



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

July 8, 2022

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

RE: Exempt Modification Application  
95 Country Club Road, New Canaan, CT 06840  
Latitude: 41.172861  
Longitude: -73.496333  
Site #: CT40876-T\_CT11389A\_SBA/T-Mobile

Dear Ms. Bachman:

T-Mobile is requesting to file an exempt modification for an existing tower located at 95 Country Club Road, New Canaan, CT 06840. T-Mobile currently maintains three (3) antennas at the 106-foot level and three (3) antennas at the 99-foot level of the existing 109-foot stealth monopole tower. The property is owned by Country Club of N C, and the tower is owned by SBA. T-Mobile now intends to replace (6) antennas. The new antennas would be installed at the 106-foot level and the 99-foot level of the tower. This modification includes B2, B5 hardware that is both 4G (LTE), and 5G capable.

**T-Mobile Planned Modifications:**

**Remove:**

(3) ANDREW 782 11054 Bias Ts

**Remove and Replace @ 106' AGL:**

(3) RFS APX16DWV-16DWVS-E-A20 Antennas (REMOVE) - (3) COMMSCOPE VV-65A-R1 Antennas (REPLACE)

(3) RFS TMA's (REMOVE) - (3) COMMSCOPE ATSBT-TOP-FM SMART Bias Ts (REPLACE)

**Remove and Replace @ 99' AGL:**

(3) COMMSCOPE LNX-6512DS-A1M Antennas (REMOVE) - (3) COMMSCOPE FVV-65B-R3 Antennas (REPLACE)

(3) ERICSSON KRY 112 144/1 TMA's (REMOVE) - (3) COMMSCOPE ATSBT-TOP-FM SMART Bias Ts (REPLACE)

**Install New:**

(12) Coax - 7/8"

**Existing to Remain:**

(18) Coax - 7/8"



The facility was approved by the Connecticut Siting Council, Docket No. 244 on February 18, 2004. 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 Kevin Moynihan, First Selectman and Lynn Brooks Avni, Town Planner for the Town of New Canaan, 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](mailto:denise@northeastsitesolutions.com)



**NSS** **NORTHEAST**  
SITE SOLUTIONS  
*Turnkey Wireless Development*

Attachments

Cc: Kevin Moynihan, First Selectman  
Town Hall, 2nd Floor  
77 Main St.  
New Canaan, CT 06840

Lynn Brooks Avni, AICP - Town Planner  
Town Hall, Lower Level  
77 Main St.  
New Canaan, CT 06840

Country Club of N C - Property Owner  
95 Country Club Road  
New Canaan, CT 06840

SBA - Tower Owner

# Exhibit A

## **Original Facility Approval**

**DOCKET NO. 244** - Omnipoint Facilities Network 2, L.L.C., a }  
subsidiary of T-Mobile, USA, Inc. application for a Certificate of }  
Environmental Compatibility and Public Need for the }  
construction, maintenance and operation of a wireless }  
telecommunications facility at the New Canaan Country Club, 95 }  
Country Club Road, New Canaan, Connecticut.

Connecticut

Siting

Council

February 18, 2004

### **Decision and Order**

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Omnipoint Facilities Network 2, L.L.C., a subsidiary of T-Mobile, USA, Inc. for the construction, maintenance and operation of a wireless telecommunications facility 95 Country Club Road, New Canaan, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The tower shall be constructed as a silhouette structure, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of T-Mobile, AT&T Wireless and other entities, both public and private, but such tower shall not exceed a height of 110 feet above ground level. Antennas shall be installed on the inside of the silhouette structure and the Certificate Holder shall consult with the Town of New Canaan and the landowner to decide on the color of the structure.
2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be submitted to and approved by the Council prior to the commencement of facility construction and shall include:
  - a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment building, access road, utility line, and landscaping; and
  - b) construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.
3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of electromagnetic radio frequency power density is submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.
5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing. The Certificate Holder shall provide reasonable space on the tower for no compensation for any municipal antennas, provided such antennas are compatible with the structural integrity of the tower.
6. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.
7. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function.
8. Unless otherwise approved by the Council, this Decision and Order shall be void if the facility authorized herein is not operational within one year of the effective date of this Decision and Order or within one year after all appeals to this Decision and Order have been resolved.

Pursuant to General Statutes § 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in The Hartford Courant, the Stamford Advocate, and The New Canaan Advertiser.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

The parties and intervenors in this proceeding are:

**Applicant**

Omnipoint Facilities Network 2, LLC  
A subsidiary of T-Mobile, USA, Inc.

**Its Representative**

Stephen J. Humes, Esq.  
LeBoeuf, Lamb, Greene & MacRae, LLP  
Goodwin Square  
225 Asylum Street  
Hartford, CT 06103

**Intervenor**

AT&T Wireless PCS, LLC  
d/b/a AT&T Wireless

**Its Representative**

Christopher B. Fisher, Esq.  
Cuddy & Feder LLP  
90 Maple Avenue  
White Plains, NY 10601-5196

**Party**

The Citizens for Responsible Cellular  
Planning

**Its Representative**

The Citizens for Responsible Cellular Planning  
c/o Ms. Diane Baldwin, Co-Chairperson  
22 Wardwell Drive  
New Canaan, CT 06840

**Party**

John Corcoran and Wanda Corcoran  
James E. Lineberger and Harrietjo  
Lineberger

**Its Representative**

Alan R. Spierer, Esq.  
Spierer & Cott  
830 Post Road East  
Westport, CT 06880

**Party**

Lewis D. Bakes  
561 Smith Ridge Rd.  
New Canaan, CT 06840

**Its Representative**

**Party**

The Town of New Canaan

**Its Representative**

John W. Cannavino, Esq.  
M. Juliet Bonazzoli, Esq.  
Cummings & Lockwood  
Four Stamford Plaza, P.O. Box 120  
Stamford, CT 06904-0120

**Party**

Thomas A. Champion  
579 Smith Ridge Road  
New Canaan, CT 06840

**Its Representative**

# 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 2018.



Town of New Canaan



Information on the Property Records for the Municipality of New Canaan was last updated on 7/8/2022.



### Parcel Information

Location:	95 COUNTRY CLUB RD	Property Use:	Special Purpose	Primary Use:	Country Club
Unique ID:	33 34 55	Map Block Lot:	33 34 55	Acres:	153.3500
490 Acres:	0.00	Zone:	4AC	Volume / Page:	0179/0405
Developers Map / Lot:	1469	Census:	00352		

### Value Information

	Appraised Value	Assessed Value
Land	8,786,700	6,150,690
Buildings	12,710,200	8,897,140
Detached Outbuildings	8,162,200	5,534,340

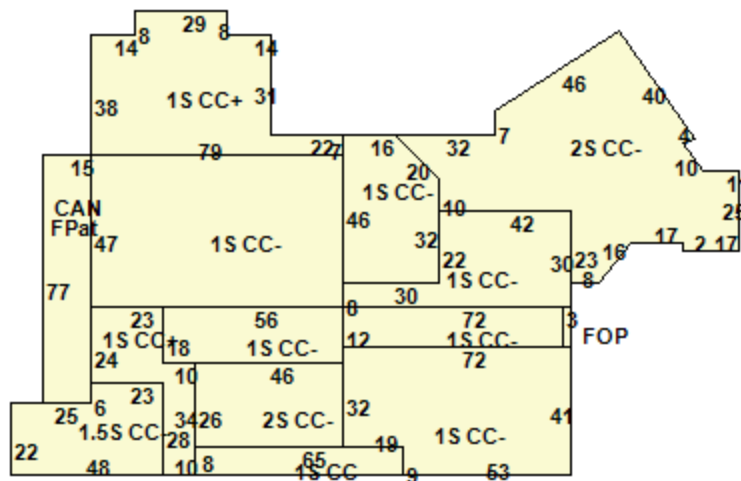
	Appraised Value	Assessed Value
Total	29,659,100	20,582,170

## Owner's Information

### Owner's Data

COUNTRY CLUB OF N C  
 95 COUNTRY CLUB RD  
 NEW CANAAN, CT 06840

## Building 1



Category:	Special Purpose	Use:	Country Club	GLA:	27,333
Stories:	2.00	Construction:	Wood Frame	Year Built:	1900
Heating:	Hot Water	Fuel:		Cooling Percent:	0
Siding:	Wood on Sheath	Roof Material:	Asphalt	Beds/Units:	0

## Special Features

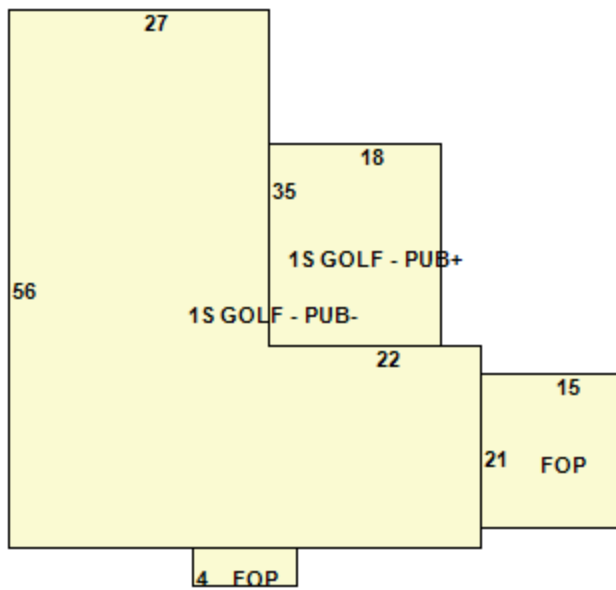
Gross Basement Area	3444
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## Attached Components

Type:	Year Built:	Area:
Canopy	1900	1,155
Flagstone Patio	1900	1,155
Open Porch	1900	36

## Building 2





Category:	Special Purpose	Use:	Golf Course - Public	GLA:	2,352
Stories:	1.00	Construction:	Wood Frame	Year Built:	1951
Heating:	Forced Hot Air	Fuel:		Cooling Percent:	100
Siding:	Wood on Sheath	Roof Material:	Asphalt	Beds/Units:	0

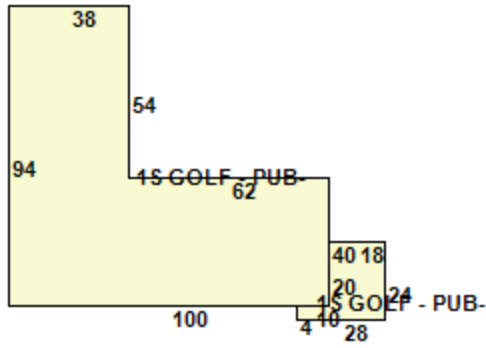
### Special Features

Gross Basement Area	378
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### Attached Components

Type:	Year Built:	Area:
Open Porch	1951	44
Open Porch	1951	240

### Building 3



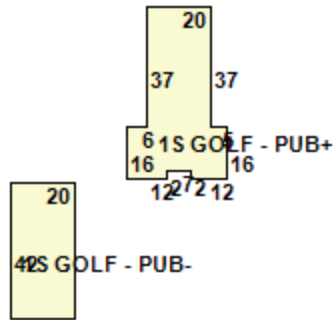
Category:	Special Purpose	Use:	Golf Course - Public	GLA:	6,524
Stories:	1.00	Construction:	Wood Frame	Year Built:	1977
Heating:	Electric Baseboard	Fuel:		Cooling Percent:	0
Siding:	Concr/Cinder	Roof Material:	Asphalt	Beds/Units:	0

### Special Features

### Attached Components

## Building 4

Photo Not Available



Category:	Special Purpose	Use:	Golf Course - Public	GLA:	2,062
Stories:	1.00	Construction:	Wood Frame	Year Built:	2009
Heating:	Forced Hot Air	Fuel:		Cooling Percent:	100
Siding:	Wood on Sheath	Roof Material:	Asphalt	Beds/Units:	0

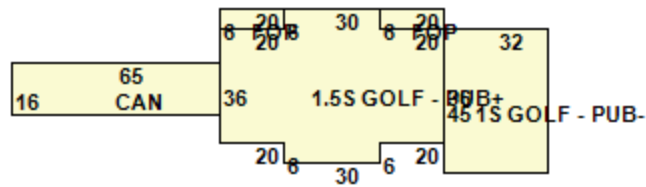
### Special Features

Fireplace	1
Gross Basement Area	1222

### Attached Components

## Building 5

Photo Not Available



Category:	Special Purpose	Use:	Golf Course - Public	GLA:	5,760
Stories:	1.50	Construction:	Wood Frame	Year Built:	2000
Heating:	Hot Water	Fuel:		Cooling Percent:	0
Siding:	Wood on Sheath	Roof Material:	Asphalt	Beds/Units:	0

## Special Features

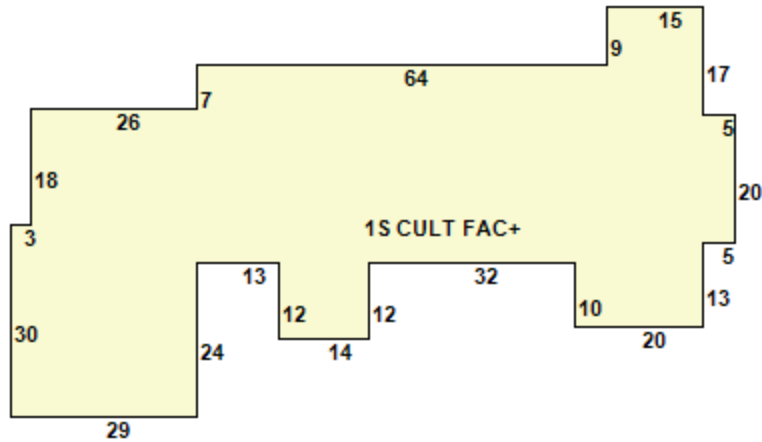
Gross Basement Area	2880
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## Attached Components

Type:	Year Built:	Area:
Canopy	2000	1,040
Open Porch	2000	120
Open Porch	2000	120

## Building 6

Photo Not Available



Category:	Entertainment	Use:	Cultural Facility	GLA:	4,390
Stories:	1.00	Construction:	Wood Frame	Year Built:	2018
Heating:	Typical	Fuel:	Typical	Cooling Percent:	100



Siding:	Typical	Roof Material:	Typical	Beds/Units:	0
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## Special Features

Gross Basement Area	4390
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## Attached Components

## Detached Outbuildings

Type:	Year Built:	Length:	Width:	Area:
Poor Work Shop	1970	0.00	0.00	322
Average Work Shop	1970	0.00	0.00	336
Tennis Courts	1970	0.00	0.00	8
Tennis Courts	1970	0.00	0.00	4
Tennis Courts	1970	0.00	0.00	1
Garage Poor	1993	0.00	0.00	576
Golf Greens	1975	0.00	0.00	18
Residential Greenhouse	2017	0.00	0.00	576
Patio-Good	2019	0.00	0.00	13,350
Paving	1980	0.00	0.00	20,000
Inground Pool Better	2019	0.00	0.00	5,922
Better Quality Shed	2000	0.00	0.00	300
Better Quality Shed	1970	0.00	0.00	225
Frame Shed	1970	0.00	0.00	192
Frame Shed	1970	0.00	0.00	25
Frame Shed	1980	0.00	0.00	96

<b>Type:</b>	<b>Year Built:</b>	<b>Length:</b>	<b>Width:</b>	<b>Area:</b>
Cell Tower	1982	0.00	0.00	1

### Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Sale Price
COUNTRY CLUB OF N C	0179	0405	01/01/1966	Warranty Deed	\$0
COUNTRY CLUB OF N C	0075	0581	05/20/1945		\$0
COUNTRY CLUB OF N C	0024	0459	10/23/1902		\$0

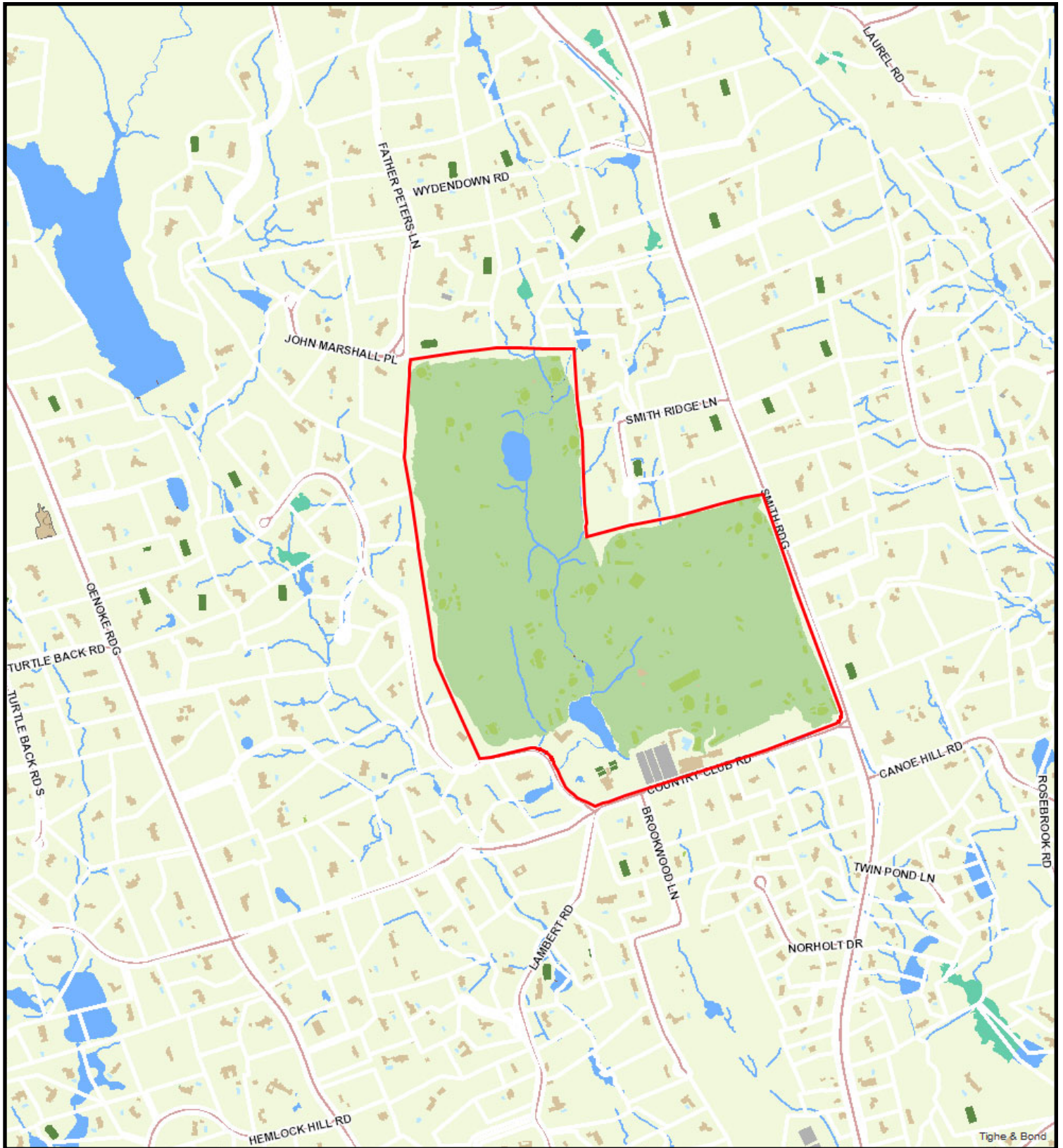
### Building Permits

Permit Number	Permit Type	Date Opened	Reason
18-00473	Commercial	11/07/2018	CLUBHOUSE - ADDITION TO BANQUET RM (2500 SF), ADDITION TO CLUB RM (3600 SF). INT RENOS THROUGHOUT E
18-00474	Commercial	11/07/2018	CONSTRUCT NEW CAMP BLDG (1416 SF). ADDING 3 RMS, 5 FIXTURES & 47 SQ FT OPEN PATIO.
18-00476	Commercial	11/07/2018	RENOVATE EXISTING TENNIS PRO SHOP
18-00475	Commercial	10/31/2018	NEW POOL HOUSE PROJECT. NEW BLDG W/LOWER LEVEL BASEMENT. MAIN FLR WITH LOCKER ABOVE, KITCHEN & DININ
18-00583	Commercial	10/01/2018	PARTIAL DEMO OF CLUBHOUSE & TENNIS BLDG
18-00585	Commercial	09/27/2018	DEMO EXISTING POOLS
18-00618	Commercial	09/27/2018	NEW KIDDIE POOL W/ ZERO ENTRY (4,204 GALLONS) WITH OPEN PATIO (11,800 SF) AND A COVERED PATIO (1,220
18-00619	Commercial	09/27/2018	NEW MAIN POOL W/ SWIM LANES AND DIVING AREA (265,800 GALLONS). OPEN PATIO (11,800 SF) AND COVERED P
18-00584	Commercial	09/24/2018	DEMO POOL HOUSE
16-1007	Commercial	04/26/2018	AFTER THE FACT-TEMP TRAILER W/POWER
17-00364	Commercial	05/22/2017	"SWAP OUT 6 EXISTING CELL ANTENNAS WITH 6 NEWER TECHNOLOGY CELL ANTENNAS & ASSOCIATED EQUIPMENT. NO

Permit Number	Permit Type	Date Opened	Reason
16-01008	Commercial	02/24/2017	GREENHOUSE STRUCTURE. AFTER THE FACT. "18 X 32 GREENHOUSE - USED TO GROW ANNUAL FLOWERS FOR CLUB P
16-00935	Commercial	12/14/2016	SWAP 3 EXISTING CELL ANTENNAS WITH 3 NEWER TECHNOLOGY CELL ANTENNAS & ASSOCIATED EQUIPMENT.
12-1355	Commercial	11/27/2012	COM ADDS & ALTS
11-1151	Commercial	01/04/2012	COM ADDS & ALTS
11-0645	Residential Demolition	08/04/2011	DEMO PERMIT
11-0521	Commercial	08/02/2011	COM ADDS & ALTS
10-0080	Commercial	03/01/2010	COM ADDS & ALTS
09-0154	Commercial	04/22/2009	GENERAL PERMIT
08-1000	Commercial	12/05/2008	GENERAL PERMIT
08-0881	Residential Demolition	10/21/2008	PADDLE TENNIS HUT
08-0248	Commercial	06/10/2008	COM ADDITIONS & ALTERATIONS
07-0965	Commercial	11/28/2007	COM ADDITIONS AND ALTERATIONS
06-0509	Commercial	08/23/2006	SAND SILO
4-0160	CO Issued	01/18/2005	COM ISSUED
04-1362	Commercial	12/27/2004	BUILT STORAGE ROOM
03-01195	CO Issued	06/03/2004	CO ISSUED
04-0160	Commercial	05/25/2004	ADDITIONS AND ALTERATIONS
03-1195	Addition	12/09/2003	ALT & ADD
19771A	Addition	03/24/2000	ADD DORMERS&FIN 2FL
19940	Shed	03/07/2000	STORAGE SHED
19868	Residential	01/07/2000	TEMP.TRAILER
19771	Residential	11/02/1999	PRO SHOP-LOCKER RM
35-99	Residential	10/05/1999	DEMOLISH PRO-SHOP

<b>Permit Number</b>	<b>Permit Type</b>	<b>Date Opened</b>	<b>Reason</b>
20-99	Residential	06/15/1999	DEMOLISH DWELLING
19282	Residential	01/04/1999	PUMP HOUSE
19168	Pool	10/06/1998	POOL HOUSE W/SNACK B
1864-0055	Addition	10/28/1997	ADDITION
1778-0055	Shed	05/01/1996	PRE-FAB SHED
1755-0055	Residential	10/12/1995	GARDEN TERRACE ROOM

Information Published With Permission From The Assessor



## 95 COUNTRY CLUB ROAD

7/8/2022 2:30:24 PM

Scale: 1"=1000'

Scale is approximate

The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.



# Exhibit C

## **Construction Drawings**

# CT389/NEW CANAAN C C

95 COUNTRY CLUB ROAD  
NEW CANAAN, CT 06840  
FAIRFIELD COUNTY

## SITE NO.: CT11389A

SITE TYPE: 110'± STEALTH POLE

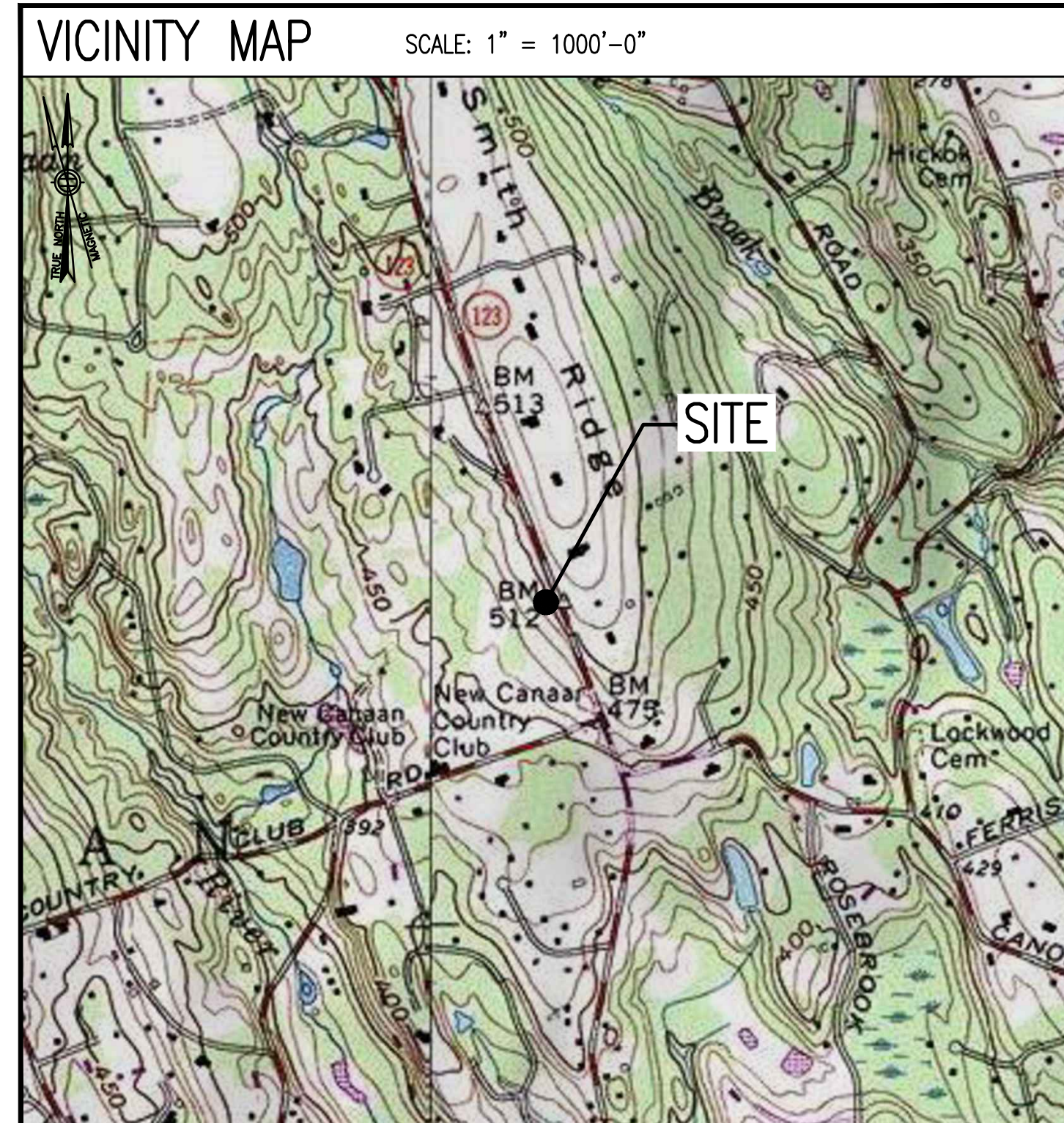
RF DESIGN GUIDELINE: 67G5C998G 6160 (GSM ON 6630)

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

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

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

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



**DIRECTIONS**

MERGE ONTO I-495 NORTH TOWARD MANSFIELD/MARLBORO. TAKE EXIT 33B FOR I-95 SOUTH TOWARD PROVIDENCE RI. ENTER RHODE ISLAND. KEEP LEFT TO CONTINUE TOWARD I-95 SOUTH. CONTINUE ONTO I-95 SOUTH. KEEP RIGHT AT FORK TO STAY ON I-95 SOUTH. ENTER CONNECTICUT. CONTINUE TO FOLLOW I-95 SOUTH. TAKE EXIT 38 FOR STATE ROUTE 15 TOWARD MERRITT PARKWAY/WILBUR CROSS PARKWAY. MERGE ONTO MILFORD PARKWAY. TAKE EXIT ON LEFT FOR CONNECTICUT 15 SOUTH TOWARD MERRITT PARKWAY/N.Y. CITY. MERGE ONTO CT-15 SOUTH/MERRITT PARKWAY. TAKE EXIT 38 TOWARD CT-123 NORTH. TURN LEFT ONTO CT-123 NORTH. SITE IS LOCATED ON THE LEFT HAND SIDE.

SHEET INDEX		
SHEET NO.	DESCRIPTION	REV. NO.
T-1	TITLE SHEET	0
GN-1	GENERAL NOTES	0
A-1	COMPOUND & EQUIPMENT PLANS	0
A-2	TOWER ELEVATIONS & ANTENNA PLANS	0
A-3	SITE DETAILS	0
A-4	ANTENNA & FEEDLINE CHARTS	0
E-1	ELECTRIC & GROUNDING DETAILS	0

**DO NOT SCALE DRAWINGS**

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

SCOPE OF WORK	
<b>REMOVE:</b>	<b>INSTALL:</b>
<ul style="list-style-type: none"> <li>6 ANTENNAS</li> <li>6 TMAS</li> <li>3 RADIOS</li> <li>1 100A-2P BREAKER</li> </ul>	<ul style="list-style-type: none"> <li>6 ANTENNAS</li> <li>6 SMART BIAS TEES</li> <li>9 RADIOS</li> <li>12 COAX CABLES</li> <li>1 HYBRID CABLE</li> <li>1 6160 EQUIPMENT CABINET</li> <li>1 B160 BATTERY CABINET</li> <li>2 125A-2P BREAKERS</li> <li>1 25A-1P BREAKER</li> </ul>

- 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.

PROJECT SUMMARY	
SITE NUMBER:	CT11389A
SITE NAME:	CT389/NEW CANAAN C C
SBA SITE NUMBER:	CT40876-T
SBA SITE NAME:	CT389/NEW CANAAN C C
SITE ADDRESS:	95 COUNTRY CLUB ROAD NEW CANAAN, CT 06840
PROPERTY OWNER:	COUNTRY CLUB OF N C 95 COUNTRY CLUB ROAD NEW CANAAN, CT 06840
TOWER OWNER:	SBA MONARCH TOWERS III, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	FAIRFIELD
ZONING DISTRICT:	RESIDENTIAL
STRUCTURE TYPE:	STEALTH POLE
STRUCTURE HEIGHT:	110'±
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: 41.172888° N41°10'22.40" LONGITUDE: -73.496310° W73°29'46.72"

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

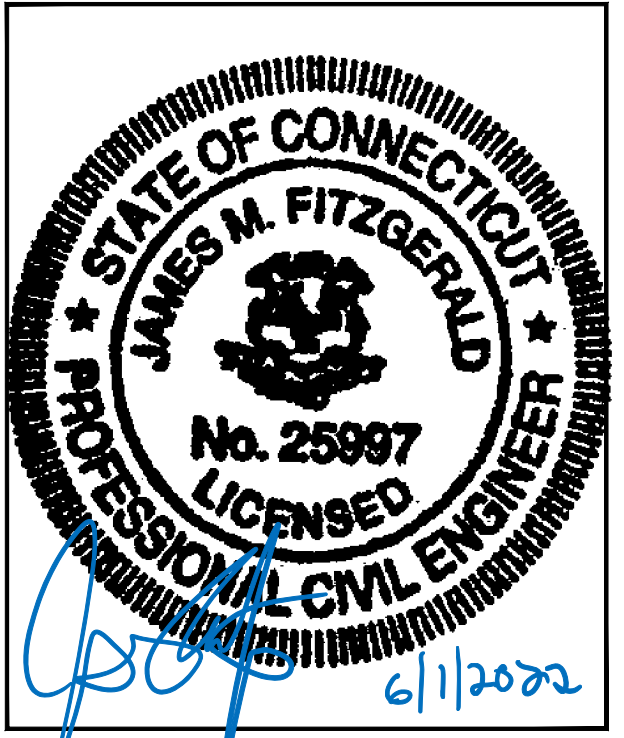
**T-MOBILE NORTHEAST LLC**

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

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

CHAPPELL ENGINEERING ASSOCIATES, LLC  
Civil Structural Land Surveying

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



CHECKED BY: JMT  
APPROVED BY: JMT

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
0	04/26/22	ISSUED FOR CONSTRUCTION CMC	

SITE NUMBER:  
**CT11389A**

SITE ADDRESS:  
95 COUNTRY CLUB ROAD  
NEW CANAAN, CT 06840

SHEET TITLE  
**TITLE SHEET**

SHEET NUMBER  
**T-1**

**GENERAL NOTES:**

- FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:  
CONTRACTOR – T-MOBILE  
SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)  
OWNER – T-MOBILE  
OEM – ORIGINAL EQUIPMENT MANUFACTURER
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL, STATE AND FEDERAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
- SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER, T1 CABLES AND GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR AND/OR LANDLORD PRIOR TO CONSTRUCTION.
- THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION AND RETURN DISTURBED AREAS TO ORIGINAL CONDITIONS.
- THE SUBCONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- SUBCONTRACTOR SHALL NOTIFY CHAPPELL ENGINEERING ASSOCIATES, LLC 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS AND POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEERING REVIEW.
- CONSTRUCTION SHALL COMPLY WITH ALL T-MOBILE STANDARDS AND SPECIFICATIONS.
- SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- THE EXISTING CELL SITES ARE IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
- IF THE EXISTING CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

**SITE WORK GENERAL NOTES:**

- THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION.
- ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING, OWNER AND/OR LOCAL UTILITIES.
- THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE T-MOBILE SPECIFICATION FOR SITE SIGNAGE.

**CONCRETE AND REINFORCING STEEL NOTES:**

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (400PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE REQUIREMENTS
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNDO.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:  
CONCRETE CAST AGAINST EARTH.....3 IN.  
CONCRETE EXPOSED TO EARTH OR WEATHER:  
#6 AND LARGER .....2 IN.  
#5 AND SMALLER & WWF .....1½ IN.  
CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:  
SLAB AND WALL .....¾ IN.  
BEAMS AND COLUMNS .....½ IN.
- A CHAMFER ¾" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY SIMPSON OR APPROVED EQUAL.
- CONCRETE CYLINDER TIES ARE NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;  
(A) RESULTS OF CONCRETE CYLINDER TEST PERFORMED AT THE SUPPLIERS PLANT.  
(B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.  
FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.
- AS AN ALTERNATIVE TO ITEM 7. TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.
- EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY CYLINDER TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

**STRUCTURAL STEEL NOTES:**

- ALL STEEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS AND T-MOBILE SPECIFICATIONS UNLESS OTHERWISE NOTED. STRUCTURAL STEEL SHALL BE ASTM-A-36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".
- ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION. PAINTED SURFACES SHALL BE TOUCHED UP.
- BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (¾") AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE GALVANIZED OR STAINLESS STEEL.
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE ¾" DIA. ASTM A 307 BOLTS (GALV) UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL
- ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

**SOIL COMPACTION NOTES FOR SLAB ON GRADE:**

- EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.
- COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.
- AS AN ALTERNATE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.
- COMPACTED SUBBASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING #1 SIEVE.
- AS AN ALTERNATE TO ITEMS 2 AND 3, THE SUBGRADE SOILS WITH 5 PASSES OR A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND-OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). AND SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL-GRADED GRANULAR FILL AND COMPACTED AS STATED ABOVE.

**COMPACTION EQUIPMENT:**

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

**CONSTRUCTION NOTES:**

- FIELD VERIFICATION:  
SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, T-MOBILE ANTENNA PLATFORM LOCATION AND UTILITY TRENCHWORK.
- COORDINATION OF WORK:  
SUBCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.
- CABLE LADDER RACK:  
SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY AND/OR ICE BRIDGE, AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BTS LOCATION.

**ELECTRICAL INSTALLATION NOTES:**

- WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
- SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLE TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
- CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
- EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA, AND MATCH INSTALLATION REQUIREMENTS.
- POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC AND OSHA.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).
- PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
- ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY HARGER (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANS/IEEE AND NEC.
- NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
- RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND, DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANS/IEEE AND NEC.
- CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.
- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

**T-MOBILE  
NORTHEAST LLC**

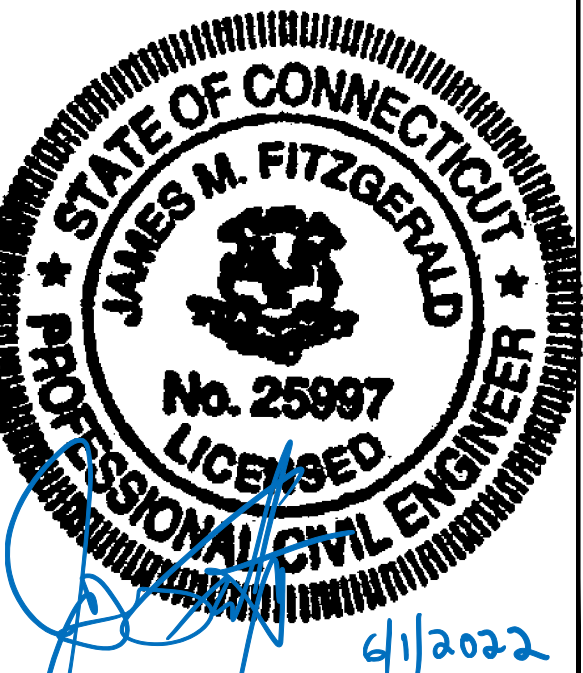
15 COMMERCE WAY, SUITE B  
NORTON, MA 02766  
(508) 286-2700



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



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SITE NUMBER:  
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SITE ADDRESS:  
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SHEET TITLE  
**GENERAL NOTES**

SHEET NUMBER  
**GN-1**



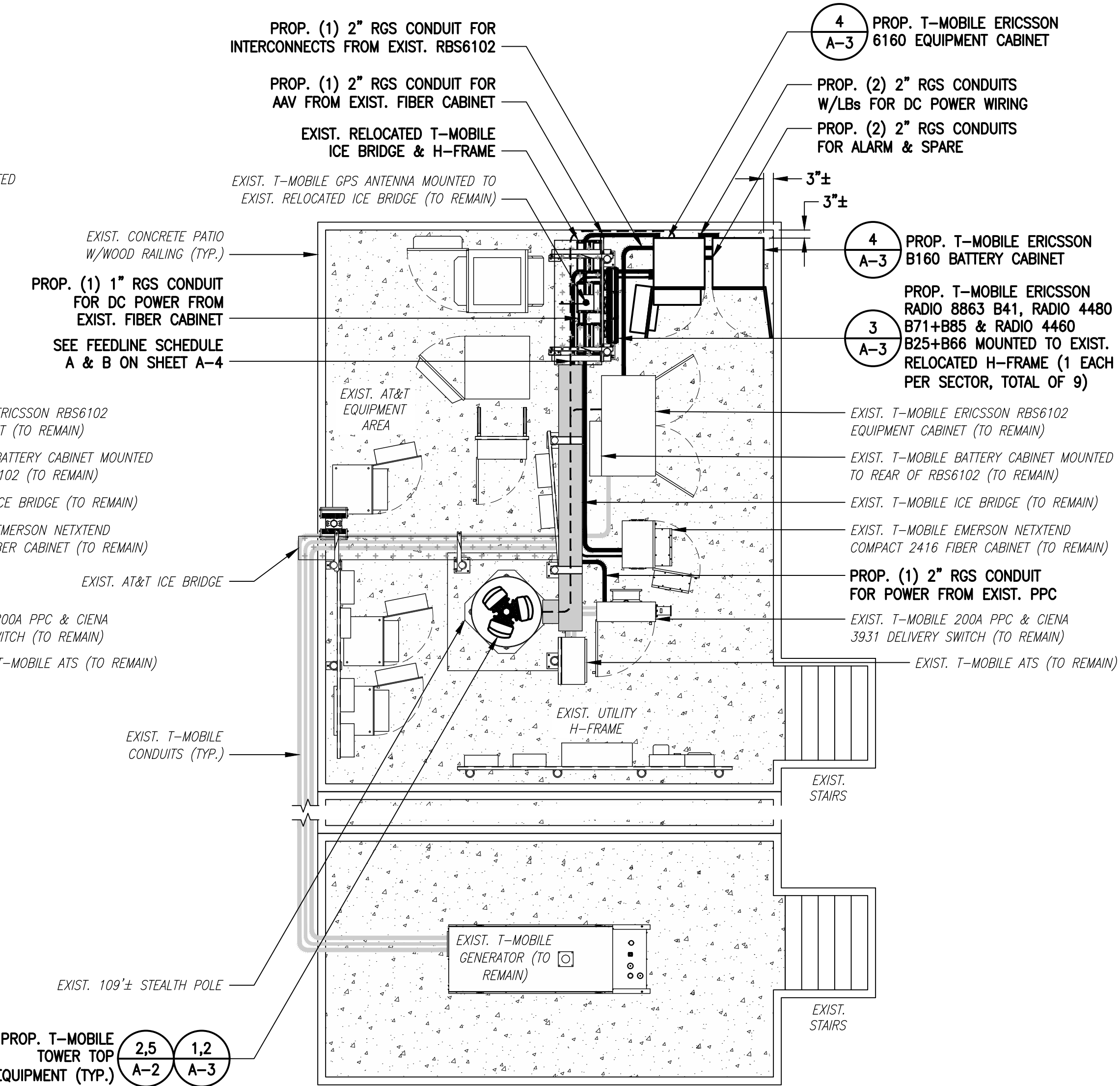
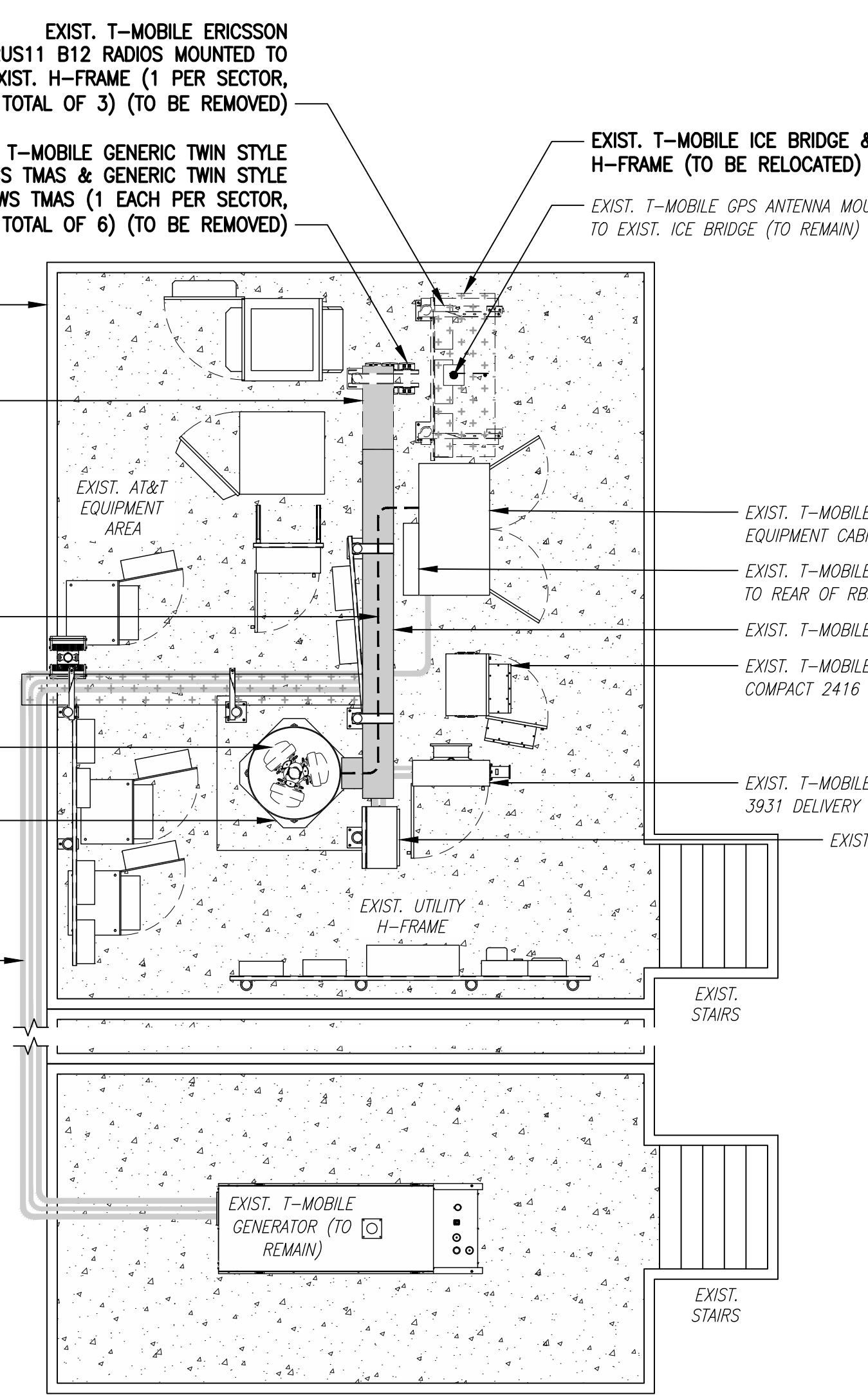
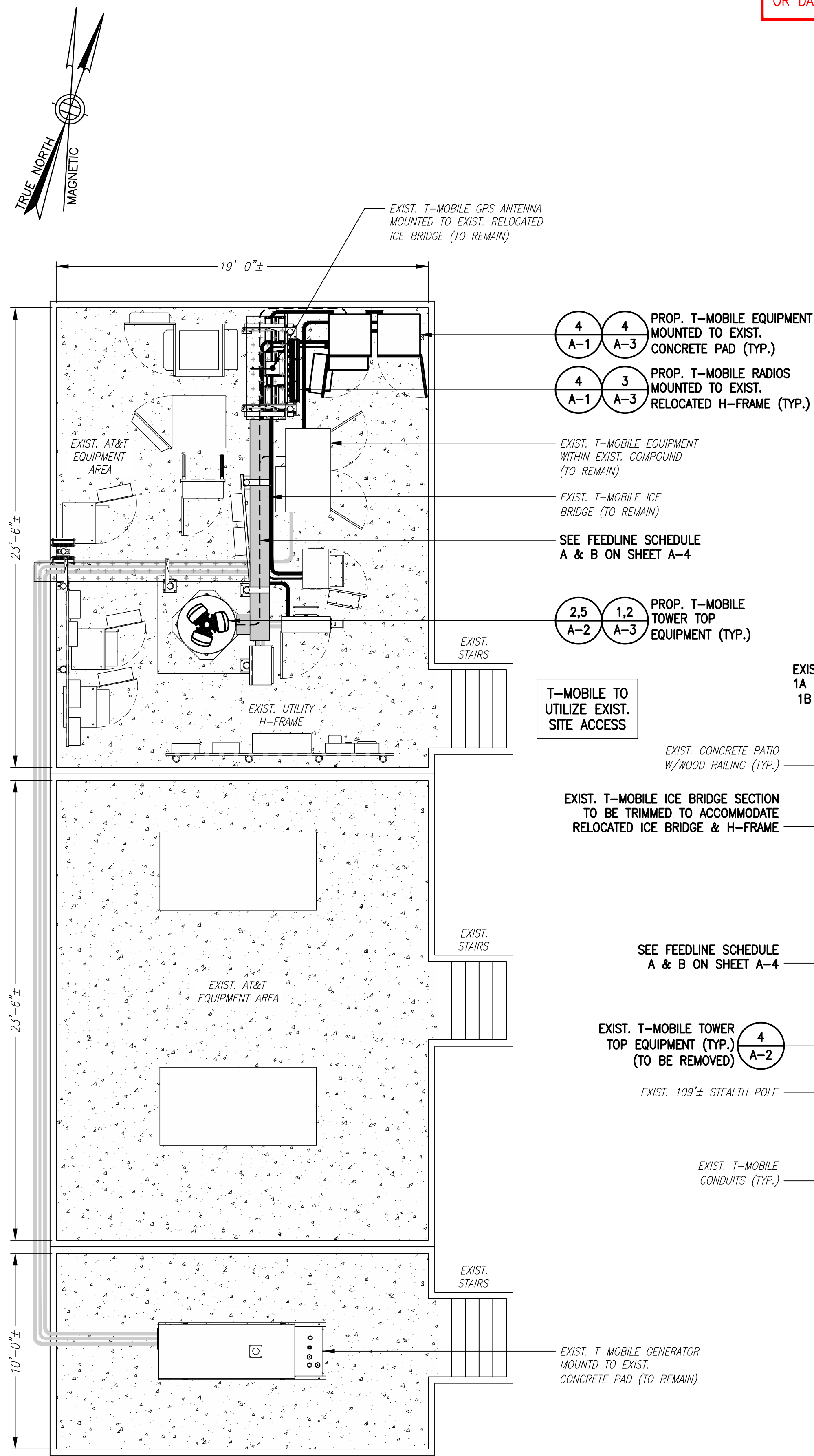
**SPECIAL CONSTRUCTION NOTE (CANISTER BUMP-OUT DESIGN SERVICES PROVIDED BY SBA COMMUNICATIONS):**  
 SBA COMMUNICATIONS RESPONSIBLE FOR DESIGN-BUILD FOR ALL REQUIRED CANISTER MODIFICATIONS, ENGINEERING CONSTRUCTION CONTROL INSPECTIONS, AND FINAL ENGINEERING AFFIDAVIT (ALL PREVIOUS ITEMS TO BE DESIGN-BUILD PERFORMED BY SBA UNDER A SEPARATE BUILDING PERMIT). THE ENGINEER-OF-RECORD FOR THESE CONSTRUCTION DRAWINGS IS NOT RESPONSIBLE FOR CANISTER BUMP-OUT DESIGN SERVICES OR FOR FINAL ANTENNA FITMENT MODIFICATIONS DESIGNED BY OTHERS.

**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 WORK NOTE (EXISTING SBA-PROVIDED WINDBAND CLAMPS):**  
 GENERAL CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION RECOMMENDATIONS AND USER MANUAL FOR UNFASTENING AND REFASTENING EXISTING SBA-PROVIDED WINDBAND CLAMPS. ANY DAMAGED CANISTER SHROUDS OR DAMAGED WINDBAND CLAMPS LOCATED AT THE T-MOBILE RAD SHALL BE REPLACED AT NO COST TO SBA.



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

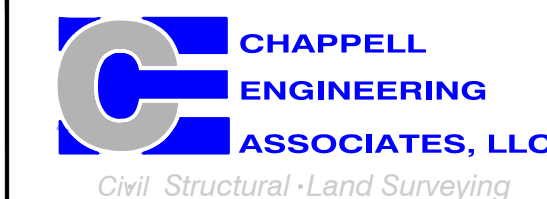


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 NEW CANAAN, CT 06840

SHEET TITLE  
**COMPOUND &  
 EQUIPMENT PLANS**

SHEET NUMBER  
**A-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.

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**SPECIAL WORK NOTE (EXISTING SBA-PROVIDED WINDBAND CLAMPS):**  
 GENERAL CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION RECOMMENDATIONS AND USER MANUAL FOR UNFASTENING AND REFASTENING EXISTING SBA-PROVIDED WINDBAND CLAMPS. ANY DAMAGED CANISTER SHROUDS OR DAMAGED WINDBAND CLAMPS LOCATED AT THE T-MOBILE RAD SHALL BE REPLACED AT NO COST TO SBA.

**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.

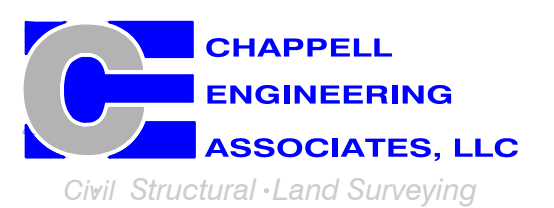
**ANTENNA STATUS LEGEND:**  
 EMPTY - EMPTY PIPE  
 (E) - EXISTING  
 (P) - INSTALL  
 (F) - FUTURE

**T-MOBILE  
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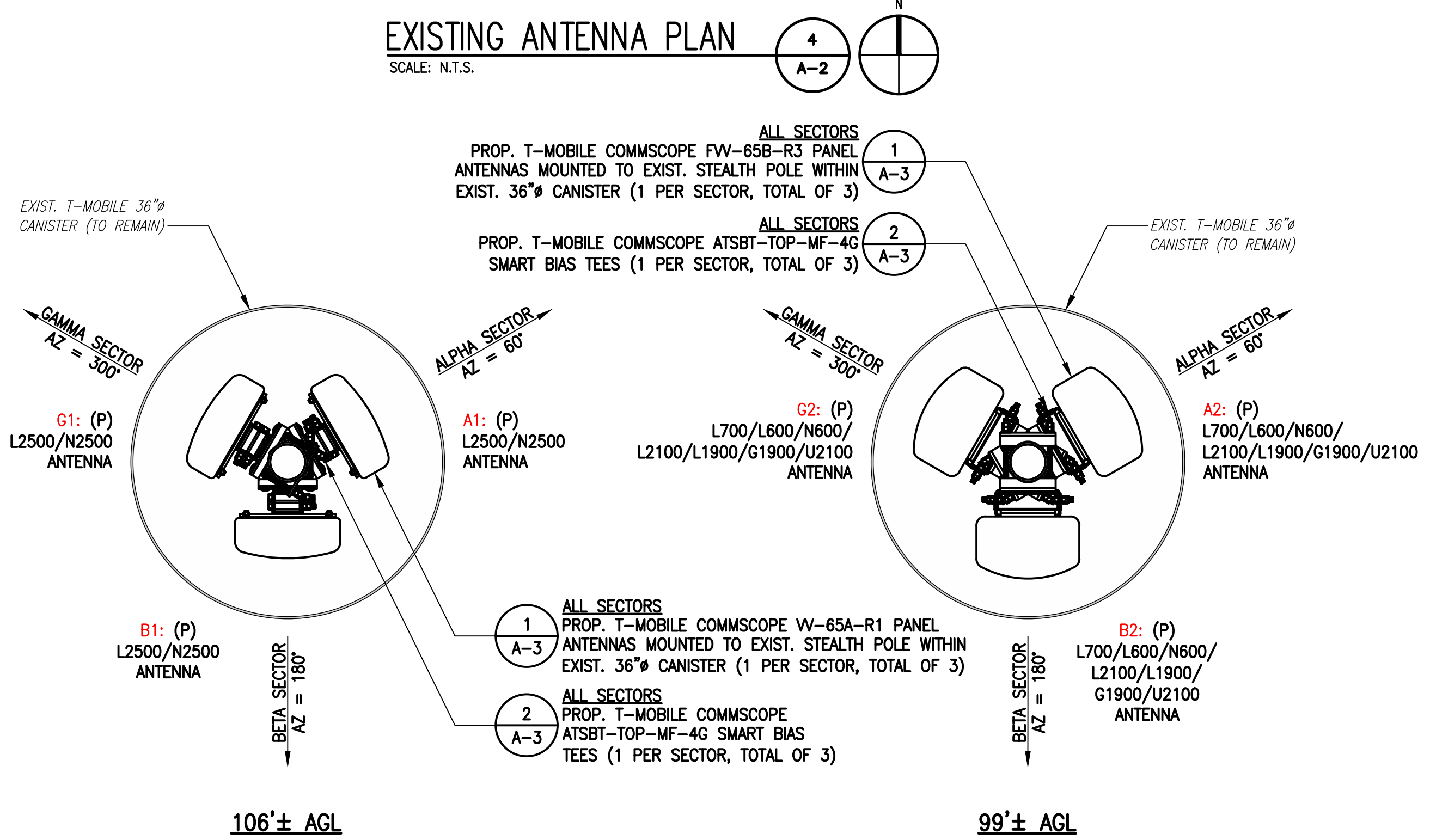
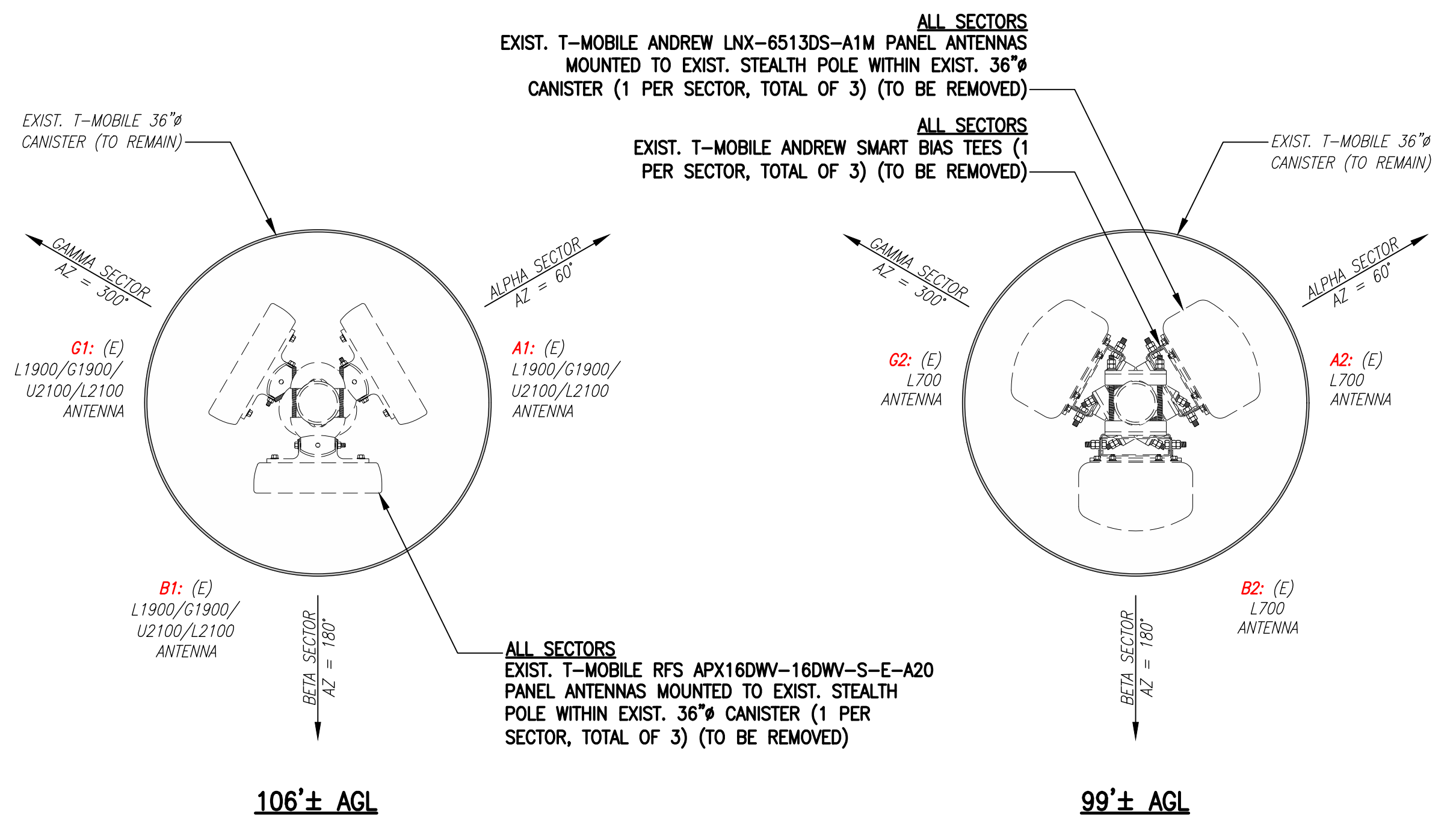
SITE ADDRESS:  
 95 COUNTRY CLUB ROAD  
 NEW CANAAN, CT 06840

SHEET TITLE  
**TOWER ELEVATIONS &  
 ANTENNA PLANS**

SHEET NUMBER  
**A-2**



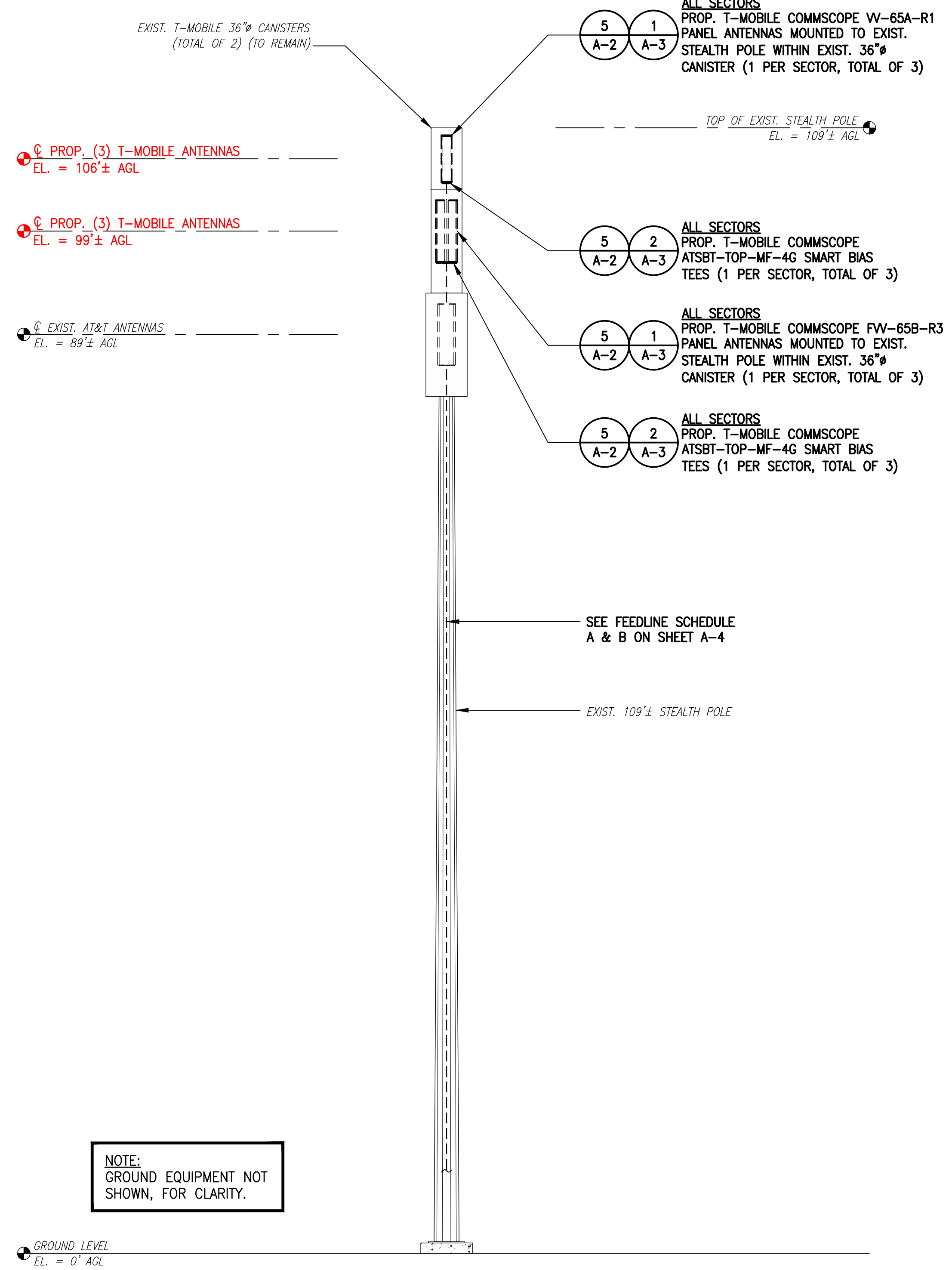
**EXISTING ANTENNA PHOTO** 3  
 SCALE: N.T.S.



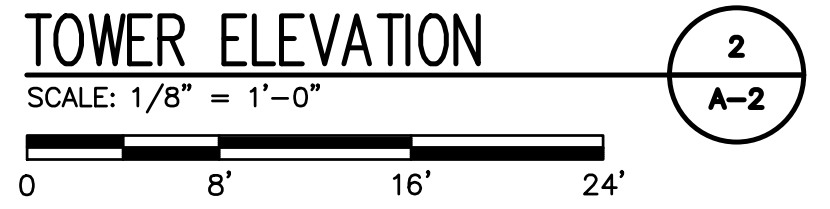
NOTE:  
 VERIFY PROPOSED AZIMUTHS  
 WITH RF ENGINEER PRIOR  
 TO INSTALLATION.



**EXISTING TOWER PHOTO** 1  
 SCALE: N.T.S.



NOTE:  
 GROUND EQUIPMENT NOT  
 SHOWN, FOR CLARITY.



**T-MOBILE  
NORTHEAST LLC**

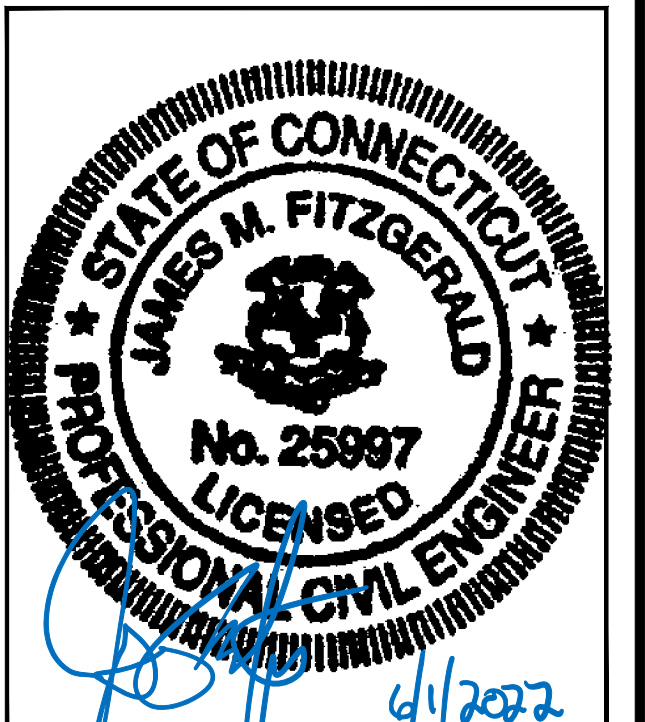
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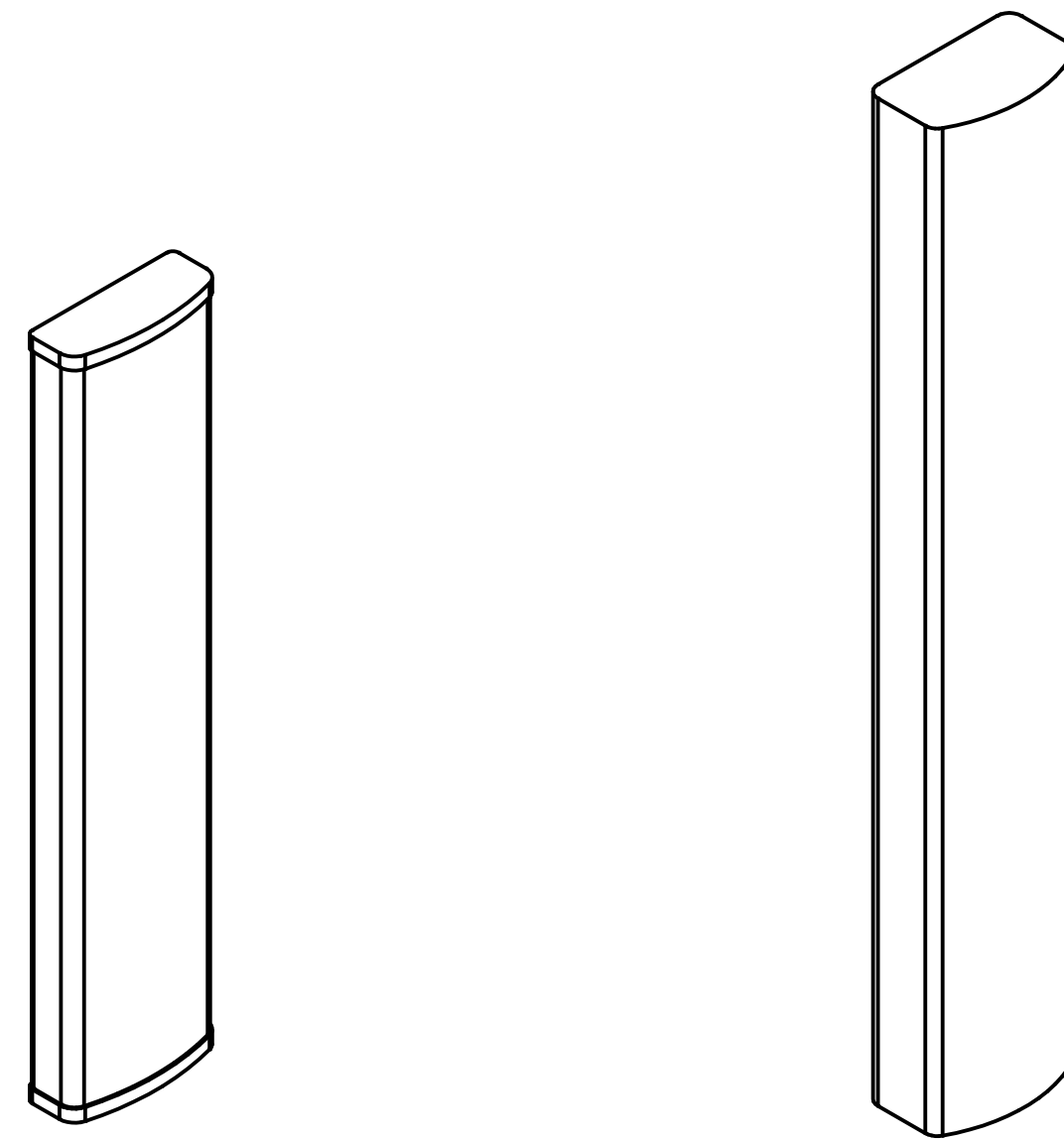
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REV.	DATE	DESCRIPTION	BY
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SHEET TITLE  
**SITE DETAILS**

SHEET NUMBER  
**A-3**



**COMMSCOPE WV-65A-R1 ANTENNA**

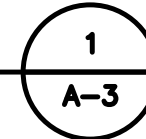
DIMENSIONS: 54.7"H x 12.1"W x 4.6"D  
WEIGHT: 23.8 lbs  
QUANTITY: 1 PER SECTOR, TOTAL OF 3

**COMMSCOPE FW-65B-R3 ANTENNA**

DIMENSIONS: 72.0"H x 11.8"W x 7.1"D  
WEIGHT: 43.2 lbs  
QUANTITY: 1 PER SECTOR, TOTAL OF 3

**ANTENNA DETAILS**

SCALE: N.T.S.

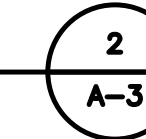


**COMMSCOPE ATSBT-TOP-MF-4G  
SMART BIAS TEE**

DIMENSIONS: 5.6"H x 3.7"W x 2.0"D  
WEIGHT: 1.8 lbs  
QUANTITY: 2 PER SECTOR, TOTAL OF 6

**SBT DETAIL**

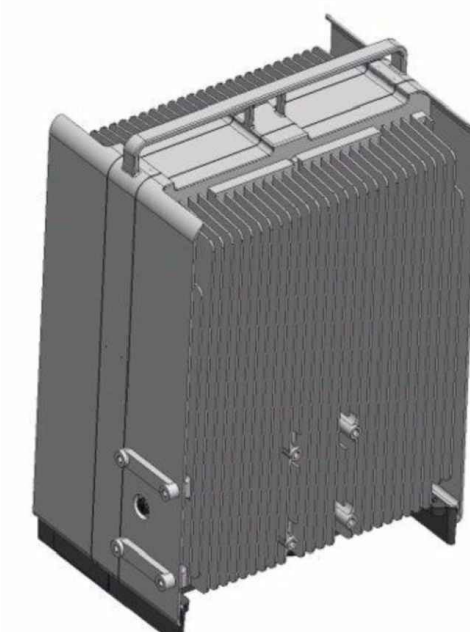
SCALE: N.T.S.



**ERICSSON RADIO 8863 B41**  
DIMENSIONS: 18.5"H x 14.5"W x 5.5"D  
WEIGHT: 51.0 lbs  
QUANTITY: 1 PER SECTOR, TOTAL OF 3



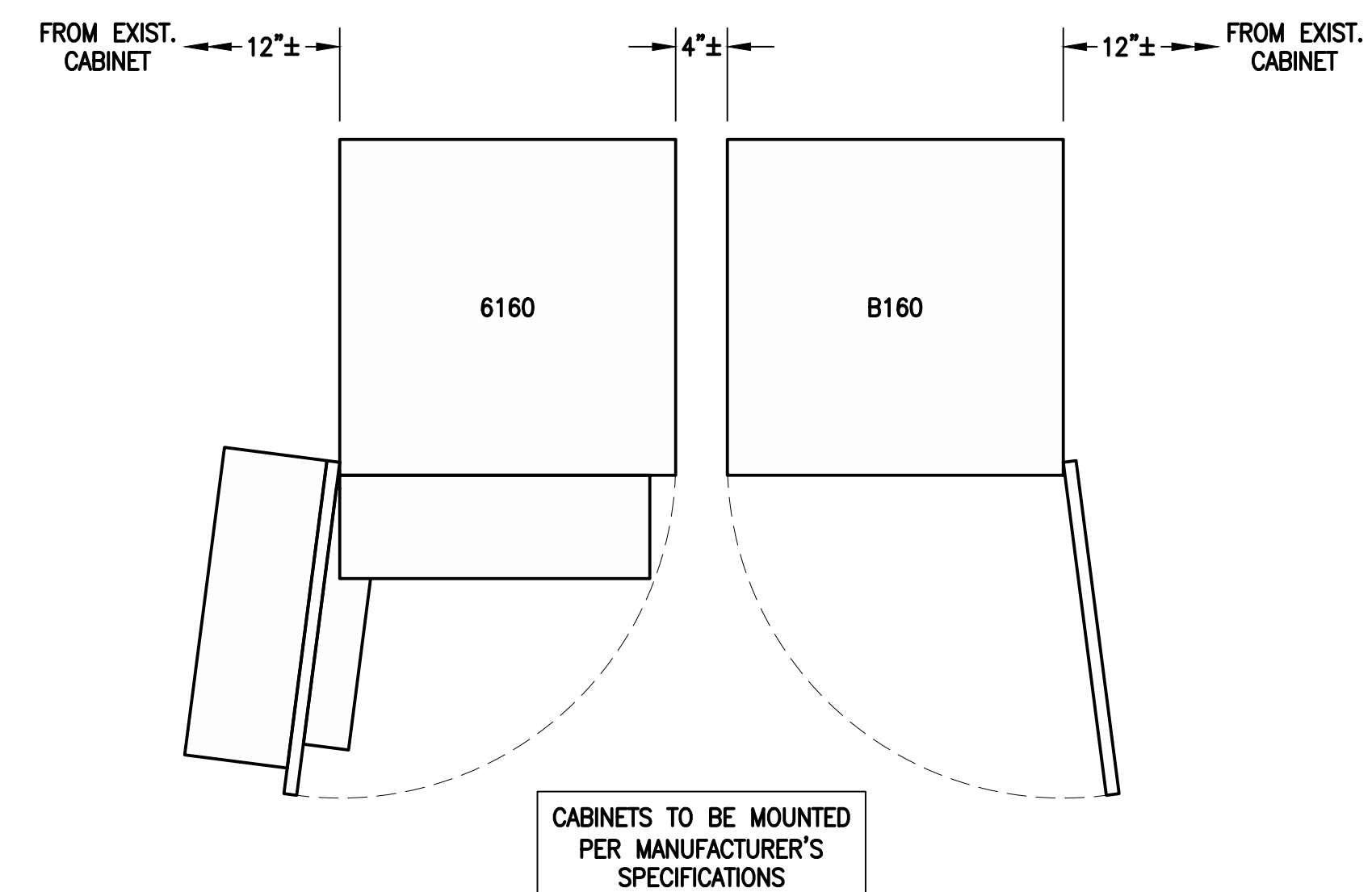
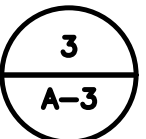
**ERICSSON RADIO 4480 B71+B85**  
DIMENSIONS: 19.2"H x 15.1"W x 7.5"D  
WEIGHT: 92.6 lbs  
QUANTITY: 1 PER SECTOR, TOTAL OF 3



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

**RADIO DETAILS**

SCALE: N.T.S.



**ERICSSON 6160 SITE SUPPORT CABINET**

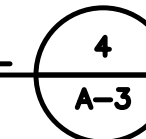
DIMENSIONS: 63.25"H x 26.0"W x 34.0"D  
QUANTITY: TOTAL OF 1

**ERICSSON B160 BATTERY CABINET**

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

**EQUIPMENT DETAIL**

SCALE: N.T.S.



FINAL ANTENNA CONFIGURATION									
SECTOR	ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	CABLES	
ALPHA	A1	COMMSCOPE WV-65A-R1	106'± AGL	60°	0°	2'	L2500/N2500	ERICSSON RADIO 8863 B41	EXIST. (18) 1/8" COAX CABLES PROP. (12) 3/8" COAX CABLES PROP. (1) 2" (6x24) HCS FIBER CABLE
	A2	COMMSCOPE FW-65B-R3	99'± AGL	60°	0°	2'	L700/L600/N600	ERICSSON RADIO 4480 B71+B85	
						2'	L2100/L1900/G1900/U2100	ERICSSON RADIO 4460 B25+B66	
						2'		COMMSCOPE ATSBT-TOP-MF-4G	
BETA	B1	COMMSCOPE WV-65A-R1	106'± AGL	180°	0°	2'	L2500/N2500	ERICSSON RADIO 8863 B41	
	B2	COMMSCOPE FW-65B-R3	99'± AGL	180°	0°	2'	L700/L600/N600	ERICSSON RADIO 4480 B71+B85	
						2'	L2100/L1900/G1900/U2100	ERICSSON RADIO 4460 B25+B66	
						2'		COMMSCOPE ATSBT-TOP-MF-4G	
GAMMA	G1	COMMSCOPE WV-65A-R1	106'± AGL	300°	0°	2'	L2500/N2500	ERICSSON RADIO 8863 B41	
	G2	COMMSCOPE FW-65B-R3	99'± AGL	300°	0°	2'	L700/L600/N600	ERICSSON RADIO 4480 B71+B85	
						2'	L2100/L1900/G1900/U2100	ERICSSON RADIO 4460 B25+B66	
						2'		COMMSCOPE ATSBT-TOP-MF-4G	

CABLE NOTE: SEE FEEDLINE SCHEDULE A & B BELOW.

NOTE: RFDS REV10 - 03/11/22

FEEDLINE SCHEDULE		
SCHEDULE	FEEDLINES	LOCATION
A	EXISTING TO REMAIN: (1) 1/2" COAX FOR GPS ANTENNA (18) 1/8" COAX CABLES EXISTING TO BE REMOVED: ALL COAX CABLES	ROUTED PER STRUCTURAL ANALYSIS
B	PROPOSED: (12) 3/8" COAX CABLES (1) 2" (6x24) HCS FIBER CABLE	

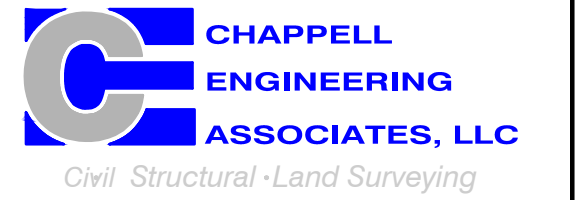
NOTE: EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER.

### T-MOBILE NORTHEAST LLC

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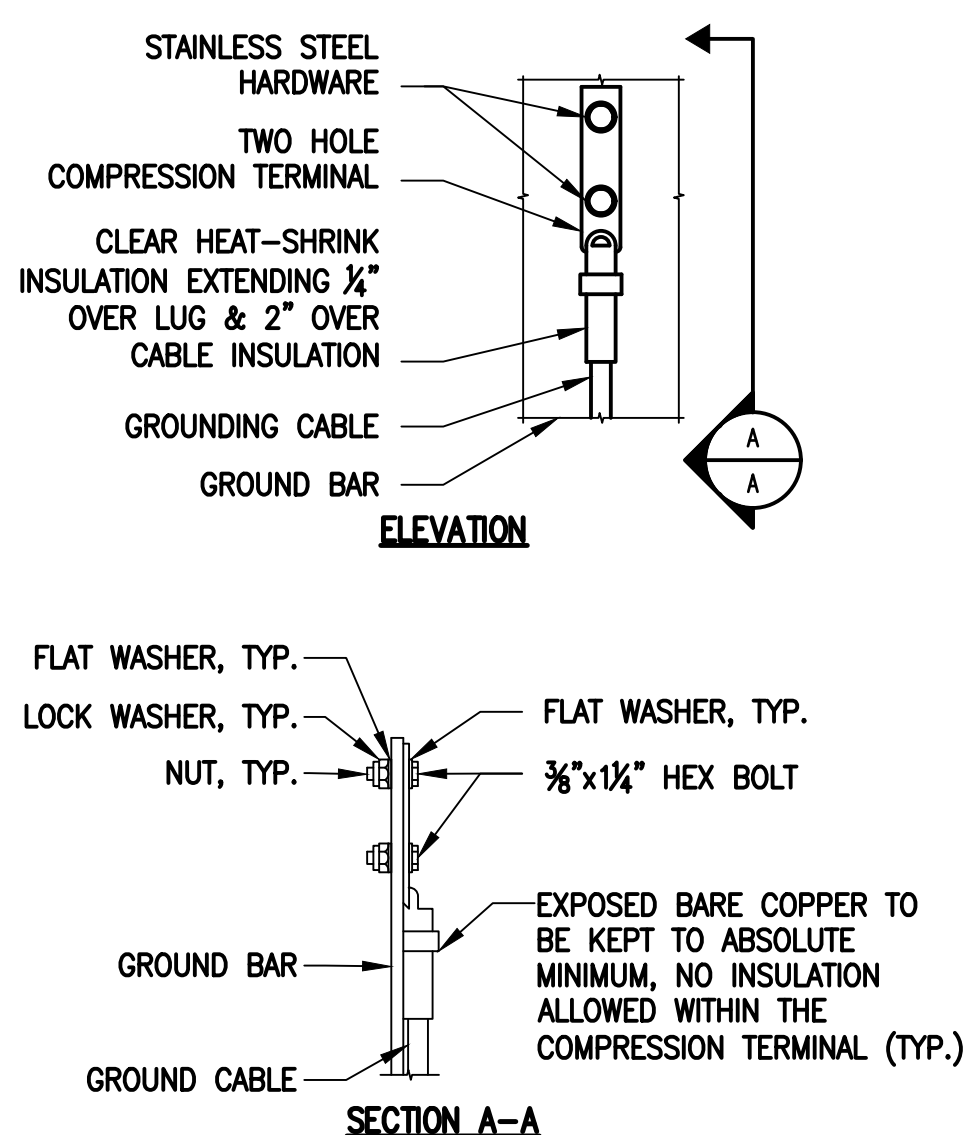
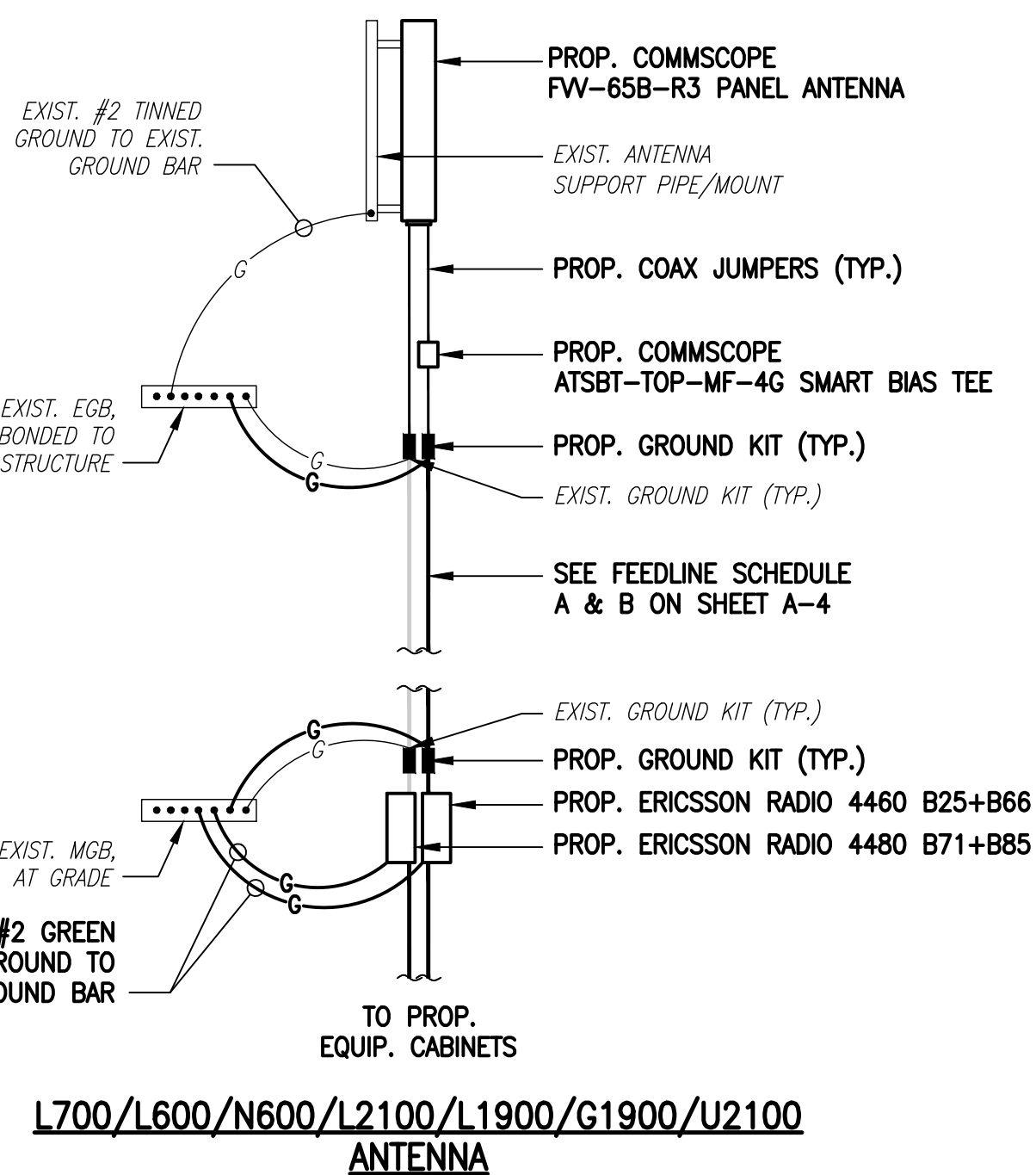
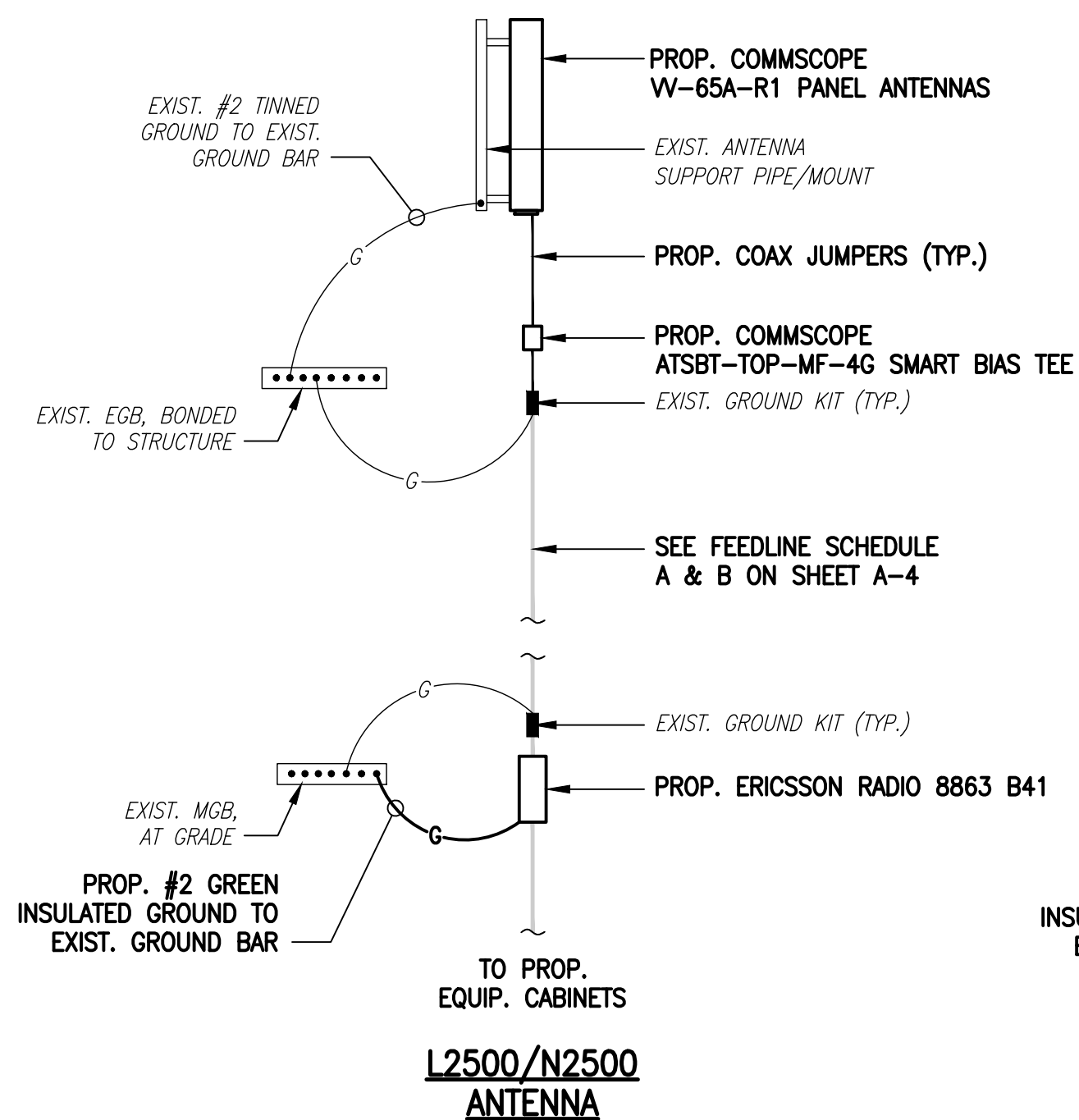
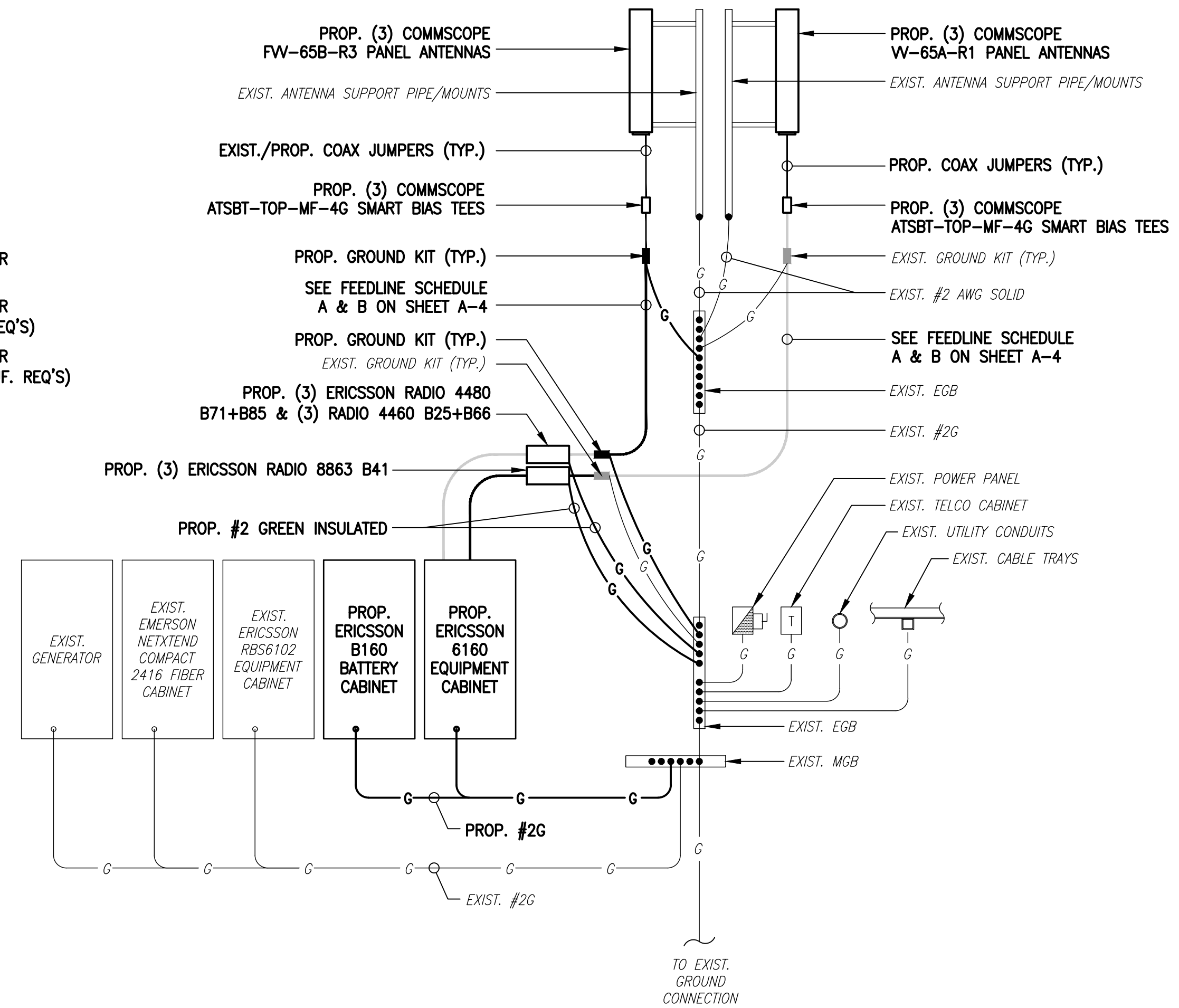
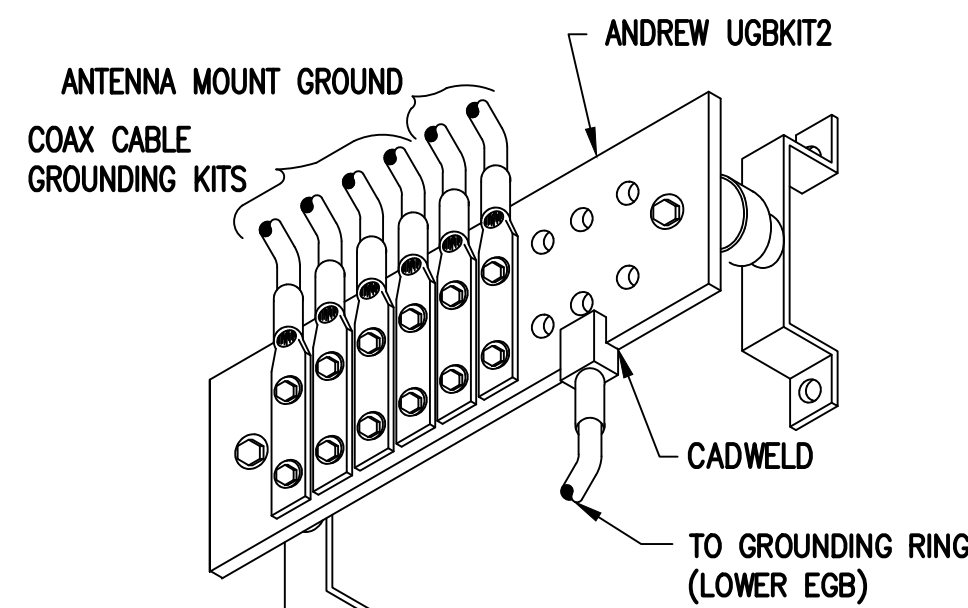
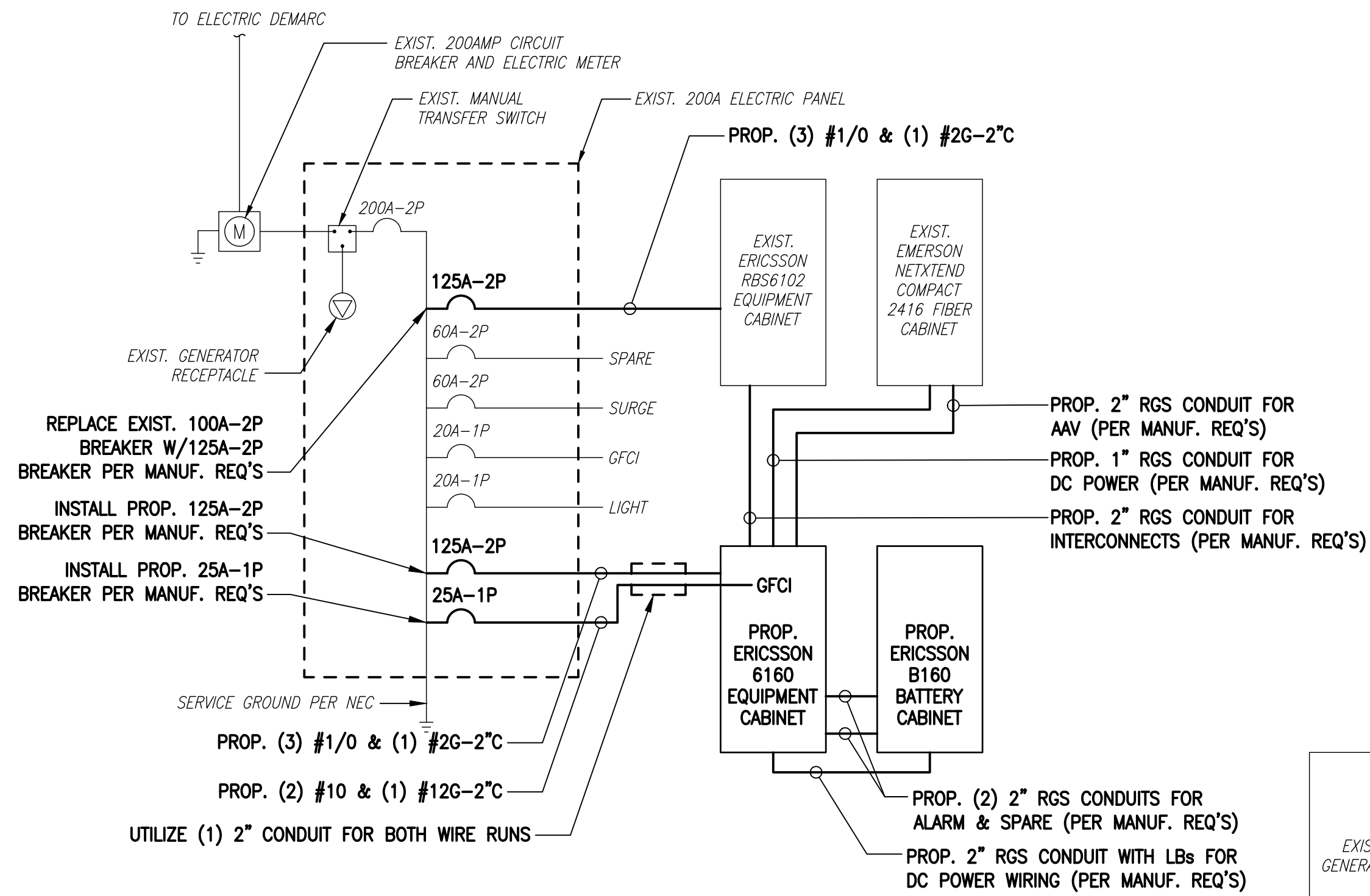
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SHEET TITLE  
**ANTENNA & FEEDLINE CHARTS**

SHEET NUMBER  
**A-4**



EXISTING POWER PANEL PHOTOS  
SCALE: NOT TO SCALE



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

**ELECTRICAL AND GROUNDING NOTES**

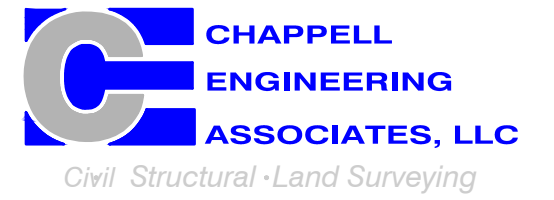
- ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
- ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
- THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
- GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
- ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
- BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
- ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THININSULATION.
- RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
- RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
- WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.
- ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
- PPC SUPPLIED BY PROJECT OWNER.
- GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".
- GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
- USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
- ALL GROUND CONNECTIONS TO BE BURNED HYDROGEN 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  
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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

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**Structural Analysis Report**

**Existing 109 ft EEI Monopole**

**Customer Name: SBA Communications Corp**

**Customer Site Number: CT40876-T**

**Customer Site Name: CT389/New Canaan C C**

**Carrier Name: T-Mobile (App#: 117062-4)**

**Carrier Site ID / Name: CT11389A / CT389/New Canaan C C**

**Site Location: 95 Country Club Road**

**New Canaan, Connecticut**

**Fairfield County**

**Latitude: 41.172860**

**Longitude: -73.496333**



**Analysis Result:**

**Max Structural Usage: 97.0% [Pass]**

**Max Foundation Usage: 33.0% [Pass]**

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

**Report Prepared By: Changzhi Zang**



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## Introduction

The purpose of this report is to summarize the analysis results on the 109 ft EEI 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

<b>Tower Drawings</b>	EEI Job #15040, Drawing #GS56879, Date 09/06/07
<b>Foundation Drawing</b>	EEI Job #15040, Drawing #1504D-110.0, Date 09/06/07
<b>Geotechnical Report</b>	Jaworski Geotech, Inc. Project #04193G
<b>Modification Drawings</b>	Allpro Consulting Job #11-5047, Date 09/15/11 Mod design by TES, Job# 30577, Dated 05/16/17; PCI by TES, Job# 33829, Dated 08/07/17
<b>Mount Analysis</b>	N/A

## 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.

<b>Wind Speed Used in the Analysis:</b>	Ultimate Design Wind Speed $V_{ult} = 120.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 93.0$ mph (3-Sec. Gust)
<b>Wind Speed with Ice:</b>	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
<b>Operational Wind Speed:</b>	60 mph + 0" Radial ice
<b>Standard/Codes:</b>	TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code
<b>Exposure Category:</b>	C
<b>Structure Class:</b>	II
<b>Topographic Category:</b>	1
<b>Crest Height:</b>	0 ft
<b>Seismic Parameters:</b>	$S_5 = 0.239$ , $S_1 = 0.068$

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
-	106.0	3	RFS APX16DWV-16DWVS-E-A20 - Panel	Concealed in Ø30" Canisters	(12) 7/8"	T-Mobile
-		3	RFS ATMAA1412D-1A20 TMA			
-	99.0	3	Commscope LNX-6512DS-A1M - Panel	Concealed in Ø30" Canisters	(6) 7/8"	
-		3	Ericsson KRY 112 144/1 TMA			
-		3	Andrew 782 11054			
5	89.0	3	CCI - HPA-65R-BUU-H6 - Panel	Concealed in Ø30" Canisters	(12) 7/8"	
6		6	CCI - DTMAP7819VG12A - TMA			

**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	106.0	3	Commscope ATSBT-TOP-FM	Concealed in Ø30" Canisters	(30) 7/8"	T-Mobile
2		3	Commscope VV-65A-R1 - Panel			
3	99.0	3	Commscope FVV-65B-R3 - Panel			
4		3	Commscope ATSBT-TOP-FM			

All transmission lines are considered running inside of the pole shafts.

## **Analysis Results**

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

	Pole shafts	Anchor Bolts	Base Plate	Spoked Connection
Max. Usage:	<b>97.0%</b>	<b>88.1%</b>	<b>71.8%</b>	<b>42.6%</b>
Pass/Fail	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>

## **Foundations**

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	375.2	5.9	9.8

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

## **Operational Condition (Rigidity):**

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 3.0594 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 96.97% at 91.0ft

**Structure:** CT40876-T-SBA  
**Site Name:** CT389/New Canaan C C  
**Height:** 109.00 (ft)  
**Base Elev:** 0.000 (ft)

**Code:** EIA/TIA-222-G  
**Exposure:** C  
**Gh:** 1.1

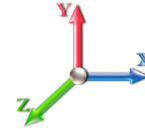
6/28/2022



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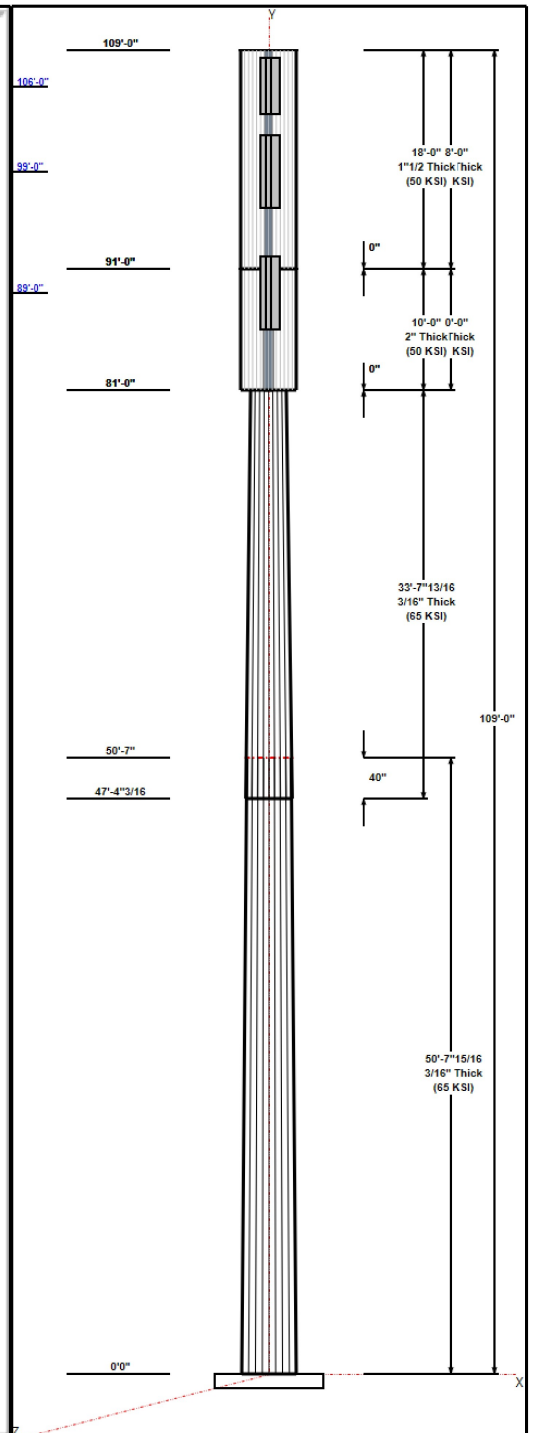
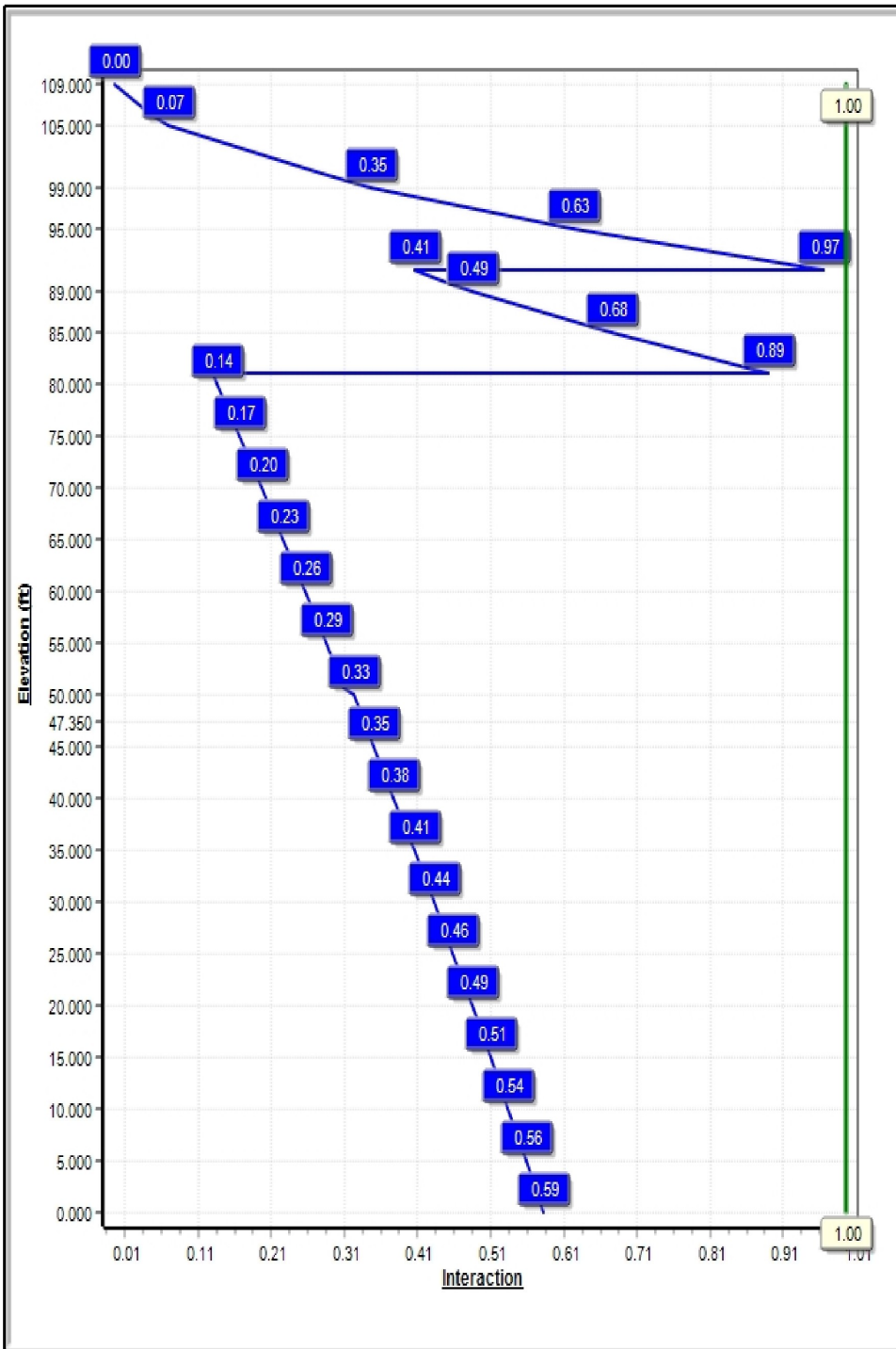
**Dead Load Factor:** 1.20  
**Wind Load Factor:** 1.60

**Load Case : 1.2D + 1.6W 93 mph Wind**



**Iterations:** 36

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## Structure: CT40876-T-SBA

**Type:** Custom  
**Site Name:** CT389/New Canaan C C  
**Height:** 109.00 (ft)  
**Base Elev:** 0.00 (ft)

**Base Shape:** 18 Sided  
**Taper:** 0.14660

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### Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	50.66	21.57	29.00	0.188		0.14660	65
2	33.65	17.50	22.43	0.188	Slip	0.14660	65
3	10.00	4.00	4.00	2.000	Butt	0.00000	50
4	18.00	3.00	3.00	1.500	Butt	0.00000	50

### Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
109.00	109.00	1	30" OD Canister	--
106.00	106.00	3	Commscope	T-Mobile
106.00	106.00	3	Commscope VV-65A-R1	T-Mobile
99.00	99.00	3	Commscope FVV-65B-R3	T-Mobile
99.00	99.00	3	Commscope	T-Mobile
91.00	91.00	1	30" OD Canister	--
89.00	89.00	6	DTMABP7819VG12A	AT&T
89.00	89.00	3	HPA-65R-BUU-H6	AT&T
81.00	81.00	1	30" OD Canister	--

### Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	106.00	Inside	7/8" Coax	T-Mobile
0.00	99.00	Inside	7/8" Coax	T-Mobile
0.00	89.00	Inside	7/8" Coax	AT&T

### Anchor Bolts

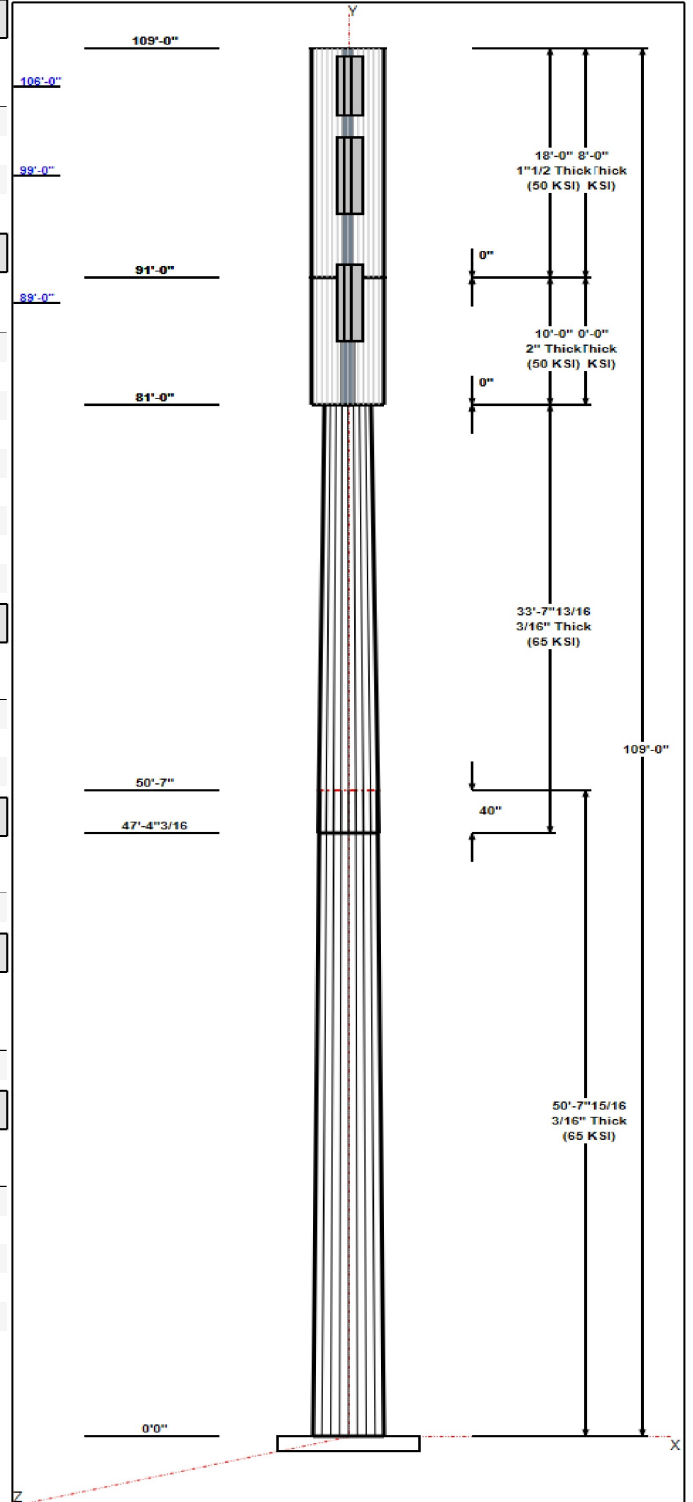
Qty	Specifications	Grade (ksi)	Arrangement
4	1.75" #18J	75.0	Radial

### Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
1.7500	36.0	50.0	Clipped

### Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 93 mph Wind	375.2	5.9	9.8
0.9D + 1.6W 93 mph Wind	369.7	5.9	7.3
1.2D + 1.0Di + 1.0Wi 50 mph Wind	200.9	2.7	16.4
1.2D + 1.0E	27.1	0.3	9.8
0.9D + 1.0E	26.6	0.3	7.4
1.0D + 1.0W 60 mph Wind	96.7	1.5	8.2

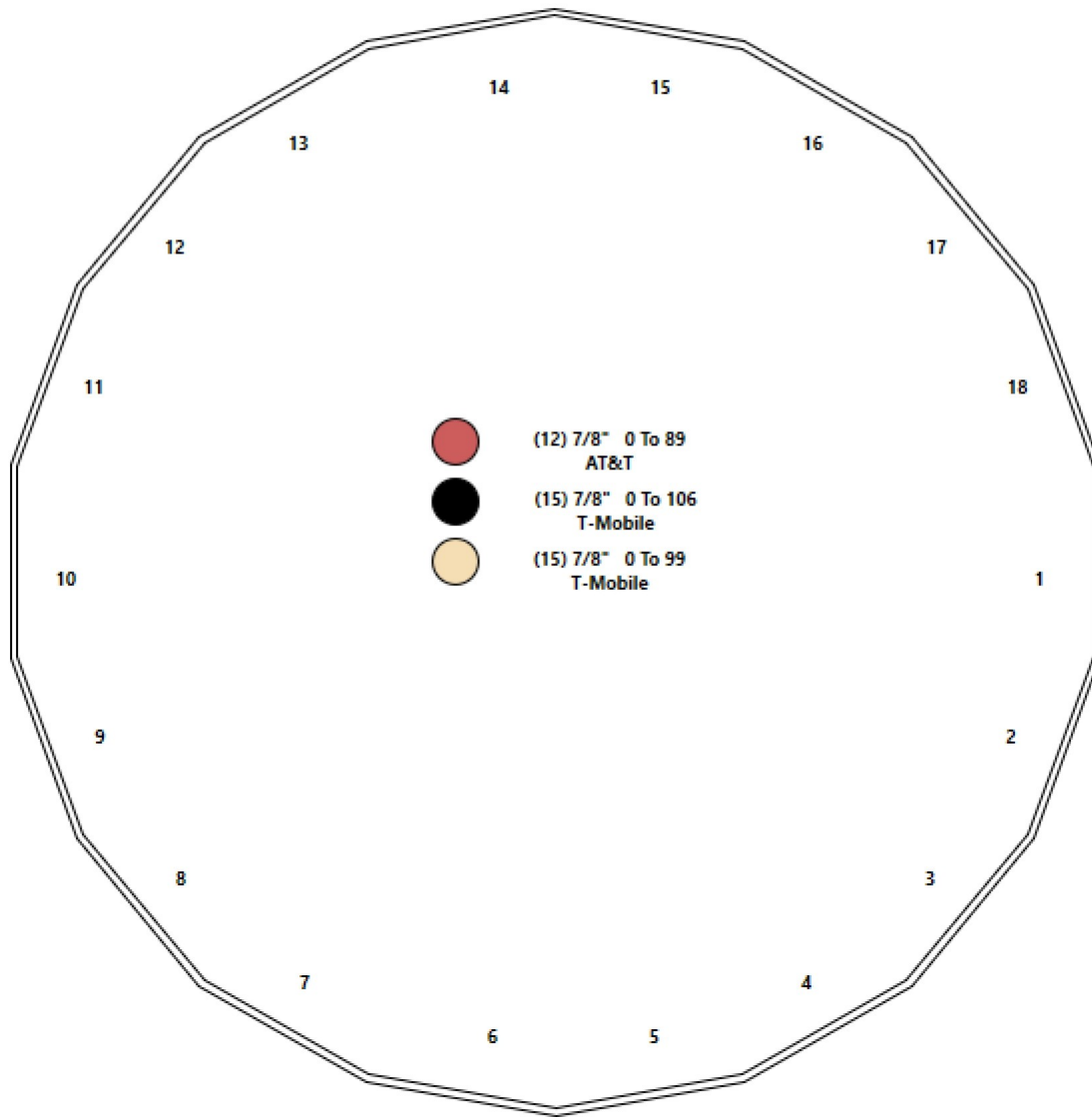


# Structure: CT40876-T-SBA - Coax Line Placement

**Type:** Monopole  
**Site Name:** CT389/New Canaan C C  
**Height:** 109.00 (ft)

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## Shaft Properties

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	50.660	0.1875	65		0.00	2,575
2	18	33.650	0.1875	65	Slip	39.72	1,348
3	RS	10.000	2.0000	50	Flange	0.00	428
4	RS	18.000	1.5000	50	Flange	0.00	433
<b>Total Shaft Weight:</b>							<b>4,783</b>

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	Canister Diam (in)
1	29.00	0.00	17.15	1798.41	25.86	154.67	21.57	50.66	12.73	735.37	18.88	115.0	0.146605	0.00
2	22.43	47.35	13.24	827.73	19.69	119.64	17.50	81.00	10.30	390.14	15.05	93.33	0.146605	0.00
3	4.00	81.00	12.57	12.57	0.00	2.00	4.00	91.00	12.57	12.57	0.00	2.00	0.000000	30.00
4	3.00	91.00	7.07	3.98	0.00	2.00	3.00	109.00	7.07	3.98	0.00	2.00	0.000000	30.00



## Load Summary

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> 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	109.00	30" OD Canister	1	175.00	0.00	1.00	507.02	0.000	1.00	0.00	0.00
2	106.00	Commscope ATSBT-TOP-FM	3	1.80	0.00	1.00	6.17	0.000	1.00	0.00	0.00
3	106.00	Commscope VV-65A-R1	3	23.81	0.00	1.00	89.95	0.000	1.00	0.00	0.00
4	99.00	Commscope FVV-65B-R3	3	45.60	0.00	1.00	236.60	9.259	1.00	0.00	0.00
5	99.00	Commscope ATSBT-TOP-FM	3	1.80	0.00	1.00	6.14	0.000	1.00	0.00	0.00
6	91.00	30" OD Canister	1	250.00	0.00	1.00	712.51	0.000	1.00	0.00	0.00
7	89.00	DTMABP7819VG12A	6	19.20	0.00	1.00	43.42	0.000	1.00	0.00	0.00
8	89.00	HPA-65R-BUU-H6	3	51.00	0.00	1.00	284.53	10.953	1.00	0.00	0.00
9	81.00	30" OD Canister	1	105.00	0.00	1.00	292.60	0.000	1.00	0.00	0.00
<b>Totals:</b>			<b>24</b>	<b>1,017.23</b>			<b>3,642.83</b>				

### Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	106.00	(15) 7/8" Coax	0.00	Inside
0.00	99.00	(15) 7/8" Coax	0.00	Inside
0.00	89.00	(12) 7/8" Coax	0.00	Inside

## Shaft Section Properties

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Increment Length:** 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in <sup>3</sup> )	Weight (lb)
0.00		0.1875	29.000	17.146	1798.4	25.86	154.67	71.0	122.1	0.0
5.00		0.1875	28.267	16.710	1664.6	25.17	150.76	71.8	116.0	288.0
10.00		0.1875	27.534	16.274	1537.6	24.48	146.85	72.6	110.0	280.6
15.00		0.1875	26.801	15.838	1417.3	23.79	142.94	73.4	104.2	273.2
20.00		0.1875	26.068	15.402	1303.3	23.10	139.03	74.2	98.5	265.8
25.00		0.1875	25.335	14.965	1195.7	22.41	135.12	75.0	93.0	258.3
30.00		0.1875	24.602	14.529	1094.2	21.73	131.21	75.8	87.6	250.9
35.00		0.1875	23.869	14.093	998.5	21.04	127.30	76.7	82.4	243.5
40.00		0.1875	23.136	13.657	908.7	20.35	123.39	77.5	77.4	236.1
45.00		0.1875	22.403	13.220	824.3	19.66	119.48	78.3	72.5	228.6
47.35	Bot - Section 2	0.1875	22.058	13.015	786.6	19.33	117.64	78.7	70.2	104.9
50.00		0.1875	21.670	12.784	745.4	18.97	115.57	79.1	67.8	234.7
50.66	Top - Section 1	0.1875	21.948	12.950	774.7	19.23	117.06	0.0	0.0	57.8
55.00		0.1875	21.312	12.571	708.7	18.63	113.66	79.5	65.5	188.4
60.00		0.1875	20.579	12.135	637.5	17.94	109.75	80.3	61.0	210.2
65.00		0.1875	19.846	11.699	571.2	17.25	105.84	81.1	56.7	202.8
70.00		0.1875	19.113	11.262	509.6	16.56	101.93	81.9	52.5	195.3
75.00		0.1875	18.380	10.826	452.7	15.87	98.02	82.5	48.5	187.9
80.00		0.1875	17.647	10.390	400.1	15.18	94.12	82.5	44.7	180.5
81.00	Top - Section 2	0.1875	17.500	10.303	390.1	15.05	93.33	82.5	43.9	35.2
81.00	Bot - Section 3	2.0000	4.000	12.566	12.6	1.41	8.75	50.0	6.3	
85.00		2.0000	4.000	12.566	12.6	0.00	2.00	50.0	6.3	171.0
89.00		2.0000	4.000	12.566	12.6	0.00	2.00	50.0	6.3	171.0
90.00		2.0000	4.000	12.566	12.6	0.00	2.00	50.0	6.3	42.8
91.00	Top - Section 3	2.0000	4.000	12.566	12.6	0.00	2.00	50.0	6.3	42.8
91.00	Bot - Section 4	1.5000	3.000	7.069	4.0	0.00	2.67	50.0	2.7	
95.00		1.5000	3.000	7.069	4.0	0.00	2.00	50.0	2.7	96.2
99.00		1.5000	3.000	7.069	4.0	0.00	2.00	50.0	2.7	96.2
100.00		1.5000	3.000	7.069	4.0	0.00	2.00	50.0	2.7	24.1
105.00		1.5000	3.000	7.069	4.0	0.00	2.00	50.0	2.7	120.3
106.00		1.5000	3.000	7.069	4.0	0.00	2.00	50.0	2.7	24.1
109.00		1.5000	3.000	7.069	4.0	0.00	2.00	50.0	2.7	72.2
										<b>4783.2</b>

## Wind Loading - Shaft

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

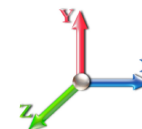


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**Load Case:** 1.2D + 1.6W 93 mph Wind

**Dead Load Factor** 1.20

**Wind Load Factor** 1.60



**Iterations** 36

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	17.879	19.67	210.41	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	17.879	19.67	205.09	0.650	0.000	5.00	12.115	7.87	247.8	0.0	345.6
10.00		1.00	0.85	17.879	19.67	199.77	0.650	0.000	5.00	11.805	7.67	241.4	0.0	336.7
15.00		1.00	0.85	17.879	19.67	194.45	0.650	0.000	5.00	11.494	7.47	235.1	0.0	327.8
20.00		1.00	0.90	18.971	20.87	194.82	0.650	0.000	5.00	11.184	7.27	242.7	0.0	318.9
25.00		1.00	0.95	19.883	21.87	193.84	0.650	0.000	5.00	10.874	7.07	247.3	0.0	310.0
30.00		1.00	0.98	20.661	22.73	191.88	0.650	0.000	5.00	10.564	6.87	249.7	0.0	301.1
35.00		1.00	1.01	21.343	23.48	189.21	0.650	0.000	5.00	10.254	6.66	250.4	0.0	292.2
40.00		1.00	1.04	21.951	24.15	185.99	0.650	0.000	5.00	9.944	6.46	249.7	0.0	283.3
45.00		1.00	1.07	22.502	24.75	182.35	0.650	0.000	5.00	9.634	6.26	248.0	0.0	274.4
47.35	Bot - Section 2	1.00	1.08	22.745	25.02	180.51	0.650	0.000	2.35	4.421	2.87	115.0	0.0	125.9
50.00		1.00	1.09	23.007	25.31	178.35	0.650	0.000	2.65	4.987	3.24	131.3	0.0	281.6
50.66	Top - Section 1	1.00	1.10	23.070	25.38	177.80	0.650	0.000	0.66	1.228	0.80	32.4	0.0	69.4
55.00		1.00	1.12	23.473	25.82	177.17	0.650	0.000	4.34	7.943	5.16	213.3	0.0	226.1
60.00		1.00	1.14	23.907	26.30	172.65	0.650	0.000	5.00	8.862	5.76	242.4	0.0	252.2
65.00		1.00	1.16	24.313	26.74	167.91	0.650	0.000	5.00	8.552	5.56	237.9	0.0	243.3
70.00		1.00	1.17	24.696	27.17	162.97	0.650	0.000	5.00	8.242	5.36	232.8	0.0	234.4
75.00		1.00	1.19	25.057	27.56	157.87	0.650	0.000	5.00	7.931	5.16	227.4	0.0	225.5
80.00		1.00	1.21	25.400	27.94	152.60	0.650	0.000	5.00	7.621	4.95	221.5	0.0	216.6
81.00	Top - Section 2	1.00	1.21	25.466	28.01	151.53	0.650	0.000	1.00	1.487	0.97	43.3	0.0	42.2
85.00		1.00	1.22	25.726	28.30	157.13	0.600	0.000	4.00	10.000	6.00	271.7	0.0	243.7
89.00	Appurtenance(s)	1.00	1.23	25.976	28.57	258.37	0.600	0.000	4.00	10.000	6.00	274.3	0.0	243.7
90.00		1.00	1.24	26.037	28.64	258.68	0.600	0.000	1.00	2.500	1.50	68.7	0.0	60.9
91.00	Top - Section 3	1.00	1.24	26.098	28.71	258.98	0.600	0.000	1.00	2.500	1.50	68.9	0.0	60.9
95.00		1.00	1.25	26.336	28.97	260.15	0.600	0.000	4.00	10.000	6.00	278.1	0.0	153.9
99.00	Appurtenance(s)	1.00	1.26	26.565	29.22	261.29	0.600	0.000	4.00	10.000	6.00	280.5	0.0	153.9
100.00		1.00	1.27	26.621	29.28	261.56	0.600	0.000	1.00	2.500	1.50	70.3	0.0	38.5
105.00		1.00	1.28	26.896	29.59	262.91	0.600	0.000	5.00	12.500	7.50	355.0	0.0	192.3
106.00	Appurtenance(s)	1.00	1.28	26.950	29.65	263.17	0.600	0.000	1.00	2.500	1.50	71.1	0.0	38.5
109.00	Appurtenance(s)	1.00	1.29	27.109	29.82	263.95	0.600	0.000	3.00	7.500	4.50	214.7	0.0	115.4
<b>Totals:</b>								<b>109.00</b>			<b>5,862.8</b>	<b>6,008.6</b>		

## Discrete Appurtenance Forces

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

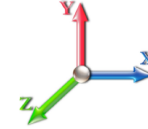


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**Load Case:** 1.2D + 1.6W 93 mph Wind

**Dead Load Factor** 1.20

**Wind Load Factor** 1.60



**Iterations** 36

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	109.00	30" OD Canister	1	27.109	29.820	1.00	1.00	0.00	210.00	0.000	0.000	0.00	0.00	0.00
2	106.00	Commscope	3	26.950	29.645	1.00	1.00	0.00	6.48	0.000	0.000	0.00	0.00	0.00
3	106.00	Commscope VV-65A-R1	3	26.950	29.645	1.00	1.00	0.00	85.72	0.000	0.000	0.00	0.00	0.00
4	99.00	Commscope FVV-65B-R3	3	26.565	29.222	1.00	1.00	0.00	164.16	0.000	0.000	0.00	0.00	0.00
5	99.00	Commscope	3	26.565	29.222	1.00	1.00	0.00	6.48	0.000	0.000	0.00	0.00	0.00
6	91.00	30" OD Canister	1	26.098	28.708	1.00	1.00	0.00	300.00	0.000	0.000	0.00	0.00	0.00
7	89.00	DTMABP7819VG12A	6	25.976	28.574	1.00	1.00	0.00	138.24	0.000	0.000	0.00	0.00	0.00
8	89.00	HPA-65R-BUU-H6	3	25.976	28.574	1.00	1.00	0.00	183.60	0.000	0.000	0.00	0.00	0.00
9	81.00	30" OD Canister	1	25.466	28.013	1.00	1.00	0.00	126.00	0.000	0.000	0.00	0.00	0.00
<b>Totals:</b>									<b>1,220.68</b>			<b>0.00</b>		

## Total Applied Force Summary

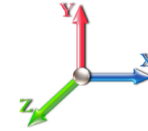
<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.2D + 1.6W 93 mph Wind

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.60



**Iterations** 36

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		247.79	476.66	0.00	0.00
10.00		241.45	467.75	0.00	0.00
15.00		235.10	458.85	0.00	0.00
20.00		242.72	449.94	0.00	0.00
25.00		247.34	441.03	0.00	0.00
30.00		249.69	432.13	0.00	0.00
35.00		250.36	423.22	0.00	0.00
40.00		249.71	414.32	0.00	0.00
45.00		247.99	405.41	0.00	0.00
47.35		115.02	187.47	0.00	0.00
50.00		131.25	351.04	0.00	0.00
50.66		32.42	86.65	0.00	0.00
55.00		213.31	339.88	0.00	0.00
60.00		242.37	383.25	0.00	0.00
65.00		237.86	374.34	0.00	0.00
70.00		232.84	365.43	0.00	0.00
75.00		227.36	356.53	0.00	0.00
80.00		221.45	347.62	0.00	0.00
81.00	(1) attachments	43.32	194.46	0.00	0.00
85.00		271.67	348.48	0.00	0.00
89.00	(9) attachments	274.31	670.32	0.00	0.00
90.00		68.74	79.63	0.00	0.00
91.00	(1) attachments	68.90	379.63	0.00	0.00
95.00		278.10	228.73	0.00	0.00
99.00	(6) attachments	280.53	399.37	0.00	0.00
100.00		70.28	47.82	0.00	0.00
105.00		355.03	239.12	0.00	0.00
106.00	(6) attachments	71.15	140.02	0.00	0.00
109.00	(1) attachments	214.70	325.39	0.00	0.00
	<b>Totals:</b>	<b>5,862.78</b>	<b>9,814.50</b>	<b>0.00</b>	<b>0.00</b>

## Calculated Forces

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.2D + 1.6W 93 mph Wind

**Iterations** 36

**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	-9.80	-5.89	0.00	-375.17	0.00	375.17	1095.40	547.70	1298.60	650.26	0.00	0.000	0.000	0.586
5.00	-9.30	-5.68	0.00	-345.74	0.00	345.74	1079.72	539.86	1247.24	624.55	0.15	-0.285	0.000	0.562
10.00	-8.80	-5.48	0.00	-317.31	0.00	317.31	1063.41	531.71	1196.12	598.95	0.60	-0.568	0.000	0.538
15.00	-8.32	-5.28	0.00	-289.90	0.00	289.90	1046.46	523.23	1145.29	573.49	1.35	-0.849	0.000	0.514
20.00	-7.85	-5.07	0.00	-263.48	0.00	263.48	1028.88	514.44	1094.81	548.22	2.39	-1.127	0.000	0.488
25.00	-7.39	-4.85	0.00	-238.13	0.00	238.13	1010.66	505.33	1044.74	523.15	3.71	-1.401	0.000	0.463
30.00	-6.95	-4.62	0.00	-213.89	0.00	213.89	991.80	495.90	995.14	498.31	5.33	-1.670	0.000	0.436
35.00	-6.51	-4.39	0.00	-190.79	0.00	190.79	972.31	486.15	946.07	473.74	7.22	-1.933	0.000	0.410
40.00	-6.09	-4.15	0.00	-168.86	0.00	168.86	952.17	476.09	897.58	449.45	9.38	-2.189	0.000	0.382
45.00	-5.68	-3.90	0.00	-148.12	0.00	148.12	931.41	465.70	849.73	425.49	11.80	-2.437	0.000	0.354
47.35	-5.49	-3.79	0.00	-138.95	0.00	138.95	921.43	460.71	827.47	414.35	13.03	-2.553	0.000	0.341
50.00	-5.14	-3.65	0.00	-128.91	0.00	128.91	910.00	455.00	802.58	401.88	14.48	-2.682	0.000	0.326
50.66	-5.05	-3.62	0.00	-126.50	0.00	126.50	918.20	459.10	820.39	410.80	14.86	-2.714	0.000	0.313
55.00	-4.71	-3.41	0.00	-110.77	0.00	110.77	899.32	449.66	779.82	390.49	17.42	-2.913	0.000	0.289
60.00	-4.33	-3.16	0.00	-93.72	0.00	93.72	876.96	438.48	733.82	367.45	20.58	-3.118	0.000	0.260
65.00	-3.96	-2.92	0.00	-77.90	0.00	77.90	853.97	426.99	688.66	344.84	23.95	-3.310	0.000	0.231
70.00	-3.60	-2.67	0.00	-63.31	0.00	63.31	830.35	415.17	644.40	322.68	27.51	-3.486	0.000	0.201
75.00	-3.25	-2.43	0.00	-49.93	0.00	49.93	804.33	402.17	599.80	300.34	31.24	-3.644	0.000	0.170
80.00	-2.91	-2.19	0.00	-37.76	0.00	37.76	771.92	385.96	552.20	276.51	35.13	-3.782	0.000	0.140
81.00	-2.72	-2.14	0.00	-35.57	0.00	35.57	765.44	382.72	542.91	271.86	35.92	-3.808	0.000	0.134
81.00	-2.72	-2.14	0.00	-35.57	0.00	35.57	565.49	282.74	47.12	40.00	35.92	-3.808	0.000	0.894
85.00	-2.35	-1.89	0.00	-27.01	0.00	27.01	565.49	282.74	47.12	40.00	39.15	-3.899	0.000	0.679
89.00	-1.68	-1.60	0.00	-19.43	0.00	19.43	565.49	282.74	47.12	40.00	43.34	-6.001	0.000	0.489
90.00	-1.59	-1.53	0.00	-17.83	0.00	17.83	565.49	282.74	47.12	40.00	44.64	-6.423	0.000	0.449
91.00	-1.20	-1.44	0.00	-16.30	0.00	16.30	565.49	282.74	47.12	40.00	46.03	-6.810	0.000	0.410
91.00	-1.20	-1.44	0.00	-16.30	0.00	16.30	318.09	159.04	19.88	16.88	46.03	-6.810	0.000	0.970
95.00	-0.98	-1.16	0.00	-10.55	0.00	10.55	318.09	159.04	19.88	16.88	52.26	-8.025	0.000	0.628
99.00	-0.61	-0.84	0.00	-5.89	0.00	5.89	318.09	159.04	19.88	16.88	60.03	-10.376	0.000	0.351
100.00	-0.56	-0.77	0.00	-5.05	0.00	5.05	318.09	159.04	19.88	16.88	62.23	-10.767	0.000	0.301
105.00	-0.40	-0.38	0.00	-1.21	0.00	1.21	318.09	159.04	19.88	16.88	74.13	-11.887	0.000	0.073
106.00	-0.27	-0.28	0.00	-0.83	0.00	0.83	318.09	159.04	19.88	16.88	76.61	-11.960	0.000	0.050
109.00	0.00	-0.21	0.00	0.00	0.00	0.00	318.09	159.04	19.88	16.88	84.11	-12.049	0.000	0.000

## Wind Loading - Shaft

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 0.9D + 1.6W 93 mph Wind

**Dead Load Factor** 0.90

**Wind Load Factor** 1.60



**Iterations** 36

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	17.879	19.67	210.41	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	17.879	19.67	205.09	0.650	0.000	5.00	12.115	7.87	247.8	0.0	259.2
10.00		1.00	0.85	17.879	19.67	199.77	0.650	0.000	5.00	11.805	7.67	241.4	0.0	252.5
15.00		1.00	0.85	17.879	19.67	194.45	0.650	0.000	5.00	11.494	7.47	235.1	0.0	245.9
20.00		1.00	0.90	18.971	20.87	194.82	0.650	0.000	5.00	11.184	7.27	242.7	0.0	239.2
25.00		1.00	0.95	19.883	21.87	193.84	0.650	0.000	5.00	10.874	7.07	247.3	0.0	232.5
30.00		1.00	0.98	20.661	22.73	191.88	0.650	0.000	5.00	10.564	6.87	249.7	0.0	225.8
35.00		1.00	1.01	21.343	23.48	189.21	0.650	0.000	5.00	10.254	6.66	250.4	0.0	219.1
40.00		1.00	1.04	21.951	24.15	185.99	0.650	0.000	5.00	9.944	6.46	249.7	0.0	212.5
45.00		1.00	1.07	22.502	24.75	182.35	0.650	0.000	5.00	9.634	6.26	248.0	0.0	205.8
47.35	Bot - Section 2	1.00	1.08	22.745	25.02	180.51	0.650	0.000	2.35	4.421	2.87	115.0	0.0	94.4
50.00		1.00	1.09	23.007	25.31	178.35	0.650	0.000	2.65	4.987	3.24	131.3	0.0	211.2
50.66	Top - Section 1	1.00	1.10	23.070	25.38	177.80	0.650	0.000	0.66	1.228	0.80	32.4	0.0	52.0
55.00		1.00	1.12	23.473	25.82	177.17	0.650	0.000	4.34	7.943	5.16	213.3	0.0	169.6
60.00		1.00	1.14	23.907	26.30	172.65	0.650	0.000	5.00	8.862	5.76	242.4	0.0	189.2
65.00		1.00	1.16	24.313	26.74	167.91	0.650	0.000	5.00	8.552	5.56	237.9	0.0	182.5
70.00		1.00	1.17	24.696	27.17	162.97	0.650	0.000	5.00	8.242	5.36	232.8	0.0	175.8
75.00		1.00	1.19	25.057	27.56	157.87	0.650	0.000	5.00	7.931	5.16	227.4	0.0	169.1
80.00		1.00	1.21	25.400	27.94	152.60	0.650	0.000	5.00	7.621	4.95	221.5	0.0	162.4
81.00	Top - Section 2	1.00	1.21	25.466	28.01	151.53	0.650	0.000	1.00	1.487	0.97	43.3	0.0	31.7
85.00		1.00	1.22	25.726	28.30	257.13	0.600	0.000	4.00	10.000	6.00	271.7	0.0	182.7
89.00	Appurtenance(s)	1.00	1.23	25.976	28.57	258.37	0.600	0.000	4.00	10.000	6.00	274.3	0.0	182.7
90.00		1.00	1.24	26.037	28.64	258.68	0.600	0.000	1.00	2.500	1.50	68.7	0.0	45.7
91.00	Top - Section 3	1.00	1.24	26.098	28.71	258.98	0.600	0.000	1.00	2.500	1.50	68.9	0.0	45.7
95.00		1.00	1.25	26.336	28.97	260.15	0.600	0.000	4.00	10.000	6.00	278.1	0.0	115.4
99.00	Appurtenance(s)	1.00	1.26	26.565	29.22	261.29	0.600	0.000	4.00	10.000	6.00	280.5	0.0	115.4
100.00		1.00	1.27	26.621	29.28	261.56	0.600	0.000	1.00	2.500	1.50	70.3	0.0	28.8
105.00		1.00	1.28	26.896	29.59	262.91	0.600	0.000	5.00	12.500	7.50	355.0	0.0	144.2
106.00	Appurtenance(s)	1.00	1.28	26.950	29.65	263.17	0.600	0.000	1.00	2.500	1.50	71.1	0.0	28.8
109.00	Appurtenance(s)	1.00	1.29	27.109	29.82	263.95	0.600	0.000	3.00	7.500	4.50	214.7	0.0	86.5
<b>Totals:</b>								<b>109.00</b>			<b>5,862.8</b>	<b>4,506.4</b>		

## Discrete Appurtenance Forces

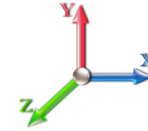
<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 0.9D + 1.6W 93 mph Wind

**Dead Load Factor** 0.90  
**Wind Load Factor** 1.60



**Iterations** 36

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	109.00	30" OD Canister	1	27.109	29.820	1.00	1.00	0.00	157.50	0.000	0.000	0.00	0.00	0.00
2	106.00	Commscope	3	26.950	29.645	1.00	1.00	0.00	4.86	0.000	0.000	0.00	0.00	0.00
3	106.00	Commscope VV-65A-R1	3	26.950	29.645	1.00	1.00	0.00	64.29	0.000	0.000	0.00	0.00	0.00
4	99.00	Commscope FVV-65B-R3	3	26.565	29.222	1.00	1.00	0.00	123.12	0.000	0.000	0.00	0.00	0.00
5	99.00	Commscope	3	26.565	29.222	1.00	1.00	0.00	4.86	0.000	0.000	0.00	0.00	0.00
6	91.00	30" OD Canister	1	26.098	28.708	1.00	1.00	0.00	225.00	0.000	0.000	0.00	0.00	0.00
7	89.00	DTMABP7819VG12A	6	25.976	28.574	1.00	1.00	0.00	103.68	0.000	0.000	0.00	0.00	0.00
8	89.00	HPA-65R-BUU-H6	3	25.976	28.574	1.00	1.00	0.00	137.70	0.000	0.000	0.00	0.00	0.00
9	81.00	30" OD Canister	1	25.466	28.013	1.00	1.00	0.00	94.50	0.000	0.000	0.00	0.00	0.00
<b>Totals:</b>									<b>915.51</b>			<b>0.00</b>		



## Total Applied Force Summary

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 0.9D + 1.6W 93 mph Wind

**Dead Load Factor**    0.90  
**Wind Load Factor**    1.60



**Iterations**    36

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		247.79	357.49	0.00	0.00
10.00		241.45	350.82	0.00	0.00
15.00		235.10	344.14	0.00	0.00
20.00		242.72	337.46	0.00	0.00
25.00		247.34	330.78	0.00	0.00
30.00		249.69	324.10	0.00	0.00
35.00		250.36	317.42	0.00	0.00
40.00		249.71	310.74	0.00	0.00
45.00		247.99	304.06	0.00	0.00
47.35		115.02	140.60	0.00	0.00
50.00		131.25	263.28	0.00	0.00
50.66		32.42	64.99	0.00	0.00
55.00		213.31	254.91	0.00	0.00
60.00		242.37	287.44	0.00	0.00
65.00		237.86	280.76	0.00	0.00
70.00		232.84	274.08	0.00	0.00
75.00		227.36	267.40	0.00	0.00
80.00		221.45	260.72	0.00	0.00
81.00	(1) attachments	43.32	145.84	0.00	0.00
85.00		271.67	261.36	0.00	0.00
89.00	(9) attachments	274.31	502.74	0.00	0.00
90.00		68.74	59.72	0.00	0.00
91.00	(1) attachments	68.90	284.72	0.00	0.00
95.00		278.10	171.55	0.00	0.00
99.00	(6) attachments	280.53	299.53	0.00	0.00
100.00		70.28	35.87	0.00	0.00
105.00		355.03	179.34	0.00	0.00
106.00	(6) attachments	71.15	105.01	0.00	0.00
109.00	(1) attachments	214.70	244.04	0.00	0.00
	<b>Totals:</b>	<b>5,862.78</b>	<b>7,360.87</b>	<b>0.00</b>	<b>0.00</b>

## Calculated Forces

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 0.9D + 1.6W 93 mph Wind	<b>Iterations</b> 36
<b>Dead Load Factor</b> 0.90	
<b>Wind Load Factor</b> 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	-7.35	-5.88	0.00	-369.69	0.00	369.69	1095.40	547.70	1298.60	650.26	0.00	0.000	0.000	0.575
5.00	-6.96	-5.67	0.00	-340.29	0.00	340.29	1079.72	539.86	1247.24	624.55	0.15	-0.281	0.000	0.551
10.00	-6.59	-5.45	0.00	-311.96	0.00	311.96	1063.41	531.71	1196.12	598.95	0.59	-0.559	0.000	0.527
15.00	-6.22	-5.24	0.00	-284.68	0.00	284.68	1046.46	523.23	1145.29	573.49	1.33	-0.835	0.000	0.502
20.00	-5.86	-5.02	0.00	-258.46	0.00	258.46	1028.88	514.44	1094.81	548.22	2.35	-1.108	0.000	0.477
25.00	-5.52	-4.80	0.00	-233.34	0.00	233.34	1010.66	505.33	1044.74	523.15	3.65	-1.376	0.000	0.452
30.00	-5.18	-4.56	0.00	-209.36	0.00	209.36	991.80	495.90	995.14	498.31	5.24	-1.640	0.000	0.425
35.00	-4.85	-4.32	0.00	-186.56	0.00	186.56	972.31	486.15	946.07	473.74	7.09	-1.897	0.000	0.399
40.00	-4.53	-4.08	0.00	-164.95	0.00	164.95	952.17	476.09	897.58	449.45	9.21	-2.148	0.000	0.372
45.00	-4.22	-3.83	0.00	-144.54	0.00	144.54	931.41	465.70	849.73	425.49	11.59	-2.390	0.000	0.344
47.35	-4.08	-3.72	0.00	-135.53	0.00	135.53	921.43	460.71	827.47	414.35	12.80	-2.503	0.000	0.332
50.00	-3.82	-3.58	0.00	-125.67	0.00	125.67	910.00	455.00	802.58	401.88	14.22	-2.629	0.000	0.317
50.66	-3.75	-3.56	0.00	-123.30	0.00	123.30	918.20	459.10	820.39	410.80	14.59	-2.660	0.000	0.304
55.00	-3.49	-3.34	0.00	-107.87	0.00	107.87	899.32	449.66	779.82	390.49	17.10	-2.854	0.000	0.280
60.00	-3.21	-3.10	0.00	-91.15	0.00	91.15	876.96	438.48	733.82	367.45	20.19	-3.054	0.000	0.252
65.00	-2.93	-2.85	0.00	-75.66	0.00	75.66	853.97	426.99	688.66	344.84	23.49	-3.240	0.000	0.223
70.00	-2.66	-2.61	0.00	-61.40	0.00	61.40	830.35	415.17	644.40	322.68	26.97	-3.410	0.000	0.194
75.00	-2.40	-2.38	0.00	-48.34	0.00	48.34	804.33	402.17	599.80	300.34	30.63	-3.564	0.000	0.164
80.00	-2.16	-2.14	0.00	-36.46	0.00	36.46	771.92	385.96	552.20	276.51	34.43	-3.697	0.000	0.135
81.00	-2.01	-2.09	0.00	-34.32	0.00	34.32	765.44	382.72	542.91	271.86	35.21	-3.722	0.000	0.129
81.00	-2.01	-2.09	0.00	-34.32	0.00	34.32	565.49	282.74	47.12	40.00	35.21	-3.722	0.000	0.862
85.00	-1.73	-1.84	0.00	-25.96	0.00	25.96	565.49	282.74	47.12	40.00	38.36	-3.810	0.000	0.652
89.00	-1.22	-1.54	0.00	-18.62	0.00	18.62	565.49	282.74	47.12	40.00	42.44	-5.828	0.000	0.468
90.00	-1.16	-1.48	0.00	-17.07	0.00	17.07	565.49	282.74	47.12	40.00	43.70	-6.232	0.000	0.429
91.00	-0.87	-1.39	0.00	-15.59	0.00	15.59	565.49	282.74	47.12	40.00	45.04	-6.602	0.000	0.391
91.00	-0.87	-1.39	0.00	-15.59	0.00	15.59	318.09	159.04	19.88	16.88	45.04	-6.602	0.000	0.927
95.00	-0.70	-1.11	0.00	-10.03	0.00	10.03	318.09	159.04	19.88	16.88	51.08	-7.762	0.000	0.597
99.00	-0.43	-0.80	0.00	-5.58	0.00	5.58	318.09	159.04	19.88	16.88	58.58	-9.996	0.000	0.332
100.00	-0.40	-0.73	0.00	-4.78	0.00	4.78	318.09	159.04	19.88	16.88	60.70	-10.367	0.000	0.284
105.00	-0.29	-0.35	0.00	-1.13	0.00	1.13	318.09	159.04	19.88	16.88	72.15	-11.423	0.000	0.068
106.00	-0.20	-0.26	0.00	-0.78	0.00	0.78	318.09	159.04	19.88	16.88	74.54	-11.491	0.000	0.047
109.00	0.00	-0.21	0.00	0.00	0.00	0.00	318.09	159.04	19.88	16.88	81.74	-11.574	0.000	0.000

## Wind Loading - Shaft

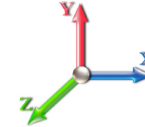
<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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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** 35

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.242	5.00	13.150	15.78	89.7	229.5	575.2
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.331	5.00	12.914	15.50	88.1	240.6	577.3
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.386	5.00	12.650	15.18	86.3	244.7	572.5
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.427	5.00	12.373	14.85	89.6	245.6	564.5
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.459	5.00	12.090	14.51	91.7	244.8	554.8
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.486	5.00	11.802	14.16	93.0	242.7	543.8
35.00		1.00	1.01	6.169	6.79	0.00	1.200	1.509	5.00	11.511	13.81	93.7	239.7	531.9
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.529	5.00	11.218	13.46	94.0	236.1	519.4
45.00		1.00	1.07	6.504	7.15	0.00	1.200	1.547	5.00	10.923	13.11	93.8	232.0	506.4
47.35	Bot - Section 2	1.00	1.08	6.574	7.23	0.00	1.200	1.555	2.35	5.030	6.04	43.6	108.1	233.9
50.00		1.00	1.09	6.650	7.32	0.00	1.200	1.564	2.65	5.677	6.81	49.8	122.5	404.1
50.66	Top - Section 1	1.00	1.10	6.669	7.34	0.00	1.200	1.566	0.66	1.401	1.68	12.3	30.4	99.8
55.00		1.00	1.12	6.785	7.46	0.00	1.200	1.579	4.34	9.085	10.90	81.4	196.3	422.5
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.592	5.00	10.189	12.23	92.9	221.0	473.2
65.00		1.00	1.16	7.028	7.73	0.00	1.200	1.605	5.00	9.889	11.87	91.7	215.5	458.8
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.617	5.00	9.589	11.51	90.4	209.8	444.2
75.00		1.00	1.19	7.243	7.97	0.00	1.200	1.628	5.00	9.288	11.15	88.8	203.9	429.4
80.00		1.00	1.21	7.342	8.08	0.00	1.200	1.639	5.00	8.987	10.78	87.1	197.8	414.4
81.00	Top - Section 2	1.00	1.21	7.361	8.10	0.00	1.200	1.641	1.00	1.761	2.11	17.1	39.3	81.6
85.00		1.00	1.22	7.436	8.18	0.00	1.200	1.649	4.00	10.000	12.00	98.2	170.0	413.7
89.00	Appurtenance(s)	1.00	1.23	7.508	8.26	0.00	1.200	1.656	4.00	10.000	12.00	99.1	170.3	414.0
90.00		1.00	1.24	7.526	8.28	0.00	1.200	1.658	1.00	2.500	3.00	24.8	42.6	103.5
91.00	Top - Section 3	1.00	1.24	7.544	8.30	0.00	1.200	1.660	1.00	2.500	3.00	24.9	42.6	103.5
95.00		1.00	1.25	7.612	8.37	0.00	1.200	1.667	4.00	10.000	12.00	100.5	162.5	316.3
99.00	Appurtenance(s)	1.00	1.26	7.679	8.45	0.00	1.200	1.674	4.00	10.000	12.00	101.4	162.7	316.5
100.00		1.00	1.27	7.695	8.46	0.00	1.200	1.676	1.00	2.500	3.00	25.4	40.7	79.1
105.00		1.00	1.28	7.774	8.55	0.00	1.200	1.684	5.00	12.500	15.00	128.3	203.7	396.1
106.00	Appurtenance(s)	1.00	1.28	7.790	8.57	0.00	1.200	1.686	1.00	2.500	3.00	25.7	40.8	79.2
109.00	Appurtenance(s)	1.00	1.29	7.836	8.62	0.00	1.200	1.690	3.00	7.500	9.00	77.6	122.4	237.8
<b>Totals:</b>									<b>109.00</b>			<b>2,180.9</b>	<b>10,867.4</b>	

## Discrete Appurtenance Forces

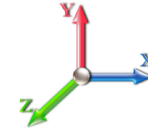
<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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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** 35

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	109.00	30" OD Canister	1	7.836	8.619	1.00	1.00	0.00	323.95	0.000	0.000	0.00	0.00	0.00
2	106.00	Commscope	3	7.790	8.569	1.00	1.00	0.00	11.48	0.000	0.000	0.00	0.00	0.00
3	106.00	Commscope VV-65A-R1	3	7.790	8.569	1.00	1.00	0.00	132.98	0.000	0.000	0.00	0.00	0.00
4	99.00	Commscope FVV-65B-R3	3	7.679	8.447	1.00	1.00	27.78	737.15	0.000	0.000	234.61	0.00	0.00
5	99.00	Commscope	3	7.679	8.447	1.00	1.00	0.00	11.39	0.000	0.000	0.00	0.00	0.00
6	91.00	30" OD Canister	1	7.544	8.298	1.00	1.00	0.00	619.44	0.000	0.000	0.00	0.00	0.00
7	89.00	DTMABP7819VG12A	6	7.508	8.259	1.00	1.00	0.00	239.77	0.000	0.000	0.00	0.00	0.00
8	89.00	HPA-65R-BUU-H6	3	7.508	8.259	1.00	1.00	32.86	884.19	0.000	0.000	271.39	0.00	0.00
9	81.00	30" OD Canister	1	7.361	8.097	1.00	1.00	0.00	25.53	0.000	0.000	0.00	0.00	0.00
<b>Totals:</b>									<b>2,985.90</b>			<b>506.00</b>		

## Total Applied Force Summary

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> 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** 35

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		89.70	706.19	0.00	0.00
10.00		88.10	708.38	0.00	0.00
15.00		86.29	703.53	0.00	0.00
20.00		89.56	695.57	0.00	0.00
25.00		91.72	685.80	0.00	0.00
30.00		93.04	674.81	0.00	0.00
35.00		93.74	662.96	0.00	0.00
40.00		93.95	650.45	0.00	0.00
45.00		93.78	637.40	0.00	0.00
47.35		43.65	295.52	0.00	0.00
50.00		49.84	473.52	0.00	0.00
50.66		12.33	117.07	0.00	0.00
55.00		81.37	536.23	0.00	0.00
60.00		92.94	604.25	0.00	0.00
65.00		91.74	589.88	0.00	0.00
70.00		90.35	575.26	0.00	0.00
75.00		88.80	560.44	0.00	0.00
80.00		87.09	545.43	0.00	0.00
81.00	(1) attachments	17.11	133.30	0.00	0.00
85.00		98.16	518.52	0.00	0.00
89.00	(9) attachments	370.50	1642.76	0.00	0.00
90.00		24.84	122.23	0.00	0.00
91.00	(1) attachments	24.89	741.69	0.00	0.00
95.00		100.48	391.21	0.00	0.00
99.00	(6) attachments	335.97	1139.97	0.00	0.00
100.00		25.39	88.51	0.00	0.00
105.00		128.28	442.87	0.00	0.00
106.00	(6) attachments	25.71	233.05	0.00	0.00
109.00	(1) attachments	77.57	561.74	0.00	0.00
	<b>Totals:</b>	<b>2,686.90</b>	<b>16,438.55</b>	<b>0.00</b>	<b>0.00</b>

## Calculated Forces

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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

**Iterations** 35

**Dead Load Factor** 1.20  
**Wind Load Factor** 1.00



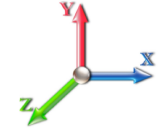
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-16.43	-2.71	0.00	-200.89	0.00	200.89	1095.40	547.70	1298.60	650.26	0.00	0.000	0.000	0.324
5.00	-15.72	-2.66	0.00	-187.35	0.00	187.35	1079.72	539.86	1247.24	624.55	0.08	-0.154	0.000	0.315
10.00	-15.01	-2.61	0.00	-174.05	0.00	174.05	1063.41	531.71	1196.12	598.95	0.33	-0.308	0.000	0.305
15.00	-14.30	-2.56	0.00	-160.99	0.00	160.99	1046.46	523.23	1145.29	573.49	0.73	-0.463	0.000	0.294
20.00	-13.60	-2.50	0.00	-148.20	0.00	148.20	1028.88	514.44	1094.81	548.22	1.30	-0.618	0.000	0.284
25.00	-12.90	-2.43	0.00	-135.71	0.00	135.71	1010.66	505.33	1044.74	523.15	2.03	-0.773	0.000	0.272
30.00	-12.22	-2.36	0.00	-123.54	0.00	123.54	991.80	495.90	995.14	498.31	2.92	-0.927	0.000	0.260
35.00	-11.56	-2.29	0.00	-111.73	0.00	111.73	972.31	486.15	946.07	473.74	3.97	-1.080	0.000	0.248
40.00	-10.90	-2.21	0.00	-100.28	0.00	100.28	952.17	476.09	897.58	449.45	5.19	-1.231	0.000	0.235
45.00	-10.26	-2.12	0.00	-89.23	0.00	89.23	931.41	465.70	849.73	425.49	6.56	-1.380	0.000	0.221
47.35	-9.97	-2.08	0.00	-84.25	0.00	84.25	921.43	460.71	827.47	414.35	7.25	-1.450	0.000	0.214
50.00	-9.49	-2.03	0.00	-78.73	0.00	78.73	910.00	455.00	802.58	401.88	8.08	-1.528	0.000	0.206
50.66	-9.37	-2.03	0.00	-77.39	0.00	77.39	918.20	459.10	820.39	410.80	8.29	-1.548	0.000	0.199
55.00	-8.84	-1.95	0.00	-68.60	0.00	68.60	899.32	449.66	779.82	390.49	9.76	-1.670	0.000	0.186
60.00	-8.23	-1.86	0.00	-58.86	0.00	58.86	876.96	438.48	733.82	367.45	11.57	-1.798	0.000	0.170
65.00	-7.64	-1.76	0.00	-49.58	0.00	49.58	853.97	426.99	688.66	344.84	13.52	-1.919	0.000	0.153
70.00	-7.07	-1.66	0.00	-40.79	0.00	40.79	830.35	415.17	644.40	322.68	15.59	-2.032	0.000	0.135
75.00	-6.51	-1.56	0.00	-32.47	0.00	32.47	804.33	402.17	599.80	300.34	17.78	-2.134	0.000	0.116
80.00	-5.96	-1.46	0.00	-24.65	0.00	24.65	771.92	385.96	552.20	276.51	20.06	-2.224	0.000	0.097
81.00	-5.83	-1.44	0.00	-23.19	0.00	23.19	765.44	382.72	542.91	271.86	20.53	-2.241	0.000	0.093
81.00	-5.83	-1.44	0.00	-23.19	0.00	23.19	565.49	282.74	47.12	40.00	20.53	-2.241	0.000	0.590
85.00	-5.30	-1.39	0.00	-17.41	0.00	17.41	565.49	282.74	47.12	40.00	22.43	-2.300	0.000	0.445
89.00	-3.66	-0.99	0.00	-11.84	0.00	11.84	565.49	282.74	47.12	40.00	24.95	-3.624	0.000	0.302
90.00	-3.54	-0.97	0.00	-10.85	0.00	10.85	565.49	282.74	47.12	40.00	25.73	-3.881	0.000	0.278
91.00	-2.79	-0.92	0.00	-9.89	0.00	9.89	565.49	282.74	47.12	40.00	26.57	-4.116	0.000	0.252
91.00	-2.79	-0.92	0.00	-9.89	0.00	9.89	318.09	159.04	19.88	16.88	26.57	-4.116	0.000	0.595
95.00	-2.40	-0.83	0.00	-6.22	0.00	6.22	318.09	159.04	19.88	16.88	30.34	-4.845	0.000	0.376
99.00	-1.29	-0.40	0.00	-2.90	0.00	2.90	318.09	159.04	19.88	16.88	35.01	-6.151	0.000	0.176
100.00	-1.20	-0.37	0.00	-2.50	0.00	2.50	318.09	159.04	19.88	16.88	36.31	-6.345	0.000	0.152
105.00	-0.78	-0.20	0.00	-0.63	0.00	0.63	318.09	159.04	19.88	16.88	43.29	-6.906	0.000	0.040
106.00	-0.55	-0.15	0.00	-0.44	0.00	0.44	318.09	159.04	19.88	16.88	44.74	-6.944	0.000	0.028
109.00	0.00	-0.08	0.00	0.00	0.00	0.00	318.09	159.04	19.88	16.88	49.11	-6.991	0.000	0.000

## Seismic Segment Forces (Factored)

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 1.2D + 1.0E							<b>Iterations</b> 31
<b>Gust Response Factor</b>	1.10				<b>Sds</b> 0.25	<b>Ss</b> 0.24	
<b>Dead Load Factor</b>	1.20	<b>Seismic Load Factor</b>	1.00	<b>Sd1</b> 0.11		<b>S1</b> 0.07	
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.40	<b>SA</b> 0.04	<b>Seismic Importance Factor</b>	1.00	

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		288.02	0.00	0.04	0.02	8.87	
10.00		280.59	0.02	0.06	0.04	11.56	
15.00		273.17	0.04	0.07	0.04	12.35	
20.00		265.75	0.06	0.07	0.04	12.54	
25.00		258.33	0.10	0.07	0.04	12.61	
30.00		250.91	0.14	0.07	0.03	12.63	
35.00		243.48	0.19	0.06	0.02	12.44	
40.00		236.06	0.25	0.05	0.02	11.63	
45.00		228.64	0.32	0.04	0.01	9.66	
47.35	Bot - Section 2	104.90	0.36	0.03	0.01	3.81	
50.00		234.66	0.40	0.02	0.01	6.42	
50.66	Top - Section 1	57.79	0.41	0.02	0.01	1.43	
55.00		188.45	0.48	-0.01	0.01	0.78	
60.00		210.17	0.57	-0.04	0.01	-4.67	
65.00		202.75	0.67	-0.08	0.02	-8.72	
70.00		195.33	0.78	-0.11	0.05	-10.20	
75.00		187.91	0.89	-0.12	0.09	-9.05	
80.00		180.48	1.02	-0.10	0.14	-5.63	
81.00	Top - Section 2	140.21	1.04	-0.10	0.15	-3.68	
85.00		171.04	1.15	-0.04	0.22	-0.27	
89.00	Appurtenance(s)	439.24	1.26	0.07	0.30	13.67	
90.00		42.76	1.29	0.10	0.33	1.73	
91.00	Top - Section 3	292.76	1.32	0.15	0.35	14.79	
95.00		96.21	1.44	0.35	0.47	9.18	
99.00	Appurtenance(s)	238.41	1.56	0.66	0.62	35.45	
100.00		24.05	1.59	0.75	0.66	3.93	
105.00		120.26	1.75	1.34	0.90	29.43	
106.00	Appurtenance(s)	100.88	1.79	1.48	0.96	26.50	
109.00	Appurtenance(s)	247.16	1.89	1.98	1.14	79.05	
<b>Totals:</b>		<b>5,800.4</b>				<b>288.2</b>	<b>Total Wind: 5,862.8</b>

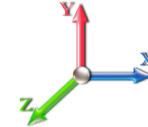
## Calculated Forces

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 1.2D + 1.0E								<b>Iterations</b> 31
<b>Gust Response Factor</b>	1.10					<b>Sds</b>	0.25	<b>Ss</b> 0.24
<b>Dead Load Factor</b>	1.20	<b>Seismic Load Factor</b>	1.00	<b>Sd1</b>	0.11			<b>S1</b> 0.07
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.40	<b>SA</b>	0.04	<b>Seismic Importance Factor</b>	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	-9.81	-0.33	0.00	-27.15	0.00	27.15	1095.40	547.70	1298.60	650.26	0.00	0.00	0.00	0.051
5.00	-9.34	-0.33	0.00	-25.49	0.00	25.49	1079.72	539.86	1247.24	624.55	0.01	-0.02	0.049	
10.00	-8.87	-0.32	0.00	-23.85	0.00	23.85	1063.41	531.71	1196.12	598.95	0.04	-0.04	0.048	
15.00	-8.41	-0.31	0.00	-22.26	0.00	22.26	1046.46	523.23	1145.29	573.49	0.10	-0.06	0.047	
20.00	-7.96	-0.30	0.00	-20.72	0.00	20.72	1028.88	514.44	1094.81	548.22	0.18	-0.08	0.046	
25.00	-7.52	-0.29	0.00	-19.23	0.00	19.23	1010.66	505.33	1044.74	523.15	0.28	-0.11	0.044	
30.00	-7.09	-0.28	0.00	-17.79	0.00	17.79	991.80	495.90	995.14	498.31	0.40	-0.13	0.043	
35.00	-6.66	-0.27	0.00	-16.41	0.00	16.41	972.31	486.15	946.07	473.74	0.55	-0.15	0.041	
40.00	-6.25	-0.26	0.00	-15.08	0.00	15.08	952.17	476.09	897.58	449.45	0.72	-0.17	0.040	
45.00	-5.84	-0.25	0.00	-13.80	0.00	13.80	931.41	465.70	849.73	425.49	0.91	-0.20	0.039	
47.35	-5.66	-0.24	0.00	-13.22	0.00	13.22	921.43	460.71	827.47	414.35	1.01	-0.21	0.038	
50.00	-5.31	-0.24	0.00	-12.57	0.00	12.57	910.00	455.00	802.58	401.88	1.13	-0.22	0.037	
50.66	-5.22	-0.24	0.00	-12.42	0.00	12.42	918.20	459.10	820.39	410.80	1.16	-0.22	0.036	
55.00	-4.88	-0.24	0.00	-11.40	0.00	11.40	899.32	449.66	779.82	390.49	1.37	-0.24	0.035	
60.00	-4.50	-0.24	0.00	-10.22	0.00	10.22	876.96	438.48	733.82	367.45	1.64	-0.26	0.033	
65.00	-4.12	-0.23	0.00	-9.04	0.00	9.04	853.97	426.99	688.66	344.84	1.92	-0.29	0.031	
70.00	-3.76	-0.23	0.00	-7.87	0.00	7.87	830.35	415.17	644.40	322.68	2.23	-0.31	0.029	
75.00	-3.40	-0.23	0.00	-6.70	0.00	6.70	804.33	402.17	599.80	300.34	2.57	-0.33	0.027	
80.00	-3.05	-0.23	0.00	-5.53	0.00	5.53	771.92	385.96	552.20	276.51	2.92	-0.35	0.024	
81.00	-2.86	-0.23	0.00	-5.30	0.00	5.30	765.44	382.72	542.91	271.86	2.99	-0.35	0.023	
81.00	-2.86	-0.23	0.00	-5.30	0.00	5.30	565.49	282.74	47.12	40.00	2.99	-0.35	0.138	
85.00	-2.51	-0.24	0.00	-4.37	0.00	4.37	565.49	282.74	47.12	40.00	3.29	-0.36	0.114	
89.00	-1.84	-0.22	0.00	-3.42	0.00	3.42	565.49	282.74	47.12	40.00	3.75	-0.72	0.089	
90.00	-1.76	-0.22	0.00	-3.20	0.00	3.20	565.49	282.74	47.12	40.00	3.91	-0.79	0.083	
91.00	-1.38	-0.21	0.00	-2.98	0.00	2.98	565.49	282.74	47.12	40.00	4.08	-0.86	0.077	
91.00	-1.38	-0.21	0.00	-2.98	0.00	2.98	318.09	159.04	19.88	16.88	4.08	-0.86	0.181	
95.00	-1.15	-0.20	0.00	-2.15	0.00	2.15	318.09	159.04	19.88	16.88	4.91	-1.09	0.131	
99.00	-0.75	-0.16	0.00	-1.34	0.00	1.34	318.09	159.04	19.88	16.88	6.05	-1.59	0.082	
100.00	-0.70	-0.16	0.00	-1.18	0.00	1.18	318.09	159.04	19.88	16.88	6.39	-1.68	0.072	
105.00	-0.46	-0.12	0.00	-0.39	0.00	0.39	318.09	159.04	19.88	16.88	8.33	-1.96	0.025	
106.00	-0.32	-0.09	0.00	-0.27	0.00	0.27	318.09	159.04	19.88	16.88	8.74	-1.99	0.017	
109.00	0.00	-0.08	0.00	0.00	0.00	0.00	318.09	159.04	19.88	16.88	10.00	-2.02	0.000	



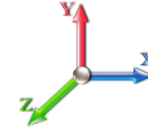
## Seismic Segment Forces (Factored)

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 0.9D + 1.0E				<b>Iterations</b> 31
<b>Gust Response Factor</b>	1.10	<b>Sds</b>	0.25	<b>Ss</b> 0.24
<b>Dead Load Factor</b>	0.90	<b>Seismic Load Factor</b>	1.00	<b>S1</b> 0.07
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.40	<b>SA</b> 0.04
				<b>Seismic Importance Factor</b> 1.00



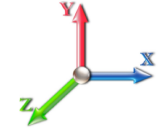
Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		288.02	0.00	0.04	0.02	8.87	
10.00		280.59	0.02	0.06	0.04	11.56	
15.00		273.17	0.04	0.07	0.04	12.35	
20.00		265.75	0.06	0.07	0.04	12.54	
25.00		258.33	0.10	0.07	0.04	12.61	
30.00		250.91	0.14	0.07	0.03	12.63	
35.00		243.48	0.19	0.06	0.02	12.44	
40.00		236.06	0.25	0.05	0.02	11.63	
45.00		228.64	0.32	0.04	0.01	9.66	
47.35	Bot - Section 2	104.90	0.36	0.03	0.01	3.81	
50.00		234.66	0.40	0.02	0.01	6.42	
50.66	Top - Section 1	57.79	0.41	0.02	0.01	1.43	
55.00		188.45	0.48	-0.01	0.01	0.78	
60.00		210.17	0.57	-0.04	0.01	-4.67	
65.00		202.75	0.67	-0.08	0.02	-8.72	
70.00		195.33	0.78	-0.11	0.05	-10.20	
75.00		187.91	0.89	-0.12	0.09	-9.05	
80.00		180.48	1.02	-0.10	0.14	-5.63	
81.00	Top - Section 2	140.21	1.04	-0.10	0.15	-3.68	
85.00		171.04	1.15	-0.04	0.22	-0.27	
89.00	Appurtenance(s)	439.24	1.26	0.07	0.30	13.67	
90.00		42.76	1.29	0.10	0.33	1.73	
91.00	Top - Section 3	292.76	1.32	0.15	0.35	14.79	
95.00		96.21	1.44	0.35	0.47	9.18	
99.00	Appurtenance(s)	238.41	1.56	0.66	0.62	35.45	
100.00		24.05	1.59	0.75	0.66	3.93	
105.00		120.26	1.75	1.34	0.90	29.43	
106.00	Appurtenance(s)	100.88	1.79	1.48	0.96	26.50	
109.00	Appurtenance(s)	247.16	1.89	1.98	1.14	79.05	
<b>Totals:</b>		<b>5,800.4</b>				<b>288.2</b>	<b>Total Wind: 5,862.8</b>

## Calculated Forces

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 0.9D + 1.0E							<b>Iterations</b> 31
<b>Gust Response Factor</b>	1.10			<b>Sds</b>	0.25	<b>Ss</b>	0.24
<b>Dead Load Factor</b>	0.90	<b>Seismic Load Factor</b>	1.00	<b>Sd1</b>	0.11	<b>S1</b>	0.07
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.40	<b>SA</b>	0.04	<b>Seismic Importance Factor</b>	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	-7.36	-0.33	0.00	-26.63	0.00	26.63	1095.40	547.70	1298.60	650.26	0.00	0.00	0.00	0.048
5.00	-7.00	-0.33	0.00	-24.97	0.00	24.97	1079.72	539.86	1247.24	624.55	0.01	-0.02	0.046	
10.00	-6.65	-0.32	0.00	-23.35	0.00	23.35	1063.41	531.71	1196.12	598.95	0.04	-0.04	0.045	
15.00	-6.31	-0.31	0.00	-21.77	0.00	21.77	1046.46	523.23	1145.29	573.49	0.10	-0.06	0.044	
20.00	-5.97	-0.29	0.00	-20.24	0.00	20.24	1028.88	514.44	1094.81	548.22	0.17	-0.08	0.043	
25.00	-5.64	-0.28	0.00	-18.77	0.00	18.77	1010.66	505.33	1044.74	523.15	0.27	-0.10	0.041	
30.00	-5.32	-0.27	0.00	-17.35	0.00	17.35	991.80	495.90	995.14	498.31	0.39	-0.13	0.040	
35.00	-5.00	-0.26	0.00	-15.99	0.00	15.99	972.31	486.15	946.07	473.74	0.54	-0.15	0.039	
40.00	-4.69	-0.25	0.00	-14.68	0.00	14.68	952.17	476.09	897.58	449.45	0.70	-0.17	0.038	
45.00	-4.38	-0.24	0.00	-13.43	0.00	13.43	931.41	465.70	849.73	425.49	0.89	-0.19	0.036	
47.35	-4.24	-0.24	0.00	-12.86	0.00	12.86	921.43	460.71	827.47	414.35	0.99	-0.20	0.036	
50.00	-3.98	-0.23	0.00	-12.23	0.00	12.23	910.00	455.00	802.58	401.88	1.10	-0.21	0.035	
50.66	-3.91	-0.23	0.00	-12.08	0.00	12.08	918.20	459.10	820.39	410.80	1.13	-0.22	0.034	
55.00	-3.66	-0.23	0.00	-11.08	0.00	11.08	899.32	449.66	779.82	390.49	1.34	-0.24	0.032	
60.00	-3.37	-0.23	0.00	-9.94	0.00	9.94	876.96	438.48	733.82	367.45	1.60	-0.26	0.031	
65.00	-3.09	-0.23	0.00	-8.79	0.00	8.79	853.97	426.99	688.66	344.84	1.88	-0.28	0.029	
70.00	-2.82	-0.23	0.00	-7.65	0.00	7.65	830.35	415.17	644.40	322.68	2.18	-0.30	0.027	
75.00	-2.55	-0.23	0.00	-6.50	0.00	6.50	804.33	402.17	599.80	300.34	2.51	-0.32	0.025	
80.00	-2.29	-0.23	0.00	-5.36	0.00	5.36	771.92	385.96	552.20	276.51	2.85	-0.34	0.022	
81.00	-2.14	-0.23	0.00	-5.13	0.00	5.13	765.44	382.72	542.91	271.86	2.92	-0.34	0.022	
81.00	-2.14	-0.23	0.00	-5.13	0.00	5.13	565.49	282.74	47.12	40.00	2.92	-0.34	0.132	
85.00	-1.88	-0.23	0.00	-4.23	0.00	4.23	565.49	282.74	47.12	40.00	3.21	-0.35	0.109	
89.00	-1.38	-0.22	0.00	-3.30	0.00	3.30	565.49	282.74	47.12	40.00	3.66	-0.70	0.085	
90.00	-1.32	-0.22	0.00	-3.09	0.00	3.09	565.49	282.74	47.12	40.00	3.81	-0.77	0.079	
91.00	-1.03	-0.20	0.00	-2.87	0.00	2.87	565.49	282.74	47.12	40.00	3.98	-0.84	0.074	
91.00	-1.03	-0.20	0.00	-2.87	0.00	2.87	318.09	159.04	19.88	16.88	3.98	-0.84	0.173	
95.00	-0.86	-0.19	0.00	-2.07	0.00	2.07	318.09	159.04	19.88	16.88	4.78	-1.06	0.125	
99.00	-0.56	-0.15	0.00	-1.29	0.00	1.29	318.09	159.04	19.88	16.88	5.88	-1.54	0.078	
100.00	-0.52	-0.15	0.00	-1.14	0.00	1.14	318.09	159.04	19.88	16.88	6.21	-1.63	0.069	
105.00	-0.35	-0.12	0.00	-0.38	0.00	0.38	318.09	159.04	19.88	16.88	8.08	-1.90	0.024	
106.00	-0.24	-0.09	0.00	-0.26	0.00	0.26	318.09	159.04	19.88	16.88	8.48	-1.92	0.016	
109.00	0.00	-0.08	0.00	0.00	0.00	0.00	318.09	159.04	19.88	16.88	9.70	-1.95	0.000	

## Wind Loading - Shaft

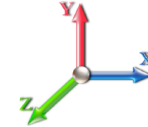
<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00  
**Wind Load Factor** 1.00



**Iterations** 32

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	135.75	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	132.31	0.650	0.000	5.00	12.115	7.87	64.5	0.0	288.0
10.00		1.00	0.85	7.442	8.19	128.88	0.650	0.000	5.00	11.805	7.67	62.8	0.0	280.6
15.00		1.00	0.85	7.442	8.19	125.45	0.650	0.000	5.00	11.494	7.47	61.2	0.0	273.2
20.00		1.00	0.90	7.896	8.69	125.69	0.650	0.000	5.00	11.184	7.27	63.1	0.0	265.8
25.00		1.00	0.95	8.276	9.10	125.06	0.650	0.000	5.00	10.874	7.07	64.3	0.0	258.3
30.00		1.00	0.98	8.600	9.46	123.79	0.650	0.000	5.00	10.564	6.87	65.0	0.0	250.9
35.00		1.00	1.01	8.883	9.77	122.07	0.650	0.000	5.00	10.254	6.66	65.1	0.0	243.5
40.00		1.00	1.04	9.137	10.05	120.00	0.650	0.000	5.00	9.944	6.46	65.0	0.0	236.1
45.00		1.00	1.07	9.366	10.30	117.64	0.650	0.000	5.00	9.634	6.26	64.5	0.0	228.6
47.35	Bot - Section 2	1.00	1.08	9.467	10.41	116.46	0.650	0.000	2.35	4.421	2.87	29.9	0.0	104.9
50.00		1.00	1.09	9.576	10.53	115.06	0.650	0.000	2.65	4.987	3.24	34.1	0.0	234.7
50.66	Top - Section 1	1.00	1.10	9.603	10.56	114.71	0.650	0.000	0.66	1.228	0.80	8.4	0.0	57.8
55.00		1.00	1.12	9.770	10.75	114.30	0.650	0.000	4.34	7.943	5.16	55.5	0.0	188.4
60.00		1.00	1.14	9.951	10.95	111.39	0.650	0.000	5.00	8.862	5.76	63.1	0.0	210.2
65.00		1.00	1.16	10.120	11.13	108.33	0.650	0.000	5.00	8.552	5.56	61.9	0.0	202.8
70.00		1.00	1.17	10.279	11.31	105.14	0.650	0.000	5.00	8.242	5.36	60.6	0.0	195.3
75.00		1.00	1.19	10.430	11.47	101.85	0.650	0.000	5.00	7.931	5.16	59.1	0.0	187.9
80.00		1.00	1.21	10.572	11.63	98.45	0.650	0.000	5.00	7.621	4.95	57.6	0.0	180.5
81.00	Top - Section 2	1.00	1.21	10.600	11.66	97.76	0.650	0.000	1.00	1.487	0.97	11.3	0.0	35.2
85.00		1.00	1.22	10.708	11.78	165.89	0.600	0.000	4.00	10.000	6.00	70.7	0.0	203.0
89.00	Appurtenance(s)	1.00	1.23	10.812	11.89	166.69	0.600	0.000	4.00	10.000	6.00	71.4	0.0	203.0
90.00		1.00	1.24	10.838	11.92	166.89	0.600	0.000	1.00	2.500	1.50	17.9	0.0	50.8
91.00	Top - Section 3	1.00	1.24	10.863	11.95	167.08	0.600	0.000	1.00	2.500	1.50	17.9	0.0	50.8
95.00		1.00	1.25	10.962	12.06	167.84	0.600	0.000	4.00	10.000	6.00	72.3	0.0	128.2
99.00	Appurtenance(s)	1.00	1.26	11.057	12.16	168.57	0.600	0.000	4.00	10.000	6.00	73.0	0.0	128.2
100.00		1.00	1.27	11.081	12.19	168.75	0.600	0.000	1.00	2.500	1.50	18.3	0.0	32.1
105.00		1.00	1.28	11.195	12.31	169.62	0.600	0.000	5.00	12.500	7.50	92.4	0.0	160.3
106.00	Appurtenance(s)	1.00	1.28	11.218	12.34	169.79	0.600	0.000	1.00	2.500	1.50	18.5	0.0	32.1
109.00	Appurtenance(s)	1.00	1.29	11.284	12.41	170.29	0.600	0.000	3.00	7.500	4.50	55.9	0.0	96.2
<b>Totals:</b>									<b>109.00</b>			<b>1,525.2</b>		<b>5,007.2</b>

## Discrete Appurtenance Forces

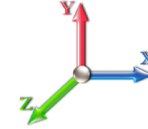
<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00  
**Wind Load Factor** 1.00



**Iterations** 32

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	109.00	30" OD Canister	1	11.284	12.412	1.00	1.00	0.00	175.00	0.000	0.000	0.00	0.00	0.00
2	106.00	Commscope	3	11.218	12.339	1.00	1.00	0.00	5.40	0.000	0.000	0.00	0.00	0.00
3	106.00	Commscope VV-65A-R1	3	11.218	12.339	1.00	1.00	0.00	71.43	0.000	0.000	0.00	0.00	0.00
4	99.00	Commscope FVV-65B-R3	3	11.057	12.163	1.00	1.00	0.00	136.80	0.000	0.000	0.00	0.00	0.00
5	99.00	Commscope	3	11.057	12.163	1.00	1.00	0.00	5.40	0.000	0.000	0.00	0.00	0.00
6	91.00	30" OD Canister	1	10.863	11.949	1.00	1.00	0.00	250.00	0.000	0.000	0.00	0.00	0.00
7	89.00	DTMABP7819VG12A	6	10.812	11.893	1.00	1.00	0.00	115.20	0.000	0.000	0.00	0.00	0.00
8	89.00	HPA-65R-BUU-H6	3	10.812	11.893	1.00	1.00	0.00	153.00	0.000	0.000	0.00	0.00	0.00
9	81.00	30" OD Canister	1	10.600	11.660	1.00	1.00	0.00	105.00	0.000	0.000	0.00	0.00	0.00
<b>Totals:</b>									<b>1,017.23</b>			<b>0.00</b>		

## Total Applied Force Summary

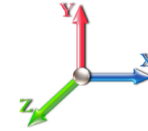
<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00  
**Wind Load Factor** 1.00



**Iterations** 32

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		64.46	397.22	0.00	0.00
10.00		62.81	389.79	0.00	0.00
15.00		61.16	382.37	0.00	0.00
20.00		63.14	374.95	0.00	0.00
25.00		64.35	367.53	0.00	0.00
30.00		64.96	360.11	0.00	0.00
35.00		65.13	352.68	0.00	0.00
40.00		64.96	345.26	0.00	0.00
45.00		64.51	337.84	0.00	0.00
47.35		29.92	156.22	0.00	0.00
50.00		34.15	292.53	0.00	0.00
50.66		8.43	72.21	0.00	0.00
55.00		55.49	283.23	0.00	0.00
60.00		63.05	319.37	0.00	0.00
65.00		61.88	311.95	0.00	0.00
70.00		60.57	304.53	0.00	0.00
75.00		59.15	297.11	0.00	0.00
80.00		57.61	289.68	0.00	0.00
81.00	(1) attachments	11.27	162.05	0.00	0.00
85.00		70.67	290.40	0.00	0.00
89.00	(9) attachments	71.36	558.60	0.00	0.00
90.00		17.88	66.36	0.00	0.00
91.00	(1) attachments	17.92	316.36	0.00	0.00
95.00		72.35	190.61	0.00	0.00
99.00	(6) attachments	72.98	332.81	0.00	0.00
100.00		18.28	39.85	0.00	0.00
105.00		92.36	199.26	0.00	0.00
106.00	(6) attachments	18.51	116.68	0.00	0.00
109.00	(1) attachments	55.85	271.16	0.00	0.00
	<b>Totals:</b>	<b>1,525.18</b>	<b>8,178.75</b>	<b>0.00</b>	<b>0.00</b>

## Calculated Forces

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Iterations** 32

**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	-8.18	-1.53	0.00	-96.75	0.00	96.75	1095.40	547.70	1298.60	650.26	0.00	0.000	0.000	0.156
5.00	-7.78	-1.48	0.00	-89.10	0.00	89.10	1079.72	539.86	1247.24	624.55	0.04	-0.074	0.000	0.150
10.00	-7.39	-1.42	0.00	-81.72	0.00	81.72	1063.41	531.71	1196.12	598.95	0.16	-0.146	0.000	0.143
15.00	-7.00	-1.37	0.00	-74.61	0.00	74.61	1046.46	523.23	1145.29	573.49	0.35	-0.219	0.000	0.137
20.00	-6.63	-1.31	0.00	-67.77	0.00	67.77	1028.88	514.44	1094.81	548.22	0.62	-0.290	0.000	0.130
25.00	-6.26	-1.25	0.00	-61.22	0.00	61.22	1010.66	505.33	1044.74	523.15	0.96	-0.361	0.000	0.123
30.00	-5.90	-1.19	0.00	-54.96	0.00	54.96	991.80	495.90	995.14	498.31	1.37	-0.430	0.000	0.116
35.00	-5.54	-1.13	0.00	-49.00	0.00	49.00	972.31	486.15	946.07	473.74	1.86	-0.497	0.000	0.109
40.00	-5.20	-1.07	0.00	-43.35	0.00	43.35	952.17	476.09	897.58	449.45	2.41	-0.563	0.000	0.102
45.00	-4.86	-1.00	0.00	-38.01	0.00	38.01	931.41	465.70	849.73	425.49	3.04	-0.627	0.000	0.095
47.35	-4.70	-0.97	0.00	-35.65	0.00	35.65	921.43	460.71	827.47	414.35	3.35	-0.657	0.000	0.091
50.00	-4.41	-0.94	0.00	-33.06	0.00	33.06	910.00	455.00	802.58	401.88	3.73	-0.690	0.000	0.087
50.66	-4.34	-0.93	0.00	-32.44	0.00	32.44	918.20	459.10	820.39	410.80	3.82	-0.698	0.000	0.084
55.00	-4.06	-0.88	0.00	-28.40	0.00	28.40	899.32	449.66	779.82	390.49	4.48	-0.749	0.000	0.077
60.00	-3.74	-0.81	0.00	-24.02	0.00	24.02	876.96	438.48	733.82	367.45	5.30	-0.802	0.000	0.070
65.00	-3.42	-0.75	0.00	-19.96	0.00	19.96	853.97	426.99	688.66	344.84	6.16	-0.851	0.000	0.062
70.00	-3.12	-0.69	0.00	-16.21	0.00	16.21	830.35	415.17	644.40	322.68	7.08	-0.896	0.000	0.054
75.00	-2.82	-0.62	0.00	-12.78	0.00	12.78	804.33	402.17	599.80	300.34	8.04	-0.936	0.000	0.046
80.00	-2.53	-0.56	0.00	-9.66	0.00	9.66	771.92	385.96	552.20	276.51	9.04	-0.971	0.000	0.038
81.00	-2.37	-0.55	0.00	-9.10	0.00	9.10	765.44	382.72	542.91	271.86	9.24	-0.978	0.000	0.037
81.00	-2.37	-0.55	0.00	-9.10	0.00	9.10	565.49	282.74	47.12	40.00	9.24	-0.978	0.000	0.232
85.00	-2.08	-0.48	0.00	-6.90	0.00	6.90	565.49	282.74	47.12	40.00	10.07	-1.001	0.000	0.176
89.00	-1.52	-0.41	0.00	-4.97	0.00	4.97	565.49	282.74	47.12	40.00	11.15	-1.539	0.000	0.127
90.00	-1.46	-0.39	0.00	-4.56	0.00	4.56	565.49	282.74	47.12	40.00	11.48	-1.647	0.000	0.117
91.00	-1.14	-0.37	0.00	-4.17	0.00	4.17	565.49	282.74	47.12	40.00	11.84	-1.745	0.000	0.106
91.00	-1.14	-0.37	0.00	-4.17	0.00	4.17	318.09	159.04	19.88	16.88	11.84	-1.745	0.000	0.250
95.00	-0.95	-0.30	0.00	-2.69	0.00	2.69	318.09	159.04	19.88	16.88	13.44	-2.056	0.000	0.163
99.00	-0.62	-0.21	0.00	-1.50	0.00	1.50	318.09	159.04	19.88	16.88	15.43	-2.656	0.000	0.091
100.00	-0.58	-0.20	0.00	-1.29	0.00	1.29	318.09	159.04	19.88	16.88	16.00	-2.756	0.000	0.078
105.00	-0.38	-0.09	0.00	-0.31	0.00	0.31	318.09	159.04	19.88	16.88	19.07	-3.041	0.000	0.019
106.00	-0.27	-0.07	0.00	-0.21	0.00	0.21	318.09	159.04	19.88	16.88	19.70	-3.059	0.000	0.013
109.00	0.00	-0.06	0.00	0.00	0.00	0.00	318.09	159.04	19.88	16.88	21.64	-3.082	0.000	0.000

## Final Analysis Summary

<b>Structure:</b> CT40876-T-SBA	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> 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 93 mph Wind	5.9	0.00	9.80	0.00	0.00	375.17
0.9D + 1.6W 93 mph Wind	5.9	0.00	7.35	0.00	0.00	369.69
1.2D + 1.0Di + 1.0Wi 50 mph Wind	2.7	0.00	16.43	0.00	0.00	200.89
1.2D + 1.0E	0.3	0.00	9.81	0.00	0.00	27.15
0.9D + 1.0E	0.3	0.00	7.36	0.00	0.00	26.63
1.0D + 1.0W 60 mph Wind	1.5	0.00	8.18	0.00	0.00	96.75

### 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 93 mph Wind	-1.20	-1.44	0.00	-16.30	0.00	-16.30	565.49	282.74	47.12	40.00	91.00	0.970
0.9D + 1.6W 93 mph Wind	-0.87	-1.39	0.00	-15.59	0.00	-15.59	565.49	282.74	47.12	40.00	91.00	0.927
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-2.79	-0.92	0.00	-9.89	0.00	-9.89	565.49	282.74	47.12	40.00	91.00	0.595
1.2D + 1.0E	-1.38	-0.21	0.00	-2.98	0.00	-2.98	565.49	282.74	47.12	40.00	91.00	0.181
0.9D + 1.0E	-1.03	-0.20	0.00	-2.87	0.00	-2.87	565.49	282.74	47.12	40.00	91.00	0.173
1.0D + 1.0W 60 mph Wind	-1.14	-0.37	0.00	-4.17	0.00	-4.17	565.49	282.74	47.12	40.00	91.00	0.250

## Base Plate Summary

<b>Structure:</b> CT40876-T-SB	<b>Code:</b> TIA-222-G	6/28/2022
<b>Site Name:</b> CT389/New Canaan C C	<b>Exposure:</b> C	
<b>Height:</b> 109.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		Page: 28



Reactions	Base Plate	Anchor Bolts
Original Design	<b>Yield (ksi):</b> 50.00	<b>Bolt Circle:</b> 35.50
<b>Moment (kip-ft):</b> 272.00	<b>Width (in):</b> 36.00	<b>Number Bolts:</b> 4.00
<b>Axial (kip):</b> 5.90	<b>Style:</b> Clipped	<b>Bolt Type:</b> 1.75" #18J
<b>Shear (kip):</b> 4.70	<b>Polygon Sides:</b> 4.00	<b>Bolt Diameter (in):</b> 1.75
Analysis (1.2D + 1.6W)	<b>Clip Length (in):</b> 6.00	<b>Yield (ksi):</b> 75.00
<b>Moment (kip-ft):</b> 375.17	<b>Effective Len (in):</b> 17.21	<b>Ultimate (ksi):</b> 100.00
<b>Axial (kip):</b> 9.80	<b>Moment (kip-in):</b> 425.52	<b>Arrangement:</b> Radial
<b>Shear (kip):</b> 5.89	<b>Allow Stress (ksi):</b> 67.50	<b>Cluster Dist (in):</b> 6.00
	<b>Applied Stress (ksi):</b> 48.60	<b>Start Angle (deg):</b> 45.00
	<b>Stress Ratio:</b> 0.72	Compression
		<b>Force (kip):</b> 130.93
		<b>Allowable (kip):</b> 152.00
		<b>Ratio:</b> 0.88
		Tension
		<b>Force (kip):</b> 122.71
		<b>Allowable (kip):</b> 152.00
		<b>Ratio:</b> 0.83





Pier Foundation Design For Monopole			Date
			6/28/2022
Customer Name:	T-Mobile	EIA/TIA Standard:	TIA-222-G
Site Name:		Structure Height (Ft.):	109
Site Number:	CT40876-T-SBA	Engineer Name:	S. Hesselbein
Engr. Number:	130926	Engineer Login ID:	

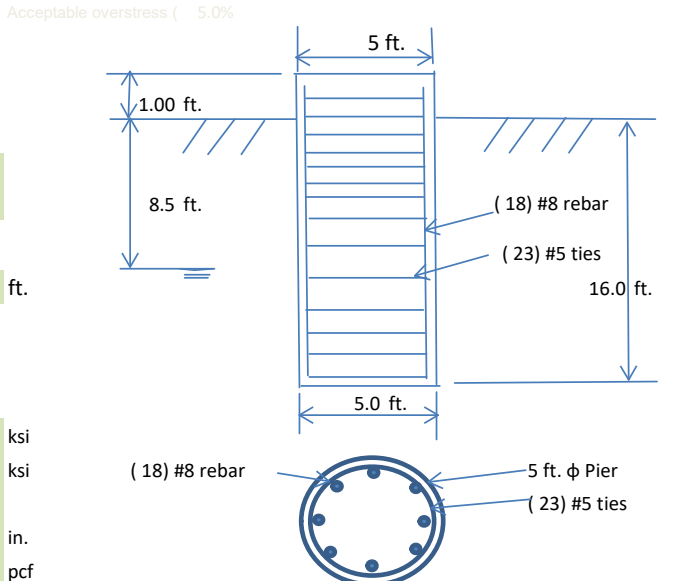
**Foundation Info Obtained from:** Drawings/Calculations  
**Structure Type:** Monopole  
**Analysis or Design?** Analysis

**Base Reactions (Factored):**  
 Axial Load (Kips): 9.8 Shear Force (Kips): 5.9  
 Uplift Force (Kips): 0.0 Moment (Kips-ft): 375.2

**Foundation Geometries:**  
 Diameter of Pier (ft.): 5.0 Depth of Base B. G. S. : 16.0 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 #: 8 Tie / Stirrup Size #: 5  
 Qty. of Vertical Rebars: 18 Tie Spacing: 12.0 in.  
 Concrete Cover (in.): 3 Concrete unit weight: 150.0 pcf

**Soil Design Parameters:**  
 Water Table B.G.S. (ft): 8.5 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



**Monopole Pier Foundation**

Depth of Layers (ft)		$\gamma_{soil}$ (pcf)	$\phi$ (°)	Cohesion (psf)	Ultimate Skin Friction (psf)	Ultimate Bearing (psf)	Soil Types					
Top	Bottom											
0.0	4.0	135	0	0	0	0						
4.0	17.0	135	32	0	1000	20000						
17.0	22.0											

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.):	2169	Dry Soil Weight from Conical Failure:	293 Kips
Total Buoyant Soil Volume from Conical Failure (cu. Ft.):	402	Buoyant Soil Weight from Conical Failure (Kips):	14 Kips
Total Dry Concrete Volume (cu. Ft.):	187	Total Dry Concrete Weight:	28.0 Kips
Total Buoyant Concrete Volume (cu. Ft.):	147.3	Total Buoyant Concrete Weight:	12.90 Kips
Total Effective Concrete Weight (Kips):	40.9	Total Effective Soil Weight:	307.0 Kips
Total Effective Vertical Load on Base (Kips):	22.9		

**Check Soil Capacities:**

Allowable Foundation Overturning Resistance (kips-ft.):	1336.8	>	Design Factored Moment (kips-ft):	445	Usage	0.33	OK!
Factor of Safety of Passive Soil Resistance against Moment:	3.01	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):	0.79	Tie / Stirrup Area (sq. in./each):	0.31	Usage	
Calculated Moment Capacity (Mn, Kips-Ft):	1705.0	>	Design Factored Moment (Mu, K-Ft):	396.5	0.23 OK!
Calculated Shear Capacity (Kips):	562.8	>	Design Factored Shear (Kips):	65.1	0.12 OK!
Calculated Tension Capacity (Tn, Kips):	767.9	>	Design Factored Tension (Tu Kips):	0.0	0.00 OK!
Calculated Compression Capacity (Pn, Kips):	4974	>	Design Factored Axial Load (Pu Kips):	9.8	0.00 OK!
Moment & Axial Strength Combination:	0.23	OK!	Max. Allowable Tie/Stirrup Spacing:	12.00	in.
Pier Reinforcement Ratio:	0.005	Reinforcement Ratio is too small			

# Exhibit E

## **Power Density/RF Emissions Report**



# Radio Frequency Exposure Analysis Report

June 23, 2022

Centerline on behalf of T-Mobile

T-Mobile Site Name: CT389/New Canaan C C  
Site Number: CT11389A

Site Address: 95 Country Club Road, New Canaan, CT 06840

## Site Compliance Summary

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<b>T-Mobile Compliance Status:</b>	Compliant
<b>Cumulative Calculated Power Density (Ground Level):</b>	2.98952 $\mu\text{W}/\text{cm}^2$
<b>Cumulative General Population % MPE (Ground Level):</b>	0.42294%



June 23, 2022

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

RF Exposure Analysis for Site: **CT389/New Canaan C C**

Centerline Communications, LLC (“Centerline”) was contracted to analyze the proposed T-Mobile facility at **95 Country Club Road, New Canaan, CT 06840** for the purpose of determining whether the predictive exposure from the proposed facility is within specified federal limits.

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

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

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

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



## **Calculation Methodology**

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

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



## **Data & Results**

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

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

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



**Maximum Calculated Cumulative Power Density (Location: approximately 9' NE of site)**

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/Channel (watts)	ERP (watts)	Calculated Power Density ( $\mu\text{W}/\text{cm}^2$ )	General Population MPE Limit ( $\mu\text{W}/\text{cm}^2$ )	General Population % MPE
T-Mobile A 1	COMMSCOPE VV-65A-R1	2500	16.31	106.00	4.00	40.00	6841.01	0.22195	1000.00	0.02220
T-Mobile A 1	COMMSCOPE VV-65A-R1	2500	16.31	106.00	4.00	40.00	6841.01	0.22195	1000.00	0.02220
T-Mobile A 2	COMMSCOPE FFV-65B-R3-V1	700	11.80	99.00	2.00	40.00	1210.85	0.11132	466.67	0.02386
T-Mobile A 2	COMMSCOPE FFV-65B-R3-V1	600	11.65	99.00	4.00	60.00	3509.23	0.30191	400.00	0.07548
T-Mobile A 2	COMMSCOPE FFV-65B-R3-V1	600	11.65	99.00	2.00	40.00	1169.74	0.10066	400.00	0.02517
T-Mobile A 2	COMMSCOPE FFV-65B-R3-V1	2100	16.19	99.00	2.00	140.00	11645.50	0.42617	1000.00	0.04262
T-Mobile A 2	COMMSCOPE FFV-65B-R3-V1	1900	15.80	99.00	2.00	140.00	10645.30	0.36598	1000.00	0.03660
T-Mobile A 2	COMMSCOPE FFV-65B-R3-V1	1900	15.80	99.00	1.00	15.00	570.28	0.01960	1000.00	0.00196
T-Mobile B 3	COMMSCOPE VV-65A-R1	2500	16.31	106.00	4.00	40.00	6841.01	0.00062	1000.00	0.00006
T-Mobile B 3	COMMSCOPE VV-65A-R1	2500	16.31	106.00	4.00	40.00	6841.01	0.00062	1000.00	0.00006
T-Mobile B 4	COMMSCOPE FFV-65B-R3-V1	700	11.80	99.00	2.00	40.00	1210.85	0.00060	466.67	0.00013
T-Mobile B 4	COMMSCOPE FFV-65B-R3-V1	600	11.65	99.00	4.00	60.00	3509.23	0.00028	400.00	0.00007
T-Mobile B 4	COMMSCOPE FFV-65B-R3-V1	600	11.65	99.00	2.00	40.00	1169.74	0.00009	400.00	0.00002
T-Mobile B 4	COMMSCOPE FFV-65B-R3-V1	2100	16.19	99.00	2.00	140.00	11645.50	0.00031	1000.00	0.00003
T-Mobile B 4	COMMSCOPE FFV-65B-R3-V1	1900	15.80	99.00	2.00	140.00	10645.30	0.00006	1000.00	0.00001
T-Mobile B 4	COMMSCOPE FFV-65B-R3-V1	1900	15.80	99.00	1.00	15.00	570.28	0.00000	1000.00	0.00000
T-Mobile C 5	COMMSCOPE VV-65A-R1	2500	16.31	106.00	4.00	40.00	6841.01	0.00014	1000.00	0.00001
T-Mobile C 5	COMMSCOPE VV-65A-R1	2500	16.31	106.00	4.00	40.00	6841.01	0.00014	1000.00	0.00001
T-Mobile C 6	COMMSCOPE FFV-65B-R3-V1	700	11.80	99.00	2.00	40.00	1210.85	0.00019	466.67	0.00004
T-Mobile C 6	COMMSCOPE FFV-65B-R3-V1	600	11.65	99.00	4.00	60.00	3509.23	0.00021	400.00	0.00005
T-Mobile C 6	COMMSCOPE FFV-65B-R3-V1	600	11.65	99.00	2.00	40.00	1169.74	0.00007	400.00	0.00002
T-Mobile C 6	COMMSCOPE FFV-65B-R3-V1	2100	16.19	99.00	2.00	140.00	11645.50	0.00004	1000.00	0.00000
T-Mobile C 6	COMMSCOPE FFV-65B-R3-V1	1900	15.80	99.00	2.00	140.00	10645.30	0.00054	1000.00	0.00005
T-Mobile C 6	COMMSCOPE FFV-65B-R3-V1	1900	15.80	99.00	1.00	15.00	570.28	0.00003	1000.00	0.00000
AT&T A 7	CCI HPA-65R-BUU-H6	700	12.35	89.00	4.00	40.00	2748.65	0.27673	466.67	0.05930
AT&T A 7	CCI HPA-65R-BUU-H6	850	12.74	89.00	4.00	40.00	3006.91	0.24310	566.67	0.04290
AT&T A 7	CCI HPA-65R-BUU-H6	1900	14.51	89.00	4.00	40.00	4519.81	0.26690	1000.00	0.02669
AT&T A 7	CCI HPA-65R-BUU-H6	2100	15.02	89.00	4.00	40.00	5083.00	0.25032	1000.00	0.02503
AT&T A 7	CCI HPA-65R-BUU-H6	2300	14.77	89.00	4.00	25.00	2999.16	0.17167	1000.00	0.01717
AT&T B 8	CCI HPA-65R-BUU-H6	700	12.35	89.00	4.00	40.00	2748.65	0.00162	466.67	0.00035
AT&T B 8	CCI HPA-65R-BUU-H6	850	12.74	89.00	4.00	40.00	3006.91	0.00179	566.67	0.00032
AT&T B 8	CCI HPA-65R-BUU-H6	1900	14.51	89.00	4.00	40.00	4519.81	0.00077	1000.00	0.00008
AT&T B 8	CCI HPA-65R-BUU-H6	2100	15.02	89.00	4.00	40.00	5083.00	0.00050	1000.00	0.00005
AT&T B 8	CCI HPA-65R-BUU-H6	2300	14.77	89.00	4.00	25.00	2999.16	0.00077	1000.00	0.00008
AT&T C 9	CCI HPA-65R-BUU-H6	700	12.35	89.00	4.00	40.00	2748.65	0.00068	466.67	0.00015





Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density ( $\mu\text{W}/\text{cm}^2$ )	General Population MPE Limit ( $\mu\text{W}/\text{cm}^2$ )	General Population % MPE
AT&T C 9	CCI HPA-65R-BUU-H6	850	12.74	89.00	4.00	40.00	3006.91	0.00103	566.67	0.00018
AT&T C 9	CCI HPA-65R-BUU-H6	1900	14.51	89.00	4.00	40.00	4519.81	0.00002	1000.00	0.00000
AT&T C 9	CCI HPA-65R-BUU-H6	2100	15.02	89.00	4.00	40.00	5083.00	0.00011	1000.00	0.00001
AT&T C 9	CCI HPA-65R-BUU-H6	2300	14.77	89.00	4.00	25.00	2999.16	0.00004	1000.00	0.00000
							<b>Cumulative Power Density:</b>	<b>2.98952 <math>\mu\text{W}/\text{cm}^2</math></b>	<b>Cumulative % MPE:</b>	<b>0.42294%</b>



## Summary

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

*Michelle Stone*

Michelle Stone

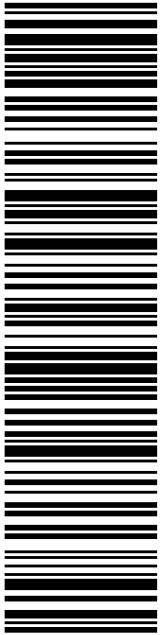
RF EME Technical Writer II

Centerline Communications, LLC

# Exhibit F


## Recipient Mailings





**USPS TRACKING #**  
**9405 5036 9930 0295 0631 78**

Electronic Rate Approved #038555749



KEVIN MOYNIHAN  
FIRST SELECTMAN  
77 MAIN ST  
NEW CANAAN CT 06840-4710

**P**

USPS.com  
**US POSTAGE**  
Flat Rate Env

9405 5036 9930 0295 0631 78 0089 5000 0020 6840

U.S. POSTAGE PAID  
click-n-ship®


07/13/2022 Mailed from 01566

**PRIORITY MAIL®**

DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
STE 1  
420 MAIN ST  
STURBRIDGE MA 01566-1359

Expected Delivery Date: 07/15/22  
Ref#: SBCT-389  
**0000**

**C011**



**Click-N-Ship®**



Cut on dotted line.

### Instructions

1. Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
2. Place your label so it does not wrap around the edge of the package.
3. Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
4. To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
5. Mail your package on the "Ship Date" you selected when creating this label.

### Click-N-Ship® Label Record

**USPS TRACKING # :**  
**9405 5036 9930 0295 0631 78**

Trans. #: 567469068	Priority Mail® Postage: <b>\$8.95</b>
Print Date: 07/13/2022	Total: <b>\$8.95</b>
Ship Date: 07/13/2022	
Expected Delivery Date: 07/15/2022	

**From:** DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
STE 1  
420 MAIN ST  
STURBRIDGE MA 01566-1359

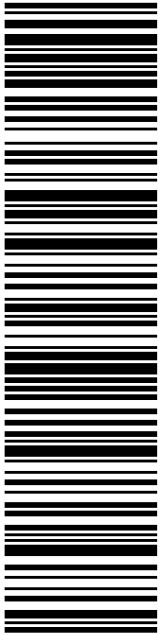
Ref#: SBCT-389

**To:** KEVIN MOYNIHAN  
FIRST SELECTMAN  
77 MAIN ST  
NEW CANAAN CT 06840-4710

\* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.




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**USPS TRACKING #**  
**9405 5036 9930 0295 0631 92**

Electronic Rate Approved #038555749



LYNN BROOKS AVNI  
AICP- TOWN PLANNER  
77 MAIN ST  
NEW CANAAN CT 06840-4710

**P**

USPS.com 9405 5036 9930 0295 0631 92 0089 5000 0020 6840  
**US POSTAGE**  
 Flat Rate Env  
 07/13/2022

**U.S. POSTAGE PAID**  
click-n-ship®


Mailed from 01566

**PRIORITY MAIL®**

DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
STE 1  
420 MAIN ST  
STURBRIDGE MA 01566-1359

Expected Delivery Date: 07/15/22  
Ref#: SBCT-389  
**0000**

**C011**



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**9405 5036 9930 0295 0631 92**

Trans. #: 567469068	Priority Mail® Postage: <b>\$8.95</b>
Print Date: 07/13/2022	Total: <b>\$8.95</b>
Ship Date: 07/13/2022	
Expected Delivery Date: 07/15/2022	

**From:** DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
STE 1  
420 MAIN ST  
STURBRIDGE MA 01566-1359


Ref#: SBCT-389

**To:** LYNN BROOKS AVNI  
AICP- TOWN PLANNER  
77 MAIN ST  
NEW CANAAN CT 06840-4710

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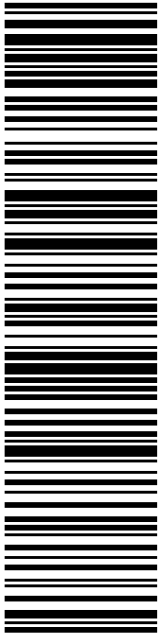


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COUNTRY CLUB OF NC  
95 COUNTRY CLUB RD  
NEW CANAAN CT 06840-3106

**USPS TRACKING #**



**9405 5036 9930 0295 0632 08**

**P**

USPS.com  
**US POSTAGE**  
Flat Rate Env

07/13/2022

Mailed from 01566

**U.S. POSTAGE PAID**  
click-n-ship®


**PRIORITY MAIL®**

Expected Delivery Date: 07/15/22  
Ref#: SBCT-389  
**0000**

**C029**

DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
STE 1  
420 MAIN ST  
STURBRIDGE MA 01566-1359

Electronic Rate Approved #038555749



**UNITED STATES POSTAL SERVICE®**

**Click-N-Ship®**



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**From:** DEBORAH CHASE  
NORTHEAST SITE SOLUTIONS  
STE 1  
420 MAIN ST  
STURBRIDGE MA 01566-1359

Ref#: SBCT-389

**To:** COUNTRY CLUB OF NC  
95 COUNTRY CLUB RD  
NEW CANAAN CT 06840-3106

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