STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Web Site: portal.ct.gov/csc

VIA ELECTRONIC MAIL

August 12, 2021

G. Scott Shepherd
Site Development Specialist II
SBA Communications
134 Flanders Rd., Suite 125
Westborough, MA 01581
gshepherd@sbasite.com

RE: **EM-T-MOBILE-163-210720** –T-Mobile notice of intent to modify an existing telecommunications facility located at 193 Windham Center Road, Windham, Connecticut.

Dear Mr. Shepherd:

The Connecticut Siting Council (Council) is in receipt of your correspondence of August 6, 2021 submitted in response to the Council's August 6, 2021 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

Melanie A. Bachman
Executive Director

MAB/CMW/laf

From: Glenn Shepherd <GShepherd@sbasite.com>
Sent: Friday, August 6, 2021 10:22 AM
To: Robidoux, Evan <Evan.Robidoux@ct.gov>
Cc: CSC-DL Siting Council <Siting.Council@ct.gov>
Subject: RE: [External] Council Incomplete Letter for EM-T-MOBILE-163-210720 (193 Windham Center Road, Windham)

All,

Please see the attached corrected Notice of intent to make exempt modifications: **193 Windham Center Road, Windham, CT,** which includes all the FedEx mailing/delivered receipts, which provide proof of mailing to all required recipients in accordance with Council's memoranda of June 22, 2017 and July 12, 2021.

Thanks,

G. Scott Shepherd
Site Development Specialist II

508.251.0720 Ext.3807 + **T**
508.366.2610 + F + **F**
508.868.6000 + C + **C**

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@sbasite.com

July 12, 2021

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

RE: Notice of Exempt Modification
193 Windham Center Rd., Windham, CT
Latitude: 41.690055
Longitude: -72.162536
Sprint, now a part of T-Mobile USA #: CTHA705A_Sprint Keep

Dear Ms. Bachman:

Sprint, now a part of T-Mobile USA, hereinafter referred to as "Sprint/T-Mobile" currently maintains six (6) antennas at the 167-foot level of the existing 180-foot Monopole Tower at 193 Windham Center Rd., Windham, CT. The 180-foot tower is owned by SBA Properties, LLC. The property is owned by the Town of Windham, CT. Sprint/T-Mobile now intends to remove the three (3) existing antennas and replace with three (3) new L700/L600/1900/2100 MHz antennas and install three (3) additional 2500MHz antennas.

The new antennas support 5G services and would be installed at the 167-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) RFS APXVTM14-C-I20 antennas (remove) – (3) RFS APX16DWVS-E-A20 2100MHz antenna (replace)
- (3) RFS APXVSPP18-C-A20 antennas (remove) – (3) RFS APXVAALL24_43-U-NA20 600/700/1900MHz antennas (replace)
- (1) Low Profile Platform (remove) – (1) Low profile Platform w/handrail kit (SitePro RMQP-4096-HK) – (Replace)
- (3) TD-RRH8x20-25 RRUs (remove) – (3) Ericsson 4424 B25 RRUs (replace)
- (3) Alcatel 1900 MHz RRU (remove) – (3) Ericsson 4449 B71 + B85 RRUs (replace)
- (3) Aclatrel 800 MHz RRUs (remove) – (3) Ericsson 4415 B66A RRUs (replace)
- (3) 1-1/4" Hybrid (remove) – (3) 1.99" Hybrid (replace)

Install New:

- (3) Ericsson AIR6449 B41 2500MHz antennas
- (4) RFS ACU-A20-N RETs

Existing Equipment to Remain:

- N/A

Entitlements:

- (1) 1-1/4" Hybrid
- (3) Alcatel 800 MHz Filter

GROUND

Install New:

- Purcell RAC24 cabinet
- (5) 2" RGS conduit
- Ericsson B160 Battery cabinet
- Ericsson 6160 Equipment cabinet
- Slackbox
- Breakers within existing power panel

Remain:

- 10' x 20' shelter
- (1) ½" coax for GPS
- Power panel
- Cable bridge

Remove:

- N/A

The telecommunications facility located at 193 Windham Center Rd., Windham, CT was granted a variance from Section 62.6.6a on setback requirements and Section 78.3.8 on maximum length in order to construct a cellular tower for lease by The Town of Windham on May 4, 2000. The Town of Windham later approved a declatory ruling for construction of a cell tower on May 11, 2000, and further approved the construction of a wireless telecommunications tower on June 15, 2000. There were no other stipulations set forth by the Town of Windham. 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 Hebron's Mayor, Thomas DeVivo, Building Official, Joe Smith. The property is owned by the Town of Hebron. (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@sbasite.com

Attachments

cc: Thomas DeVivo, Mayor / with attachments
Windham Town Hall, 979 Main St., Willimantic, CT 06226
Joe Smith, Building Official / with attachments
Windham Town Hall, 979 Main St., Willimantic, CT 06226

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 Windham 5/4/00, 5/11/00, 6/15/00
Exhibit 6	Construction Drawings	Chappell Engineering 4/21/21
Exhibit 7	Structural Analysis	TES 6/2/21
Exhibit 8	Mount Analysis	TES 5/17/21
Exhibit 8	EME Report	Centerline 6/29/21

EXHIBIT 1

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

EXHIBIT 2

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

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

FedEx

TRACK ANOTHER SHIPMENT

774232215993

ADD NICKNAME

Delivered
Thursday, July 15, 2021 at 12:42 pm

DELIVERED

Signed for by: T.TOM

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM

SBA COMMUNICATIONS CORPORATION
Rick Woods

134 Flanders Rd
Suite 125
WESTBOROUGH, MA US 01581
508-614-0389

TO

Melanie A. Bachman Exec. Dir
Connecticut Siting Council

Ten Franklin Square
NEW BRITAIN, CT US 06051
508-251-0720

Travel History

TIME ZONE
Local Scan Time

Thursday, July 15, 2021

12:42 PM	NEW BRITAIN, CT	Delivered
8:30 AM	WINDSOR LOCKS, CT	On FedEx vehicle for delivery
7:30 AM	WINDSOR LOCKS, CT	At local FedEx facility
5:18 AM	EAST GRANBY, CT	At destination sort facility
4:33 AM	NEWARK, NJ	Departed FedEx hub

Wednesday, July 14, 2021

11:30 PM	NEWARK, NJ	Arrived at FedEx hub
8:25 PM	FRAMINGHAM, MA	Left FedEx origin facility

5:35 PM	FRAMINGHAM, MA	Picked up

Monday, July 12, 2021

11:03 AM		Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBER
774232215993

SERVICE
FedEx Priority Overnight

WEIGHT
1 lbs / 0.45 kgs

DELIVERY ATTEMPTS
1

DELIVERED TO
Receptionist/Front Desk

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
1 lbs / 0.45 kgs

TERMS
Shipper

SHIPPER REFERENCE
10-56-92009-6089

PACKAGING
FedEx Envelope

SPECIAL HANDLING SECTION
Deliver Weekday

SHIP DATE
7/14/21

STANDARD TRANSIT
7/15/21 before 10:30 am

ACTUAL DELIVERY
7/15/21 at 12:42 pm

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

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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.

FedEx

TRACK ANOTHER SHIPMENT

774232254590

ADD NICKNAME

Delivered
Thursday, July 15, 2021 at 10:26 am

DELIVERED

Signed for by: J.POULIN

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM

SBA COMMUNICATIONS CORPORATION
Rick Woods

134 Flanders Rd
Suite 125
WESTBOROUGH, MA US 01581
508-614-0389

TO

Thomas DeVivo, Mayor
Windham Town Hall

979 Main St.
WILLIMANTIC, CT US 06226
508-251-0720

Travel History

TIME ZONE
Local Scan Time

Thursday, July 15, 2021

10:26 AM	WILLIMANTIC, CT	Delivered
9:10 AM	NORWICH, CT	On FedEx vehicle for delivery
8:18 AM	NORWICH, CT	At local FedEx facility
3:15 AM	NEWARK, NJ	Departed FedEx hub

Wednesday, July 14, 2021

11:30 PM	NEWARK, NJ	Arrived at FedEx hub
8:25 PM	FRAMINGHAM, MA	Left FedEx origin facility
5:35 PM	FRAMINGHAM, MA	Picked up

Monday, July 12, 2021

11:05 AM	Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBER	**SERVICE**	**WEIGHT**
774232254590	FedEx Priority Overnight	1 lbs / 0.45 kgs
DELIVERY ATTEMPTS	**DELIVERED TO**	**TOTAL PIECES**
1	Receptionist/Front Desk	1
TOTAL SHIPMENT WEIGHT	**TERMS**	**SHIPPER REFERENCE**
1 lbs / 0.45 kgs	Shipper	10-56-92009-6089
PACKAGING	**SPECIAL HANDLING SECTION**	**SHIP DATE**
FedEx Envelope	Deliver Weekday	7/14/21
STANDARD TRANSIT	**ACTUAL DELIVERY**	
7/15/21 before 10:30 am	7/15/21 at 10:26 am	

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

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

FedEx

TRACK ANOTHER SHIPMENT

774232269559

ADD NICKNAME

Delivered
Thursday, July 15, 2021 at 10:26 am

DELIVERED

Signed for by: J.POULIN

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM

SBA COMMUNICATIONS CORPORATION
Rick Woods

134 Flanders Rd
Suite 125
WESTBOROUGH, MA US 01581
508-614-0389

TO

Joe Smith, Building Official
Windham Town Hall

979 Main St.
WILLIMANTIC, CT US 06226
508-251-0720

Travel History

TIME ZONE
Local Scan Time

Thursday, July 15, 2021

10:26 AM	WILLIMANTIC, CT	Delivered
8:23 AM	NORWICH, CT	On FedEx vehicle for delivery
8:15 AM	NORWICH, CT	At local FedEx facility
3:15 AM	NEWARK, NJ	Departed FedEx hub

Wednesday, July 14, 2021

11:30 PM	NEWARK, NJ	Arrived at FedEx hub
8:25 PM	FRAMINGHAM, MA	Left FedEx origin facility
5:35 PM	FRAMINGHAM, MA	Picked up

Monday, July 12, 2021

11:06 AM	Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBER	**SERVICE**	**WEIGHT**
774232269559	FedEx Priority Overnight	1 lbs / 0.45 kgs
DELIVERY ATTEMPTS	**DELIVERED TO**	**TOTAL PIECES**
1	Receptionist/Front Desk	1
TOTAL SHIPMENT WEIGHT	**TERMS**	**SHIPPER REFERENCE**
1 lbs / 0.45 kgs	Shipper	10-56-92009-6089
PACKAGING	**SPECIAL HANDLING SECTION**	**SHIP DATE**
FedEx Envelope	Deliver Weekday	7/14/21
STANDARD TRANSIT	**ACTUAL DELIVERY**	
7/15/21 before 10:30 am	7/15/21 at 10:26 am	

EXHIBIT 3

Property Card: **193 WINDHAM CENTER RD**

Town of Windham, CT

Parcel Information

Parcel ID:	6-9-240-29	**Map:**	6-9
Vision ID:	5764	**Lot:**	240-29
Owner:	WINDHAM TOWN OF	**Use Description:**	Exempt Comm
Co-Owner:		**Zone:**	M2
Mailing Address:	979 MAIN ST WILLIMANTIC, CT 06226	**Land Area in Acres:**	30.92

Sale History		Assessed Value	
Book/Page:	234/ 304	**Land:**	$353,250
Sale Date:	12/12/1972	**Buildings:**	$24,590
Sale Price:	$0	**Total:**	$377,840

Building Details: Building # 1

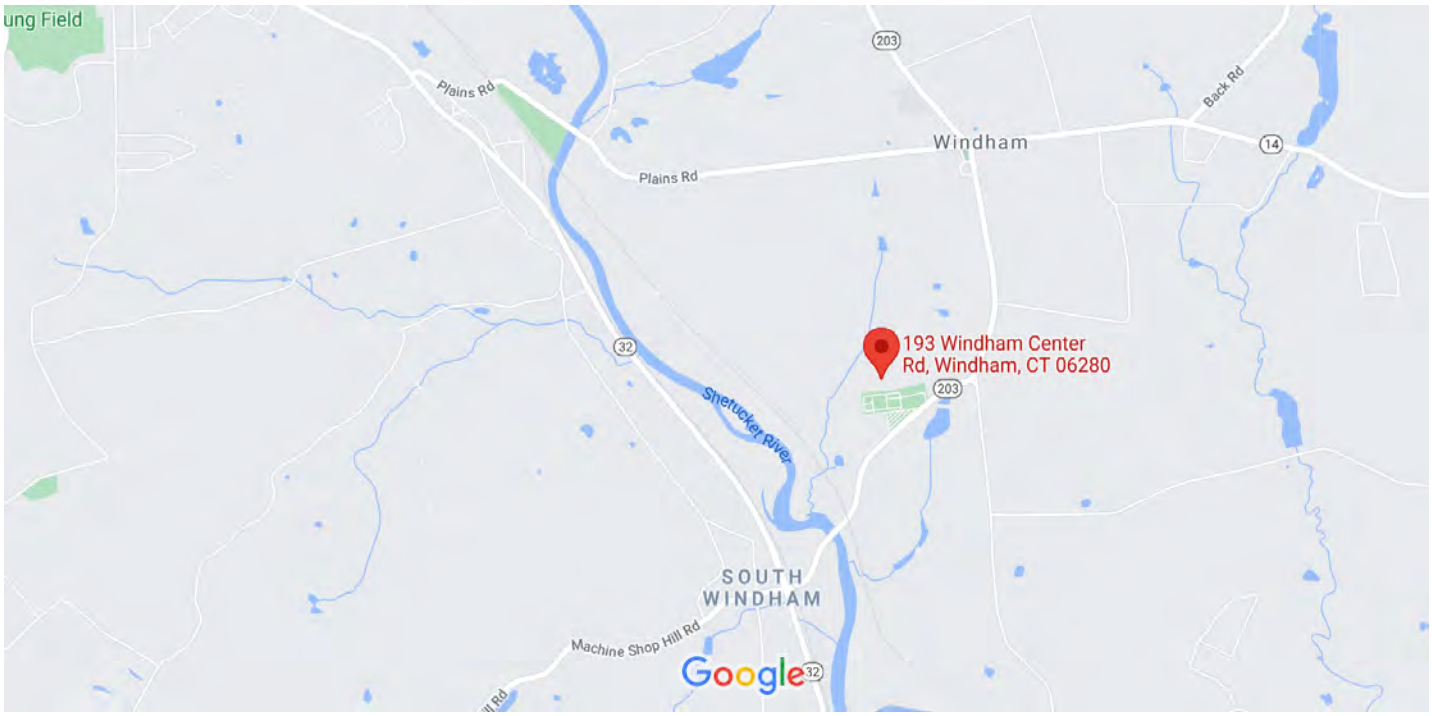
Model:	Commercial	**Int Wall Desc 1:**	
Living Area:	240	**Int Wall Desc 2:**	
Appr. Year Built:		**Ext Wall Desc 1:**	Reinforc Concr
Style:	Warehouse	**Ext Wall Desc 2:**	01
Stories:	1	**Roof Cover:**	
Occupancy:	1	**Roof Structure:**	01
No. Total Rooms:		**Heat Type:**	
No. Bedrooms:		**Heat Fuel:**	
No. Baths:		**A/C Type:**	Central
No. Half Baths:			

Building Details: Building # 2

Model:	Commercial	**Int Wall Desc 1:**	
Living Area:	360	**Int Wall Desc 2:**	
Appr. Year Built:		**Ext Wall Desc 1:**	Reinforc Concr
Style:	Warehouse	**Ext Wall Desc 2:**	01
Stories:	1	**Roof Cover:**	
Occupancy:	1	**Roof Structure:**	01
No. Total Rooms:		**Heat Type:**	
No. Bedrooms:		**Heat Fuel:**	
No. Baths:		**A/C Type:**	Central
No. Half Baths:			

EXHIBIT 4

Google Maps 193 Windham Center Rd



Map data ©2021 2000 ft

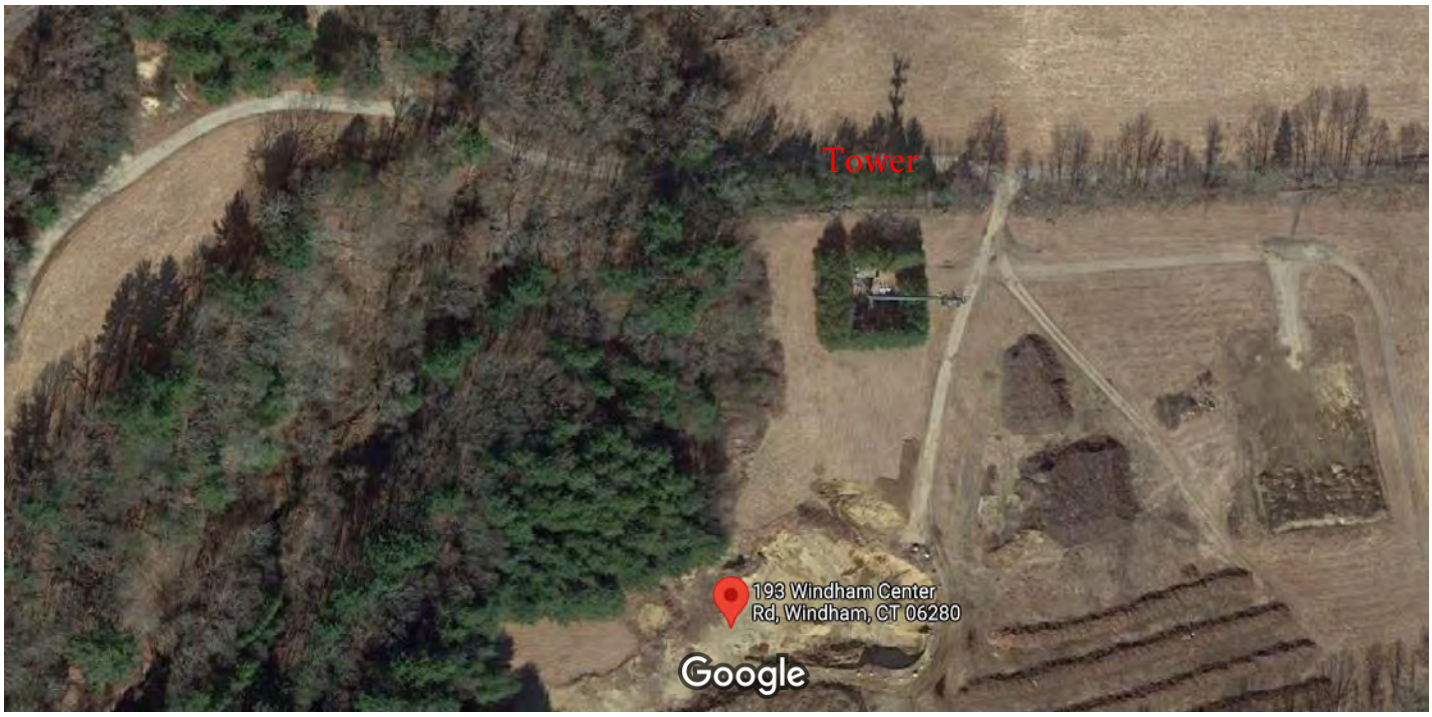
193 Windham Center Rd

Directions Save Nearby Send to your phone Share

193 Windham Center Rd, Windham, CT 06280

MRQP+MQ Windham, Connecticut

Google Maps 193 Windham Center Rd



Imagery ©2021 Maxar Technologies, USDA Farm Service Agency, Map data ©2021 100 ft

193 Windham Center Rd

Directions Save Nearby Send to your phone Share

193 Windham Center Rd, Windham, CT 06280

MRQP+MQ Windham, Connecticut

EXHIBIT 5

NOTICE OF ACTION

SPECIAL PERMIT: X SPECIAL EXCEPTION: _____ VARIANCE: _____

SITE PLAN: _____ ZONE CHANGE: _____ APPEAL: _____

SUBDIVISION: _____ WETLANDS: _____ OTHER: _____

ZONING REG: _____ SECTION: _____

APPLICANT: SBA Inc.

NAME OF RECORD OWNER (IF DIFFERENT): Town of Windham

STREET ADDRESS OF PROPERTY: 193 Windham Center Road

DEED REFERENCE – VOLUME: 234 PAGE: 304 ZONE: R-3

DESCRIPTION OF PROPERTY: (MAY BE ATTACHED)

DESCRIPTION OF ACTION: Approved the construction of a wireless telecommunication tower.

DATE APPROVED: 06/15/00 EFFECTIVE DATE: 07/06/00

LEGAL NOTICE OF ACTION PUBLISHED – DATE: 06/21/00

CONDITIONS – IF ANY: _____

_____ Clarence Sylvester

TOWN CLERK CHAIRMAN

_____ Windham Zoning Commission

DATE AGENCY

_____ June 28, 2000

TIME DATE

This Notice of Action must be recorded by the applicant within 90 days of the effective date, otherwise it shall become null and void.

NOTICE OF ACTION

SPECIAL PERMIT: _____ SECTION: _____ VARIANCE: _____

SITE PLAN: _____ ZONE CHANGE: _____ APPEAL: _____

SUBDIVISION: _____ WETLANDS: X OTHER: _____

ZONING REG: _____ SECTION: _____

APPLICANT: SBA Inc.

NAME OF RECORD OWNER (IF DIFFERENT): Town of Windham

STREET ADDRESS OF PROPERTY: 193 Windham Center Road

DEED REFERENCE – VOLUME: _____ PAGE: _____ ZONE: _____

DESCRIPTION OF PROPERTY: (MAY BE ATTACHED)

DESCRIPTION OF ACTION: Approved a declaratory ruling for construction of a cell tower.

DATE APPROVED: 05/11/00 EFFECTIVE DATE: 06/03/00

LEGAL NOTICE OF ACTION PUBLISHED – DATE: 05/19/00

CONDITIONS – IF ANY: _____

George F. DeCloutier

_____ George Cloutier

TOWN CLERK CHAIRMAN

_____ Windham Conservation Commission

DATE AGENCY

_____ June 1, 2000

TIME DATE

This Notice of Action must be recorded by the applicant within 90 days of the effective date, otherwise it shall become null and void.

NOTICE OF ACTION

SPECIAL PERMIT: _____ SPECIAL EXCEPTION: _____ VARIANCE: X

SITE PLAN: _____ ZONE CHANGE: _____ APPEAL: _____

SUBDIVISION: _____ WETLANDS: _____ OTHER: _____

ZONING REG: _____ SECTION: 62.6.6a & 78.3.8

APPLICANT: SBA Inc.

NAME OF RECORD OWNER (IF DIFFERENT): Town of Windham

STREET ADDRESS OF PROPERTY: 193 Windham Center Road

DEED REFERENCE – VOLUME: 234 PAGE: 304 ZONE: R-3

DESCRIPTION OF PROPERTY: (MAY BE ATTACHED)

DESCRIPTION OF ACTION: Granted a Variance from Section 62.6.6a on setback requirements and Section 78.3.8 on maximum length in order to construct a cellular tower for lease.

DATE APPROVED: 05/04/00 EFFECTIVE DATE: 05/28/00

LEGAL NOTICE OF ACTION PUBLISHED – DATE: 05/13/00

CONDITIONS – IF ANY: _____

Thomas Praakli

_____ Thomas Praakli
TOWN CLERK VICE CHAIRMAN

_____ Windham Zoning Board of Appeals
DATE AGENCY

_____ May 10, 2000
TIME DATE

This Notice of Action must be recorded by the applicant within 90 days of the effective date, otherwise it shall become null and void.

EXHIBIT 6

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

CTHA705A

187 WINDHAM CENTER ROAD
WINDHAM, CT 06280

SITE NO.: CTHA705A
CARRIER SITE ID: CT72XC043-A

RF DESIGN GUIDELINE: 67D5A998C 6160 (GSM ONLY)

SCOPE OF WORK

REMOVE:
- 6 ANTENNAS
- 9 RRUs
- 2 SPRINT CABINETS
- 1 FIBER DISTRIBUTION BOX
- ALL SPRINT CABLES
- 1 LOW-PROFILE MOUNT

INSTALL:
- 9 ANTENNAS
- 9 RRUs
- 1 B160 BATTERY CABINET
- 1 6160 CABINET
- 1 SLACKBOX
- 1 PURCELL CABINET
- 3 HYBRID CABLES
- 1 LOW-PROFILE MOUNT W/HANDRAIL

SITE NOTES

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

APPROVALS

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

T-MOBILE TECHNICIAN SITE SAFETY NOTES

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

GENERAL NOTES

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

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

811 DigSafe
MA,ME,NH,RI,VT

VICINITY MAP

SCALE: 1" = 1000'-0"

DIRECTIONS

TURN LEFT ONTO S WASHINGTON ST. TURN RIGHT ONTO MA-123 E. TURN LEFT TO MERGE ONTO I-495 NORTH TOWARD MANSFIELD/MARLBORO. MERGE ONTO I-495 NORTH. TAKE EXIT 13B TO MERGE ONTO I-95 SOUTH TOWARD PROVIDENCE RI. TAKE EXIT 6 FOR I-295 SOUTH. TAKE EXIT 9C-A FOR US-6 WEST. KEEP RIGHT AT THE FORK TO MERGE ONTO US-6 WEST. FOLLOW SIGNS INTO CT. TAKE EXIT ON LEFT FOR I-395 SOUTH. TAKE EXIT 32 TO MERGE ONTO CT-14 WEST. TURN RIGHT ONTO CT-12 NORTH/CT-14 WEST SLIGHT LEFT ONTO CT-14 WEST. TURN RIGHT TO STAY ON CT-14 WEST. TURN LEFT ONTO CT-203 SOUTH. SITE WILL BE ON THE RIGHT.

SHEET INDEX

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DO NOT SCALE DRAWINGS

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

PROJECT SUMMARY

SITE NUMBER:	CTHA705A
SBA SITE NUMBER:	CT02721-S
SBA SITE NAME:	SOUTH WINDHAM
SITE ADDRESS:	193 WINDHAM CENTER ROAD WINDHAM, CT 06280
PROPERTY OWNER:	TOWN OF WINDHAM 979 MAIN STREET WILLIMANTIC, CT 06226
TOWER OWNER:	SBA PROPERTIES, LLC 8501 CONGRESS AVENUE BOCA RATON, FL 33487 PHONE: 561-226-9523
COUNTY:	WINDHAM
ZONING DISTRICT:	RESIDENTIAL RURAL
STRUCTURE TYPE:	MONOPOLE
STRUCTURE HEIGHT:	180'
APPLICANT:	T-MOBILE NORTHEAST LLC 15 COMMERCE WAY, SUITE B NORTON, MA 02766
SBA RSM:	STEPHEN ROTH PHONE: 860-539-4920 EMAIL: SRoth@sbasite.com
ARCHITECT:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
STRUCTURAL ENGINEER:	CHAPPELL ENGINEERING ASSOCIATES, LLC. 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752
SITE CONTROL POINT:	LATITUDE: 41.690056° N41°41'24.20" LONGITUDE: -72.162528° W72°09'45.10"

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

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700

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

CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil ·Structural ·Land Surveying
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25997
LICENSED
PROFESSIONAL CIVIL ENGINEER
4/21/2021

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	04/20/21	ISSUED FOR CONSTRUCTION	JRV
0	04/19/21	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CTHA705A

SITE ADDRESS:
187 WINDHAM CENTER ROAD
WINDHAM, CT 06280

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

1815.228

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR – T–MOBILE
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – T–MOBILE
   OEM – ORIGINAL EQUIPMENT MANUFACTURER

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.

4. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL, STATE AND FEDERAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

5. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.

6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.

9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER, T1 CABLES AND GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR AND/OR LANDLORD PRIOR TO CONSTRUCTION.

10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION AND RETURN DISTURBED AREAS TO ORIGINAL CONDITIONS.

13. THE SUBCONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

14. SUBCONTRACTOR SHALL NOTIFY CHAPPELL ENGINEERING ASSOCIATES, LLC 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS AND POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEERING REVIEW.

15. CONSTRUCTION SHALL COMPLY WITH ALL T–MOBILE STANDARDS AND SPECIFICATIONS.

16. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

17. THE EXISTING CELL SITES ARE IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.

18. IF THE EXISTING CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

SITE WORK GENERAL NOTES:

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.

2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION.

3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.

4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

5. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.

6. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

7. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.

8. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING, OWNER AND/OR LOCAL UTILITIES.

9. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.

10. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

11. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE T–MOBILE SPECIFICATION FOR SITE SIGNAGE.

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST–IN–PLACE CONCRETE.

2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (4000PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE REQUIREMENTS

3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.

4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST EARTH.....3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER .....2 IN.
   #5 AND SMALLER & WWF .....1½ IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER
   OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL .....¾ IN.
   BEAMS AND COLUMNS .....1½ IN.

5. A CHAMFER ¾" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY SIMPSON OR APPROVED EQUAL.

7. CONCRETE CYLINDER TIES ARE NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER;
   (A) RESULTS OF CONCRETE CYLINDER TEST PERFORMED AT THE SUPPLIERS PLANT.
   (B) CERTIFICATION OF MINIMUM COMPRESSIVE STRENGTH FOR THE CONCRETE GRADE SUPPLIED.
FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.

8. AS AN ALTERNATIVE TO ITEM 7. TEST CYLINDERS SHALL BE TAKEN INITIALLY AND THEREAFTER FOR EVERY 50 YARDS OF CONCRETE FROM EACH DIFFERENT BATCH PLANT.

9. EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY CYLINDER TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS AND T–MOBILE SPECIFICATIONS UNLESS OTHERWISE NOTED. STRUCTURAL STEEL SHALL BE ASTM–A–36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".

2. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION. PAINTED SURFACES SHALL BE TOUCHED UP.

3. BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (⅞"ø) AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE GALVANIZED OR STAINLESS STEEL.

4. NON–STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE ⅝" DIA. ASTM A 307 BOLTS (GALV) UNLESS NOTED OTHERWISE.

5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL

6. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

1. EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.

2. COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.

3. AS AN ALTERNATE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 90% MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM D 1557 METHOD C.

4. COMPACTED SUBBASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING #1 SIEVE.

5. AS AN ALTERNATE TO ITEMS 2 AND 3, THE SUBGRADE SOILS WITH 5 PASSES OR A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND–OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). AND SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL–GRADED GRANULAR FILL AND COMPACTED AS STATED ABOVE.

COMPACTION EQUIPMENT:

1. HAND OPERATED DOUBLE DRUN, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

CONSTRUCTION NOTES:

1. FIELD VERIFICATION:
SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, T–MOBILE ANTENNA PLATFORM LOCATION AND UTILITY TRENCHWORK.

2. COORDINATION OF WORK:
SUBCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.

3. CABLE LADDER RACK:
SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY AND/OR ICE BRIDGE, AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BTS LOCATION.

ELECTRICAL INSTALLATION NOTES:

1. WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.

2. SUBCONTRACTOR SHALL MODIFY OR INSTALL CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.

3. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.

4. CABLES SHALL NOT BE ROUTED THROUGH LADDER–STYLE CABLE TRAY RUNGS.

5. EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA, AND MATCH INSTALLATION REQUIREMENTS.

6. POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, ½ INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC AND OSHA.

7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).

8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.

9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.

10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.

13. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN–2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.

14. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY HARGER (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75'C (90'C IF AVAILABLE).

15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

16. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

17. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

18. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.

19. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.

20. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.

21. LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.

23. CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

24. CABINETS, BOXES AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

25. WIREWAYS SHALL BE EPOXY–COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

26. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

27. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED, OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

28. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.

29. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

30. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

31. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.

32. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

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STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25937
LICENSED
PROFESSIONAL CIVIL ENGINEER
4/21/2021

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

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SITE NUMBER:
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SITE ADDRESS:
187 WINDHAM CENTER ROAD
WINDHAM, CT 06280

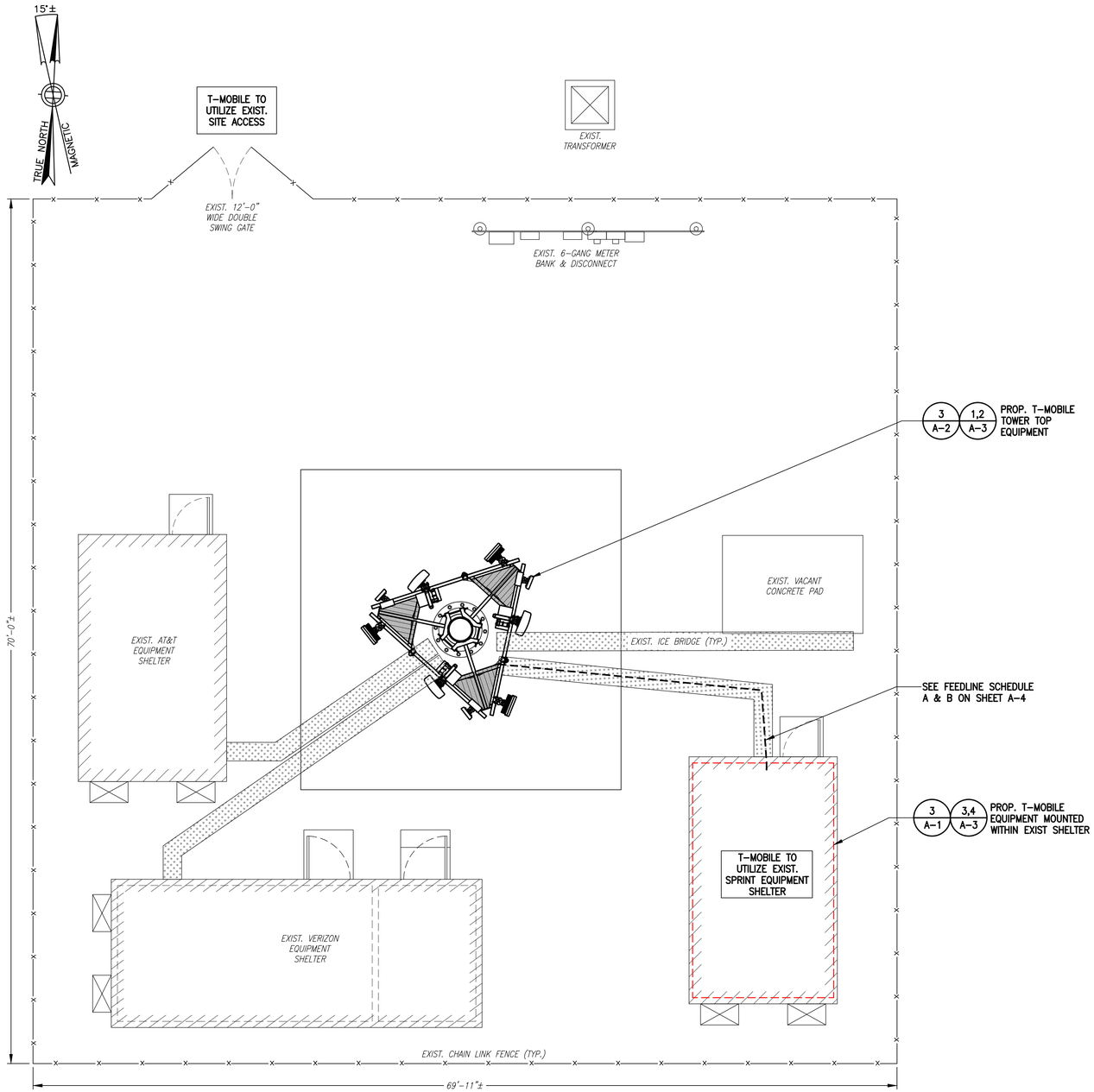
SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

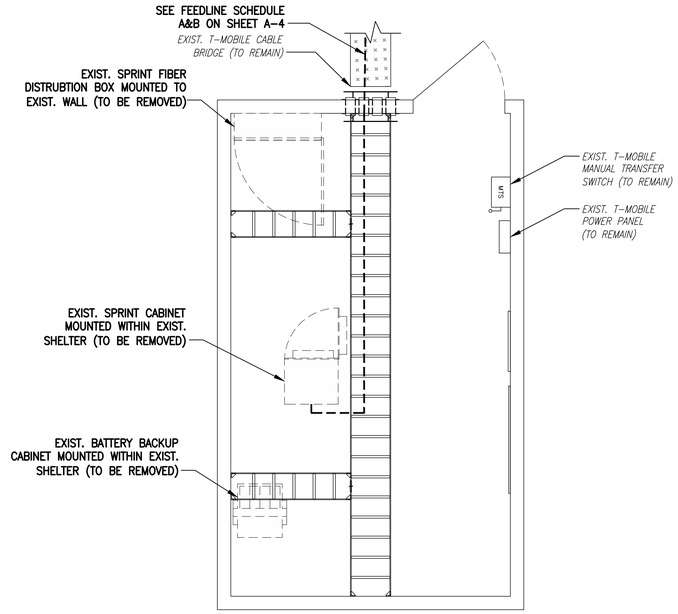
1815.228

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

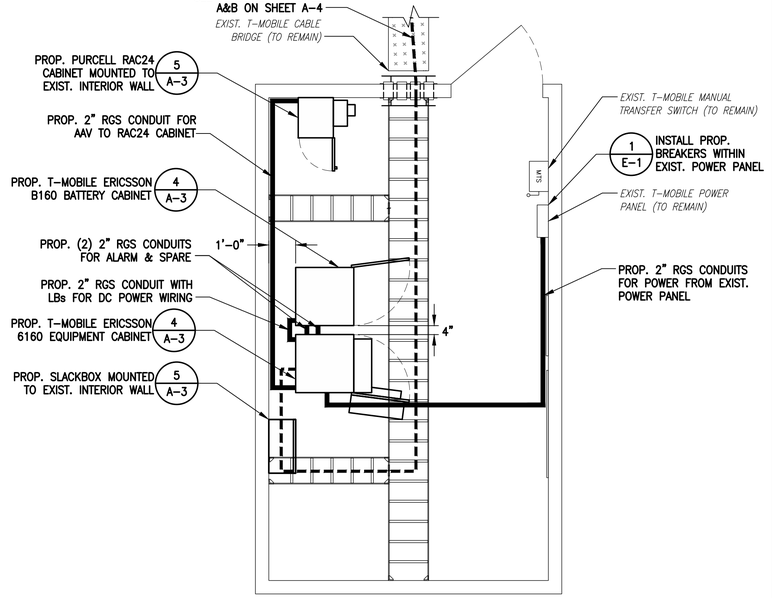
SPECIAL CONSTRUCTION NOTE:
GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ANTENNA MOUNT STRUCTURAL AUGMENTS (STRUCTURAL MODIFICATIONS) AT T-MOBILE'S RAD/VERTICAL EQUIPMENT SPACE PER RECOMMENDATIONS FROM SBA-PROVIDED ANTENNA MOUNT STRUCTURAL ANALYSIS AND ANY SUPPLEMENTAL CONSTRUCTION DRAWINGS (PROVIDED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



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



EXISTING EQUIPMENT PLAN
SCALE: 3/8" = 1'-0"
2 A-1
0 2'-8" 5'-4" 8'-0"



PROPOSED EQUIPMENT PLAN
SCALE: 3/8" = 1'-0"
3 A-1
0 2'-8" 5'-4" 8'-0"

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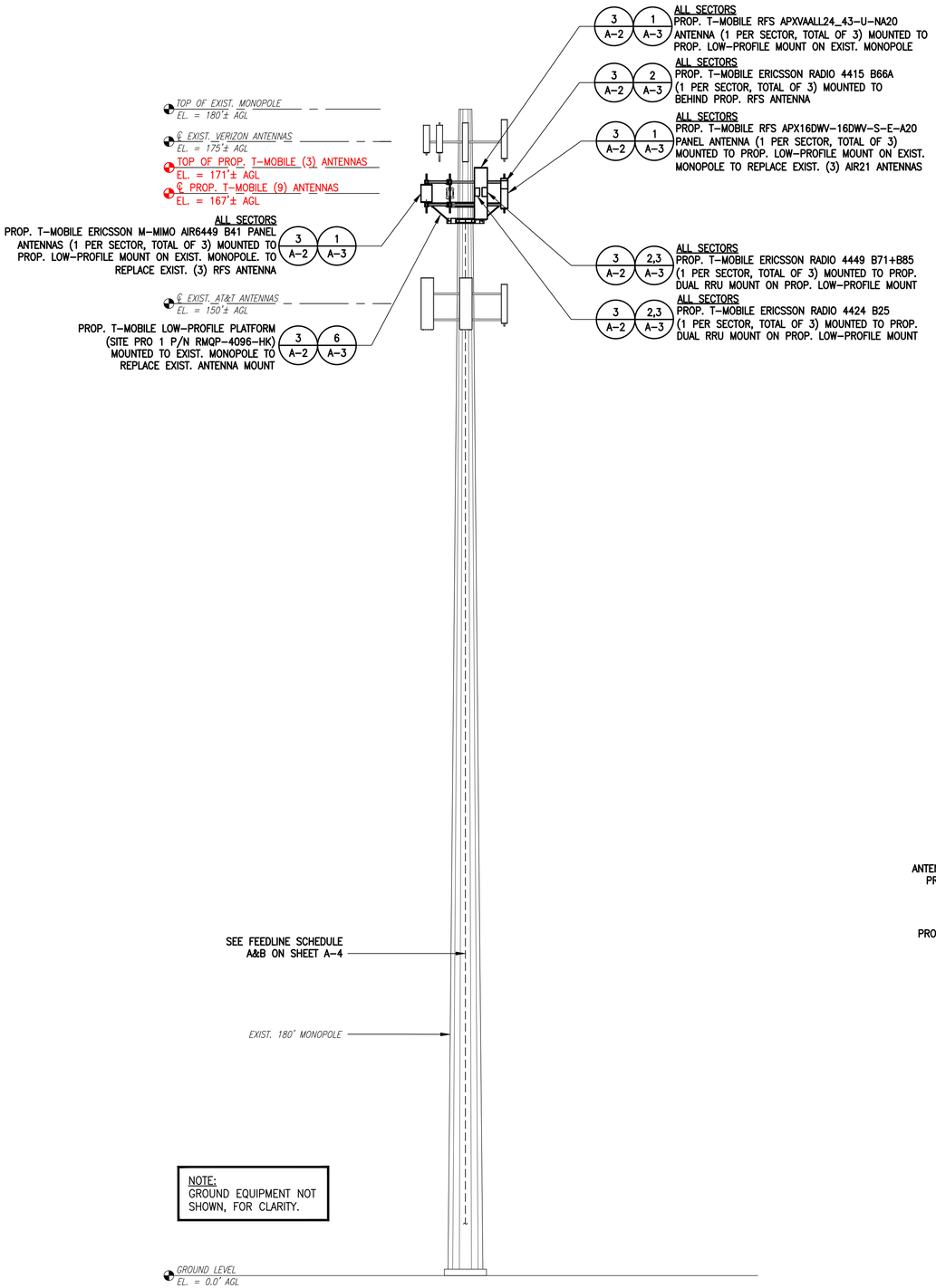
SHEET TITLE
COMPOUND & EQUIPMENT PLANS

SHEET NUMBER
A-1

1815.228



ALL SECTORS
PROP. T-MOBILE ERICSSON M-MIMO AIR6449 B41 PANEL ANTENNAS (1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROP. LOW-PROFILE MOUNT ON EXIST. MONOPOLE. TO REPLACE EXIST. (3) RFS ANTENNA (3 A-2, 1 A-3)

PROP. T-MOBILE LOW-PROFILE PLATFORM (SITE PRO 1 P/N RMQP-4096-HK) MOUNTED TO EXIST. MONOPOLE TO REPLACE EXIST. ANTENNA MOUNT (3 A-2, 6 A-3)

ALL SECTORS
PROP. T-MOBILE RFS APXVAALL24_43-U-NA20 ANTENNA (1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROP. LOW-PROFILE MOUNT ON EXIST. MONOPOLE (3 A-2, 1 A-3)

ALL SECTORS
PROP. T-MOBILE ERICSSON RADIO 4415 B66A (1 PER SECTOR, TOTAL OF 3) MOUNTED TO BEHIND PROP. RFS ANTENNA (3 A-2, 2 A-3)

ALL SECTORS
PROP. T-MOBILE RFS APX16DWV-16DWV-S-E-A20 PANEL ANTENNA (1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROP. LOW-PROFILE MOUNT ON EXIST. MONOPOLE TO REPLACE EXIST. (3) AIR21 ANTENNAS (3 A-2, 1 A-3)

ALL SECTORS
PROP. T-MOBILE ERICSSON RADIO 4449 B71+B85 (1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROP. DUAL RRU MOUNT ON PROP. LOW-PROFILE MOUNT (3 A-2, 2,3 A-3)

ALL SECTORS
PROP. T-MOBILE ERICSSON RADIO 4424 B25 (1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROP. DUAL RRU MOUNT ON PROP. LOW-PROFILE MOUNT (3 A-2, 2,3 A-3)

NOTE:
GROUND EQUIPMENT NOT SHOWN, FOR CLARITY.

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

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

SPECIAL CONSTRUCTION NOTE:
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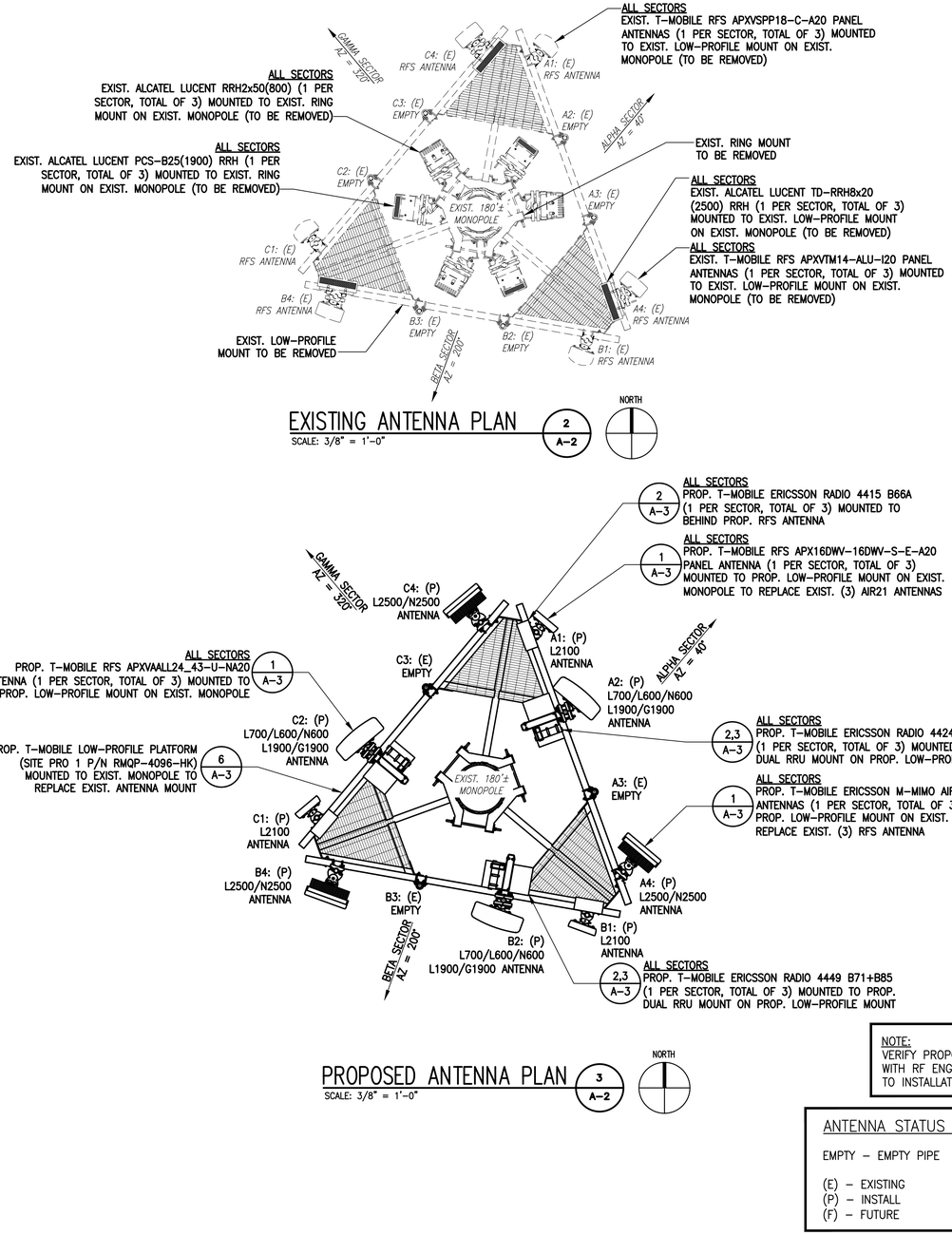

ALL SECTORS
EXIST. T-MOBILE RFS APXVSPP18-C-A20 PANEL ANTENNAS (1 PER SECTOR, TOTAL OF 3) MOUNTED TO EXIST. LOW-PROFILE MOUNT ON EXIST. MONOPOLE (TO BE REMOVED)

ALL SECTORS
EXIST. ALCATEL LUCENT RRH2x50(800) (1 PER SECTOR, TOTAL OF 3) MOUNTED TO EXIST. RING MOUNT ON EXIST. MONOPOLE (TO BE REMOVED)

EXIST. RING MOUNT TO BE REMOVED

ALL SECTORS
EXIST. ALCATEL LUCENT PCS-B25(1900) RRH (1 PER SECTOR, TOTAL OF 3) MOUNTED TO EXIST. RING MOUNT ON EXIST. MONOPOLE (TO BE REMOVED)

ALL SECTORS
EXIST. ALCATEL LUCENT TD-RRH8x20 (2500) RRH (1 PER SECTOR, TOTAL OF 3) MOUNTED TO EXIST. LOW-PROFILE MOUNT ON EXIST. MONOPOLE (TO BE REMOVED)

ALL SECTORS
EXIST. T-MOBILE RFS APXVTM14-ALU-I20 PANEL ANTENNAS (1 PER SECTOR, TOTAL OF 3) MOUNTED TO EXIST. LOW-PROFILE MOUNT ON EXIST. MONOPOLE (TO BE REMOVED)

EXIST. LOW-PROFILE MOUNT TO BE REMOVED

EXISTING ANTENNA PLAN (2 A-2)
SCALE: 3/8" = 1'-0"

ALL SECTORS
PROP. T-MOBILE ERICSSON RADIO 4415 B66A (1 PER SECTOR, TOTAL OF 3) MOUNTED TO BEHIND PROP. RFS ANTENNA (2 A-3)

ALL SECTORS
PROP. T-MOBILE RFS APX16DWV-16DWV-S-E-A20 PANEL ANTENNA (1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROP. LOW-PROFILE MOUNT ON EXIST. MONOPOLE TO REPLACE EXIST. (3) AIR21 ANTENNAS (1 A-3)

ALL SECTORS
PROP. T-MOBILE RFS APXVAALL24_43-U-NA20 ANTENNA (1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROP. LOW-PROFILE MOUNT ON EXIST. MONOPOLE (1 A-3)

PROP. T-MOBILE LOW-PROFILE PLATFORM (SITE PRO 1 P/N RMQP-4096-HK) MOUNTED TO EXIST. MONOPOLE TO REPLACE EXIST. ANTENNA MOUNT (6 A-3)

ALL SECTORS
PROP. T-MOBILE ERICSSON RADIO 4424 B25 (1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROP. DUAL RRU MOUNT ON PROP. LOW-PROFILE MOUNT (2,3 A-3)

ALL SECTORS
PROP. T-MOBILE ERICSSON M-MIMO AIR6449 B41 PANEL ANTENNAS (1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROP. LOW-PROFILE MOUNT ON EXIST. MONOPOLE. TO REPLACE EXIST. (3) RFS ANTENNA (1 A-3)

ALL SECTORS
PROP. T-MOBILE ERICSSON RADIO 4449 B71+B85 (1 PER SECTOR, TOTAL OF 3) MOUNTED TO PROP. DUAL RRU MOUNT ON PROP. LOW-PROFILE MOUNT (2,3 A-3)

PROPOSED ANTENNA PLAN (3 A-2)
SCALE: 3/8" = 1'-0"

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

ANTENNA STATUS LEGEND:

EMPTY – EMPTY PIPE

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

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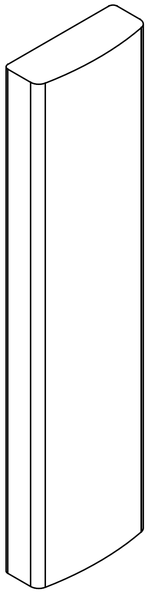
SHEET TITLE
TOWER ELEVATIONS & ANTENNA PLANS

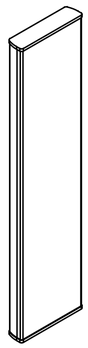
SHEET NUMBER
A-2

1815.228



RFS APXVAALL24_43-U-NA20 ANTENNA

DIMENSIONS: 95.9"H x 24.0"W x 8.7"D
WEIGHT: 128.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3



RFS APX16DWV-16DWV-S-E-A20 ANTENNA

DIMENSIONS: 55.9"H x 13.0"W x 3.15"D
WEIGHT: 40.7 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

ERICSSON M-MIMO AIR6449 B41 ANTENNA

DIMENSIONS: 33.1"H x 20.5"W x 8.3"D
WEIGHT: 103.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

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

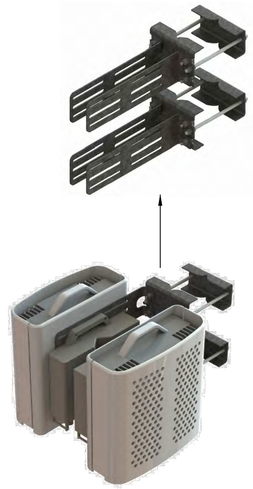
ERICSSON RADIO 4449 B71+B85

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

ERICSSON RADIO 4424 B25

DIMENSIONS: 16.5"H x 13.5"W x 9.6"D
WEIGHT: 88.0 lbs
QUANTITY: 1 PER SECTOR, TOTAL OF 3

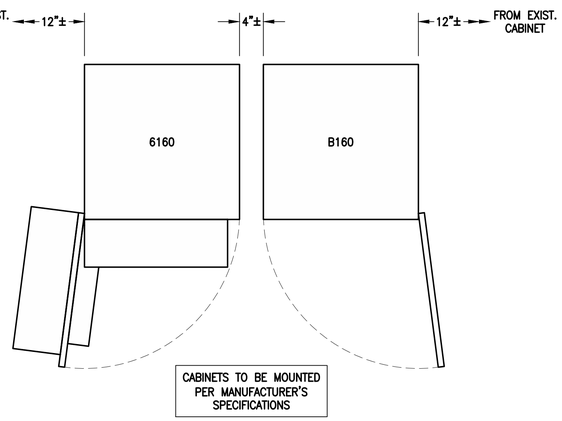
RADIO DETAILS
SCALE: N.T.S.
2 / A-3



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
SCALE: N.T.S.
3 / A-3



ERICSSON 6160 SITE SUPPORT CABINET

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

ERICSSON B160 BATTERY CABINET

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

EQUIPMENT DETAIL
SCALE: N.T.S.
4 / A-3

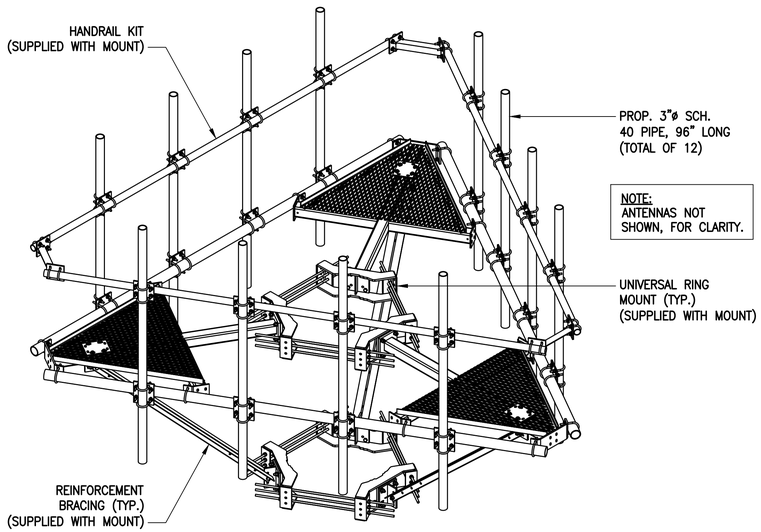
PURCELL SITE SUPPORT CABINET RAC24

DIMENSIONS: 24.0"H x 15.7"W x 20.0"D
QUANTITY: TOTAL OF 1

SLACKBOX

MODEL: 32FH91 OR EQUAL
QUANTITY: TOTAL OF 1

SSC DETAILS
SCALE: N.T.S.
5 / A-3



SITE-PRO 1 12'-6" LOW-PROFILE CO-LOCATION PLATFORM W/HANDRAIL KIT
PART NUMBERS: RMQP-4096-HK
(TOTAL OF 1 REQUIRED)

TYPICAL SITE PRO 1 12'-6" PLATFORM MOUNT
SCALE: N.T.S.
6 / A-3

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SITE DETAILS

SHEET NUMBER
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FINAL ANTENNA CONFIGURATION

SECTOR	ANTENNA	RAD CENTER	AZIMUTH (TRUE NORTH)	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	BAND	TMA/RADIOS	SIGNAL CABLES
ALPHA	A1 RFS APX16DWV-16DWV-S-E-A20	167'± AGL	40°	0°	2°	L2100	RADIO 4415 B66A	(3) 2" (6x24) HCS FIBER CABLES
	A2 RFS APXVAALL24_43-U-NA20	167'± AGL	40°	0°	2°	L700/L600/N600	RADIO 4449 B71+B85	
						L1900/G1900	RADIO 4424 B25	
	A3 –	–	–	–	–	–	–	
	A4 ERICSSON M-MIMO AIR6449 B41	167'± AGL	40°	0°	2°	L2500/N2500	–	
BETA	B1 RFS APX16DWV-16DWV-S-E-A20	167'± AGL	200°	0°	2°	L2100	RADIO 4415 B66A	
	B2 RFS APXVAALL24_43-U-NA20	167'± AGL	200°	0°	2°	L700/L600/N600	RADIO 4449 B71+B85	
						L1900/G1900	RADIO 4424 B25	
	B3 –	–	–	–	–	–	–	
	B4 ERICSSON M-MIMO AIR6449 B41	167'± AGL	200°	0°	2°	L2500/N2500	–	
GAMMA	C1 RFS APX16DWV-16DWV-S-E-A20	167'± AGL	320°	0°	2°	L2100	RADIO 4415 B66A	
	C2 RFS APXVAALL24_43-U-NA20	167'± AGL	320°	0°	2°	L700/L600/N600	RADIO 4449 B71+B85	
						L1900/G1900	RADIO 4424 B25	
	C3 –	–	–	–	–	–	–	
	C4 ERICSSON M-MIMO AIR6449 B41	167'± AGL	320°	0°	2°	L2500/N2500	–	

CABLE NOTE: ALL SPRINT CABLES & ASSOCIATED HARDWARE TO BE REMOVED. SEE FEEDLINE SCHEDULE A & B BELOW.

NOTE: RFDS REV1 – 03/30/21

FEEDLINE SCHEDULE

SCHEDULE	FEEDLINES	LOCATION
A	*EXISTING TO REMAIN:* *(1) ½" COAX CABLE FOR GPS ANTENNA*	ROUTED PER STRUCTURAL ANALYSIS
	EXISTING TO BE REMOVED: *SPRINT CABLES AND ASSOCIATED HARDWARE TO BE REMOVED*	
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.

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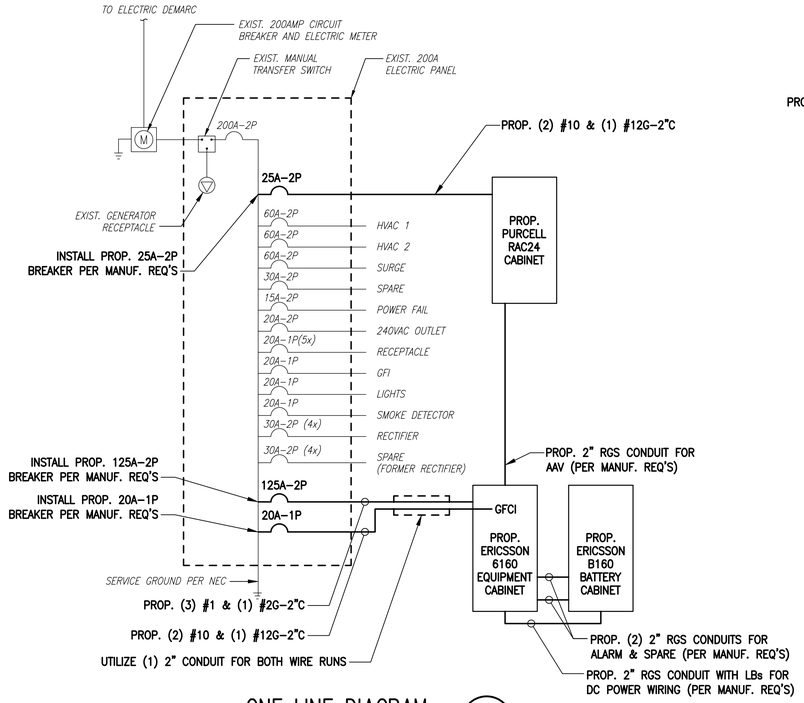
WINDHAM, CT 06280

SHEET TITLE
ANTENNA & FEEDLINE CHARTS

SHEET NUMBER
A-4

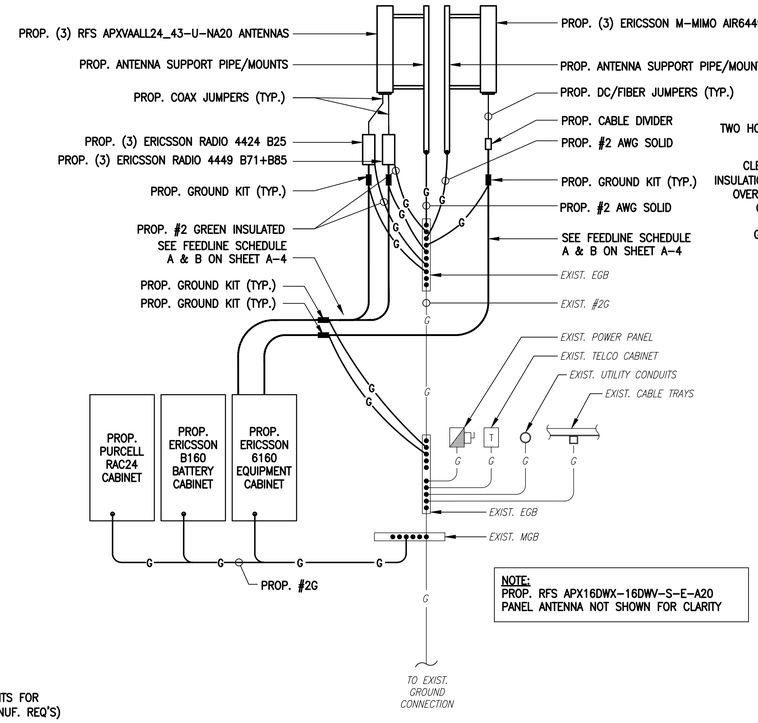
1815.228



ONE LINE DIAGRAM

SCALE: NOT TO SCALE

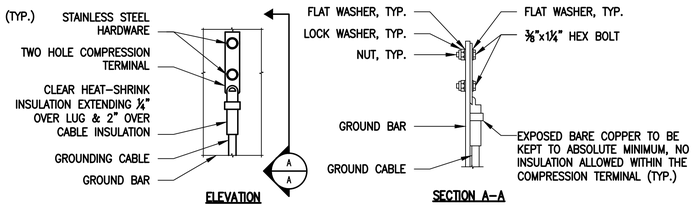
1 / E-1



GROUNDING RISER DIAGRAM

SCALE: NOT TO SCALE

2 / E-1



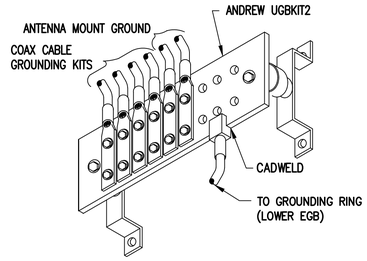
NOTES:

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

TYPICAL GROUND BAR CONNECTIONS DETAIL

SCALE: NOT TO SCALE

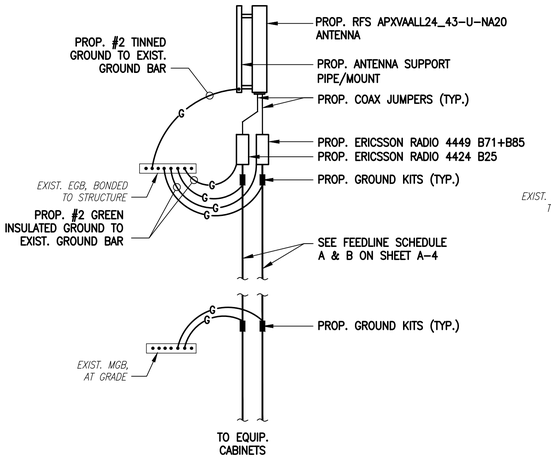
3 / E-1



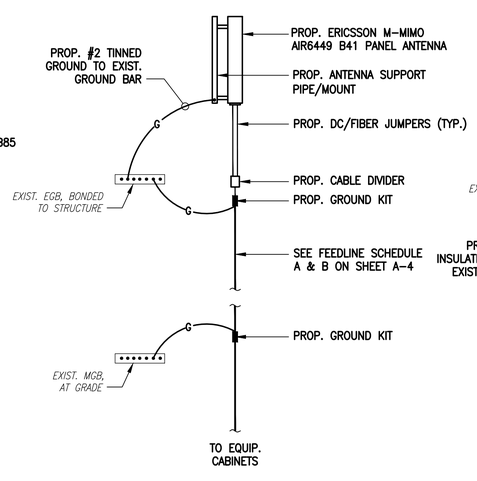
GROUND BAR (EGB)

SCALE: NOT TO SCALE

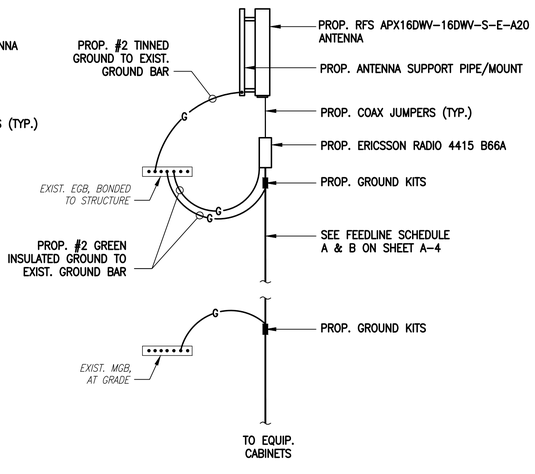
5 / E-1



L700/L600/N600/L1900/G1900 ANTENNA



L2500/N2500 ANTENNA



L2100 ANTENNA

COAX CABLE CONNECTION AND GROUNDING DETAIL

SCALE: NOT TO SCALE

4 / E-1

ELECTRICAL AND GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THHNINSULATION.
8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
10. WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.
11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
12. PPC SUPPLIED BY PROJECT OWNER.
13. GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".
14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
15. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
17. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
19. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
20. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXIST. TOWER/ MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
21. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMNS MINIMUM RESISTANCE REQUIRED.
22. CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.

T-MOBILE NORTHEAST LLC
15 COMMERCE WAY, SUITE B
NORTON, MA 02766
(508) 286-2700

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

CHAPPELL ENGINEERING ASSOCIATES, LLC
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www.chappellengineering.com

STATE OF CONNECTICUT
JAMES M. FITZGERALD
No. 25937
LICENSED PROFESSIONAL CIVIL ENGINEER
4/21/2021

CHECKED BY: JMT

APPROVED BY: JMT

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	04/20/21	ISSUED FOR CONSTRUCTION	JRV
0	04/19/21	ISSUED FOR REVIEW	JRV

SITE NUMBER:
CTHA705A

SITE ADDRESS:
187 WINDHAM CENTER ROAD
WINDHAM, CT 06280

SHEET TITLE
ELECTRIC & GROUNDING DETAILS

SHEET NUMBER
E-1

1815.228

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 180 ft Valmont Monopole
Customer Name: SBA Communications Corp
Customer Site Number: CT02721-S
Customer Site Name: South Windham
Carrier Name: T-Mobile Sprint (App#: 154214-2)
Carrier Site ID / Name: CT72XC043 / _
Site Location: 193 Windham Center Road
Windham, Connecticut
Windham County
Latitude: 41.690055
Longitude: -72.162536

Exp.10/31/2021

Analysis Result:

Max Structural Usage: 82.6% [Pass]
Max Foundation Usage: 72.0% [Pass]
Additional Usage Caused by New Mount: +2%

06/02/2021

Report Prepared By : Tawfeeq Alajaj

Introduction

The purpose of this report is to summarize the analysis results on the 180 ft Valmont Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Valmont#: 11872-00. dated 06/23/2000.
Foundation Drawing	Valmont#: 11872-00. dated 06/23/2000.
Geotechnical Report	FDH Project Number 1202237EG1 Revision 1, dated 08/16/2012.
Modification Drawings	N/A
Mount Analysis	T-Mobile Sprint MA by TES# 106878. Dated 05/17/2021.

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

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed V_{ult} = 130.0 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 101.0 mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 1" 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
Seismic Parameters:	S_S = 0.173, S_1 = 0.062

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

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	177.0	3	Antel - BXA-70063-6CF - Panel	Low Profile Platform	(12) 1 5/8"	Verizon
2		6	Antel - LPA-80080-4CF - Panel			
3		3	Antel - BXA-171085-8BF - Panel			
4		6	RFS FD9R6004-2C-3L Diplexers			
5	167.0	3	RFS - APXVTM14-C-I20 - Panel	Low Profile Platform	(4) 1-1/4" Hybrid	Sprint Nextel
6		3	RFS - APXVSPP18-C-A20 - Panel			
7		4	RFS ACU-A20-N RET			
8		3	Alcatel Lucent TD-RRH8x20-25			
9		3	Alcatel Lucent 1900 MHz RRH			
10		3	Alcatel Lucent 800 MHz RRH			
11		3	Alcatel Lucent 800 MHz Filter			
12	147.0	3	Power wave- 7770- Panel	(1) Platform w/ Rail Site Pro 1: AT&T RMQP-496-HK	(12) 1-5/8" (1)3" conduit housing (2) 3/4" DC & (1) 1/2" Fiber (2)3" conduit housing (4) 3/4" DC & (1) 1/2" Fiber	AT&T
13		6	Cci- DMP65R-BU8DA- Panel			
14		3	Cci - DTMABP7819VG12A- Panel			
15		4	TT08-19DB111-001 TMA			
16		3	RRUS 4478 B14			
17		3	RRUS 8843 B2 B66A			
18		3	RRUS 4449 B5/B12			
19		3	DC6-48-60-18-8F			
20	122.0	1	Nokia CS72188.01	Direct Mount	-	

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
5	167.0	3	RFS - APX16DWV-16DWVS-E-A20 - Panel	SitePro1 RMQP-4096-HK	(3) 1.99" Hybrid - 6x24	T-Mobile Sprint
6		3	RFS - APXVAALL24_43-U-NA20 - Panel			
7		3	Ericsson - AIR6449 B41 - Panel			
8		4	RFS ACU-A20-N RET			
9		3	Ericsson 4424 B25			
10		3	Ericsson 4449 B71 + B85			
11		3	Ericsson 4415 B66A			
12		3	Alcatel Lucent 800 MHz Filter			

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

Analysis Results

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

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	**82.6%**	**76.3%**	**56.6%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)
Original Design Reactions	5047.0	40.1
Analysis Reactions	5411.1	43.8
Factored Reactions*	6813.5	54.1
% of Design Reactions	79.4%	80.8%

* Per section 15.5.1 of the TIA-222-G standard, factored reactions were obtained by multiplying a 1.35 factor to the original design reactions.

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

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.4843 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the TIA-222 Standard under the design basic wind speed as specified in the Analysis Criteria.

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC.** Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.

2. The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.

3. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the ANSI/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.

4. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.

5. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.

6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

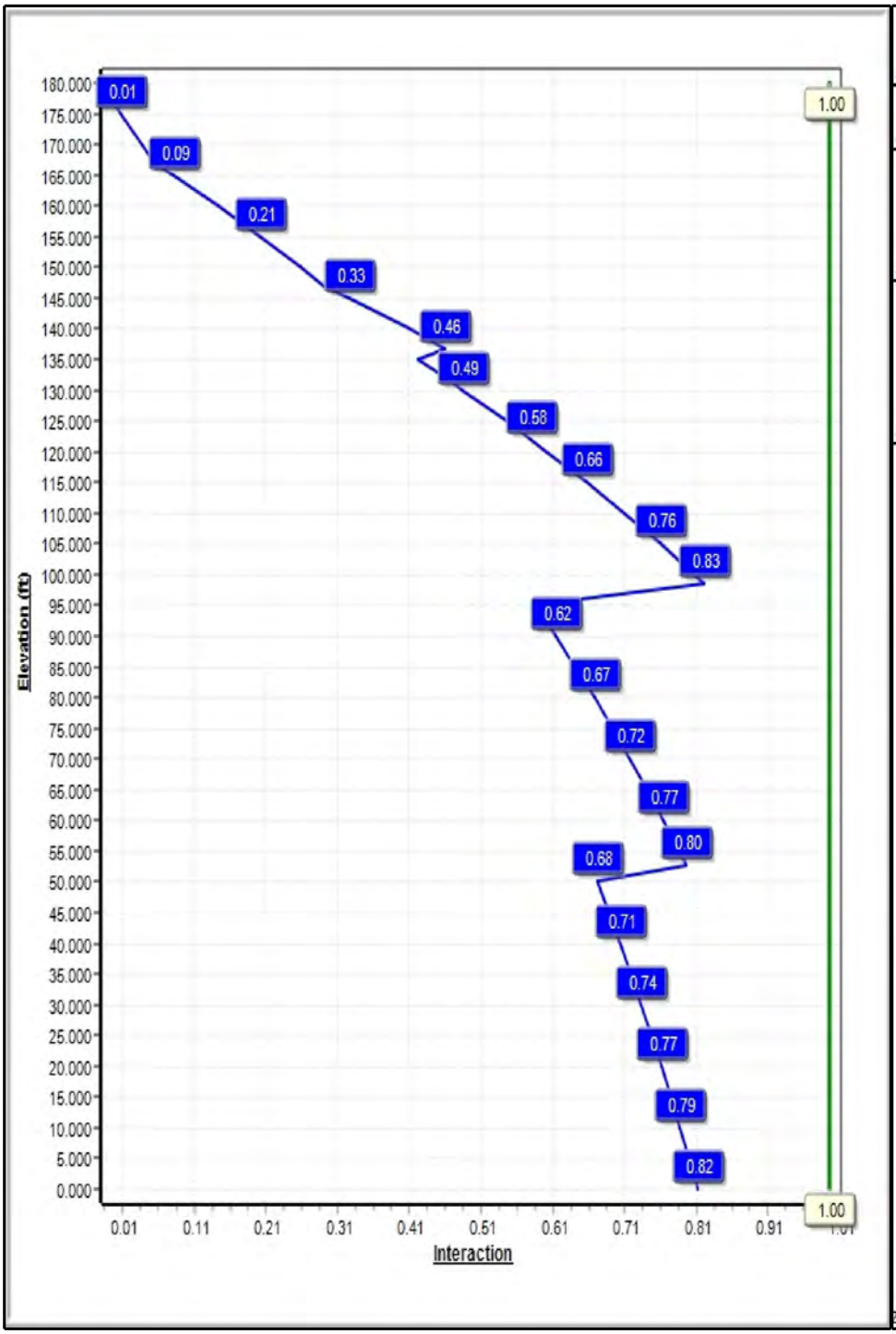
Usage Diagram - Max Ratio 82.59% at 98.5ft

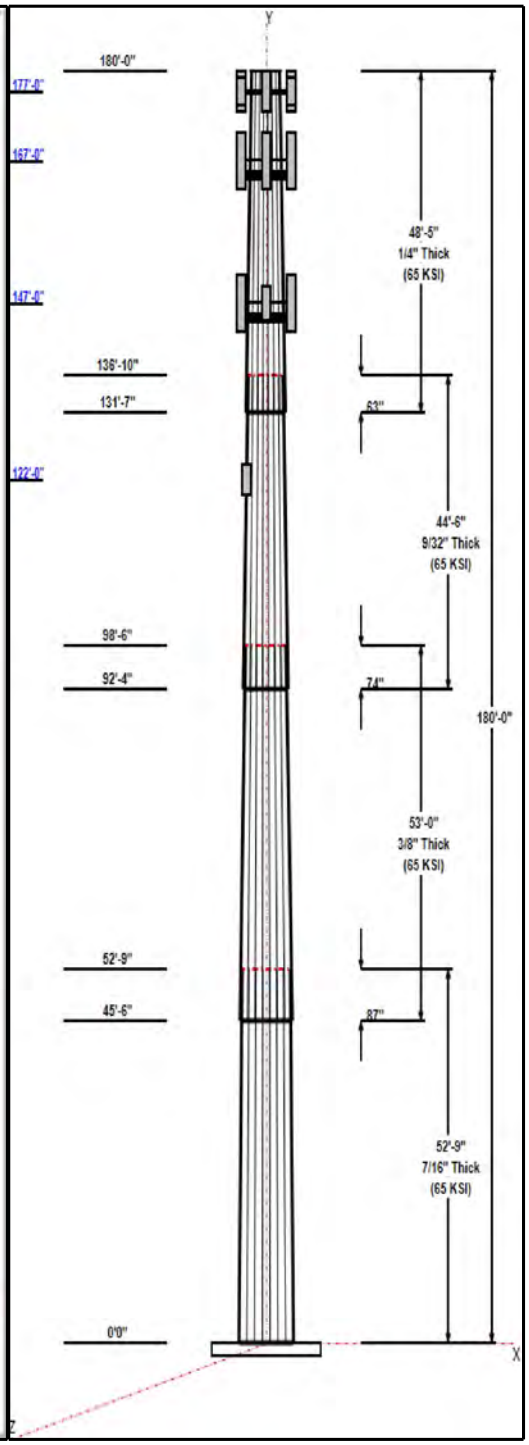
Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham	**Exposure:**	C	
Height:	180.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

Tower Engineering Solutions

Dead Load Factor:	1.20	**Iterations:**	26
Wind Load Factor:	1.60		

Load Case : 1.2D + 1.6W 101 mph Wind





Structure: CT02721-S-SBA

Type: Tapered
Site Name: South Windham
Height: 180.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 16 Sided
Taper: 0.19501

6/2/2021

Tower Engineering Solutions

Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	52.75	49.71	60.00	0.438		0.19501	65
2	53.00	41.54	51.88	0.375	Slip	0.19501	65
3	44.50	34.63	43.31	0.281	Slip	0.19501	65
4	48.42	26.71	36.15	0.250	Slip	0.19501	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
177.00	177.00	3	BXA-70063-6CF	Verizon
177.00	177.00	6	LPA-80080-4CF	Verizon
177.00	177.00	3	BXA-171085-8BF	Verizon
177.00	177.00	6	RFS FD9R6004-2C-3L	Verizon
177.00	177.00	1	Low Profile Platform	Verizon
167.00	167.00	3	APX16DWV-16DWVS-E-A	T-Mobile Sprint
167.00	167.00	3	APXVAALL24_43-U-NA20	T-Mobile Sprint
167.00	167.00	3	AIR6449 B41	T-Mobile Sprint
167.00	167.00	4	RFS ACU-A20-N RET	T-Mobile Sprint
167.00	167.00	3	Ericsson 4424 B25	T-Mobile Sprint
167.00	167.00	3	Ericsson 4449 B71 + B85	T-Mobile Sprint
167.00	167.00	3	Ericsson 4415 B66A	T-Mobile Sprint
167.00	167.00	3	Alcatel Lucent 800 MHz	T-Mobile Sprint
167.00	167.00	1	RMQP-4096-HK	T-Mobile Sprint
147.00	147.00	3	7770	AT&T
147.00	147.00	6	Cci DMP65R-BU8DA	AT&T
147.00	147.00	3	Cci DTMABP7819VG12A	AT&T
147.00	147.00	3	Powerwave	AT&T
147.00	147.00	3	Ericsson RRUS 4478 B14	AT&T
147.00	147.00	3	Ericsson RRUS 8843 B2	AT&T
147.00	147.00	3	Ericsson RRUS 4449	AT&T
147.00	147.00	3	Raycap DC6-48-60-18-8F	AT&T
147.00	147.00	1	RMQP-496-HK	AT&T
122.00	122.00	1	Nokia CS72188.01	AT&T

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	177.00	Inside	1 5/8" Coax	Verizon
0.00	167.00	Inside	1.99" Hybrid - 6x24	T-Mobile Sprint
0.00	147.00	Inside	1 5/8" Coax	AT&T
0.00	147.00	Inside	3" conduit	AT&T

Anchor Bolts

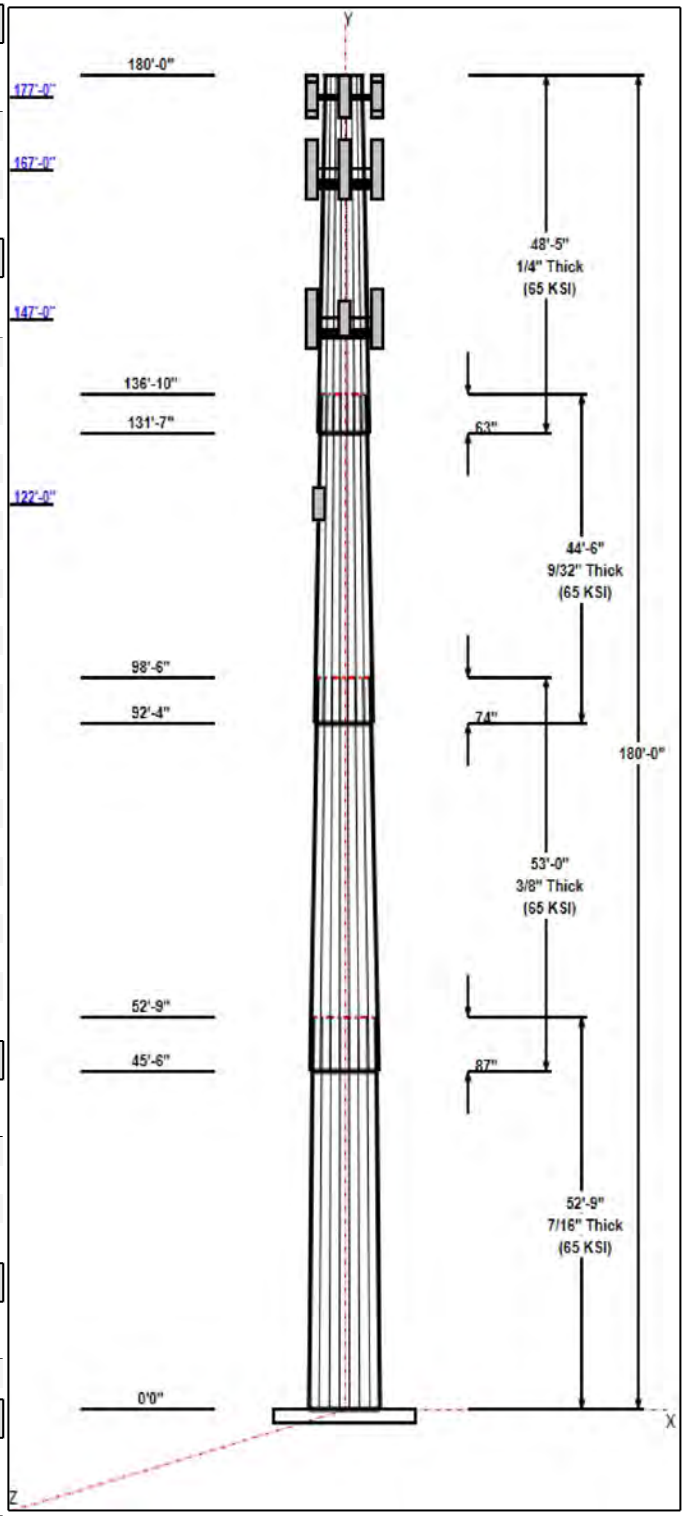
Qty	Specifications	Grade (ksi)	Arrangement
20	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
3.0000	74.6	50.0	Round

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)



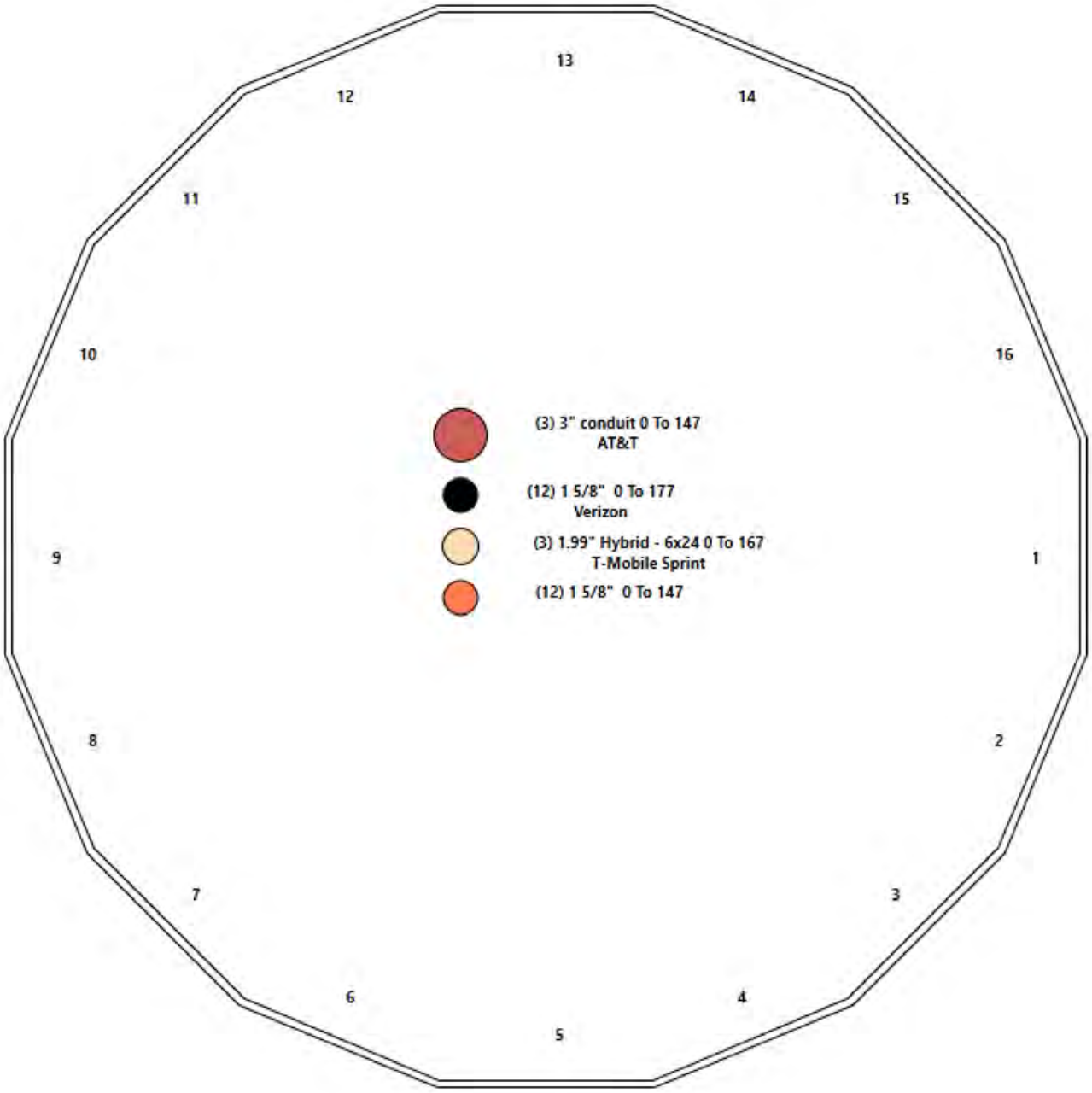
1.2D + 1.6W 101 mph Wind	5411.1	43.8	57.2
0.9D + 1.6W 101 mph Wind	5348.1	43.7	42.9
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1449.9	11.2	96.4
1.2D + 1.0E	257.9	2.0	57.3
0.9D + 1.0E	254.6	2.0	42.9
1.0D + 1.0W 60 mph Wind	1186.4	9.6	47.7

Structure: CT02721-S-SBA - Coax Line Placement

Type: Monopole
Site Name: South Windham
Height: 180.00 (ft)

6/2/2021

Tower Engineering Solutions



Shaft Properties

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 5

Tower Engineering Solutions

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	16	52.750	0.4375	65		0.00	13,633
2	16	53.000	0.3750	65	Slip	87.00	9,996
3	16	44.500	0.2813	65	Slip	74.00	5,256
4	16	48.417	0.2500	65	Slip	63.00	4,097
					Total Shaft Weight:		**32,982**

	Bottom						Top						
Sec. No.	**Dia (in)**	**Elev (ft)**	**Area (sqin)**	**Ix (in^4)**	**W/t Ratio**	**D/t Ratio**	**Dia (in)**	**Elev (ft)**	**Area (sqin)**	**Ix (in^4)**	**W/t Ratio**	**D/t Ratio**	**Taper**
1	60.00	0.00	83.13	37256.48	25.69	137.14	49.71	52.75	68.77	21095.3	21.01	113.6	0.195007
2	51.88	45.50	61.61	20644.91	25.93	138.34	41.54	98.50	49.25	10543.3	20.44	110.7	0.195007
3	43.31	92.33	38.60	9027.72	29.04	153.98	34.63	136.83	30.82	4592.96	22.90	123.1	0.195007
4	36.15	131.5	28.63	4662.62	27.17	144.61	26.71	180.00	21.10	1866.70	19.66	106.8	0.195007

Load Summary

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

Discrete Appurtenances

				No Ice			Ice				
No.	**Elev (ft)**	**Description**	**Qty**	**Weight (lb)**	**CaAa (sf)**	**CaAa Factor**	**Weight (lb)**	**CaAa (sf)**	**CaAa Factor**	**Hor. Ecc. (ft)**	**Vert Ecc (ft)**
1	177.00	BXA-70063-6CF	3	17.00	7.57	0.73	271.32	9.322	0.73	0.00	0.00
2	177.00	LPA-80080-4CF	6	12.00	2.61	1.70	168.73	3.828	1.70	0.00	0.00
3	177.00	BXA-171085-8BF	3	10.50	2.94	0.84	99.35	5.188	0.84	0.00	0.00
4	177.00	RFS FD9R6004-2C-3L Diplexers	6	3.10	0.37	0.62	13.98	0.988	0.62	0.00	0.00
5	177.00	Low Profile Platform	1	1500.00	22.00	1.00	3274.34	45.942	1.00	0.00	0.00
6	167.00	APX16DWV-16DWVS-E-A20	3	40.70	6.61	0.62	198.46	9.545	0.62	0.00	0.00
7	167.00	APXVAALL24_43-U-NA20	3	128.00	20.24	0.70	716.40	22.834	0.70	0.00	0.00
8	167.00	AIR6449 B41	3	103.00	5.65	0.71	287.80	6.931	0.71	0.00	0.00
9	167.00	RFS ACU-A20-N RET	4	1.00	0.14	0.79	6.79	0.540	0.79	0.00	0.00
10	167.00	Ericsson 4424 B25	3	88.00	2.05	0.67	213.87	2.880	0.67	0.00	0.00
11	167.00	Ericsson 4449 B71 + B85	3	73.20	1.97	0.67	151.02	2.737	0.67	0.00	0.00
12	167.00	Ericsson 4415 B66A	3	49.60	1.64	0.67	134.48	2.402	0.67	0.00	0.00
13	167.00	Alcatel Lucent 800 MHz Filter	3	8.80	0.78	0.67	32.58	1.652	0.67	0.00	0.00
14	167.00	RMQP-4096-HK	1	2449.00	46.00	1.00	5905.13	89.278	1.00	0.00	0.00
15	147.00	7770	3	35.00	5.50	0.73	228.61	6.948	0.73	0.00	0.00
16	147.00	Cci DMP65R-BU8DA	6	95.70	17.87	0.73	624.19	20.260	0.73	0.00	0.00
17	147.00	Cci DTMABP7819VG12A	3	19.20	1.14	0.67	53.16	2.164	0.67	0.00	0.00
18	147.00	Powerwave TT08-19DB111-001 TMA	3	22.00	0.92	0.90	57.42	1.904	0.90	0.00	0.00
19	147.00	Ericsson RRUS 4478 B14	3	59.40	1.65	0.67	114.58	2.340	0.67	0.00	0.00
20	147.00	Ericsson RRUS 8843 B2 B66A	3	75.00	1.65	0.67	182.64	2.392	0.67	0.00	0.00
21	147.00	Ericsson RRUS 4449 B5/B12	3	71.00	1.97	0.67	142.03	2.698	0.67	0.00	0.00
22	147.00	Raycap DC6-48-60-18-8F	3	31.80	0.92	1.00	114.07	1.503	1.00	0.00	0.00
23	147.00	RMQP-496-HK	1	2449.00	46.00	1.00	5861.32	88.730	1.00	0.00	0.00
24	122.00	Nokia CS72188.01	1	16.50	3.15	1.00	94.61	5.419	1.00	0.00	0.00
		Totals:	**74**	**9,579.90**			**28,997.32**				

Linear Appurtenances

Bottom Elev. (ft)	**Top Elev. (ft)**	**Description**	**Exposed Width**	**Exposed**
0.00	177.00	(12) 1 5/8" Coax	0.00	Inside
0.00	167.00	(3) 1.99" Hybrid - 6x24	0.00	Inside
0.00	147.00	(12) 1 5/8" Coax	0.00	Inside
0.00	147.00	(3) 3" conduit	0.00	Inside

Shaft Section Properties

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 7	

Increment Length: **5 (ft)**

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.4375	60.000	83.127	37256.5	25.69	137.14	73.5	1218.	0.0
5.00		0.4375	59.025	81.766	35456.6	25.24	134.91	74.0	1178.	1402.7
10.00		0.4375	58.050	80.405	33715.7	24.80	132.69	74.5	1139.	1379.6
15.00		0.4375	57.075	79.045	32032.6	24.36	130.46	75.0	1100.	1356.4
20.00		0.4375	56.100	77.684	30406.6	23.91	128.23	75.5	1063.	1333.3
25.00		0.4375	55.125	76.323	28836.5	23.47	126.00	76.0	1026.	1310.1
30.00		0.4375	54.150	74.962	27321.5	23.03	123.77	76.5	989.7	1287.0
35.00		0.4375	53.175	73.601	25860.4	22.58	121.54	77.0	954.0	1263.8
40.00		0.4375	52.200	72.241	24452.4	22.14	119.31	77.5	918.9	1240.7
45.00		0.4375	51.225	70.880	23096.5	21.70	117.08	78.0	884.4	1217.5
45.50	Bot - Section 2	0.4375	51.127	70.744	22963.7	21.65	116.86	78.1	881.0	120.5
50.00		0.4375	50.250	69.519	21791.6	21.26	114.86	78.5	850.7	2009.2
52.75	Top - Section 1	0.3750	50.463	59.918	18991.0	25.18	134.57	0.0	0.0	1210.7
55.00		0.3750	50.025	59.393	18496.2	24.94	133.40	74.3	725.3	456.7
60.00		0.3750	49.050	58.227	17427.8	24.43	130.80	74.9	697.0	1000.6
65.00		0.3750	48.075	57.061	16401.3	23.91	128.20	75.5	669.2	980.7
70.00		0.3750	47.099	55.894	15415.9	23.39	125.60	76.1	642.0	960.9
75.00		0.3750	46.124	54.728	14470.9	22.87	123.00	76.7	615.4	941.1
80.00		0.3750	45.149	53.561	13565.2	22.36	120.40	77.3	589.4	921.2
85.00		0.3750	44.174	52.395	12698.1	21.84	117.80	77.9	563.9	901.4
90.00		0.3750	43.199	51.229	11868.9	21.32	115.20	78.4	538.9	881.5
92.33	Bot - Section 3	0.3750	42.744	50.684	11494.5	21.08	113.98	78.7	527.5	404.6
95.00		0.3750	42.224	50.062	11076.5	20.81	112.60	79.0	514.6	805.3
98.50	Top - Section 2	0.2813	42.104	37.523	8291.7	28.19	149.70	0.0	0.0	1041.9
100.00		0.2813	41.812	37.261	8119.0	27.98	148.66	70.9	380.9	190.9
105.00		0.2813	40.837	36.386	7560.4	27.29	145.20	71.7	363.2	626.5
110.00		0.2813	39.862	35.511	7028.1	26.60	141.73	72.5	345.9	611.6
115.00		0.2813	38.887	34.636	6521.4	25.91	138.26	73.3	329.0	596.7
120.00		0.2813	37.912	33.762	6039.7	25.22	134.80	74.0	312.5	581.9
122.00		0.2813	37.522	33.412	5853.8	24.95	133.41	74.3	306.0	228.6
125.00		0.2813	36.937	32.887	5582.3	24.53	131.33	74.8	296.5	338.4
130.00		0.2813	35.962	32.012	5148.5	23.84	127.86	75.6	280.8	552.1
131.58	Bot - Section 4	0.2813	35.653	31.735	5016.0	23.62	126.77	75.8	276.0	171.7
135.00		0.2813	34.987	31.137	4737.9	23.15	124.40	76.4	265.6	695.3
136.83	Top - Section 3	0.2500	35.129	27.816	4275.0	26.36	140.52	0.0	0.0	367.7
140.00		0.2500	34.511	27.324	4051.9	25.87	138.05	73.3	230.3	297.1
145.00		0.2500	33.536	26.546	3715.8	25.09	134.15	74.2	217.3	458.3
147.00		0.2500	33.146	26.235	3586.7	24.78	132.59	74.5	212.3	179.6
150.00		0.2500	32.561	25.768	3398.7	24.32	130.25	75.1	204.7	265.4
155.00		0.2500	31.586	24.991	3100.2	23.54	126.35	75.9	192.5	431.8
160.00		0.2500	30.611	24.213	2819.7	22.76	122.45	76.8	180.7	418.6
165.00		0.2500	29.636	23.436	2556.7	21.99	118.55	77.7	169.2	405.3
167.00		0.2500	29.246	23.125	2456.2	21.68	116.99	78.0	164.7	158.4
170.00		0.2500	28.661	22.658	2310.6	21.21	114.65	78.6	158.1	233.7
175.00		0.2500	27.686	21.880	2080.7	20.44	110.74	79.4	147.4	378.9
177.00		0.2500	27.296	21.569	1993.3	20.13	109.18	79.8	143.2	147.8
180.00		0.2500	26.711	21.103	1866.7	19.66	106.84	80.3	137.1	217.8
										32981.5

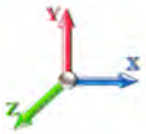
Wind Loading - Shaft

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 26

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	21.088	23.20	474.71	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	466.99	0.750	0.000	5.00	25.283	18.96	703.8	0.0	1683.3
10.00		1.00	0.85	21.088	23.20	459.28	0.750	0.000	5.00	24.868	18.65	692.2	0.0	1655.5
15.00		1.00	0.85	21.088	23.20	451.57	0.750	0.000	5.00	24.454	18.34	680.7	0.0	1627.7
20.00		1.00	0.90	22.375	24.61	457.20	0.750	0.000	5.00	24.040	18.03	710.0	0.0	1599.9
25.00		1.00	0.95	23.451	25.80	459.93	0.750	0.000	5.00	23.626	17.72	731.3	0.0	1572.2
30.00		1.00	0.98	24.369	26.81	460.55	0.750	0.000	5.00	23.212	17.41	746.6	0.0	1544.4
35.00		1.00	1.01	25.172	27.69	459.65	0.750	0.000	5.00	22.797	17.10	757.5	0.0	1516.6
40.00		1.00	1.04	25.890	28.48	457.61	0.750	0.000	5.00	22.383	16.79	764.9	0.0	1488.8
45.00		1.00	1.07	26.540	29.19	454.67	0.750	0.000	5.00	21.969	16.48	769.6	0.0	1461.0
45.50	Bot - Section 2	1.00	1.07	26.602	29.26	454.33	0.750	0.000	0.50	2.174	1.63	76.3	0.0	144.6
50.00		1.00	1.09	27.135	29.85	450.99	0.750	0.000	4.50	19.667	14.75	704.5	0.0	2411.1
52.75	Top - Section 1	1.00	1.11	27.443	30.19	448.69	0.750	0.000	2.75	11.854	8.89	429.4	0.0	1452.9
55.00		1.00	1.12	27.685	30.45	453.49	0.750	0.000	2.25	9.605	7.20	351.0	0.0	548.1
60.00		1.00	1.14	28.197	31.02	448.75	0.750	0.000	5.00	21.045	15.78	783.3	0.0	1200.7
65.00		1.00	1.16	28.676	31.54	443.55	0.750	0.000	5.00	20.631	15.47	780.9	0.0	1176.9
70.00		1.00	1.17	29.127	32.04	437.95	0.750	0.000	5.00	20.216	15.16	777.3	0.0	1153.1
75.00		1.00	1.19	29.553	32.51	432.01	0.750	0.000	5.00	19.802	14.85	772.5	0.0	1129.3
80.00		1.00	1.21	29.958	32.95	425.76	0.750	0.000	5.00	19.388	14.54	766.7	0.0	1105.5
85.00		1.00	1.22	30.342	33.38	419.24	0.750	0.000	5.00	18.974	14.23	759.9	0.0	1081.6
90.00		1.00	1.24	30.710	33.78	412.46	0.750	0.000	5.00	18.559	13.92	752.3	0.0	1057.8
92.33	Bot - Section 3	1.00	1.24	30.876	33.96	409.21	0.750	0.000	2.33	8.519	6.39	347.2	0.0	485.5
95.00		1.00	1.25	31.061	34.17	405.45	0.750	0.000	2.67	9.753	7.32	399.9	0.0	966.3
98.50	Top - Section 2	1.00	1.26	31.299	34.43	400.42	0.750	0.000	3.50	12.622	9.47	521.5	0.0	1250.3
100.00		1.00	1.27	31.399	34.54	403.66	0.750	0.000	1.50	5.348	4.01	221.6	0.0	229.0
105.00		1.00	1.28	31.723	34.89	396.28	0.750	0.000	5.00	17.556	13.17	735.1	0.0	751.8
110.00		1.00	1.29	32.035	35.24	388.71	0.750	0.000	5.00	17.142	12.86	724.8	0.0	733.9
115.00		1.00	1.30	32.336	35.57	380.98	0.750	0.000	5.00	16.727	12.55	714.0	0.0	716.1
120.00		1.00	1.32	32.627	35.89	373.10	0.750	0.000	5.00	16.313	12.23	702.6	0.0	698.2
122.00	Appurtenance(s)	1.00	1.32	32.741	36.01	369.90	0.750	0.000	2.00	6.409	4.81	277.0	0.0	274.3
125.00		1.00	1.33	32.909	36.20	365.07	0.750	0.000	3.00	9.490	7.12	412.2	0.0	406.1
130.00		1.00	1.34	33.182	36.50	356.90	0.750	0.000	5.00	15.485	11.61	678.2	0.0	662.5
131.58	Bot - Section 4	1.00	1.34	33.266	36.59	354.29	0.750	0.000	1.58	4.817	3.61	211.5	0.0	206.1
135.00		1.00	1.35	33.446	36.79	348.61	0.750	0.000	3.42	10.398	7.80	459.1	0.0	834.3
136.83	Top - Section 3	1.00	1.35	33.541	36.90	345.54	0.750	0.000	1.83	5.500	4.12	243.5	0.0	441.2
140.00		1.00	1.36	33.703	37.07	345.19	0.750	0.000	3.17	9.369	7.03	416.8	0.0	356.5
145.00		1.00	1.37	33.953	37.35	336.68	0.750	0.000	5.00	14.454	10.84	647.8	0.0	549.9
147.00	Appurtenance(s)	1.00	1.37	34.051	37.46	333.25	0.750	0.000	2.00	5.666	4.25	254.7	0.0	215.5
150.00		1.00	1.38	34.196	37.62	328.06	0.750	0.000	3.00	8.374	6.28	378.0	0.0	318.5
155.00		1.00	1.39	34.433	37.88	319.34	0.750	0.000	5.00	13.626	10.22	619.3	0.0	518.2
160.00		1.00	1.40	34.664	38.13	310.52	0.750	0.000	5.00	13.212	9.91	604.5	0.0	502.3
165.00		1.00	1.41	34.890	38.38	301.60	0.750	0.000	5.00	12.797	9.60	589.4	0.0	486.4
167.00	Appurtenance(s)	1.00	1.41	34.978	38.48	298.01	0.750	0.000	2.00	5.003	3.75	231.0	0.0	190.1
170.00		1.00	1.42	35.110	38.62	292.60	0.750	0.000	3.00	7.380	5.54	342.0	0.0	280.4
175.00		1.00	1.42	35.324	38.86	283.51	0.750	0.000	5.00	11.969	8.98	558.1	0.0	454.7
177.00	Appurtenance(s)	1.00	1.43	35.409	38.95	279.85	0.750	0.000	2.00	4.672	3.50	218.4	0.0	177.4
180.00		1.00	1.43	35.535	39.09	274.34	0.750	0.000	3.00	6.883	5.16	322.9	0.0	261.4

Wind Loading - Shaft

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Totals:	**180.00**	**25,342.1**	**39,577.8**

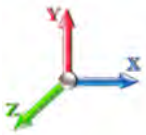
Discrete Appurtenance Forces

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 10	

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 26

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	177.00	RFS FD9R6004-2C-3L	6	35.409	38.950	0.50	0.80	1.10	22.32	0.000	0.000	68.62	0.00	0.00
2	177.00	BXA-171085-8BF	3	35.409	38.950	0.67	0.80	5.93	37.80	0.000	0.000	369.37	0.00	0.00
3	177.00	LPA-80080-4CF	6	35.409	38.950	1.36	0.80	21.30	86.40	0.000	0.000	1327.26	0.00	0.00
4	177.00	BXA-70063-6CF	3	35.409	38.950	0.58	0.80	13.26	61.20	0.000	0.000	826.53	0.00	0.00
5	177.00	Low Profile Platform	1	35.409	38.950	1.00	1.00	22.00	1800.00	0.000	0.000	1371.04	0.00	0.00
6	167.00	Ericsson 4424 B25	3	34.978	38.476	0.50	0.75	3.09	316.80	0.000	0.000	190.25	0.00	0.00
7	167.00	AIR6449 B41	3	34.978	38.476	0.53	0.75	9.03	370.80	0.000	0.000	555.65	0.00	0.00
8	167.00	RFS ACU-A20-N RET	4	34.978	38.476	0.59	0.75	0.33	4.80	0.000	0.000	20.43	0.00	0.00
9	167.00	RMQP-4096-HK	1	34.978	38.476	1.00	1.00	46.00	2938.80	0.000	0.000	2831.83	0.00	0.00
10	167.00	Ericsson 4449 B71 + B85	3	34.978	38.476	0.50	0.75	2.97	263.52	0.000	0.000	182.82	0.00	0.00
11	167.00	Ericsson 4415 B66A	3	34.978	38.476	0.50	0.75	2.47	178.56	0.000	0.000	152.20	0.00	0.00
12	167.00	Alcatel Lucent 800 MHz	3	34.978	38.476	0.50	0.75	1.18	31.68	0.000	0.000	72.39	0.00	0.00
13	167.00	APXVAALL24_43-U-NA20	3	34.978	38.476	0.52	0.75	31.88	460.80	0.000	0.000	1962.46	0.00	0.00
14	167.00	APX16DWV-16DWVS-E-A	3	34.978	38.476	0.46	0.75	9.22	146.52	0.000	0.000	567.66	0.00	0.00
15	147.00	7770	3	34.051	37.456	0.55	0.75	9.03	126.00	0.000	0.000	541.40	0.00	0.00
16	147.00	Cci DMP65R-BU8DA	6	34.051	37.456	0.55	0.75	58.70	689.04	0.000	0.000	3518.09	0.00	0.00
17	147.00	Cci DTMABP7819VG12A	3	34.051	37.456	0.50	0.75	1.72	69.12	0.000	0.000	102.99	0.00	0.00
18	147.00	Powerwave	3	34.051	37.456	0.68	0.75	1.86	79.20	0.000	0.000	111.65	0.00	0.00
19	147.00	Ericsson RRUS 4478 B14	3	34.051	37.456	0.50	0.75	2.49	213.84	0.000	0.000	149.07	0.00	0.00
20	147.00	Ericsson RRUS 8843 B2	3	34.051	37.456	0.50	0.75	2.49	270.00	0.000	0.000	149.07	0.00	0.00
21	147.00	Ericsson RRUS 4449	3	34.051	37.456	0.50	0.75	2.97	255.60	0.000	0.000	177.98	0.00	0.00
22	147.00	Raycap DC6-48-60-18-8F	3	34.051	37.456	0.75	0.75	2.07	114.48	0.000	0.000	124.06	0.00	0.00
23	147.00	RMQP-496-HK	1	34.051	37.456	1.00	1.00	46.00	2938.80	0.000	0.000	2756.79	0.00	0.00
24	122.00	Nokia CS72188.01	1	32.741	36.015	1.00	1.00	3.15	19.80	0.000	0.000	181.52	0.00	0.00
							Totals:		**11,495.88**			**18,311.11**		

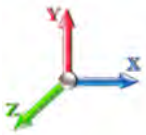
Total Applied Force Summary

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 11

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 26

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		703.76	1876.96	0.00	0.00
10.00		692.23	1849.18	0.00	0.00
15.00		680.70	1821.40	0.00	0.00
20.00		710.01	1793.62	0.00	0.00
25.00		731.34	1765.83	0.00	0.00
30.00		746.63	1738.05	0.00	0.00
35.00		757.50	1710.27	0.00	0.00
40.00		764.94	1682.48	0.00	0.00
45.00		769.63	1654.70	0.00	0.00
45.50		76.34	163.94	0.00	0.00
50.00		704.45	2585.41	0.00	0.00
52.75		429.40	1559.40	0.00	0.00
55.00		351.02	635.24	0.00	0.00
60.00		783.29	1394.39	0.00	0.00
65.00		780.92	1370.57	0.00	0.00
70.00		777.28	1346.76	0.00	0.00
75.00		772.49	1322.95	0.00	0.00
80.00		766.68	1299.13	0.00	0.00
85.00		759.93	1275.32	0.00	0.00
90.00		752.34	1251.50	0.00	0.00
92.33		347.21	575.89	0.00	0.00
95.00		399.90	1069.60	0.00	0.00
98.50		521.49	1385.86	0.00	0.00
100.00		221.63	287.13	0.00	0.00
105.00		735.13	945.49	0.00	0.00
110.00		724.85	927.63	0.00	0.00
115.00		713.98	909.77	0.00	0.00
120.00		702.57	891.91	0.00	0.00
122.00	(1) attachments	458.51	371.56	0.00	0.00
125.00		412.22	522.29	0.00	0.00
130.00		678.22	856.19	0.00	0.00
131.58		211.53	267.40	0.00	0.00
135.00		459.08	966.68	0.00	0.00
136.83		243.51	512.21	0.00	0.00
140.00		416.80	479.16	0.00	0.00
145.00		647.82	743.60	0.00	0.00
147.00	(28) attachments	7885.76	5049.07	0.00	0.00
150.00		378.01	370.58	0.00	0.00
155.00		619.33	604.93	0.00	0.00
160.00		604.53	589.05	0.00	0.00
165.00		589.38	573.17	0.00	0.00
167.00	(26) attachments	6766.67	4937.10	0.00	0.00
170.00		342.03	325.35	0.00	0.00
175.00		558.10	529.54	0.00	0.00
177.00	(19) attachments	4181.17	2215.09	0.00	0.00
180.00		322.86	261.37	0.00	0.00

Total Applied Force Summary

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 12

Totals:	**43,653.18**	**57,264.70**	**0.00**	**0.00**

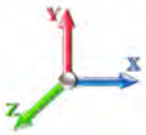
Calculated Forces

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 26

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-57.19	-43.76	0.00	-5411.1	0.00	5411.13	5499.24	2749.62	13525.8	6714.82	0.00	0.000	0.000	0.817
5.00	-55.16	-43.25	0.00	-5192.3	0.00	5192.36	5446.13	2723.06	13174.3	6540.31	0.11	-0.202	0.000	0.804
10.00	-53.16	-42.73	0.00	-4976.1	0.00	4976.13	5391.79	2695.89	12824.2	6366.50	0.43	-0.406	0.000	0.792
15.00	-51.19	-42.22	0.00	-4762.4	0.00	4762.47	5336.22	2668.11	12475.6	6193.44	0.97	-0.612	0.000	0.779
20.00	-49.26	-41.67	0.00	-4551.3	0.00	4551.37	5279.42	2639.71	12128.7	6021.23	1.72	-0.819	0.000	0.765
25.00	-47.35	-41.08	0.00	-4343.0	0.00	4343.04	5221.40	2610.70	11783.6	5849.92	2.69	-1.027	0.000	0.752
30.00	-45.48	-40.47	0.00	-4137.6	0.00	4137.65	5162.14	2581.07	11440.6	5679.60	3.88	-1.236	0.000	0.738
35.00	-43.64	-39.83	0.00	-3935.3	0.00	3935.32	5101.66	2550.83	11099.6	5510.34	5.28	-1.446	0.000	0.723
40.00	-41.84	-39.17	0.00	-3736.1	0.00	3736.18	5039.95	2519.97	10760.9	5342.21	6.91	-1.657	0.000	0.708
45.00	-40.13	-38.43	0.00	-3540.3	0.00	3540.32	4977.01	2488.50	10424.7	5175.29	8.76	-1.869	0.000	0.692
45.50	-39.90	-38.43	0.00	-3521.1	0.00	3521.10	4970.65	2485.32	10391.2	5158.66	8.96	-1.890	0.000	0.691
50.00	-37.24	-37.73	0.00	-3348.1	0.00	3348.18	4912.84	2456.42	10091.1	5009.65	10.83	-2.082	0.000	0.676
52.75	-35.63	-37.31	0.00	-3244.4	0.00	3244.41	3995.11	1997.56	8262.19	4101.70	12.07	-2.200	0.000	0.800
55.00	-34.90	-37.04	0.00	-3160.4	0.00	3160.46	3974.19	1987.10	8146.39	4044.21	13.13	-2.297	0.000	0.791
60.00	-33.39	-36.34	0.00	-2975.2	0.00	2975.26	3926.81	1963.41	7890.01	3916.93	15.66	-2.533	0.000	0.768
65.00	-31.91	-35.62	0.00	-2793.5	0.00	2793.58	3878.20	1939.10	7635.05	3790.36	18.44	-2.769	0.000	0.746
70.00	-30.46	-34.90	0.00	-2615.4	0.00	2615.46	3828.36	1914.18	7381.67	3664.57	21.46	-3.003	0.000	0.722
75.00	-29.04	-34.18	0.00	-2440.9	0.00	2440.94	3777.30	1888.65	7130.01	3539.64	24.73	-3.237	0.000	0.698
80.00	-27.66	-33.45	0.00	-2270.0	0.00	2270.04	3725.00	1862.50	6880.23	3415.63	28.24	-3.468	0.000	0.672
85.00	-26.30	-32.72	0.00	-2102.8	0.00	2102.80	3671.48	1835.74	6632.46	3292.63	32.00	-3.698	0.000	0.646
90.00	-25.01	-31.95	0.00	-1939.2	0.00	1939.22	3616.73	1808.36	6386.87	3170.71	35.99	-3.924	0.000	0.619
92.33	-24.40	-31.62	0.00	-1864.6	0.00	1864.66	3590.75	1795.38	6273.05	3114.21	37.93	-4.030	0.000	0.606
95.00	-23.28	-31.20	0.00	-1780.3	0.00	1780.35	3560.74	1780.37	6143.61	3049.94	40.22	-4.151	0.000	0.591
98.50	-21.88	-30.62	0.00	-1671.1	0.00	1671.16	2386.86	1193.43	4124.78	2047.71	43.32	-4.306	0.000	0.826
100.00	-21.52	-30.44	0.00	-1625.2	0.00	1625.24	2378.02	1189.01	4080.56	2025.76	44.68	-4.372	0.000	0.812
105.00	-20.50	-29.73	0.00	-1473.0	0.00	1473.04	2347.74	1173.87	3933.38	1952.70	49.40	-4.644	0.000	0.764
110.00	-19.50	-29.02	0.00	-1324.4	0.00	1324.40	2316.23	1158.11	3786.65	1879.85	54.40	-4.907	0.000	0.714
115.00	-18.54	-28.31	0.00	-1179.3	0.00	1179.32	2283.49	1141.75	3640.52	1807.31	59.67	-5.160	0.000	0.661
120.00	-17.63	-27.58	0.00	-1037.7	0.00	1037.79	2249.53	1124.76	3495.14	1735.13	65.20	-5.402	0.000	0.607
122.00	-17.25	-27.12	0.00	-982.64	0.00	982.64	2235.60	1117.80	3437.23	1706.38	67.48	-5.497	0.000	0.584
125.00	-16.69	-26.71	0.00	-901.29	0.00	901.29	2214.33	1107.17	3350.65	1663.40	70.98	-5.635	0.000	0.550
130.00	-15.84	-25.99	0.00	-767.74	0.00	767.74	2177.91	1088.96	3207.21	1592.19	76.98	-5.847	0.000	0.490
131.58	-15.55	-25.78	0.00	-726.59	0.00	726.59	2166.12	1083.06	3162.03	1569.76	78.93	-5.913	0.000	0.471
135.00	-14.60	-25.24	0.00	-638.52	0.00	638.52	2140.26	1070.13	3064.96	1521.58	83.21	-6.045	0.000	0.427
136.83	-14.08	-24.97	0.00	-592.24	0.00	592.24	1821.16	910.58	2623.48	1302.41	85.54	-6.113	0.000	0.463
140.00	-13.59	-24.54	0.00	-513.17	0.00	513.17	1802.58	901.29	2550.43	1266.14	89.62	-6.221	0.000	0.414
145.00	-12.87	-23.83	0.00	-390.49	0.00	390.49	1772.26	886.13	2435.64	1209.15	96.21	-6.380	0.000	0.331
147.00	-8.72	-15.44	0.00	-342.82	0.00	342.82	1759.78	879.89	2389.94	1186.47	98.89	-6.436	0.000	0.294
150.00	-8.37	-15.04	0.00	-296.49	0.00	296.49	1740.70	870.35	2321.67	1152.58	102.96	-6.512	0.000	0.262
155.00	-7.82	-14.37	0.00	-221.29	0.00	221.29	1707.91	853.96	2208.68	1096.48	109.82	-6.620	0.000	0.207
160.00	-7.28	-13.71	0.00	-149.45	0.00	149.45	1673.90	836.95	2096.80	1040.94	116.79	-6.705	0.000	0.148
165.00	-6.78	-13.06	0.00	-80.90	0.00	80.90	1638.66	819.33	1986.20	986.03	123.83	-6.764	0.000	0.086
167.00	-2.67	-5.76	0.00	-54.78	0.00	54.78	1624.22	812.11	1942.34	964.26	126.66	-6.779	0.000	0.059
170.00	-2.39	-5.38	0.00	-37.50	0.00	37.50	1602.19	801.09	1877.01	931.83	130.92	-6.795	0.000	0.042
175.00	-1.92	-4.77	0.00	-10.59	0.00	10.59	1564.49	782.24	1769.40	878.40	138.02	-6.810	0.000	0.013
177.00	-0.22	-0.35	0.00	-1.05	0.00	1.05	1549.06	774.53	1726.82	857.27	140.87	-6.811	0.000	0.001
180.00	0.00	-0.32	0.00	0.00	0.00	0.00	1525.56	762.78	1663.50	825.83	145.14	-6.811	0.000	0.000

Calculated Forces

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 14

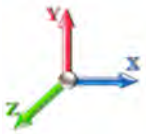
Wind Loading - Shaft

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 26

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	21.088	23.20	474.71	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	466.99	0.750	0.000	5.00	25.283	18.96	703.8	0.0	1262.5
10.00		1.00	0.85	21.088	23.20	459.28	0.750	0.000	5.00	24.868	18.65	692.2	0.0	1241.6
15.00		1.00	0.85	21.088	23.20	451.57	0.750	0.000	5.00	24.454	18.34	680.7	0.0	1220.8
20.00		1.00	0.90	22.375	24.61	457.20	0.750	0.000	5.00	24.040	18.03	710.0	0.0	1200.0
25.00		1.00	0.95	23.451	25.80	459.93	0.750	0.000	5.00	23.626	17.72	731.3	0.0	1179.1
30.00		1.00	0.98	24.369	26.81	460.55	0.750	0.000	5.00	23.212	17.41	746.6	0.0	1158.3
35.00		1.00	1.01	25.172	27.69	459.65	0.750	0.000	5.00	22.797	17.10	757.5	0.0	1137.4
40.00		1.00	1.04	25.890	28.48	457.61	0.750	0.000	5.00	22.383	16.79	764.9	0.0	1116.6
45.00		1.00	1.07	26.540	29.19	454.67	0.750	0.000	5.00	21.969	16.48	769.6	0.0	1095.8
45.50	Bot - Section 2	1.00	1.07	26.602	29.26	454.33	0.750	0.000	0.50	2.174	1.63	76.3	0.0	108.4
50.00		1.00	1.09	27.135	29.85	450.99	0.750	0.000	4.50	19.667	14.75	704.5	0.0	1808.3
52.75	Top - Section 1	1.00	1.11	27.443	30.19	448.69	0.750	0.000	2.75	11.854	8.89	429.4	0.0	1089.7
55.00		1.00	1.12	27.685	30.45	453.49	0.750	0.000	2.25	9.605	7.20	351.0	0.0	411.1
60.00		1.00	1.14	28.197	31.02	448.75	0.750	0.000	5.00	21.045	15.78	783.3	0.0	900.5
65.00		1.00	1.16	28.676	31.54	443.55	0.750	0.000	5.00	20.631	15.47	780.9	0.0	882.7
70.00		1.00	1.17	29.127	32.04	437.95	0.750	0.000	5.00	20.216	15.16	777.3	0.0	864.8
75.00		1.00	1.19	29.553	32.51	432.01	0.750	0.000	5.00	19.802	14.85	772.5	0.0	846.9
80.00		1.00	1.21	29.958	32.95	425.76	0.750	0.000	5.00	19.388	14.54	766.7	0.0	829.1
85.00		1.00	1.22	30.342	33.38	419.24	0.750	0.000	5.00	18.974	14.23	759.9	0.0	811.2
90.00		1.00	1.24	30.710	33.78	412.46	0.750	0.000	5.00	18.559	13.92	752.3	0.0	793.4
92.33	Bot - Section 3	1.00	1.24	30.876	33.96	409.21	0.750	0.000	2.33	8.519	6.39	347.2	0.0	364.1
95.00		1.00	1.25	31.061	34.17	405.45	0.750	0.000	2.67	9.753	7.32	399.9	0.0	724.7
98.50	Top - Section 2	1.00	1.26	31.299	34.43	400.42	0.750	0.000	3.50	12.622	9.47	521.5	0.0	937.7
100.00		1.00	1.27	31.399	34.54	403.66	0.750	0.000	1.50	5.348	4.01	221.6	0.0	171.8
105.00		1.00	1.28	31.723	34.89	396.28	0.750	0.000	5.00	17.556	13.17	735.1	0.0	563.9
110.00		1.00	1.29	32.035	35.24	388.71	0.750	0.000	5.00	17.142	12.86	724.8	0.0	550.5
115.00		1.00	1.30	32.336	35.57	380.98	0.750	0.000	5.00	16.727	12.55	714.0	0.0	537.1
120.00		1.00	1.32	32.627	35.89	373.10	0.750	0.000	5.00	16.313	12.23	702.6	0.0	523.7
122.00	Appurtenance(s)	1.00	1.32	32.741	36.01	369.90	0.750	0.000	2.00	6.409	4.81	277.0	0.0	205.7
125.00		1.00	1.33	32.909	36.20	365.07	0.750	0.000	3.00	9.490	7.12	412.2	0.0	304.6
130.00		1.00	1.34	33.182	36.50	356.90	0.750	0.000	5.00	15.485	11.61	678.2	0.0	496.9
131.58	Bot - Section 4	1.00	1.34	33.266	36.59	354.29	0.750	0.000	1.58	4.817	3.61	211.5	0.0	154.6
135.00		1.00	1.35	33.446	36.79	348.61	0.750	0.000	3.42	10.398	7.80	459.1	0.0	625.7
136.83	Top - Section 3	1.00	1.35	33.541	36.90	345.54	0.750	0.000	1.83	5.500	4.12	243.5	0.0	330.9
140.00		1.00	1.36	33.703	37.07	345.19	0.750	0.000	3.17	9.369	7.03	416.8	0.0	267.4
145.00		1.00	1.37	33.953	37.35	336.68	0.750	0.000	5.00	14.454	10.84	647.8	0.0	412.4
147.00	Appurtenance(s)	1.00	1.37	34.051	37.46	333.25	0.750	0.000	2.00	5.666	4.25	254.7	0.0	161.6
150.00		1.00	1.38	34.196	37.62	328.06	0.750	0.000	3.00	8.374	6.28	378.0	0.0	238.9
155.00		1.00	1.39	34.433	37.88	319.34	0.750	0.000	5.00	13.626	10.22	619.3	0.0	388.6
160.00		1.00	1.40	34.664	38.13	310.52	0.750	0.000	5.00	13.212	9.91	604.5	0.0	376.7
165.00		1.00	1.41	34.890	38.38	301.60	0.750	0.000	5.00	12.797	9.60	589.4	0.0	364.8
167.00	Appurtenance(s)	1.00	1.41	34.978	38.48	298.01	0.750	0.000	2.00	5.003	3.75	231.0	0.0	142.6
170.00		1.00	1.42	35.110	38.62	292.60	0.750	0.000	3.00	7.380	5.54	342.0	0.0	210.3
175.00		1.00	1.42	35.324	38.86	283.51	0.750	0.000	5.00	11.969	8.98	558.1	0.0	341.0
177.00	Appurtenance(s)	1.00	1.43	35.409	38.95	279.85	0.750	0.000	2.00	4.672	3.50	218.4	0.0	133.1
180.00		1.00	1.43	35.535	39.09	274.34	0.750	0.000	3.00	6.883	5.16	322.9	0.0	196.0

Wind Loading - Shaft

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 16

Totals:	**180.00**	**25,342.1**	**29,683.4**

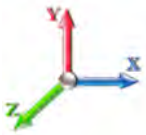
Discrete Appurtenance Forces

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 17	

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 26

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	177.00	RFS FD9R6004-2C-3L	6	35.409	38.950	0.50	0.80	1.10	16.74	0.000	0.000	68.62	0.00	0.00
2	177.00	BXA-171085-8BF	3	35.409	38.950	0.67	0.80	5.93	28.35	0.000	0.000	369.37	0.00	0.00
3	177.00	LPA-80080-4CF	6	35.409	38.950	1.36	0.80	21.30	64.80	0.000	0.000	1327.26	0.00	0.00
4	177.00	BXA-70063-6CF	3	35.409	38.950	0.58	0.80	13.26	45.90	0.000	0.000	826.53	0.00	0.00
5	177.00	Low Profile Platform	1	35.409	38.950	1.00	1.00	22.00	1350.00	0.000	0.000	1371.04	0.00	0.00
6	167.00	Ericsson 4424 B25	3	34.978	38.476	0.50	0.75	3.09	237.60	0.000	0.000	190.25	0.00	0.00
7	167.00	AIR6449 B41	3	34.978	38.476	0.53	0.75	9.03	278.10	0.000	0.000	555.65	0.00	0.00
8	167.00	RFS ACU-A20-N RET	4	34.978	38.476	0.59	0.75	0.33	3.60	0.000	0.000	20.43	0.00	0.00
9	167.00	RMQP-4096-HK	1	34.978	38.476	1.00	1.00	46.00	2204.10	0.000	0.000	2831.83	0.00	0.00
10	167.00	Ericsson 4449 B71 + B85	3	34.978	38.476	0.50	0.75	2.97	197.64	0.000	0.000	182.82	0.00	0.00
11	167.00	Ericsson 4415 B66A	3	34.978	38.476	0.50	0.75	2.47	133.92	0.000	0.000	152.20	0.00	0.00
12	167.00	Alcatel Lucent 800 MHz	3	34.978	38.476	0.50	0.75	1.18	23.76	0.000	0.000	72.39	0.00	0.00
13	167.00	APXVAALL24_43-U-NA20	3	34.978	38.476	0.52	0.75	31.88	345.60	0.000	0.000	1962.46	0.00	0.00
14	167.00	APX16DWV-16DWVS-E-A	3	34.978	38.476	0.46	0.75	9.22	109.89	0.000	0.000	567.66	0.00	0.00
15	147.00	7770	3	34.051	37.456	0.55	0.75	9.03	94.50	0.000	0.000	541.40	0.00	0.00
16	147.00	Cci DMP65R-BU8DA	6	34.051	37.456	0.55	0.75	58.70	516.78	0.000	0.000	3518.09	0.00	0.00
17	147.00	Cci DTMABP7819VG12A	3	34.051	37.456	0.50	0.75	1.72	51.84	0.000	0.000	102.99	0.00	0.00
18	147.00	Powerwave	3	34.051	37.456	0.68	0.75	1.86	59.40	0.000	0.000	111.65	0.00	0.00
19	147.00	Ericsson RRUS 4478 B14	3	34.051	37.456	0.50	0.75	2.49	160.38	0.000	0.000	149.07	0.00	0.00
20	147.00	Ericsson RRUS 8843 B2	3	34.051	37.456	0.50	0.75	2.49	202.50	0.000	0.000	149.07	0.00	0.00
21	147.00	Ericsson RRUS 4449	3	34.051	37.456	0.50	0.75	2.97	191.70	0.000	0.000	177.98	0.00	0.00
22	147.00	Raycap DC6-48-60-18-8F	3	34.051	37.456	0.75	0.75	2.07	85.86	0.000	0.000	124.06	0.00	0.00
23	147.00	RMQP-496-HK	1	34.051	37.456	1.00	1.00	46.00	2204.10	0.000	0.000	2756.79	0.00	0.00
24	122.00	Nokia CS72188.01	1	32.741	36.015	1.00	1.00	3.15	14.85	0.000	0.000	181.52	0.00	0.00
							Totals:		**8,621.91**			**18,311.11**		

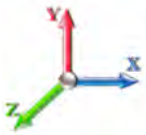
Total Applied Force Summary

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 18

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 26

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		703.76	1407.72	0.00	0.00
10.00		692.23	1386.89	0.00	0.00
15.00		680.70	1366.05	0.00	0.00
20.00		710.01	1345.21	0.00	0.00
25.00		731.34	1324.37	0.00	0.00
30.00		746.63	1303.54	0.00	0.00
35.00		757.50	1282.70	0.00	0.00
40.00		764.94	1261.86	0.00	0.00
45.00		769.63	1241.03	0.00	0.00
45.50		76.34	122.96	0.00	0.00
50.00		704.45	1939.05	0.00	0.00
52.75		429.40	1169.55	0.00	0.00
55.00		351.02	476.43	0.00	0.00
60.00		783.29	1045.79	0.00	0.00
65.00		780.92	1027.93	0.00	0.00
70.00		777.28	1010.07	0.00	0.00
75.00		772.49	992.21	0.00	0.00
80.00		766.68	974.35	0.00	0.00
85.00		759.93	956.49	0.00	0.00
90.00		752.34	938.63	0.00	0.00
92.33		347.21	431.91	0.00	0.00
95.00		399.90	802.20	0.00	0.00
98.50		521.49	1039.39	0.00	0.00
100.00		221.63	215.35	0.00	0.00
105.00		735.13	709.12	0.00	0.00
110.00		724.85	695.72	0.00	0.00
115.00		713.98	682.33	0.00	0.00
120.00		702.57	668.93	0.00	0.00
122.00	(1) attachments	458.51	278.67	0.00	0.00
125.00		412.22	391.71	0.00	0.00
130.00		678.22	642.14	0.00	0.00
131.58		211.53	200.55	0.00	0.00
135.00		459.08	725.01	0.00	0.00
136.83		243.51	384.16	0.00	0.00
140.00		416.80	359.37	0.00	0.00
145.00		647.82	557.70	0.00	0.00
147.00	(28) attachments	7885.76	3786.81	0.00	0.00
150.00		378.01	277.93	0.00	0.00
155.00		619.33	453.69	0.00	0.00
160.00		604.53	441.79	0.00	0.00
165.00		589.38	429.88	0.00	0.00
167.00	(26) attachments	6766.67	3702.83	0.00	0.00
170.00		342.03	244.01	0.00	0.00
175.00		558.10	397.16	0.00	0.00
177.00	(19) attachments	4181.17	1661.32	0.00	0.00
180.00		322.86	196.03	0.00	0.00

Total Applied Force Summary

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 19

Totals:	**43,653.18**	**42,948.53**	**0.00**	**0.00**

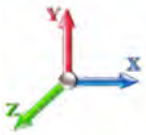
Calculated Forces

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 20	

Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 26

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-42.87	-43.73	0.00	-5348.1	0.00	5348.13	5499.24	2749.62	13525.8	6714.82	0.00	0.000	0.000	0.805
5.00	-41.31	-43.17	0.00	-5129.4	0.00	5129.49	5446.13	2723.06	13174.3	6540.31	0.11	-0.200	0.000	0.792
10.00	-39.78	-42.61	0.00	-4913.6	0.00	4913.65	5391.79	2695.89	12824.2	6366.50	0.43	-0.401	0.000	0.779
15.00	-38.27	-42.05	0.00	-4700.6	0.00	4700.60	5336.22	2668.11	12475.6	6193.44	0.96	-0.604	0.000	0.766
20.00	-36.79	-41.46	0.00	-4490.3	0.00	4490.34	5279.42	2639.71	12128.7	6021.23	1.70	-0.808	0.000	0.753
25.00	-35.33	-40.83	0.00	-4283.0	0.00	4283.06	5221.40	2610.70	11783.6	5849.92	2.65	-1.014	0.000	0.739
30.00	-33.89	-40.18	0.00	-4078.9	0.00	4078.90	5162.14	2581.07	11440.6	5679.60	3.83	-1.220	0.000	0.725
35.00	-32.49	-39.51	0.00	-3877.9	0.00	3877.98	5101.66	2550.83	11099.6	5510.34	5.22	-1.427	0.000	0.710
40.00	-31.10	-38.83	0.00	-3680.4	0.00	3680.41	5039.95	2519.97	10760.9	5342.21	6.82	-1.635	0.000	0.695
45.00	-29.81	-38.08	0.00	-3486.2	0.00	3486.27	4977.01	2488.50	10424.7	5175.29	8.65	-1.843	0.000	0.680
45.50	-29.62	-38.06	0.00	-3467.2	0.00	3467.23	4970.65	2485.32	10391.2	5158.66	8.84	-1.865	0.000	0.678
50.00	-27.61	-37.36	0.00	-3295.9	0.00	3295.98	4912.84	2456.42	10091.1	5009.65	10.69	-2.053	0.000	0.664
52.75	-26.39	-36.94	0.00	-3193.2	0.00	3193.25	3995.11	1997.56	8262.19	4101.70	11.91	-2.170	0.000	0.785
55.00	-25.82	-36.64	0.00	-3110.1	0.00	3110.14	3974.19	1987.10	8146.39	4044.21	12.95	-2.265	0.000	0.776
60.00	-24.66	-35.91	0.00	-2926.9	0.00	2926.94	3926.81	1963.41	7890.01	3916.93	15.45	-2.498	0.000	0.754
65.00	-23.53	-35.18	0.00	-2747.3	0.00	2747.37	3878.20	1939.10	7635.05	3790.36	18.19	-2.729	0.000	0.731
70.00	-22.42	-34.45	0.00	-2571.4	0.00	2571.46	3828.36	1914.18	7381.67	3664.57	21.17	-2.960	0.000	0.708
75.00	-21.34	-33.71	0.00	-2399.2	0.00	2399.22	3777.30	1888.65	7130.01	3539.64	24.39	-3.189	0.000	0.684
80.00	-20.28	-32.97	0.00	-2230.6	0.00	2230.69	3725.00	1862.50	6880.23	3415.63	27.85	-3.417	0.000	0.659
85.00	-19.24	-32.22	0.00	-2065.8	0.00	2065.86	3671.48	1835.74	6632.46	3292.63	31.55	-3.642	0.000	0.633
90.00	-18.27	-31.46	0.00	-1904.7	0.00	1904.74	3616.73	1808.36	6386.87	3170.71	35.48	-3.864	0.000	0.606
92.33	-17.80	-31.12	0.00	-1831.3	0.00	1831.32	3590.75	1795.38	6273.05	3114.21	37.40	-3.969	0.000	0.593
95.00	-16.96	-30.71	0.00	-1748.3	0.00	1748.33	3560.74	1780.37	6143.61	3049.94	39.65	-4.087	0.000	0.578
98.50	-15.90	-30.14	0.00	-1640.8	0.00	1640.85	2386.86	1193.43	4124.78	2047.71	42.70	-4.239	0.000	0.809
100.00	-15.61	-29.95	0.00	-1595.6	0.00	1595.64	2378.02	1189.01	4080.56	2025.76	44.04	-4.305	0.000	0.795
105.00	-14.83	-29.23	0.00	-1445.8	0.00	1445.89	2347.74	1173.87	3933.38	1952.70	48.69	-4.571	0.000	0.747
110.00	-14.07	-28.51	0.00	-1299.7	0.00	1299.73	2316.23	1158.11	3786.65	1879.85	53.61	-4.830	0.000	0.698
115.00	-13.33	-27.80	0.00	-1157.1	0.00	1157.16	2283.49	1141.75	3640.52	1807.31	58.80	-5.078	0.000	0.647
120.00	-12.65	-27.08	0.00	-1018.1	0.00	1018.16	2249.53	1124.76	3495.14	1735.13	64.24	-5.315	0.000	0.593
122.00	-12.37	-26.62	0.00	-964.00	0.00	964.00	2235.60	1117.80	3437.23	1706.38	66.48	-5.409	0.000	0.571
125.00	-11.94	-26.21	0.00	-884.14	0.00	884.14	2214.33	1107.17	3350.65	1663.40	69.92	-5.544	0.000	0.537
130.00	-11.30	-25.50	0.00	-753.11	0.00	753.11	2177.91	1088.96	3207.21	1592.19	75.83	-5.752	0.000	0.479
131.58	-11.08	-25.28	0.00	-712.74	0.00	712.74	2166.12	1083.06	3162.03	1569.76	77.75	-5.816	0.000	0.460
135.00	-10.37	-24.77	0.00	-626.35	0.00	626.35	2140.26	1070.13	3064.96	1521.58	81.95	-5.946	0.000	0.417
136.83	-9.97	-24.50	0.00	-580.94	0.00	580.94	1821.16	910.58	2623.48	1302.41	84.24	-6.013	0.000	0.452
140.00	-9.60	-24.07	0.00	-503.34	0.00	503.34	1802.58	901.29	2550.43	1266.14	88.26	-6.119	0.000	0.404
145.00	-9.08	-23.39	0.00	-382.97	0.00	382.97	1772.26	886.13	2435.64	1209.15	94.75	-6.274	0.000	0.323
147.00	-6.16	-15.14	0.00	-336.20	0.00	336.20	1759.78	879.89	2389.94	1186.47	97.38	-6.330	0.000	0.287
150.00	-5.91	-14.74	0.00	-290.78	0.00	290.78	1740.70	870.35	2321.67	1152.58	101.38	-6.404	0.000	0.256
155.00	-5.50	-14.08	0.00	-217.07	0.00	217.07	1707.91	853.96	2208.68	1096.48	108.13	-6.510	0.000	0.201
160.00	-5.11	-13.44	0.00	-146.65	0.00	146.65	1673.90	836.95	2096.80	1040.94	114.98	-6.594	0.000	0.144
165.00	-4.75	-12.81	0.00	-79.45	0.00	79.45	1638.66	819.33	1986.20	986.03	121.90	-6.651	0.000	0.084
167.00	-1.85	-5.66	0.00	-53.83	0.00	53.83	1624.22	812.11	1942.34	964.26	124.69	-6.666	0.000	0.057
170.00	-1.65	-5.29	0.00	-36.86	0.00	36.86	1602.19	801.09	1877.01	931.83	128.87	-6.681	0.000	0.041
175.00	-1.32	-4.69	0.00	-10.41	0.00	10.41	1564.49	782.24	1769.40	878.40	135.86	-6.696	0.000	0.013
177.00	-0.16	-0.34	0.00	-1.03	0.00	1.03	1549.06	774.53	1726.82	857.27	138.66	-6.698	0.000	0.001
180.00	0.00	-0.32	0.00	0.00	0.00	0.00	1525.56	762.78	1663.50	825.83	142.86	-6.698	0.000	0.000

Calculated Forces

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 21

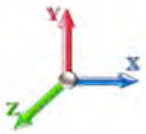
Wind Loading - Shaft

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 22	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.656	5.00	26.663	32.00	181.9	635.2	2318.5
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.775	5.00	26.348	31.62	179.7	671.2	2326.7
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.848	5.00	25.995	31.19	177.3	688.4	2316.1
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.902	5.00	25.625	30.75	185.5	697.4	2297.3
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.945	5.00	25.247	30.30	191.5	701.6	2273.8
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.981	5.00	24.862	29.83	196.0	702.8	2247.1
35.00		1.00	1.01	6.169	6.79	0.00	1.200	2.012	5.00	24.474	29.37	199.3	701.7	2218.2
40.00		1.00	1.04	6.345	6.98	0.00	1.200	2.039	5.00	24.082	28.90	201.7	698.9	2187.7
45.00		1.00	1.07	6.504	7.15	0.00	1.200	2.063	5.00	23.688	28.43	203.4	694.7	2155.8
45.50	Bot - Section 2	1.00	1.07	6.519	7.17	0.00	1.200	2.065	0.50	2.346	2.82	20.2	69.4	214.0
50.00		1.00	1.09	6.650	7.32	0.00	1.200	2.085	4.50	21.231	25.48	186.4	629.5	3040.6
52.75	Top - Section 1	1.00	1.11	6.726	7.40	0.00	1.200	2.096	2.75	12.814	15.38	113.8	382.9	1835.8
55.00		1.00	1.12	6.785	7.46	0.00	1.200	2.105	2.25	10.395	12.47	93.1	312.0	860.1
60.00		1.00	1.14	6.910	7.60	0.00	1.200	2.123	5.00	22.814	27.38	208.1	686.6	1887.3
65.00		1.00	1.16	7.028	7.73	0.00	1.200	2.140	5.00	22.414	26.90	207.9	679.1	1856.0
70.00		1.00	1.17	7.138	7.85	0.00	1.200	2.156	5.00	22.013	26.42	207.4	671.1	1824.2
75.00		1.00	1.19	7.243	7.97	0.00	1.200	2.171	5.00	21.611	25.93	206.6	662.6	1791.8
80.00		1.00	1.21	7.342	8.08	0.00	1.200	2.185	5.00	21.209	25.45	205.5	653.6	1759.0
85.00		1.00	1.22	7.436	8.18	0.00	1.200	2.198	5.00	20.806	24.97	204.2	644.2	1725.8
90.00		1.00	1.24	7.526	8.28	0.00	1.200	2.211	5.00	20.402	24.48	202.7	634.4	1692.2
92.33	Bot - Section 3	1.00	1.24	7.567	8.32	0.00	1.200	2.217	2.33	9.381	11.26	93.7	293.9	779.4
95.00		1.00	1.25	7.612	8.37	0.00	1.200	2.223	2.67	10.741	12.89	107.9	337.2	1303.5
98.50	Top - Section 2	1.00	1.26	7.671	8.44	0.00	1.200	2.231	3.50	13.924	16.71	141.0	437.5	1687.8
100.00		1.00	1.27	7.695	8.46	0.00	1.200	2.234	1.50	5.906	7.09	60.0	186.6	415.6
105.00		1.00	1.28	7.774	8.55	0.00	1.200	2.245	5.00	19.427	23.31	199.4	611.2	1363.0
110.00		1.00	1.29	7.851	8.64	0.00	1.200	2.256	5.00	19.021	22.83	197.1	600.3	1334.2
115.00		1.00	1.30	7.925	8.72	0.00	1.200	2.266	5.00	18.616	22.34	194.7	589.1	1305.2
120.00		1.00	1.32	7.996	8.80	0.00	1.200	2.276	5.00	18.209	21.85	192.2	577.7	1276.0
122.00	Appurtenance(s)	1.00	1.32	8.024	8.83	0.00	1.200	2.279	2.00	7.169	8.60	75.9	229.2	503.5
125.00		1.00	1.33	8.065	8.87	0.00	1.200	2.285	3.00	10.632	12.76	113.2	339.7	745.8
130.00		1.00	1.34	8.132	8.95	0.00	1.200	2.294	5.00	17.396	20.88	186.7	554.3	1216.8
131.58	Bot - Section 4	1.00	1.34	8.153	8.97	0.00	1.200	2.297	1.58	5.423	6.51	58.4	174.3	380.4
135.00		1.00	1.35	8.197	9.02	0.00	1.200	2.303	3.42	11.710	14.05	126.7	375.6	1209.9
136.83	Top - Section 3	1.00	1.35	8.220	9.04	0.00	1.200	2.306	1.83	6.204	7.45	67.3	199.9	641.1
140.00		1.00	1.36	8.260	9.09	0.00	1.200	2.311	3.17	10.588	12.71	115.4	340.4	696.9
145.00		1.00	1.37	8.321	9.15	0.00	1.200	2.319	5.00	16.387	19.66	180.0	525.2	1075.1
147.00	Appurtenance(s)	1.00	1.37	8.345	9.18	0.00	1.200	2.322	2.00	6.440	7.73	70.9	208.1	423.6
150.00		1.00	1.38	8.381	9.22	0.00	1.200	2.327	3.00	9.538	11.45	105.5	307.7	626.2
155.00		1.00	1.39	8.439	9.28	0.00	1.200	2.335	5.00	15.571	18.69	173.5	500.2	1018.3
160.00		1.00	1.40	8.495	9.34	0.00	1.200	2.342	5.00	15.163	18.20	170.0	487.4	989.7
165.00		1.00	1.41	8.551	9.41	0.00	1.200	2.349	5.00	14.755	17.71	166.5	474.5	961.0
167.00	Appurtenance(s)	1.00	1.41	8.572	9.43	0.00	1.200	2.352	2.00	5.787	6.94	65.5	187.7	377.9
170.00		1.00	1.42	8.604	9.46	0.00	1.200	2.356	3.00	8.558	10.27	97.2	276.9	557.3
175.00		1.00	1.42	8.657	9.52	0.00	1.200	2.363	5.00	13.938	16.73	159.3	448.4	903.1
177.00	Appurtenance(s)	1.00	1.43	8.678	9.55	0.00	1.200	2.366	2.00	5.460	6.55	62.5	177.2	354.7
180.00		1.00	1.43	8.709	9.58	0.00	1.200	2.370	3.00	8.068	9.68	92.7	261.1	522.5

Wind Loading - Shaft

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 23	

Totals:	**180.00**	**6,845.7**	**61,496.4**

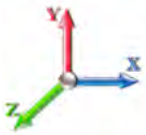
Discrete Appurtenance Forces

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	177.00	RFS FD9R6004-2C-3L	6	8.678	9.546	0.50	0.80	2.94	73.80	0.000	0.000	28.06	0.00	0.00
2	177.00	BXA-171085-8BF	3	8.678	9.546	0.67	0.80	10.46	248.25	0.000	0.000	99.84	0.00	0.00
3	177.00	LPA-80080-4CF	6	8.678	9.546	1.36	0.80	31.23	828.20	0.000	0.000	298.14	0.00	0.00
4	177.00	BXA-70063-6CF	3	8.678	9.546	0.58	0.80	16.33	824.17	0.000	0.000	155.91	0.00	0.00
5	177.00	Low Profile Platform	1	8.678	9.546	1.00	1.00	45.94	3274.34	0.000	0.000	438.54	0.00	0.00
6	167.00	Ericsson 4424 B25	3	8.572	9.429	0.50	0.75	4.34	694.41	0.000	0.000	40.94	0.00	0.00
7	167.00	AIR6449 B41	3	8.572	9.429	0.53	0.75	11.07	830.10	0.000	0.000	104.41	0.00	0.00
8	167.00	RFS ACU-A20-N RET	4	8.572	9.429	0.59	0.75	1.28	22.76	0.000	0.000	12.07	0.00	0.00
9	167.00	RMQP-4096-HK	1	8.572	9.429	1.00	1.00	89.28	5604.93	0.000	0.000	841.84	0.00	0.00
10	167.00	Ericsson 4449 B71 + B85	3	8.572	9.429	0.50	0.75	4.13	321.78	0.000	0.000	38.91	0.00	0.00
11	167.00	Ericsson 4415 B66A	3	8.572	9.429	0.50	0.75	3.62	433.21	0.000	0.000	34.15	0.00	0.00
12	167.00	Alcatel Lucent 800 MHz	3	8.572	9.429	0.50	0.75	2.49	88.01	0.000	0.000	23.48	0.00	0.00
13	167.00	APXVAALL24_43-U-NA20	3	8.572	9.429	0.52	0.75	35.96	2226.01	0.000	0.000	339.12	0.00	0.00
14	167.00	APX16DWV-16DWVS-E-A	3	8.572	9.429	0.46	0.75	13.32	519.31	0.000	0.000	125.56	0.00	0.00
15	147.00	7770	3	8.345	9.180	0.55	0.75	11.41	706.84	0.000	0.000	104.76	0.00	0.00
16	147.00	Cci DMP65R-BU8DA	6	8.345	9.180	0.55	0.75	66.56	4434.16	0.000	0.000	610.95	0.00	0.00
17	147.00	Cci DTMABP7819VG12A	3	8.345	9.180	0.50	0.75	3.26	149.09	0.000	0.000	29.95	0.00	0.00
18	147.00	Powerwave	3	8.345	9.180	0.68	0.75	3.85	162.65	0.000	0.000	35.39	0.00	0.00
19	147.00	Ericsson RRUS 4478 B14	3	8.345	9.180	0.50	0.75	3.53	351.17	0.000	0.000	32.38	0.00	0.00
20	147.00	Ericsson RRUS 8843 B2	3	8.345	9.180	0.50	0.75	3.61	592.91	0.000	0.000	33.09	0.00	0.00
21	147.00	Ericsson RRUS 4449	3	8.345	9.180	0.50	0.75	4.07	427.89	0.000	0.000	37.34	0.00	0.00
22	147.00	Raycap DC6-48-60-18-8F	3	8.345	9.180	0.75	0.75	3.38	308.18	0.000	0.000	31.04	0.00	0.00
23	147.00	RMQP-496-HK	1	8.345	9.180	1.00	1.00	88.73	5561.12	0.000	0.000	814.50	0.00	0.00
24	122.00	Nokia CS72188.01	1	8.024	8.826	1.00	1.00	5.42	80.71	0.000	0.000	47.83	0.00	0.00
							Totals:		**28,764.00**			**4,358.19**		

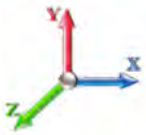
Total Applied Force Summary

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 25

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		181.89	2512.17	0.00	0.00
10.00		179.74	2520.34	0.00	0.00
15.00		177.33	2509.77	0.00	0.00
20.00		185.48	2490.99	0.00	0.00
25.00		191.53	2467.46	0.00	0.00
30.00		195.99	2440.81	0.00	0.00
35.00		199.30	2411.93	0.00	0.00
40.00		201.70	2381.35	0.00	0.00
45.00		203.38	2349.43	0.00	0.00
45.50		20.19	233.37	0.00	0.00
50.00		186.37	3214.87	0.00	0.00
52.75		113.76	1942.30	0.00	0.00
55.00		93.10	947.27	0.00	0.00
60.00		208.10	2080.98	0.00	0.00
65.00		207.93	2049.71	0.00	0.00
70.00		207.42	2017.87	0.00	0.00
75.00		206.61	1985.51	0.00	0.00
80.00		205.54	1952.70	0.00	0.00
85.00		204.22	1919.49	0.00	0.00
90.00		202.68	1885.91	0.00	0.00
92.33		93.70	869.76	0.00	0.00
95.00		107.93	1406.77	0.00	0.00
98.50		140.98	1823.34	0.00	0.00
100.00		59.99	473.68	0.00	0.00
105.00		199.36	1556.67	0.00	0.00
110.00		197.12	1527.90	0.00	0.00
115.00		194.73	1498.88	0.00	0.00
120.00		192.20	1469.64	0.00	0.00
122.00	(1) attachments	123.76	661.72	0.00	0.00
125.00		113.19	861.97	0.00	0.00
130.00		186.73	1410.53	0.00	0.00
131.58		58.36	441.75	0.00	0.00
135.00		126.70	1342.27	0.00	0.00
136.83		67.32	712.13	0.00	0.00
140.00		115.44	819.58	0.00	0.00
145.00		179.99	1268.82	0.00	0.00
147.00	(28) attachments	1800.34	13195.12	0.00	0.00
150.00		105.51	678.24	0.00	0.00
155.00		173.45	1105.10	0.00	0.00
160.00		170.04	1076.48	0.00	0.00
165.00		166.54	1047.72	0.00	0.00
167.00	(26) attachments	1625.96	11153.08	0.00	0.00
170.00		97.20	602.27	0.00	0.00
175.00		159.28	977.95	0.00	0.00
177.00	(19) attachments	1083.03	5633.38	0.00	0.00
180.00		92.75	522.46	0.00	0.00

Total Applied Force Summary

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 26

Totals:	**11,203.87**	**96,451.42**	**0.00**	**0.00**

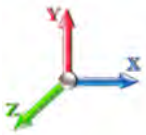
Calculated Forces

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 25

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-96.45	-11.25	0.00	-1449.9	0.00	1449.91	5499.24	2749.62	13525.8	6714.82	0.00	0.000	0.000	0.233
5.00	-93.92	-11.16	0.00	-1393.6	0.00	1393.66	5446.13	2723.06	13174.3	6540.31	0.03	-0.054	0.000	0.230
10.00	-91.39	-11.06	0.00	-1337.8	0.00	1337.88	5391.79	2695.89	12824.2	6366.50	0.12	-0.109	0.000	0.227
15.00	-88.87	-10.96	0.00	-1282.5	0.00	1282.58	5336.22	2668.11	12475.6	6193.44	0.26	-0.164	0.000	0.224
20.00	-86.37	-10.85	0.00	-1227.7	0.00	1227.76	5279.42	2639.71	12128.7	6021.23	0.46	-0.220	0.000	0.220
25.00	-83.89	-10.73	0.00	-1173.5	0.00	1173.50	5221.40	2610.70	11783.6	5849.92	0.72	-0.276	0.000	0.217
30.00	-81.44	-10.61	0.00	-1119.8	0.00	1119.83	5162.14	2581.07	11440.6	5679.60	1.04	-0.333	0.000	0.213
35.00	-79.02	-10.47	0.00	-1066.8	0.00	1066.80	5101.66	2550.83	11099.6	5510.34	1.42	-0.390	0.000	0.209
40.00	-76.63	-10.33	0.00	-1014.4	0.00	1014.45	5039.95	2519.97	10760.9	5342.21	1.86	-0.447	0.000	0.205
45.00	-74.28	-10.15	0.00	-962.81	0.00	962.81	4977.01	2488.50	10424.7	5175.29	2.36	-0.505	0.000	0.201
45.50	-74.04	-10.16	0.00	-957.74	0.00	957.74	4970.65	2485.32	10391.2	5158.66	2.41	-0.510	0.000	0.201
50.00	-70.82	-10.00	0.00	-912.02	0.00	912.02	4912.84	2456.42	10091.1	5009.65	2.92	-0.563	0.000	0.196
52.75	-68.88	-9.90	0.00	-884.53	0.00	884.53	3995.11	1997.56	8262.19	4101.70	3.25	-0.595	0.000	0.233
55.00	-67.92	-9.85	0.00	-862.25	0.00	862.25	3974.19	1987.10	8146.39	4044.21	3.54	-0.621	0.000	0.230
60.00	-65.83	-9.69	0.00	-813.01	0.00	813.01	3926.81	1963.41	7890.01	3916.93	4.22	-0.686	0.000	0.224
65.00	-63.77	-9.53	0.00	-764.55	0.00	764.55	3878.20	1939.10	7635.05	3790.36	4.98	-0.750	0.000	0.218
70.00	-61.75	-9.36	0.00	-716.90	0.00	716.90	3828.36	1914.18	7381.67	3664.57	5.80	-0.814	0.000	0.212
75.00	-59.76	-9.19	0.00	-670.08	0.00	670.08	3777.30	1888.65	7130.01	3539.64	6.68	-0.878	0.000	0.205
80.00	-57.80	-9.02	0.00	-624.11	0.00	624.11	3725.00	1862.50	6880.23	3415.63	7.64	-0.942	0.000	0.198
85.00	-55.87	-8.85	0.00	-579.00	0.00	579.00	3671.48	1835.74	6632.46	3292.63	8.66	-1.005	0.000	0.191
90.00	-53.98	-8.65	0.00	-534.77	0.00	534.77	3616.73	1808.36	6386.87	3170.71	9.75	-1.067	0.000	0.184
92.33	-53.11	-8.57	0.00	-514.58	0.00	514.58	3590.75	1795.38	6273.05	3114.21	10.27	-1.097	0.000	0.180
95.00	-51.70	-8.47	0.00	-491.73	0.00	491.73	3560.74	1780.37	6143.61	3049.94	10.90	-1.130	0.000	0.176
98.50	-49.88	-8.32	0.00	-462.08	0.00	462.08	2386.86	1193.43	4124.78	2047.71	11.74	-1.173	0.000	0.247
100.00	-49.40	-8.29	0.00	-449.60	0.00	449.60	2378.02	1189.01	4080.56	2025.76	12.11	-1.191	0.000	0.243
105.00	-47.83	-8.12	0.00	-408.15	0.00	408.15	2347.74	1173.87	3933.38	1952.70	13.40	-1.266	0.000	0.229
110.00	-46.30	-7.95	0.00	-367.55	0.00	367.55	2316.23	1158.11	3786.65	1879.85	14.77	-1.339	0.000	0.216
115.00	-44.80	-7.77	0.00	-327.82	0.00	327.82	2283.49	1141.75	3640.52	1807.31	16.21	-1.410	0.000	0.201
120.00	-43.33	-7.58	0.00	-288.98	0.00	288.98	2249.53	1124.76	3495.14	1735.13	17.72	-1.477	0.000	0.186
122.00	-42.67	-7.46	0.00	-273.83	0.00	273.83	2235.60	1117.80	3437.23	1706.38	18.35	-1.504	0.000	0.180
125.00	-41.80	-7.36	0.00	-251.45	0.00	251.45	2214.33	1107.17	3350.65	1663.40	19.30	-1.542	0.000	0.170
130.00	-40.39	-7.16	0.00	-214.66	0.00	214.66	2177.91	1088.96	3207.21	1592.19	20.95	-1.601	0.000	0.153
131.58	-39.95	-7.11	0.00	-203.32	0.00	203.32	2166.12	1083.06	3162.03	1569.76	21.48	-1.620	0.000	0.148
135.00	-38.61	-6.96	0.00	-179.04	0.00	179.04	2140.26	1070.13	3064.96	1521.58	22.66	-1.657	0.000	0.136
136.83	-37.89	-6.89	0.00	-166.27	0.00	166.27	1821.16	910.58	2623.48	1302.41	23.30	-1.676	0.000	0.149
140.00	-37.07	-6.78	0.00	-144.45	0.00	144.45	1802.58	901.29	2550.43	1266.14	24.42	-1.706	0.000	0.135
145.00	-35.81	-6.58	0.00	-110.57	0.00	110.57	1772.26	886.13	2435.64	1209.15	26.23	-1.751	0.000	0.112
147.00	-22.67	-4.38	0.00	-97.42	0.00	97.42	1759.78	879.89	2389.94	1186.47	26.97	-1.767	0.000	0.095
150.00	-22.00	-4.26	0.00	-84.28	0.00	84.28	1740.70	870.35	2321.67	1152.58	28.09	-1.788	0.000	0.086
155.00	-20.89	-4.06	0.00	-62.97	0.00	62.97	1707.91	853.96	2208.68	1096.48	29.98	-1.819	0.000	0.070
160.00	-19.82	-3.87	0.00	-42.65	0.00	42.65	1673.90	836.95	2096.80	1040.94	31.89	-1.843	0.000	0.053
165.00	-18.78	-3.67	0.00	-23.31	0.00	23.31	1638.66	819.33	1986.20	986.03	33.83	-1.860	0.000	0.035
167.00	-7.69	-1.68	0.00	-15.97	0.00	15.97	1624.22	812.11	1942.34	964.26	34.61	-1.864	0.000	0.021
170.00	-7.09	-1.57	0.00	-10.92	0.00	10.92	1602.19	801.09	1877.01	931.83	35.79	-1.869	0.000	0.016
175.00	-6.11	-1.38	0.00	-3.08	0.00	3.08	1564.49	782.24	1769.40	878.40	37.75	-1.873	0.000	0.007
177.00	-0.52	-0.11	0.00	-0.33	0.00	0.33	1549.06	774.53	1726.82	857.27	38.53	-1.874	0.000	0.001
180.00	0.00	-0.09	0.00	0.00	0.00	0.00	1525.56	762.78	1663.50	825.83	39.71	-1.874	0.000	0.000

Calculated Forces

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 28

Seismic Segment Forces (Factored)

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 29	

Load Case:	1.2D + 1.0E							**Iterations**	23
Gust Response Factor	1.10				**Sds**	0.18		**Ss**	0.17
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.31		**SA**	0.03	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1402.7	0.00	0.03	0.02	23.53	
10.00		1379.5	0.01	0.05	0.03	34.36	
15.00		1356.4	0.01	0.06	0.03	39.72	
20.00		1333.2	0.02	0.07	0.04	42.28	
25.00		1310.1	0.04	0.07	0.04	43.40	
30.00		1286.9	0.05	0.07	0.04	43.83	
35.00		1263.8	0.07	0.07	0.04	43.97	
40.00		1240.6	0.09	0.07	0.04	44.04	
45.00		1217.5	0.12	0.07	0.03	44.09	
45.50	Bot - Section 2	120.48	0.12	0.07	0.03	4.37	
50.00		2009.2	0.15	0.07	0.03	74.08	
52.75	Top - Section 1	1210.7	0.16	0.07	0.03	44.98	
55.00		456.74	0.18	0.07	0.03	17.04	
60.00		1000.5	0.21	0.06	0.02	37.29	
65.00		980.74	0.25	0.06	0.02	35.69	
70.00		960.90	0.29	0.05	0.01	32.88	
75.00		941.05	0.33	0.04	0.01	28.45	
80.00		921.21	0.37	0.03	0.01	22.10	
85.00		901.37	0.42	0.01	0.01	13.79	
90.00		881.52	0.47	-0.01	0.01	3.95	
92.33	Bot - Section 3	404.58	0.50	-0.02	0.01	-0.42	
95.00		805.25	0.53	-0.03	0.01	-6.00	
98.50	Top - Section 2	1041.9	0.57	-0.04	0.01	-16.32	
100.00		190.85	0.58	-0.05	0.01	-3.62	
105.00		626.51	0.64	-0.07	0.02	-17.93	
110.00		611.62	0.71	-0.09	0.03	-21.61	
115.00		596.74	0.77	-0.11	0.05	-23.02	
120.00		581.86	0.84	-0.12	0.07	-22.27	
122.00	Appurtenance(s)	245.08	0.87	-0.12	0.08	-9.11	
125.00		338.40	0.91	-0.12	0.09	-11.66	
130.00		552.09	0.99	-0.11	0.12	-15.03	
131.58	Bot - Section 4	171.73	1.01	-0.11	0.14	-4.16	
135.00		695.28	1.06	-0.09	0.17	-11.56	
136.83	Top - Section 3	367.66	1.09	-0.07	0.18	-4.38	
140.00		297.08	1.14	-0.04	0.21	-0.81	
145.00		458.26	1.23	0.03	0.27	6.63	
147.00	Appurtenance(s)	4143.0	1.26	0.07	0.30	92.26	
150.00		265.43	1.31	0.14	0.35	9.29	
155.00		431.80	1.40	0.29	0.43	25.43	
160.00		418.58	1.49	0.48	0.53	36.10	
165.00		405.35	1.59	0.74	0.65	47.46	
167.00	Appurtenance(s)	4085.3	1.63	0.86	0.71	532.79	
170.00		233.68	1.69	1.07	0.79	35.40	
175.00		378.89	1.79	1.48	0.95	71.82	
177.00	Appurtenance(s)	1820.9	1.83	1.67	1.03	374.78	

Seismic Segment Forces (Factored)

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 30

180.00			217.81	1.89	1.98	1.14	50.39	
		Totals:	**42,561.4**				**1,788.3**	**Total Wind:** **43,653.2**

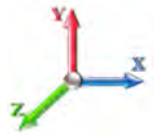
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 31	

Tower Engineering Solutions

Load Case: 1.2D + 1.0E



Gust Response Factor	1.10			**Sds**	0.18			**Iterations**	23
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10			**Ss**	0.17
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.31	**SA**	0.03			**S1**	0.06
								Seismic Importance Factor	1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-57.26	-1.96	0.00	-257.86	0.00	257.86	5499.24	2749.62	13525.8	6714.82		0.00	0.00	0.049
5.00	-55.39	-1.95	0.00	-248.06	0.00	248.06	5446.13	2723.06	13174.3	6540.31		0.01	-0.01	0.048
10.00	-53.54	-1.92	0.00	-238.33	0.00	238.33	5391.79	2695.89	12824.2	6366.50		0.02	-0.02	0.047
15.00	-51.72	-1.89	0.00	-228.73	0.00	228.73	5336.22	2668.11	12475.6	6193.44		0.05	-0.03	0.047
20.00	-49.92	-1.85	0.00	-219.28	0.00	219.28	5279.42	2639.71	12128.7	6021.23		0.08	-0.04	0.046
25.00	-48.16	-1.82	0.00	-210.01	0.00	210.01	5221.40	2610.70	11783.6	5849.92		0.13	-0.05	0.045
30.00	-46.42	-1.78	0.00	-200.93	0.00	200.93	5162.14	2581.07	11440.6	5679.60		0.19	-0.06	0.044
35.00	-44.71	-1.74	0.00	-192.02	0.00	192.02	5101.66	2550.83	11099.6	5510.34		0.25	-0.07	0.044
40.00	-43.02	-1.70	0.00	-183.31	0.00	183.31	5039.95	2519.97	10760.9	5342.21		0.33	-0.08	0.043
45.00	-41.37	-1.66	0.00	-174.79	0.00	174.79	4977.01	2488.50	10424.7	5175.29		0.42	-0.09	0.042
45.50	-41.21	-1.66	0.00	-173.96	0.00	173.96	4970.65	2485.32	10391.2	5158.66		0.43	-0.09	0.042
50.00	-38.62	-1.59	0.00	-166.49	0.00	166.49	4912.84	2456.42	10091.1	5009.65		0.52	-0.10	0.041
52.75	-37.06	-1.54	0.00	-162.12	0.00	162.12	3995.11	1997.56	8262.19	4101.70		0.58	-0.11	0.049
55.00	-36.43	-1.53	0.00	-158.65	0.00	158.65	3974.19	1987.10	8146.39	4044.21		0.63	-0.11	0.048
60.00	-35.03	-1.50	0.00	-151.00	0.00	151.00	3926.81	1963.41	7890.01	3916.93		0.76	-0.12	0.047
65.00	-33.66	-1.47	0.00	-143.51	0.00	143.51	3878.20	1939.10	7635.05	3790.36		0.89	-0.14	0.047
70.00	-32.31	-1.44	0.00	-136.18	0.00	136.18	3828.36	1914.18	7381.67	3664.57		1.04	-0.15	0.046
75.00	-30.99	-1.41	0.00	-129.00	0.00	129.00	3777.30	1888.65	7130.01	3539.64		1.20	-0.16	0.045
80.00	-29.69	-1.39	0.00	-121.94	0.00	121.94	3725.00	1862.50	6880.23	3415.63		1.38	-0.17	0.044
85.00	-28.41	-1.38	0.00	-114.98	0.00	114.98	3671.48	1835.74	6632.46	3292.63		1.56	-0.18	0.043
90.00	-27.16	-1.38	0.00	-108.08	0.00	108.08	3616.73	1808.36	6386.87	3170.71		1.76	-0.20	0.042
92.33	-26.59	-1.38	0.00	-104.87	0.00	104.87	3590.75	1795.38	6273.05	3114.21		1.86	-0.20	0.041
95.00	-25.52	-1.38	0.00	-101.20	0.00	101.20	3560.74	1780.37	6143.61	3049.94		1.98	-0.21	0.040
98.50	-24.13	-1.37	0.00	-96.38	0.00	96.38	2386.86	1193.43	4124.78	2047.71		2.13	-0.22	0.057
100.00	-23.84	-1.38	0.00	-94.32	0.00	94.32	2378.02	1189.01	4080.56	2025.76		2.20	-0.22	0.057
105.00	-22.90	-1.38	0.00	-87.43	0.00	87.43	2347.74	1173.87	3933.38	1952.70		2.45	-0.24	0.055
110.00	-21.97	-1.38	0.00	-80.53	0.00	80.53	2316.23	1158.11	3786.65	1879.85		2.70	-0.25	0.052
115.00	-21.06	-1.38	0.00	-73.62	0.00	73.62	2283.49	1141.75	3640.52	1807.31		2.98	-0.27	0.050
120.00	-20.17	-1.38	0.00	-66.70	0.00	66.70	2249.53	1124.76	3495.14	1735.13		3.27	-0.29	0.047
122.00	-19.80	-1.38	0.00	-63.93	0.00	63.93	2235.60	1117.80	3437.23	1706.38		3.39	-0.29	0.046
125.00	-19.27	-1.39	0.00	-59.78	0.00	59.78	2214.33	1107.17	3350.65	1663.40		3.58	-0.30	0.045
130.00	-18.42	-1.38	0.00	-52.85	0.00	52.85	2177.91	1088.96	3207.21	1592.19		3.90	-0.31	0.042
131.58	-18.15	-1.38	0.00	-50.66	0.00	50.66	2166.12	1083.06	3162.03	1569.76		4.00	-0.32	0.041
135.00	-17.18	-1.38	0.00	-45.93	0.00	45.93	2140.26	1070.13	3064.96	1521.58		4.24	-0.33	0.038
136.83	-16.67	-1.38	0.00	-43.40	0.00	43.40	1821.16	910.58	2623.48	1302.41		4.36	-0.33	0.042
140.00	-16.19	-1.38	0.00	-39.03	0.00	39.03	1802.58	901.29	2550.43	1266.14		4.59	-0.34	0.040
145.00	-15.45	-1.37	0.00	-32.13	0.00	32.13	1772.26	886.13	2435.64	1209.15		4.95	-0.35	0.035
147.00	-10.40	-1.25	0.00	-29.39	0.00	29.39	1759.78	879.89	2389.94	1186.47		5.10	-0.36	0.031
150.00	-10.03	-1.24	0.00	-25.64	0.00	25.64	1740.70	870.35	2321.67	1152.58		5.33	-0.37	0.028
155.00	-9.42	-1.21	0.00	-19.45	0.00	19.45	1707.91	853.96	2208.68	1096.48		5.72	-0.37	0.023
160.00	-8.83	-1.17	0.00	-13.39	0.00	13.39	1673.90	836.95	2096.80	1040.94		6.12	-0.38	0.018
165.00	-8.26	-1.12	0.00	-7.53	0.00	7.53	1638.66	819.33	1986.20	986.03		6.52	-0.39	0.013
167.00	-3.33	-0.55	0.00	-5.29	0.00	5.29	1624.22	812.11	1942.34	964.26		6.68	-0.39	0.008
170.00	-3.00	-0.52	0.00	-3.63	0.00	3.63	1602.19	801.09	1877.01	931.83		6.93	-0.39	0.006
175.00	-2.47	-0.44	0.00	-1.04	0.00	1.04	1564.49	782.24	1769.40	878.40		7.34	-0.39	0.003
177.00	-0.26	-0.05	0.00	-0.16	0.00	0.16	1549.06	774.53	1726.82	857.27		7.50	-0.39	0.000
180.00	0.00	-0.05	0.00	0.00	0.00	0.00	1525.56	762.78	1663.50	825.83		7.75	-0.39	0.000

Calculated Forces

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 32

Seismic Segment Forces (Factored)

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 33	

Load Case:	0.9D + 1.0E					**Iterations**	23
Gust Response Factor	1.10			**Sds**	0.18	**Ss**	0.17
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10	**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.31	**SA**	0.03	**Seismic Importance Factor**	1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1402.7	0.00	0.03	0.02	23.53	
10.00		1379.5	0.01	0.05	0.03	34.36	
15.00		1356.4	0.01	0.06	0.03	39.72	
20.00		1333.2	0.02	0.07	0.04	42.28	
25.00		1310.1	0.04	0.07	0.04	43.40	
30.00		1286.9	0.05	0.07	0.04	43.83	
35.00		1263.8	0.07	0.07	0.04	43.97	
40.00		1240.6	0.09	0.07	0.04	44.04	
45.00		1217.5	0.12	0.07	0.03	44.09	
45.50	Bot - Section 2	120.48	0.12	0.07	0.03	4.37	
50.00		2009.2	0.15	0.07	0.03	74.08	
52.75	Top - Section 1	1210.7	0.16	0.07	0.03	44.98	
55.00		456.74	0.18	0.07	0.03	17.04	
60.00		1000.5	0.21	0.06	0.02	37.29	
65.00		980.74	0.25	0.06	0.02	35.69	
70.00		960.90	0.29	0.05	0.01	32.88	
75.00		941.05	0.33	0.04	0.01	28.45	
80.00		921.21	0.37	0.03	0.01	22.10	
85.00		901.37	0.42	0.01	0.01	13.79	
90.00		881.52	0.47	-0.01	0.01	3.95	
92.33	Bot - Section 3	404.58	0.50	-0.02	0.01	-0.42	
95.00		805.25	0.53	-0.03	0.01	-6.00	
98.50	Top - Section 2	1041.9	0.57	-0.04	0.01	-16.32	
100.00		190.85	0.58	-0.05	0.01	-3.62	
105.00		626.51	0.64	-0.07	0.02	-17.93	
110.00		611.62	0.71	-0.09	0.03	-21.61	
115.00		596.74	0.77	-0.11	0.05	-23.02	
120.00		581.86	0.84	-0.12	0.07	-22.27	
122.00	Appurtenance(s)	245.08	0.87	-0.12	0.08	-9.11	
125.00		338.40	0.91	-0.12	0.09	-11.66	
130.00		552.09	0.99	-0.11	0.12	-15.03	
131.58	Bot - Section 4	171.73	1.01	-0.11	0.14	-4.16	
135.00		695.28	1.06	-0.09	0.17	-11.56	
136.83	Top - Section 3	367.66	1.09	-0.07	0.18	-4.38	
140.00		297.08	1.14	-0.04	0.21	-0.81	
145.00		458.26	1.23	0.03	0.27	6.63	
147.00	Appurtenance(s)	4143.0	1.26	0.07	0.30	92.26	
150.00		265.43	1.31	0.14	0.35	9.29	
155.00		431.80	1.40	0.29	0.43	25.43	
160.00		418.58	1.49	0.48	0.53	36.10	
165.00		405.35	1.59	0.74	0.65	47.46	
167.00	Appurtenance(s)	4085.3	1.63	0.86	0.71	532.79	
170.00		233.68	1.69	1.07	0.79	35.40	
175.00		378.89	1.79	1.48	0.95	71.82	
177.00	Appurtenance(s)	1820.9	1.83	1.67	1.03	374.78	

Seismic Segment Forces (Factored)

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 34

180.00			217.81	1.89	1.98	1.14	50.39	
		Totals:	**42,561.4**				**1,788.3**	**Total Wind:** **43,653.2**

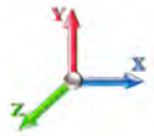
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 35	

Tower Engineering Solutions

Load Case: 0.9D + 1.0E



Gust Response Factor	1.10			**Sds**	0.18			**Iterations**	23
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10			**Ss**	0.17
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.31	**SA**	0.03			**S1**	0.06
								Seismic Importance Factor	1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-42.95	-1.96	0.00	-254.60	0.00	254.60	5499.24	2749.62	13525.8	6714.82		0.00	0.00	0.046
5.00	-41.54	-1.94	0.00	-244.81	0.00	244.81	5446.13	2723.06	13174.3	6540.31		0.01	-0.01	0.045
10.00	-40.15	-1.91	0.00	-235.10	0.00	235.10	5391.79	2695.89	12824.2	6366.50		0.02	-0.02	0.044
15.00	-38.79	-1.88	0.00	-225.53	0.00	225.53	5336.22	2668.11	12475.6	6193.44		0.05	-0.03	0.044
20.00	-37.44	-1.84	0.00	-216.12	0.00	216.12	5279.42	2639.71	12128.7	6021.23		0.08	-0.04	0.043
25.00	-36.12	-1.81	0.00	-206.90	0.00	206.90	5221.40	2610.70	11783.6	5849.92		0.13	-0.05	0.042
30.00	-34.81	-1.77	0.00	-197.88	0.00	197.88	5162.14	2581.07	11440.6	5679.60		0.18	-0.06	0.042
35.00	-33.53	-1.73	0.00	-189.04	0.00	189.04	5101.66	2550.83	11099.6	5510.34		0.25	-0.07	0.041
40.00	-32.27	-1.69	0.00	-180.40	0.00	180.40	5039.95	2519.97	10760.9	5342.21		0.33	-0.08	0.040
45.00	-31.03	-1.64	0.00	-171.97	0.00	171.97	4977.01	2488.50	10424.7	5175.29		0.42	-0.09	0.039
45.50	-30.90	-1.64	0.00	-171.14	0.00	171.14	4970.65	2485.32	10391.2	5158.66		0.42	-0.09	0.039
50.00	-28.96	-1.57	0.00	-163.75	0.00	163.75	4912.84	2456.42	10091.1	5009.65		0.51	-0.10	0.039
52.75	-27.79	-1.52	0.00	-159.44	0.00	159.44	3995.11	1997.56	8262.19	4101.70		0.57	-0.11	0.046
55.00	-27.32	-1.51	0.00	-156.01	0.00	156.01	3974.19	1987.10	8146.39	4044.21		0.62	-0.11	0.045
60.00	-26.27	-1.48	0.00	-148.45	0.00	148.45	3926.81	1963.41	7890.01	3916.93		0.75	-0.12	0.045
65.00	-25.24	-1.44	0.00	-141.07	0.00	141.07	3878.20	1939.10	7635.05	3790.36		0.88	-0.13	0.044
70.00	-24.23	-1.41	0.00	-133.85	0.00	133.85	3828.36	1914.18	7381.67	3664.57		1.03	-0.15	0.043
75.00	-23.24	-1.39	0.00	-126.78	0.00	126.78	3777.30	1888.65	7130.01	3539.64		1.18	-0.16	0.042
80.00	-22.27	-1.37	0.00	-119.84	0.00	119.84	3725.00	1862.50	6880.23	3415.63		1.36	-0.17	0.041
85.00	-21.31	-1.36	0.00	-113.00	0.00	113.00	3671.48	1835.74	6632.46	3292.63		1.54	-0.18	0.040
90.00	-20.37	-1.35	0.00	-106.22	0.00	106.22	3616.73	1808.36	6386.87	3170.71		1.74	-0.19	0.039
92.33	-19.94	-1.35	0.00	-103.07	0.00	103.07	3590.75	1795.38	6273.05	3114.21		1.83	-0.20	0.039
95.00	-19.14	-1.35	0.00	-99.46	0.00	99.46	3560.74	1780.37	6143.61	3049.94		1.95	-0.21	0.038
98.50	-18.10	-1.35	0.00	-94.73	0.00	94.73	2386.86	1193.43	4124.78	2047.71		2.10	-0.22	0.054
100.00	-17.88	-1.35	0.00	-92.71	0.00	92.71	2378.02	1189.01	4080.56	2025.76		2.17	-0.22	0.053
105.00	-17.17	-1.35	0.00	-85.94	0.00	85.94	2347.74	1173.87	3933.38	1952.70		2.41	-0.23	0.051
110.00	-16.48	-1.36	0.00	-79.17	0.00	79.17	2316.23	1158.11	3786.65	1879.85		2.66	-0.25	0.049
115.00	-15.79	-1.36	0.00	-72.39	0.00	72.39	2283.49	1141.75	3640.52	1807.31		2.93	-0.27	0.047
120.00	-15.12	-1.36	0.00	-65.61	0.00	65.61	2249.53	1124.76	3495.14	1735.13		3.22	-0.28	0.045
122.00	-14.85	-1.36	0.00	-62.89	0.00	62.89	2235.60	1117.80	3437.23	1706.38		3.34	-0.29	0.043
125.00	-14.45	-1.36	0.00	-58.82	0.00	58.82	2214.33	1107.17	3350.65	1663.40		3.52	-0.30	0.042
130.00	-13.81	-1.36	0.00	-52.03	0.00	52.03	2177.91	1088.96	3207.21	1592.19		3.84	-0.31	0.039
131.58	-13.61	-1.36	0.00	-49.88	0.00	49.88	2166.12	1083.06	3162.03	1569.76		3.94	-0.31	0.038
135.00	-12.89	-1.36	0.00	-45.24	0.00	45.24	2140.26	1070.13	3064.96	1521.58		4.17	-0.32	0.036
136.83	-12.50	-1.35	0.00	-42.76	0.00	42.76	1821.16	910.58	2623.48	1302.41		4.30	-0.33	0.040
140.00	-12.14	-1.35	0.00	-38.47	0.00	38.47	1802.58	901.29	2550.43	1266.14		4.52	-0.34	0.037
145.00	-11.58	-1.35	0.00	-31.70	0.00	31.70	1772.26	886.13	2435.64	1209.15		4.87	-0.35	0.033
147.00	-7.80	-1.23	0.00	-29.01	0.00	29.01	1759.78	879.89	2389.94	1186.47		5.02	-0.35	0.029
150.00	-7.52	-1.22	0.00	-25.31	0.00	25.31	1740.70	870.35	2321.67	1152.58		5.25	-0.36	0.026
155.00	-7.07	-1.19	0.00	-19.20	0.00	19.20	1707.91	853.96	2208.68	1096.48		5.63	-0.37	0.022
160.00	-6.62	-1.16	0.00	-13.23	0.00	13.23	1673.90	836.95	2096.80	1040.94		6.02	-0.38	0.017
165.00	-6.19	-1.11	0.00	-7.45	0.00	7.45	1638.66	819.33	1986.20	986.03		6.42	-0.38	0.011
167.00	-2.49	-0.55	0.00	-5.24	0.00	5.24	1624.22	812.11	1942.34	964.26		6.58	-0.38	0.007
170.00	-2.25	-0.51	0.00	-3.59	0.00	3.59	1602.19	801.09	1877.01	931.83		6.82	-0.38	0.005
175.00	-1.85	-0.44	0.00	-1.03	0.00	1.03	1564.49	782.24	1769.40	878.40		7.22	-0.39	0.002
177.00	-0.20	-0.05	0.00	-0.15	0.00	0.15	1549.06	774.53	1726.82	857.27		7.38	-0.39	0.000
180.00	0.00	-0.05	0.00	0.00	0.00	0.00	1525.56	762.78	1663.50	825.83		7.63	-0.39	0.000

Calculated Forces

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 36

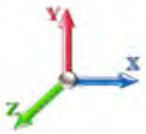
Wind Loading - Shaft

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 37	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	282.00	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	277.42	0.750	0.000	5.00	25.283	18.96	155.2	0.0	1402.7
10.00		1.00	0.85	7.442	8.19	272.84	0.750	0.000	5.00	24.868	18.65	152.7	0.0	1379.6
15.00		1.00	0.85	7.442	8.19	268.26	0.750	0.000	5.00	24.454	18.34	150.1	0.0	1356.4
20.00		1.00	0.90	7.896	8.69	271.60	0.750	0.000	5.00	24.040	18.03	156.6	0.0	1333.3
25.00		1.00	0.95	8.276	9.10	273.22	0.750	0.000	5.00	23.626	17.72	161.3	0.0	1310.1
30.00		1.00	0.98	8.600	9.46	273.59	0.750	0.000	5.00	23.212	17.41	164.7	0.0	1287.0
35.00		1.00	1.01	8.883	9.77	273.06	0.750	0.000	5.00	22.797	17.10	167.1	0.0	1263.8
40.00		1.00	1.04	9.137	10.05	271.85	0.750	0.000	5.00	22.383	16.79	168.7	0.0	1240.7
45.00		1.00	1.07	9.366	10.30	270.10	0.750	0.000	5.00	21.969	16.48	169.8	0.0	1217.5
45.50	Bot - Section 2	1.00	1.07	9.388	10.33	269.90	0.750	0.000	0.50	2.174	1.63	16.8	0.0	120.5
50.00		1.00	1.09	9.576	10.53	267.91	0.750	0.000	4.50	19.667	14.75	155.4	0.0	2009.2
52.75	Top - Section 1	1.00	1.11	9.685	10.65	266.55	0.750	0.000	2.75	11.854	8.89	94.7	0.0	1210.7
55.00		1.00	1.12	9.770	10.75	269.40	0.750	0.000	2.25	9.605	7.20	77.4	0.0	456.7
60.00		1.00	1.14	9.951	10.95	266.58	0.750	0.000	5.00	21.045	15.78	172.8	0.0	1000.6
65.00		1.00	1.16	10.120	11.13	263.49	0.750	0.000	5.00	20.631	15.47	172.2	0.0	980.7
70.00		1.00	1.17	10.279	11.31	260.17	0.750	0.000	5.00	20.216	15.16	171.4	0.0	960.9
75.00		1.00	1.19	10.430	11.47	256.64	0.750	0.000	5.00	19.802	14.85	170.4	0.0	941.1
80.00		1.00	1.21	10.572	11.63	252.93	0.750	0.000	5.00	19.388	14.54	169.1	0.0	921.2
85.00		1.00	1.22	10.708	11.78	249.05	0.750	0.000	5.00	18.974	14.23	167.6	0.0	901.4
90.00		1.00	1.24	10.838	11.92	245.02	0.750	0.000	5.00	18.559	13.92	165.9	0.0	881.5
92.33	Bot - Section 3	1.00	1.24	10.896	11.99	243.10	0.750	0.000	2.33	8.519	6.39	76.6	0.0	404.6
95.00		1.00	1.25	10.962	12.06	240.86	0.750	0.000	2.67	9.753	7.32	88.2	0.0	805.3
98.50	Top - Section 2	1.00	1.26	11.046	12.15	237.87	0.750	0.000	3.50	12.622	9.47	115.0	0.0	1041.9
100.00		1.00	1.27	11.081	12.19	239.80	0.750	0.000	1.50	5.348	4.01	48.9	0.0	190.9
105.00		1.00	1.28	11.195	12.31	235.41	0.750	0.000	5.00	17.556	13.17	162.1	0.0	626.5
110.00		1.00	1.29	11.305	12.44	230.92	0.750	0.000	5.00	17.142	12.86	159.9	0.0	611.6
115.00		1.00	1.30	11.412	12.55	226.33	0.750	0.000	5.00	16.727	12.55	157.5	0.0	596.7
120.00		1.00	1.32	11.514	12.67	221.64	0.750	0.000	5.00	16.313	12.23	155.0	0.0	581.9
122.00	Appurtenance(s)	1.00	1.32	11.554	12.71	219.75	0.750	0.000	2.00	6.409	4.81	61.1	0.0	228.6
125.00		1.00	1.33	11.614	12.78	216.87	0.750	0.000	3.00	9.490	7.12	90.9	0.0	338.4
130.00		1.00	1.34	11.710	12.88	212.02	0.750	0.000	5.00	15.485	11.61	149.6	0.0	552.1
131.58	Bot - Section 4	1.00	1.34	11.740	12.91	210.47	0.750	0.000	1.58	4.817	3.61	46.7	0.0	171.7
135.00		1.00	1.35	11.803	12.98	207.09	0.750	0.000	3.42	10.398	7.80	101.3	0.0	695.3
136.83	Top - Section 3	1.00	1.35	11.837	13.02	205.27	0.750	0.000	1.83	5.500	4.12	53.7	0.0	367.7
140.00		1.00	1.36	11.894	13.08	205.07	0.750	0.000	3.17	9.369	7.03	91.9	0.0	297.1
145.00		1.00	1.37	11.982	13.18	200.01	0.750	0.000	5.00	14.454	10.84	142.9	0.0	458.3
147.00	Appurtenance(s)	1.00	1.37	12.017	13.22	197.97	0.750	0.000	2.00	5.666	4.25	56.2	0.0	179.6
150.00		1.00	1.38	12.068	13.27	194.89	0.750	0.000	3.00	8.374	6.28	83.4	0.0	265.4
155.00		1.00	1.39	12.152	13.37	189.71	0.750	0.000	5.00	13.626	10.22	136.6	0.0	431.8
160.00		1.00	1.40	12.233	13.46	184.47	0.750	0.000	5.00	13.212	9.91	133.3	0.0	418.6
165.00		1.00	1.41	12.313	13.54	179.17	0.750	0.000	5.00	12.797	9.60	130.0	0.0	405.3
167.00	Appurtenance(s)	1.00	1.41	12.344	13.58	177.04	0.750	0.000	2.00	5.003	3.75	50.9	0.0	158.4
170.00		1.00	1.42	12.390	13.63	173.82	0.750	0.000	3.00	7.380	5.54	75.4	0.0	233.7
175.00		1.00	1.42	12.466	13.71	168.42	0.750	0.000	5.00	11.969	8.98	123.1	0.0	378.9
177.00	Appurtenance(s)	1.00	1.43	12.496	13.75	166.25	0.750	0.000	2.00	4.672	3.50	48.2	0.0	147.8
180.00		1.00	1.43	12.540	13.79	162.97	0.750	0.000	3.00	6.883	5.16	71.2	0.0	217.8

Wind Loading - Shaft

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 38	

Totals:	**180.00**	**5,589.6**	**32,981.5**

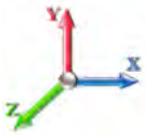
Discrete Appurtenance Forces

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 39	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	177.00	RFS FD9R6004-2C-3L	6	12.496	13.746	0.50	0.80	1.10	18.60	0.000	0.000	15.14	0.00	0.00
2	177.00	BXA-171085-8BF	3	12.496	13.746	0.67	0.80	5.93	31.50	0.000	0.000	81.47	0.00	0.00
3	177.00	LPA-80080-4CF	6	12.496	13.746	1.36	0.80	21.30	72.00	0.000	0.000	292.75	0.00	0.00
4	177.00	BXA-70063-6CF	3	12.496	13.746	0.58	0.80	13.26	51.00	0.000	0.000	182.30	0.00	0.00
5	177.00	Low Profile Platform	1	12.496	13.746	1.00	1.00	22.00	1500.00	0.000	0.000	302.41	0.00	0.00
6	167.00	Ericsson 4424 B25	3	12.344	13.578	0.50	0.75	3.09	264.00	0.000	0.000	41.96	0.00	0.00
7	167.00	AIR6449 B41	3	12.344	13.578	0.53	0.75	9.03	309.00	0.000	0.000	122.56	0.00	0.00
8	167.00	RFS ACU-A20-N RET	4	12.344	13.578	0.59	0.75	0.33	4.00	0.000	0.000	4.51	0.00	0.00
9	167.00	RMQP-4096-HK	1	12.344	13.578	1.00	1.00	46.00	2449.00	0.000	0.000	624.61	0.00	0.00
10	167.00	Ericsson 4449 B71 + B85	3	12.344	13.578	0.50	0.75	2.97	219.60	0.000	0.000	40.32	0.00	0.00
11	167.00	Ericsson 4415 B66A	3	12.344	13.578	0.50	0.75	2.47	148.80	0.000	0.000	33.57	0.00	0.00
12	167.00	Alcatel Lucent 800 MHz	3	12.344	13.578	0.50	0.75	1.18	26.40	0.000	0.000	15.97	0.00	0.00
13	167.00	APXVAALL24_43-U-NA20	3	12.344	13.578	0.52	0.75	31.88	384.00	0.000	0.000	432.85	0.00	0.00
14	167.00	APX16DWV-16DWVS-E-A	3	12.344	13.578	0.46	0.75	9.22	122.10	0.000	0.000	125.21	0.00	0.00
15	147.00	7770	3	12.017	13.219	0.55	0.75	9.03	105.00	0.000	0.000	119.41	0.00	0.00
16	147.00	Cci DMP65R-BU8DA	6	12.017	13.219	0.55	0.75	58.70	574.20	0.000	0.000	775.97	0.00	0.00
17	147.00	Cci DTMABP7819VG12A	3	12.017	13.219	0.50	0.75	1.72	57.60	0.000	0.000	22.72	0.00	0.00
18	147.00	Powerwave	3	12.017	13.219	0.68	0.75	1.86	66.00	0.000	0.000	24.63	0.00	0.00
19	147.00	Ericsson RRUS 4478 B14	3	12.017	13.219	0.50	0.75	2.49	178.20	0.000	0.000	32.88	0.00	0.00
20	147.00	Ericsson RRUS 8843 B2	3	12.017	13.219	0.50	0.75	2.49	225.00	0.000	0.000	32.88	0.00	0.00
21	147.00	Ericsson RRUS 4449	3	12.017	13.219	0.50	0.75	2.97	213.00	0.000	0.000	39.26	0.00	0.00
22	147.00	Raycap DC6-48-60-18-8F	3	12.017	13.219	0.75	0.75	2.07	95.40	0.000	0.000	27.36	0.00	0.00
23	147.00	RMQP-496-HK	1	12.017	13.219	1.00	1.00	46.00	2449.00	0.000	0.000	608.06	0.00	0.00
24	122.00	Nokia CS72188.01	1	11.554	12.710	1.00	1.00	3.15	16.50	0.000	0.000	40.04	0.00	0.00
							Totals:		**9,579.90**			**4,038.82**		

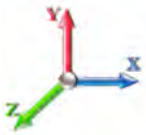
Total Applied Force Summary

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 40

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		155.23	1564.14	0.00	0.00
10.00		152.68	1540.98	0.00	0.00
15.00		150.14	1517.83	0.00	0.00
20.00		156.61	1494.68	0.00	0.00
25.00		161.31	1471.53	0.00	0.00
30.00		164.68	1448.37	0.00	0.00
35.00		167.08	1425.22	0.00	0.00
40.00		168.72	1402.07	0.00	0.00
45.00		169.76	1378.92	0.00	0.00
45.50		16.84	136.62	0.00	0.00
50.00		155.38	2154.51	0.00	0.00
52.75		94.71	1299.50	0.00	0.00
55.00		77.42	529.37	0.00	0.00
60.00		172.77	1161.99	0.00	0.00
65.00		172.25	1142.14	0.00	0.00
70.00		171.44	1122.30	0.00	0.00
75.00		170.39	1102.45	0.00	0.00
80.00		169.10	1082.61	0.00	0.00
85.00		167.62	1062.77	0.00	0.00
90.00		165.94	1042.92	0.00	0.00
92.33		76.58	479.90	0.00	0.00
95.00		88.20	891.33	0.00	0.00
98.50		115.02	1154.88	0.00	0.00
100.00		48.88	239.27	0.00	0.00
105.00		162.15	787.91	0.00	0.00
110.00		159.88	773.02	0.00	0.00
115.00		157.48	758.14	0.00	0.00
120.00		154.96	743.26	0.00	0.00
122.00	(1) attachments	101.13	309.64	0.00	0.00
125.00		90.92	435.24	0.00	0.00
130.00		149.59	713.49	0.00	0.00
131.58		46.66	222.84	0.00	0.00
135.00		101.26	805.57	0.00	0.00
136.83		53.71	426.84	0.00	0.00
140.00		91.93	399.30	0.00	0.00
145.00		142.89	619.66	0.00	0.00
147.00	(28) attachments	1739.33	4207.56	0.00	0.00
150.00		83.38	308.81	0.00	0.00
155.00		136.60	504.10	0.00	0.00
160.00		133.34	490.88	0.00	0.00
165.00		130.00	477.65	0.00	0.00
167.00	(26) attachments	1492.50	4114.25	0.00	0.00
170.00		75.44	271.12	0.00	0.00
175.00		123.10	441.29	0.00	0.00
177.00	(19) attachments	922.23	1845.91	0.00	0.00
180.00		71.21	217.81	0.00	0.00

Total Applied Force Summary

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 41

Totals:	**9,628.43**	**47,720.58**	**0.00**	**0.00**

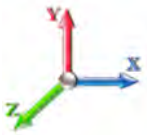
Calculated Forces

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 42	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 24

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-47.72	-9.65	0.00	-1186.4	0.00	1186.42	5499.24	2749.62	13525.8	6714.82	0.00	0.000	0.000	0.185
5.00	-46.15	-9.53	0.00	-1138.1	0.00	1138.19	5446.13	2723.06	13174.3	6540.31	0.02	-0.044	0.000	0.183
10.00	-44.60	-9.41	0.00	-1090.5	0.00	1090.56	5391.79	2695.89	12824.2	6366.50	0.09	-0.089	0.000	0.180
15.00	-43.07	-9.29	0.00	-1043.5	0.00	1043.53	5336.22	2668.11	12475.6	6193.44	0.21	-0.134	0.000	0.177
20.00	-41.57	-9.16	0.00	-997.09	0.00	997.09	5279.42	2639.71	12128.7	6021.23	0.38	-0.179	0.000	0.173
25.00	-40.09	-9.03	0.00	-951.29	0.00	951.29	5221.40	2610.70	11783.6	5849.92	0.59	-0.225	0.000	0.170
30.00	-38.64	-8.89	0.00	-906.17	0.00	906.17	5162.14	2581.07	11440.6	5679.60	0.85	-0.271	0.000	0.167
35.00	-37.21	-8.74	0.00	-861.74	0.00	861.74	5101.66	2550.83	11099.6	5510.34	1.16	-0.317	0.000	0.164
40.00	-35.80	-8.59	0.00	-818.04	0.00	818.04	5039.95	2519.97	10760.9	5342.21	1.51	-0.363	0.000	0.160
45.00	-34.42	-8.43	0.00	-775.08	0.00	775.08	4977.01	2488.50	10424.7	5175.29	1.92	-0.409	0.000	0.157
45.50	-34.28	-8.43	0.00	-770.86	0.00	770.86	4970.65	2485.32	10391.2	5158.66	1.96	-0.414	0.000	0.156
50.00	-32.12	-8.27	0.00	-732.95	0.00	732.95	4912.84	2456.42	10091.1	5009.65	2.37	-0.456	0.000	0.153
52.75	-30.82	-8.18	0.00	-710.20	0.00	710.20	3995.11	1997.56	8262.19	4101.70	2.64	-0.482	0.000	0.181
55.00	-30.28	-8.12	0.00	-691.80	0.00	691.80	3974.19	1987.10	8146.39	4044.21	2.88	-0.503	0.000	0.179
60.00	-29.12	-7.96	0.00	-651.22	0.00	651.22	3926.81	1963.41	7890.01	3916.93	3.43	-0.555	0.000	0.174
65.00	-27.97	-7.80	0.00	-611.42	0.00	611.42	3878.20	1939.10	7635.05	3790.36	4.04	-0.606	0.000	0.169
70.00	-26.84	-7.64	0.00	-572.41	0.00	572.41	3828.36	1914.18	7381.67	3664.57	4.70	-0.658	0.000	0.163
75.00	-25.73	-7.48	0.00	-534.21	0.00	534.21	3777.30	1888.65	7130.01	3539.64	5.42	-0.709	0.000	0.158
80.00	-24.65	-7.32	0.00	-496.81	0.00	496.81	3725.00	1862.50	6880.23	3415.63	6.19	-0.759	0.000	0.152
85.00	-23.58	-7.16	0.00	-460.21	0.00	460.21	3671.48	1835.74	6632.46	3292.63	7.01	-0.810	0.000	0.146
90.00	-22.54	-6.99	0.00	-424.42	0.00	424.42	3616.73	1808.36	6386.87	3170.71	7.89	-0.859	0.000	0.140
92.33	-22.05	-6.92	0.00	-408.11	0.00	408.11	3590.75	1795.38	6273.05	3114.21	8.31	-0.882	0.000	0.137
95.00	-21.16	-6.83	0.00	-389.67	0.00	389.67	3560.74	1780.37	6143.61	3049.94	8.81	-0.909	0.000	0.134
98.50	-20.01	-6.70	0.00	-365.78	0.00	365.78	2386.86	1193.43	4124.78	2047.71	9.49	-0.943	0.000	0.187
100.00	-19.76	-6.66	0.00	-355.73	0.00	355.73	2378.02	1189.01	4080.56	2025.76	9.79	-0.957	0.000	0.184
105.00	-18.97	-6.50	0.00	-322.43	0.00	322.43	2347.74	1173.87	3933.38	1952.70	10.82	-1.017	0.000	0.173
110.00	-18.19	-6.35	0.00	-289.91	0.00	289.91	2316.23	1158.11	3786.65	1879.85	11.92	-1.074	0.000	0.162
115.00	-17.43	-6.19	0.00	-258.17	0.00	258.17	2283.49	1141.75	3640.52	1807.31	13.08	-1.130	0.000	0.151
120.00	-16.69	-6.03	0.00	-227.21	0.00	227.21	2249.53	1124.76	3495.14	1735.13	14.29	-1.183	0.000	0.138
122.00	-16.38	-5.93	0.00	-215.14	0.00	215.14	2235.60	1117.80	3437.23	1706.38	14.79	-1.204	0.000	0.133
125.00	-15.94	-5.84	0.00	-197.34	0.00	197.34	2214.33	1107.17	3350.65	1663.40	15.55	-1.234	0.000	0.126
130.00	-15.23	-5.69	0.00	-168.12	0.00	168.12	2177.91	1088.96	3207.21	1592.19	16.87	-1.280	0.000	0.113
131.58	-15.01	-5.64	0.00	-159.12	0.00	159.12	2166.12	1083.06	3162.03	1569.76	17.30	-1.295	0.000	0.108
135.00	-14.20	-5.53	0.00	-139.85	0.00	139.85	2140.26	1070.13	3064.96	1521.58	18.24	-1.324	0.000	0.099
136.83	-13.77	-5.47	0.00	-129.72	0.00	129.72	1821.16	910.58	2623.48	1302.41	18.75	-1.338	0.000	0.107
140.00	-13.37	-5.37	0.00	-112.40	0.00	112.40	1802.58	901.29	2550.43	1266.14	19.64	-1.362	0.000	0.096
145.00	-12.76	-5.22	0.00	-85.54	0.00	85.54	1772.26	886.13	2435.64	1209.15	21.09	-1.397	0.000	0.078
147.00	-8.59	-3.38	0.00	-75.10	0.00	75.10	1759.78	879.89	2389.94	1186.47	21.68	-1.409	0.000	0.068
150.00	-8.28	-3.29	0.00	-64.95	0.00	64.95	1740.70	870.35	2321.67	1152.58	22.57	-1.426	0.000	0.061
155.00	-7.78	-3.15	0.00	-48.49	0.00	48.49	1707.91	853.96	2208.68	1096.48	24.08	-1.450	0.000	0.049
160.00	-7.29	-3.00	0.00	-32.76	0.00	32.76	1673.90	836.95	2096.80	1040.94	25.60	-1.468	0.000	0.036
165.00	-6.82	-2.86	0.00	-17.74	0.00	17.74	1638.66	819.33	1986.20	986.03	27.15	-1.481	0.000	0.022
167.00	-2.74	-1.26	0.00	-12.02	0.00	12.02	1624.22	812.11	1942.34	964.26	27.77	-1.484	0.000	0.014
170.00	-2.48	-1.18	0.00	-8.23	0.00	8.23	1602.19	801.09	1877.01	931.83	28.70	-1.488	0.000	0.010
175.00	-2.04	-1.05	0.00	-2.32	0.00	2.32	1564.49	782.24	1769.40	878.40	30.26	-1.491	0.000	0.004
177.00	-0.22	-0.08	0.00	-0.23	0.00	0.23	1549.06	774.53	1726.82	857.27	30.89	-1.491	0.000	0.000
180.00	0.00	-0.07	0.00	0.00	0.00	0.00	1525.56	762.78	1663.50	825.83	31.83	-1.491	0.000	0.000

Calculated Forces

Structure:	CT02721-S-SBA		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 43

Final Analysis Summary

Structure:	CT02721-S-SBA	**Code:**	EIA/TIA-222-G	6/2/2021	
Site Name:	South Windham	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 44	

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 101 mph Wind	43.8	0.00	57.19	0.00	0.00	5411.13
0.9D + 1.6W 101 mph Wind	43.7	0.00	42.87	0.00	0.00	5348.13
1.2D + 1.0Di + 1.0Wi 50 mph Wind	11.2	0.00	96.45	0.00	0.00	1449.91
1.2D + 1.0E	2.0	0.00	57.26	0.00	0.00	257.86
0.9D + 1.0E	2.0	0.00	42.95	0.00	0.00	254.60
1.0D + 1.0W 60 mph Wind	9.6	0.00	47.72	0.00	0.00	1186.42

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 101 mph Wind	-21.88	-30.62	0.00	-1671.1	0.00	-1671.1	2386.86	1193.4	4124.78	2047.71	98.50	0.826
0.9D + 1.6W 101 mph Wind	-15.90	-30.14	0.00	-1640.8	0.00	-1640.8	2386.86	1193.4	4124.78	2047.71	98.50	0.809
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-49.88	-8.32	0.00	-462.08	0.00	-462.08	2386.86	1193.4	4124.78	2047.71	98.50	0.247
1.2D + 1.0E	-24.13	-1.37	0.00	-96.38	0.00	-96.38	2386.86	1193.4	4124.78	2047.71	98.50	0.057
0.9D + 1.0E	-18.10	-1.35	0.00	-94.73	0.00	-94.73	2386.86	1193.4	4124.78	2047.71	98.50	0.054
1.0D + 1.0W 60 mph Wind	-20.01	-6.70	0.00	-365.78	0.00	-365.78	2386.86	1193.4	4124.78	2047.71	98.50	0.187

Base Plate Summary

Structure:	CT02721-S-SB		**Code:**	EIA/TIA-222-G	6/2/2021
Site Name:	South Windham		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 45

Reactions	
Original Design	
Moment (kip-ft):	5047.00
Axial (kip):	57.10
Shear (kip):	40.10
Analysis (1.2D + 1.6W)	
Moment (kip-ft):	5411.13
Axial (kip):	57.19
Shear (kip):	43.76

Base Plate	
Yield (ksi):	50.00
Width (in):	74.62
Style:	Round
Polygon Sides:	0.00
Clip Length (in):	0.00
Effective Len (in):	14.60
Moment (kip-in):	836.48
Allow Stress (ksi):	67.50
Applied Stress (ksi):	38.48
Stress Ratio:	0.57

Anchor Bolts	
Bolt Circle:	68.62
Number Bolts:	20.00
Bolt Type:	2.25" 18J
Bolt Diameter (in):	2.25
Yield (ksi):	75.00
Ultimate (ksi):	100.00
Arrangement:	Radial
Cluster Dist (in):	0.00
Start Angle (deg):	0.00
Compression	
Force (kip):	194.08
Allowable (kip):	260.00
Ratio:	0.76
Tension	
Force (kip):	184.43
Allowable (kip):	260.00
Ratio:	0.73

Monopole Mat Foundation Design

				Date
				7/30/2020
Customer Name:		**EIA/TIA Standard:**	EIA-222-G	
Site Name:		**Structure Height (Ft.):**	300	
Site Number:	194213-VZW	**Engineer Name:**	T. Alajaj	
Engr. Number:		**Engineer Login ID:**		

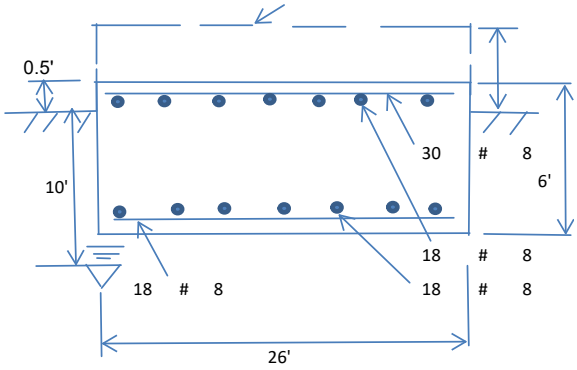
Foundation Info Obtained from: Mapping Operation

Structure Type: Monopole

Analysis or Design? Analysis

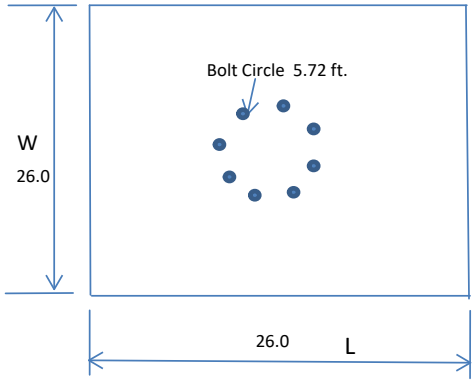
Base Reactions (Factored):

Axial Load (Kips):	57.2	Shear Force (Kips):	43.8
Uplift Force (Kips):	0.0	Moment (Kips-ft):	5411.1
Allowable overstress %:	5.0%		



Foundation Geometries:

		Mods required -Yes/No ?:	No
Anchor Bolt Circle (ft.):	5.72	Depth of Base BG (ft.):	5.50
Thickness of Pad (ft):	6.00		
Length of Pad (ft.):	26	Width of Pad (ft.):	26
Final Length of pad (ft)	26.0	Final width of pad (ft):	26.0



Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Pad Rebar Yield (Ksi):	60	Tie Spacing (in):	12.0	
Pad Steel Rebar Size (#):	8			
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	30	Qty. of Rebar in Pad (W):	30	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	18	Qty. of Rebar in Pad (W):	18	
Apply 1.35 factor for e/w Per G:	1.35			

Soil Design Parameters:

Water Table B.G.S. (ft):	10.0	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:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00			

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

Total Dry Soil Volume (cu. Ft.):	0.00	Total Dry Soil Weight (Kips):	0.00
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	0.00	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	4056.00	Total Dry Concrete Weight (Kips):	608.40
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	608.40	Total Vertical Load on Base (Kips):	665.59

Check Soil Capacities:

				Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	4179	<	Allowable Factored Soil Bearing (psf): 22500	0.19	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	7861.8	>	Design Factored Momont (kips-ft): 5676	0.72	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.39	OK!			

Check the capacities of Reinforceing Concrete:

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

Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	1755.9	>	One-Way Factored Shear (L-D. Kips):	286.9	0.16	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1755.9	>	One-Way Factored Shear (W-D., Kips)	286.9	0.16	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	2063.1	>	One-Way Factored Shear (C-C, Kips):	810.3	0.39	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0011	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0011		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	7210.2	>	Moment at Bottom (L-Direct. K-Ft):	600.0	0.08	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	7210.2	>	Moment at Bottom (W-Direct. K-Ft):	600.0	0.08	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	10169.3	>	Moment at Bottom (C-C Dir. K-Ft):	848.5	0.08	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0007	OK!	Upper Steel Reinf. Ratio (W-Direct.):	0.0007		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	4349.0	>	Moment at the top (L-Dir Kips-Ft):	212.6	0.05	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	4349.0	>	Moment at the top (W-Dir Kips-Ft):	212.6	0.05	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	6140.5	>	Moment at the top (C-C Direc. K-Ft):	772.1	0.13	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 180-Ft Monopole Tower

Customer Name: SBA Communications Corp

Customer Site Number: CT02721-S-SBA

Customer Site Name: South Windham

Carrier Name: T-Mobile Sprint (App#: 154214, V#2)

Carrier Site ID / Name: CT72XC043 / _

Site Location: 193 Windham Center Road

Windham, Connecticut

Windham County

Latitude: 41.690055

Longitude: -72.162536

Exp.10/31/2021

05/17/2021

Analysis Result:

Max Structural Usage: 99% [Pass]

Report Prepared By : Sunil Joshi

NOTE: The proposed (1) SitePro1 RMQP-4096-HK is not currently installed on the tower. The proposed mount was assumed to be installed per the manufacturer's instructions, and it was assumed that it can be installed properly on the existing mount. TES cannot verify that the proposed mount 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 (1) SitePro1 RMQP-4096-HK at 167.00' 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	SitePro1 RMQP-4096-HK
Antenna Loading	SBA Application #: 154214, v2 dated 4/19/2021
Modification Drawings	N/A

Analysis Criteria

Basic Wind Speed Used in the Analysis: V_{ULT} = 129 mph (3-Sec. Gust) / Equivalent to
V_{ASD} = 110 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

(1) SitePro1 RMQP-4096-HK at 167.00' elevation.

Final Antenna Configuration

3	RFS APX16DWV-16DWVS-E-A20
3	RFS APXVAALL24_43-U-NA20
3	Ericsson AIR6449 B41
3	Ericsson 4424 B25
3	Ericsson 4449 B71 + B85
3	Ericsson 4415 B66A
4	RFS ACU-A20-N RET

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

Analysis Results

Our calculations have determined that under design wind load the existing mounts will be structurally adequate to support the proposed antenna configuration. The maximum structural usage is 99%, which occurs in the upper end connection plate. 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 (1) SitePro1 RMQP-4096-HK is not currently installed on the tower. The proposed mount was assumed to be installed per the manufacturer's instructions, and it was assumed that it can be installed properly on the existing mount. TES cannot verify that the proposed mount will fit properly and is not liable for any fit-up issues during installation.

Attachments

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

Standard Conditions

1. The loading configuration as analyzed in this report is as provided from the customer. Any deviation from this design shall be communicated to TES to verify deviation will not adversely impact the analysis.

2. The analysis is based on the presumption that the antenna mount members and components along with any existing reinforcement items have been correctly and properly designed, manufactured, installed and maintained.

3. All the existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion. The mount analysis is not a condition assessment of the mount.

4. The mount analysis was performed in accordance with the loading provided, and if applicable the modification required to support the additional loading.

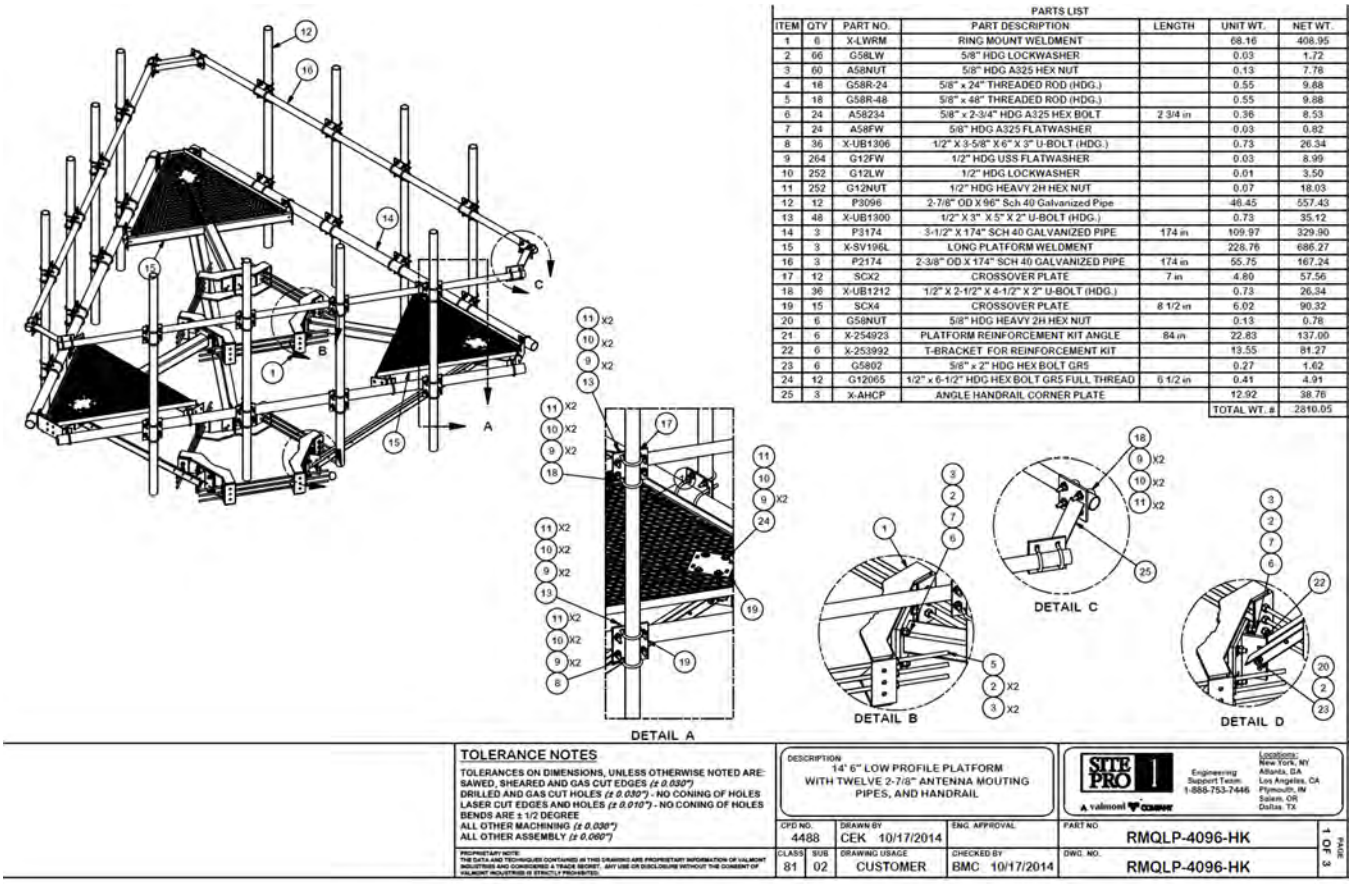
5. If the mount is modified, installation must adhere to the configuration communicated in the modification drawings.

6. The modification drawings are not intended to convey means or methods. These are the responsibility of the installing contractor.

7. Rigging plan review is available if the contractor requires for a construction class IV or other if required. Review fee would apply.

8. The mount modification package was created based upon information provided for the mount loading. The underlying tower is assumed to provide support and sufficient rigidity to support the mount loads as a tower analysis was not part of the mount analysis.

9. TES is not responsible for modifications to climbing facilities unless communicated to TES in writing.



PARTS LIST

ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	6	X-LWRM	RING MOUNT WELDMENT		68.16	408.95
2	66	G58LW	5/8" HDG LOCKWASHER		0.03	1.72
3	60	A58NUT	5/8" HDG A325 HEX NUT		0.13	7.78
4	18	G58R-24	5/8" x 24" THREADED ROD (HDG.)		0.55	9.88
5	18	G58R-48	5/8" x 48" THREADED ROD (HDG.)		0.55	9.88
6	24	A58234	5/8" x 2-3/4" HDG A325 HEX BOLT	2 3/4 in	0.36	8.53
7	24	A58FW	5/8" HDG A325 FLATWASHER		0.03	0.82
8	36	X-UB1306	1/2" X 3-5/8" X 6" X 3" U-BOLT (HDG.)		0.73	26.34
9	264	G12FW	1/2" HDG USS FLATWASHER		0.03	8.99
10	252	G12LW	1/2" HDG LOCKWASHER		0.01	3.50
11	252	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	18.03
12	12	P3096	2-7/8" OD X 96" Sch 40 Galvanized Pipe		46.45	557.43
13	48	X-UB1300	1/2" X 3" X 5" X 2" U-BOLT (HDG.)		0.73	35.12
14	3	P3174	3-1/2" X 174" SCH 40 GALVANIZED PIPE	174 in	109.97	329.90
15	3	X-SV196L	LONG PLATFORM WELDMENT		228.76	686.27
16	3	P2174	2-3/8" OD X 174" SCH 40 GALVANIZED PIPE	174 in	55.75	167.24
17	12	SCX2	CROSSOVER PLATE	7 in	4.80	57.56
18	36	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.73	26.34
19	15	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	90.32
20	6	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	0.78
21	6	X-254923	PLATFORM REINFORCEMENT KIT ANGLE	84 in	22.83	137.00
22	6	X-253992	T-BRACKET FOR REINFORCEMENT KIT		13.55	81.27
23	6	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	1.62
24	12	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	4.91
25	3	X-AHCP	ANGLE HANDRAIL CORNER PLATE		12.92	38.76
					TOTAL WT. #	2810.05

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES *(± 0.030")*
DRILLED AND GAS CUT HOLES *(± 0.030")* - NO CONING OF HOLES
LASER CUT EDGES AND HOLES *(± 0.010")* - NO CONING OF HOLES
BENDS ARE ± 1/2 DEGREE
ALL OTHER MACHINING *(± 0.030")*
ALL OTHER ASSEMBLY *(± 0.060")*

PROPRIETARY NOTE: THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

DESCRIPTION: 14' 6" LOW PROFILE PLATFORM WITH TWELVE 2-7/8" ANTENNA MOUTING PIPES, AND HANDRAIL

SITE PRO 1 — Engineering Support Team 1-888-753-7446 — Locations: New York, NY; Atlanta, GA; Los Angeles, CA; Plymouth, IN; Salem, OR; Dallas, TX

A valmont company

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
4488	CEK 10/17/2014		RMQLP-4096-HK

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 10/17/2014	RMQLP-4096-HK

PAGE 1 OF 3

(1) SitePro1 RMQP-4096-HK

Structure: CT02721-S-SBA - South Windham

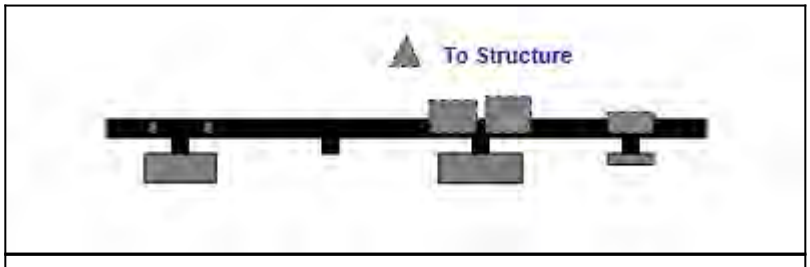
Sector: **A**

Structure Type: Monopole

Mount Elev: 167.00

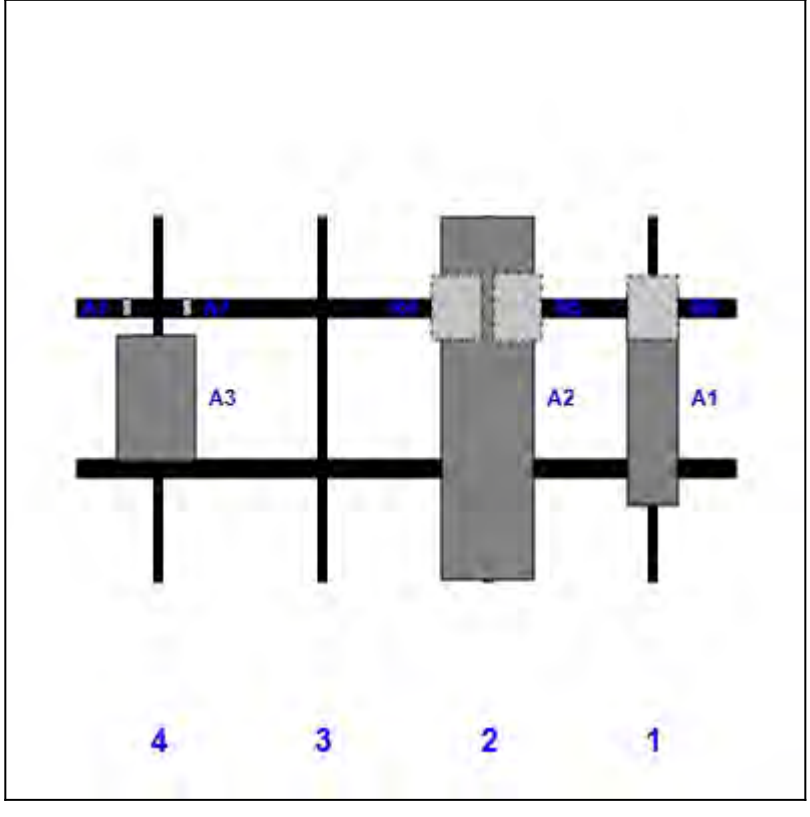
5/17/2021

Plan View



Front View

Looking Toward Structure



Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	APX16DWV-16DWVS-E-A20	55.90	13.30	152.25	1	a	Front	48.00			
R6	4415 B66A	16.50	13.40	152.25	1	a	Behind	24.00			
A2	APXVAALL24_43-U-NA20	95.90	24.00	108.75	2	a	Front	48.00			
R4	4424 B25	16.50	13.50	108.75	2	a	Behind	24.00	-8.00		
R5	4449 B71 + B85	17.90	13.10	108.75	2	a	Behind	24.00	8.00		
A3	AIR6449 B41	33.10	20.50	21.79	4	a	Front	48.00			
A7	ACU-A20-N RET	4.00	2.00	21.79	4	a	Behind	24.00	-8.00		
A7	ACU-A20-N RET	4.00	2.00	21.79	4	b	Behind	24.00	8.00		

Structure: CT02721-S-SBA - South Windham

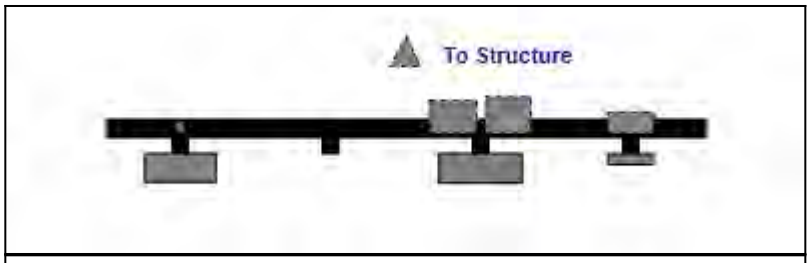
Sector: B

Structure Type: Monopole

Mount Elev: 167.00

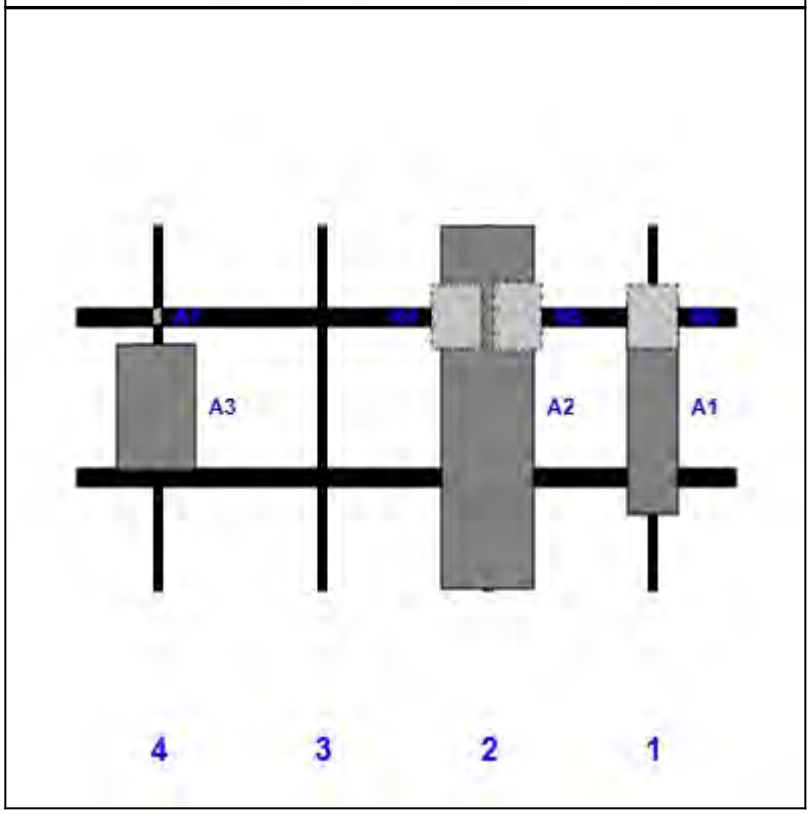
5/17/2021

Plan View



Front View

Looking Toward Structure



Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	APX16DWV-16DWVS-E-A20	55.90	13.30	152.25	1	a	Front	48.00			
R6	4415 B66A	16.50	13.40	152.25	1	a	Behind	24.00			
A2	APXVAALL24_43-U-NA20	95.90	24.00	108.75	2	a	Front	48.00			
R4	4424 B25	16.50	13.50	108.75	2	a	Behind	24.00	-8.00		
R5	4449 B71 + B85	17.90	13.10	108.75	2	a	Behind	24.00	8.00		
A3	AIR6449 B41	33.10	20.50	21.79	4	a	Front	48.00			
A7	ACU-A20-N RET	4.00	2.00	21.79	4	a	Behind	24.00			

Structure: CT02721-S-SBA - South Windham

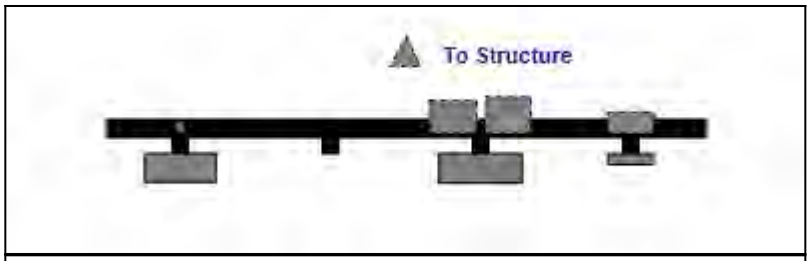
Sector: C

Structure Type: Monopole

Mount Elev: 167.00

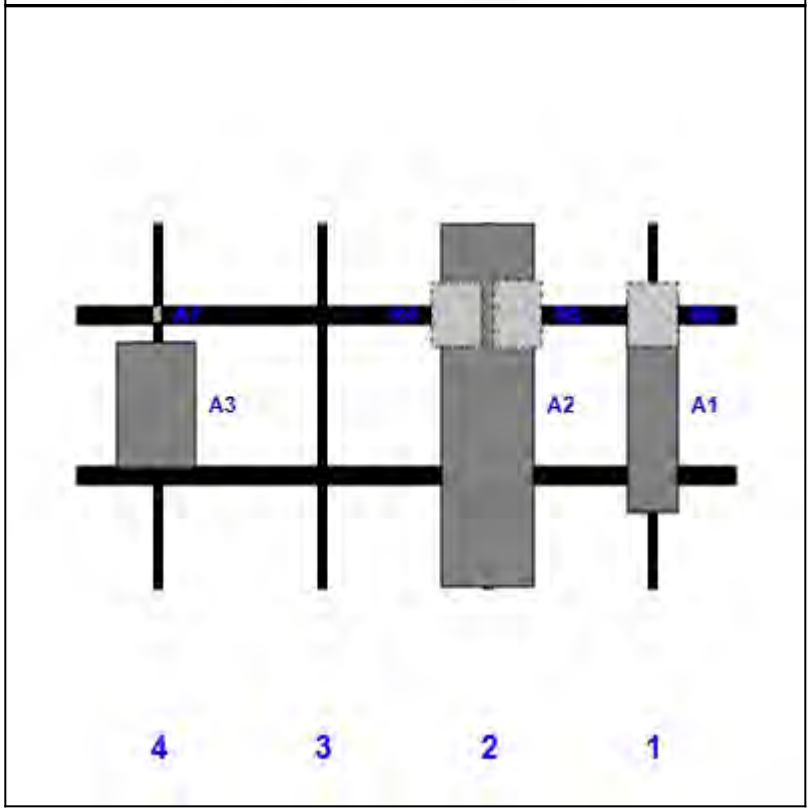
5/17/2021

Plan View

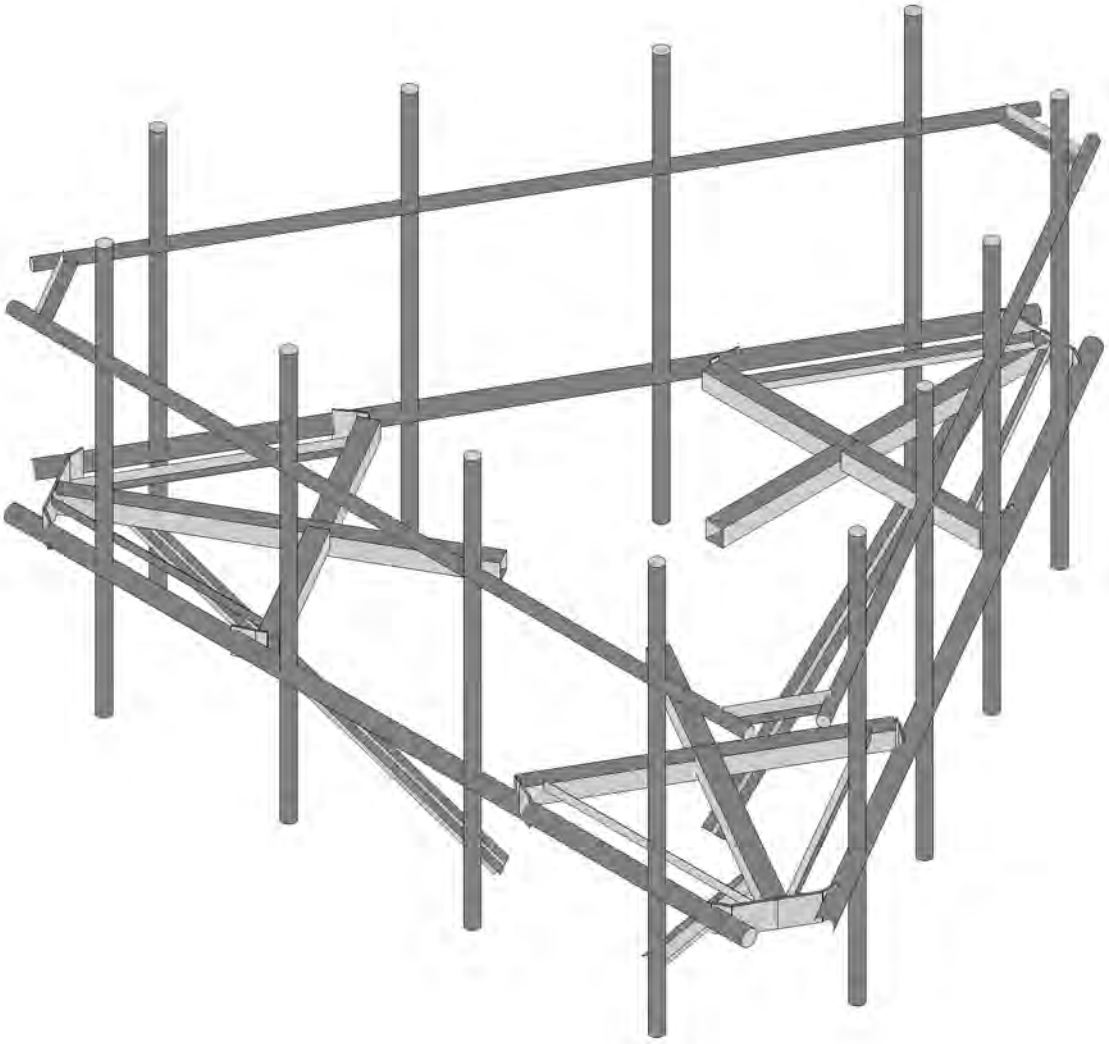


Front View

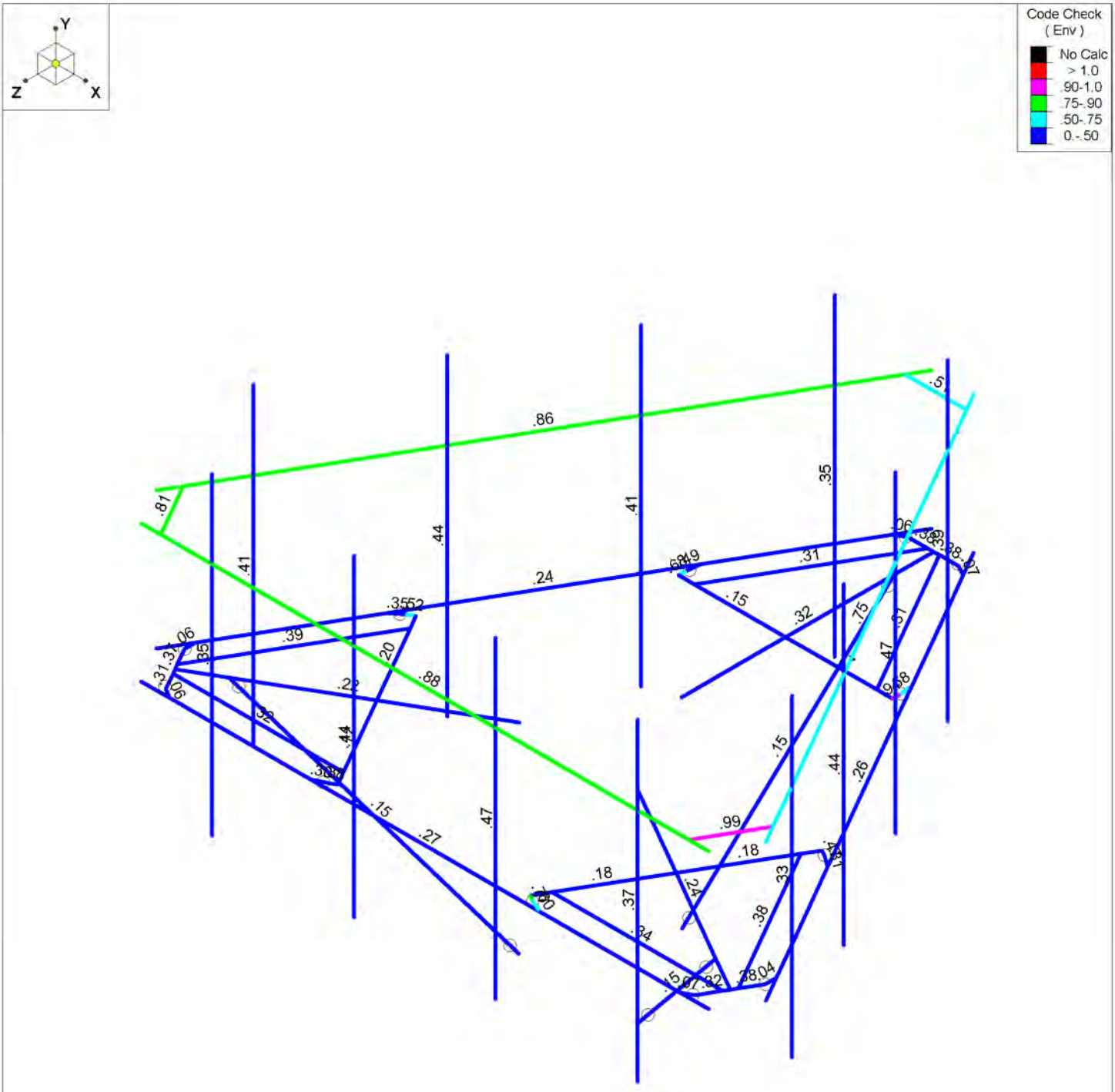
Looking Toward Structure



Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A1	APX16DWV-16DWVS-E-A20	55.90	13.30	152.25	1	a	Front	48.00			
R6	4415 B66A	16.50	13.40	152.25	1	a	Behind	24.00			
A2	APXVAALL24_43-U-NA20	95.90	24.00	108.75	2	a	Front	48.00			
R4	4424 B25	16.50	13.50	108.75	2	a	Behind	24.00	-8.00		
R5	4449 B71 + B85	17.90	13.10	108.75	2	a	Behind	24.00	8.00		
A3	AIR6449 B41	33.10	20.50	21.79	4	a	Front	48.00			
A7	ACU-A20-N RET	4.00	2.00	21.79	4	a	Behind	24.00			

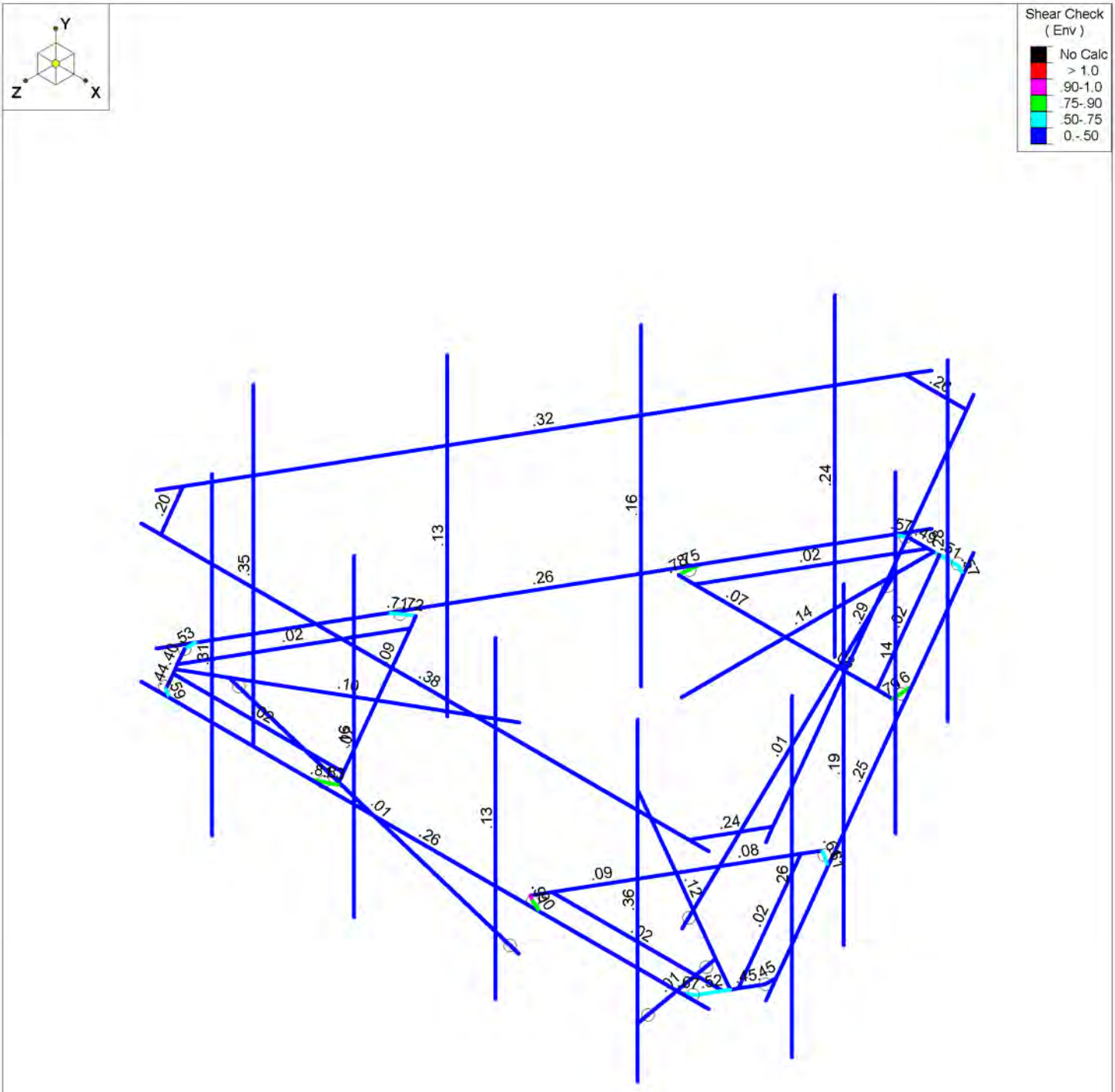


Tower Engineering Solutio...	CT02721-S-SBA_MT_LO_Loads Only_G	SK - 1
		May 17, 2021 at 4:34 PM
TES Project No. 106878		CT02721-S-SBA_106878_G_RISA_...



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

Tower Engineering Solutio...	CT02721-S-SBA_MT_LO_Loads Only_G	SK - 2
		May 17, 2021 at 4:34 PM
TES Project No. 106878		CT02721-S-SBA_106878_G_RISA_...



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

Tower Engineering Solutio...	CT02721-S-SBA_MT_LO_Loads Only_G	SK - 3
		May 17, 2021 at 4:34 PM
TES Project No. 106878		CT02721-S-SBA_106878_G_RISA_...

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Antenna D	None					31			
2	Antenna Di	None					31			
3	Antenna W Front	None					31			
4	Antenna Wi Front	None					31			
5	Antenna W Side	None					31			
6	Antenna Wi Side	None					31			
7	Service Lm1	None					1			
8	Service Lm2	None					1			
9	Structure D	None		-1					8	
10	Structure Di	None						63	6	
11	Structure W Front	None						63		
12	Structure Wi Front	None						63		
13	Structure W Side	None						63		
14	Structure Wi Side	None						63		
15	BLC 9 Transient Area...	None						129		
16	BLC 10 Transient Are...	None						186		

Load Combinations

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

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diaphragm
1	NP4	-7.25	0.395833	4.802255	0	
2	NP1	7.25	0.395833	4.802255	0	
3	CG	0	0	0	0	
4	N56	0.001306	0.395833	-1.75	0	
5	N30	0.000003	0.395833	-3.92336	0	
6	N145	0.001306	-4.729167	-1.760626	0	
7	N148	-0.000477	0.395833	-7.18	0	
8	N158	-7.25	3.895833	4.802256	0	
9	N161	7.25	3.895833	4.802256	0	
10	N162	6.75	3.895833	4.802256	0	
11	N163	-6.75	3.895833	4.802256	0	
12	N71	-5.434883	3.895833	4.802256	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diaphragm
13	N72	-5.434883	5.895833	4.802256	0	
14	N73	-5.434883	-2.104167	4.802256	0	
15	N74	5.437496	5.895833	4.802256	0	
16	N75	5.437496	-2.104167	4.802256	0	
17	N76	-1.809883	5.895833	4.802256	0	
18	N77	-1.809883	-2.104167	4.802256	0	
19	N78	1.812496	5.895833	4.802256	0	
20	N79A	1.812496	-2.104167	4.802256	0	
21	N104	-5.434883	0.395833	4.802255	0	
22	N105	5.437496	0.395833	4.802255	0	
23	N106	-1.809883	0.395833	4.802255	0	
24	N107	1.812496	0.395833	4.802255	0	
25	N108	5.437496	3.895833	4.802256	0	
26	N109	-1.809883	3.895833	4.802256	0	
27	N110	1.812496	3.895833	4.802256	0	
28	N49	7.783875	0.395833	3.877557	0	
29	N50A	0.533875	0.395833	-8.679812	0	
30	N51A	-0.533875	0.395833	-8.679812	0	
31	N52	-7.783875	0.395833	3.877557	0	
32	N53A	0.899861	0.395833	-8.045904	0	
33	N55	0.648566	0.395833	-8.189494	0	
34	N58	-0.900816	0.395833	-8.044251	0	
35	N60	-0.649521	0.395833	-8.187841	0	
36	N61	2.691528	0.395833	-4.942646	0	
37	N63	2.7319	0.395833	-4.581055	0	
38	N66	-2.692482	0.395833	-4.940994	0	
39	N68	-2.732854	0.395833	-4.579402	0	
40	N69	-0.000477	0.395833	-8.188668	0	
41	N65	2.7319	0.395833	-4.414388	0	
42	N70	-2.7319	0.395833	-4.414388	0	
43	N69C	-0.000477	0.395833	-4.414388	0	
44	N70A	-2.328125	0.395833	-4.414388	0	
45	N71A	2.328125	0.395833	-4.414388	0	
46	N76B	0.147602	0.395833	-8.188856	0	
47	N77B	-0.147819	0.395833	-8.18848	0	
48	N48	-1.516197	0.395833	0.873869	0	
49	N49A	-1.5254	-4.729167	0.879182	0	
50	N50	-6.217667	0.395833	3.59	0	
51	N51	-7.417888	0.395833	3.243649	0	
52	N52A	-7.416593	0.395833	3.533072	0	
53	N53	-6.516118	0.395833	4.802255	0	
54	N54	-6.766118	0.395833	4.656422	0	
55	N55A	-5.626221	0.395833	0.140391	0	
56	N56A	-5.33326	0.395833	-0.075367	0	
57	N57	-2.932785	0.395833	4.802255	0	
58	N58A	-2.599451	0.395833	4.656422	0	
59	N59	-7.091356	0.395833	4.094747	0	
60	N60A	-5.188922	0.395833	-0.158701	0	
61	N61A	-2.457022	0.395833	4.573089	0	
62	N62	-3.823256	0.395833	2.206702	0	
63	N63A	-2.659576	0.395833	4.222255	0	
64	N64	-4.987035	0.395833	0.190979	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diaphragm
65	N65A	-7.165558	0.395833	3.966601	0	
66	N66A	-7.017522	0.395833	4.222255	0	
67	N67	1.514891	0.395833	0.876131	0	
68	N68A	1.524094	-4.729167	0.881444	0	
69	N69A	6.218458	0.395833	3.59	0	
70	N70B	6.518027	0.395833	4.802255	0	
71	N71B	6.768027	0.395833	4.656422	0	
72	N72A	7.416934	0.395833	3.241996	0	
73	N73A	7.415639	0.395833	3.531419	0	
74	N74A	2.934693	0.395833	4.802255	0	
75	N75A	2.60136	0.395833	4.656422	0	
76	N76A	5.625267	0.395833	0.138739	0	
77	N77A	5.332305	0.395833	-0.07702	0	
78	N78A	7.091833	0.395833	4.093921	0	
79	N79	2.457022	0.395833	4.573089	0	
80	N80	5.188922	0.395833	-0.158701	0	
81	N81	3.822688	0.395833	2.207686	0	
82	N82	4.987035	0.395833	0.190979	0	
83	N83	2.659576	0.395833	4.222255	0	
84	N84	7.017957	0.395833	4.222255	0	
85	N85	7.165341	0.395833	3.966225	0	
86	N86	7.783876	3.895833	3.877556	0	
87	N87	0.533876	3.895833	-8.679812	0	
88	N88	-0.533876	3.895833	-8.679812	0	
89	N89	-7.783876	3.895833	3.877556	0	
90	N90	6.876317	5.895833	2.305619	0	
91	N91	6.876317	-2.104167	2.305619	0	
92	N92	1.440127	5.895833	-7.110138	0	
93	N93	1.440127	-2.104167	-7.110138	0	
94	N94	5.063817	5.895833	-0.833723	0	
95	N95	5.063817	-2.104167	-0.833723	0	
96	N96	3.252627	5.895833	-3.970796	0	
97	N97	3.252627	-2.104167	-3.970796	0	
98	N98	-1.441434	5.895833	-7.107875	0	
99	N99	-1.441434	-2.104167	-7.107875	0	
100	N100	-6.877624	5.895833	2.307882	0	
101	N101	-6.877624	-2.104167	2.307882	0	
102	N102	-3.253934	5.895833	-3.968533	0	
103	N103	-3.253934	-2.104167	-3.968533	0	
104	N104A	-5.065124	5.895833	-0.83146	0	
105	N105A	-5.065124	-2.104167	-0.83146	0	
106	N106A	0.783876	3.895833	-8.246799	0	
107	N107A	7.533876	3.895833	3.444543	0	
108	N108A	-7.533876	3.895833	3.444543	0	
109	N109A	-0.783876	3.895833	-8.246799	0	
110	N110A	6.876316	0.395833	2.305619	0	
111	N111	1.440126	0.395833	-7.110138	0	
112	N112	5.063816	0.395833	-0.833723	0	
113	N113	3.252626	0.395833	-3.970796	0	
114	N114	-1.441433	0.395833	-7.107875	0	
115	N115	-6.877623	0.395833	2.307882	0	
116	N116	-3.253933	0.395833	-3.968533	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diaphragm
117	N117	-5.065123	0.395833	-0.83146	0	
118	N118	6.876318	3.895833	2.305619	0	
119	N119	1.440128	3.895833	-7.110138	0	
120	N120	5.063818	3.895833	-0.833723	0	
121	N121	3.252628	3.895833	-3.970796	0	
122	N122	-1.441434	3.895833	-7.107875	0	
123	N123	-6.877624	3.895833	2.307882	0	
124	N124	-3.253934	3.895833	-3.968533	0	
125	N125	-5.065124	3.895833	-0.83146	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Des...	Mater...	Desi...	A ...	Iy...	Izz [in4]	J [in4]
1	Footrails	PIP...	Beam	Pipe	A53 ...	Typi...	2....	2....	2.85	5.69
2	Gratin...	L2x2...	Beam	Sin...	A36 ...	Typi...	.7...	.2...	.271	.009
3	Handr...	PIP...	Beam	Pipe	A53 ...	Typi...	1....	.6...	.627	1.25
4	Stand...	HSS...	Beam	Squ...	A500 ...	Typi...	3....	7.8	7.8	12.8
5	Plan B...	HSS...	Beam	Squ...	A500 ...	Typi...	3....	7.8	7.8	12.8
6	Kickers	LL2...	Beam	Dou...	A36 ...	Typi...	1.8	2....	1.07	.023
7	Mount ...	PIP...	Beam	Pipe	A53 ...	Typi...	1....	1....	1.45	2.89
8	Footrai...	PL1/...	Beam	RE...	A36 ...	Typi...	3	.0...	9	.237
9	Plan B...	PL3/...	Beam	RE...	A36 ...	Typi...	2....	.0...	6.75	.101
10	Handr...	L2.5...	Beam	Sin...	A36 ...	Typi...	1....	.6...	.692	.026

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	CF1A	1.5CU1.25X...	Beam	CU	A570_33	Typical	.131	.022	.052	5.4e-5

Aluminum Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	AL1	AA CS14X1...	Beam	AA Channel	3003-H14	Typical	11.8	44.7	401	1.19

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
2	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	58	1.2
3	A992	29000	11154	.3	.65	.49	50	1.1	58	1.2
4	A500 Gr.42	29000	11154	.3	.65	.49	42	1.3	58	1.1
5	A500 Gr.46	29000	11154	.3	.65	.49	46	1.2	58	1.1
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.5	58	1.2
7	Q235	29000	11154	.3	.65	.49	34	1.5	58	1.2
8	J429-Gr5	29000	11154	.3	.65	.49	92	1.5	120	1.2

Cold Formed Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E5 F)	Density[k/ft^3]	Yield[ksi]	Fu[ksi]
1	A570_33	29500	11346	.3	.65	.49	33	52
2	A607_C1_55	29500	11346	.3	.65	.49	55	70

Aluminum Properties

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

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M28	N69	N55			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
2	M33	N76B	N71A			Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
3	M34	N77B	N70A		270	Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
4	M37	N69	N56			Standoff Arm	Beam	SquareTube	A500 Gr.46	Typical
5	M38	N70	N69C			Plan Bracing	Beam	SquareTube	A500 Gr.46	Typical
6	M39	N69C	N65			Plan Bracing	Beam	SquareTube	A500 Gr.46	Typical
7	M42	NP4	NP1			Footrails	Beam	Pipe	A53 Gr.B	Typical
8	M140	N145	N148			Kickers	Beam	Double Angle (...	A36 Gr.36	Typical
9	M154	N158	N161			Handrails	Beam	Pipe	A53 Gr.B	Typical
10	MP4A	N72	N73			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
11	MP1A	N74	N75			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
12	MP3A	N76	N77			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
13	MP2A	N78	N79A			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
14	M25	N49	N50A			Footrails	Beam	Pipe	A53 Gr.B	Typical
15	M26	N51A	N52			Footrails	Beam	Pipe	A53 Gr.B	Typical
16	M28A	N55	N53A			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
17	M29A	N60	N58			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
18	M32A	N63	N61			Plan Bracing C...	Beam	RECT	A36 Gr.36	Typical
19	M33A	N68	N66			Plan Bracing C...	Beam	RECT	A36 Gr.36	Typical
20	M35A	N69	N60			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
21	M33B	N65	N63			Plan Bracing C...	Beam	RECT	A36 Gr.36	Typical
22	M36A	N70	N68			Plan Bracing C...	Beam	RECT	A36 Gr.36	Typical
23	M23	N59	N52A			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
24	M24	N65A	N64			Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
25	M25A	N66A	N63A		270	Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
26	M26A	N59	N48			Standoff Arm	Beam	SquareTube	A500 Gr.46	Typical
27	M27	N61A	N62			Plan Bracing	Beam	SquareTube	A500 Gr.46	Typical
28	M28B	N62	N60A			Plan Bracing	Beam	SquareTube	A500 Gr.46	Typical
29	M29	N49A	N50			Kickers	Beam	Double Angle (...	A36 Gr.36	Typical
30	M30	N52A	N51			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
31	M31	N54	N53			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
32	M32	N56A	N55A			Plan Bracing C...	Beam	RECT	A36 Gr.36	Typical
33	M33C	N58A	N57			Plan Bracing C...	Beam	RECT	A36 Gr.36	Typical
34	M34A	N59	N54			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
35	M35	N60A	N56A			Plan Bracing C...	Beam	RECT	A36 Gr.36	Typical
36	M36	N61A	N58A			Plan Bracing C...	Beam	RECT	A36 Gr.36	Typical
37	M37A	N78A	N71B			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
38	M38A	N84	N83			Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
39	M39A	N85	N82		270	Grating Angles	Beam	Single Angle	A36 Gr.36	Typical
40	M40	N78A	N67			Standoff Arm	Beam	SquareTube	A500 Gr.46	Typical
41	M41	N80	N81			Plan Bracing	Beam	SquareTube	A500 Gr.46	Typical
42	M42A	N81	N79			Plan Bracing	Beam	SquareTube	A500 Gr.46	Typical
43	M43	N68A	N69A			Kickers	Beam	Double Angle (...	A36 Gr.36	Typical
44	M44	N71B	N70B			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
45	M45	N73A	N72A			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
46	M46	N75A	N74A			Plan Bracing C...	Beam	RECT	A36 Gr.36	Typical
47	M47	N77A	N76A			Plan Bracing C...	Beam	RECT	A36 Gr.36	Typical
48	M48	N78A	N73A			Footrail Conne...	Beam	RECT	A36 Gr.36	Typical
49	M49	N79	N75A			Plan Bracing C...	Beam	RECT	A36 Gr.36	Typical
50	M50	N80	N77A			Plan Bracing C...	Beam	RECT	A36 Gr.36	Typical
51	M51	N86	N87			Handrails	Beam	Pipe	A53 Gr.B	Typical
52	M52	N88	N89			Handrails	Beam	Pipe	A53 Gr.B	Typical
53	MP4C	N90	N91			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
54	MP1C	N92	N93			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
55	MP3C	N94	N95			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
56	MP2C	N96	N97			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
57	MP4B	N98	N99			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
58	MP1B	N100	N101			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
59	MP3B	N102	N103			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
60	MP2B	N104A	N105A			Mount Pipes	Beam	Pipe	A53 Gr.B	Typical
61	M61	N163	N108A			Handrail Corne...	Beam	Single Angle	A36 Gr.36	Typical
62	M62	N162	N107A			Handrail Corne...	Beam	Single Angle	A36 Gr.36	Typical
63	M63	N109A	N106A			Handrail Corne...	Beam	Single Angle	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M28						Yes				None
2	M33						Yes				None
3	M34						Yes				None
4	M37						Yes				None
5	M38						Yes				None
6	M39						Yes				None
7	M42						Yes				None
8	M140	BenPIN	BenPIN				Yes				None
9	M154						Yes				None
10	MP4A						Yes				None
11	MP1A						Yes				None
12	MP3A						Yes				None
13	MP2A						Yes				None
14	M25						Yes				None
15	M26						Yes				None
16	M28A		BenPIN				Yes				None
17	M29A		BenPIN				Yes				None
18	M32A		BenPIN				Yes				None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
19	M33A		BenPIN				Yes				None
20	M35A						Yes				None
21	M33B						Yes				None
22	M36A						Yes				None
23	M23						Yes				None
24	M24						Yes				None
25	M25A						Yes				None
26	M26A						Yes				None
27	M27						Yes				None
28	M28B						Yes				None
29	M29	BenPIN	BenPIN				Yes				None
30	M30		BenPIN				Yes				None
31	M31		BenPIN				Yes				None
32	M32		BenPIN				Yes				None
33	M33C		BenPIN				Yes				None
34	M34A						Yes				None
35	M35						Yes				None
36	M36						Yes				None
37	M37A						Yes				None
38	M38A						Yes				None
39	M39A						Yes				None
40	M40						Yes				None
41	M41						Yes				None
42	M42A						Yes				None
43	M43	BenPIN	BenPIN				Yes				None
44	M44		BenPIN				Yes				None
45	M45		BenPIN				Yes				None
46	M46		BenPIN				Yes				None
47	M47		BenPIN				Yes				None
48	M48						Yes				None
49	M49						Yes				None
50	M50						Yes				None
51	M51						Yes				None
52	M52						Yes				None
53	MP4C						Yes				None
54	MP1C						Yes				None
55	MP3C						Yes				None
56	MP2C						Yes				None
57	MP4B						Yes				None
58	MP1B						Yes				None
59	MP3B						Yes				None
60	MP2B						Yes				None
61	M61						Yes				None
62	M62						Yes				None
63	M63						Yes				None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
1	M28	Footrail Con...	.649			Lbyy			.65	.65		Lateral
2	M33	Grating Ang...	4.359			Lbyy			.65	.65		Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
3	M34	Grating Ang...	4.359			Lbyy			.65	.65		Lateral
4	M37	Standoff Arm	6.439			Lbyy			2.1	2.1		Lateral
5	M38	Plan Bracing	2.731			Lbyy			.65	.65		Lateral
6	M39	Plan Bracing	2.732			Lbyy			.65	.65		Lateral
7	M42	Footrails	14.5			Lbyy			1	1		Lateral
8	M140	Kickers	7.459			Lbyy			1	1		Lateral
9	M154	Handrails	14.5			Lbyy			1	1		Lateral
10	MP4A	Mount Pipes	8			Lbyy			1	1		Lateral
11	MP1A	Mount Pipes	8			Lbyy			1	1		Lateral
12	MP3A	Mount Pipes	8			Lbyy			1	1		Lateral
13	MP2A	Mount Pipes	8			Lbyy			1	1		Lateral
14	M25	Footrails	14.5			Lbyy			1	1		Lateral
15	M26	Footrails	14.5			Lbyy			1	1		Lateral
16	M28A	Footrail Con...	.289			Lbyy			.8	.8		Lateral
17	M29A	Footrail Con...	.289			Lbyy			.8	.8		Lateral
18	M32A	Plan Bracin...	.364			Lbyy			.8	.8		Lateral
19	M33A	Plan Bracin...	.364			Lbyy			.8	.8		Lateral
20	M35A	Footrail Con...	.649			Lbyy			.65	.65		Lateral
21	M33B	Plan Bracin...	.167			Lbyy			.65	.65		Lateral
22	M36A	Plan Bracin...	.165			Lbyy			.65	.65		Lateral
23	M23	Footrail Con...	.649			Lbyy			.65	.65		Lateral
24	M24	Grating Ang...	4.359			Lbyy			.65	.65		Lateral
25	M25A	Grating Ang...	4.358			Lbyy			.65	.65		Lateral
26	M26A	Standoff Arm	6.439			Lbyy			2.1	2.1		Lateral
27	M27	Plan Bracing	2.732			Lbyy			.65	.65		Lateral
28	M28B	Plan Bracing	2.731			Lbyy			.65	.65		Lateral
29	M29	Kickers	7.459			Lbyy			1	1		Lateral
30	M30	Footrail Con...	.289			Lbyy			.8	.8		Lateral
31	M31	Footrail Con...	.289			Lbyy			.8	.8		Lateral
32	M32	Plan Bracin...	.364			Lbyy			.8	.8		Lateral
33	M33C	Plan Bracin...	.364			Lbyy			.8	.8		Lateral
34	M34A	Footrail Con...	.649			Lbyy			.65	.65		Lateral
35	M35	Plan Bracin...	.167			Lbyy			.65	.65		Lateral
36	M36	Plan Bracin...	.165			Lbyy			.65	.65		Lateral
37	M37A	Footrail Con...	.649			Lbyy			.65	.65		Lateral
38	M38A	Grating Ang...	4.358			Lbyy			.65	.65		Lateral
39	M39A	Grating Ang...	4.359			Lbyy			.65	.65		Lateral
40	M40	Standoff Arm	6.439			Lbyy			2.1	2.1		Lateral
41	M41	Plan Bracing	2.732			Lbyy			.65	.65		Lateral
42	M42A	Plan Bracing	2.731			Lbyy			.65	.65		Lateral
43	M43	Kickers	7.459			Lbyy			1	1		Lateral
44	M44	Footrail Con...	.289			Lbyy			.8	.8		Lateral
45	M45	Footrail Con...	.289			Lbyy			.8	.8		Lateral
46	M46	Plan Bracin...	.364			Lbyy			.8	.8		Lateral
47	M47	Plan Bracin...	.364			Lbyy			.8	.8		Lateral
48	M48	Footrail Con...	.649			Lbyy			.65	.65		Lateral
49	M49	Plan Bracin...	.167			Lbyy			.65	.65		Lateral
50	M50	Plan Bracin...	.165			Lbyy			.65	.65		Lateral
51	M51	Handrails	14.5			Lbyy			1	1		Lateral
52	M52	Handrails	14.5			Lbyy			1	1		Lateral
53	MP4C	Mount Pipes	8			Lbyy			1	1		Lateral
54	MP1C	Mount Pipes	8			Lbyy			1	1		Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
55	MP3C	Mount Pipes	8			Lbyy			1	1		Lateral
56	MP2C	Mount Pipes	8			Lbyy			1	1		Lateral
57	MP4B	Mount Pipes	8			Lbyy			1	1		Lateral
58	MP1B	Mount Pipes	8			Lbyy			1	1		Lateral
59	MP3B	Mount Pipes	8			Lbyy			1	1		Lateral
60	MP2B	Mount Pipes	8			Lbyy			1	1		Lateral
61	M61	Handrail Co...	1.568			Lbyy			.65	.65		Lateral
62	M62	Handrail Co...	1.568			Lbyy			.65	.65		Lateral
63	M63	Handrail Co...	1.568			Lbyy			.65	.65		Lateral

Cold Formed Steel Design Parameters

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

Aluminum Design Parameters

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

Joint Loads and Enforced Displacements

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

Member Area Loads (BLC 9 : Structure D)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N66A	N65A	N64	N63A	Y	Two Way	0
2	N77B	N76B	N71A	N70A	Y	Two Way	0
3	N84	N85	N82	N83	Y	Two Way	0
4	N55	N65	N70	N60	Y	Two Way	-.005
5	N52A	N60A	N61A	N54	Y	Two Way	-.005
6	N71B	N79	N80	N73A	Y	Two Way	-.005
7	N52A	N60A	N61A	N54	Y	Two Way	-.005
8	N71B	N79	N80	N73A	Y	Two Way	-.005

Member Area Loads (BLC 10 : Structure Di)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N66A	N65A	N64	N63A	Y	Two Way	-.013
2	N77B	N76B	N71A	N70A	Y	Two Way	-.013
3	N84	N85	N82	N83	Y	Two Way	-.013
4	N55	N65	N70	N60	Y	Two Way	-.015
5	N52A	N60A	N61A	N54	Y	Two Way	-.015
6	N71B	N79	N80	N73A	Y	Two Way	-.015

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	CG						
2	N56	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N145	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N48	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
5	N49A	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
6	N67	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
7	N68A	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N56	max	2580.274	4	990.077	8	7357.183	1	1.573	8	4.611	3	.986	3
2		min	-2592.943	3	329.816	9	-5476.474	2	.52	9	-4.593	4	-.8	4
3	N145	max	111.158	4	2935.333	5	424.137	2	0	11	0	4	0	3
4		min	-110.995	3	-447.505	2	-2996.626	5	0	1	0	3	0	4
5	N48	max	6603.053	4	1005.31	7	2887.526	1	.403	1	1.884	1	-.248	2
6		min	-4888.375	3	366.887	4	-3879.371	2	-.84	2	-1.887	2	-1.59	5
7	N49A	max	111.233	3	2940.291	8	1511.975	8	0	4	0	3	0	3
8		min	-2593.534	8	-190.15	3	-114.585	3	0	3	0	4	0	4
9	N67	max	4417.988	4	1007.251	5	3569.259	1	.315	1	2.925	2	1.319	5
10		min	-6116.276	3	358.426	2	-4587.46	2	-1.179	6	-2.9	1	.059	2
11	N68A	max	2587.217	7	2932.195	7	1506.538	7	0	3	0	3	0	3
12		min	-88.66	4	-165.414	4	-101.467	4	0	4	0	4	0	4
13	Totals:	max	11703.38	4	11044.309	5	11930.864	1						
14		min	-11703.38	3	4134.082	2	-11930.864	2						

Envelope Maximum Member Section Forces

	Member		Axial[l...	Loc[ft]	LC	y Shear...	Loc[ft]	LC	z Shear...	Loc[ft]	LC	Torque[...	Loc[ft]	LC	y-y Mome...	Loc[ft]	LC	z-z Mome...	Loc[ft]	LC
1	M28	m...	1888....	.142	1	830.922	0	5	2436.678	0	1	.315	.149	3	.328	0	2	.826	0	1
2		min	-1925....	.142	2	-279.245	.142	2	-2519.1...	0	2	-.387	0	4	-.309	0	1	-.377	0	2
3	M33	m...	2570....	0	1	84.362	0	5	56.292	4.359	2	0	0	4	.04	0	4	.154	0	1
4		min	-2665....	0	2	-60.305	4.359	6	-61.851	4.359	1	0	0	3	-.065	0	3	-.12	0	2
5	M34	m...	2471....	0	1	56.99	4.359	2	89.972	0	5	0	0	4	.032	0	3	.123	0	2
6		min	-2543....	0	2	-63.955	4.359	1	-53.131	4.359	6	0	0	3	-.061	0	8	-.166	0	1
7	M37	m...	5556....	1.073	2	1199.156	1.073	5	2578.545	6.439	4	.8	3.823	4	4.593	6.439	4	1.573	6.439	8
8		min	-7366....	1.073	1	-1561.3...	1.006	5	-2589.84	6.439	3	-.986	3.823	3	-4.611	6.439	3	-1.744	3.756	5
9	M38	m...	1024....	.427	2	-33.733	0	2	1932.242	.398	2	-.004	0	2	.839	.398	2	2.326	2.731	5
10		min	-1029....	.427	4	-928.157	2.731	5	-1900.6...	.398	1	-.4	0	5	-.832	2.731	4	-.335	0	3
11	M39	m...	1454....	0	4	998.491	0	5	2086.674	2.334	1	.437	2.334	5	.866	2.334	2	2.509	0	5
12		min	-1476....	0	3	76.432	2.732	2	-2134.6	2.334	2	.021	2.334	2	-.906	0	3	-.339	2.732	4
13	M42	m...	1901....	4.38	2	672.154	4.38	4	1328.797	10.12	2	1.124	4.38	1	1.184	9.063	1	.783	5.589	4
14		min	-2124....	5.589	1	-799.661	10.12	7	-1293.9...	10.12	1	-1.132	4.38	2	-1.178	9.063	2	-.989	9.063	4
15	M140	m...	4194....	0	5	74.389	0	5	113.471	0	4	0	0	4	.212	3.729	4	.063	3.729	2
16		min	-766....	7.459	2	-74.389	7.459	5	-113.471	0	3	0	0	3	-.212	3.729	3	-.139	3.729	5
17	M154	m...	773.9...	.604	3	409.041	12.6...	2	799.401	13.8...	2	.464	12.6...	2	1.012	12.6...	1	.758	12.6...	2
18		min	-798....	.604	4	-420.6	13.8...	1	-764.021	13.8...	1	-.474	12.6...	1	-1.04	12.6...	2	-.778	12.6...	1
19	MP4A	m...	643.3...	5.5	2	618.789	5.5	4	259.703	5.5	2	.918	2	2	.463	5.5	4	.936	5.5	3
20		min	-332....	2	1	-525.415	5.5	3	-259.707	5.5	1	-.913	2	1	-.478	5.5	3	-1.174	5.5	4
21	MP1A	m...	694.41	5.5	2	448.647	5.5	4	294.385	5.5	2	1.074	2	1	.414	5.5	3	1.253	5.5	3

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[l...	Loc[ft]	LC	y Shear...	Loc[ft]	LC	z Shear...	Loc[ft]	LC	Torque[...	Loc[ft]	LC	y-y Mome...	Loc[ft]	LC	z-z Mome...	Loc[ft]	LC
22		min	-380....	2	1	-623.018	5.5	3	-294.384	5.5	1	-1.091	2	2	-.419	5.5	4	-.857	5.5	4
23	MP3A	m...	138.8...	5.5	5	804.236	5.5	4	354.261	5.5	1	.431	2	2	.926	5.5	1	1.241	5.5	3
24		min	-61.3...	2	2	-650.523	5.5	3	-353.246	5.5	2	-.428	2	1	-.923	5.5	2	-1.561	5.5	4
25	MP2A	m...	589.7...	5.5	5	730.026	5.5	4	792.966	5.5	2	.247	2	4	1.671	5.5	1	1.514	5.5	3
26		min	-330....	5.583	5	-781.738	5.5	3	-792.962	5.5	1	-.243	2	3	-1.675	5.5	2	-1.4	5.5	4
27	M25	m...	2021....	4.38	3	666.102	4.38	2	1030.812	10.12	3	1.084	4.38	4	1.005	9.062	4	.815	12.6...	4
28		min	-2158....	4.38	4	-791.078	10.12	5	-1000.8...	10.12	4	-1.093	4.38	3	-1.014	9.062	3	-.956	9.062	2
29	M26	m...	2020....	10.12	4	614.179	.755	1	991.508	10.12	4	1.069	9.062	4	.95	9.062	3	.813	12.6...	2
30		min	-2252....	10.12	3	-806.433	10.12	6	-974.4	10.12	3	-1.074	9.062	3	-.966	9.062	4	-.988	12.6...	4
31	M28A	m...	585.6...	0	1	729.912	0	1	207.925	.289	4	.428	0	3	.059	0	3	.211	0	1
32		min	-584....	0	2	-282.253	.289	2	-207.872	.289	3	-.41	0	4	-.059	0	4	-.081	0	2
33	M29A	m...	626.1...	0	1	623.396	0	1	177.694	.289	4	.397	0	3	.051	0	3	.18	0	1
34		min	-636....	0	2	-238.888	.289	2	-178.985	.289	3	-.429	0	4	-.051	0	4	-.069	0	2
35	M32A	m...	2123....	0	2	829.785	0	5	1041.412	0	4	.325	0	4	.37	0	3	.3	0	5
36		min	-2073....	0	1	72.773	.364	2	-1029.0...	0	3	-.305	0	3	-.374	0	4	0	.364	1
37	M33A	m...	1931....	0	2	759.438	0	5	747.398	0	4	.318	0	4	.268	0	3	.275	0	5
38		min	-1898....	0	1	29.61	.364	2	-749.487	0	3	-.323	0	3	-.267	0	4	0	.364	1
39	M35A	m...	1868....	0	1	686.194	0	1	2450.57	0	2	.371	0	3	.318	0	1	.703	0	1
40		min	-1909....	0	2	-237.782	.142	2	-2384.8...	0	1	-.326	.149	4	-.338	0	2	-.302	0	2
41	M33B	m...	2115....	0	2	833.483	0	5	889.204	0	4	.339	0	4	.523	0	3	.437	0	5
42		min	-2066....	0	1	75.507	.167	2	-926.571	0	3	-.295	0	3	-.521	0	4	.008	.167	2
43	M36A	m...	1911....	0	2	763.162	0	5	668.279	0	4	.307	0	4	.373	0	3	.4	0	5
44		min	-1879....	0	1	32.685	.165	2	-643.864	0	3	-.335	0	3	-.376	0	4	-.002	.165	2
45	M23	m...	1847....	.142	4	842.689	0	8	2680.951	0	4	.23	.149	4	.306	0	3	.941	0	4
46		min	-1864....	.142	3	-291.291	.649	3	-2780.3...	0	3	-.302	0	2	-.286	0	4	-.476	0	3
47	M24	m...	3018....	0	4	91.614	0	8	84.618	4.359	3	0	0	2	.039	4.359	3	.148	0	4
48		min	-3143....	0	3	-68.862	4.359	7	-90.399	4.359	4	0	0	1	-.057	0	5	-.131	4.359	4
49	M25A	m...	2156....	0	2	81.988	4.358	1	97.358	0	6	0	0	2	.034	4.358	1	.111	4.358	2
50		min	-2288....	0	1	-89.196	4.358	2	-62.791	4.358	5	0	0	5	-.063	0	6	-.132	0	4
51	M26A	m...	5154....	3.756	3	1209.711	1.073	8	1653.197	6.439	2	.603	3.823	2	2.559	3.823	4	1.6	6.439	6
52		min	-7121....	6.439	4	-1555.4...	1.006	8	-1661.5...	6.439	1	-.796	3.823	1	-2.578	3.823	3	-1.763	3.756	8
53	M27	m...	1465....	2.732	1	-31.118	0	3	2218.01	.398	1	-.02	0	3	1.294	2.732	1	2.308	2.732	8
54		min	-1450....	2.732	2	-934.822	2.732	8	-2134.95	.398	2	-.395	.427	8	-1.317	2.732	2	-.358	0	1
55	M28B	m...	1700....	0	3	1012.154	0	6	2802.72	2.333	4	.432	0	8	1.566	0	3	2.507	0	8
56		min	-1694....	0	4	107.681	2.731	1	-2875.36	2.333	3	.043	2.333	3	-1.592	0	4	-.314	2.731	3
57	M29	m...	4201....	0	8	74.124	0	8	91.531	0	2	.001	0	3	.171	3.729	2	.061	3.729	3
58		min	-390....	7.459	3	-74.124	7.459	8	-91.531	0	1	-.001	0	4	-.171	3.729	1	-.138	3.729	8
59	M30	m...	605.7...	0	2	750.251	0	4	156.045	.289	3	.389	0	4	.044	0	4	.217	0	4
60		min	-613....	0	1	-297	.289	3	-161.195	.289	4	-.37	0	3	-.042	0	3	-.085	0	3
61	M31	m...	636.67	0	4	668.326	0	9	178.268	.289	2	.411	0	1	.049	0	1	.193	0	9
62		min	-641....	0	3	-131.03	.289	1	-177.78	.289	1	-.444	0	2	-.049	0	2	-.037	0	1
63	M32	m...	2834....	0	3	816.471	0	6	513.874	0	2	.31	0	3	.193	0	1	.295	0	6
64		min	-2759....	0	4	103.824	.364	1	-539.24	0	1	-.29	0	4	-.184	0	2	0	.364	1
65	M33C	m...	2173....	0	1	754.994	0	8	441.615	0	2	.345	0	2	.16	0	1	.273	0	8
66		min	-2087....	0	2	26.075	.364	3	-449.809	0	1	-.352	0	1	-.157	0	2	0	.364	1
67	M34A	m...	1629....	0	4	693.858	0	9	1982.687	0	3	.339	.149	1	.269	0	4	.759	0	2
68		min	-1682....	0	3	-125.416	.649	1	-1911.0...	0	4	-.31	.149	2	-.288	0	3	-.334	0	1
69	M35	m...	2860....	0	3	820.28	0	6	566.418	0	2	.314	0	3	.29	0	1	.429	0	8
70		min	-2788....	0	4	108.001	.167	1	-587.216	0	1	-.27	0	4	-.277	0	2	.018	.167	3
71	M36	m...	2213....	0	1	758.755	0	8	241.418	0	3	.329	0	2	.189	0	1	.394	0	8
72		min	-2132....	0	2	30.338	.165	3	-226.382	0	4	-.358	0	1	-.192	0	2	.015	.165	3
73	M37A	m...	1569....	0	3	812.255	0	6	2175.661	0	2	.347	.149	2	.284	0	4	.849	0	2

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[l...	Loc[ft]	LC	y Shear...	Loc[ft]	LC	z Shear...	Loc[ft]	LC	Torque[...	Loc[ft]	LC	y-y Mome...	Loc[ft]	LC	z-z Mome...	Loc[ft]	LC
74		min	-1632...	0	4	-146.063	.649	1	-2296.4...	0	1	-.396	.149	1	-.263	0	3	-.382	0	1
75	M38A	m...	2748....	0	2	90.719	0	6	72.317	4.358	1	0	0	1	.029	4.358	1	.122	0	3
76		min	-2915...	0	1	-68.455	4.358	5	-79.182	4.358	2	0	0	2	-.058	0	6	-.096	4.358	2
77	M39A	m...	2631....	0	3	90.589	4.359	4	98.463	0	7	0	0	1	.04	4.359	4	.143	4.359	3
78		min	-2721...	0	4	-97.319	4.359	3	-63.378	4.359	8	0	0	2	-.063	0	5	-.175	0	3
79	M40	m...	4885...	3.756	4	1208.255	1.073	7	2179.557	6.439	1	.723	3.823	1	2.9	6.439	1	1.604	6.439	7
80		min	-6811...	6.439	3	-1548.8...	1.006	7	-2188.1...	6.439	2	-.902	3.823	2	-2.925	6.439	2	-1.769	3.756	7
81	M41	m...	1246...	2.732	4	-85.266	0	1	2407.562	.398	4	-.02	0	4	1.301	2.732	4	2.327	2.732	7
82		min	-1224...	2.732	3	-932.562	2.732	6	-2361.4...	.398	3	-.393	0	7	-1.327	2.732	3	-.267	0	4
83	M42A	m...	2121....	0	1	1013.996	0	7	2730.365	2.333	2	.44	0	7	1.496	0	1	2.498	0	7
84		min	-2138...	0	2	58.087	2.731	4	-2837.8...	2.333	1	.029	2.333	4	-1.529	0	2	-.396	2.731	1
85	M43	m...	4189....	0	7	74.133	0	7	91.579	7.459	2	0	0	3	.171	3.73	1	.061	3.73	4
86		min	-354....	7.459	4	-74.133	7.459	7	-91.579	7.459	1	0	0	4	-.171	3.73	2	-.138	3.73	7
87	M44	m...	581.6...	0	3	703.121	0	6	210.019	.289	1	.5	0	2	.06	0	2	.202	0	6
88		min	-583....	0	4	-149.181	.289	1	-213.552	.289	2	-.481	0	1	-.059	0	1	-.043	0	1
89	M45	m...	479.1...	0	2	623.559	0	3	98.828	.289	3	.299	0	4	.026	0	4	.18	0	3
90		min	-488....	0	1	-231.979	.289	4	-101.86	.289	4	-.331	0	3	-.026	0	3	-.067	0	4
91	M46	m...	2749....	0	1	827.792	0	7	907.645	0	1	.388	0	1	.312	0	2	.299	0	7
92		min	-2635...	0	2	53.177	.364	4	-868.779	0	2	-.367	0	2	-.326	0	1	0	.364	1
93	M47	m...	2398....	0	4	742.6	0	6	488.196	0	1	.257	0	3	.166	0	2	.268	0	6
94		min	-2350...	0	3	81.127	.364	1	-466.127	0	2	-.265	0	4	-.174	0	1	0	.364	1
95	M48	m...	1750....	.142	3	702.556	0	3	2535.985	0	4	.337	0	2	.307	0	3	.807	0	3
96		min	-1780...	.142	4	-225.973	.649	4	-2456.5...	0	3	-.256	0	1	-.329	0	4	-.387	0	4
97	M49	m...	2831....	0	1	831.557	0	7	561.567	0	1	.396	0	1	.415	0	2	.432	0	7
98		min	-2726...	0	2	57.29	.167	4	-621.095	0	2	-.352	0	2	-.419	0	1	.02	.167	4
99	M50	m...	2392....	0	4	746.379	0	6	546.78	0	1	.237	0	3	.254	0	2	.393	0	7
100		min	-2344...	0	3	85.422	.165	1	-532.559	0	2	-.267	0	4	-.264	0	1	.003	.165	4
101	M51	m...	854.3...	1.812	1	502.239	12.6...	3	583.611	.604	4	.368	1.964	4	1.005	.604	2	.807	12.6...	3
102		min	-881	1.812	2	-508.296	13.8...	4	-586.501	.604	3	-.371	1.964	3	-.994	.604	1	-.826	12.6...	4
103	M52	m...	691.5...	12.6...	1	480	.604	3	831.854	13.8...	4	.385	9.062	4	.867	12.6...	3	.863	1.812	4
104		min	-699....	12.6...	2	-530.861	1.812	4	-811.863	13.8...	3	-.387	9.062	3	-.878	12.6...	4	-.789	1.812	3
105	MP4C	m...	561.9...	5.5	3	228.023	5.583	3	529.473	5.5	1	.767	2	3	.93	5.5	1	.337	2	1
106		min	-253....	2	4	-228.048	5.583	4	-603.908	5.5	2	-.772	2	4	-1.127	5.5	2	-.393	2	2
107	MP1C	m...	604.1...	5.5	3	456.903	2	1	415.878	5.5	1	.763	2	4	.9	5.5	1	.829	5.5	2
108		min	-284....	2	4	-368.887	2	2	-272.247	5.5	2	-.778	2	3	-.785	2	4	-1.018	5.5	1
109	MP3C	m...	143.4...	5.5	2	402.148	5.5	4	617.452	5.5	1	.49	2	3	1.272	5.5	1	1.028	5.5	3
110		min	-81.7...	2	1	-471.526	5.5	3	-750.883	5.5	2	-.482	2	4	-1.549	5.5	2	-.885	5.5	4
111	MP2C	m...	592.9...	5.5	8	688.228	5.5	4	759.963	5.5	1	.292	2	2	1.524	5.5	1	1.594	5.5	3
112		min	-330....	5.583	5	-685.74	5.583	4	-717.831	5.5	2	-.291	2	1	-1.43	5.5	2	-1.648	5.5	4
113	MP4B	m...	598.3...	5.5	4	389.157	2	2	368.398	2	3	.654	2	4	.748	5.5	1	.958	5.5	1
114		min	-283....	2	3	-426.572	2	1	-287.538	2	4	-.646	2	3	-.742	2	3	-.857	5.5	2
115	MP1B	m...	662.2...	5.5	4	253.467	5.5	3	528.985	5.5	1	1.017	2	3	1.039	2	2	.32	2	2
116		min	-348....	2	3	-251.703	5.583	4	-681.386	5.5	2	-1.023	2	4	-1.217	5.5	2	-.305	5.5	6
117	MP3B	m...	168.5...	5.5	3	445.181	5.5	4	706.063	5.5	1	.358	2	1	1.379	5.5	1	1.225	5.5	3
118		min	-102....	2	4	-522.289	5.5	3	-578.282	5.5	2	-.35	2	2	-1.113	5.5	2	-1.065	5.5	4
119	MP2B	m...	586.85	5.5	6	687.497	5.5	3	703.183	5.5	1	.252	2	3	1.46	5.5	1	1.521	5.5	3
120		min	-330....	5.583	5	-685.742	5.583	4	-748.623	5.5	2	-.25	2	4	-1.559	5.5	2	-1.572	5.5	4
121	M61	m...	709.3...	0	3	409.716	0	2	569.197	1.568	1	.032	0	1	.514	0	3	.817	0	3
122		min	-716....	0	4	-378.952	1.568	1	-557.698	1.568	2	-.032	0	2	-.528	0	4	-.813	0	4
123	M62	m...	555.0...	1.568	1	406.424	0	2	661.758	1.568	2	.038	0	2	.806	1.568	2	.64	1.568	2
124		min	-562....	1.568	2	-426.102	1.568	1	-665.085	1.568	1	-.039	0	1	-.811	1.568	1	-.617	1.568	1
125	M63	m...	604.1...	0	2	518.86	0	4	640.61	0	3	.041	0	3	.356	0	2	.719	0	4

Envelope Maximum Member Section Forces (Continued)

	Member		Axial[l...	Loc[ft]	LC	y Shear...	Loc[ft]	LC	z Shear...	Loc[ft]	LC	Torque[...	Loc[ft]	LC	y-y Mome...	Loc[ft]	LC	z-z Mome...	Loc[ft]	LC
126		min	-610....	0	1	-494.599	1.568	3	-637.075	0	4	-.042	0	4	-.375	0	1	-.724	0	3

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc.....	...		phi*Pnc [lb]	phi*Pnt...	phi*Mn ...	phi*Mn z-z.....		Eqn
1	M28	PL1/2x6	.383	0	1	.507	0	y	4	91104.489	97200	1.012	12.15	...	H1-1b
2	M33	L2x2x3	.312	4.359	1	.017	0	y	8	15646.442	23392.8	.558	1.229	...	H2-1
3	M34	L2x2x3	.305	4.359	1	.018	0	z	5	15647.696	23392.8	.558	1.228	...	H2-1
4	M37	HSS4X4X4	.324	6.439	4	.140	6.4...	z	3	64913.906	139518	16.181	16.181	...	H1-1b
5	M38	HSS4X4X4	.154	2.731	5	.070	.398	z	1	137689.568	139518	16.181	16.181	...	H1-1b
6	M39	HSS4X4X4	.167	0	5	.076	2.3...	z	1	137688.298	139518	16.181	16.181	...	H1-1b
7	M42	PIPE_3.0	.270	4.38	2	.258	10....		1	21266.02	65205	5.749	5.749	...	H3-6
8	M140	LL2.5x2.5...	.147	0	5	.008	7.4...	z	3	28541.215	58320	3.954	2.55	1	H1-1...
9	M154	PIPE_2.0	.878	12.688	2	.375	13....		1	4678.524	32130	1.872	1.872	...	H3-6
10	MP4A	PIPE_2.5	.354	5.5	4	.307	5.5		2	30038.461	50715	3.596	3.596	...	H1-1b
11	MP1A	PIPE_2.5	.372	5.5	3	.364	5.5		2	30038.461	50715	3.596	3.596	...	H1-1b
12	MP3A	PIPE_2.5	.437	5.5	4	.160	5.5		2	30038.461	50715	3.596	3.596	...	H1-1b
13	MP2A	PIPE_2.5	.471	5.5	1	.128	5.5		3	30038.461	50715	3.596	3.596	...	H1-1b
14	M25	PIPE_3.0	.264	4.38	3	.246	4.38		3	21266.02	65205	5.749	5.749	...	H3-6
15	M26	PIPE_3.0	.238	9.062	4	.264	10....		4	21266.02	65205	5.749	5.749	...	H1-1b
16	M28A	PL1/2x6	.070	0	3	.568	0	y	3	95322.208	97200	1.012	12.15	...	H1-1b
17	M29A	PL1/2x6	.059	0	4	.567	0	y	4	95322.208	97200	1.012	12.15	...	H1-1b
18	M32A	PL3/8x6	.681	0	4	.756	0	y	4	68817.972	72900	.57	9.113	...	H1-1b
19	M33A	PL3/8x6	.490	0	3	.751	0	y	3	68817.953	72900	.57	9.113	...	H1-1b
20	M35A	PL1/2x6	.382	0	1	.486	0	y	3	91104.489	97200	1.012	12.15	...	H1-1b
21	M33B	PL3/8x6	.943	0	4	.788	0	y	4	72185.734	72900	.57	9.113	...	H1-1b
22	M36A	PL3/8x6	.683	0	4	.778	0	y	3	72196.664	72900	.57	9.113	...	H1-1b
23	M23	PL1/2x6	.371	0	4	.404	0	y	2	91104.489	97200	1.012	12.15	...	H1-1b
24	M24	L2x2x3	.394	4.359	4	.018	0	y	6	15646.442	23392.8	.558	1.22	...	H2-1
25	M25A	L2x2x3	.317	4.358	2	.020	0	z	8	15649.621	23392.8	.558	1.212	...	H2-1
26	M26A	HSS4X4X4	.224	3.823	3	.102	6.4...	z	1	64913.906	139518	16.181	16.181	...	H1-1b
27	M27	HSS4X4X4	.167	2.732	2	.071	.398	z	2	137688.177	139518	16.181	16.181	...	H1-1b
28	M28B	HSS4X4X4	.200	0	4	.093	2.3...	z	4	137689.689	139518	16.181	16.181	...	H1-1b
29	M29	LL2.5x2.5...	.147	0	8	.009	7.4...	y	4	28542.544	58320	3.954	2.55	...	H1-1...
30	M30	PL1/2x6	.063	0	4	.527	0	y	4	95322.208	97200	1.012	12.15	...	H1-1b
31	M31	PL1/2x6	.062	0	2	.592	0	y	2	95322.208	97200	1.012	12.15	...	H1-1b
32	M32	PL3/8x6	.346	0	1	.714	0	y	3	68817.972	72900	.57	9.113	...	H1-1b
33	M33C	PL3/8x6	.304	0	1	.812	0	y	1	68817.953	72900	.57	9.113	...	H1-1b
34	M34A	PL1/2x6	.313	0	4	.445	.649	y	1	91104.489	97200	1.012	12.15	...	H1-1b
35	M35	PL3/8x6	.520	0	1	.724	0	y	3	72185.734	72900	.57	9.113	...	H1-1b
36	M36	PL3/8x6	.376	0	2	.826	0	y	1	72196.664	72900	.57	9.113	...	H1-1b
37	M37A	PL1/2x6	.316	0	3	.520	.649	y	1	91104.489	97200	1.012	12.15	...	H1-1b
38	M38A	L2x2x3	.335	4.358	2	.018	0	y	7	15648.367	23392.8	.558	1.23	...	H2-1
39	M39A	L2x2x3	.379	4.359	3	.020	0	z	6	15647.696	23392.8	.558	1.221	...	H2-1
40	M40	HSS4X4X4	.244	6.439	1	.123	6.4...	z	2	64913.906	139518	16.181	16.181	...	H1-1b
41	M41	HSS4X4X4	.179	2.732	3	.081	.398	z	3	137688.177	139518	16.181	16.181	...	H1-1b
42	M42A	HSS4X4X4	.184	0	2	.087	2.3...	z	2	137689.689	139518	16.181	16.181	...	H1-1b
43	M43	LL2.5x2.5...	.147	0	7	.009	0	z	2	28539.886	58320	3.954	2.55	...	H1-1...
44	M44	PL1/2x6	.074	0	2	.668	0	y	2	95322.208	97200	1.012	12.15	...	H1-1b
45	M45	PL1/2x6	.042	0	3	.447	0	y	3	95322.208	97200	1.012	12.15	...	H1-1b
46	M46	PL3/8x6	.603	0	1	.896	0	y	1	68817.972	72900	.57	9.113	...	H1-1b

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc...	...	...	phi*Pnc [lb]	phi*Pnt...	phi*Mn ...	phi*Mn z-z...	...	Eqn
47	M47	PL3/8x6	.313	0	2	.608	0	y	4	68817.953	72900	.57	9.113	...	H1-1b
48	M48	PL1/2x6	.379	0	3	.449	0	y	2	91104.489	97200	1.012	12.15	...	H1-1b
49	M49	PL3/8x6	.770	0	2	.914	0	y	1	72185.734	72900	.57	9.113	...	H1-1b
50	M50	PL3/8x6	.474	0	1	.613	0	y	4	72196.664	72900	.57	9.113	...	H1-1b
51	M51	PIPE_2.0	.750	12.687	4	.287	13....		4	4678.524	32130	1.872	1.872	...	H3-6
52	M52	PIPE_2.0	.863	1.812	4	.320	12....		4	4678.524	32130	1.872	1.872	...	H3-6
53	MP4C	PIPE_2.5	.330	5.5	3	.262	2		3	30038.461	50715	3.596	3.596	...	H3-6
54	MP1C	PIPE_2.5	.386	5.5	1	.275	5.5		4	30038.461	50715	3.596	3.596	...	H1-1b
55	MP3C	PIPE_2.5	.441	5.5	2	.192	5.5		3	30038.461	50715	3.596	3.596	...	H1-1b
56	MP2C	PIPE_2.5	.466	5.5	4	.143	5.5		1	30038.461	50715	3.596	3.596	...	H1-1b
57	MP4B	PIPE_2.5	.345	5.5	1	.236	5.5		3	30038.461	50715	3.596	3.596	...	H1-1b
58	MP1B	PIPE_2.5	.412	5.5	4	.349	5.5		4	30038.461	50715	3.596	3.596	...	H3-6
59	MP3B	PIPE_2.5	.409	5.5	1	.163	5.5		1	30038.461	50715	3.596	3.596	...	H1-1b
60	MP2B	PIPE_2.5	.443	5.5	4	.125	5.5		4	30038.461	50715	3.596	3.596	...	H1-1b
61	M61	L2.5x2.5x4	.813	0	4	.204	1.5...	z	2	37271.433	38556	1.114	2.537	...	H2-1
62	M62	L2.5x2.5x4	.991	1.568	2	.244	1.5...	z	1	37271.433	38556	1.114	2.537	...	H2-1
63	M63	L2.5x2.5x4	.513	0	1	.258	0	z	4	37271.433	38556	1.114	2.537	...	H2-1

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

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

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

Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	Pnc/O...	Pnt/Om...	Mny/O...	Mnz/O...	Vny/O...	Vnz/O...	Cb	Eqn
No Data to Print ...																

Wood Wall Panel Parameters

	Label	Top Plate	Sill Plate	Studs	Min Stud Sp...	Max Stud Sp...	Green Lumb...	Header Size	Header Matl
1	Typical	2-2X6	2X6	2X6	16	16		6x8	Same as Wall

Additional Wood Wall Panel Parameters

	Label	Schedule	Min. Pan...	Max. Pa...	Double S...	Max. Nail...	Min. Nail...	HD Chor...	HD Chor...	Hold Do...	Chord Strap	Eccen...
1	Typical	IBC06-09 Pa...	.375	.75	Optimum	6-in.	2-in.	2-2X6	Same as...	SIMPSO...	SIMPSON C...	Yes

EXHIBIT 9

Radio Frequency Emissions Analysis Report

T-Mobile Wireless monopole Facility

June 29, 2021

Analysis Format: Theoretical Calculations

Sign Count	
	1
	0
	1
	0
	1

Statement of Compliance

T-Mobile will be compliant with FCC Regulations once the mitigation measures recommended in this report are implemented.

CTHA705A
South Windam
193 Windham Center Road, Windham, CT 06280

Contents

Overview

Centerline Communications, LLC ("Centerline") has been contracted to provide a Radio Frequency (RF) Analysis for the following T-Mobile wireless monopole facility to determine whether the facility is in compliance with federal standards and regulations regarding RF emissions. This analysis includes theoretical emissions calculations for all existing equipment for T-Mobile .

The facility is located on a monpole in Windham, Connecticut. Access to the facility is restricted to authorized personnel and facility management.

Analysis Site Data

Site ID:	CTHA705A
Site Name:	South Windam
Site Address:	193 Windham Center Road, Windham, CT 06280
Site Latitude:	41.690056
Site Longitude:	-72.16253
Facility Type:	Monopole

Compliance Summary

Status:	T-Mobile will be compliant with FCC Regulations Upon Installation of Signage
Site Modeled Composite MPE% (General Public Limit):	1.71 %
T-Mobile Max Modeled MPE% (General Public Limit):	1.71 %
Lock or Control Measures if Present:	Unknown

In addition to the T-Mobile antennas and radio equipment there are antennas and radio equipment for AT&T, Verizon, & Sprint which have been included in this analysis as part of the overall site compliance determination.

*To be conservative, all sites are considered uncontrolled for modeling purposes unless confirmed otherwise by a site visit.

FCC Guidelines

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

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

General Population/Uncontrolled exposure limits apply to situations in which the general public 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 public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limit for the 600, 700, and 800 MHz Bands is approximately 400 $\mu W/cm^2$, 467 $\mu W/cm^2$, and 567 $\mu W/cm^2$ respectively, and the general population exposure limit for the 1900 MHz PCS, 2100 MHz AWS, 2500 MHz, 3500 MHz CBRS, 5000 MHz LAA, 28GHz, and 39GHz bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density. Reference the Site Antenna Data Table for list of frequencies in operation at this site.

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, have been properly trained in RF safety 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, have been trained in RF safety and can exercise control over his or her exposure by leaving the area or by some other appropriate means. The Occupational/Controlled exposure limits all utilized frequency bands is five (5) times the FCC's General Public / Uncontrolled exposure limit.

Additional details can be found in FCC OET 65.

Calculation Methodology & Data

Centerline has performed theoretical calculations on all transmission equipment located on this facility. All calculations have been performed using the RoofMaster® software from Waterford Consultants LLC. This software performs calculations using a cylindrical model for very conservative power density predictions within the near-field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations the power decreases inversely with the square of the distance. This modeling technique is accurate with low antenna centerlines, such as rooftops, where persons can get close to the antennas and pass through fields in close proximity.

The below calculation in Figure 1 shows the theoretical distribution of power over an imaginary cylinder with equal power distribution in all directions.

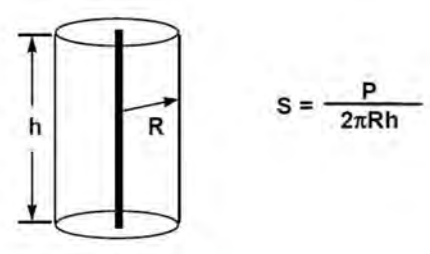


Figure 1: Distribution of power over an imaginary cylinder in all directions

This model can be modified for directional antennas to show directionality of power distribution. This formula will tend to be conservative as it assumes that all power is focused between the 3 dB power roll off points as shown in Figure 2.

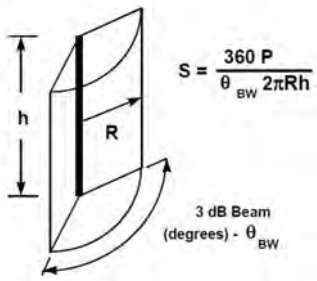


Figure 2: Distribution of power over an imaginary cylinder in all directions inside the half power roll off points (HBW)

The **proposed antenna configuration** for T-Mobile and any other known wireless carriers at this facility are shown below in **Table 1 – Site Antenna Data Table**.

All calculations for this facility were performed assuming that all radios were running at full power and were uncombined in their RF paths with the configuration shown in table 1. FCC OET Bulletin 65 – Edition 97-01 recommends that modeling of this nature should be done as described prior to yield a worst-case scenario. Due to the dynamic nature of many deployed systems the "real world" values will most likely be less than those shown in this report due to worst-case values being shown in all instances.

For all "Other" systems on this facility, exact equipment was used if available. In instances where "Other" system equipment was not available, standard radio configurations for these systems were utilized based upon prior experience with these systems on facilities in this area.

Site Antenna Data Table

Sector	Operator	Frequency Band	TX Power Per Channel	Tx #	ERP	Antenna Make	Antenna Model	Gain (dBd)	Az (°)	Antenna Centerline Height (ft)	Z Value (ft)**
A1	T-Mobile	L2100	40	4	6747.14	RFS	APX16DWV-16DWVS-E-A20	16.25	40	167	164.67
A2	T-Mobile	L700	40	4	3707.83	RFS	APXVAALL24 43-U-NA20	13.65	40	167	163.00
A2	T-Mobile	L600	40	2	1577.94	RFS	APXVAALL24 43-U-NA20	12.95	40	167	163.00
A2	T-Mobile	N600	30	2	1183.45	RFS	APXVAALL24 43-U-NA20	12.95	40	167	163.00
A2	T-Mobile	L1900	40	4	5612.03	RFS	APXVAALL24 43-U-NA20	15.45	40	167	163.00
A2	T-Mobile	G1900	15	1	526.13	RFS	APXVAALL24 43-U-NA20	15.45	40	167	163.00
A3	T-Mobile	L2500	90	1	15461.18	ERICSSON	SON_AIR6449 2500 LTE TB	22.35	40	167	165.62
A3	T-Mobile	N2500	90	1	15461.18	ERICSSON	SON_AIR6449 2500 NR TB	22.35	40	167	165.62
A3	T-Mobile	L/N2500	30	1	982.02	ERICSSON	AIR6449 LTE BrM 02DT	15.15	40	167	165.62
A3	T-Mobile	L/N2500	30	1	982.02	ERICSSON	AIR6449 NR BrM 02DT	15.15	40	167	165.62
B4	T-Mobile	L2100	40	4	6747.14	RFS	APX16DWV-16DWVS-E-A20	16.25	200	167	164.67
B5	T-Mobile	L700	40	4	3707.83	RFS	APXVAALL24 43-U-NA20	13.65	200	167	163.00
B5	T-Mobile	L600	40	2	1577.94	RFS	APXVAALL24 43-U-NA20	12.95	200	167	163.00
B5	T-Mobile	N600	30	2	1183.45	RFS	APXVAALL24 43-U-NA20	12.95	200	167	163.00
B5	T-Mobile	L1900	40	4	5612.03	RFS	APXVAALL24 43-U-NA20	15.45	200	167	163.00
B5	T-Mobile	G1900	15	1	526.13	RFS	APXVAALL24 43-U-NA20	15.45	200	167	163.00
B6	T-Mobile	L2500	90	1	15461.18	ERICSSON	SON_AIR6449 2500 LTE TB	22.35	200	167	165.62
B6	T-Mobile	N2500	90	1	15461.18	ERICSSON	SON_AIR6449 2500 NR TB	22.35	200	167	165.62
B6	T-Mobile	L/N2500	30	1	982.02	ERICSSON	AIR6449 LTE BrM 02DT	15.15	200	167	165.62
B6	T-Mobile	L/N2500	30	1	982.02	ERICSSON	AIR6449 NR BrM 02DT	15.15	200	167	165.62
C7	T-Mobile	L2100	40	4	6747.14	RFS	APX16DWV-16DWVS-E-A20	16.25	320	167	164.67
C8	T-Mobile	L700	40	4	3707.83	RFS	APXVAALL24 43-U-NA20	13.65	320	167	163.00
C8	T-Mobile	L600	40	2	1577.94	RFS	APXVAALL24 43-U-NA20	12.95	320	167	163.00
C8	T-Mobile	N600	30	2	1183.45	RFS	APXVAALL24 43-U-NA20	12.95	320	167	163.00
C8	T-Mobile	L1900	40	4	5612.03	RFS	APXVAALL24 43-U-NA20	15.45	320	167	163.00
C8	T-Mobile	G1900	15	1	526.13	RFS	APXVAALL24 43-U-NA20	15.45	320	167	163.00
C9	T-Mobile	L2500	90	1	15461.18	ERICSSON	SON_AIR6449 2500 LTE TB	22.35	320	167	165.62
C9	T-Mobile	N2500	90	1	15461.18	ERICSSON	SON_AIR6449 2500 NR TB	22.35	320	167	165.62
C9	T-Mobile	L/N2500	30	1	982.02	ERICSSON	AIR6449 LTE BrM 02DT	15.15	320	167	165.62
C9	T-Mobile	L/N2500	30	1	982.02	ERICSSON	AIR6449 NR BrM 02DT	15.15	320	167	165.62
C10	Verizon	700	40	4	4019.02	ANTEL	BXA-70063-6CF-EDIN-0	14	40	177	174.04
C11	Verizon	850	40	4	2270.49	ANTEL	LPA-800-80-4CF	11.52	40	177	175.00
C12	Verizon	850	40	4	2270.49	ANTEL	LPA-800-80-4CF	11.52	40	177	175.00
C13	Verizon	1900	40	4	4667.88	ANTEL	BXA-171085-8BF	14.65	40	177	175.00
C13	Verizon	2100	40	4	4667.88	ANTEL	BXA-171085-8BF	14.65	40	177	175.00
C14	Verizon	700	40	4	4019.02	ANTEL	BXA-70063-6CF-EDIN-0	14	200	177	174.04
15	Verizon	850	40	4	2270.49	ANTEL	LPA-800-80-4CF	11.52	200	177	175.00
16	Verizon	850	40	4	2270.49	ANTEL	LPA-800-80-4CF	11.52	200	177	175.00

17	Verizon	1900	40	4	4667.88	ANTEL	BXA-171085-8BF	14.65	200	177	175.00
17	Verizon	2100	40	4	4667.88	ANTEL	BXA-171085-8BF	14.65	200	177	175.00
18	Verizon	700	40	4	4019.02	ANTEL	BXA-70063-6CF-EDIN-0	14	320	177	174.04
19	Verizon	850	40	4	2270.49	ANTEL	LPA-800-80-4CF	11.52	320	177	175.00
20	Verizon	850	40	4	2270.49	ANTEL	LPA-800-80-4CF	11.52	320	177	175.00
21	Verizon	1900	40	4	4667.88	ANTEL	BXA-171085-8BF	14.65	320	177	175.00
21	Verizon	2100	40	4	4667.88	ANTEL	BXA-171085-8BF	14.65	320	177	175.00
22	Sprint	2500	0	1	1600.00	RFS	APXVTM14 ALU-I20	15.85	40	167	164.65
23	Sprint	850	40	2	1730.17	RFS	APXVSPP18-C-A20	13.35	40	167	164.00
23	Sprint	1900	60	2	4615.10	RFS	APXVSPP18-C-A20	15.85	40	167	164.00
24	Sprint	2500	0	1	1600.00	RFS	APXVTM14 ALU-I20	15.85	200	167	164.65
25	Sprint	850	40	2	1730.17	RFS	APXVSPP18-C-A20	13.35	200	167	164.00
25	Sprint	1900	60	2	4615.10	RFS	APXVSPP18-C-A20	15.85	200	167	164.00
26	Sprint	2500	0	1	1600.00	RFS	APXVTM14 ALU-I20	15.85	320	167	164.65
27	Sprint	850	40	2	1730.17	RFS	APXVSPP18-C-A20	13.35	320	167	164.00
27	Sprint	1900	60	2	4615.10	RFS	APXVSPP18-C-A20	15.85	320	167	164.00
28	AT&T	850	40	1	545.83	POWERWAVE	7770 00	11.35	40	147	144.69
29	AT&T	700	40	4	2686.09	CCI	DMP65R-BU8D	12.25	40	147	143.00
29	AT&T	1900	40	4	4160.26	CCI	DMP65R-BU8D	14.15	40	147	143.00
29	AT&T	2100	40	4	5237.45	CCI	DMP65R-BU8D	15.15	40	147	143.00
30	AT&T	850	40	4	2878.19	CCI	DMP65R-BU8D	12.55	40	147	143.00
30	AT&T	2300	25	4	2660.73	CCI	DMP65R-BU8D	14.25	40	147	143.00
31	AT&T	850	40	1	545.83	POWERWAVE	7770 00	11.35	200	147	144.69
32	AT&T	700	40	4	2686.09	CCI	DMP65R-BU8D	12.25	200	147	143.00
32	AT&T	1900	40	4	4160.26	CCI	DMP65R-BU8D	14.15	200	147	143.00
32	AT&T	2100	40	4	5237.45	CCI	DMP65R-BU8D	15.15	200	147	143.00
33	AT&T	850	40	4	2878.19	CCI	DMP65R-BU8D	12.55	200	147	143.00
33	AT&T	2300	25	4	2660.73	CCI	DMP65R-BU8D	14.25	200	147	143.00
34	AT&T	850	40	1	545.83	POWERWAVE	7770 00	11.35	320	147	144.69
35	AT&T	700	40	4	2686.09	CCI	DMP65R-BU8D	12.25	320	147	143.00
35	AT&T	1900	40	4	4160.26	CCI	DMP65R-BU8D	14.15	320	147	143.00
35	AT&T	2100	40	4	5237.45	CCI	DMP65R-BU8D	15.15	320	147	143.00
36	AT&T	850	40	4	2878.19	CCI	DMP65R-BU8D	12.55	320	147	143.00
36	AT&T	2300	25	4	2660.73	CCI	DMP65R-BU8D	14.25	320	147	143.00

*Table 1: Total Site Antenna data table **(Z Value is distance from bottom of antenna to walking surface)*

Results

All calculations performed based upon the data listed for this facility have produced results that are within allowable limits for General Population for exposure to RF emissions as specified by federal standards.

T-Mobile's RF Exposure: Responsibilities, Procedures & Guidelines document states that microwave dishes are compliant if they are mounted 20 feet or greater above any accessible walking or working surface.

Maximum Predicted MPE Level on Site:	% of MPE Limit:	Location:
Accessible **General Population** MPE Limits:	**1.71%**	**Sector A**
Accessible **Occupational** MPE Limits:	**0.34%**	

Ground Level Assessment:	% of MPE Limit:
Ground Level **General Population** MPE Limits:	**1.95%**
Ground Level **Occupational** MPE Limits:	**0.39%**

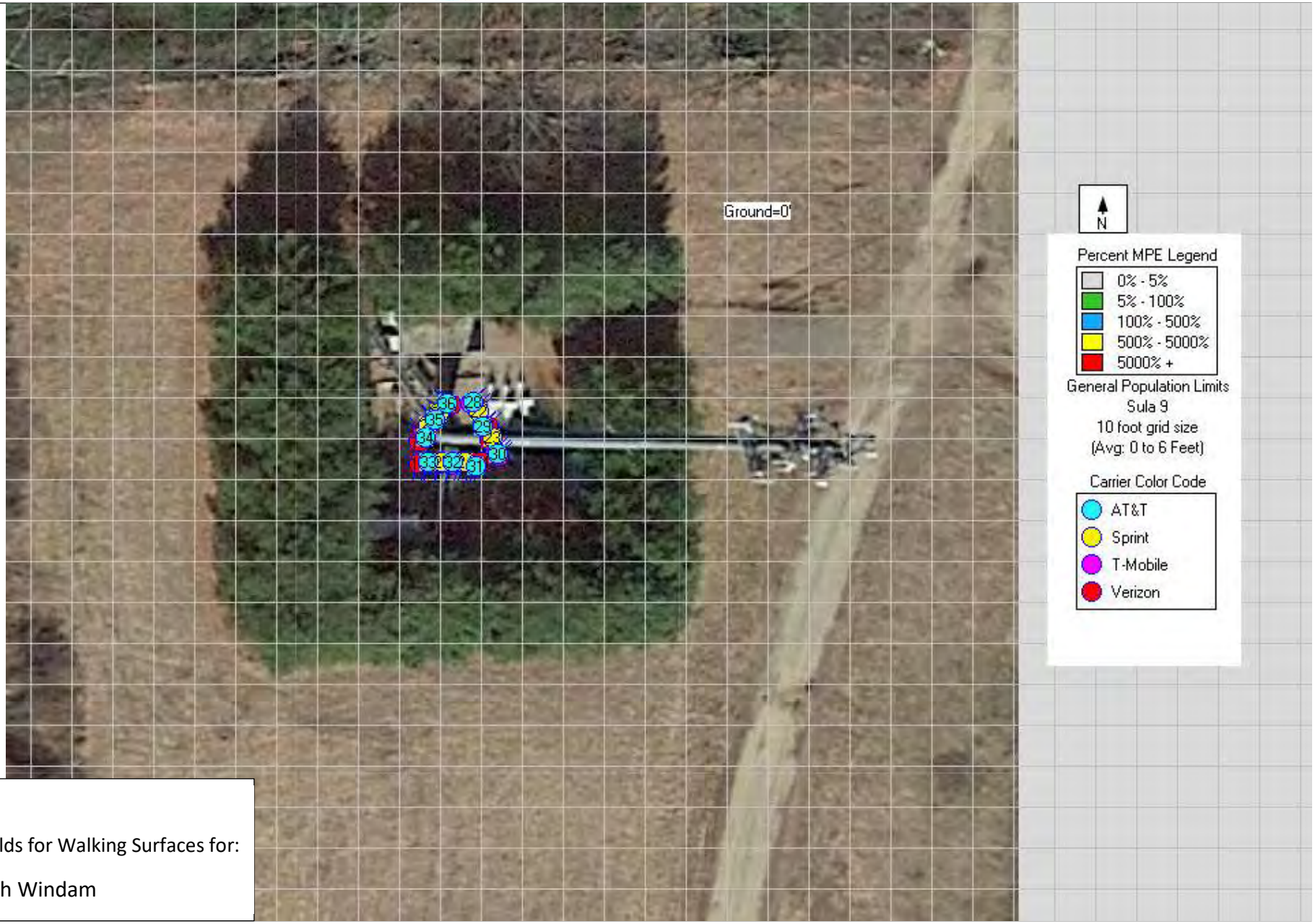
Sector A: Transmitting over Ground	% of MPE Limit:	*Distance from Antenna:
Accessible **General Population** MPE Limits:	**1.71%**	**0'**
Accessible **Occupational** MPE Limits:	**0.34%**	**0'**

Sector B: Transmitting over Ground	% of MPE Limit:	*Distance from Antenna:
Accessible **General Population** MPE Limits:	**1.71%**	**0'**
Accessible **Occupational** MPE Limits:	**0.34%**	**0'**

Sector C: Transmitting over Ground	% of MPE Limit:	*Distance from Antenna:
Accessible **General Population** MPE Limits:	**1.71%**	**0'**
Accessible **Occupational** MPE Limits:	**0.34%**	**0'**

**Distance from Antenna is the distance in feet that the MPE limits are exceeded from the front face of the antenna, outward across an accessible area.*

APPENDIX A: Emissions Thresholds for Walking Surfaces and Signage



Ground (0ft.)

Emissions Thresholds for Walking Surfaces for:

CTHA705A / South Windam

Ground Wide Overview (0ft.)

Emissions Thresholds for Walking Surfaces for:

CTHA705A / South Windam

Access

Existing Item

Proposed Item

Signage Count									
	1		0		1		0		1

Signage Diagram

Signage for:

CTHA705A/ South Windam

Compliance Actions

Access	• Ensure all access points are locked. • Install (1) Guideline sign on the inside of the access point. • Install (1) Caution sign on the inside of the access point. • Install (1) 911 Emergency sign on the inside of the access point.
Alpha Sector	• No Action Needed.
Beta Sector	• No Action Needed.
Gamma Sector	• No Action Needed.
Notes:	• If there is a fixed climbing point located on this site, a Guideline and Caution sign should be installed at that location.

APPENDIX B: RF Signage Description Table

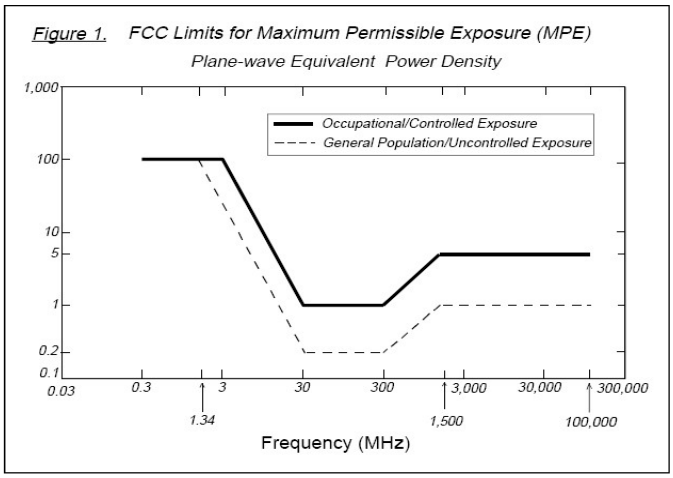
Sign	Description
	**RF Guideline Sign** Gives guidelines on how to proceed in areas that may exceed either the FCC's General Population or Occupational emissions limits.
 	**Blue Notice Sign** Used to inform individuals that they are entering an area that may exceed the FCC's General Population limits. Must be placed anywhere the public can get within 30 feet vertically or horizontally of an antenna.
 	**Yellow Caution Sign** Used to inform individuals that they are entering an area that may exceed the either the FCC's General Population or Occupational Emissions limits. It must be placed so it is visible from all approachable sides. It must also be just outside of the area predicted to exceed the MPE limits so it can be read without standing within the affected area.
 	**Orange Warning Sign (Previously Red)** Used to inform individuals that they are entering an area that may exceed 5x the FCC's Occupational emissions limit. It must be placed so it is visible from all approachable sides. It must also be just outside of the area predicted to exceed the MPE limits so it can be read without standing within the affected area.

APPENDIX C: FCC Emissions Threshold Limits

Table 1: Limits for Maximum Permissible Exposure (MPE)				
(A) Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mW/cm^2)**	**Averaging Time $[E]^2$, $[H]^2$, or S (minutes)**
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-I,500	--	--	f/300	6
1,500-100,000	--	--	5	6
(B) Limits for General Public/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mW/cm^2)**	**Averaging Time $[E]^2$, $[H]^2$, or S (minutes)**
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-I,500	--	--	f/1,500	30
1,500-100,000	--	--	1.0	30

f = Frequency in (MHz)

* Plane-wave equivalent power density



APPENDIX D: Certifications

I, Michelle Stone, preparer of this report certify that I am fully trained and aware of the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation. I have been trained in the procedures and requirements outlined in T-Mobile's FCC Regulatory Compliance Manual.

Michelle Stone

6/29/2021

I, Brandon Green, reviewer and approver of this report certify that I am fully trained and aware of the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation. I have been trained in the procedures and requirements outlined in T-Mobile's FCC Regulatory Compliance Manual.

Brandon Green

6/29/2021