



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](mailto:siting.council@ct.gov)

Web Site: [portal.ct.gov/csc](http://portal.ct.gov/csc)

**VIA ELECTRONIC MAIL**

May 19, 2023

Elizabeth Jamieson  
SBA Communications Corporation  
134 Flanders Road, Suite 125  
Westborough, MA 01581  
[EJamieson@sbsite.com](mailto:EJamieson@sbsite.com)

**RE: TS-DISH-136-230403** – Dish Wireless, LLC request for an order to approve tower sharing at an existing telecommunications facility located at 5 Exeter Drive, Sterling, Connecticut.

Dear Elizabeth Jamieson:

The Connecticut Siting Council (Council) is in receipt of your correspondence of May 19, 2023 submitted in response to the Council's April 21, 2023 notification of an incomplete request for tower sharing with regard to the above-referenced matter.

The submission renders the request for tower sharing 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/ANM/dll

**From:** Elizabeth Jamieson <EJamieson@sbsite.com>  
**Sent:** Friday, May 19, 2023 9:39 AM  
**To:** CSC-DL Siting Council <Siting.Council@ct.gov>  
**Subject:** FW: 5 Exeter Drive Sterling CT - Tower Share / Dish BOBOS00053A

Members of the Council

Please see the attached updated tower share application that includes the updated exhibits that were requested in your Incomplete letter dated April 21,2023.  
Please note the cover letter was also updated to reflect the new dates of the exhibits and the new compliance% for the updated EME.

Hard copy to follow.

Thank you,

**Elizabeth Jamieson**  
*Site Development Specialist II*

860.605.7808 + **T**



March 28, 2023

Melanie Bachman  
Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

**RE: Tower Share Application**  
**5 Exeter Drive (aka 7 Exeter Drive – Tower) Sterling, CT 06377**  
**Latitude: Lat.: 41.71402780**  
**Longitude: -71.82272220**  
**Site#: CT08748-A\_BOBOS00053A\_SBA\_DISH**

Dear Ms. Bachman:

This letter and attachments are submitted on behalf of Dish Wireless LLC. Dish Wireless LLC plans to install antennas and related equipment to the tower site located at 5 Exeter Drive (AKA 7 Exeter Drive – Tower) in Sterling, CT

Dish Wireless LLC proposes to install three (3) 600/1900/2100 MHz antennas and six (6) RRUs, at the 95-foot level of the existing 141-foot monopole tower, one (1) Fiber cables will also be installed. Dish Wireless LLC equipment cabinets will be placed within 7' x 5' lease area. Included are plans by B+T Group, May 11, 2023 Exhibit 6. Also included is a structural analysis prepared by TES, dated May 1, 2023, confirming that the existing tower is structurally capable of supporting the proposed equipment, attached as Exhibit 7. Also included is a mount analysis prepared by B&T, dated January 23, 2023 confirming that the mount is structurally capable of supporting the proposed equipment, attached as Exhibit 8. This facility was approved by the CT Siting Council on February 14, 2008 Docket #345. Please see attached Exhibit 5.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies 16-50aa, of Dish Wireless LLC intent to share a telecommunications facility pursuant to R.C.S.A. 16-50j-88. In accordance with R.C.S.A., a copy of this letter is being sent to **Lincoln A. Cooper, Town of Sterling First Selectman and Melissa Gill, Zoning Enforcement Officer**. (Separate notice is not being sent to SBA, as SBA is the tower owner making this submission).

The planned modifications of the facility fall squarely within those activities explicitly provided for in R.C.S.A. 16-50j-89.

1. The proposed modification will not result in an increase in the height of the existing structure. The top of the existing tower is 141-feet and the Dish Wireless LLC antennas will be located at a center line height of 95-feet.
2. The proposed modifications will not result in the increase of the site boundary as depicted on the attached site plan.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed local and state criteria. The incremental effect of the proposed changes will be negligent.



4. The operation of the proposed antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard. As indicated in the attached power density calculations, the combined site operations will result in a total power density of 21.36% as evidenced by Exhibit 9.

Connecticut General Statutes 16-50aa indicates that the Council must approve the shared use of a telecommunications facility provided it finds the shared use is technically, legally, environmentally, and economically feasible and meets public safety concerns. As demonstrated in this letter, Dish Wireless LLC respectfully indicates that the shared use of this facility satisfies these criteria.

A. Technical Feasibility. The existing monopole has been deemed structurally capable of supporting Dish Wireless LLC proposed loading. The structural analysis is included as Exhibit 7.

B. Legal Feasibility. As referenced above, C.G.S. 16-50aa has been authorized to issue orders approving the shared use of an existing tower such as this support tower in Sterling. Under the authority granted to the Council, an order of the Council approving the requested shared use would permit Dish Wireless LLC to obtain a building permit for the proposed installation.

C. Environmental Feasibility. The proposed shared use of this facility would have a minimal environmental impact. The installation of Dish Wireless LLC equipment at the 95-foot level of the existing 141-foot tower would have an insignificant visual impact on the area around the tower. Dish Wireless LLC ground equipment would be installed within the existing facility compound. Dish Wireless LLC shared use would therefore not cause any significant alteration in the physical or environmental characteristics of the existing site. Additionally, as evidenced by Exhibit 9, the proposed antennas would not increase radio frequency emissions to a level at or above the Federal Communications Commission safety standard.

D. Economic Feasibility. Dish Wireless LLC will be entering into an agreement with the owner of this facility to mutually agreeable terms. As previously mentioned, the Letter of Authorization has been provided by the owner to assist Dish Wireless LLC with this tower sharing application.

E. Public Safety Concerns. As discussed above, the tower is structurally capable of supporting Dish Wireless LLC proposed loading.

Dish Wireless LLC is not aware of any public safety concerns relative to the proposed sharing of the existing guyed tower. Dish Wireless LLC intentions of providing new and improved wireless service through the shared use of this facility is expected to enhance the safety and welfare of local residents and individuals traveling through Sterling .

Sincerely,

**Elizabeth Jamieson**  
*Site Development Specialist II*  
**SBA Communications Corporation**  
134 Flanders Road, Suite 125  
Westborough, MA 01581  
860.605.7808 + T  
[EJamieson@sbsite.com](mailto:EJamieson@sbsite.com)





**Attachments:**

cc:  
Lincoln A. Cooper, Town of Sterling First Selectman, and ground landlord  
183 Plainfield Pike, P.O. Box 157, Oneco, CT 06373  
860-564-2904

Melissa Gill, Zoning Enforcement Officer 1183 Plainfield Pike, P.O. Box 157  
Oneco, CT 06373  
860-564-2904 x109

**EXHIBIT LIST**

Exhibit 1	Copy of Check	X
Exhibit 2	Notification Receipts	x
Exhibit 3	Property Card	x
Exhibit 4	Property Map	x
Exhibit 5	Original Zoning Approval	February 14, 2008 Docket #345
Exhibit 6	Construction Drawings	B&T Group – May 11, 2023
Exhibit 7	Structural Analysis	TES – May 1, 2023
Exhibit 8	Mount Analysis	B&T Group – January 23,2023
Exhibit 9	EME	Fox Hill Telecom – May 4, 2023

# EXHIBIT 1

Copy of Check for filing fee.

# EXHIBIT 2

## FedEx Labels

ORIGIN ID: BCTA (561) 995-7670  
ELIZABETH JAMIESON  
8051 CONGRESS AVE  
BOCA RATON, FL 33487  
UNITED STATES US

SHIP DATE: 28MAR23  
ACT WGT: 1.00 LB  
CAD: 255382542/NET4580

BILL SENDER

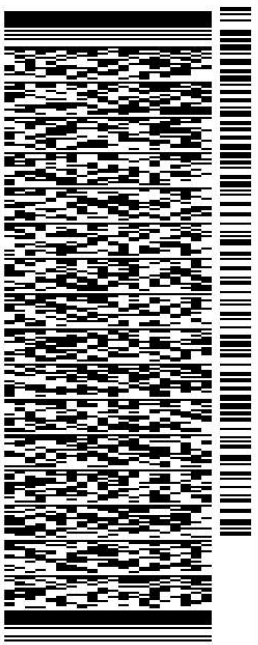
TO LINCOLN A. COOPER, FIRST SELECTMAN  
TOWN OF STERLING  
183 PLAINFIELD PIKE

ONECCO CT 06373

REF: 10-56-92009-6089

(860) 564-2904  
INV/

DEPT:



581.J2105E/FE2D

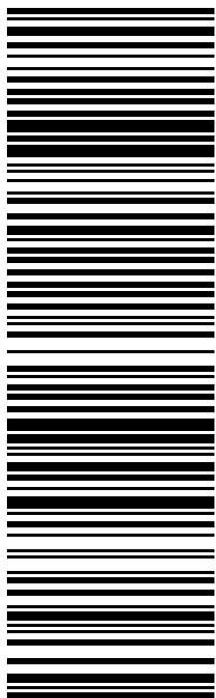
TRK# 7716 8461 6750  
0201

THU - 30 MAR 4:30P

\*\* 2DAY \*\*

SE GONA

06373  
CT-US BDL



**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 Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



March 30, 2023

Dear Customer,

The following is the proof-of-delivery for tracking number: 771684616750

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**Delivery Information:**

---

<b>Status:</b>	Delivered	<b>Delivered To:</b>	Receptionist/Front Desk
<b>Signed for by:</b>	H.GEORGE	<b>Delivery Location:</b>	183 PLAINFIELD PIKE
<b>Service type:</b>	FedEx 2Day		
<b>Special Handling:</b>	Deliver Weekday		ONECO, CT, 06373
		<b>Delivery date:</b>	Mar 30, 2023 13:05

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**Shipping Information:**

---

<b>Tracking number:</b>	771684616750	<b>Ship Date:</b>	Mar 29, 2023
		<b>Weight:</b>	0.5 LB/0.23 KG

**Recipient:**  
Lincoln A. Cooper, First Selectman, Town of Sterling  
183 Plainfield Pike  
ONECO, CT, US, 06373

**Shipper:**  
elizabeth jamieson,  
8051 CONGRESS AVE  
BOCA RATON, FL, US, 33487

**Reference** 10-56-92009-6089

Signature Proof of Delivery is not currently available for this Tracking Number. Availability of signature images may take up to 5 days after delivery date. Please try later, or contact Customer Service at 1.800.Go.FedEx(R) 800.463.3339.

Thank you for choosing FedEx

ORIGIN ID: BCTA (561) 995-7670  
ELIZABETH JAMIESON  
8051 CONGRESS AVE  
BOCA RATON, FL 33487  
UNITED STATES US

SHIP DATE: 28MAR23  
ACT WGT: 1.00 LB  
CAD: 255382542/NET4580

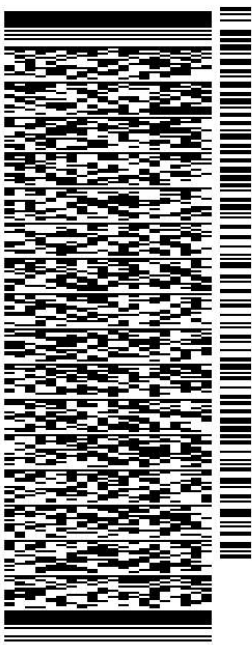
BILL SENDER

TO MELISSA GILL, ZONING ENFORCEMENT OF  
TOWN OF STERLING  
1183 PLAINFIELD PIKE

ONECO CT 06373

REF: 10-56-92009-6089

(860) 564-2904 X 109  
INV/ PO: DEPT:



J231023011101uv

581.J2105E/FE2D

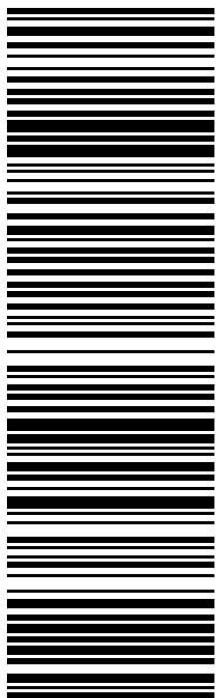
TRK# 7716 8473 6917  
0201

THU - 30 MAR 4:30P

\*\* 2DAY \*\*

SE GONA

06373  
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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 Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



March 30, 2023

Dear Customer,

The following is the proof-of-delivery for tracking number: 771684736917

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**Delivery Information:**

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<b>Status:</b>	Delivered	<b>Delivered To:</b>	Receptionist/Front Desk
<b>Signed for by:</b>	H.GEORGE	<b>Delivery Location:</b>	183 PLAINFIELD PIKE
<b>Service type:</b>	FedEx 2Day		
<b>Special Handling:</b>	Deliver Weekday		ONECO, CT, 06373
		<b>Delivery date:</b>	Mar 30, 2023 13:05

---

**Shipping Information:**

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<b>Tracking number:</b>	771684736917	<b>Ship Date:</b>	Mar 29, 2023
		<b>Weight:</b>	0.5 LB/0.23 KG

**Recipient:**  
Melissa Gill, Zoning Enforcement Of, Town of Sterling  
1183 Plainfield Pike  
ONECO, CT, US, 06373

**Shipper:**  
elizabeth jamieson,  
8051 CONGRESS AVE  
BOCA RATON, FL, US, 33487

**Reference** 10-56-92009-6089

Signature Proof of Delivery is not currently available for this Tracking Number. Availability of signature images may take up to 5 days after delivery date. Please try later, or contact Customer Service at 1.800.Go.FedEx(R) 800.463.3339.

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## EXHIBIT 3

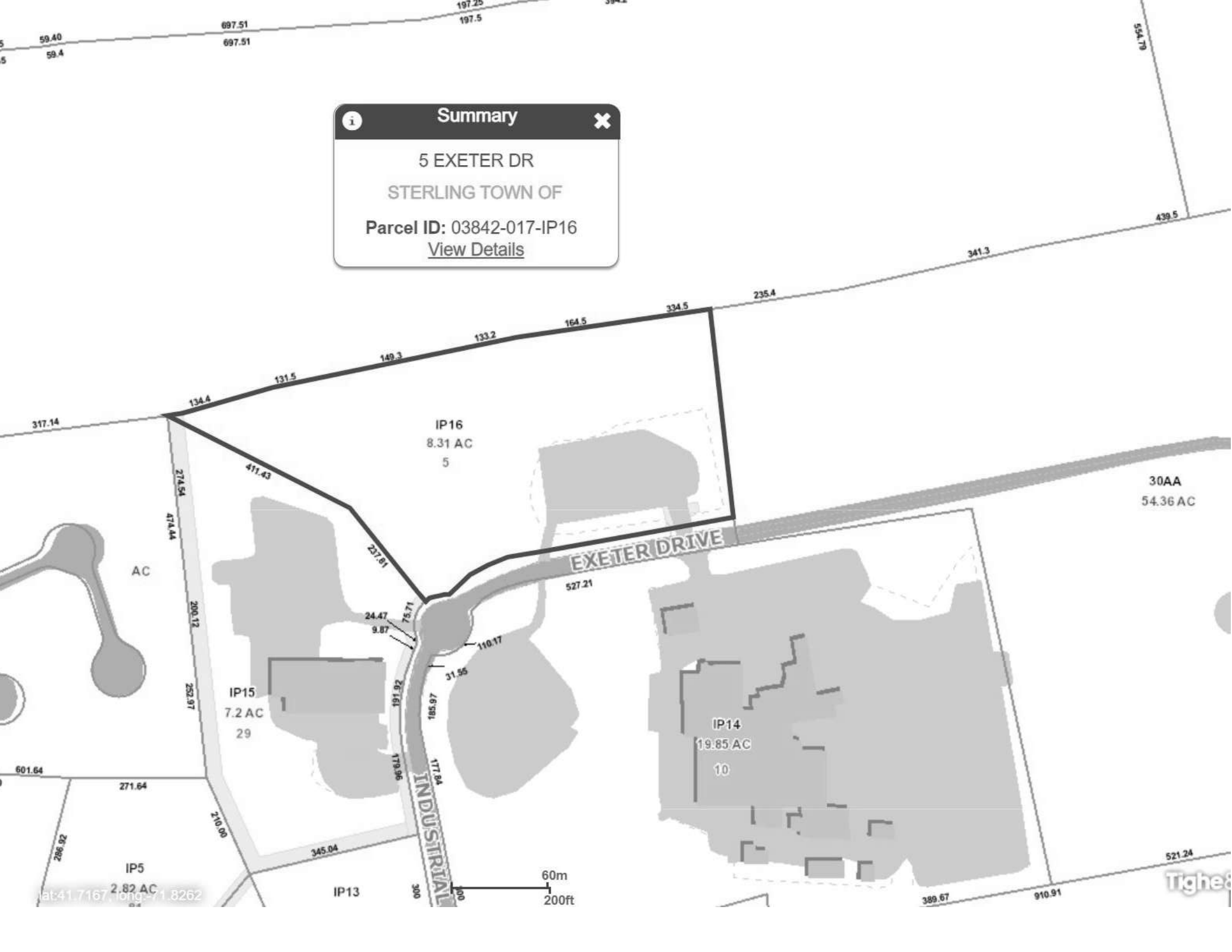
# Property Card



**Summary** ✕

5 EXETER DR  
STERLING TOWN OF

Parcel ID: 03842-017-IP16  
[View Details](#)



lat:41.7167, long:-71.8262

Situs : 5 EXETER DR

Map ID: 00045300

Class: Municipal

Card: 1 of 1

Printed: March 9, 2016

**CURRENT OWNER**  
STERLING TOWN OF  
  
PO BOX 157  
ONECO CT 06373

**GENERAL INFORMATION**  
Living Units  
Neighborhood 200  
Alternate Id 03842-017-IP16  
Vol / Pg 40/15  
District  
Zoning  
Class 200

**Property Notes**  
7 EXETER DRIVE=CELL TOWER  
ADDRESS ASSIGNED TO TOWER  
146/21 - LEASE AMENDMENT

**Land Information**

Type	AC	Size	Influence Factors	Influence %	Value
Primary	AC	2.0000			40,000
Excess	AC	6.3100			15,780

Total Acres: 8.31  
Spot: Location:

**Assessment Information**

	Assessed	Appraised	Cost	Income	
Land	39,050	55,780	55,780	0	55,780
Building	27,890	39,840	39,840	0	39,840
<b>Total</b>	<b>66,930</b>	<b>95,620</b>	<b>95,620</b>	<b>0</b>	<b>95,620</b>

**Manual Override Reason**  
Base Date of Value 10-01-2012  
Effective Date of Value 10-01-2016

Value Flag COST APPROACH  
Gross Building:

**Entrance Information**

Date	ID	Entry Code	Source
08/24/12	JS	Data Mailer/Field Check	Owner

**Permit Information**

Date Issued	Number	Price	Purpose	% Complet
07/09/15	15-59	15,000	CFX Bell Atlantic/Verizon Wireless Rep	
10/15/12	12-78	25,000	CAL At&T Site Modification	100
12/15/08	08-90	6,800	COB Wire (?) Equipment Shelter	100
05/27/08	08-38	125,000	COB Cell Tower (2 Permits) Cingular To	100

**Sales/Ownership History**

Transfer Date	Price	Type	Validity	Deed Reference	Deed Type	Grantee

Situs : 5 EXETER DR

Parcel Id: 00045300

Class: Municipal

Card: 1 of 1

Printed: March 9, 2016

Dwelling Information	
Style	Year Built
Story height	Eff Year Built
Attic	Year Remodeled
Exterior Walls	Amenities
Masonry Trim x	In-law Apt No
Color	
Basement	
Basement	# Car Bsmt Gar
FBLA Size x	FBLA Type
Rec Rm Size x	Rec Rm Type
Heating & Cooling	
Heat Type	Fireplaces
Fuel Type	Stacks
System Type	Openings
	Pre-Fab
Room Detail	
Bedrooms	Full Baths
Family Rooms	Half Baths
Kitchens	Extra Fixtures
Total Rooms	
Kitchen Type	Bath Type
Kitchen Remod	Bath Remod
Adjustments	
Int vs Ext	Unfinished Area
Cathedral Ceiling x	Unheated Area
Grade & Depreciation	
Grade C	Market Adj
Condition	Functional
CDU AVERAGE	Economic
Cost & Design 0	% Good Ovr
% Complete	
Dwelling Computations	
Base Price	% Good
Plumbing	% Good Override
Basement	Functional
Heating	Economic
Attic	% Complete
Other Features 0	C&D Factor
	Adj Factor
Subtotal	Additions
Ground Floor Area	Dwelling Value
Total Living Area	

**Building Notes**

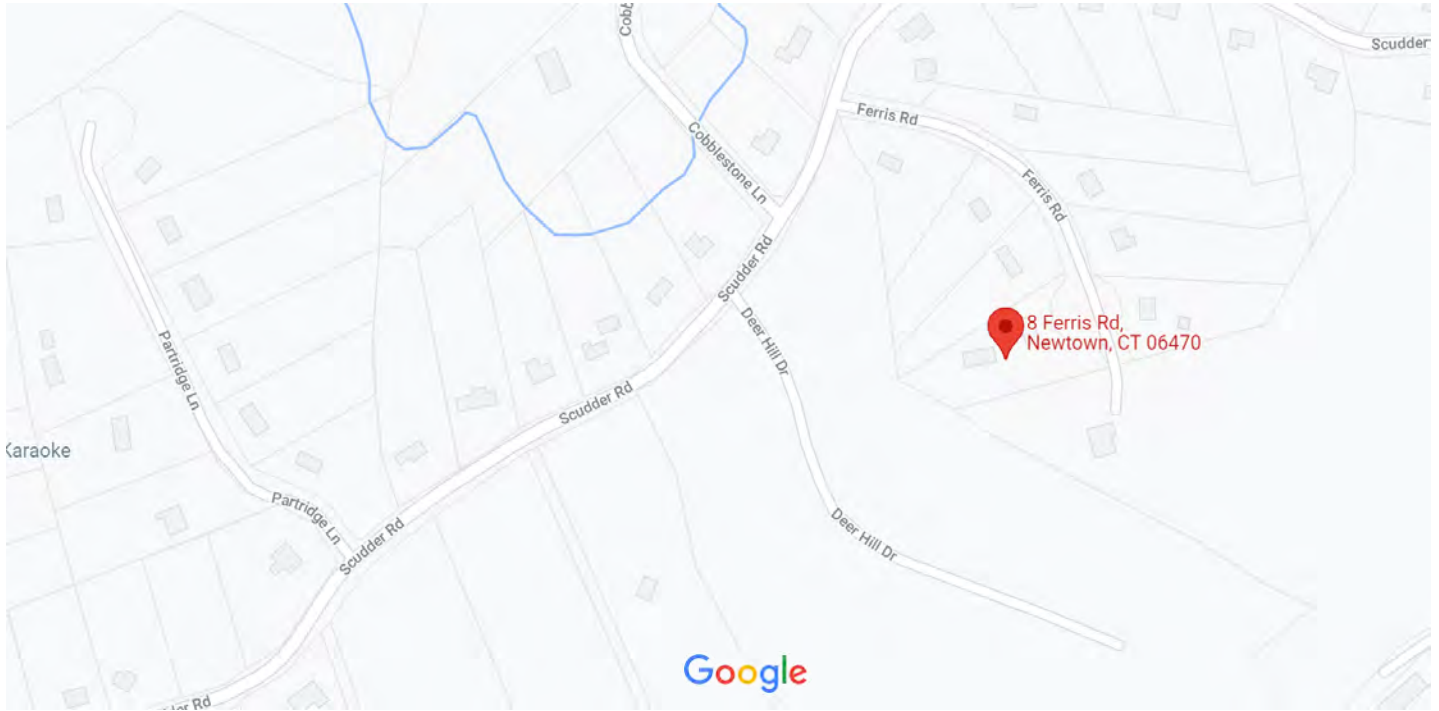
Outbuilding Data								
Type	Size 1	Size 2	Area	Qty	Yr Blt	Grade	Condition	Value
Br/St Shed	16 x	12	192	1	2008	C	A	39,840

Condominium / Mobile Home Information	
Complex Name	
Condo Model	
Unit Number	
Unit Level	Unit Location
Unit Parking	Unit View
Model (MH)	Model Make (MH)

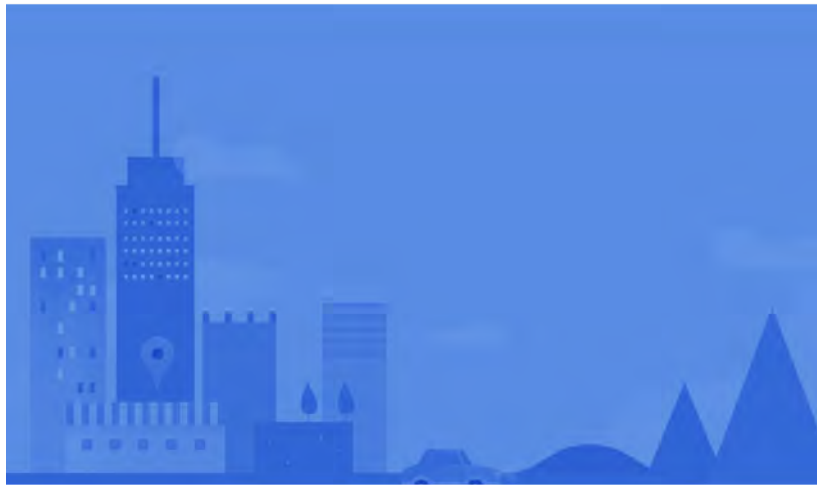
Addition Details						
Line #	Low	1st	2nd	3rd	Value	

**EXHIBIT 4**  
**Property Map**

Google Maps 8 Ferris Rd



Map data ©2021 200 ft



# 8 Ferris Rd

Newtown, CT 06470



Directions



Save



Nearby



Send to your phone



Share

9MQ6+WQ Newtown, Connecticut

# EXHIBIT 5

## Zoning Documents

**DOCKET NO. 345** - MCF Communications bg, Inc. and Cellco Partnership d/b/a Verizon Wireless application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located off Exeter Drive in Sterling, Connecticut.

Connecticut  
Siting  
Council

February 14, 2008

### Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to MCF Communications bg, Inc. (MCF) and Cellco Partnership d/b/a Verizon Wireless (Verizon Wireless), hereinafter referred to as the Certificate Holder, for a telecommunications facility at Exeter Drive, Sterling, Connecticut.

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

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of Verizon Wireless and other entities, both public and private, but such tower shall not exceed a height of 140 feet above ground level. The height at the top of the Certificate Holder's antennas shall not exceed 140 feet above ground level.
2. Such tower shall incorporate a yield point to eliminate the potential fall radius onto the adjacent property and Exeter Drive.
3. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Sterling for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
  - a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line; and
  - b) construction plans for site clearing, grading, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.
4. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of the electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of the electromagnetic radio frequency power density be submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

5. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.
6. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
7. The Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Sterling public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.
8. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed and providing wireless services within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline.
9. Any request for extension of the time period referred to in Condition 8 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Sterling. Any proposed modifications to this Decision and Order shall likewise be so served.
10. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.
11. The Certificate Holder shall remove any nonfunctioning antenna, and associated antenna mounting equipment, within 60 days of the date the antenna ceased to function.
12. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction and the commencement of site operation.

Pursuant to General Statutes § 16-50p, the Council hereby directs that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the Norwich Bulletin and The Hartford Courant.

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



The parties and intervenors to this proceeding are:

**Applicant**

MCF Communications bg, Inc. and  
Cellco Partnership d/b/a Verizon Wireless

**Its Representative**

Kenneth C. Baldwin, Esq.  
Robinson and Cole LLP  
Hartford, CT 06103-3597  
(860) 275-8200

Brad Gannon  
MCF Communications bg, Inc.  
733 Turnpike Street, Suite 105  
North Andover, MA 01845

Sandy Carter  
Regulatory Manager  
Verizon Wireless  
99 East River Drive  
East Hartford, CT 06108

# EXHIBIT 6

## Construction Drawings



DISH Wireless L.L.C. SITE ID:

**BOBOS00053A**

DISH Wireless L.L.C. SITE ADDRESS:

**5 EXETER DR (AKA 7 EXETER DR - TOWER)  
STERLING, CT 06377**

SCOPE OF WORK
THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:
TOWER SCOPE OF WORK:
<ul style="list-style-type: none"> <li>• INSTALL (3) PROPOSED PANEL ANTENNAS (1 PER SECTOR)</li> <li>• INSTALL (1) PROPOSED ANTENNA PLATFORM MOUNT</li> <li>• INSTALL PROPOSED JUMPERS</li> <li>• INSTALL (6) PROPOSED RRUs (2 PER SECTOR)</li> <li>• INSTALL (1) PROPOSED OVER VOLTAGE PROTECTION DEVICE (OVP)</li> <li>• INSTALL (1) PROPOSED HYBRID CABLE</li> </ul>
GROUND SCOPE OF WORK:
<ul style="list-style-type: none"> <li>• INSTALL (1) PROPOSED METAL PLATFORM</li> <li>• INSTALL (1) PROPOSED ICE BRIDGE</li> <li>• INSTALL (1) PROPOSED PPC CABINET</li> <li>• INSTALL (1) PROPOSED EQUIPMENT CABINET</li> <li>• INSTALL (1) PROPOSED POWER CONDUIT</li> <li>• INSTALL (1) PROPOSED TELCO CONDUIT</li> <li>• INSTALL (1) PROPOSED TELCO-FIBER BOX</li> <li>• INSTALL (1) PROPOSED GPS UNIT</li> <li>• INSTALL (1) PROPOSED FIBER NID (IF REQUIRED)</li> </ul>

SITE INFORMATION	PROJECT DIRECTORY
PROPERTY OWNER: STERLING TOWN OF ADDRESS: PO BOX 157 ONECO, CT 6373	APPLICANT: DISH Wireless L.L.C. 5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120
TOWER TYPE: MONOPOLE	TOWER OWNER: SBA COMMUNICATAIONS CORP. 8051 CONGRESS AVENUE BOCA RATON, FL 33487 (800) 487-7483
TOWER CO SITE ID: CT11560-A	SITE DESIGNER: B+T GROUP 1717 S. BOULDER AVE, SUITE 300 TULSA, OK 74119 (918) 587-4630
TOWER APP NUMBER: 177052	SITE ACQUISITION: APRIL PARROTT APRIL.PARROTT@DISH.COM
COUNTY: WINDHAM	CONST. MANAGER: CHAD WILCOX CHAD.WILCOX@DISH.COM
LATITUDE (NAD 83): 41° 42' 50.6" N 41.71404722°	RF ENGINEER: DIPESH PARIKH DIPESH.PARIKH@DISH.COM
LONGITUDE (NAD 83): 71° 49' 21.9" W -71.82273544°	
ZONING JURISDICTION: CONNECTICUT SITING COUNCIL	
ZONING DISTRICT: RESIDENTIAL	
PARCEL NUMBER: 03842-017-IP16	
OCCUPANCY GROUP: U	
CONSTRUCTION TYPE: II-B	
POWER COMPANY: CONNECTICUT LIGHT & POWER	
TELEPHONE COMPANY: T.B.D.	



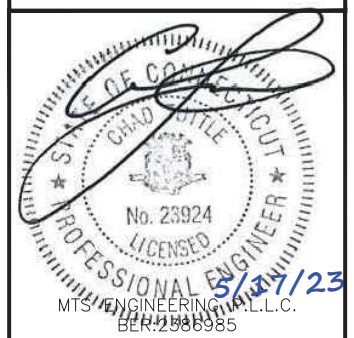
5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120



8051 CONGRESS AVENUE  
BOCA RATON, FL 33487



1717 S. BOULDER  
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TULSA, OK 74119  
PH: (918) 587-4630  
www.btgrp.com



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DRAWN BY: SM	CHECKED BY: FWP	APPROVED BY: RMC
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RFDS REV #: 2.0

**CONSTRUCTION DOCUMENTS**

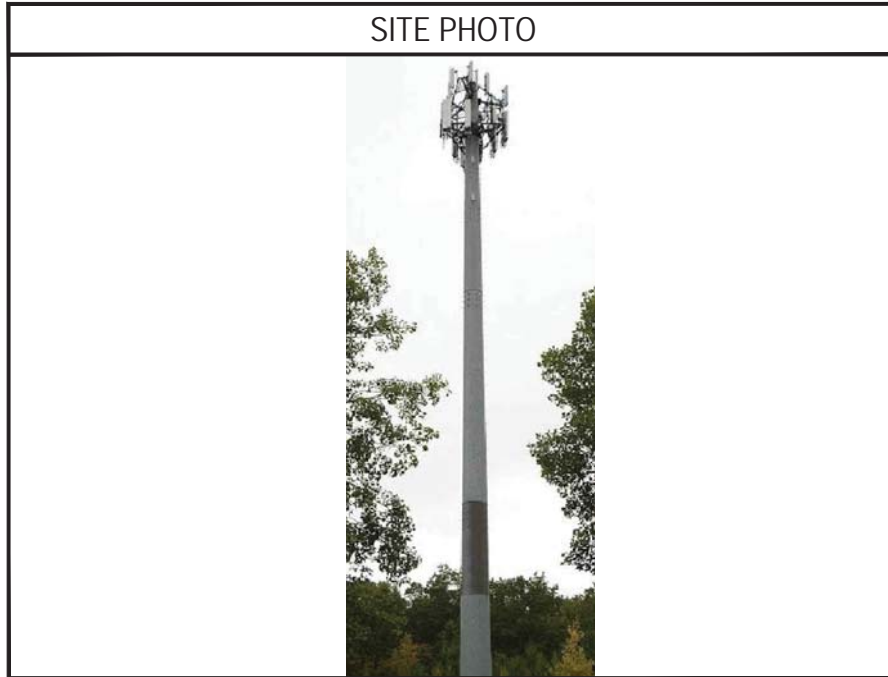
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A&E PROJECT NUMBER  
**149457.001.01**

DISH Wireless L.L.C.  
PROJECT INFORMATION  
**BOBOS00053A**  
**5 EXETER DR**  
**(AKA 7 EXETER DR - TOWER)**  
**STERLING, CT 06377**

SHEET TITLE  
**TITLE SHEET**

SHEET NUMBER  
**T-1**



**UNDERGROUND SERVICE ALERT CBYD 811**  
**UTILITY NOTIFICATION CENTER OF CONNECTICUT**  
(800) 922-4455  
**WWW.CBYD.COM**

CALL 2 WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTION

**GENERAL NOTES**

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE, NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

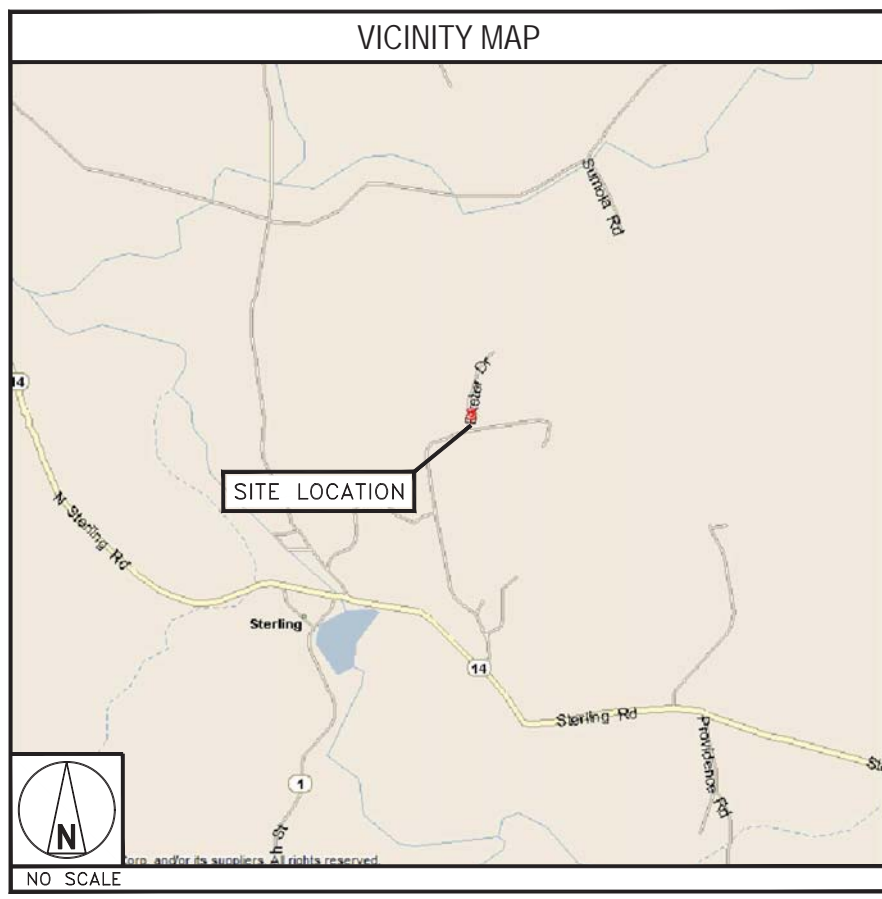
**11"x17" PLOT WILL BE HALF SCALE UNLESS OTHERWISE NOTED**

CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON THE JOB SITE, AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.

**DIRECTIONS**

DIRECTIONS FROM SOUTHBRIDGE MUNICIPAL AIRPORT:

TAKE CLEMENCE HILL RD TO CENTRAL ST, HEAD SOUTH ON CLEMENCE HILL RD TOWARD AIRPORT ACCESS RD. CONTINUE ONTO PAIGE HILL RD, SLIGHT LEFT ONTO TWINE HURST PL, TAKE MA-131, CT-131 E/QUINEBAUG RD, I-395 S AND CT-14 E TO MAIN ST IN STERLING. TURN RIGHT ONTO CENTRAL ST, CONTINUE STRAIGHT ONTO FOSTER ST. TURN LEFT ONTO NORTH ST, TURN RIGHT ONTO CRYSTAL ST. AT THE ROUNDABOUT, TAKE THE 2ND EXIT ONTO MA-131/E MAIN ST. CONTINUE ONTO CT-131 E/QUINEBAUG RD, CONTINUE STRAIGHT ONTO CT-12 S, SLIGHT LEFT ONTO BUCKLEY HILL RD. SLIGHT LEFT ONTO CT-200 E, TURN RIGHT TO MERGE WITH I-395 S TOWARD NORWICH, TAKE EXIT 32 TO MERGE WITH CT-14 E, DRIVE TO INDUSTRIAL PARK RD. TURN LEFT ONTO MAIN ST, TURN RIGHT ONTO INDUSTRIAL PARK RD, ARRIVE AT BOBOS00053A.



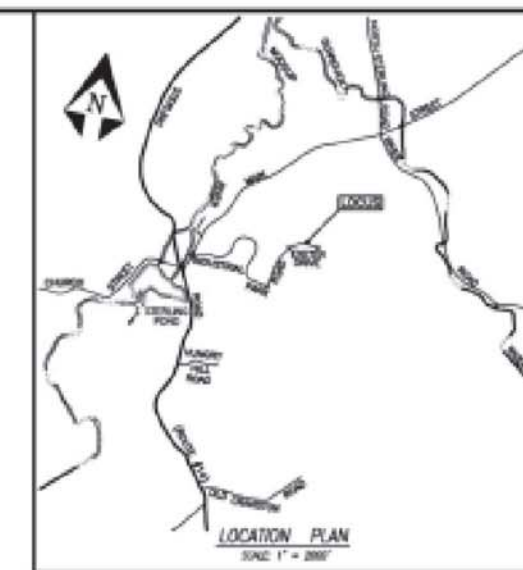
**CONNECTICUT CODE OF COMPLIANCE**

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES

CODE TYPE	CODE
BUILDING	2021 IBC
MECHANICAL	2021 IMC
ELECTRICAL	2020 NEC

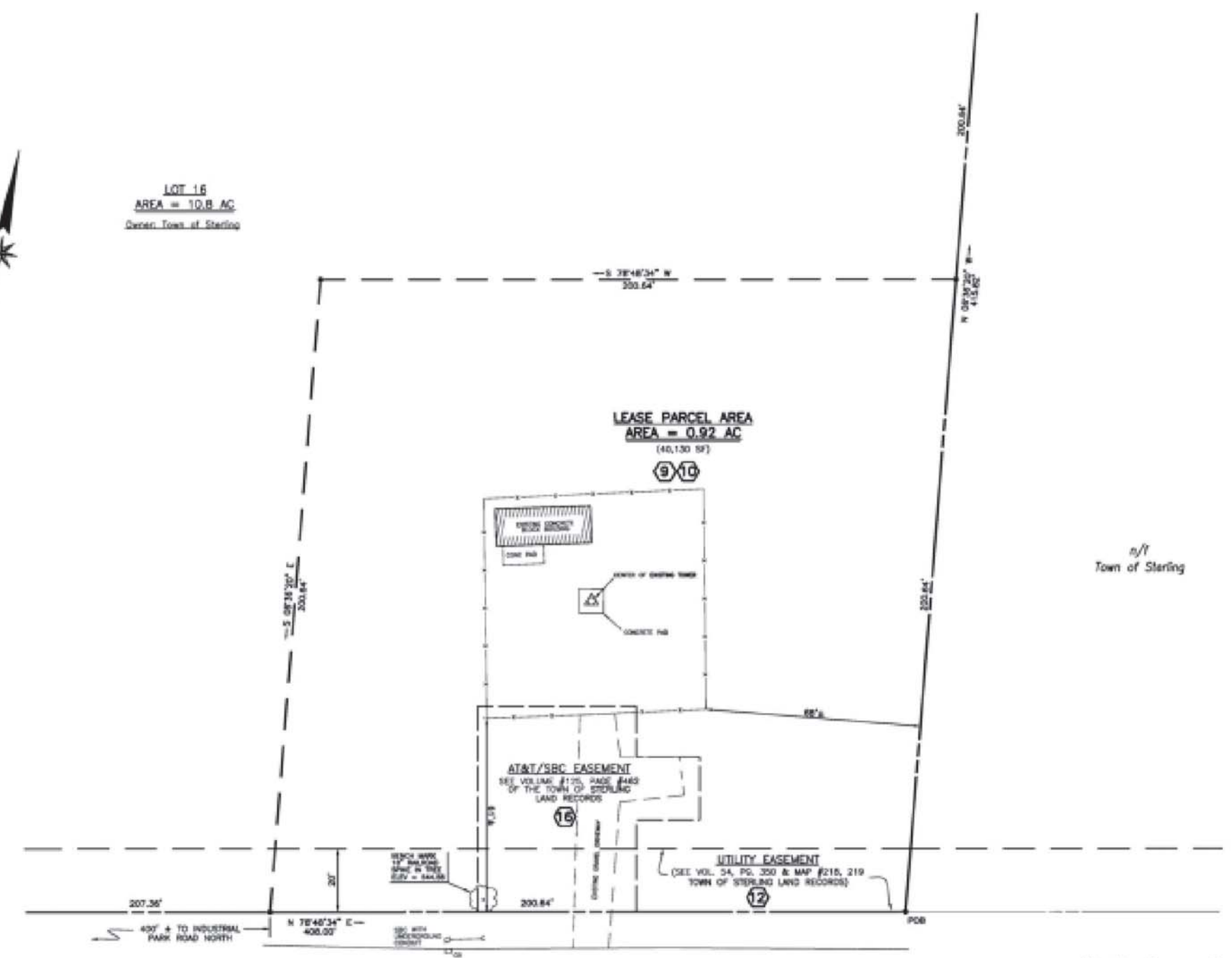
**SHEET INDEX**

SHEET NO.	SHEET TITLE
T-1	TITLE SHEET
LS1	SITE SURVEY
A-1	OVERALL AND ENLARGED SITE PLAN
A-2	ELEVATION, ANTENNA LAYOUT AND SCHEDULE
A-3	EQUIPMENT PLATFORM AND H-FRAME DETAILS
A-4	EQUIPMENT DETAILS
A-5	EQUIPMENT DETAILS
A-6	EQUIPMENT DETAILS
E-1	ELECTRICAL/FIBER ROUTE PLAN AND NOTES
E-2	ELECTRICAL DETAILS
E-3	ELECTRICAL ONE-LINE, FAULT CALCS & PANEL SCHEDULE
G-1	GROUNDING PLANS AND NOTES
G-2	GROUNDING DETAILS
G-3	GROUNDING DETAILS
RF-1	RF CABLE COLOR CODE
GN-1	LEGEND AND ABBREVIATIONS
GN-2	RF SIGNAGE
GN-3	GENERAL NOTES
GN-4	GENERAL NOTES
GN-5	GENERAL NOTES



LOT 16  
AREA = 10.8 AC  
Owner: Town of Sterling

LEGAL DESCRIPTION  
(PENDING FINAL APPROVAL)



n/y  
Town of Sterling

**GEOGRAPHIC COORDINATES**  
LAT 41°42'55.57" N  
LONG 71°45'21.85" W  
**ELEVATIONS**  
BASE TOWER GROUND 544' ± AMSL  
**HEIGHTS**  
TOP OF TOWER 143' ± AGL  
TOP OF HIGHEST APPURTENANCE 145' ± AGL  
**HORIZONTAL DATUM NAD 27**  
**VERTICAL DATUM NAVD 29**

**NOTES:**

- This survey has been prepared pursuant to the Regulations of Connecticut State Agencies Sections 20-300b-1 through 20-300b-20 and the "Standards for Surveys and Maps in the State of Connecticut" as adopted by the Connecticut Association of Land Surveyors, Inc. on September 26, 1998.  
- Lease and easement lines conform to a Class "A-2" horizontal accuracy. All other boundary lines conform to a Class "D" horizontal accuracy and were compiled from limited field surveys, other maps, record research or other sources of information, not to be construed as having been obtained as the result of a complete field survey, and subject to such change as an accurate field survey may disclose. This survey does not represent a property boundary opinion.  
- Survey Type: Improvement Location Survey.
- Owner: Town of Sterling
- Parcel is shown as Lot P #16, Block #17, on Assessor's Tax Map #3042.
- The lease area is located within Flood Hazard Zone "C" on FIRM Flood Insurance Rate Map #060118 0008 B, Effective Date March 4, 1995.

- MAP REFERENCES:**
- Town of Sterling Industrial Park - Re-subdivision Plan - International Process Systems, Inc. - Eastern of Exeter Drive - Sterling Industrial Park - Sterling, Connecticut - Scale: 1" = 60' - Dated February 18, 1995 - Prepared by KWP Associates
  - MCF Communications, Inc. - Site Name: Sterling - Site Address: Exeter Drive - Sterling, Connecticut - 06377 - Windham County - Scale: 1" = 60' - Dated March 14, 2008 - Prepared by Clough Harbour & Associates LLP
  - Boundary Survey - Property to be Leased to MCF Communications - Exeter Drive - Town of Sterling, Connecticut - Scale: 1" = 40' - Dated April 18, 2008 - Prepared by CIA Engineers, Inc.
  - Completion Plan Map Showing Easement to be Granted to Southern New England Telephone Company S/BA AT&T Across the Property of Town of Sterling - Exeter Drive - Sterling, Connecticut - Scale: 1" = 30' - Dated March 25, 2008 - Prepared by Clough Harbour & Associates LLP

- PLATTABLE SCHEDULE B - SECTION 2 EXCEPTION ITEMS**
- 9 Notice of Lease of the Town of Sterling ("Lessor") to MCF Communications, Inc. ("Lessee") dated June 13, 2006 and recorded June 13, 2006 in Volume 115 Page 862 of the Sterling Land Records.
  - 10 Memorandum of Tower Sublease Agreement between MCF Communications, Inc. ("Sublessor") and Celco Partnership d/b/a Verizon Wireless ("Sublessee") dated September 18, 2007 and recorded November 29, 2007 in Volume 123 Page 812 of the Sterling Land Records.
  - 12 Electric Distribution Easement in favor of the Connecticut Light and Power Company dated October 25, 1987 and recorded in Volume 54 Page 350 of the Sterling Land Records.
  - 16 Telephone Distribution Easement from the Town of Sterling ("Landlord") and MCF Communications, Inc. to the Southern New England Telephone Company dated June 8, 2008 and recorded July 17, 2008 in Volume 125 at Page 462 of the Sterling Land Records.

**LEGEND**

●	IRON PIN FOUND
○	UTILITY POLE
□	EXISTING CATCH BASIN
—	CHAIN LINK FENCE
⑨	SCHEDULE B - SECTION 2 EXCEPTION ITEM NUMBERS



I hereby certify to SBA Towers II, LLC, a Florida Limited Liability Company, Seidman, Prewitt & DeBelo, P.A. and Lawyers Title Insurance Corporation, the following:

This surveyor has received and reviewed that certain Title Commitment No. 05-020992/71394787 issued by Lawyers Title Insurance Corporation with an effective date of September 2, 2008, which proposes to insure the lands described under its Schedule A.

To the best of this surveyor's knowledge and belief, the lands described under said Schedule A of the Title Commitment contain or include the lands described in and depicted on this survey.

To the best of this surveyor's knowledge and belief, the easements of record and identified under Schedule B-2 of said Title Commitment encumber the lands described on this survey, but said easements will not interfere with the location of the proposed insured lands, including the leased area and any and all access, utility and guy wire easement parcels (except as shown).

BRUCE D. WOODS, CIVIL L.S. #13646  
No certification is expressed or implied unless this map bears the embossed seal of the land surveyor whose signature appears herein.

**DRAFT COPY**  
FOR REVIEW PURPOSES  
SUBJECT TO FINAL REVISIONS  
**SEPT 30, 2008**

*As-built Plan*  
*Improvement Location Survey*  
*Prepared For*  
**SBA TOWERS II, LLC**  
*EXETER DRIVE*  
*STERLING, CONNECTICUT*

**KWP associates**  
SURVEYING - ENGINEERING - SITE PLANNING  
250 Ridgely Road  
Punahoa Center, CT 06259-0108  
(860) 822-1321

SCALE: 1" = 20'  
DATE: 8/30/2008  
SHEET: 1 OF 1  
REV # DISTS FB: 305  
Dwn: JES Cdn: AMW



NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED UNDERGROUND UTILITY CONDUIT ROUTE.
2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. CONTRACTOR SHALL MAINTAIN A 10'-0" MINIMUM SEPARATION BETWEEN THE PROPOSED GPS UNIT, TRANSMITTING ANTENNAS AND EXISTING GPS UNITS.
3. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.



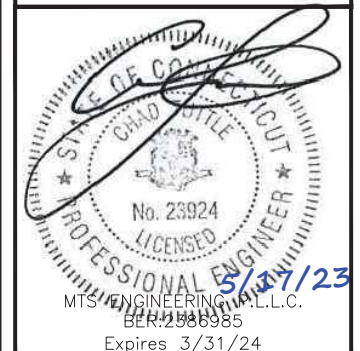
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RFDS REV #: 2.0

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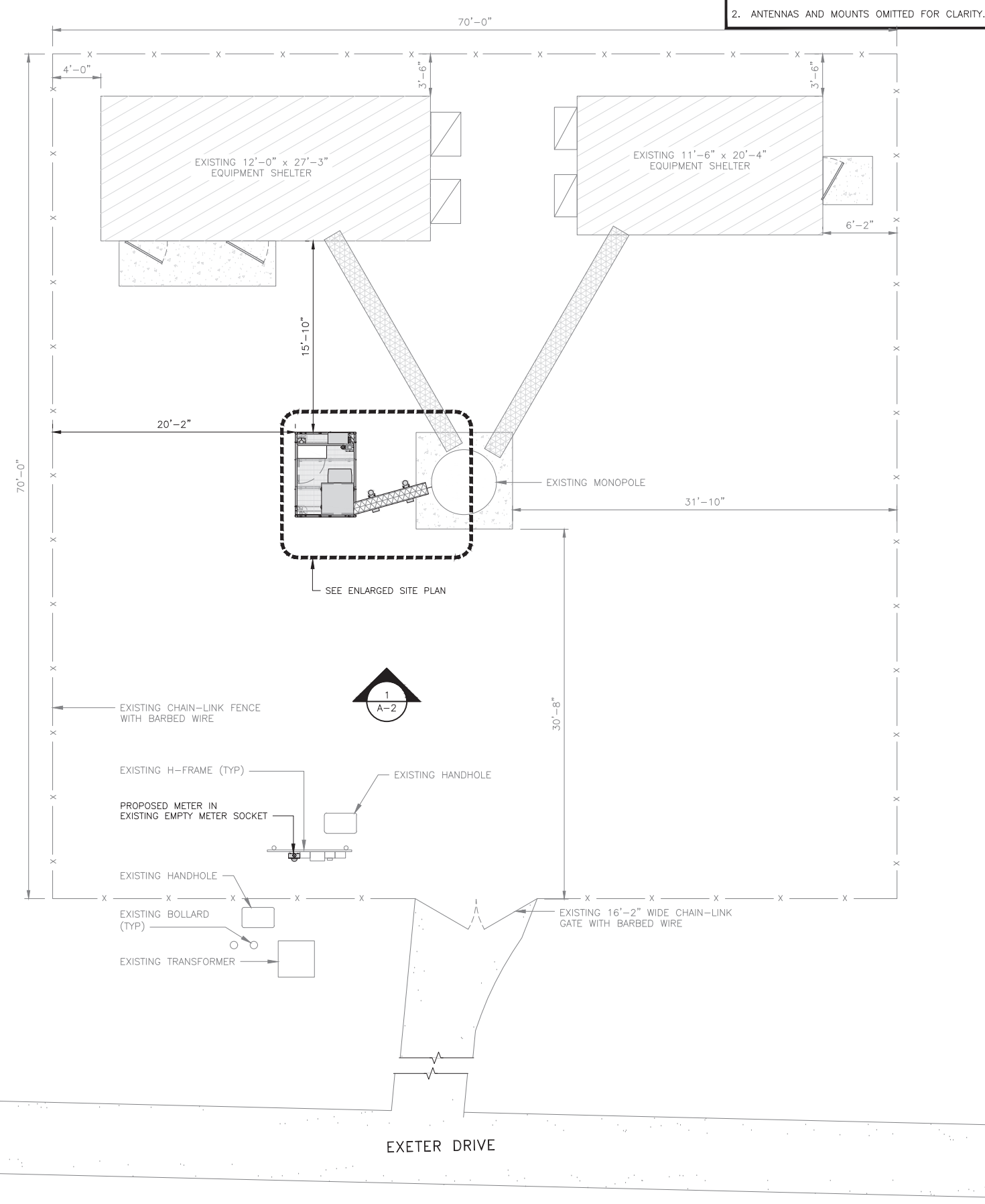
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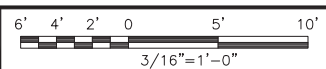
DISH Wireless L.L.C.  
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BOBOS00053A  
5 EXETER DR  
(AKA 7 EXETER DR - TOWER)  
STERLING, CT 06377

SHEET TITLE  
OVERALL AND ENLARGED  
SITE PLAN

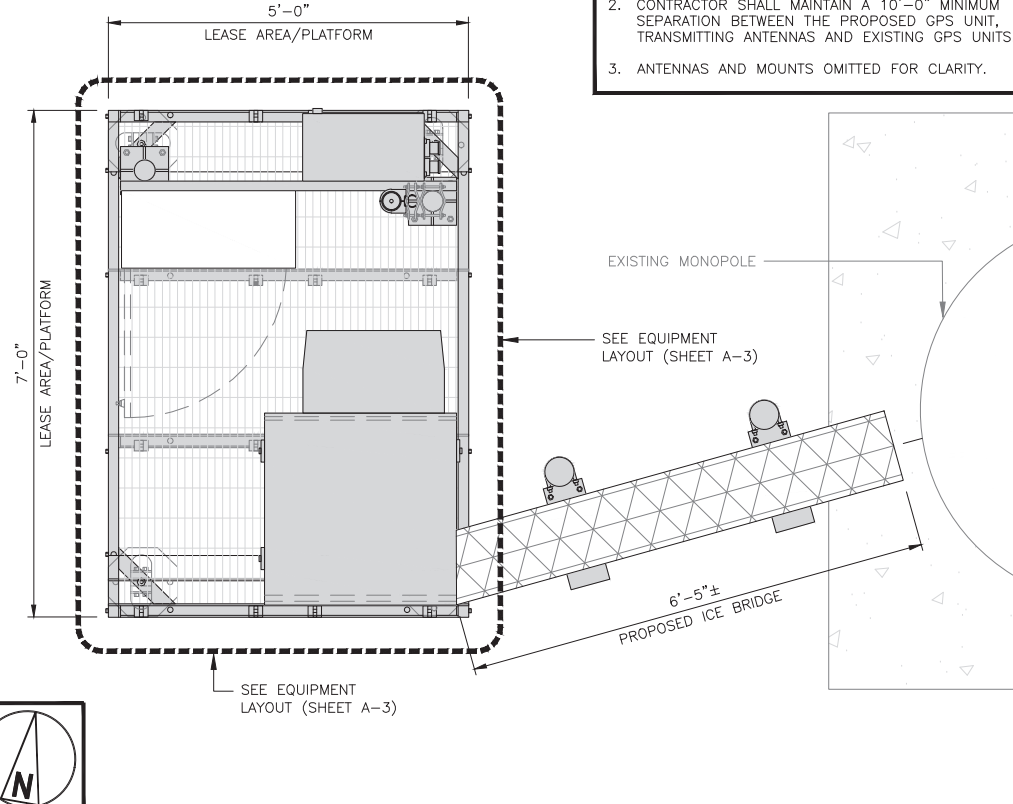
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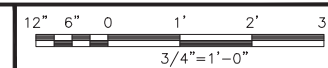
OVERALL SITE PLAN



1



ENLARGED SITE PLAN



2

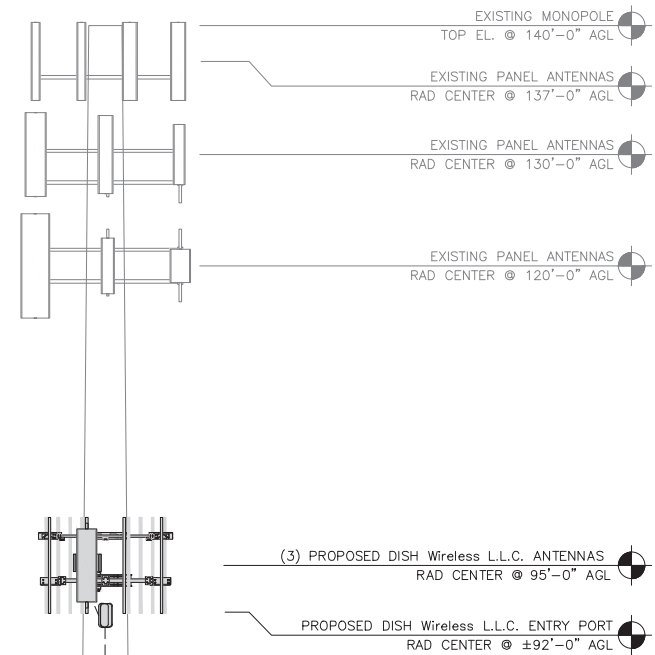
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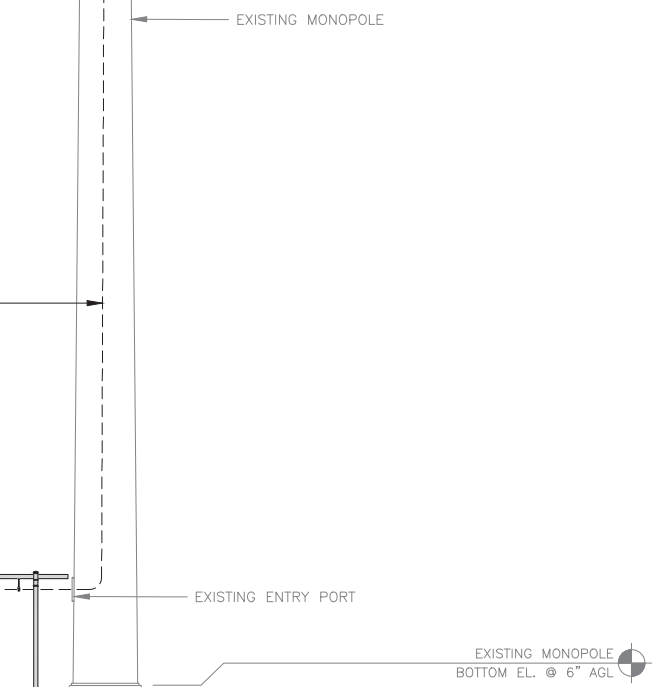
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**NOTES**

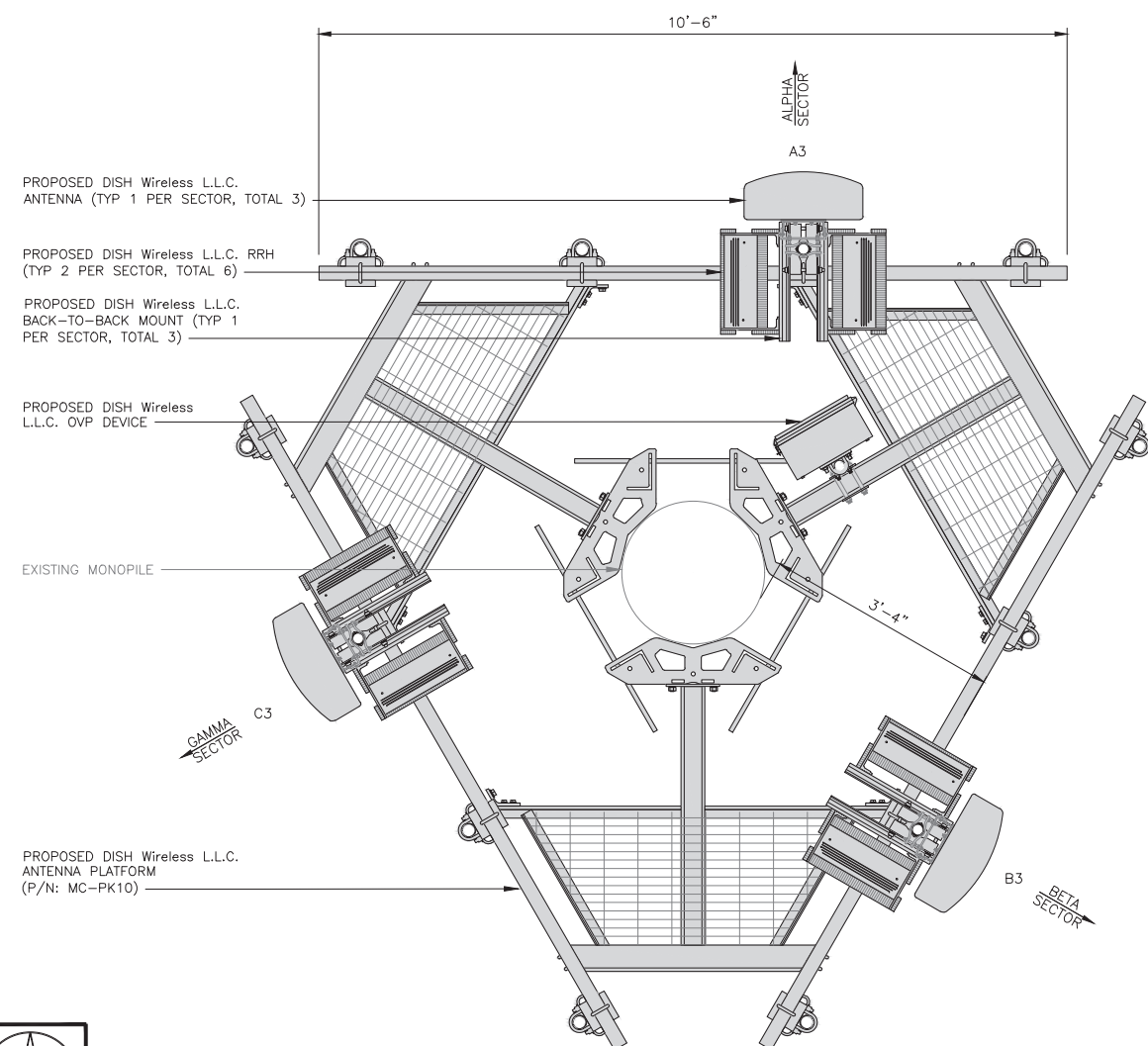
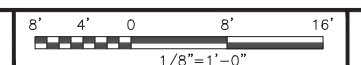
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNA AND MW DISH SPECIFICATIONS REFER TO ANTENNA SCHEDULE AND TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS
3. EXISTING EQUIPMENT AND FENCE OMITTED FOR CLARITY.



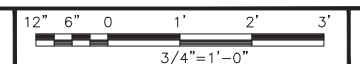
- (1) PROPOSED DISH Wireless L.L.C. HYBRID CABLE ROUTED INSIDE POLE
- PROPOSED DISH Wireless L.L.C. ICE BRIDGE
- HYBRID CABLE DRIP LOOP
- PROPOSED DISH Wireless L.L.C. GPS UNIT
- PROPOSED DISH Wireless L.L.C. EQUIPMENT ON PROPOSED STEEL PLATFORM



**PROPOSED SOUTH ELEVATION**



**ANTENNA LAYOUT**



SECTOR POS.	ANTENNA					TRANSMISSION CABLE	RRH			OVP
	EXISTING OR PROPOSED	MANUFACTURER - MODEL NUMBER	TECH	AZIMUTH	RAD CENTER		FEED LINE TYPE AND LENGTH	MANUFACTURER - MODEL NUMBER	TECH	
A1	--	--	--	--	--	(1) HIGH-CAPACITY HYBRID CABLE (140' LONG)	FUJITSU - TA08025-B605	5G	A2	RAYCAP RDIDC-9181-PF-48
A2	PROPOSED	COMMSCOPE - FFV-65B-R2	5G	0°	95'-0"		FUJITSU - TA08025-B604	5G	A2	
A3	--	--	--	--	--		--	--	--	
B1	--	--	--	--	--	SHARED W/ALPHA	FUJITSU - TA08025-B605	5G	B2	SHARED W/ALPHA
B2	PROPOSED	COMMSCOPE - FFV-65B-R2	5G	120°	95'-0"		FUJITSU - TA08025-B604	5G	B2	
B3	--	--	--	--	--		--	--	--	
C1	--	--	--	--	--	SHARED W/ALPHA	FUJITSU - TA08025-B605	5G	C2	SHARED W/ALPHA
C2	PROPOSED	COMMSCOPE - FFV-65B-R2	5G	240°	95'-0"		FUJITSU - TA08025-B604	5G	C2	
C3	--	--	--	--	--		--	--	--	

- NOTES**
1. CONTRACTOR TO REFER TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS.
  2. ANTENNA AND RRH MODELS MAY CHANGE DUE TO EQUIPMENT AVAILABILITY. ALL EQUIPMENT CHANGES MUST BE APPROVED AND REMAIN IN COMPLIANCE WITH THE PROPOSED DESIGN AND STRUCTURAL ANALYSES.

**ANTENNA SCHEDULE**

NO SCALE 3



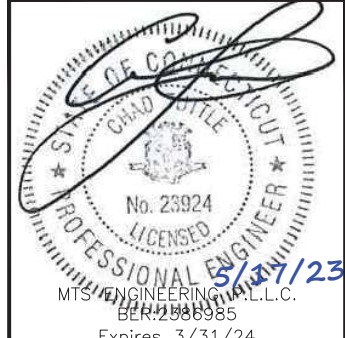
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SM	FWP	RMC

RFDS REV #: 2.0

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**5 EXETER DR**  
(AKA 7 EXETER DR - TOWER)  
STERLING, CT 06377

SHEET TITLE  
**ELEVATION, ANTENNA LAYOUT AND SCHEDULE**

SHEET NUMBER  
**A-2**



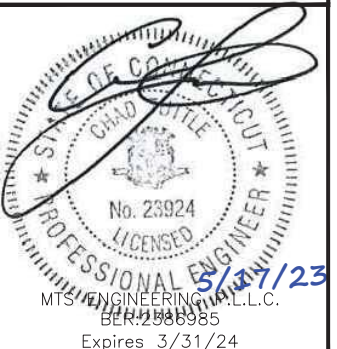
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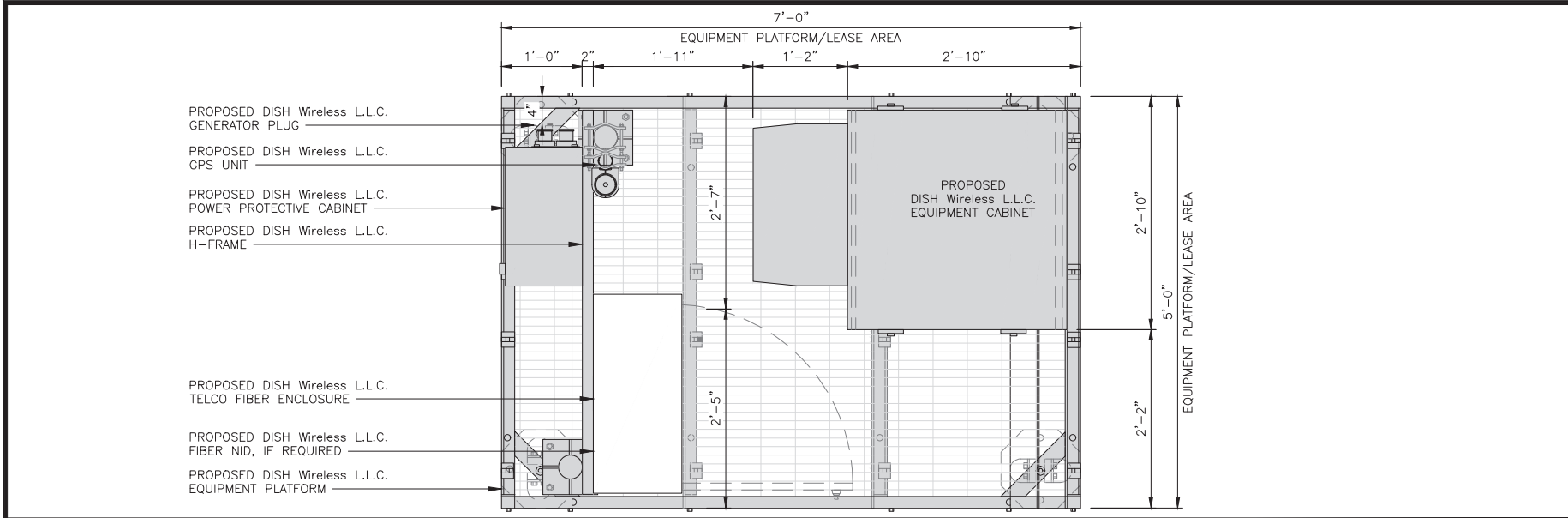
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SHEET TITLE  
**EQUIPMENT PLATFORM AND H-FRAME DETAILS**

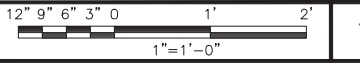
SHEET NUMBER  
**A-3**

**NOTES**

- CONTRACTOR TO BURY PLATFORM FEET WITH A MINIMUM OF 2" OF FILL PER EXISTING SITE SURFACE
- WEED BARRIER FABRIC TO BE ADDED AT DISCRETION OF DISH Wireless L.L.C. CONSTRUCTION MANAGER AT TIME OF CONSTRUCTION. ONE SHEET 8'x8' INSTALLED UNDER ALL FOUR FEET OF THE PLATFORM (4 MIL BLACK PLASTIC)
- EQUIPMENT CABINET OMITTED FOR CLARITY



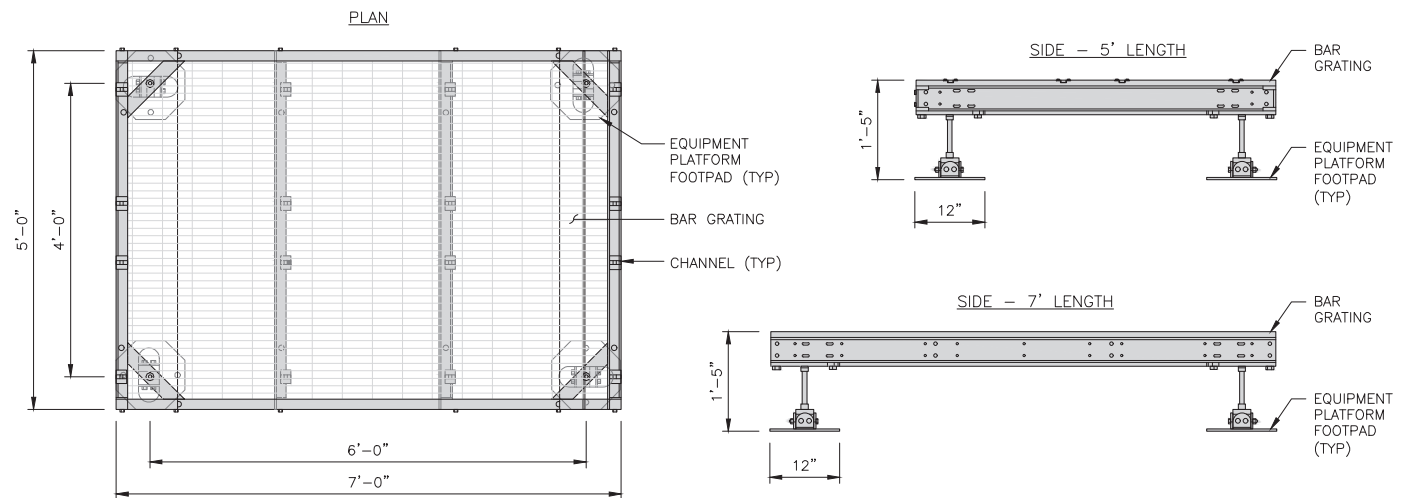
PLATFORM EQUIPMENT PLAN



1

<b>COMMSCOPE MTC4045LP 5X7 PLATFORM</b>	
DIMENSIONS (HxWxD)	16"x84"x60"
TOTAL WEIGHT	423 LBS

NOTE:  
GC TO PROVIDE EXTENDED THREAD FOR PLATFORM IF REQUIRED HEIGHT EXCEEDS 17"



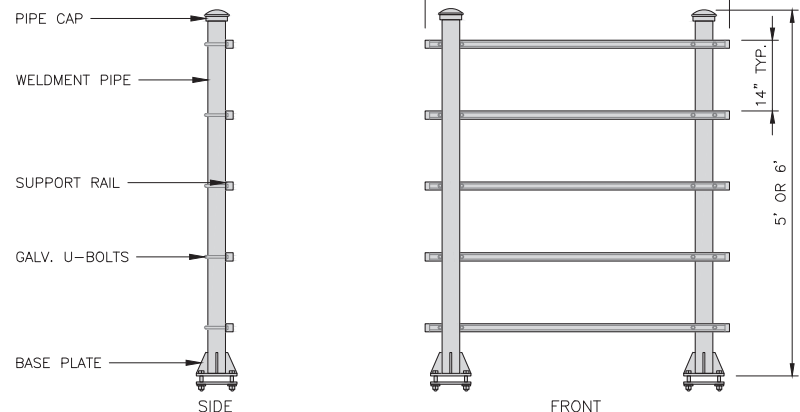
PLATFORM DETAIL

NO SCALE

2

<b>COMMSCOPE MTC4045HFLD H-FRAME</b>	
UNISTRUT/SUPPORT RAILS QTY	5
WEIGHT	59.74 lbs

NOTE:  
OR DISH Wireless L.L.C. APPROVED EQUIVALENT



H-FRAME DETAIL

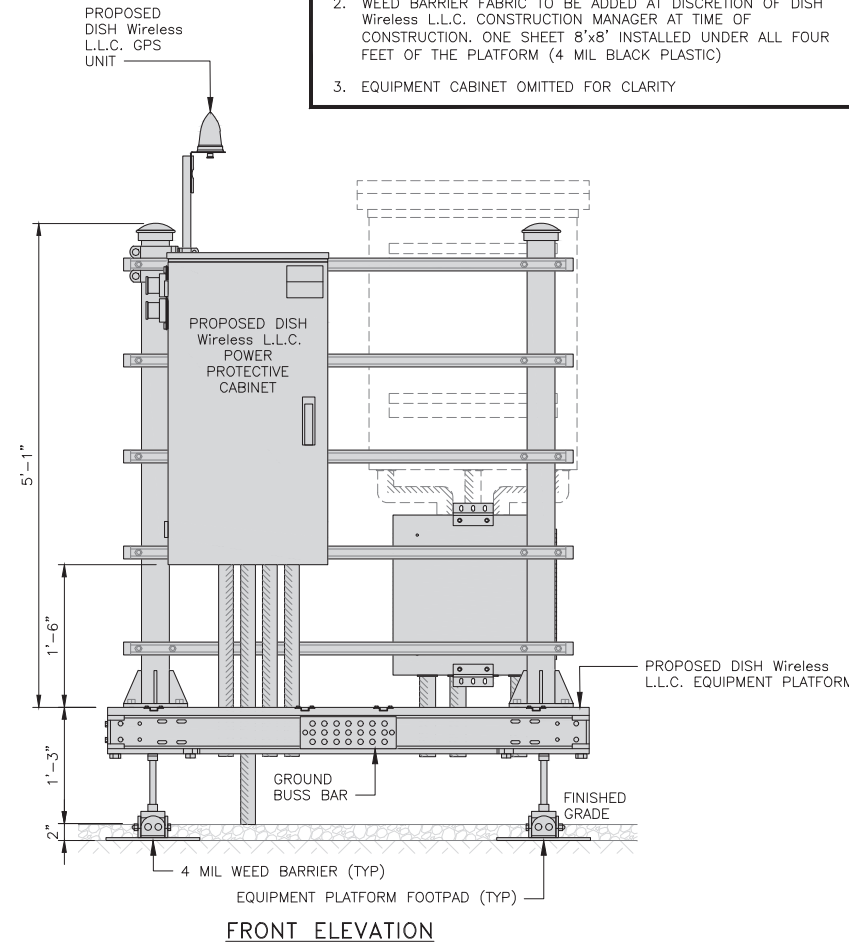
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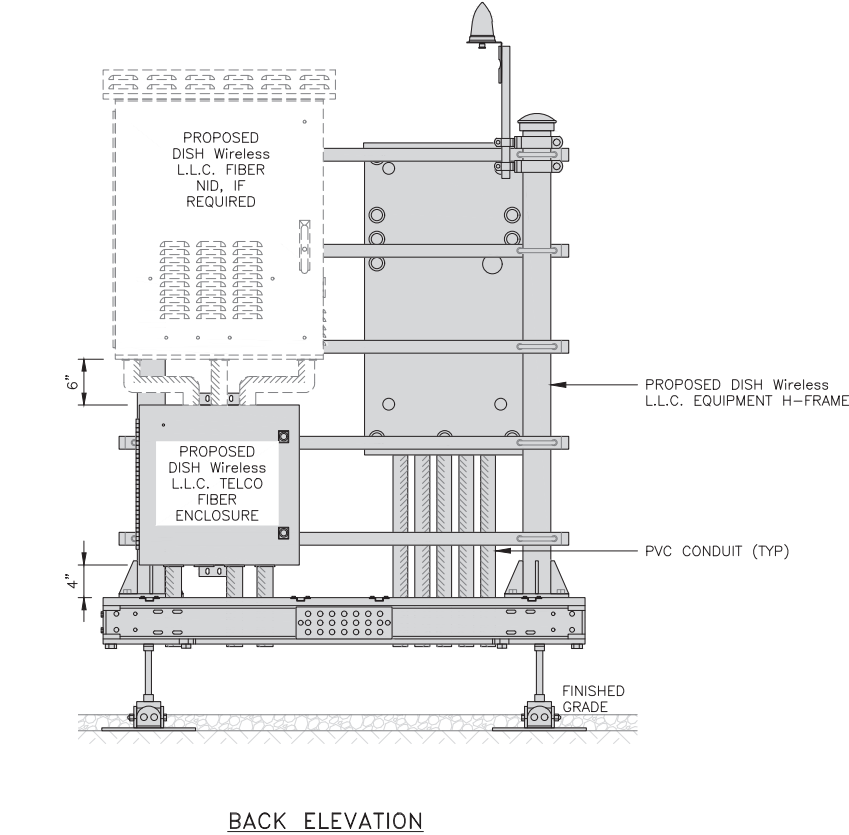
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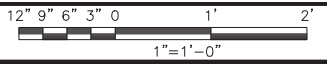


FRONT ELEVATION



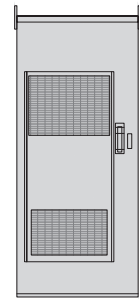
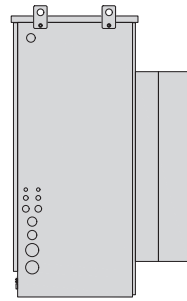
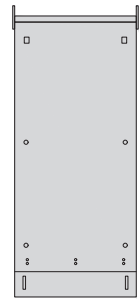
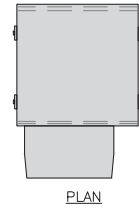
BACK ELEVATION

H-FRAME EQUIPMENT ELEVATION



5

CHARLES INDUSTRY HEX CUBE-PM639155N4	
DIMENSIONS (HxWxD)	74"x32"x32"
POWER PLANT	-48VDC ABB/600W
TOTAL WEIGHT (EMPTY)	408 lbs



BACK

SIDE

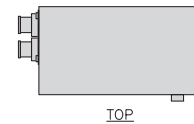
FRONT

CABINET DETAIL

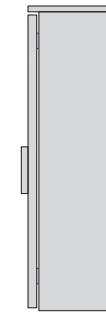
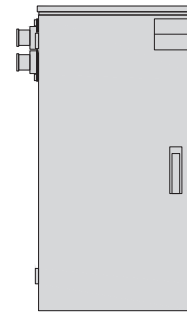
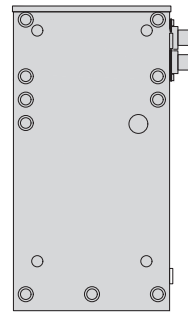
NO SCALE

1

RAYCAP PPC RDIAC-2465-P-240-MTS	
ENCLOSURE DIMENSIONS (HxWxD):	39"x22.855"x12.593
WEIGHT:	80 lbs
OPERATING AC VOLTAGE	240/120 1 PHASE 3W+G



TOP



BACK

SIDE

FRONT

SIDE

POWER PROTECTION CABINET (PPC) DETAIL

NO SCALE

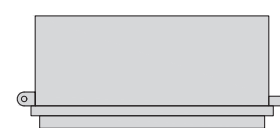
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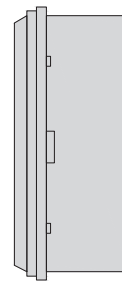
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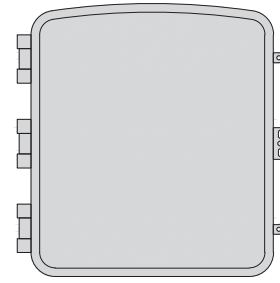
CIENA 3931 FIBER NID ENCLOSURE	
DIMENSIONS (HxWxD)	17"x16.8"x7"
WEIGHT	28.6 lbs



TOP



SIDE



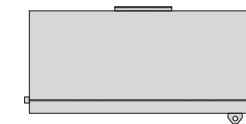
FRONT

FIBER NID ENCLOSURE DETAIL

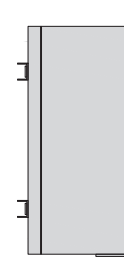
NO SCALE

5

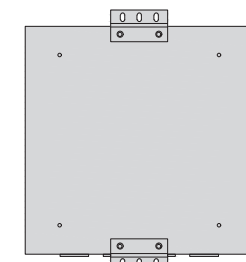
CHARLES CFIT-PF2020DSH1 FIBER TELCO ENCLOSURE	
ENCLOSURE DIMS (HxWxD)	20"x20"x9"
ENCLOSURE WEIGHT	20 lbs
MOUNTING	WALL
COMPLIANCE	TYPE 4



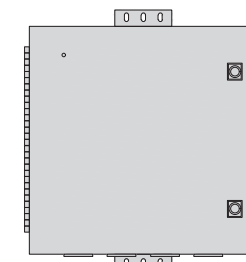
FRONT



SIDE



BACK



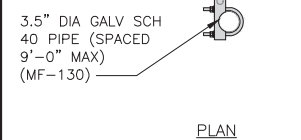
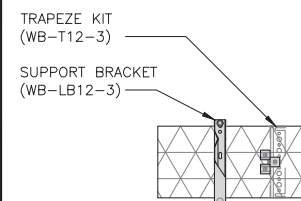
FRONT

FIBER TELCO ENCLOSURE DETAIL

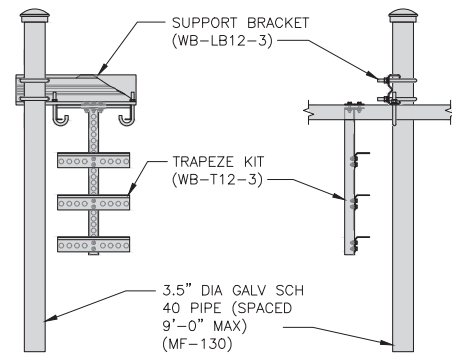
NO SCALE

6

COMMSCOPE WB-K110-B WAVEGUIDE BRIDGE KIT		INCLUDED PRODUCTS: WB-T12-3 TRAPEZE KIT, 3 RUNGS WB-LB12-3 SUPPORT BRACKET MF-130 DIRECT BURIAL PIPE COLUMN, 13'-4"
DIMENSIONS (HxL)	160"x10"	
WEIGHT/ VOLUME	325.0 LBS	
CABLE RUN (QTY)	12	



PLAN



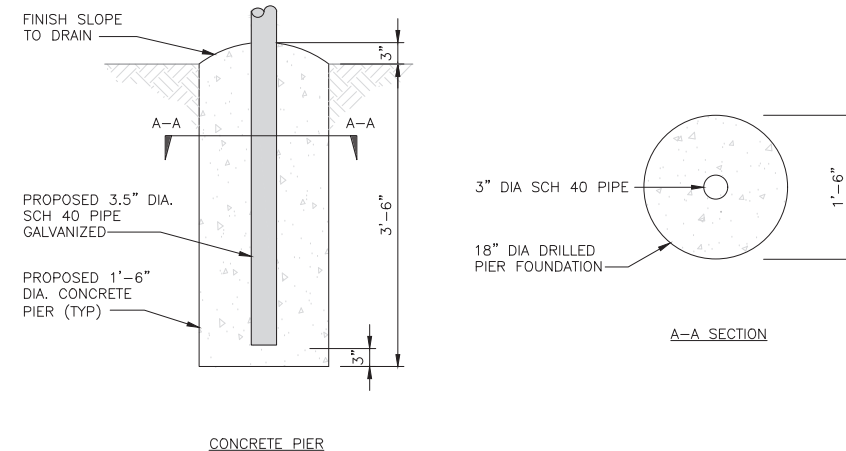
FRONT

SIDE

ICE BRIDGE DETAIL

NO SCALE

7



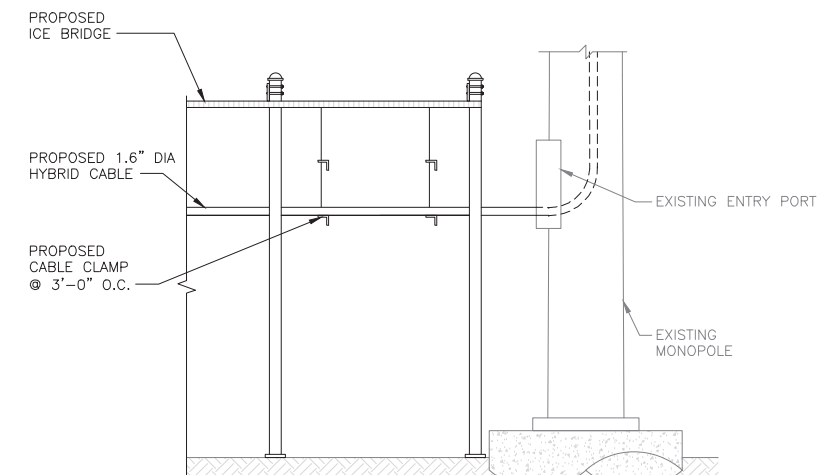
CONCRETE PIER

A-A SECTION

TYPICAL ICE BRIDGE CONCRETE PIER DETAIL

NO SCALE

8



HYBRID CABLE RUN

NO SCALE

9



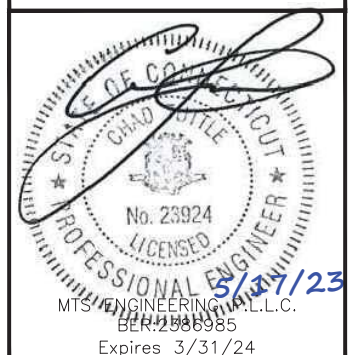
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LITTLETON, CO 80120



8051 CONGRESS AVENUE  
BOCA RATON, FL 33487



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SUITE 300  
TULSA, OK 74119  
PH: (918) 587-4630  
www.blgrp.com



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SM	FWP	RMC

RFDS REV #: 2.0

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A&E PROJECT NUMBER  
149457.001.01

DISH Wireless L.L.C.  
PROJECT INFORMATION  
BOBOS00053A  
5 EXETER DR  
(AKA 7 EXETER DR - TOWER)  
STERLING, CT 06377

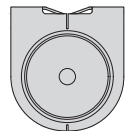
SHEET TITLE  
EQUIPMENT DETAILS

SHEET NUMBER

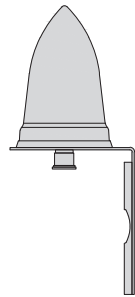
A-4



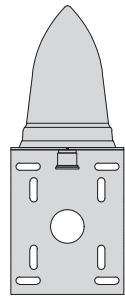
PCTEL GPSGL-TMG-SPI-40NCB	
DIMENSIONS (DIAxH) MM/INCH	81x184mm 3.2"x7.25"
WEIGHT W/ACCESSORIES	075 lbs
CONNECTOR	N-FEMALE
FREQUENCY RANGE	1590 ± 30MHz



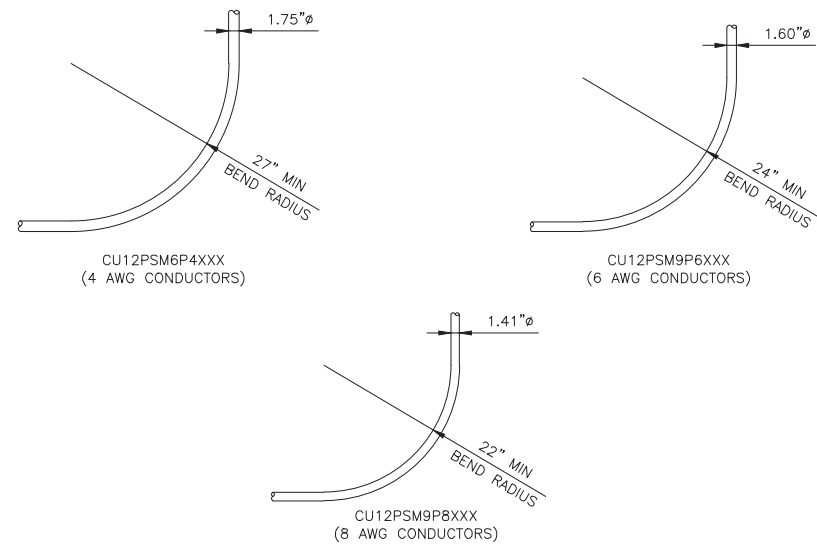
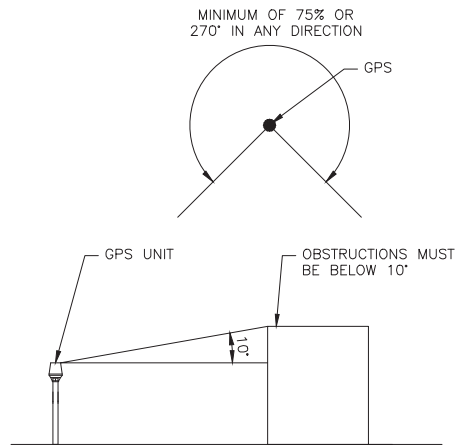
TOP



BACK



SIDE



GPS DETAIL

NO SCALE

1

GPS MINIMUM SKY VIEW REQUIREMENTS

NO SCALE

2

CABLES UNLIMITED HYBRID CABLE  
MINIMUM BEND RADIUSES

NO SCALE

3

NOT USED

NO SCALE

4

NOT USED

NO SCALE

5

NOT USED

NO SCALE

6

NOT USED

NO SCALE

7

NOT USED

NO SCALE

8

NOT USED

NO SCALE

9

**dish**  
wireless.

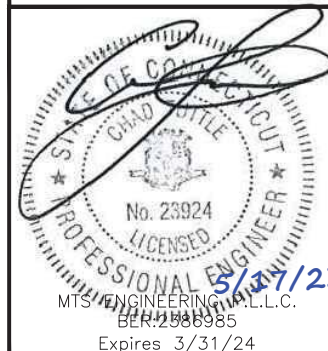
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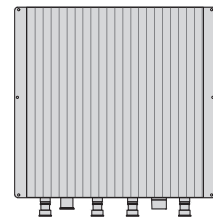
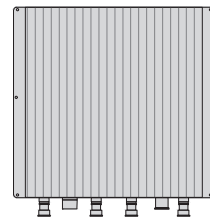
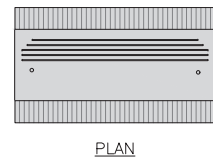
A&E PROJECT NUMBER  
149457.001.01

DISH Wireless L.L.C.  
PROJECT INFORMATION  
BOBOS00053A  
5 EXETER DR  
(AKA 7 EXETER DR - TOWER)  
STERLING, CT 06377

SHEET TITLE  
EQUIPMENT DETAILS

SHEET NUMBER  
**A-5**

FUJITSU TRIPLE BAND TA08025-B605	
DIMENSIONS (HxWxD)	14.9"x15.7"x9"
WEIGHT	74.95 lbs
CONNECTOR TYPE	4.3-10 RF CONNECTOR
POWER SUPPLY	DC -58~-36V



BACK

SIDE

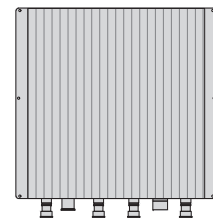
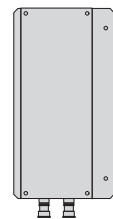
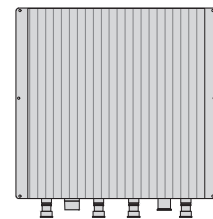
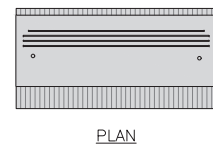
FRONT

RRH DETAIL

NO SCALE

1

FUJITSU DUAL BAND TA08025-B604	
DIMENSIONS (HxWxD)	14.9"x15.7"x7.8"
WEIGHT	63.9 lbs
CONNECTOR TYPE	4.3-10 RF CONNECTOR
POWER SUPPLY	DC -58~-36V



BACK

SIDE

FRONT

RRH DETAIL

NO SCALE

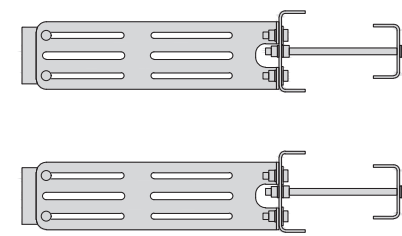
2

COMMSCOPE RR-FA2 LARGE STABILIZER	
DIMENSIONS (HxWxD)	16.4"x8.5"x18"
WEIGHT	39.2 lbs

DESIGN NOTES:  
MOUNT WILL FIT LEGS UP TO:  
- 5.6" ROUND  
- 6.0" 60° ANGLE  
- 4.5" 90° ANGLE



PLAN



SIDE

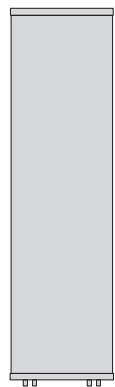
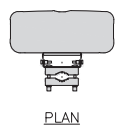
NOTE:  
OR DISH Wireless L.L.C.  
APPROVED EQUIVALENT

RRH MOUNT DETAIL

NO SCALE

3

COMMSCOPE FFV-65B-R2	
DIMENSIONS (HxWxD)(MM/IN)	1828x498x197 72"x19.6"x7.8"
RF CONNECTOR INTERFACE	4.3-10 FEMALE
WEIGHT	70.8 lbs
WEIGHT WITH BRACKETS	98.1 lbs



BACK

SIDE

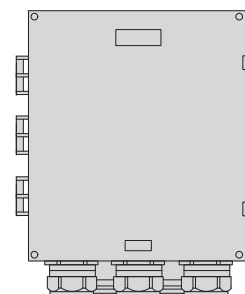
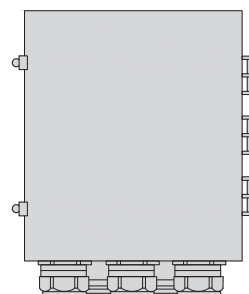
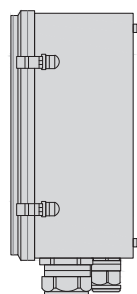
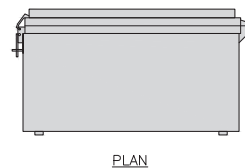
FRONT

ANTENNA DETAIL

NO SCALE

4

RAYCAP RDIC-9181-PF-48 DC SURGE PROTECTION (OVP)	
DIMENSIONS (HxWxD)	18.98"x14.39"x8.15"
WEIGHT	21.82 LBS



SIDE

BACK

FRONT

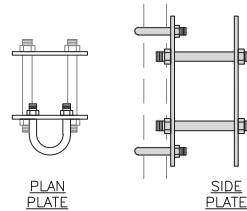
SURGE SUPPRESSION DETAIL (OVP)

NO SCALE

7

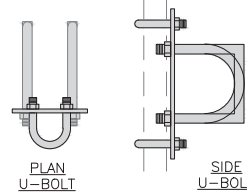
COMMSCOPE XP-2040 CROSSOVER PLATE	
DIMENSIONS (HxW)	10"x12"
WEIGHT	11 lbs

NOTE:  
OR DISH Wireless L.L.C.  
APPROVED EQUIVALENT



PLAN PLATE

SIDE PLATE



PLAN U-BOLT

SIDE U-BOLT

RRH/OVP MOUNT DETAIL

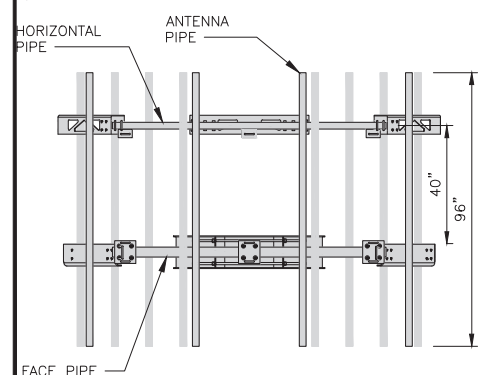
NO SCALE

8

COMMSCOPE MC-PK10-DSH	
FACE WIDTH	126"
WEIGHT	1583 lbs

NOTE:  
OR DISH Wireless L.L.C.  
APPROVED EQUIVALENT

NOTE: 12" TO 50" O.D.

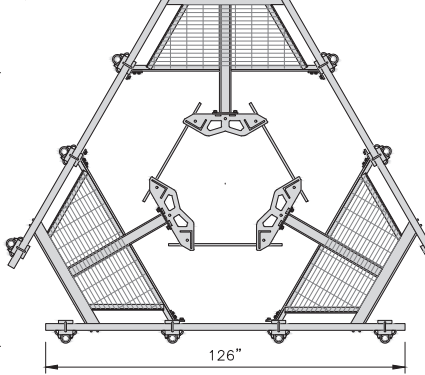


HORIZONTAL PIPE

ANTENNA PIPE

FACE PIPE

40"



126"

ANTENNA PLATFORM DETAIL

NO SCALE

9



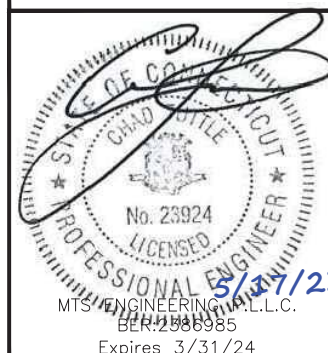
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DISH Wireless L.L.C.  
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BOBOS00053A  
5 EXETER DR  
(AKA 7 EXETER DR - TOWER)  
STERLING, CT 06377

SHEET TITLE  
EQUIPMENT DETAILS

SHEET NUMBER

A-6

**NOTES**

1. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED UNDERGROUND UTILITY CONDUIT ROUTE.
2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.
3. THE GROUND LEASE PROVIDES BROAD/BLANKET UTILITY RIGHTS. "PWR" AND "FBR" PATH DEPICTED ON A-1 AND E-1 ARE BASED ON BEST AVAILABLE INFORMATION INCLUDING BUT NOT LIMITED TO FIELD VERIFICATION, PRIOR PROJECT DOCUMENTATION AND OTHER REAL PROPERTY RIGHTS DOCUMENTS. WHEN INSTALLING THE UTILITIES PLEASE LOCATE AND FOLLOW EXISTING PATH. IF EXISTING PATH IS NOT AN OPTION, PLEASE NOTIFY TOWER OWNER AS FURTHER COORDINATION MAY BE NEEDED.

DC POWER WIRING SHALL BE COLOR CODED AT EACH END FOR IDENTIFYING +24V AND -48V CONDUCTORS. RED MARKINGS SHALL IDENTIFY +24V AND BLUE MARKINGS SHALL IDENTIFY -48V.

1. CONTRACTOR SHALL INSPECT THE EXISTING CONDITIONS PRIOR TO SUBMITTING A BID. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARDS TO THE CONTRACTOR'S FUNCTIONS, THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE PROJECT MANAGER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED.
2. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT NATIONAL ELECTRICAL CODES AND ALL STATE AND LOCAL CODES, LAWS, AND ORDINANCES. PROVIDE ALL COMPONENTS AND WIRING SIZES AS REQUIRED TO MEET NEC STANDARDS.
3. LOCATION OF EQUIPMENT, CONDUIT AND DEVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE COORDINATED WITH FIELD CONDITIONS PRIOR TO CONSTRUCTION.
4. CONDUIT ROUGH-IN SHALL BE COORDINATED WITH THE MECHANICAL EQUIPMENT TO AVOID LOCATION CONFLICTS. VERIFY WITH THE MECHANICAL EQUIPMENT CONTRACTOR AND COMPLY AS REQUIRED.
5. CONTRACTOR SHALL PROVIDE ALL BREAKERS, CONDUITS AND CIRCUITS AS REQUIRED FOR A COMPLETE SYSTEM.
6. CONTRACTOR SHALL PROVIDE PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NEC ARTICLE 314.
7. CONTRACTOR SHALL PROVIDE ALL STRAIN RELIEF AND CABLE SUPPORTS FOR ALL CABLE ASSEMBLIES. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
8. ALL DISCONNECTS AND CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED PHENOLIC NAMEPLATES INDICATING EQUIPMENT CONTROLLED, BRANCH CIRCUITS INSTALLED ON, AND PANEL FIELD LOCATIONS FED FROM.
9. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS PER THE SPECIFICATIONS AND NEC 250. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULL BOXES, AND ALL DISCONNECT SWITCHES, AND EQUIPMENT CABINETS.
10. ALL NEW MATERIAL SHALL HAVE A U.L. LABEL.
11. PANEL SCHEDULE LOADING AND CIRCUIT ARRANGEMENTS REFLECT POST-CONSTRUCTION EQUIPMENT.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR AS-BUILT PANEL SCHEDULE AND SITE DRAWINGS.
13. ALL TRENCHES IN COMPOUND TO BE HAND DUG



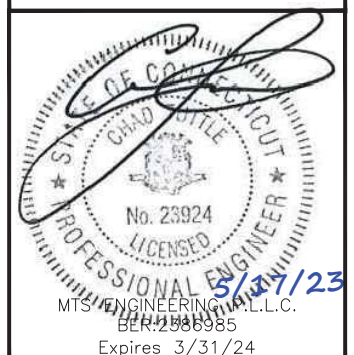
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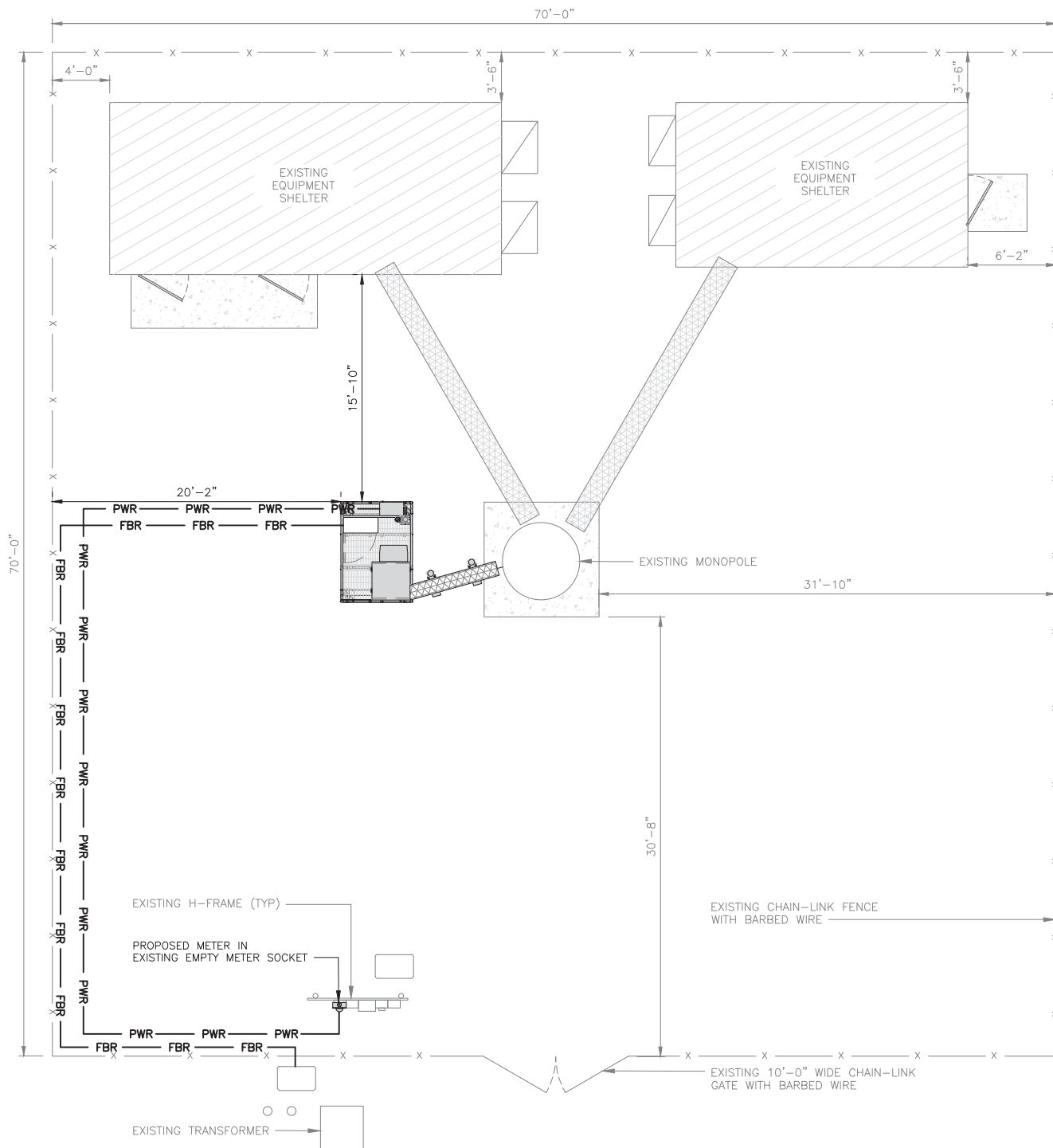
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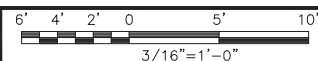
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PROJECT INFORMATION  
**BOBOS00053A**  
**5 EXETER DR**  
(AKA 7 EXETER DR - TOWER)  
STERLING, CT 06377

SHEET TITLE  
**ELECTRICAL/FIBER ROUTE  
PLAN AND NOTES**

SHEET NUMBER  
**E-1**



**UTILITY ROUTE PLAN**



**1**

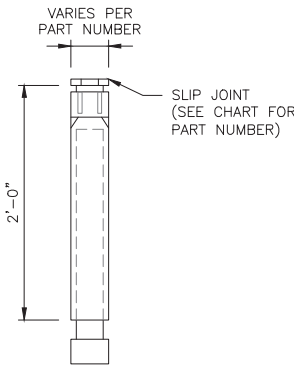
**ELECTRICAL NOTES**

NO SCALE

**2**

**CARLON EXPANSION FITTINGS**

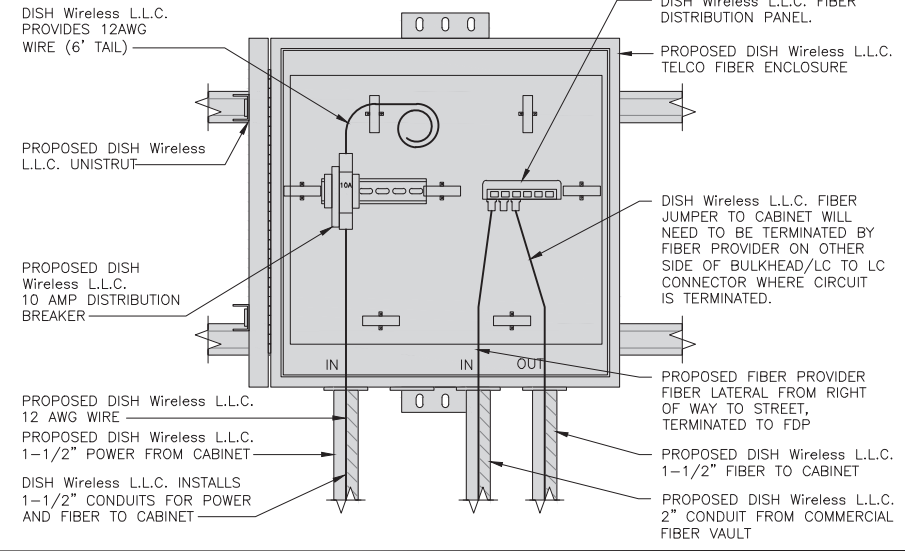
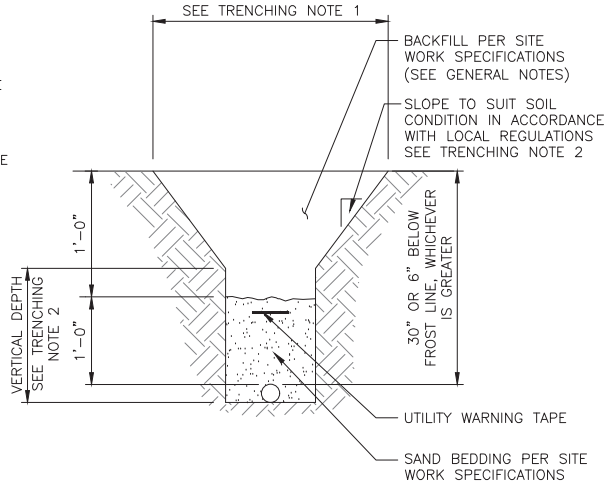
COUPLING END PART#	MALE TERMINAL ADAPTER END PART#	SIZE	STD CTN QTY.	TRAVEL LENGTH
E945D	E945DX	1/2"	20	4"
E945E	E945EX	3/4"	15	4"
E945F	E945FX	1"	10	4"
E945G	E945GX	1 1/4"	5	4"
E945H	E945HX	1 1/2"	5	4"
E945J	E945JX	2"	15	8"
E945K	E945KX	2 1/2"	10	8"
E945L	E945LX	3"	10	8"
E945M	E945MX	3 1/2"	5	8"
E945N	E945NX	4"	5	8"
E945P	E945PX	5"	1	8"
E945R	E945RX	6"	1	8"



NOTE: CONTRACTOR TO INSTALL EXPANSION FITTING SLIP JOINT AT METER CENTER CONDUIT TERMINATION, AS PER LOCAL UTILITY POLICY, ORDINANCE AND/OR SPECIFIED REQUIREMENT.

**TRENCHING NOTES**

- CONTRACTOR SHALL RESTORE THE TRENCH TO ITS ORIGINAL CONDITIONS BY EITHER SEEDING OR SODDING GRASS AREAS, OR REPLACING ASPHALT OR CONCRETE AREAS TO ITS ORIGINAL CROSS SECTION.
- TRENCHING SAFETY; INCLUDING, BUT NOT LIMITED TO SOIL CLASSIFICATION, SLOPING, AND SHORING, SHALL BE GOVERNED BY THE CURRENT OSHA TRENCHING AND EXCAVATION SAFETY STANDARDS.
- ALL CONDUITS SHALL BE INSTALLED IN COMPLIANCE WITH THE CURRENT NATIONAL ELECTRIC CODE (NEC) OR AS REQUIRED BY THE LOCAL JURISDICTION, WHICHEVER IS THE MOST STRINGENT.



EXPANSION JOINT DETAIL

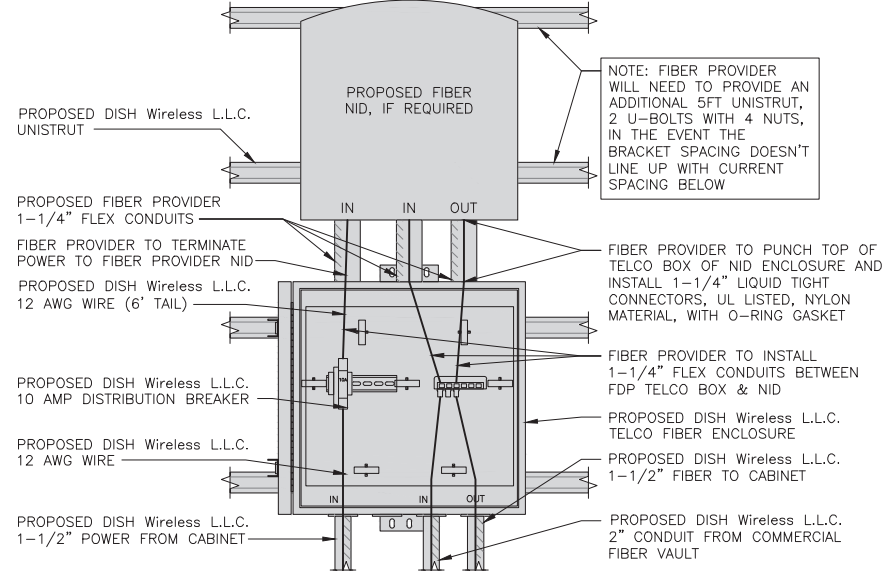
NO SCALE 1

TYPICAL UNDERGROUND TRENCH DETAIL

NO SCALE 2

DARK TELCO BOX – INTERIOR WIRING LAYOUT

NO SCALE 3



NOTE: FIBER PROVIDER WILL NEED TO PROVIDE AN ADDITIONAL 5FT UNISTRUT, 2 U-BOLTS WITH 4 NUTS, IN THE EVENT THE BRACKET SPACING DOESN'T LINE UP WITH CURRENT SPACING BELOW

LIT TELCO BOX – INTERIOR WIRING LAYOUT (OPTIONAL)

NO SCALE 4

NOT USED

NO SCALE 5

NOT USED

NO SCALE 6

NOT USED

NO SCALE 7

NOT USED

NO SCALE 8

NOT USED

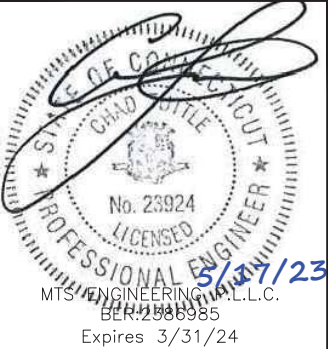
NO SCALE 9



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SM	FWP	RMC
RFDS REV #:	2.0	

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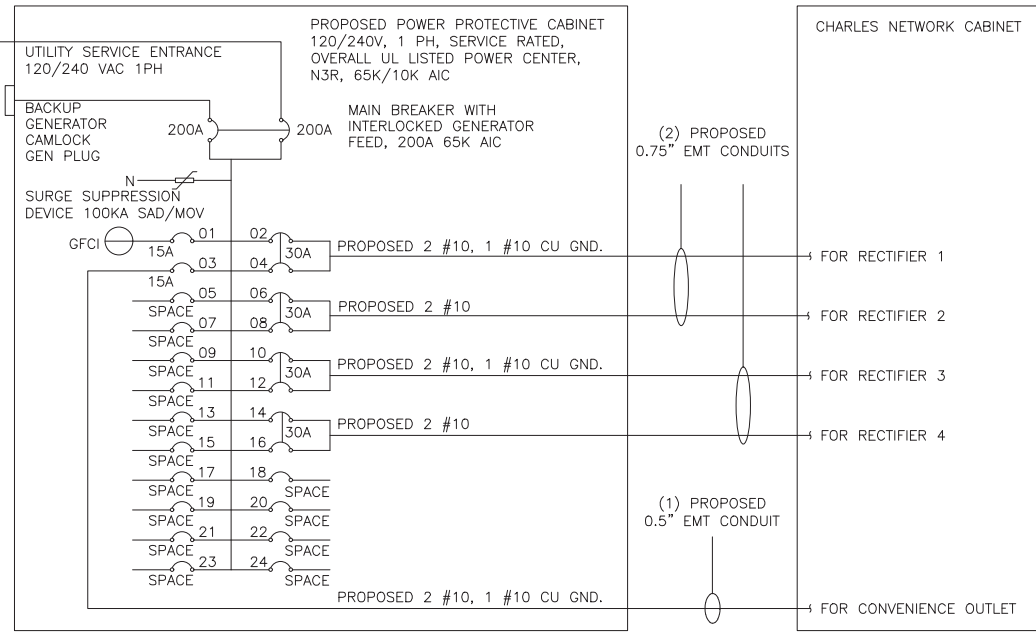
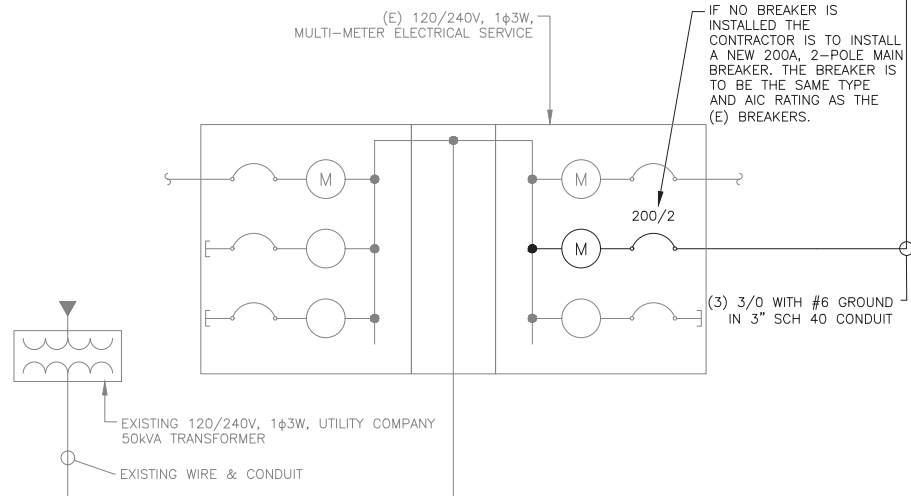
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**149457.001.01**

DISH Wireless L.L.C.  
PROJECT INFORMATION  
**BOBOS00053A**  
5 EXETER DR  
(AKA 7 EXETER DR – TOWER)  
STERLING, CT 06377

SHEET TITLE  
**ELECTRICAL DETAILS**

SHEET NUMBER  
**E-2**





NOTE:  
BRANCH CIRCUIT WIRING SUPPLYING RECTIFIERS ARE TO BE RATED UL1015, 105°C, 600V, AND PVC INSULATED, IN THE SIZES SHOWN IN THE ONE-LINE DIAGRAM. CONTRACTOR MAY SUBSTITUTE UL1015 WIRE FOR THWN-2 FOR CONVENIENCE OUTLET BRANCH CIRCUIT.

BREAKERS REQUIRED:  
(4) 30A, 2P BREAKER - SQUARE D P/N:Q0230  
(1) 15A, 1P BREAKER - SQUARE D P/N:Q0115

PPC ONE-LINE DIAGRAM

NO SCALE 1

PROPOSED CHARLES PANEL SCHEDULE										
LOAD SERVED	VOLT AMPS (WATTS)		TRIP	CKT #	PHASE	CKT #	TRIP	VOLT AMPS (WATTS)		LOAD SERVED
	L1	L2						L1	L2	
PPC GFCI OUTLET	180	180	15A	1	A	2	30A	2880	2880	ABB/GE INFINITY RECTIFIER 1
CHARLES GFCI OUTLET			15A	3	B	4				
-SPACE-				5	A	6	30A	2880	2880	ABB/GE INFINITY RECTIFIER 2
-SPACE-				7	B	8				
-SPACE-				9	A	10	30A	2880	2880	ABB/GE INFINITY RECTIFIER 3
-SPACE-				11	B	12				
-SPACE-				13	A	14	30A	2880	2880	ABB/GE INFINITY RECTIFIER 4
-SPACE-				15	B	16				
-SPACE-				17	A	18				-SPACE-
-SPACE-				19	B	20				-SPACE-
-SPACE-				21	A	22				-SPACE-
-SPACE-				23	B	24				-SPACE-
VOLTAGE AMPS	180	180						11520	11520	
200A MCB, 1 $\phi$ , 24 SPACE, 120/240V				L1	L2					
MB RATING: 65,000 AIC				11700	11700					
				98	98					VOLTAGE AMPS
										AMPS
										MAX AMPS
										MAX 125%

PANEL SCHEDULE

NO SCALE 2

NOT USED

NO SCALE 3

NOTES

THE ENGINEER OF RECORD HAS PERFORMED ALL REQUIRED SHORT CIRCUIT CALCULATIONS AND THE AIC RATINGS FOR EACH DEVICE IS ADEQUATE TO PROTECT THE EQUIPMENT AND THE ELECTRICAL SYSTEM.

THE ENGINEER OF RECORD HAS PERFORMED ALL REQUIRED VOLTAGE DROP CALCULATIONS AND ALL BRANCH CIRCUIT AND FEEDERS COMPLY WITH THE NEC (LISTED ON T-1) ARTICLE 210.19(A)(1) FPN NO. 4.

THE (2) CONDUITS WITH (4) CURRENT CARRYING CONDUCTORS EACH, SHALL APPLY THE ADJUSTMENT FACTOR OF 80% PER 2014/17 NEC TABLE 310.15(B)(3)(a) OR 2020 NEC TABLE 310.15(C)(1) FOR UL1015 WIRE.

#12 FOR 15A-20A/1P BREAKER: 0.8 x 30A = 24.0A  
#10 FOR 25A-30A/2P BREAKER: 0.8 x 40A = 32.0A  
#8 FOR 35A-40A/2P BREAKER: 0.8 x 55A = 44.0A  
#6 FOR 45A-60A/2P BREAKER: 0.8 x 75A = 60.0A

CONDUIT SIZING: AT 40% FILL PER NEC CHAPTER 9, TABLE 4, ARTICLE 358.  
0.5" CONDUIT - 0.122 SQ. IN AREA  
0.75" CONDUIT - 0.213 SQ. IN AREA  
2.0" CONDUIT - 1.316 SQ. IN AREA  
3.0" CONDUIT - 2.907 SQ. IN AREA

CABINET CONVENIENCE OUTLET CONDUCTORS (1 CONDUIT): USING THWN-2, CU.  
#10 - 0.0211 SQ. IN X 2 = 0.0422 SQ. IN  
#10 - 0.0211 SQ. IN X 1 = 0.0211 SQ. IN <GROUND  
TOTAL = 0.0633 SQ. IN

0.5" EMT CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (3) WIRES, INCLUDING GROUND WIRE, AS INDICATED ABOVE.

RECTIFIER CONDUCTORS (2 CONDUITS): USING UL1015, CU.  
#10 - 0.0266 SQ. IN X 4 = 0.1064 SQ. IN  
#10 - 0.0082 SQ. IN X 1 = 0.0082 SQ. IN <BARE GROUND  
TOTAL = 0.1146 SQ. IN

0.75" EMT CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (5) WIRES, INCLUDING GROUND WIRE, AS INDICATED ABOVE.

PPC FEED CONDUCTORS (1 CONDUIT): USING THWN, CU.  
3/0 - 0.2679 SQ. IN X 3 = 0.8037 SQ. IN  
#6 - 0.0507 SQ. IN X 1 = 0.0507 SQ. IN <GROUND  
TOTAL = 0.8544 SQ. IN

3.0" SCH 40 PVC CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (4) WIRES, INCLUDING GROUND WIRE, AS INDICATED ABOVE.



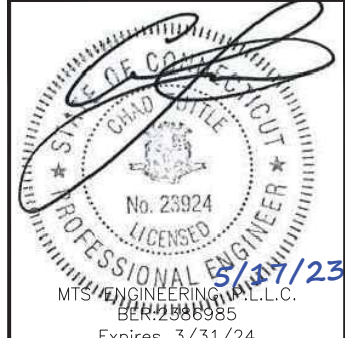
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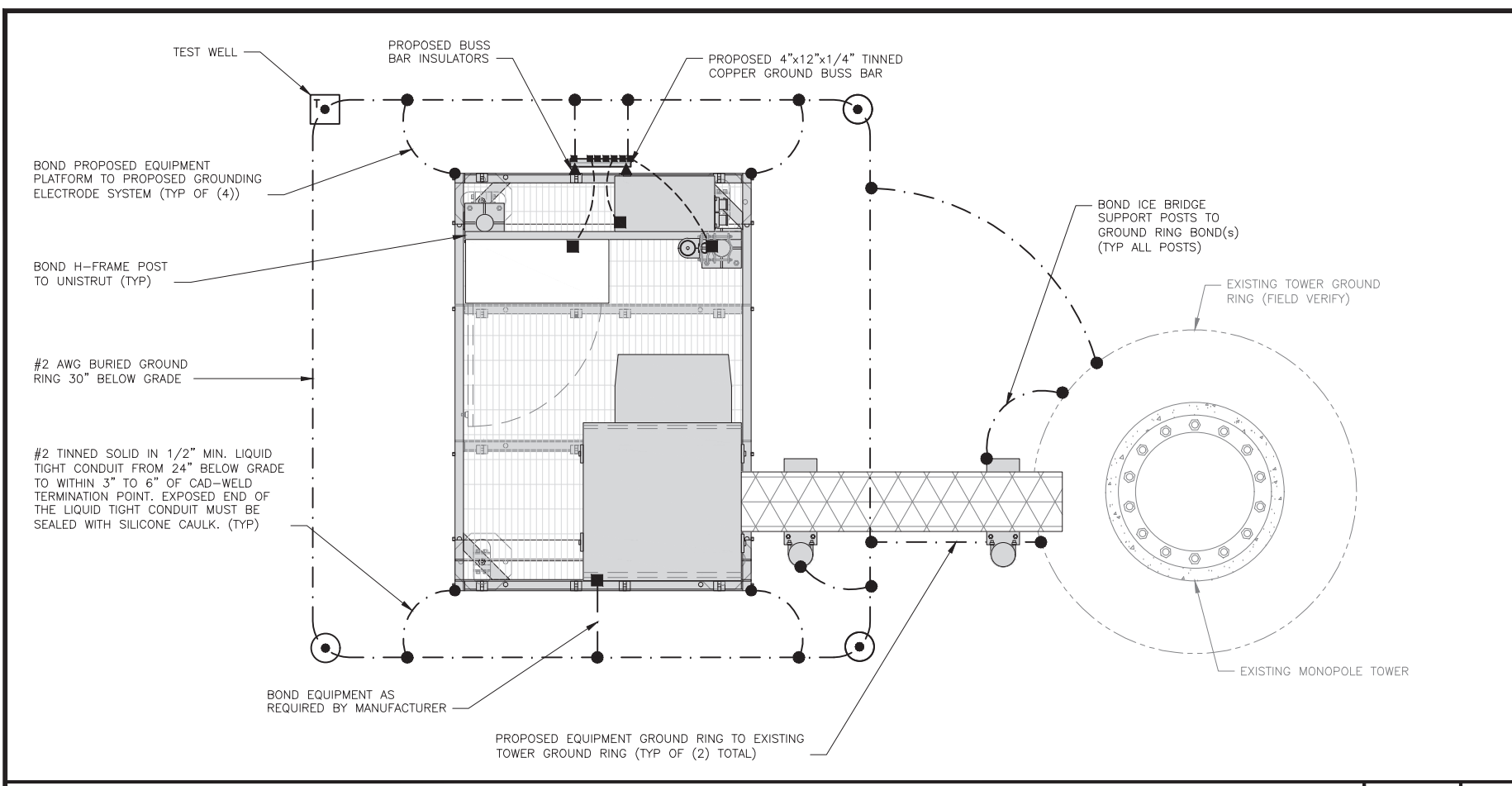
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DISH Wireless L.L.C.  
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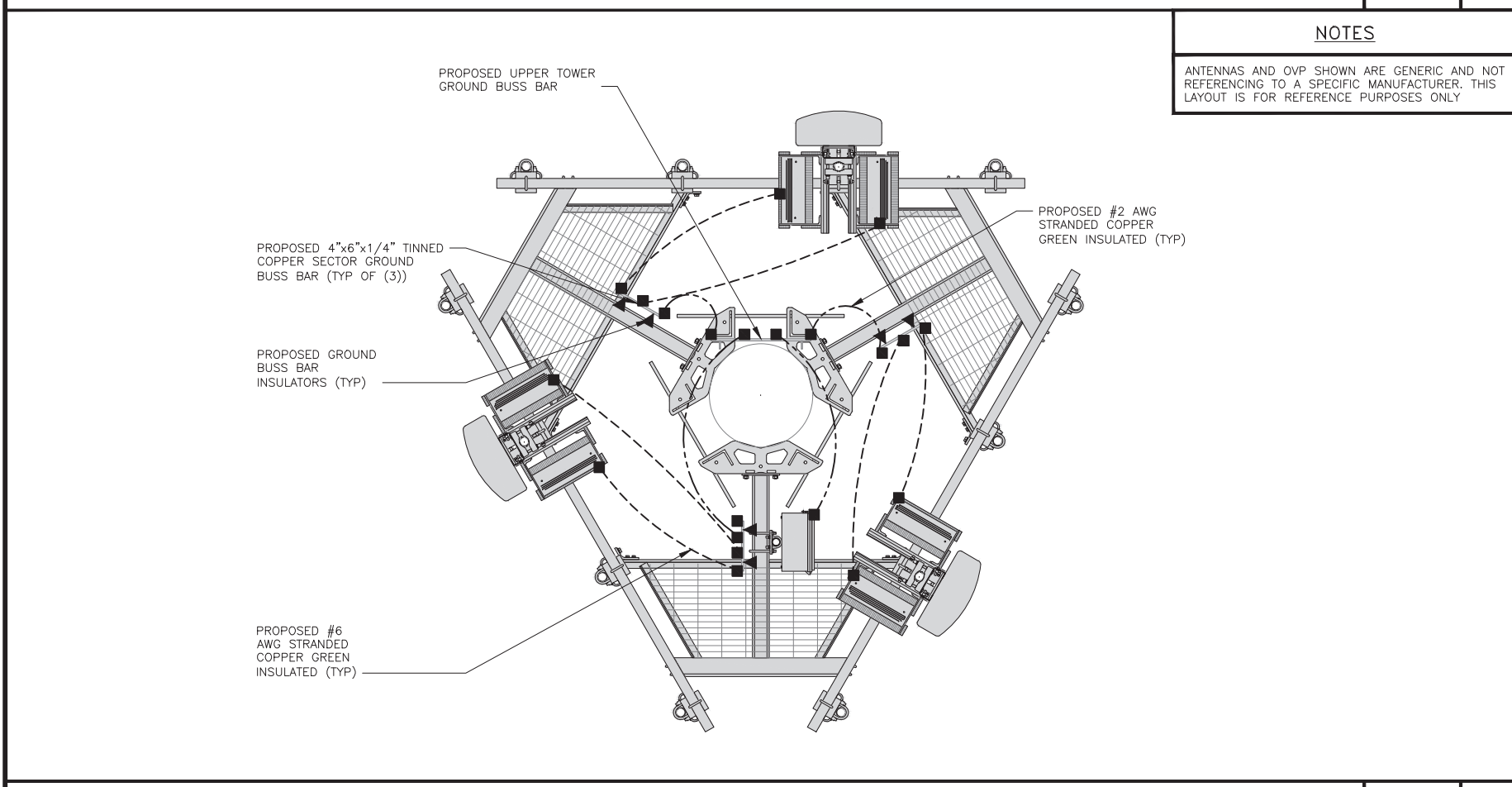
SHEET TITLE  
ELECTRICAL ONE-LINE, FAULT  
CALCS & PANEL SCHEDULE

SHEET NUMBER  
E-3



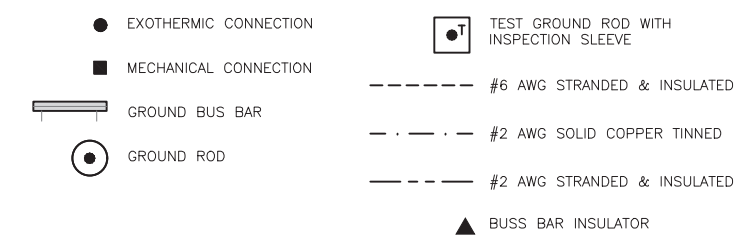
TYPICAL EQUIPMENT GROUNDING PLAN

NO SCALE 1



TYPICAL ANTENNA GROUNDING PLAN

NO SCALE 2



GROUNDING LEGEND

- GROUNDING IS SHOWN DIAGRAMMATICALLY ONLY.
- CONTRACTOR SHALL GROUND ALL EQUIPMENT AS A COMPLETE SYSTEM. GROUNDING SHALL BE IN COMPLIANCE WITH NEC SECTION 250 AND DISH Wireless L.L.C. GROUNDING AND BONDING REQUIREMENTS AND MANUFACTURER'S SPECIFICATIONS.
- ALL GROUND CONDUCTORS SHALL BE COPPER; NO ALUMINUM CONDUCTORS SHALL BE USED.

GROUNDING KEY NOTES

- (A) **EXTERIOR GROUND RING:** #2 AWG SOLID COPPER, BURIED AT A DEPTH OF AT LEAST 30 INCHES BELOW GRADE, OR 6 INCHES BELOW THE FROST LINE AND APPROXIMATELY 24 INCHES FROM THE EXTERIOR WALL OR FOOTING.
  - (B) **TOWER GROUND RING:** THE GROUND RING SYSTEM SHALL BE INSTALLED AROUND AN ANTENNA TOWER'S LEGS, AND/OR GUY ANCHORS. WHERE SEPARATE SYSTEMS HAVE BEEN PROVIDED FOR THE TOWER AND THE BUILDING, AT LEAST TWO BONDS SHALL BE MADE BETWEEN THE TOWER RING GROUND SYSTEM AND THE BUILDING RING GROUND SYSTEM USING MINIMUM #2 AWG SOLID COPPER CONDUCTORS.
  - (C) **INTERIOR GROUND RING:** #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTOR EXTENDED AROUND THE PERIMETER OF THE EQUIPMENT AREA. ALL NON-TELECOMMUNICATIONS RELATED METALLIC OBJECTS FOUND WITHIN A SITE SHALL BE GROUNDED TO THE INTERIOR GROUND RING WITH #6 AWG STRANDED GREEN INSULATED CONDUCTOR.
  - (D) **BOND TO INTERIOR GROUND RING:** #2 AWG SOLID TINNED COPPER WIRE PRIMARY BONDS SHALL BE PROVIDED AT LEAST AT FOUR POINTS ON THE INTERIOR GROUND RING, LOCATED AT THE CORNERS OF THE BUILDING.
  - (E) **GROUND ROD:** UL LISTED COPPER CLAD STEEL. MINIMUM 1/2" DIAMETER BY EIGHT FEET LONG. GROUND RODS SHALL BE INSTALLED WITH INSPECTION SLEEVES. GROUND RODS SHALL BE DRIVEN TO THE DEPTH OF GROUND RING CONDUCTOR.
  - (F) **CELL REFERENCE GROUND BAR:** POINT OF GROUND REFERENCE FOR ALL COMMUNICATIONS EQUIPMENT FRAMES. ALL BONDS ARE MADE WITH #2 AWG UNLESS NOTED OTHERWISE STRANDED GREEN INSULATED COPPER CONDUCTORS. BOND TO GROUND RING WITH (2) #2 SOLID TINNED COPPER CONDUCTORS.
  - (G) **HATCH PLATE GROUND BAR:** BOND TO THE INTERIOR GROUND RING WITH TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS. WHEN A HATCH-PLATE AND A CELL REFERENCE GROUND BAR ARE BOTH PRESENT, THE CRGB MUST BE CONNECTED TO THE HATCH-PLATE AND TO THE INTERIOR GROUND RING USING (2) TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS EACH.
  - (H) **EXTERIOR CABLE ENTRY PORT GROUND BARS:** LOCATED AT THE ENTRANCE TO THE CELL SITE BUILDING. BOND TO GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTORS WITH AN EXOTHERMIC WELD AND INSPECTION SLEEVE.
  - (I) **TELCO GROUND BAR:** BOND TO BOTH CELL REFERENCE GROUND BAR OR EXTERIOR GROUND RING.
  - (J) **FRAME BONDING:** THE BONDING POINT FOR TELECOM EQUIPMENT FRAMES SHALL BE THE GROUND BUS THAT IS NOT ISOLATED FROM THE EQUIPMENTS METAL FRAMEWORK.
  - (K) **INTERIOR UNIT BONDS:** METAL FRAMES, CABINETS AND INDIVIDUAL METALLIC UNITS LOCATED WITH THE AREA OF THE INTERIOR GROUND RING REQUIRE A #6 AWG STRANDED GREEN INSULATED COPPER BOND TO THE INTERIOR GROUND RING.
  - (L) **FENCE AND GATE GROUNDING:** METAL FENCES WITHIN 7 FEET OF THE EXTERIOR GROUND RING OR OBJECTS BONDED TO THE EXTERIOR GROUND RING SHALL BE BONDED TO THE GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTOR AT AN INTERVAL NOT EXCEEDING 25 FEET. BONDS SHALL BE MADE AT EACH GATE POST AND ACROSS GATE OPENINGS.
  - (M) **EXTERIOR UNIT BONDS:** METALLIC OBJECTS, EXTERNAL TO OR MOUNTED TO THE BUILDING, SHALL BE BONDED TO THE EXTERIOR GROUND RING. USING #2 TINNED SOLID COPPER WIRE
  - (N) **ICE BRIDGE SUPPORTS:** EACH ICE BRIDGE LEG SHALL BE BONDED TO THE GROUND RING WITH #2 AWG BARE TINNED COPPER CONDUCTOR. PROVIDE EXOTHERMIC WELDS AT BOTH THE ICE BRIDGE LEG AND BURIED GROUND RING.
  - (O) **DURING ALL DC POWER SYSTEM CHANGES INCLUDING DC SYSTEM CHANGE OUTS, RECTIFIER REPLACEMENTS OR ADDITIONS, BREAKER DISTRIBUTION CHANGES, BATTERY ADDITIONS, BATTERY REPLACEMENTS AND INSTALLATIONS OR CHANGES TO DC CONVERTER SYSTEMS IT SHALL BE REQUIRED THAT SERVICE CONTRACTORS VERIFY ALL DC POWER SYSTEMS ARE EQUIPPED WITH A MASTER DC SYSTEM RETURN GROUND CONDUCTOR FROM THE DC POWER SYSTEM COMMON RETURN BUS DIRECTLY CONNECTED TO THE CELL SITE REFERENCE GROUND BAR**
  - (P) **TOWER TOP COLLECTOR BUSS BAR IS TO BE MECHANICALLY BONDED TO PROPOSED ANTENNA MOUNT COLLAR.**
- REFER TO DISH Wireless L.L.C. GROUNDING NOTES.

GROUNDING KEY NOTES

NO SCALE 3



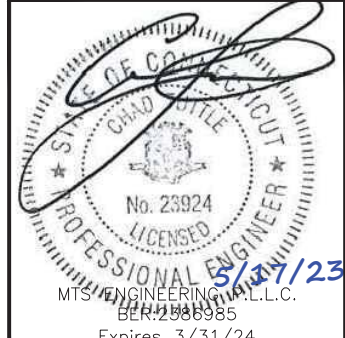
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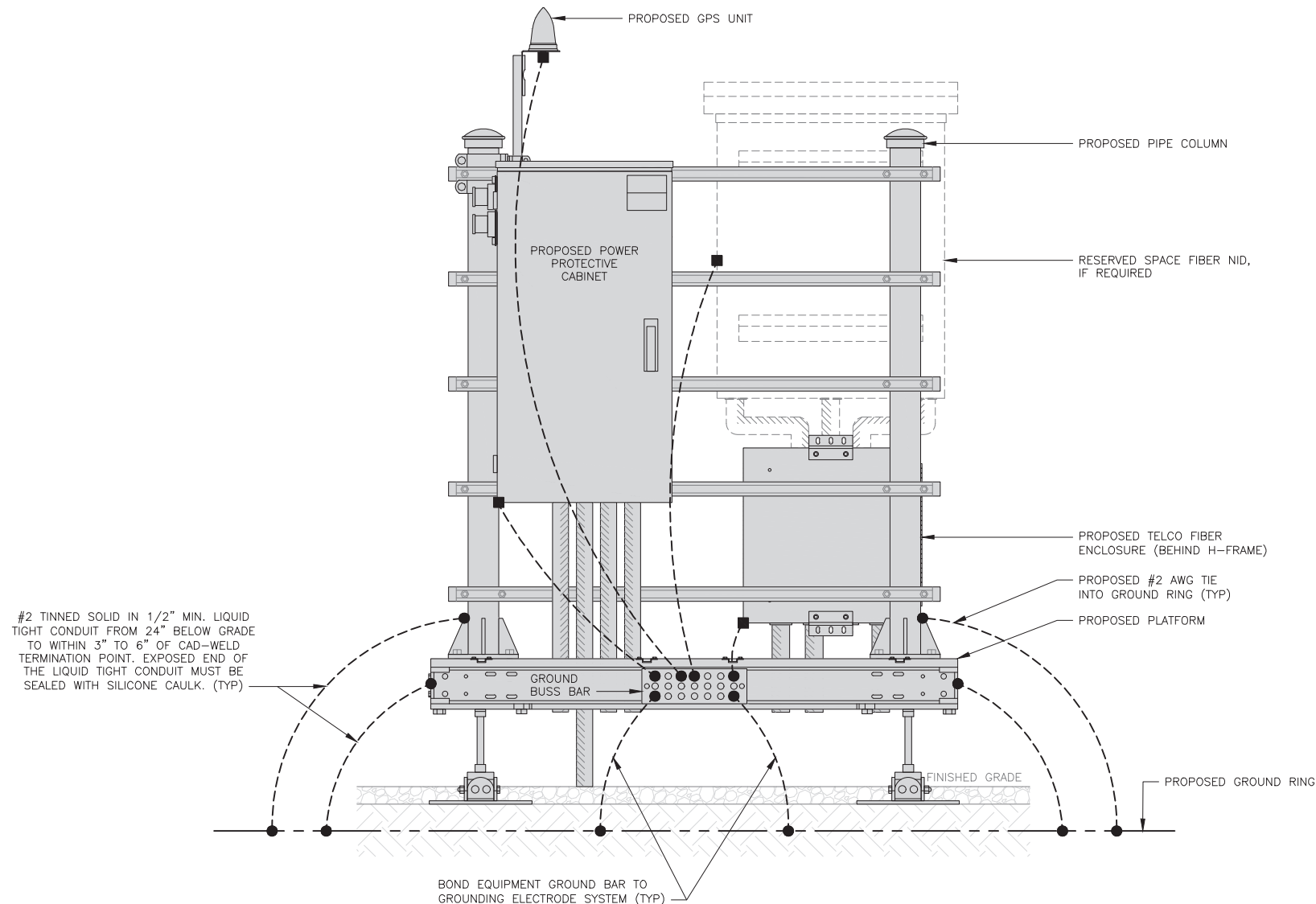
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SHEET TITLE  
GROUNDING PLANS  
AND NOTES

SHEET NUMBER  
**G-1**

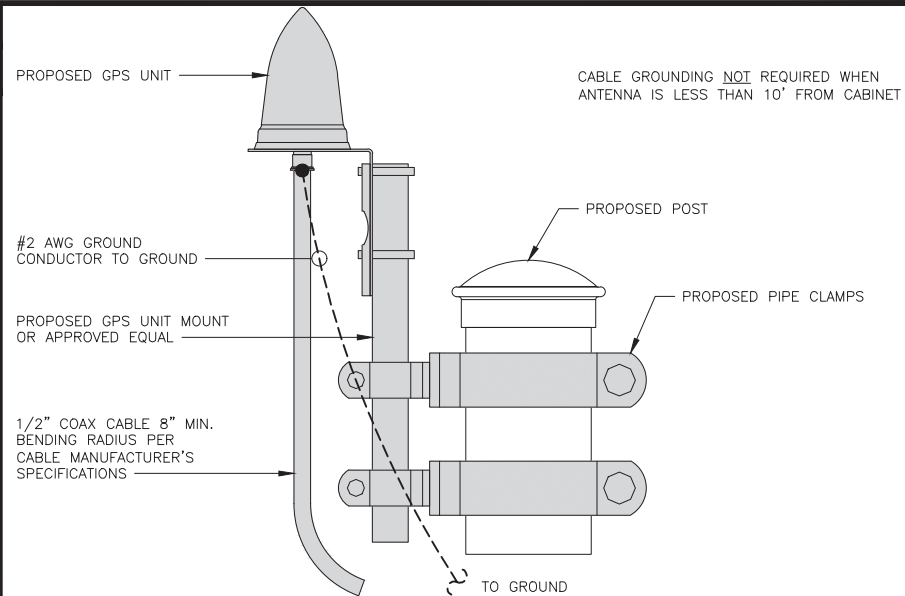
NOTES

EQUIPMENT CABINET OMITTED FOR CLARITY



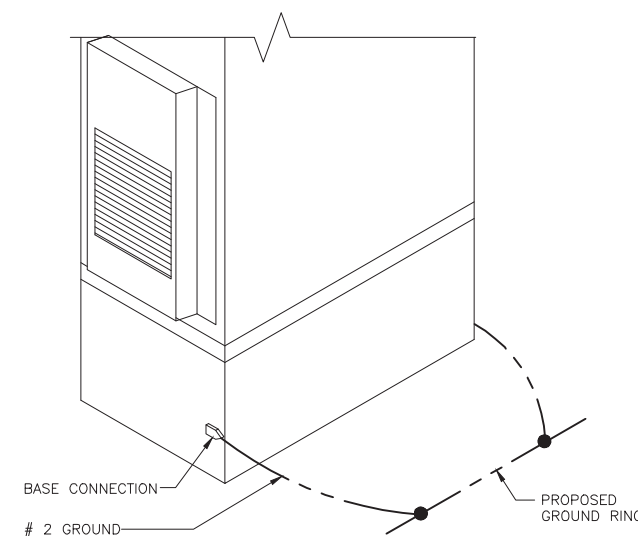
H-FRAME GROUNDING DETAIL

NO SCALE 1



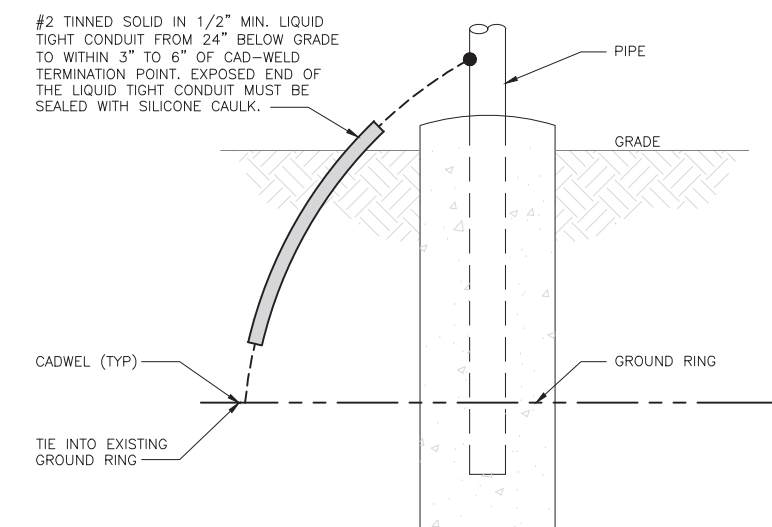
TYPICAL GPS UNIT GROUNDING

NO SCALE 2



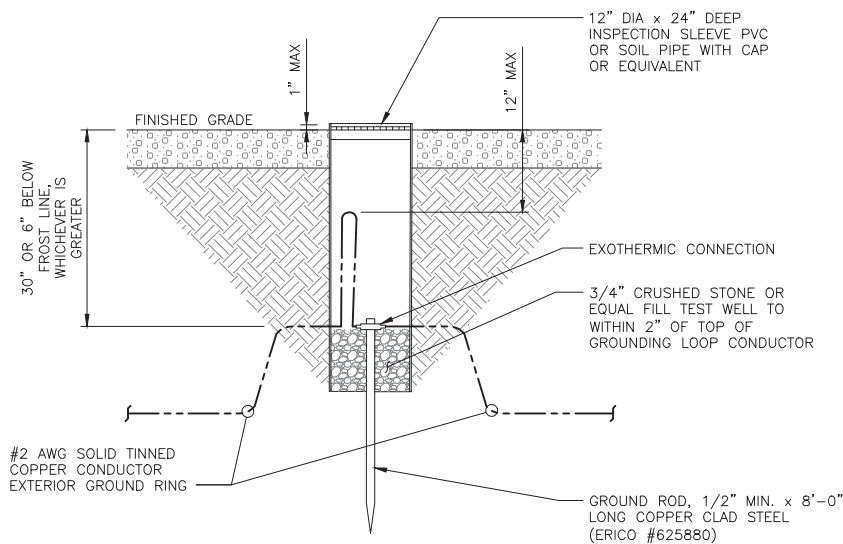
OUTDOOR CABINET GROUNDING

NO SCALE 3



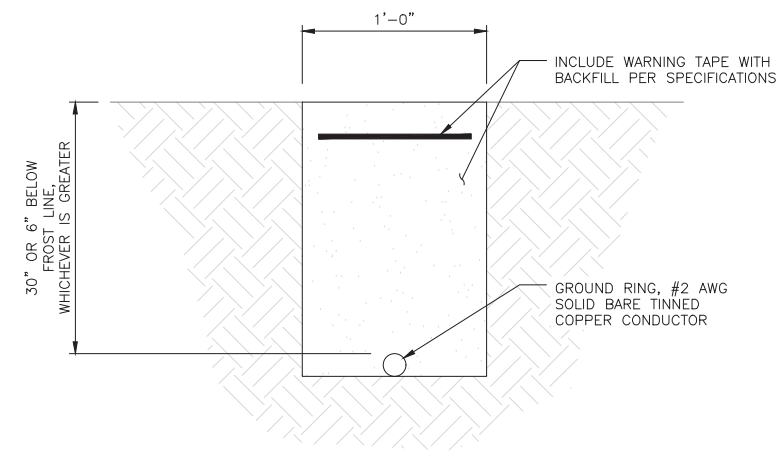
TRANSITIONING GROUND DETAIL

NO SCALE 4



TYPICAL TEST GROUND ROD WITH INSPECTION SLEEVE

NO SCALE 5



TYPICAL GROUND RING TRENCH

NO SCALE 6



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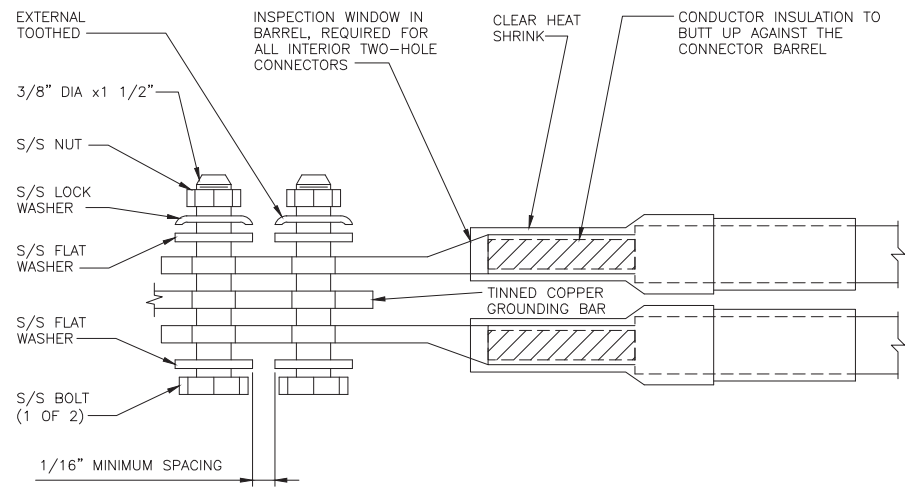
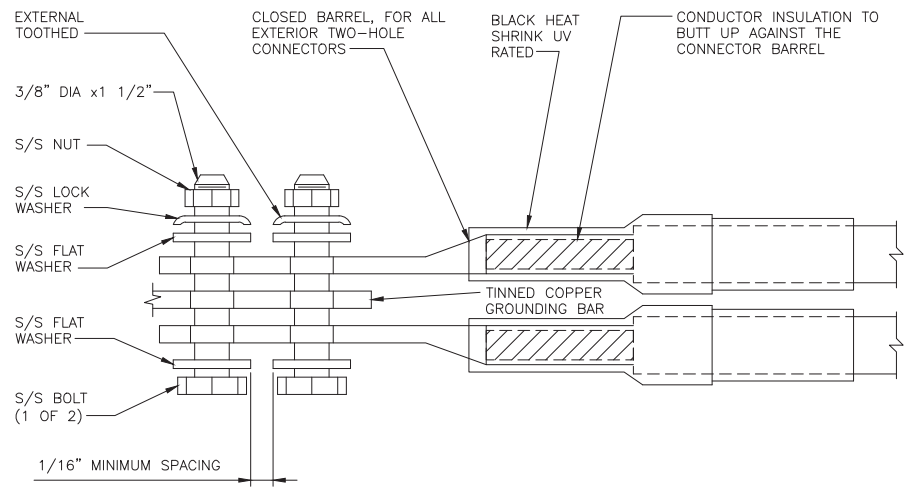
SHEET TITLE  
GROUNDING DETAILS

SHEET NUMBER

G-2



1. EXOTHERMIC WELD (2) TWO, #2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUND BAR. ROUTE CONDUCTORS TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
2. ALL EXTERIOR GROUNDING HARDWARE SHALL BE STAINLESS STEEL 3/8" DIAMETER OR LARGER. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
3. FOR GROUND BOND TO STEEL ONLY: COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
4. DO NOT INSTALL CABLE GROUNDING KIT AT A BEND AND ALWAYS DIRECT GROUND CONDUCTOR DOWN TO GROUNDING BUS.
5. NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUND BAR AND BOLTED ON THE BACK SIDE.
6. ALL GROUNDING PARTS AND EQUIPMENT TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ADDITIONAL GROUND BAR AS REQUIRED.
8. ENSURE THE WIRE INSULATION TERMINATION IS WITHIN 1/8" OF THE BARREL (NO SHINERS).



TYPICAL GROUNDING NOTES

NO SCALE

1

TYPICAL EXTERIOR TWO HOLE LUG

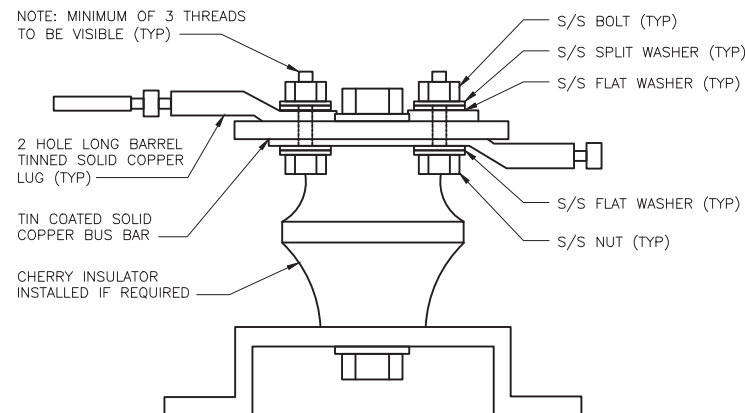
NO SCALE

2

TYPICAL INTERIOR TWO HOLE LUG

NO SCALE

3



LUG DETAIL

NO SCALE

4

NOT USED

NO SCALE

5

NOT USED

NO SCALE

6

NOT USED

NO SCALE

7

NOT USED

NO SCALE

8

NOT USED

NO SCALE

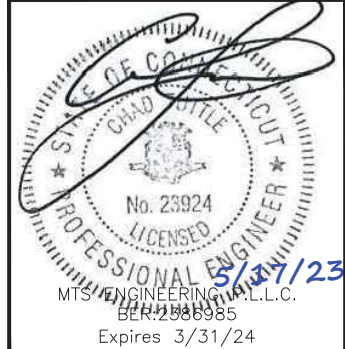
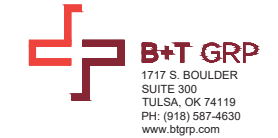
9



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B	8/16/22	ISSUED FOR REVIEW
0	9/20/22	CONSTRUCTION
1	1/13/23	CONSTRUCTION
2	5/17/23	CONSTRUCTION

A&E PROJECT NUMBER  
149457.001.01

DISH Wireless L.L.C.  
PROJECT INFORMATION  
BOBOS00053A  
5 EXETER DR  
(AKA 7 EXETER DR - TOWER)  
STERLING, CT 06377

SHEET TITLE  
GROUNDING DETAILS

SHEET NUMBER  
**G-3**



HYBRID/DISCREET CABLES												3/4" TAPE WIDTHS WITH 3/4" SPACING																	
<p>LOW-BAND RRH (600 MHz N71 BASEBAND) + (850 MHz N26 BAND) + (700 MHz N29 BAND) - OPTIONAL PER MARKET</p> <p>ADD FREQUENCY COLOR TO SECTOR BAND (CBRS WILL USE YELLOW BAND)</p>												ALPHA RRH				BETA RRH				GAMMA RRH									
PORT 1 + SLANT		PORT 2 - SLANT		PORT 3 + SLANT		PORT 4 - SLANT		PORT 1 + SLANT		PORT 2 - SLANT		PORT 3 + SLANT		PORT 4 - SLANT		PORT 1 + SLANT		PORT 2 - SLANT		PORT 3 + SLANT		PORT 4 - SLANT							
RED		RED		RED		RED		BLUE		BLUE		BLUE		BLUE		GREEN		GREEN		GREEN		GREEN							
ORANGE		ORANGE		RED		RED		ORANGE		ORANGE		BLUE		BLUE		ORANGE		ORANGE		GREEN		GREEN							
		WHITE (-) PORT		ORANGE		ORANGE				WHITE (-) PORT		ORANGE		ORANGE				WHITE (-) PORT		ORANGE		ORANGE							
				WHITE (-) PORT		WHITE (-) PORT				WHITE (-) PORT		WHITE (-) PORT				WHITE (-) PORT		WHITE (-) PORT		WHITE (-) PORT		WHITE (-) PORT							
<p>MID-BAND RRH (AWS BANDS N66+N70)</p> <p>ADD FREQUENCY COLOR TO SECTOR BAND (CBRS WILL USE YELLOW BANDS)</p>												RED				BLUE				GREEN									
RED		RED		RED		RED		BLUE		BLUE		BLUE		BLUE		GREEN		GREEN		GREEN		GREEN							
PURPLE		PURPLE		RED		RED		PURPLE		PURPLE		BLUE		BLUE		PURPLE		PURPLE		GREEN		GREEN							
		WHITE (-) PORT		PURPLE		PURPLE				WHITE (-) PORT		PURPLE		PURPLE				WHITE (-) PORT		PURPLE		PURPLE							
				WHITE (-) PORT		WHITE (-) PORT				WHITE (-) PORT		WHITE (-) PORT				WHITE (-) PORT		WHITE (-) PORT		WHITE (-) PORT		WHITE (-) PORT							
<p>HYBRID/DISCREET CABLES</p> <p>INCLUDE SECTOR BANDS BEING SUPPORTED ALONG WITH FREQUENCY BANDS.</p> <p>EXAMPLE 1 - HYBRID, OR DISCREET, SUPPORTS ALL SECTORS, BOTH LOW-BANDS AND MID-BANDS.</p> <p>EXAMPLE 2 - HYBRID, OR DISCREET, SUPPORTS CBRS ONLY, ALL SECTORS.</p> <p>EXAMPLE 3 - MAIN COAX WITH GROUND MOUNTED RRHS.</p>												EXAMPLE 1		EXAMPLE 2		EXAMPLE 3		CANISTER COAX #1 (ALPHA)		CANISTER COAX #2 (ALPHA)		CONTRACTOR TO REFER TO FINAL CONSTRUCTION RFDS FOR ALL RD DETAILS. FINAL RFDS IS IN NEXSYSONE.							
RED		RED		RED		RED		RED		RED																			
BLUE		BLUE		GREEN		ORANGE		PURPLE		PURPLE																			
GREEN		GREEN		YELLOW		PURPLE		PURPLE		PURPLE																			
ORANGE		ORANGE		PURPLE		PURPLE		PURPLE		PURPLE																			
PURPLE		PURPLE		PURPLE		PURPLE		PURPLE		PURPLE																			
<p>FIBER JUMPERS TO RRHS</p> <p>LOW-BAND HHR FIBER CABLES HAVE SECTOR STRIPE ONLY.</p>												LOW BAND RRH		MID BAND RRH		LOW BAND RRH		MID BAND RRH		LOW BAND RRH		MID BAND RRH							
RED		RED		RED		BLUE		BLUE		GREEN		GREEN																	
ORANGE		PURPLE		PURPLE		ORANGE		PURPLE		ORANGE		PURPLE																	
<p>POWER CABLES TO RRHS</p> <p>LOW-BAND RRH POWER CABLES HAVE SECTOR STRIPE ONLY.</p>												LOW BAND RRH		MID BAND RRH		LOW BAND RRH		MID BAND RRH		LOW BAND RRH		MID BAND RRH							
RED		RED		RED		BLUE		BLUE		GREEN		GREEN																	
ORANGE		PURPLE		PURPLE		ORANGE		PURPLE		ORANGE		PURPLE																	
<p>RET MOTORS AT ANTENNAS</p> <p>RET CONTROL IS HANDLED BY THE MID-BAND RRH WHEN ONE SET OF RET PORTS EXIST ON ANTENNA.</p> <p>SEPARATE RET CABLES ARE USED WHEN ANTENNA PORTS PROVIDE INPUTS FOR BOTH LOW AND MID BANDS.</p>												ANTENNA 1 IN		ANTENNA 1 IN		ANTENNA 1 IN		ANTENNA 1 IN		ANTENNA 1 IN		ANTENNA 1 IN							
RED		RED		BLUE		BLUE		GREEN		GREEN																			
PURPLE		ORANGE		PURPLE		ORANGE		PURPLE		ORANGE																			
<p>MICROWAVE RADIO LINKS</p> <p>LINKS WILL HAVE A 1.5-2 INCH WHITE WRAP WITH THE AZIMUTH COLOR OVERLAPPING IN THE MIDDLE.</p> <p>ADD ADDITIONAL SECTOR COLOR BANDS FOR EACH ADDITIONAL MW RADIO.</p> <p>MICROWAVE CABLES WILL REQUIRE P-TOUCH LABELS INSIDE THE CABINET TO IDENTIFY THE LOCAL AND REMOTE SITE ID'S.</p>												FORWARD AZIMUTH OF 0-120 DEGREES		FORWARD AZIMUTH OF 120-240 DEGREES		FORWARD AZIMUTH OF 240-359 DEGREES													
WHITE		WHITE		WHITE		WHITE		WHITE		WHITE																			
RED		RED		BLUE		BLUE		GREEN		GREEN																			
WHITE		WHITE		WHITE		WHITE		WHITE		WHITE																			
		RED		BLUE		WHITE		GREEN		WHITE																			
		WHITE		WHITE		WHITE		WHITE		WHITE																			

RF CABLE COLOR CODES

NO SCALE

1

NOT USED

NO SCALE

4

LOW BANDS (N71+N26)  
OPTIONAL - (N29)

ORANGE

CBRS TECH  
(3 GHz)

YELLOW

AWS  
(N66+N70+H-BLOCK)

PURPLE

NEGATIVE SLANT PORT  
ON ANT/RRH

WHITE

ALPHA SECTOR

RED

BETA SECTOR

BLUE

GAMMA SECTOR

GREEN

COLOR IDENTIFIER

NO SCALE

2

NOT USED

NO SCALE

3

**dish**  
wireless.

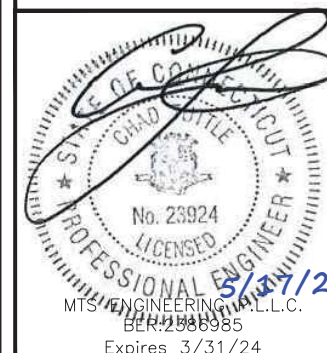
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DRAWN BY: CHECKED BY: APPROVED BY:

SM FWP RMC

RFDS REV #: 2.0

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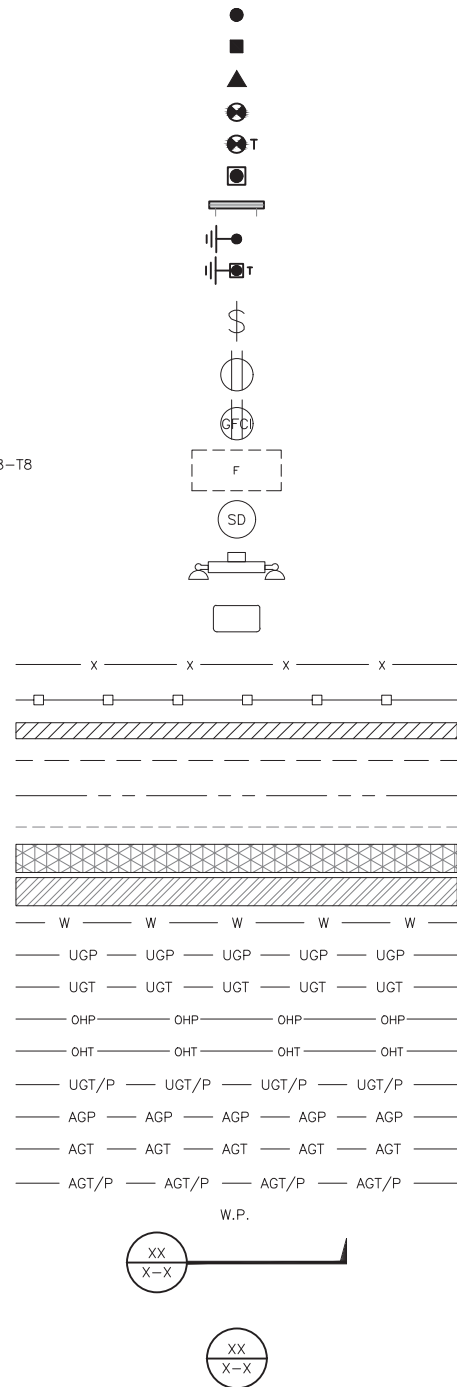
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PROJECT INFORMATION  
BOBOS00053A  
5 EXETER DR  
(AKA 7 EXETER DR - TOWER)  
STERLING, CT 06377

SHEET TITLE  
RF  
CABLE COLOR CODES

SHEET NUMBER  
RF-1

EXOTHERMIC CONNECTION  
 MECHANICAL CONNECTION  
 BUSS BAR INSULATOR  
 CHEMICAL ELECTROLYTIC GROUNDING SYSTEM  
 TEST CHEMICAL ELECTROLYTIC GROUNDING SYSTEM  
 EXOTHERMIC WITH INSPECTION SLEEVE  
 GROUNDING BAR  
 GROUND ROD  
 TEST GROUND ROD WITH INSPECTION SLEEVE  
 SINGLE POLE SWITCH  
 DUPLEX RECEPTACLE  
 DUPLEX GFCI RECEPTACLE  
 FLUORESCENT LIGHTING FIXTURE (2) TWO LAMPS 48-T8  
 SMOKE DETECTION (DC)  
 EMERGENCY LIGHTING (DC)  
 SECURITY LIGHT W/PHOTOCELL LITHONIA ALXW  
 LED-1-25A400/51K-SR4-120-PE-DOBXTD  
 CHAIN LINK FENCE  
 WOOD/WROUGHT IRON FENCE  
 WALL STRUCTURE  
 LEASE AREA  
 PROPERTY LINE (PL)  
 SETBACKS  
 ICE BRIDGE  
 CABLE TRAY  
 WATER LINE  
 UNDERGROUND POWER  
 UNDERGROUND TELCO  
 OVERHEAD POWER  
 OVERHEAD TELCO  
 UNDERGROUND TELCO/POWER  
 ABOVE GROUND POWER  
 ABOVE GROUND TELCO  
 ABOVE GROUND TELCO/POWER  
 WORKPOINT  
 SECTION REFERENCE  
 DETAIL REFERENCE



**LEGEND**

AB	ANCHOR BOLT	IN	INCH	INT	INTERIOR
ABV	ABOVE	LB(S)	POUND(S)	LF	LINEAR FEET
AC	ALTERNATING CURRENT	LTE	LONG TERM EVOLUTION	MAS	MASONRY
ADDL	ADDITIONAL	MAX	MAXIMUM	MB	MACHINE BOLT
AFF	ABOVE FINISHED FLOOR	MECH	MECHANICAL	MFR	MANUFACTURER
AFG	ABOVE FINISHED GRADE	MGB	MASTER GROUND BAR	MIN	MINIMUM
AGL	ABOVE GROUND LEVEL	MISC	MISCELLANEOUS	MTL	METAL
AIC	AMPERAGE INTERRUPTION CAPACITY	MTS	MANUAL TRANSFER SWITCH	MW	MICROWAVE
ALUM	ALUMINUM	NEC	NATIONAL ELECTRIC CODE	NM	NEWTON METERS
ALT	ALTERNATE	NO.	NUMBER	#	NUMBER
ANT	ANTENNA	NTS	NOT TO SCALE	OC	ON-CENTER
APPROX	APPROXIMATE	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION	OPNG	OPENING
ARCH	ARCHITECTURAL	P/C	PRECAST CONCRETE	PCS	PERSONAL COMMUNICATION SERVICES
ATS	AUTOMATIC TRANSFER SWITCH	PCU	PRIMARY CONTROL UNIT	PP	POLARIZING PRESERVING
AWG	AMERICAN WIRE GAUGE	PRC	PRIMARY RADIO CABINET	PSF	POUNDS PER SQUARE FOOT
BATT	BATTERY	PP	POLARIZING PRESERVING	PSI	POUNDS PER SQUARE INCH
BLDG	BUILDING	PT	PRESSURE TREATED	PWR	POWER CABINET
BLK	BLOCK	QTY	QUANTITY	RAD	RADIUS
BLKG	BLOCKING	RECT	RECTIFIER	REF	REFERENCE
BM	BEAM	REINF	REINFORCEMENT	REQ'D	REQUIRED
BTC	BARE TINNED COPPER CONDUCTOR	RET	REMOTE ELECTRIC TILT	RF	RADIO FREQUENCY
BOF	BOTTOM OF FOOTING	RMC	RIGID METALLIC CONDUIT	RRH	REMOTE RADIO HEAD
CAB	CABINET	RRU	REMOTE RADIO UNIT	RWY	RACEWAY
CANT	CANTILEVERED	SCH	SCHEDULE	SHT	SHEET
CHG	CHARGING	SIAD	SMART INTEGRATED ACCESS DEVICE	SIM	SIMILAR
CLG	CEILING	SPEC	SPECIFICATION	SQ	SQUARE
CLR	CLEAR	SS	STAINLESS STEEL	STD	STANDARD
COL	COLUMN	STL	STEEL	TEMP	TEMPORARY
COMM	COMMON	THK	THICKNESS	TMA	TOWER MOUNTED AMPLIFIER
CONC	CONCRETE	TOA	TOP OF ANTENNA	TN	TOE NAIL
CONSTR	CONSTRUCTION	TOC	TOP OF CURB	TOA	TOP OF ANTENNA
DBL	DOUBLE	TOF	TOP OF FOUNDATION	TOF	TOP OF FOUNDATION
DC	DIRECT CURRENT	TOP	TOP OF PLATE (PARAPET)	TOS	TOP OF STEEL
DEPT	DEPARTMENT	TOW	TOP OF WALL	TOW	TOP OF WALL
DF	DOUGLAS FIR	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION	TYP	TYPICAL
DIA	DIAMETER	UG	UNDERGROUND	UG	UNDERGROUND
DIAG	DIAGONAL	UL	UNDERWRITERS LABORATORY	UL	UNDERWRITERS LABORATORY
DIM	DIMENSION	UNO	UNLESS NOTED OTHERWISE	UNO	UNLESS NOTED OTHERWISE
DWG	DRAWING	UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM	UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
DWL	DOWEL	UPS	UNINTERRUPTIBLE POWER SYSTEM (DC POWER PLANT)	UPS	UNINTERRUPTIBLE POWER SYSTEM (DC POWER PLANT)
EA	EACH	VIF	VERIFIED IN FIELD	VIF	VERIFIED IN FIELD
EC	ELECTRICAL CONDUCTOR	W	WIDE	W	WIDE
EL	ELEVATION	W/	WITH	W/	WITH
ELEC	ELECTRICAL	WD	WOOD	WD	WOOD
EMT	ELECTRICAL METALLIC TUBING	WP	WEATHERPROOF	WP	WEATHERPROOF
ENG	ENGINEER	WT	WEIGHT	WT	WEIGHT
EQ	EQUAL				
EXP	EXPANSION				
EXT	EXTERIOR				
EW	EACH WAY				
FAB	FABRICATION				
FF	FINISH FLOOR				
FG	FINISH GRADE				
FIF	FACILITY INTERFACE FRAME				
FIN	FINISH(ED)				
FLR	FLOOR				
FDN	FOUNDATION				
FOC	FACE OF CONCRETE				
FOM	FACE OF MASONRY				
FOS	FACE OF STUD				
FOW	FACE OF WALL				
FS	FINISH SURFACE				
FT	FOOT				
FTG	FOOTING				
GA	GAUGE				
GEN	GENERATOR				
GFCI	GROUND FAULT CIRCUIT INTERRUPTER				
GLB	GLUE LAMINATED BEAM				
GLV	GALVANIZED				
GPS	GLOBAL POSITIONING SYSTEM				
GND	GROUND				
GSM	GLOBAL SYSTEM FOR MOBILE				
HDG	HOT DIPPED GALVANIZED				
HDR	HEADER				
HGR	HANGER				
HVAC	HEAT/VENTILATION/AIR CONDITIONING				
HT	HEIGHT				
IGR	INTERIOR GROUND RING				

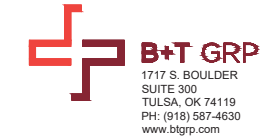
**ABBREVIATIONS**



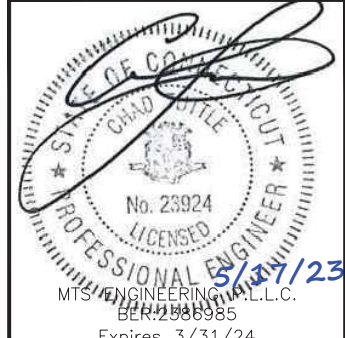
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 TULSA, OK 74119  
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RFDS REV #: 2.0

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**BOBOS00053A**  
**5 EXETER DR**  
 (AKA 7 EXETER DR - TOWER)  
 STERLING, CT 06377

SHEET TITLE  
**LEGEND AND ABBREVIATIONS**

SHEET NUMBER  
**GN-1**

SIGN TYPES		
TYPE	COLOR	COLOR CODE PURPOSE
INFORMATION	GREEN	"INFORMATIONAL SIGN" TO NOTIFY OTHERS OF SITE OWNERSHIP & CONTACT NUMBER AND POTENTIAL RF EXPOSURE.
NOTICE	BLUE	"NOTICE BEYOND THIS POINT" RF FIELDS BEYOND THIS POINT MAY EXCEED THE FCC GENERAL PUBLIC EXPOSURE LIMIT. OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)
CAUTION	YELLOW	"CAUTION BEYOND THIS POINT" RF FIELDS BEYOND THIS POINT MAY EXCEED THE FCC GENERAL PUBLIC EXPOSURE LIMIT. OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)
WARNING	ORANGE/RED	"WARNING BEYOND THIS POINT" RF FIELDS AT THIS SITE EXCEED FCC RULES FOR HUMAN EXPOSURE. FAILURE TO OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS COULD RESULT IN SERIOUS INJURY. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)

**SIGN PLACEMENT:**

- RF SIGNAGE PLACEMENT SHALL FOLLOW THE RECOMMENDATIONS OF AN EXISTING EME REPORT, CREATED BY A THIRD PARTY PREVIOUSLY AUTHORIZED BY DISH Wireless L.L.C.
- INFORMATION SIGN (GREEN) SHALL BE LOCATED ON EXISTING DISH Wireless L.L.C. EQUIPMENT.  
 A) IF THE INFORMATION SIGN IS A STICKER, IT SHALL BE PLACED ON EXISTING DISH Wireless L.L.C. EQUIPMENT CABINET.  
 B) IF THE INFORMATION SIGN IS A METAL SIGN IT SHALL BE PLACED ON EXISTING DISH Wireless L.L.C. H-FRAME WITH A SECURE ATTACH METHOD.
- IF EME REPORT IS NOT AVAILABLE AT THE TIME OF CREATION OF CONSTRUCTION DOCUMENTS; PLEASE CONTACT DISH Wireless L.L.C. CONSTRUCTION MANAGER FOR FURTHER INSTRUCTION ON HOW TO PROCEED.

**NOTES:**

1. FOR DISH Wireless L.L.C. LOGO, SEE DISH Wireless L.L.C. DESIGN SPECIFICATIONS (PROVIDED BY DISH Wireless L.L.C.)
2. SITE ID SHALL BE APPLIED TO SIGNS USING "LASER ENGRAVING" OR ANY OTHER WEATHER RESISTANT METHOD (DISH Wireless L.L.C. APPROVAL REQUIRED)
3. TEXT FOR SIGNAGE SHALL INDICATE CORRECT SITE NAME AND NUMBER AS PER DISH Wireless L.L.C. CONSTRUCTION MANAGER RECOMMENDATIONS.
4. CABINET/SHELTER MOUNTING APPLICATION REQUIRES ANOTHER PLATE APPLIED TO THE FACE OF THE CABINET WITH WATER PROOF POLYURETHANE ADHESIVE
5. ALL SIGNS WILL BE SECURED WITH EITHER STAINLESS STEEL ZIP TIES OR STAINLESS STEEL TECH SCREWS
6. ALL SIGNS TO BE 8.5"x11" AND MADE WITH 0.04" OF ALUMINUM MATERIAL

# INFORMATION

This is an access point to an area with transmitting antennas.

Obey all signs and barriers beyond this point.  
 Call the DISH Wireless L.L.C. NOC at 1-866-624-6874

Site ID: \_\_\_\_\_



THIS SIGN IS FOR REFERENCE PURPOSES ONLY

NOTICE

**Transmitting Antenna(s)**

**Radio frequency fields beyond this point MAY EXCEED the FCC Occupational exposure limit.**

**Obey all posted signs and site guidelines for working in radio frequency environments.**

**Call the DISH Wireless L.L.C. NOC at 1-866-624-6874 prior to working beyond this point.**

Site ID: \_\_\_\_\_

dish

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dish

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dish

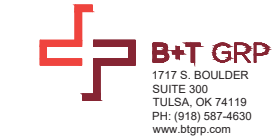
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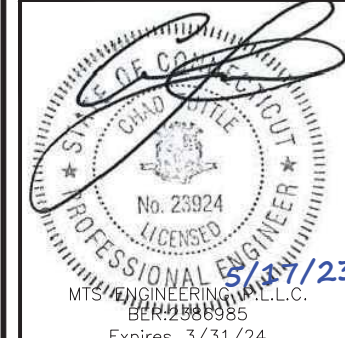
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SHEET TITLE  
RF SIGNAGE

SHEET NUMBER  
**GN-2**



SITE ACTIVITY REQUIREMENTS:

- NOTICE TO PROCEED – NO WORK SHALL COMMENCE PRIOR TO CONTRACTOR RECEIVING A WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE DISH Wireless L.L.C. AND TOWER OWNER NOC & THE DISH Wireless L.L.C. AND TOWER OWNER CONSTRUCTION MANAGER.
- "LOOK UP" – DISH Wireless L.L.C. AND TOWER OWNER SAFETY CLIMB REQUIREMENT:  
THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR DISH Wireless L.L.C. AND DISH Wireless L.L.C. AND TOWER OWNER POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
- PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
- ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND DISH Wireless L.L.C. AND TOWER OWNER STANDARDS, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA-322 (LATEST EDITION).
- ALL SITE WORK TO COMPLY WITH DISH Wireless L.L.C. AND TOWER OWNER INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON DISH Wireless L.L.C. AND TOWER OWNER TOWER SITE AND LATEST VERSION OF ANSI/TIA-1019-A-2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
- IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY DISH Wireless L.L.C. AND TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES INCLUDING PRIVATE LOCATES SERVICES PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR 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 E) CONSTRUCTION SAFETY PROCEDURES.
- ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND DISH PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
- CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- 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 DISH Wireless L.L.C. AND TOWER OWNER, AND/OR LOCAL UTILITIES.
- THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- 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 ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
- CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
- CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS AND RADIOS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
- 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.

GENERAL NOTES:

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:  
CONTRACTOR:GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION  
CARRIER:DISH Wireless L.L.C.  
TOWER OWNER:TOWER OWNER
- THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
- THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.
- NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
- SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR 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 CARRIER POC AND TOWER OWNER.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
- CONTRACTOR IS TO PERFORM A SITE INVESTIGATION, BEFORE SUBMITTING BIDS, TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF DISH Wireless L.L.C. AND TOWER OWNER
- CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.



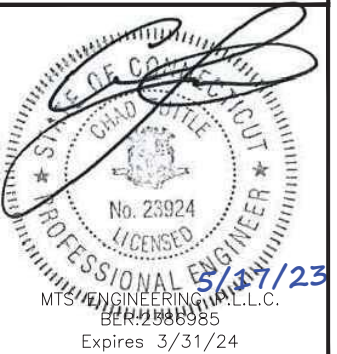
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DRAWN BY:	CHECKED BY:	APPROVED BY:
SM	FWP	RMC

RFDS REV #: 2.0

**CONSTRUCTION DOCUMENTS**

SUBMITTALS		
REV	DATE	DESCRIPTION
A	11/29/21	ISSUED FOR REVIEW
B	8/16/22	ISSUED FOR REVIEW
0	9/20/22	CONSTRUCTION
1	1/13/23	CONSTRUCTION
2	5/17/23	CONSTRUCTION

A&E PROJECT NUMBER  
**149457.001.01**

DISH Wireless L.L.C.  
PROJECT INFORMATION  
**BOBOS00053A**  
**5 EXETER DR**  
(AKA 7 EXETER DR - TOWER)  
**STERLING, CT 06377**

SHEET TITLE  
**GENERAL NOTES**

SHEET NUMBER  
**GN-3**

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

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. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°f AT TIME OF PLACEMENT.
4. CONCRETE EXPOSED TO FREEZE-THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER-TO-CEMENT RATIO (W/C) OF 0.45.
5. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:
  - #4 BARS AND SMALLER 40 ksi
  - #5 BARS AND LARGER 60 ksi
6. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
  - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
  - CONCRETE EXPOSED TO EARTH OR WEATHER:
    - #6 BARS AND LARGER 2"
    - #5 BARS AND SMALLER 1-1/2"
  - CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
    - SLAB AND WALLS 3/4"
    - BEAMS AND COLUMNS 1-1/2"
7. A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
- 4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
- 4.2. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.
5. EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
6. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT ID'S).
7. PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
8. TIE WRAPS ARE NOT ALLOWED.
9. ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
10. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

16. ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
18. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.
21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).
22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
23. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER-ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3 (OR BETTER) FOR EXTERIOR LOCATIONS.
25. 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 BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
26. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
27. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR DISH Wireless L.L.C. AND TOWER OWNER BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
28. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "DISH Wireless L.L.C.".
30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.



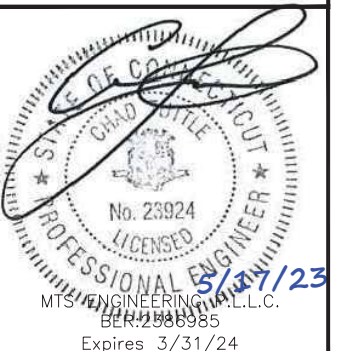
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A&E PROJECT NUMBER  
**149457.001.01**

DISH Wireless L.L.C.  
PROJECT INFORMATION  
**BOBOS00053A**  
**5 EXETER DR**  
(AKA 7 EXETER DR - TOWER)  
**STERLING, CT 06377**

SHEET TITLE  
**GENERAL NOTES**

SHEET NUMBER  
**GN-4**



**GROUNDING NOTES:**

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 ft OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON-METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD-WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
21. BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY). DO NOT ATTACH GROUNDING TO FIRE SPRINKLER SYSTEM PIPES.



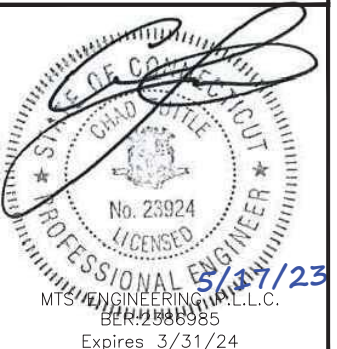
5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120



8051 CONGRESS AVENUE  
BOCA RATON, FL 33487



1717 S. BOULDER  
SUITE 300  
TULSA, OK 74119  
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www.btgrp.com



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

DRAWN BY:	CHECKED BY:	APPROVED BY:
SM	FWP	RMC

RFDS REV #: 2.0

**CONSTRUCTION DOCUMENTS**

SUBMITTALS		
REV	DATE	DESCRIPTION
A	11/29/21	ISSUED FOR REVIEW
B	8/16/22	ISSUED FOR REVIEW
0	9/20/22	CONSTRUCTION
1	1/13/23	CONSTRUCTION
2	5/17/23	CONSTRUCTION

A&E PROJECT NUMBER  
**149457.001.01**

DISH Wireless L.L.C.  
PROJECT INFORMATION  
**BOBOS00053A**  
**5 EXETER DR**  
**(AKA 7 EXETER DR - TOWER)**  
**STERLING, CT 06377**

SHEET TITLE  
**GENERAL NOTES**

SHEET NUMBER  
**GN-5**

# EXHIBIT 7

## Structural Analysis



**Tower Engineering Solutions**

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

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## Structural Analysis Report

**Existing 140 ft Nudd Corporation Monopole**

**Customer Name: SBA Communications Corp**

**Customer Site Number: CT11560-A**

**Customer Site Name: Sterling 6 CT**

**Carrier Name: Dish Wireless (App#: 227981, V1)**

**Carrier Site ID / Name: BOBOS00053A / 0**

**Site Location: 7 Exeter Drive**

**Sterling, Connecticut**

**Windham County**

**Latitude: 41.714047**

**Longitude: -71.822735**

### Analysis Result:

**Max Structural Usage: 89.3% [Pass]**

**Max Foundation Usage: 76.0% [Pass]**

**Additional Usage Caused by New Mount/Mount Modification: 1.1%**

**Report Prepared By: Zobair Ahmed**





## Introduction

The purpose of this report is to summarize the analysis results on the 140 ft Nudd Corporation Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

## Sources of Information

<b>Tower Drawings</b>	Monopole original structural design report prepared by Fred A. Nudd, Corp. Dated 03-17-2008. Drawing No 308-13078-1. Project No 308-13078. Monopole previous structural report prepared by FDH Engineering, Inc. Dated 03-24-2015. Project No 15BHJV1400.
<b>Foundation Drawing</b>	Monopole original foundation design prepared by Fred A. Nudd, Corp. Dated 03-17-2008. Drawing No 308-13078-2. Project No 308-13078.
<b>Geotechnical Report</b>	Soil properties obtained from Monopole original structural design report prepared by Fred A. Nudd, Corp. Dated 03-17-2008. Drawing No 308-13078-1. Project No 308-13078
<b>Modification Drawings</b>	N/A

## Analysis Criteria

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

<b>Wind Speed Used in the Analysis:</b>	125.0 mph (3-Sec. Gust) (Ultimate wind speed)
<b>Wind Speed with Ice:</b>	50 mph (3-Sec. Gust) with 1" radial ice concurrent
<b>Service Load Wind Speed:</b>	60 mph + 0" Radial ice
<b>Standard/Codes:</b>	TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
<b>Exposure Category:</b>	B
<b>Risk Category:</b>	II
<b>Topographic Category:</b>	1
<b>Crest Height:</b>	0 ft
<b>Seismic Parameters:</b>	$S_S = 0.19$ , $S_1 = 0.055$

This structural analysis is based upon the tower being classified as a Risk Category 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	137.0	3	Samsung B5/B13 RRH-BR04C	(1) Low Profile Platform w/Handrails+ Kicker support	(10) 1 5/8" (2) 1 5/8" Hybrid	Verizon
2		3	Samsung B2/B66A RRH-BR049			
3		1	Raycap OVP-12			
4		3	Antel BXA-70063-6CF-2- Panel			
5		6	Andrew JAHH-65B-R3B - Panel			
6		3	Samsung MT6407-77A - Panel			
7		3	Commscope CBC78T-DS-43-2X			
8	130.0	6	Powerwave LGP21901 - Diplexer	(1) Modified Low Profile Platform (Valmont LWRM) W/ (1) SitePro1 HRK12 (Handrail Kit), (3) 2 1/2" standard (Pipe Masts) & (3) SitePro1 SCX4-K (Crossover Plate Kit)	(12) 1 5/8" (2) 1" DC Power (1) 7/16" Fiber	AT&T
9		6	Powerwave 7770.00 - Panel			
10		6	Powerwave LGP21401 - TMA			
11		1	Raycap-DC6-48-60-18-8F-OVP			
12		3	Cci HPA-65R-BU8AA - Panel			
13		3	Cci DMP65R-BU8DA - Panel			
14		6	Powerwave LGP17201 TMA			
15		3	Ericsson RRUS 8843 B2 B66A			
16		3	Ericsson RRUS 4449 B5/B12			
17	120.0	3	RFS APX16DWV-16DWVS-E-A20 - Panel	Platform w/ Handrails & Kickers SitePro1 RMQP-4096-HK	(3) 1.99" Hybrid 6x24	T-Mobile
18		3	RFS APXVAALL24-43-U-NA20 - Panel			
19		3	Ericsson AIR6449 B41 - Panel			
20		3	Ericsson 4460 B25 + B66 - RRU			
21		3	Ericsson 4480 B71 + B85 - RRU			
-	95.0	3	Commscope FFVV-65B-R2- Panel	(1) Commscope MC-PK8-DSH Low-profile platform w/HRK	(1) 1.6" Hybrid	Dish Wireless
-		3	Fujitsu TA08025-B604 RRU			
-		3	Fujitsu TA08025-B605 RRU			
-		1	Raycap RDIDC-9181-PF-48-OVP			

**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
17	95.0	3	Commscope FFVV-65B-R2- Panel	(1) Commscope MC-PK10-DSH Low-profile platform w/HRK	(1) 1.6" Hybrid	Dish Wireless
18		3	Fujitsu TA08025-B604 RRU			
19		3	Fujitsu TA08025-B605 RRU			
20		1	Raycap RDIDC-9181-PF-48-OVP			

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:	<b>51.4%</b>	<b>50.0%</b>	<b>89.3%</b>
Pass/Fail	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>

## **Foundations**

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	3482.1.0	34.1	58.6

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

## **Service Load Condition (Rigidity):**

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 0.4298 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 51.37% at 25.0ft

**Structure:** CT11560-A-SBA  
**Site Name:** Sterling 6 CT  
**Height:** 140.00 (ft)  
**Base Elev:** 1.000 (ft)

**Code:** EIA/TIA-222-H  
**Exposure:** B  
**Gh:** 1.1

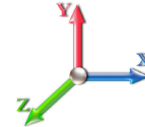
5/1/2023



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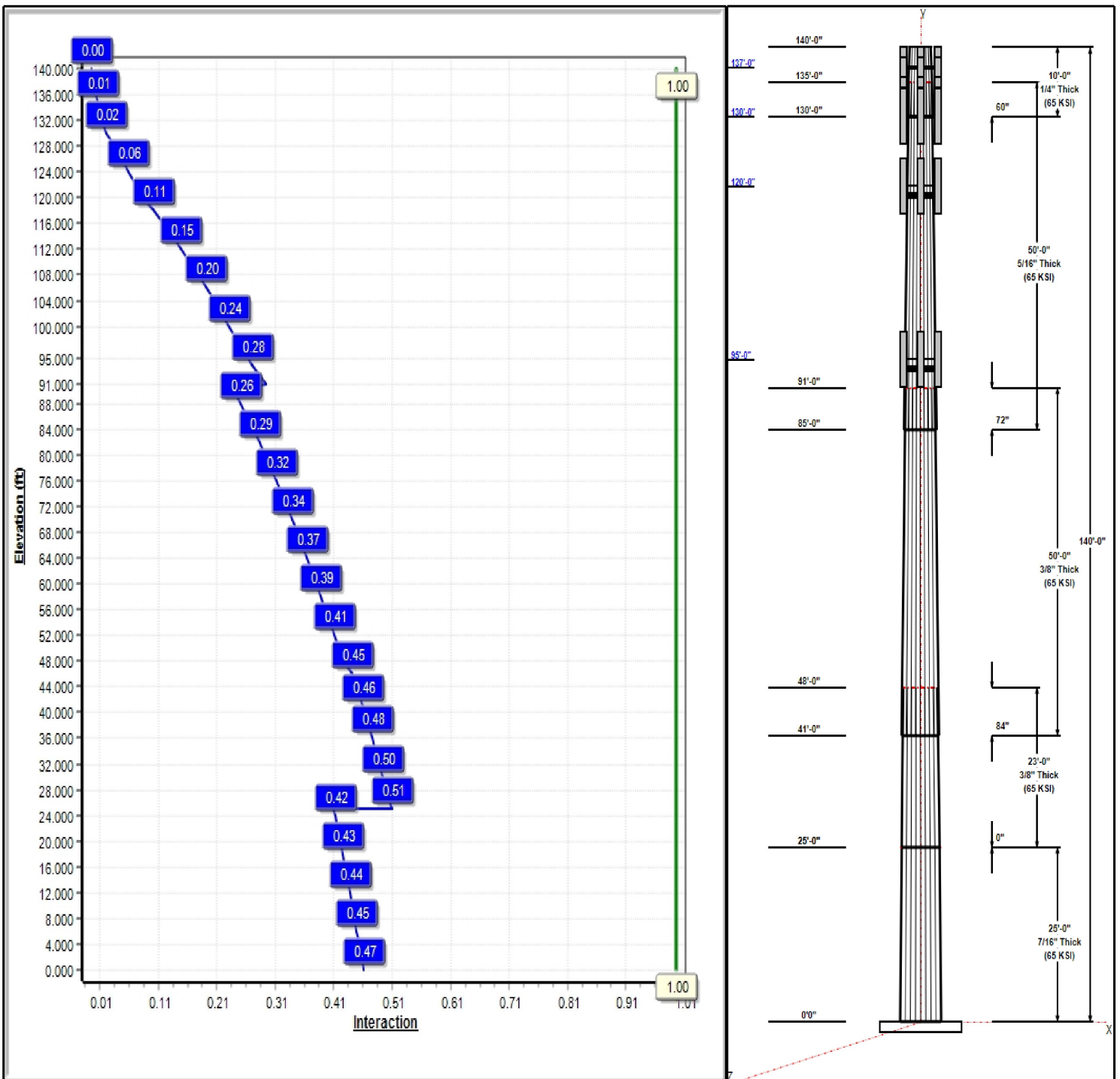
**Dead Load Factor:** 1.20  
**Wind Load Factor:** 1.00

**Load Case : 1.2D + 1.0W 125 mph Wind**



**Iterations:** 22

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## Structure: CT11560-A-SBA

**Type:** Tapered  
**Site Name:** Sterling 6 CT  
**Height:** 140.00 (ft)  
**Base Elev:** 1.00 (ft)

**Base Shape:** 18 Sided  
**Taper:** 0.23518

5/1/2023

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### Shaft Properties

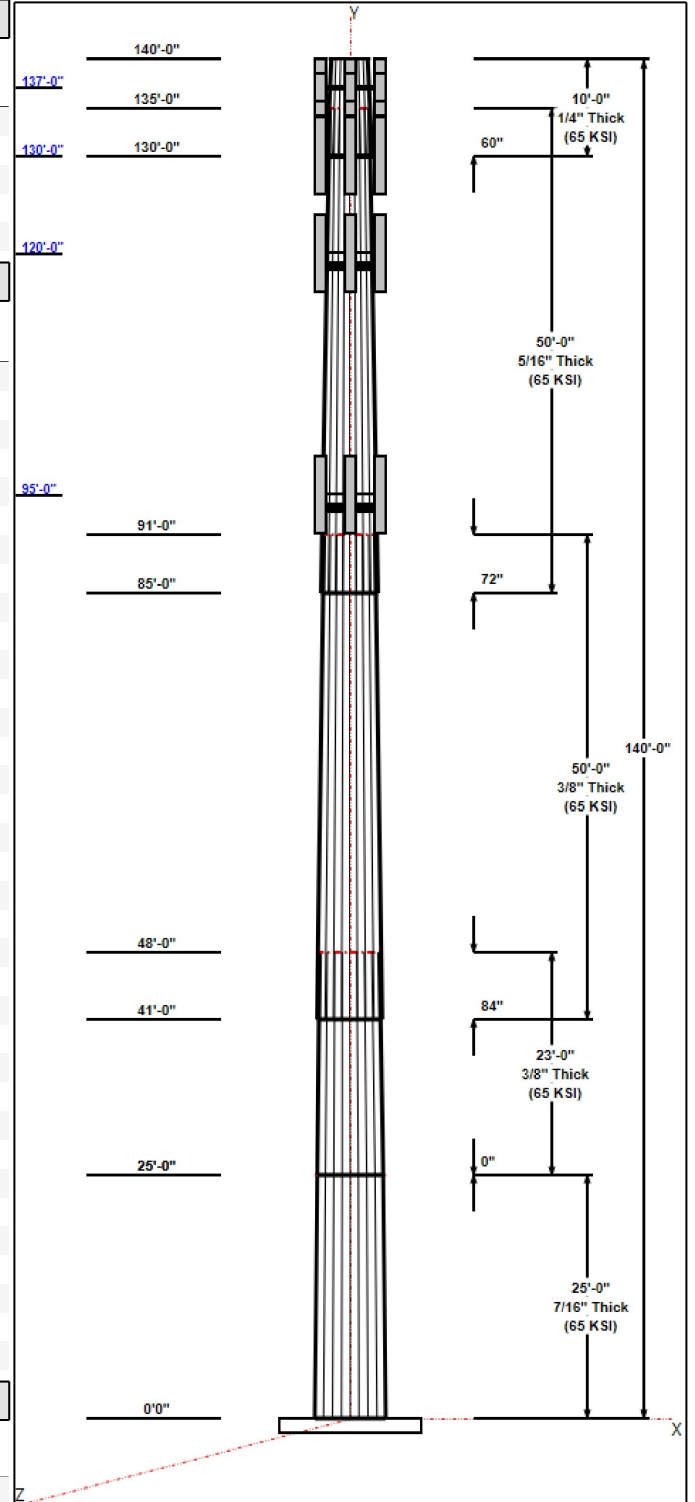
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	25.00	58.62	64.50	0.438		0.23518	65
2	23.00	53.21	58.62	0.375	Butt	0.23518	65
3	50.00	43.85	55.61	0.375	Slip	0.23518	65
4	50.00	34.13	45.88	0.313	Slip	0.23518	65
5	10.00	33.45	35.80	0.250	Slip	0.23518	65

### Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
137.00	137.00	3	B5/B13 RRHBR04C	Verizon
137.00	137.00	3	B2/B66A RRHBR049	Verizon
137.00	137.00	3	MT6407-77A	Verizon
137.00	137.00	3	CBC78T-DS-43	Verizon
137.00	137.00	6	JAHH-65B-R3B	Verizon
137.00	137.00	1	HRK12 (Handrail Kit)	Verizon
137.00	137.00	1	PRK-1245 (kicker kit)	Verizon
137.00	137.00	3	Antel BXA-70080/6CF	Verizon
137.00	137.00	1	Low Profile Platform	Verizon
137.00	137.00	1	(3) Stabilizer Kit (4' FW)	T-Mobile
137.00	137.00	1	Raycap OVP-12	Verizon
130.00	130.00	3	15'x2.875"mount pipe	AT&T
130.00	130.00	3	HPA-65R-BU8AA	AT&T
130.00	130.00	3	DMP65R-BU8DA	AT&T
130.00	130.00	1	HRK12 (Handrail Kit)	AT&T
130.00	130.00	6	LGP17201	AT&T
130.00	130.00	3	RRUS 8843 B2 B66A	AT&T
130.00	130.00	3	RRUS 4449 B5/B12	AT&T
130.00	130.00	6	Powerwave LGP21901 -	AT&T
130.00	130.00	6	7770.00	AT&T
130.00	130.00	6	Powerwave LGP21401 -	AT&T
130.00	130.00	1	DC6-48-60-18-8F	AT&T
130.00	130.00	1	Low Profile Platform	AT&T
120.00	120.00	1	PRK-1245 (kicker kit)	T-Mobile
120.00	120.00	3	APX16DWV-16DWVS-E-A	T-Mobile
120.00	120.00	3	APXVAA4L24-43-U-NA20	T-Mobile
120.00	120.00	3	AIR6449 B41	T-Mobile
120.00	120.00	1	LP-RMQP-4096-HK Plat	T-Mobile
120.00	120.00	3	4460 Radio	T-Mobile
120.00	120.00	3	4480 Radio	T-Mobile
95.00	95.00	1	MC-PK10-DSH	Dish Wireless
95.00	95.00	3	FFVV-65C-R3-V1	Dish Wireless
95.00	95.00	3	TA08025-B604	Dish Wireless
95.00	95.00	3	TA08025-B605	Dish Wireless
95.00	95.00	1	RDIDC-9181-OF-48	Dish Wireless

### Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	137.00	Inside	1 5/8" Hybrid	Verizon
3.00	137.00	Inside	1 5/8" Coax	Verizon
3.00	130.00	Inside	1 5/8" Coax	AT&T
3.00	130.00	Inside	1" DC Power	AT&T
3.00	130.00	Inside	7/16" Fiber	AT&T
0.00	120.00	Inside	1.99" Hybrid 6x24	T-Mobile



**Structure: CT11560-A-SBA**

**Type:** Tapered  
**Site Name:** Sterling 6 CT  
**Height:** 140.00 (ft)  
**Base Elev:** 1.00 (ft)

**Base Shape:** 18 Sided  
**Taper:** 0.23518

5/1/2023

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0.00	95.00	Inside	1.6" Hybrid	Dish Wireless
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**Anchor Bolts**

Qty	Specifications	Grade (ksi)	Arrangement
20	2.00" F1554 105	105.0	Radial

**Base Plate**

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.0000	68.0	50.0	Round

**Reactions**

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.0W 125 mph Wind	3482.1	34.1	58.6
0.9D + 1.0W 125 mph Wind	3458.7	34.1	43.9
1.2D + 1.0Di + 1.0Wi 50 mph Wind	824.6	8.3	77.3
1.2D + 1.0Ev + 1.0Eh	148.2	1.2	60.6
0.9D + 1.0Ev + 1.0Eh	147.4	1.2	45.9
1.0D + 1.0W 60 mph Wind	714.7	7.0	48.8

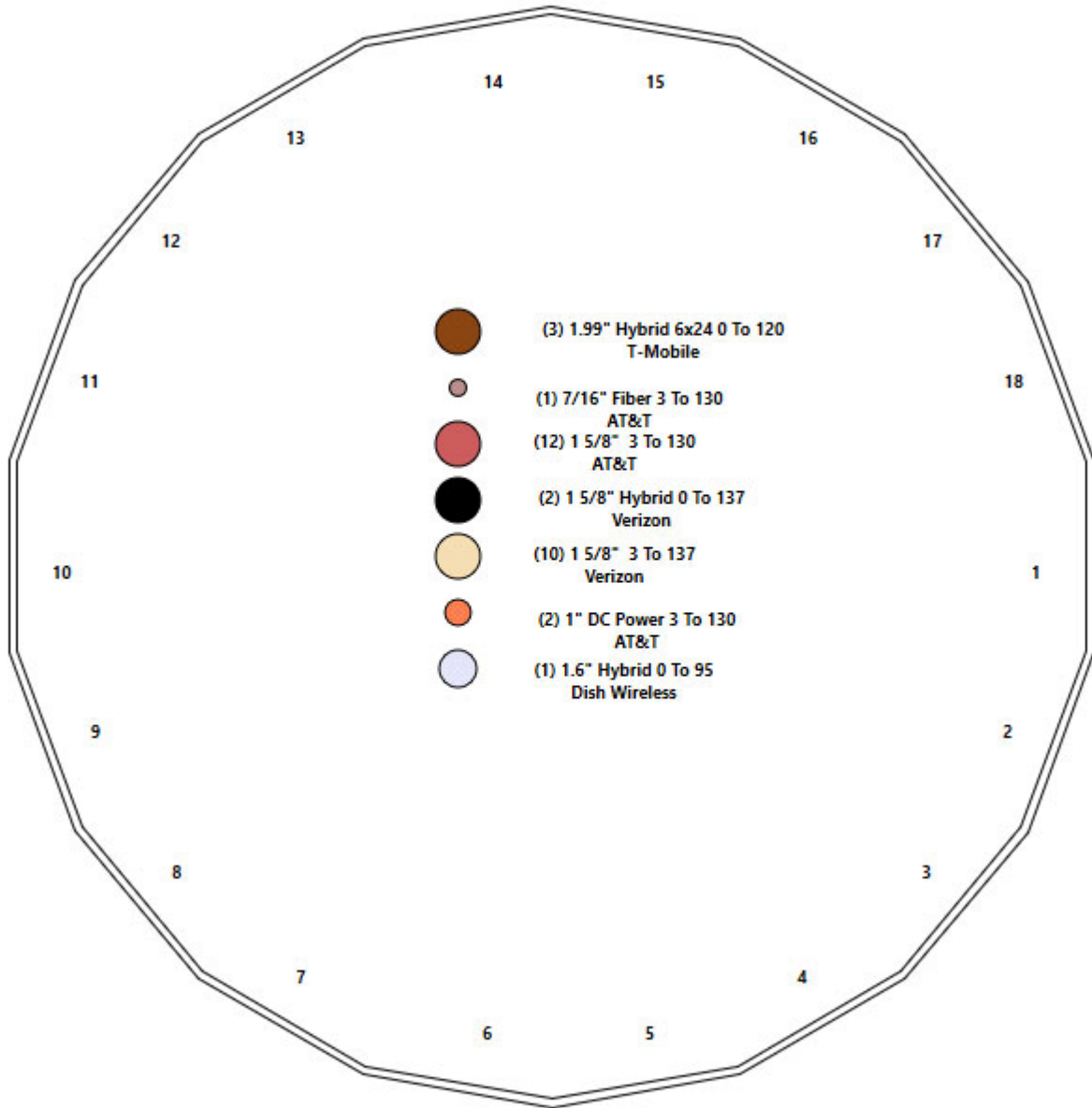


# Structure: CT11560-A-SBA - Coax Line Placement

**Type:** Monopole  
**Site Name:** Sterling 6 CT  
**Height:** 140.00 (ft)

5/1/2023

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## Shaft Properties

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	25.000	0.4375	65		0.00	7,220
2	18	23.000	0.3750	65	Flange	0.00	5,174
3	18	50.000	0.3750	65	Slip	84.00	9,994
4	18	50.000	0.3125	65	Slip	72.00	6,698
5	18	10.000	0.2500	65	Slip	60.00	928
<b>Total Shaft Weight:</b>							<b>30,014</b>

Bottom

Top

Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Taper
1	64.50	0.00	88.96	46124.76	24.59	147.43	58.62	25.00	80.79	34555.0	22.22	133.9	0.235179
2	58.62	25.00	69.32	29714.17	26.15	156.32	53.21	48.00	62.89	22180.7	23.61	141.9	0.235179
3	55.61	41.00	65.74	25337.51	24.74	148.29	43.85	91.00	51.74	12355.4	19.21	116.9	0.235179
4	45.88	85.00	45.20	11860.36	24.48	146.83	34.13	135.00	33.54	4844.63	17.84	109.2	0.235179
5	35.80	130.0	28.21	4504.73	23.84	143.21	33.45	140.00	26.34	3668.59	22.18	133.8	0.235179

## Load Summary

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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### Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	137.00	B5/B13 RRHBR04C	3	70.30	1.85	0.67	98.50	2.209	0.67	0.00	0.00
2	137.00	B2/B66A RRHBR049	3	84.50	1.88	0.67	118.39	2.244	0.67	0.00	0.00
3	137.00	MT6407-77A	3	79.40	4.69	0.70	152.90	5.309	0.70	0.00	0.00
4	137.00	CBC78T-DS-43	3	10.40	0.37	0.67	22.00	0.543	0.67	0.00	0.00
5	137.00	JAHH-65B-R3B	6	63.30	9.11	0.83	206.84	9.983	0.83	0.00	0.00
6	137.00	HRK12 (Handrail Kit)	1	261.72	6.75	1.00	467.06	11.111	1.00	0.00	0.00
7	137.00	PRK-1245 (kicker kit)	1	464.91	9.50	1.00	679.48	16.077	1.00	0.00	0.00
8	137.00	Antel BXA-70080/6CF	3	18.00	5.84	0.88	101.26	7.417	0.88	0.00	0.00
9	137.00	Low Profile Platform	1	1500.00	22.00	1.00	2365.36	33.677	1.00	0.00	0.00
10	137.00	(3) Stabilizer Kit (4' FW)	1	140.00	3.70	1.00	256.30	6.261	1.00	0.00	0.00
11	137.00	Raycap OVP-12	1	32.00	4.06	0.67	107.32	4.603	0.67	0.00	0.00
12	130.00	15'x2.875" mount pipe	3	87.00	4.31	1.00	174.88	7.852	1.00	0.00	0.00
13	130.00	HPA-65R-BU8AA	3	54.00	11.23	0.86	218.54	12.330	0.86	0.00	0.00
14	130.00	DMP65R-BU8DA	3	95.70	17.87	0.72	398.26	19.052	0.72	0.00	0.00
15	130.00	HRK12 (Handrail Kit)	1	261.72	10.00	1.00	466.00	16.428	1.00	0.00	0.00
16	130.00	LGP17201	6	10.00	1.95	0.67	18.11	2.605	0.67	0.00	0.00
17	130.00	RRUS 8843 B2 B66A	3	72.00	1.64	0.67	102.81	1.967	0.67	0.00	0.00
18	130.00	RRUS 4449 B5/B12	3	71.00	1.97	0.67	106.11	2.330	0.67	0.00	0.00
19	130.00	Powerwave LGP21901 - Diplexer	6	31.00	1.67	0.67	59.51	3.427	0.67	0.00	0.00
20	130.00	7770.00	6	27.00	5.50	0.73	109.08	6.185	0.73	0.00	0.00
21	130.00	Powerwave LGP21401 - TMA	6	17.50	1.29	0.67	37.91	1.840	0.67	0.00	0.00
22	130.00	DC6-48-60-18-8F	1	32.80	1.30	0.67	74.74	1.707	0.67	0.00	0.00
23	130.00	Low Profile Platform	1	1500.00	22.00	1.00	2360.87	33.616	1.00	0.00	0.00
24	120.00	PRK-1245 (kicker kit)	1	464.91	9.50	1.00	676.68	15.991	1.00	0.00	0.00
25	120.00	APX16DWV-16DWVS-E-A20	3	40.70	6.61	0.62	117.08	8.031	0.62	0.00	0.00
26	120.00	APXVAA4L24-43-U-NA20	3	122.80	20.24	0.72	376.80	21.466	0.72	0.00	0.00
27	120.00	AIR6449 B41	3	103.00	5.65	0.71	192.47	6.270	0.71	0.00	0.00
28	120.00	LP-RMQP-4096-HK Plat	1	2669.00	51.70	1.00	4492.59	76.662	1.00	0.00	0.00
29	120.00	4460 Radio	3	104.00	2.85	0.67	148.77	3.290	0.67	0.00	0.00
30	120.00	4480 Radio	3	93.00	2.85	0.67	139.94	3.290	0.67	0.00	0.00
31	95.00	MC-PK10-DSH	1	1669.30	46.50	1.00	2709.46	83.753	1.00	0.00	0.00
32	95.00	FFVV-65C-R3-V1	3	183.40	21.12	0.72	460.20	22.323	0.74	0.00	0.00
33	95.00	TA08025-B604	3	63.90	1.96	0.67	96.18	2.318	0.67	0.00	0.00
34	95.00	TA08025-B605	3	75.00	1.96	0.67	108.35	2.318	0.67	0.00	0.00
35	95.00	RDIDC-9181-OF-48	1	21.90	2.01	1.00	55.85	2.372	1.00	0.00	0.00
<b>Totals:</b>			<b>96</b>	<b>14,195.36</b>			<b>26,700.64</b>				

### Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	137.00	(2) 1 5/8" Hybrid	0.00	Inside
3.00	137.00	(10) 1 5/8" Coax	0.00	Inside
3.00	130.00	(12) 1 5/8" Coax	0.00	Inside
3.00	130.00	(2) 1" DC Power	1.00	Inside
3.00	130.00	(1) 7/16" Fiber	0.00	Inside
0.00	120.00	(3) 1.99" Hybrid 6x24	0.00	Inside

## Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
0.00	95.00	(1) 1.6" Hybrid		0.00		Inside					

## Shaft Section Properties

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Increment Length:** 2 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in <sup>3</sup> )	Weight (lb)
0.00		0.4375	64.500	88.956	46124.8	24.59	147.43	72.5	1408.	0.0
2.00		0.4375	64.030	88.302	45116.2	24.40	146.35	72.7	1387.	603.2
4.00		0.4375	63.559	87.649	44122.5	24.21	145.28	72.9	1367.	598.7
6.00		0.4375	63.089	86.996	43143.5	24.02	144.20	73.2	1346.	594.3
8.00		0.4375	62.619	86.343	42179.1	23.83	143.13	73.4	1326.	589.8
10.00		0.4375	62.148	85.690	41229.1	23.64	142.05	73.6	1306.	585.4
12.00		0.4375	61.678	85.037	40293.6	23.45	140.98	73.8	1286.	580.9
14.00		0.4375	61.208	84.384	39372.2	23.26	139.90	74.0	1267.	576.5
16.00		0.4375	60.737	83.731	38465.1	23.07	138.83	74.3	1247.	572.1
18.00		0.4375	60.267	83.077	37572.0	22.88	137.75	74.5	1227.	567.6
20.00		0.4375	59.796	82.424	36692.8	22.69	136.68	74.7	1208.	563.2
22.00		0.4375	59.326	81.771	35827.4	22.50	135.60	74.9	1189.	558.7
24.00		0.4375	58.856	81.118	34975.8	22.31	134.53	75.2	1170.	554.3
25.00	Top - Section 1	0.4375	58.621	80.792	34555.1	22.22	133.99	75.3	1161.	275.5
25.00	Bot - Section 2	0.3750	58.621	69.324	29714.2	25.92	156.32	70.6	998.4	
26.00		0.3750	58.385	69.044	29355.7	26.04	155.69	70.8	990.3	235.4
28.00		0.3750	57.915	68.485	28647.4	25.82	154.44	71.0	974.3	468.0
30.00		0.3750	57.445	67.925	27950.6	25.60	153.19	71.3	958.3	464.2
32.00		0.3750	56.974	67.365	27265.2	25.38	151.93	71.6	942.6	460.4
34.00		0.3750	56.504	66.805	26591.1	25.16	150.68	71.8	926.9	456.6
36.00		0.3750	56.034	66.245	25928.2	24.94	149.42	72.1	911.4	452.7
38.00		0.3750	55.563	65.685	25276.4	24.72	148.17	72.3	896.0	448.9
40.00		0.3750	55.093	65.126	24635.6	24.49	146.91	72.6	880.7	445.1
41.00	Bot - Section 3	0.3750	54.858	64.846	24319.3	24.38	146.29	72.7	873.2	221.1
42.00		0.3750	54.623	64.566	24005.7	24.27	145.66	72.9	865.6	443.4
44.00		0.3750	54.152	64.006	23386.7	24.05	144.41	73.1	850.6	881.1
46.00		0.3750	53.682	63.446	22778.4	23.83	143.15	73.4	835.8	873.5
48.00	Top - Section 2	0.3750	53.961	63.779	23138.8	23.96	143.90	0.0	0.0	865.8
50.00		0.3750	53.491	63.219	22534.8	23.74	142.64	73.5	829.8	432.1
52.00		0.3750	53.021	62.659	21941.4	23.52	141.39	73.7	815.1	428.3
54.00		0.3750	52.550	62.099	21358.6	23.30	140.13	74.0	800.5	424.5
56.00		0.3750	52.080	61.540	20786.1	23.08	138.88	74.3	786.1	420.7
58.00		0.3750	51.610	60.980	20224.0	22.86	137.63	74.5	771.8	416.9
60.00		0.3750	51.139	60.420	19672.1	22.64	136.37	74.8	757.7	413.1
62.00		0.3750	50.669	59.860	19130.3	22.41	135.12	75.0	743.6	409.3
64.00		0.3750	50.199	59.300	18598.6	22.19	133.86	75.3	729.7	405.5
66.00		0.3750	49.728	58.741	18076.8	21.97	132.61	75.6	716.0	401.7
68.00		0.3750	49.258	58.181	17564.9	21.75	131.35	75.8	702.3	397.9
70.00		0.3750	48.788	57.621	17062.7	21.53	130.10	76.1	688.8	394.0
72.00		0.3750	48.317	57.061	16570.2	21.31	128.85	76.3	675.5	390.2
74.00		0.3750	47.847	56.501	16087.3	21.09	127.59	76.6	662.2	386.4
76.00		0.3750	47.376	55.941	15613.8	20.87	126.34	76.9	649.1	382.6
78.00		0.3750	46.906	55.382	15149.7	20.64	125.08	77.1	636.1	378.8
80.00		0.3750	46.436	54.822	14694.9	20.42	123.83	77.4	623.3	375.0
82.00		0.3750	45.965	54.262	14249.3	20.20	122.57	77.6	610.6	371.2
84.00		0.3750	45.495	53.702	13812.8	19.98	121.32	77.9	598.0	367.4
85.00	Bot - Section 4	0.3750	45.260	53.422	13598.0	19.87	120.69	78.0	591.8	182.3
86.00		0.3750	45.025	53.142	13385.3	19.76	120.07	78.2	585.5	334.7
88.00		0.3750	44.554	52.583	12966.8	19.54	118.81	78.4	573.2	664.2
90.00		0.3750	44.084	52.023	12557.0	19.32	117.56	78.7	561.0	657.2

Increment Length: 2 (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)
91.00	Top - Section 3	0.3125	44.474	43.801	10792.4	23.68	142.32	0.0	0.0	326.0
92.00		0.3125	44.239	43.568	10620.9	23.55	141.56	73.7	472.9	148.6
94.00		0.3125	43.768	43.101	10283.4	23.29	140.06	74.0	462.8	294.9
95.00		0.3125	43.533	42.868	10117.3	23.15	139.31	74.2	457.7	146.3
96.00		0.3125	43.298	42.635	9953.0	23.02	138.55	74.3	452.8	145.5
98.00		0.3125	42.828	42.168	9629.9	22.75	137.05	74.6	442.9	288.6
100.00		0.3125	42.357	41.702	9313.8	22.49	135.54	74.9	433.1	285.4
102.00		0.3125	41.887	41.235	9004.7	22.22	134.04	75.3	423.4	282.2
104.00		0.3125	41.416	40.768	8702.5	21.96	132.53	75.6	413.9	279.0
106.00		0.3125	40.946	40.302	8407.2	21.69	131.03	75.9	404.4	275.9
108.00		0.3125	40.476	39.835	8118.6	21.43	129.52	76.2	395.1	272.7
110.00		0.3125	40.005	39.369	7836.7	21.16	128.02	76.5	385.8	269.5
112.00		0.3125	39.535	38.902	7561.4	20.90	126.51	76.8	376.7	266.3
114.00		0.3125	39.065	38.436	7292.6	20.63	125.01	77.1	367.7	263.2
116.00		0.3125	38.594	37.969	7030.3	20.37	123.50	77.4	358.8	260.0
118.00		0.3125	38.124	37.503	6774.3	20.10	122.00	77.8	350.0	256.8
120.00		0.3125	37.654	37.036	6524.6	19.84	120.49	78.1	341.3	253.6
122.00		0.3125	37.183	36.570	6281.1	19.57	118.99	78.4	332.7	250.5
124.00		0.3125	36.713	36.103	6043.8	19.30	117.48	78.7	324.2	247.3
126.00		0.3125	36.243	35.637	5812.5	19.04	115.98	79.0	315.9	244.1
128.00		0.3125	35.772	35.170	5587.2	18.77	114.47	79.3	307.6	240.9
130.00	Bot - Section 5	0.3125	35.302	34.704	5367.8	18.51	112.97	79.6	299.5	237.8
132.00		0.3125	34.831	34.237	5154.3	18.24	111.46	79.9	291.5	425.3
134.00		0.3125	34.361	33.771	4946.4	17.98	109.96	80.3	283.5	419.6
135.00	Top - Section 4	0.2500	34.626	27.276	4072.4	23.01	138.50	0.0	0.0	207.6
136.00		0.2500	34.391	27.090	3989.4	22.85	137.56	74.5	228.5	92.5
137.00		0.2500	34.156	26.903	3907.5	22.68	136.62	74.7	225.3	91.9
138.00		0.2500	33.920	26.716	3826.7	22.51	135.68	74.9	222.2	91.2
140.00		0.2500	33.450	26.343	3668.6	22.18	133.80	75.3	216.0	180.6

**30014.2**

## Wind Loading - Shaft

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

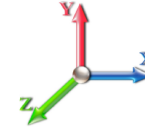


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**Load Case:** 1.2D + 1.0W 125 mph Wind

**Iterations** 22

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



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	26.079	28.69	565.18	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	26.079	28.69	561.06	0.730	0.000	2.00	10.876	7.94	227.8	0.0	723.8
4.00		1.00	0.70	26.079	28.69	556.94	0.730	0.000	2.00	10.796	7.88	226.1	0.0	718.5
6.00		1.00	0.70	26.079	28.69	552.82	0.730	0.000	2.00	10.717	7.82	224.4	0.0	713.1
8.00		1.00	0.70	26.079	28.69	548.69	0.730	0.000	2.00	10.637	7.77	222.8	0.0	707.8
10.00		1.00	0.70	26.079	28.69	544.57	0.730	0.000	2.00	10.558	7.71	221.1	0.0	702.5
12.00		1.00	0.70	26.079	28.69	540.45	0.730	0.000	2.00	10.478	7.65	219.4	0.0	697.1
14.00		1.00	0.70	26.079	28.69	536.33	0.730	0.000	2.00	10.398	7.59	217.8	0.0	691.8
16.00		1.00	0.70	26.079	28.69	532.21	0.730	0.000	2.00	10.319	7.53	216.1	0.0	686.5
18.00		1.00	0.70	26.079	28.69	528.09	0.730	0.000	2.00	10.239	7.47	214.4	0.0	681.1
20.00		1.00	0.70	26.079	28.69	523.97	0.730	0.000	2.00	10.160	7.42	212.8	0.0	675.8
22.00		1.00	0.70	26.079	28.69	519.84	0.730	0.000	2.00	10.080	7.36	211.1	0.0	670.5
24.00		1.00	0.70	26.079	28.69	515.72	0.730	0.000	2.00	10.000	7.30	209.4	0.0	665.1
25.00	Top - Section 1	1.00	0.70	26.079	28.69	513.66	0.730	0.000	1.00	4.970	3.63	104.1	0.0	330.6
26.00		1.00	0.70	26.079	28.69	511.60	0.730	0.000	1.00	4.950	3.61	103.7	0.0	282.5
28.00		1.00	0.70	26.079	28.69	507.48	0.730	0.000	2.00	9.841	7.18	206.1	0.0	561.6
30.00		1.00	0.71	26.346	28.98	505.93	0.730	0.000	2.00	9.762	7.13	206.5	0.0	557.0
32.00		1.00	0.72	26.821	29.50	506.29	0.730	0.000	2.00	9.682	7.07	208.5	0.0	552.4
34.00		1.00	0.73	27.276	30.00	506.35	0.730	0.000	2.00	9.602	7.01	210.3	0.0	547.9
36.00		1.00	0.74	27.712	30.48	506.14	0.730	0.000	2.00	9.523	6.95	211.9	0.0	543.3
38.00		1.00	0.76	28.132	30.95	505.68	0.730	0.000	2.00	9.443	6.89	213.3	0.0	538.7
40.00		1.00	0.77	28.537	31.39	504.99	0.730	0.000	2.00	9.364	6.84	214.6	0.0	534.1
41.00	Bot - Section 3	1.00	0.77	28.734	31.61	504.57	0.730	0.000	1.00	4.652	3.40	107.3	0.0	265.4
42.00		1.00	0.78	28.928	31.82	504.10	0.730	0.000	1.00	4.696	3.43	109.1	0.0	532.1
44.00		1.00	0.79	29.306	32.24	503.02	0.730	0.000	2.00	9.331	6.81	219.6	0.0	1057.3
46.00		1.00	0.80	29.673	32.64	501.75	0.730	0.000	2.00	9.252	6.75	220.4	0.0	1048.1
48.00	Top - Section 2	1.00	0.81	30.028	33.03	500.33	0.730	0.000	2.00	9.172	6.70	221.2	0.0	1039.0
50.00		1.00	0.82	30.373	33.41	505.84	0.730	0.000	2.00	9.093	6.64	221.8	0.0	518.6
52.00		1.00	0.82	30.709	33.78	504.16	0.730	0.000	2.00	9.013	6.58	222.3	0.0	514.0
54.00		1.00	0.83	31.036	34.14	502.33	0.730	0.000	2.00	8.933	6.52	222.6	0.0	509.4
56.00		1.00	0.84	31.354	34.49	500.38	0.730	0.000	2.00	8.854	6.46	222.9	0.0	504.9
58.00		1.00	0.85	31.665	34.83	498.31	0.730	0.000	2.00	8.774	6.41	223.1	0.0	500.3
60.00		1.00	0.86	31.968	35.16	496.13	0.730	0.000	2.00	8.694	6.35	223.2	0.0	495.7
62.00		1.00	0.87	32.264	35.49	493.84	0.730	0.000	2.00	8.615	6.29	223.2	0.0	491.1
64.00		1.00	0.87	32.553	35.81	491.44	0.730	0.000	2.00	8.535	6.23	223.1	0.0	486.6
66.00		1.00	0.88	32.836	36.12	488.95	0.730	0.000	2.00	8.456	6.17	223.0	0.0	482.0
68.00		1.00	0.89	33.113	36.42	486.36	0.730	0.000	2.00	8.376	6.11	222.7	0.0	477.4
70.00		1.00	0.90	33.385	36.72	483.69	0.730	0.000	2.00	8.296	6.06	222.4	0.0	472.9
72.00		1.00	0.90	33.651	37.02	480.93	0.730	0.000	2.00	8.217	6.00	222.0	0.0	468.3
74.00		1.00	0.91	33.912	37.30	478.09	0.730	0.000	2.00	8.137	5.94	221.6	0.0	463.7
76.00		1.00	0.92	34.168	37.58	475.18	0.730	0.000	2.00	8.058	5.88	221.1	0.0	459.1
78.00		1.00	0.92	34.419	37.86	472.18	0.730	0.000	2.00	7.978	5.82	220.5	0.0	454.6
80.00		1.00	0.93	34.665	38.13	469.12	0.730	0.000	2.00	7.898	5.77	219.9	0.0	450.0
82.00		1.00	0.94	34.908	38.40	465.99	0.730	0.000	2.00	7.819	5.71	219.2	0.0	445.4
84.00		1.00	0.94	35.146	38.66	462.79	0.730	0.000	2.00	7.739	5.65	218.4	0.0	440.9
85.00	Bot - Section 4	1.00	0.95	35.264	38.79	461.17	0.730	0.000	1.00	3.840	2.80	108.7	0.0	218.7
86.00		1.00	0.95	35.381	38.92	459.53	0.730	0.000	1.00	3.873	2.83	110.0	0.0	401.7



## Wind Loading - Shaft

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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88.00	1.00	0.96	35.611	39.17	456.21	0.730	0.000	2.00	7.686	5.61	219.8	0.0	797.0
90.00	1.00	0.96	35.838	39.42	452.83	0.730	0.000	2.00	7.606	5.55	218.9	0.0	788.7
91.00 Top - Section 3	1.00	0.96	35.950	39.54	451.12	0.730	0.000	1.00	3.773	2.75	108.9	0.0	391.2
92.00	1.00	0.97	36.061	39.67	455.83	0.730	0.000	1.00	3.753	2.74	108.7	0.0	178.4
94.00	1.00	0.97	36.281	39.91	452.36	0.730	0.000	2.00	7.447	5.44	217.0	0.0	353.9
95.00 Appurtenance(s)	1.00	0.98	36.390	40.03	450.60	0.730	0.000	1.00	3.694	2.70	107.9	0.0	175.5
96.00	1.00	0.98	36.498	40.15	448.83	0.730	0.000	1.00	3.674	2.68	107.7	0.0	174.6
98.00	1.00	0.99	36.711	40.38	445.25	0.730	0.000	2.00	7.288	5.32	214.8	0.0	346.3
100.00	1.00	0.99	36.921	40.61	441.62	0.730	0.000	2.00	7.208	5.26	213.7	0.0	342.5
102.00	1.00	1.00	37.129	40.84	437.94	0.730	0.000	2.00	7.129	5.20	212.5	0.0	338.7
104.00	1.00	1.00	37.333	41.07	434.22	0.730	0.000	2.00	7.049	5.15	211.3	0.0	334.8
106.00	1.00	1.01	37.535	41.29	430.45	0.730	0.000	2.00	6.969	5.09	210.1	0.0	331.0
108.00	1.00	1.01	37.734	41.51	426.63	0.730	0.000	2.00	6.890	5.03	208.8	0.0	327.2
110.00	1.00	1.02	37.931	41.72	422.77	0.730	0.000	2.00	6.810	4.97	207.4	0.0	323.4
112.00	1.00	1.02	38.125	41.94	418.86	0.730	0.000	2.00	6.731	4.91	206.1	0.0	319.6
114.00	1.00	1.03	38.317	42.15	414.92	0.730	0.000	2.00	6.651	4.86	204.6	0.0	315.8
116.00	1.00	1.03	38.506	42.36	410.93	0.730	0.000	2.00	6.571	4.80	203.2	0.0	312.0
118.00	1.00	1.04	38.693	42.56	406.91	0.730	0.000	2.00	6.492	4.74	201.7	0.0	308.2
120.00 Appurtenance(s)	1.00	1.04	38.877	42.77	402.85	0.730	0.000	2.00	6.412	4.68	200.2	0.0	304.4
122.00	1.00	1.05	39.060	42.97	398.75	0.730	0.000	2.00	6.333	4.62	198.6	0.0	300.6
124.00	1.00	1.05	39.240	43.16	394.61	0.730	0.000	2.00	6.253	4.56	197.0	0.0	296.7
126.00	1.00	1.06	39.419	43.36	390.44	0.730	0.000	2.00	6.173	4.51	195.4	0.0	292.9
128.00	1.00	1.06	39.595	43.55	386.23	0.730	0.000	2.00	6.094	4.45	193.8	0.0	289.1
130.00 Bot - Section 5	1.00	1.07	39.770	43.75	381.99	0.730	0.000	2.00	6.014	4.39	192.1	0.0	285.3
132.00	1.00	1.07	39.942	43.94	377.72	0.730	0.000	2.00	6.019	4.39	193.1	0.0	510.4
134.00	1.00	1.08	40.113	44.12	373.42	0.730	0.000	2.00	5.940	4.34	191.3	0.0	503.5
135.00 Top - Section 4	1.00	1.08	40.197	44.22	371.25	0.730	0.000	1.00	2.940	2.15	94.9	0.0	249.2
136.00	1.00	1.08	40.282	44.31	374.52	0.730	0.000	1.00	2.920	2.13	94.5	0.0	111.0
137.00 Appurtenance(s)	1.00	1.08	40.365	44.40	372.35	0.730	0.000	1.00	2.900	2.12	94.0	0.0	110.2
138.00	1.00	1.09	40.449	44.49	370.17	0.730	0.000	1.00	2.880	2.10	93.6	0.0	109.5
140.00	1.00	1.09	40.614	44.68	365.78	0.730	0.000	2.00	5.701	4.16	185.9	0.0	216.7
<b>Totals:</b>								<b>140.00</b>			<b>14,898.7</b>		<b>36,017.0</b>

## Discrete Appurtenance Forces

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.2D + 1.0W 125 mph Wind

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



**Iterations** 22

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	137.00	PRK-1245 (kicker kit)	1	40.365	44.402	1.00	1.00	9.50	557.89	0.000	0.000	421.82	0.00	0.00
2	137.00	B5/B13 RRHBR04C	3	40.365	44.402	0.50	0.75	2.79	253.08	0.000	0.000	123.83	0.00	0.00
3	137.00	B2/B66A RRHBR049	3	40.365	44.402	0.50	0.75	2.83	304.20	0.000	0.000	125.84	0.00	0.00
4	137.00	JAHH-65B-R3B	6	40.365	44.402	0.62	0.75	34.03	455.76	0.000	0.000	1510.82	0.00	0.00
5	137.00	HRK12 (Handrail Kit)	1	40.365	44.402	1.00	1.00	6.75	314.06	0.000	0.000	299.71	0.00	0.00
6	137.00	Raycap OVP-12	1	40.365	44.402	0.50	0.75	2.04	38.40	0.000	0.000	90.59	0.00	0.00
7	137.00	MT6407-77A	3	40.365	44.402	0.52	0.75	7.39	285.84	0.000	0.000	327.99	0.00	0.00
8	137.00	CBC78T-DS-43	3	40.365	44.402	0.50	0.75	0.56	37.44	0.000	0.000	24.77	0.00	0.00
9	137.00	Antel BXA-70080/6CF	3	40.365	44.402	0.70	0.80	12.33	64.80	0.000	0.000	547.66	0.00	0.00
10	137.00	Low Profile Platform	1	40.365	44.402	1.00	1.00	22.00	1800.00	0.000	0.000	976.84	0.00	0.00
11	137.00	(3) Stabilizer Kit (4' FW)	1	40.365	44.402	1.00	1.00	3.70	168.00	0.000	0.000	164.29	0.00	0.00
12	130.00	LGP17201	6	39.770	43.746	0.50	0.75	5.88	72.00	0.000	0.000	257.20	0.00	0.00
13	130.00	DMP65R-BU8DA	3	39.770	43.746	0.54	0.75	28.95	344.52	0.000	0.000	1266.43	0.00	0.00
14	130.00	HRK12 (Handrail Kit)	1	39.770	43.746	1.00	1.00	10.00	314.06	0.000	0.000	437.46	0.00	0.00
15	130.00	Powerwave LGP21901 -	6	39.770	43.746	0.50	0.75	5.04	223.20	0.000	0.000	220.27	0.00	0.00
16	130.00	RRUS 8843 B2 B66A	3	39.770	43.746	0.50	0.75	2.47	259.20	0.000	0.000	108.15	0.00	0.00
17	130.00	RRUS 4449 B5/B12	3	39.770	43.746	0.50	0.75	2.97	255.60	0.000	0.000	129.92	0.00	0.00
18	130.00	HPA-65R-BU8AA	3	39.770	43.746	0.65	0.75	21.73	194.40	0.000	0.000	950.61	0.00	0.00
19	130.00	Low Profile Platform	1	39.770	43.746	1.00	1.00	22.00	1800.00	0.000	0.000	962.42	0.00	0.00
20	130.00	DC6-48-60-18-8F	1	39.770	43.746	0.50	0.75	0.65	39.36	0.000	0.000	28.58	0.00	0.00
21	130.00	Powerwave LGP21401 -	6	39.770	43.746	0.50	0.75	3.89	126.00	0.000	0.000	170.15	0.00	0.00
22	130.00	7770.00	6	39.770	43.746	0.55	0.75	18.07	194.40	0.000	0.000	790.39	0.00	0.00
23	130.00	15'x2.875"mount pipe	3	39.770	43.746	1.00	1.00	12.93	313.20	0.000	0.000	565.64	0.00	0.00
24	120.00	PRK-1245 (kicker kit)	1	38.877	42.765	1.00	1.00	9.50	557.89	0.000	0.000	406.27	0.00	0.00
25	120.00	APX16DWV-16DWVS-E-A	3	38.877	42.765	0.46	0.75	9.22	146.52	0.000	0.000	394.34	0.00	0.00
26	120.00	APXVAA4L24-43-U-NA20	3	38.877	42.765	0.54	0.75	32.79	442.08	0.000	0.000	1402.22	0.00	0.00
27	120.00	AIR6449 B41	3	38.877	42.765	0.53	0.75	9.03	370.80	0.000	0.000	385.99	0.00	0.00
28	120.00	LP-RMQP-4096-HK Plat	1	38.877	42.765	1.00	1.00	51.70	3202.80	0.000	0.000	2210.96	0.00	0.00
29	120.00	4460 Radio	3	38.877	42.765	0.50	0.75	4.30	374.40	0.000	0.000	183.74	0.00	0.00
30	120.00	4480 Radio	3	38.877	42.765	0.50	0.75	4.30	334.80	0.000	0.000	183.74	0.00	0.00
31	95.00	RDIDC-9181-OF-48	1	36.390	40.029	1.00	1.00	2.01	26.28	0.000	0.000	80.46	0.00	0.00
32	95.00	TA08025-B605	3	36.390	40.029	0.50	0.75	2.95	270.00	0.000	0.000	118.27	0.00	0.00
33	95.00	TA08025-B604	3	36.390	40.029	0.50	0.75	2.95	230.04	0.000	0.000	118.27	0.00	0.00
34	95.00	FFVV-65C-R3-V1	3	36.390	40.029	0.54	0.75	34.21	660.24	0.000	0.000	1369.56	0.00	0.00
35	95.00	MC-PK10-DSH	1	36.390	40.029	1.00	1.00	46.50	2003.16	0.000	0.000	1861.34	0.00	0.00
<b>Totals:</b>									<b>17,034.43</b>			<b>19,216.52</b>		

## Total Applied Force Summary

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 1.2D + 1.0W 125 mph Wind

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



**Iterations** 22

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		227.76	751.45	0.00	0.00
4.00		226.09	776.07	0.00	0.00
6.00		224.42	800.69	0.00	0.00
8.00		222.76	795.35	0.00	0.00
10.00		221.09	790.02	0.00	0.00
12.00		219.42	784.69	0.00	0.00
14.00		217.75	779.35	0.00	0.00
16.00		216.09	774.02	0.00	0.00
18.00		214.42	768.68	0.00	0.00
20.00		212.75	763.35	0.00	0.00
22.00		211.09	758.02	0.00	0.00
24.00		209.42	752.68	0.00	0.00
25.00		104.08	374.34	0.00	0.00
26.00		103.67	326.28	0.00	0.00
28.00		206.09	649.13	0.00	0.00
30.00		206.52	644.56	0.00	0.00
32.00		208.52	639.98	0.00	0.00
34.00		210.32	635.41	0.00	0.00
36.00		211.91	630.84	0.00	0.00
38.00		213.32	626.27	0.00	0.00
40.00		214.57	621.70	0.00	0.00
41.00		107.34	309.13	0.00	0.00
42.00		109.07	575.85	0.00	0.00
44.00		219.59	1144.84	0.00	0.00
46.00		220.44	1135.70	0.00	0.00
48.00		221.16	1126.56	0.00	0.00
50.00		221.76	606.13	0.00	0.00
52.00		222.25	601.56	0.00	0.00
54.00		222.63	596.98	0.00	0.00
56.00		222.91	592.41	0.00	0.00
58.00		223.10	587.84	0.00	0.00
60.00		223.19	583.27	0.00	0.00
62.00		223.19	578.70	0.00	0.00
64.00		223.11	574.12	0.00	0.00
66.00		222.95	569.55	0.00	0.00
68.00		222.72	564.98	0.00	0.00
70.00		222.41	560.41	0.00	0.00
72.00		222.03	555.84	0.00	0.00
74.00		221.59	551.26	0.00	0.00
76.00		221.07	546.69	0.00	0.00
78.00		220.50	542.12	0.00	0.00
80.00		219.87	537.55	0.00	0.00
82.00		219.17	532.98	0.00	0.00
84.00		218.42	528.41	0.00	0.00
85.00		108.73	262.49	0.00	0.00
86.00		110.03	445.44	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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88.00		219.78	884.59	0.00	0.00
90.00		218.89	876.21	0.00	0.00
91.00		108.93	434.96	0.00	0.00
92.00		108.69	222.15	0.00	0.00
94.00		216.96	441.45	0.00	0.00
95.00	(11) attachments	3655.83	3409.02	0.00	0.00
96.00		107.67	216.16	0.00	0.00
98.00		214.84	429.46	0.00	0.00
100.00		213.71	425.65	0.00	0.00
102.00		212.54	421.84	0.00	0.00
104.00		211.32	418.03	0.00	0.00
106.00		210.06	414.22	0.00	0.00
108.00		208.77	410.41	0.00	0.00
110.00		207.43	406.60	0.00	0.00
112.00		206.05	402.79	0.00	0.00
114.00		204.64	398.98	0.00	0.00
116.00		203.19	395.17	0.00	0.00
118.00		201.70	391.36	0.00	0.00
120.00	(17) attachments	5367.43	5816.84	0.00	0.00
122.00		198.62	365.74	0.00	0.00
124.00		197.03	361.93	0.00	0.00
126.00		195.41	358.12	0.00	0.00
128.00		193.75	354.31	0.00	0.00
130.00	(42) attachments	6079.29	4486.45	0.00	0.00
132.00		193.06	540.60	0.00	0.00
134.00		191.32	533.74	0.00	0.00
135.00		94.90	264.30	0.00	0.00
136.00		94.45	126.12	0.00	0.00
137.00	(26) attachments	4708.15	4404.83	0.00	0.00
138.00		93.55	109.47	0.00	0.00
140.00		185.92	216.66	0.00	0.00
	<b>Totals:</b>	<b>34,115.19</b>	<b>58,591.88</b>	<b>0.00</b>	<b>0.00</b>

## Calculated Forces

**Structure:** CT11560-A-SBA  
**Site Name:** Sterling 6 CT  
**Height:** 140.00 (ft)  
**Base Elev:** 1.000 (ft)  
**Gh:** 1.1

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

5/1/2023  
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**Load Case:** 1.2D + 1.0W 125 mph Wind

**Iterations** 22

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



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-58.58	-34.14	0.00	-3482.1	0.00	3482.10	5803.10	1561.17	8297.91	7657.05	0.00	0.000	0.000	0.465
2.00	-57.80	-33.95	0.00	-3413.8	0.00	3413.83	5778.21	1549.71	8176.51	7567.86	0.01	-0.043	0.000	0.462
4.00	-57.00	-33.77	0.00	-3345.9	0.00	3345.92	5753.06	1538.25	8056.00	7478.80	0.04	-0.085	0.000	0.458
6.00	-56.18	-33.58	0.00	-3278.3	0.00	3278.39	5727.65	1526.78	7936.39	7389.90	0.08	-0.128	0.000	0.454
8.00	-55.36	-33.40	0.00	-3211.2	0.00	3211.22	5701.98	1515.32	7817.67	7301.16	0.15	-0.171	0.000	0.450
10.00	-54.54	-33.22	0.00	-3144.4	0.00	3144.43	5676.04	1503.86	7699.85	7212.59	0.23	-0.214	0.000	0.446
12.00	-53.73	-33.03	0.00	-3077.9	0.00	3077.99	5649.84	1492.40	7582.92	7124.20	0.33	-0.256	0.000	0.442
14.00	-52.93	-32.85	0.00	-3011.9	0.00	3011.93	5623.38	1480.93	7466.89	7035.98	0.44	-0.299	0.000	0.438
16.00	-52.13	-32.67	0.00	-2946.2	0.00	2946.22	5596.66	1469.47	7351.75	6947.96	0.58	-0.343	0.000	0.434
18.00	-51.34	-32.49	0.00	-2880.8	0.00	2880.88	5569.67	1458.01	7237.50	6860.14	0.73	-0.386	0.000	0.430
20.00	-50.55	-32.31	0.00	-2815.9	0.00	2815.90	5542.43	1446.55	7124.15	6772.52	0.90	-0.429	0.000	0.425
22.00	-49.77	-32.13	0.00	-2751.2	0.00	2751.28	5514.92	1435.08	7011.70	6685.11	1.09	-0.472	0.000	0.421
24.00	-49.01	-31.94	0.00	-2687.0	0.00	2687.02	5487.15	1423.62	6900.13	6597.93	1.30	-0.515	0.000	0.417
25.00	-48.62	-31.85	0.00	-2655.0	0.00	2655.07	5473.16	1417.89	6844.69	6554.42	1.41	-0.537	0.000	0.414
25.00	-48.62	-31.85	0.00	-2655.0	0.00	2655.07	4407.37	1216.64	5879.49	5289.42	1.41	-0.537	0.000	0.514
26.00	-48.27	-31.78	0.00	-2623.2	0.00	2623.22	4397.65	1211.73	5832.10	5256.32	1.52	-0.559	0.000	0.511
28.00	-47.60	-31.61	0.00	-2559.6	0.00	2559.67	4378.03	1201.90	5737.91	5190.16	1.77	-0.609	0.000	0.505
30.00	-46.93	-31.43	0.00	-2496.4	0.00	2496.45	4358.14	1192.08	5644.49	5124.08	2.04	-0.659	0.000	0.499
32.00	-46.27	-31.26	0.00	-2433.5	0.00	2433.59	4338.00	1182.25	5551.83	5058.08	2.32	-0.709	0.000	0.492
34.00	-45.61	-31.08	0.00	-2371.0	0.00	2371.07	4317.58	1172.43	5459.94	4992.17	2.63	-0.759	0.000	0.486
36.00	-44.95	-30.90	0.00	-2308.9	0.00	2308.91	4296.91	1162.60	5368.81	4926.35	2.96	-0.809	0.000	0.480
38.00	-44.30	-30.72	0.00	-2247.1	0.00	2247.11	4275.98	1152.78	5278.46	4860.65	3.31	-0.859	0.000	0.473
40.00	-43.66	-30.52	0.00	-2185.6	0.00	2185.69	4254.78	1142.95	5188.87	4795.05	3.68	-0.909	0.000	0.467
41.00	-43.34	-30.43	0.00	-2155.1	0.00	2155.17	4244.08	1138.04	5144.36	4762.30	3.88	-0.934	0.000	0.463
42.00	-42.75	-30.34	0.00	-2124.7	0.00	2124.74	4233.32	1133.13	5100.04	4729.58	4.08	-0.959	0.000	0.460
44.00	-41.58	-30.13	0.00	-2064.0	0.00	2064.07	4211.60	1123.30	5011.98	4664.23	4.49	-1.009	0.000	0.453
46.00	-40.42	-29.93	0.00	-2003.8	0.00	2003.81	4189.62	1113.48	4924.69	4599.03	4.92	-1.059	0.000	0.446
48.00	-39.28	-29.72	0.00	-1943.9	0.00	1943.96	4202.72	1119.32	4976.50	4637.78	5.38	-1.108	0.000	0.429
50.00	-38.65	-29.52	0.00	-1884.5	0.00	1884.52	4180.63	1109.50	4889.52	4572.63	5.85	-1.157	0.000	0.422
52.00	-38.03	-29.31	0.00	-1825.4	0.00	1825.49	4158.28	1099.67	4803.31	4507.62	6.35	-1.204	0.000	0.415
54.00	-37.41	-29.11	0.00	-1766.8	0.00	1766.87	4135.67	1089.85	4717.86	4442.77	6.86	-1.250	0.000	0.407
56.00	-36.80	-28.90	0.00	-1708.6	0.00	1708.66	4112.79	1080.02	4633.18	4378.08	7.40	-1.297	0.000	0.400
58.00	-36.20	-28.69	0.00	-1650.8	0.00	1650.86	4089.65	1070.20	4549.27	4313.56	7.95	-1.343	0.000	0.392
60.00	-35.60	-28.48	0.00	-1593.4	0.00	1593.47	4066.25	1060.37	4466.12	4249.22	8.52	-1.388	0.000	0.384
62.00	-35.00	-28.27	0.00	-1536.5	0.00	1536.50	4042.59	1050.55	4383.75	4185.07	9.11	-1.434	0.000	0.377
64.00	-34.41	-28.06	0.00	-1479.9	0.00	1479.95	4018.67	1040.72	4302.13	4121.10	9.72	-1.478	0.000	0.368
66.00	-33.83	-27.85	0.00	-1423.8	0.00	1423.83	3994.48	1030.90	4221.29	4057.34	10.35	-1.523	0.000	0.360
68.00	-33.25	-27.64	0.00	-1368.1	0.00	1368.12	3970.03	1021.07	4141.21	3993.79	11.00	-1.567	0.000	0.352
70.00	-32.67	-27.43	0.00	-1312.8	0.00	1312.84	3945.32	1011.25	4061.90	3930.45	11.67	-1.610	0.000	0.343
72.00	-32.10	-27.21	0.00	-1257.9	0.00	1257.99	3920.35	1001.42	3983.36	3867.33	12.35	-1.653	0.000	0.334
74.00	-31.54	-27.00	0.00	-1203.5	0.00	1203.57	3895.11	991.60	3905.58	3804.45	13.05	-1.695	0.000	0.325
76.00	-30.98	-26.78	0.00	-1149.5	0.00	1149.57	3869.62	981.77	3828.57	3741.80	13.77	-1.737	0.000	0.316
78.00	-30.43	-26.57	0.00	-1096.0	0.00	1096.01	3843.86	971.95	3752.32	3679.40	14.51	-1.778	0.000	0.307
80.00	-29.88	-26.35	0.00	-1042.8	0.00	1042.87	3817.84	962.12	3676.85	3617.26	15.26	-1.818	0.000	0.297
82.00	-29.33	-26.14	0.00	-990.17	0.00	990.17	3791.55	952.30	3602.14	3555.38	16.03	-1.857	0.000	0.287
84.00	-28.80	-25.91	0.00	-937.90	0.00	937.90	3765.01	942.47	3528.19	3493.76	16.82	-1.896	0.000	0.277
85.00	-28.53	-25.81	0.00	-911.99	0.00	911.99	3751.64	937.56	3491.51	3463.06	17.22	-1.915	0.000	0.272
86.00	-28.08	-25.70	0.00	-886.18	0.00	886.18	3738.20	932.65	3455.02	3432.43	17.62	-1.934	0.000	0.266

## Calculated Forces

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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88.00	-27.19	-25.46	0.00	-834.79	0.00	834.79	3711.13	922.82	3382.61	3371.38	18.44	-1.970	0.000	0.256
90.00	-26.31	-25.23	0.00	-783.87	0.00	783.87	3683.80	913.00	3310.96	3310.62	19.28	-2.006	0.000	0.245
91.00	-25.87	-25.11	0.00	-758.64	0.00	758.64	2899.19	768.71	2816.54	2636.38	19.70	-2.023	0.000	0.298
92.00	-25.64	-25.01	0.00	-733.53	0.00	733.53	2889.87	764.61	2786.62	2613.82	20.12	-2.040	0.000	0.291
94.00	-25.19	-24.78	0.00	-683.52	0.00	683.52	2871.03	756.42	2727.26	2568.78	20.99	-2.078	0.000	0.276
95.00	-21.91	-21.01	0.00	-658.74	0.00	658.74	2861.52	752.33	2697.82	2546.31	21.43	-2.097	0.000	0.267
96.00	-21.69	-20.91	0.00	-637.73	0.00	637.73	2851.93	748.24	2668.54	2523.87	21.87	-2.115	0.000	0.261
98.00	-21.26	-20.69	0.00	-595.91	0.00	595.91	2832.57	740.05	2610.46	2479.11	22.76	-2.151	0.000	0.249
100.00	-20.83	-20.47	0.00	-554.53	0.00	554.53	2812.95	731.86	2553.02	2434.50	23.67	-2.184	0.000	0.236
102.00	-20.40	-20.26	0.00	-513.58	0.00	513.58	2793.07	723.67	2496.22	2390.05	24.59	-2.217	0.000	0.223
104.00	-19.98	-20.04	0.00	-473.07	0.00	473.07	2772.92	715.49	2440.06	2345.77	25.53	-2.248	0.000	0.210
106.00	-19.57	-19.82	0.00	-432.99	0.00	432.99	2752.51	707.30	2384.53	2301.65	26.48	-2.278	0.000	0.196
108.00	-19.16	-19.61	0.00	-393.35	0.00	393.35	2731.84	699.11	2329.65	2257.73	27.44	-2.306	0.000	0.182
110.00	-18.75	-19.39	0.00	-354.13	0.00	354.13	2710.91	690.92	2275.40	2213.98	28.41	-2.332	0.000	0.168
112.00	-18.35	-19.18	0.00	-315.35	0.00	315.35	2689.71	682.74	2221.79	2170.44	29.39	-2.356	0.000	0.153
114.00	-17.95	-18.96	0.00	-277.00	0.00	277.00	2668.26	674.55	2168.82	2127.10	30.38	-2.379	0.000	0.138
116.00	-17.56	-18.75	0.00	-239.08	0.00	239.08	2646.54	666.36	2116.50	2083.97	31.39	-2.399	0.000	0.122
118.00	-17.17	-18.54	0.00	-201.58	0.00	201.58	2624.55	658.18	2064.81	2041.07	32.39	-2.417	0.000	0.106
120.00	-11.58	-12.93	0.00	-164.51	0.00	164.51	2602.31	649.99	2013.75	1998.39	33.41	-2.432	0.000	0.087
122.00	-11.22	-12.72	0.00	-138.65	0.00	138.65	2579.81	641.80	1963.34	1955.94	34.43	-2.445	0.000	0.076
124.00	-10.87	-12.51	0.00	-113.21	0.00	113.21	2557.04	633.61	1913.57	1913.74	35.46	-2.457	0.000	0.064
126.00	-10.52	-12.30	0.00	-88.20	0.00	88.20	2534.01	625.43	1864.44	1871.79	36.49	-2.466	0.000	0.052
128.00	-10.17	-12.09	0.00	-63.60	0.00	63.60	2510.72	617.24	1815.94	1830.10	37.53	-2.474	0.000	0.039
130.00	-5.95	-5.82	0.00	-39.42	0.00	39.42	2487.16	609.05	1768.08	1788.67	38.56	-2.479	0.000	0.025
132.00	-5.42	-5.61	0.00	-27.77	0.00	27.77	2463.34	600.86	1720.87	1747.52	39.60	-2.482	0.000	0.018
134.00	-4.89	-5.39	0.00	-16.55	0.00	16.55	2439.27	592.68	1674.29	1706.65	40.64	-2.485	0.000	0.012
135.00	-4.63	-5.29	0.00	-11.16	0.00	11.16	1824.83	478.70	1365.31	1291.47	41.16	-2.486	0.000	0.011
136.00	-4.51	-5.19	0.00	-5.87	0.00	5.87	1817.10	475.42	1346.69	1277.14	41.68	-2.486	0.000	0.007
137.00	-0.31	-0.29	0.00	-0.68	0.00	0.68	1809.31	472.15	1328.20	1262.84	42.20	-2.486	0.000	0.001
138.00	-0.21	-0.20	0.00	-0.39	0.00	0.39	1801.45	468.87	1309.84	1248.56	42.72	-2.486	0.000	0.000
140.00	0.00	-0.19	0.00	0.00	0.00	0.00	1785.54	462.32	1273.50	1220.12	43.77	-2.486	0.000	0.000

## Wind Loading - Shaft

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 0.9D + 1.0W 125 mph Wind

**Iterations** 22

**Dead Load Factor** 0.90

**Wind Load Factor** 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	26.079	28.69	565.18	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	26.079	28.69	561.06	0.730	0.000	2.00	10.876	7.94	227.8	0.0	542.9
4.00		1.00	0.70	26.079	28.69	556.94	0.730	0.000	2.00	10.796	7.88	226.1	0.0	538.9
6.00		1.00	0.70	26.079	28.69	552.82	0.730	0.000	2.00	10.717	7.82	224.4	0.0	534.9
8.00		1.00	0.70	26.079	28.69	548.69	0.730	0.000	2.00	10.637	7.77	222.8	0.0	530.9
10.00		1.00	0.70	26.079	28.69	544.57	0.730	0.000	2.00	10.558	7.71	221.1	0.0	526.9
12.00		1.00	0.70	26.079	28.69	540.45	0.730	0.000	2.00	10.478	7.65	219.4	0.0	522.9
14.00		1.00	0.70	26.079	28.69	536.33	0.730	0.000	2.00	10.398	7.59	217.8	0.0	518.9
16.00		1.00	0.70	26.079	28.69	532.21	0.730	0.000	2.00	10.319	7.53	216.1	0.0	514.8
18.00		1.00	0.70	26.079	28.69	528.09	0.730	0.000	2.00	10.239	7.47	214.4	0.0	510.8
20.00		1.00	0.70	26.079	28.69	523.97	0.730	0.000	2.00	10.160	7.42	212.8	0.0	506.8
22.00		1.00	0.70	26.079	28.69	519.84	0.730	0.000	2.00	10.080	7.36	211.1	0.0	502.8
24.00		1.00	0.70	26.079	28.69	515.72	0.730	0.000	2.00	10.000	7.30	209.4	0.0	498.8
25.00	Top - Section 1	1.00	0.70	26.079	28.69	513.66	0.730	0.000	1.00	4.970	3.63	104.1	0.0	247.9
26.00		1.00	0.70	26.079	28.69	511.60	0.730	0.000	1.00	4.950	3.61	103.7	0.0	211.9
28.00		1.00	0.70	26.079	28.69	507.48	0.730	0.000	2.00	9.841	7.18	206.1	0.0	421.2
30.00		1.00	0.71	26.346	28.98	505.93	0.730	0.000	2.00	9.762	7.13	206.5	0.0	417.8
32.00		1.00	0.72	26.821	29.50	506.29	0.730	0.000	2.00	9.682	7.07	208.5	0.0	414.3
34.00		1.00	0.73	27.276	30.00	506.35	0.730	0.000	2.00	9.602	7.01	210.3	0.0	410.9
36.00		1.00	0.74	27.712	30.48	506.14	0.730	0.000	2.00	9.523	6.95	211.9	0.0	407.5
38.00		1.00	0.76	28.132	30.95	505.68	0.730	0.000	2.00	9.443	6.89	213.3	0.0	404.0
40.00		1.00	0.77	28.537	31.39	504.99	0.730	0.000	2.00	9.364	6.84	214.6	0.0	400.6
41.00	Bot - Section 3	1.00	0.77	28.734	31.61	504.57	0.730	0.000	1.00	4.652	3.40	107.3	0.0	199.0
42.00		1.00	0.78	28.928	31.82	504.10	0.730	0.000	1.00	4.696	3.43	109.1	0.0	399.1
44.00		1.00	0.79	29.306	32.24	503.02	0.730	0.000	2.00	9.331	6.81	219.6	0.0	793.0
46.00		1.00	0.80	29.673	32.64	501.75	0.730	0.000	2.00	9.252	6.75	220.4	0.0	786.1
48.00	Top - Section 2	1.00	0.81	30.028	33.03	500.33	0.730	0.000	2.00	9.172	6.70	221.2	0.0	779.3
50.00		1.00	0.82	30.373	33.41	505.84	0.730	0.000	2.00	9.093	6.64	221.8	0.0	388.9
52.00		1.00	0.82	30.709	33.78	504.16	0.730	0.000	2.00	9.013	6.58	222.3	0.0	385.5
54.00		1.00	0.83	31.036	34.14	502.33	0.730	0.000	2.00	8.933	6.52	222.6	0.0	382.1
56.00		1.00	0.84	31.354	34.49	500.38	0.730	0.000	2.00	8.854	6.46	222.9	0.0	378.6
58.00		1.00	0.85	31.665	34.83	498.31	0.730	0.000	2.00	8.774	6.41	223.1	0.0	375.2
60.00		1.00	0.86	31.968	35.16	496.13	0.730	0.000	2.00	8.694	6.35	223.2	0.0	371.8
62.00		1.00	0.87	32.264	35.49	493.84	0.730	0.000	2.00	8.615	6.29	223.2	0.0	368.4
64.00		1.00	0.87	32.553	35.81	491.44	0.730	0.000	2.00	8.535	6.23	223.1	0.0	364.9
66.00		1.00	0.88	32.836	36.12	488.95	0.730	0.000	2.00	8.456	6.17	223.0	0.0	361.5
68.00		1.00	0.89	33.113	36.42	486.36	0.730	0.000	2.00	8.376	6.11	222.7	0.0	358.1
70.00		1.00	0.90	33.385	36.72	483.69	0.730	0.000	2.00	8.296	6.06	222.4	0.0	354.6
72.00		1.00	0.90	33.651	37.02	480.93	0.730	0.000	2.00	8.217	6.00	222.0	0.0	351.2
74.00		1.00	0.91	33.912	37.30	478.09	0.730	0.000	2.00	8.137	5.94	221.6	0.0	347.8
76.00		1.00	0.92	34.168	37.58	475.18	0.730	0.000	2.00	8.058	5.88	221.1	0.0	344.4
78.00		1.00	0.92	34.419	37.86	472.18	0.730	0.000	2.00	7.978	5.82	220.5	0.0	340.9
80.00		1.00	0.93	34.665	38.13	469.12	0.730	0.000	2.00	7.898	5.77	219.9	0.0	337.5
82.00		1.00	0.94	34.908	38.40	465.99	0.730	0.000	2.00	7.819	5.71	219.2	0.0	334.1
84.00		1.00	0.94	35.146	38.66	462.79	0.730	0.000	2.00	7.739	5.65	218.4	0.0	330.6
85.00	Bot - Section 4	1.00	0.95	35.264	38.79	461.17	0.730	0.000	1.00	3.840	2.80	108.7	0.0	164.0
86.00		1.00	0.95	35.381	38.92	459.53	0.730	0.000	1.00	3.873	2.83	110.0	0.0	301.2



## Wind Loading - Shaft

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II
		<b>Page:</b> 18



88.00	1.00	0.96	35.611	39.17	456.21	0.730	0.000	2.00	7.686	5.61	219.8	0.0	597.8
90.00	1.00	0.96	35.838	39.42	452.83	0.730	0.000	2.00	7.606	5.55	218.9	0.0	591.5
91.00 Top - Section 3	1.00	0.96	35.950	39.54	451.12	0.730	0.000	1.00	3.773	2.75	108.9	0.0	293.4
92.00	1.00	0.97	36.061	39.67	455.83	0.730	0.000	1.00	3.753	2.74	108.7	0.0	133.8
94.00	1.00	0.97	36.281	39.91	452.36	0.730	0.000	2.00	7.447	5.44	217.0	0.0	265.4
95.00 Appurtenance(s)	1.00	0.98	36.390	40.03	450.60	0.730	0.000	1.00	3.694	2.70	107.9	0.0	131.6
96.00	1.00	0.98	36.498	40.15	448.83	0.730	0.000	1.00	3.674	2.68	107.7	0.0	130.9
98.00	1.00	0.99	36.711	40.38	445.25	0.730	0.000	2.00	7.288	5.32	214.8	0.0	259.7
100.00	1.00	0.99	36.921	40.61	441.62	0.730	0.000	2.00	7.208	5.26	213.7	0.0	256.9
102.00	1.00	1.00	37.129	40.84	437.94	0.730	0.000	2.00	7.129	5.20	212.5	0.0	254.0
104.00	1.00	1.00	37.333	41.07	434.22	0.730	0.000	2.00	7.049	5.15	211.3	0.0	251.1
106.00	1.00	1.01	37.535	41.29	430.45	0.730	0.000	2.00	6.969	5.09	210.1	0.0	248.3
108.00	1.00	1.01	37.734	41.51	426.63	0.730	0.000	2.00	6.890	5.03	208.8	0.0	245.4
110.00	1.00	1.02	37.931	41.72	422.77	0.730	0.000	2.00	6.810	4.97	207.4	0.0	242.6
112.00	1.00	1.02	38.125	41.94	418.86	0.730	0.000	2.00	6.731	4.91	206.1	0.0	239.7
114.00	1.00	1.03	38.317	42.15	414.92	0.730	0.000	2.00	6.651	4.86	204.6	0.0	236.8
116.00	1.00	1.03	38.506	42.36	410.93	0.730	0.000	2.00	6.571	4.80	203.2	0.0	234.0
118.00	1.00	1.04	38.693	42.56	406.91	0.730	0.000	2.00	6.492	4.74	201.7	0.0	231.1
120.00 Appurtenance(s)	1.00	1.04	38.877	42.77	402.85	0.730	0.000	2.00	6.412	4.68	200.2	0.0	228.3
122.00	1.00	1.05	39.060	42.97	398.75	0.730	0.000	2.00	6.333	4.62	198.6	0.0	225.4
124.00	1.00	1.05	39.240	43.16	394.61	0.730	0.000	2.00	6.253	4.56	197.0	0.0	222.6
126.00	1.00	1.06	39.419	43.36	390.44	0.730	0.000	2.00	6.173	4.51	195.4	0.0	219.7
128.00	1.00	1.06	39.595	43.55	386.23	0.730	0.000	2.00	6.094	4.45	193.8	0.0	216.8
130.00 Bot - Section 5	1.00	1.07	39.770	43.75	381.99	0.730	0.000	2.00	6.014	4.39	192.1	0.0	214.0
132.00	1.00	1.07	39.942	43.94	377.72	0.730	0.000	2.00	6.019	4.39	193.1	0.0	382.8
134.00	1.00	1.08	40.113	44.12	373.42	0.730	0.000	2.00	5.940	4.34	191.3	0.0	377.6
135.00 Top - Section 4	1.00	1.08	40.197	44.22	371.25	0.730	0.000	1.00	2.940	2.15	94.9	0.0	186.9
136.00	1.00	1.08	40.282	44.31	374.52	0.730	0.000	1.00	2.920	2.13	94.5	0.0	83.2
137.00 Appurtenance(s)	1.00	1.08	40.365	44.40	372.35	0.730	0.000	1.00	2.900	2.12	94.0	0.0	82.7
138.00	1.00	1.09	40.449	44.49	370.17	0.730	0.000	1.00	2.880	2.10	93.6	0.0	82.1
140.00	1.00	1.09	40.614	44.68	365.78	0.730	0.000	2.00	5.701	4.16	185.9	0.0	162.5
<b>Totals:</b>								<b>140.00</b>			<b>14,898.7</b>	<b>27,012.8</b>	

## Discrete Appurtenance Forces

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 0.9D + 1.0W 125 mph Wind

**Dead Load Factor** 0.90  
**Wind Load Factor** 1.00



**Iterations** 22

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	137.00	PRK-1245 (kicker kit)	1	40.365	44.402	1.00	1.00	1.00	9.50	418.42	0.000	0.000	421.82	0.00	0.00
2	137.00	B5/B13 RRHBR04C	3	40.365	44.402	0.50	0.75	2.79	2.79	189.81	0.000	0.000	123.83	0.00	0.00
3	137.00	B2/B66A RRHBR049	3	40.365	44.402	0.50	0.75	2.83	2.83	228.15	0.000	0.000	125.84	0.00	0.00
4	137.00	JAHH-65B-R3B	6	40.365	44.402	0.62	0.75	34.03	34.03	341.82	0.000	0.000	1510.82	0.00	0.00
5	137.00	HRK12 (Handrail Kit)	1	40.365	44.402	1.00	1.00	6.75	6.75	235.55	0.000	0.000	299.71	0.00	0.00
6	137.00	Raycap OVP-12	1	40.365	44.402	0.50	0.75	2.04	2.04	28.80	0.000	0.000	90.59	0.00	0.00
7	137.00	MT6407-77A	3	40.365	44.402	0.52	0.75	7.39	7.39	214.38	0.000	0.000	327.99	0.00	0.00
8	137.00	CBC78T-DS-43	3	40.365	44.402	0.50	0.75	0.56	0.56	28.08	0.000	0.000	24.77	0.00	0.00
9	137.00	Antel BXA-70080/6CF	3	40.365	44.402	0.70	0.80	12.33	12.33	48.60	0.000	0.000	547.66	0.00	0.00
10	137.00	Low Profile Platform	1	40.365	44.402	1.00	1.00	22.00	22.00	1350.00	0.000	0.000	976.84	0.00	0.00
11	137.00	(3) Stabilizer Kit (4' FW)	1	40.365	44.402	1.00	1.00	3.70	3.70	126.00	0.000	0.000	164.29	0.00	0.00
12	130.00	LGP17201	6	39.770	43.746	0.50	0.75	5.88	5.88	54.00	0.000	0.000	257.20	0.00	0.00
13	130.00	DMP65R-BU8DA	3	39.770	43.746	0.54	0.75	28.95	28.95	258.39	0.000	0.000	1266.43	0.00	0.00
14	130.00	HRK12 (Handrail Kit)	1	39.770	43.746	1.00	1.00	10.00	10.00	235.55	0.000	0.000	437.46	0.00	0.00
15	130.00	Powerwave LGP21901 -	6	39.770	43.746	0.50	0.75	5.04	5.04	167.40	0.000	0.000	220.27	0.00	0.00
16	130.00	RRUS 8843 B2 B66A	3	39.770	43.746	0.50	0.75	2.47	2.47	194.40	0.000	0.000	108.15	0.00	0.00
17	130.00	RRUS 4449 B5/B12	3	39.770	43.746	0.50	0.75	2.97	2.97	191.70	0.000	0.000	129.92	0.00	0.00
18	130.00	HPA-65R-BU8AA	3	39.770	43.746	0.65	0.75	21.73	21.73	145.80	0.000	0.000	950.61	0.00	0.00
19	130.00	Low Profile Platform	1	39.770	43.746	1.00	1.00	22.00	22.00	1350.00	0.000	0.000	962.42	0.00	0.00
20	130.00	DC6-48-60-18-8F	1	39.770	43.746	0.50	0.75	0.65	0.65	29.52	0.000	0.000	28.58	0.00	0.00
21	130.00	Powerwave LGP21401 -	6	39.770	43.746	0.50	0.75	3.89	3.89	94.50	0.000	0.000	170.15	0.00	0.00
22	130.00	7770.00	6	39.770	43.746	0.55	0.75	18.07	18.07	145.80	0.000	0.000	790.39	0.00	0.00
23	130.00	15'x2.875"mount pipe	3	39.770	43.746	1.00	1.00	12.93	12.93	234.90	0.000	0.000	565.64	0.00	0.00
24	120.00	PRK-1245 (kicker kit)	1	38.877	42.765	1.00	1.00	9.50	9.50	418.42	0.000	0.000	406.27	0.00	0.00
25	120.00	APX16DWV-16DWVS-E-A	3	38.877	42.765	0.46	0.75	9.22	109.89	0.000	0.000	394.34	0.00	0.00	
26	120.00	APXVAA4L24-43-U-NA20	3	38.877	42.765	0.54	0.75	32.79	331.56	0.000	0.000	1402.22	0.00	0.00	
27	120.00	AIR6449 B41	3	38.877	42.765	0.53	0.75	9.03	278.10	0.000	0.000	385.99	0.00	0.00	
28	120.00	LP-RMQP-4096-HK Plat	1	38.877	42.765	1.00	1.00	51.70	2402.10	0.000	0.000	2210.96	0.00	0.00	
29	120.00	4460 Radio	3	38.877	42.765	0.50	0.75	4.30	280.80	0.000	0.000	183.74	0.00	0.00	
30	120.00	4480 Radio	3	38.877	42.765	0.50	0.75	4.30	251.10	0.000	0.000	183.74	0.00	0.00	
31	95.00	RDIDC-9181-OF-48	1	36.390	40.029	1.00	1.00	2.01	19.71	0.000	0.000	80.46	0.00	0.00	
32	95.00	TA08025-B605	3	36.390	40.029	0.50	0.75	2.95	202.50	0.000	0.000	118.27	0.00	0.00	
33	95.00	TA08025-B604	3	36.390	40.029	0.50	0.75	2.95	172.53	0.000	0.000	118.27	0.00	0.00	
34	95.00	FFVV-65C-R3-V1	3	36.390	40.029	0.54	0.75	34.21	495.18	0.000	0.000	1369.56	0.00	0.00	
35	95.00	MC-PK10-DSH	1	36.390	40.029	1.00	1.00	46.50	1502.37	0.000	0.000	1861.34	0.00	0.00	
<b>Totals:</b>									<b>12,775.82</b>				<b>19,216.52</b>		

## Total Applied Force Summary

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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**Load Case:** 0.9D + 1.0W 125 mph Wind

**Dead Load Factor**    0.90  
**Wind Load Factor**    1.00



**Iterations**    22

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		227.76	563.59	0.00	0.00
4.00		226.09	582.05	0.00	0.00
6.00		224.42	600.52	0.00	0.00
8.00		222.76	596.52	0.00	0.00
10.00		221.09	592.52	0.00	0.00
12.00		219.42	588.51	0.00	0.00
14.00		217.75	584.51	0.00	0.00
16.00		216.09	580.51	0.00	0.00
18.00		214.42	576.51	0.00	0.00
20.00		212.75	572.51	0.00	0.00
22.00		211.09	568.51	0.00	0.00
24.00		209.42	564.51	0.00	0.00
25.00		104.08	280.76	0.00	0.00
26.00		103.67	244.71	0.00	0.00
28.00		206.09	486.85	0.00	0.00
30.00		206.52	483.42	0.00	0.00
32.00		208.52	479.99	0.00	0.00
34.00		210.32	476.56	0.00	0.00
36.00		211.91	473.13	0.00	0.00
38.00		213.32	469.70	0.00	0.00
40.00		214.57	466.27	0.00	0.00
41.00		107.34	231.85	0.00	0.00
42.00		109.07	431.89	0.00	0.00
44.00		219.59	858.63	0.00	0.00
46.00		220.44	851.78	0.00	0.00
48.00		221.16	844.92	0.00	0.00
50.00		221.76	454.60	0.00	0.00
52.00		222.25	451.17	0.00	0.00
54.00		222.63	447.74	0.00	0.00
56.00		222.91	444.31	0.00	0.00
58.00		223.10	440.88	0.00	0.00
60.00		223.19	437.45	0.00	0.00
62.00		223.19	434.02	0.00	0.00
64.00		223.11	430.59	0.00	0.00
66.00		222.95	427.16	0.00	0.00
68.00		222.72	423.74	0.00	0.00
70.00		222.41	420.31	0.00	0.00
72.00		222.03	416.88	0.00	0.00
74.00		221.59	413.45	0.00	0.00
76.00		221.07	410.02	0.00	0.00
78.00		220.50	406.59	0.00	0.00
80.00		219.87	403.16	0.00	0.00
82.00		219.17	399.73	0.00	0.00
84.00		218.42	396.30	0.00	0.00
85.00		108.73	196.87	0.00	0.00
86.00		110.03	334.08	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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88.00		219.78	663.44	0.00	0.00
90.00		218.89	657.16	0.00	0.00
91.00		108.93	326.22	0.00	0.00
92.00		108.69	166.61	0.00	0.00
94.00		216.96	331.09	0.00	0.00
95.00	(11) attachments	3655.83	2556.76	0.00	0.00
96.00		107.67	162.12	0.00	0.00
98.00		214.84	322.10	0.00	0.00
100.00		213.71	319.24	0.00	0.00
102.00		212.54	316.38	0.00	0.00
104.00		211.32	313.52	0.00	0.00
106.00		210.06	310.67	0.00	0.00
108.00		208.77	307.81	0.00	0.00
110.00		207.43	304.95	0.00	0.00
112.00		206.05	302.09	0.00	0.00
114.00		204.64	299.24	0.00	0.00
116.00		203.19	296.38	0.00	0.00
118.00		201.70	293.52	0.00	0.00
120.00	(17) attachments	5367.43	4362.63	0.00	0.00
122.00		198.62	274.31	0.00	0.00
124.00		197.03	271.45	0.00	0.00
126.00		195.41	268.59	0.00	0.00
128.00		193.75	265.73	0.00	0.00
130.00	(42) attachments	6079.29	3364.84	0.00	0.00
132.00		193.06	405.45	0.00	0.00
134.00		191.32	400.31	0.00	0.00
135.00		94.90	198.22	0.00	0.00
136.00		94.45	94.59	0.00	0.00
137.00	(26) attachments	4708.15	3303.62	0.00	0.00
138.00		93.55	82.10	0.00	0.00
140.00		185.92	162.50	0.00	0.00
<b>Totals:</b>		<b>34,115.19</b>	<b>43,943.91</b>	<b>0.00</b>	<b>0.00</b>

**Calculated Forces**

**Structure:** CT11560-A-SBA  
**Site Name:** Sterling 6 CT  
**Height:** 140.00 (ft)  
**Base Elev:** 1.000 (ft)  
**Gh:** 1.1

**Topography:** 1

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

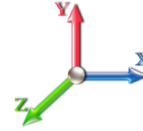
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**Load Case:** 0.9D + 1.0W 125 mph Wind **Iterations** 22

**Dead Load Factor** 0.90

**Wind Load Factor** 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-43.93	-34.13	0.00	-3458.7	0.00	3458.73	5803.10	1561.17	8297.91	7657.05	0.00	0.000	0.000	0.460
2.00	-43.34	-33.94	0.00	-3390.4	0.00	3390.47	5778.21	1549.71	8176.51	7567.86	0.01	-0.042	0.000	0.456
4.00	-42.74	-33.74	0.00	-3322.6	0.00	3322.60	5753.06	1538.25	8056.00	7478.80	0.04	-0.085	0.000	0.452
6.00	-42.11	-33.55	0.00	-3255.1	0.00	3255.12	5727.65	1526.78	7936.39	7389.90	0.08	-0.127	0.000	0.448
8.00	-41.49	-33.35	0.00	-3188.0	0.00	3188.03	5701.98	1515.32	7817.67	7301.16	0.14	-0.169	0.000	0.444
10.00	-40.87	-33.16	0.00	-3121.3	0.00	3121.33	5676.04	1503.86	7699.85	7212.59	0.23	-0.212	0.000	0.440
12.00	-40.26	-32.97	0.00	-3055.0	0.00	3055.01	5649.84	1492.40	7582.92	7124.20	0.32	-0.255	0.000	0.436
14.00	-39.65	-32.78	0.00	-2989.0	0.00	2989.08	5623.38	1480.93	7466.89	7035.98	0.44	-0.297	0.000	0.432
16.00	-39.05	-32.59	0.00	-2923.5	0.00	2923.53	5596.66	1469.47	7351.75	6947.96	0.57	-0.340	0.000	0.428
18.00	-38.45	-32.40	0.00	-2858.3	0.00	2858.35	5569.67	1458.01	7237.50	6860.14	0.73	-0.383	0.000	0.424
20.00	-37.86	-32.21	0.00	-2793.5	0.00	2793.56	5542.43	1446.55	7124.15	6772.52	0.90	-0.426	0.000	0.420
22.00	-37.26	-32.02	0.00	-2729.1	0.00	2729.15	5514.92	1435.08	7011.70	6685.11	1.08	-0.468	0.000	0.415
24.00	-36.68	-31.83	0.00	-2665.1	0.00	2665.10	5487.15	1423.62	6900.13	6597.93	1.29	-0.511	0.000	0.411
25.00	-36.39	-31.73	0.00	-2633.2	0.00	2633.28	5473.16	1417.89	6844.69	6554.42	1.40	-0.533	0.000	0.409
25.00	-36.39	-31.73	0.00	-2633.2	0.00	2633.28	4407.37	1216.64	5879.49	5289.42	1.40	-0.533	0.000	0.507
26.00	-36.13	-31.65	0.00	-2601.5	0.00	2601.54	4397.65	1211.73	5832.10	5256.32	1.51	-0.554	0.000	0.504
28.00	-35.62	-31.47	0.00	-2538.2	0.00	2538.24	4378.03	1201.90	5737.91	5190.16	1.76	-0.604	0.000	0.498
30.00	-35.11	-31.29	0.00	-2475.3	0.00	2475.30	4358.14	1192.08	5644.49	5124.08	2.02	-0.654	0.000	0.492
32.00	-34.60	-31.11	0.00	-2412.7	0.00	2412.72	4338.00	1182.25	5551.83	5058.08	2.31	-0.704	0.000	0.486
34.00	-34.10	-30.92	0.00	-2350.5	0.00	2350.51	4317.58	1172.43	5459.94	4992.17	2.61	-0.753	0.000	0.479
36.00	-33.61	-30.73	0.00	-2288.6	0.00	2288.68	4296.91	1162.60	5368.81	4926.35	2.94	-0.803	0.000	0.473
38.00	-33.11	-30.54	0.00	-2227.2	0.00	2227.22	4275.98	1152.78	5278.46	4860.65	3.29	-0.853	0.000	0.467
40.00	-32.63	-30.34	0.00	-2166.1	0.00	2166.14	4254.78	1142.95	5188.87	4795.05	3.66	-0.902	0.000	0.460
41.00	-32.39	-30.24	0.00	-2135.8	0.00	2135.81	4244.08	1138.04	5144.36	4762.30	3.85	-0.927	0.000	0.457
42.00	-31.94	-30.15	0.00	-2105.5	0.00	2105.57	4233.32	1133.13	5100.04	4729.58	4.04	-0.952	0.000	0.453
44.00	-31.06	-29.94	0.00	-2045.2	0.00	2045.28	4211.60	1123.30	5011.98	4664.23	4.45	-1.001	0.000	0.447
46.00	-30.18	-29.73	0.00	-1985.4	0.00	1985.40	4189.62	1113.48	4924.69	4599.03	4.88	-1.050	0.000	0.440
48.00	-29.32	-29.52	0.00	-1925.9	0.00	1925.95	4202.72	1119.32	4976.50	4637.78	5.34	-1.099	0.000	0.423
50.00	-28.84	-29.31	0.00	-1866.9	0.00	1866.92	4180.63	1109.50	4889.52	4572.63	5.81	-1.147	0.000	0.416
52.00	-28.37	-29.10	0.00	-1808.3	0.00	1808.30	4158.28	1099.67	4803.31	4507.62	6.30	-1.194	0.000	0.409
54.00	-27.91	-28.89	0.00	-1750.1	0.00	1750.10	4135.67	1089.85	4717.86	4442.77	6.81	-1.240	0.000	0.401
56.00	-27.45	-28.68	0.00	-1692.3	0.00	1692.32	4112.79	1080.02	4633.18	4378.08	7.34	-1.286	0.000	0.394
58.00	-26.99	-28.47	0.00	-1634.9	0.00	1634.96	4089.65	1070.20	4549.27	4313.56	7.89	-1.331	0.000	0.386
60.00	-26.53	-28.26	0.00	-1578.0	0.00	1578.03	4066.25	1060.37	4466.12	4249.22	8.45	-1.377	0.000	0.379
62.00	-26.08	-28.04	0.00	-1521.5	0.00	1521.52	4042.59	1050.55	4383.75	4185.07	9.04	-1.421	0.000	0.371
64.00	-25.64	-27.83	0.00	-1465.4	0.00	1465.44	4018.67	1040.72	4302.13	4121.10	9.65	-1.466	0.000	0.363
66.00	-25.19	-27.61	0.00	-1409.7	0.00	1409.78	3994.48	1030.90	4221.29	4057.34	10.27	-1.510	0.000	0.354
68.00	-24.76	-27.40	0.00	-1354.5	0.00	1354.55	3970.03	1021.07	4141.21	3993.79	10.91	-1.553	0.000	0.346
70.00	-24.32	-27.18	0.00	-1299.7	0.00	1299.76	3945.32	1011.25	4061.90	3930.45	11.57	-1.596	0.000	0.338
72.00	-23.89	-26.97	0.00	-1245.4	0.00	1245.40	3920.35	1001.42	3983.36	3867.33	12.25	-1.639	0.000	0.329
74.00	-23.47	-26.75	0.00	-1191.4	0.00	1191.46	3895.11	991.60	3905.58	3804.45	12.95	-1.681	0.000	0.320
76.00	-23.04	-26.53	0.00	-1137.9	0.00	1137.97	3869.62	981.77	3828.57	3741.80	13.66	-1.722	0.000	0.311
78.00	-22.63	-26.32	0.00	-1084.9	0.00	1084.90	3843.86	971.95	3752.32	3679.40	14.39	-1.762	0.000	0.301
80.00	-22.21	-26.10	0.00	-1032.2	0.00	1032.27	3817.84	962.12	3676.85	3617.26	15.14	-1.802	0.000	0.292
82.00	-21.80	-25.88	0.00	-980.07	0.00	980.07	3791.55	952.30	3602.14	3555.38	15.90	-1.841	0.000	0.282
84.00	-21.40	-25.66	0.00	-928.31	0.00	928.31	3765.01	942.47	3528.19	3493.76	16.68	-1.879	0.000	0.272
85.00	-21.20	-25.55	0.00	-902.65	0.00	902.65	3751.64	937.56	3491.51	3463.06	17.08	-1.898	0.000	0.267
86.00	-20.86	-25.44	0.00	-877.09	0.00	877.09	3738.20	932.65	3455.02	3432.43	17.48	-1.917	0.000	0.262

## Calculated Forces

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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88.00	-20.18	-25.21	0.00	-826.21	0.00	826.21	3711.13	922.82	3382.61	3371.38	18.29	-1.953	0.000	0.251
90.00	-19.52	-24.98	0.00	-775.79	0.00	775.79	3683.80	913.00	3310.96	3310.62	19.12	-1.988	0.000	0.240
91.00	-19.19	-24.87	0.00	-750.81	0.00	750.81	2899.19	768.71	2816.54	2636.38	19.53	-2.005	0.000	0.292
92.00	-19.02	-24.76	0.00	-725.94	0.00	725.94	2889.87	764.61	2786.62	2613.82	19.96	-2.022	0.000	0.285
94.00	-18.68	-24.54	0.00	-676.42	0.00	676.42	2871.03	756.42	2727.26	2568.78	20.81	-2.060	0.000	0.271
95.00	-16.25	-20.80	0.00	-651.88	0.00	651.88	2861.52	752.33	2697.82	2546.31	21.25	-2.078	0.000	0.262
96.00	-16.09	-20.69	0.00	-631.08	0.00	631.08	2851.93	748.24	2668.54	2523.87	21.68	-2.096	0.000	0.256
98.00	-15.76	-20.48	0.00	-589.69	0.00	589.69	2832.57	740.05	2610.46	2479.11	22.57	-2.131	0.000	0.244
100.00	-15.44	-20.26	0.00	-548.74	0.00	548.74	2812.95	731.86	2553.02	2434.50	23.47	-2.165	0.000	0.232
102.00	-15.12	-20.04	0.00	-508.22	0.00	508.22	2793.07	723.67	2496.22	2390.05	24.38	-2.197	0.000	0.219
104.00	-14.80	-19.83	0.00	-468.13	0.00	468.13	2772.92	715.49	2440.06	2345.77	25.31	-2.228	0.000	0.206
106.00	-14.49	-19.61	0.00	-428.47	0.00	428.47	2752.51	707.30	2384.53	2301.65	26.25	-2.257	0.000	0.192
108.00	-14.18	-19.40	0.00	-389.24	0.00	389.24	2731.84	699.11	2329.65	2257.73	27.20	-2.285	0.000	0.178
110.00	-13.88	-19.19	0.00	-350.44	0.00	350.44	2710.91	690.92	2275.40	2213.98	28.17	-2.311	0.000	0.164
112.00	-13.58	-18.97	0.00	-312.07	0.00	312.07	2689.71	682.74	2221.79	2170.44	29.14	-2.335	0.000	0.150
114.00	-13.28	-18.76	0.00	-274.12	0.00	274.12	2668.26	674.55	2168.82	2127.10	30.12	-2.357	0.000	0.135
116.00	-12.99	-18.55	0.00	-236.60	0.00	236.60	2646.54	666.36	2116.50	2083.97	31.11	-2.377	0.000	0.119
118.00	-12.70	-18.34	0.00	-199.50	0.00	199.50	2624.55	658.18	2064.81	2041.07	32.11	-2.394	0.000	0.103
120.00	-8.56	-12.80	0.00	-162.82	0.00	162.82	2602.31	649.99	2013.75	1998.39	33.12	-2.410	0.000	0.085
122.00	-8.29	-12.59	0.00	-137.22	0.00	137.22	2579.81	641.80	1963.34	1955.94	34.13	-2.423	0.000	0.074
124.00	-8.03	-12.38	0.00	-112.04	0.00	112.04	2557.04	633.61	1913.57	1913.74	35.15	-2.434	0.000	0.062
126.00	-7.76	-12.18	0.00	-87.28	0.00	87.28	2534.01	625.43	1864.44	1871.79	36.17	-2.443	0.000	0.050
128.00	-7.51	-11.97	0.00	-62.93	0.00	62.93	2510.72	617.24	1815.94	1830.10	37.20	-2.451	0.000	0.038
130.00	-4.40	-5.76	0.00	-38.98	0.00	38.98	2487.16	609.05	1768.08	1788.67	38.23	-2.456	0.000	0.024
132.00	-4.01	-5.55	0.00	-27.47	0.00	27.47	2463.34	600.86	1720.87	1747.52	39.26	-2.460	0.000	0.017
134.00	-3.62	-5.34	0.00	-16.38	0.00	16.38	2439.27	592.68	1674.29	1706.65	40.29	-2.462	0.000	0.011
135.00	-3.42	-5.23	0.00	-11.04	0.00	11.04	1824.83	478.70	1365.31	1291.47	40.80	-2.463	0.000	0.011
136.00	-3.33	-5.14	0.00	-5.81	0.00	5.81	1817.10	475.42	1346.69	1277.14	41.32	-2.463	0.000	0.006
137.00	-0.23	-0.29	0.00	-0.67	0.00	0.67	1809.31	472.15	1328.20	1262.84	41.83	-2.463	0.000	0.001
138.00	-0.15	-0.19	0.00	-0.39	0.00	0.39	1801.45	468.87	1309.84	1248.56	42.35	-2.463	0.000	0.000
140.00	0.00	-0.19	0.00	0.00	0.00	0.00	1785.54	462.32	1273.50	1220.12	43.38	-2.464	0.000	0.000



## Wind Loading - Shaft

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

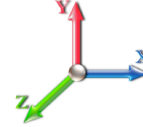


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**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Iterations** 21

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



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	4.173	4.59	0.00	1.200	0.705	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	4.173	4.59	0.00	1.200	0.787	2.00	11.138	13.37	61.3	127.8	851.6
4.00		1.00	0.70	4.173	4.59	0.00	1.200	0.828	2.00	11.072	13.29	61.0	133.6	852.1
6.00		1.00	0.70	4.173	4.59	0.00	1.200	0.856	2.00	11.002	13.20	60.6	137.2	850.4
8.00		1.00	0.70	4.173	4.59	0.00	1.200	0.878	2.00	10.930	13.12	60.2	139.7	847.5
10.00		1.00	0.70	4.173	4.59	0.00	1.200	0.896	2.00	10.856	13.03	59.8	141.6	844.0
12.00		1.00	0.70	4.173	4.59	0.00	1.200	0.911	2.00	10.782	12.94	59.4	142.9	840.0
14.00		1.00	0.70	4.173	4.59	0.00	1.200	0.924	2.00	10.706	12.85	59.0	143.9	835.7
16.00		1.00	0.70	4.173	4.59	0.00	1.200	0.936	2.00	10.631	12.76	58.6	144.6	831.1
18.00		1.00	0.70	4.173	4.59	0.00	1.200	0.946	2.00	10.555	12.67	58.1	145.2	826.3
20.00		1.00	0.70	4.173	4.59	0.00	1.200	0.956	2.00	10.478	12.57	57.7	145.5	821.3
22.00		1.00	0.70	4.173	4.59	0.00	1.200	0.965	2.00	10.402	12.48	57.3	145.7	816.2
24.00		1.00	0.70	4.173	4.59	0.00	1.200	0.973	2.00	10.325	12.39	56.9	145.8	811.0
25.00	Top - Section 1	1.00	0.70	4.173	4.59	0.00	1.200	0.976	1.00	5.133	6.16	28.3	72.9	403.5
26.00		1.00	0.70	4.173	4.59	0.00	1.200	0.980	1.00	5.114	6.14	28.2	72.9	355.4
28.00		1.00	0.70	4.173	4.59	0.00	1.200	0.987	2.00	10.170	12.20	56.0	145.7	707.3
30.00		1.00	0.71	4.215	4.64	0.00	1.200	0.994	2.00	10.093	12.11	56.2	145.5	702.5
32.00		1.00	0.72	4.291	4.72	0.00	1.200	1.000	2.00	10.015	12.02	56.7	145.3	697.7
34.00		1.00	0.73	4.364	4.80	0.00	1.200	1.006	2.00	9.938	11.93	57.2	145.0	692.8
36.00		1.00	0.74	4.434	4.88	0.00	1.200	1.012	2.00	9.860	11.83	57.7	144.6	687.9
38.00		1.00	0.76	4.501	4.95	0.00	1.200	1.017	2.00	9.782	11.74	58.1	144.2	682.9
40.00		1.00	0.77	4.566	5.02	0.00	1.200	1.022	2.00	9.704	11.65	58.5	143.7	677.9
41.00	Bot - Section 3	1.00	0.77	4.597	5.06	0.00	1.200	1.024	1.00	4.823	5.79	29.3	71.7	337.1
42.00		1.00	0.78	4.629	5.09	0.00	1.200	1.027	1.00	4.867	5.84	29.7	72.6	604.6
44.00		1.00	0.79	4.689	5.16	0.00	1.200	1.032	2.00	9.675	11.61	59.9	144.6	1201.9
46.00		1.00	0.80	4.748	5.22	0.00	1.200	1.036	2.00	9.597	11.52	60.1	144.0	1192.2
48.00	Top - Section 2	1.00	0.81	4.805	5.28	0.00	1.200	1.040	2.00	9.519	11.42	60.4	143.4	1182.4
50.00		1.00	0.82	4.860	5.35	0.00	1.200	1.044	2.00	9.441	11.33	60.6	142.7	661.3
52.00		1.00	0.82	4.913	5.40	0.00	1.200	1.049	2.00	9.362	11.23	60.7	142.1	656.1
54.00		1.00	0.83	4.966	5.46	0.00	1.200	1.052	2.00	9.284	11.14	60.9	141.4	650.8
56.00		1.00	0.84	5.017	5.52	0.00	1.200	1.056	2.00	9.206	11.05	61.0	140.6	645.5
58.00		1.00	0.85	5.066	5.57	0.00	1.200	1.060	2.00	9.127	10.95	61.0	139.9	640.2
60.00		1.00	0.86	5.115	5.63	0.00	1.200	1.063	2.00	9.049	10.86	61.1	139.1	634.8
62.00		1.00	0.87	5.162	5.68	0.00	1.200	1.067	2.00	8.970	10.76	61.1	138.3	629.4
64.00		1.00	0.87	5.208	5.73	0.00	1.200	1.070	2.00	8.892	10.67	61.1	137.5	624.1
66.00		1.00	0.88	5.254	5.78	0.00	1.200	1.073	2.00	8.813	10.58	61.1	136.6	618.6
68.00		1.00	0.89	5.298	5.83	0.00	1.200	1.077	2.00	8.735	10.48	61.1	135.8	613.2
70.00		1.00	0.90	5.342	5.88	0.00	1.200	1.080	2.00	8.656	10.39	61.0	134.9	607.8
72.00		1.00	0.90	5.384	5.92	0.00	1.200	1.083	2.00	8.578	10.29	61.0	134.0	602.3
74.00		1.00	0.91	5.426	5.97	0.00	1.200	1.086	2.00	8.499	10.20	60.9	133.1	596.8
76.00		1.00	0.92	5.467	6.01	0.00	1.200	1.088	2.00	8.420	10.10	60.8	132.2	591.3
78.00		1.00	0.92	5.507	6.06	0.00	1.200	1.091	2.00	8.342	10.01	60.6	131.2	585.8
80.00		1.00	0.93	5.546	6.10	0.00	1.200	1.094	2.00	8.263	9.92	60.5	130.3	580.3
82.00		1.00	0.94	5.585	6.14	0.00	1.200	1.097	2.00	8.184	9.82	60.3	129.3	574.7
84.00		1.00	0.94	5.623	6.19	0.00	1.200	1.099	2.00	8.106	9.73	60.2	128.3	569.2
85.00	Bot - Section 4	1.00	0.95	5.642	6.21	0.00	1.200	1.101	1.00	4.023	4.83	30.0	63.9	282.6
86.00		1.00	0.95	5.661	6.23	0.00	1.200	1.102	1.00	4.056	4.87	30.3	64.5	466.2

## Wind Loading - Shaft

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Page:</b> 25
	<b>Struct Class:</b> II	



88.00	1.00	0.96	5.698	6.27	0.00	1.200	1.104	2.00	8.054	9.66	60.6	128.1	925.1
90.00	1.00	0.96	5.734	6.31	0.00	1.200	1.107	2.00	7.975	9.57	60.4	127.1	915.7
91.00 Top - Section 3	1.00	0.96	5.752	6.33	0.00	1.200	1.108	1.00	3.958	4.75	30.1	63.3	454.5
92.00	1.00	0.97	5.770	6.35	0.00	1.200	1.109	1.00	3.938	4.73	30.0	63.0	241.4
94.00	1.00	0.97	5.805	6.39	0.00	1.200	1.112	2.00	7.818	9.38	59.9	125.0	478.9
95.00 Appurtenance(s)	1.00	0.98	5.822	6.40	0.00	1.200	1.113	1.00	3.879	4.65	29.8	62.2	237.8
96.00	1.00	0.98	5.840	6.42	0.00	1.200	1.114	1.00	3.859	4.63	29.7	62.0	236.5
98.00	1.00	0.99	5.874	6.46	0.00	1.200	1.116	2.00	7.660	9.19	59.4	122.9	469.2
100.00	1.00	0.99	5.907	6.50	0.00	1.200	1.118	2.00	7.581	9.10	59.1	121.8	464.3
102.00	1.00	1.00	5.941	6.53	0.00	1.200	1.121	2.00	7.502	9.00	58.8	120.8	459.4
104.00	1.00	1.00	5.973	6.57	0.00	1.200	1.123	2.00	7.423	8.91	58.5	119.7	454.5
106.00	1.00	1.01	6.006	6.61	0.00	1.200	1.125	2.00	7.344	8.81	58.2	118.6	449.6
108.00	1.00	1.01	6.038	6.64	0.00	1.200	1.127	2.00	7.265	8.72	57.9	117.5	444.7
110.00	1.00	1.02	6.069	6.68	0.00	1.200	1.129	2.00	7.187	8.62	57.6	116.4	439.8
112.00	1.00	1.02	6.100	6.71	0.00	1.200	1.131	2.00	7.108	8.53	57.2	115.2	434.8
114.00	1.00	1.03	6.131	6.74	0.00	1.200	1.133	2.00	7.029	8.43	56.9	114.1	429.9
116.00	1.00	1.03	6.161	6.78	0.00	1.200	1.135	2.00	6.950	8.34	56.5	113.0	425.0
118.00	1.00	1.04	6.191	6.81	0.00	1.200	1.137	2.00	6.871	8.24	56.1	111.8	420.0
120.00 Appurtenance(s)	1.00	1.04	6.220	6.84	0.00	1.200	1.139	2.00	6.792	8.15	55.8	110.7	415.0
122.00	1.00	1.05	6.250	6.87	0.00	1.200	1.141	2.00	6.713	8.06	55.4	109.5	410.1
124.00	1.00	1.05	6.278	6.91	0.00	1.200	1.142	2.00	6.634	7.96	55.0	108.4	405.1
126.00	1.00	1.06	6.307	6.94	0.00	1.200	1.144	2.00	6.555	7.87	54.6	107.2	400.1
128.00	1.00	1.06	6.335	6.97	0.00	1.200	1.146	2.00	6.476	7.77	54.2	106.0	395.1
130.00 Bot - Section 5	1.00	1.07	6.363	7.00	0.00	1.200	1.148	2.00	6.397	7.68	53.7	104.8	390.1
132.00	1.00	1.07	6.391	7.03	0.00	1.200	1.150	2.00	6.402	7.68	54.0	105.1	615.4
134.00	1.00	1.08	6.418	7.06	0.00	1.200	1.151	2.00	6.323	7.59	53.6	103.9	607.4
135.00 Top - Section 4	1.00	1.08	6.432	7.07	0.00	1.200	1.152	1.00	3.132	3.76	26.6	51.6	300.8
136.00	1.00	1.08	6.445	7.09	0.00	1.200	1.153	1.00	3.112	3.73	26.5	51.3	162.3
137.00 Appurtenance(s)	1.00	1.08	6.458	7.10	0.00	1.200	1.154	1.00	3.092	3.71	26.4	51.0	161.3
138.00	1.00	1.09	6.472	7.12	0.00	1.200	1.155	1.00	3.073	3.69	26.2	50.7	160.2
140.00	1.00	1.09	6.498	7.15	0.00	1.200	1.156	2.00	6.086	7.30	52.2	100.3	316.9
<b>Totals:</b>								<b>140.00</b>		<b>4,092.2</b>		<b>45,105.5</b>	

## Discrete Appurtenance Forces

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

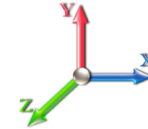


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**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Iterations** 21

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



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	137.00	PRK-1245 (kicker kit)	1	6.458	7.104	1.00	1.00	16.08	677.37	0.000	0.000	114.21	0.00	0.00	
2	137.00	B5/B13 RRHBR04C	3	6.458	7.104	0.50	0.75	3.33	257.56	0.000	0.000	23.65	0.00	0.00	
3	137.00	B2/B66A RRHBR049	3	6.458	7.104	0.50	0.75	3.38	368.37	0.000	0.000	24.04	0.00	0.00	
4	137.00	JAHH-65B-R3B	6	6.458	7.104	0.62	0.75	37.29	1317.01	0.000	0.000	264.89	0.00	0.00	
5	137.00	HRK12 (Handrail Kit)	1	6.458	7.104	1.00	1.00	11.11	108.72	0.000	0.000	78.94	0.00	0.00	
6	137.00	Raycap OVP-12	1	6.458	7.104	0.50	0.75	2.31	88.52	0.000	0.000	16.43	0.00	0.00	
7	137.00	MT6407-77A	3	6.458	7.104	0.52	0.75	8.36	506.35	0.000	0.000	59.41	0.00	0.00	
8	137.00	CBC78T-DS-43	3	6.458	7.104	0.50	0.75	0.82	72.24	0.000	0.000	5.82	0.00	0.00	
9	137.00	Antel BXA-70080/6CF	3	6.458	7.104	0.70	0.80	15.66	206.57	0.000	0.000	111.28	0.00	0.00	
10	137.00	Low Profile Platform	1	6.458	7.104	1.00	1.00	33.68	2365.36	0.000	0.000	239.25	0.00	0.00	
11	137.00	(3) Stabilizer Kit (4' FW)	1	6.458	7.104	1.00	1.00	6.26	224.30	0.000	0.000	44.48	0.00	0.00	
12	130.00	LGP17201	6	6.363	6.999	0.50	0.75	7.86	-70.75	0.000	0.000	54.98	0.00	0.00	
13	130.00	DMP65R-BU8DA	3	6.363	6.999	0.54	0.75	30.86	1019.41	0.000	0.000	216.03	0.00	0.00	
14	130.00	HRK12 (Handrail Kit)	1	6.363	6.999	1.00	1.00	16.43	780.06	0.000	0.000	114.99	0.00	0.00	
15	130.00	Powerwave LGP21901 -	6	6.363	6.999	0.50	0.75	10.33	534.05	0.000	0.000	72.33	0.00	0.00	
16	130.00	RRUS 8843 B2 B66A	3	6.363	6.999	0.50	0.75	2.96	315.63	0.000	0.000	20.75	0.00	0.00	
17	130.00	RRUS 4449 B5/B12	3	6.363	6.999	0.50	0.75	3.51	320.12	0.000	0.000	24.59	0.00	0.00	
18	130.00	HPA-65R-BU8AA	3	6.363	6.999	0.65	0.75	23.86	688.02	0.000	0.000	166.99	0.00	0.00	
19	130.00	Low Profile Platform	1	6.363	6.999	1.00	1.00	33.62	2360.87	0.000	0.000	235.29	0.00	0.00	
20	130.00	DC6-48-60-18-8F	1	6.363	6.999	0.50	0.75	0.86	64.60	0.000	0.000	6.00	0.00	0.00	
21	130.00	Powerwave LGP21401 -	6	6.363	6.999	0.50	0.75	5.55	226.25	0.000	0.000	38.82	0.00	0.00	
22	130.00	7770.00	6	6.363	6.999	0.55	0.75	20.32	686.87	0.000	0.000	142.22	0.00	0.00	
23	130.00	15'x2.875"mount pipe	3	6.363	6.999	1.00	1.00	23.56	483.83	0.000	0.000	164.88	0.00	0.00	
24	120.00	PRK-1245 (kicker kit)	1	6.220	6.842	1.00	1.00	15.99	674.57	0.000	0.000	109.42	0.00	0.00	
25	120.00	APX16DWV-16DWVS-E-A	3	6.220	6.842	0.46	0.75	11.20	275.16	0.000	0.000	76.66	0.00	0.00	
26	120.00	APXVAA4L24-43-U-NA20	3	6.220	6.842	0.54	0.75	34.78	1572.49	0.000	0.000	237.95	0.00	0.00	
27	120.00	AIR6449 B41	3	6.220	6.842	0.53	0.75	10.02	544.11	0.000	0.000	68.54	0.00	0.00	
28	120.00	LP-RMQP-4096-HK Plat	1	6.220	6.842	1.00	1.00	76.66	4295.39	0.000	0.000	524.56	0.00	0.00	
29	120.00	4460 Radio	3	6.220	6.842	0.50	0.75	4.96	442.70	0.000	0.000	33.94	0.00	0.00	
30	120.00	4480 Radio	3	6.220	6.842	0.50	0.75	4.96	424.61	0.000	0.000	33.94	0.00	0.00	
31	95.00	RDIDC-9181-OF-48	1	5.822	6.405	1.00	1.00	2.37	47.53	0.000	0.000	15.19	0.00	0.00	
32	95.00	TA08025-B605	3	5.822	6.405	0.50	0.75	3.49	332.24	0.000	0.000	22.38	0.00	0.00	
33	95.00	TA08025-B604	3	5.822	6.405	0.50	0.75	3.49	290.58	0.000	0.000	22.38	0.00	0.00	
34	95.00	FFVV-65C-R3-V1	3	5.822	6.405	0.55	0.75	37.17	1490.63	0.000	0.000	238.04	0.00	0.00	
35	95.00	MC-PK10-DSH	1	5.822	6.405	1.00	1.00	83.75	2712.62	0.000	0.000	536.40	0.00	0.00	
<b>Totals:</b>									<b>26,703.96</b>			<b>4,159.67</b>			

## Total Applied Force Summary

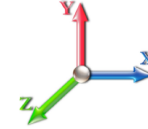
<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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

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



**Iterations**    21

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		61.35	879.26	0.00	0.00
4.00		60.98	909.69	0.00	0.00
6.00		60.60	937.93	0.00	0.00
8.00		60.20	935.10	0.00	0.00
10.00		59.79	931.58	0.00	0.00
12.00		59.38	927.59	0.00	0.00
14.00		58.97	923.25	0.00	0.00
16.00		58.55	918.66	0.00	0.00
18.00		58.13	913.85	0.00	0.00
20.00		57.71	908.87	0.00	0.00
22.00		57.29	903.75	0.00	0.00
24.00		56.87	898.51	0.00	0.00
25.00		28.27	447.26	0.00	0.00
26.00		28.17	399.19	0.00	0.00
28.00		56.02	794.84	0.00	0.00
30.00		56.16	790.09	0.00	0.00
32.00		56.73	785.27	0.00	0.00
34.00		57.25	780.38	0.00	0.00
36.00		57.71	775.44	0.00	0.00
38.00		58.12	770.45	0.00	0.00
40.00		58.49	765.40	0.00	0.00
41.00		29.27	380.86	0.00	0.00
42.00		29.73	648.41	0.00	0.00
44.00		59.88	1289.43	0.00	0.00
46.00		60.14	1279.70	0.00	0.00
48.00		60.37	1269.95	0.00	0.00
50.00		60.56	748.87	0.00	0.00
52.00		60.72	743.62	0.00	0.00
54.00		60.86	738.35	0.00	0.00
56.00		60.96	733.05	0.00	0.00
58.00		61.04	727.72	0.00	0.00
60.00		61.09	722.37	0.00	0.00
62.00		61.13	717.00	0.00	0.00
64.00		61.13	711.61	0.00	0.00
66.00		61.12	706.20	0.00	0.00
68.00		61.09	700.77	0.00	0.00
70.00		61.03	695.32	0.00	0.00
72.00		60.96	689.85	0.00	0.00
74.00		60.87	684.37	0.00	0.00
76.00		60.76	678.87	0.00	0.00
78.00		60.64	673.36	0.00	0.00
80.00		60.50	667.84	0.00	0.00
82.00		60.34	662.30	0.00	0.00
84.00		60.17	656.75	0.00	0.00
85.00		29.96	326.41	0.00	0.00
86.00		30.31	509.97	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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88.00		60.57	1012.66	0.00	0.00
90.00		60.36	1003.27	0.00	0.00
91.00		30.05	498.23	0.00	0.00
92.00		29.99	285.17	0.00	0.00
94.00		59.90	566.45	0.00	0.00
95.00	(11) attachments	864.21	5155.13	0.00	0.00
96.00		29.75	278.14	0.00	0.00
98.00		59.39	552.36	0.00	0.00
100.00		59.12	547.48	0.00	0.00
102.00		58.83	542.59	0.00	0.00
104.00		58.53	537.70	0.00	0.00
106.00		58.22	532.80	0.00	0.00
108.00		57.90	527.88	0.00	0.00
110.00		57.57	522.96	0.00	0.00
112.00		57.23	518.03	0.00	0.00
114.00		56.88	513.09	0.00	0.00
116.00		56.52	508.15	0.00	0.00
118.00		56.15	503.19	0.00	0.00
120.00	(17) attachments	1140.76	8727.25	0.00	0.00
122.00		55.38	475.27	0.00	0.00
124.00		54.98	470.29	0.00	0.00
126.00		54.57	465.31	0.00	0.00
128.00		54.15	460.32	0.00	0.00
130.00	(42) attachments	1311.61	7864.29	0.00	0.00
132.00		54.01	645.67	0.00	0.00
134.00		53.57	637.62	0.00	0.00
135.00		26.59	315.94	0.00	0.00
136.00		26.48	177.45	0.00	0.00
137.00	(26) attachments	1008.77	6368.77	0.00	0.00
138.00		26.25	160.21	0.00	0.00
140.00		52.21	316.91	0.00	0.00
	<b>Totals:</b>	<b>8,251.89</b>	<b>77,349.88</b>	<b>0.00</b>	<b>0.00</b>

## Calculated Forces

**Structure:** CT11560-A-SBA  
**Site Name:** Sterling 6 CT  
**Height:** 140.00 (ft)  
**Base Elev:** 1.000 (ft)  
**Gh:** 1.1

**Topography:** 1

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

5/1/2023  
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**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Iterations** 21

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



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-77.35	-8.26	0.00	-824.62	0.00	824.62	5803.10	1561.17	8297.91	7657.05	0.00	0.000	0.000	0.121
2.00	-76.47	-8.21	0.00	-808.10	0.00	808.10	5778.21	1549.71	8176.51	7567.86	0.00	-0.010	0.000	0.120
4.00	-75.56	-8.16	0.00	-791.68	0.00	791.68	5753.06	1538.25	8056.00	7478.80	0.01	-0.020	0.000	0.119
6.00	-74.62	-8.11	0.00	-775.36	0.00	775.36	5727.65	1526.78	7936.39	7389.90	0.02	-0.030	0.000	0.118
8.00	-73.68	-8.07	0.00	-759.13	0.00	759.13	5701.98	1515.32	7817.67	7301.16	0.03	-0.040	0.000	0.117
10.00	-72.75	-8.02	0.00	-743.00	0.00	743.00	5676.04	1503.86	7699.85	7212.59	0.05	-0.051	0.000	0.116
12.00	-71.82	-7.97	0.00	-726.96	0.00	726.96	5649.84	1492.40	7582.92	7124.20	0.08	-0.061	0.000	0.115
14.00	-70.89	-7.92	0.00	-711.02	0.00	711.02	5623.38	1480.93	7466.89	7035.98	0.10	-0.071	0.000	0.114
16.00	-69.97	-7.88	0.00	-695.17	0.00	695.17	5596.66	1469.47	7351.75	6947.96	0.14	-0.081	0.000	0.113
18.00	-69.06	-7.83	0.00	-679.42	0.00	679.42	5569.67	1458.01	7237.50	6860.14	0.17	-0.091	0.000	0.111
20.00	-68.15	-7.78	0.00	-663.76	0.00	663.76	5542.43	1446.55	7124.15	6772.52	0.21	-0.101	0.000	0.110
22.00	-67.24	-7.73	0.00	-648.20	0.00	648.20	5514.92	1435.08	7011.70	6685.11	0.26	-0.111	0.000	0.109
24.00	-66.35	-7.68	0.00	-632.73	0.00	632.73	5487.15	1423.62	6900.13	6597.93	0.31	-0.122	0.000	0.108
25.00	-65.90	-7.66	0.00	-625.05	0.00	625.05	5473.16	1417.89	6844.69	6554.42	0.33	-0.127	0.000	0.107
25.00	-65.90	-7.66	0.00	-625.05	0.00	625.05	4407.37	1216.64	5879.49	5289.42	0.33	-0.127	0.000	0.133
26.00	-65.50	-7.64	0.00	-617.39	0.00	617.39	4397.65	1211.73	5832.10	5256.32	0.36	-0.132	0.000	0.132
28.00	-64.70	-7.60	0.00	-602.10	0.00	602.10	4378.03	1201.90	5737.91	5190.16	0.42	-0.144	0.000	0.131
30.00	-63.91	-7.55	0.00	-586.91	0.00	586.91	4358.14	1192.08	5644.49	5124.08	0.48	-0.156	0.000	0.129
32.00	-63.12	-7.51	0.00	-571.80	0.00	571.80	4338.00	1182.25	5551.83	5058.08	0.55	-0.167	0.000	0.128
34.00	-62.34	-7.46	0.00	-556.79	0.00	556.79	4317.58	1172.43	5459.94	4992.17	0.62	-0.179	0.000	0.126
36.00	-61.56	-7.41	0.00	-541.87	0.00	541.87	4296.91	1162.60	5368.81	4926.35	0.70	-0.191	0.000	0.124
38.00	-60.79	-7.36	0.00	-527.05	0.00	527.05	4275.98	1152.78	5278.46	4860.65	0.78	-0.203	0.000	0.123
40.00	-60.03	-7.31	0.00	-512.32	0.00	512.32	4254.78	1142.95	5188.87	4795.05	0.87	-0.214	0.000	0.121
41.00	-59.64	-7.29	0.00	-505.01	0.00	505.01	4244.08	1138.04	5144.36	4762.30	0.92	-0.220	0.000	0.120
42.00	-59.00	-7.26	0.00	-497.72	0.00	497.72	4233.32	1133.13	5100.04	4729.58	0.96	-0.226	0.000	0.119
44.00	-57.70	-7.21	0.00	-483.19	0.00	483.19	4211.60	1123.30	5011.98	4664.23	1.06	-0.238	0.000	0.117
46.00	-56.42	-7.16	0.00	-468.77	0.00	468.77	4189.62	1113.48	4924.69	4599.03	1.16	-0.249	0.000	0.115
48.00	-55.15	-7.10	0.00	-454.46	0.00	454.46	4202.72	1119.32	4976.50	4637.78	1.27	-0.261	0.000	0.111
50.00	-54.40	-7.05	0.00	-440.26	0.00	440.26	4180.63	1109.50	4889.52	4572.63	1.38	-0.272	0.000	0.109
52.00	-53.66	-6.99	0.00	-426.16	0.00	426.16	4158.28	1099.67	4803.31	4507.62	1.50	-0.283	0.000	0.107
54.00	-52.92	-6.94	0.00	-412.18	0.00	412.18	4135.67	1089.85	4717.86	4442.77	1.62	-0.294	0.000	0.106
56.00	-52.18	-6.88	0.00	-398.30	0.00	398.30	4112.79	1080.02	4633.18	4378.08	1.74	-0.305	0.000	0.104
58.00	-51.46	-6.83	0.00	-384.53	0.00	384.53	4089.65	1070.20	4549.27	4313.56	1.87	-0.316	0.000	0.102
60.00	-50.73	-6.77	0.00	-370.87	0.00	370.87	4066.25	1060.37	4466.12	4249.22	2.01	-0.326	0.000	0.100
62.00	-50.01	-6.72	0.00	-357.33	0.00	357.33	4042.59	1050.55	4383.75	4185.07	2.15	-0.337	0.000	0.098
64.00	-49.30	-6.66	0.00	-343.89	0.00	343.89	4018.67	1040.72	4302.13	4121.10	2.29	-0.347	0.000	0.096
66.00	-48.60	-6.60	0.00	-330.57	0.00	330.57	3994.48	1030.90	4221.29	4057.34	2.44	-0.357	0.000	0.094
68.00	-47.89	-6.55	0.00	-317.36	0.00	317.36	3970.03	1021.07	4141.21	3993.79	2.59	-0.368	0.000	0.092
70.00	-47.20	-6.49	0.00	-304.27	0.00	304.27	3945.32	1011.25	4061.90	3930.45	2.75	-0.378	0.000	0.089
72.00	-46.51	-6.43	0.00	-291.29	0.00	291.29	3920.35	1001.42	3983.36	3867.33	2.91	-0.388	0.000	0.087
74.00	-45.82	-6.37	0.00	-278.43	0.00	278.43	3895.11	991.60	3905.58	3804.45	3.07	-0.397	0.000	0.085
76.00	-45.14	-6.32	0.00	-265.68	0.00	265.68	3869.62	981.77	3828.57	3741.80	3.24	-0.407	0.000	0.083
78.00	-44.47	-6.26	0.00	-253.05	0.00	253.05	3843.86	971.95	3752.32	3679.40	3.41	-0.416	0.000	0.080
80.00	-43.80	-6.20	0.00	-240.53	0.00	240.53	3817.84	962.12	3676.85	3617.26	3.59	-0.426	0.000	0.078
82.00	-43.14	-6.14	0.00	-228.13	0.00	228.13	3791.55	952.30	3602.14	3555.38	3.77	-0.435	0.000	0.076
84.00	-42.48	-6.08	0.00	-215.85	0.00	215.85	3765.01	942.47	3528.19	3493.76	3.95	-0.444	0.000	0.073
85.00	-42.15	-6.05	0.00	-209.77	0.00	209.77	3751.64	937.56	3491.51	3463.06	4.05	-0.448	0.000	0.072
86.00	-41.64	-6.02	0.00	-203.72	0.00	203.72	3738.20	932.65	3455.02	3432.43	4.14	-0.452	0.000	0.071



## Calculated Forces

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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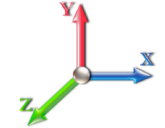
88.00	-40.63	-5.96	0.00	-191.68	0.00	191.68	3711.13	922.82	3382.61	3371.38	4.33	-0.461	0.000	0.068
90.00	-39.63	-5.89	0.00	-179.76	0.00	179.76	3683.80	913.00	3310.96	3310.62	4.53	-0.469	0.000	0.065
91.00	-39.13	-5.86	0.00	-173.87	0.00	173.87	2899.19	768.71	2816.54	2636.38	4.63	-0.473	0.000	0.080
92.00	-38.84	-5.84	0.00	-168.00	0.00	168.00	2889.87	764.61	2786.62	2613.82	4.73	-0.477	0.000	0.078
94.00	-38.28	-5.78	0.00	-156.33	0.00	156.33	2871.03	756.42	2727.26	2568.78	4.93	-0.486	0.000	0.074
95.00	-33.13	-4.87	0.00	-150.56	0.00	150.56	2861.52	752.33	2697.82	2546.31	5.03	-0.490	0.000	0.071
96.00	-32.85	-4.84	0.00	-145.69	0.00	145.69	2851.93	748.24	2668.54	2523.87	5.13	-0.494	0.000	0.069
98.00	-32.30	-4.78	0.00	-136.01	0.00	136.01	2832.57	740.05	2610.46	2479.11	5.34	-0.502	0.000	0.066
100.00	-31.75	-4.72	0.00	-126.44	0.00	126.44	2812.95	731.86	2553.02	2434.50	5.56	-0.510	0.000	0.063
102.00	-31.21	-4.66	0.00	-117.00	0.00	117.00	2793.07	723.67	2496.22	2390.05	5.77	-0.517	0.000	0.060
104.00	-30.67	-4.60	0.00	-107.68	0.00	107.68	2772.92	715.49	2440.06	2345.77	5.99	-0.524	0.000	0.057
106.00	-30.14	-4.54	0.00	-98.48	0.00	98.48	2752.51	707.30	2384.53	2301.65	6.21	-0.531	0.000	0.054
108.00	-29.61	-4.48	0.00	-89.39	0.00	89.39	2731.84	699.11	2329.65	2257.73	6.43	-0.537	0.000	0.050
110.00	-29.09	-4.42	0.00	-80.43	0.00	80.43	2710.91	690.92	2275.40	2213.98	6.66	-0.543	0.000	0.047
112.00	-28.57	-4.36	0.00	-71.58	0.00	71.58	2689.71	682.74	2221.79	2170.44	6.89	-0.549	0.000	0.044
114.00	-28.06	-4.30	0.00	-62.85	0.00	62.85	2668.26	674.55	2168.82	2127.10	7.12	-0.554	0.000	0.040
116.00	-27.55	-4.24	0.00	-54.25	0.00	54.25	2646.54	666.36	2116.50	2083.97	7.35	-0.559	0.000	0.036
118.00	-27.05	-4.19	0.00	-45.76	0.00	45.76	2624.55	658.18	2064.81	2041.07	7.59	-0.563	0.000	0.033
120.00	-18.33	-2.96	0.00	-37.39	0.00	37.39	2602.31	649.99	2013.75	1998.39	7.83	-0.566	0.000	0.026
122.00	-17.85	-2.90	0.00	-31.47	0.00	31.47	2579.81	641.80	1963.34	1955.94	8.06	-0.569	0.000	0.023
124.00	-17.38	-2.84	0.00	-25.66	0.00	25.66	2557.04	633.61	1913.57	1913.74	8.30	-0.572	0.000	0.020
126.00	-16.92	-2.78	0.00	-19.98	0.00	19.98	2534.01	625.43	1864.44	1871.79	8.54	-0.574	0.000	0.017
128.00	-16.46	-2.72	0.00	-14.41	0.00	14.41	2510.72	617.24	1815.94	1830.10	8.78	-0.576	0.000	0.014
130.00	-8.61	-1.33	0.00	-8.97	0.00	8.97	2487.16	609.05	1768.08	1788.67	9.02	-0.577	0.000	0.008
132.00	-7.96	-1.27	0.00	-6.30	0.00	6.30	2463.34	600.86	1720.87	1747.52	9.27	-0.578	0.000	0.007
134.00	-7.33	-1.21	0.00	-3.75	0.00	3.75	2439.27	592.68	1674.29	1706.65	9.51	-0.578	0.000	0.005
135.00	-7.01	-1.18	0.00	-2.53	0.00	2.53	1824.83	478.70	1365.31	1291.47	9.63	-0.578	0.000	0.006
136.00	-6.83	-1.16	0.00	-1.35	0.00	1.35	1817.10	475.42	1346.69	1277.14	9.75	-0.578	0.000	0.005
137.00	-0.48	-0.08	0.00	-0.19	0.00	0.19	1809.31	472.15	1328.20	1262.84	9.87	-0.578	0.000	0.000
138.00	-0.32	-0.06	0.00	-0.11	0.00	0.11	1801.45	468.87	1309.84	1248.56	9.99	-0.578	0.000	0.000
140.00	0.00	-0.05	0.00	0.00	0.00	0.00	1785.54	462.32	1273.50	1220.12	10.24	-0.578	0.000	0.000

## Seismic Segment Forces (Factored)

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 1.2D + 1.0Ev + 1.0Eh							<b>Iterations</b> 19
<b>Gust Response Factor</b>	1.10			<b>Sds</b>	0.20	<b>Ss</b>	0.19
<b>Dead Load Factor</b>	1.20	<b>Seismic Load Factor</b>	1.00	<b>Sd1</b>	0.09	<b>S1</b>	0.06
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.46	<b>SA</b>	0.04	<b>Seismic Importance Factor</b>	1.00

Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	
2.00		630.82	1.00	25.57	0.00	
4.00		656.32	3.00	26.60	0.01	
6.00		681.83	5.00	27.64	0.03	
8.00		677.39	7.00	27.46	0.06	
10.00		672.94	9.00	27.28	0.09	
12.00		668.50	11.00	27.10	0.13	
14.00		664.05	13.00	26.92	0.17	
16.00		659.61	15.00	26.74	0.22	
18.00		655.16	17.00	26.56	0.27	
20.00		650.72	19.00	26.38	0.33	
22.00		646.27	21.00	26.20	0.39	
24.00		641.83	23.00	26.02	0.45	
25.00	Top - Section 1	319.25	24.50	12.94	0.14	
26.00		279.19	25.50	11.32	0.12	
28.00		555.53	27.00	22.52	0.47	
30.00		551.72	29.00	22.36	0.52	
32.00		547.91	31.00	22.21	0.59	
34.00		544.10	33.00	22.05	0.65	
36.00		540.29	35.00	21.90	0.71	
38.00		536.48	37.00	21.75	0.78	
40.00		532.67	39.00	21.59	0.85	
41.00	Bot - Section 3	264.91	40.50	10.74	0.25	
42.00		487.17	41.50	19.75	0.81	
44.00		968.63	43.00	39.26	3.05	
46.00		961.01	45.00	38.95	3.27	
48.00	Top - Section 2	953.39	47.00	38.64	3.49	
50.00		519.70	49.00	21.07	1.23	
52.00		515.89	51.00	20.91	1.31	
54.00		512.08	53.00	20.76	1.39	
56.00		508.27	55.00	20.60	1.47	
58.00		504.46	57.00	20.45	1.54	
60.00		500.65	59.00	20.29	1.62	
62.00		496.84	61.00	20.14	1.70	
64.00		493.03	63.00	19.98	1.78	
66.00		489.22	65.00	19.83	1.86	
68.00		485.41	67.00	19.68	1.94	
70.00		481.60	69.00	19.52	2.01	
72.00		477.79	71.00	19.37	2.09	
74.00		473.98	73.00	19.21	2.17	
76.00		470.17	75.00	19.06	2.25	
78.00		466.36	77.00	18.90	2.32	
80.00		462.55	79.00	18.75	2.40	
82.00		458.74	81.00	18.59	2.47	
84.00		454.93	83.00	18.44	2.55	
85.00	Bot - Section 4	226.04	84.50	9.16	0.73	

## Seismic Segment Forces (Factored)

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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86.00		378.49	85.50	15.34	1.92
88.00		751.75	87.00	30.47	7.01
90.00		744.76	89.00	30.19	7.18
91.00	Top - Section 3	369.76	90.50	14.99	2.04
92.00		192.42	91.50	7.80	0.63
94.00		382.47	93.00	15.50	2.28
95.00	Appurtenance(s)	2848.1	94.50	115.44	94.79
96.00		187.06	95.50	7.58	0.64
98.00		371.75	97.00	15.07	2.34
100.00		368.57	99.00	14.94	2.39
102.00		365.40	101.00	14.81	2.44
104.00		362.22	103.00	14.68	2.49
106.00		359.05	105.00	14.55	2.54
108.00		355.87	107.00	14.42	2.59
110.00		352.70	109.00	14.30	2.63
112.00		349.52	111.00	14.17	2.68
114.00		346.35	113.00	14.04	2.72
116.00		343.17	115.00	13.91	2.76
118.00		340.00	117.00	13.78	2.81
120.00	Appurtenance(s)	4861.2	119.00	197.04	387.80
122.00		315.65	121.00	12.79	2.60
124.00		312.47	123.00	12.67	2.63
126.00		309.30	125.00	12.54	2.66
128.00		306.12	127.00	12.41	2.69
130.00	Bot - Section 5	3749.5	129.00	151.98	278.94
132.00		455.54	131.00	18.46	5.92
134.00		449.83	133.00	18.23	5.95
135.00	Top - Section 4	222.77	134.50	9.03	1.66
136.00		107.62	135.50	4.36	0.44
137.00	Appurtenance(s)	3673.2	136.50	148.89	298.02
138.00		91.23	137.50	3.70	0.34
140.00		180.55	139.00	7.32	1.20
<b>Totals:</b>		<b>49,750.0</b>	<b>2,016.5</b>	<b>1,188.4</b>	
					<b>Total Wind: 34,115.2</b>

## Calculated Forces

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



<b>Load Case:</b> 1.2D + 1.0Ev + 1.0Eh		<b>Iterations</b> 19
<b>Gust Response Factor</b> 1.10	<b>Sds</b> 0.20	<b>Ss</b> 0.19
<b>Dead Load Factor</b> 1.20	<b>Seismic Load Factor</b> 1.00	<b>S1</b> 0.06
<b>Wind Load Factor</b> 0.00	<b>Structure Frequency (f1)</b> 0.46	<b>SA</b> 0.04
	<b>Seismic Importance Factor</b> 1.00	



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-60.61	-1.19	0.00	-148.19	0.00	148.19	5803.10	1561.17	8297.91	7657.05	0.00	0.00	0.00	0.030
2.00	-59.83	-1.19	0.00	-145.82	0.00	145.82	5778.21	1549.71	8176.51	7567.86	0.00	0.00	0.00	0.030
4.00	-59.03	-1.19	0.00	-143.44	0.00	143.44	5753.06	1538.25	8056.00	7478.80	0.00	0.00	0.00	0.029
6.00	-58.20	-1.19	0.00	-141.06	0.00	141.06	5727.65	1526.78	7936.39	7389.90	0.00	0.00	-0.01	0.029
8.00	-57.38	-1.19	0.00	-138.67	0.00	138.67	5701.98	1515.32	7817.67	7301.16	0.01	0.00	-0.01	0.029
10.00	-56.56	-1.20	0.00	-136.29	0.00	136.29	5676.04	1503.86	7699.85	7212.59	0.01	0.00	-0.01	0.029
12.00	-55.75	-1.20	0.00	-133.90	0.00	133.90	5649.84	1492.40	7582.92	7124.20	0.01	0.00	-0.01	0.029
14.00	-54.94	-1.20	0.00	-131.50	0.00	131.50	5623.38	1480.93	7466.89	7035.98	0.02	0.00	-0.01	0.028
16.00	-54.14	-1.20	0.00	-129.11	0.00	129.11	5596.66	1469.47	7351.75	6947.96	0.02	0.00	-0.01	0.028
18.00	-53.35	-1.20	0.00	-126.71	0.00	126.71	5569.67	1458.01	7237.50	6860.14	0.03	0.00	-0.02	0.028
20.00	-52.56	-1.20	0.00	-124.30	0.00	124.30	5542.43	1446.55	7124.15	6772.52	0.04	0.00	-0.02	0.028
22.00	-51.77	-1.20	0.00	-121.90	0.00	121.90	5514.92	1435.08	7011.70	6685.11	0.05	0.00	-0.02	0.028
24.00	-50.99	-1.20	0.00	-119.49	0.00	119.49	5487.15	1423.62	6900.13	6597.93	0.06	0.00	-0.02	0.027
25.00	-50.61	-1.20	0.00	-118.29	0.00	118.29	5473.16	1417.89	6844.69	6554.42	0.06	0.00	-0.02	0.027
25.00	-50.61	-1.20	0.00	-118.29	0.00	118.29	4407.37	1216.64	5879.49	5289.42	0.06	0.00	-0.02	0.034
26.00	-50.27	-1.21	0.00	-117.08	0.00	117.08	4397.65	1211.73	5832.10	5256.32	0.07	0.00	-0.02	0.034
28.00	-49.60	-1.21	0.00	-114.67	0.00	114.67	4378.03	1201.90	5737.91	5190.16	0.08	0.00	-0.03	0.033
30.00	-48.93	-1.21	0.00	-112.26	0.00	112.26	4358.14	1192.08	5644.49	5124.08	0.09	0.00	-0.03	0.033
32.00	-48.27	-1.21	0.00	-109.84	0.00	109.84	4338.00	1182.25	5551.83	5058.08	0.10	0.00	-0.03	0.033
34.00	-47.61	-1.21	0.00	-107.43	0.00	107.43	4317.58	1172.43	5459.94	4992.17	0.11	0.00	-0.03	0.033
36.00	-46.96	-1.21	0.00	-105.01	0.00	105.01	4296.91	1162.60	5368.81	4926.35	0.13	0.00	-0.04	0.032
38.00	-46.31	-1.21	0.00	-102.59	0.00	102.59	4275.98	1152.78	5278.46	4860.65	0.14	0.00	-0.04	0.032
40.00	-45.67	-1.21	0.00	-100.16	0.00	100.16	4254.78	1142.95	5188.87	4795.05	0.16	0.00	-0.04	0.032
41.00	-45.35	-1.21	0.00	-98.95	0.00	98.95	4244.08	1138.04	5144.36	4762.30	0.17	0.00	-0.04	0.031
42.00	-44.75	-1.21	0.00	-97.74	0.00	97.74	4233.32	1133.13	5100.04	4729.58	0.18	0.00	-0.04	0.031
44.00	-43.57	-1.21	0.00	-95.32	0.00	95.32	4211.60	1123.30	5011.98	4664.23	0.20	0.00	-0.04	0.031
46.00	-42.39	-1.21	0.00	-92.90	0.00	92.90	4189.62	1113.48	4924.69	4599.03	0.22	0.00	-0.05	0.030
48.00	-41.23	-1.20	0.00	-90.48	0.00	90.48	4202.72	1119.32	4976.50	4637.78	0.24	0.00	-0.05	0.029
50.00	-40.60	-1.20	0.00	-88.08	0.00	88.08	4180.63	1109.50	4889.52	4572.63	0.26	0.00	-0.05	0.029
52.00	-39.98	-1.20	0.00	-85.67	0.00	85.67	4158.28	1099.67	4803.31	4507.62	0.28	0.00	-0.05	0.029
54.00	-39.36	-1.20	0.00	-83.26	0.00	83.26	4135.67	1089.85	4717.86	4442.77	0.30	0.00	-0.06	0.028
56.00	-38.75	-1.20	0.00	-80.85	0.00	80.85	4112.79	1080.02	4633.18	4378.08	0.33	0.00	-0.06	0.028
58.00	-38.14	-1.20	0.00	-78.45	0.00	78.45	4089.65	1070.20	4549.27	4313.56	0.35	0.00	-0.06	0.028
60.00	-37.53	-1.20	0.00	-76.05	0.00	76.05	4066.25	1060.37	4466.12	4249.22	0.38	0.00	-0.06	0.027
62.00	-36.93	-1.20	0.00	-73.64	0.00	73.64	4042.59	1050.55	4383.75	4185.07	0.40	0.00	-0.06	0.027
64.00	-36.34	-1.20	0.00	-71.24	0.00	71.24	4018.67	1040.72	4302.13	4121.10	0.43	0.00	-0.07	0.026
66.00	-35.75	-1.20	0.00	-68.84	0.00	68.84	3994.48	1030.90	4221.29	4057.34	0.46	0.00	-0.07	0.026
68.00	-35.17	-1.20	0.00	-66.45	0.00	66.45	3970.03	1021.07	4141.21	3993.79	0.49	0.00	-0.07	0.025
70.00	-34.59	-1.20	0.00	-64.06	0.00	64.06	3945.32	1011.25	4061.90	3930.45	0.52	0.00	-0.07	0.025
72.00	-34.01	-1.19	0.00	-61.67	0.00	61.67	3920.35	1001.42	3983.36	3867.33	0.55	0.00	-0.08	0.025
74.00	-33.44	-1.19	0.00	-59.28	0.00	59.28	3895.11	991.60	3905.58	3804.45	0.58	0.00	-0.08	0.024
76.00	-32.87	-1.19	0.00	-56.89	0.00	56.89	3869.62	981.77	3828.57	3741.80	0.62	0.00	-0.08	0.024
78.00	-32.31	-1.19	0.00	-54.51	0.00	54.51	3843.86	971.95	3752.32	3679.40	0.65	0.00	-0.08	0.023
80.00	-31.76	-1.19	0.00	-52.14	0.00	52.14	3817.84	962.12	3676.85	3617.26	0.68	0.00	-0.08	0.023
82.00	-31.21	-1.18	0.00	-49.77	0.00	49.77	3791.55	952.30	3602.14	3555.38	0.72	0.00	-0.09	0.022
84.00	-30.66	-1.18	0.00	-47.40	0.00	47.40	3765.01	942.47	3528.19	3493.76	0.76	0.00	-0.09	0.022
85.00	-30.39	-1.18	0.00	-46.22	0.00	46.22	3751.64	937.56	3491.51	3463.06	0.77	0.00	-0.09	0.021

## Calculated Forces

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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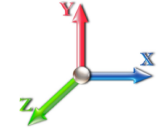
86.00	-29.93	-1.18	0.00	-45.04	0.00	45.04	3738.20	932.65	3455.02	3432.43	0.79	-0.09	0.021
88.00	-29.01	-1.17	0.00	-42.68	0.00	42.68	3711.13	922.82	3382.61	3371.38	0.83	-0.09	0.020
90.00	-28.10	-1.16	0.00	-40.34	0.00	40.34	3683.80	913.00	3310.96	3310.62	0.87	-0.09	0.020
91.00	-27.65	-1.16	0.00	-39.17	0.00	39.17	2899.19	768.71	2816.54	2636.38	0.89	-0.09	0.024
92.00	-27.42	-1.16	0.00	-38.01	0.00	38.01	2889.87	764.61	2786.62	2613.82	0.91	-0.09	0.024
94.00	-26.97	-1.16	0.00	-35.69	0.00	35.69	2871.03	756.42	2727.26	2568.78	0.95	-0.10	0.023
95.00	-23.44	-1.06	0.00	-34.53	0.00	34.53	2861.52	752.33	2697.82	2546.31	0.97	-0.10	0.022
96.00	-23.22	-1.06	0.00	-33.47	0.00	33.47	2851.93	748.24	2668.54	2523.87	0.99	-0.10	0.021
98.00	-22.78	-1.06	0.00	-31.36	0.00	31.36	2832.57	740.05	2610.46	2479.11	1.03	-0.10	0.021
100.00	-22.33	-1.05	0.00	-29.25	0.00	29.25	2812.95	731.86	2553.02	2434.50	1.07	-0.10	0.020
102.00	-21.90	-1.05	0.00	-27.14	0.00	27.14	2793.07	723.67	2496.22	2390.05	1.12	-0.10	0.019
104.00	-21.47	-1.05	0.00	-25.04	0.00	25.04	2772.92	715.49	2440.06	2345.77	1.16	-0.11	0.018
106.00	-21.04	-1.05	0.00	-22.94	0.00	22.94	2752.51	707.30	2384.53	2301.65	1.21	-0.11	0.018
108.00	-20.61	-1.04	0.00	-20.85	0.00	20.85	2731.84	699.11	2329.65	2257.73	1.25	-0.11	0.017
110.00	-20.19	-1.04	0.00	-18.77	0.00	18.77	2710.91	690.92	2275.40	2213.98	1.30	-0.11	0.016
112.00	-19.77	-1.04	0.00	-16.69	0.00	16.69	2689.71	682.74	2221.79	2170.44	1.34	-0.11	0.015
114.00	-19.36	-1.03	0.00	-14.62	0.00	14.62	2668.26	674.55	2168.82	2127.10	1.39	-0.11	0.014
116.00	-18.95	-1.03	0.00	-12.55	0.00	12.55	2646.54	666.36	2116.50	2083.97	1.44	-0.11	0.013
118.00	-18.55	-1.03	0.00	-10.49	0.00	10.49	2624.55	658.18	2064.81	2041.07	1.49	-0.11	0.012
120.00	-12.53	-0.63	0.00	-8.44	0.00	8.44	2602.31	649.99	2013.75	1998.39	1.53	-0.12	0.009
122.00	-12.15	-0.62	0.00	-7.18	0.00	7.18	2579.81	641.80	1963.34	1955.94	1.58	-0.12	0.008
124.00	-11.78	-0.62	0.00	-5.93	0.00	5.93	2557.04	633.61	1913.57	1913.74	1.63	-0.12	0.008
126.00	-11.41	-0.62	0.00	-4.69	0.00	4.69	2534.01	625.43	1864.44	1871.79	1.68	-0.12	0.007
128.00	-11.04	-0.61	0.00	-3.46	0.00	3.46	2510.72	617.24	1815.94	1830.10	1.73	-0.12	0.006
130.00	-6.41	-0.33	0.00	-2.23	0.00	2.23	2487.16	609.05	1768.08	1788.67	1.78	-0.12	0.004
132.00	-5.85	-0.32	0.00	-1.57	0.00	1.57	2463.34	600.86	1720.87	1747.52	1.83	-0.12	0.003
134.00	-5.29	-0.31	0.00	-0.94	0.00	0.94	2439.27	592.68	1674.29	1706.65	1.88	-0.12	0.003
135.00	-5.02	-0.31	0.00	-0.62	0.00	0.62	1824.83	478.70	1365.31	1291.47	1.90	-0.12	0.003
136.00	-4.89	-0.31	0.00	-0.31	0.00	0.31	1817.10	475.42	1346.69	1277.14	1.93	-0.12	0.003
137.00	-0.34	0.00	0.00	-0.01	0.00	0.01	1809.31	472.15	1328.20	1262.84	1.95	-0.12	0.000
138.00	-0.22	0.00	0.00	0.00	0.00	0.00	1801.45	468.87	1309.84	1248.56	1.98	-0.12	0.000
140.00	0.00	0.00	0.00	0.00	0.00	0.00	1785.54	462.32	1273.50	1220.12	2.03	-0.12	0.000

## Seismic Segment Forces (Factored)

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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<b>Load Case:</b> 0.9D + 1.0Ev + 1.0Eh							<b>Iterations</b> 19
<b>Gust Response Factor</b>	1.10			<b>Sds</b>	0.20	<b>Ss</b>	0.19
<b>Dead Load Factor</b>	0.90	<b>Seismic Load Factor</b>	1.00	<b>Sd1</b>	0.09	<b>S1</b>	0.06
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.46	<b>SA</b>	0.04	<b>Seismic Importance Factor</b>	1.00

Top Elev (ft)	Description	Wz (lb)	Hz (lb)	Vertical Ev (lb)	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	
2.00		623.91	1.00	25.29	0.00	
4.00		641.92	3.00	26.02	0.01	
6.00		659.94	5.00	26.75	0.03	
8.00		655.50	7.00	26.57	0.05	
10.00		651.05	9.00	26.39	0.08	
12.00		646.61	11.00	26.21	0.12	
14.00		642.16	13.00	26.03	0.16	
16.00		637.72	15.00	25.85	0.21	
18.00		633.27	17.00	25.67	0.26	
20.00		628.83	19.00	25.49	0.31	
22.00		624.38	21.00	25.31	0.37	
24.00		619.94	23.00	25.13	0.43	
25.00	Top - Section 1	308.30	24.50	12.50	0.13	
26.00		268.25	25.50	10.87	0.11	
28.00		533.64	27.00	21.63	0.44	
30.00		529.83	29.00	21.48	0.49	
32.00		526.02	31.00	21.32	0.55	
34.00		522.21	33.00	21.17	0.61	
36.00		518.40	35.00	21.01	0.67	
38.00		514.59	37.00	20.86	0.73	
40.00		510.78	39.00	20.70	0.80	
41.00	Bot - Section 3	253.96	40.50	10.29	0.24	
42.00		476.23	41.50	19.30	0.78	
44.00		946.74	43.00	38.37	2.97	
46.00		939.12	45.00	38.07	3.18	
48.00	Top - Section 2	931.50	47.00	37.76	3.39	
50.00		497.81	49.00	20.18	1.16	
52.00		494.00	51.00	20.02	1.23	
54.00		490.19	53.00	19.87	1.30	
56.00		486.38	55.00	19.71	1.37	
58.00		482.57	57.00	19.56	1.44	
60.00		478.76	59.00	19.41	1.51	
62.00		474.95	61.00	19.25	1.59	
64.00		471.14	63.00	19.10	1.66	
66.00		467.33	65.00	18.94	1.73	
68.00		463.52	67.00	18.79	1.80	
70.00		459.71	69.00	18.63	1.87	
72.00		455.90	71.00	18.48	1.95	
74.00		452.09	73.00	18.32	2.02	
76.00		448.28	75.00	18.17	2.09	
78.00		444.47	77.00	18.02	2.16	
80.00		440.66	79.00	17.86	2.22	
82.00		436.85	81.00	17.71	2.29	
84.00		433.04	83.00	17.55	2.36	
85.00	Bot - Section 4	215.09	84.50	8.72	0.67	



## Seismic Segment Forces (Factored)

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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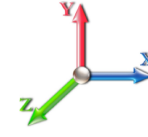
86.00		367.55	85.50	14.90	1.84
88.00		729.86	87.00	29.58	6.73
90.00		722.88	89.00	29.30	6.89
91.00	Top - Section 3	358.82	90.50	14.54	1.96
92.00		181.48	91.50	7.36	0.57
94.00		360.58	93.00	14.62	2.08
95.00	Appurtenance(s)	2837.2	94.50	115.00	95.41
96.00		176.67	95.50	7.16	0.59
98.00		350.95	97.00	14.23	2.13
100.00		347.78	99.00	14.10	2.18
102.00		344.60	101.00	13.97	2.22
104.00		341.43	103.00	13.84	2.27
106.00		338.25	105.00	13.71	2.31
108.00		335.08	107.00	13.58	2.35
110.00		331.90	109.00	13.45	2.39
112.00		328.73	111.00	13.32	2.43
114.00		325.55	113.00	13.20	2.46
116.00		322.38	115.00	13.07	2.50
118.00		319.20	117.00	12.94	2.53
120.00	Appurtenance(s)	4840.4	119.00	196.20	390.03
122.00		299.35	121.00	12.13	2.39
124.00		296.18	123.00	12.01	2.42
126.00		293.00	125.00	11.88	2.44
128.00		289.83	127.00	11.75	2.46
130.00	Bot - Section 5	3733.2	129.00	151.32	280.50
132.00		447.98	131.00	18.16	5.82
134.00		442.27	133.00	17.93	5.84
135.00	Top - Section 4	218.99	134.50	8.88	1.64
136.00		103.84	135.50	4.21	0.42
137.00	Appurtenance(s)	3669.4	136.50	148.73	301.53
138.00		91.23	137.50	3.70	0.34
140.00		180.55	139.00	7.32	1.22
<b>Totals:</b>		<b>48,364.9</b>	<b>1,960.4</b>	<b>1,188.4</b>	
					<b>Total Wind: 34,115.2</b>

## Calculated Forces

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



<b>Load Case:</b> 0.9D + 1.0Ev + 1.0Eh						<b>Iterations</b> 19
<b>Gust Response Factor</b>	1.10		<b>Sds</b>	0.20		<b>Ss</b> 0.19
<b>Dead Load Factor</b>	0.90	<b>Seismic Load Factor</b>	1.00	<b>Sd1</b>	0.09	<b>S1</b> 0.06
<b>Wind Load Factor</b>	0.00	<b>Structure Frequency (f1)</b>	0.46	<b>SA</b>	0.04	<b>Seismic Importance Factor</b> 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-45.90	-1.19	0.00	-147.43	0.00	147.43	5803.10	1561.17	8297.91	7657.05	0.00	0.00	0.00	0.027
2.00	-45.32	-1.19	0.00	-145.06	0.00	145.06	5778.21	1549.71	8176.51	7567.86	0.00	0.00	0.00	0.027
4.00	-44.71	-1.19	0.00	-142.68	0.00	142.68	5753.06	1538.25	8056.00	7478.80	0.00	0.00	0.00	0.027
6.00	-44.08	-1.19	0.00	-140.31	0.00	140.31	5727.65	1526.78	7936.39	7389.90	0.00	-0.01	0.00	0.027
8.00	-43.46	-1.19	0.00	-137.93	0.00	137.93	5701.98	1515.32	7817.67	7301.16	0.01	-0.01	0.00	0.027
10.00	-42.84	-1.19	0.00	-135.54	0.00	135.54	5676.04	1503.86	7699.85	7212.59	0.01	-0.01	0.00	0.026
12.00	-42.22	-1.19	0.00	-133.16	0.00	133.16	5649.84	1492.40	7582.92	7124.20	0.01	-0.01	0.00	0.026
14.00	-41.61	-1.20	0.00	-130.77	0.00	130.77	5623.38	1480.93	7466.89	7035.98	0.02	-0.01	0.00	0.026
16.00	-41.01	-1.20	0.00	-128.38	0.00	128.38	5596.66	1469.47	7351.75	6947.96	0.02	-0.01	0.00	0.026
18.00	-40.40	-1.20	0.00	-125.98	0.00	125.98	5569.67	1458.01	7237.50	6860.14	0.03	-0.02	0.00	0.026
20.00	-39.81	-1.20	0.00	-123.59	0.00	123.59	5542.43	1446.55	7124.15	6772.52	0.04	-0.02	0.00	0.025
22.00	-39.21	-1.20	0.00	-121.19	0.00	121.19	5514.92	1435.08	7011.70	6685.11	0.05	-0.02	0.00	0.025
24.00	-38.62	-1.20	0.00	-118.80	0.00	118.80	5487.15	1423.62	6900.13	6597.93	0.06	-0.02	0.00	0.025
25.00	-38.33	-1.20	0.00	-117.60	0.00	117.60	5473.16	1417.89	6844.69	6554.42	0.06	-0.02	0.00	0.025
25.00	-38.33	-1.20	0.00	-117.60	0.00	117.60	4407.37	1216.64	5879.49	5289.42	0.06	-0.02	0.00	0.031
26.00	-38.07	-1.20	0.00	-116.40	0.00	116.40	4397.65	1211.73	5832.10	5256.32	0.07	-0.02	0.00	0.031
28.00	-37.56	-1.20	0.00	-114.00	0.00	114.00	4378.03	1201.90	5737.91	5190.16	0.08	-0.03	0.00	0.031
30.00	-37.06	-1.20	0.00	-111.60	0.00	111.60	4358.14	1192.08	5644.49	5124.08	0.09	-0.03	0.00	0.030
32.00	-36.56	-1.20	0.00	-109.19	0.00	109.19	4338.00	1182.25	5551.83	5058.08	0.10	-0.03	0.00	0.030
34.00	-36.06	-1.20	0.00	-106.79	0.00	106.79	4317.58	1172.43	5459.94	4992.17	0.11	-0.03	0.00	0.030
36.00	-35.57	-1.20	0.00	-104.38	0.00	104.38	4296.91	1162.60	5368.81	4926.35	0.13	-0.04	0.00	0.029
38.00	-35.08	-1.20	0.00	-101.97	0.00	101.97	4275.98	1152.78	5278.46	4860.65	0.14	-0.04	0.00	0.029
40.00	-34.59	-1.20	0.00	-99.57	0.00	99.57	4254.78	1142.95	5188.87	4795.05	0.16	-0.04	0.00	0.029
41.00	-34.35	-1.20	0.00	-98.36	0.00	98.36	4244.08	1138.04	5144.36	4762.30	0.17	-0.04	0.00	0.029
42.00	-33.90	-1.20	0.00	-97.16	0.00	97.16	4233.32	1133.13	5100.04	4729.58	0.18	-0.04	0.00	0.029
44.00	-33.00	-1.20	0.00	-94.75	0.00	94.75	4211.60	1123.30	5011.98	4664.23	0.20	-0.04	0.00	0.028
46.00	-32.11	-1.20	0.00	-92.35	0.00	92.35	4189.62	1113.48	4924.69	4599.03	0.21	-0.05	0.00	0.028
48.00	-31.23	-1.20	0.00	-89.95	0.00	89.95	4202.72	1119.32	4976.50	4637.78	0.23	-0.05	0.00	0.027
50.00	-30.75	-1.20	0.00	-87.56	0.00	87.56	4180.63	1109.50	4889.52	4572.63	0.26	-0.05	0.00	0.027
52.00	-30.28	-1.20	0.00	-85.17	0.00	85.17	4158.28	1099.67	4803.31	4507.62	0.28	-0.05	0.00	0.026
54.00	-29.81	-1.19	0.00	-82.78	0.00	82.78	4135.67	1089.85	4717.86	4442.77	0.30	-0.06	0.00	0.026
56.00	-29.35	-1.19	0.00	-80.39	0.00	80.39	4112.79	1080.02	4633.18	4378.08	0.32	-0.06	0.00	0.025
58.00	-28.89	-1.19	0.00	-78.00	0.00	78.00	4089.65	1070.20	4549.27	4313.56	0.35	-0.06	0.00	0.025
60.00	-28.43	-1.19	0.00	-75.61	0.00	75.61	4066.25	1060.37	4466.12	4249.22	0.37	-0.06	0.00	0.025
62.00	-27.98	-1.19	0.00	-73.23	0.00	73.23	4042.59	1050.55	4383.75	4185.07	0.40	-0.06	0.00	0.024
64.00	-27.53	-1.19	0.00	-70.85	0.00	70.85	4018.67	1040.72	4302.13	4121.10	0.43	-0.07	0.00	0.024
66.00	-27.08	-1.19	0.00	-68.47	0.00	68.47	3994.48	1030.90	4221.29	4057.34	0.46	-0.07	0.00	0.024
68.00	-26.64	-1.19	0.00	-66.09	0.00	66.09	3970.03	1021.07	4141.21	3993.79	0.49	-0.07	0.00	0.023
70.00	-26.20	-1.19	0.00	-63.71	0.00	63.71	3945.32	1011.25	4061.90	3930.45	0.52	-0.07	0.00	0.023
72.00	-25.76	-1.18	0.00	-61.34	0.00	61.34	3920.35	1001.42	3983.36	3867.33	0.55	-0.07	0.00	0.022
74.00	-25.33	-1.18	0.00	-58.97	0.00	58.97	3895.11	991.60	3905.58	3804.45	0.58	-0.08	0.00	0.022
76.00	-24.90	-1.18	0.00	-56.61	0.00	56.61	3869.62	981.77	3828.57	3741.80	0.61	-0.08	0.00	0.022
78.00	-24.48	-1.18	0.00	-54.24	0.00	54.24	3843.86	971.95	3752.32	3679.40	0.65	-0.08	0.00	0.021
80.00	-24.06	-1.18	0.00	-51.89	0.00	51.89	3817.84	962.12	3676.85	3617.26	0.68	-0.08	0.00	0.021
82.00	-23.64	-1.18	0.00	-49.53	0.00	49.53	3791.55	952.30	3602.14	3555.38	0.72	-0.09	0.00	0.020
84.00	-23.23	-1.17	0.00	-47.18	0.00	47.18	3765.01	942.47	3528.19	3493.76	0.75	-0.09	0.00	0.020
85.00	-23.02	-1.17	0.00	-46.01	0.00	46.01	3751.64	937.56	3491.51	3463.06	0.77	-0.09	0.00	0.019

## Calculated Forces

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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86.00	-22.67	-1.17	0.00	-44.84	0.00	44.84	3738.20	932.65	3455.02	3432.43	0.79	-0.09	0.019
88.00	-21.98	-1.16	0.00	-42.49	0.00	42.49	3711.13	922.82	3382.61	3371.38	0.83	-0.09	0.019
90.00	-21.29	-1.16	0.00	-40.17	0.00	40.17	3683.80	913.00	3310.96	3310.62	0.86	-0.09	0.018
91.00	-20.95	-1.15	0.00	-39.01	0.00	39.01	2899.19	768.71	2816.54	2636.38	0.88	-0.09	0.022
92.00	-20.78	-1.15	0.00	-37.86	0.00	37.86	2889.87	764.61	2786.62	2613.82	0.90	-0.09	0.022
94.00	-20.43	-1.15	0.00	-35.55	0.00	35.55	2871.03	756.42	2727.26	2568.78	0.94	-0.10	0.021
95.00	-17.76	-1.05	0.00	-34.40	0.00	34.40	2861.52	752.33	2697.82	2546.31	0.96	-0.10	0.020
96.00	-17.59	-1.05	0.00	-33.35	0.00	33.35	2851.93	748.24	2668.54	2523.87	0.98	-0.10	0.019
98.00	-17.26	-1.05	0.00	-31.24	0.00	31.24	2832.57	740.05	2610.46	2479.11	1.03	-0.10	0.019
100.00	-16.92	-1.05	0.00	-29.15	0.00	29.15	2812.95	731.86	2553.02	2434.50	1.07	-0.10	0.018
102.00	-16.59	-1.04	0.00	-27.05	0.00	27.05	2793.07	723.67	2496.22	2390.05	1.11	-0.10	0.017
104.00	-16.26	-1.04	0.00	-24.96	0.00	24.96	2772.92	715.49	2440.06	2345.77	1.16	-0.11	0.017
106.00	-15.94	-1.04	0.00	-22.88	0.00	22.88	2752.51	707.30	2384.53	2301.65	1.20	-0.11	0.016
108.00	-15.62	-1.04	0.00	-20.80	0.00	20.80	2731.84	699.11	2329.65	2257.73	1.24	-0.11	0.015
110.00	-15.30	-1.04	0.00	-18.72	0.00	18.72	2710.91	690.92	2275.40	2213.98	1.29	-0.11	0.014
112.00	-14.98	-1.03	0.00	-16.65	0.00	16.65	2689.71	682.74	2221.79	2170.44	1.34	-0.11	0.013
114.00	-14.67	-1.03	0.00	-14.59	0.00	14.59	2668.26	674.55	2168.82	2127.10	1.38	-0.11	0.012
116.00	-14.36	-1.03	0.00	-12.53	0.00	12.53	2646.54	666.36	2116.50	2083.97	1.43	-0.11	0.011
118.00	-14.06	-1.02	0.00	-10.47	0.00	10.47	2624.55	658.18	2064.81	2041.07	1.48	-0.11	0.010
120.00	-9.50	-0.63	0.00	-8.42	0.00	8.42	2602.31	649.99	2013.75	1998.39	1.53	-0.11	0.008
122.00	-9.21	-0.62	0.00	-7.17	0.00	7.17	2579.81	641.80	1963.34	1955.94	1.57	-0.12	0.007
124.00	-8.93	-0.62	0.00	-5.93	0.00	5.93	2557.04	633.61	1913.57	1913.74	1.62	-0.12	0.007
126.00	-8.65	-0.62	0.00	-4.69	0.00	4.69	2534.01	625.43	1864.44	1871.79	1.67	-0.12	0.006
128.00	-8.37	-0.61	0.00	-3.46	0.00	3.46	2510.72	617.24	1815.94	1830.10	1.72	-0.12	0.005
130.00	-4.86	-0.33	0.00	-2.23	0.00	2.23	2487.16	609.05	1768.08	1788.67	1.77	-0.12	0.003
132.00	-4.43	-0.32	0.00	-1.58	0.00	1.58	2463.34	600.86	1720.87	1747.52	1.82	-0.12	0.003
134.00	-4.01	-0.31	0.00	-0.94	0.00	0.94	2439.27	592.68	1674.29	1706.65	1.87	-0.12	0.002
135.00	-3.81	-0.31	0.00	-0.63	0.00	0.63	1824.83	478.70	1365.31	1291.47	1.89	-0.12	0.003
136.00	-3.71	-0.31	0.00	-0.32	0.00	0.32	1817.10	475.42	1346.69	1277.14	1.92	-0.12	0.002
137.00	-0.26	0.00	0.00	0.00	0.00	0.00	1809.31	472.15	1328.20	1262.84	1.94	-0.12	0.000
138.00	-0.17	0.00	0.00	0.00	0.00	0.00	1801.45	468.87	1309.84	1248.56	1.97	-0.12	0.000
140.00	0.00	0.00	0.00	0.00	0.00	0.00	1785.54	462.32	1273.50	1220.12	2.02	-0.12	0.000

## Wind Loading - Shaft

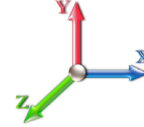
<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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

**Iterations** 21

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



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	5.376	5.91	271.29	0.730	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	5.376	5.91	269.31	0.730	0.000	2.00	10.876	7.94	47.0	0.0	603.2
4.00		1.00	0.70	5.376	5.91	267.33	0.730	0.000	2.00	10.796	7.88	46.6	0.0	598.7
6.00		1.00	0.70	5.376	5.91	265.35	0.730	0.000	2.00	10.717	7.82	46.3	0.0	594.3
8.00		1.00	0.70	5.376	5.91	263.37	0.730	0.000	2.00	10.637	7.77	45.9	0.0	589.8
10.00		1.00	0.70	5.376	5.91	261.40	0.730	0.000	2.00	10.558	7.71	45.6	0.0	585.4
12.00		1.00	0.70	5.376	5.91	259.42	0.730	0.000	2.00	10.478	7.65	45.2	0.0	580.9
14.00		1.00	0.70	5.376	5.91	257.44	0.730	0.000	2.00	10.398	7.59	44.9	0.0	576.5
16.00		1.00	0.70	5.376	5.91	255.46	0.730	0.000	2.00	10.319	7.53	44.5	0.0	572.1
18.00		1.00	0.70	5.376	5.91	253.48	0.730	0.000	2.00	10.239	7.47	44.2	0.0	567.6
20.00		1.00	0.70	5.376	5.91	251.50	0.730	0.000	2.00	10.160	7.42	43.9	0.0	563.2
22.00		1.00	0.70	5.376	5.91	249.53	0.730	0.000	2.00	10.080	7.36	43.5	0.0	558.7
24.00		1.00	0.70	5.376	5.91	247.55	0.730	0.000	2.00	10.000	7.30	43.2	0.0	554.3
25.00	Top - Section 1	1.00	0.70	5.376	5.91	246.56	0.730	0.000	1.00	4.970	3.63	21.5	0.0	275.5
26.00		1.00	0.70	5.376	5.91	245.57	0.730	0.000	1.00	4.950	3.61	21.4	0.0	235.4
28.00		1.00	0.70	5.376	5.91	243.59	0.730	0.000	2.00	9.841	7.18	42.5	0.0	468.0
30.00		1.00	0.71	5.431	5.97	242.85	0.730	0.000	2.00	9.762	7.13	42.6	0.0	464.2
32.00		1.00	0.72	5.529	6.08	243.02	0.730	0.000	2.00	9.682	7.07	43.0	0.0	460.4
34.00		1.00	0.73	5.623	6.19	243.05	0.730	0.000	2.00	9.602	7.01	43.4	0.0	456.6
36.00		1.00	0.74	5.713	6.28	242.95	0.730	0.000	2.00	9.523	6.95	43.7	0.0	452.7
38.00		1.00	0.76	5.799	6.38	242.73	0.730	0.000	2.00	9.443	6.89	44.0	0.0	448.9
40.00		1.00	0.77	5.883	6.47	242.40	0.730	0.000	2.00	9.364	6.84	44.2	0.0	445.1
41.00	Bot - Section 3	1.00	0.77	5.924	6.52	242.19	0.730	0.000	1.00	4.652	3.40	22.1	0.0	221.1
42.00		1.00	0.78	5.963	6.56	241.97	0.730	0.000	1.00	4.696	3.43	22.5	0.0	443.4
44.00		1.00	0.79	6.041	6.65	241.45	0.730	0.000	2.00	9.331	6.81	45.3	0.0	881.1
46.00		1.00	0.80	6.117	6.73	240.84	0.730	0.000	2.00	9.252	6.75	45.4	0.0	873.5
48.00	Top - Section 2	1.00	0.81	6.190	6.81	240.16	0.730	0.000	2.00	9.172	6.70	45.6	0.0	865.8
50.00		1.00	0.82	6.261	6.89	242.80	0.730	0.000	2.00	9.093	6.64	45.7	0.0	432.1
52.00		1.00	0.82	6.331	6.96	241.99	0.730	0.000	2.00	9.013	6.58	45.8	0.0	428.3
54.00		1.00	0.83	6.398	7.04	241.12	0.730	0.000	2.00	8.933	6.52	45.9	0.0	424.5
56.00		1.00	0.84	6.464	7.11	240.18	0.730	0.000	2.00	8.854	6.46	46.0	0.0	420.7
58.00		1.00	0.85	6.528	7.18	239.19	0.730	0.000	2.00	8.774	6.41	46.0	0.0	416.9
60.00		1.00	0.86	6.590	7.25	238.14	0.730	0.000	2.00	8.694	6.35	46.0	0.0	413.1
62.00		1.00	0.87	6.651	7.32	237.04	0.730	0.000	2.00	8.615	6.29	46.0	0.0	409.3
64.00		1.00	0.87	6.711	7.38	235.89	0.730	0.000	2.00	8.535	6.23	46.0	0.0	405.5
66.00		1.00	0.88	6.769	7.45	234.70	0.730	0.000	2.00	8.456	6.17	46.0	0.0	401.7
68.00		1.00	0.89	6.826	7.51	233.45	0.730	0.000	2.00	8.376	6.11	45.9	0.0	397.9
70.00		1.00	0.90	6.882	7.57	232.17	0.730	0.000	2.00	8.296	6.06	45.8	0.0	394.0
72.00		1.00	0.90	6.937	7.63	230.85	0.730	0.000	2.00	8.217	6.00	45.8	0.0	390.2
74.00		1.00	0.91	6.991	7.69	229.48	0.730	0.000	2.00	8.137	5.94	45.7	0.0	386.4
76.00		1.00	0.92	7.044	7.75	228.08	0.730	0.000	2.00	8.058	5.88	45.6	0.0	382.6
78.00		1.00	0.92	7.095	7.80	226.65	0.730	0.000	2.00	7.978	5.82	45.5	0.0	378.8
80.00		1.00	0.93	7.146	7.86	225.18	0.730	0.000	2.00	7.898	5.77	45.3	0.0	375.0
82.00		1.00	0.94	7.196	7.92	223.68	0.730	0.000	2.00	7.819	5.71	45.2	0.0	371.2
84.00		1.00	0.94	7.245	7.97	222.14	0.730	0.000	2.00	7.739	5.65	45.0	0.0	367.4
85.00	Bot - Section 4	1.00	0.95	7.270	8.00	221.36	0.730	0.000	1.00	3.840	2.80	22.4	0.0	182.3
86.00		1.00	0.95	7.294	8.02	220.58	0.730	0.000	1.00	3.873	2.83	22.7	0.0	334.7

## Wind Loading - Shaft

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Page:</b> 40
	<b>Struct Class:</b> II	



88.00	1.00	0.96	7.341	8.08	218.98	0.730	0.000	2.00	7.686	5.61	45.3	0.0	664.2		
90.00	1.00	0.96	7.388	8.13	217.36	0.730	0.000	2.00	7.606	5.55	45.1	0.0	657.2		
91.00 Top - Section 3	1.00	0.96	7.411	8.15	216.54	0.730	0.000	1.00	3.773	2.75	22.5	0.0	326.0		
92.00	1.00	0.97	7.434	8.18	218.80	0.730	0.000	1.00	3.753	2.74	22.4	0.0	148.6		
94.00	1.00	0.97	7.479	8.23	217.13	0.730	0.000	2.00	7.447	5.44	44.7	0.0	294.9		
95.00 Appurtenance(s)	1.00	0.98	7.502	8.25	216.29	0.730	0.000	1.00	3.694	2.70	22.3	0.0	146.3		
96.00	1.00	0.98	7.524	8.28	215.44	0.730	0.000	1.00	3.674	2.68	22.2	0.0	145.5		
98.00	1.00	0.99	7.568	8.32	213.72	0.730	0.000	2.00	7.288	5.32	44.3	0.0	288.6		
100.00	1.00	0.99	7.611	8.37	211.98	0.730	0.000	2.00	7.208	5.26	44.1	0.0	285.4		
102.00	1.00	1.00	7.654	8.42	210.21	0.730	0.000	2.00	7.129	5.20	43.8	0.0	282.2		
104.00	1.00	1.00	7.696	8.47	208.42	0.730	0.000	2.00	7.049	5.15	43.6	0.0	279.0		
106.00	1.00	1.01	7.738	8.51	206.61	0.730	0.000	2.00	6.969	5.09	43.3	0.0	275.9		
108.00	1.00	1.01	7.779	8.56	204.78	0.730	0.000	2.00	6.890	5.03	43.0	0.0	272.7		
110.00	1.00	1.02	7.819	8.60	202.93	0.730	0.000	2.00	6.810	4.97	42.8	0.0	269.5		
112.00	1.00	1.02	7.859	8.65	201.05	0.730	0.000	2.00	6.731	4.91	42.5	0.0	266.3		
114.00	1.00	1.03	7.899	8.69	199.16	0.730	0.000	2.00	6.651	4.86	42.2	0.0	263.2		
116.00	1.00	1.03	7.938	8.73	197.25	0.730	0.000	2.00	6.571	4.80	41.9	0.0	260.0		
118.00	1.00	1.04	7.976	8.77	195.32	0.730	0.000	2.00	6.492	4.74	41.6	0.0	256.8		
120.00 Appurtenance(s)	1.00	1.04	8.014	8.82	193.37	0.730	0.000	2.00	6.412	4.68	41.3	0.0	253.6		
122.00	1.00	1.05	8.052	8.86	191.40	0.730	0.000	2.00	6.333	4.62	40.9	0.0	250.5		
124.00	1.00	1.05	8.089	8.90	189.41	0.730	0.000	2.00	6.253	4.56	40.6	0.0	247.3		
126.00	1.00	1.06	8.126	8.94	187.41	0.730	0.000	2.00	6.173	4.51	40.3	0.0	244.1		
128.00	1.00	1.06	8.162	8.98	185.39	0.730	0.000	2.00	6.094	4.45	39.9	0.0	240.9		
130.00 Bot - Section 5	1.00	1.07	8.198	9.02	183.36	0.730	0.000	2.00	6.014	4.39	39.6	0.0	237.8		
132.00	1.00	1.07	8.234	9.06	181.31	0.730	0.000	2.00	6.019	4.39	39.8	0.0	425.3		
134.00	1.00	1.08	8.269	9.10	179.24	0.730	0.000	2.00	5.940	4.34	39.4	0.0	419.6		
135.00 Top - Section 4	1.00	1.08	8.287	9.12	178.20	0.730	0.000	1.00	2.940	2.15	19.6	0.0	207.6		
136.00	1.00	1.08	8.304	9.13	179.77	0.730	0.000	1.00	2.920	2.13	19.5	0.0	92.5		
137.00 Appurtenance(s)	1.00	1.08	8.321	9.15	178.73	0.730	0.000	1.00	2.900	2.12	19.4	0.0	91.9		
138.00	1.00	1.09	8.338	9.17	177.68	0.730	0.000	1.00	2.880	2.10	19.3	0.0	91.2		
140.00	1.00	1.09	8.373	9.21	175.57	0.730	0.000	2.00	5.701	4.16	38.3	0.0	180.6		
<b>Totals:</b>								<b>140.00</b>				<b>3,071.3</b>			<b>30,014.2</b>

## Discrete Appurtenance Forces

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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

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



**Iterations** 21

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	137.00	PRK-1245 (kicker kit)	1	8.321	9.153	1.00	1.00	9.50	464.91	0.000	0.000	86.96	0.00	0.00
2	137.00	B5/B13 RRHBR04C	3	8.321	9.153	0.50	0.75	2.79	210.90	0.000	0.000	25.53	0.00	0.00
3	137.00	B2/B66A RRHBR049	3	8.321	9.153	0.50	0.75	2.83	253.50	0.000	0.000	25.94	0.00	0.00
4	137.00	JAHH-65B-R3B	6	8.321	9.153	0.62	0.75	34.03	379.80	0.000	0.000	311.45	0.00	0.00
5	137.00	HRK12 (Handrail Kit)	1	8.321	9.153	1.00	1.00	6.75	261.72	0.000	0.000	61.79	0.00	0.00
6	137.00	Raycap OVP-12	1	8.321	9.153	0.50	0.75	2.04	32.00	0.000	0.000	18.67	0.00	0.00
7	137.00	MT6407-77A	3	8.321	9.153	0.52	0.75	7.39	238.20	0.000	0.000	67.61	0.00	0.00
8	137.00	CBC78T-DS-43	3	8.321	9.153	0.50	0.75	0.56	31.20	0.000	0.000	5.11	0.00	0.00
9	137.00	Antel BXA-70080/6CF	3	8.321	9.153	0.70	0.80	12.33	54.00	0.000	0.000	112.90	0.00	0.00
10	137.00	Low Profile Platform	1	8.321	9.153	1.00	1.00	22.00	1500.00	0.000	0.000	201.37	0.00	0.00
11	137.00	(3) Stabilizer Kit (4' FW)	1	8.321	9.153	1.00	1.00	3.70	140.00	0.000	0.000	33.87	0.00	0.00
12	130.00	LGP17201	6	8.198	9.018	0.50	0.75	5.88	60.00	0.000	0.000	53.02	0.00	0.00
13	130.00	DMP65R-BU8DA	3	8.198	9.018	0.54	0.75	28.95	287.10	0.000	0.000	261.07	0.00	0.00
14	130.00	HRK12 (Handrail Kit)	1	8.198	9.018	1.00	1.00	10.00	261.72	0.000	0.000	90.18	0.00	0.00
15	130.00	Powerwave LGP21901 -	6	8.198	9.018	0.50	0.75	5.04	186.00	0.000	0.000	45.41	0.00	0.00
16	130.00	RRUS 8843 B2 B66A	3	8.198	9.018	0.50	0.75	2.47	216.00	0.000	0.000	22.30	0.00	0.00
17	130.00	RRUS 4449 B5/B12	3	8.198	9.018	0.50	0.75	2.97	213.00	0.000	0.000	26.78	0.00	0.00
18	130.00	HPA-65R-BU8AA	3	8.198	9.018	0.65	0.75	21.73	162.00	0.000	0.000	195.97	0.00	0.00
19	130.00	Low Profile Platform	1	8.198	9.018	1.00	1.00	22.00	1500.00	0.000	0.000	198.40	0.00	0.00
20	130.00	DC6-48-60-18-8F	1	8.198	9.018	0.50	0.75	0.65	32.80	0.000	0.000	5.89	0.00	0.00
21	130.00	Powerwave LGP21401 -	6	8.198	9.018	0.50	0.75	3.89	105.00	0.000	0.000	35.08	0.00	0.00
22	130.00	7770.00	6	8.198	9.018	0.55	0.75	18.07	162.00	0.000	0.000	162.94	0.00	0.00
23	130.00	15'x2.875"mount pipe	3	8.198	9.018	1.00	1.00	12.93	261.00	0.000	0.000	116.61	0.00	0.00
24	120.00	PRK-1245 (kicker kit)	1	8.014	8.816	1.00	1.00	9.50	464.91	0.000	0.000	83.75	0.00	0.00
25	120.00	APX16DWV-16DWVS-E-A	3	8.014	8.816	0.46	0.75	9.22	122.10	0.000	0.000	81.29	0.00	0.00
26	120.00	APXVAA4L24-43-U-NA20	3	8.014	8.816	0.54	0.75	32.79	368.40	0.000	0.000	289.06	0.00	0.00
27	120.00	AIR6449 B41	3	8.014	8.816	0.53	0.75	9.03	309.00	0.000	0.000	79.57	0.00	0.00
28	120.00	LP-RMQP-4096-HK Plat	1	8.014	8.816	1.00	1.00	51.70	2669.00	0.000	0.000	455.78	0.00	0.00
29	120.00	4460 Radio	3	8.014	8.816	0.50	0.75	4.30	312.00	0.000	0.000	37.88	0.00	0.00
30	120.00	4480 Radio	3	8.014	8.816	0.50	0.75	4.30	279.00	0.000	0.000	37.88	0.00	0.00
31	95.00	RDIDC-9181-OF-48	1	7.502	8.252	1.00	1.00	2.01	21.90	0.000	0.000	16.59	0.00	0.00
32	95.00	TA08025-B605	3	7.502	8.252	0.50	0.75	2.95	225.00	0.000	0.000	24.38	0.00	0.00
33	95.00	TA08025-B604	3	7.502	8.252	0.50	0.75	2.95	191.70	0.000	0.000	24.38	0.00	0.00
34	95.00	FFVV-65C-R3-V1	3	7.502	8.252	0.54	0.75	34.21	550.20	0.000	0.000	282.33	0.00	0.00
35	95.00	MC-PK10-DSH	1	7.502	8.252	1.00	1.00	46.50	1669.30	0.000	0.000	383.71	0.00	0.00
<b>Totals:</b>									<b>14,195.36</b>			<b>3,961.43</b>		



## Total Applied Force Summary

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II

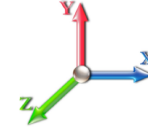


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**Load Case:** 1.0D + 1.0W 60 mph Wind

**Dead Load Factor** 1.00

**Wind Load Factor** 1.00



**Iterations** 21

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		46.95	626.21	0.00	0.00
4.00		46.61	646.72	0.00	0.00
6.00		46.26	667.24	0.00	0.00
8.00		45.92	662.80	0.00	0.00
10.00		45.58	658.35	0.00	0.00
12.00		45.23	653.91	0.00	0.00
14.00		44.89	649.46	0.00	0.00
16.00		44.55	645.02	0.00	0.00
18.00		44.20	640.57	0.00	0.00
20.00		43.86	636.13	0.00	0.00
22.00		43.51	631.68	0.00	0.00
24.00		43.17	627.24	0.00	0.00
25.00		21.46	311.95	0.00	0.00
26.00		21.37	271.90	0.00	0.00
28.00		42.48	540.94	0.00	0.00
30.00		42.57	537.13	0.00	0.00
32.00		42.99	533.32	0.00	0.00
34.00		43.36	529.51	0.00	0.00
36.00		43.68	525.70	0.00	0.00
38.00		43.98	521.89	0.00	0.00
40.00		44.23	518.08	0.00	0.00
41.00		22.13	257.61	0.00	0.00
42.00		22.49	479.88	0.00	0.00
44.00		45.27	954.04	0.00	0.00
46.00		45.44	946.42	0.00	0.00
48.00		45.59	938.80	0.00	0.00
50.00		45.72	505.11	0.00	0.00
52.00		45.82	501.30	0.00	0.00
54.00		45.90	497.49	0.00	0.00
56.00		45.95	493.68	0.00	0.00
58.00		45.99	489.87	0.00	0.00
60.00		46.01	486.06	0.00	0.00
62.00		46.01	482.25	0.00	0.00
64.00		45.99	478.44	0.00	0.00
66.00		45.96	474.63	0.00	0.00
68.00		45.91	470.82	0.00	0.00
70.00		45.85	467.01	0.00	0.00
72.00		45.77	463.20	0.00	0.00
74.00		45.68	459.39	0.00	0.00
76.00		45.57	455.58	0.00	0.00
78.00		45.46	451.77	0.00	0.00
80.00		45.32	447.96	0.00	0.00
82.00		45.18	444.15	0.00	0.00
84.00		45.03	440.34	0.00	0.00
85.00		22.41	218.74	0.00	0.00
86.00		22.68	371.20	0.00	0.00

## Total Applied Force Summary

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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88.00		45.31	737.16	0.00	0.00
90.00		45.12	730.17	0.00	0.00
91.00		22.45	362.47	0.00	0.00
92.00		22.41	185.13	0.00	0.00
94.00		44.73	367.87	0.00	0.00
95.00	(11) attachments	753.64	2840.85	0.00	0.00
96.00		22.20	180.13	0.00	0.00
98.00		44.29	357.88	0.00	0.00
100.00		44.06	354.71	0.00	0.00
102.00		43.81	351.53	0.00	0.00
104.00		43.56	348.36	0.00	0.00
106.00		43.30	345.18	0.00	0.00
108.00		43.04	342.01	0.00	0.00
110.00		42.76	338.83	0.00	0.00
112.00		42.48	335.66	0.00	0.00
114.00		42.19	332.49	0.00	0.00
116.00		41.89	329.31	0.00	0.00
118.00		41.58	326.14	0.00	0.00
120.00	(17) attachments	1106.48	4847.37	0.00	0.00
122.00		40.95	304.79	0.00	0.00
124.00		40.62	301.61	0.00	0.00
126.00		40.28	298.44	0.00	0.00
128.00		39.94	295.26	0.00	0.00
130.00	(42) attachments	1253.23	3738.71	0.00	0.00
132.00		39.80	450.50	0.00	0.00
134.00		39.44	444.79	0.00	0.00
135.00		19.56	220.25	0.00	0.00
136.00		19.47	105.10	0.00	0.00
137.00	(26) attachments	970.57	3670.69	0.00	0.00
138.00		19.29	91.23	0.00	0.00
140.00		38.33	180.55	0.00	0.00
	<b>Totals:</b>	<b>7,032.76</b>	<b>48,826.57</b>	<b>0.00</b>	<b>0.00</b>

## Calculated Forces

**Structure:** CT11560-A-SBA

**Code:** TIA-222-H

5/1/2023

**Site Name:** Sterling 6 CT

**Exposure:** B



**Height:** 140.00 (ft)

**Crest Height:** 0.00

**Base Elev:** 1.000 (ft)

**Site Class:** D - Stiff Soil

**Gh:** 1.1

**Topography:** 1

**Struct Class:** II

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

**Iterations** 21

**Dead Load Factor** 1.00

**Wind Load Factor** 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-48.83	-7.04	0.00	-714.74	0.00	714.74	5803.10	1561.17	8297.91	7657.05	0.00	0.000	0.000	0.102
2.00	-48.20	-7.00	0.00	-700.67	0.00	700.67	5778.21	1549.71	8176.51	7567.86	0.00	-0.009	0.000	0.101
4.00	-47.55	-6.96	0.00	-686.68	0.00	686.68	5753.06	1538.25	8056.00	7478.80	0.01	-0.017	0.000	0.100
6.00	-46.88	-6.92	0.00	-672.77	0.00	672.77	5727.65	1526.78	7936.39	7389.90	0.02	-0.026	0.000	0.099
8.00	-46.22	-6.88	0.00	-658.93	0.00	658.93	5701.98	1515.32	7817.67	7301.16	0.03	-0.035	0.000	0.098
10.00	-45.56	-6.84	0.00	-645.18	0.00	645.18	5676.04	1503.86	7699.85	7212.59	0.05	-0.044	0.000	0.097
12.00	-44.90	-6.80	0.00	-631.50	0.00	631.50	5649.84	1492.40	7582.92	7124.20	0.07	-0.053	0.000	0.097
14.00	-44.25	-6.76	0.00	-617.90	0.00	617.90	5623.38	1480.93	7466.89	7035.98	0.09	-0.061	0.000	0.096
16.00	-43.61	-6.72	0.00	-604.38	0.00	604.38	5596.66	1469.47	7351.75	6947.96	0.12	-0.070	0.000	0.095
18.00	-42.97	-6.68	0.00	-590.93	0.00	590.93	5569.67	1458.01	7237.50	6860.14	0.15	-0.079	0.000	0.094
20.00	-42.33	-6.65	0.00	-577.56	0.00	577.56	5542.43	1446.55	7124.15	6772.52	0.19	-0.088	0.000	0.093
22.00	-41.70	-6.61	0.00	-564.27	0.00	564.27	5514.92	1435.08	7011.70	6685.11	0.22	-0.097	0.000	0.092
24.00	-41.07	-6.57	0.00	-551.06	0.00	551.06	5487.15	1423.62	6900.13	6597.93	0.27	-0.106	0.000	0.091
25.00	-40.76	-6.55	0.00	-544.49	0.00	544.49	5473.16	1417.89	6844.69	6554.42	0.29	-0.110	0.000	0.091
25.00	-40.76	-6.55	0.00	-544.49	0.00	544.49	4407.37	1216.64	5879.49	5289.42	0.29	-0.110	0.000	0.112
26.00	-40.48	-6.53	0.00	-537.94	0.00	537.94	4397.65	1211.73	5832.10	5256.32	0.31	-0.115	0.000	0.112
28.00	-39.94	-6.50	0.00	-524.87	0.00	524.87	4378.03	1201.90	5737.91	5190.16	0.36	-0.125	0.000	0.110
30.00	-39.40	-6.46	0.00	-511.88	0.00	511.88	4358.14	1192.08	5644.49	5124.08	0.42	-0.135	0.000	0.109
32.00	-38.87	-6.42	0.00	-498.96	0.00	498.96	4338.00	1182.25	5551.83	5058.08	0.48	-0.145	0.000	0.108
34.00	-38.34	-6.38	0.00	-486.12	0.00	486.12	4317.58	1172.43	5459.94	4992.17	0.54	-0.156	0.000	0.106
36.00	-37.81	-6.35	0.00	-473.35	0.00	473.35	4296.91	1162.60	5368.81	4926.35	0.61	-0.166	0.000	0.105
38.00	-37.29	-6.31	0.00	-460.65	0.00	460.65	4275.98	1152.78	5278.46	4860.65	0.68	-0.176	0.000	0.104
40.00	-36.77	-6.27	0.00	-448.04	0.00	448.04	4254.78	1142.95	5188.87	4795.05	0.76	-0.187	0.000	0.102
41.00	-36.51	-6.25	0.00	-441.77	0.00	441.77	4244.08	1138.04	5144.36	4762.30	0.80	-0.192	0.000	0.101
42.00	-36.03	-6.23	0.00	-435.53	0.00	435.53	4233.32	1133.13	5100.04	4729.58	0.84	-0.197	0.000	0.101
44.00	-35.08	-6.19	0.00	-423.07	0.00	423.07	4211.60	1123.30	5011.98	4664.23	0.92	-0.207	0.000	0.099
46.00	-34.13	-6.14	0.00	-410.70	0.00	410.70	4189.62	1113.48	4924.69	4599.03	1.01	-0.217	0.000	0.097
48.00	-33.19	-6.10	0.00	-398.42	0.00	398.42	4202.72	1119.32	4976.50	4637.78	1.10	-0.227	0.000	0.094
50.00	-32.68	-6.06	0.00	-386.22	0.00	386.22	4180.63	1109.50	4889.52	4572.63	1.20	-0.237	0.000	0.092
52.00	-32.18	-6.01	0.00	-374.11	0.00	374.11	4158.28	1099.67	4803.31	4507.62	1.30	-0.247	0.000	0.091
54.00	-31.68	-5.97	0.00	-362.08	0.00	362.08	4135.67	1089.85	4717.86	4442.77	1.41	-0.256	0.000	0.089
56.00	-31.19	-5.93	0.00	-350.14	0.00	350.14	4112.79	1080.02	4633.18	4378.08	1.52	-0.266	0.000	0.088
58.00	-30.70	-5.88	0.00	-338.28	0.00	338.28	4089.65	1070.20	4549.27	4313.56	1.63	-0.275	0.000	0.086
60.00	-30.21	-5.84	0.00	-326.51	0.00	326.51	4066.25	1060.37	4466.12	4249.22	1.75	-0.285	0.000	0.084
62.00	-29.73	-5.80	0.00	-314.83	0.00	314.83	4042.59	1050.55	4383.75	4185.07	1.87	-0.294	0.000	0.083
64.00	-29.25	-5.75	0.00	-303.24	0.00	303.24	4018.67	1040.72	4302.13	4121.10	1.99	-0.303	0.000	0.081
66.00	-28.77	-5.71	0.00	-291.73	0.00	291.73	3994.48	1030.90	4221.29	4057.34	2.12	-0.312	0.000	0.079
68.00	-28.30	-5.67	0.00	-280.31	0.00	280.31	3970.03	1021.07	4141.21	3993.79	2.26	-0.321	0.000	0.077
70.00	-27.84	-5.62	0.00	-268.98	0.00	268.98	3945.32	1011.25	4061.90	3930.45	2.39	-0.330	0.000	0.076
72.00	-27.37	-5.58	0.00	-257.73	0.00	257.73	3920.35	1001.42	3983.36	3867.33	2.53	-0.339	0.000	0.074
74.00	-26.91	-5.53	0.00	-246.58	0.00	246.58	3895.11	991.60	3905.58	3804.45	2.68	-0.348	0.000	0.072
76.00	-26.46	-5.49	0.00	-235.51	0.00	235.51	3869.62	981.77	3828.57	3741.80	2.82	-0.356	0.000	0.070
78.00	-26.00	-5.44	0.00	-224.54	0.00	224.54	3843.86	971.95	3752.32	3679.40	2.98	-0.364	0.000	0.068
80.00	-25.55	-5.40	0.00	-213.65	0.00	213.65	3817.84	962.12	3676.85	3617.26	3.13	-0.373	0.000	0.066
82.00	-25.11	-5.35	0.00	-202.85	0.00	202.85	3791.55	952.30	3602.14	3555.38	3.29	-0.381	0.000	0.064
84.00	-24.67	-5.31	0.00	-192.14	0.00	192.14	3765.01	942.47	3528.19	3493.76	3.45	-0.389	0.000	0.062
85.00	-24.45	-5.29	0.00	-186.83	0.00	186.83	3751.64	937.56	3491.51	3463.06	3.53	-0.393	0.000	0.060
86.00	-24.08	-5.26	0.00	-181.54	0.00	181.54	3738.20	932.65	3455.02	3432.43	3.61	-0.396	0.000	0.059

## Calculated Forces

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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88.00	-23.34	-5.22	0.00	-171.01	0.00	171.01	3711.13	922.82	3382.61	3371.38	3.78	-0.404	0.000	0.057
90.00	-22.61	-5.17	0.00	-160.58	0.00	160.58	3683.80	913.00	3310.96	3310.62	3.95	-0.411	0.000	0.055
91.00	-22.25	-5.15	0.00	-155.41	0.00	155.41	2899.19	768.71	2816.54	2636.38	4.04	-0.415	0.000	0.067
92.00	-22.06	-5.12	0.00	-150.27	0.00	150.27	2889.87	764.61	2786.62	2613.82	4.13	-0.418	0.000	0.065
94.00	-21.69	-5.08	0.00	-140.02	0.00	140.02	2871.03	756.42	2727.26	2568.78	4.30	-0.426	0.000	0.062
95.00	-18.86	-4.30	0.00	-134.94	0.00	134.94	2861.52	752.33	2697.82	2546.31	4.39	-0.430	0.000	0.060
96.00	-18.68	-4.28	0.00	-130.64	0.00	130.64	2851.93	748.24	2668.54	2523.87	4.48	-0.434	0.000	0.058
98.00	-18.32	-4.24	0.00	-122.07	0.00	122.07	2832.57	740.05	2610.46	2479.11	4.67	-0.441	0.000	0.056
100.00	-17.97	-4.19	0.00	-113.60	0.00	113.60	2812.95	731.86	2553.02	2434.50	4.85	-0.448	0.000	0.053
102.00	-17.61	-4.15	0.00	-105.21	0.00	105.21	2793.07	723.67	2496.22	2390.05	5.04	-0.454	0.000	0.050
104.00	-17.27	-4.10	0.00	-96.91	0.00	96.91	2772.92	715.49	2440.06	2345.77	5.24	-0.461	0.000	0.048
106.00	-16.92	-4.06	0.00	-88.70	0.00	88.70	2752.51	707.30	2384.53	2301.65	5.43	-0.467	0.000	0.045
108.00	-16.58	-4.02	0.00	-80.58	0.00	80.58	2731.84	699.11	2329.65	2257.73	5.63	-0.473	0.000	0.042
110.00	-16.24	-3.97	0.00	-72.55	0.00	72.55	2710.91	690.92	2275.40	2213.98	5.83	-0.478	0.000	0.039
112.00	-15.90	-3.93	0.00	-64.60	0.00	64.60	2689.71	682.74	2221.79	2170.44	6.03	-0.483	0.000	0.036
114.00	-15.57	-3.88	0.00	-56.75	0.00	56.75	2668.26	674.55	2168.82	2127.10	6.23	-0.488	0.000	0.033
116.00	-15.24	-3.84	0.00	-48.98	0.00	48.98	2646.54	666.36	2116.50	2083.97	6.44	-0.492	0.000	0.029
118.00	-14.92	-3.80	0.00	-41.30	0.00	41.30	2624.55	658.18	2064.81	2041.07	6.64	-0.495	0.000	0.026
120.00	-10.08	-2.65	0.00	-33.71	0.00	33.71	2602.31	649.99	2013.75	1998.39	6.85	-0.498	0.000	0.021
122.00	-9.77	-2.61	0.00	-28.41	0.00	28.41	2579.81	641.80	1963.34	1955.94	7.06	-0.501	0.000	0.018
124.00	-9.47	-2.56	0.00	-23.20	0.00	23.20	2557.04	633.61	1913.57	1913.74	7.27	-0.504	0.000	0.016
126.00	-9.18	-2.52	0.00	-18.07	0.00	18.07	2534.01	625.43	1864.44	1871.79	7.48	-0.505	0.000	0.013
128.00	-8.88	-2.48	0.00	-13.03	0.00	13.03	2510.72	617.24	1815.94	1830.10	7.69	-0.507	0.000	0.011
130.00	-5.15	-1.19	0.00	-8.07	0.00	8.07	2487.16	609.05	1768.08	1788.67	7.91	-0.508	0.000	0.007
132.00	-4.70	-1.15	0.00	-5.69	0.00	5.69	2463.34	600.86	1720.87	1747.52	8.12	-0.509	0.000	0.005
134.00	-4.26	-1.10	0.00	-3.39	0.00	3.39	2439.27	592.68	1674.29	1706.65	8.33	-0.509	0.000	0.004
135.00	-4.04	-1.08	0.00	-2.29	0.00	2.29	1824.83	478.70	1365.31	1291.47	8.44	-0.509	0.000	0.004
136.00	-3.93	-1.06	0.00	-1.20	0.00	1.20	1817.10	475.42	1346.69	1277.14	8.55	-0.510	0.000	0.003
137.00	-0.27	-0.06	0.00	-0.14	0.00	0.14	1809.31	472.15	1328.20	1262.84	8.65	-0.510	0.000	0.000
138.00	-0.18	-0.04	0.00	-0.08	0.00	0.08	1801.45	468.87	1309.84	1248.56	8.76	-0.510	0.000	0.000
140.00	0.00	-0.04	0.00	0.00	0.00	0.00	1785.54	462.32	1273.50	1220.12	8.97	-0.510	0.000	0.000

## Final Analysis Summary

<b>Structure:</b> CT11560-A-SBA	<b>Code:</b> TIA-222-H	5/1/2023
<b>Site Name:</b> Sterling 6 CT	<b>Exposure:</b> B	
<b>Height:</b> 140.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 1.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 1.1	<b>Topography:</b> 1	<b>Struct Class:</b> II



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### Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.0W 125 mph Wind	34.1	0.00	58.58	0.00	0.00	3482.10
0.9D + 1.0W 125 mph Wind	34.1	0.00	43.93	0.00	0.00	3458.73
1.2D + 1.0Di + 1.0Wi 50 mph Wind	8.3	0.00	77.35	0.00	0.00	824.62
1.2D + 1.0Ev + 1.0Eh	1.2	0.00	60.61	0.00	0.00	148.19
0.9D + 1.0Ev + 1.0Eh	1.2	0.00	45.90	0.00	0.00	147.43
1.0D + 1.0W 60 mph Wind	7.0	0.00	48.83	0.00	0.00	714.74

### 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 + 1.0W 125 mph Wind	-48.62	-31.85	0.00	-2655.0	0.00	-2655.0	5473.16	1417.8	6844.69	6554.42	25.00	0.514
0.9D + 1.0W 125 mph Wind	-36.39	-31.73	0.00	-2633.2	0.00	-2633.2	5473.16	1417.8	6844.69	6554.42	25.00	0.507
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-65.90	-7.66	0.00	-625.05	0.00	-625.05	5473.16	1417.8	6844.69	6554.42	25.00	0.133
1.2D + 1.0Ev + 1.0Eh	-50.61	-1.20	0.00	-118.29	0.00	-118.29	5473.16	1417.8	6844.69	6554.42	25.00	0.034
0.9D + 1.0Ev + 1.0Eh	-38.33	-1.20	0.00	-117.60	0.00	-117.60	5473.16	1417.8	6844.69	6554.42	25.00	0.031
1.0D + 1.0W 60 mph Wind	-40.76	-6.55	0.00	-544.49	0.00	-544.49	5473.16	1417.8	6844.69	6554.42	25.00	0.112



# Monopole Mat Foundation Design

Date

5/1/2023

<b>Customer Name:</b>	Dish Wireless	<b>TIA Standard:</b>	TIA-222-H
<b>Site Name:</b>		<b>Structure Height (Ft.):</b>	140
<b>Site Number:</b>	CT11560-A-SBA	<b>Engineer Name:</b>	J. Tibbetts
<b>Engr. Number:</b>	140520	<b>Engineer Login ID:</b>	

**Foundation Info Obtained from:**

Drawings/Calculations
Monopole
Analysis

**Structure Type:**

**Analysis or Design?**

**Base Reactions (Factored):**

Axial Load (Kips):	58.6	Shear Force (Kips):	34.1
Uplift Force (Kips):	0.0	Moment (Kips-ft):	3482.1

Allowable overstress %: 5.0%

**Foundation Geometries:**

Diameter of Pier (ft.):	7.0	Mods required -Yes/No ?:	No
Pier Height A. G. (ft.):	1.00	Depth of Base BG (ft.):	5.5
Length of Pad (ft.):	31	Thickness of Pad (ft.):	2.50
		Width of Pad (ft.):	31

Final Length of pad (ft)	31.0	Final width of pad (ft):	31.0
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**Material Properties and Rebar Info:**

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	9	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	60	Tie Spacing (in):	12.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf

Rebar at the bottom of the concrete pad:

Qty. of Rebar in Pad (L):	30	Qty. of Rebar in Pad (W):	30
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Rebar at the top of the concrete pad:

Qty. of Rebar in Pad (L):	30	Qty. of Rebar in Pad (W):	30
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Apply 1.35 factor for e/w Per G: 1.35

**Soil Design Parameters:**

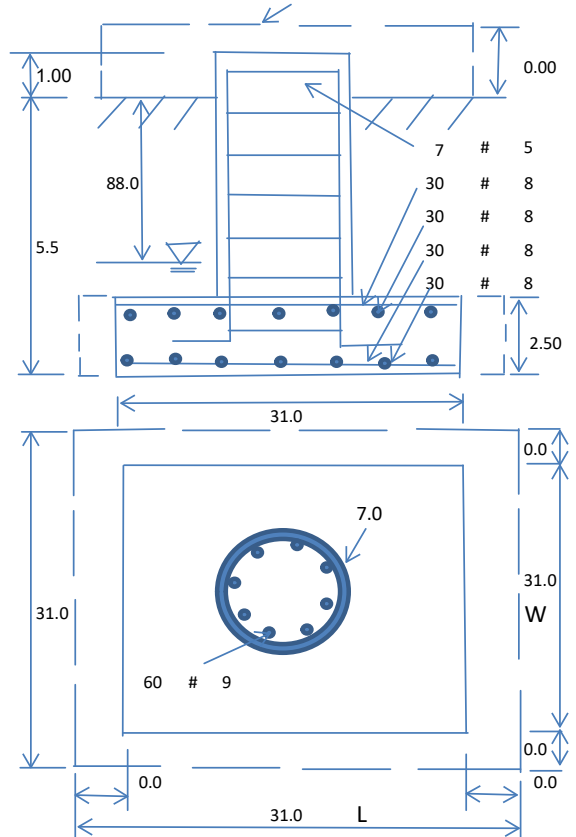
Soil Unit Weight (pcf):	120.0	Soil Buoyant Weight:	50.0	Pcf	Angle from Top of Pad:	30
Water Table B.G.S. (ft):	88.0	Unit Weight of Water:	62.4	pcf	Angle from Bottm of Pad:	25
Ultimate Bearing Pressure (psf):	44891	Ultimate Skin Friction:		Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Reduction factor on the maximum soil bearing pressure:	1.00
Consider soil hor. resist. for OTM.:	Yes					

**Foundation Analysis and Design:**

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	2767.55	Total Dry Soil Weight (Kips):	332.11
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	332.11	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	2556.44	Total Dry Concrete Weight (Kips):	383.47
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	383.47	Total Vertical Load on Base (Kips):	774.15

**Check Soil Capacities:**

Calculated Maxium Net Soil Pressure under the base (psf):	1406	< Allowable Factored Soil Bearing (psf):	33668	0.04	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	10890.2	> Design Factored Momont (kips-ft):	3578	0.33	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	3.04				OK!



**Check the capacities of Reinforcing Concrete:**

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

Load/  
Capacity  
Ratio

**(1) Concrete Pier:**

Vertical Steel Rebar Area (sq. in./each):	1.00	Tie / Stirrup Area (sq. in./each):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	9417.5	> Design Factored Moment (Mu, Kips-F	3618.5	0.38	OK!
Calculated Shear Capacity (Kips):	663.6	> Design Factored Shear (Kips):	34.1	0.05	OK!
Calculated Tension Capacity (Tn, Kips):	3240.0	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	7268.8	> Design Factored Axial Load (Pu Kips):	58.6	0.01	OK!
Moment & Axial Strength Combination:	0.38	OK! Check Tie Spacing (Design/Required):	1		OK!
Pier Reinforcement Ratio:	0.011	Reinforcement Ratio is satisfied per ACI			

**(2).Concrete Pad:**

One-Way Design Shear Capacity (L-Direction, Kips):	809.9	> One-Way Factored Shear (L-D. Kips):	250.7	0.31	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	809.9	> One-Way Factored Shear (W-D., Kips)	250.7	0.31	OK!
One-Way Design Shear Capacity (Corner-Corner, Kips):	847.1	> One-Way Factored Shear (C-C, Kips):	235.7	0.28	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct. ):	0.0024	OK! Lower Steel Pad Reinf. Ratio (W-Direc	0.0024		
Lower Steel Pad Moment Capacity (L-Direction, Kips-ft):	2746.3	> Moment at Bottom ( L-Dir. K-Ft):	1682.4	0.61	OK!
Lower Steel Pad Moment Capacity (W-Direction, Kips-ft):	2746.3	> Moment at Bottom ( W-Dir. K-Ft):	1682.4	0.61	OK!
Lower Steel Pad Moment Capacity (Corner-Corner, K-ft):	3862.4	> Moment at Bottom ( C-C Dir. K-Ft):	2379.3	0.62	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct. ):	0.0024	OK! Upper Steel Reinf. Ratio (W-Dir. ):	0.0024		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	2746.3	> Moment at the top ( L-Dir K-Ft):	646.7	0.24	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	2746.3	> Moment at the top ( W-Dir K-Ft):	646.7	0.24	OK!
Upper Steel Pad Moment Capacity (Corner-Corner, K-ft):	3862.4	> Moment at the top ( C-C Dir. K-Ft):	603.7	0.16	OK!

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

Moment transferred by punching shear:	1392.8	k-ft.	Max. factored shear stress $v_{u,CD}$ :	2.8	Psi
Max. factored shear stress $v_{u,AB}$ :	13.1	Psi	Factored shear Strength $\phi v_n$ :	164.3	Psi
Max. factored shear stress $v_u$ :	13.1	Psi	Check Usage of Punching Shear Capacity:	0.08	OK!

**(4).Check Bending Capacity of the Pad Within the Effective Slab Width:**

Overturning moment to be transferred by flexure:	1044.6	k-ft.	Effective Width for resisting OT moment:	14.5	ft.
Calculated number of Rebar in Effective width:	15		Actual number of Rebar in Effective width:	15	
Steel Pad Moment Capacity ( L-Direc. Kips-ft):	1370.4	k-ft.	Check Usage of the Flexure Capacity:	0.76	OK!



# EXHIBIT 8

## Mount Analysis



January 23, 2023

Sherri Knapik  
SBA Network Services, LLC.  
134 Flanders Road, Suite 125  
Westborough, MA 01581  
(508) 251-0720 x 3805

MTS Engineering, P.L.L.C.  
1717 S. Boulder, Suite 300  
Tulsa, OK 74119  
(918) 587- 4630  
btwo@btgrp.com

**Subject:** **Appurtenance Mount Analysis Report**

**Carrier Designation:** **Dish Co-Locate**  
**Site Number:** BOBOS00053A  
**Site Name:** SBA - Exeter Drive

**SBA Network Services Designation:** **Site Number:** CT11560-A  
**Site Name:** Sterling 6  
**Application Number:** 177052, v0

**Engineering Firm Designation:** **B+T Group Project Number:** 149457.003.01.0002

**Site Data:** **5 Exeter Drive (a/k/a 7 Exeter Drive), Sterling, CT, 06377, Windham County**  
**Latitude 41.71404°, Longitude -71.82273°**  
**Monopole**  
**10.5 ft. Platform Mount**

Dear Ms. Knapik,

B+T Group is pleased to submit this “**Appurtenance Mount Analysis Report**” to determine the structural integrity of the antenna mount on the above-mentioned structure.

The purpose of the analysis is to determine acceptability of the mount’s stress level. Based on our analysis we have determined the stress level for the mount under the following load case to be:

Proposed Equipment

Note: See Table 1 for the final loading configuration

**Sufficient Capacity**  
**(Passing at 48.2%)**

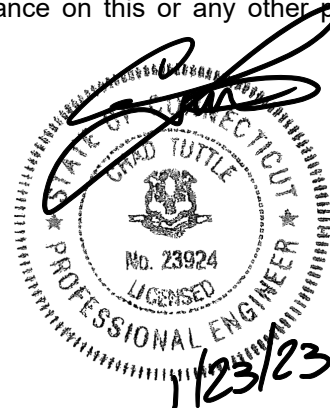
This analysis utilizes an ultimate 3-second gust wind speed of 124 mph as required by the 2022 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

All the equipment proposed in this report shall be installed in accordance with the drawings for the determined available structural capacity to be effective.

We at B+T Group appreciate the opportunity of providing our continuing professional services to you and SBA Network Services, LLC. If you have any questions or need further assistance on this or any other projects, please give us a call.

Mount structural analysis prepared by: Erika Ruiz

Respectfully submitted by: B&T Engineering, Inc.  
COA: BER:2386985 Expires: 3/31/2023



Chad E. Tuttle, P.E.

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## 1) INTRODUCTION

The appurtenance mount consists of platform mount designed by Commscope (Part #MC-PK10) at 95 ft., attached to monopole at 24 Exeter Drive, Sterling, CT, 06377, Windham County. The proposed antenna loading information was obtained from SBA Network Services, LLC. All information provided to B+T Group was assumed accurate and complete.

## 2) ANALYSIS CRITERIA

The structural analysis was performed for this mount in accordance with the ANSI/TIA-222-H-2017 Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures using a 3-second gust wind speed of 124 mph with no ice and 50 mph with 1 inch escalated ice thickness. Exposure Category B & Topographic Category 1 and Risk Category II were used in this analysis. In addition, the platform mount has been analyzed for various live loading conditions consisting of a 250-lb man live load applied individually at the midpoint and cantilevered ends of horizontal members as well as a 500-pound man live load applied individually at mount pipe locations using a 3-second gust of 30 mph. The mount was analyzed under 30° increments in the wind direction. The analyzed loading is detailed in Table 1.

**Table 1 – Proposed Equipment Information**

Loading	RAD Center Elev. (ft.)	Position	Qty.	Description	Note
Proposed	95	1	3	Commscope FFVV-65B-R2	1
			3	FUJITSU TA08025-B605	2
			3	FUJITSU TA08025-B604	
		-	1	Raycap RDIDC-9181-PF-48	3

Note:

- (1) Proposed Antenna to be installed on the Proposed Mount Pipe.
- (2) Proposed Equipment to be installed directly behind the Antenna.
- (3) Proposed Equipment to be installed on the mount.

**Table 2 – Documents Provided**

Documents	Remarks	Reference	Source
RFDS	Proposed Loading	Date: 10/21/2021	SBA Network Services, LLC.
Collo App		Date: 10/21/2021	

## 3) ANALYSIS PROCEDURE

### 3.1) Analysis Method

RISA-3D (Version 20.0.2), a commercially available analysis software package, was used to create a three-dimensional model of the mount and calculate member stresses and deflections for various loading cases. Selected output from the analysis is included in Appendix A.

Manufacturers drawing were used to create the model.

### 3.2) Assumptions

1. The mount was built in accordance with the manufacturer's specifications.
2. The mount has been maintained in accordance with the manufacturer's specifications and is free of damage.
3. The configuration of antennas and other appurtenances are as specified in Table 1.
4. All mount components have been assumed to be in sufficient condition to carry their full design capacity for the analysis.
5. Mount area and weights are determined from field measurements, standard material properties, and/or manufacturer product data.

6. Serviceability with respect to antenna twist, tilt, roll or lateral translation is not checked and is left to the carrier or tower owner to ensure conformance.
7. All prior structural modifications, if any are assumed to be correctly installed and fully effective.
8. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
9. The following material grades were assumed (Unless Noted Otherwise):
  - a) Connection Bolts : ASTM A325
  - b) Steel Pipe : ASTM A53 (GR. 35)
  - c) HSS (Round) : ASTM 500 (GR. B-42)
  - d) HSS (Rectangular) : ASTM 500 (GR. B-46)
  - e) Channel : ASTM A36 (GR. 36)
  - f) Steel Solid Rod : ASTM A36 (GR. 36)
  - g) Steel Plate : ASTM A36 (GR. 36)
  - h) Steel Angle : ASTM A36 (GR. 36)
  - i) UNISTRUT : ASTM A570 (GR. 33)

This analysis may be affected if any assumptions are not valid or have been made in error. B+T Group should be notified to determine the effect on the structural integrity of the antenna mounting system.

#### 4) ANALYSIS RESULTS

**Table 3 – Mount Component Stresses vs. Capacity**

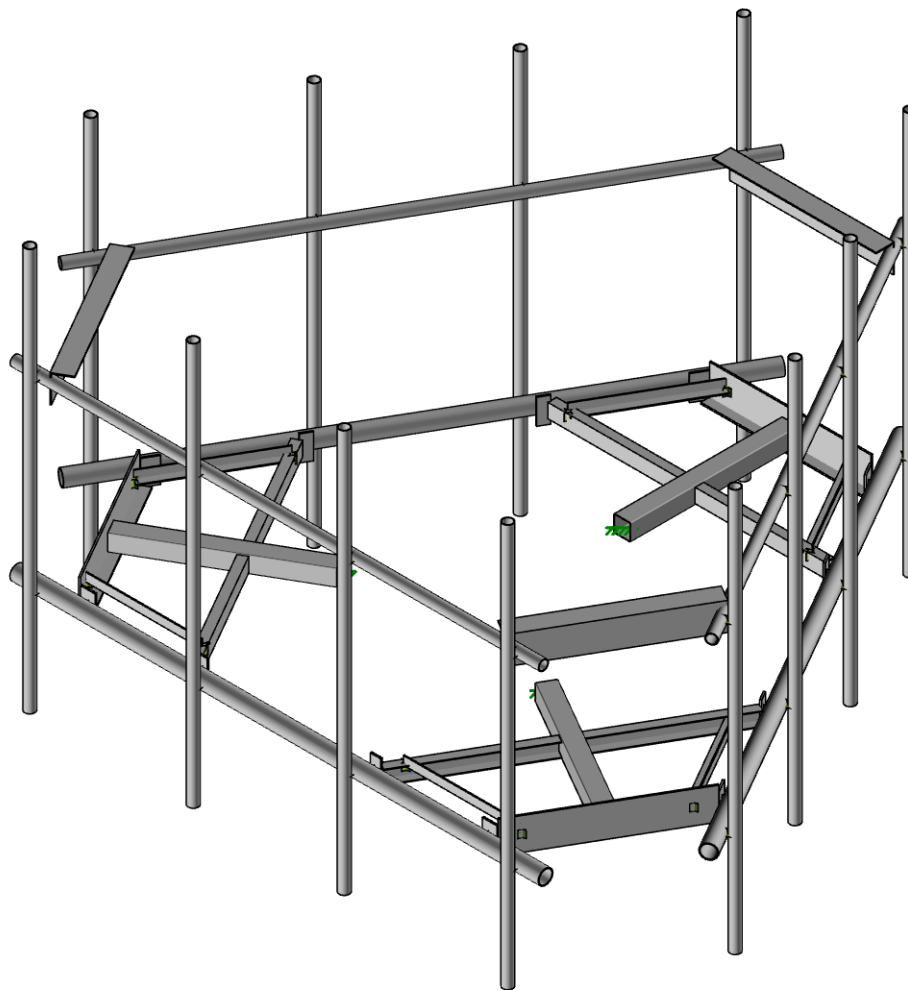
Notes	Component	Elevation (ft.)	% Capacity	Pass / Fail
-	Main Horizontals	95	10.3	Pass
-	Support Rails	95	31.1	Pass
-	Support Tubes	95	48.2	Pass
-	Support Channels	95	31.7	Pass
-	Grating Support Angles	95	28.0	Pass
-	Support Angles	95	35.4	Pass
-	Mount Pipes	95	33.4	Pass
-	Connection Plates	95	19.4	Pass
-	Connection Angles	95	26.0	Pass

#### 5) RECOMMENDATIONS

The Commscope platform mount, Part #MC-PK10 has sufficient capacity to carry the proposed loads and is in compliance with the ANSI/TIA-222-H standard for the proposed loading. (Refer to the RISA output for the specific members).

# APPENDIX A

(RISA-3D Output)



Envelope Only Solution

B+T Group

AK

149457.003.01

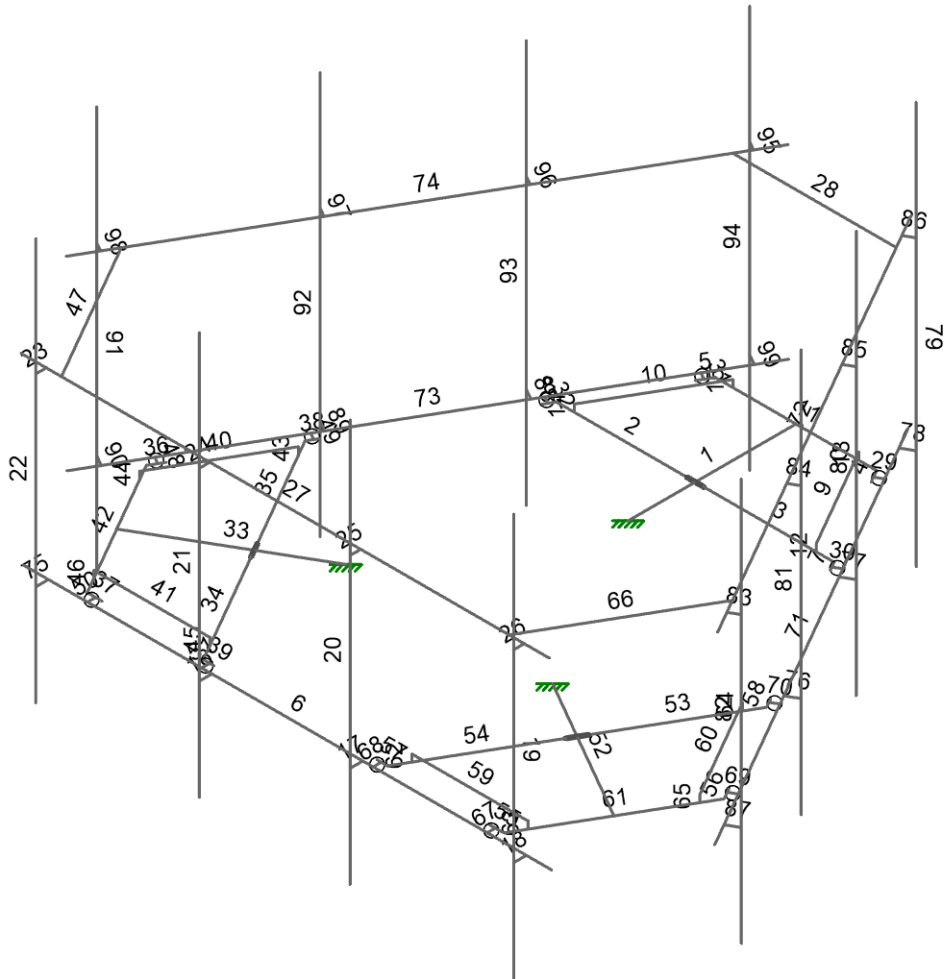
CT11560-A - Sterling 6

AK1

Jul 06, 2022

149457\_003\_01\_Sterling 6\_CT.R3D





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AK

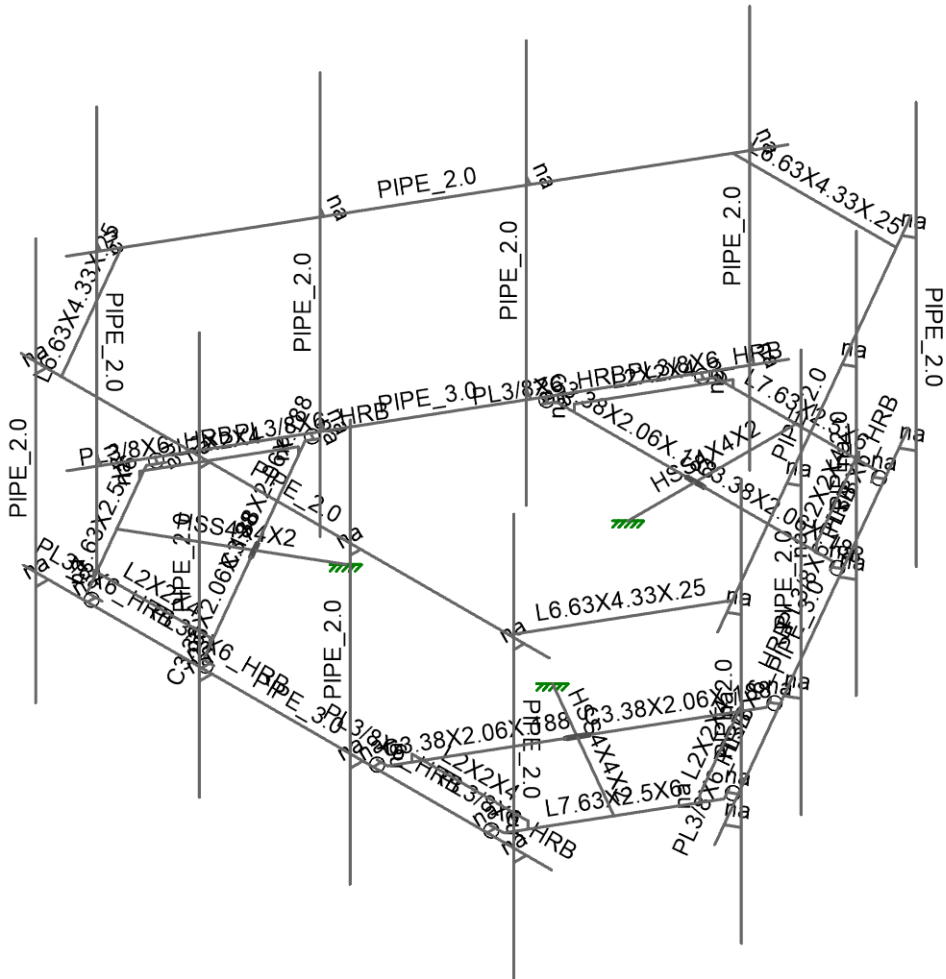
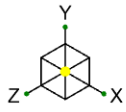
149457.003.01

CT11560-A - Sterling 6

AK2

Jul 06, 2022

149457\_003\_01\_Sterling 6\_CT.R3D



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CT11560-A - Sterling 6

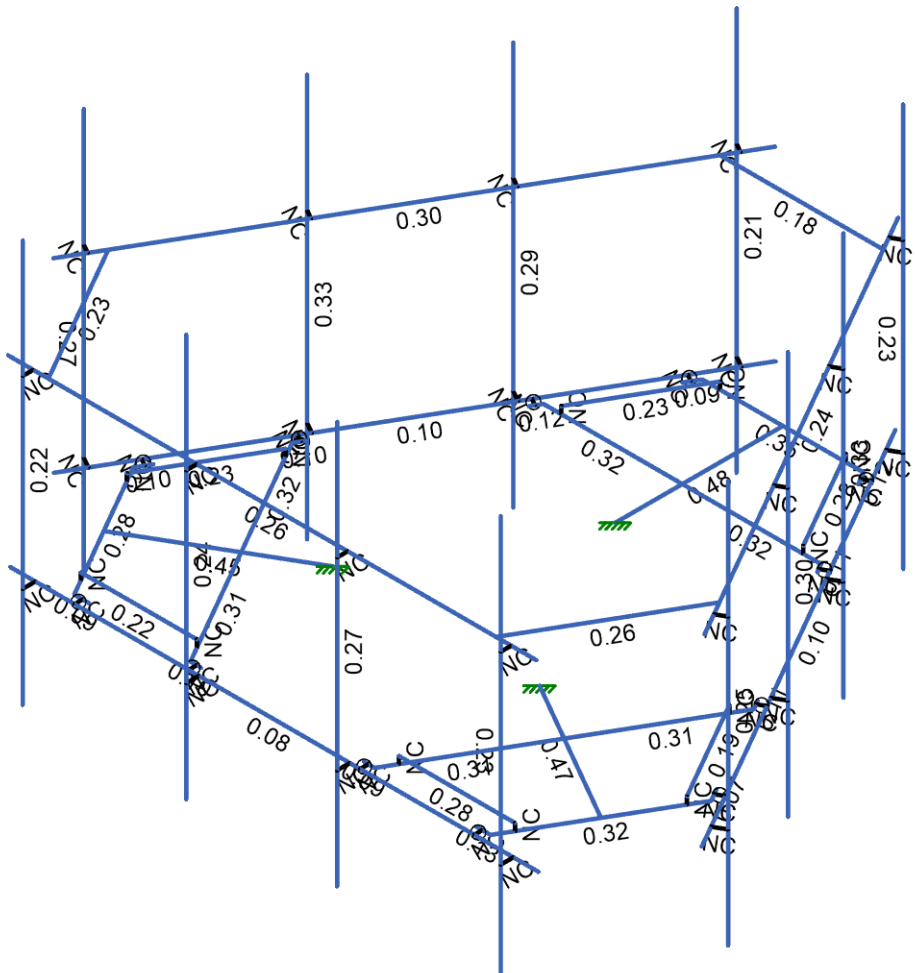
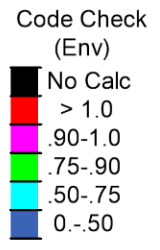
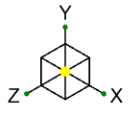
AK3

AK

Jul 06, 2022

149457.003.01

149457\_003\_01\_Sterling 6\_CT.R3D

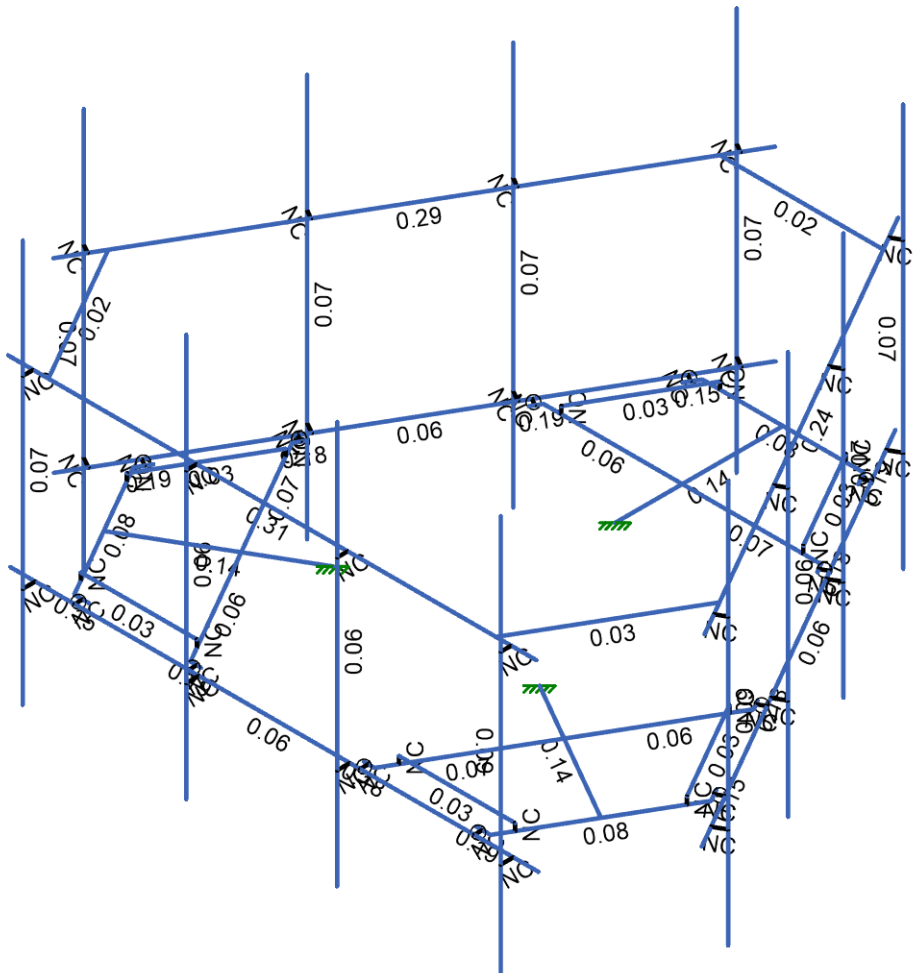
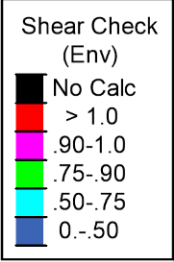


Member Code Checks Displayed (Enveloped)  
Envelope Only Solution

B+T Group  
AK  
149457.003.01

CT11560-A - Sterling 6

AK4  
Jul 06, 2022  
149457\_003\_01\_Sterling 6\_CT.R3D



Member Shear Checks Displayed (Enveloped)  
Envelope Only Solution

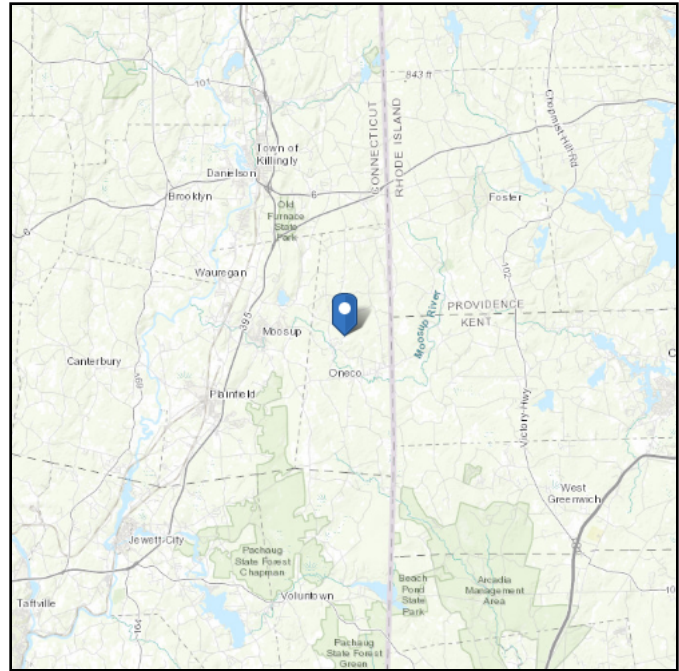
B+T Group	CT11560-A - Sterling 6	AK5
AK		Jul 06, 2022
149457.003.01		149457_003_01_Sterling 6_CT.R3D

# ASCE 7 Hazards Report

**Address:**  
No Address at This Location

**Standard:** ASCE/SEI 7-16  
**Risk Category:** II  
**Soil Class:** D - Default (see Section 11.4.3)

**Elevation:** 546.93 ft (NAVD 88)  
**Latitude:** 41.714047  
**Longitude:** -71.822735



## Wind

### Results:

Wind Speed:	124 Vmph
10-year MRI	75 Vmph
25-year MRI	85 Vmph
50-year MRI	96 Vmph
100-year MRI	101 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2  
Date Accessed: Sat Nov 20 2021

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

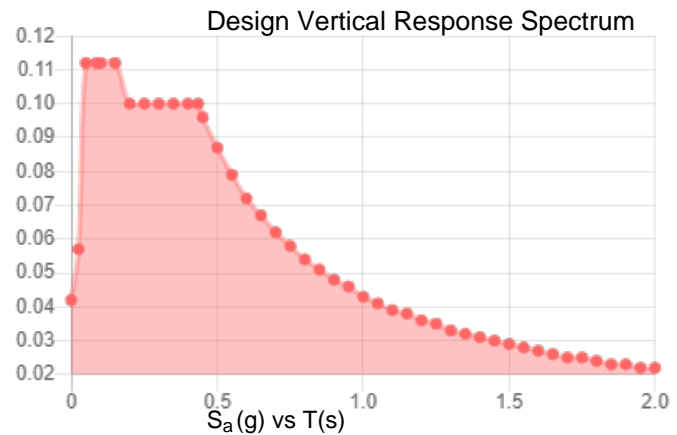
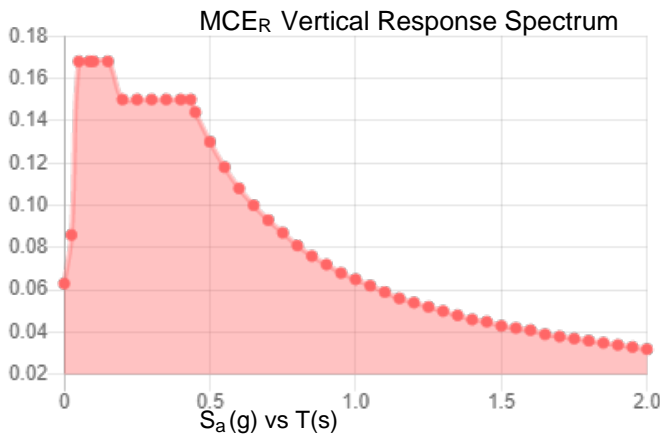
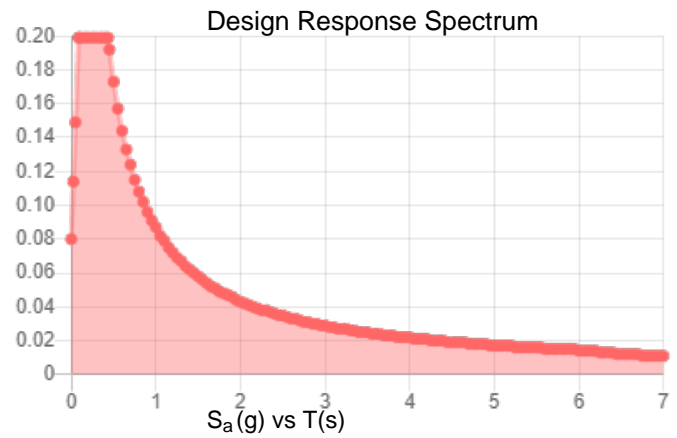
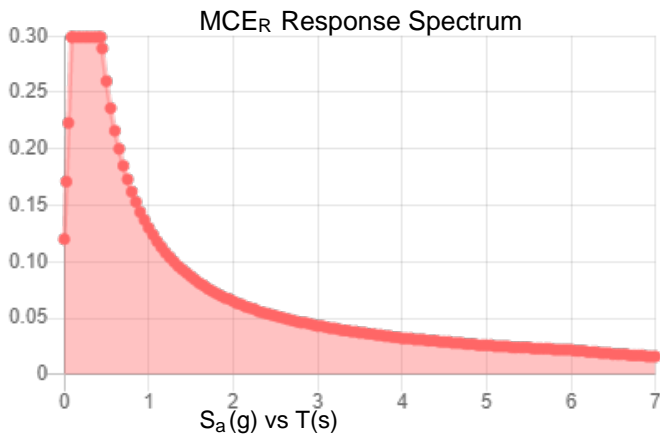
Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

**Site Soil Class:** D - Default (see Section 11.4.3)

**Results:**

$S_s$ :	0.187	$S_{D1}$ :	0.087
$S_1$ :	0.054	$T_L$ :	6
$F_a$ :	1.6	PGA :	0.102
$F_v$ :	2.4	PGA <sub>M</sub> :	0.162
$S_{MS}$ :	0.299	$F_{PGA}$ :	1.597
$S_{M1}$ :	0.13	$I_e$ :	1
$S_{DS}$ :	0.199	$C_v$ :	0.7

**Seismic Design Category** B



**Data Accessed:** Sat Nov 20 2021  
**Date Source:** USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

## Ice

---

**Results:**

Ice Thickness: 1.00 in.

Concurrent Temperature: 15 F

Gust Speed: 50 mph

**Data Source:** Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

**Date Accessed:** Sat Nov 20 2021

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

---

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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PROJECT	<b>149457.003.01 - Sterling 6, CT</b>	<b>KSC</b>
SUBJECT	<b>Platform Mount Analysis</b>	
DATE	<b>07/08/22</b>	



**B+T Group**  
1717 S. Boulder, Suite 300  
Tulsa, OK 74119  
(918) 587-4630

Tower Type	:	Monopole	
Ground Elevation	$z_s$ :	547 ft	[ASCE7 Hazard Tool]
Tower Height	:	140.00 ft	
Mount Elevation	:	95.00 ft	
Antenna Elevation	:	95.00 ft	
Crest Height	:	0 ft	
Risk Category	:	II	[Table 2-1 ]
Exposure Category	:	B	[Sec. 2.6.5.1.2]
Topography Category	:	1.00	[Sec. 2.6.6.2]
Wind Velocity	$V$ :	125 mph	[ASCE7 Hazard Tool]
Ice wind Velocity	$V_i$ :	50 mph	[ASCE7 Hazard Tool]
Service Velocity	$V_s$ :	30 mph	[ASCE7 Hazard Tool]
Base Ice thickness	$t_i$ :	1.00 in	[ASCE7 Hazard Tool]
Seismic Design Cat.	:	B	[ASCE7 Hazard Tool]
	$S_S$ :	0.19	
	$S_1$ :	0.05	
	$S_{DS}$ :	0.20	
	$S_{D1}$ :	0.09	
Gust Factor	$G_h$ :	1.00	[Sec. 16.6]
Pressure Coefficient	$K_z$ :	0.97	[Sec. 2.6.5.2]
Topography Facto	$K_{zt}$ :	1.00	[Sec. 2.6.6]
Elevation Factor	$K_e$ :	0.98	[Sec. 2.6.8]
Directionality Factor	$K_d$ :	0.95	[Sec. 16.6]
Shielding Factor	$K_a$ :	0.90	[Sec. 16.6]
Design Ice Thickness	$t_{iz}$ :	1.11 in	[Sec. 2.6.10]
Importance Factor	$I_e$ :	1	[Table 2-3 ]
Response Coefficient	$C_s$ :	0.100	[Sec. 2.7.7.1]
Amplification	$A_s$ :	1.714286	[Sec. 16.7]
	$q_z$ :	36.28 psf	

PROJECT	<b>149457.003.01 - Sterling 6, CT</b>	<b>KSC</b>
SUBJECT	<b>Platform Mount Analysis</b>	
DATE	<b>07/08/22</b>	



**B+T Group**  
 1717 S. Boulder, Suite 300  
 Tulsa, OK 74119  
 (918) 587-4630

**B+T GRP**

Manufacturer	Model	Qty	Height (in <sup>2</sup> )	Width (in <sup>2</sup> )	Depth (in <sup>2</sup> )	Weight (lbs)	C <sub>a</sub> A <sub>a</sub> (N) (ft <sup>2</sup> )	C <sub>a</sub> A <sub>a</sub> (T) (ft <sup>2</sup> )	C <sub>a</sub> A <sub>a</sub> (N) Ice (ft <sup>2</sup> )	C <sub>a</sub> A <sub>a</sub> (T) Ice (ft <sup>2</sup> )	F <sub>A</sub> (N) (k)	F <sub>A</sub> (T) (k)	F <sub>A</sub> (N) Ice (k)	F <sub>A</sub> (T) Ice (k)
COMMSCOPE	FFV-65B-R2	0.5	72.0	19.6	7.8	70.8	3.81	1.51	4.32	1.95	0.14	0.05	0.03	0.01
COMMSCOPE	FFV-65B-R2	0.5					3.81	1.51	4.32	1.95	0.14	0.05	0.03	0.01
FUJITSU	TA08025-B605	1	15.8	15.0	9.1	75.0	1.96	1.19	2.57	1.69	0.06	0.04	0.01	0.01
FUJITSU	TA08025-B604	1	15.8	15.0	7.9	63.9	1.96	1.03	2.57	1.51	0.06	0.03	0.01	0.01
COMMSCOPE	FFV-65B-R2	0.5	72.0	19.6	7.8	84.5	3.81	1.51	4.32	1.95	0.14	0.05	0.03	0.01
COMMSCOPE	FFV-65B-R2	0.5					3.81	1.51	4.32	1.95	0.14	0.05	0.03	0.01
FUJITSU	TA08025-B605	1	15.8	15.0	9.1	75.0	1.96	1.19	2.57	1.69	0.06	0.04	0.01	0.01
FUJITSU	TA08025-B604	1	15.8	15.0	7.9	63.9	1.96	1.03	2.57	1.51	0.06	0.03	0.01	0.01
COMMSCOPE	FFV-65B-R2	0.5	72.0	19.6	7.8	84.5	3.81	1.51	4.32	1.95	0.14	0.05	0.03	0.01
COMMSCOPE	FFV-65B-R2	0.5					3.81	1.51	4.32	1.95	0.14	0.05	0.03	0.01
FUJITSU	TA08025-B605	1	15.8	15.0	9.1	75.0	1.96	1.19	2.57	1.69	0.06	0.04	0.01	0.01
FUJITSU	TA08025-B604	1	15.8	15.0	7.9	63.9	1.96	1.03	2.57	1.51	0.06	0.03	0.01	0.01
RAYCAP	RDIDC-9181-PF-48	1	16.6	14.6	8.2	21.9	2.01	1.13	2.63	1.62	0.07	0.04	0.01	0.01



**Node Coordinates**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	1	0	0	-2.372083	
2	2	0	0	-5.705417	
3	3	0	0	-3.705417	
4	4	2.758333	0	-3.705417	
5	5	-2.758333	0	-3.705417	
6	6	-1.603633	0	-5.705417	
7	7	1.603633	0	-5.705417	
8	8	1.749466	0	-5.452826	
9	9	-1.749466	0	-5.452826	
10	10	1.686966	0	-5.561079	
11	11	1.826793	0	-5.641808	
12	12	-1.686966	0	-5.561079	
13	13	-1.826793	0	-5.641808	
14	14	-5.249998	0	4.402953	
15	15	5.249998	0	4.402953	
16	16	2.8625	0	-3.524995	
17	17	2.820833	0	-3.597164	
18	18	2.960666	0	-3.677894	
19	19	-2.8625	0	-3.524995	
20	20	-2.820833	0	-3.597164	
21	21	-2.960666	0	-3.677894	
22	22	-1.25	0.140833	-5.705417	
23	23	-2.404701	0.140833	-3.705417	
24	24	2.404701	0.140833	-3.705417	
25	25	1.25	0.140833	-5.705417	
26	26	-1.25	0	-5.705417	
27	27	-2.404701	0	-3.705417	
28	28	2.404701	0	-3.705417	
29	29	1.25	0	-5.705417	
30	30	-1.499998	0	4.402953	
31	31	1.500002	0	4.402953	
32	32	4.750002	0	4.402953	
33	33	-1.499998	0	4.652953	
34	34	1.500002	0	4.652953	
35	35	4.750002	0	4.652953	
36	36	-4.749998	-2	4.652953	
37	37	-1.499998	-2	4.652953	
38	38	1.500002	-2	4.652953	
39	39	4.750002	-2	4.652953	
40	40	-4.749998	6	4.652953	
41	41	-1.499998	6	4.652953	
42	42	1.500002	6	4.652953	
43	43	4.750002	6	4.652953	
44	44	-4.749998	3.666667	4.652953	
45	45	-1.499998	3.666667	4.652953	
46	46	1.500002	3.666667	4.652953	
47	47	4.750002	3.666667	4.652953	
48	48	-4.749998	3.666667	4.44462	
49	49	-1.499998	3.666667	4.44462	
50	50	1.500002	3.666667	4.44462	
51	51	4.750002	3.666667	4.44462	
52	52	-5.25	3.666667	4.44462	
53	53	5.25	3.666667	4.44462	
54	54	1.625002	3.666667	-6.074655	
55	55	-1.625002	3.666667	-6.074655	



Company : B+T Group  
 Designer : AK  
 Job Number : 149457.003.01  
 Model Name : CT11560-A - Sterling 6

7/6/2022  
 2:45:03 PM  
 Checked By : \_\_\_\_\_

**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
56	56	0	0	0	
57	57	-2.054284	0	1.186042	
58	58	-4.941036	0	2.852708	
59	59	-3.208985	0	1.852708	
60	60	-4.588152	0	-0.536078	
61	61	-1.829818	0	4.241495	
62	62	-4.139219	0	4.241495	
63	63	-5.742852	0	1.463922	
64	64	-5.597019	0	1.211331	
65	65	-3.847553	0	4.241495	
66	66	-5.659519	0	1.319584	
67	67	-5.799346	0	1.238855	
68	68	-3.972553	0	4.241495	
69	69	-3.972553	0	4.402953	
70	70	-4.483985	0	-0.7165	
71	71	-4.525652	0	-0.644331	
72	72	-4.665479	0	-0.72506	
73	73	-1.621485	0	4.241495	
74	74	-1.704819	0	4.241495	
75	75	-1.704819	0	4.402953	
76	76	-4.316036	0.140833	3.93524	
77	77	-2.006635	0.140833	3.93524	
78	78	-4.411335	0.140833	-0.229823	
79	79	-5.566036	0.140833	1.770177	
80	80	-4.316036	0	3.93524	
81	81	-2.006635	0	3.93524	
82	82	-4.411335	0	-0.229823	
83	83	-5.566036	0	1.770177	
84	84	-6.073306	3.666667	1.630035	
85	85	-4.448305	3.666667	4.44462	
86	86	2.054284	0	1.186042	
87	87	4.941036	0	2.852708	
88	88	3.208985	0	1.852708	
89	89	1.829818	0	4.241495	
90	90	4.588152	0	-0.536078	
91	91	5.742852	0	1.463922	
92	92	4.139219	0	4.241495	
93	93	3.847553	0	4.241495	
94	94	5.597019	0	1.211331	
95	95	3.972553	0	4.241495	
96	96	3.972553	0	4.402953	
97	97	5.659519	0	1.319584	
98	98	5.799346	0	1.238855	
99	99	1.621485	0	4.241495	
100	100	1.704819	0	4.241495	
101	101	1.704819	0	4.402953	
102	102	4.483985	0	-0.7165	
103	103	4.525652	0	-0.644331	
104	104	4.665479	0	-0.72506	
105	105	5.566036	0.140833	1.770177	
106	106	4.411335	0.140833	-0.229823	
107	107	2.006635	0.140833	3.93524	
108	108	4.316036	0.140833	3.93524	
109	109	5.566036	0	1.770177	
110	110	4.411335	0	-0.229823	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
111	111	2.006635	0	3.93524	
112	112	4.316036	0	3.93524	
113	113	4.448305	3.666667	4.44462	
114	114	6.073306	3.666667	1.630035	
115	115	6.438069	0	2.345155	
116	116	1.18807	0	-6.748108	
117	117	6.474154	3.666667	2.324323	
118	118	1.224154	3.666667	-6.768943	
119	119	-1.18807	0	-6.748108	
120	120	-6.438069	0	2.345155	
121	121	-1.224154	3.666667	-6.768943	
122	122	-6.474154	3.666667	2.324323	
123	123	-4.749998	0	4.402953	
124	124	-4.749998	0	4.652953	
125	125	4.563069	0	-0.90244	
126	126	3.063069	0	-3.500516	
127	127	1.438069	0	-6.315099	
128	128	4.779575	0	-1.02744	
129	129	3.279575	0	-3.625516	
130	130	1.654575	0	-6.440099	
131	131	6.404575	-2	1.787142	
132	132	4.779575	-2	-1.02744	
133	133	3.279575	-2	-3.625516	
134	134	1.654575	-2	-6.440099	
135	135	6.404575	6	1.787142	
136	136	4.779575	6	-1.02744	
137	137	3.279575	6	-3.625516	
138	138	1.654575	6	-6.440099	
139	139	6.404575	3.666667	1.787142	
140	140	4.779575	3.666667	-1.02744	
141	141	3.279575	3.666667	-3.625516	
142	142	1.654575	3.666667	-6.440099	
143	143	6.224153	3.666667	1.891309	
144	144	4.599153	3.666667	-0.923274	
145	145	3.099153	3.666667	-3.52135	
146	146	1.474153	3.666667	-6.335932	
147	147	6.188069	0	1.912142	
148	148	6.404575	0	1.787142	
149	149	-3.06307	0	-3.500513	
150	150	-4.56307	0	-0.902437	
151	151	-6.18807	0	1.912146	
152	152	-3.279577	0	-3.625513	
153	153	-4.779577	0	-1.027437	
154	154	-6.404577	0	1.787146	
155	155	-1.654577	-2	-6.440096	
156	156	-3.279577	-2	-3.625513	
157	157	-4.779577	-2	-1.027437	
158	158	-6.404577	-2	1.787146	
159	159	-1.654577	6	-6.440096	
160	160	-3.279577	6	-3.625513	
161	161	-4.779577	6	-1.027437	
162	162	-6.404577	6	1.787146	
163	163	-1.654577	3.666667	-6.440096	
164	164	-3.279577	3.666667	-3.625513	
165	165	-4.779577	3.666667	-1.027437	



**Node Coordinates (Continued)**

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
166	166	-6.404577	3.666667	1.787146	
167	167	-1.474155	3.666667	-6.335929	
168	168	-3.099155	3.666667	-3.521346	
169	169	-4.599155	3.666667	-0.92327	
170	170	-6.224155	3.666667	1.891312	
171	171	-1.43807	0	-6.315096	
172	172	-1.654577	0	-6.440096	

**Node Boundary Conditions**

	Node 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	1	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	2						
3	3						
4	4						
5	5						
6	16						
7	17						
8	19						
9	20						
10	22						
11	25						
12	26						
13	29						
14	57	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
15	58						
16	59						
17	60						
18	61						
19	70						
20	71						
21	73						
22	74						
23	76						
24	79						
25	80						
26	83						
27	86	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
28	87						
29	88						
30	89						
31	90						
32	99						
33	100						
34	102						
35	103						
36	105						
37	108						
38	109						
39	112						

**Hot Rolled Steel Properties**

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e <sup>5</sup> °F <sup>-1</sup> ]	Density [k/ft <sup>3</sup> ]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3

**Hot Rolled Steel Section Sets**

	Label	Shape	Type	Design List	Material	Design Rule	Area [in <sup>2</sup> ]	Iyy [in <sup>4</sup> ]	Izz [in <sup>4</sup> ]	J [in <sup>4</sup> ]
1	MF-H1	PIPE 3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
2	MF-H2	PIPE 2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
3	SF-H1	HSS4X4X2	Beam	Tube	A500 Gr.B Rect	Typical	1.77	4.4	4.4	6.91
4	SF-H2	C3.38X2.06X.188	Beam	Channel	A36 Gr.36	Typical	1.339	0.562	2.4	0.015
5	SF-H3	L2X2X4	Beam	Single Angle	A36 Gr.36	Typical	0.944	0.346	0.346	0.021
6	SF-H4	L7.63X2.5X6	Beam	Single Angle	A36 Gr.36	Typical	3.658	1.307	22.092	0.163
7	MF-P1	PIPE 2.0	Column	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
8	MF-CP1	PL3/8X6 HRB	Beam	RECT	A36 Gr.36	Typical	2.28	0.027	6.84	0.105
9	MF-H3	L6.63X4.33X.25	Beam	Single Angle	A36 Gr.36	Typical	2.678	4.383	12.502	0.054

**Member Primary Data**

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	1	1	2		SF-H1	Beam	Tube	A500 Gr.B Rect	Typical
2	2	5	3	180	SF-H2	Beam	Channel	A36 Gr.36	Typical
3	3	3	4	180	SF-H2	Beam	Channel	A36 Gr.36	Typical
4	4	7	8		MF-CP1	Beam	RECT	A36 Gr.36	Typical
5	5	6	9		MF-CP1	Beam	RECT	A36 Gr.36	Typical
6	6	14	15		MF-H1	Beam	Pipe	A53 Gr.B	Typical
7	7	16	4		MF-CP1	Beam	RECT	A36 Gr.36	Typical
8	8	5	19		MF-CP1	Beam	RECT	A36 Gr.36	Typical
9	9	25	24		SF-H3	Beam	Single Angle	A36 Gr.36	Typical
10	10	23	22		SF-H3	Beam	Single Angle	A36 Gr.36	Typical
11	11	6	7		SF-H4	Beam	Single Angle	A36 Gr.36	Typical
12	12	28	24		RIGID	None	None	RIGID	Typical
13	13	29	25		RIGID	None	None	RIGID	Typical
14	14	27	23		RIGID	None	None	RIGID	Typical
15	15	26	22		RIGID	None	None	RIGID	Typical
16	16	33	30		RIGID	None	None	RIGID	Typical
17	17	34	31		RIGID	None	None	RIGID	Typical
18	18	35	32		RIGID	None	None	RIGID	Typical
19	19	43	39		MF-P1	Column	Pipe	A53 Gr.B	Typical
20	20	38	42		MF-P1	Column	Pipe	A53 Gr.B	Typical
21	21	37	41		MF-P1	Column	Pipe	A53 Gr.B	Typical
22	22	36	40		MF-P1	Column	Pipe	A53 Gr.B	Typical
23	23	44	48		RIGID	None	None	RIGID	Typical
24	24	45	49		RIGID	None	None	RIGID	Typical
25	25	46	50		RIGID	None	None	RIGID	Typical
26	26	47	51		RIGID	None	None	RIGID	Typical
27	27	52	53		MF-H2	Beam	Pipe	A53 Gr.B	Typical
28	28	54	55	180	MF-H3	Beam	Single Angle	A36 Gr.36	Typical
29	29	11	10		RIGID	None	None	RIGID	Typical
30	30	18	17		RIGID	None	None	RIGID	Typical



**Member Primary Data (Continued)**

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
31	31	13	12		RIGID	None	None	RIGID	Typical
32	32	21	20		RIGID	None	None	RIGID	Typical
33	33	57	58		SF-H1	Beam	Tube	A500 Gr.B Rect	Typical
34	34	61	59	180	SF-H2	Beam	Channel	A36 Gr.36	Typical
35	35	59	60	180	SF-H2	Beam	Channel	A36 Gr.36	Typical
36	36	63	64		MF-CP1	Beam	RECT	A36 Gr.36	Typical
37	37	62	65		MF-CP1	Beam	RECT	A36 Gr.36	Typical
38	38	70	60		MF-CP1	Beam	RECT	A36 Gr.36	Typical
39	39	61	73		MF-CP1	Beam	RECT	A36 Gr.36	Typical
40	40	79	78		SF-H3	Beam	Single Angle	A36 Gr.36	Typical
41	41	77	76		SF-H3	Beam	Single Angle	A36 Gr.36	Typical
42	42	62	63		SF-H4	Beam	Single Angle	A36 Gr.36	Typical
43	43	82	78		RIGID	None	None	RIGID	Typical
44	44	83	79		RIGID	None	None	RIGID	Typical
45	45	81	77		RIGID	None	None	RIGID	Typical
46	46	80	76		RIGID	None	None	RIGID	Typical
47	47	84	85	180	MF-H3	Beam	Single Angle	A36 Gr.36	Typical
48	48	67	66		RIGID	None	None	RIGID	Typical
49	49	72	71		RIGID	None	None	RIGID	Typical
50	50	69	68		RIGID	None	None	RIGID	Typical
51	51	75	74		RIGID	None	None	RIGID	Typical
52	52	86	87		SF-H1	Beam	Tube	A500 Gr.B Rect	Typical
53	53	90	88	180	SF-H2	Beam	Channel	A36 Gr.36	Typical
54	54	88	89	180	SF-H2	Beam	Channel	A36 Gr.36	Typical
55	55	92	93		MF-CP1	Beam	RECT	A36 Gr.36	Typical
56	56	91	94		MF-CP1	Beam	RECT	A36 Gr.36	Typical
57	57	99	89		MF-CP1	Beam	RECT	A36 Gr.36	Typical
58	58	90	102		MF-CP1	Beam	RECT	A36 Gr.36	Typical
59	59	108	107		SF-H3	Beam	Single Angle	A36 Gr.36	Typical
60	60	106	105		SF-H3	Beam	Single Angle	A36 Gr.36	Typical
61	61	91	92		SF-H4	Beam	Single Angle	A36 Gr.36	Typical
62	62	111	107		RIGID	None	None	RIGID	Typical
63	63	112	108		RIGID	None	None	RIGID	Typical
64	64	110	106		RIGID	None	None	RIGID	Typical
65	65	109	105		RIGID	None	None	RIGID	Typical
66	66	113	114	180	MF-H3	Beam	Single Angle	A36 Gr.36	Typical
67	67	96	95		RIGID	None	None	RIGID	Typical
68	68	101	100		RIGID	None	None	RIGID	Typical
69	69	98	97		RIGID	None	None	RIGID	Typical
70	70	104	103		RIGID	None	None	RIGID	Typical
71	71	115	116		MF-H1	Beam	Pipe	A53 Gr.B	Typical
72	72	117	118		MF-H2	Beam	Pipe	A53 Gr.B	Typical
73	73	119	120		MF-H1	Beam	Pipe	A53 Gr.B	Typical
74	74	121	122		MF-H2	Beam	Pipe	A53 Gr.B	Typical
75	75	124	123		RIGID	None	None	RIGID	Typical
76	76	128	125		RIGID	None	None	RIGID	Typical
77	77	129	126		RIGID	None	None	RIGID	Typical
78	78	130	127		RIGID	None	None	RIGID	Typical
79	79	138	134		MF-P1	Column	Pipe	A53 Gr.B	Typical
80	80	133	137		MF-P1	Column	Pipe	A53 Gr.B	Typical
81	81	132	136		MF-P1	Column	Pipe	A53 Gr.B	Typical
82	82	131	135		MF-P1	Column	Pipe	A53 Gr.B	Typical
83	83	139	143		RIGID	None	None	RIGID	Typical
84	84	140	144		RIGID	None	None	RIGID	Typical
85	85	141	145		RIGID	None	None	RIGID	Typical



**Member Primary Data (Continued)**

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
86	86	142	146		RIGID	None	None	RIGID	Typical
87	87	148	147		RIGID	None	None	RIGID	Typical
88	88	152	149		RIGID	None	None	RIGID	Typical
89	89	153	150		RIGID	None	None	RIGID	Typical
90	90	154	151		RIGID	None	None	RIGID	Typical
91	91	162	158		MF-P1	Column	Pipe	A53 Gr.B	Typical
92	92	157	161		MF-P1	Column	Pipe	A53 Gr.B	Typical
93	93	156	160		MF-P1	Column	Pipe	A53 Gr.B	Typical
94	94	155	159		MF-P1	Column	Pipe	A53 Gr.B	Typical
95	95	163	167		RIGID	None	None	RIGID	Typical
96	96	164	168		RIGID	None	None	RIGID	Typical
97	97	165	169		RIGID	None	None	RIGID	Typical
98	98	166	170		RIGID	None	None	RIGID	Typical
99	99	172	171		RIGID	None	None	RIGID	Typical

**Member Advanced Data**

	Label	I Release	I Offset [in]	J Offset [in]	Physical	Deflection Ratio Options	Seismic DR
1	1				Yes	N/A	None
2	2			2	Yes	N/A	None
3	3		2		Yes	N/A	None
4	4				Yes	N/A	None
5	5				Yes	N/A	None
6	6				Yes	N/A	None
7	7				Yes	N/A	None
8	8				Yes	N/A	None
9	9				Yes	N/A	None
10	10				Yes	N/A	None
11	11				Yes	N/A	None
12	12				Yes	** NA **	None
13	13				Yes	** NA **	None
14	14				Yes	** NA **	None
15	15				Yes	** NA **	None
16	16				Yes	** NA **	None
17	17				Yes	** NA **	None
18	18				Yes	** NA **	None
19	19				Yes	** NA **	None
20	20				Yes	** NA **	None
21	21				Yes	** NA **	None
22	22				Yes	** NA **	None
23	23				Yes	** NA **	None
24	24				Yes	** NA **	None
25	25				Yes	** NA **	None
26	26				Yes	** NA **	None
27	27				Yes	N/A	None
28	28				Yes	N/A	None
29	29	O O O O O X			Yes	** NA **	None
30	30	O O O O O X			Yes	** NA **	None
31	31	O O O O O X			Yes	** NA **	None
32	32	O O O O O X			Yes	** NA **	None
33	33				Yes	N/A	None
34	34			2	Yes	N/A	None
35	35		2		Yes	N/A	None
36	36				Yes	N/A	None
37	37				Yes	N/A	None
38	38				Yes	N/A	None

**Member Advanced Data (Continued)**

	Label	I Release	I Offset [in]	J Offset [in]	Physical	Deflection Ratio Options	Seismic DR
39	39				Yes	N/A	None
40	40				Yes	N/A	None
41	41				Yes	N/A	None
42	42				Yes	N/A	None
43	43				Yes	** NA **	None
44	44				Yes	** NA **	None
45	45				Yes	** NA **	None
46	46				Yes	** NA **	None
47	47				Yes	N/A	None
48	48	O O O O O X			Yes	** NA **	None
49	49	O O O O O X			Yes	** NA **	None
50	50	O O O O O X			Yes	** NA **	None
51	51	O O O O O X			Yes	** NA **	None
52	52				Yes	N/A	None
53	53			2	Yes	N/A	None
54	54		2		Yes	N/A	None
55	55				Yes	N/A	None
56	56				Yes	N/A	None
57	57				Yes	N/A	None
58	58				Yes	N/A	None
59	59				Yes	N/A	None
60	60				Yes	N/A	None
61	61				Yes	N/A	None
62	62				Yes	** NA **	None
63	63				Yes	** NA **	None
64	64				Yes	** NA **	None
65	65				Yes	** NA **	None
66	66				Yes	N/A	None
67	67	O O O O O X			Yes	** NA **	None
68	68	O O O O O X			Yes	** NA **	None
69	69	O O O O O X			Yes	** NA **	None
70	70	O O O O O X			Yes	** NA **	None
71	71				Yes	N/A	None
72	72				Yes	N/A	None
73	73				Yes	N/A	None
74	74				Yes	N/A	None
75	75				Yes	** NA **	None
76	76				Yes	** NA **	None
77	77				Yes	** NA **	None
78	78				Yes	** NA **	None
79	79				Yes	** NA **	None
80	80				Yes	** NA **	None
81	81				Yes	** NA **	None
82	82				Yes	** NA **	None
83	83				Yes	** NA **	None
84	84				Yes	** NA **	None
85	85				Yes	** NA **	None
86	86				Yes	** NA **	None
87	87				Yes	** NA **	None
88	88				Yes	** NA **	None
89	89				Yes	** NA **	None
90	90				Yes	** NA **	None
91	91				Yes	** NA **	None
92	92				Yes	** NA **	None
93	93				Yes	** NA **	None



Company : B+T Group  
 Designer : AK  
 Job Number : 149457.003.01  
 Model Name : CT11560-A - Sterling 6

7/6/2022  
 2:45:03 PM  
 Checked By : \_\_\_\_\_

**Member Advanced Data (Continued)**

	Label	I Release	I Offset [in]	J Offset [in]	Physical	Deflection Ratio Options	Seismic DR
94	94				Yes	** NA **	None
95	95				Yes	** NA **	None
96	96				Yes	** NA **	None
97	97				Yes	** NA **	None
98	98				Yes	** NA **	None
99	99				Yes	** NA **	None

**Hot Rolled Steel Design Parameters**

	Label	Shape	Length [ft]	Lcomp top [ft]	Channel Conn.	a [ft]	Function
1	1	SF-H1	3.333	Lbyy	N/A	N/A	Lateral
2	2	SF-H2	2.758	Lbyy	N/A	N/A	Lateral
3	3	SF-H2	2.758	Lbyy	N/A	N/A	Lateral
4	4	MF-CP1	0.292	Lbyy	N/A	N/A	Lateral
5	5	MF-CP1	0.292	Lbyy	N/A	N/A	Lateral
6	6	MF-H1	10.5	Lbyy	N/A	N/A	Lateral
7	7	MF-CP1	0.208	Lbyy	N/A	N/A	Lateral
8	8	MF-CP1	0.208	Lbyy	N/A	N/A	Lateral
9	9	SF-H3	2.309	Lbyy	N/A	N/A	Lateral
10	10	SF-H3	2.309	Lbyy	N/A	N/A	Lateral
11	11	SF-H4	3.207	Lbyy	N/A	N/A	Lateral
12	19	MF-P1	8	Lbyy	N/A	N/A	Lateral
13	20	MF-P1	8	Lbyy	N/A	N/A	Lateral
14	21	MF-P1	8	Lbyy	N/A	N/A	Lateral
15	22	MF-P1	8	Lbyy	N/A	N/A	Lateral
16	27	MF-H2	10.5	Lbyy	N/A	N/A	Lateral
17	28	MF-H3	3.25	Lbyy	N/A	N/A	Lateral
18	33	SF-H1	3.333	Lbyy	N/A	N/A	Lateral
19	34	SF-H2	2.758	Lbyy	N/A	N/A	Lateral
20	35	SF-H2	2.758	Lbyy	N/A	N/A	Lateral
21	36	MF-CP1	0.292	Lbyy	N/A	N/A	Lateral
22	37	MF-CP1	0.292	Lbyy	N/A	N/A	Lateral
23	38	MF-CP1	0.208	Lbyy	N/A	N/A	Lateral
24	39	MF-CP1	0.208	Lbyy	N/A	N/A	Lateral
25	40	SF-H3	2.309	Lbyy	N/A	N/A	Lateral
26	41	SF-H3	2.309	Lbyy	N/A	N/A	Lateral
27	42	SF-H4	3.207	Lbyy	N/A	N/A	Lateral
28	47	MF-H3	3.25	Lbyy	N/A	N/A	Lateral
29	52	SF-H1	3.333	Lbyy	N/A	N/A	Lateral
30	53	SF-H2	2.758	Lbyy	N/A	N/A	Lateral
31	54	SF-H2	2.758	Lbyy	N/A	N/A	Lateral
32	55	MF-CP1	0.292	Lbyy	N/A	N/A	Lateral
33	56	MF-CP1	0.292	Lbyy	N/A	N/A	Lateral
34	57	MF-CP1	0.208	Lbyy	N/A	N/A	Lateral
35	58	MF-CP1	0.208	Lbyy	N/A	N/A	Lateral
36	59	SF-H3	2.309	Lbyy	N/A	N/A	Lateral
37	60	SF-H3	2.309	Lbyy	N/A	N/A	Lateral
38	61	SF-H4	3.207	Lbyy	N/A	N/A	Lateral
39	66	MF-H3	3.25	Lbyy	N/A	N/A	Lateral
40	71	MF-H1	10.5	Lbyy	N/A	N/A	Lateral
41	72	MF-H2	10.5	Lbyy	N/A	N/A	Lateral
42	73	MF-H1	10.5	Lbyy	N/A	N/A	Lateral
43	74	MF-H2	10.5	Lbyy	N/A	N/A	Lateral
44	79	MF-P1	8	Lbyy	N/A	N/A	Lateral
45	80	MF-P1	8	Lbyy	N/A	N/A	Lateral
46	81	MF-P1	8	Lbyy	N/A	N/A	Lateral

**Hot Rolled Steel Design Parameters (Continued)**

	Label	Shape	Length [ft]	Lcomp top [ft]	Channel Conn.	a [ft]	Function
47	82	MF-P1	8	Lbyy	N/A	N/A	Lateral
48	91	MF-P1	8	Lbyy	N/A	N/A	Lateral
49	92	MF-P1	8	Lbyy	N/A	N/A	Lateral
50	93	MF-P1	8	Lbyy	N/A	N/A	Lateral
51	94	MF-P1	8	Lbyy	N/A	N/A	Lateral

**Member Point Loads (BLC 1 : Dead)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	19	Y	-0.035	%15
2	19	Y	-0.035	%85
3	19	Y	-0.075	%10
4	19	Y	-0.064	%50
5	19	Y	0	0
6	91	Y	-0.042	%15
7	91	Y	-0.042	%85
8	91	Y	-0.075	%10
9	91	Y	-0.064	%50
10	91	Y	0	0
11	79	Y	-0.042	%15
12	79	Y	-0.042	%85
13	79	Y	-0.075	%10
14	79	Y	-0.064	%50
15	79	Y	0	0
16	1	Y	-0.022	%10
17	1	Y	0	0
18	1	Y	0	0
19	1	Y	0	0
20	1	Y	0	0

**Member Point Loads (BLC 2 : 0 Wind - No Ice)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	19	Z	-0.138	%15
2	19	Z	-0.138	%85
3	19	Z	-0.064	%10
4	19	Z	-0.064	%50
5	19	Z	0	0
6	91	Z	-0.138	%15
7	91	Z	-0.138	%85
8	91	Z	-0.064	%10
9	91	Z	-0.064	%50
10	91	Z	0	0
11	79	Z	-0.138	%15
12	79	Z	-0.138	%85
13	79	Z	-0.064	%10
14	79	Z	-0.064	%50
15	79	Z	0	0
16	1	Z	-0.066	%10
17	1	Z	0	0
18	1	Z	0	0
19	1	Z	0	0
20	1	Z	0	0

**Member Point Loads (BLC 3 : 90 Wind - No Ice)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	19	X	-0.055	%15
2	19	X	-0.055	%85
3	19	X	-0.039	%10
4	19	X	-0.034	%50
5	19	X	0	0
6	91	X	-0.055	%15
7	91	X	-0.055	%85
8	91	X	-0.039	%10
9	91	X	-0.034	%50
10	91	X	0	0
11	79	X	-0.055	%15
12	79	X	-0.055	%85
13	79	X	-0.039	%10
14	79	X	-0.034	%50
15	79	X	0	0
16	1	X	-0.037	%10
17	1	X	0	0
18	1	X	0	0
19	1	X	0	0
20	1	X	0	0

**Member Point Loads (BLC 4 : 0 Wind - Ice)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	19	Z	-0.025	%15
2	19	Z	-0.025	%85
3	19	Z	-0.01	%10
4	19	Z	-0.01	%50
5	19	Z	0	0
6	91	Z	-0.025	%15
7	91	Z	-0.025	%85
8	91	Z	-0.01	%10
9	91	Z	-0.01	%50
10	91	Z	0	0
11	79	Z	-0.025	%15
12	79	Z	-0.025	%85
13	79	Z	-0.01	%10
14	79	Z	-0.01	%50
15	79	Z	0	0
16	1	Z	-0.011	%10
17	1	Z	0	0
18	1	Z	0	0
19	1	Z	0	0
20	1	Z	0	0

**Member Point Loads (BLC 5 : 90 Wind - Ice)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	19	X	-0.011	%15
2	19	X	-0.011	%85
3	19	X	-0.006	%10
4	19	X	-0.005	%50
5	19	X	0	0
6	91	X	-0.011	%15

**Member Point Loads (BLC 5 : 90 Wind - Ice) (Continued)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
7	91	X	-0.011	%85
8	91	X	-0.006	%10
9	91	X	-0.005	%50
10	91	X	0	0
11	79	X	-0.011	%15
12	79	X	-0.011	%85
13	79	X	-0.006	%10
14	79	X	-0.005	%50
15	79	X	0	0
16	1	X	-0.006	%10
17	1	X	0	0
18	1	X	0	0
19	1	X	0	0
20	1	X	0	0

**Member Point Loads (BLC 6 : 0 Wind - Service)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	19	Z	-0.008	%15
2	19	Z	-0.008	%85
3	19	Z	-0.004	%10
4	19	Z	-0.004	%50
5	19	Z	0	0
6	91	Z	-0.008	%15
7	91	Z	-0.008	%85
8	91	Z	-0.004	%10
9	91	Z	-0.004	%50
10	91	Z	0	0
11	79	Z	-0.008	%15
12	79	Z	-0.008	%85
13	79	Z	-0.004	%10
14	79	Z	-0.004	%50
15	79	Z	0	0
16	1	Z	-0.004	%10
17	1	Z	0	0
18	1	Z	0	0
19	1	Z	0	0
20	1	Z	0	0

**Member Point Loads (BLC 7 : 90 Wind - Service)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	19	X	-0.003	%15
2	19	X	-0.003	%85
3	19	X	-0.002	%10
4	19	X	-0.002	%50
5	19	X	0	0
6	91	X	-0.003	%15
7	91	X	-0.003	%85
8	91	X	-0.002	%10
9	91	X	-0.002	%50
10	91	X	0	0
11	79	X	-0.003	%15
12	79	X	-0.003	%85
13	79	X	-0.002	%10



**Member Point Loads (BLC 7 : 90 Wind - Service) (Continued)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
14	79	X	-0.002	%50
15	79	X	0	0
16	1	X	-0.002	%10
17	1	X	0	0
18	1	X	0	0
19	1	X	0	0
20	1	X	0	0

**Member Point Loads (BLC 8 : Ice)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	19	Y	-0.118	%15
2	19	Y	-0.118	%85
3	19	Y	-0.033	%10
4	19	Y	-0.032	%50
5	19	Y	0	0
6	91	Y	-0.118	%15
7	91	Y	-0.118	%85
8	91	Y	-0.033	%10
9	91	Y	-0.032	%50
10	91	Y	0	0
11	79	Y	-0.118	%15
12	79	Y	-0.118	%85
13	79	Y	-0.033	%10
14	79	Y	-0.032	%50
15	79	Y	0	0
16	1	Y	-0.033	%10
17	1	Y	0	0
18	1	Y	0	0
19	1	Y	0	0
20	1	Y	0	0

**Member Point Loads (BLC 9 : 0 Seismic)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	19	Z	-0.012	%15
2	19	Z	-0.012	%85
3	19	Z	-0.013	%10
4	19	Z	-0.011	%50
5	19	Z	0	0
6	91	Z	-0.014	%15
7	91	Z	-0.014	%85
8	91	Z	-0.013	%10
9	91	Z	-0.011	%50
10	91	Z	0	0
11	79	Z	-0.014	%15
12	79	Z	-0.014	%85
13	79	Z	-0.013	%10
14	79	Z	-0.011	%50
15	79	Z	0	0
16	1	Z	-0.004	%10
17	1	Z	0	0
18	1	Z	0	0
19	1	Z	0	0
20	1	Z	0	0

**Member Point Loads (BLC 10 : 90 Seismic)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	19	X	-0.012	%15
2	19	X	-0.012	%85
3	19	X	-0.013	%10
4	19	X	-0.011	%50
5	19	X	0	0
6	91	X	-0.014	%15
7	91	X	-0.014	%85
8	91	X	-0.013	%10
9	91	X	-0.011	%50
10	91	X	0	0
11	79	X	-0.014	%15
12	79	X	-0.014	%85
13	79	X	-0.013	%10
14	79	X	-0.011	%50
15	79	X	0	0
16	1	X	-0.004	%10
17	1	X	0	0
18	1	X	0	0
19	1	X	0	0
20	1	X	0	0

**Member Point Loads (BLC 15 : Maint LL 1)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	27	Y	-0.25	%5

**Member Point Loads (BLC 16 : Maint LL 2)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	6	Y	-0.25	%5

**Member Point Loads (BLC 17 : Maint LL 3)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	27	Y	-0.25	%95

**Member Point Loads (BLC 18 : Maint LL 4)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	6	Y	-0.25	%95

**Member Point Loads (BLC 19 : Maint LL 5)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	74	Y	-0.25	%5

**Member Point Loads (BLC 20 : Maint LL 6)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	73	Y	-0.25	%5



**Member Point Loads (BLC 21 : Maint LL 7)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	74	Y	-0.25	%95

**Member Point Loads (BLC 22 : Maint LL 8)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	73	Y	-0.25	%95

**Member Point Loads (BLC 23 : Maint LL 9)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	72	Y	-0.25	%5

**Member Point Loads (BLC 24 : Maint LL 10)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	71	Y	-0.25	%5

**Member Point Loads (BLC 25 : Maint LL 11)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	72	Y	-0.25	%95

**Member Point Loads (BLC 26 : Maint LL 12)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	71	Y	-0.25	%95

**Member Point Loads (BLC 27 : Maint LL 13)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	33	Y	-0.25	%95

**Member Point Loads (BLC 28 : Maint LL 14)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	1	Y	-0.25	%95

**Member Point Loads (BLC 29 : Maint LL 15)**

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	52	Y	-0.25	%95

**Member Distributed Loads (BLC 2 : 0 Wind - No Ice)**

	Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.016	-0.016	0	%100
2	2	Z	-0.013	-0.013	0	%100
3	3	Z	-0.013	-0.013	0	%100
4	4	Z	-0.002	-0.002	0	%100
5	5	Z	-0.002	-0.002	0	%100
6	6	Z	-0.011	-0.011	0	%100



**Member Distributed Loads (BLC 2 : 0 Wind - No Ice) (Continued)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
7	7	Z	-0.001	-0.001	0	%100
8	8	Z	-0.001	-0.001	0	%100
9	9	Z	-0.009	-0.009	0	%100
10	10	Z	-0.009	-0.009	0	%100
11	11	Z	-0.027	-0.027	0	%100
12	19	Z	-0.008	-0.008	0	%100
13	20	Z	-0.008	-0.008	0	%100
14	21	Z	-0.008	-0.008	0	%100
15	22	Z	-0.008	-0.008	0	%100
16	27	Z	-0.008	-0.008	0	%100
17	28	Z	-0.024	-0.024	0	%100
18	33	Z	-0.016	-0.016	0	%100
19	34	Z	-0.013	-0.013	0	%100
20	35	Z	-0.013	-0.013	0	%100
21	36	Z	-0.002	-0.002	0	%100
22	37	Z	-0.002	-0.002	0	%100
23	38	Z	-0.001	-0.001	0	%100
24	39	Z	-0.001	-0.001	0	%100
25	40	Z	-0.009	-0.009	0	%100
26	41	Z	-0.009	-0.009	0	%100
27	42	Z	-0.027	-0.027	0	%100
28	47	Z	-0.024	-0.024	0	%100
29	52	Z	-0.016	-0.016	0	%100
30	53	Z	-0.013	-0.013	0	%100
31	54	Z	-0.013	-0.013	0	%100
32	55	Z	-0.002	-0.002	0	%100
33	56	Z	-0.002	-0.002	0	%100
34	57	Z	-0.001	-0.001	0	%100
35	58	Z	-0.001	-0.001	0	%100
36	59	Z	-0.009	-0.009	0	%100
37	60	Z	-0.009	-0.009	0	%100
38	61	Z	-0.027	-0.027	0	%100
39	66	Z	-0.024	-0.024	0	%100
40	71	Z	-0.011	-0.011	0	%100
41	72	Z	-0.008	-0.008	0	%100
42	73	Z	-0.011	-0.011	0	%100
43	74	Z	-0.008	-0.008	0	%100
44	79	Z	-0.008	-0.008	0	%100
45	80	Z	-0.008	-0.008	0	%100
46	81	Z	-0.008	-0.008	0	%100
47	82	Z	-0.008	-0.008	0	%100
48	91	Z	-0.008	-0.008	0	%100
49	92	Z	-0.008	-0.008	0	%100
50	93	Z	-0.008	-0.008	0	%100
51	94	Z	-0.008	-0.008	0	%100

**Member Distributed Loads (BLC 3 : 90 Wind - No Ice)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.016	-0.016	0	%100
2	2	X	-0.013	-0.013	0	%100
3	3	X	-0.013	-0.013	0	%100
4	4	X	-0.002	-0.002	0	%100
5	5	X	-0.002	-0.002	0	%100
6	6	X	-0.011	-0.011	0	%100
7	7	X	-0.001	-0.001	0	%100

**Member Distributed Loads (BLC 3 : 90 Wind - No Ice) (Continued)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
8	8	X	-0.001	-0.001	0	%100
9	9	X	-0.009	-0.009	0	%100
10	10	X	-0.009	-0.009	0	%100
11	11	X	-0.027	-0.027	0	%100
12	19	X	-0.008	-0.008	0	%100
13	20	X	-0.008	-0.008	0	%100
14	21	X	-0.008	-0.008	0	%100
15	22	X	-0.008	-0.008	0	%100
16	27	X	-0.008	-0.008	0	%100
17	28	X	-0.024	-0.024	0	%100
18	33	X	-0.016	-0.016	0	%100
19	34	X	-0.013	-0.013	0	%100
20	35	X	-0.013	-0.013	0	%100
21	36	X	-0.002	-0.002	0	%100
22	37	X	-0.002	-0.002	0	%100
23	38	X	-0.001	-0.001	0	%100
24	39	X	-0.001	-0.001	0	%100
25	40	X	-0.009	-0.009	0	%100
26	41	X	-0.009	-0.009	0	%100
27	42	X	-0.027	-0.027	0	%100
28	47	X	-0.024	-0.024	0	%100
29	52	X	-0.016	-0.016	0	%100
30	53	X	-0.013	-0.013	0	%100
31	54	X	-0.013	-0.013	0	%100
32	55	X	-0.002	-0.002	0	%100
33	56	X	-0.002	-0.002	0	%100
34	57	X	-0.001	-0.001	0	%100
35	58	X	-0.001	-0.001	0	%100
36	59	X	-0.009	-0.009	0	%100
37	60	X	-0.009	-0.009	0	%100
38	61	X	-0.027	-0.027	0	%100
39	66	X	-0.024	-0.024	0	%100
40	71	X	-0.011	-0.011	0	%100
41	72	X	-0.008	-0.008	0	%100
42	73	X	-0.011	-0.011	0	%100
43	74	X	-0.008	-0.008	0	%100
44	79	X	-0.008	-0.008	0	%100
45	80	X	-0.008	-0.008	0	%100
46	81	X	-0.008	-0.008	0	%100
47	82	X	-0.008	-0.008	0	%100
48	91	X	-0.008	-0.008	0	%100
49	92	X	-0.008	-0.008	0	%100
50	93	X	-0.008	-0.008	0	%100
51	94	X	-0.008	-0.008	0	%100

**Member Distributed Loads (BLC 4 : 0 Wind - Ice)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.004	-0.004	0	%100
2	2	Z	-0.004	-0.004	0	%100
3	3	Z	-0.004	-0.004	0	%100
4	4	Z	-0.003	-0.003	0	%100
5	5	Z	-0.003	-0.003	0	%100
6	6	Z	-0.002	-0.002	0	%100
7	7	Z	-0.003	-0.003	0	%100
8	8	Z	-0.003	-0.003	0	%100



Company : B+T Group  
 Designer : AK  
 Job Number : 149457.003.01  
 Model Name : CT11560-A - Sterling 6

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**Member Distributed Loads (BLC 4 : 0 Wind - Ice) (Continued)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
9	9	Z	-0.003	-0.003	0	%100
10	10	Z	-0.003	-0.003	0	%100
11	11	Z	-0.006	-0.006	0	%100
12	19	Z	-0.001	-0.001	0	%100
13	20	Z	-0.001	-0.001	0	%100
14	21	Z	-0.001	-0.001	0	%100
15	22	Z	-0.001	-0.001	0	%100
16	27	Z	-0.001	-0.001	0	%100
17	28	Z	-0.005	-0.005	0	%100
18	33	Z	-0.004	-0.004	0	%100
19	34	Z	-0.004	-0.004	0	%100
20	35	Z	-0.004	-0.004	0	%100
21	36	Z	-0.003	-0.003	0	%100
22	37	Z	-0.003	-0.003	0	%100
23	38	Z	-0.003	-0.003	0	%100
24	39	Z	-0.003	-0.003	0	%100
25	40	Z	-0.003	-0.003	0	%100
26	41	Z	-0.003	-0.003	0	%100
27	42	Z	-0.006	-0.006	0	%100
28	47	Z	-0.005	-0.005	0	%100
29	52	Z	-0.004	-0.004	0	%100
30	53	Z	-0.004	-0.004	0	%100
31	54	Z	-0.004	-0.004	0	%100
32	55	Z	-0.003	-0.003	0	%100
33	56	Z	-0.003	-0.003	0	%100
34	57	Z	-0.003	-0.003	0	%100
35	58	Z	-0.003	-0.003	0	%100
36	59	Z	-0.003	-0.003	0	%100
37	60	Z	-0.003	-0.003	0	%100
38	61	Z	-0.006	-0.006	0	%100
39	66	Z	-0.005	-0.005	0	%100
40	71	Z	-0.002	-0.002	0	%100
41	72	Z	-0.001	-0.001	0	%100
42	73	Z	-0.002	-0.002	0	%100
43	74	Z	-0.001	-0.001	0	%100
44	79	Z	-0.001	-0.001	0	%100
45	80	Z	-0.001	-0.001	0	%100
46	81	Z	-0.001	-0.001	0	%100
47	82	Z	-0.001	-0.001	0	%100
48	91	Z	-0.001	-0.001	0	%100
49	92	Z	-0.001	-0.001	0	%100
50	93	Z	-0.001	-0.001	0	%100
51	94	Z	-0.001	-0.001	0	%100

**Member Distributed Loads (BLC 5 : 90 Wind - Ice)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.004	-0.004	0	%100
2	2	X	-0.004	-0.004	0	%100
3	3	X	-0.004	-0.004	0	%100
4	4	X	-0.003	-0.003	0	%100
5	5	X	-0.003	-0.003	0	%100
6	6	X	-0.002	-0.002	0	%100
7	7	X	-0.003	-0.003	0	%100
8	8	X	-0.003	-0.003	0	%100
9	9	X	-0.003	-0.003	0	%100



Company : B+T Group  
 Designer : AK  
 Job Number : 149457.003.01  
 Model Name : CT11560-A - Sterling 6

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**Member Distributed Loads (BLC 5 : 90 Wind - Ice) (Continued)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
10	10	X	-0.003	-0.003	0	%100
11	11	X	-0.006	-0.006	0	%100
12	19	X	-0.001	-0.001	0	%100
13	20	X	-0.001	-0.001	0	%100
14	21	X	-0.001	-0.001	0	%100
15	22	X	-0.001	-0.001	0	%100
16	27	X	-0.001	-0.001	0	%100
17	28	X	-0.005	-0.005	0	%100
18	33	X	-0.004	-0.004	0	%100
19	34	X	-0.004	-0.004	0	%100
20	35	X	-0.004	-0.004	0	%100
21	36	X	-0.003	-0.003	0	%100
22	37	X	-0.003	-0.003	0	%100
23	38	X	-0.003	-0.003	0	%100
24	39	X	-0.003	-0.003	0	%100
25	40	X	-0.003	-0.003	0	%100
26	41	X	-0.003	-0.003	0	%100
27	42	X	-0.006	-0.006	0	%100
28	47	X	-0.005	-0.005	0	%100
29	52	X	-0.004	-0.004	0	%100
30	53	X	-0.004	-0.004	0	%100
31	54	X	-0.004	-0.004	0	%100
32	55	X	-0.003	-0.003	0	%100
33	56	X	-0.003	-0.003	0	%100
34	57	X	-0.003	-0.003	0	%100
35	58	X	-0.003	-0.003	0	%100
36	59	X	-0.003	-0.003	0	%100
37	60	X	-0.003	-0.003	0	%100
38	61	X	-0.006	-0.006	0	%100
39	66	X	-0.005	-0.005	0	%100
40	71	X	-0.002	-0.002	0	%100
41	72	X	-0.001	-0.001	0	%100
42	73	X	-0.002	-0.002	0	%100
43	74	X	-0.001	-0.001	0	%100
44	79	X	-0.001	-0.001	0	%100
45	80	X	-0.001	-0.001	0	%100
46	81	X	-0.001	-0.001	0	%100
47	82	X	-0.001	-0.001	0	%100
48	91	X	-0.001	-0.001	0	%100
49	92	X	-0.001	-0.001	0	%100
50	93	X	-0.001	-0.001	0	%100
51	94	X	-0.001	-0.001	0	%100

**Member Distributed Loads (BLC 6 : 0 Wind - Service)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.0009	-0.0009	0	%100
2	2	Z	-0.0008	-0.0008	0	%100
3	3	Z	-0.0008	-0.0008	0	%100
4	4	Z	-1e-04	-1e-04	0	%100
5	5	Z	-1e-04	-1e-04	0	%100
6	6	Z	-0.0003	-0.0003	0	%100
7	7	Z	-1e-04	-1e-04	0	%100
8	8	Z	-1e-04	-1e-04	0	%100
9	9	Z	-0.0005	-0.0005	0	%100
10	10	Z	-0.0005	-0.0005	0	%100





Company : B+T Group  
 Designer : AK  
 Job Number : 149457.003.01  
 Model Name : CT11560-A - Sterling 6

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**Member Distributed Loads (BLC 6 : 0 Wind - Service) (Continued)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
11	11	Z	-0.002	-0.002	0	%100
12	19	Z	-0.0002	-0.0002	0	%100
13	20	Z	-0.0002	-0.0002	0	%100
14	21	Z	-0.0002	-0.0002	0	%100
15	22	Z	-0.0002	-0.0002	0	%100
16	27	Z	-0.0002	-0.0002	0	%100
17	28	Z	-0.001	-0.001	0	%100
18	33	Z	-0.0009	-0.0009	0	%100
19	34	Z	-0.0008	-0.0008	0	%100
20	35	Z	-0.0008	-0.0008	0	%100
21	36	Z	-1e-04	-1e-04	0	%100
22	37	Z	-1e-04	-1e-04	0	%100
23	38	Z	-1e-04	-1e-04	0	%100
24	39	Z	-1e-04	-1e-04	0	%100
25	40	Z	-0.0005	-0.0005	0	%100
26	41	Z	-0.0005	-0.0005	0	%100
27	42	Z	-0.002	-0.002	0	%100
28	47	Z	-0.001	-0.001	0	%100
29	52	Z	-0.0009	-0.0009	0	%100
30	53	Z	-0.0008	-0.0008	0	%100
31	54	Z	-0.0008	-0.0008	0	%100
32	55	Z	-1e-04	-1e-04	0	%100
33	56	Z	-1e-04	-1e-04	0	%100
34	57	Z	-1e-04	-1e-04	0	%100
35	58	Z	-1e-04	-1e-04	0	%100
36	59	Z	-0.0005	-0.0005	0	%100
37	60	Z	-0.0005	-0.0005	0	%100
38	61	Z	-0.002	-0.002	0	%100
39	66	Z	-0.001	-0.001	0	%100
40	71	Z	-0.0003	-0.0003	0	%100
41	72	Z	-0.0002	-0.0002	0	%100
42	73	Z	-0.0003	-0.0003	0	%100
43	74	Z	-0.0002	-0.0002	0	%100
44	79	Z	-0.0002	-0.0002	0	%100
45	80	Z	-0.0002	-0.0002	0	%100
46	81	Z	-0.0002	-0.0002	0	%100
47	82	Z	-0.0002	-0.0002	0	%100
48	91	Z	-0.0002	-0.0002	0	%100
49	92	Z	-0.0002	-0.0002	0	%100
50	93	Z	-0.0002	-0.0002	0	%100
51	94	Z	-0.0002	-0.0002	0	%100

**Member Distributed Loads (BLC 7 : 90 Wind - Service)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.0009	-0.0009	0	%100
2	2	X	-0.0008	-0.0008	0	%100
3	3	X	-0.0008	-0.0008	0	%100
4	4	X	-1e-04	-1e-04	0	%100
5	5	X	-1e-04	-1e-04	0	%100
6	6	X	-0.0003	-0.0003	0	%100
7	7	X	-1e-04	-1e-04	0	%100
8	8	X	-1e-04	-1e-04	0	%100
9	9	X	-0.0005	-0.0005	0	%100
10	10	X	-0.0005	-0.0005	0	%100
11	11	X	-0.002	-0.002	0	%100



**Member Distributed Loads (BLC 7 : 90 Wind - Service) (Continued)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
12	19	X	-0.0002	-0.0002	0	%100
13	20	X	-0.0002	-0.0002	0	%100
14	21	X	-0.0002	-0.0002	0	%100
15	22	X	-0.0002	-0.0002	0	%100
16	27	X	-0.0002	-0.0002	0	%100
17	28	X	-0.001	-0.001	0	%100
18	33	X	-0.0009	-0.0009	0	%100
19	34	X	-0.0008	-0.0008	0	%100
20	35	X	-0.0008	-0.0008	0	%100
21	36	X	-1e-04	-1e-04	0	%100
22	37	X	-1e-04	-1e-04	0	%100
23	38	X	-1e-04	-1e-04	0	%100
24	39	X	-1e-04	-1e-04	0	%100
25	40	X	-0.0005	-0.0005	0	%100
26	41	X	-0.0005	-0.0005	0	%100
27	42	X	-0.002	-0.002	0	%100
28	47	X	-0.001	-0.001	0	%100
29	52	X	-0.0009	-0.0009	0	%100
30	53	X	-0.0008	-0.0008	0	%100
31	54	X	-0.0008	-0.0008	0	%100
32	55	X	-1e-04	-1e-04	0	%100
33	56	X	-1e-04	-1e-04	0	%100
34	57	X	-1e-04	-1e-04	0	%100
35	58	X	-1e-04	-1e-04	0	%100
36	59	X	-0.0005	-0.0005	0	%100
37	60	X	-0.0005	-0.0005	0	%100
38	61	X	-0.002	-0.002	0	%100
39	66	X	-0.001	-0.001	0	%100
40	71	X	-0.0003	-0.0003	0	%100
41	72	X	-0.0002	-0.0002	0	%100
42	73	X	-0.0003	-0.0003	0	%100
43	74	X	-0.0002	-0.0002	0	%100
44	79	X	-0.0002	-0.0002	0	%100
45	80	X	-0.0002	-0.0002	0	%100
46	81	X	-0.0002	-0.0002	0	%100
47	82	X	-0.0002	-0.0002	0	%100
48	91	X	-0.0002	-0.0002	0	%100
49	92	X	-0.0002	-0.0002	0	%100
50	93	X	-0.0002	-0.0002	0	%100
51	94	X	-0.0002	-0.0002	0	%100

**Member Distributed Loads (BLC 8 : Ice)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Y	-0.009	-0.009	0	%100
2	2	Y	-0.007	-0.007	0	%100
3	3	Y	-0.007	-0.007	0	%100
4	4	Y	-0.01	-0.01	0	%100
5	5	Y	-0.01	-0.01	0	%100
6	6	Y	-0.006	-0.006	0	%100
7	7	Y	-0.01	-0.01	0	%100
8	8	Y	-0.01	-0.01	0	%100
9	9	Y	-0.005	-0.005	0	%100
10	10	Y	-0.005	-0.005	0	%100
11	11	Y	-0.012	-0.012	0	%100
12	19	Y	-0.005	-0.005	0	%100



Company : B+T Group  
 Designer : AK  
 Job Number : 149457.003.01  
 Model Name : CT11560-A - Sterling 6

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**Member Distributed Loads (BLC 8 : Ice) (Continued)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
13	20	Y	-0.005	-0.005	0	%100
14	21	Y	-0.005	-0.005	0	%100
15	22	Y	-0.005	-0.005	0	%100
16	27	Y	-0.005	-0.005	0	%100
17	28	Y	-0.012	-0.012	0	%100
18	33	Y	-0.009	-0.009	0	%100
19	34	Y	-0.007	-0.007	0	%100
20	35	Y	-0.007	-0.007	0	%100
21	36	Y	-0.01	-0.01	0	%100
22	37	Y	-0.01	-0.01	0	%100
23	38	Y	-0.01	-0.01	0	%100
24	39	Y	-0.01	-0.01	0	%100
25	40	Y	-0.005	-0.005	0	%100
26	41	Y	-0.005	-0.005	0	%100
27	42	Y	-0.012	-0.012	0	%100
28	47	Y	-0.012	-0.012	0	%100
29	52	Y	-0.009	-0.009	0	%100
30	53	Y	-0.007	-0.007	0	%100
31	54	Y	-0.007	-0.007	0	%100
32	55	Y	-0.01	-0.01	0	%100
33	56	Y	-0.01	-0.01	0	%100
34	57	Y	-0.01	-0.01	0	%100
35	58	Y	-0.01	-0.01	0	%100
36	59	Y	-0.005	-0.005	0	%100
37	60	Y	-0.005	-0.005	0	%100
38	61	Y	-0.012	-0.012	0	%100
39	66	Y	-0.012	-0.012	0	%100
40	71	Y	-0.006	-0.006	0	%100
41	72	Y	-0.005	-0.005	0	%100
42	73	Y	-0.006	-0.006	0	%100
43	74	Y	-0.005	-0.005	0	%100
44	79	Y	-0.005	-0.005	0	%100
45	80	Y	-0.005	-0.005	0	%100
46	81	Y	-0.005	-0.005	0	%100
47	82	Y	-0.005	-0.005	0	%100
48	91	Y	-0.005	-0.005	0	%100
49	92	Y	-0.005	-0.005	0	%100
50	93	Y	-0.005	-0.005	0	%100
51	94	Y	-0.005	-0.005	0	%100

**Member Distributed Loads (BLC 9 : 0 Seismic)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	Z	-0.001	-0.001	0	%100
2	2	Z	-0.0008	-0.0008	0	%100
3	3	Z	-0.0008	-0.0008	0	%100
4	4	Z	-0.001	-0.001	0	%100
5	5	Z	-0.001	-0.001	0	%100
6	6	Z	-0.001	-0.001	0	%100
7	7	Z	-0.001	-0.001	0	%100
8	8	Z	-0.001	-0.001	0	%100
9	9	Z	-0.0005	-0.0005	0	%100
10	10	Z	-0.0005	-0.0005	0	%100
11	11	Z	-0.002	-0.002	0	%100
12	19	Z	-0.0006	-0.0006	0	%100
13	20	Z	-0.0006	-0.0006	0	%100



Company : B+T Group  
 Designer : AK  
 Job Number : 149457.003.01  
 Model Name : CT11560-A - Sterling 6

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**Member Distributed Loads (BLC 9 : 0 Seismic) (Continued)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
14	21	Z	-0.0006	-0.0006	0	%100
15	22	Z	-0.0006	-0.0006	0	%100
16	27	Z	-0.0006	-0.0006	0	%100
17	28	Z	-0.002	-0.002	0	%100
18	33	Z	-0.001	-0.001	0	%100
19	34	Z	-0.0008	-0.0008	0	%100
20	35	Z	-0.0008	-0.0008	0	%100
21	36	Z	-0.001	-0.001	0	%100
22	37	Z	-0.001	-0.001	0	%100
23	38	Z	-0.001	-0.001	0	%100
24	39	Z	-0.001	-0.001	0	%100
25	40	Z	-0.0005	-0.0005	0	%100
26	41	Z	-0.0005	-0.0005	0	%100
27	42	Z	-0.002	-0.002	0	%100
28	47	Z	-0.002	-0.002	0	%100
29	52	Z	-0.001	-0.001	0	%100
30	53	Z	-0.0008	-0.0008	0	%100
31	54	Z	-0.0008	-0.0008	0	%100
32	55	Z	-0.001	-0.001	0	%100
33	56	Z	-0.001	-0.001	0	%100
34	57	Z	-0.001	-0.001	0	%100
35	58	Z	-0.001	-0.001	0	%100
36	59	Z	-0.0005	-0.0005	0	%100
37	60	Z	-0.0005	-0.0005	0	%100
38	61	Z	-0.002	-0.002	0	%100
39	66	Z	-0.002	-0.002	0	%100
40	71	Z	-0.001	-0.001	0	%100
41	72	Z	-0.0006	-0.0006	0	%100
42	73	Z	-0.001	-0.001	0	%100
43	74	Z	-0.0006	-0.0006	0	%100
44	79	Z	-0.0006	-0.0006	0	%100
45	80	Z	-0.0006	-0.0006	0	%100
46	81	Z	-0.0006	-0.0006	0	%100
47	82	Z	-0.0006	-0.0006	0	%100
48	91	Z	-0.0006	-0.0006	0	%100
49	92	Z	-0.0006	-0.0006	0	%100
50	93	Z	-0.0006	-0.0006	0	%100
51	94	Z	-0.0006	-0.0006	0	%100

**Member Distributed Loads (BLC 10 : 90 Seismic)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	1	X	-0.001	-0.001	0	%100
2	2	X	-0.0008	-0.0008	0	%100
3	3	X	-0.0008	-0.0008	0	%100
4	4	X	-0.001	-0.001	0	%100
5	5	X	-0.001	-0.001	0	%100
6	6	X	-0.001	-0.001	0	%100
7	7	X	-0.001	-0.001	0	%100
8	8	X	-0.001	-0.001	0	%100
9	9	X	-0.0005	-0.0005	0	%100
10	10	X	-0.0005	-0.0005	0	%100
11	11	X	-0.002	-0.002	0	%100
12	19	X	-0.0006	-0.0006	0	%100
13	20	X	-0.0006	-0.0006	0	%100
14	21	X	-0.0006	-0.0006	0	%100



**Member Distributed Loads (BLC 10 : 90 Seismic) (Continued)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
15	22	X	-0.0006	-0.0006	0	%100
16	27	X	-0.0006	-0.0006	0	%100
17	28	X	-0.002	-0.002	0	%100
18	33	X	-0.001	-0.001	0	%100
19	34	X	-0.0008	-0.0008	0	%100
20	35	X	-0.0008	-0.0008	0	%100
21	36	X	-0.001	-0.001	0	%100
22	37	X	-0.001	-0.001	0	%100
23	38	X	-0.001	-0.001	0	%100
24	39	X	-0.001	-0.001	0	%100
25	40	X	-0.0005	-0.0005	0	%100
26	41	X	-0.0005	-0.0005	0	%100
27	42	X	-0.002	-0.002	0	%100
28	47	X	-0.002	-0.002	0	%100
29	52	X	-0.001	-0.001	0	%100
30	53	X	-0.0008	-0.0008	0	%100
31	54	X	-0.0008	-0.0008	0	%100
32	55	X	-0.001	-0.001	0	%100
33	56	X	-0.001	-0.001	0	%100
34	57	X	-0.001	-0.001	0	%100
35	58	X	-0.001	-0.001	0	%100
36	59	X	-0.0005	-0.0005	0	%100
37	60	X	-0.0005	-0.0005	0	%100
38	61	X	-0.002	-0.002	0	%100
39	66	X	-0.002	-0.002	0	%100
40	71	X	-0.001	-0.001	0	%100
41	72	X	-0.0006	-0.0006	0	%100
42	73	X	-0.001	-0.001	0	%100
43	74	X	-0.0006	-0.0006	0	%100
44	79	X	-0.0006	-0.0006	0	%100
45	80	X	-0.0006	-0.0006	0	%100
46	81	X	-0.0006	-0.0006	0	%100
47	82	X	-0.0006	-0.0006	0	%100
48	91	X	-0.0006	-0.0006	0	%100
49	92	X	-0.0006	-0.0006	0	%100
50	93	X	-0.0006	-0.0006	0	%100
51	94	X	-0.0006	-0.0006	0	%100

**Member Distributed Loads (BLC 39 : BLC 1 Transient Area Loads)**

Member	Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	59	Y	-0.035	-0.016	0	1.155
2	59	Y	-0.016	0.0006163	1.155	2.309
3	60	Y	-0.018	-0.016	0.231	2.309
4	40	Y	-0.017	-0.017	0	2.078
5	41	Y	0.0006164	-0.016	0	1.155
6	41	Y	-0.016	-0.035	1.155	2.309
7	9	Y	-0.014	-0.016	0	2.078
8	10	Y	-0.014	-0.02	0.231	1.27
9	10	Y	-0.02	-0.026	1.27	2.309

**Member Distributed Loads (BLC 40 : BLC 8 Transient Area Loads)**

Member Label	Direction	Start Magnitude [k/ft, F, ksf, k-ft/ft]	End Magnitude [k/ft, F, ksf, k-ft/ft]	Start Location [(ft, %)]	End Location [(ft, %)]
1	40	Y	-0.009	-0.009	0 2.078
2	41	Y	0.0003261	-0.008	0 1.155
3	41	Y	-0.008	-0.018	1.155 2.309
4	9	Y	-0.007	-0.008	0 2.078
5	10	Y	-0.007	-0.01	0.231 1.27
6	10	Y	-0.01	-0.013	1.27 2.309
7	59	Y	-0.017	-0.008	0 1.155
8	59	Y	-0.008	0.0003082	1.155 2.309
9	60	Y	-0.009	-0.008	0.231 2.309

**Member Area Loads (BLC 1 : Dead)**

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	79	78	77	76	Y	Two Way	-0.01
2	23	22	25	24	Y	Two Way	-0.01
3	106	105	108	107	Y	Two Way	-0.01

**Member Area Loads (BLC 8 : Ice)**

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	79	78	77	76	Y	Two Way	-0.005
2	23	22	25	24	Y	Two Way	-0.005
3	106	105	108	107	Y	Two Way	-0.005

**Node Loads and Enforced Displacements (BLC 11 : Live Load a)**

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s <sup>2</sup> /ft, k*s <sup>2</sup> *ft)]
1	123	L	Y	-0.5
2	147	L	Y	-0.5
3	171	L	Y	-0.5

**Node Loads and Enforced Displacements (BLC 12 : Live Load b)**

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s <sup>2</sup> /ft, k*s <sup>2</sup> *ft)]
1	30	L	Y	-0.5
2	125	L	Y	-0.5
3	149	L	Y	-0.5

**Node Loads and Enforced Displacements (BLC 13 : Live Load c)**

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s <sup>2</sup> /ft, k*s <sup>2</sup> *ft)]
1	31	L	Y	-0.5
2	126	L	Y	-0.5
3	150	L	Y	-0.5

**Node Loads and Enforced Displacements (BLC 14 : Live Load d)**

	Node Label	L, D, M	Direction	Magnitude [(k, k-ft), (in, rad), (k*s <sup>2</sup> /ft, k*s <sup>2</sup> *ft)]
1	32	L	Y	-0.5
2	127	L	Y	-0.5
3	151	L	Y	-0.5

**Basic Load Cases**

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed	Area(Member)
1	Dead	DL	-1		20		3
2	0 Wind - No Ice	WLZ			20	51	
3	90 Wind - No Ice	WLX			20	51	
4	0 Wind - Ice	WLZ			20	51	
5	90 Wind - Ice	WLX			20	51	
6	0 Wind - Service	WLZ			20	51	
7	90 Wind - Service	WLX			20	51	
8	Ice	OL1			20	51	3
9	0 Seismic	ELZ			20	51	
10	90 Seismic	ELX			20	51	
11	Live Load a	LL		3			
12	Live Load b	LL		3			
13	Live Load c	LL		3			
14	Live Load d	LL		3			
15	Maint LL 1	LL			1		
16	Maint LL 2	LL			1		
17	Maint LL 3	LL			1		
18	Maint LL 4	LL			1		
19	Maint LL 5	LL			1		
20	Maint LL 6	LL			1		
21	Maint LL 7	LL			1		
22	Maint LL 8	LL			1		
23	Maint LL 9	LL			1		
24	Maint LL 10	LL			1		
25	Maint LL 11	LL			1		
26	Maint LL 12	LL			1		
27	Maint LL 13	LL			1		
28	Maint LL 14	LL			1		
29	Maint LL 15	LL			1		
30	Maint LL 16	LL					
31	Maint LL 17	LL					
32	Maint LL 18	LL					
33	Maint LL 19	LL					
34	Maint LL 20	LL					
35	Maint LL 21	LL					
36	Maint LL 22	LL					
37	Maint LL 23	LL					
38	Maint LL 24	LL					
39	BLC 1 Transient Area Loads	None				9	
40	BLC 8 Transient Area Loads	None				9	

**Load Combinations**

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	1.4 Dead	Yes	Y	1	1.4						
2	1.2 D + 1.0 - 0 W	Yes	Y	1	1.2	2	1				
3	1.2 D + 1.0 - 30 W	Yes	Y	1	1.2	2	0.866	3	0.5		
4	1.2 D + 1.0 - 60 W	Yes	Y	1	1.2	3	0.866	2	0.5		
5	1.2 D + 1.0 - 90 W	Yes	Y	1	1.2	3	1				
6	1.2 D + 1.0 - 120 W	Yes	Y	1	1.2	3	0.866	2	-0.5		
7	1.2 D + 1.0 - 150 W	Yes	Y	1	1.2	2	-0.866	3	0.5		
8	1.2 D + 1.0 - 180 W	Yes	Y	1	1.2	2	-1				
9	1.2 D + 1.0 - 210 W	Yes	Y	1	1.2	2	-0.866	3	-0.5		
10	1.2 D + 1.0 - 240 W	Yes	Y	1	1.2	3	-0.866	2	-0.5		
11	1.2 D + 1.0 - 270 W	Yes	Y	1	1.2	3	-1				





Company : B+T Group  
 Designer : AK  
 Job Number : 149457.003.01  
 Model Name : CT11560-A - Sterling 6

7/6/2022  
 2:45:03 PM  
 Checked By : \_\_\_\_\_

**Load Combinations (Continued)**

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
12	1.2 D + 1.0 - 300 W	Yes	Y	1	1.2	3	-0.866	2	0.5		
13	1.2 D + 1.0 - 330 W	Yes	Y	1	1.2	2	0.866	3	-0.5		
14	1.2 D + 1.0 - 0 W/Ice	Yes	Y	1	1.2	4	1			8	1
15	1.2 D + 1.0 - 30 W/Ice	Yes	Y	1	1.2	4	0.866	5	0.5	8	1
16	1.2 D + 1.0 - 60 W/Ice	Yes	Y	1	1.2	5	0.866	4	0.5	8	1
17	1.2 D + 1.0 - 90 W/Ice	Yes	Y	1	1.2	5	1			8	1
18	1.2 D + 1.0 - 120 W/Ice	Yes	Y	1	1.2	5	0.866	4	-0.5	8	1
19	1.2 D + 1.0 - 150 W/Ice	Yes	Y	1	1.2	4	-0.866	5	0.5	8	1
20	1.2 D + 1.0 - 180 W/Ice	Yes	Y	1	1.2	4	-1			8	1
21	1.2 D + 1.0 - 210 W/Ice	Yes	Y	1	1.2	4	-0.866	5	-0.5	8	1
22	1.2 D + 1.0 - 240 W/Ice	Yes	Y	1	1.2	5	-0.866	4	-0.5	8	1
23	1.2 D + 1.0 - 270 W/Ice	Yes	Y	1	1.2	5	-1			8	1
24	1.2 D + 1.0 - 300 W/Ice	Yes	Y	1	1.2	5	-0.866	4	0.5	8	1
25	1.2 D + 1.0 - 330 W/Ice	Yes	Y	1	1.2	4	0.866	5	-0.5	8	1
26	1.2 D + 1.0 E - 0	Yes	Y	1	1.2	9	1				
27	1.2 D + 1.0 E - 30	Yes	Y	1	1.2	9	0.866	10	0.5		
28	1.2 D + 1.0 E - 60	Yes	Y	1	1.2	10	0.866	9	0.5		
29	1.2 D + 1.0 E - 90	Yes	Y	1	1.2	10	1				
30	1.2 D + 1.0 E - 120	Yes	Y	1	1.2	10	0.866	9	-0.5		
31	1.2 D + 1.0 E - 150	Yes	Y	1	1.2	9	-0.866	10	0.5		
32	1.2 D + 1.0 E - 180	Yes	Y	1	1.2	9	-1				
33	1.2 D + 1.0 E - 210	Yes	Y	1	1.2	9	-0.866	10	-0.5		
34	1.2 D + 1.0 E - 240	Yes	Y	1	1.2	10	-0.866	9	-0.5		
35	1.2 D + 1.0 E - 270	Yes	Y	1	1.2	10	-1				
36	1.2 D + 1.0 E - 300	Yes	Y	1	1.2	10	-0.866	9	0.5		
37	1.2 D + 1.0 E - 330	Yes	Y	1	1.2	9	0.866	10	-0.5		
38	1.2 D + 1.5 LL a + Service - 0 W	Yes	Y	1	1.2	6	1			11	1.5
39	1.2 D + 1.5 LL a + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	11	1.5
40	1.2 D + 1.5 LL a + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	11	1.5
41	1.2 D + 1.5 LL a + Service - 90 W	Yes	Y	1	1.2	7	1			11	1.5
42	1.2 D + 1.5 LL a + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	11	1.5
43	1.2 D + 1.5 LL a + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	11	1.5
44	1.2 D + 1.5 LL a + Service - 180 W	Yes	Y	1	1.2	6	-1			11	1.5
45	1.2 D + 1.5 LL a + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	11	1.5
46	1.2 D + 1.5 LL a + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	11	1.5
47	1.2 D + 1.5 LL a + Service - 270 W	Yes	Y	1	1.2	7	-1			11	1.5
48	1.2 D + 1.5 LL a + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	11	1.5
49	1.2 D + 1.5 LL a + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	11	1.5
50	1.2 D + 1.5 LL b + Service - 0 W	Yes	Y	1	1.2	6	1			12	1.5
51	1.2 D + 1.5 LL b + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	12	1.5
52	1.2 D + 1.5 LL b + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	12	1.5
53	1.2 D + 1.5 LL b + Service - 90 W	Yes	Y	1	1.2	7	1			12	1.5
54	1.2 D + 1.5 LL b + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	12	1.5
55	1.2 D + 1.5 LL b + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	12	1.5
56	1.2 D + 1.5 LL b + Service - 180 W	Yes	Y	1	1.2	6	-1			12	1.5
57	1.2 D + 1.5 LL b + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	12	1.5
58	1.2 D + 1.5 LL b + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	12	1.5
59	1.2 D + 1.5 LL b + Service - 270 W	Yes	Y	1	1.2	7	-1			12	1.5
60	1.2 D + 1.5 LL b + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	12	1.5
61	1.2 D + 1.5 LL b + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	12	1.5
62	1.2 D + 1.5 LL c + Service - 0 W	Yes	Y	1	1.2	6	1			13	1.5
63	1.2 D + 1.5 LL c + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	13	1.5
64	1.2 D + 1.5 LL c + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	13	1.5
65	1.2 D + 1.5 LL c + Service - 90 W	Yes	Y	1	1.2	7	1			13	1.5
66	1.2 D + 1.5 LL c + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	13	1.5



**Load Combinations (Continued)**

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
67	1.2 D + 1.5 LL c + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	13	1.5
68	1.2 D + 1.5 LL c + Service - 180 W	Yes	Y	1	1.2	6	-1			13	1.5
69	1.2 D + 1.5 LL c + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	13	1.5
70	1.2 D + 1.5 LL c + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	13	1.5
71	1.2 D + 1.5 LL c + Service - 270 W	Yes	Y	1	1.2	7	-1			13	1.5
72	1.2 D + 1.5 LL c + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	13	1.5
73	1.2 D + 1.5 LL c + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	13	1.5
74	1.2 D + 1.5 LL d + Service - 0 W	Yes	Y	1	1.2	6	1			14	1.5
75	1.2 D + 1.5 LL d + Service - 30 W	Yes	Y	1	1.2	6	0.866	7	0.5	14	1.5
76	1.2 D + 1.5 LL d + Service - 60 W	Yes	Y	1	1.2	7	0.866	6	0.5	14	1.5
77	1.2 D + 1.5 LL d + Service - 90 W	Yes	Y	1	1.2	7	1			14	1.5
78	1.2 D + 1.5 LL d + Service - 120 W	Yes	Y	1	1.2	7	0.866	6	-0.5	14	1.5
79	1.2 D + 1.5 LL d + Service - 150 W	Yes	Y	1	1.2	6	-0.866	7	0.5	14	1.5
80	1.2 D + 1.5 LL d + Service - 180 W	Yes	Y	1	1.2	6	-1			14	1.5
81	1.2 D + 1.5 LL d + Service - 210 W	Yes	Y	1	1.2	6	-0.866	7	-0.5	14	1.5
82	1.2 D + 1.5 LL d + Service - 240 W	Yes	Y	1	1.2	7	-0.866	6	-0.5	14	1.5
83	1.2 D + 1.5 LL d + Service - 270 W	Yes	Y	1	1.2	7	-1			14	1.5
84	1.2 D + 1.5 LL d + Service - 300 W	Yes	Y	1	1.2	7	-0.866	6	0.5	14	1.5
85	1.2 D + 1.5 LL d + Service - 330 W	Yes	Y	1	1.2	6	0.866	7	-0.5	14	1.5
86	1.2 D + 1.5 LL Maint (1)	Yes	Y	1	1.2					15	1.5
87	1.2 D + 1.5 LL Maint (2)	Yes	Y	1	1.2					16	1.5
88	1.2 D + 1.5 LL Maint (3)	Yes	Y	1	1.2					17	1.5
89	1.2 D + 1.5 LL Maint (4)	Yes	Y	1	1.2					18	1.5
90	1.2 D + 1.5 LL Maint (5)	Yes	Y	1	1.2					19	1.5
91	1.2 D + 1.5 LL Maint (6)	Yes	Y	1	1.2					20	1.5
92	1.2 D + 1.5 LL Maint (7)	Yes	Y	1	1.2					21	1.5
93	1.2 D + 1.5 LL Maint (8)	Yes	Y	1	1.2					22	1.5
94	1.2 D + 1.5 LL Maint (9)	Yes	Y	1	1.2					23	1.5
95	1.2 D + 1.5 LL Maint (10)	Yes	Y	1	1.2					24	1.5
96	1.2 D + 1.5 LL Maint (11)	Yes	Y	1	1.2					25	1.5
97	1.2 D + 1.5 LL Maint (12)	Yes	Y	1	1.2					26	1.5
98	1.2 D + 1.5 LL Maint (13)	Yes	Y	1	1.2					27	1.5
99	1.2 D + 1.5 LL Maint (14)	Yes	Y	1	1.2					28	1.5
100	1.2 D + 1.5 LL Maint (15)	Yes	Y	1	1.2					29	1.5
101	1.2 D + 1.5 LL Maint (16)	Yes	Y	1	1.2					30	1.5
102	1.2 D + 1.5 LL Maint (17)	Yes	Y	1	1.2					31	1.5
103	1.2 D + 1.5 LL Maint (18)	Yes	Y	1	1.2					32	1.5
104	1.2 D + 1.5 LL Maint (19)	Yes	Y	1	1.2					33	1.5
105	1.2 D + 1.5 LL Maint (20)	Yes	Y	1	1.2					34	1.5
106	1.2 D + 1.5 LL Maint (21)	Yes	Y	1	1.2					35	1.5
107	1.2 D + 1.5 LL Maint (22)	Yes	Y	1	1.2					36	1.5
108	1.2 D + 1.5 LL Maint (23)	Yes	Y	1	1.2					37	1.5
109	1.2 D + 1.5 LL Maint (24)	Yes	Y	1	1.2					38	1.5

**Envelope Node Reactions**

Node Label		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC	
1	1	max	0.888	5	1.772	14	1.337	2	3.682	14	0.915	11	0.462	84
2		min	-0.893	11	0.043	8	-1.467	8	-0.325	8	-0.929	5	-0.243	42
3	57	max	0.986	5	1.69	18	1.08	2	0.145	13	1.049	3	-0.101	12
4		min	-1.096	11	0.163	12	-1.009	8	-1.924	43	-1.06	9	-3.253	18
5	86	max	1.044	5	1.666	22	1.199	2	0.131	3	1.081	7	3.069	46
6		min	-0.929	11	0.135	4	-1.141	8	-2.105	81	-1.09	13	-0.028	4
7	Totals:	max	2.919	5	4.773	24	3.616	2						
8		min	-2.919	11	2.369	6	-3.616	8						



Company : B+T Group  
 Designer : AK  
 Job Number : 149457.003.01  
 Model Name : CT11560-A - Sterling 6

7/6/2022  
 2:45:03 PM  
 Checked By : \_\_\_\_\_

**Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks**

Member	Shape	Code	Check	Loc[ft]	LC	Shear	Check	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt [k]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	1	HSS4X4X2	0.482	0	13	0.139	0	y	85		70.173	73.278	8.24	8.24	1.972	H1-1b
2	2	C3.38X2.06X.188	0.317	2.592	60	0.061	0.351	y	63		35.676	43.394	1.703	4.483	1.62	H1-1b
3	3	C3.38X2.06X.188	0.316	0	65	0.066	2.241	y	56		35.676	43.394	1.703	4.483	1.621	H1-1b
4	4	PL3/8X6 HRB	0.116	0.164	7	0.194	0	y	74		70.017	73.872	0.585	9.234	1.504	H1-1b
5	5	PL3/8X6 HRB	0.087	0.164	3	0.154	0	y	38		70.017	73.872	0.585	9.234	2.787	H1-1b
6	6	PIPE 3.0	0.085	3.828	6	0.057	9.297		81		36.138	65.205	5.749	5.749	1	H1-1b
7	7	PL3/8X6 HRB	0.114	0.208	8	0.182	0.208	y	62		71.879	73.872	0.585	9.234	1.46	H1-1b
8	8	PL3/8X6 HRB	0.116	0	13	0.187	0	y	50		71.879	73.872	0.585	9.234	3	H1-1b
9	9	L2X2X4	0.28	0	7	0.026	2.309	y	43		23.349	30.586	0.691	1.577	1.5	H2-1
10	10	L2X2X4	0.231	2.309	8	0.034	2.309	y	74		23.349	30.586	0.691	1.577	1.5	H2-1
11	11	L7.63X2.5X6	0.354	1.604	8	0.081	1.604	y	74		75.414	118.523	1.798	13.659	1.223	H2-1
12	19	PIPE 2.0	0.233	6	6	0.085	2.333		8		14.916	32.13	1.872	1.872	1	H1-1b
13	20	PIPE 2.0	0.274	2	5	0.057	2		5		14.916	32.13	1.872	1.872	1	H1-1b
14	21	PIPE 2.0	0.235	2	11	0.058	2		6		14.916	32.13	1.872	1.872	1	H1-1b
15	22	PIPE 2.0	0.223	5.667	9	0.068	2		9		14.916	32.13	1.872	1.872	1	H1-1b
16	27	PIPE 2.0	0.257	9.734	13	0.311	9.734		2		8.922	32.13	1.872	1.872	1	H3-6
17	28	L6.63X4.33X.25	0.179	3.25	6	0.025	3.25	y	74		51.794	86.751	2.311	6.976	1.5	H2-1
18	33	HSS4X4X2	0.455	0	7	0.139	0	y	76		70.173	73.278	8.24	8.24	1.987	H1-1b
19	34	C3.38X2.06X.188	0.314	2.592	52	0.061	0.351	y	68		35.676	43.394	1.703	4.483	1.618	H1-1b
20	35	C3.38X2.06X.188	0.317	0	69	0.066	2.241	y	60		35.676	43.394	1.703	4.483	1.621	H1-1b
21	36	PL3/8X6 HRB	0.1	0.164	10	0.192	0	y	78		70.017	73.872	0.585	9.234	1.442	H1-1b
22	37	PL3/8X6 HRB	0.088	0	7	0.153	0	y	43		70.017	73.872	0.585	9.234	3	H1-1b
23	38	PL3/8X6 HRB	0.098	0.208	13	0.181	0.208	y	66		71.879	73.872	0.585	9.234	1.789	H1-1b
24	39	PL3/8X6 HRB	0.095	0	5	0.187	0	y	55		71.879	73.872	0.585	9.234	3	H1-1b
25	40	L2X2X4	0.225	0	11	0.027	0	y	44		23.349	30.586	0.691	1.577	1.5	H2-1
26	41	L2X2X4	0.218	2.309	13	0.034	2.309	y	78		23.349	30.586	0.691	1.577	1.5	H2-1
27	42	L7.63X2.5X6	0.278	1.604	12	0.081	1.604	y	78		75.414	118.523	1.798	14.344	1.383	H2-1
28	47	L6.63X4.33X.25	0.23	0	3	0.025	3.25	y	79		51.794	86.751	2.311	6.976	1.5	H2-1
29	52	HSS4X4X2	0.468	0	9	0.137	0	y	80		70.173	73.278	8.24	8.24	1.971	H1-1b
30	53	C3.38X2.06X.188	0.313	2.592	56	0.06	0.351	y	72		35.676	43.394	1.703	4.483	1.62	H1-1b
31	54	C3.38X2.06X.188	0.313	0	62	0.066	2.241	y	51		35.676	43.394	1.703	4.483	1.621	H1-1b
32	55	PL3/8X6 HRB	0.135	0.164	2	0.187	0	y	81		70.017	73.872	0.585	9.234	1.397	H1-1b
33	56	PL3/8X6 HRB	0.072	0	11	0.153	0	y	46		70.017	73.872	0.585	9.234	2.714	H1-1b
34	57	PL3/8X6 HRB	0.092	0.208	4	0.18	0.208	y	69		71.879	73.872	0.585	9.234	1.605	H1-1b
35	58	PL3/8X6 HRB	0.114	0	9	0.184	0	y	58		71.879	73.872	0.585	9.234	3	H1-1b
36	59	L2X2X4	0.278	0	3	0.027	0	y	49		23.349	30.586	0.691	1.577	1.5	H2-1
37	60	L2X2X4	0.191	2.309	4	0.033	2.309	y	81		23.349	30.586	0.691	1.577	1.5	H2-1
38	61	L7.63X2.5X6	0.321	1.604	3	0.08	1.604	y	81		75.414	118.523	1.798	13.43	1.176	H2-1
39	66	L6.63X4.33X.25	0.26	0	7	0.027	3.25	z	8		51.794	86.751	2.311	6.976	1.5	H2-1
40	71	PIPE 3.0	0.099	3.828	9	0.058	9.297		74		36.138	65.205	5.749	5.749	1	H1-1b
41	72	PIPE 2.0	0.238	0.766	2	0.236	9.734		6		8.922	32.13	1.872	1.872	1	H1-1b
42	73	PIPE 3.0	0.103	3.828	2	0.058	9.297		78		36.138	65.205	5.749	5.749	1	H1-1b
43	74	PIPE 2.0	0.296	9.734	8	0.286	9.734		9		8.922	32.13	1.872	1.872	1	H3-6
44	79	PIPE 2.0	0.233	6	10	0.071	2.333		12		14.916	32.13	1.872	1.872	1	H1-1b
45	80	PIPE 2.0	0.325	2	9	0.066	2		9		14.916	32.13	1.872	1.872	1	H1-1b
46	81	PIPE 2.0	0.296	2	3	0.057	2		10		14.916	32.13	1.872	1.872	1	H1-1b
47	82	PIPE 2.0	0.247	2	2	0.086	2		2		14.916	32.13	1.872	1.872	1	H1-1b
48	91	PIPE 2.0	0.272	6	2	0.074	6		3		14.916	32.13	1.872	1.872	1	H1-1b
49	92	PIPE 2.0	0.334	2	13	0.072	2		13		14.916	32.13	1.872	1.872	1	H1-1b
50	93	PIPE 2.0	0.287	2	7	0.067	2		2		14.916	32.13	1.872	1.872	1	H1-1b
51	94	PIPE 2.0	0.212	2	6	0.072	2		6		14.916	32.13	1.872	1.872	1	H1-1b

## **APPENDIX B**

**Additional Calculations**

PROJECT	<b>149457.003.01 - Sterling 6, CT</b>			<b>KSC</b>
SUBJECT	<b>Platform Mount Analysis</b>			
DATE	<b>07/08/22</b>	PAGE	1	OF 1



**B+T Group**  
 1717 S. Boulder, Suite 300  
 Tulsa, OK 74119  
 (918) 587-4630

[REF: AISC 360-05]

**Reactions at Bolted Connection**

Tension	:	1.467	k
Vertical Shear	:	1.772	k
Horizontal Shear	:	0.893	k
Torsion	:	0.462	k.ft
Moment from Horizontal Forces	:	0.929	k.ft
Moment from Vertical Forces	:	3.682	k.ft

**Bolt Parameters**

Bolt Grade	:	A325	
Bolt Diameter	:	0.625	in
Nominal Bolt Area	:	0.307	in <sup>2</sup>
Bolt spacing, Horizontal	:	6	in
Bolt spacing, Vertical	:	6	in
Bolt edge distance, plate height	:	1.5	in
Bolt edge distance, plate width	:	1.5	in
Total Number of Bolts	:	4	bolts

**Summary of Forces**

Shear Resultant Force	:	1.98	k
Force from Horz. Moment	:	1.68	k
Force from Vert. Moment	:	6.67	k
Shear Load / Bolt	:	0.50	k
Tension Load / Bolt	:	0.37	k
Resultant from Moments / Bolt	:	3.44	k

**Bolt Checks**

Nominal Tensile Stress, $F_{nt}$	:	90.00	ksi	[AISC Table J3.2]
Available Tensile Stress, $\Phi R_{nt}$	:	20.72	k/bolt	[Eq. J3-1]
Unity Check, Bolt Tension	:	<b>18.37%</b>		<b>OKAY</b>
Nominal Shear Stress, $F_{nv}$	:	48.00	ksi	[AISC Table J3.2]
Available Shear Stress, $\Phi R_{nv}$	:	11.05	k/bolt	[Eq. J3-1]
Unity Check, Bolt Shear	:	<b>7.81%</b>		<b>OKAY</b>
Unity Check, Combined	:	<b>26.17%</b>		<b>OKAY</b>
Available Bearing Strength, $\Phi R_n$	:	34.66	k/bolt	
Unity Check, Bolt Bearing	:	<b>1.43%</b>		<b>OKAY</b>

PROJECT	<b>149457.003.01 - Sterling 6, CT</b>			<b>KSC</b>
SUBJECT	<b>Platform Mount Analysis</b>			
DATE	<b>07/08/22</b>	PAGE	1	OF 1



[REF: AISC 360-05]

**Connecting Member Parameters**

Plate Yield Strength, $F_y$	:	36.00	ksi	[AISC Table 2-5]
Plate Tensile Strength, $F_u$	:	58.00	ksi	[AISC Table 2-5]
Plate Height	:	9.00	in	
Plate Width	:	9.00	in	
Plate Thickness	:	0.50	in	
Edge Distance	:	1.06	in	
Gross Tension Area, $A_{gt}$	:	4.50	in <sup>2</sup>	
Gross Shear Area, $A_{gv}$	:	0.75	in <sup>2</sup>	
Net Area for tension, $A_{nt}$	:	4.16	in <sup>2</sup>	
Net Area for shear, $A_{nt}$	:	3.00	in <sup>2</sup>	

**Plate Check**

Available Tensile Yield	:	145.80	k	[Eq. J4-1]
Available Tensile Rupture	:	180.80	k	[Eq. J4-2]
Unity Check, Plate Tension	:	<b>2.61%</b>		<b>OKAY</b>
Available Shear Yield	:	16.20	k	[Eq. J4-3]
Available Shear Rupture	:	104.40	k	[Eq. J4-4]
Unity Check, Plate Shear	:	<b>12.25%</b>		<b>OKAY</b>
Available Block Shear, $\Phi R_n$	:	77.40	k	[Eq. J4-5]
Unity Check, Block Shear	:	<b>2.56%</b>		<b>OKAY</b>

# EXHIBIT 9

## EME Report





# Radio Frequency Emissions Analysis Report



**Site ID: BOBOS00053A**

SBA - Exeter Drive  
5 Exeter Drive (AKA 7 Exeter Drive)  
Sterling, CT 06377

**May 4, 2023**

**Fox Hill Telecom Project Number: 222134**

Site Compliance Summary	
Compliance Status:	<b>COMPLIANT</b>
Site total MPE% of FCC general population allowable limit:	<b>21.36 %</b>

May 4, 2023

Dish Wireless  
5701 South Santa Fe Drive  
Littleton, CO 80120

### Emissions Analysis for Site: **BOBOS00053A – SBA - Exeter Drive**

Fox Hill Telecom, Inc (“Fox Hill”) was directed to analyze the proposed radio installation for Dish Wireless, LLC (Dish) facility located at **5 Exeter Drive (AKA 7 Exeter Drive), Sterling, CT**, for the purpose of determining whether the emissions from the Proposed Dish radio and antenna installation located on this property are within specified federal limits.

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

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

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

Population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ). The general population exposure limit for the 600 MHz band is approximately  $400 \mu\text{W}/\text{cm}^2$ . The general population exposure limit for the 1900 MHz (PCS) and 2100 MHz (AWS / AWS-4) bands is  $1000 \mu\text{W}/\text{cm}^2$ . Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.



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

Additional details can be found in FCC OET 65.

## CALCULATIONS

Calculations were performed for the proposed upgrades to the Dish Wireless antenna facility located at **5 Exeter Drive (AKA 7 Exeter Drive), Sterling, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65 for far field modeling calculations.

In OET-65, plane wave power densities in the Far Field of an antenna are calculated by considering antenna gain and reflective waves that would contribute to exposure.

Since the radiation pattern of an antenna has developed in the **Far Field** region the power gain in specific directions needs to be considered in exposure predictions to yield an Effective Radiated Power (ERP) in each specific direction from the antenna. Also, since the vertical radiation pattern of the antenna is considered, the exposure calculations would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels. To determine a worst-case scenario at each point along the calculation radials, each point was calculated using the antenna gain value at each angle of incident and compared against the result using an isotropic radiator at the antenna height with the greater of the two used to yield the more pessimistic far field value for each point along the calculation radial.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential 1.6 times increase in power density in calculating far field power density values.

With these factors Considered, the worst case **Far Field prediction model** utilized in this analysis is determined by the following equation:

Equation 9 per FCC OET65 for Far Field Modeling

$$S = \frac{33.4 \text{ ERP}}{R^2}$$

S = Power Density (in  $\mu\text{w}/\text{cm}^2$ )

ERP = Effective Radiated Power from antenna (watts)

R = Distance from the antenna (meters)

Predicted far field power density values for all carriers identified in this report were calculated 6 feet above the ground level and are displayed as a percentage of the applicable FCC standards. All emissions values for other carriers were calculated using the same Far Field model outlined above, using industry standard radio configurations and frequency band selection based upon available licenses in this geographic area for emissions contribution estimates.



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

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
5G	n71 (600 MHz)	4	61.5
5G	n70 (AWS-4 / 1995-2020)	4	40
5G	n66 (AWS-4 / 2180-2200)	4	40

*Table 1: Channel Data Table*



The following **Dish** antennas listed in *Table 2* were used in the modeling for transmission in the 600 MHz (n71) frequency band and the 2100 MHz (AWS 4) frequency bands at 1995-2020 MHz (n70) and 2180-2200 MHz (n66). This is based on feedback from Dish regarding anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	Commscope FFVV-65B-R2	95
B	1	Commscope FFVV-65B-R2	95
C	1	Commscope FFVV-65B-R2	95

*Table 2: Antenna Data*

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



## RESULTS

Per the calculations completed for the proposed **Dish** configurations *Table 3* shows resulting emissions power levels and percentages of the FCC’s allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	Commscope FFVV-65B-R2	n71 (600 MHz) / n70 (AWS-4 / 1995-2020) / n66 (AWS-4 / 2180-2200)	12.15 / 15.95 / 16.25	12	566	17,079.80	4.30
Sector A Composite MPE%							<b>4.30</b>
Antenna B1	Commscope FFVV-65B-R2	n71 (600 MHz) / n70 (AWS-4 / 1995-2020) / n66 (AWS-4 / 2180-2200)	12.15 / 15.95 / 16.25	12	566	17,079.80	4.30
Sector B Composite MPE%							<b>4.30</b>
Antenna C1	Commscope FFVV-65B-R2	n71 (600 MHz) / n70 (AWS-4 / 1995-2020) / n66 (AWS-4 / 2180-2200)	12.15 / 15.95 / 16.25	12	566	17,079.80	4.30
Sector C Composite MPE%							<b>4.30</b>

*Table 3: Dish Emissions Levels*





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

<b>Site Composite MPE%</b>	
<b>Carrier</b>	<b>MPE%</b>
Dish – Max Per Sector Value	<b>4.30 %</b>
Verizon Wireless	7.70 %
AT&T	5.88 %
T-Mobile	3.48 %
<b>Site Total MPE %:</b>	<b>21.36 %</b>

*Table 4: All Carrier MPE Contributions*

Dish Sector A Total:	4.30 %
Dish Sector B Total:	4.30 %
Dish Sector C Total:	4.30 %
<hr/>	
<b>Site Total:</b>	<b>21.36 %</b>

*Table 5: Site MPE Summary*

Table 6 below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated **Dish** sector(s). For this site, all three sectors have the same configuration yielding the same results on all three sectors.

Dish _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ( $\mu\text{W}/\text{cm}^2$ )	Frequency (MHz)	Allowable MPE ( $\mu\text{W}/\text{cm}^2$ )	Calculated % MPE
Dish n71 (600 MHz) 5G	4	1,008.96	95	11.36	n71 (600 MHz)	400	2.84%
Dish n70 (AWS-4 / 1995-2020) 5G	4	1,574.20	95	7.30	n70 (AWS-4 / 1995-2020)	1000	0.73%
Dish n66 (AWS-4 / 2180-2200) 5G	4	1,686.79	95	7.30	n66 (AWS-4 / 2180-2200)	1000	0.73%
						<b>Total:</b>	<b>4.30 %</b>

*Table 6: Dish Maximum Sector MPE Power Values*

## Summary

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

The anticipated maximum composite contributions from the Dish facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

Dish Sector	Power Density Value (%)
Sector A:	4.30 %
Sector B:	4.30 %
Sector C:	4.30 %
Dish Maximum Total (per sector):	4.30 %
Site Total:	21.36 %
Site Compliance Status:	<b>COMPLIANT</b>

The anticipated composite emissions value for this site, assuming all carriers present, is **21.36 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon the far field calculations performed for all carriers identified in this report.

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



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