



Filed by:

G. Scott Shepherd, Site Development Specialist II - SBA Communications
134 Flanders Rd., Suite 125, Westborough, MA 01581
508.251.0720 x 3807 - gshepherd@sbsite.com

June 24, 2021

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

RE: Notice of Exempt Modification
2172 Glasgo Road, Griswold, CT 06351
Latitude: 41.537366
Longitude: -71.873447
T-Mobile Site #: CTNL082B_L600

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 185-foot level of the existing 195-foot Monopole Tower at 2172 Glasgo Rd., Griswold, CT. The 195-foot tower is owned by SBA Towers II, LLC. The property is owned by Courtland and Bridget Kinnie. T-Mobile now intends to install remove three (3) antennas and replace with three (3) new 600/700/1900/2100 MHz antennas.

- **The new antennas support 5G services and would be installed at the 185-foot level of the tower.**

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

Planned Modifications:

TOWER

Remove:

- N/A

Remove and Replace:

- (3) LNX-6515DS-A1M antennas (remove) – (3) APXVAARR24_43U-NA20 Antenna 600/700 /1900/2100 MHz (Replace)

Install New:

- (3) SitePro VFA12-HD
- (6) Commscope CBC1923T-DS-43 Diplexers
- (3) Ericsson 4449 B71 + B85 RRUs
- (3) Ericsson 4415 B66A RRUs
- (3) 1.9" Fiber

Existing Equipment to Remain:

- (3) EMS-RR90-17-XXDP panel antennas (these antennas are not currently active and are not emitting any frequencies)
- (3) Ericsson KRY 112 489/2 TMAs
- (12) 1-5/8" coax

Entitlements:

- (3) RFS-APXV18-20915-C antennas
- (2) 1-5/8" coax
- (3) Ericsson 4415 B66A RRUs
- (3) Kathrein 782 11056 Bias Ts

GROUND

Remove:

- N/A

Remove and Replace:

- N/A

Install New:

- Equipment within existing equipment cabinet

Existing Equipment to Remain:

- (1) 1/2" GPS
- T-Mobile Meter bank
- T-Mobile PPC
- BBU Cabinet
- 5' x 20' concrete pad
- RBS 6201 Equipment cabinet
- Polar Generator
- Ice Bridge

Entitlements:

- N/A

This facility was approved by the Town of Griswold's Planning & Zoning Commission on August 10, 1998. Approval was given for a 195' communication tower with the stipulation that it was approved as a co-location tower. There were no further post construction stipulations set. Please see attached.



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

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

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

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

Sincerely,

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

Attachments

- cc: Todd Babbitt, First Selectman / with attachments
Town of Griswold, Griswold Town Hall, 28 Main Street, Jewett City, CT 06351
Jack Cipriano, Building & Zoning Enforcement Officer / with attachments
Town of Griswold, Griswold Town Hall, 28 Main Street, Jewett City, CT 06351
Courtland and Bridget Kinnie / with attachments
2139 Glasgow Road Griswold CT 06351



EXHIBIT LIST

Exhibit 1	Check Copy	To be invoiced at a later date per Covid guidelines
Exhibit 2	Notification Receipts	x
Exhibit 3	Property Card	x
Exhibit 4	Property Map	x
Exhibit 5	Original Zoning Approval	Town of Griswold P&Z Commission 8/10/98
Exhibit 6	Construction Drawings	Chappell Engineering 4/8/21
Exhibit 7	Structural Analysis	TES 5/19/21
Exhibit 8	Mount Analysis	TES 4/27/21
Exhibit 9	EME Report	EBI Consulting 6/23/21

EXHIBIT 1

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

EXHIBIT 2



ORIGIN ID:BFBA (508) 614-0389
RICK WOODS
SBA COMMUNICATIONS CORPORATION
134 FLANDERS RD
SUITE 125
WESTBOROUGH, MA 01581
UNITED STATES US

SHIP DATE: 24 JUN 21
ACTWGT: 1.00 LB
CAD: 105843304#NET4340

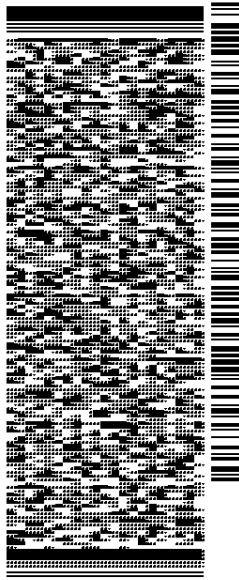
BILL SENDER

TO **MELANIE A. BACHMAN EXEC. DIR**
CONNECTICUT SITING COUNCIL
TEN FRANKLIN SQUARE

NEW BRITAIN CT 06051

(508) 251-0720 X 3807 REF: 105692009-6089
INV.
PO: DEPT:

56DJ3/B387/FE4A

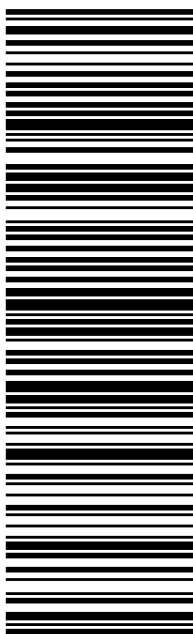


J211321033101uv

TRK# 77 40 9539 3945
0201
FRI - 25 JUN 10:30A
PRIORITY OVERNIGHT

EB BDLA

06051
BDL
CT:US



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Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

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



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SBA COMMUNICATIONS CORPORATION
134 FLANDERS RD
SUITE 125
WESTBOROUGH, MA 01581
UNITED STATES US

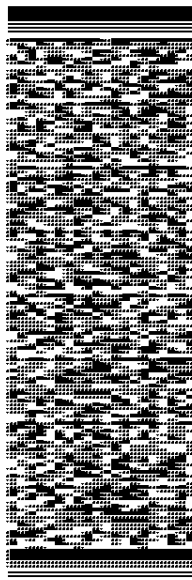
SHIP DATE: 24 JUN 21
ACTWGT: 1.00 LB
CAD: 105843304#NET4340

BILL SENDER

TO **TODD BABBIT, FIRST SELECTMAN**
TOWN OF GRISWOLD
28 MAIN ST

JEWETT CITY CT 06351
(508) 251-0720 X 3807 REF: 105692009-6089
INV: DEPT:
PO:

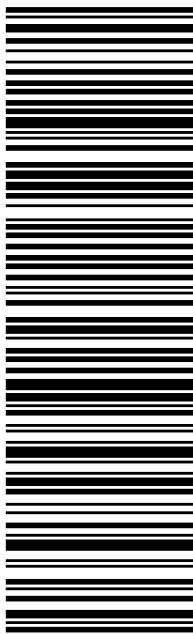
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SUITE 125
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UNITED STATES US

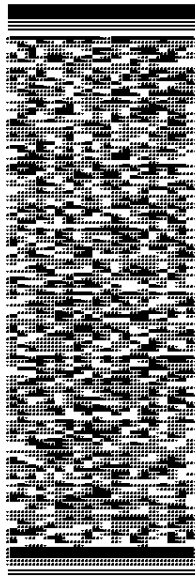
SHIP DATE: 24 JUN 21
ACTWGT: 1.00 LB
CAD: 105843304#NET4340

BILL SENDER

TO JACK CIPRIANO, BUILDING/ZONE OFF
TOWN OF GRISWOLD
28 MAIN ST

JEWETT CITY CT 06351
(508) 251-0720 X 3807 REF: 105692009-6089
INV: DEPT:
PO:

56DJ3/B387/FE4A

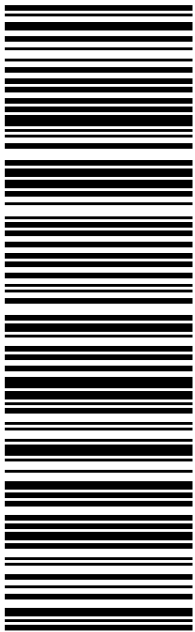


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0201
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PRIORITY OVERNIGHT

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SHIP DATE: 24JUN21
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BILL SENDER

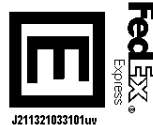
TO **COURTLAND & BRIDGET KINNIE**

2139 GLASGO RD

GRISWOLD CT 06351

(508) 251-0720 X 3807 REF: 105692009-6089
INV.
PO. DEPT.

56D.J3/B387/FE4A

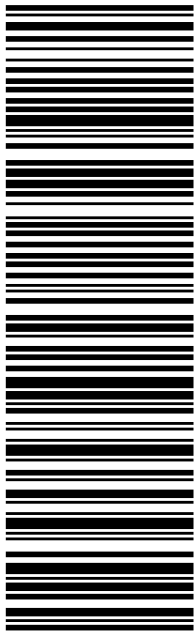


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FRI - 25 JUN 12:00P
PRIORITY OVERNIGHT

EB GONA

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EXHIBIT 3



Summary

ParcelId 5929
Account Number K0211400
Location Address 2172 GLASGO RD
Map-Block-Lot 91 /162 /3A
 Dev Lot. 7091
Use Class/Description 4310 TEL REL TW
Assessing Neighborhood 0060A
Census Tract 7091
Acreage 0.02
Utilities



Owner

KINNIE COURTLAND & BRIDGET
 2139 GLASGO RD
 GRISWOLD, CT 06351

Current Appraised Value

	2017	2015
+ Building Value	\$0	\$0
+ XF Value	\$0	\$0
+ OB Value	\$88,100	\$79,300
+ Land Value	\$150,000	\$150,000
+ Special Land Value		
+ Total Appraised Value	\$238,100	\$229,300
+ Net Appraised Value	\$238,100	\$229,300
+ Current Assessment	\$166,670	\$160,510

Assessment History

	2017	2015
+ Building Value	\$0	\$0
+ OB/Misc	\$61,670	\$55,510
+ Land	\$105,000	\$105,000
+ Total Assessment	\$166,670	\$160,510

Land

Use	Class	Zoning	Area	Value
4310 TEL REL TW	I	R80	0.02 AC	\$150,000

Out Buildings\Extra Features

Description	Sub Description	Area	Year Built	Value
CONC PAD/CELL SITES		100S.F.	2005	\$300
CELL TOWER		195HEIGHT	1999	\$87,800

Sales History

Sales Date	Type of Document	Grantee	Vacant/Improved	Book/Page	Amount
12-27-1996		KINNIE COURTLAND & BRIDGET	Improved	176/ 903	\$0
12-27-1996		KINNIE ET AL	Improved	176/ 902	\$0
12-27-1996		KINNIE ET AL	Improved	176/ 901	\$0
12-27-1996		KINNIE ET AL	Improved	176/ 900	\$0
12-29-1995		KINNIE FAMILY TRUST II TOWER	Improved	169/ 238	\$0
12-29-1995		KINNIE FAMILY TRUST II	Improved	169/ 238	\$0
01-03-1994		KINNIE BYRON P JR & PAULINE CLAIRE	Improved	156/ 99	\$0
01-17-1964		KINNIE BYRON P JR & PAULINE C	Improved	00049/0085	\$0

Permit Information

Permit ID	Issue Date	Type	Description	Amount	Inspection Date	% Complete	Date Complete	Comments
42-19	04-14-2018	MN	MAINTENANCE	\$20,000		0		SWAP 6 EXISTONG CELL ANTENNAS WITH 6 NEWER TECHNOLOGY CELL ANTENNAS AND ASSOC EQUIPMENT AT EXISTING CELL SITE
253-15	05-20-2015	MN	SWAP 3 EXISTING CELL	\$15,000	7/23/2015 12:00:00 AM	100	07-23-2015	87-16 CC
134-06	10-20-2005	AD	CELL ANTENNA	\$40,000		100	12-13-2005	111-06 CC
201-98	02-23-1999	CM	195FT TOWER	\$43,000	8/23/1999 12:00:00 AM	100	08-23-1999	226-07 CC
280-20		MN	MAINTENANCE	\$0	12/13/2020 12:00:00 AM	100	12-13-2020	CC#-124-20. SWAP 6 EXISTING CELL ANTENNAS WITH 6 NEWER TECHNOLOGY CEL ANTENNAS AND ASSOC EQUIPMT AT EXISTING CELL SITE

Sketch



Photos



No data available for the following modules: Building Data, Building Data, Commercial Building.

The Town of Griswold Assessor makes every effort to produce the most accurate information possible. No warranties, expressed or implied are provided for the data herein, its use or interpretation. The assessment information is from the last certified tax roll. All other data is subject to change.

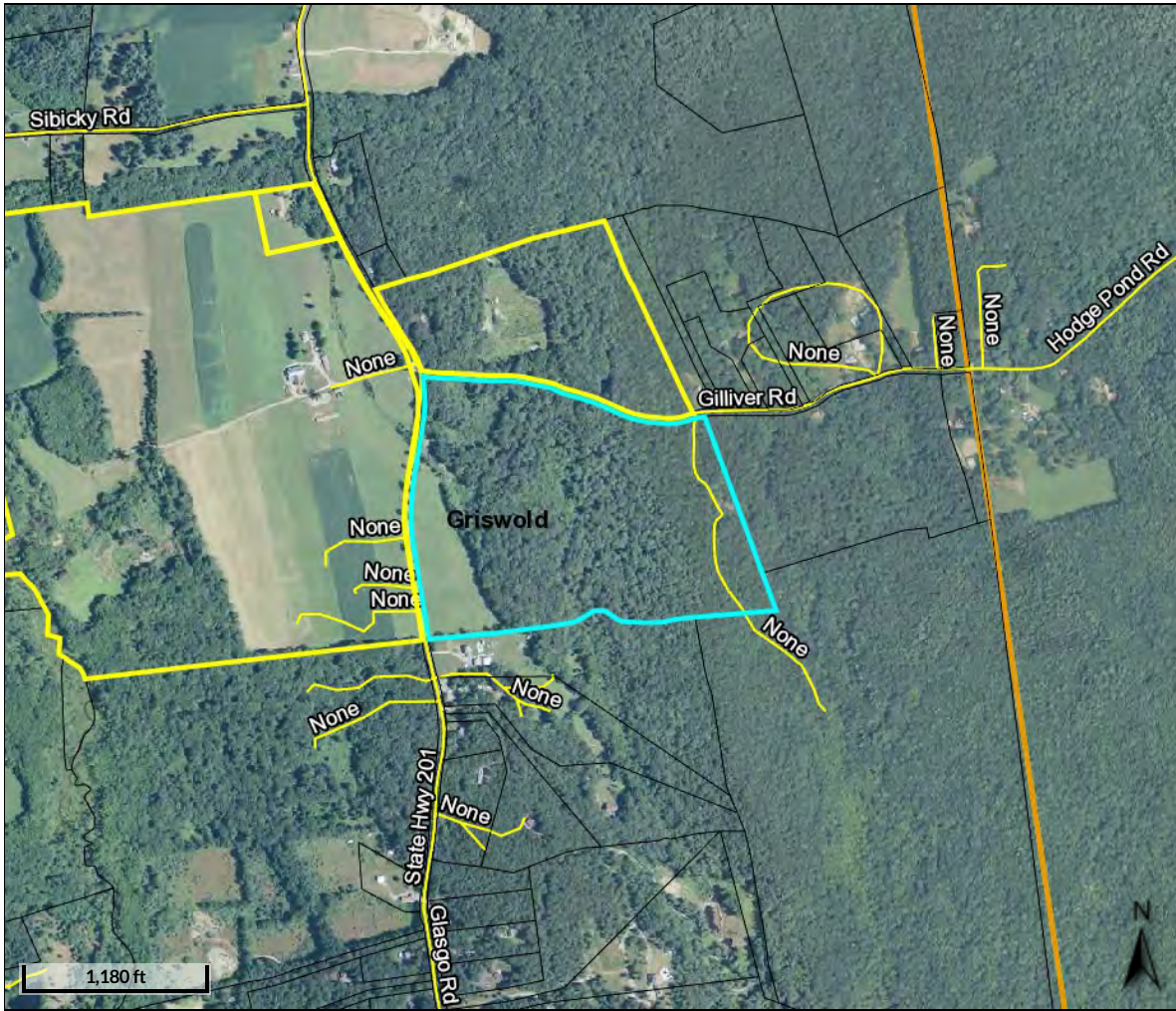
[User Privacy Policy](#)
[GDPR Privacy Notice](#)

[Last Data Upload: 6/23/2021, 8:22:38 PM](#)

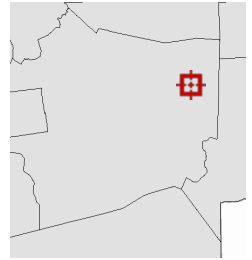
Developed by
 Schneider
GEOSPATIAL

Version 2.3.127

EXHIBIT 4



Overview



Legend

- Parcels
- Roads
- City Labels

Parcel ID	100013	Alternate ID	K0211401	Owner Address	KINNIE COURTLAND & BRIDGET
Sec/Twp/Rng	91-162-3	Class	S		2139 GLASGO RD
Property Address	2174 GLASGO RD	Acreage	62.7		GRISWOLD CT 06351
District	0050A				
Brief Tax Description	n/a				

(Note: Not to be used on legal documents)

Date created: 6/25/2019

Developed by Schneider GEOSPATIAL

Advised to use
2174 Glasgo for
map, per Town
Assessor

EXHIBIT 5



Town of Griswold

TOWN HALL, 32 SCHOOL STREET
JEWETT CITY, CONNECTICUT 06351



0710013;
Griswold
Glasgo

SELECTMEN	376-7061
ASSESSOR	376-7071
TAX COLLECTOR	376-7068
SOCIAL SERVICES	376-7067
PUBLIC HEALTH NURSES	376-7077

TOWN CLERK	376-7063
BUILDING INSPECTOR	376-7065
PLANNING & ZONING	376-7073
BOOKKEEPING	376-7074
SANITARIAN	376-7065

PLANNING & ZONING COMMISSION

CERTIFIED MAIL: Z 307 862 713
RETURN RECEIPT REQUESTED

September 30, 1998

Mr. Kenneth Thomas
Wireless Solutions, Ltd.
P.O. Box 284
Old Lyme, CT 06371

Re: Wireless Solutions, Ltd., Zoning Permit Application (ZP 2-99)
Gilliver Road, Griswold, CT

Dear Mr. Thomas:

The Griswold Planning & Zoning Commission, at it's Regular Meeting held on August 10, 1998, reviewed the above-referenced Zoning Permit application to construct a 195-foot communication tower off of Gilliver Road on property owned by The Kinnie Family Trust Wheeler.

Following a discussion on the matter, the commission voted unanimously in favor to approve the application as presented with the stipulation that it is approved as a co-location tower.

Should you have any questions regarding the above, please contact Mario at (860)376-7084.

Very truly yours,

F. Clyde Seaman
F. Clyde Seaman
Chairman

cc: Peter Zvingilas, Z.E.O.
Cynthia Kata, Assessor

EXHIBIT 6

NL082/WIRELESS SOLUTIONS

2172 GLASGO ROAD
GRISWOLD, CT 06351
NEW LONDON COUNTY

SITE NO.: CTNL082B

SITE TYPE: 195'± GUYED TOWER

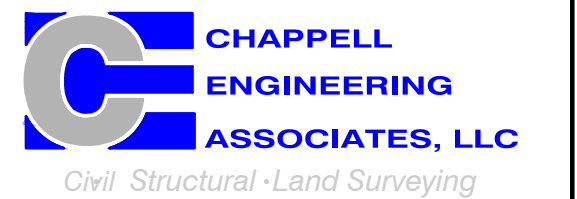
RF DESIGN GUIDELINE: 67D95F

T-MOBILE NORTHEAST LLC

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



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



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

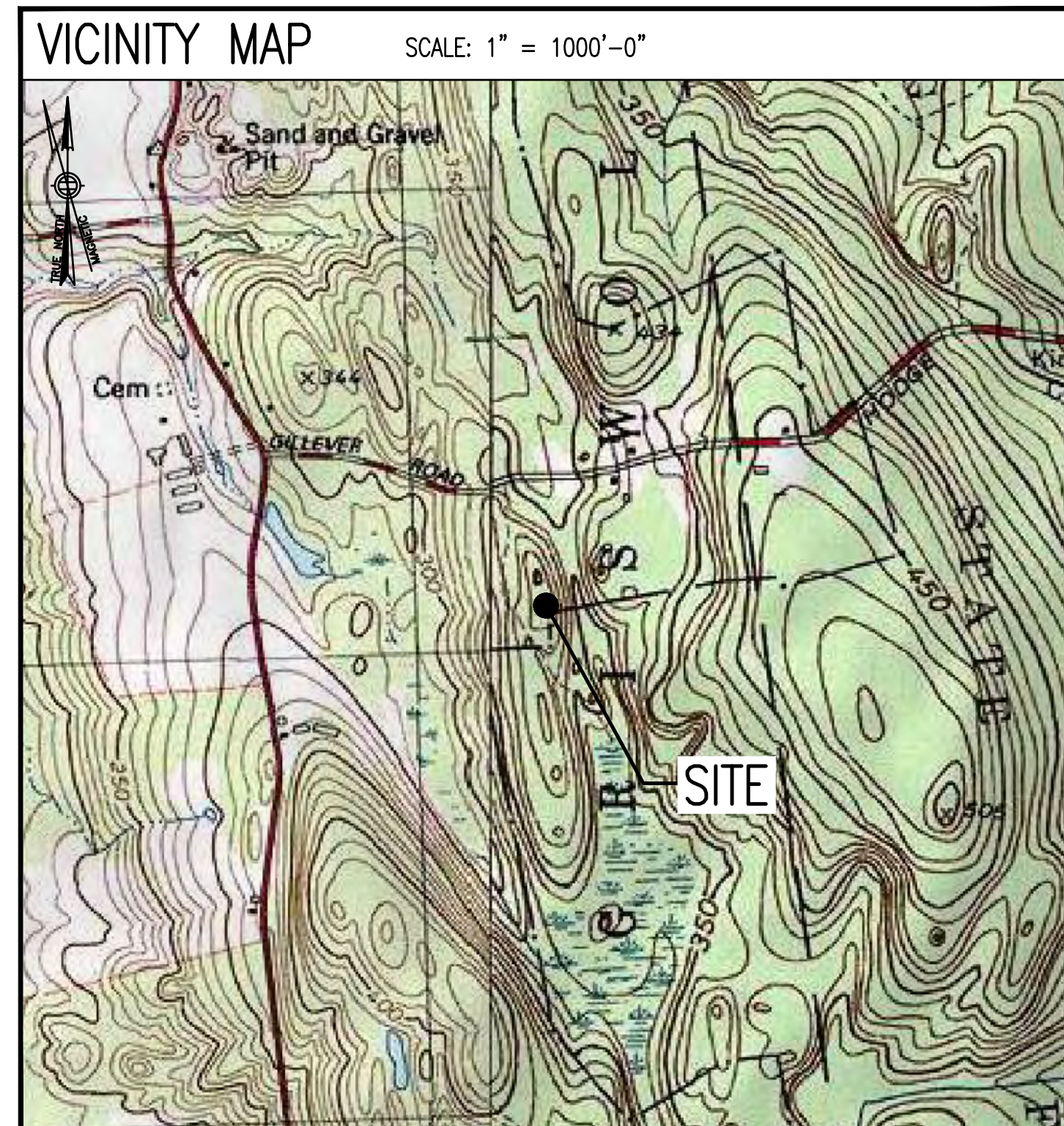


APPROVALS			
PROJECT MANAGER:	DATE:	ZONING/SITE ACQ.:	DATE:
CONSTRUCTION:	DATE:	OPERATIONS:	DATE:
RF ENGINEERING:	DATE:	TOWER OWNER:	DATE:

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.	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.
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.	12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE OMNIPOTENT 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.	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.
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.	14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
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.	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.
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.	16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
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.	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.
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.	

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



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.

SITE NOTES	
1.	THIS IS AN UNMANNED AND RESTRICTED ACCESS TELECOMMUNICATION FACILITY, AND IS NOT FOR HUMAN HABITATION. IT WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNAL FOR THE PURPOSE OF PROVIDING PUBLIC CELLULAR SERVICE. <ul style="list-style-type: none"> • ADA COMPLIANCE NOT REQUIRED. • POTABLE WATER OR SANITARY SERVICE IS NOT REQUIRED. • NO OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES REQUIRED.
2.	CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACE THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.
3.	NEW CONSTRUCTION WILL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES. <ul style="list-style-type: none"> • 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.

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

PROJECT SUMMARY	
SITE NUMBER:	CTNL082B
SBA SITE NUMBER:	CT10013-A
SBA SITE NAME:	GRISWOLD GLASGO
SITE ADDRESS:	2172 GLASGO ROAD GRISWOLD, CT 06351
PROPERTY OWNER:	KINNIE COURTLAND & BRIDGET 2139 GLASGO ROAD GRISWOLD, CT 06351
TOWER OWNER:	SBA TOWERS II, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	NEW LONDON
ZONING DISTRICT:	R20 (ONE FAMILY RESIDENCE)
STRUCTURE TYPE:	GUYED TOWER
STRUCTURE HEIGHT:	195'±
APPLICANT:	T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766
SBA RSM:	STEPHEN ROTH PHONE: 860-539-4920 EMAIL: SROth@sbsite.com
ARCHITECT:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
STRUCTURAL ENGINEER:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
SITE CONTROL POINT:	LATITUDE: N.41.537358° (41° 32' 14.49") LONGITUDE W.71.873447° (71° 52' 24.41")

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
2	04/08/21	CONSTRUCTION REVISED	CMC
1	08/14/19	ISSUED FOR CONSTRUCTION	MAM
0	05/31/19	ISSUED FOR REVIEW	MAM

SITE NUMBER:
CTNL082B

SITE ADDRESS:
2172 GLASGO ROAD
GRISWOLD, CT 06351

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

GENERAL NOTES:

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

SITE WORK GENERAL NOTES:

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

CONCRETE AND REINFORCING STEEL NOTES:

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (400PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE REQUIREMENTS
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNDO.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
CONCRETE CAST AGAINST EARTH.....3 IN.
CONCRETE EXPOSED TO EARTH OR WEATHER:
#6 AND LARGER2 IN.
#5 AND SMALLER & WWF1½ IN.
CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
SLAB AND WALL¾ IN.
BEAMS AND COLUMNS½ IN.
- A CHAMFER ¾" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY SIMPSON OR APPROVED EQUAL.
- CONCRETE CYLINDER TIES ARE NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;
(A) RESULTS OF CONCRETE CYLINDER TEST PERFORMED AT THE SUPPLIERS PLANT.
(B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.
FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.
- AS AN ALTERNATIVE TO ITEM 7. TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.
- EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY CYLINDER TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

STRUCTURAL STEEL NOTES:

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

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

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

COMPACTION EQUIPMENT:

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

CONSTRUCTION NOTES:

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

ELECTRICAL INSTALLATION NOTES:

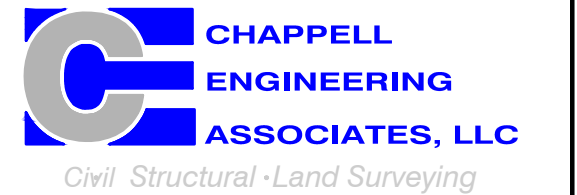
- WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
- SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLE TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR 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.

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SITE ADDRESS:
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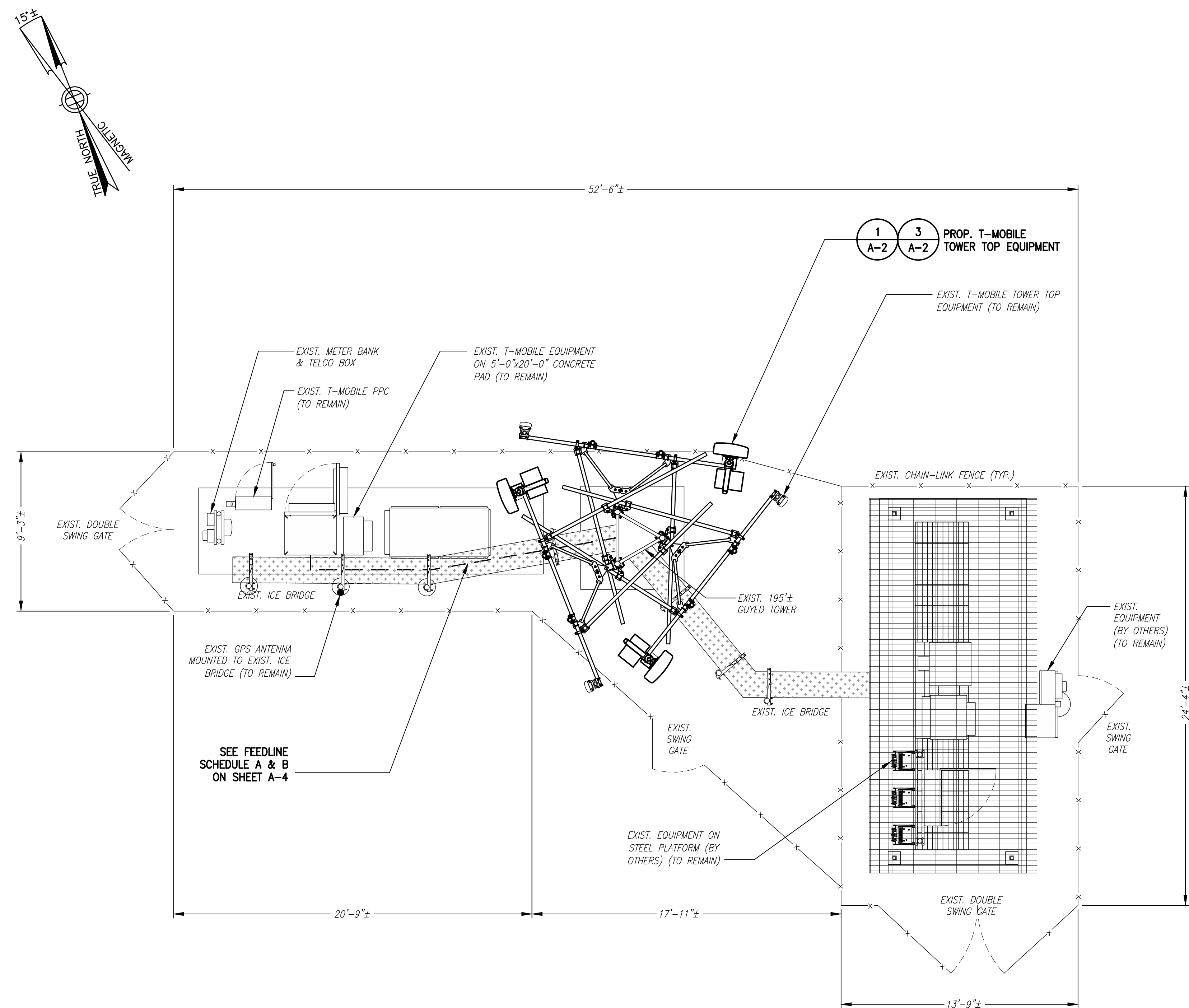
SHEET TITLE

GENERAL NOTES

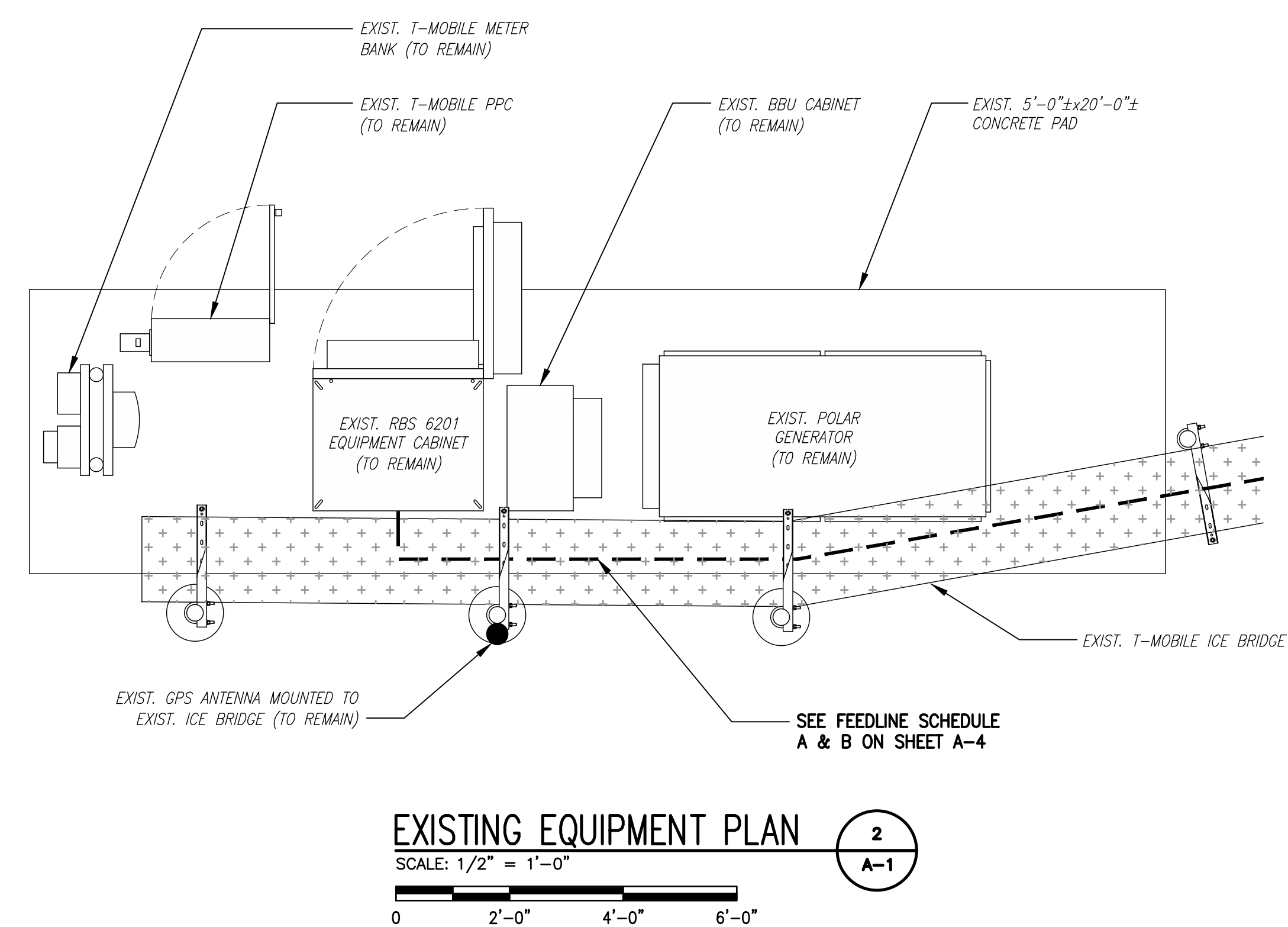
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GN-1

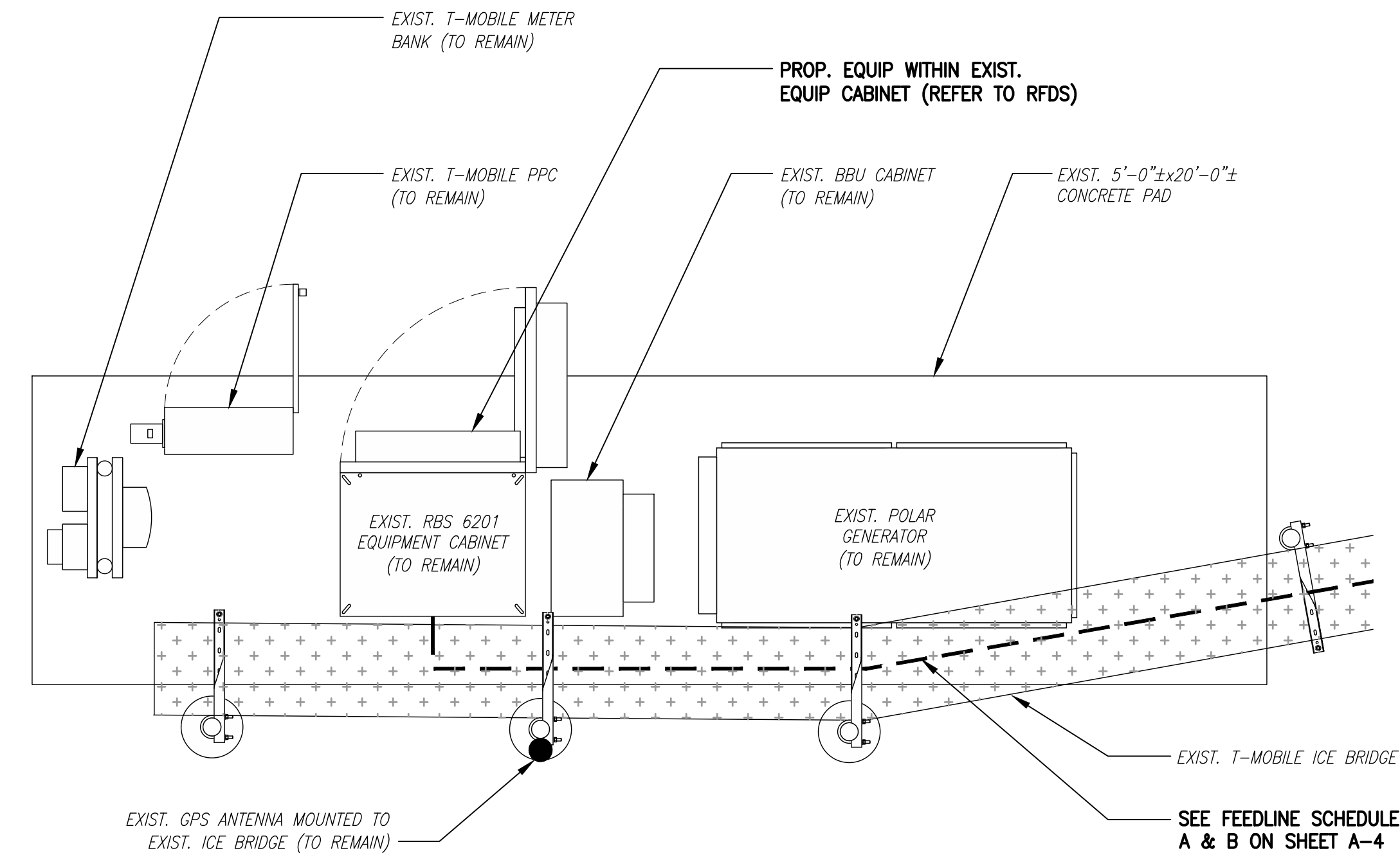
SPECIAL PRE-CONSTRUCTION WORK NOTE (SBA-PROVIDED TOWER STRUCTURAL ANALYSIS SPECIAL EQUIPMENT INSTALLATION REQUIREMENTS):
 GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY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



COMPOUND PLAN 1
 SCALE: 1/4" = 1'-0"
A-1



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



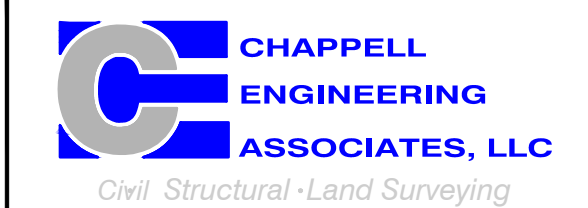
PROPOSED EQUIPMENT PLAN 3
 SCALE: 1/2" = 1'-0"
A-1

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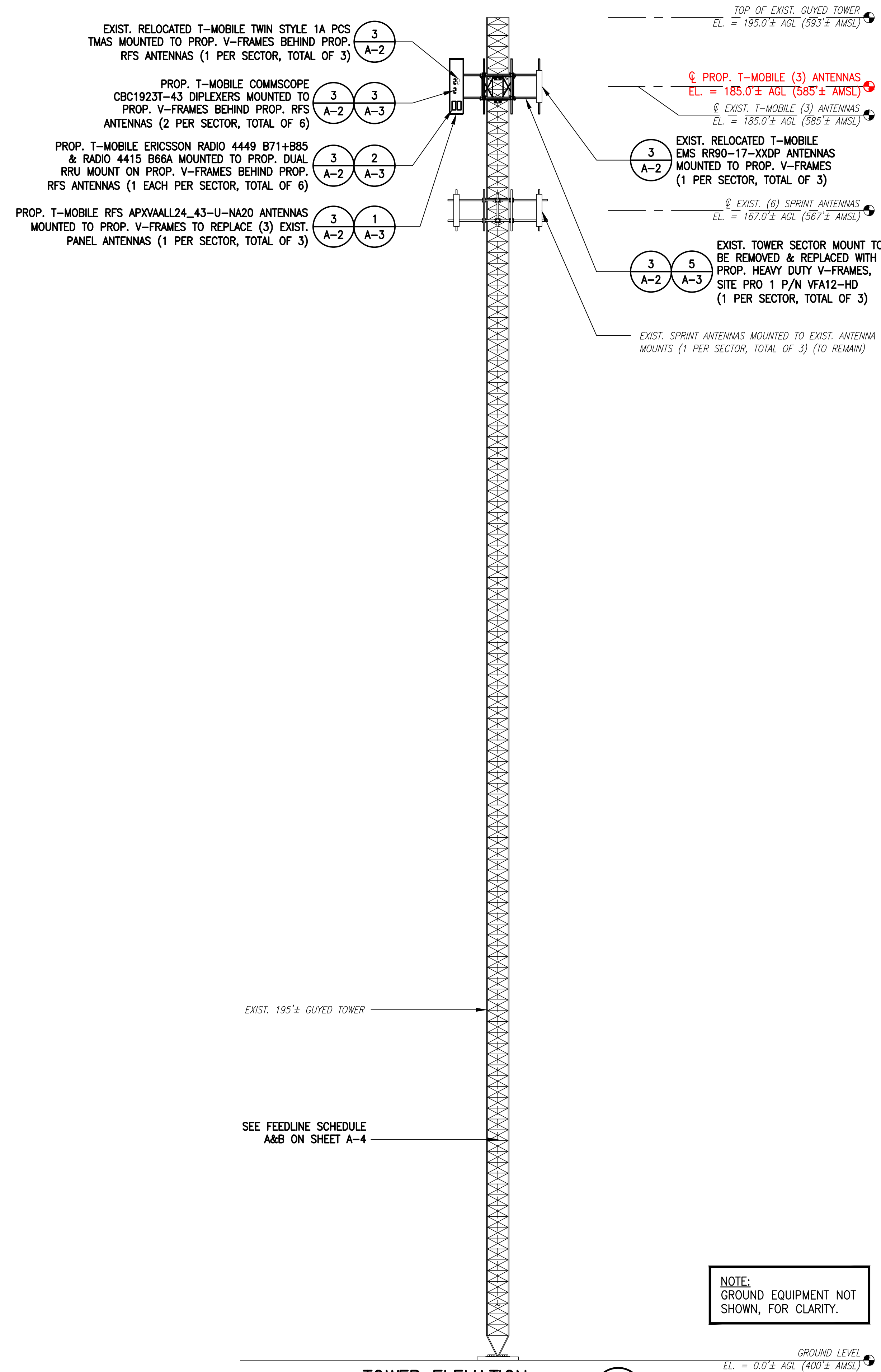
SHEET TITLE
**COMPOUND &
 EQUIPMENT PLAN**

SHEET NUMBER
A-1

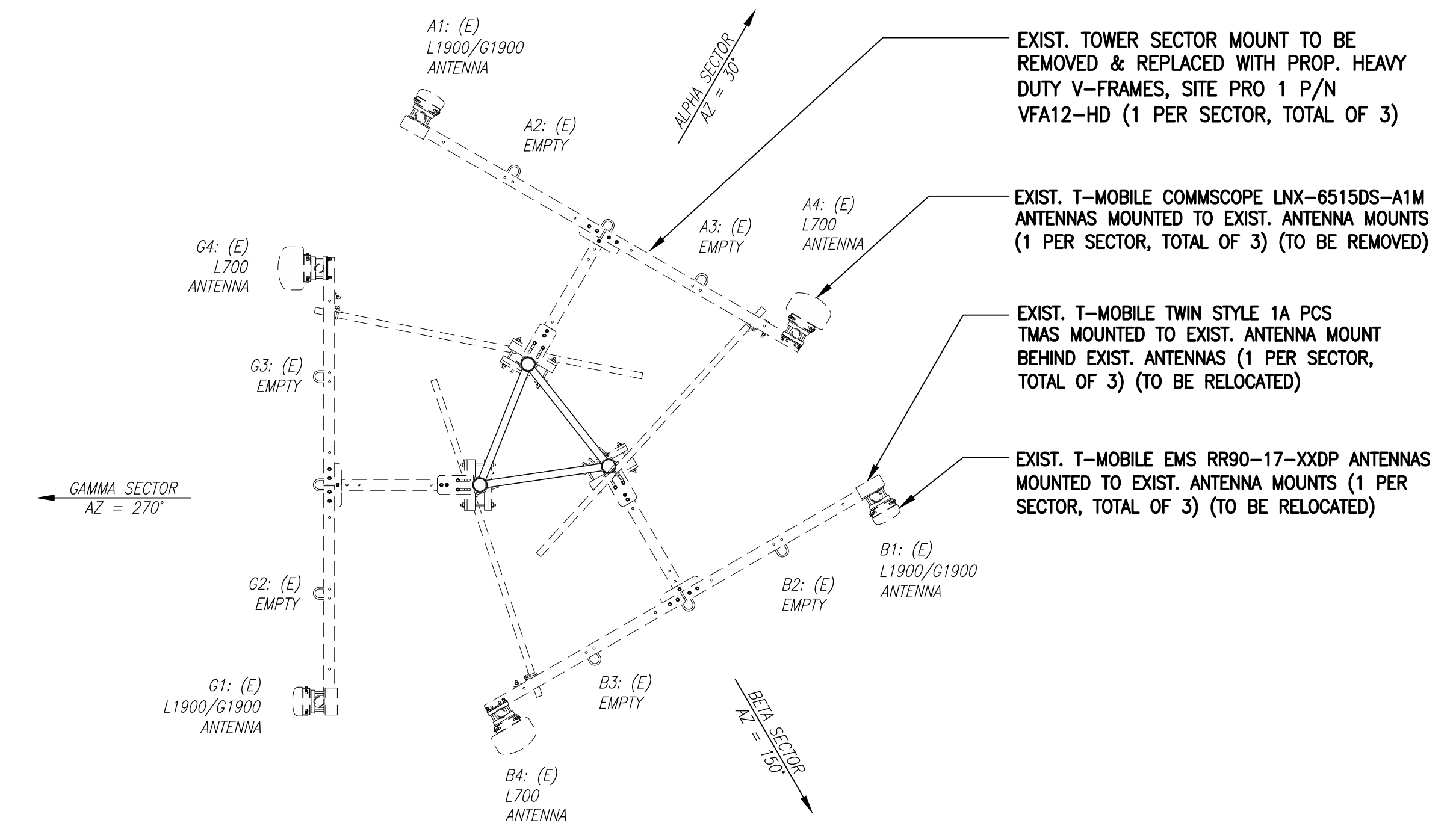
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 GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL SPECIAL OR SUPPLEMENTAL ADDITIONAL TOWER-MOUNTED EQUIPMENT PER RECOMMENDATIONS FROM SBA-PROVIDED TOWER STRUCTURAL ANALYSIS FOR ANY SPECIAL SHIELDING OF TOWER TOP EQUIPMENT AND FOR ANY SPECIAL FEEDLINE BUNDLING OR RELOCATION.

SPECIAL TOWER TOP EQUIPMENT INSTALLATION WORK NOTE (SAFETY-CLIMB ALIGNMENT REQUIREMENTS):
 GENERAL CONTRACTOR SHALL ORIENT PROPOSED PLATFORM REINFORCEMENT KIT RING-MOUNTS SO THAT EXISTING SAFETY CLIMB CABLE IS NOT OBSTRUCTED/RE-ROUTED FROM VERTICAL ALIGNMENT AND IS NOT IN PHYSICAL CONTACT WITH EXISTING OR PROPOSED RING-MOUNT HARDWARE. GENERAL CONTRACTOR SHALL INSTALL NEW OR ADDITIONAL SAFETY-CLIMB CABLE GUIDES IF ADDITIONAL CLEARANCE IS REQUIRED. ADDITIONAL CABLE GUIDES SHALL BE ATTACHED SECURELY TO THE POLE USING MECHANICAL FASTENERS OR FIELD WELDED BY A CERTIFIED WELDING TECHNICIAN.

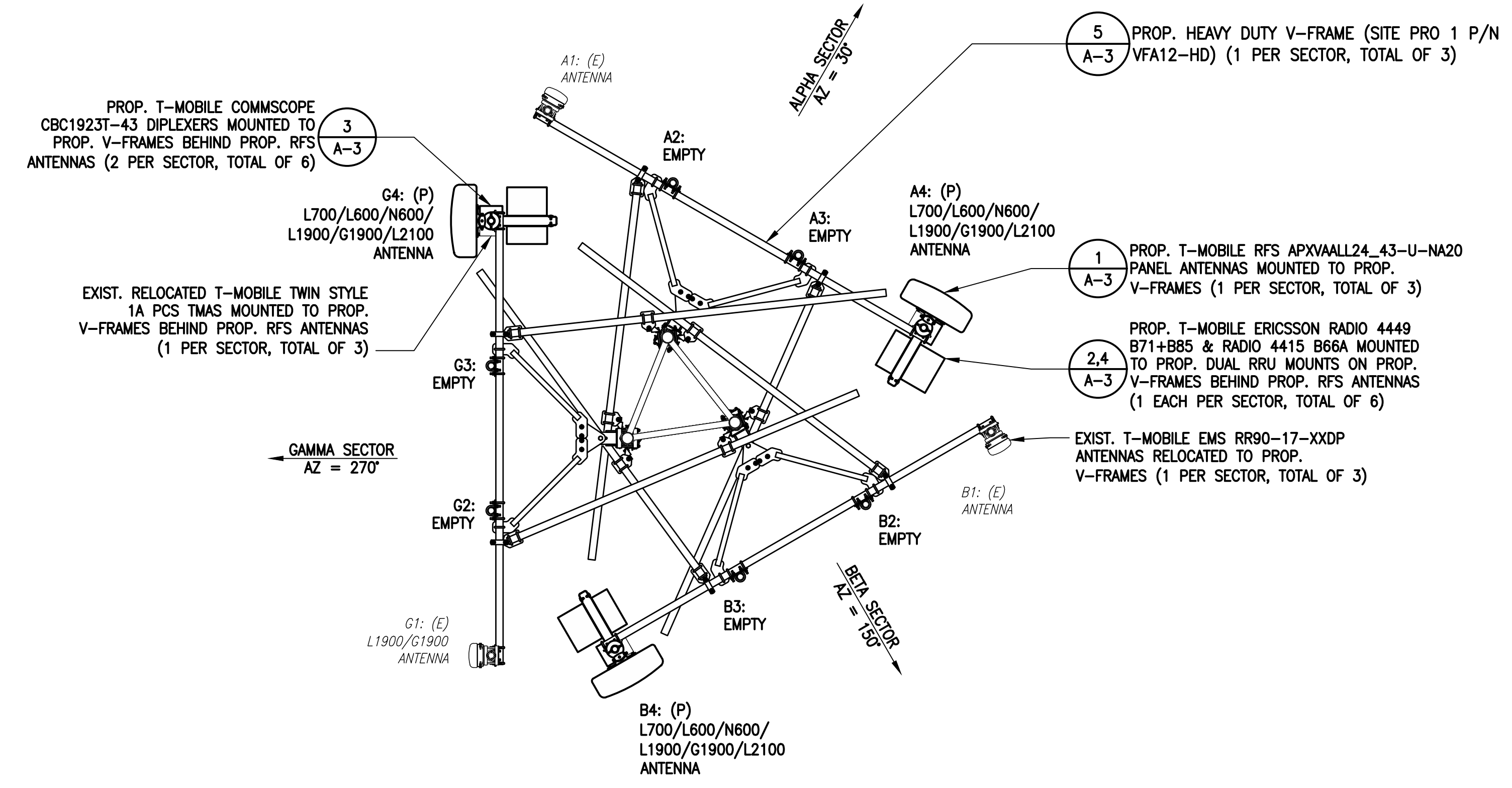
RAD CENTER NOTE:
 T-MOBILE RAD CENTER SHOWN IN RED TEXT BASED ON SBA-PROVIDED CO-LOCATION APPLICATION, EQUIPMENT DATABASE, AND STRUCTURAL ANALYSIS. THE SBA-PROVIDED ANTENNA RAD CENTER SHALL SUPERSEDE ANY CONFLICTING INFORMATION DERIVED FROM THE T-MOBILE RFDS.



TOWER ELEVATION
 SCALE: 1" = 20'
 0 10' 20' 40' 60'



EXISTING ANTENNA PLAN
 SCALE: N.T.S.

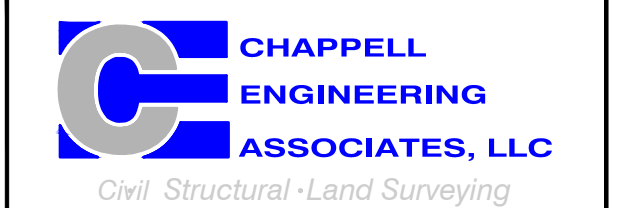


PROPOSED ANTENNA PLAN
 SCALE: N.T.S.

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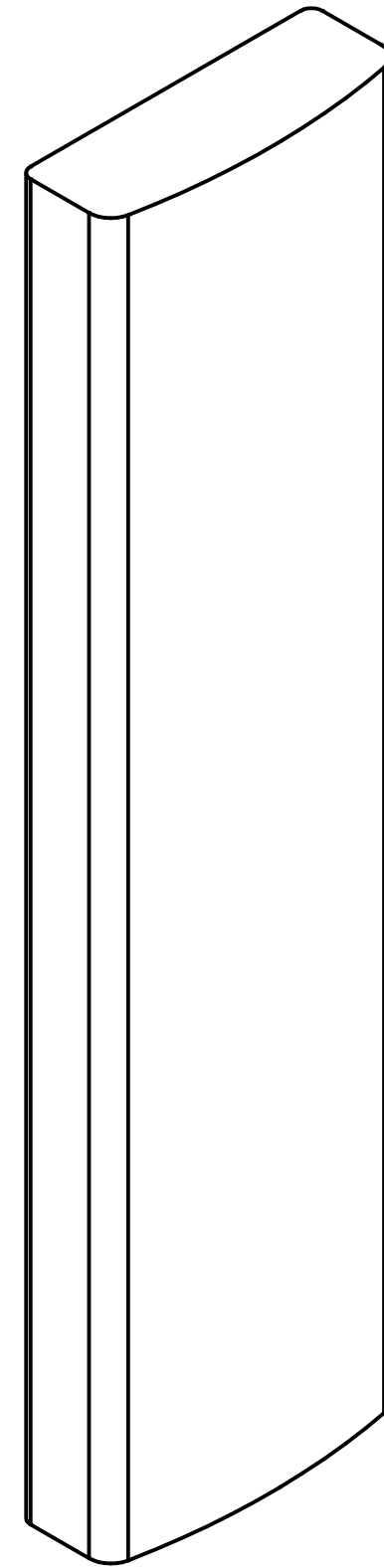
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SHEET TITLE
**TOWER ELEVATIONS &
 ANTENNA PLAN**

SHEET NUMBER
A-2



RFS APXVAALL24 43-U-NA20 ANTENNA
 DIMENSIONS: 95.9"H x 24.0"W x 8.5"D
 WEIGHT: 122.8 lbs
 QUANTITY: 1 PER SECTOR, TOTAL OF 3

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



ERICSSON RADIO 4449 B71+B85
 DIMENSIONS: 17.9"H x 13.1"W x 10.6"D
 WEIGHT: 75.0 lbs
 QUANTITY: 1 PER SECTOR, TOTAL OF 3



ERICSSON RADIO 4415 B66A
 DIMENSIONS: 16.5"H x 13.4"W x 5.9"D
 WEIGHT: 46.0 lbs
 QUANTITY: 1 PER SECTOR, TOTAL OF 3

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



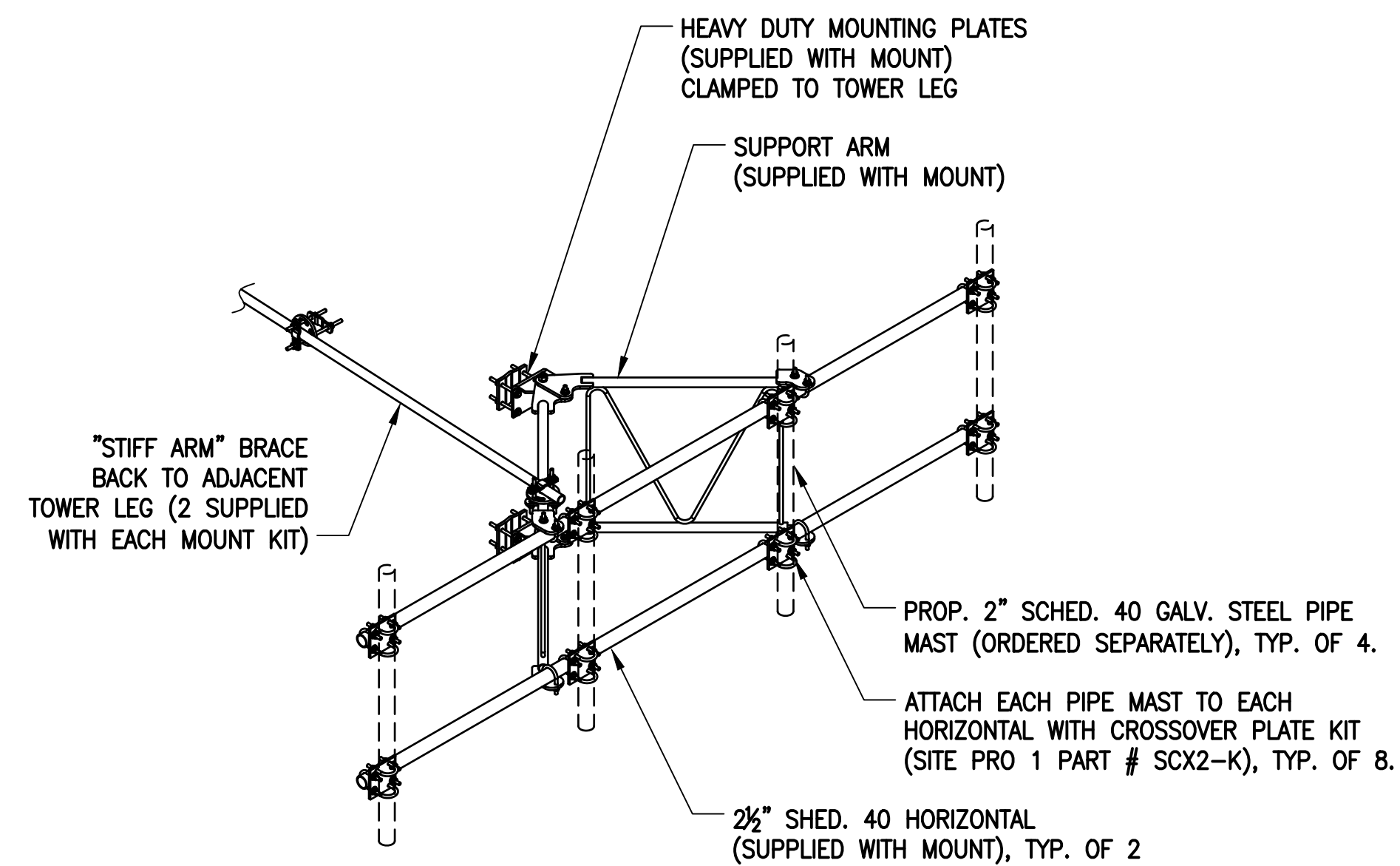
COMMSCOPE CBC1923T-43 TWIN DIPLEXER
 DIMENSIONS: 4.6"H x 8.3"W x 1.8"D
 WEIGHT: 4.4 lbs
 QUANTITY: 2 PER SECTOR, TOTAL OF 6

DIPLEXER DETAIL 3
A-3
 SCALE: N.T.S.



**COMMSCOPE RR-FA2 FAST ACCESS
 DUAL RRU MOUNT KIT**
 DIMENSIONS: 16.4"H x 8.6"W x 18"L
 WEIGHT: 36.0 lbs
 QUANTITY: 1 PER SECTOR, TOTAL OF 3

RADIO MOUNT DETAIL 4
A-3
 SCALE: N.T.S.



SITE-PRO 1 12'-6" HEAVY-DUTY V-FRAME
 PART NUMBER: VFA12-HD
 QUANTITY: 1 PER SECTOR, TOTAL OF 3

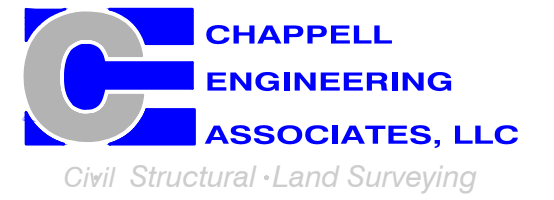
TYPICAL SECTOR FRAME DETAIL 5
A-3
 SCALE: N.T.S.

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SHEET TITLE
SITE DETAILS

SHEET NUMBER
A-3

FINAL ANTENNA CONFIGURATION								
SECTOR	ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	CABLES
ALPHA	A1	EMS RR90-17-XXDP	185'± AGL	30°	-	-	-	-
	A2	EMPTY PIPE MOUNT	-	-	-	-	-	-
	A3	EMPTY PIPE MOUNT	-	-	-	-	-	-
	A4	RFS APXVALL24_43-U-NA20	185'± AGL	30°	0°	2'	L700/L600/N600	ERICSSON RADIO 4449 B71+B85 ERICSSON RADIO 4415 B66A COMMSCOPE CBC1923T-43 DIPLEXER (2x) GENERIC TWIN STYLE 1A PCS TMA
						2'	L1900/G1900/L2100	
BETA	B1	EMS RR90-17-XXDP	185'± AGL	150°	-	-	-	-
	B2	EMPTY PIPE MOUNT	-	-	-	-	-	-
	B3	EMPTY PIPE MOUNT	-	-	-	-	-	-
	B4	RFS APXVALL24_43-U-NA20	185'± AGL	150°	0°	2'	L700/L600/N600	ERICSSON RADIO 4449 B71+B85 ERICSSON RADIO 4415 B66A COMMSCOPE CBC1923T-43 DIPLEXER (2x) GENERIC TWIN STYLE 1A PCS TMA
						2'	L1900/G1900/L2100	
GAMMA	G1	EMS RR90-17-XXDP	185'± AGL	270°	-	-	-	-
	G2	EMPTY PIPE MOUNT	-	-	-	-	-	-
	G3	EMPTY PIPE MOUNT	-	-	-	-	-	-
	G4	RFS APXVALL24_43-U-NA20	185'± AGL	270°	0°	2'	L700/L600/N600	ERICSSON RADIO 4449 B71+B85 ERICSSON RADIO 4415 B66A COMMSCOPE CBC1923T-43 DIPLEXER (2x) GENERIC TWIN STYLE 1A PCS TMA
						2'	L1900/G1900/L2100	

EXIST. (12) 1-5/8" COAX CABLES
PROP. (3) 2" (6x24) HCS FIBER CABLES

CABLE NOTE: SEE FEEDLINE SCHEDULE A & B BELOW.

NOTE: RFDS REV3 - 02/09/21

FEEDLINE SCHEDULE		
SCHEDULE	FEEDLINES	LOCATION
A	EXISTING TO REMAIN: (1) 1/2" COAX FOR GPS ANTENNA (12) 1-5/8" COAX CABLES EXISTING TO BE REMOVED: NONE	ROUTED PER STRUCTURAL ANALYSIS
B	PROPOSED: (3) 2" (6x24) HCS FIBER CABLES	

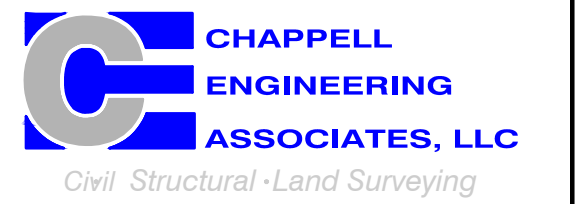
NOTE:
EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER.

T-MOBILE NORTHEAST LLC

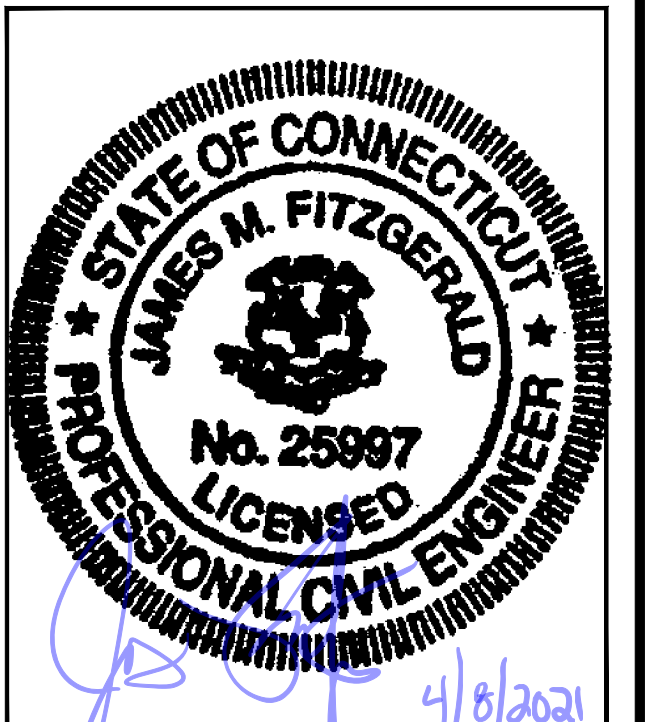
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SHEET TITLE
**ANTENNA &
FEEDLINE CHARTS**

SHEET NUMBER

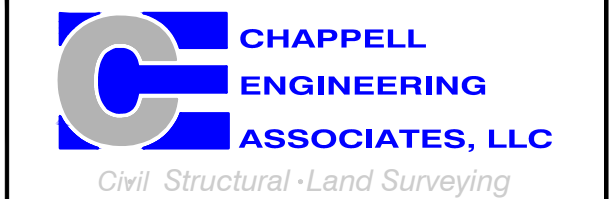
A-4

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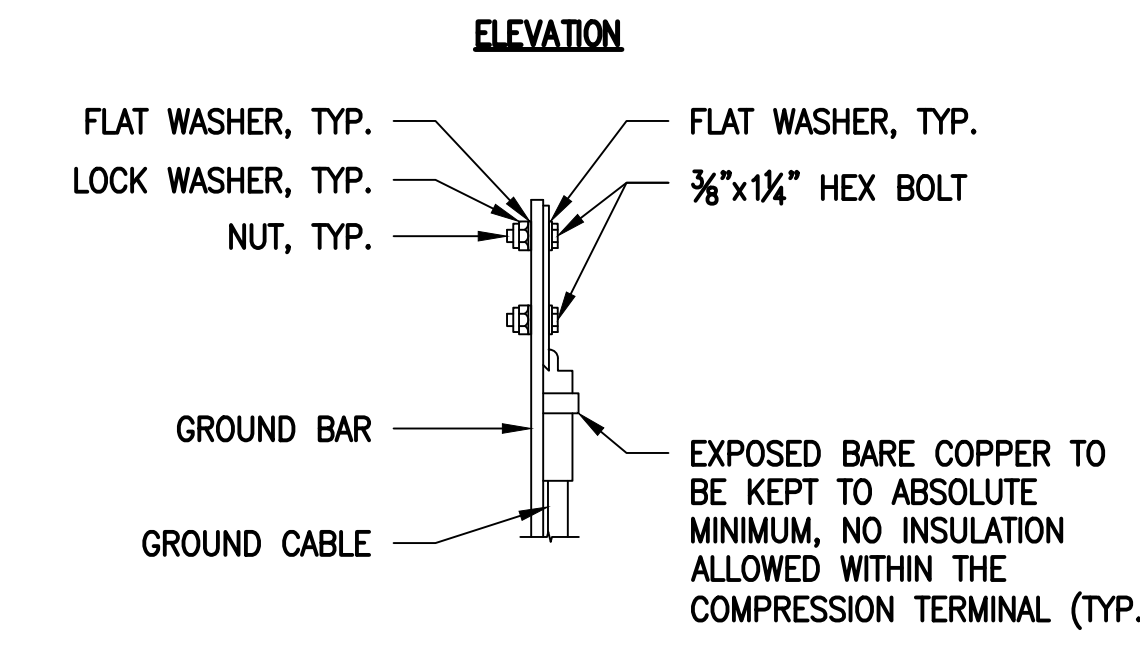
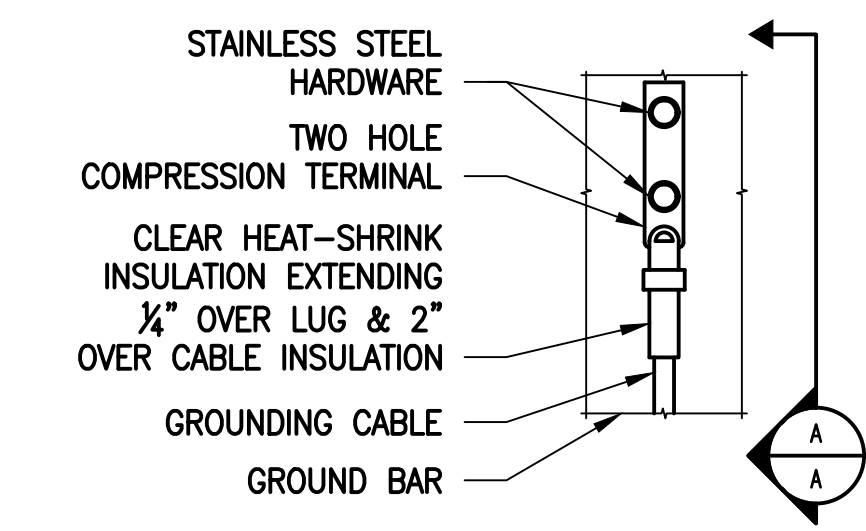
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SHEET TITLE
**ELECTRIC & GROUNDING
DETAILS**

SHEET NUMBER
E-1



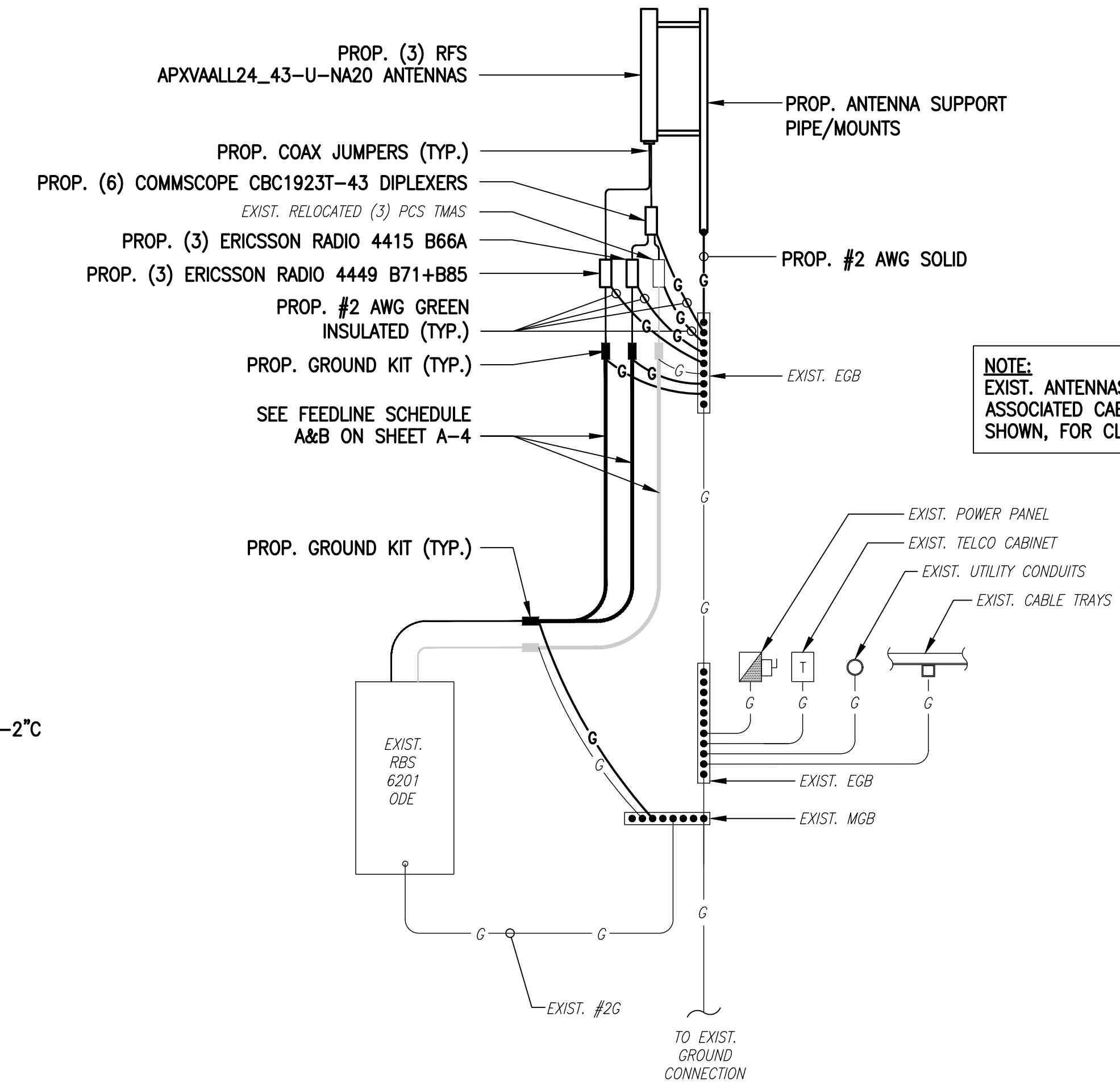
- NOTES:
- "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
 - OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
 - CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB AND MGB.

TYPICAL GROUND BAR
CONNECTIONS DETAIL

SCALE: NOT TO SCALE

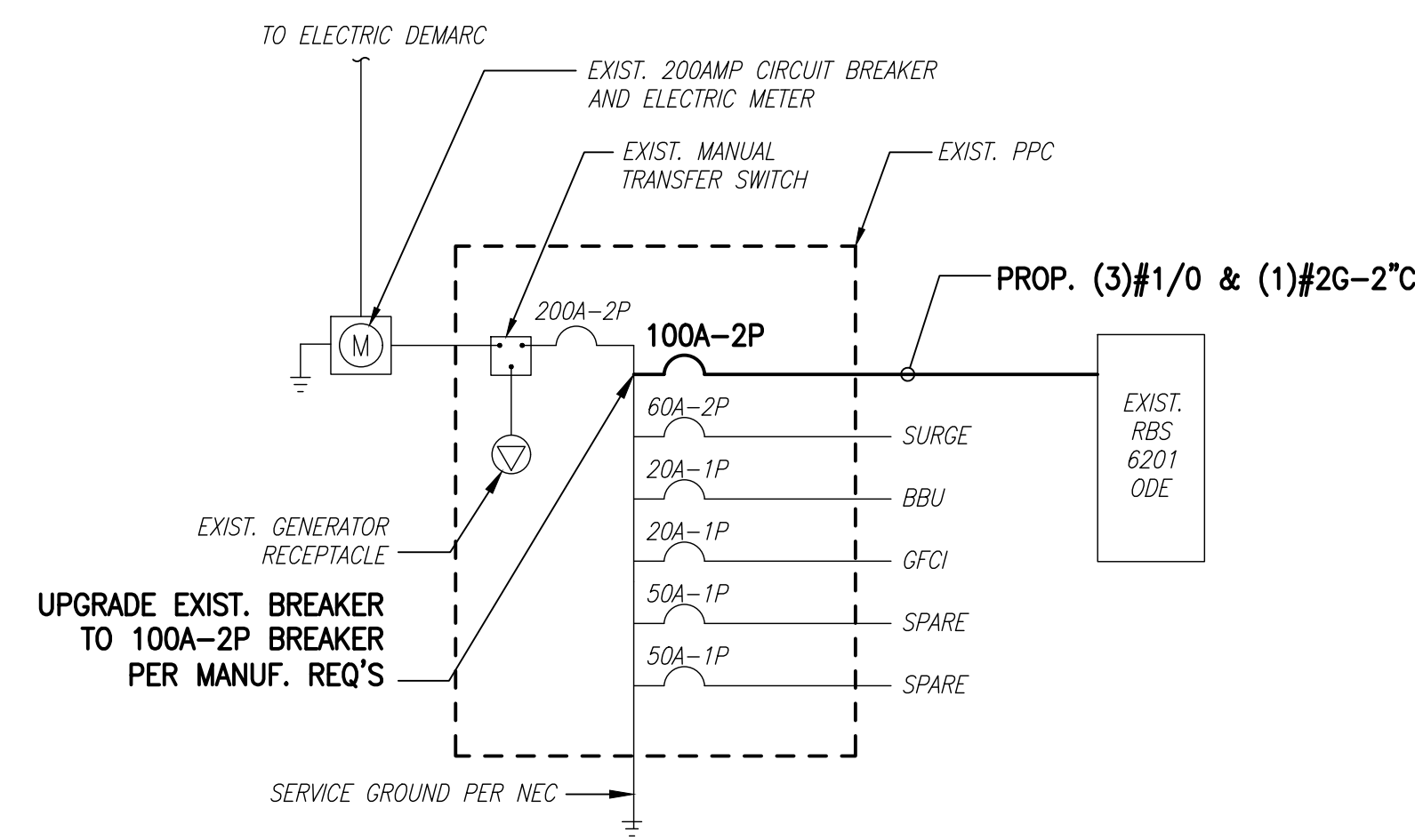
ELECTRICAL AND GROUNDING NOTES

- 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, THHN, OR THININSULATION.
- RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
- RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
- WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.
- ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
- PPC SUPPLIED BY PROJECT OWNER.
- GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".
- GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
- USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
- ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
- ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 8" 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.



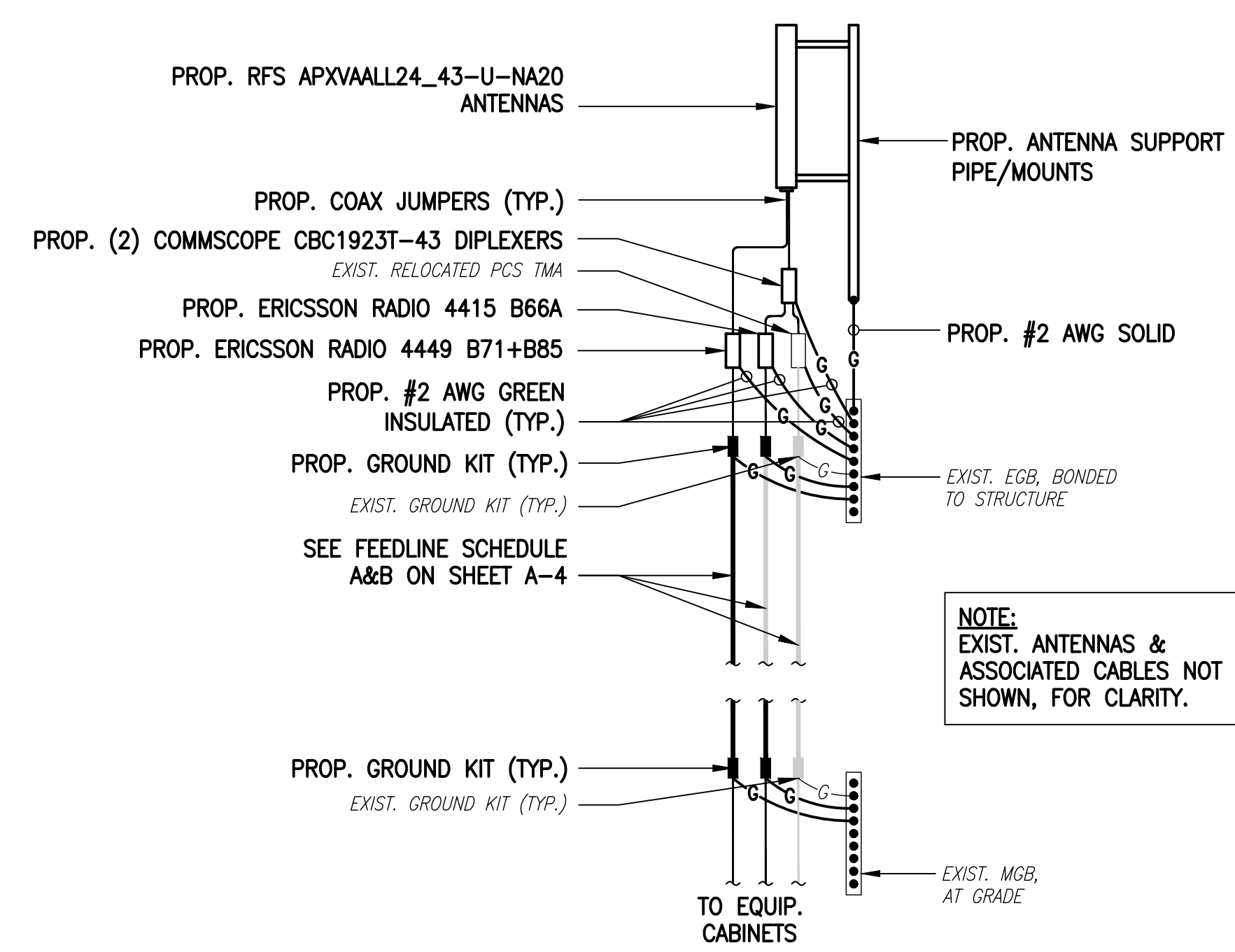
GROUNDING RISER DIAGRAM

SCALE: NOT TO SCALE



ONE LINE DIAGRAM

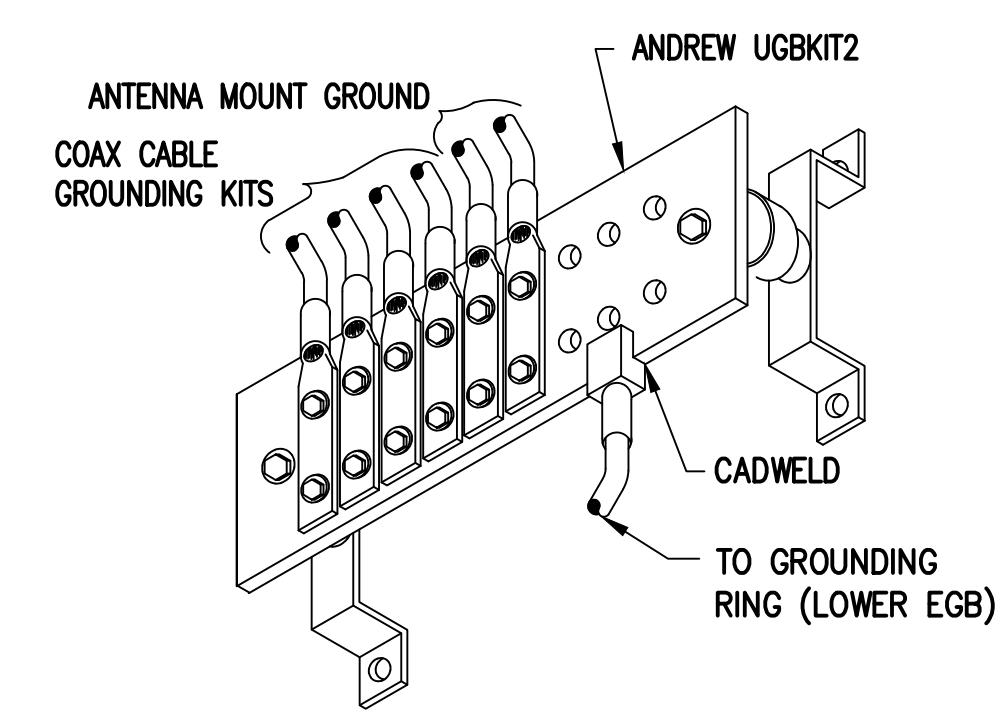
SCALE: NOT TO SCALE



L700/L600/N600/L1900/G1900/L2100

COAX CABLE CONNECTION
AND GROUNDING DETAIL

SCALE: NOT TO SCALE



GROUND BAR (EGB)

SCALE: NOT TO SCALE

EXHIBIT 7



Tower Engineering Solutions

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

Structural Analysis Report

Existing 195 ft PIROD Guyed Tower

Customer Name: SBA Communications Corp

Customer Site Number: CT10013-A

Customer Site Name: Griswold Glasgo

Carrier Name: T-Mobile (App#: 117387, V2)

Carrier Site ID / Name: CTNL082B / Griswold Glasgo

Site Location: 2172 Glasgo Road

Griswold, Connecticut

New London County

Latitude: 41.537366

Longitude: -71.873447

Analysis Result:

Max Structural Usage: 55.3% [Pass]

Max Foundation Usage: 28.0% [Pass]

Additional Usage Caused by New Mount/Mount Modification: 0.2%



Report Prepared By : Delu Zhou

Introduction

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

Sources of Information

Tower Drawings	Pirot Inc. (Drawing No. 204648-B) Original Tower Drawings dated February 17, 1999.
Foundation Drawing	Pirot Inc. (Drawing No. 204648-B) Original Tower Drawings dated February 17, 1999.
Geotechnical Report	FDH Engineering, Inc. (Project No. 1207122EG1) Geotechnical Evaluation of Subsurface Conditions dated August 15, 2012.
Modification Drawings	N/A
Mount Analysis	TES MA Job # 106783, dated 04/26/2021

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 **TESTowers**, a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed $V_{ult} = 135.00$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 105.0$ mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft

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
-	185.0	3	Commscope - LNX-6515DS-A1M - Panel	(3) Sector Frames	(12) 1 5/8"	T-Mobile
-		3	EMS - RR901702DP - Panel			
-		3	RFS - APX16PV-16VL-E - Panel			
-		3	Ericsson KRY 112 489/2 TMA			
-		3	Kathrein 782 11056 Bias-T			
8	165.0	3	CommScope - NNVV-65B-R4 - Panel	(3) Modified Sector Frame with (3) tie-back kit Sitepro SPTB, (3) v-brace kit Sitepro SFR-K-L & (6) new Pipe2.0STD	(4) 1-1/4" Fiber	Sprint Nextel
9		3	RFS - APXVTM14-C-I20 - Panel			
10		3	ALU 1900 Mhz RRUs			
11		6	ALU 800 Mhz RRUs			
12		3	ALU TD-RRH8x20-25 RRUs			

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	185.0	3	RFS - APXV18-209015-C Panel	(3) Sector Frames VFA12-HD	(14) 1 5/8" (3) 1.9" Fiber	T-Mobile
2		3	RFS - APXVAARR24_43-U-NA20 Panel			
3		3	EMS - RR90-17-XXDP Panel			
4		3	Ericsson KRY 112 489/2 TMAs			
5		6	CBC1923T-DS-43 Diplexer			
6		3	Ericsson Radio 4449 B71+B85			
7		3	Ericsson 4415 B66A RRU			
8		3	Kathrein 782 11056 Bias-T			

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

Analysis Results

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

Tower Component	Legs	Diagonals	Horizontals	Guy Wires
Max. Usage:	55.3%	33.8%	33.9%	43.3%
Pass/Fail	Pass	Pass	Pass	Pass

Foundations

Reactions (kips)	Base Reactions		Inner Anchors	
	Axial	Shear	Uplift	Shear
Analysis Reactions	166.0	2.3	51.4	47.6

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 0.0368 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.

Structure: CT10013-A-SBA

Site Name: Griswold Glasgo

Code: EIA/TIA-222-G

5/19/2021

Type: Guyed

Base Shape: Triangle

Basic WS: 105.00

Height: 195.00 (ft)

Base Width: 0.00

Basic Ice WS: 50.00

Base Elev: 0.00 (ft)

Top Width: 3.00

Operational WS: 60.00

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Section Properties

Sect	Leg Members	Diagonal Members	Horizontal Members
1-8	SOL 2" SOLID	SOL 7/8" SOLID	SOL 7/8" SOLID
9-11	SOL 1 3/4" SOLID	SOL 1" SOLID	SOL 1" SOLID

Discrete Appurtenances

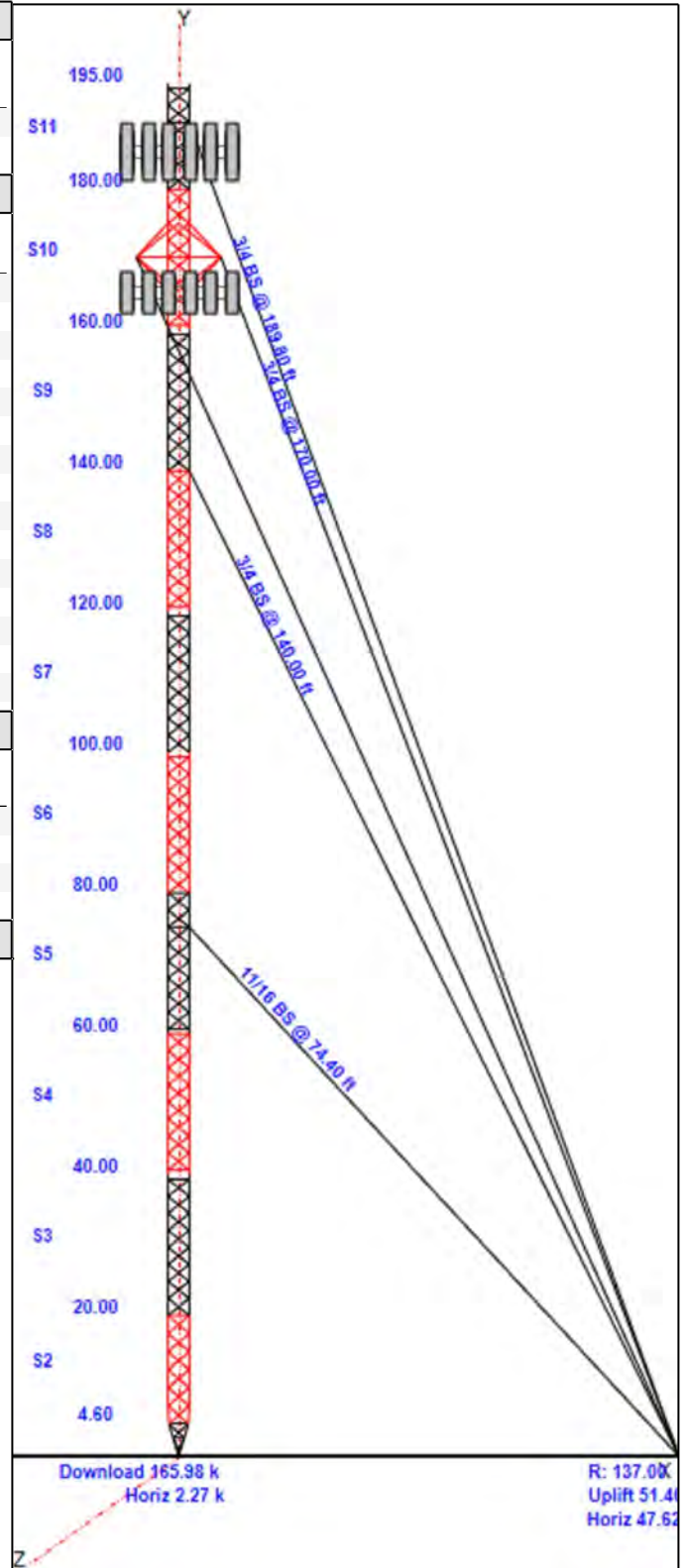
Attach Elev (ft)	Force Elev (ft)	Qty	Description
185.00	185.00	6	CBC1923T-DS-43 Diplexer
185.00	185.00	3	4415 B66A
185.00	185.00	3	Sector Frames VFA12-HD
185.00	185.00	3	Kathrein 782 11056 Bias-T
185.00	185.00	3	APXV18-209015-C
185.00	185.00	3	APXVAARR24_43-U-NA20
185.00	185.00	3	RR90-17-XXDP
185.00	185.00	3	Ericsson KRY 112 489/2 TMAs
185.00	185.00	3	Ericsson Radio 4449 B71+B85
165.00	165.00	3	NNVV-65B-R4
165.00	165.00	3	APXVTM14-C-I20
165.00	165.00	3	ALU 1900 Mhz RRUs
165.00	165.00	6	ALU 800 Mhz RRUs
165.00	165.00	3	ALU TD-RRH8x20-25 RRUs
165.00	165.00	3	Sector Frame

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Qty	Description
0.00	185.00	14	1 5/8" Coax
0.00	185.00	3	1.9" Fiber
0.00	165.00	4	1-1/4" Fiber
0.00	165.00	1	Safety Cable

Max Guy Wire

43.26% @ 75.1667 ft - 11/16 BS



Structure: CT10013-A-SBA

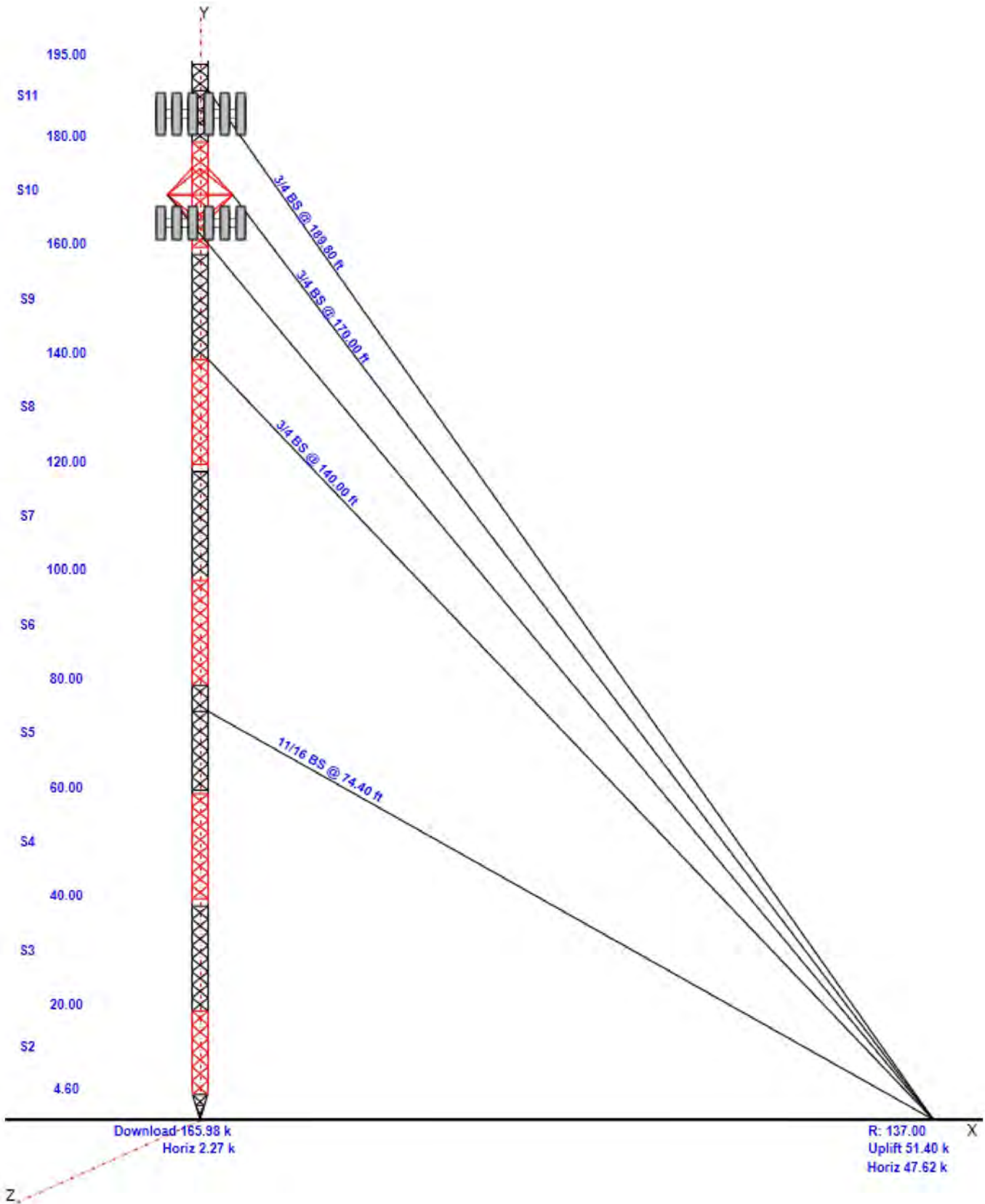
Site Name: Griswold Glasgo
Type: Guyed
Height: 195.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: Triangle
Base Width: 0.00
Top Width: 3.00

Code: EIA/TIA-222-G
Basic WS: 105.00
Basic Ice WS: 50.00
Operational WS: 60.00

5/19/2021

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Anchor Drops with Guy Radius - Structure: CT10013-A-SBA

Site Name: Griswold Glasgo

Code: EIA/TIA-222-G

5/19/2021

Type: Guyed

Base Shape: Triangle

Basic WS: 105.00

Height: 195.00 (ft)

Base Width: 0.00

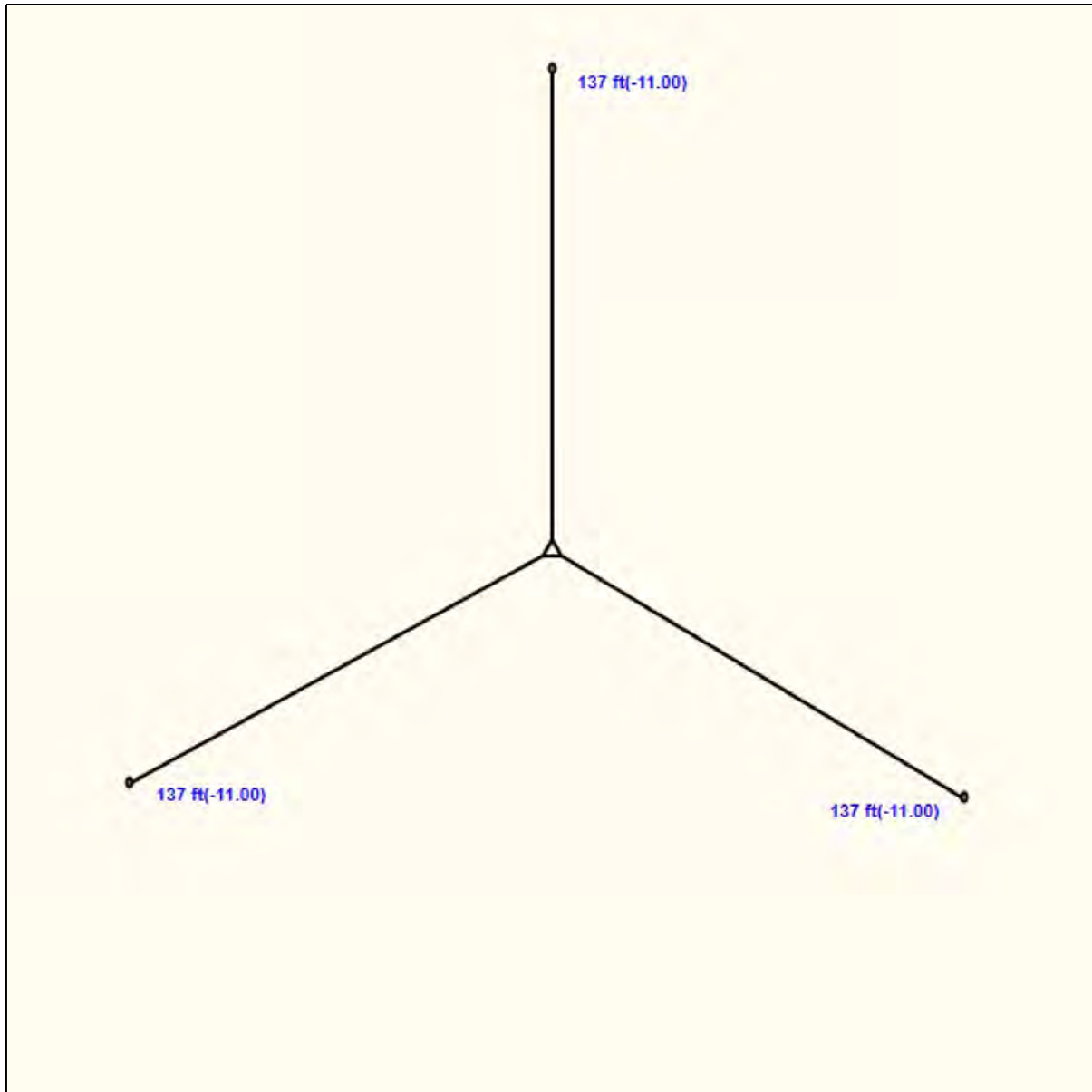
Basic Ice WS: 50.00

Base Elev: 0.00 (ft)

Top Width: 3.00

Operational WS: 60.00

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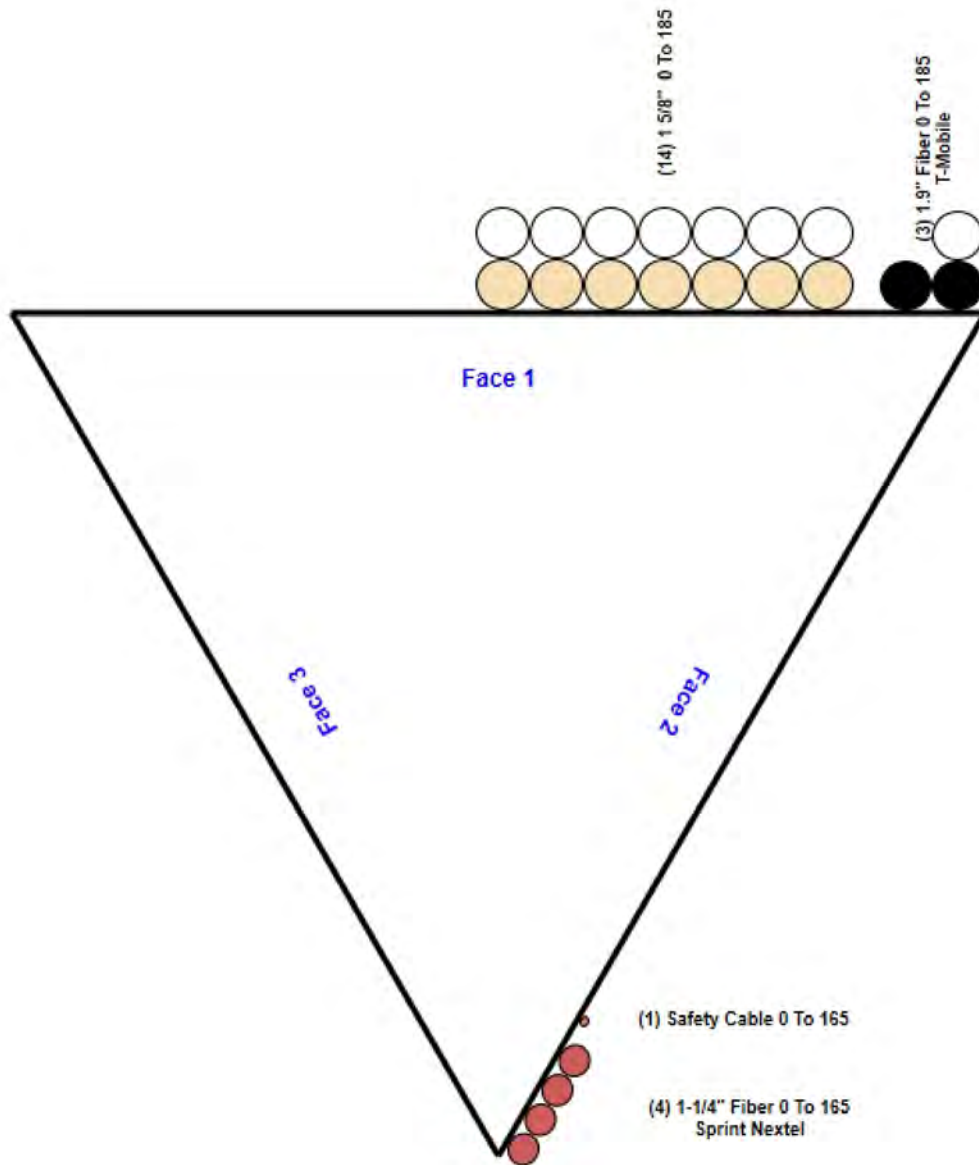


Structure: CT10013-A-SBA - Coax Line Placement

Type: Guyed
Site Name: Griswold Glasgo
Height: 195.00 (ft)

5/19/2021

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Loading Summary

Structure: CT10013-A-SBA	Code: EIA/TIA-222-G	5/19/2021
Site Name: Griswold Glasgo	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II



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Discrete Appurtenances Properties

Attach Elev (ft)	Description	Qty	No Ice		Ice		Len (in)	Width (in)	Depth (in)	Ka	Orientation Factor	Vert Ecc (ft)
			Weight (lb)	CaAa (sf)	Weight (lb)	CaAa (sf)						
185.00	CBC1923T-DS-43 Diplexer	6	11.00	0.320	21.75	0.588	8.300	4.600	3.700	0.80	0.67	0.000
185.00	4415 B66A	3	44.10	1.860	92.61	2.446	13.500	16.500	4.800	0.80	0.67	0.000
185.00	Sector Frames VFA12-HD	3	682.00	18.900	1363.57	43.185	0.000	0.000	0.000	0.75	0.75	0.000
185.00	Kathrein 782 11056 Bias-T	3	12.60	0.600	29.57	1.182	7.800	7.800	4.100	0.80	0.67	0.000
185.00	APXV18-209015-C	3	25.30	5.170	146.42	6.439	72.000	6.800	3.200	0.80	0.74	0.000
185.00	APXVAARR24_43-U-NA20	3	128.00	20.240	556.59	22.185	95.900	24.000	7.800	0.80	0.70	0.000
185.00	RR90-17-XXDP	3	18.00	4.360	119.60	5.370	56.000	8.000	2.800	0.80	0.72	0.000
185.00	Ericsson KRY 112 489/2 TMAs	3	15.40	0.650	33.42	1.276	11.000	6.100	3.900	0.80	0.67	0.000
185.00	Ericsson Radio 4449 B71+B85	3	75.00	2.650	145.19	2.201	15.000	13.200	9.300	0.80	0.67	0.000
165.00	NNVV-65B-R4	3	77.40	12.270	366.56	13.745	72.000	19.600	7.800	0.80	0.74	0.000
165.00	APXVTM14-C-I20	3	56.20	6.340	219.05	7.468	56.300	12.600	6.300	0.80	0.77	0.000
165.00	ALU 1900 Mhz RRUs	3	60.00	2.770	144.49	4.054	25.000	11.100	11.400	0.80	0.67	0.000
165.00	ALU 800 Mhz RRUs	6	53.00	2.490	127.89	3.648	19.700	13.000	10.800	0.80	0.67	0.000
165.00	ALU TD-RRH8x20-25 RRUs	3	70.00	4.050	182.15	4.874	26.100	18.600	6.700	0.80	0.67	0.000
165.00	Sector Frame	3	650.00	25.000	1568.94	45.146	0.000	0.000	0.000	0.75	0.75	0.000
Totals:		51	6,126.00		15,802.32						Number of Appurtenances :	15

Loading Summary

Structure: CT10013-A-SBA	Code: EIA/TIA-222-G	5/19/2021
Site Name: Griswold Glasgo	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II
		Page: 6

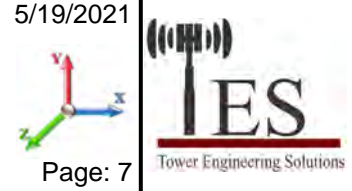


Linear Appurtenances Properties

Elev. From (ft)	Elev. To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	185.00	1 5/8" Coax	14	1.98	1.04	50.00	1	Block		N	1.00	1.00	
0.00	185.00	1.9" Fiber	3	1.90	1.04	50.00	1	Block		N	1.00	1.00	
0.00	165.00	1-1/4" Fiber	4	1.25	0.66	100.00	2	Individual NR		N	1.00	1.00	
0.00	165.00	Safety Cable	1	0.38	0.27	100.00	2	Individual NR		N	1.00	1.00	

Section Forces

Structure: CT10013-A-SBA	Code: EIA/TIA-222-G	5/19/2021
Site Name: Griswold Glasgo	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W Normal Wind	1.2D + 1.6W 105 mph Wind at Normal To Face
Wind Load Factor: 1.60	Wind Importance Factor: 1.00
Dead Load Factor: 1.20	
Ice Dead Load Factor: 0.00	Ice Importance Factor: 1.00

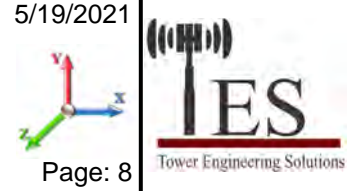
Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.3	20.39	0.000	2.64	0.00	0.37	2.12	1.00	1.00	0.00	1.70	11.86	0.00	412.2	0.0	100.16	274.79	374.95
2	12.3	20.39	0.000	8.65	0.00	0.18	2.67	1.00	1.00	0.00	5.03	39.70	0.00	1,344.3	0.0	372.75	919.94	1,292.70
3	30.0	23.56	0.000	11.17	0.00	0.18	2.68	1.00	1.00	0.00	6.49	51.56	0.00	1,740.0	0.0	557.15	1380.62	1,937.77
4	50.0	26.24	0.000	11.38	0.00	0.18	2.67	1.00	1.00	0.00	6.63	51.56	0.00	1,762.1	0.0	630.16	1537.38	2,167.53
5	70.0	28.17	0.500	11.38	0.00	0.19	2.64	1.00	1.00	0.00	7.14	51.56	0.00	1,796.5	0.0	721.43	1650.23	2,371.66
6	90.0	29.70	0.000	11.17	0.00	0.18	2.68	1.00	1.00	0.00	6.49	51.56	0.00	1,740.0	0.0	702.13	1739.89	2,442.02
7	110.0	30.98	0.000	11.17	0.00	0.18	2.68	1.00	1.00	0.00	6.49	51.56	0.00	1,740.0	0.0	732.43	1814.97	2,547.40
8	130.0	32.09	0.500	11.17	0.00	0.18	2.65	1.00	1.00	0.00	7.01	51.56	0.00	1,774.5	0.0	810.20	1879.94	2,690.14
9	150.0	33.07	0.000	11.01	0.00	0.18	2.68	1.00	1.00	0.00	6.40	51.56	0.00	1,705.5	0.0	772.00	1937.43	2,709.44
10	170.0	33.95	0.000	11.25	0.00	0.18	2.67	1.00	1.00	0.00	6.55	44.84	0.00	1,682.0	0.0	807.02	1765.80	2,572.81
11	187.5	34.66	0.500	8.30	0.00	0.19	2.64	1.00	1.00	0.00	5.34	10.65	0.00	1,054.2	0.0	665.06	431.65	1,096.71
														16,751.3	0.0			22,203.11

Load Case: 1.2D + 1.6W 60° Wind	1.2D + 1.6W 105 mph Wind at 60° From Face
Wind Load Factor: 1.60	Wind Importance Factor: 1.00
Dead Load Factor: 1.20	
Ice Dead Load Factor: 0.00	Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.3	20.39	0.000	2.64	0.00	0.37	2.12	0.80	1.00	0.00	1.70	11.86	0.00	412.2	0.0	100.16	274.79	374.95
2	12.3	20.39	0.000	8.65	0.00	0.18	2.67	0.80	1.00	0.00	5.03	39.70	0.00	1,344.3	0.0	372.75	919.94	1,292.70
3	30.0	23.56	0.000	11.17	0.00	0.18	2.68	0.80	1.00	0.00	6.49	51.56	0.00	1,740.0	0.0	557.15	1380.62	1,937.77
4	50.0	26.24	0.000	11.38	0.00	0.18	2.67	0.80	1.00	0.00	6.63	51.56	0.00	1,762.1	0.0	630.16	1537.38	2,167.53
5	70.0	28.17	0.500	11.38	0.00	0.19	2.64	0.80	1.00	0.00	7.04	51.56	0.00	1,796.5	0.0	711.32	1650.23	2,361.55
6	90.0	29.70	0.000	11.17	0.00	0.18	2.68	0.80	1.00	0.00	6.49	51.56	0.00	1,740.0	0.0	702.13	1739.89	2,442.02
7	110.0	30.98	0.000	11.17	0.00	0.18	2.68	0.80	1.00	0.00	6.49	51.56	0.00	1,740.0	0.0	732.43	1814.97	2,547.40
8	130.0	32.09	0.500	11.17	0.00	0.18	2.65	0.80	1.00	0.00	6.91	51.56	0.00	1,774.5	0.0	798.64	1879.94	2,678.58
9	150.0	33.07	0.000	11.01	0.00	0.18	2.68	0.80	1.00	0.00	6.40	51.56	0.00	1,705.5	0.0	772.00	1937.43	2,709.44
10	170.0	33.95	0.000	11.25	0.00	0.18	2.67	0.80	1.00	0.00	6.55	44.84	0.00	1,682.0	0.0	807.02	1765.80	2,572.81
11	187.5	34.66	0.500	8.30	0.00	0.19	2.64	0.80	1.00	0.00	5.24	10.65	0.00	1,054.2	0.0	652.61	431.65	1,084.25
														16,751.3	0.0			22,168.99

Section Forces

Structure: CT10013-A-SBA	Code: EIA/TIA-222-G	5/19/2021
Site Name: Griswold Glasgo	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 90° Wind	1.2D + 1.6W 105 mph Wind at 90° From Face
Wind Load Factor: 1.60	Wind Importance Factor: 1.00
Dead Load Factor: 1.20	
Ice Dead Load Factor: 0.00	Ice Importance Factor: 1.00

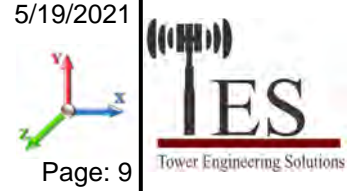
Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.3	20.39	0.000	2.64	0.00	0.37	2.12	0.85	1.00	0.00	1.70	11.86	0.00	412.2	0.0	100.16	274.79	374.95
2	12.3	20.39	0.000	8.65	0.00	0.18	2.67	0.85	1.00	0.00	5.03	39.70	0.00	1,344.3	0.0	372.75	919.94	1,292.70
3	30.0	23.56	0.000	11.17	0.00	0.18	2.68	0.85	1.00	0.00	6.49	51.56	0.00	1,740.0	0.0	557.15	1380.62	1,937.77
4	50.0	26.24	0.000	11.38	0.00	0.18	2.67	0.85	1.00	0.00	6.63	51.56	0.00	1,762.1	0.0	630.16	1537.38	2,167.53
5	70.0	28.17	0.500	11.38	0.00	0.19	2.64	0.85	1.00	0.00	7.06	51.56	0.00	1,796.5	0.0	713.85	1650.23	2,364.08
6	90.0	29.70	0.000	11.17	0.00	0.18	2.68	0.85	1.00	0.00	6.49	51.56	0.00	1,740.0	0.0	702.13	1739.89	2,442.02
7	110.0	30.98	0.000	11.17	0.00	0.18	2.68	0.85	1.00	0.00	6.49	51.56	0.00	1,740.0	0.0	732.43	1814.97	2,547.40
8	130.0	32.09	0.500	11.17	0.00	0.18	2.65	0.85	1.00	0.00	6.93	51.56	0.00	1,774.5	0.0	801.53	1879.94	2,681.47
9	150.0	33.07	0.000	11.01	0.00	0.18	2.68	0.85	1.00	0.00	6.40	51.56	0.00	1,705.5	0.0	772.00	1937.43	2,709.44
10	170.0	33.95	0.000	11.25	0.00	0.18	2.67	0.85	1.00	0.00	6.55	44.84	0.00	1,682.0	0.0	807.02	1765.80	2,572.81
11	187.5	34.66	0.500	8.30	0.00	0.19	2.64	0.85	1.00	0.00	5.27	10.65	0.00	1,054.2	0.0	655.72	431.65	1,087.37
														16,751.3	0.0	22,177.52		

Load Case: 0.9D + 1.6W Normal Wind	0.9D + 1.6W 105 mph Wind at Normal To Face
Wind Load Factor: 1.60	Wind Importance Factor: 1.00
Dead Load Factor: 0.90	
Ice Dead Load Factor: 0.00	Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.3	20.39	0.000	2.64	0.00	0.37	2.12	1.00	1.00	0.00	1.70	11.86	0.00	309.2	0.0	100.16	274.79	374.95
2	12.3	20.39	0.000	8.65	0.00	0.18	2.67	1.00	1.00	0.00	5.03	39.70	0.00	1,008.2	0.0	372.75	919.94	1,292.70
3	30.0	23.56	0.000	11.17	0.00	0.18	2.68	1.00	1.00	0.00	6.49	51.56	0.00	1,305.0	0.0	557.15	1380.62	1,937.77
4	50.0	26.24	0.000	11.38	0.00	0.18	2.67	1.00	1.00	0.00	6.63	51.56	0.00	1,321.6	0.0	630.16	1537.38	2,167.53
5	70.0	28.17	0.500	11.38	0.00	0.19	2.64	1.00	1.00	0.00	7.14	51.56	0.00	1,347.4	0.0	721.43	1650.23	2,371.66
6	90.0	29.70	0.000	11.17	0.00	0.18	2.68	1.00	1.00	0.00	6.49	51.56	0.00	1,305.0	0.0	702.13	1739.89	2,442.02
7	110.0	30.98	0.000	11.17	0.00	0.18	2.68	1.00	1.00	0.00	6.49	51.56	0.00	1,305.0	0.0	732.43	1814.97	2,547.40
8	130.0	32.09	0.500	11.17	0.00	0.18	2.65	1.00	1.00	0.00	7.01	51.56	0.00	1,330.8	0.0	810.20	1879.94	2,690.14
9	150.0	33.07	0.000	11.01	0.00	0.18	2.68	1.00	1.00	0.00	6.40	51.56	0.00	1,279.2	0.0	772.00	1937.43	2,709.44
10	170.0	33.95	0.000	11.25	0.00	0.18	2.67	1.00	1.00	0.00	6.55	44.84	0.00	1,261.5	0.0	807.02	1765.80	2,572.81
11	187.5	34.66	0.500	8.30	0.00	0.19	2.64	1.00	1.00	0.00	5.34	10.65	0.00	790.7	0.0	665.06	431.65	1,096.71
														12,563.5	0.0	22,203.11		

Section Forces

Structure: CT10013-A-SBA	Code: EIA/TIA-222-G	5/19/2021
Site Name: Griswold Glasgo	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 60° Wind	0.9D + 1.6W 105 mph Wind at 60° From Face
Wind Load Factor: 1.60	Wind Importance Factor: 1.00
Dead Load Factor: 0.90	
Ice Dead Load Factor: 0.00	Ice Importance Factor: 1.00

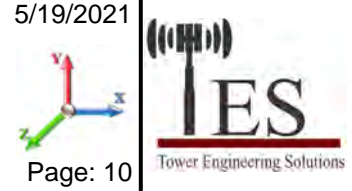
Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.3	20.39	0.000	2.64	0.00	0.37	2.12	0.80	1.00	0.00	1.70	11.86	0.00	309.2	0.0	100.16	274.79	374.95
2	12.3	20.39	0.000	8.65	0.00	0.18	2.67	0.80	1.00	0.00	5.03	39.70	0.00	1,008.2	0.0	372.75	919.94	1,292.70
3	30.0	23.56	0.000	11.17	0.00	0.18	2.68	0.80	1.00	0.00	6.49	51.56	0.00	1,305.0	0.0	557.15	1380.62	1,937.77
4	50.0	26.24	0.000	11.38	0.00	0.18	2.67	0.80	1.00	0.00	6.63	51.56	0.00	1,321.6	0.0	630.16	1537.38	2,167.53
5	70.0	28.17	0.500	11.38	0.00	0.19	2.64	0.80	1.00	0.00	7.04	51.56	0.00	1,347.4	0.0	711.32	1650.23	2,361.55
6	90.0	29.70	0.000	11.17	0.00	0.18	2.68	0.80	1.00	0.00	6.49	51.56	0.00	1,305.0	0.0	702.13	1739.89	2,442.02
7	110.0	30.98	0.000	11.17	0.00	0.18	2.68	0.80	1.00	0.00	6.49	51.56	0.00	1,305.0	0.0	732.43	1814.97	2,547.40
8	130.0	32.09	0.500	11.17	0.00	0.18	2.65	0.80	1.00	0.00	6.91	51.56	0.00	1,330.8	0.0	798.64	1879.94	2,678.58
9	150.0	33.07	0.000	11.01	0.00	0.18	2.68	0.80	1.00	0.00	6.40	51.56	0.00	1,279.2	0.0	772.00	1937.43	2,709.44
10	170.0	33.95	0.000	11.25	0.00	0.18	2.67	0.80	1.00	0.00	6.55	44.84	0.00	1,261.5	0.0	807.02	1765.80	2,572.81
11	187.5	34.66	0.500	8.30	0.00	0.19	2.64	0.80	1.00	0.00	5.24	10.65	0.00	790.7	0.0	652.61	431.65	1,084.25
														12,563.5	0.0			22,168.99

Load Case: 0.9D + 1.6W 90° Wind	0.9D + 1.6W 105 mph Wind at 90° From Face
Wind Load Factor: 1.60	Wind Importance Factor: 1.00
Dead Load Factor: 0.90	
Ice Dead Load Factor: 0.00	Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Linear Area (sqft)	Ice Linear Area (sqft)	Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
1	2.3	20.39	0.000	2.64	0.00	0.37	2.12	0.85	1.00	0.00	1.70	11.86	0.00	309.2	0.0	100.16	274.79	374.95
2	12.3	20.39	0.000	8.65	0.00	0.18	2.67	0.85	1.00	0.00	5.03	39.70	0.00	1,008.2	0.0	372.75	919.94	1,292.70
3	30.0	23.56	0.000	11.17	0.00	0.18	2.68	0.85	1.00	0.00	6.49	51.56	0.00	1,305.0	0.0	557.15	1380.62	1,937.77
4	50.0	26.24	0.000	11.38	0.00	0.18	2.67	0.85	1.00	0.00	6.63	51.56	0.00	1,321.6	0.0	630.16	1537.38	2,167.53
5	70.0	28.17	0.500	11.38	0.00	0.19	2.64	0.85	1.00	0.00	7.06	51.56	0.00	1,347.4	0.0	713.85	1650.23	2,364.08
6	90.0	29.70	0.000	11.17	0.00	0.18	2.68	0.85	1.00	0.00	6.49	51.56	0.00	1,305.0	0.0	702.13	1739.89	2,442.02
7	110.0	30.98	0.000	11.17	0.00	0.18	2.68	0.85	1.00	0.00	6.49	51.56	0.00	1,305.0	0.0	732.43	1814.97	2,547.40
8	130.0	32.09	0.500	11.17	0.00	0.18	2.65	0.85	1.00	0.00	6.93	51.56	0.00	1,330.8	0.0	801.53	1879.94	2,681.47
9	150.0	33.07	0.000	11.01	0.00	0.18	2.68	0.85	1.00	0.00	6.40	51.56	0.00	1,279.2	0.0	772.00	1937.43	2,709.44
10	170.0	33.95	0.000	11.25	0.00	0.18	2.67	0.85	1.00	0.00	6.55	44.84	0.00	1,261.5	0.0	807.02	1765.80	2,572.81
11	187.5	34.66	0.500	8.30	0.00	0.19	2.64	0.85	1.00	0.00	5.27	10.65	0.00	790.7	0.0	655.72	431.65	1,087.37
														12,563.5	0.0			22,177.52

Section Forces

Structure: CT10013-A-SBA	Code: EIA/TIA-222-G	5/19/2021
Site Name: Griswold Glasgo	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi Normal Wind	1.2D + 1.0Di + 1.0Wi 50 mph Wind at Normal From Face
Wind Load Factor: 1.00	Wind Importance Factor: 1.00
Dead Load Factor: 1.20	
Ice Dead Load Factor: 1.00	Ice Importance Factor: 1.00

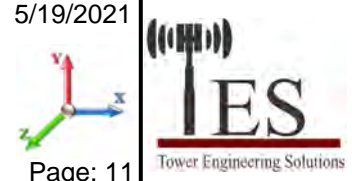
Sect Seq	Wind Height (ft)	Total Flat Area (psf) (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
											Linear Area (sqft)	Linear Area (sqft)						
1	2.3	4.62	0.000	7.40	4.76	0.92	1.96	1.00	1.00	1.15	7.38	13.28	4.41	886.4	474.2	56.88	7.25	64.14
2	12.3	4.62	0.000	27.00	18.35	0.52	1.88	1.00	1.00	1.36	18.85	45.52	17.44	3,275.5	1931.3	139.23	165.55	304.78
3	30.0	5.34	0.000	37.08	25.91	0.54	1.85	1.00	1.00	1.49	26.45	59.96	24.76	4,539.4	2799.4	222.25	242.76	465.01
4	50.0	5.95	0.000	39.43	28.05	0.58	1.82	1.00	1.00	1.56	28.88	60.48	26.06	4,795.6	3033.5	266.04	256.30	522.34
5	70.0	6.39	0.500	41.20	29.82	0.61	1.80	1.00	1.00	1.62	31.48	60.84	26.95	5,031.6	3235.0	307.64	258.13	565.78
6	90.0	6.73	0.000	40.09	28.92	0.58	1.82	1.00	1.00	1.66	29.53	61.11	27.64	4,973.3	3233.3	306.92	292.09	599.01
7	110.0	7.02	0.000	40.68	29.51	0.59	1.81	1.00	1.00	1.69	30.15	61.34	28.20	5,061.3	3321.3	325.93	301.65	627.58
8	130.0	7.28	0.500	42.04	30.86	0.62	1.80	1.00	1.00	1.72	32.35	61.53	28.67	5,240.1	3465.6	359.10	294.62	653.72
9	150.0	7.50	0.000	41.45	30.44	0.60	1.80	1.00	1.00	1.75	31.06	61.69	29.09	5,188.3	3482.7	356.78	315.68	672.46
10	170.0	7.70	0.000	42.95	31.70	0.62	1.79	1.00	1.00	1.77	32.78	55.12	7.36	4,817.8	3135.8	384.21	223.37	607.59
11	187.5	7.86	0.500	32.70	24.40	0.64	1.78	1.00	1.00	1.78	25.85	13.25	0.00	2,697.7	1643.5	308.02	47.43	355.45
														46,506.9	29755.6			5,437.84

Load Case: 1.2D + 1.0Di + 1.0Wi 60° Wind	1.2D + 1.0Di + 1.0Wi 50 mph Wind at 60° From Face
Wind Load Factor: 1.00	Wind Importance Factor: 1.00
Dead Load Factor: 1.20	
Ice Dead Load Factor: 1.00	Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	Total Flat Area (psf) (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
											Linear Area (sqft)	Linear Area (sqft)						
1	2.3	4.62	0.000	7.40	4.76	0.92	1.96	0.80	1.00	1.15	7.38	13.28	4.41	886.4	474.2	56.88	7.25	64.14
2	12.3	4.62	0.000	27.00	18.35	0.52	1.88	0.80	1.00	1.36	18.85	45.52	17.44	3,275.5	1931.3	139.23	165.55	304.78
3	30.0	5.34	0.000	37.08	25.91	0.54	1.85	0.80	1.00	1.49	26.45	59.96	24.76	4,539.4	2799.4	222.25	242.76	465.01
4	50.0	5.95	0.000	39.43	28.05	0.58	1.82	0.80	1.00	1.56	28.88	60.48	26.06	4,795.6	3033.5	266.04	256.30	522.34
5	70.0	6.39	0.500	41.20	29.82	0.61	1.80	0.80	1.00	1.62	31.38	60.84	26.95	5,031.6	3235.0	306.67	258.13	564.80
6	90.0	6.73	0.000	40.09	28.92	0.58	1.82	0.80	1.00	1.66	29.53	61.11	27.64	4,973.3	3233.3	306.92	292.09	599.01
7	110.0	7.02	0.000	40.68	29.51	0.59	1.81	0.80	1.00	1.69	30.15	61.34	28.20	5,061.3	3321.3	325.93	301.65	627.58
8	130.0	7.28	0.500	42.04	30.86	0.62	1.80	0.80	1.00	1.72	32.25	61.53	28.67	5,240.1	3465.6	357.99	294.62	652.61
9	150.0	7.50	0.000	41.45	30.44	0.60	1.80	0.80	1.00	1.75	31.06	61.69	29.09	5,188.3	3482.7	356.78	315.68	672.46
10	170.0	7.70	0.000	42.95	31.70	0.62	1.79	0.80	1.00	1.77	32.78	55.12	7.36	4,817.8	3135.8	384.21	223.37	607.59
11	187.5	7.86	0.500	32.70	24.40	0.64	1.78	0.80	1.00	1.78	25.75	13.25	0.00	2,697.7	1643.5	306.83	47.43	354.26
														46,506.9	29755.6			5,434.56

Section Forces

Structure: CT10013-A-SBA	Code: EIA/TIA-222-G	5/19/2021
Site Name: Griswold Glasgo	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II
		Page: 11



Load Case: 1.2D + 1.0Di + 1.0Wi 90° Wind	1.2D + 1.0Di + 1.0Wi 50 mph Wind at 90° From Face
Wind Load Factor: 1.00	Wind Importance Factor: 1.00
Dead Load Factor: 1.20	
Ice Dead Load Factor: 1.00	Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
												Linear Area (sqft)	Linear Area (sqft)					
1	2.3	4.62	0.000	7.40	4.76	0.92	1.96	0.85	1.00	1.15	7.38	13.28	4.41	886.4	474.2	56.88	7.25	64.14
2	12.3	4.62	0.000	27.00	18.35	0.52	1.88	0.85	1.00	1.36	18.85	45.52	17.44	3,275.5	1931.3	139.23	165.55	304.78
3	30.0	5.34	0.000	37.08	25.91	0.54	1.85	0.85	1.00	1.49	26.45	59.96	24.76	4,539.4	2799.4	222.25	242.76	465.01
4	50.0	5.95	0.000	39.43	28.05	0.58	1.82	0.85	1.00	1.56	28.88	60.48	26.06	4,795.6	3033.5	266.04	256.30	522.34
5	70.0	6.39	0.500	41.20	29.82	0.61	1.80	0.85	1.00	1.62	31.41	60.84	26.95	5,031.6	3235.0	306.91	258.13	565.04
6	90.0	6.73	0.000	40.09	28.92	0.58	1.82	0.85	1.00	1.66	29.53	61.11	27.64	4,973.3	3233.3	306.92	292.09	599.01
7	110.0	7.02	0.000	40.68	29.51	0.59	1.81	0.85	1.00	1.69	30.15	61.34	28.20	5,061.3	3321.3	325.93	301.65	627.58
8	130.0	7.28	0.500	42.04	30.86	0.62	1.80	0.85	1.00	1.72	32.27	61.53	28.67	5,240.1	3465.6	358.27	294.62	652.89
9	150.0	7.50	0.000	41.45	30.44	0.60	1.80	0.85	1.00	1.75	31.06	61.69	29.09	5,188.3	3482.7	356.78	315.68	672.46
10	170.0	7.70	0.000	42.95	31.70	0.62	1.79	0.85	1.00	1.77	32.78	55.12	7.36	4,817.8	3135.8	384.21	223.37	607.59
11	187.5	7.86	0.500	32.70	24.40	0.64	1.78	0.85	1.00	1.78	25.77	13.25	0.00	2,697.7	1643.5	307.13	47.43	354.56
														46,506.9	29755.6			5,435.38

Load Case: 1.0D + 1.0W Normal Wind	1.0D + 1.0W 60 mph Wind at Normal To Face
Wind Load Factor: 1.00	Wind Importance Factor: 1.00
Dead Load Factor: 1.00	
Ice Dead Load Factor: 0.00	Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
												Linear Area (sqft)	Linear Area (sqft)					
1	2.3	6.66	0.000	2.64	0.00	0.37	2.12	1.00	1.00	0.00	1.70	11.86	0.00	343.5	0.0	20.44	56.08	76.52
2	12.3	6.66	0.000	8.65	0.00	0.18	2.67	1.00	1.00	0.00	5.03	39.70	0.00	1,120.2	0.0	76.07	187.74	263.82
3	30.0	7.69	0.000	11.17	0.00	0.18	2.68	1.00	1.00	0.00	6.49	51.56	0.00	1,450.0	0.0	113.70	281.76	395.46
4	50.0	8.57	0.000	11.38	0.00	0.18	2.67	1.00	1.00	0.00	6.63	51.56	0.00	1,468.4	0.0	128.60	313.75	442.35
5	70.0	9.20	0.500	11.38	0.00	0.19	2.64	1.00	1.00	0.00	7.14	51.56	0.00	1,497.1	0.0	147.23	336.78	484.01
6	90.0	9.70	0.000	11.17	0.00	0.18	2.68	1.00	1.00	0.00	6.49	51.56	0.00	1,450.0	0.0	143.29	355.08	498.37
7	110.0	10.12	0.000	11.17	0.00	0.18	2.68	1.00	1.00	0.00	6.49	51.56	0.00	1,450.0	0.0	149.47	370.40	519.88
8	130.0	10.48	0.500	11.17	0.00	0.18	2.65	1.00	1.00	0.00	7.01	51.56	0.00	1,478.7	0.0	165.35	383.66	549.01
9	150.0	10.80	0.000	11.01	0.00	0.18	2.68	1.00	1.00	0.00	6.40	51.56	0.00	1,421.3	0.0	157.55	395.39	552.95
10	170.0	11.09	0.000	11.25	0.00	0.18	2.67	1.00	1.00	0.00	6.55	44.84	0.00	1,401.6	0.0	164.70	360.37	525.06
11	187.5	11.32	0.500	8.30	0.00	0.19	2.64	1.00	1.00	0.00	5.34	10.65	0.00	878.5	0.0	135.73	88.09	223.82
														13,959.4	0.0			4,531.25

Section Forces

Structure: CT10013-A-SBA	Code: EIA/TIA-222-G	5/19/2021
Site Name: Griswold Glasgo	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II
		Page: 12



Load Case: 1.0D + 1.0W 60° Wind	1.0D + 1.0W 60 mph Wind at 60° From Face
Wind Load Factor: 1.00	Wind Importance Factor: 1.00
Dead Load Factor: 1.00	
Ice Dead Load Factor: 0.00	Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
												Linear Area (sqft)	Linear Area (sqft)					
1	2.3	6.66	0.000	2.64	0.00	0.37	2.12	0.80	1.00	0.00	1.70	11.86	0.00	343.5	0.0	20.44	56.08	76.52
2	12.3	6.66	0.000	8.65	0.00	0.18	2.67	0.80	1.00	0.00	5.03	39.70	0.00	1,120.2	0.0	76.07	187.74	263.82
3	30.0	7.69	0.000	11.17	0.00	0.18	2.68	0.80	1.00	0.00	6.49	51.56	0.00	1,450.0	0.0	113.70	281.76	395.46
4	50.0	8.57	0.000	11.38	0.00	0.18	2.67	0.80	1.00	0.00	6.63	51.56	0.00	1,468.4	0.0	128.60	313.75	442.35
5	70.0	9.20	0.500	11.38	0.00	0.19	2.64	0.80	1.00	0.00	7.04	51.56	0.00	1,497.1	0.0	145.17	336.78	481.95
6	90.0	9.70	0.000	11.17	0.00	0.18	2.68	0.80	1.00	0.00	6.49	51.56	0.00	1,450.0	0.0	143.29	355.08	498.37
7	110.0	10.12	0.000	11.17	0.00	0.18	2.68	0.80	1.00	0.00	6.49	51.56	0.00	1,450.0	0.0	149.47	370.40	519.88
8	130.0	10.48	0.500	11.17	0.00	0.18	2.65	0.80	1.00	0.00	6.91	51.56	0.00	1,478.7	0.0	162.99	383.66	546.65
9	150.0	10.80	0.000	11.01	0.00	0.18	2.68	0.80	1.00	0.00	6.40	51.56	0.00	1,421.3	0.0	157.55	395.39	552.95
10	170.0	11.09	0.000	11.25	0.00	0.18	2.67	0.80	1.00	0.00	6.55	44.84	0.00	1,401.6	0.0	164.70	360.37	525.06
11	187.5	11.32	0.500	8.30	0.00	0.19	2.64	0.80	1.00	0.00	5.24	10.65	0.00	878.5	0.0	133.18	88.09	221.28
														13,959.4	0.0	4,524.28		

Load Case: 1.0D + 1.0W 90° Wind	1.0D + 1.0W 60 mph Wind at 90° From Face
Wind Load Factor: 1.00	Wind Importance Factor: 1.00
Dead Load Factor: 1.00	
Ice Dead Load Factor: 0.00	Ice Importance Factor: 1.00

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
												Linear Area (sqft)	Linear Area (sqft)					
1	2.3	6.66	0.000	2.64	0.00	0.37	2.12	0.85	1.00	0.00	1.70	11.86	0.00	343.5	0.0	20.44	56.08	76.52
2	12.3	6.66	0.000	8.65	0.00	0.18	2.67	0.85	1.00	0.00	5.03	39.70	0.00	1,120.2	0.0	76.07	187.74	263.82
3	30.0	7.69	0.000	11.17	0.00	0.18	2.68	0.85	1.00	0.00	6.49	51.56	0.00	1,450.0	0.0	113.70	281.76	395.46
4	50.0	8.57	0.000	11.38	0.00	0.18	2.67	0.85	1.00	0.00	6.63	51.56	0.00	1,468.4	0.0	128.60	313.75	442.35
5	70.0	9.20	0.500	11.38	0.00	0.19	2.64	0.85	1.00	0.00	7.06	51.56	0.00	1,497.1	0.0	145.68	336.78	482.46
6	90.0	9.70	0.000	11.17	0.00	0.18	2.68	0.85	1.00	0.00	6.49	51.56	0.00	1,450.0	0.0	143.29	355.08	498.37
7	110.0	10.12	0.000	11.17	0.00	0.18	2.68	0.85	1.00	0.00	6.49	51.56	0.00	1,450.0	0.0	149.47	370.40	519.88
8	130.0	10.48	0.500	11.17	0.00	0.18	2.65	0.85	1.00	0.00	6.93	51.56	0.00	1,478.7	0.0	163.58	383.66	547.24
9	150.0	10.80	0.000	11.01	0.00	0.18	2.68	0.85	1.00	0.00	6.40	51.56	0.00	1,421.3	0.0	157.55	395.39	552.95
10	170.0	11.09	0.000	11.25	0.00	0.18	2.67	0.85	1.00	0.00	6.55	44.84	0.00	1,401.6	0.0	164.70	360.37	525.06
11	187.5	11.32	0.500	8.30	0.00	0.19	2.64	0.85	1.00	0.00	5.27	10.65	0.00	878.5	0.0	133.82	88.09	221.91
														13,959.4	0.0	4,526.03		

Force/Stress Compression Summary

Structure: CT10013-A-SBA	Code: EIA/TIA-222-G	5/19/2021
Site Name: Griswold Glasgo	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II



LEG MEMBERS

Sect	Top Elev	Member	Force (kips)		Load Case	Len (ft)	Bracing %			Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls	
							X	Y	Z					
1	4.6	SOL - 2" SOLID	-56.37	1.2D + 1.0Di + 1.0Wi	60° Wind	2.12	100	100	100	50.80	50.00	117.06	48.2	Member X
2	20	SOL - 2" SOLID	-59.28	1.2D + 1.0Di + 1.0Wi	60° Wind	2.57	100	100	100	61.60	50.00	107.12	55.3	Member X
3	40	SOL - 2" SOLID	-59.17	1.2D + 1.0Di + 1.0Wi	60° Wind	2.42	100	100	100	58.00	50.00	110.55	53.5	Member X
4	60	SOL - 2" SOLID	-57.45	1.2D + 1.0Di + 1.0Wi	60° Wind	2.42	100	100	100	58.00	50.00	110.55	52.0	Member X
5	80	SOL - 2" SOLID	-51.80	1.2D + 1.0Di + 1.0Wi	Normal	2.42	100	100	100	58.00	50.00	110.55	46.9	Member X
6	100	SOL - 2" SOLID	-46.07	1.2D + 1.0Di + 1.0Wi	60° Wind	2.42	100	100	100	58.00	50.00	110.55	41.7	Member X
7	120	SOL - 2" SOLID	-47.49	1.2D + 1.6W	60° Wind	2.42	100	100	100	58.00	50.00	110.55	43.0	Member X
8	140	SOL - 2" SOLID	-45.91	1.2D + 1.0Di + 1.0Wi	60° Wind	2.42	100	100	100	58.00	50.00	110.55	41.5	Member X
9	160	SOL - 1 3/4" SOLID	-36.03	1.2D + 1.6W	60° Wind	2.42	100	100	100	66.28	50.00	78.50	45.9	Member X
10	180	SOL - 1 3/4" SOLID	-40.06	1.2D + 1.6W	60° Wind	2.42	100	100	100	66.28	50.00	78.50	51.0	Member X
11	195	SOL - 1 3/4" SOLID	-14.99	1.2D + 1.6W	60° Wind	2.39	100	100	100	65.52	50.00	79.08	19.0	Member X

HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)		Load Case	Len (ft)	Bracing %			Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
							X	Y	Z								
1	4.6									0.00	0	0					
2	20									0.00	0	0					
3	40									0.00	0	0					
4	60	SOL - 7/8" SOLID	-0.23	0.9D + 1.6W	Normal Wind	3.00	100	100	100	115.17	50.00	10.24	0	0			2 Member X
5	80	SOL - 7/8" SOLID	-0.38	0.9D + 1.6W	60° Wind	3.00	100	100	100	115.17	50.00	10.24	0	0			4 Member X
6	100									0.00	0	0					
7	120									0.00	0	0					
8	140	SOL - 7/8" SOLID	-0.11	0.9D + 1.6W	60° Wind	3.00	100	100	100	115.17	50.00	10.24	0	0			1 Member X
9	160	SOL - 1" SOLID	-0.26	0.9D + 1.6W	60° Wind	3.00	100	100	100	100.80	50.00	16.81	0	0			2 Member X
10	180	SOL - 1" SOLID	-2.48	0.9D + 1.6W	Normal Wind	3.00	100	100	100	100.80	50.00	16.81	0	0			15 Member X
11	195									0.00	0	0					

DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)		Load Case	Len (ft)	Bracing %			Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	Use %	Controls
							X	Y	Z								
1	4.6	SOL - 7/8" SOLID	-7.31	1.2D + 1.0Di + 1.0Wi	Normal	2.25	50	50	50	55.42	50.00	21.62	0	0			34 Member X
2	20	SOL - 7/8" SOLID	-1.18	1.2D + 1.6W	90° Wind	3.95	50	50	50	97.44	50.00	13.51	0	0			9 Member X
3	40	SOL - 7/8" SOLID	-0.89	1.2D + 1.6W	90° Wind	3.85	50	50	50	95.07	36.00	12.11	0	0			7 Member X
4	60	SOL - 7/8" SOLID	-1.84	1.2D + 1.6W	90° Wind	3.85	50	50	50	95.07	36.00	12.11	0	0			15 Member X
5	80	SOL - 7/8" SOLID	-2.30	1.2D + 1.6W	90° Wind	3.85	50	50	50	95.07	36.00	12.11	0	0			19 Member X
6	100	SOL - 7/8" SOLID	-2.15	1.2D + 1.6W	90° Wind	3.85	50	50	50	95.07	36.00	12.11	0	0			18 Member X
7	120	SOL - 7/8" SOLID	-1.11	1.2D + 1.6W	90° Wind	3.85	50	50	50	95.07	36.00	12.11	0	0			9 Member X
8	140	SOL - 7/8" SOLID	-1.48	1.2D + 1.6W	90° Wind	3.85	50	50	50	95.07	36.00	12.11	0	0			12 Member X
9	160	SOL - 1" SOLID	-1.58	1.2D + 1.6W	90° Wind	3.85	50	50	50	83.21	50.00	21.30	0	0			7 Member X
10	180	SOL - 1" SOLID	-4.83	0.9D + 1.6W	90° Wind	3.85	50	50	50	83.21	50.00	21.30	0	0			23 Member X
11	195	SOL - 1" SOLID	-1.36	1.2D + 1.6W	60° Wind	3.83	50	50	50	82.83	50.00	21.40	0	0			6 Member X

Force/Stress Tension Summary

Structure: CT10013-A-SBA	Code: EIA/TIA-222-G	5/19/2021
Site Name: Griswold Glasgow	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II



LEG MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls
1	4.6				0	0.00		
2	20				0	0.00		
3	40				0	0.00		
4	60				0	0.00		
5	80				0	0.00		
6	100				0	0.00		
7	120				0	0.00		
8	140				0	0.00		
9	160				0	0.00		
10	180				0	0.00		
11	195	SOL - 1 3/4" SOLID	0.45	0.9D + 1.6W 60° Wind	50	108.24	0.4	Member

HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
1	4.6	SOL - 7/8" SOLID	9.18	1.2D + 1.0Di + 1.0Wi Nc	50	27.06	0	0				33.9	Member
2	20	SOL - 7/8" SOLID	0.71	1.2D + 1.0Di + 1.0Wi Nc	50	27.06	0	0				2.6	Member
3	40	SOL - 7/8" SOLID	0.36	1.2D + 1.0Di + 1.0Wi 6C	50	27.06	0	0				1.3	Member
4	60	SOL - 7/8" SOLID	0.80	1.2D + 1.6W 60° Wind	50	27.06	0	0				3.0	Member
5	80	SOL - 7/8" SOLID	0.91	1.2D + 1.6W Normal Wi	50	27.06	0	0				3.4	Member
6	100	SOL - 7/8" SOLID	0.70	1.2D + 1.6W Normal Wi	50	27.06	0	0				2.6	Member
7	120	SOL - 7/8" SOLID	0.30	1.2D + 1.0Di + 1.0Wi Nc	50	27.06	0	0				1.1	Member
8	140	SOL - 7/8" SOLID	0.59	1.2D + 1.6W Normal Wi	50	27.06	0	0				2.2	Member
9	160	SOL - 1" SOLID	0.45	1.2D + 1.6W Normal Wi	50	35.34	0	0				1.3	Member
10	180	SOL - 1" SOLID	2.81	1.2D + 1.6W 60° Wind	50	35.34	0	0				7.9	Member
11	195	SOL - 1" SOLID	0.32	0.9D + 1.6W Normal Wi	50	35.34	0	0				0.9	Member

DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
1	4.6	SOL - 7/8" SOLID	0.00		50	0.00	0	0					
2	20	SOL - 7/8" SOLID	2.34	1.2D + 1.6W 90° Wind	50	27.06	0	0				8.7	Member
3	40	SOL - 7/8" SOLID	0.69	1.2D + 1.6W 90° Wind	36	19.48	0	0				3.5	Member
4	60	SOL - 7/8" SOLID	1.33	1.2D + 1.6W 90° Wind	36	19.48	0	0				6.8	Member
5	80	SOL - 7/8" SOLID	2.31	1.2D + 1.6W 90° Wind	36	19.48	0	0				11.9	Member
6	100	SOL - 7/8" SOLID	1.94	1.2D + 1.6W 90° Wind	36	19.48	0	0				10.0	Member
7	120	SOL - 7/8" SOLID	0.88	1.2D + 1.6W 90° Wind	36	19.48	0	0				4.5	Member
8	140	SOL - 7/8" SOLID	1.35	0.9D + 1.6W 90° Wind	36	19.48	0	0				6.9	Member
9	160	SOL - 1" SOLID	1.55	0.9D + 1.6W 90° Wind	50	35.34	0	0				4.4	Member
10	180	SOL - 1" SOLID	5.31	0.9D + 1.6W 90° Wind	50	35.34	0	0				15.0	Member
11	195	SOL - 1" SOLID	1.30	0.9D + 1.6W 60° Wind	50	35.34	0	0				3.7	Member

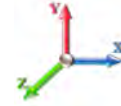
Support Forces Summary

Structure: CT10013-A-SBA
Site Name: Griswold Glasgo
Height: 195.00 (ft)
Base Elev: 0.000 (ft)
Gh: 0.85

Topography: 1

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

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Load Case	Node	FX (kips)	FY (kips)	FZ (kips)	(-) = Uplift (+) = Down
<hr/>					
1.2D + 1.6W Normal Wind	1	0.00	116.36	-2.22	
	A1	0.00	-7.14	4.53	
	A1b	31.81	-40.62	-20.05	
	A1a	-31.81	-40.62	-20.05	
<hr/>					
1.2D + 1.6W 60° Wind	1	-1.95	114.44	-1.12	
	A1	-1.37	-17.86	14.39	
	A1b	11.78	-17.86	-8.39	
	A1a	-41.18	-51.30	-23.77	
<hr/>					
1.2D + 1.6W 90° Wind	1	-2.24	116.08	-0.02	
	A1	-1.72	-29.46	26.24	
	A1b	5.84	-10.09	-4.16	
	A1a	-39.76	-48.82	-22.07	
<hr/>					
0.9D + 1.6W Normal Wind	1	0.00	110.53	-2.26	
	A1	0.00	-7.21	4.58	
	A1b	31.83	-40.67	-20.06	
	A1a	-31.83	-40.67	-20.06	
<hr/>					
0.9D + 1.6W 60° Wind	1	-1.97	108.75	-1.14	
	A1	-1.37	-17.97	14.48	
	A1b	11.86	-17.97	-8.43	
	A1a	-41.24	-51.40	-23.81	
<hr/>					
0.9D + 1.6W 90° Wind	1	-2.27	110.30	-0.01	
	A1	-1.72	-29.54	26.29	
	A1b	5.90	-10.18	-4.20	
	A1a	-39.79	-48.89	-22.09	
<hr/>					
1.2D + 1.0Di + 1.0Wi Normal Wind	1	0.00	165.98	-0.51	
	A1	0.00	-21.88	20.51	
	A1b	26.17	-31.59	-16.28	
	A1a	-26.17	-31.59	-16.28	
<hr/>					
1.2D + 1.0Di + 1.0Wi 60° Wind	1	-0.41	165.32	-0.23	
	A1	-1.02	-25.03	23.69	
	A1b	20.01	-25.03	-12.72	
	A1a	-29.45	-34.75	-17.00	
<hr/>					
1.2D + 1.0Di + 1.0Wi 90° Wind	1	-0.49	165.62	0.03	
	A1	-1.24	-28.30	27.23	
	A1b	18.18	-22.69	-11.09	
	A1a	-29.00	-33.91	-16.16	
<hr/>					
1.0D + 1.0W Normal Wind	1	0.00	84.79	-0.50	
	A1	0.00	-15.85	13.82	
	A1b	17.57	-22.60	-10.47	
	A1a	-17.57	-22.60	-10.47	
<hr/>					
1.0D + 1.0W 60° Wind	1	-0.43	84.72	-0.25	
	A1	-0.28	-18.12	16.00	
	A1b	13.72	-18.12	-8.24	
	A1a	-19.59	-24.85	-11.31	
<hr/>					

1.0D + 1.0W 90° Wind	1	-0.50	84.75	0.00
	A1	-0.34	-20.35	18.22
	A1b	12.40	-16.46	-7.32
	A1a	-19.16	-24.24	-10.90

Max Reactions (kips)	Base	Anchor 1
Vertical	165.98	51.40
Horizontal	2.27	47.62

Cable Forces Summary

Structure: CT10013-A-SBA	Code: EIA/TIA-222-G	5/19/2021
Site Name: Griswold Glasgo	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II



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Load Case	Elevation (ft)	Cable	Node 1	Node 2	Allow Tension (kips)	Applied Tension (kips)	Use %
1.2D + 1.6W Normal Wind	75.17	11/16 BS	A1	35	34.80	0.17	0
			A1b	35a	34.80	12.25	35
			A1a	35b	34.80	12.25	35
	140.00	3/4 BS	A1	64	40.80	1.20	3
			A1b	64a	40.80	12.61	31
			A1a	64b	40.80	12.61	31
			A1	T3	40.80	2.38	6
			A1a	T3b	40.80	11.48	28
			A1b	T3a	40.80	10.19	25
	170.33		A1b	T3	40.80	11.48	28
			A1a	T3a	40.80	10.19	25
			A1	T3b	40.80	2.38	6
			A1	86	40.80	3.27	8
			A1b	86a	40.80	10.35	25
			A1a	86b	40.80	10.35	25
1.2D + 1.6W 60° Wind	75.17	11/16 BS	A1	35	34.80	3.02	9
			A1b	35a	34.80	3.02	9
			A1a	35b	34.80	15.06	43
	140.00	3/4 BS	A1	64	40.80	4.40	11
			A1b	64a	40.80	4.40	11
			A1a	64b	40.80	16.35	40
			A1	T3	40.80	5.63	14
			A1a	T3b	40.80	13.73	34
			A1b	T3a	40.80	5.06	12
	170.33		A1b	T3	40.80	5.63	14
			A1a	T3a	40.80	13.73	34
			A1	T3b	40.80	5.06	12
			A1	86	40.80	6.00	15
			A1b	86a	40.80	6.00	15
			A1a	86b	40.80	12.74	31
1.2D + 1.6W 90° Wind	75.17	11/16 BS	A1	35	34.80	7.89	23
			A1b	35a	34.80	0.85	2
			A1a	35b	34.80	14.84	43
	140.00	3/4 BS	A1	64	40.80	8.46	21
			A1b	64a	40.80	2.03	5
			A1a	64b	40.80	15.55	38
			A1	T3	40.80	8.72	21
			A1a	T3b	40.80	12.56	31
			A1b	T3a	40.80	3.10	8
	170.33		A1b	T3	40.80	3.33	8
			A1a	T3a	40.80	13.36	33
			A1	T3b	40.80	7.54	18
			A1	86	40.80	8.24	20
			A1b	86a	40.80	4.09	10
			A1a	86b	40.80	12.05	30
0.9D + 1.6W Normal Wind	75.17	11/16 BS	A1	35	34.80	0.17	0
			A1b	35a	34.80	12.21	35
			A1a	35b	34.80	12.21	35
	140.00	3/4 BS	A1	64	40.80	1.21	3
			A1b	64a	40.80	12.62	31
			A1a	64b	40.80	12.62	31
			A1	T3	40.80	2.40	6
			A1a	T3b	40.80	11.51	28

0.9D + 1.6W Normal Wind	170.33	3/4 BS	A1b	T3a	40.80	10.22	25
			A1b	T3	40.80	11.51	28
			A1a	T3a	40.80	10.22	25
			A1	T3b	40.80	2.40	6
189.56			A1	86	40.80	3.30	8
			A1b	86a	40.80	10.38	25
			A1a	86b	40.80	10.38	25
			A1	35	34.80	3.03	9
0.9D + 1.6W 60° Wind	75.17	11/16 BS	A1b	35a	34.80	3.03	9
			A1a	35b	34.80	15.05	43
			A1	64	40.80	4.43	11
			A1b	64a	40.80	4.43	11
140.00	3/4 BS		A1a	64b	40.80	16.38	40
			A1	T3	40.80	5.67	14
			A1a	T3b	40.80	13.77	34
			A1b	T3a	40.80	5.09	12
170.33			A1b	T3	40.80	5.67	14
			A1a	T3a	40.80	13.77	34
			A1	T3b	40.80	5.09	12
			A1	86	40.80	6.04	15
189.56			A1b	86a	40.80	6.04	15
			A1a	86b	40.80	12.77	31
			A1	35	34.80	7.87	23
			A1b	35a	34.80	0.85	2
0.9D + 1.6W 90° Wind	75.17	11/16 BS	A1a	35b	34.80	14.81	43
			A1	64	40.80	8.48	21
			A1b	64a	40.80	2.04	5
			A1a	64b	40.80	15.56	38
140.00	3/4 BS		A1	T3	40.80	8.75	21
			A1a	T3b	40.80	12.59	31
			A1b	T3a	40.80	3.12	8
			A1b	T3	40.80	3.36	8
170.33			A1a	T3a	40.80	13.39	33
			A1	T3b	40.80	7.57	19
			A1	86	40.80	8.27	20
			A1b	86a	40.80	4.12	10
189.56			A1a	86b	40.80	12.08	30
			A1	35	34.80	6.18	18
			A1b	35a	34.80	9.34	27
			A1a	35b	34.80	9.34	27
1.2D + 1.0Di + 1.0Wi Normal Wind	75.17	11/16 BS	A1	64	40.80	6.83	17
			A1b	64a	40.80	10.11	25
			A1a	64b	40.80	10.11	25
			A1	T3	40.80	7.24	18
140.00	3/4 BS		A1a	T3b	40.80	10.08	25
			A1b	T3a	40.80	9.69	24
			A1b	T3	40.80	10.08	25
			A1a	T3a	40.80	9.69	24
170.33			A1	T3b	40.80	7.24	18
			A1	86	40.80	7.59	19
			A1b	86a	40.80	10.09	25
			A1a	86b	40.80	10.09	25
189.56			A1	35	34.80	7.12	20
			A1b	35a	34.80	7.12	20
			A1a	35b	34.80	10.27	30
			A1	64	40.80	7.87	19
140.00	3/4 BS		A1b	64a	40.80	7.87	19
			A1a	64b	40.80	11.18	27
			A1	T3	40.80	8.32	20
			A1a	T3b	40.80	10.75	26
170.33			A1b	T3a	40.80	7.87	19
			A1b	T3	40.80	8.32	20
			A1a	T3a	40.80	10.75	26
			A1	T3b	40.80	7.87	19
189.56			A1	86	40.80	8.41	21
			A1b	86a	40.80	8.41	21

1.2D + 1.0Di + 1.0Wi 60° Wind	189.56	3/4 BS	A1a	86b	40.80	10.89	27
1.2D + 1.0Di + 1.0Wi 90° Wind	75.17	11/16 BS	A1	35	34.80	8.22	24
			A1b	35a	34.80	6.39	18
			A1a	35b	34.80	10.04	29
140.00	3/4 BS	A1	64	40.80	8.99	22	
		A1b	64a	40.80	7.09	17	
170.33		A1a	64b	40.80	10.90	27	
		A1	T3	40.80	9.24	23	
		A1a	T3b	40.80	10.43	26	
		A1b	T3a	40.80	7.35	18	
		A1b	T3	40.80	7.57	19	
		A1a	T3a	40.80	10.61	26	
		A1	T3b	40.80	8.73	21	
189.56		A1	86	40.80	9.25	23	
		A1b	86a	40.80	7.81	19	
		A1a	86b	40.80	10.67	26	
1.0D + 1.0W Normal Wind	75.17	11/16 BS	A1	35	34.80	3.83	11
			A1b	35a	34.80	6.17	18
			A1a	35b	34.80	6.17	18
140.00	3/4 BS	A1	64	40.80	4.28	10	
		A1b	64a	40.80	6.66	16	
170.33		A1a	64b	40.80	6.66	16	
		A1	T3	40.80	4.60	11	
		A1a	T3b	40.80	6.41	16	
		A1b	T3a	40.80	6.20	15	
		A1b	T3	40.80	6.41	16	
		A1a	T3a	40.80	6.20	15	
		A1	T3b	40.80	4.60	11	
189.56		A1	86	40.80	4.88	12	
		A1b	86a	40.80	6.29	15	
		A1a	86b	40.80	6.29	15	
1.0D + 1.0W 60° Wind	75.17	11/16 BS	A1	35	34.80	4.59	13
		A1b	35a	34.80	4.59	13	
		A1a	35b	34.80	6.94	20	
140.00	3/4 BS	A1	64	40.80	5.08	12	
		A1b	64a	40.80	5.08	12	
170.33		A1a	64b	40.80	7.45	18	
		A1	T3	40.80	5.29	13	
		A1a	T3b	40.80	6.87	17	
		A1b	T3a	40.80	5.06	12	
		A1b	T3	40.80	5.29	13	
		A1a	T3a	40.80	6.87	17	
		A1	T3b	40.80	5.06	12	
189.56		A1	86	40.80	5.35	13	
		A1b	86a	40.80	5.35	13	
		A1a	86b	40.80	6.76	17	
1.0D + 1.0W 90° Wind	75.17	11/16 BS	A1	35	34.80	5.38	15
		A1b	35a	34.80	4.03	12	
		A1a	35b	34.80	6.73	19	
140.00	3/4 BS	A1	64	40.80	5.87	14	
		A1b	64a	40.80	4.49	11	
170.33		A1a	64b	40.80	7.24	18	
		A1	T3	40.80	5.87	14	
		A1a	T3b	40.80	6.67	16	
		A1b	T3a	40.80	4.69	12	
		A1b	T3	40.80	4.82	12	
		A1a	T3a	40.80	6.78	17	
		A1	T3b	40.80	5.61	14	
189.56		A1	86	40.80	5.82	14	
		A1b	86a	40.80	5.00	12	
		A1a	86b	40.80	6.63	16	

Analysis Summary

Structure: CT10013-A-SBA	Code: EIA/TIA-222-G	5/19/2021
Site Name: Griswold Glasgo	Exposure: C	
Height: 195.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 0.85	Topography: 1	Struct Class: II
		Page: 20



Max Reactions

Base:	165.98 (Vertical)	2.27 (Horizontal)
Anchor 1:	51.40 (Vertical)	47.62 (Horizontal)

Max Usages

Max Leg: 55.3% (1.2D + 1.0Di + 1.0Wi 60° Wind - Sect 2)
 Max Diag: 33.8% (1.2D + 1.0Di + 1.0Wi Normal Wind - Sect 1)
 Max Horiz: 33.9% (1.2D + 1.0Di + 1.0Wi Normal Wind - Sect 1)
 Max Cable: 43.3% (1.2D + 1.6W 60° Wind) - Elev: 75 ft

Max Deflection, Twist and Sway

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
0.9D + 1.6W 105 mph Wind at 60° From Face	165.50	0.4073	0.0014	0.0748
	184.78	0.3750	0.0017	0.1086
0.9D + 1.6W 105 mph Wind at 90° From Face	165.50	0.4349	0.0629	0.1827
	184.78	0.3837	0.0590	0.1885
0.9D + 1.6W 105 mph Wind at Normal To Face	165.50	0.4523	0.0018	0.2184
	184.78	0.3831	0.0015	0.2229
1.0D + 1.0W 60 mph Wind at 60° From Face	165.50	0.0554	0.0001	0.0279
	184.78	0.0461	0.0003	0.0305
1.0D + 1.0W 60 mph Wind at 90° From Face	165.50	0.0508	0.0012	0.0400
	184.78	0.0409	0.0031	0.0342
1.0D + 1.0W 60 mph Wind at Normal To Face	165.50	0.0462	0.0001	0.0454
	184.78	0.0348	0.0003	0.0368
1.2D + 1.0Di + 1.0Wi 50 mph Wind at 60° From Face	165.50	0.0656	0.0004	0.0762
	184.78	0.0395	0.0007	0.0819
1.2D + 1.0Di + 1.0Wi 50 mph Wind at 90° From Face	165.50	0.0484	0.0097	0.1246
	184.78	0.0444	0.0185	0.1139
1.2D + 1.0Di + 1.0Wi 50 mph Wind at Normal From Face	165.50	0.0038	-0.0004	0.1511
	184.78	0.0411	-0.0006	0.1385
1.2D + 1.6W 105 mph Wind at 60° From Face	165.50	0.4090	0.0014	0.0744
	184.78	0.3766	0.0017	0.1087
1.2D + 1.6W 105 mph Wind at 90° From Face	165.50	0.4379	0.0641	0.1843
	184.78	0.3863	0.0600	0.1897
1.2D + 1.6W 105 mph Wind at Normal To Face	165.50	0.4563	0.0018	0.2200
	184.78	0.3866	-0.0015	0.2241



Guyed Tower Base Design

Date
5/19/2021

Customer Name:	SBA Communications Corp	EIA/TIA Standard:	EIA-222-G
Site Name:		Structure Height (Ft.):	195
Site Nmber:	CT10013-A-SBA	Engineer Name:	D. Zhou
Engr. Number:	107688	Engineer Login ID:	

Foundation Info Obtained from:

Drawings/Calculations

Structure Type:

Guyed Tower

Analysis or Design?

Analysis

Base Reactions (Factored):

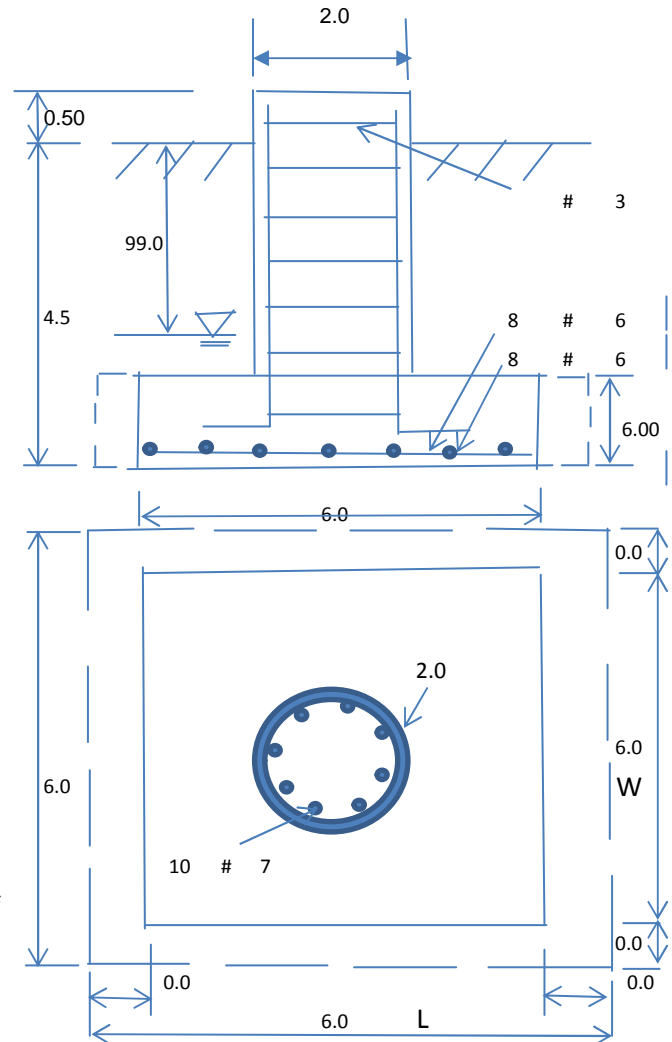
Axial Load (Kips):	166.0	Shear Force (Kips):	2.3
Uplift Force (Kips):	0.0	Moment (Kips-ft):	
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	2.0	Depth of Base BG (ft.):	4.5
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	6.00
Length of Pad (ft.):	6	Width of Pad (ft.):	6
Final Length of pad (ft)	6.0	Final width of pad (ft):	6.0

Material Properties and Reabr Info:

Concrete Strength (psi):	4500	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	36	
Vertical Rebar Size #:	7	Tie / Stirrup Size #:	3	
Qty. of Vertical Rebars:	10	Tie Spacing (in):	6.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	6	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	8	Qty. of Rebar in Pad (W):	8	



Soil Design Parameters:

Soil Unit Weight (pcf):	115.0	Soil Buoyant Weight:	50.0	Pcf		
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	30000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	30
					Angle from Bottm of Pad:	25

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.6
Total Dry Soil Volume (cu. Ft.):	-49.29	Total Dry Soil Weight (Kips):	-5.67
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	-5.67	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	212.86	Total Dry Concrete Weight (Kips):	31.93
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	31.93	Total Vertical Load on Base (Kips):	192.24

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	5011.1	<	Allowable Factored Soil Bearing (psf):	18000	0.28	OK!
Calculated Foundation Allowable Axail Capacity (Kips):	648.0	>	Design Factored Axial Load (Kips):	175	0.27	OK!

Load/
Capacity
Ratio

Check the capacities of Reinforcing Concrete:

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

Load/
Capacity
Ratio

(1) Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):	0.60	Tie / Stirrup Area (sq. in./each):	0.11		
Calculated Moment Capacity (Mn,Kips-Ft):	227.0	> Design Factored Moment (Mu, Kips-Ft)	-2.3	-0.01	OK!
Calculated Shear Capacity (Kips):	70.9	> Design Factored Shear (Kips):	2.3	0.03	OK!
Calculated Tension Capacity (Tn, Kips):	324.0	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	887.9	> Design Factored Axial Load (Pu Kips):	166.0	0.19	OK!
Moment & Axial Strength Combination(Pu/Pn+Mu/Mn):	0.18	OK!			
Pier Reinforcement Ratio:	0.013				

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Dir. Kips);	497.2	> One-Way Factored Shear (L-Dir Kips):	0.0	0.00	OK!
One-Way Design Shear Capacity (W-Dir. Kips):	497.2	> One-Way Factored Shear (W-Dir Kips)	0.0	0.00	OK!
Two-Way Design Shear Capacity (Kips):	4018.7	> Two-Way Factored Shear (Kips):	0.0	0.00	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0007	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0007	OK!
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	1080.8	> Moment at Bottom (L-Direct. K-Ft):	57.9	0.05	OK!
Lower Steel Pad Moment Capacity (W-Dir. Kips-ft):	1080.8	> Moment at Bottom (W-Dir. Kips-Ft):	57.9	0.05	OK!

EXHIBIT 8



Tower Engineering Solutions

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

Antenna Mount Analysis Report

Existing 195-Ft Guyed Tower

Customer Name: SBA Communications Corp

Customer Site Number: CT10013-A-SBA / Griswold Glasgo

Customer Site Name: Griswold Glasgo

Carrier Name: T-Mobile (App#: 117387, V#2)

Carrier Site ID / Name: CTNL082B / Griswold Glasgo

Site Location: 2172 Glasgo Road

Griswold, Connecticut

New London County

Latitude: 41.537366

Longitude: -71.873447

Analysis Result:

Max Structural Usage: 50.9% [Pass]

Report Prepared By: Osuba Gurung



NOTE: The proposed (3) Site Pro VFA12-HD mounts are not currently installed on the tower. The proposed mounts were assumed to be installed per the manufacturer's instructions, and it is assumed that they can be installed properly on the tower. TES cannot verify that the proposed mounts will fit properly and is not liable for any fit-up issues during installation.

Introduction

The purpose of this report is to summarize the analysis results on the (3) Proposed Sector Frames at 185.00' elevation to support the proposed antenna configuration. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Mount Drawings	Mount info by SBA, Site name: Griswold Glasgo, Dated 12/13/2017
Antenna Loading	SBA, Application #: 117387, v2, Dated 04/16/2021
Modification Drawings	N/A

Analysis Criteria

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

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

Operational Wind Speed: 60 mph +0" Radial ice

Standard/Codes: ANSI/TIA/EIA 222-G

Exposure Category: C

Structure Class: II

Topographic Category: 1

Crest Height (Ft): 0

The site is a Risk Category II structure per IBC Table 1604.5. This site does not support emergency communication equipment for first responders such as fire departments, police, hospitals, ambulance services or any of the facilities listed for Risk Categories III and IV. The scope of work detailed in this structural analysis does not include items that are a part of emergency service as the 911 or essential facility service of an emergency response system.

Mount Information

(3) Proposed Sector Frames [(3) Site Pro VFA12-HD] at 185.00' elevation

Final Antenna Configuration

- 3 RFS APXV18-209015-C
- 3 RFS APXVAALL24-43-U-NA20
- 3 EMS RR90-17-XXDP
- 3 Ericsson KRY 112 489/2*
- 6 Commscope CBC1923T-DS-43
- 3 Ericsson 4449 B71 + B85
- 3 Ericsson 4415 B66A
- 3 Kathrein 782 11056*

* Equipment to be flush mounted directly to the Face Horizontal. They are not included in the antenna placement diagrams.

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

Analysis Results

Our calculations have determined that under design wind load the proposed mounts will be structurally adequate to support the proposed antenna configuration. The maximum structural usage is 50.9%, which occurs in the mount pipe. The proposed equipment must be installed as stipulated in the Final Antenna Configuration section of this report. The analysis results are void if the proposed equipment is not installed in accordance with this report.

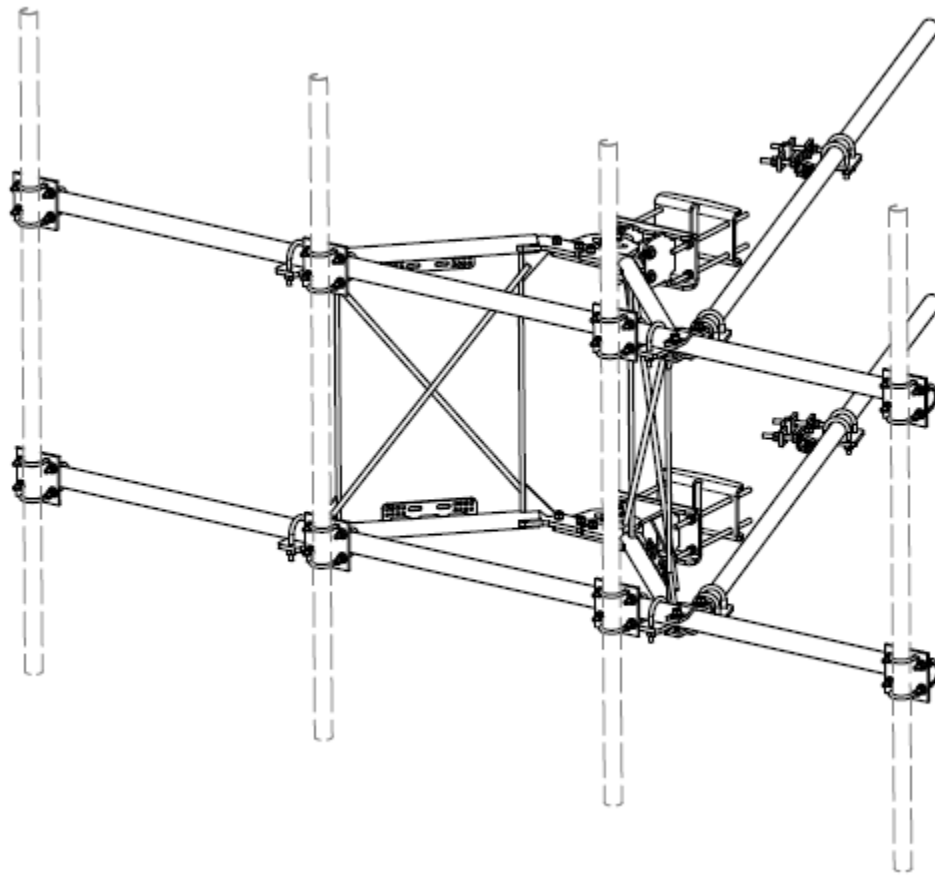
NOTE: The proposed (3) Site Pro VFA12-HD mounts are not currently installed on the tower. The proposed mounts were assumed to be installed per the manufacturer's instructions, and it is assumed that they can be installed properly on the tower. TES cannot verify that the proposed mounts will fit properly and is not liable for any fit-up issues during installation.

Attachments

1. Mount Drawings
2. Antenna Placement Diagram
3. Analysis Calculations

Standard Conditions

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



VFA12-HD

Structure: CT10013-A-SBA - Griswold Glasgo

Sector: A

4/26/2021

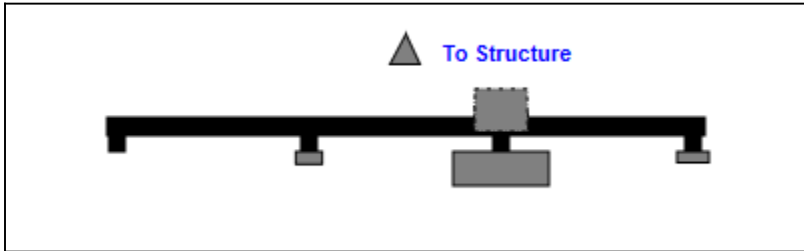
Structure Type: Guyed

Mount Elev: 185.00

Page: 1

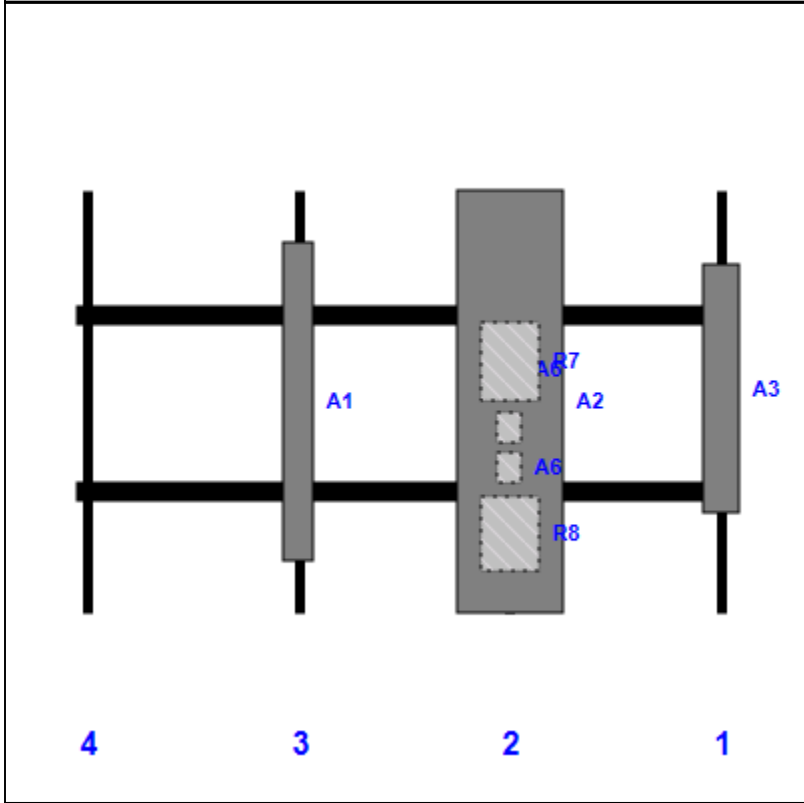


Plan View



Front View

Looking Toward Structure



Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A3	RR90-17-XXDP	56.00	8.00	147.00	1	a	Front	45.00			
A2	APXVAALL24-43-U-NA20	95.90	24.00	99.00	2	a	Front	48.00			
R7	4449 B71 + B85	17.90	13.10	99.00	2	a	Behind	39.00			
A6	CBC1923T-DS-43	6.90	5.50	99.00	2	b	Behind	54.00			
A6	CBC1923T-DS-43	6.90	5.50	99.00	2	c	Behind	63.00			
R8	4415 B66A	16.50	13.40	99.00	2	c	Behind	78.00			
A1	APXV18-209015-C	72.00	6.65	51.00	3	a	Front	48.00			
M14	KRY 112 489/2	11.00	6.10								Member
M17	782 11056	5.50	3.20								Member

Structure: CT10013-A-SBA - Griswold Glasgo

Sector: B

4/26/2021

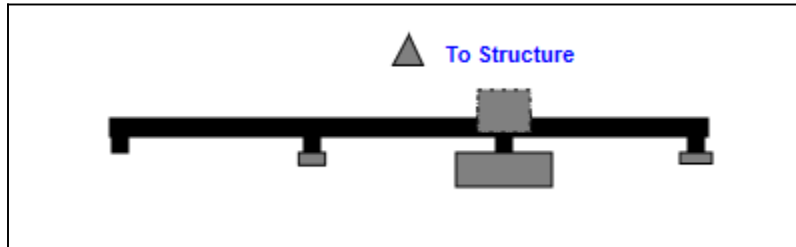
Structure Type: Guyed

Mount Elev: 185.00

Page: 2

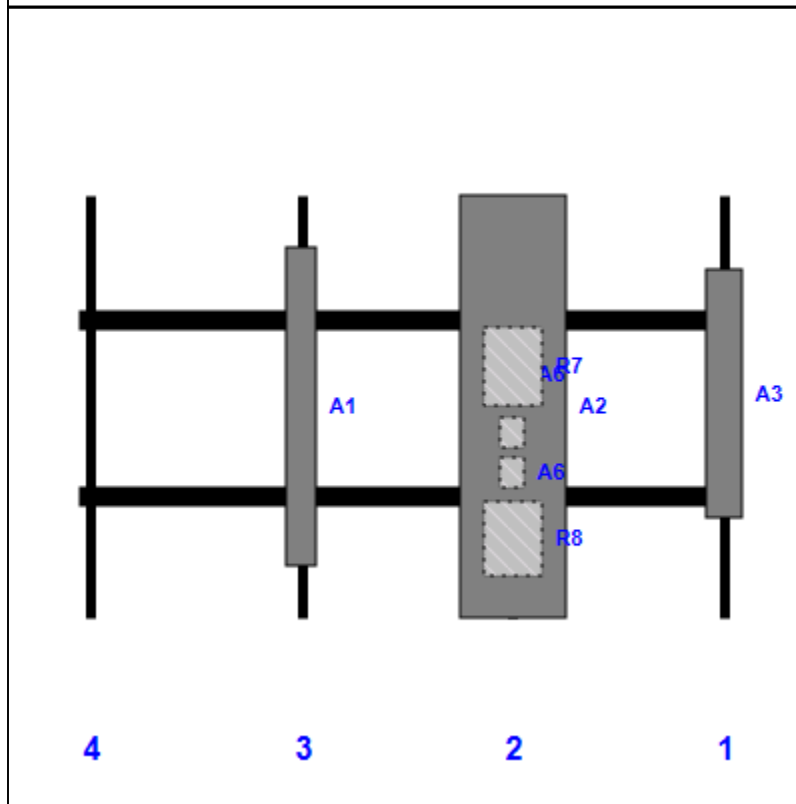


Plan View



Front View

Looking Toward Structure



Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A3	RR90-17-XXDP	56.00	8.00	147.00	1	a	Front	45.00			
A2	APXVAALL24-43-U-NA20	95.90	24.00	99.00	2	a	Front	48.00			
R7	4449 B71 + B85	17.90	13.10	99.00	2	a	Behind	39.00			
A6	CBC1923T-DS-43	6.90	5.50	99.00	2	b	Behind	54.00			
A6	CBC1923T-DS-43	6.90	5.50	99.00	2	c	Behind	63.00			
R8	4415 B66A	16.50	13.40	99.00	2	c	Behind	78.00			
A1	APXV18-209015-C	72.00	6.65	51.00	3	a	Front	48.00			

Structure: CT10013-A-SBA - Griswold Glasgo

Sector: C

4/26/2021

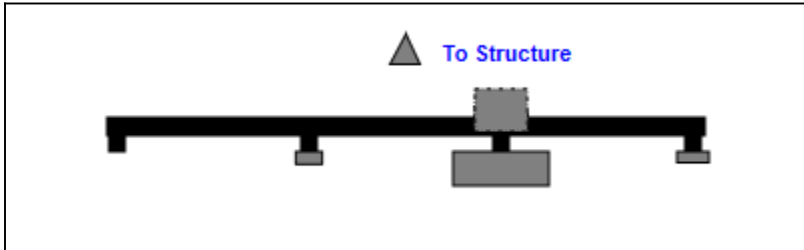
Structure Type: Guyed



Mount Elev: 185.00

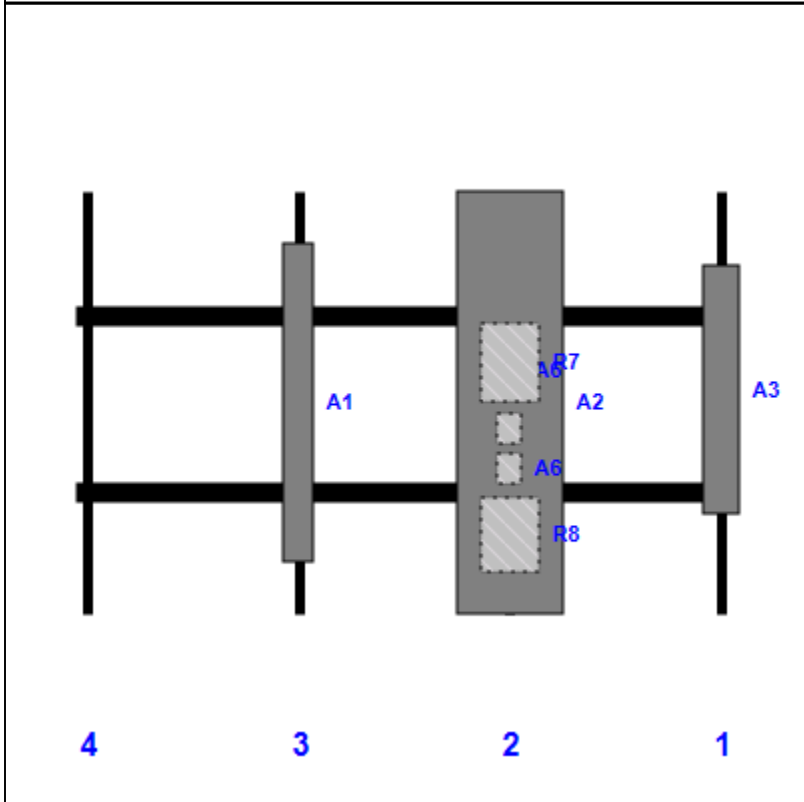
Page: 3

Plan View

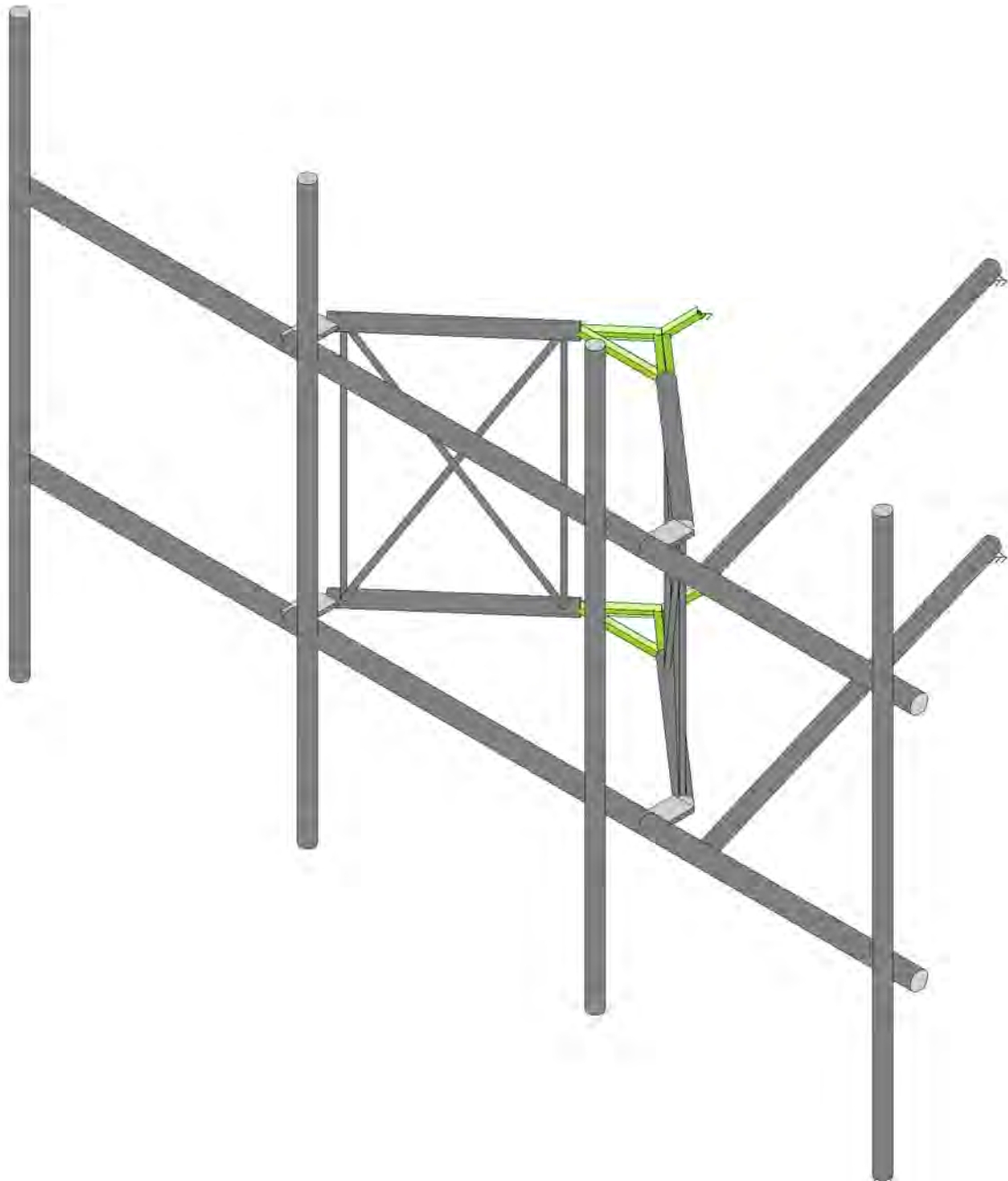
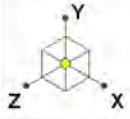


Front View

Looking Toward Structure



Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A3	RR90-17-XXDP	56.00	8.00	147.00	1	a	Front	45.00			
A2	APXVAALL24-43-U-NA20	95.90	24.00	99.00	2	a	Front	48.00			
R7	4449 B71 + B85	17.90	13.10	99.00	2	a	Behind	39.00			
A6	CBC1923T-DS-43	6.90	5.50	99.00	2	b	Behind	54.00			
A6	CBC1923T-DS-43	6.90	5.50	99.00	2	c	Behind	63.00			
R8	4415 B66A	16.50	13.40	99.00	2	c	Behind	78.00			
A1	APXV18-209015-C	72.00	6.65	51.00	3	a	Front	48.00			



Tower Engineering Solutio...

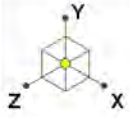
CT10013-A-SBA_MT_LOT_Loads Only_Sector A_G

SK - 1

Apr 26, 2021 at 2:34 PM

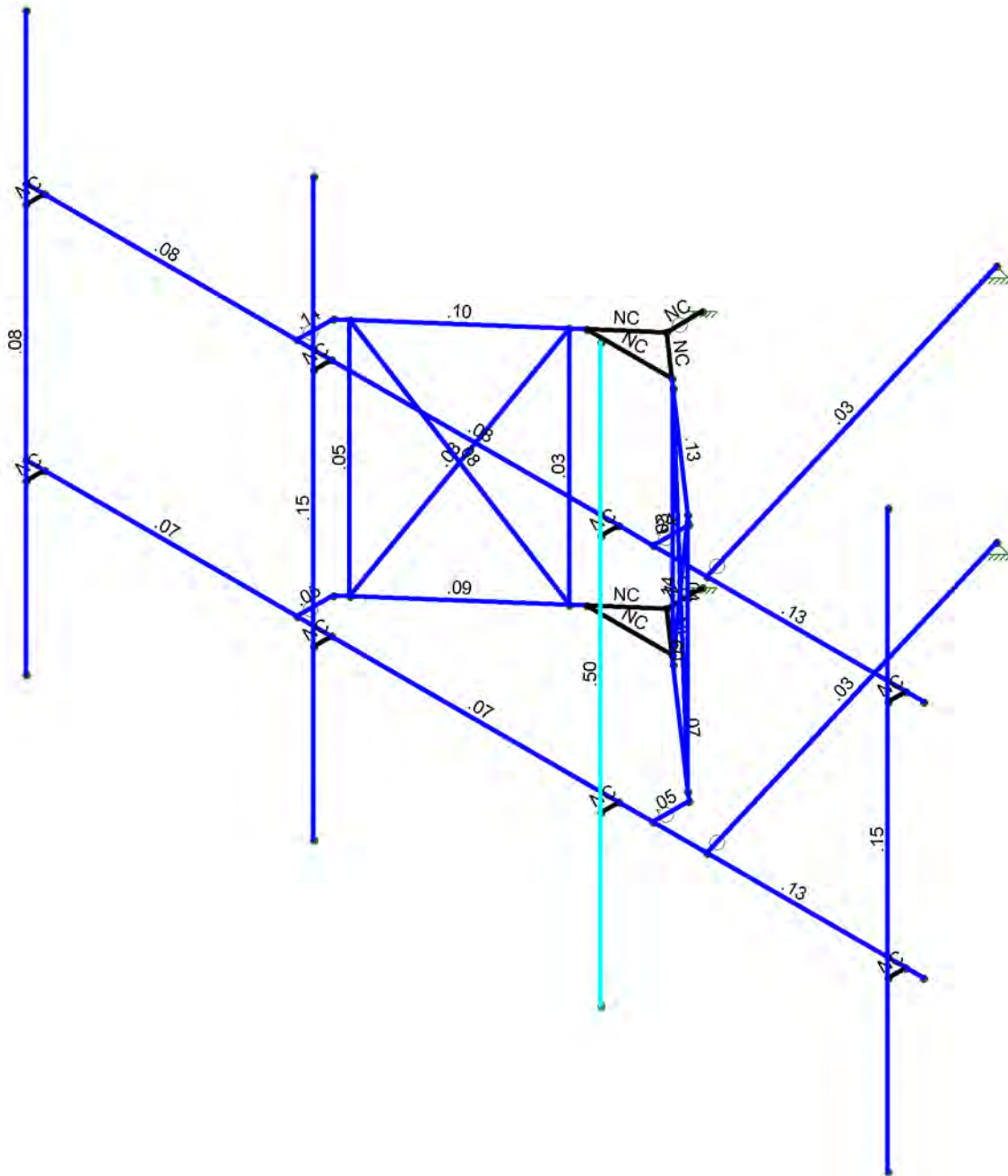
TES Project No. 106783

CT10013-A-SBA_106783_G_RISA_...



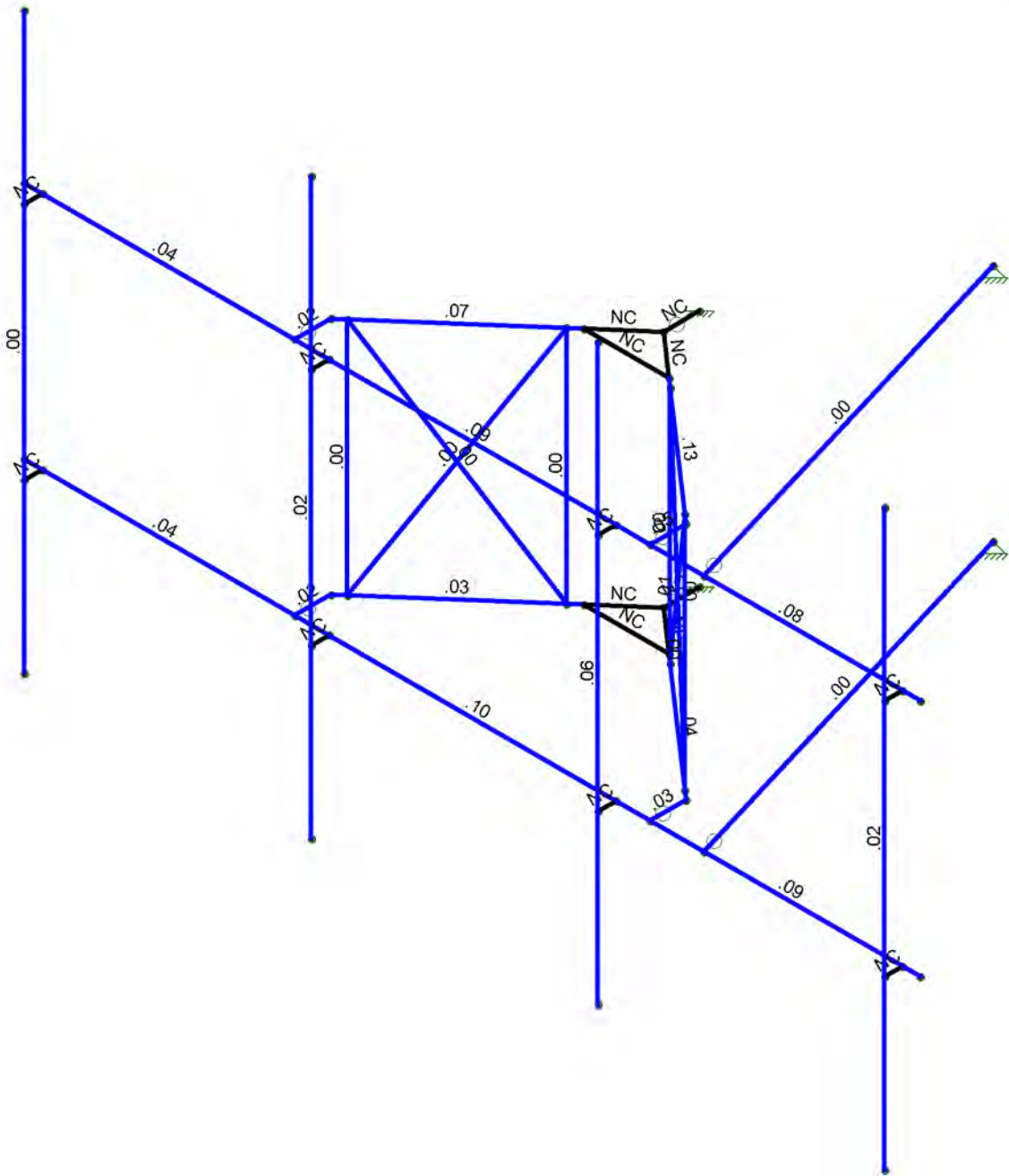
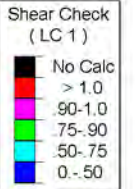
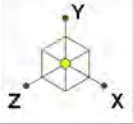
Code Check (LC 1)

Black	No Calc
Red	> 1.0
Magenta	.90-1.0
Green	.75-.90
Cyan	.50-.75
Blue	0-.50



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

Tower Engineering Solutio...	CT10013-A-SBA_MT_LOT_Loads Only_Sector A_G	SK - 2
TES Project No. 106783		Apr 26, 2021 at 2:34 PM
		CT10013-A-SBA_106783_G_RISA_...



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

Tower Engineering Solutio...

CT10013-A-SBA_MT_LOT_Loads Only_Sector A_G

SK - 3

Apr 26, 2021 at 2:35 PM

TES Project No. 106783

CT10013-A-SBA_106783_G_RISA_...

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EXHIBIT 9

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

T-Mobile Existing Facility

Site ID: CTNL082B

NL082/Wireless Solutions
2172 Glasgo Road
Griswold, Connecticut 06351

June 23, 2021

EBI Project Number: 6221003264

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	4.82%

June 23, 2021

T-Mobile

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

Emissions Analysis for Site: CTNL082B - NL082/Wireless Solutions

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **2172 Glasgo Road in Griswold, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

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

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

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

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

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 2172 Glasgo Road in Griswold, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower.

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

- 1) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 1 NR channel (600 MHz Band) was considered for each sector of the proposed installation. This Channel has a transmit power of 80 Watts.
- 3) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 4) 4 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 5) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 6) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

- 7) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 8) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 9) The antennas used in this modeling are the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector A, the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector B, the RFS APXVAALL24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 10) The antenna mounting height centerline of the proposed antennas is 185 feet above ground level (AGL).
- 11) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.
- 12) All calculations were done with respect to uncontrolled / general population threshold limits.

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	I	Antenna #:	I	Antenna #:	I
Make / Model:	RFS APXVAALL24_43- U-NA20	Make / Model:	RFS APXVAALL24_43- U-NA20	Make / Model:	RFS APXVAALL24_43- U-NA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz / 1900 MHz / 2100 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd / 15.45 dBd / 15.45 dBd / 16.45 dBd
Height (AGL):	185 feet	Height (AGL):	185 feet	Height (AGL):	185 feet
Channel Count:	13	Channel Count:	13	Channel Count:	13
Total TX Power (W):	560 Watts	Total TX Power (W):	560 Watts	Total TX Power (W):	560 Watts
ERP (W):	17,868.72	ERP (W):	17,868.72	ERP (W):	17,868.72
Antenna AI MPE %:	2.65%	Antenna BI MPE %:	2.65%	Antenna CI MPE %:	2.65%

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	2.65%
Sprint	2.17%
Site Total MPE % :	4.82%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	2.65%
T-Mobile Sector B Total:	2.65%
T-Mobile Sector C Total:	2.65%
Site Total MPE % :	
	4.82%

T-Mobile Maximum MPE Power Values (Sector A)							
T-Mobile Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
T-Mobile 600 MHz LTE	2	591.73	185.0	1.33	600 MHz LTE	400	0.33%
T-Mobile 600 MHz NR	1	1577.94	185.0	1.77	600 MHz NR	400	0.44%
T-Mobile 700 MHz LTE	2	695.22	185.0	1.56	700 MHz LTE	467	0.33%
T-Mobile 1900 MHz GSM	4	1052.26	185.0	4.72	1900 MHz GSM	1000	0.47%
T-Mobile 1900 MHz LTE	2	2104.51	185.0	4.72	1900 MHz LTE	1000	0.47%
T-Mobile 2100 MHz LTE	2	2649.42	185.0	5.95	2100 MHz LTE	1000	0.59%
						Total:	2.65%

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

Summary

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

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

T-Mobile Sector	Power Density Value (%)
Sector A:	2.65%
Sector B:	2.65%
Sector C:	2.65%
T-Mobile Maximum MPE % (Sector A):	2.65%
Site Total:	4.82%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **4.82%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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