinforcing plate	Yes	0.33	0.000	1.25	0.12	0.00	0.176	1.228	4.451	0.00	0.92
40.00	1 5/8" Coax	Yes	5.00	0.000	5.94	3.75	0.00	0.178	1.234	4.625	0.00	230.44
40.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.178	1.234	4.625	0.00	34.45
40.00	Reinforcing plate	Yes	5.00	0.000	1.25	1.80	0.00	0.178	1.234	4.625	0.00	14.28
42.14	1 5/8" Coax	Yes	2.14	0.000	5.94	1.61	0.00	0.181	1.244	4.694	0.00	98.83
42.14	1.9" Fiber	Yes	2.14	0.000	0.00	0.00	0.00	0.181	1.244	4.694	0.00	14.81
42.14	Reinforcing plate	Yes	2.14	0.000	1.25	0.77	0.00	0.181	1.244	4.694	0.00	6.17
45.00	1 5/8" Coax	Yes	2.86	0.000	5.94	2.16	0.00	0.184	1.251	4.783	0.00	133.04
45.00	1.9" Fiber	Yes	2.86	0.000	0.00	0.00	0.00	0.184	1.251	4.783	0.00	20.00
45.00	Reinforcing plate	Yes	2.86	0.000	1.25	1.04	0.00	0.184	1.251	4.783	0.00	8.37
47.57	1 5/8" Coax	Yes	2.57	0.000	5.94	1.94	0.00	0.186	1.258	4.859	0.00	119.87
47.57	1.9" Fiber	Yes	2.57	0.000	0.00	0.00	0.00	0.186	1.258	4.859	0.00	18.07
47.57	Reinforcing plate	Yes	2.57	0.000	1.25	0.93	0.00	0.186	1.258	4.859	0.00	7.60
50.00	1 5/8" Coax	Yes	2.43	0.000	5.94	1.84	0.00	0.185	1.256	4.929	0.00	113.73
50.00	1.9" Fiber	Yes	2.43	0.000	0.00	0.00	0.00	0.185	1.256	4.929	0.00	17.19
50.00	Reinforcing plate	Yes	2.43	0.000	1.25	0.89	0.00	0.185	1.256	4.929	0.00	7.26
54.67	1 5/8" Coax	Yes	4.67	0.000	5.94	3.54	0.00	0.189	1.266	5.056	0.00	219.93
54.67	1.9" Fiber	Yes	4.67	0.000	0.00	0.00	0.00	0.189	1.266	5.056	0.00	33.39

Linear Appurtenance Segment Forces (Factored)

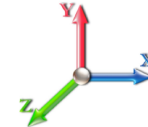
Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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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 26

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
54.67	Reinforcing plate	Yes	4.67	0.000	1.25	1.71	0.00	0.189	1.266	5.056	0.00	14.20
55.00	1 5/8" Coax	Yes	0.33	0.000	5.94	0.25	0.00	0.191	1.274	5.065	0.00	15.55
55.00	1.9" Fiber	Yes	0.33	0.000	0.00	0.00	0.00	0.191	1.274	5.065	0.00	2.36
55.00	Reinforcing plate	Yes	0.33	0.000	1.25	0.12	0.00	0.191	1.274	5.065	0.00	1.00
60.00	1 5/8" Coax	Yes	5.00	0.000	5.94	3.80	0.00	0.194	1.282	5.193	0.00	237.00
60.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.194	1.282	5.193	0.00	36.14
60.00	Reinforcing plate	Yes	5.00	0.000	1.25	1.85	0.00	0.194	1.282	5.193	0.00	15.49
65.00	1 5/8" Coax	Yes	5.00	0.000	5.94	3.81	0.00	0.199	1.298	5.313	0.00	238.34
65.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.199	1.298	5.313	0.00	36.49
65.00	Reinforcing plate	Yes	5.00	0.000	1.25	1.86	0.00	0.199	1.298	5.313	0.00	15.74
70.00	1 5/8" Coax	Yes	5.00	1.200	5.94	3.82	4.59	0.205	0.000	5.426	27.38	239.58
70.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.205	0.000	5.426	0.00	36.82
70.00	Reinforcing plate	Yes	5.00	1.200	1.25	1.87	2.24	0.205	0.000	5.426	13.38	15.98
74.67	1 5/8" Coax	Yes	4.67	1.200	5.94	3.58	4.29	0.210	0.000	5.527	26.11	224.79
74.67	1.9" Fiber	Yes	4.67	0.000	0.00	0.00	0.00	0.210	0.000	5.527	0.00	34.66
74.67	Reinforcing plate	Yes	4.67	1.200	1.25	1.75	2.10	0.210	0.000	5.527	12.79	15.11
75.00	1 5/8" Coax	Yes	0.33	1.200	5.94	0.25	0.30	0.214	0.000	5.534	1.85	15.89
75.00	1.9" Fiber	Yes	0.33	0.000	0.00	0.00	0.00	0.214	0.000	5.534	0.00	2.45
75.00	Reinforcing plate	Yes	0.33	1.200	1.25	0.12	0.15	0.214	0.000	5.534	0.91	1.07
76.52	1 5/8" Coax	Yes	1.52	1.200	5.94	1.16	1.40	0.215	0.000	5.566	8.55	73.13
76.52	1.9" Fiber	Yes	1.52	0.000	0.00	0.00	0.00	0.215	0.000	5.566	0.00	11.29
76.52	Reinforcing plate	Yes	1.52	1.200	1.25	0.57	0.68	0.215	0.000	5.566	4.19	4.93
80.00	1 5/8" Coax	Yes	3.48	1.200	5.94	2.68	3.21	0.218	0.000	5.637	19.91	168.49
80.00	1.9" Fiber	Yes	3.48	0.000	0.00	0.00	0.00	0.218	0.000	5.637	0.00	26.07
80.00	Reinforcing plate	Yes	3.48	1.200	1.25	1.31	1.58	0.218	0.000	5.637	9.78	11.43
81.00	1 5/8" Coax	Yes	1.00	1.200	5.94	0.77	0.92	0.221	0.000	5.657	5.74	48.41
81.00	1.9" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.221	0.000	5.657	0.00	7.50
81.00	Reinforcing plate	Yes	1.00	1.200	1.25	0.38	0.45	0.221	0.000	5.657	2.82	3.29
81.19	1 5/8" Coax	Yes	0.19	1.200	5.94	0.14	0.17	0.222	0.000	5.661	1.07	9.04
81.19	1.9" Fiber	Yes	0.19	0.000	0.00	0.00	0.00	0.222	0.000	5.661	0.00	1.40
81.19	Reinforcing plate	Yes	0.19	1.200	1.25	0.07	0.08	0.222	0.000	5.661	0.53	0.61
85.00	1 5/8" Coax	Yes	3.81	1.200	5.94	2.94	3.52	0.221	0.000	5.736	22.23	185.25
85.00	1.9" Fiber	Yes	3.81	0.000	0.00	0.00	0.00	0.221	0.000	5.736	0.00	28.75
85.00	Reinforcing plate	Yes	3.81	1.200	1.25	1.45	1.73	0.221	0.000	5.736	10.94	12.67
86.00	1 5/8" Coax	Yes	1.00	1.200	5.94	0.77	0.92	0.224	0.000	5.755	5.85	48.62
86.00	1.9" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.224	0.000	5.755	0.00	7.55
86.00	Reinforcing plate	Yes	1.00	1.200	1.25	0.38	0.46	0.224	0.000	5.755	2.88	3.33
90.00	1 5/8" Coax	Yes	4.00	1.200	5.94	3.09	3.70	0.228	0.000	5.830	23.75	195.11
90.00	1.9" Fiber	Yes	4.00	0.000	0.00	0.00	0.00	0.228	0.000	5.830	0.00	30.37
90.00	Reinforcing plate	Yes	4.00	1.200	1.25	1.52	1.83	0.228	0.000	5.830	11.71	13.44
94.67	1 5/8" Coax	Yes	4.67	1.200	5.94	3.61	4.33	0.234	0.000	5.915	28.18	228.62
94.67	1.9" Fiber	Yes	4.67	0.000	0.00	0.00	0.00	0.234	0.000	5.915	0.00	35.68
94.67	Reinforcing plate	Yes	4.67	1.200	1.25	1.78	2.14	0.234	0.000	5.915	13.93	15.85
95.00	1 5/8" Coax	Yes	0.33	1.200	5.94	0.26	0.31	0.238	0.000	5.921	1.99	16.16
95.00	1.9" Fiber	Yes	0.33	0.000	0.00	0.00	0.00	0.238	0.000	5.921	0.00	2.52
95.00	Reinforcing plate	Yes	0.33	1.200	1.25	0.13	0.15	0.238	0.000	5.921	0.99	1.12
100.00	1 5/8" Coax	Yes	5.00	1.200	5.94	3.87	4.65	0.242	0.000	6.008	30.71	245.74

Linear Appurtenance Segment Forces (Factored)

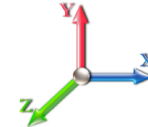
Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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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 26

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
100.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.242	0.000	6.008	0.00	38.46
100.00	Reinforcing plate	Yes	5.00	1.200	1.25	1.92	2.30	0.242	0.000	6.008	15.21	17.16
102.00	1 5/8" Coax	Yes	2.00	1.200	5.94	1.55	1.86	0.282	0.000	6.043	12.36	98.43
102.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.282	0.000	6.043	0.00	15.42
102.00	Reinforcing plate	Yes	2.00	1.200	1.00	0.73	0.87	0.282	0.000	6.043	5.79	6.89
102.00	Reinforcing plate	Yes	2.00	1.200	1.25	0.77	0.92	0.282	0.000	6.043	6.13	6.89
102.67	1 5/8" Coax	Yes	0.67	1.200	5.94	0.52	0.62	0.285	0.000	6.054	4.15	32.99
102.67	1.9" Fiber	Yes	0.67	0.000	0.00	0.00	0.00	0.285	0.000	6.054	0.00	5.17
102.67	Reinforcing plate	Yes	0.67	1.200	1.00	0.24	0.29	0.285	0.000	6.054	1.95	2.31
102.67	Reinforcing plate	Yes	0.67	1.200	1.25	0.26	0.31	0.285	0.000	6.054	2.06	2.31
105.00	1 5/8" Coax	Yes	2.33	1.200	5.94	1.81	2.17	0.282	0.000	6.093	14.54	114.92
105.00	1.9" Fiber	Yes	2.33	0.000	0.00	0.00	0.00	0.282	0.000	6.093	0.00	18.03
105.00	Reinforcing plate	Yes	2.33	1.200	1.00	0.85	1.02	0.282	0.000	6.093	6.82	8.07
105.00	Reinforcing plate	Yes	2.03	1.200	1.25	0.78	0.94	0.282	0.000	6.093	6.28	7.03
110.00	1 5/8" Coax	Yes	5.00	1.200	5.94	3.88	4.66	0.250	0.000	6.174	31.66	247.43
110.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.250	0.000	6.174	0.00	38.92
110.00	Reinforcing plate	Yes	5.00	1.200	1.00	1.83	2.19	0.250	0.000	6.174	14.89	17.49
110.91	1 5/8" Coax	Yes	0.91	1.200	5.94	0.70	0.84	0.255	0.000	6.189	5.75	44.81
110.91	1.9" Fiber	Yes	0.91	0.000	0.00	0.00	0.00	0.255	0.000	6.189	0.00	7.05
110.91	Reinforcing plate	Yes	0.91	1.200	1.00	0.33	0.40	0.255	0.000	6.189	2.70	3.17
114.50	1 5/8" Coax	Yes	3.59	1.200	5.94	2.80	3.36	0.260	0.000	6.245	23.06	178.42
114.50	1.9" Fiber	Yes	3.59	0.000	0.00	0.00	0.00	0.260	0.000	6.245	0.00	28.12
114.50	Reinforcing plate	Yes	3.59	1.200	1.00	1.32	1.58	0.260	0.000	6.245	10.86	12.67
114.80	1 5/8" Coax	Yes	0.30	1.200	5.94	0.23	0.28	0.263	0.000	6.250	1.90	14.73
114.80	1.9" Fiber	Yes	0.30	0.000	0.00	0.00	0.00	0.263	0.000	6.250	0.00	2.32
114.80	Reinforcing plate	Yes	0.30	1.200	1.00	0.11	0.13	0.263	0.000	6.250	0.90	1.05
115.00	1 5/8" Coax	Yes	0.20	1.200	5.94	0.16	0.19	0.260	0.000	6.253	1.31	10.09
115.00	1.9" Fiber	Yes	0.20	0.000	0.00	0.00	0.00	0.260	0.000	6.253	0.00	1.59
115.00	Reinforcing plate	Yes	0.20	1.200	1.00	0.07	0.09	0.260	0.000	6.253	0.62	0.72
117.00	1 5/8" Coax	Yes	2.00	1.200	5.94	1.56	1.87	0.262	0.000	6.284	12.92	99.41
117.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.262	0.000	6.284	0.00	15.69
117.00	Reinforcing plate	Yes	2.00	1.200	1.00	0.73	0.88	0.262	0.000	6.284	6.09	7.08
118.00	1 5/8" Coax	Yes	1.00	1.200	5.94	0.78	0.93	0.265	0.000	6.299	6.48	49.74
118.00	1.9" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.265	0.000	6.299	0.00	7.85
118.00	Reinforcing plate	Yes	1.00	1.200	1.00	0.37	0.44	0.265	0.000	6.299	3.05	3.55
120.00	1 5/8" Coax	Yes	2.00	1.200	5.94	1.56	1.87	0.268	0.000	6.330	13.03	99.59
120.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.268	0.000	6.330	0.00	15.73
120.00	Reinforcing plate	Yes	2.00	1.200	1.00	0.74	0.88	0.268	0.000	6.330	6.15	7.12
125.00	1 5/8" Coax	Yes	5.00	1.200	5.94	3.90	4.68	0.236	0.000	6.404	32.99	249.72
125.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.236	0.000	6.404	0.00	39.54
130.00	1 5/8" Coax	Yes	5.00	1.200	5.94	3.91	4.69	0.245	0.000	6.476	33.41	250.44
130.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.245	0.000	6.476	0.00	39.73
135.00	1 5/8" Coax	Yes	5.00	1.200	5.94	3.91	4.70	0.256	0.000	6.546	33.82	251.12
135.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.256	0.000	6.546	0.00	39.92
137.00	1 5/8" Coax	Yes	2.00	1.200	5.94	1.57	1.88	0.263	0.000	6.574	13.59	100.56
137.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.263	0.000	6.574	0.00	16.00
140.00	1 5/8" Coax	Yes	3.00	1.200	5.94	2.35	2.82	0.269	0.000	6.615	20.53	151.07

Linear Appurtenance Segment Forces (Factored)

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

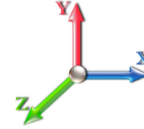


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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 26

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)
140.00	1.9" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.269	0.000	6.615	0.00	24.06
145.00	1 5/8" Coax	Yes	5.00	1.200	5.94	3.92	4.71	0.279	0.000	6.681	34.61	252.43
145.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.279	0.000	6.681	0.00	40.28
150.00	1 5/8" Coax	Yes	5.00	1.200	5.94	3.93	4.72	0.293	0.000	6.746	34.99	253.06
150.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.293	0.000	6.746	0.00	40.45
155.00	1 5/8" Coax	Yes	5.00	1.200	5.94	3.93	4.72	0.466	0.000	6.810	35.36	253.67
155.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.466	0.000	6.810	0.00	40.62
158.00	1 5/8" Coax	Yes	3.00	1.200	5.94	2.36	2.83	0.466	0.000	6.847	21.35	152.41
158.00	1.9" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.466	0.000	6.847	0.00	24.43
160.00	1 5/8" Coax	Yes	2.00	1.200	5.94	1.58	1.89	0.466	0.000	6.872	14.29	101.70
160.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.466	0.000	6.872	0.00	16.31
Totals:											779.8	9,185.1

Calculated Forces

Structure: CT02694-B-SBA

Code: TIA-222-G

5/23/2022

Site Name: E-Prospect

Exposure: B



Height: 162.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

Topography: 1

Struct Class: II

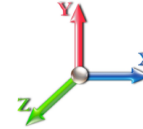
Page: 41

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

Iterations 26

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	-70.57	-8.07	0.00	-909.67	0.00	909.67	3849.02	1924.51	7372.73	3691.85	0.00	0.000	0.000	0.194
5.00	-68.66	-8.01	0.00	-869.31	0.00	869.31	3795.37	1897.68	7118.03	3564.30	0.03	-0.061	0.000	0.191
10.00	-66.73	-7.95	0.00	-829.26	0.00	829.26	3740.61	1870.30	6865.59	3437.90	0.13	-0.123	0.000	0.187
15.00	-64.82	-7.86	0.00	-789.53	0.00	789.53	3684.74	1842.37	6615.55	3312.69	0.29	-0.185	0.000	0.184
16.67	-64.19	-7.83	0.00	-776.41	0.00	776.41	3665.83	1832.91	6532.59	3271.15	0.36	-0.206	0.000	0.137
18.50	-63.49	-7.80	0.00	-762.08	0.00	762.08	3644.97	1822.48	6442.01	3225.79	0.44	-0.224	0.000	0.173
20.00	-62.92	-7.80	0.00	-750.38	0.00	750.38	3627.76	1813.88	6368.03	3188.75	0.52	-0.242	0.000	0.172
25.00	-61.04	-7.73	0.00	-711.38	0.00	711.38	3569.68	1784.84	6123.18	3066.14	0.80	-0.302	0.000	0.168
30.00	-59.19	-7.65	0.00	-672.74	0.00	672.74	3510.49	1755.24	5881.13	2944.94	1.15	-0.362	0.000	0.164
34.67	-57.47	-7.54	0.00	-637.02	0.00	637.02	3454.20	1727.10	5657.69	2833.05	1.53	-0.419	0.000	0.162
35.00	-57.35	-7.57	0.00	-634.53	0.00	634.53	3450.19	1725.09	5642.00	2825.20	1.56	-0.423	0.000	0.162
40.00	-55.54	-7.46	0.00	-596.69	0.00	596.69	3388.79	1694.39	5405.94	2706.99	2.04	-0.485	0.000	0.158
42.14	-54.77	-7.42	0.00	-580.76	0.00	580.76	3362.21	1681.10	5306.03	2656.96	2.26	-0.512	0.000	0.156
45.00	-53.30	-7.36	0.00	-559.50	0.00	559.50	3326.27	1663.14	5173.07	2590.38	2.58	-0.548	0.000	0.152
47.57	-51.99	-7.30	0.00	-540.58	0.00	540.58	2638.80	1319.40	4131.44	2068.79	2.88	-0.580	0.000	0.160
50.00	-51.20	-7.27	0.00	-522.83	0.00	522.83	2616.75	1308.38	4046.02	2026.02	3.19	-0.610	0.000	0.171
54.67	-49.70	-7.14	0.00	-488.89	0.00	488.89	2573.65	1286.82	3883.14	1944.46	3.81	-0.672	0.000	0.171
55.00	-49.59	-7.16	0.00	-486.54	0.00	486.54	2570.56	1285.28	3871.70	1938.73	3.86	-0.677	0.000	0.171
60.00	-48.01	-7.05	0.00	-450.71	0.00	450.71	2523.27	1261.63	3699.46	1852.48	4.61	-0.745	0.000	0.164
65.00	-46.45	-6.94	0.00	-415.44	0.00	415.44	2474.87	1237.43	3529.43	1767.34	5.42	-0.812	0.000	0.157
70.00	-44.92	-6.81	0.00	-380.75	0.00	380.75	2425.36	1212.68	3361.74	1683.37	6.31	-0.878	0.000	0.150
74.67	-43.52	-6.67	0.00	-348.94	0.00	348.94	2378.12	1189.06	3207.34	1606.06	7.20	-0.939	0.000	0.145
75.00	-43.42	-6.67	0.00	-346.74	0.00	346.74	2374.74	1187.37	3196.52	1600.63	7.26	-0.944	0.000	0.145
76.52	-42.96	-6.64	0.00	-336.63	0.00	336.63	2359.17	1179.58	3146.91	1575.79	7.57	-0.964	0.000	0.142
80.00	-41.56	-6.52	0.00	-313.52	0.00	313.52	2323.02	1161.51	3033.91	1519.21	8.29	-1.010	0.000	0.135
81.00	-41.16	-6.49	0.00	-306.99	0.00	306.99	2312.54	1156.27	3001.71	1503.09	8.50	-1.023	0.000	0.108
81.19	-41.09	-6.50	0.00	-305.78	0.00	305.78	1750.09	875.04	2314.24	1158.84	8.54	-1.025	0.000	0.118
85.00	-40.07	-6.38	0.00	-281.00	0.00	281.00	1723.72	861.86	2226.75	1115.03	9.37	-1.064	0.000	0.121
86.00	-39.80	-6.37	0.00	-274.62	0.00	274.62	1716.70	858.35	2203.94	1103.61	9.60	-1.075	0.000	0.149
90.00	-38.75	-6.26	0.00	-249.16	0.00	249.16	1688.18	844.09	2113.26	1058.20	10.52	-1.129	0.000	0.140
94.67	-37.54	-6.11	0.00	-219.93	0.00	219.93	1653.98	826.99	2008.61	1005.80	11.66	-1.188	0.000	0.135
95.00	-37.45	-6.12	0.00	-217.92	0.00	217.92	1651.53	825.76	2001.27	1002.12	11.74	-1.192	0.000	0.134
100.00	-31.22	-5.09	0.00	-187.32	0.00	187.32	1613.77	806.88	1890.91	946.86	13.02	-1.255	0.000	0.120
102.00	-30.72	-5.02	0.00	-177.15	0.00	177.15	1598.36	799.18	1847.26	925.00	13.55	-1.279	0.000	0.078
102.67	-30.55	-5.00	0.00	-173.79	0.00	173.79	1593.15	796.58	1832.70	917.71	13.73	-1.285	0.000	0.111
105.00	-29.96	-4.93	0.00	-162.15	0.00	162.15	1574.90	787.45	1782.33	892.49	14.37	-1.311	0.000	0.106
110.00	-28.75	-4.76	0.00	-137.50	0.00	137.50	1534.93	767.47	1675.65	839.07	15.77	-1.365	0.000	0.095
110.91	-28.53	-4.74	0.00	-133.19	0.00	133.19	1527.58	763.79	1656.56	829.51	16.03	-1.374	0.000	0.093
114.50	-26.38	-4.50	0.00	-116.14	0.00	116.14	1498.01	749.01	1581.38	791.86	17.08	-1.410	0.000	0.083
114.80	-26.29	-4.49	0.00	-114.81	0.00	114.81	1034.66	517.33	1111.16	556.41	17.16	-1.412	0.000	0.092
115.00	-26.25	-4.49	0.00	-113.90	0.00	113.90	1033.71	516.86	1108.46	555.05	17.22	-1.414	0.000	0.102
117.00	-22.00	-3.56	0.00	-104.92	0.00	104.92	1024.27	512.13	1081.93	541.77	17.82	-1.435	0.000	0.094
118.00	-21.80	-3.53	0.00	-101.36	0.00	101.36	1019.48	509.74	1068.72	535.15	18.12	-1.445	0.000	0.092
118.00	-21.80	-3.53	0.00	-101.36	0.00	101.36	1019.48	509.74	1068.72	535.15	18.12	-1.445	0.000	0.092
120.00	-21.40	-3.49	0.00	-94.29	0.00	94.29	1009.78	504.89	1042.37	521.96	18.73	-1.464	0.000	0.202
125.00	-20.44	-3.36	0.00	-76.86	0.00	76.86	984.73	492.37	977.10	489.28	20.32	-1.566	0.000	0.178
130.00	-19.51	-3.23	0.00	-60.04	0.00	60.04	958.58	479.29	912.78	457.07	22.01	-1.658	0.000	0.152
135.00	-18.60	-3.09	0.00	-43.88	0.00	43.88	931.33	465.66	849.55	425.40	23.79	-1.737	0.000	0.123

Calculated Forces

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 42
	Struct Class: II	



137.00	-10.98	-1.92	0.00	-37.69	0.00	37.69	920.11	460.06	824.58	412.91	24.53	-1.766	0.000	0.103
140.00	-10.50	-1.84	0.00	-31.92	0.00	31.92	902.96	451.48	787.53	394.35	25.65	-1.804	0.000	0.093
145.00	-9.72	-1.70	0.00	-22.71	0.00	22.71	873.49	436.75	726.86	363.97	27.57	-1.857	0.000	0.074
150.00	-8.96	-1.56	0.00	-14.21	0.00	14.21	842.91	421.46	667.67	334.33	29.54	-1.899	0.000	0.053
150.00	-8.96	-1.56	0.00	-14.21	0.00	14.21	656.05	328.03	328.13	215.42	29.54	-1.899	0.000	0.080
155.00	-8.21	-1.44	0.00	-6.43	0.00	6.43	656.05	328.03	328.13	215.42	31.54	-1.926	0.000	0.042
158.00	-6.06	-1.03	0.00	-2.12	0.00	2.12	656.05	328.03	328.13	215.42	32.76	-1.939	0.000	0.019
160.00	-0.18	-0.03	0.00	-0.06	0.00	0.06	656.05	328.03	328.13	215.42	33.57	-1.942	0.000	0.001
162.00	0.00	-0.02	0.00	0.00	0.00	0.00	656.05	328.03	328.13	215.42	34.38	-1.942	0.000	0.000

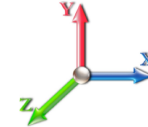
Seismic Segment Forces (Factored)

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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 24
Gust Response Factor	1.10	Sds	0.20	Ss 0.19
Dead Load Factor	1.20	Seismic Load Factor	1.00	S1 0.06
Wind Load Factor	0.00	Structure Frequency (f1)	0.26	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	RB1	0.00	0.00	0.00	0.00	0.00	
5.00		934.37	0.00	0.03	0.02	20.52	
10.00		914.80	0.01	0.05	0.03	28.32	
15.00		895.22	0.02	0.06	0.04	31.65	
16.67	RB2	294.64	0.02	0.06	0.04	10.69	
18.50	RT1	320.36	0.02	0.07	0.04	11.88	
20.00		260.64	0.03	0.07	0.04	9.81	
25.00		856.07	0.05	0.07	0.04	33.32	
30.00		836.50	0.06	0.07	0.04	33.35	
34.67	RT2 RB3	763.61	0.09	0.07	0.04	31.08	
35.00		53.31	0.09	0.07	0.04	2.17	
40.00		797.35	0.12	0.07	0.04	33.28	
42.14	Bot - Section 2	334.76	0.13	0.07	0.03	14.11	
45.00		818.83	0.15	0.07	0.03	34.97	
47.57	Top - Section 1	724.92	0.16	0.07	0.03	31.26	
50.00		310.67	0.18	0.07	0.03	13.49	
54.67	RT3 RB4	586.23	0.22	0.06	0.02	25.47	
55.00		40.89	0.22	0.06	0.02	1.78	
60.00		610.81	0.26	0.05	0.02	25.69	
65.00		594.49	0.30	0.04	0.01	22.83	
70.00		578.18	0.35	0.03	0.01	18.15	
74.67	RT4 RB5	525.29	0.40	0.02	0.01	11.06	
75.00		36.58	0.41	0.02	0.01	0.74	
76.52	Bot - Section 3	167.21	0.42	0.01	0.01	2.67	
80.00		686.32	0.46	0.00	0.01	3.45	
81.00	RB6	194.40	0.47	-0.01	0.01	0.32	
81.19	Top - Section 2	36.16	0.47	-0.01	0.01	0.04	
85.00		327.52	0.52	-0.02	0.01	-3.97	
86.00	RT6	84.63	0.53	-0.03	0.01	-1.31	
90.00		333.31	0.58	-0.05	0.01	-9.35	
94.67	RT5 RB7	378.57	0.65	-0.07	0.02	-14.92	
95.00		26.32	0.65	-0.07	0.02	-1.05	
100.00	Appurtenance(s)	2750.9	0.72	-0.09	0.03	-129.21	
102.00	RB8	153.08	0.75	-0.10	0.04	-7.39	
102.67	RT7	50.82	0.76	-0.10	0.04	-2.47	
105.00		174.89	0.79	-0.11	0.05	-8.52	
110.00		365.74	0.87	-0.12	0.08	-16.69	
110.91	Bot - Section 4	64.80	0.89	-0.12	0.08	-2.89	
114.50	Appurtenance(s)	810.49	0.94	-0.12	0.11	-31.59	
114.80	Top - Section 3	36.30	0.95	-0.12	0.11	-1.39	
115.00		10.75	0.95	-0.12	0.11	-0.41	
117.00	Appurtenance(s)	1920.2	0.99	-0.11	0.12	-64.83	
118.00	RT8	51.83	1.00	-0.11	0.13	-1.63	
120.00		102.49	1.04	-0.10	0.15	-2.67	
125.00		249.37	1.13	-0.05	0.20	-2.47	
130.00		239.58	1.22	0.02	0.27	2.52	

Seismic Segment Forces (Factored)

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 44



135.00		229.80	1.31	0.14	0.35	8.10
137.00	Appurtenance(s)	2948.4	1.35	0.20	0.38	136.70
140.00		130.83	1.41	0.31	0.44	8.42
145.00		210.22	1.51	0.54	0.56	20.60
150.00	Top - Section 4	200.43	1.62	0.84	0.70	27.30
155.00		248.04	1.73	1.24	0.86	44.44
158.00	Appurtenance(s)	532.83	1.80	1.53	0.97	110.43
160.00	Appurtenance(s)	2738.8	1.84	1.74	1.05	621.59
162.00		99.22	1.89	1.98	1.14	24.55
	Totals:	28,642.9				1,154.0
						Total Wind: 31,317.6

Calculated Forces

Structure: CT02694-B-SBA

Code: TIA-222-G

5/23/2022

Site Name: E-Prospect

Exposure: B

Height: 162.00 (ft)

Crest Height: 0.00

Base Elev: 0.000 (ft)

Site Class: D - Stiff Soil

Gh: 1.1

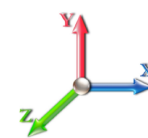
Topography: 1

Struct Class: II

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Load Case: 1.2D + 1.0E			Iterations 24
Gust Response Factor	1.10	Sds 0.20	Ss 0.19
Dead Load Factor	1.20	Seismic Load Factor 1.00	S1 0.06
Wind Load Factor	0.00	Structure Frequency (f1) 0.26	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	-41.36	-1.46	0.00	-183.08	0.00	183.08	3849.02	1924.51	7372.73	3691.85	0.00	0.00	0.00	0.044
5.00	-39.98	-1.45	0.00	-175.78	0.00	175.78	3795.37	1897.68	7118.03	3564.30	0.01	-0.01	0.043	
10.00	-38.62	-1.43	0.00	-168.54	0.00	168.54	3740.61	1870.30	6865.59	3437.90	0.03	-0.02	0.043	
15.00	-37.29	-1.40	0.00	-161.40	0.00	161.40	3684.74	1842.37	6615.55	3312.69	0.06	-0.04	0.042	
16.67	-36.85	-1.39	0.00	-159.06	0.00	159.06	3665.83	1832.91	6532.59	3271.15	0.07	-0.04	0.031	
18.50	-36.37	-1.38	0.00	-156.51	0.00	156.51	3644.97	1822.48	6442.01	3225.79	0.09	-0.05	0.040	
20.00	-35.98	-1.38	0.00	-154.44	0.00	154.44	3627.76	1813.88	6368.03	3188.75	0.10	-0.05	0.040	
25.00	-34.70	-1.35	0.00	-147.55	0.00	147.55	3569.68	1784.84	6123.18	3066.14	0.16	-0.06	0.039	
30.00	-33.44	-1.32	0.00	-140.80	0.00	140.80	3510.49	1755.24	5881.13	2944.94	0.23	-0.07	0.038	
34.67	-32.28	-1.29	0.00	-134.63	0.00	134.63	3454.20	1727.10	5657.69	2833.05	0.31	-0.09	0.038	
35.00	-32.20	-1.30	0.00	-134.20	0.00	134.20	3450.19	1725.09	5642.00	2825.20	0.32	-0.09	0.038	
40.00	-30.99	-1.27	0.00	-127.72	0.00	127.72	3388.79	1694.39	5405.94	2706.99	0.42	-0.10	0.038	
42.14	-30.47	-1.25	0.00	-125.02	0.00	125.02	3362.21	1681.10	5306.03	2656.96	0.46	-0.11	0.037	
45.00	-29.34	-1.22	0.00	-121.43	0.00	121.43	3326.27	1663.14	5173.07	2590.38	0.53	-0.11	0.037	
47.57	-28.34	-1.19	0.00	-118.29	0.00	118.29	2638.80	1319.40	4131.44	2068.79	0.59	-0.12	0.039	
50.00	-27.84	-1.18	0.00	-115.40	0.00	115.40	2616.75	1308.38	4046.02	2026.02	0.65	-0.13	0.042	
54.67	-26.90	-1.16	0.00	-109.89	0.00	109.89	2573.65	1286.82	3883.14	1944.46	0.79	-0.14	0.042	
55.00	-26.83	-1.16	0.00	-109.51	0.00	109.51	2570.56	1285.28	3871.70	1938.73	0.80	-0.14	0.042	
60.00	-25.84	-1.14	0.00	-103.71	0.00	103.71	2523.27	1261.63	3699.46	1852.48	0.95	-0.16	0.042	
65.00	-24.87	-1.12	0.00	-98.03	0.00	98.03	2474.87	1237.43	3529.43	1767.34	1.13	-0.17	0.041	
70.00	-23.92	-1.10	0.00	-92.44	0.00	92.44	2425.36	1212.68	3361.74	1683.37	1.32	-0.19	0.040	
74.67	-23.05	-1.09	0.00	-87.28	0.00	87.28	2378.12	1189.06	3207.34	1606.06	1.51	-0.20	0.040	
75.00	-22.99	-1.09	0.00	-86.92	0.00	86.92	2374.74	1187.37	3196.52	1600.63	1.52	-0.21	0.039	
76.52	-22.71	-1.09	0.00	-85.26	0.00	85.26	2359.17	1179.58	3146.91	1575.79	1.59	-0.21	0.039	
80.00	-21.71	-1.09	0.00	-81.46	0.00	81.46	2323.02	1161.51	3033.91	1519.21	1.75	-0.22	0.038	
81.00	-21.42	-1.09	0.00	-80.37	0.00	80.37	2312.54	1156.27	3001.71	1503.09	1.79	-0.23	0.031	
81.19	-21.37	-1.09	0.00	-80.16	0.00	80.16	1750.09	875.04	2314.24	1158.84	1.80	-0.23	0.033	
85.00	-20.78	-1.09	0.00	-76.01	0.00	76.01	1723.72	861.86	2226.75	1115.03	1.99	-0.24	0.035	
86.00	-20.63	-1.09	0.00	-74.92	0.00	74.92	1716.70	858.35	2203.94	1103.61	2.04	-0.24	0.044	
90.00	-20.02	-1.10	0.00	-70.55	0.00	70.55	1688.18	844.09	2113.26	1058.20	2.24	-0.25	0.043	
94.67	-19.33	-1.10	0.00	-65.43	0.00	65.43	1653.98	826.99	2008.61	1005.80	2.50	-0.27	0.043	
95.00	-19.28	-1.10	0.00	-65.07	0.00	65.07	1651.53	825.76	2001.27	1002.12	2.52	-0.27	0.043	
100.00	-15.72	-1.08	0.00	-59.58	0.00	59.58	1613.77	806.88	1890.91	946.86	2.82	-0.29	0.040	
102.00	-15.44	-1.08	0.00	-57.41	0.00	57.41	1598.36	799.18	1847.26	925.00	2.94	-0.30	0.027	
102.67	-15.34	-1.09	0.00	-56.68	0.00	56.68	1593.15	796.58	1832.70	917.71	2.98	-0.30	0.038	
105.00	-15.02	-1.09	0.00	-54.15	0.00	54.15	1574.90	787.45	1782.33	892.49	3.13	-0.31	0.037	
110.00	-14.33	-1.09	0.00	-48.71	0.00	48.71	1534.93	767.47	1675.65	839.07	3.47	-0.33	0.035	
110.91	-14.21	-1.09	0.00	-47.73	0.00	47.73	1527.58	763.79	1656.56	829.51	3.53	-0.33	0.035	
114.50	-13.06	-1.08	0.00	-43.82	0.00	43.82	1498.01	749.01	1581.38	791.86	3.78	-0.35	0.032	
114.80	-13.00	-1.08	0.00	-43.50	0.00	43.50	1034.66	517.33	1111.16	556.41	3.81	-0.35	0.036	
115.00	-12.98	-1.08	0.00	-43.28	0.00	43.28	1033.71	516.86	1108.46	555.05	3.82	-0.35	0.040	
117.00	-10.58	-1.07	0.00	-41.11	0.00	41.11	1024.27	512.13	1081.93	541.77	3.97	-0.35	0.038	
118.00	-10.48	-1.07	0.00	-40.04	0.00	40.04	1019.48	509.74	1068.72	535.15	4.04	-0.36	0.037	
118.00	-10.48	-1.07	0.00	-40.04	0.00	40.04	1019.48	509.74	1068.72	535.15	4.04	-0.36	0.037	
120.00	-10.29	-1.07	0.00	-37.90	0.00	37.90	1009.78	504.89	1042.37	521.96	4.19	-0.37	0.083	
125.00	-9.83	-1.08	0.00	-32.53	0.00	32.53	984.73	492.37	977.10	489.28	4.60	-0.41	0.076	
130.00	-9.37	-1.08	0.00	-27.15	0.00	27.15	958.58	479.29	912.78	457.07	5.05	-0.45	0.069	

Calculated Forces

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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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135.00	-8.93	-1.07	0.00	-21.75	0.00	21.75	931.33	465.66	849.55	425.40	5.54	-0.49	0.061
137.00	-5.33	-0.90	0.00	-19.61	0.00	19.61	920.11	460.06	824.58	412.91	5.75	-0.50	0.053
140.00	-5.13	-0.90	0.00	-16.90	0.00	16.90	902.96	451.48	787.53	394.35	6.07	-0.52	0.049
145.00	-4.80	-0.88	0.00	-12.42	0.00	12.42	873.49	436.75	726.86	363.97	6.63	-0.55	0.040
150.00	-4.48	-0.85	0.00	-8.04	0.00	8.04	842.91	421.46	667.67	334.33	7.22	-0.57	0.029
150.00	-4.48	-0.85	0.00	-8.04	0.00	8.04	656.05	328.03	328.13	215.42	7.22	-0.57	0.044
155.00	-4.11	-0.80	0.00	-3.81	0.00	3.81	656.05	328.03	328.13	215.42	7.83	-0.59	0.024
158.00	-3.43	-0.68	0.00	-1.41	0.00	1.41	656.05	328.03	328.13	215.42	8.20	-0.60	0.012
160.00	-0.12	-0.03	0.00	-0.05	0.00	0.05	656.05	328.03	328.13	215.42	8.45	-0.60	0.000
162.00	0.00	-0.02	0.00	0.00	0.00	0.00	656.05	328.03	328.13	215.42	8.70	-0.60	0.000

Seismic Segment Forces (Factored)

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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 24
Gust Response Factor	1.10			Sds	0.20	Ss 0.19
Dead Load Factor	0.90	Seismic Load Factor	1.00	Sd1	0.10	S1 0.06
Wind Load Factor	0.00	Structure Frequency (f1)	0.26	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	RB1	0.00	0.00	0.00	0.00	0.00	
5.00		934.37	0.00	0.03	0.02	20.52	
10.00		914.80	0.01	0.05	0.03	28.32	
15.00		895.22	0.02	0.06	0.04	31.65	
16.67	RB2	294.64	0.02	0.06	0.04	10.69	
18.50	RT1	320.36	0.02	0.07	0.04	11.88	
20.00		260.64	0.03	0.07	0.04	9.81	
25.00		856.07	0.05	0.07	0.04	33.32	
30.00		836.50	0.06	0.07	0.04	33.35	
34.67	RT2 RB3	763.61	0.09	0.07	0.04	31.08	
35.00		53.31	0.09	0.07	0.04	2.17	
40.00		797.35	0.12	0.07	0.04	33.28	
42.14	Bot - Section 2	334.76	0.13	0.07	0.03	14.11	
45.00		818.83	0.15	0.07	0.03	34.97	
47.57	Top - Section 1	724.92	0.16	0.07	0.03	31.26	
50.00		310.67	0.18	0.07	0.03	13.49	
54.67	RT3 RB4	586.23	0.22	0.06	0.02	25.47	
55.00		40.89	0.22	0.06	0.02	1.78	
60.00		610.81	0.26	0.05	0.02	25.69	
65.00		594.49	0.30	0.04	0.01	22.83	
70.00		578.18	0.35	0.03	0.01	18.15	
74.67	RT4 RB5	525.29	0.40	0.02	0.01	11.06	
75.00		36.58	0.41	0.02	0.01	0.74	
76.52	Bot - Section 3	167.21	0.42	0.01	0.01	2.67	
80.00		686.32	0.46	0.00	0.01	3.45	
81.00	RB6	194.40	0.47	-0.01	0.01	0.32	
81.19	Top - Section 2	36.16	0.47	-0.01	0.01	0.04	
85.00		327.52	0.52	-0.02	0.01	-3.97	
86.00	RT6	84.63	0.53	-0.03	0.01	-1.31	
90.00		333.31	0.58	-0.05	0.01	-9.35	
94.67	RT5 RB7	378.57	0.65	-0.07	0.02	-14.92	
95.00		26.32	0.65	-0.07	0.02	-1.05	
100.00	Appurtenance(s)	2750.9	0.72	-0.09	0.03	-129.21	
102.00	RB8	153.08	0.75	-0.10	0.04	-7.39	
102.67	RT7	50.82	0.76	-0.10	0.04	-2.47	
105.00		174.89	0.79	-0.11	0.05	-8.52	
110.00		365.74	0.87	-0.12	0.08	-16.69	
110.91	Bot - Section 4	64.80	0.89	-0.12	0.08	-2.89	
114.50	Appurtenance(s)	810.49	0.94	-0.12	0.11	-31.59	
114.80	Top - Section 3	36.30	0.95	-0.12	0.11	-1.39	
115.00		10.75	0.95	-0.12	0.11	-0.41	
117.00	Appurtenance(s)	1920.2	0.99	-0.11	0.12	-64.83	
118.00	RT8	51.83	1.00	-0.11	0.13	-1.63	
120.00		102.49	1.04	-0.10	0.15	-2.67	
125.00		249.37	1.13	-0.05	0.20	-2.47	
130.00		239.58	1.22	0.02	0.27	2.52	

Seismic Segment Forces (Factored)

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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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135.00		229.80	1.31	0.14	0.35	8.10
137.00	Appurtenance(s)	2948.4	1.35	0.20	0.38	136.70
140.00		130.83	1.41	0.31	0.44	8.42
145.00		210.22	1.51	0.54	0.56	20.60
150.00	Top - Section 4	200.43	1.62	0.84	0.70	27.30
155.00		248.04	1.73	1.24	0.86	44.44
158.00	Appurtenance(s)	532.83	1.80	1.53	0.97	110.43
160.00	Appurtenance(s)	2738.8	1.84	1.74	1.05	621.59
162.00		99.22	1.89	1.98	1.14	24.55
Totals:		28,642.9				1,154.0
						Total Wind: 31,317.6

Calculated Forces

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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 24

Gust Response Factor 1.10

Sds 0.20

Ss 0.19

Dead Load Factor 0.90

Seismic Load Factor 1.00

Sd1 0.10

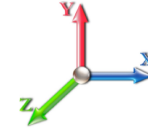
S1 0.06

Wind Load Factor 0.00

Structure Frequency (f1) 0.26

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	-31.02	-1.46	0.00	-180.52	0.00	180.52	3849.02	1924.51	7372.73	3691.85	0.00	0.00	0.00	0.042
5.00	-29.99	-1.44	0.00	-173.23	0.00	173.23	3795.37	1897.68	7118.03	3564.30	0.01	-0.01	0.041	
10.00	-28.97	-1.42	0.00	-166.00	0.00	166.00	3740.61	1870.30	6865.59	3437.90	0.03	-0.02	0.040	
15.00	-27.97	-1.39	0.00	-158.89	0.00	158.89	3684.74	1842.37	6615.55	3312.69	0.06	-0.04	0.040	
16.67	-27.64	-1.39	0.00	-156.57	0.00	156.57	3665.83	1832.91	6532.59	3271.15	0.07	-0.04	0.030	
18.50	-27.28	-1.37	0.00	-154.03	0.00	154.03	3644.97	1822.48	6442.01	3225.79	0.09	-0.04	0.038	
20.00	-26.99	-1.37	0.00	-151.97	0.00	151.97	3627.76	1813.88	6368.03	3188.75	0.10	-0.05	0.037	
25.00	-26.02	-1.34	0.00	-145.13	0.00	145.13	3569.68	1784.84	6123.18	3066.14	0.16	-0.06	0.037	
30.00	-25.08	-1.31	0.00	-138.43	0.00	138.43	3510.49	1755.24	5881.13	2944.94	0.23	-0.07	0.036	
34.67	-24.21	-1.28	0.00	-132.31	0.00	132.31	3454.20	1727.10	5657.69	2833.05	0.31	-0.08	0.036	
35.00	-24.15	-1.28	0.00	-131.89	0.00	131.89	3450.19	1725.09	5642.00	2825.20	0.31	-0.09	0.036	
40.00	-23.24	-1.25	0.00	-125.48	0.00	125.48	3388.79	1694.39	5405.94	2706.99	0.41	-0.10	0.036	
42.14	-22.86	-1.24	0.00	-122.81	0.00	122.81	3362.21	1681.10	5306.03	2656.96	0.46	-0.10	0.035	
45.00	-22.01	-1.20	0.00	-119.26	0.00	119.26	3326.27	1663.14	5173.07	2590.38	0.52	-0.11	0.034	
47.57	-21.26	-1.17	0.00	-116.16	0.00	116.16	2638.80	1319.40	4131.44	2068.79	0.58	-0.12	0.037	
50.00	-20.88	-1.16	0.00	-113.31	0.00	113.31	2616.75	1308.38	4046.02	2026.02	0.64	-0.13	0.039	
54.67	-20.17	-1.14	0.00	-107.88	0.00	107.88	2573.65	1286.82	3883.14	1944.46	0.77	-0.14	0.040	
55.00	-20.12	-1.14	0.00	-107.50	0.00	107.50	2570.56	1285.28	3871.70	1938.73	0.78	-0.14	0.040	
60.00	-19.38	-1.12	0.00	-101.80	0.00	101.80	2523.27	1261.63	3699.46	1852.48	0.94	-0.15	0.039	
65.00	-18.65	-1.10	0.00	-96.21	0.00	96.21	2474.87	1237.43	3529.43	1767.34	1.11	-0.17	0.038	
70.00	-17.94	-1.08	0.00	-90.72	0.00	90.72	2425.36	1212.68	3361.74	1683.37	1.29	-0.19	0.037	
74.67	-17.29	-1.07	0.00	-85.67	0.00	85.67	2378.12	1189.06	3207.34	1606.06	1.48	-0.20	0.037	
75.00	-17.24	-1.07	0.00	-85.31	0.00	85.31	2374.74	1187.37	3196.52	1600.63	1.50	-0.20	0.037	
76.52	-17.03	-1.07	0.00	-83.69	0.00	83.69	2359.17	1179.58	3146.91	1575.79	1.56	-0.21	0.037	
80.00	-16.28	-1.07	0.00	-79.96	0.00	79.96	2323.02	1161.51	3033.91	1519.21	1.72	-0.22	0.036	
81.00	-16.07	-1.07	0.00	-78.89	0.00	78.89	2312.54	1156.27	3001.71	1503.09	1.76	-0.22	0.029	
81.19	-16.03	-1.07	0.00	-78.69	0.00	78.69	1750.09	875.04	2314.24	1158.84	1.77	-0.22	0.032	
85.00	-15.58	-1.07	0.00	-74.62	0.00	74.62	1723.72	861.86	2226.75	1115.03	1.95	-0.23	0.033	
86.00	-15.47	-1.07	0.00	-73.56	0.00	73.56	1716.70	858.35	2203.94	1103.61	2.00	-0.24	0.042	
90.00	-15.01	-1.07	0.00	-69.28	0.00	69.28	1688.18	844.09	2113.26	1058.20	2.21	-0.25	0.040	
94.67	-14.49	-1.07	0.00	-64.28	0.00	64.28	1653.98	826.99	2008.61	1005.80	2.46	-0.27	0.041	
95.00	-14.46	-1.07	0.00	-63.92	0.00	63.92	1651.53	825.76	2001.27	1002.12	2.48	-0.27	0.041	
100.00	-11.79	-1.06	0.00	-58.56	0.00	58.56	1613.77	806.88	1890.91	946.86	2.77	-0.29	0.038	
102.00	-11.58	-1.06	0.00	-56.43	0.00	56.43	1598.36	799.18	1847.26	925.00	2.89	-0.29	0.025	
102.67	-11.51	-1.06	0.00	-55.72	0.00	55.72	1593.15	796.58	1832.70	917.71	2.93	-0.30	0.036	
105.00	-11.26	-1.07	0.00	-53.24	0.00	53.24	1574.90	787.45	1782.33	892.49	3.08	-0.31	0.035	
110.00	-10.75	-1.06	0.00	-47.91	0.00	47.91	1534.93	767.47	1675.65	839.07	3.41	-0.32	0.033	
110.91	-10.66	-1.07	0.00	-46.95	0.00	46.95	1527.58	763.79	1656.56	829.51	3.47	-0.33	0.033	
114.50	-9.79	-1.06	0.00	-43.11	0.00	43.11	1498.01	749.01	1581.38	791.86	3.72	-0.34	0.031	
114.80	-9.75	-1.06	0.00	-42.80	0.00	42.80	1034.66	517.33	1111.16	556.41	3.74	-0.34	0.034	
115.00	-9.73	-1.06	0.00	-42.58	0.00	42.58	1033.71	516.86	1108.46	555.05	3.76	-0.34	0.038	
117.00	-7.93	-1.05	0.00	-40.46	0.00	40.46	1024.27	512.13	1081.93	541.77	3.90	-0.35	0.036	
118.00	-7.86	-1.05	0.00	-39.41	0.00	39.41	1019.48	509.74	1068.72	535.15	3.97	-0.35	0.035	
118.00	-7.86	-1.05	0.00	-39.41	0.00	39.41	1019.48	509.74	1068.72	535.15	3.97	-0.35	0.035	
120.00	-7.72	-1.06	0.00	-37.30	0.00	37.30	1009.78	504.89	1042.37	521.96	4.12	-0.36	0.079	
125.00	-7.37	-1.06	0.00	-32.02	0.00	32.02	984.73	492.37	977.10	489.28	4.52	-0.40	0.073	
130.00	-7.03	-1.06	0.00	-26.73	0.00	26.73	958.58	479.29	912.78	457.07	4.97	-0.44	0.066	

Calculated Forces

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 50
	Struct Class: II	



135.00	-6.70	-1.05	0.00	-21.44	0.00	21.44	931.33	465.66	849.55	425.40	5.45	-0.48	0.058
137.00	-4.00	-0.89	0.00	-19.34	0.00	19.34	920.11	460.06	824.58	412.91	5.65	-0.49	0.051
140.00	-3.84	-0.88	0.00	-16.66	0.00	16.66	902.96	451.48	787.53	394.35	5.97	-0.51	0.047
145.00	-3.60	-0.86	0.00	-12.24	0.00	12.24	873.49	436.75	726.86	363.97	6.52	-0.54	0.038
150.00	-3.36	-0.83	0.00	-7.93	0.00	7.93	842.91	421.46	667.67	334.33	7.10	-0.56	0.028
150.00	-3.36	-0.83	0.00	-7.93	0.00	7.93	656.05	328.03	328.13	215.42	7.10	-0.56	0.042
155.00	-3.08	-0.79	0.00	-3.76	0.00	3.76	656.05	328.03	328.13	215.42	7.70	-0.58	0.022
158.00	-2.57	-0.67	0.00	-1.40	0.00	1.40	656.05	328.03	328.13	215.42	8.06	-0.59	0.010
160.00	-0.09	-0.03	0.00	-0.05	0.00	0.05	656.05	328.03	328.13	215.42	8.31	-0.59	0.000
162.00	0.00	-0.02	0.00	0.00	0.00	0.00	656.05	328.03	328.13	215.42	8.55	-0.59	0.000

Wind Loading - Shaft

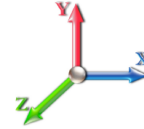
Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 26

Dead Load Factor 1.00
Wind Load Factor 1.00



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	RB1	1.00	0.70	6.129	6.74	199.65	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	6.129	6.74	195.54	0.752 *	0.000	5.00	19.681	14.80	99.8	0.0	934.4
10.00		1.00	0.70	6.129	6.74	191.44	0.758 *	0.000	5.00	19.272	14.61	98.5	0.0	914.8
15.00		1.00	0.70	6.129	6.74	187.33	0.765 *	0.000	5.00	18.863	14.42	97.2	0.0	895.2
16.67	RB2	1.00	0.70	6.129	6.74	185.96	0.769 *	0.000	1.67	6.209	4.78	32.2	0.0	294.6
18.50	RT1	1.00	0.70	6.129	6.74	184.46	0.772 *	0.000	1.83	6.752	5.21	35.1	0.0	320.4
20.00		1.00	0.70	6.129	6.74	183.22	0.774 *	0.000	1.50	5.493	4.25	28.7	0.0	260.6
25.00		1.00	0.70	6.129	6.74	179.12	0.779 *	0.000	5.00	18.045	14.05	94.7	0.0	856.1
30.00		1.00	0.70	6.134	6.75	175.08	0.786 *	0.000	5.00	17.636	13.87	93.6	0.0	836.5
34.67	RT2 RB3	1.00	0.73	6.393	7.03	174.82	0.794 *	0.000	4.67	16.103	12.78	89.9	0.0	763.6
35.00		1.00	0.73	6.410	7.05	174.78	0.798 *	0.000	0.33	1.124	0.90	6.3	0.0	53.3
40.00		1.00	0.76	6.659	7.33	173.87	0.802 *	0.000	5.00	16.818	13.49	98.8	0.0	797.3
42.14	Bot - Section 2	1.00	0.77	6.759	7.43	173.32	0.808 *	0.000	2.14	7.062	5.71	42.5	0.0	334.8
45.00		1.00	0.79	6.887	7.58	172.47	0.813 *	0.000	2.86	9.498	7.72	58.5	0.0	818.8
47.57	Top - Section 1	1.00	0.80	6.997	7.70	171.59	0.818 *	0.000	2.57	8.411	6.88	52.9	0.0	724.9
50.00		1.00	0.81	7.098	7.81	173.52	0.817 *	0.000	2.43	7.853	6.41	50.1	0.0	310.7
54.67	RT3 RB4	1.00	0.83	7.281	8.01	171.57	0.823 *	0.000	4.67	14.822	12.20	97.7	0.0	586.2
55.00		1.00	0.83	7.294	8.02	171.42	0.828 *	0.000	0.33	1.034	0.86	6.9	0.0	40.9
60.00		1.00	0.85	7.477	8.22	169.03	0.833 *	0.000	5.00	15.446	12.87	105.9	0.0	610.8
65.00		1.00	0.87	7.650	8.42	166.38	0.843 *	0.000	5.00	15.037	12.68	106.7	0.0	594.5
70.00		1.00	0.89	7.814	8.60	163.52	1.200 *	0.000	5.00	14.628	17.55	150.9	0.0	578.2
74.67	RT4 RB5	1.00	0.91	7.959	8.76	160.66	1.200 *	0.000	4.67	13.294	15.95	139.7	0.0	525.3
75.00		1.00	0.91	7.969	8.77	160.46	1.200 *	0.000	0.33	0.926	1.11	9.7	0.0	36.6
76.52	Bot - Section 3	1.00	0.92	8.015	8.82	159.49	1.200 *	0.000	1.52	4.232	5.08	44.8	0.0	167.2
80.00		1.00	0.93	8.118	8.93	157.22	1.200 *	0.000	3.48	9.725	11.67	104.2	0.0	686.3
81.00	RB6	1.00	0.93	8.147	8.96	156.55	1.200 *	0.000	1.00	2.755	3.31	29.6	0.0	194.4
81.19	Top - Section 2	1.00	0.93	8.152	8.97	156.42	1.200 *	0.000	0.19	0.513	0.62	5.5	0.0	36.2
85.00		1.00	0.94	8.260	9.09	156.28	1.200 *	0.000	3.81	10.345	12.41	112.8	0.0	327.5
86.00	RT6	1.00	0.95	8.287	9.12	155.59	1.200 *	0.000	1.00	2.674	3.21	29.2	0.0	84.6
90.00		1.00	0.96	8.396	9.24	152.76	1.200 *	0.000	4.00	10.531	12.64	116.7	0.0	333.3
94.67	RT5 RB7	1.00	0.97	8.518	9.37	149.34	1.200 *	0.000	4.67	11.963	14.36	134.5	0.0	378.6
95.00		1.00	0.97	8.526	9.38	149.10	1.200 *	0.000	0.33	0.832	1.00	9.4	0.0	26.3
100.00	Appurtenance(s)	1.00	0.99	8.652	9.52	145.32	1.200 *	0.000	5.00	12.386	14.86	141.5	0.0	391.8
102.00	RB8	1.00	0.99	8.701	9.57	143.77	1.200 *	0.000	2.00	4.840	5.81	55.6	0.0	153.1
102.67	RT7	1.00	1.00	8.718	9.59	143.25	1.200 *	0.000	0.67	1.607	1.93	18.5	0.0	50.8
105.00		1.00	1.00	8.774	9.65	141.42	1.200 *	0.000	2.33	5.530	6.64	64.0	0.0	174.9
110.00		1.00	1.02	8.891	9.78	137.42	1.200 *	0.000	5.00	11.568	13.88	135.8	0.0	365.7
110.91	Bot - Section 4	1.00	1.02	8.912	9.80	136.68	1.200 *	0.000	0.91	2.050	2.46	24.1	0.0	64.8
114.50	Appurtenance(s)	1.00	1.03	8.993	9.89	133.73	1.200 *	0.000	3.59	8.126	9.75	96.5	0.0	446.3
114.80	Top - Section 3	1.00	1.03	9.000	9.90	133.48	1.200 *	0.000	0.30	0.661	0.79	7.9	0.0	36.3
115.00		1.00	1.03	9.005	9.91	135.25	1.200 *	0.000	0.20	0.452	0.54	5.4	0.0	10.7
117.00	Appurtenance(s)	1.00	1.03	9.049	9.95	133.58	1.200 *	0.000	2.00	4.413	5.30	52.7	0.0	104.8
118.00	RT8	1.00	1.04	9.071	9.98	132.75	1.200 *	0.000	1.00	2.182	2.62	26.1	0.0	51.8
120.00		1.00	1.04	9.115	10.03	131.06	1.200 *	0.000	2.00	4.314	5.18	51.9	0.0	102.5
125.00		1.00	1.05	9.222	10.14	126.79	1.200 *	0.000	5.00	10.500	12.60	127.8	0.0	249.4
130.00		1.00	1.07	9.326	10.26	122.44	1.200 *	0.000	5.00	10.091	12.11	124.2	0.0	239.6
135.00		1.00	1.08	9.427	10.37	118.01	1.200 *	0.000	5.00	9.682	11.62	120.5	0.0	229.8

Wind Loading - Shaft

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 52
	Struct Class: II	



137.00 Appurtenance(s)	1.00	1.08	9.466	10.41	116.22	1.200 *	0.000	2.00	3.758	4.51	47.0	0.0	89.2
140.00	1.00	1.09	9.525	10.48	113.50	1.200 *	0.000	3.00	5.515	6.62	69.3	0.0	130.8
145.00	1.00	1.10	9.621	10.58	108.93	1.200 *	0.000	5.00	8.864	10.64	112.6	0.0	210.2
150.00 Top - Section 4	1.00	1.11	9.715	10.69	104.29	1.200 *	0.000	5.00	8.455	10.15	108.4	0.0	200.4
155.00	1.00	1.12	9.806	10.79	67.47	1.200 *	0.000	5.00	5.313	6.38	68.8	0.0	248.0
158.00 Appurtenance(s)	1.00	1.13	9.860	10.85	67.65	1.200 *	0.000	3.00	3.188	3.82	41.5	0.0	148.8
160.00 Appurtenance(s)	1.00	1.13	9.896	10.89	67.77	1.200 *	0.000	2.00	2.125	2.55	27.8	0.0	99.2
162.00	1.00	1.13	9.931	10.92	67.90	0.600	0.000	2.00	2.125	1.27	13.9	0.0	99.2
								Totals:	162.00			3,724.6	18,221.3

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 26

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	160.00	Ericsson AIR 21 B4A B2P	3	9.896	10.885	0.69	0.80	12.57	271.20	0.000	0.000	136.82	0.00	0.00
2	160.00	Mount Mods	1	9.896	10.885	0.75	0.75	12.25	929.95	0.000	0.000	133.32	0.00	0.00
3	160.00	Ericsson S11 B2	3	9.896	10.885	0.54	0.80	4.55	153.00	0.000	0.000	49.53	0.00	0.00
4	160.00	Ericsson 4480 B71 + B85	3	9.896	10.885	0.54	0.80	4.58	279.00	0.000	0.000	49.88	0.00	0.00
5	160.00	RFS ATMAA1412D-1A20	3	9.896	10.885	0.54	0.80	1.88	39.00	0.000	0.000	20.48	0.00	0.00
6	160.00	RFS ATMPP1412D-1CWA	3	9.896	10.885	0.54	0.80	1.88	37.50	0.000	0.000	20.48	0.00	0.00
7	160.00	CommScope	1	9.896	10.885	0.75	0.75	18.66	929.95	0.000	0.000	203.12	0.00	0.00
8	158.00	RFS	3	9.860	10.846	0.56	0.80	34.00	384.00	0.000	0.000	368.80	0.00	0.00
9	137.00	MS-HRECP	1	9.466	10.413	1.00	1.00	12.25	514.00	0.000	0.000	127.56	0.00	0.00
10	137.00	CBC78T-DS-43	3	9.466	10.413	0.38	0.75	0.42	31.20	0.000	0.000	4.33	0.00	0.00
11	137.00	DB-C1-12C-24AB-OZ	1	9.466	10.413	0.75	0.75	3.04	32.00	0.000	0.000	31.71	0.00	0.00
12	137.00	B5/B13 RRH-BR04C	3	9.466	10.413	0.50	0.75	2.82	210.90	0.000	0.000	29.35	0.00	0.00
13	137.00	B2/B66A RRH-BR049	3	9.466	10.413	0.50	0.75	2.82	253.20	0.000	0.000	29.35	0.00	0.00
14	137.00	MT6407-77A	3	9.466	10.413	0.52	0.75	7.39	238.20	0.000	0.000	76.92	0.00	0.00
15	137.00	JAHH-65B-R3B	6	9.466	10.413	0.62	0.75	34.03	379.80	0.000	0.000	354.31	0.00	0.00
16	137.00	Low Profile Platform	1	9.466	10.413	1.00	1.00	22.00	1200.00	0.000	0.000	229.09	0.00	0.00
17	117.00	Kathrein 800-10121	3	9.049	9.954	0.63	0.80	9.76	132.30	0.000	0.000	97.20	0.00	0.00
18	117.00	Low Profile Platform	1	9.049	9.954	1.00	1.00	22.00	1200.00	0.000	0.000	218.99	0.00	0.00
19	117.00	KMW AM-X-CD-16-6500T	2	9.049	9.954	0.65	0.80	7.84	66.00	0.000	0.000	78.05	0.00	0.00
20	117.00	Andrew SBNH-1D6565C	4	9.049	9.954	0.64	0.80	29.36	264.40	0.000	0.000	292.28	0.00	0.00
21	117.00	Kathrein 860 10025 RET	6	9.049	9.954	0.40	0.80	0.43	7.20	0.000	0.000	4.30	0.00	0.00
22	117.00	CCI DTMAPB7819VG12A	6	9.049	9.954	0.54	0.80	3.67	115.20	0.000	0.000	36.49	0.00	0.00
23	117.00	Powerwave LGP 13519	3	9.049	9.954	0.40	0.80	0.41	15.90	0.000	0.000	4.06	0.00	0.00
24	117.00	CSS DBC-750	3	9.049	9.954	0.40	0.80	0.61	14.40	0.000	0.000	6.09	0.00	0.00
25	114.50	Ericsson RRUS 11	6	8.993	9.893	0.54	0.80	8.10	304.20	0.000	0.000	80.17	0.00	0.00
26	114.50	Raycap DC6-48-60-18-8F	3	8.993	9.893	0.54	0.80	2.03	60.00	0.000	0.000	20.04	0.00	0.00
27	100.00	Commscope	1	8.652	9.517	1.00	1.00	37.59	1727.00	0.000	0.000	357.76	0.00	0.00
28	100.00	Raycap	1	8.652	9.517	1.00	1.00	2.01	21.90	0.000	0.000	19.13	0.00	0.00
29	100.00	Fujitsu TA08025-B604	3	8.652	9.517	0.50	0.75	2.95	191.70	0.000	0.000	28.12	0.00	0.00
30	100.00	Fujitsu TA08025-B605	3	8.652	9.517	0.50	0.75	2.95	225.00	0.000	0.000	28.12	0.00	0.00
31	100.00	JMA Wireless	3	8.652	9.517	0.55	0.75	20.80	193.50	0.000	0.000	197.92	0.00	0.00

Totals: 10,421.60 3,333.81

Total Applied Force Summary

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

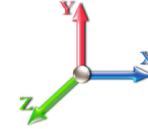


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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 26

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		99.75	1148.82	0.00	0.00
10.00		98.50	1129.25	0.00	0.00
15.00		97.24	1109.67	0.00	0.00
16.67		32.20	366.27	0.00	0.00
18.50		35.12	398.85	0.00	0.00
20.00		28.66	324.97	0.00	0.00
25.00		94.73	1070.52	0.00	0.00
30.00		93.56	1050.95	0.00	0.00
34.67		89.89	963.90	0.00	0.00
35.00		6.33	67.47	0.00	0.00
40.00		98.85	1011.80	0.00	0.00
42.14		42.45	426.40	0.00	0.00
45.00		58.50	941.63	0.00	0.00
47.57		52.95	835.15	0.00	0.00
50.00		50.06	414.89	0.00	0.00
54.67		97.71	786.53	0.00	0.00
55.00		6.87	55.04	0.00	0.00
60.00		105.85	825.26	0.00	0.00
65.00		106.74	808.94	0.00	0.00
70.00		181.78	792.63	0.00	0.00
74.67		169.07	725.58	0.00	0.00
75.00		11.82	50.73	0.00	0.00
76.52		54.39	232.26	0.00	0.00
80.00		126.58	835.72	0.00	0.00
81.00		36.07	237.29	0.00	0.00
81.19		6.72	44.16	0.00	0.00
85.00		137.70	491.07	0.00	0.00
86.00		35.80	127.52	0.00	0.00
90.00		143.26	504.87	0.00	0.00
94.67		165.97	578.86	0.00	0.00
95.00		11.59	40.47	0.00	0.00
100.00	(11) attachments	806.73	2965.39	0.00	0.00
102.00		71.27	235.22	0.00	0.00
102.67		23.75	78.33	0.00	0.00
105.00		82.10	270.58	0.00	0.00
110.00		169.70	571.09	0.00	0.00
110.91		30.27	101.97	0.00	0.00
114.50	(9) attachments	221.36	958.14	0.00	0.00
114.80		9.89	48.49	0.00	0.00
115.00		6.77	19.10	0.00	0.00
117.00	(28) attachments	803.98	2002.38	0.00	0.00
118.00		33.05	79.21	0.00	0.00
120.00		65.83	157.25	0.00	0.00
125.00		157.94	386.27	0.00	0.00
130.00		154.68	376.48	0.00	0.00
135.00		151.27	366.70	0.00	0.00

Total Applied Force Summary

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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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137.00	(21) attachments	941.97	3003.24	0.00	0.00
140.00		88.01	168.45	0.00	0.00
145.00		144.00	272.92	0.00	0.00
150.00		140.16	263.13	0.00	0.00
155.00		100.80	310.74	0.00	0.00
158.00	(3) attachments	429.62	570.45	0.00	0.00
160.00	(17) attachments	654.33	2763.90	0.00	0.00
162.00		13.93	99.22	0.00	0.00
Totals:		7,678.14	34,466.13	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

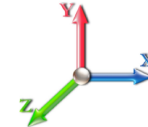
Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 26

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.152	1.157	6.129	0.00	57.20
5.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.152	1.157	6.129	0.00	5.50
5.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.152	1.157	6.129	0.00	0.00
10.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.155	1.166	6.129	0.00	57.20
10.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.155	1.166	6.129	0.00	5.50
10.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.155	1.166	6.129	0.00	0.00
15.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.159	1.176	6.129	0.00	57.20
15.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.159	1.176	6.129	0.00	5.50
15.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.159	1.176	6.129	0.00	0.00
16.67	1 5/8" Coax	Yes	1.67	0.000	5.94	0.83	0.00	0.161	1.183	6.129	0.00	19.10
16.67	1.9" Fiber	Yes	1.67	0.000	0.00	0.00	0.00	0.161	1.183	6.129	0.00	1.84
16.67	Reinforcing plate	Yes	1.67	0.000	1.25	0.17	0.00	0.161	1.183	6.129	0.00	0.00
18.50	1 5/8" Coax	Yes	1.83	0.000	5.94	0.91	0.00	0.162	1.187	6.129	0.00	20.94
18.50	1.9" Fiber	Yes	1.83	0.000	0.00	0.00	0.00	0.162	1.187	6.129	0.00	2.01
18.50	Reinforcing plate	Yes	1.83	0.000	1.25	0.19	0.00	0.162	1.187	6.129	0.00	0.00
20.00	1 5/8" Coax	Yes	1.50	0.000	5.94	0.74	0.00	0.164	1.191	6.129	0.00	17.16
20.00	1.9" Fiber	Yes	1.50	0.000	0.00	0.00	0.00	0.164	1.191	6.129	0.00	1.65
20.00	Reinforcing plate	Yes	1.50	0.000	1.25	0.16	0.00	0.164	1.191	6.129	0.00	0.00
25.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.166	1.198	6.129	0.00	57.20
25.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.166	1.198	6.129	0.00	5.50
25.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.166	1.198	6.129	0.00	0.00
30.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.170	1.210	6.134	0.00	57.20
30.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.170	1.210	6.134	0.00	5.50
30.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.170	1.210	6.134	0.00	0.00
34.67	1 5/8" Coax	Yes	4.67	0.000	5.94	2.31	0.00	0.174	1.221	6.393	0.00	53.42
34.67	1.9" Fiber	Yes	4.67	0.000	0.00	0.00	0.00	0.174	1.221	6.393	0.00	5.14
34.67	Reinforcing plate	Yes	4.67	0.000	1.25	0.49	0.00	0.174	1.221	6.393	0.00	0.00
35.00	1 5/8" Coax	Yes	0.33	0.000	5.94	0.16	0.00	0.176	1.228	6.410	0.00	3.78
35.00	1.9" Fiber	Yes	0.33	0.000	0.00	0.00	0.00	0.176	1.228	6.410	0.00	0.36
35.00	Reinforcing plate	Yes	0.33	0.000	1.25	0.03	0.00	0.176	1.228	6.410	0.00	0.00
40.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.178	1.234	6.659	0.00	57.20
40.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.178	1.234	6.659	0.00	5.50
40.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.178	1.234	6.659	0.00	0.00
42.14	1 5/8" Coax	Yes	2.14	0.000	5.94	1.06	0.00	0.181	1.244	6.759	0.00	24.44
42.14	1.9" Fiber	Yes	2.14	0.000	0.00	0.00	0.00	0.181	1.244	6.759	0.00	2.35
42.14	Reinforcing plate	Yes	2.14	0.000	1.25	0.22	0.00	0.181	1.244	6.759	0.00	0.00
45.00	1 5/8" Coax	Yes	2.86	0.000	5.94	1.42	0.00	0.184	1.251	6.887	0.00	32.76
45.00	1.9" Fiber	Yes	2.86	0.000	0.00	0.00	0.00	0.184	1.251	6.887	0.00	3.15
45.00	Reinforcing plate	Yes	2.86	0.000	1.25	0.30	0.00	0.184	1.251	6.887	0.00	0.00
47.57	1 5/8" Coax	Yes	2.57	0.000	5.94	1.27	0.00	0.186	1.258	6.997	0.00	29.40
47.57	1.9" Fiber	Yes	2.57	0.000	0.00	0.00	0.00	0.186	1.258	6.997	0.00	2.83
47.57	Reinforcing plate	Yes	2.57	0.000	1.25	0.27	0.00	0.186	1.258	6.997	0.00	0.00
50.00	1 5/8" Coax	Yes	2.43	0.000	5.94	1.20	0.00	0.185	1.256	7.098	0.00	27.80
50.00	1.9" Fiber	Yes	2.43	0.000	0.00	0.00	0.00	0.185	1.256	7.098	0.00	2.67
50.00	Reinforcing plate	Yes	2.43	0.000	1.25	0.25	0.00	0.185	1.256	7.098	0.00	0.00
54.67	1 5/8" Coax	Yes	4.67	0.000	5.94	2.31	0.00	0.189	1.266	7.281	0.00	53.42
54.67	1.9" Fiber	Yes	4.67	0.000	0.00	0.00	0.00	0.189	1.266	7.281	0.00	5.14

Linear Appurtenance Segment Forces (Factored)

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



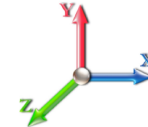
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Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 26

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)
54.67	Reinforcing plate	Yes	4.67	0.000	1.25	0.49	0.00	0.189	1.266	7.281	0.00	0.00
55.00	1 5/8" Coax	Yes	0.33	0.000	5.94	0.16	0.00	0.191	1.274	7.294	0.00	3.78
55.00	1.9" Fiber	Yes	0.33	0.000	0.00	0.00	0.00	0.191	1.274	7.294	0.00	0.36
55.00	Reinforcing plate	Yes	0.33	0.000	1.25	0.03	0.00	0.191	1.274	7.294	0.00	0.00
60.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.194	1.282	7.477	0.00	57.20
60.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.194	1.282	7.477	0.00	5.50
60.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.194	1.282	7.477	0.00	0.00
65.00	1 5/8" Coax	Yes	5.00	0.000	5.94	2.48	0.00	0.199	1.298	7.650	0.00	57.20
65.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.199	1.298	7.650	0.00	5.50
65.00	Reinforcing plate	Yes	5.00	0.000	1.25	0.52	0.00	0.199	1.298	7.650	0.00	0.00
70.00	1 5/8" Coax	Yes	5.00	1.200	5.94	2.48	2.97	0.205	0.000	7.814	25.53	57.20
70.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.205	0.000	7.814	0.00	5.50
70.00	Reinforcing plate	Yes	5.00	1.200	1.25	0.52	0.63	0.205	0.000	7.814	5.37	0.00
74.67	1 5/8" Coax	Yes	4.67	1.200	5.94	2.31	2.77	0.210	0.000	7.959	24.29	53.42
74.67	1.9" Fiber	Yes	4.67	0.000	0.00	0.00	0.00	0.210	0.000	7.959	0.00	5.14
74.67	Reinforcing plate	Yes	4.67	1.200	1.25	0.49	0.58	0.210	0.000	7.959	5.11	0.00
75.00	1 5/8" Coax	Yes	0.33	1.200	5.94	0.16	0.20	0.214	0.000	7.969	1.72	3.78
75.00	1.9" Fiber	Yes	0.33	0.000	0.00	0.00	0.00	0.214	0.000	7.969	0.00	0.36
75.00	Reinforcing plate	Yes	0.33	1.200	1.25	0.03	0.04	0.214	0.000	7.969	0.36	0.00
76.52	1 5/8" Coax	Yes	1.52	1.200	5.94	0.75	0.90	0.215	0.000	8.015	7.94	17.35
76.52	1.9" Fiber	Yes	1.52	0.000	0.00	0.00	0.00	0.215	0.000	8.015	0.00	1.67
76.52	Reinforcing plate	Yes	1.52	1.200	1.25	0.16	0.19	0.215	0.000	8.015	1.67	0.00
80.00	1 5/8" Coax	Yes	3.48	1.200	5.94	1.72	2.07	0.218	0.000	8.118	18.48	39.85
80.00	1.9" Fiber	Yes	3.48	0.000	0.00	0.00	0.00	0.218	0.000	8.118	0.00	3.83
80.00	Reinforcing plate	Yes	3.48	1.200	1.25	0.36	0.44	0.218	0.000	8.118	3.89	0.00
81.00	1 5/8" Coax	Yes	1.00	1.200	5.94	0.50	0.59	0.221	0.000	8.147	5.32	11.44
81.00	1.9" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.221	0.000	8.147	0.00	1.10
81.00	Reinforcing plate	Yes	1.00	1.200	1.25	0.10	0.13	0.221	0.000	8.147	1.12	0.00
81.19	1 5/8" Coax	Yes	0.19	1.200	5.94	0.09	0.11	0.222	0.000	8.152	0.99	2.14
81.19	1.9" Fiber	Yes	0.19	0.000	0.00	0.00	0.00	0.222	0.000	8.152	0.00	0.21
81.19	Reinforcing plate	Yes	0.19	1.200	1.25	0.02	0.02	0.222	0.000	8.152	0.21	0.00
85.00	1 5/8" Coax	Yes	3.81	1.200	5.94	1.89	2.27	0.221	0.000	8.260	20.58	43.62
85.00	1.9" Fiber	Yes	3.81	0.000	0.00	0.00	0.00	0.221	0.000	8.260	0.00	4.19
85.00	Reinforcing plate	Yes	3.81	1.200	1.25	0.40	0.48	0.221	0.000	8.260	4.33	0.00
86.00	1 5/8" Coax	Yes	1.00	1.200	5.94	0.50	0.59	0.224	0.000	8.287	5.41	11.44
86.00	1.9" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.224	0.000	8.287	0.00	1.10
86.00	Reinforcing plate	Yes	1.00	1.200	1.25	0.10	0.13	0.224	0.000	8.287	1.14	0.00
90.00	1 5/8" Coax	Yes	4.00	1.200	5.94	1.98	2.38	0.228	0.000	8.396	21.94	45.76
90.00	1.9" Fiber	Yes	4.00	0.000	0.00	0.00	0.00	0.228	0.000	8.396	0.00	4.40
90.00	Reinforcing plate	Yes	4.00	1.200	1.25	0.42	0.50	0.228	0.000	8.396	4.62	0.00
94.67	1 5/8" Coax	Yes	4.67	1.200	5.94	2.31	2.77	0.234	0.000	8.518	25.99	53.42
94.67	1.9" Fiber	Yes	4.67	0.000	0.00	0.00	0.00	0.234	0.000	8.518	0.00	5.14
94.67	Reinforcing plate	Yes	4.67	1.200	1.25	0.49	0.58	0.234	0.000	8.518	5.47	0.00
95.00	1 5/8" Coax	Yes	0.33	1.200	5.94	0.16	0.20	0.238	0.000	8.526	1.84	3.78
95.00	1.9" Fiber	Yes	0.33	0.000	0.00	0.00	0.00	0.238	0.000	8.526	0.00	0.36
95.00	Reinforcing plate	Yes	0.33	1.200	1.25	0.03	0.04	0.238	0.000	8.526	0.39	0.00
100.00	1 5/8" Coax	Yes	5.00	1.200	5.94	2.48	2.97	0.242	0.000	8.652	28.27	57.20

Linear Appurtenance Segment Forces (Factored)

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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 26

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
100.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.242	0.000	8.652	0.00	5.50
100.00	Reinforcing plate	Yes	5.00	1.200	1.25	0.52	0.63	0.242	0.000	8.652	5.95	0.00
102.00	1 5/8" Coax	Yes	2.00	1.200	5.94	0.99	1.19	0.282	0.000	8.701	11.37	22.88
102.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.282	0.000	8.701	0.00	2.20
102.00	Reinforcing plate	Yes	2.00	1.200	1.00	0.17	0.20	0.282	0.000	8.701	1.91	0.00
102.00	Reinforcing plate	Yes	2.00	1.200	1.25	0.21	0.25	0.282	0.000	8.701	2.39	0.00
102.67	1 5/8" Coax	Yes	0.67	1.200	5.94	0.33	0.40	0.285	0.000	8.718	3.82	7.66
102.67	1.9" Fiber	Yes	0.67	0.000	0.00	0.00	0.00	0.285	0.000	8.718	0.00	0.74
102.67	Reinforcing plate	Yes	0.67	1.200	1.00	0.06	0.07	0.285	0.000	8.718	0.64	0.00
102.67	Reinforcing plate	Yes	0.67	1.200	1.25	0.07	0.08	0.285	0.000	8.718	0.80	0.00
105.00	1 5/8" Coax	Yes	2.33	1.200	5.94	1.15	1.38	0.282	0.000	8.774	13.36	26.66
105.00	1.9" Fiber	Yes	2.33	0.000	0.00	0.00	0.00	0.282	0.000	8.774	0.00	2.56
105.00	Reinforcing plate	Yes	2.33	1.200	1.00	0.19	0.23	0.282	0.000	8.774	2.25	0.00
105.00	Reinforcing plate	Yes	2.03	1.200	1.25	0.21	0.25	0.282	0.000	8.774	2.45	0.00
110.00	1 5/8" Coax	Yes	5.00	1.200	5.94	2.48	2.97	0.250	0.000	8.891	29.05	57.20
110.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.250	0.000	8.891	0.00	5.50
110.00	Reinforcing plate	Yes	5.00	1.200	1.00	0.42	0.50	0.250	0.000	8.891	4.89	0.00
110.91	1 5/8" Coax	Yes	0.91	1.200	5.94	0.45	0.54	0.255	0.000	8.912	5.27	10.35
110.91	1.9" Fiber	Yes	0.91	0.000	0.00	0.00	0.00	0.255	0.000	8.912	0.00	1.00
110.91	Reinforcing plate	Yes	0.91	1.200	1.00	0.08	0.09	0.255	0.000	8.912	0.89	0.00
114.50	1 5/8" Coax	Yes	3.59	1.200	5.94	1.78	2.14	0.260	0.000	8.993	21.13	41.13
114.50	1.9" Fiber	Yes	3.59	0.000	0.00	0.00	0.00	0.260	0.000	8.993	0.00	3.95
114.50	Reinforcing plate	Yes	3.59	1.200	1.00	0.30	0.36	0.260	0.000	8.993	3.56	0.00
114.80	1 5/8" Coax	Yes	0.30	1.200	5.94	0.15	0.18	0.263	0.000	9.000	1.74	3.39
114.80	1.9" Fiber	Yes	0.30	0.000	0.00	0.00	0.00	0.263	0.000	9.000	0.00	0.33
114.80	Reinforcing plate	Yes	0.30	1.200	1.00	0.02	0.03	0.263	0.000	9.000	0.29	0.00
115.00	1 5/8" Coax	Yes	0.20	1.200	5.94	0.10	0.12	0.260	0.000	9.005	1.20	2.33
115.00	1.9" Fiber	Yes	0.20	0.000	0.00	0.00	0.00	0.260	0.000	9.005	0.00	0.22
115.00	Reinforcing plate	Yes	0.20	1.200	1.00	0.02	0.02	0.260	0.000	9.005	0.20	0.00
117.00	1 5/8" Coax	Yes	2.00	1.200	5.94	0.99	1.19	0.262	0.000	9.049	11.83	22.88
117.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.262	0.000	9.049	0.00	2.20
117.00	Reinforcing plate	Yes	2.00	1.200	1.00	0.17	0.20	0.262	0.000	9.049	1.99	0.00
118.00	1 5/8" Coax	Yes	1.00	1.200	5.94	0.50	0.59	0.265	0.000	9.071	5.93	11.44
118.00	1.9" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.265	0.000	9.071	0.00	1.10
118.00	Reinforcing plate	Yes	1.00	1.200	1.00	0.08	0.10	0.265	0.000	9.071	1.00	0.00
120.00	1 5/8" Coax	Yes	2.00	1.200	5.94	0.99	1.19	0.268	0.000	9.115	11.91	22.88
120.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.268	0.000	9.115	0.00	2.20
120.00	Reinforcing plate	Yes	2.00	1.200	1.00	0.17	0.20	0.268	0.000	9.115	2.01	0.00
125.00	1 5/8" Coax	Yes	5.00	1.200	5.94	2.48	2.97	0.236	0.000	9.222	30.13	57.20
125.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.236	0.000	9.222	0.00	5.50
130.00	1 5/8" Coax	Yes	5.00	1.200	5.94	2.48	2.97	0.245	0.000	9.326	30.47	57.20
130.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.245	0.000	9.326	0.00	5.50
135.00	1 5/8" Coax	Yes	5.00	1.200	5.94	2.48	2.97	0.256	0.000	9.427	30.80	57.20
135.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.256	0.000	9.427	0.00	5.50
137.00	1 5/8" Coax	Yes	2.00	1.200	5.94	0.99	1.19	0.263	0.000	9.466	12.37	22.88
137.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.263	0.000	9.466	0.00	2.20
140.00	1 5/8" Coax	Yes	3.00	1.200	5.94	1.49	1.78	0.269	0.000	9.525	18.67	34.32

Linear Appurtenance Segment Forces (Factored)

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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 26

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
140.00	1.9" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.269	0.000	9.525	0.00	3.30
145.00	1 5/8" Coax	Yes	5.00	1.200	5.94	2.48	2.97	0.279	0.000	9.621	31.43	57.20
145.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.279	0.000	9.621	0.00	5.50
150.00	1 5/8" Coax	Yes	5.00	1.200	5.94	2.48	2.97	0.293	0.000	9.715	31.74	57.20
150.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.293	0.000	9.715	0.00	5.50
155.00	1 5/8" Coax	Yes	5.00	1.200	5.94	2.48	2.97	0.466	0.000	9.806	32.04	57.20
155.00	1.9" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.466	0.000	9.806	0.00	5.50
158.00	1 5/8" Coax	Yes	3.00	1.200	5.94	1.49	1.78	0.466	0.000	9.860	19.33	34.32
158.00	1.9" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.466	0.000	9.860	0.00	3.30
160.00	1 5/8" Coax	Yes	2.00	1.200	5.94	0.99	1.19	0.466	0.000	9.896	12.93	22.88
160.00	1.9" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.466	0.000	9.896	0.00	2.20
Totals:											619.7	2,006.4

Calculated Forces

Structure: CT02694-B-SBA

Code: TIA-222-G

5/23/2022

Site Name: E-Prospect

Exposure: B

Height: 162.00 (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 26
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	-34.46	-7.70	0.00	-854.79	0.00	854.79	3849.02	1924.51	7372.73	3691.85	0.00	0.000	0.000	0.176
5.00	-33.31	-7.63	0.00	-816.32	0.00	816.32	3795.37	1897.68	7118.03	3564.30	0.03	-0.057	0.000	0.173
10.00	-32.17	-7.56	0.00	-778.18	0.00	778.18	3740.61	1870.30	6865.59	3437.90	0.12	-0.115	0.000	0.170
15.00	-31.05	-7.48	0.00	-740.37	0.00	740.37	3684.74	1842.37	6615.55	3312.69	0.27	-0.174	0.000	0.167
16.67	-30.69	-7.46	0.00	-727.88	0.00	727.88	3665.83	1832.91	6532.59	3271.15	0.34	-0.194	0.000	0.124
18.50	-30.29	-7.43	0.00	-714.23	0.00	714.23	3644.97	1822.48	6442.01	3225.79	0.42	-0.210	0.000	0.156
20.00	-29.96	-7.42	0.00	-703.09	0.00	703.09	3627.76	1813.88	6368.03	3188.75	0.48	-0.227	0.000	0.155
25.00	-28.88	-7.35	0.00	-665.99	0.00	665.99	3569.68	1784.84	6123.18	3066.14	0.75	-0.283	0.000	0.152
30.00	-27.82	-7.28	0.00	-629.24	0.00	629.24	3510.49	1755.24	5881.13	2944.94	1.08	-0.340	0.000	0.148
34.67	-26.85	-7.19	0.00	-595.27	0.00	595.27	3454.20	1727.10	5657.69	2833.05	1.44	-0.393	0.000	0.146
35.00	-26.78	-7.20	0.00	-592.89	0.00	592.89	3450.19	1725.09	5642.00	2825.20	1.47	-0.397	0.000	0.146
40.00	-25.77	-7.11	0.00	-556.89	0.00	556.89	3388.79	1694.39	5405.94	2706.99	1.91	-0.454	0.000	0.142
42.14	-25.34	-7.08	0.00	-541.69	0.00	541.69	3362.21	1681.10	5306.03	2656.96	2.12	-0.480	0.000	0.140
45.00	-24.39	-7.03	0.00	-521.42	0.00	521.42	3326.27	1663.14	5173.07	2590.38	2.42	-0.513	0.000	0.136
47.57	-23.55	-6.98	0.00	-503.36	0.00	503.36	2638.80	1319.40	4131.44	2068.79	2.70	-0.543	0.000	0.144
50.00	-23.13	-6.94	0.00	-486.40	0.00	486.40	2616.75	1308.38	4046.02	2026.02	2.99	-0.571	0.000	0.153
54.67	-22.34	-6.85	0.00	-453.98	0.00	453.98	2573.65	1286.82	3883.14	1944.46	3.57	-0.628	0.000	0.153
55.00	-22.29	-6.85	0.00	-451.72	0.00	451.72	2570.56	1285.28	3871.70	1938.73	3.62	-0.633	0.000	0.153
60.00	-21.45	-6.76	0.00	-417.46	0.00	417.46	2523.27	1261.63	3699.46	1852.48	4.31	-0.696	0.000	0.146
65.00	-20.64	-6.67	0.00	-383.65	0.00	383.65	2474.87	1237.43	3529.43	1767.34	5.08	-0.758	0.000	0.139
70.00	-19.84	-6.49	0.00	-350.32	0.00	350.32	2425.36	1212.68	3361.74	1683.37	5.90	-0.819	0.000	0.132
74.67	-19.12	-6.32	0.00	-319.99	0.00	319.99	2378.12	1189.06	3207.34	1606.06	6.73	-0.875	0.000	0.127
75.00	-19.07	-6.32	0.00	-317.90	0.00	317.90	2374.74	1187.37	3196.52	1600.63	6.79	-0.880	0.000	0.127
76.52	-18.83	-6.27	0.00	-308.33	0.00	308.33	2359.17	1179.58	3146.91	1575.79	7.08	-0.898	0.000	0.125
80.00	-17.99	-6.14	0.00	-286.49	0.00	286.49	2323.02	1161.51	3033.91	1519.21	7.75	-0.940	0.000	0.118
81.00	-17.76	-6.10	0.00	-280.36	0.00	280.36	2312.54	1156.27	3001.71	1503.09	7.95	-0.952	0.000	0.095
81.19	-17.71	-6.10	0.00	-279.22	0.00	279.22	1750.09	875.04	2314.24	1158.84	7.98	-0.954	0.000	0.103
85.00	-17.22	-5.96	0.00	-255.97	0.00	255.97	1723.72	861.86	2226.75	1115.03	8.76	-0.989	0.000	0.105
86.00	-17.09	-5.93	0.00	-250.01	0.00	250.01	1716.70	858.35	2203.94	1103.61	8.97	-1.000	0.000	0.130
90.00	-16.58	-5.79	0.00	-226.30	0.00	226.30	1688.18	844.09	2113.26	1058.20	9.83	-1.048	0.000	0.121
94.67	-16.00	-5.62	0.00	-199.26	0.00	199.26	1653.98	826.99	2008.61	1005.80	10.88	-1.102	0.000	0.116
95.00	-15.96	-5.62	0.00	-197.40	0.00	197.40	1651.53	825.76	2001.27	1002.12	10.95	-1.106	0.000	0.116
100.00	-13.01	-4.76	0.00	-169.31	0.00	169.31	1613.77	806.88	1890.91	946.86	12.14	-1.162	0.000	0.103
102.00	-12.77	-4.69	0.00	-159.79	0.00	159.79	1598.36	799.18	1847.26	925.00	12.64	-1.184	0.000	0.067
102.67	-12.69	-4.67	0.00	-156.65	0.00	156.65	1593.15	796.58	1832.70	917.71	12.80	-1.189	0.000	0.095
105.00	-12.42	-4.59	0.00	-145.77	0.00	145.77	1574.90	787.45	1782.33	892.49	13.39	-1.213	0.000	0.090
110.00	-11.85	-4.41	0.00	-122.84	0.00	122.84	1534.93	767.47	1675.65	839.07	14.69	-1.261	0.000	0.080
110.91	-11.75	-4.38	0.00	-118.85	0.00	118.85	1527.58	763.79	1656.56	829.51	14.92	-1.270	0.000	0.078
114.50	-10.80	-4.14	0.00	-103.10	0.00	103.10	1498.01	749.01	1581.38	791.86	15.89	-1.301	0.000	0.069
114.80	-10.75	-4.13	0.00	-101.87	0.00	101.87	1034.66	517.33	1111.16	556.41	15.97	-1.304	0.000	0.076
115.00	-10.73	-4.13	0.00	-101.03	0.00	101.03	1033.71	516.86	1108.46	555.05	16.03	-1.305	0.000	0.085
117.00	-8.74	-3.28	0.00	-92.77	0.00	92.77	1024.27	512.13	1081.93	541.77	16.58	-1.324	0.000	0.079
118.00	-8.67	-3.25	0.00	-89.50	0.00	89.50	1019.48	509.74	1068.72	535.15	16.86	-1.332	0.000	0.076
118.00	-8.67	-3.25	0.00	-89.50	0.00	89.50	1019.48	509.74	1068.72	535.15	16.86	-1.332	0.000	0.076
120.00	-8.51	-3.18	0.00	-83.00	0.00	83.00	1009.78	504.89	1042.37	521.96	17.42	-1.349	0.000	0.167
125.00	-8.12	-3.03	0.00	-67.08	0.00	67.08	984.73	492.37	977.10	489.28	18.88	-1.439	0.000	0.145
130.00	-7.74	-2.88	0.00	-51.93	0.00	51.93	958.58	479.29	912.78	457.07	20.43	-1.519	0.000	0.122
135.00	-7.38	-2.72	0.00	-37.56	0.00	37.56	931.33	465.66	849.55	425.40	22.06	-1.587	0.000	0.096

Calculated Forces

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 61
	Struct Class: II	



137.00	-4.40	-1.70	0.00	-32.12	0.00	32.12	920.11	460.06	824.58	412.91	22.73	-1.611	0.000	0.083
140.00	-4.24	-1.61	0.00	-27.03	0.00	27.03	902.96	451.48	787.53	394.35	23.76	-1.643	0.000	0.073
145.00	-3.97	-1.46	0.00	-19.00	0.00	19.00	873.49	436.75	726.86	363.97	25.50	-1.689	0.000	0.057
150.00	-3.71	-1.31	0.00	-11.71	0.00	11.71	842.91	421.46	667.67	334.33	27.29	-1.724	0.000	0.039
150.00	-3.71	-1.31	0.00	-11.71	0.00	11.71	656.05	328.03	328.13	215.42	27.29	-1.724	0.000	0.060
155.00	-3.40	-1.20	0.00	-5.15	0.00	5.15	656.05	328.03	328.13	215.42	29.11	-1.746	0.000	0.029
158.00	-2.84	-0.76	0.00	-1.55	0.00	1.55	656.05	328.03	328.13	215.42	30.21	-1.756	0.000	0.012
160.00	-0.10	-0.02	0.00	-0.03	0.00	0.03	656.05	328.03	328.13	215.42	30.95	-1.758	0.000	0.000
162.00	0.00	-0.01	0.00	0.00	0.00	0.00	656.05	328.03	328.13	215.42	31.68	-1.758	0.000	0.000

Final Analysis Summary

Structure: CT02694-B-SBA	Code: TIA-222-G	5/23/2022
Site Name: E-Prospect	Exposure: B	
Height: 162.00 (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 97 mph Wind	31.4	0.00	41.29	0.00	0.00	3499.46
0.9D + 1.6W 97 mph Wind	31.4	0.00	30.95	0.00	0.00	3457.58
1.2D + 1.0Di + 1.0Wi 50 mph Wind	8.1	0.00	70.57	0.00	0.00	909.67
1.2D + 1.0E	1.5	0.00	41.36	0.00	0.00	183.08
0.9D + 1.0E	1.5	0.00	31.02	0.00	0.00	180.52
1.0D + 1.0W 60 mph Wind	7.7	0.00	34.46	0.00	0.00	854.79

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 97 mph Wind	-41.29	-31.40	0.00	-3499.4	0.00	-3499.4	3849.02	1924.5	7372.73	3691.85	0.00	0.704
0.9D + 1.6W 97 mph Wind	-30.95	-31.38	0.00	-3457.5	0.00	-3457.5	3849.02	1924.5	7372.73	3691.85	0.00	0.694
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-21.40	-3.49	0.00	-94.29	0.00	-94.29	1009.78	504.89	1042.37	521.96	120.00	0.202
1.2D + 1.0E	-10.29	-1.07	0.00	-37.90	0.00	-37.90	1009.78	504.89	1042.37	521.96	120.00	0.083
0.9D + 1.0E	-7.72	-1.06	0.00	-37.30	0.00	-37.30	1009.78	504.89	1042.37	521.96	120.00	0.079
1.0D + 1.0W 60 mph Wind	-34.46	-7.70	0.00	-854.79	0.00	-854.79	3849.02	1924.5	7372.73	3691.85	0.00	0.176

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors			Lower Termination				Upper Termination				Max Member			Ratio
			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)	
0.0	18.5	(3) PLT-6.5x1.25(1.25 Hole)	-308.1	-5.55	37.1	375.8	37.1	11	12	272.3	37.1	8	12	375.79	448.0	389.06	0.966
16.7	34.7	(3) PLT-6"x1-1/4"(1.25" Hole)	317.0	5.71	37.1	266.6	37.1	8	11	315.4	37.1			333.31	413.6	351.56	0.948
34.7	54.7	(3) PLT-5.75x1.25(1.25 Hole)	377.8	6.80	37.1	306.6	37.1			301.4	37.1			310.41	396.3	332.81	0.933
54.7	74.7	(3) PLT-5.25"x1 1/4"(1.25"ho	395.6	7.12	37.1	285.0	37.1			240.8	37.1			284.96	361.9	295.31	0.965
74.7	94.7	(3) PLT-5"x1-1/4"(1.25"Hole)	459.8	8.28	37.1	233.8	37.1			195.5	37.1			233.79	344.6	276.56	0.845
81.0	86.0	(3) PLT-C6x13 (1.25" hole)	-228.8	-5.49	25.3	115.2	25.3	5	8	115.9	25.3	5	8	117.61	165.9	160.09	0.735
94.7	102.7	(3) PLT-4.5"x 1-1/4"(1.25"ho	459.8	8.28	37.1	184.7	37.1			106.5	37.1	3	8	184.75	310.2	239.06	0.773
102.0	118.0	(3) LNP-LP6X100-G-20TT	457.0	10.97	25.3	114.2	25.3	5	8	122.8	25.3	5	8	162.87	297.8	288.75	0.564



Pier Foundation Design For Monopole			Date
			5/20/2022
Customer Name:	T-Mobile	EIA/TIA Standard:	TIA-222-G
Site Name:		Structure Height (Ft.):	162
Site Number:	CT02694-B-SBA	Engineer Name:	K. Azisllari
Engr. Number:	129481	Engineer Login ID:	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	41.3	Shear Force (Kips):	31.4
Uplift Force (Kips):	0.0	Moment (Kips-ft):	3499.5

Foundation Geometries:

Diameter of Pier (ft.):	6.5	Depth of Base B. G. S. :	21.0 ft.
Pier Height A. G. (ft.):	1.00		

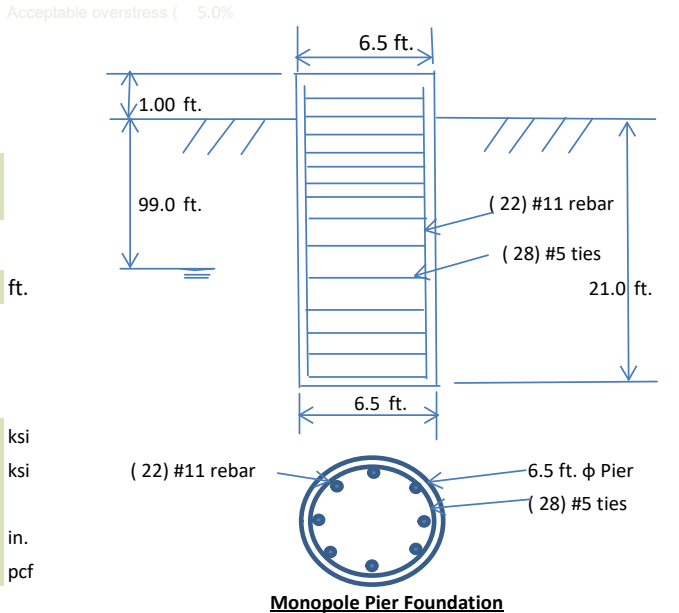
Material Properties and Rebar Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000 ksi
Vertical bar yield (ksi)	60	Tie steel yield strength:	60 ksi
Vertical Rebar Size #:	11	Tie / Stirrup Size #:	5
Qty. of Vertical Rebars:	22	Tie Spacing:	12.0 in.
Concrete Cover (in.):	3	Concrete unit weight:	150.0 pcf

Soil Design Parameters:

Water Table B.G.S. (ft):	99.0	Unit weight of water:	62.4 psf
Ratio of Uplift/Axial Skin Friction:	1.0	Pullout failure Angle:	30 (°)

Skin Frictions are to be obtained from: Soil Report



Depth of Layers (ft)		γ_{soil} (pcf)	ϕ (°)	Cohesion (psf)	Ultimate Skin Friction (psf)	Ultimate Bearing (psf)	Soil Types						
Top	Bottom												
0.0	3.0	110	20	0									
3.0	35.0	135	38	0									
35.0	40.0	135	38	0									

Soil weight Increase Factor for bouyant soils (1.0 to 1.15): 1.1

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Soil Bearing Strength Reduction Factor:	0.75
Total Dry Soil Volume from Conical Failure (cu. Ft.):	5799	Dry Soil Weight from Conical Failure:	772 Kips
Total Buoyant Soil Volume from Conical Failure (cu. Ft.):	0	Buoyant Soil Weight from Conical Failure (Kips):	0 Kips
Total Dry Concrete Volume (cu. Ft.):	730	Total Dry Concrete Weight:	109.5 Kips
Total Buoyant Concrete Volume (cu. Ft.):	0.0	Total Buoyant Concrete Weight:	0.00 Kips
Total Effective Concrete Weight (Kips):	109.5	Total Effective Soil Weight:	772.0 Kips
Total Effective Vertical Load on Base (Kips):	58.0		

Check Soil Capacities:

Allowable Foundation Overturning Resistance (kips-ft.):	5797.9	>	Design Factored Moment (kips-ft):	3979	Usage	0.69	OK!
Factor of Safety of Passive Soil Resistance against Moment:	1.46	OK!					

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

Reinforcing Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):	1.56	Tie / Stirrup Area (sq. in./each):	0.31	Usage	
Calculated Moment Capacity (Mn, Kips-Ft):	5345.3	>	Design Factored Moment (Mu, K-Ft):	3637.1	0.68 OK!
Calculated Shear Capacity (Kips):	962.3	>	Design Factored Shear (Kips):	408.8	0.42 OK!
Calculated Tension Capacity (Tn, Kips):	1853.3	>	Design Factored Tension (Tu Kips):	0.0	0.00 OK!
Calculated Compression Capacity (Pn, Kips):	8387	>	Design Factored Axial Load (Pu Kips):	41.3	0.00 OK!
Moment & Axial Strength Combination:	0.68	OK!	Max. Allowable Tie/Stirrup Spacing:	12.00	in.
Pier Reinforcement Ratio:	0.007	Reinforcement Ratio is satisfied per ACI			

Exhibit E

Mount Analysis



Tower Engineering Solutions

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

Post-Mod Antenna Mount Analysis Report

Existing Monopole Tower

Customer Name: SBA Communications Corp

Customer Site Number: CT02694-B-SBA

Customer Site Name: E-Prospect

Carrier Name: T-Mobile (App#: 194486, v2)

Carrier Site ID / Name: CTNH303A / CTNH303/SBA Prospect_ET

Site Location: 229 Cheshire Road

Prospect, Connecticut

New Haven County

Latitude: 41.507881

Longitude: -72.951025

Analysis Result:

Max Structural Usage: 60.8% [Pass]



Report Prepared By: Cameron Pescatello



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Longitude: -72.951025

Analysis Result:

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Report Prepared By: Cameron Pescatello

Introduction

The purpose of this report is to summarize the analysis results on the (3) T-Arms at 160.00' elevation including the proposed modifications to support the proposed antenna configuration. Any existing modification listed under Sources of Information was assumed completed and was included in this analysis.

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

Sources of Information

Mount Drawings	Mount mapping provided by SGS Towers, dated 5/3/2022
Antenna Loading	Provided by SBA; Application #: 194486, v2, dated 5/20/2022
Existing Modification	N/A
Proposed Modification	TES Project No. 129484
Previous Mount Analysis	TES Project No. 128141, dated 5/16/2022

Analysis Criteria

Basic Wind Speed Used in the Analysis: $V_{ULT} = 125$ mph (3-Sec. Gust) / Equivalent to
 $V_{ASD} = 97$ mph (3-Sec. Gust)

Basic Wind Speed with Ice: 50 mph (3-Sec. Gust) with 0.75" radial ice concurrent

Operational Wind Speed: 30 mph +0" Radial ice

Standard/Codes: ANSI/TIA/EIA 222-G / 2015 IBC / 2018 Connecticut State Building Code

Exposure Category: B

Structure Class: II

Topographic Category: 1

Crest Height (Ft): 0

Mount Information

(3) T-Arms at 160.00' elevation

Final Antenna Configuration

3	Ericsson AIR 21 B4A B2P
3	RFS APXVAALL24_43-U-NA20
3	RFS ATMPP1412D-1CWA
3	RFS ATMAA1412D-1A20 TMA
3	Ericsson 4480 B71 + B85
3	Ericsson S11 B2

Analysis Results

Our calculations have determined that under design wind load the existing mounts will be structurally adequate to support the proposed antenna configuration after the proposed modification is successfully completed. The maximum structural usage is 60.8%, which occurs in the standoff arm flange plates. The proposed equipment must be installed as stipulated in the Final Antenna Configuration section of this report. The analysis results are void if the proposed equipment is not installed in accordance with this report.

Attachments

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

Standard Conditions

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



Structure: CT02694-B-SBA - E-Prospect

Sector: **A**

5/25/2022

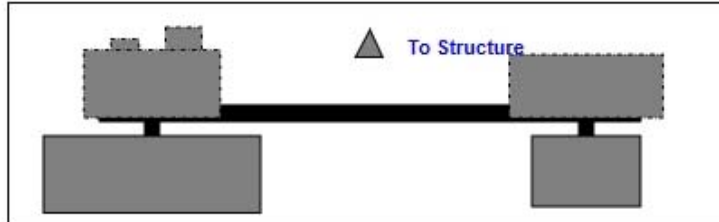


Structure Type: Monopole

Mount Elev: 160.00

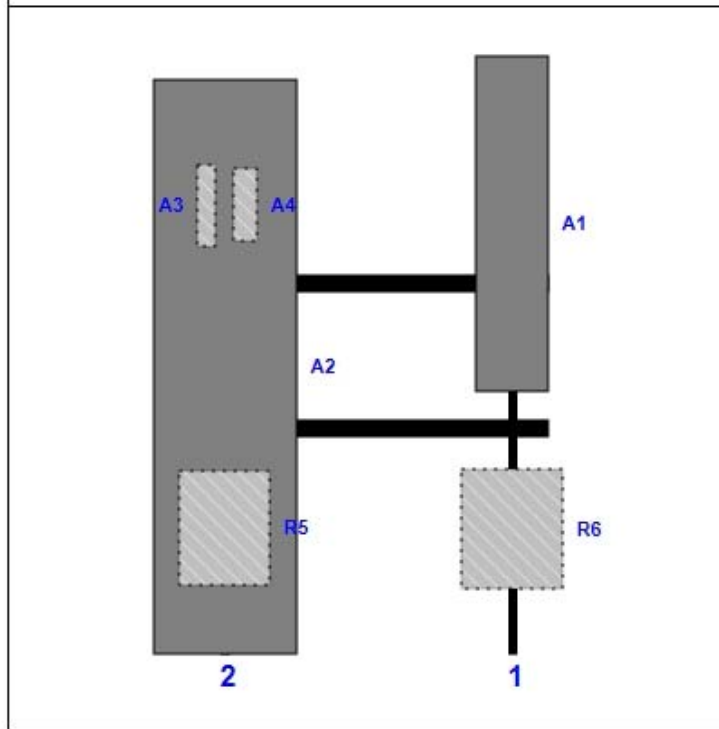
Page: 1

Plan View



Front View

Looking Toward Structure



Ref #	Model	Height (n)	Width (n)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	AIR 21 B4A B2P	55.90	12.00	54.00	1	a	Front	24.00		Retained	5/3/2022
R6	S11 B2	20.00	17.00	54.00	1	b	Behind	75.00		Retained	5/3/2022
A2	APXVAALL24_43-U-NA20	95.90	24.00	6.00	2	a	Front	48.00		Added	
R5	4480 B71 + B85	19.20	15.10	6.00	2	b	Behind	75.00		Added	
A3	ATMPP1412D-1CWA	13.80	3.10	6.00	2	c	Behind	21.00	-3.00	Leased	
A4	ATMAA1412D-1A20 TMA	12.00	4.00	6.00	2	c	Behind	21.00	3.50	Leased	

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Sector: **B**

5/25/2022

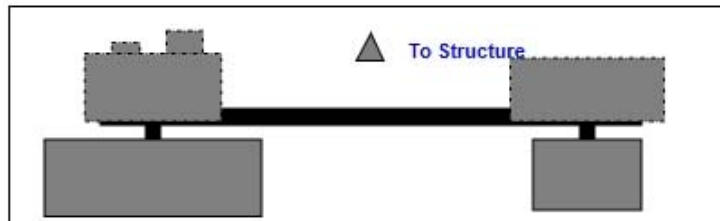


Structure Type: Monopole

Mount Elev: 160.00

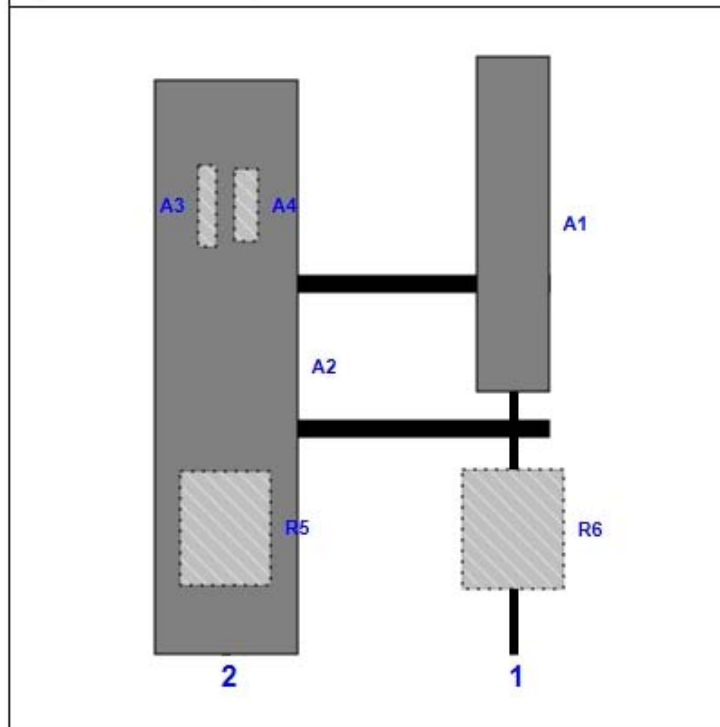
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Plan View



Front View

Looking Toward Structure



Ref #	Model	Height (n)	Width (n)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
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A2	APXVAALL24_43-U-NA20	95.90	24.00	6.00	2	a	Front	48.00		Added	
R5	4480 B71 + B85	19.20	15.10	6.00	2	b	Behind	75.00		Added	
A3	ATMPP1412D-1CWA	13.80	3.10	6.00	2	c	Behind	21.00	-3.00	Leased	
A4	ATMAA1412D-1A20 TMA	12.00	4.00	6.00	2	c	Behind	21.00	3.50	Leased	

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Sector: C

5/25/2022

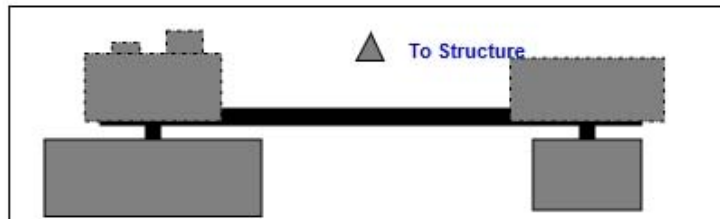


Structure Type: Monopole

Mount Elev: 160.00

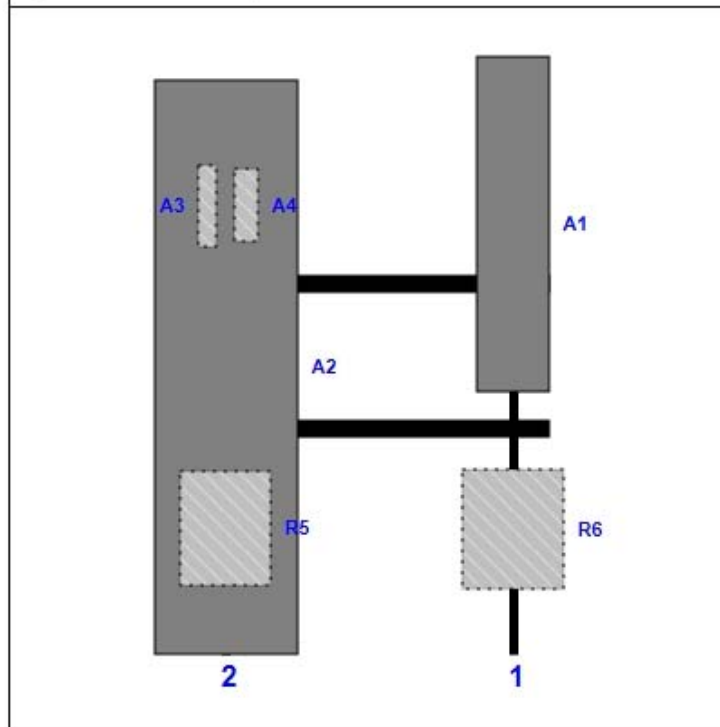
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Plan View



Front View

Looking Toward Structure



Ref #	Model	Height (n)	Width (n)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	AIR 21 B4A B2P	55.90	12.00	54.00	1	a	Front	24.00		Retained	5/3/2022
R6	S11 B2	20.00	17.00	54.00	1	b	Behind	75.00		Retained	5/3/2022
A2	APXVAALL24_43-U-NA20	95.90	24.00	6.00	2	a	Front	48.00		Added	
R5	4480 B71 + B85	19.20	15.10	6.00	2	b	Behind	75.00		Added	
A3	ATMPP1412D-1CWA	13.80	3.10	6.00	2	c	Behind	21.00	-3.00	Leased	
A4	ATMAA1412D-1A20 TMA	12.00	4.00	6.00	2	c	Behind	21.00	3.50	Leased	

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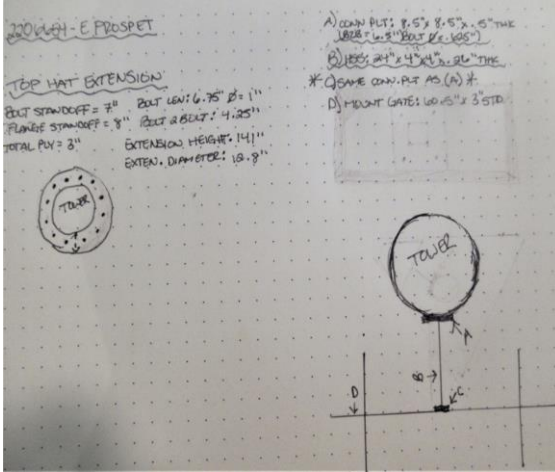


Antenna Mount Mapping Form (PATENT PENDING)

FCC #
1232865

Tower Owner:	SBA	Mapping Date:	5/3/2022
Site Name:	E-PROSPECT	Tower Type:	Monopole
Site Number or ID:	CT02694	Tower Height (Ft.):	180
Mapping Contractor:	SGS Towers	Mount Elevation (Ft.):	160

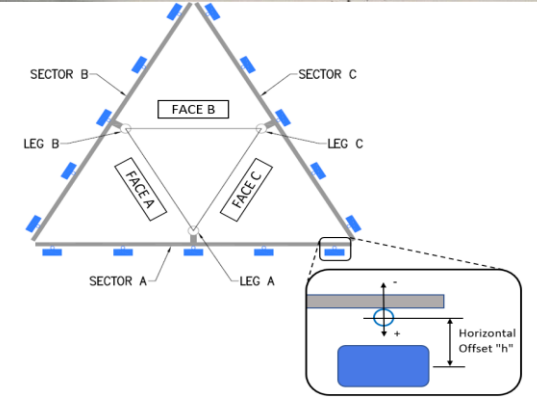
This antenna mapping form is the property of TES and under **PATENT PENDING**. The formation contained herein is considered confidential in nature and is to be used only for the specific customer it was intended for. Reproduction, transmission, publication, modification or disclosure by any method is prohibited except by express written permission of TES. All means and methods are the responsibility of the contractor and the work shall be compliant with ANSI/ASSE A 10.48, OSHA, FCC, FAA and other safety requirements that may apply. TES is not warranting the usability of the safety climb as it must be assessed prior to each use in compliance with OSHA requirements.



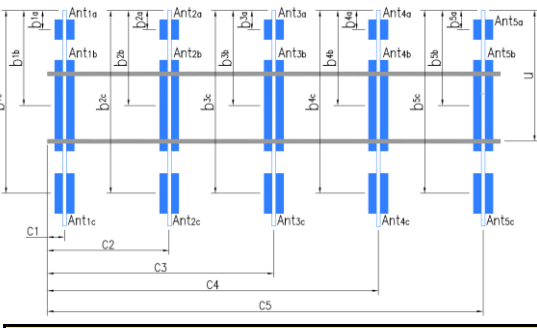
Mount Pipe Configuration and Geometries [Unit = Inches]							
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "L"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "L"	Horizontal Offset "C1, C2, C3, etc."
A1	98.5"x 2.5"STD	34.25	6.50	C1	98.5"x 2.5"STD	34.25	6.50
A2	98.5"x 2.5"STD	34.25	55.50	C2	98.5"x 2.5"STD	34.25	55.50
A3				C3			
A4				C4			
A5				C5			
A6				C6			
B1	98.5"x 2.5"STD	34.25	6.50	D1			
B2	98.5"x 2.5"STD	34.25	55.50	D2			
B3				D3			
B4				D4			
B5				D5			
B6				D6			

Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.): 3
 Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.): 0
 Please enter additional information or comments below.
 Coax: (1) 1 1/2" Fiber//Collar Info: (18"x 9.75"x 3"x 2"x .375"THK) Collar2Collar: 2.5"/Collar Standoff: 2.75"
 TR Info: 14"/TR 2 TR: 6"/TR Dia: .625"

Tower Face Width at Mount Elev. (ft.):	3	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	12.8
--	---	---	------



Enter antenna model. If not labeled, enter "Unknown".							Mounting Locations [Units are inches and degrees]			Photos of antennas
Ants. Items	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Vertical Distances "b _{1a} , b _{2a} , b _{3a} , b _{1b} ..." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photo Numbers
Sector A										
Ant _{1a}										
Ant _{1b}	AIR21 B4A B2B	12.10	7.87	55.90	1 1/2" FBF	162.5	22.25	14.62	10.00	157
Ant _{1c}	RRUS 11 B2	17.00	7.00	20.00	1 1/2" FBF	158	28.00	10.50	10.00	158
Ant _{2a}										
Ant _{2b}	LNx-6515DS-A1M	11.90	7.10	48.50	1 1/2" FBF	162.5	46.00	11.10	10.00	159
Ant _{2c}	RRUS 11 B12	17.00	7.00	20.00	1 1/2" FBF	158	28.00	10.50	10.00	160
Ant _{3a}										
Ant _{3b}	EMPTY									
Ant _{3c}										
Ant _{4a}										
Ant _{4b}	EMPTY									
Ant _{4c}										
Ant _{5a}										
Ant _{5b}	EMPTY									
Ant _{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										



Antenna Layout (Looking Out From Tower)

Observed Safety and Structural Issues During the Mount Mapping

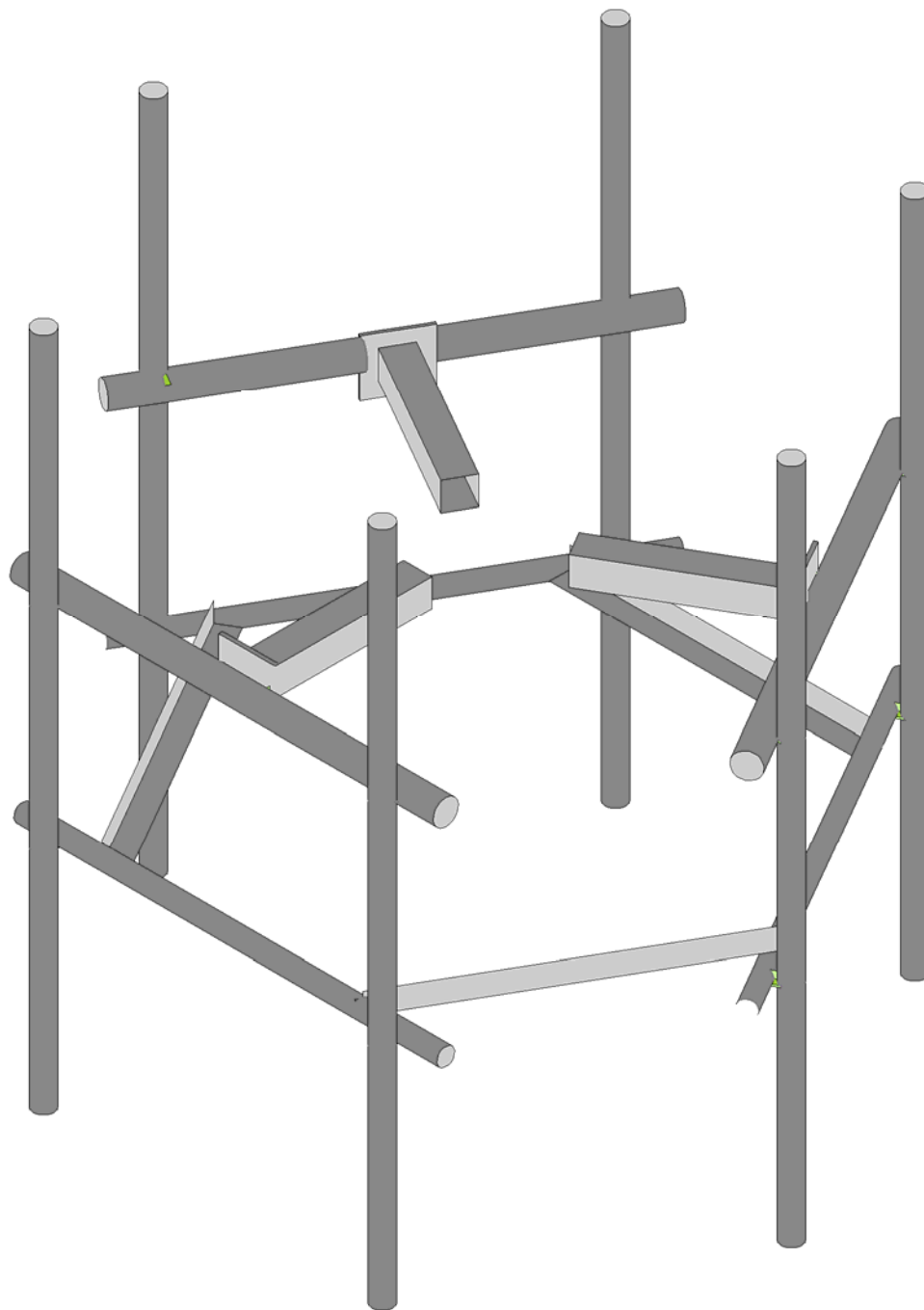
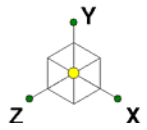
Issue #	Description of Issue	Photo #
1		
2		
3		
4		
5		
6		
7		
8		

Mapping Notes

1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.)
2. If the thickness of the existing pipes or tubing can't be obtained from a general tool (such as Caliper), please use an ultrasonic measurement tool (thickness gauge) to measure the thickness.
3. Please create all required detail sketches of the mounts and insert them into the "Sketches" tab.
4. Please measure and enter the bolt sizes and types under the Members Box in the spreadsheet of the mount type.
5. Take and label the photos of the tower, mounts, connections, antennas and all measurements. Minimum 50 photos are required.
6. Please measure and report the size and length of all existing antenna mounting pipes.
7. Please measure and report the antenna information for all sectors.
8. Don't delete or rearrange any sheet or contents of any sheet from this mapping form.

Standard Conditions

1. Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping are to be reported in this mapping. However, this mount mapping is not a condition assessment of the mount.



Tower Engineering Solutio...

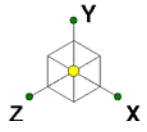
CT02694-B-SBA_MT_LO_Loads Only_G

SK - 1

May 25, 2022 at 9:11 AM

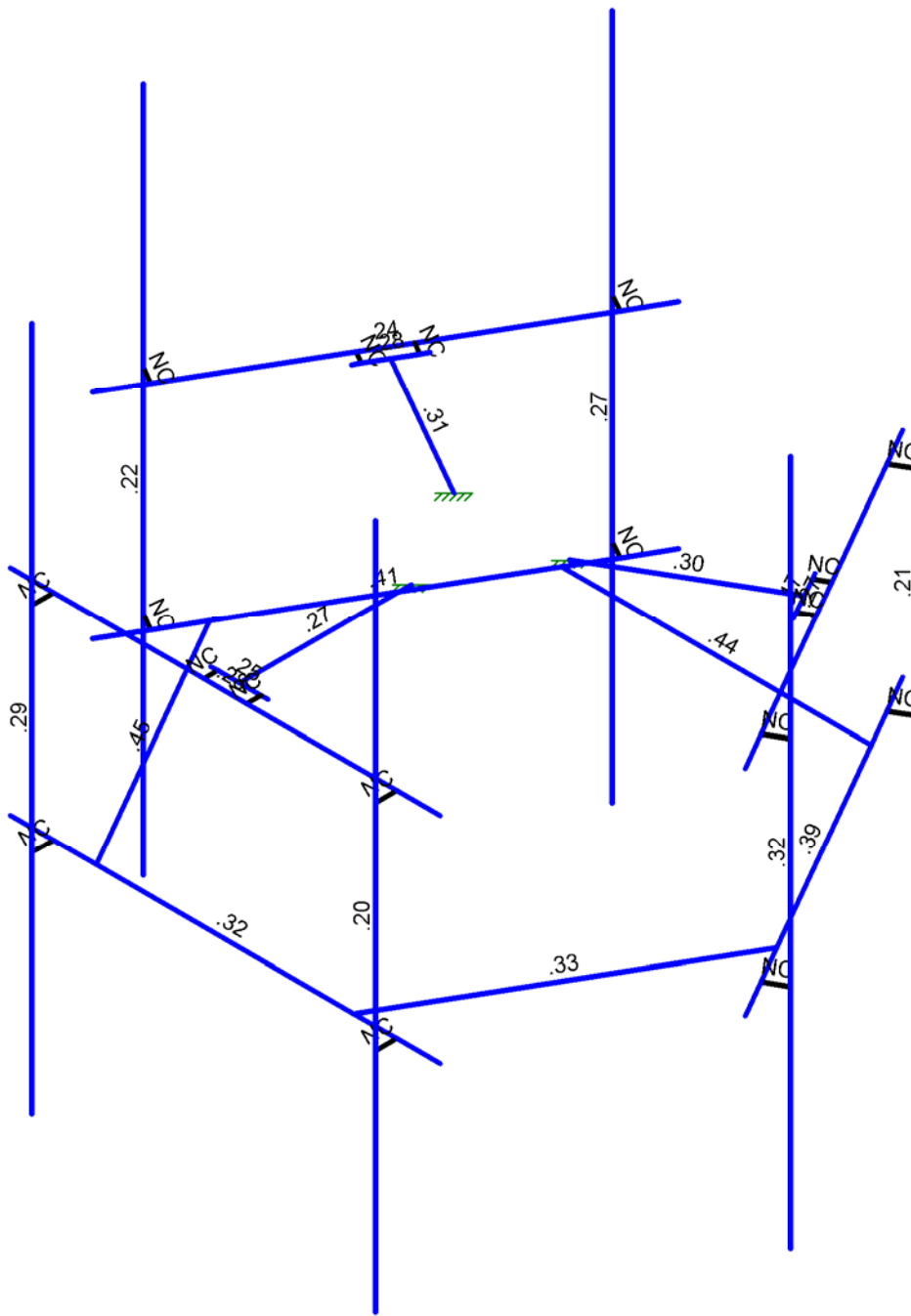
TES Project No. 129484

CT02694-B-SBA_129484_G_RISA_...



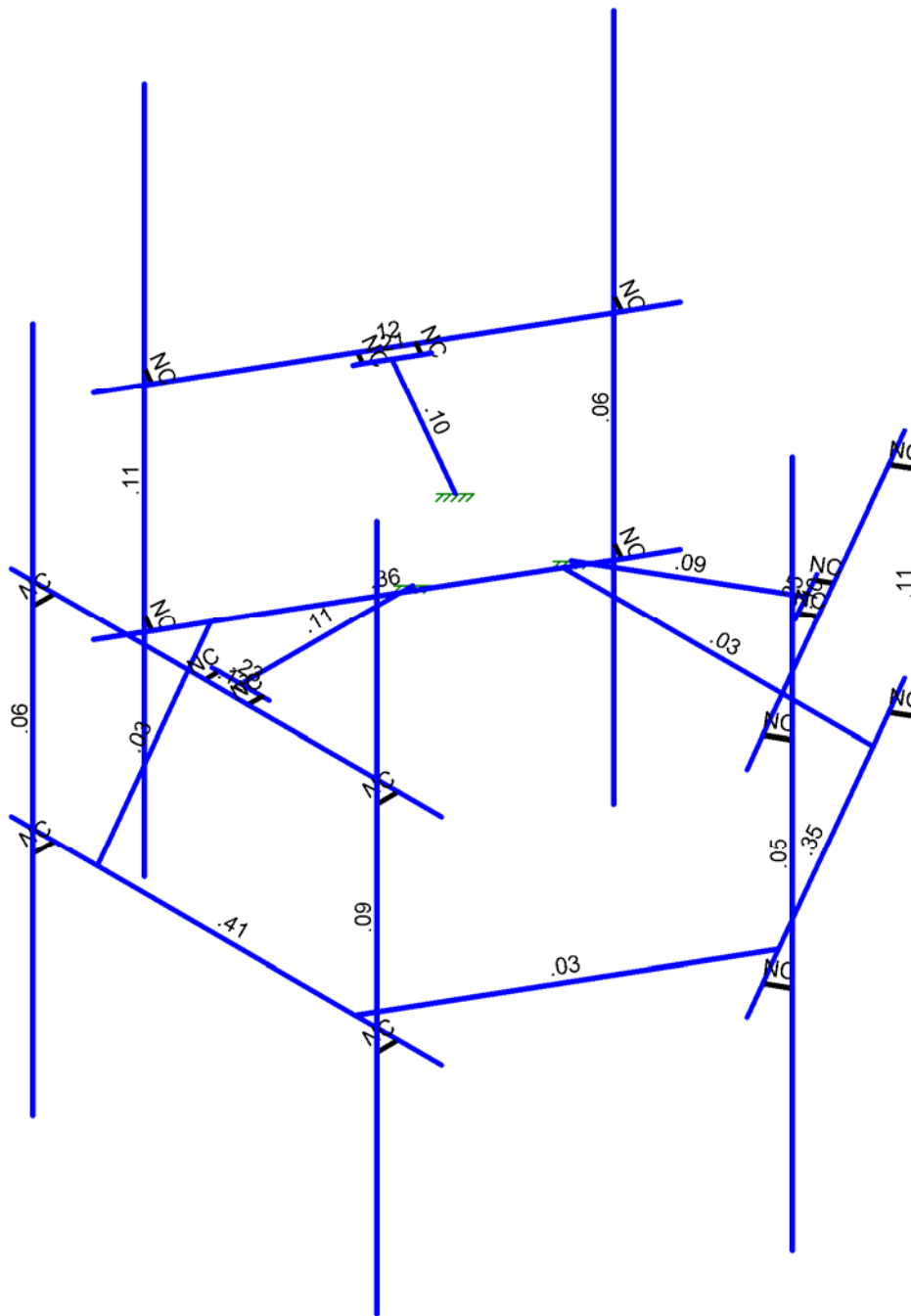
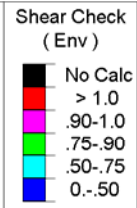
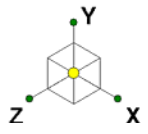
Code Check (Env)

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...	CT02694-B-SBA_MT_LO_Loads Only_G	SK - 2
TES Project No. 129484		May 25, 2022 at 9:12 AM
		CT02694-B-SBA_129484_G_RISA_...



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

Tower Engineering Solutio...	CT02694-B-SBA_MT_LO_Loads Only_G	SK - 3
		May 25, 2022 at 9:13 AM
TES Project No. 129484		CT02694-B-SBA_129484_G_RISA_...



Company : Tower Engineering Solutions, LLC
 Designer :
 Job Number : TES Project No. 129484
 Model Name : CT02694-B-SBA_MT_LO_Loads Only_G

May 25, 2022
 9:13 AM
 Checked By: _____

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Member)	Surface(...)
1	Antenna D	None					36			
2	Antenna Di	None					36			
3	Antenna W Front	None					36			
4	Antenna Wi Front	None					36			
5	Antenna W Side	None					36			
6	Antenna Wi Side	None					36			
7	Service Lm1	None					1			
8	Service Lm2	None					1			
9	Structure D	None		-1						
10	Structure Di	None						21		
11	Structure W Front	None						21		
12	Structure Wi Front	None						21		
13	Structure W Side	None						21		
14	Structure Wi Side	None						21		

Load Combinations

	Description	So..P...	SR..	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	
1	1.2D+1.6W (Front)	Yes	Y	1	1.2	9	1.2	3	1.6	11	1.6										
2	1.2D+1.6W (Back)	Yes	Y	1	1.2	9	1.2	3	-1.6	11	-1.6										
3	1.2D+1.6W (Left)	Yes	Y	1	1.2	9	1.2	5	1.6	13	1.6										
4	1.2D+1.6W (Right)	Yes	Y	1	1.2	9	1.2	5	-1.6	13	-1.6										
5	1.2D+1.0Di+1.0Wi (Front)	Yes	Y	1	1.2	9	1.2	2	1	10	1	4	1	12	1						
6	1.2D+1.0Di+1.0Wi (Back)	Yes	Y	1	1.2	9	1.2	2	1	10	1	4	-1	12	-1						
7	1.2D+1.0Di+1.0Wi (Left)	Yes	Y	1	1.2	9	1.2	2	1	10	1	6	1	14	1						
8	1.2D+1.0Di+1.0Wi (Right)	Yes	Y	1	1.2	9	1.2	2	1	10	1	6	-1	14	-1						
9	1.2D+1.5L1+.16W (Main..)	Yes	Y	1	1.2	9	1.2	7	1.5	3	.16	11	.16								
10	1.2D+1.5L2+.16W (Main..)	Yes	Y	1	1.2	9	1.2	8	1.5	3	.16	11	.16								
11	1.4D	Yes	Y	1	1.4	9	1.4														

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diaphr...
1	N1	0	0	0.78125	0	
2	N2	-2.5	0	2.947921	0	
3	N3	2.5	0	2.947921	0	
4	N4	0	0	2.781254	0	
5	N5	2	2.854167	3.197895	0	
6	N6	2	-5.145833	3.197895	0	
7	N7	2	0	3.197895	0	
8	N8	2	0	2.947921	0	
9	N9	0	0	0	0	
10	N10	-0.333333	0	2.781254	0	
11	N11	0.333333	0	2.781254	0	
12	N12	-2	2.854167	3.197895	0	
13	N13	-2	-5.145833	3.197895	0	
14	N14	-2	0	3.197895	0	
15	N15	-2	0	2.947921	0	
16	N16	.25	0	2.947921	0	
17	N17	.25	0	2.781254	0	
18	N18	-.25	0	2.947921	0	
19	N19	-.25	0	2.781254	0	



Company : Tower Engineering Solutions, LLC
 Designer :
 Job Number : TES Project No. 129484
 Model Name : CT02694-B-SBA_MT_LO_Loads Only_G

May 25, 2022
 9:13 AM
 Checked By: _____

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diaphr...
20	N20	0.676582	0	-0.390625	0	
21	N21	3.802974	0	0.691103	0	
22	N22	1.302974	0	-3.639024	0	
23	N23	2.408636	0	-1.390627	0	
24	N24	1.769459	2.854167	-3.330998	0	
25	N25	1.769459	-5.145833	-3.330998	0	
26	N26	1.769459	0	-3.330998	0	
27	N27	1.552974	0	-3.206011	0	
28	N28	2.575303	0	-1.101952	0	
29	N29	2.24197	0	-1.679302	0	
30	N30	3.769459	2.854167	0.133103	0	
31	N31	3.769459	-5.145833	0.133103	0	
32	N32	3.769459	0	0.133103	0	
33	N33	3.552974	0	0.25809	0	
34	N34	2.427974	0	-1.690467	0	
35	N35	2.283636	0	-1.607133	0	
36	N36	2.677974	0	-1.257454	0	
37	N37	2.533636	0	-1.17412	0	
38	N38	-0.676582	0	-0.390625	0	
39	N39	-1.302974	0	-3.639024	0	
40	N40	-3.802974	0	0.691103	0	
41	N41	-2.408636	0	-1.390627	0	
42	N42	-3.769459	2.854167	0.133103	0	
43	N43	-3.769459	-5.145833	0.133103	0	
44	N44	-3.769459	0	0.133103	0	
45	N45	-3.552974	0	0.25809	0	
46	N46	-2.24197	0	-1.679302	0	
47	N47	-2.575303	0	-1.101952	0	
48	N48	-1.769459	2.854167	-3.330998	0	
49	N49	-1.769459	-5.145833	-3.330998	0	
50	N50	-1.769459	0	-3.330998	0	
51	N51	-1.552974	0	-3.206011	0	
52	N52	-2.677974	0	-1.257454	0	
53	N53	-2.533636	0	-1.17412	0	
54	N54	-2.427974	0	-1.690467	0	
55	N55	-2.283636	0	-1.607133	0	
56	N56	-2.5	-2.5	2.947921	0	
57	N57	2.5	-2.5	2.947921	0	
58	N58	2	-2.5	3.197895	0	
59	N59	2	-2.5	2.947921	0	
60	N60	-2	-2.5	3.197895	0	
61	N61	-2	-2.5	2.947921	0	
62	N62	3.802974	-2.5	0.691103	0	
63	N63	1.302974	-2.5	-3.639024	0	
64	N64	1.769459	-2.5	-3.330998	0	
65	N65	1.552974	-2.5	-3.206011	0	
66	N66	3.769459	-2.5	0.133103	0	
67	N67	3.552974	-2.5	0.25809	0	
68	N68	-1.302974	-2.5	-3.639024	0	
69	N69	-3.802974	-2.5	0.691103	0	
70	N70	-3.769459	-2.5	0.133103	0	
71	N71	-3.552974	-2.5	0.25809	0	
72	N72	-1.769459	-2.5	-3.330998	0	
73	N73	-1.552974	-2.5	-3.206011	0	
74	N74	-1.5	-2.5	2.947921	0	
75	N75	1.5	-2.5	2.947921	0	
76	N76	3.302974	-2.5	-0.174922	0	



Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diaphragm
77	N77	1.802974	-2.5	-2.772998	0	
78	N78	-1.802974	-2.5	-2.772998	0	
79	N79	-3.302974	-2.5	-0.174922	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Standoff Arms	HSS4X4X4	Beam	SquareTube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
2	Face Horizontals	PIPE 3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
3	Mount Pipes	PIPE 2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
4	Standoff Arm End Plates	PL1/2x8	Beam	RECT	A36 Gr.36	Typical	4	.083	21.333	.32
5	Support Rails	PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
6	End Connections	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	CF	4CU5.25X03..	Beam	CU	A570 Gr.33	Typical	4.854	13.238	12.817	.228

Aluminum Section Sets

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

Hot Rolled Steel Properties

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

Cold Formed Steel Properties

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

Aluminum Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (...Density...	Table B.4	kt	Ftu[ksi]	Fty[ksi]	Fcy[ksi]	Fsu[ksi]	Ct
1	3003-H14	10100	3787.5	.33	1.3	.173	1	19	16	13	12	141
2	6061-T6	10100	3787.5	.33	1.3	.173	1	38	35	35	24	141
3	6063-T5	10100	3787.5	.33	1.3	.173	1	22	16	16	13	141
4	6063-T6	10100	3787.5	.33	1.3	.173	1	30	25	25	19	141
5	5052-H34	10200	3787.5	.33	1.3	.173	1	34	26	24	20	141
6	6061-T6 W	10100	3787.5	.33	1.3	.173	1	24	15	15	15	141



Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N4			Standoff Arms	Beam	SquareTube	A500 Gr.B...	Typical
2	M2	N2	N3			Face Horizont...	Beam	Pipe	A53 Gr.B	Typical
3	MP1A	N5	N6			Mount Pipes	Column	Pipe	A53 Gr.B	Typical
4	M4	N8	N7			RIGID	Beam	None	RIGID	DR1
5	M5	N10	N11			Standoff Arm ...	Beam	RECT	A36 Gr.36	Typical
6	MP2A	N12	N13			Mount Pipes	Column	Pipe	A53 Gr.B	Typical
7	M7	N15	N14			RIGID	Beam	None	RIGID	DR1
8	M8	N17	N16			RIGID	Beam	None	RIGID	DR1
9	M9	N19	N18			RIGID	Beam	None	RIGID	DR1
10	M10	N20	N23			Standoff Arms	Beam	SquareTube	A500 Gr.B...	Typical
11	M11	N21	N22			Face Horizont...	Beam	Pipe	A53 Gr.B	Typical
12	MP1C	N24	N25			Mount Pipes	Column	Pipe	A53 Gr.B	Typical
13	M13	N27	N26			RIGID	Beam	None	RIGID	DR1
14	M14	N28	N29			Standoff Arm ...	Beam	RECT	A36 Gr.36	Typical
15	MP2C	N30	N31			Mount Pipes	Column	Pipe	A53 Gr.B	Typical
16	M16	N33	N32			RIGID	Beam	None	RIGID	DR1
17	M17	N35	N34			RIGID	Beam	None	RIGID	DR1
18	M18	N37	N36			RIGID	Beam	None	RIGID	DR1
19	M19	N38	N41			Standoff Arms	Beam	SquareTube	A500 Gr.B...	Typical
20	M20	N39	N40			Face Horizont...	Beam	Pipe	A53 Gr.B	Typical
21	MP1B	N42	N43			Mount Pipes	Column	Pipe	A53 Gr.B	Typical
22	M22	N45	N44			RIGID	Beam	None	RIGID	DR1
23	M23	N46	N47			Standoff Arm ...	Beam	RECT	A36 Gr.36	Typical
24	MP2B	N48	N49			Mount Pipes	Column	Pipe	A53 Gr.B	Typical
25	M25	N51	N50			RIGID	Beam	None	RIGID	DR1
26	M26	N53	N52			RIGID	Beam	None	RIGID	DR1
27	M27	N55	N54			RIGID	Beam	None	RIGID	DR1
28	M28	N59	N58			RIGID	Beam	None	RIGID	DR1
29	M29	N61	N60			RIGID	Beam	None	RIGID	DR1
30	M30	N56	N57			Support Rails	Beam	Pipe	A53 Gr.B	Typical
31	M31	N65	N64			RIGID	Beam	None	RIGID	DR1
32	M32	N67	N66			RIGID	Beam	None	RIGID	DR1
33	M33	N62	N63			Support Rails	Beam	Pipe	A53 Gr.B	Typical
34	M34	N71	N70			RIGID	Beam	None	RIGID	DR1
35	M35	N73	N72			RIGID	Beam	None	RIGID	DR1
36	M36	N68	N69			Support Rails	Beam	Pipe	A53 Gr.B	Typical
37	M37	N74	N79			End Connectio...	Beam	Single Angle	A36 Gr.36	Typical
38	M38	N76	N75			End Connectio...	Beam	Single Angle	A36 Gr.36	Typical
39	M39	N78	N77			End Connectio...	Beam	Single Angle	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ratio O...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M2						Yes				None
3	MP1A						Yes	** NA **			None
4	M4						Yes				None
5	M5						Yes				None
6	MP2A						Yes	** NA **			None
7	M7						Yes				None
8	M8						Yes				None
9	M9						Yes				None
10	M10						Yes				None
11	M11						Yes				None
12	MP1C						Yes	** NA **			None



Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ratio O...	Analysis ...	Inactive	Seismic...
13	M13						Yes				None
14	M14						Yes				None
15	MP2C						Yes	** NA **			None
16	M16						Yes				None
17	M17						Yes				None
18	M18						Yes				None
19	M19						Yes				None
20	M20						Yes				None
21	MP1B						Yes	** NA **			None
22	M22						Yes				None
23	M23						Yes				None
24	MP2B						Yes	** NA **			None
25	M25						Yes				None
26	M26						Yes				None
27	M27						Yes				None
28	M28						Yes				None
29	M29						Yes				None
30	M30						Yes				None
31	M31						Yes				None
32	M32						Yes				None
33	M33						Yes				None
34	M34						Yes				None
35	M35						Yes				None
36	M36						Yes				None
37	M37						Yes				None
38	M38						Yes				None
39	M39						Yes				None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torq...	Kyy	Kzz	Cb	Function
1	M1	Standoff Ar...	2			Lbyy						Lateral
2	M2	Face Horizo...	5			Lbyy						Lateral
3	MP1A	Mount Pipes	8			Lbyy						Lateral
4	M5	Standoff Ar...	.667			Lbyy						Lateral
5	MP2A	Mount Pipes	8			Lbyy						Lateral
6	M10	Standoff Ar...	2			Lbyy						Lateral
7	M11	Face Horizo...	5			Lbyy						Lateral
8	MP1C	Mount Pipes	8			Lbyy						Lateral
9	M14	Standoff Ar...	.667			Lbyy						Lateral
10	MP2C	Mount Pipes	8			Lbyy						Lateral
11	M19	Standoff Ar...	2			Lbyy						Lateral
12	M20	Face Horizo...	5			Lbyy						Lateral
13	MP1B	Mount Pipes	8			Lbyy						Lateral
14	M23	Standoff Ar...	.667			Lbyy						Lateral
15	MP2B	Mount Pipes	8			Lbyy						Lateral
16	M30	Support Rails	5			Lbyy						Lateral
17	M33	Support Rails	5			Lbyy						Lateral
18	M36	Support Rails	5			Lbyy						Lateral
19	M37	End Conne...	3.606			Lbyy						Lateral
20	M38	End Conne...	3.606			Lbyy						Lateral
21	M39	End Conne...	3.606			Lbyy						Lateral



Cold Formed Steel Design Parameters

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

Aluminum Design Parameters

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

Joint Loads and Enforced Displacements

Joint Label	L,D,M	Direction	Magnitude[(lb,k-ft), (in,rad), (lb*s^2...
No Data to Print ...			

Member Area Loads

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
No Data to Print ...						

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N1	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N9						
3	N20	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N38	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Envelope Joint Reactions

Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC	
1	N1	max	1279.991	4	1991.478	5	1580.289	1	.201	2	2.463	4	.695	10
2		min	-1246.672	3	143.759	2	-1797.537	2	-3.969	5	-2.491	3	-9.26	9
3	N20	max	1709.553	4	1981.506	8	1366.14	1	1.706	6	2.365	2	3.688	8
4		min	-1913.508	3	174.703	3	-1286.634	2	-.302	1	-2.388	1	-4.79	3
5	N38	max	1764.224	4	1974.833	7	1573.181	1	2.408	6	2.604	1	.245	4
6		min	-1593.588	3	211.22	4	-1435.437	2	-.479	1	-2.636	2	-3.258	7
7	Totals:	max	4753.769	4	5591.344	8	4519.609	1						
8		min	-4753.769	3	2063.66	3	-4519.608	2						

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

Member	Shape	Code Check	Loc[ft]	LC	Shear...	Loc[ft]	Dir	LCphi*Pnc...	phi*Pnt...	phi*Mn ...	phi*Mn ...	Cb Eqn	
1	M37	L3X3X4	.452	0	2	.029	0	y	1 34979....	46656	1.688	3.756	2...H2-1
2	M39	L3X3X4	.445	0	4	.029	0	y	3 34979....	46656	1.688	3.756	2...H2-1
3	M36	PIPE 2.0	.410	.99	4	.357	.99		4 23808....	32130	1.872	1.872	2...H3-6
4	M33	PIPE 2.0	.390	4.01	4	.355	.99		3 23808....	32130	1.872	1.872	2...H3-6
5	M38	L3X3X4	.330	3.606	1	.026	3.606	z	4 34979....	46656	1.688	3.756	2...H2-1
6	M30	PIPE 2.0	.317	.99	1	.414	.99		2 23808....	32130	1.872	1.872	2...H3-6
7	MP2C	PIPE 2.5	.315	2.917	3	.053	2.917		3 30038....	50715	3.596	3.596	1...H1-1b
8	M19	HSS4X4X4	.306	0	2	.104	0	z	2 137201...	139518	16.181	16.181	1...H1-1b
9	M10	HSS4X4X4	.301	0	4	.092	0	y	4 137201...	139518	16.181	16.181	1...H1-1b
10	MP2A	PIPE 2.5	.290	2.917	2	.057	2.917		2 30038....	50715	3.596	3.596	2...H1-1b
11	M23	PL1/2x8	.282	.333	4	.210	.34	y	4 110047...	129600	1.35	21.6	1...H1-1b
12	M2	PIPE 3.0	.281	2.24	1	.116	2.76		2 57037....	65205	5.749	5.749	3...H1-1b
13	MP2B	PIPE 2.5	.270	2.917	1	.059	2.917		4 30038....	50715	3.596	3.596	3...H1-1b



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


Member	Shape	Code Check	Loc[ft]	LC	Shear...	Loc[ft]	Dir	LCphi*Pnc...	phi*Pnt...	phi*Mn...	phi*Mn...	Cb	Eqn
14	M1	HSS4X4X4	.265	0	7	.106	0	y	9 137201...	139518	16.181	16.181	1..H1-1b
15	M11	PIPE 3.0	.265	2.24	4	.097	2.76		3 57037....	65205	5.749	5.749	2..H1-1b
16	M5	PL1/2x8	.253	.333	2	.233	.34	y	2 110047...	129600	1.35	21.6	1..H1-1b
17	M20	PIPE 3.0	.245	2.24	4	.118	2.76		4 57037....	65205	5.749	5.749	1..H1-1b
18	MP1B	PIPE 2.5	.220	2.917	4	.110	2.917		1 30038....	50715	3.596	3.596	2..H1-1b
19	MP1C	PIPE 2.5	.213	2.917	4	.112	2.917		3 30038....	50715	3.596	3.596	2..H1-1b
20	MP1A	PIPE 2.5	.203	2.917	2	.092	2.917		3 30038....	50715	3.596	3.596	2..H1-1b
21	M14	PL1/2x8	.171	.333	3	.252	.34	y	3 110047...	129600	1.35	21.6	1..H1-1b

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

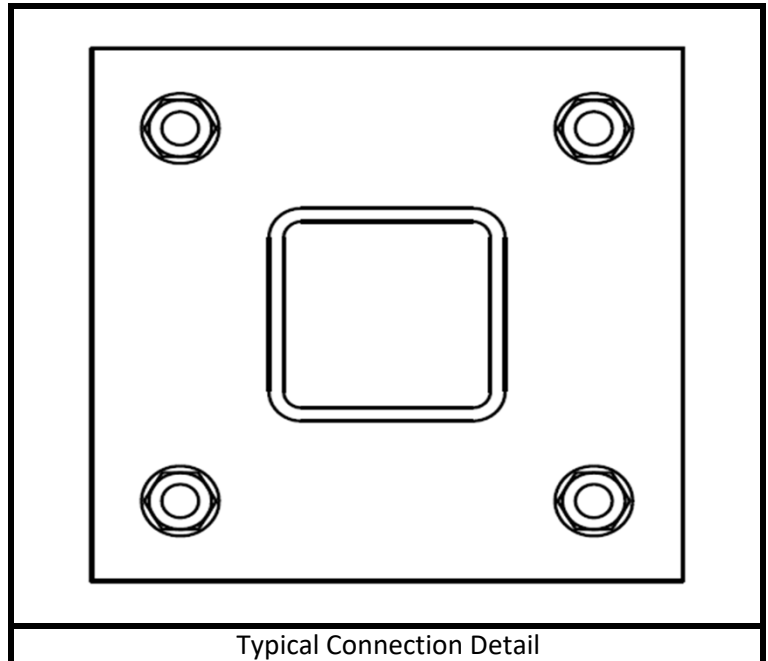
Member	Shape	Code Ch...	Loc[ft]	LC	Shear...	Loc[ft]	Dir	LCphi*Pn[lb]	phi*Tn[lb]	phi*Mny...	phi*Mnz...	Cb	Cmyy	Cmzz	Eqn
No Data to Print ...															

Envelope AA ADM1-10: LRFD - Building Aluminum Code Checks

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

	Standoff Arm Flange Connection Check		Date	
			5/25/2022	
	Customer:	SBA Communications Corp	TIA Standard:	ANSI/TIA-222-G
	Carrier:	T-Mobile	Mount Elev. [ft]:	160
	Site Name:	E-Prospect	Engineer Name:	C. Pescatello
Site Number:	CT02694-B-SBA	Project #:	129484	
<p><i>NOTE: The calculations shown below are for a single representative load combination for example purposes. The results for all load combinations are presented in the Results Summary Table.</i></p>				


RISA Member Label =	M19	
I or J End?	I	
Load Combination # =	2	
Plate Width, Wp =	8.5	[In]
Plate Height, Hp =	8.5	[In]
Plate Thickness, tp =	0.5	[In]
Plate Fy =	36	[KSI]
Bolt Diameter, db =	0.625	[In]
Bolt Fu =	120	[KSI]
Bolt Horizontal Spacing, Sbh =	6	[In]
Bolt Vertical Spacing, Sbv =	6	[In]
Standoff Member Shape =	Rect Tube	
Member Width, Wm =	4	[In]
Member Depth, Dm =	4	[In]
Member Thickness, tm =	0.25	[In]
Standoff Weld Size =	0.1875	[In]
# Standoff Welds =	2	
Length of Stiffener, Ls =		[In]
Width of Stiffener, Ws =		[In]
Width of Notch, Wn =		[In]
Stiffener Dim 1, ds1 =		[In]
Stiffener Dim 2, ds2 =		[In]
Stiffener Fy =		[KSI]
Stiffener Weld Size =		[In]
# Stiffener Welds =		



NOTES
Standoff weld size assumed as 0.1875"


Capacity Checks:

Max Bolt Shear =	1.080	[Kips]
Bolt Shear Capacity =	13.81	[Kips]
Max Bolt Shear Usage =	7.8%	PASS
Max Bolt Tension =	4.73	[Kips]
Bolt Tension Capacity =	20.34	[Kips]
Max Bolt Tension Usage =	23.3%	PASS
Max Bolt Interaction =	23.9%	PASS
Max Plate Bending Moment =	7.80	[Kip-In]
Length of Yield Line =	6.34	[In]
Plate Moment Capacity =	12.83	[Kip-In]
Max Plate Usage =	60.8%	PASS
Max Weld Usage =	7.8%	PASS

	Standoff Arm Flange Connection Check			Date
				5/25/2022
	Customer:	SBA Communications Corp	TIA Standard:	ANSI/TIA-222-G
	Carrier:	T-Mobile	Mount Elev. [ft]:	160
	Site Name:	E-Prospect	Engineer Name:	C. Pescatello
Site Number:	CT02694-B-SBA	Project #:	129484	

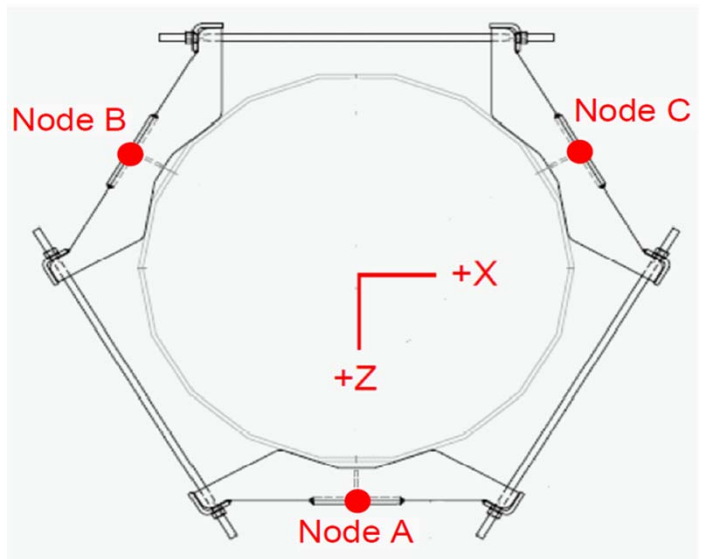
Results Summary Table

Member Label	Member End	Load Combo #	Max Bolt Shear [K]	Max Bolt Tension [K]	Bolt Shear Check	Bolt Tension Check	Bolt Interaction Check	Plate Bending Check	Weld Check
M1	I	1	0.4528	2.6826	3.3%	13.2%	13.3%	34.4%	23.3%
M1	I	2	0.0716	0.9171	0.5%	4.5%	4.5%	11.8%	5.9%
M1	I	3	0.9832	3.9848	7.1%	19.6%	20.1%	51.2%	9.3%
M1	I	4	0.8369	3.6400	6.1%	17.9%	18.3%	46.7%	25.1%
M1	I	5	0.7281	3.9505	5.3%	19.4%	20.1%	52.0%	27.2%
M1	I	6	0.6333	3.4632	4.6%	17.0%	17.6%	44.5%	22.4%
M1	I	7	0.8299	4.3392	6.0%	21.3%	22.1%	55.7%	21.1%
M1	I	8	0.5742	4.1846	4.2%	20.6%	20.8%	53.7%	28.4%
M1	I	9	0.9663	3.0628	7.0%	15.1%	15.5%	39.3%	21.6%
M1	I	10	0.8060	3.0388	5.8%	14.9%	15.2%	39.0%	19.6%
M1	I	11	0.2666	1.5812	1.9%	7.8%	8.0%	20.7%	10.6%
M10	I	1	0.7933	3.2044	5.7%	15.8%	16.1%	41.1%	13.9%
M10	I	2	0.7344	4.2226	5.3%	20.8%	21.1%	54.2%	30.6%
M10	I	3	0.6728	2.5044	4.9%	12.3%	13.2%	32.2%	14.7%
M10	I	4	0.9735	4.4173	7.1%	21.7%	22.4%	56.7%	10.2%
M10	I	5	0.7875	4.1404	5.7%	20.4%	21.1%	53.2%	20.2%
M10	I	6	0.6114	4.3116	4.4%	21.2%	21.4%	55.4%	29.3%
M10	I	7	0.5672	3.7560	4.1%	18.5%	18.7%	48.2%	25.5%
M10	I	8	0.8199	4.4047	5.9%	21.7%	22.4%	56.6%	24.0%
M10	I	9	0.2647	1.4456	1.9%	7.1%	7.3%	18.6%	4.5%
M10	I	10	0.4228	1.7357	3.1%	8.5%	9.0%	22.3%	9.3%
M10	I	11	0.2666	1.5812	1.9%	7.8%	8.0%	20.7%	10.6%
M19	I	1	0.8530	3.1768	6.2%	15.6%	16.0%	40.8%	22.0%
M19	I	2	1.0802	4.7338	7.8%	23.3%	23.9%	60.8%	7.8%
M19	I	3	0.5556	4.4440	4.0%	21.8%	22.1%	57.1%	34.4%
M19	I	4	0.5331	2.5436	3.9%	12.5%	13.1%	33.4%	17.2%
M19	I	5	0.5563	4.0366	4.0%	19.8%	20.1%	51.8%	27.4%
M19	I	6	0.8469	4.4892	6.1%	22.1%	22.8%	57.6%	22.1%
M19	I	7	0.6603	4.3102	4.8%	21.2%	21.4%	55.3%	29.4%
M19	I	8	0.7228	3.9134	5.2%	19.2%	19.9%	50.2%	20.0%
M19	I	9	0.3088	1.7086	2.2%	8.4%	8.6%	21.9%	11.7%
M19	I	10	0.1517	1.4175	1.1%	7.0%	7.1%	18.2%	9.6%
M19	I	11	0.2666	1.5812	1.9%	7.8%	8.0%	20.7%	10.6%

	Collar Mount Calculations		Date	
			5/25/2022	
	Customer:	SBA Communications Corp	TIA Standard:	ANSI/TIA-222-G
	Carrier:	T-Mobile	Mount Elev. [ft]:	160
	Site Name:	E-Prospect	Engineer Name:	C. Pescatello
Site Number:	CT02694-B-SBA	TES Project #:	129484	

NOTE: The results for all load combinations are presented in the Results Summary Table.

Collar # =	1	
RISA Joint Label =	N20	
Load Combination # =	8	
Collar Configuration # =	2	
Applied Axial Force, Fx =	0.025	[Kips]
Applied Moment, M _{UY} =	0.512	[Kip-Ft]
Applied Moment, M _{UZ} =	4.446	[Kip-Ft]
Collar Height, H =	9.75	[Inches]
# of Rows of Thread Rod, n _{rows} =	2	
Diameter of Thread Rod, d _b =	0.625	[Inches]
Thread Rod Vert. Spacing, S _v =	6	[Inches]
Thread Rod Horiz. Spacing, S _h =	16.5	[Inches]
Thread Rod F _y =	36	[KSI]
Thread Rod F _u =	58	[KSI]
Thread Rod Pretension, F _p =	6.136	[K/bolt]
F _{px} =	5.314	[K/bolt]
φ =	1.0	



Typical Collar Mount Configuration

Check Sliding:

$$\phi Rns = (2 \cdot n_{rows} \cdot F_{px} - T) \cdot \mu$$

Applied Tension, T =	0.000	
Coefficient of Friction, μ =	0.30	
Applied Vertical Shear, V _y =	1.982	[Kips]
φRns =	6.377	
Max Usage (V _y /φRns):	31.1%	PASS

Check Rotation:

$$\phi Mny = (2 \cdot n_{rows} \cdot F_{px} + F_x) \cdot (S_h/4)$$

Applied Moment, M _{UY} =	0.512	[Kip-Ft]
φMny =	7.315	[Kip-Ft]
Max Usage (M _{uy} /φMny):	7.0%	PASS

Check Tilting:

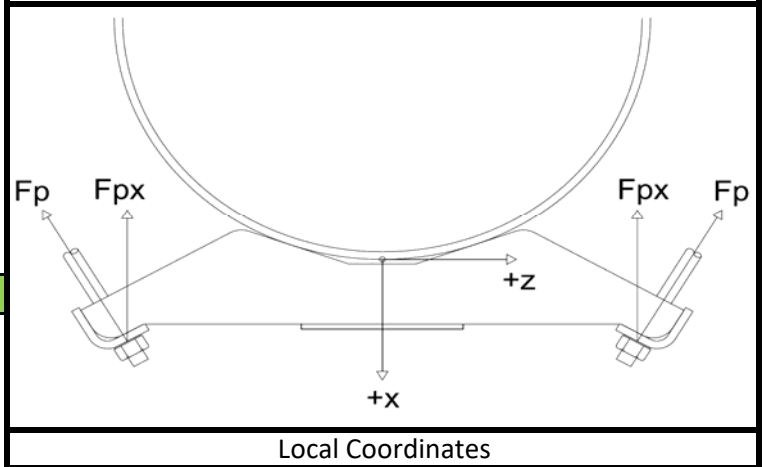
$$\phi Mnz = \sum_{i=1}^{n_{rows}} (2 \cdot F_{px} \cdot y_i) - \left(\frac{T \cdot H}{2}\right)$$

Applied Moment, M _{UZ} =	4.446	
φMnz =	8.635	
Max Usage (M _{uz} /φMnz):	51.5%	PASS


Check Interaction:

$$\sqrt{\left(\frac{V_y}{\phi Rns}\right)^2 + \left(\frac{M_{uy}}{\phi Mny}\right)^2 + \left(\frac{M_{uz}}{\phi Mnz}\right)^2} \leq 1$$

Interaction Check:	60.5%	PASS
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Local Coordinates

	Collar Mount Calculations			Date
				5/25/2022
	Customer:	SBA Communications Corp	TIA Standard:	ANSI/TIA-222-G
	Carrier:	T-Mobile	Mount Elev. [ft]:	160
	Site Name:	E-Prospect	Engineer Name:	C. Pescatello
Site Number:	CT02694-B-SBA	TES Project #:	129484	

Results Summary Table

Collar #	Joint Label	Load Combo #	Tension [K]	Muy [K-Ft]	Muz [K-Ft]	Sliding Check	Rotation Check	Tilting Check	Interaction Check
1	N1	1	0.0000	0.2412	3.1499	19.3%	3.1%	36.5%	41.4%
1	N1	2	1.7975	0.2568	0.1651	2.5%	3.8%	2.1%	5.0%
1	N1	3	0.0303	2.8027	1.6780	11.4%	38.4%	19.5%	44.5%
1	N1	4	0.1908	2.7830	1.3020	10.3%	38.4%	15.2%	42.6%
1	N1	5	0.0000	0.0052	4.4669	31.2%	0.1%	51.7%	60.4%
1	N1	6	0.6766	0.0721	3.6480	28.1%	1.0%	43.6%	51.9%
1	N1	7	0.2911	0.7161	4.0906	29.7%	9.9%	48.0%	57.4%
1	N1	8	0.3189	0.6492	4.0233	29.6%	9.0%	47.3%	56.5%
1	N1	9	0.0003	0.1785	3.2939	23.1%	2.4%	38.1%	44.7%
1	N1	10	0.0003	0.1474	3.2939	23.1%	2.0%	38.1%	44.6%
1	N1	11	0.1296	0.0110	1.7376	12.7%	0.2%	20.2%	23.9%
1	N20	1	0.7622	2.6724	0.7459	7.2%	37.9%	9.0%	39.6%
1	N20	2	0.0000	2.6582	2.2374	14.6%	35.5%	25.9%	46.3%
1	N20	3	1.6164	2.1728	0.1462	3.0%	32.2%	1.8%	32.4%
1	N20	4	0.0000	2.1990	3.1294	18.8%	28.2%	36.2%	49.7%
1	N20	5	0.4612	0.6729	3.8684	28.9%	9.4%	45.8%	55.0%
1	N20	6	0.1488	0.6060	4.2460	30.4%	8.4%	49.5%	58.7%
1	N20	7	0.6352	0.4449	3.6686	28.2%	6.3%	43.8%	52.5%
1	N20	8	0.0000	0.5118	4.4463	31.1%	7.0%	51.5%	60.5%
1	N20	9	0.2612	0.4486	1.1138	9.1%	6.2%	13.1%	17.1%
1	N20	10	0.1094	0.2338	1.7009	12.2%	3.2%	19.8%	23.5%
1	N20	11	0.1296	0.0110	1.7379	12.7%	0.2%	20.2%	23.9%
1	N38	1	0.8755	2.9318	0.4581	6.3%	41.8%	5.5%	42.7%
1	N38	2	0.0000	2.9558	2.5227	15.5%	39.2%	29.2%	51.3%
1	N38	3	0.0000	2.3584	2.9440	18.3%	30.4%	34.1%	49.2%
1	N38	4	1.5418	2.3675	0.0421	3.6%	34.9%	0.5%	35.1%
1	N38	5	0.4809	0.6488	3.8176	28.8%	9.1%	45.2%	54.4%
1	N38	6	0.1290	0.7157	4.2966	30.5%	9.9%	50.1%	59.4%
1	N38	7	0.0000	0.4701	4.4127	31.0%	6.4%	51.1%	60.1%
1	N38	8	0.6222	0.5369	3.7019	28.3%	7.6%	44.2%	53.0%
1	N38	9	0.1207	0.2428	1.6724	12.1%	3.3%	19.5%	23.2%
1	N38	10	0.2725	0.4576	1.0848	9.1%	6.3%	12.7%	16.9%
1	N38	11	0.1296	0.0110	1.7381	12.7%	0.2%	20.3%	23.9%

Exhibit F

Power Density/RF Emissions Report



Radio Frequency Emissions Analysis Report



Site ID: CTNH303A

SBA Prospect ET
229 Cheshire Road
Prospect, CT 06712

August 11, 2022

Fox Hill Telecom Project Number: 221294

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	24.76 %

August 11, 2022

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

Emissions Analysis for Site: **CTNH303A – SBA Prospect ET**

Fox Hill Telecom, Inc (“Fox Hill”) was directed to analyze the proposed upgrades to the T-MOBILE facility located at **229 Cheshire Road, Prospect, CT**, for the purpose of determining whether the emissions from the Proposed T-MOBILE Antenna Installation located on this property are within specified federal limits.

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

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

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

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



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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were performed for the proposed upgrades to the T-MOBILE antenna facility located at **229 Cheshire Road, Prospect, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-MOBILE is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB for directional panel antennas, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

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

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

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
LTE / 5G NR	600 MHz	2	40
LTE	700 MHz	2	20
LTE	2100 MHz (AWS)	4	40
UMTS	1900 MHz (PCS)	1	40

Table 1: Channel Data Table

The following antennas listed in *Table 2* were used in the modeling for transmission in the 600 MHz, 700 MHz, 1900 MHz (PCS) and 2100 MHz (AWS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB for directional panel antennas, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	RFS APXVAALL24_43-U-NA20	158
A	2	Ericsson AIR21 B4A/B2P	160
B	1	RFS APXVAALL24_43-U-NA20	158
B	2	Ericsson AIR21 B4A/B2P	160
C	1	RFS APXVAALL24_43-U-NA20	158
C	2	Ericsson AIR21 B4A/B2P	160

Table 2: Antenna Data

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



RESULTS

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

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	RFS APXVAALL24_43-U-NA20	600 MHz / 700 MHz	13.65 / 13.85	4	120	2,824.56	1.04
Antenna A2	Ericsson AIR21 B4A/B2P	2100 MHz (AWS) / 1900 MHz (PCS)	15.9 / 15.9	5	200	7,780.90	1.18
Sector A Composite MPE%							2.22
Antenna B1	RFS APXVAALL24_43-U-NA20	600 MHz / 700 MHz	13.65 / 13.85	4	120	2,824.56	1.04
Antenna B2	Ericsson AIR21 B4A/B2P	2100 MHz (AWS) / 1900 MHz (PCS)	15.9 / 15.9	5	200	7,780.90	1.18
Sector B Composite MPE%							2.22
Antenna C1	RFS APXVAALL24_43-U-NA20	600 MHz / 700 MHz	13.65 / 13.85	4	120	2,824.56	1.04
Antenna C2	Ericsson AIR21 B4A/B2P	2100 MHz (AWS) / 1900 MHz (PCS)	15.9 / 15.9	5	200	7,780.90	1.18
Sector C Composite MPE%							2.22

Table 3: T-MOBILE Emissions Levels

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

Site Composite MPE%	
Carrier	MPE%
T-MOBILE – Max Per Sector Value	2.22 %
Sprint	0.02 %
MetroPCS	0.46 %
Verizon Wireless	9.50 %
AT&T	3.37 %
DISH	9.19 %
Site Total MPE %:	24.76 %

Table 4: All Carrier MPE Contributions

T-MOBILE Sector A Total:	2.22 %
T-MOBILE Sector B Total:	2.22 %
T-MOBILE Sector C Total:	2.22 %
Site Total:	24.76 %

Table 5: Site MPE Summary



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

T-MOBILE _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
T-Mobile 600 MHz LTE / 5G NR	2	926.96	158	2.88	600 MHz	400	0.72%
T-Mobile 700 MHz LTE	2	485.32	158	1.51	700 MHz	467	0.32%
T-Mobile 2100 MHz (AWS) LTE	4	1,556.18	160	9.44	2100 MHz (AWS)	1000	0.94%
T-Mobile 1900 MHz (PCS) UMTS	1	1,556.18	160	2.36	1900 MHz (PCS)	1000	0.24%
						Total:	2.22%

Table 6: T-MOBILE Maximum Sector MPE Power Values



Summary

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

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

T-MOBILE Sector	Power Density Value (%)
Sector A:	2.22 %
Sector B:	2.22 %
Sector C:	2.22 %
T-MOBILE Maximum Total (per sector):	2.22 %
Site Total:	24.76 %
Site Compliance Status:	COMPLIANT


The anticipated composite MPE value for this site assuming all carriers present is **24.76 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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

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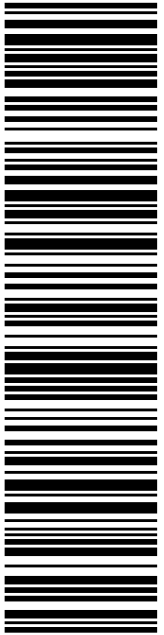
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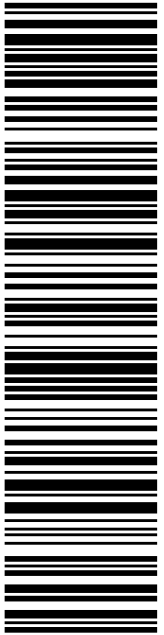


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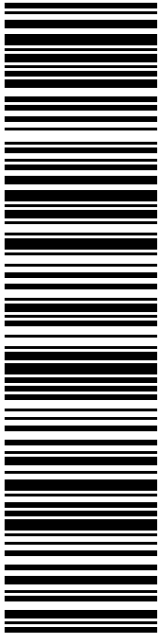


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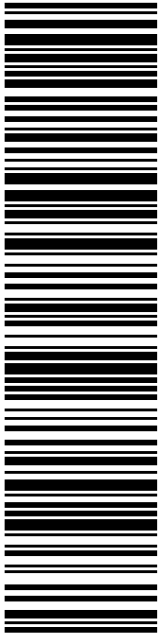


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