Filed by:
G. Scott Shepherd, Sr. Property Specialist - SBA Communications
134 Flanders Rd., Suite 125, Westborough, MA 01581
508.251.0720 x 3807 - GShepherd@sbasite.com

March 2, 2022

Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Tower Share Application
206 Everett Rd., Easton, CT 06612
Latitude: 41.290333
Longitude: -73.282666
Dish Site# NJJER01147B

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 206 Everett Rd., Easton, Connecticut.

Dish Wireless LLC proposes to install three (3) 600/1900/2100 MHz antennas and six (6) RRUs, at the 108-foot level of the existing 158-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, dated February 2, 2022 Exhibit 10. Also included is a structural analysis prepared by TES, dated January 17, 2022, confirming that the existing tower is structurally capable of supporting the proposed equipment. Attached as Exhibit 8. This facility was approved by the Town of Easton's Planning & Zoning Commission at its regular meeting of September 27, 1999 under #Z1996862361 for Special Permit (attached) for Wireless Telecommunication Tower before courts decisions gave jurisdiction to the Connecticut Siting Council. In its approval, the Town provided for a 40-foot extension to accommodate future carriers interested in sharing the site. This extension in the Town's opinion was preferable to having additional towers built. The Connecticut Siting Council later approved the Tower on June 30, 2003 under Petition No. 627T (attached). The following stipulations were set forth by the Town of Haddam's P & Z Commission: The Tower be constructed as to permit the installation of antennae that may be required by up to and including three additional Providers; 20 shall furnish a bond to this Commission in the amount of $25,000 to assure timely completion of any such additions or modifications; 30 Within ten-days following receipt of a request from any other Provider to install their antenna€ on the Tower, Nextel shall notify this Commission of such request in the event of denial of any such request, a written report to this Commission in a timely manner specifying in detail the reason(s) for such denial. There were no other post construction stipulations made. Please see attached Exhibit 6.

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 David Bindelglass, First Selectman for the Town of Easton, Raymond Martin, Chair, Planning & Zoning Commission, as well as to property owners, David Barney and Joan D. Barney. Separate notice is not being sent to tower owner as it belongs to SBA.

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 tower is 150-feet; Dish Wireless LLC proposed antennas will be located at a center line height of 108-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 8.3823% as evidenced by Exhibit 7.

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 8.

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 Easton. 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. Further, a Letter of Authorization is included as Exhibit 2, authorizing Dish Wireless LLC to file this application for shared use.

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 108-foot level of the existing 158-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.

D. 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 7, the proposed antennas would not increase radio frequency emissions to a level at or above the Federal Communications Commission safety standard.

E. 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.

F. 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 Westbrook.

Sincerely,

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

Attachments:

cc: David Bindelglass, First Selectman / with attachments
Town of Easton, 225 Center Rd., Easton, CT 06612
Raymond Martin, Chair, Planning & Zoning Commission / with attachments
Town of Easton, 225 Center Rd., Easton, CT 06612
David Barney and Joan D. Barney / with attachments
196 Everett Rd., Easton, CT 06612 (SBA remittance address on file)

EXHIBIT LIST

Exhibit 1	Copy of Check	X
Exhibit 2	Letter of Intent to Allow Shared Use of the Existing SBA Telecommunications Site	X
Exhibit 3	Notification Receipts	x
Exhibit 4	Property Card	x
Exhibit 5	Property Map	x
Exhibit 6	Original Zoning Approval	Town of Easton P&Z 9/27/99, CSC Petition No. 627T
Exhibit 7	EME Report	Pinnacle Telecom Group 02/21/2022
Exhibit 8	Structural Analysis	TES 1/17/22
Exhibit 9	Mount Analysis	B+T Group 1/10/22
Exhibit 10	Construction Drawings	B+T Group 2/2/22

EXHIBIT 1

Copy of check

EXHIBIT 2
Letter of Intent

March 2, 2022

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

RE: **Notice of Intent to Allow Shared Use of the Existing SBA Telecommunications Site**
Location: 26 Everett Rd., Easton, CT
Dish Wireless Site No: NJJER01147B
SBA Site No: CT46131-A

Dear Ms. Bachman:

Please let the following serve as Evidence of Intent to allow Dish's shared use of the existing SBA telecommunications site at 26 Everett Rd., Easton, CT.

SBA 2012 TC Assets, LLC ("Owner") and Dish Wireless ("Tenant") are entering into a Site Lease Agreement. Tenant will be provided ground space within the existing site compound for its base station equipment and space at the height of 108' for antennas and associated equipment.

Thank you,

Rick Woods
Site Development Manager
SBA COMMUNICATIONS CORPORATION
134 Flanders Road, Suite 125
Westboro, MA 01581

508.251.0720 x3800 + T
508.366.2610 + F
508.614.0389 + C
rwoods@sbasite.com

EXHIBIT 3

Fedex Labels

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

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FedEx® Tracking

776186132412

ADD NICKNAME

ON TIME

Scheduled delivery:
Friday, March 4, 2022 before 8:00 pm

IN TRANSIT

On FedEx vehicle for delivery

STRATFORD, CT

GET STATUS UPDATES

Want to know when your package will arrive?

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FROM

Elizabeth Jamieson

134 Flanders Rd,
Suite 125
WESTBOROUGH, MA US 01581
860-605-7808

TO

David Barney and Joan D. Barney

196 Everett Rd
EASTON, CT US 06612
203-268-4608

MANAGE DELIVERY

Travel History

TIME ZONE
Local Scan Time

Friday, March 4, 2022

9:14 AM	STRATFORD, CT	Shipment arriving On-Time
9:09 AM	STRATFORD, CT	On FedEx vehicle for delivery
8:55 AM	STRATFORD, CT	At local FedEx facility

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FedEx® Tracking

776185924020

ADD NICKNAME

ON TIME

Scheduled delivery:
Friday, March 4, 2022 before 4:30 pm

IN TRANSIT

On FedEx vehicle for delivery
STRATFORD, CT

GET STATUS UPDATES

FROM

Elizabeth Jamieson

134 Flanders Rd,
Suite 125
WESTBOROUGH, MA US 01581
860-605-7808

TO

David Bindelglass, First Selectman
Town of Easton

225 Center Rd
EASTON, CT US 06612
203-268-6291

MANAGE DELIVERY

Travel History

TIME ZONE
Local Scan Time

Friday, March 4, 2022		
9:11 AM	STRATFORD, CT	Shipment arriving On-Time
9:09 AM	STRATFORD, CT	On FedEx vehicle for delivery
8:52 AM	STRATFORD, CT	At local FedEx facility
Thursday, March 3, 2022		
8:12 PM	EAST GRANBY, CT	At destination sort facility
7:01 PM	WATERTOWN, CT	Left FedEx origin facility

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1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
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FedEx® Tracking

776185961686

ADD NICKNAME

ON TIME

Scheduled delivery:
Friday, March 4, 2022 before 4:30 pm

IN TRANSIT

On FedEx vehicle for delivery

STRATFORD, CT

GET STATUS UPDATES

FROM

Elizabeth Jamieson

134 Flanders Rd,
Suite 125
WESTBOROUGH, MA US 01581
860-605-7808

TO

Raymond Martin Chair, PZC
Town of Easton

225 Center Rd
EASTON, CT US 06612
203-268-6291

MANAGE DELIVERY

Travel History

TIME ZONE
Local Scan Time

Friday, March 4, 2022		
9:16 AM	STRATFORD, CT	Shipment arriving On-Time
9:09 AM	STRATFORD, CT	On FedEx vehicle for delivery
8:57 AM	STRATFORD, CT	At local FedEx facility
Thursday, March 3, 2022		
8:12 PM	EAST GRANBY, CT	At destination sort facility
7:01 PM	WATERTOWN, CT	Left FedEx origin facility

EXHIBIT 4

Property Card

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2021.

Easton, CT

Information on the Property Records for the Municipality of Easton was last updated on 2/11/2022.

Parcel Information

Location:	206 EVERETT ROAD	Property Use:	Residential	Primary Use:	Residential
Unique ID:	00010600	Map Block Lot:	9610 9611 1	Acres:	37.59
490 Acres:	34.48	Zone:	R3	Volume / Page:	0681/0372
Developers Map / Lot:	1834 1835	Census:	1052		

Value Information

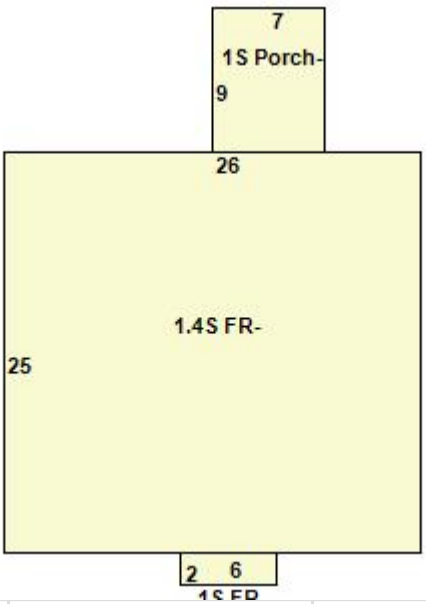
	Appraised Value	Assessed Value
Land	686,000	341,740
Buildings	216,300	151,410
Detached Outbuildings	93,600	65,520

	Appraised Value	Assessed Value
Total	995,900	558,670

Owner's Information

Owner's Data
BARNEY JOAN 1/2 INT & BARNEY DAVID 1/2 108 HIRAM HILL ROAD MONROE, CT 06468

Building 1



Building Use:	Single Family	Style:	Cape	Living Area:	922

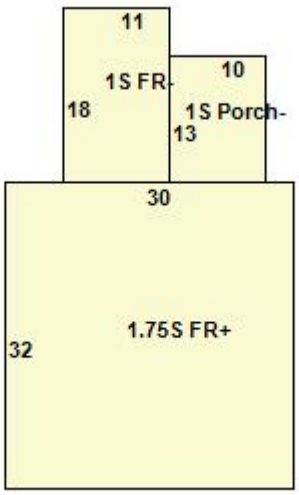
Stories:	1.40	Construction:	Wood Frame	Year Built:	1948
Total Rooms:	5	Bedrooms:	3	Full Baths:	1
Half Baths:	0	Fireplaces:	0	Heating:	Hot Water
Fuel:	Oil	Cooling Percent:	0	Basement Area:	0
Basement Finished Area:	0	Basement Garages:	0	Roof Material:	Asphalt
Siding:	Clapboards/Stucco	Units:			

Special Features

Attached Components

Type:	Year Built:	Area:
Enclosed Porch	1948	63

Building 2



Building Use:	Single Family	Style:	Salt Box	Living Area:	1,878
Stories:	1.75	Construction:	Wood Frame	Year Built:	1934
Total Rooms:	8	Bedrooms:	3	Full Baths:	1
Half Baths:	1	Fireplaces:	0	Heating:	Hot Water
Fuel:	Oil	Cooling Percent:	0	Basement Area:	960
Basement Finished Area:	0	Basement Garages:	0	Roof Material:	Asphalt
Siding:	Wood Shingles	Units:			

Special Features

Fireplace	2

Attached Components

Type:	Year Built:	Area:
Dormer Dormer	1934	12
Enclosed Porch	1934	130

Detached Outbuildings

Type:	Year Built:	Length:	Width:	Area:
1 Story Frame Barn	1900	21.00	27.00	567
1 Story Frame Barn	1900	16.00	21.00	336
1 Story Masonry Barn	1966	38.00	70.00	2,660
Det 1 Story Frame Garage	1944	13.00	23.00	299
Det 1 Story Frame with Loft Garage	1934	19.00	20.00	380
Average Shed	1934	12.00	22.00	264
Frame Shed	2009	20.00	10.00	200

Owner History - Sales

Owner Name	Volume	Page	Sale Date	Deed Type	Sale Price
BARNEY JOAN 1/2 INT & BARNEY DAVID 1/2	0681	0372	06/11/2019	Probate	$0
BARNEY JOAN 1/2 INT & BARNEY DAVID 1/2	0674	1188	11/08/2017	Certificate of Devise	$0
BARNEY ALFRED	0645	0931	01/11/2012	Quit Claim	$0
BARNEY FAMILY TRUST THE	0121	0208	12/16/1991		$0
BARNEY ALFRED N & DOROTHY M SURV	0037	0312	02/14/1961	Warranty Deed	$18,000

Building Permits

Permit Number	Permit Type	Date Opened	Reason
16986	Cell Tower	04/01/2021	INSTALL 3 REPLACEMENT ANTENNAS
15745	Cell Tower	04/18/2018	REPLACE 3 OUTDATED ANTENNAS SBA-SPRINT
15350	Cell Tower	03/10/2017	REMOVE 9 CELL ANTENNAS-REPLACE W 6
13790	Mechanical	05/03/2013	MODIFY SPRINT EQUIPMENT ON TOWER
13039	Cell Tower	07/01/2011	ADD 3 LTE ANTENNAS TO EXISTING PLATFORM, ADD 6 RR4 TO MOUNTED MONOPOLE
12325	Commercial	05/11/2009	ANTENNAS ON EXIST TOWER 10X20 EQUIPMENT SHELTER W/GENERATOR

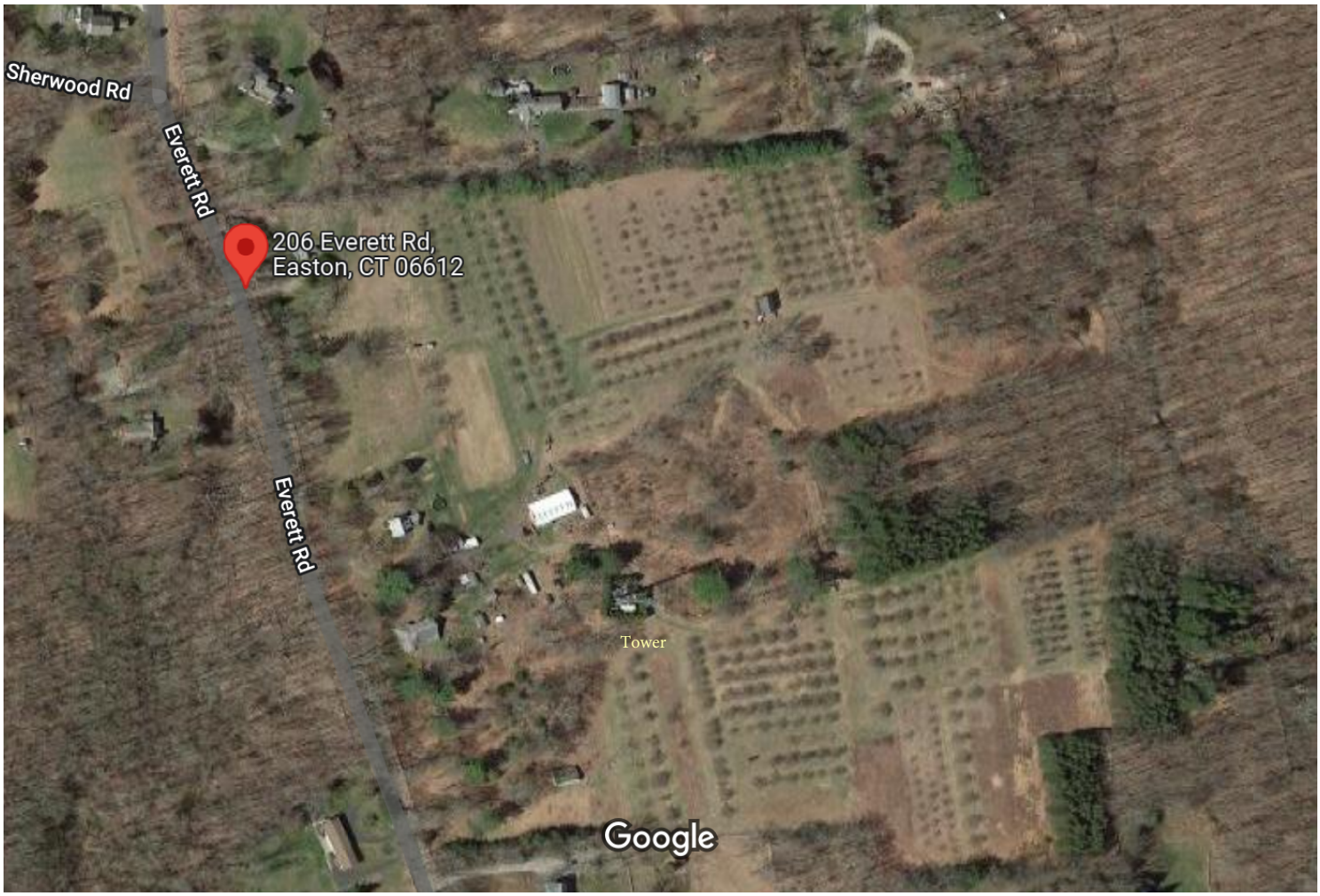
EXHIBIT 5

Property Map

Google Maps 206 Everett Rd

Map data ©2022 200 ft

Google Maps 206 Everett Rd



Imagery ©2022 Maxar Technologies, New York GIS, USDA Farm Service Agency, Map data ©2022 200 ft

EXHIBIT 6

Zoning Approval

Tab 7 Document 3

EASTON PLANNING & ZONING COMMISSION

225 CENTER ROAD

EASTON, CT., 06612

CERTIFIED MAIL
RECEIPT #Z1996862361

September 29, 1999

NEXTEL COMMUNICATIONS OF THE
MID-ATLANTIC d/b/a NEXTEL COMMUNICATIONS
100 Corporate Place
Rocky Hill, Connecticut 06067

Attention: Susan Bellion

RE: SP-99-05, NEXTEL CUMMUNICATIONS OF THE MID-ATLANTIC, INC. d/b/a NEXTEL COMMUNICATIONS, Location: 206 Everett Road, Map 9601, Block 1, District B

Dear Ms. Bellion:

Please be advised that the Easton Planning & Zoning Commission, at its regular meeting of September 27, 1999 voted to APPROVE your application for Special Permit for Wireless Telecommunication Tower at the above site with the stipulations and modifications set forth in EXHIBIT A , attached hereto and part of this letter.

Upon receipt of this letter, this original copy and all attached exhibits must be filed in the Easton land records at the applicant's expense. The effective date of this decision is October 15, 1999.

Yours truly,

EASTON PLANNING & ZONING COMMISSION

by Robert Maquat
Robert Maquat, Acting Chairman

RM:ma
cc: Attorney Daniel Leary, Cuddy & Feder & Worby

EXHIBIT A

RE: SP-99-05, Special Permit for Wireless Telecommunication Tower by
Nextel Communications of the Mid-Atlantic Inc. d/b/a
Nextel Communications, Location: 206 Everett Road
9/27/99

The stipulations and modifications set forth below are an integral part of the approval of the subject-named Special Permit application for construction of a Tower for mounting of Telecommunication Antenna(e). Special Permit plans and design information shall be revised to meet the following:

1. the Tower be constructed as to permit the installation of antenna(e) that may be required by up to and including three additional Providers as defined in Section 7.10.2 of the Easton Zoning Regulations, with the construction to accommodate such additional Provider(s) to be completed either
   (a) in the initial Tower construction, or
   (b) by means of structural addition or other modification to the initial Tower construction
   in a timely manner when any such additional Provider(s) request(s) installation of their antenna(e) on the Tower; and,
2. In the event that Nextel constructs the Tower initially to permit subsequent addition of modification pursuant to 1(b) above, then Nextel shall furnish a bond to this Commission in the amount of $25000 to assure timely completion of any such addition or modification, such bond to be released by the Town on either a) completion of any such additions or modifications to accommodate three Providers in addition to Nextel, or b) the expiration of five years following the effective date of this approval, whichever shall first occur; and,
3. Within ten days following receipt of a request from any other Provider to install their antenna(e) on the Tower, Nextel shall notify this Commission of such request and in the event of denial of any such request, Nextel shall submit a written report to this Commission in a timely manner specifying in detail the reason(s) for such denial.

EASTON PLANNING & ZONING COMMISSION

by Robert Maquat ma
Robert Maquat
Acting Chairman

RECEIVED FOR RECORD NOVEMBER 5, 1999
AT 9:51 P.M. ATTEST Elizabeth O. Fowler
EASTON TOWN CLERK

NOTICE OF
ZONING PERMIT EASTON, CONN.

PERMIT NO. Z-99-1704 DATE April 26, 2000

GRANTED TO The Barney Family Trust, Alfred Barney, Dorothy Barney

LOCATION 206 Everett Road

TO ERECT OR BUILD 7'2" x 11'2" unmanned prefabricated equipment shelter & monopole (capable of supporting four carriers).

NOTICE
CERTIFIED PLOT PLAN REQUIRED
BEFORE CONSTRUCTION OF BUILDING
ON FOUNDATION.
ART. IX PAR. 9.2.4

5.1.00 Permit Posted, 2.24

Z.E.O. FOR PLANNING AND ZONING COMMISSION
Phillip Doremus

This permit is based on information submitted with your application. If any changes or alterations are to be made which are not covered in the initial application, then a new and additional permit should be obtained.

This Notice should be posted in a conspicuous place where it is readily visible to the enforcement authority during the entire time required to complete the work.

7/88

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@po.state.ct.us
Web Site: www.state.ct.us/csc/index.htm

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

June 30, 2003

Thomas J. Regan, Esq.
Brown Rudnick Berlack Israels LLP
185 Asylum Street, CityPlace I
Hartford, CT 06103-3402

RE: **PETITION NO. 627T** - Sprint Spectrum L.P. and Omnipoint Facilities Network 2, L.L.C. petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed modifications to an existing telecommunications facility located at 206 Everett Road, Easton, Connecticut.

Dear Attorney Regan:

At a public meeting held on June 19, 2003, the Connecticut Siting Council (Council) considered and ruled that this proposal would not have a substantial adverse environmental effect, and pursuant to General Statutes § 16-50k would not require a Certificate of Environmental Compatibility and Public Need.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition, dated May 7, 2003.

Enclosed for your information is a copy of the staff report on this project.

Very truly yours,

Pamela B. Katz

Pamela B. Katz, P.E.
Chairman

PBK/laf

Enclosure: Staff Report dated June 19, 2003

c: Honorable William J. Kupinse, First Selectman, Town of Easton
Planning and Zoning Official, Town of Easton

I:\siting\petition\627T\ldoc61903.doc

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@po.state.ct.us
Web Site: www.state.ct.us/csc/index.htm

Staff Report
Petition 627: Sprint
206 Everett Road, Easton
June 19, 2003

On June 11, 2003, Council member Ed Wilensky and staff member David Martin visited 206 Everett Road in Easton, the subject property of this Petition. Also present were several representatives of the companies party to the Petition: Tom Regan and Jason Pintek, representing Sprint, Stephen Humes and Jerry Aquino, representing T-Mobile, and Tom Flynn, representing the tower owner, Nextel.

The facility currently consists of a 120-foot tall monopole on which Nextel and AT&T have located antennas. The petition, jointly submitted by Sprint Spectrum and VoiceStream, seeks to extend the monopole an additional 38 feet to an overall height of 158 feet. Sprint would locate its antennas at the 158' level. Nextel would move its antennas from 118' to 148', and VoiceStream would install antennas at 138'. Sprint would also attach a GPS antenna at 65'.

The site is located in on a farm in a rural residential area. Existing vegetation screens the tower from most of its neighbors. It is visible only for a short distance on Everett Road.

The existing monopole was originally approved by the Town of Easton in 1999, before court decisions gave jurisdiction to the Council. In its approval, the town provided for a 40-foot extension to accommodate future carriers interested in sharing the site. This extension, in the town's opinion, was preferable to having additional towers built. In a phone conversation with Mr. Martin, the town's land use director confirmed that the original site approval provided for the tower's future extension and that the town had no concerns about the current proposal.

At staff's request, Sprint notified abutting property owners of its pending petition via certified mail.

Based on the facility's existing conditions and the town's original approval that foresaw the need to extend the tower, Sprint's and VoiceStream's petition is not expected to create any adverse environmental impacts.

EXHIBIT 7

EME Report

Pinnacle Telecom Group

Professional and Technical Services

Antenna Site FCC RF Compliance Assessment and Report for Municipal Submission

Prepared for:	Dish Wireless, LLC
Site ID:	NJJER01147B
Site Address:	206 Everett Road Easton, CT
Latitude:	N 41.29033300
Longitude:	W 73.28266600
Structure type:	Monopole
Report date:	February 21, 2022
Compliance Conclusion:	Dish Wireless, LLC will be in compliance with the rules and regulations as described in OET Bulletin 65, following the implementation of the proposed mitigation as detailed in the report.

14 Ridgedale Avenue - Suite 260 • Cedar Knolls, NJ 07927 • 973-451-1630

Contents

Introduction and Summary

At the request of Dish Wireless, LLC ("Dish"), Pinnacle Telecom Group has performed an independent expert assessment of radiofrequency (RF) levels and related FCC compliance for proposed wireless base station antenna operations on an existing monopole located at 206 Everett Road in Easton, CT. Dish refers to the antenna site by the code "NJJER01147B", and its proposed operation involves directional panel antennas and transmission in the 600 MHz, 2000 MHz and 2100 MHz frequency bands licensed to it by the FCC.

The FCC requires all wireless antenna operators to perform an assessment of potential human exposure to radiofrequency (RF) fields emanating from all the transmitting antennas at a site whenever antenna operations are added or modified, and to ensure compliance with the Maximum Permissible Exposure (MPE) limit in the FCC's regulations. In this case, the compliance assessment needs to take into account the RF effects of other existing antenna operations at the site by AT&T, Sprint, T-Mobile and Verizon Wireless. Note that FCC regulations require any future antenna collocators to assess and assure continuing compliance based on the cumulative effects of all then-proposed and then-existing antennas at the site.

This report describes a mathematical analysis of RF levels resulting around the site in areas of unrestricted public access, that is, at street level around the site. The compliance analysis employs a standard FCC formula for calculating the effects of the antennas in a very conservative manner, in order to overstate the RF levels and to ensure "safe-side" conclusions regarding compliance with the FCC limit for safe continuous exposure of the general public.

The results of a compliance assessment can be described in layman's terms by expressing the calculated RF levels as simple percentages of the FCC MPE limit. If the normalized reference for that limit is 100 percent, then calculated RF levels higher than 100 percent indicate the MPE limit is exceeded and there is a need to mitigate the potential exposure. On the other hand, calculated RF levels consistently below 100 percent serve as a clear and sufficient demonstration of

compliance with the MPE limit. We can (and will) also describe the overall worst-case result via the “plain-English” equivalent “times-below-the-limit” factor.

The result of the RF compliance assessment in this case is as follows:

- At street level, the conservatively calculated maximum RF level from the combination of proposed and existing antenna operations at the site is 8.3823 percent of the FCC general population MPE limit – well below the 100-percent reference for compliance. In other words, the worst-case calculated RF level – intentionally and significantly overstated by the calculations – is still more than 11 times below the FCC limit for safe, continuous exposure of the general public.
- A supplemental analysis of the RF levels at the same height as the Dish antennas indicate that the FCC MPE limit is potentially exceeded. Therefore, it is recommended that two Caution signs be installed six feet below the antennas. In addition, NOC Information signs are to be installed at the base of the monopole.
- The results of the calculations, along with the proposed mitigation, combine to satisfy the FCC requirements and associated guidelines on RF compliance at street level around the site and on the subject roof. Moreover, because of the significant conservatism incorporated in the analysis, RF levels actually caused by the antennas will be lower than these calculations indicate.

The remainder of this report provides the following:

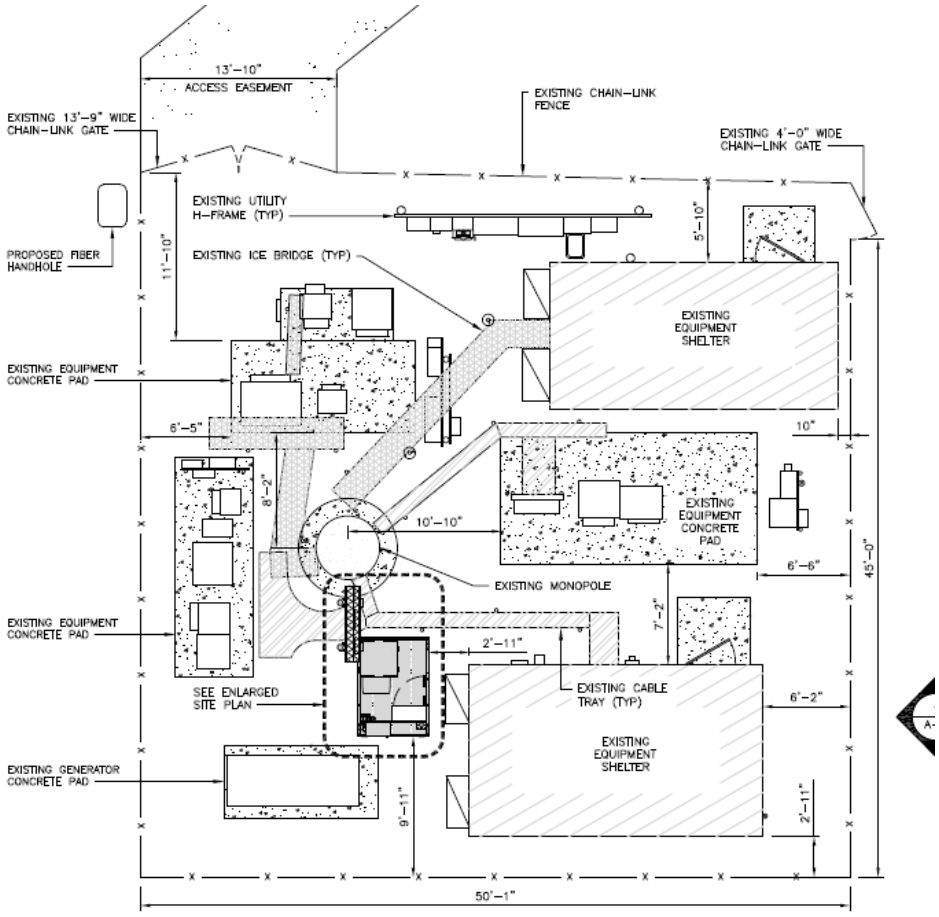
- relevant technical data on the proposed Dish antenna operations at the site, as well as on the other existing antenna operations;
- a description of the applicable FCC mathematical model for calculating RF levels, and application of the relevant technical data to that model;
- analysis of the results of the calculations against the FCC MPE limit, and the compliance conclusion for the site.

In addition, four Appendices are included. Appendix A provides information on the documents used to prepare the analysis. Appendix B provides background on the FCC MPE limit. Appendix C details the proposed mitigation to satisfy the FCC requirements and associated guidelines on RF compliance. Appendix D provides a summary of the qualifications of the expert certifying FCC compliance for this site.

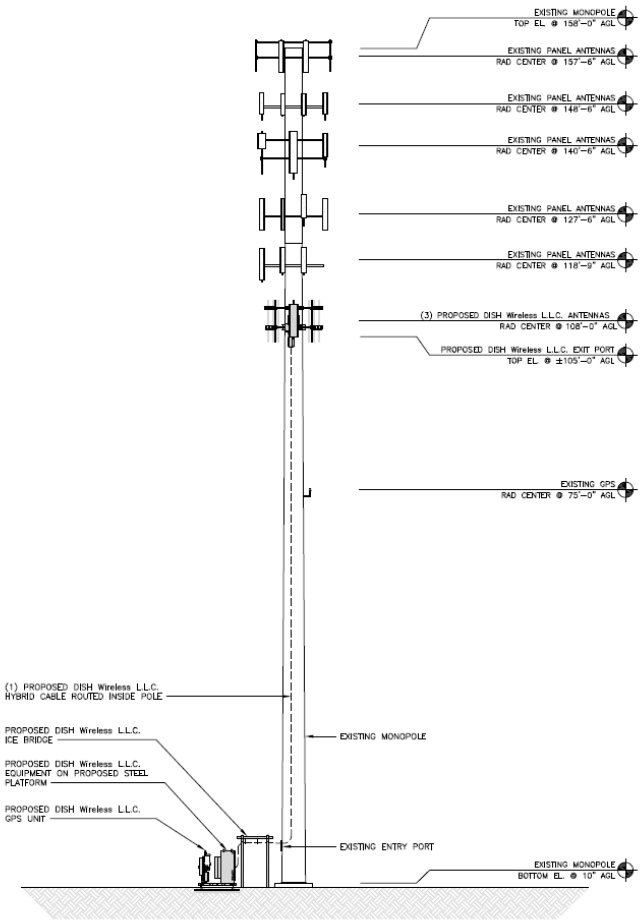
Antenna and Transmission Data

The plan and elevation views that follow, extracted from the site drawings, illustrate the mounting positions of the Dish antennas at the site.

Plan View:



Elevation View:



The table that follows summarizes the relevant data for the proposed Dish antenna operations. Note that the "Z" height references the centerline of the antenna.

Ant. ID	Carrier	Antenna Manufacturer	Antenna Model	Type	Freq (MHz)	Ant. Dim. (ft.)	Total Input Power (watts)	Total ERP (watts)	Z AGL (ft)	Ant. Gain (dBd)	B/W	Azimuth	EDT	MDT
❶	Dish	Commscope	FFVV-65B-R2	Panel	600	6	120	2110	108	12.46	64	90	2	0
❶	Dish	Commscope	FFVV-65B-R2	Panel	2000	6	160	7396	108	16.66	67	90	2	0
❶	Dish	Commscope	FFVV-65B-R2	Panel	2100	6	160	7396	108	16.66	67	90	2	0
❷	Dish	Commscope	FFVV-65B-R2	Panel	600	6	120	2110	108	12.46	64	230	2	0
❷	Dish	Commscope	FFVV-65B-R2	Panel	2000	6	160	7396	108	16.66	67	230	2	0
❷	Dish	Commscope	FFVV-65B-R2	Panel	2100	6	160	7396	108	16.66	67	230	2	0
❸	Dish	Commscope	FFVV-65B-R2	Panel	600	6	120	2110	108	12.46	64	340	2	0
❸	Dish	Commscope	FFVV-65B-R2	Panel	2000	6	160	7396	108	16.66	67	340	2	0
❸	Dish	Commscope	FFVV-65B-R2	Panel	2100	6	160	7396	108	16.66	67	340	2	0

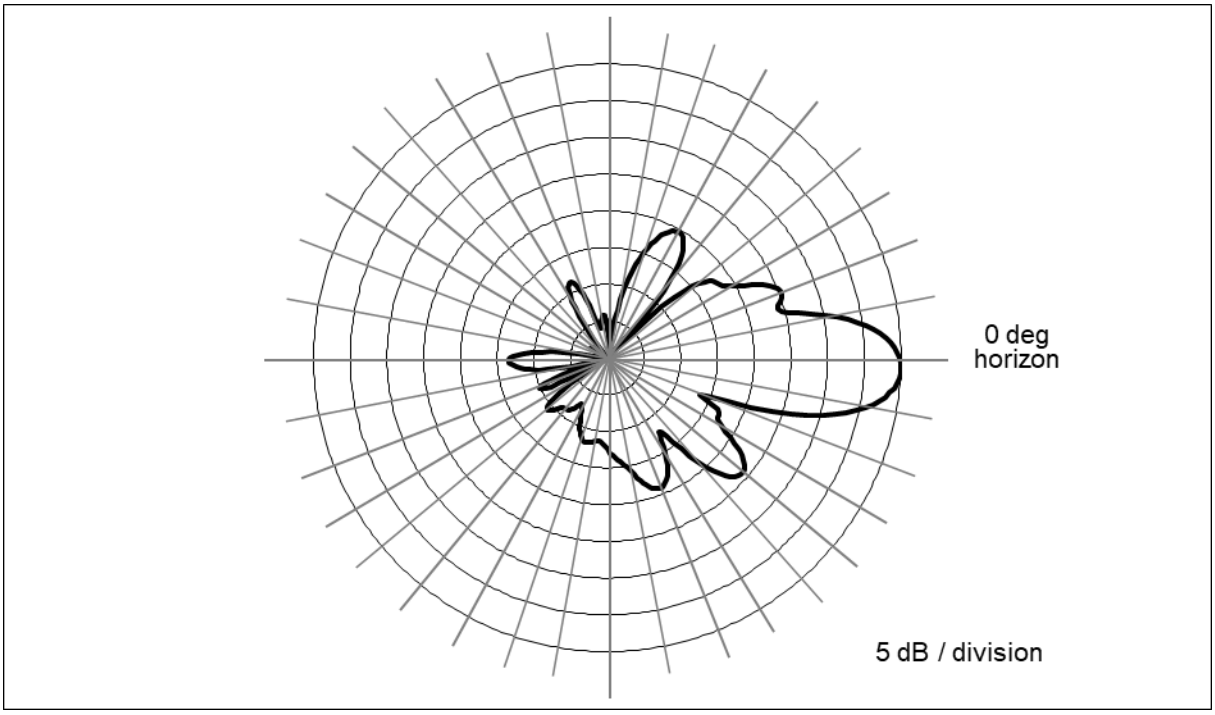
The area below the antennas, at street level, is of interest in terms of potential "uncontrolled" exposure of the general public, so the antenna's vertical-plane emission characteristic is used in the calculations, as it is a key determinant of the relative amount of RF emissions in the "downward" direction.

By way of illustration, Figure 1 that follows shows the vertical-plane radiation pattern of the proposed antenna model in the 600 MHz frequency band. In this type of antenna radiation pattern diagram, the antenna is effectively pointed at the three o'clock position (the horizon) and the relative strength of the pattern at different angles is described using decibel units.

Note that the use of a decibel scale to describe the relative pattern at different angles actually serves to significantly understate the actual focusing effects of the antenna. Where the antenna pattern reads 20 dB the relative RF energy emitted at the corresponding downward angle is 1/100th of the maximum that occurs in the main beam (at 0 degrees); at 30 dB, the energy is only 1/1000th of the maximum.

Finally, note that the automatic pattern-scaling feature of our internal software may skew side-by-side visual comparisons of different antenna models, or even different parties' depictions of the same antenna model.

Figure 1. Commscope FFVV-65B-R2 – 600 MHz Vertical-plane Pattern



As noted at the outset, there are other existing wireless antenna operations to include in the compliance assessment. For each of the wireless operators, we will conservatively assume operation with maximum channel capacity and at maximum transmitter power per channel to be used by each wireless operator in each of their respective FCC-licensed frequency bands.

The table that follows summarizes the relevant data for the collocated antenna operations.

Carrier	*Antenna Manufacturer*	*Antenna Model*	*Type*	*Freq (MHz)*	*Total ERP (watts)*	*Ant. Gain (dBd)*	*Azimuth*
AT&T	Generic	Generic	Panel	700	4945	11.26	N/A
AT&T	Generic	Generic	Panel	850	2400	11.76	N/A
AT&T	Generic	Generic	Panel	1900	5756	15.56	N/A
AT&T	Generic	Generic	Panel	2100	5890	15.66	N/A
AT&T	Generic	Generic	Panel	2300	4131	16.16	N/A
Sprint	Generic	Generic	Panel	800	2168	13.36	N/A
Sprint	Generic	Generic	Panel	1900	6168	15.86	N/A
Sprint	Generic	Generic	Panel	2500	4669	15.90	N/A
T-Mobile	Generic	Generic	Panel	600	3163	12.96	N/A
T-Mobile	Generic	Generic	Panel	700	867	13.36	N/A
T-Mobile	Generic	Generic	Panel	1900	4123	15.36	N/A
T-Mobile	Generic	Generic	Panel	1900	1452	15.60	N/A
T-Mobile	Generic	Generic	Panel	2100	4626	15.86	N/A
T-Mobile	Generic	Generic	Panel	1900	1419	15.50	N/A
T-Mobile	Generic	Generic	Panel	2500	12804	22.35	N/A
Verizon Wireless	Generic	Generic	Panel	746	2400	11.76	N/A
Verizon Wireless	Generic	Generic	Panel	869	5166	12.36	N/A
Verizon Wireless	Generic	Generic	Panel	1900	5372	15.26	N/A
Verizon Wireless	Generic	Generic	Panel	2100	5625	15.46	N/A

Compliance Analysis

FCC Office of Engineering and Technology Bulletin 65 ("OET Bulletin 65") provides guidelines for mathematical models to calculate the RF levels at various points around transmitting antennas. Different models apply in different areas around antennas, with one model applying to street level around a site, and another applying to the rooftop near the antennas. We will address each area of interest in turn in the subsections that follow.

Street Level Analysis

At street-level around an antenna site (in what is called the "far field" of the antennas), the RF levels are directly proportional to the total antenna input power and the relative antenna gain in the downward direction of interest – and the levels are otherwise inversely proportional to the square of the straight-line distance to the antenna.

Conservative calculations also assume the potential RF exposure is enhanced by reflection of the RF energy from the intervening ground. Our calculations will assume a 100% "perfect", mirror-like reflection, which is the absolute worst-case scenario.

The formula for street-level compliance assessment for any given wireless antenna operation is as follows:

$$MPE\% = (100 * Chans * TxPower * 10^{(Gmax-Vdisc/10)} * 4) / (MPE * 4\pi * R^2)$$

where

MPE%	=	RF level, expressed as a percentage of the MPE limit applicable to continuous exposure of the general public
100	=	factor to convert the raw result to a percentage
Chans	=	maximum number of RF channels per sector
TxPower	=	maximum transmitter power per channel, in milliwatts

$10^{(Gmax-Vdisc/10)}$	=	numeric equivalent of the relative antenna gain in the downward direction of interest; data on the antenna vertical-plane pattern is taken from manufacturer specifications
4	=	factor to account for a 100-percent-efficient energy reflection from the ground, and the squared relationship between RF field strength and power density ($2^2 = 4$)
MPE	=	FCC general population MPE limit
R	=	straight-line distance from the RF source to the point of interest, centimeters

The MPE% calculations are performed out to a distance of 500 feet from the facility to points 6.5 feet (approximately two meters, the FCC-recommended standing height) off the ground, as illustrated in Figure 2, below.

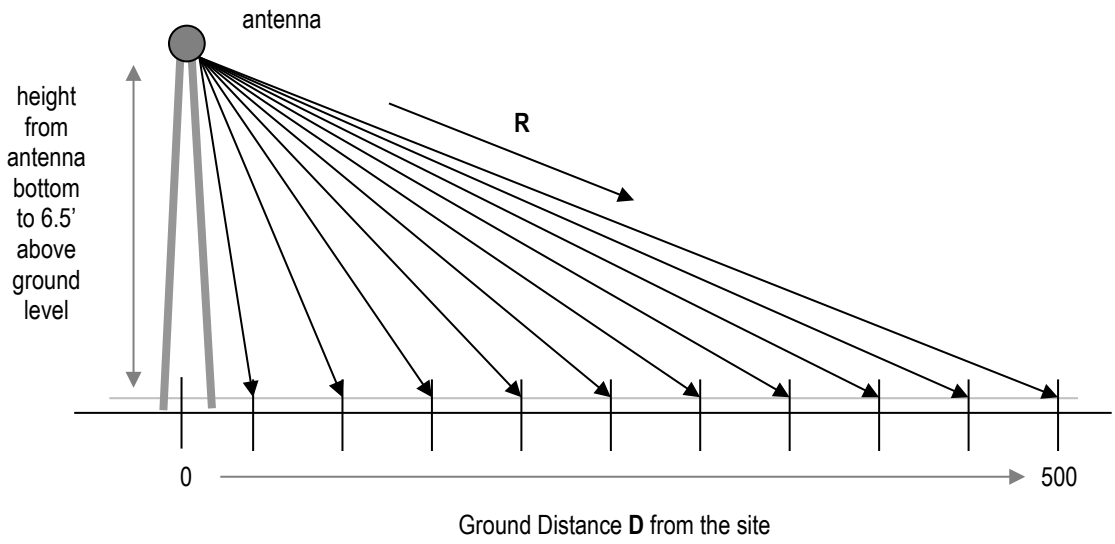


Figure 2. Street-level MPE% Calculation Geometry

It is popularly understood that the farther away one is from an antenna, the lower the RF level – which is generally but not universally correct. The results of MPE% calculations fairly close to the site will reflect the variations in the vertical-plane antenna pattern as well as the variation in straight-line distance to the antenna.

Therefore, RF levels may actually increase slightly with increasing distance within the range of zero to 500 feet from the site. As the distance approaches 500 feet

and beyond, though, the antenna pattern factor becomes less significant, the RF levels become primarily distance-controlled and, as a result, the RF levels generally decrease with increasing distance. In any case, the RF levels more than 500 feet from a wireless antenna site are well understood to be sufficiently low to be comfortably in compliance.

According to the FCC, when directional antennas (such as panels) are used, compliance assessments are based on the RF effect of a single (facing) antenna sector, as the effects of directional antennas pointed away from the point(s) of interest are considered insignificant. If the different parameters apply in the different sectors, compliance is based on the worst-case parameters.

Street level FCC compliance for a collocated antenna site is assessed in the following manner. At each distance point along the ground, an MPE% calculation is made for each antenna operation (including each frequency band), and the sum of the individual MPE% contributions at each point is compared to 100 percent, the normalized reference for compliance with the MPE limit. We refer to the sum of the individual MPE% contributions as “total MPE%”, and any calculated total MPE% result exceeding 100 percent is, by definition, higher than the FCC limit and represents non-compliance and a need to mitigate the potential exposure. If all results are consistently below 100 percent, on the other hand, that set of results serves as a clear and sufficient demonstration of compliance with the MPE limit.

Note that the following conservative methodology and assumptions are incorporated into the MPE% calculations on a general basis:

1. The antennas are assumed to be operating continuously at maximum power and maximum channel capacity.
2. The power-attenuation effects of shadowing or other obstructions to the line-of-sight path from the antenna to the point of interest are ignored.
3. The calculations intentionally minimize the distance factor (R) by assuming a 6’6” human and performing the calculations from the bottom (rather than the centerline) of each operator’s lowest-mounted antenna, as applicable.
4. The calculations also conservatively take into account, when applicable,

the different technical characteristics and related RF effects of the use of multiple antennas for transmission in the same frequency band.

5. The RF exposure at ground level is assumed to be 100-percent enhanced (increased) via a “perfect” field reflection from the intervening ground.

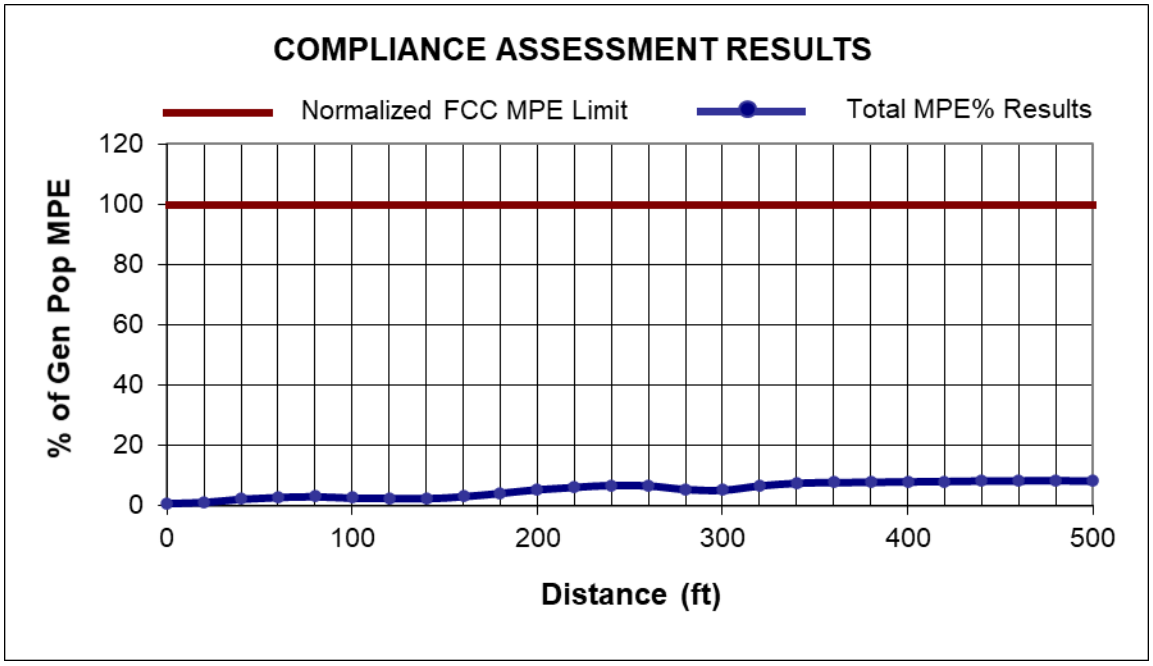
The net result of these assumptions is to intentionally and significantly overstate the calculated RF levels relative to the levels that will actually result from the antenna operations – and the purpose of this conservatism is to allow very “safe-side” conclusions about compliance.

The table that follows provides the results of the MPE% calculations for each antenna operation, with the overall worst-case calculated result highlighted in bold in the last column. Note that the transmission parameters for each Dish antenna sector are identical, and the calculations reflect the worst-case result for any/all sectors.

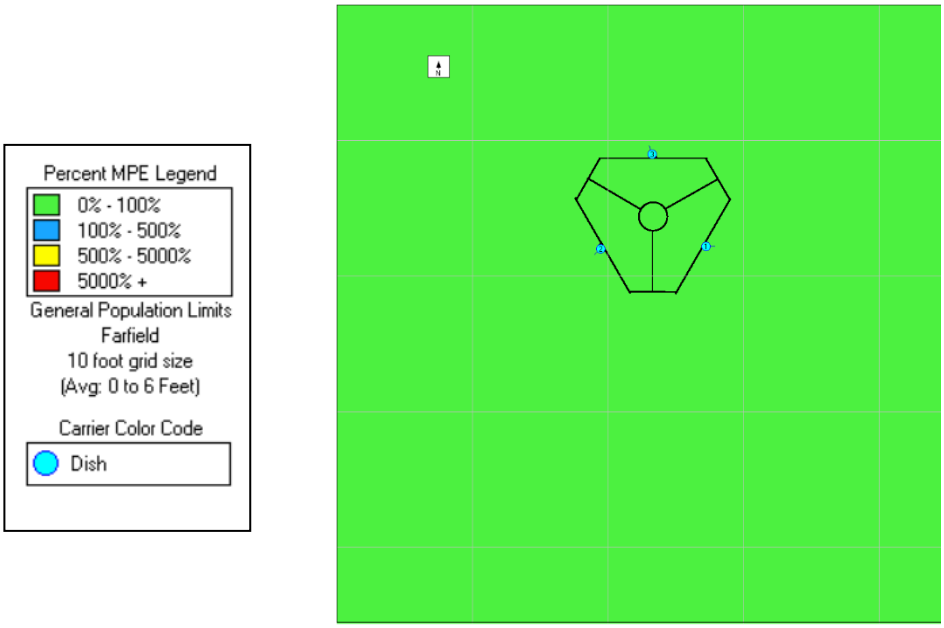
Ground Distance (ft)	Dish 600 MHz MPE%	Dish 2000 MHz MPE%	Dish 2100 MHz MPE%	AT&T MPE%	Sprint MPE%	T-Mobile MPE%	Verizon Wireless MPE%	Total MPE%
0	0.0502	0.0024	0.0004	0.0971	0.0178	0.2421	0.4412	0.8512
20	0.1071	0.0059	0.0087	0.1216	0.0109	0.3500	0.6126	1.2168
40	0.2001	0.0343	0.0261	0.2450	0.0084	0.5854	1.1750	2.2743
60	0.0572	0.0025	0.1435	0.3776	0.0080	0.8241	1.4321	2.8450
80	0.0950	0.2910	0.2301	0.5428	0.0284	0.6764	1.2402	3.1039
100	0.2978	0.2086	0.3650	0.4687	0.0219	0.4274	0.8539	2.6433
120	0.2913	0.2623	0.3570	0.7848	0.0455	0.3111	0.4921	2.5441
140	0.1450	0.0184	0.1059	0.9848	0.0397	0.4518	0.7088	2.4544
160	0.0503	0.0264	0.0640	0.9641	0.0438	0.5462	1.4236	3.1184
180	0.0338	0.0396	0.0213	1.0431	0.0611	0.8791	2.1171	4.1951
200	0.0277	0.1073	0.0898	1.0616	0.1104	1.0640	2.9285	5.3893
220	0.0178	0.0344	0.1332	0.8377	0.1018	1.6121	3.4331	6.1701
240	0.0095	0.0383	0.0262	0.5183	0.0547	1.9098	4.2622	6.8190
260	0.0198	0.1272	0.0767	0.3009	0.0290	2.1723	3.9361	6.6620
280	0.0370	0.1066	0.1210	0.2445	0.0218	1.9292	3.0130	5.4731
300	0.0645	0.0584	0.1194	0.2223	0.0301	1.5187	3.1958	5.2092
320	0.1032	0.0184	0.0786	0.2497	0.0434	1.8827	4.2584	6.6344
340	0.1526	0.0049	0.0344	0.2885	0.0472	2.7305	4.2700	7.5281
360	0.2125	0.0046	0.0107	0.3874	0.0506	2.7631	4.3102	7.7391
380	0.2809	0.0036	0.0035	0.3507	0.0548	2.7039	4.4318	7.8292
400	0.3554	0.0073	0.0022	0.5153	0.0559	2.4416	4.6013	7.9790
420	0.3241	0.0066	0.0020	0.7465	0.0485	2.3916	4.5474	8.0667
440	0.3965	0.0257	0.0099	1.0114	0.0324	2.3201	4.4665	8.2625
460	0.3643	0.0236	0.0091	0.9299	0.0235	2.2626	4.6739	8.2869
480	**0.4325**	**0.0549**	**0.0322**	**1.1599**	**0.0145**	**2.0890**	**4.5993**	**8.3823**
500	0.3999	0.0507	0.0297	1.0731	0.0100	2.0640	4.5570	8.1844

As indicated, the maximum calculated overall RF level is 8.3823 percent of the FCC MPE limit – well below the 100-percent reference for compliance.

A graph of the overall calculation results, shown below, perhaps provides a clearer *visual* illustration of the relative compliance of the calculated RF levels. The line representing the overall calculation results shows an obviously clear, consistent margin to the FCC MPE limit.



The graphic output for the areas at street level surrounding the site is reproduced on the next page.

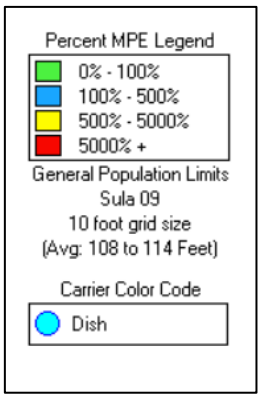


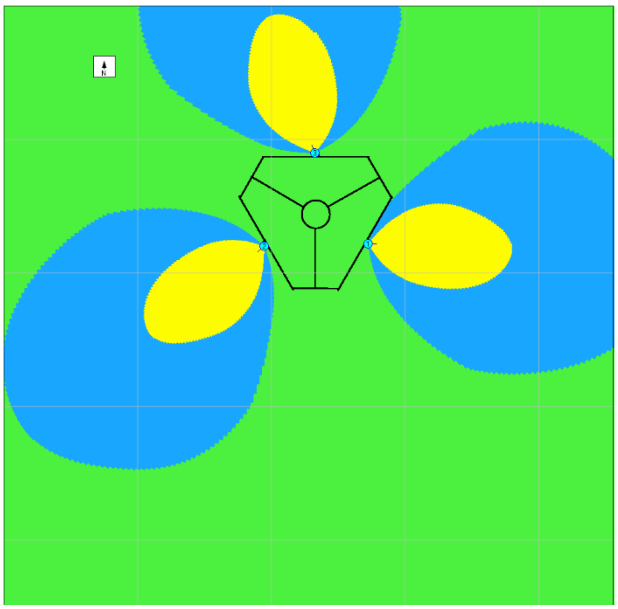
Near-field Analysis

The compliance analysis for the same height as the antennas is performed using the RoofMaster program by Waterford Consultants.

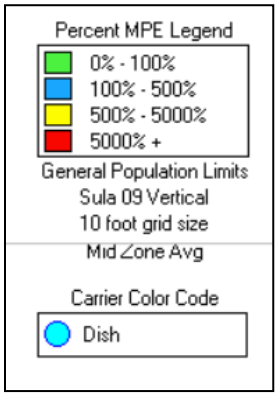
RF levels in the near field of an antenna depend on the power input to the antenna, the antenna's length and horizontal beamwidth, the mounting height of the antenna above nearby roof, and one's position and distance from the antenna. RF levels in front of a directional antenna are higher than they are to the sides or rear, and in any given horizontal direction are inversely proportional to the straight-line distance to the antenna.

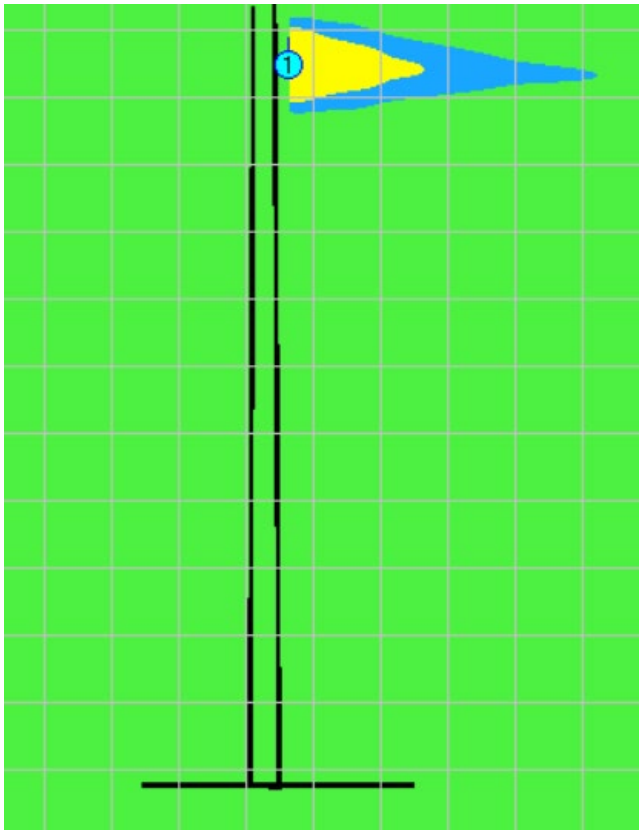
The RoofMaster graphic outputs for the same height as the Dish antennas are reproduced on the next page.





RoofMaster – Same Height as the Antennas – Alpha / Beta / Gamma sectors





RoofMaster – Same Height as the Antennas – Alpha / Beta / Gamma sectors

Compliance Conclusion

According to the FCC, the MPE limit has been constructed in such a manner that continuous human exposure to RF fields up to and including 100 percent of the MPE limit is acceptable and safe.

The conservative analysis in this case shows that the maximum calculated RF level from the proposed modifications to the existing antenna operations at the site is 8.3823 percent of the FCC general population MPE limit. At the same height as the antennas, the analysis shows that the calculated RF levels potentially exceed the FCC MPE limit. Per Dish guidelines, and consistent with FCC guidance on compliance, it is recommended that two Caution signs be six feet below the antennas. In addition, NOC Information signs be installed at the base of the monopole.

The results of the calculations, along with the described RF mitigation, combine to satisfy the FCC's RF compliance requirements and associated guidelines on compliance.

Moreover, because of the extremely conservative calculation methodology and operational assumptions we applied in the analysis, RF levels actually caused by the antennas will be significantly lower than the calculation results here indicate.

Certification

It is the policy of Pinnacle Telecom Group that all FCC RF compliance assessments are reviewed, approved, and signed by the firm's Chief Technical Officer who certifies as follows:

1. I have read and fully understand the FCC regulations concerning RF safety and the control of human exposure to RF fields (47 CFR 1.1301 *et seq*).
2. To the best of my knowledge, the statements and information disclosed in this report are true, complete and accurate.
3. The analysis of site RF compliance provided herein is consistent with the applicable FCC regulations, additional guidelines issued by the FCC, and industry practice.
4. The results of the analysis indicate that the subject antenna operations will be in compliance with the FCC regulations concerning the control of potential human exposure to the RF emissions from antennas.

2/21/22

Daniel J. Collins
Chief Technical Officer
Pinnacle Telecom Group, LLC

Date

Appendix A. Documents Used to Prepare the Analysis

RFDS: RFDS-NJJER01147B-Preliminary-20211111-v.1_20211111104814

CD: NJJER01147B_PCD_Rev 0_Redline_CM RF_20220131083506

Appendix B. Background on the FCC MPE Limit

As directed by the Telecommunications Act of 1996, the FCC has established limits for maximum continuous human exposure to RF fields.

The FCC maximum permissible exposure (MPE) limits represent the consensus of federal agencies and independent experts responsible for RF safety matters. Those agencies include the National Council on Radiation Protection and Measurements (NCRP), the Occupational Safety and Health Administration (OSHA), the National Institute for Occupational Safety and Health (NIOSH), the American National Standards Institute (ANSI), the Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA). In formulating its guidelines, the FCC also considered input from the public and technical community – notably the Institute of Electrical and Electronics Engineers (IEEE).

The FCC's RF exposure guidelines are incorporated in Section 1.301 *et seq* of its Rules and Regulations (47 CFR 1.1301-1.1310). Those guidelines specify MPE limits for both occupational and general population exposure.

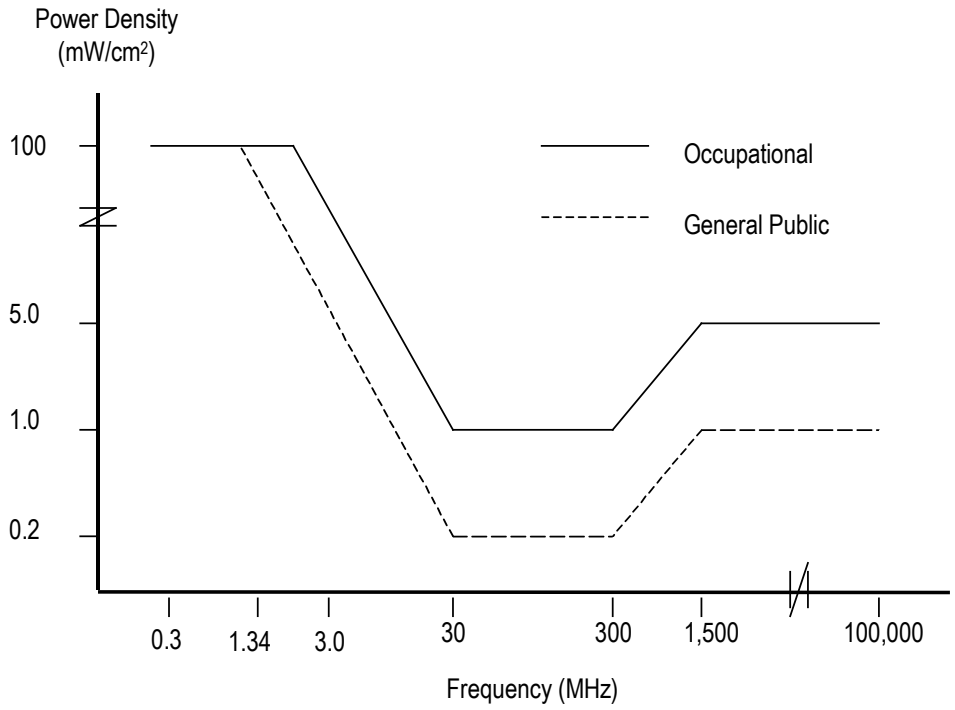
The specified continuous exposure MPE limits are based on known variation of human body susceptibility in different frequency ranges, and a Specific Absorption Rate (SAR) of 4 watts per kilogram, which is universally considered to accurately represent human capacity to dissipate incident RF energy (in the form of heat). The occupational MPE guidelines incorporate a safety factor of 10 or greater with respect to RF levels known to represent a health hazard, and an additional safety factor of five is applied to the MPE limits for general population exposure. Thus, the general population MPE limit has a built-in safety factor of more than 50. The limits were constructed to appropriately protect humans of both sexes and all ages and sizes and under all conditions – and continuous exposure at levels equal to or below the applicable MPE limits is considered to result in no adverse health effects or even health risk.

The reason for *two* tiers of MPE limits is based on an understanding and assumption that members of the general public are unlikely to have had appropriate RF safety training and may not be aware of the exposures they receive; occupational exposure in controlled environments, on the other hand, is assumed to involve individuals who have had such training, are aware of the exposures, and know how to maintain a safe personal work environment.

The FCC's RF exposure limits are expressed in two equivalent forms, using alternative units of field strength (expressed in volts per meter, or V/m), and power density (expressed in milliwatts per square centimeter, or mW/cm^2). The table on the next page lists the FCC limits for both occupational and general population exposures, using the mW/cm^2 reference, for the different radio frequency ranges.

Frequency Range (F) (MHz)	Occupational Exposure (mW/cm^2)	General Public Exposure (mW/cm^2)
0.3 - 1.34	100	100
1.34 - 3.0	100	$180 / F^2$
3.0 - 30	$900 / F^2$	$180 / F^2$
30 - 300	1.0	0.2
300 - 1,500	F / 300	F / 1500
1,500 - 100,000	5.0	1.0

The diagram below provides a graphical illustration of both the FCC's occupational and general population MPE limits.



Because the FCC's RF exposure limits are frequency-shaped, the exact MPE limits applicable to the instant situation depend on the frequency range used by the systems of interest.

The most appropriate method of determining RF compliance is to calculate the RF power density attributable to a particular system and compare that to the MPE limit applicable to the operating frequency in question. The result is usually expressed as a percentage of the MPE limit.

For potential exposure from multiple systems, the respective percentages of the MPE limits are added, and the total percentage compared to 100 (percent of the limit). If the result is less than 100, the total exposure is in compliance; if it is more than 100, exposure mitigation measures are necessary to achieve compliance.

Note that the FCC "categorically excludes" all "non-building-mounted" wireless antenna operations whose mounting heights are more than 10 meters (32.8 feet) from the routine requirement to demonstrate compliance with the MPE limit, because such operations "are deemed, individually and cumulatively, to have no significant effect on the human environment". The categorical exclusion also applies to *all* point-to-point antenna operations, regardless of the type of structure they're mounted on. Note that the FCC considers any facility qualifying for the categorical exclusion to be automatically in compliance.

In addition, FCC Rules and Regulations Section 1.1307(b)(3) describes a provision known in the industry as "the 5% rule". It describes that when a specific location – like a spot on a rooftop – is subject to an overall exposure level exceeding the applicable MPE limit, operators with antennas whose MPE% contributions at the point of interest are less than 5% are exempted from the obligation otherwise shared by all operators to bring the site into compliance, and those antennas are automatically deemed by the FCC to satisfy the rooftop compliance requirement.

FCC References on RF Compliance

47 CFR, FCC Rules and Regulations, Part 1 (Practice and Procedure), Section 1.1310 (Radiofrequency radiation exposure limits).

FCC Second Memorandum Opinion and Order and Notice of Proposed Rulemaking (FCC 97-303), *In the Matter of Procedures for Reviewing Requests for Relief From State and Local Regulations Pursuant to Section 332(c)(7)(B)(v) of the Communications Act of 1934 (WT Docket 97-192), Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation (ET Docket 93-62), and Petition for Rulemaking of the Cellular Telecommunications Industry Association Concerning Amendment of the Commission's Rules to Preempt State and Local Regulation of Commercial Mobile Radio Service Transmitting Facilities*, released August 25, 1997.

FCC First Memorandum Opinion and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released December 24, 1996.

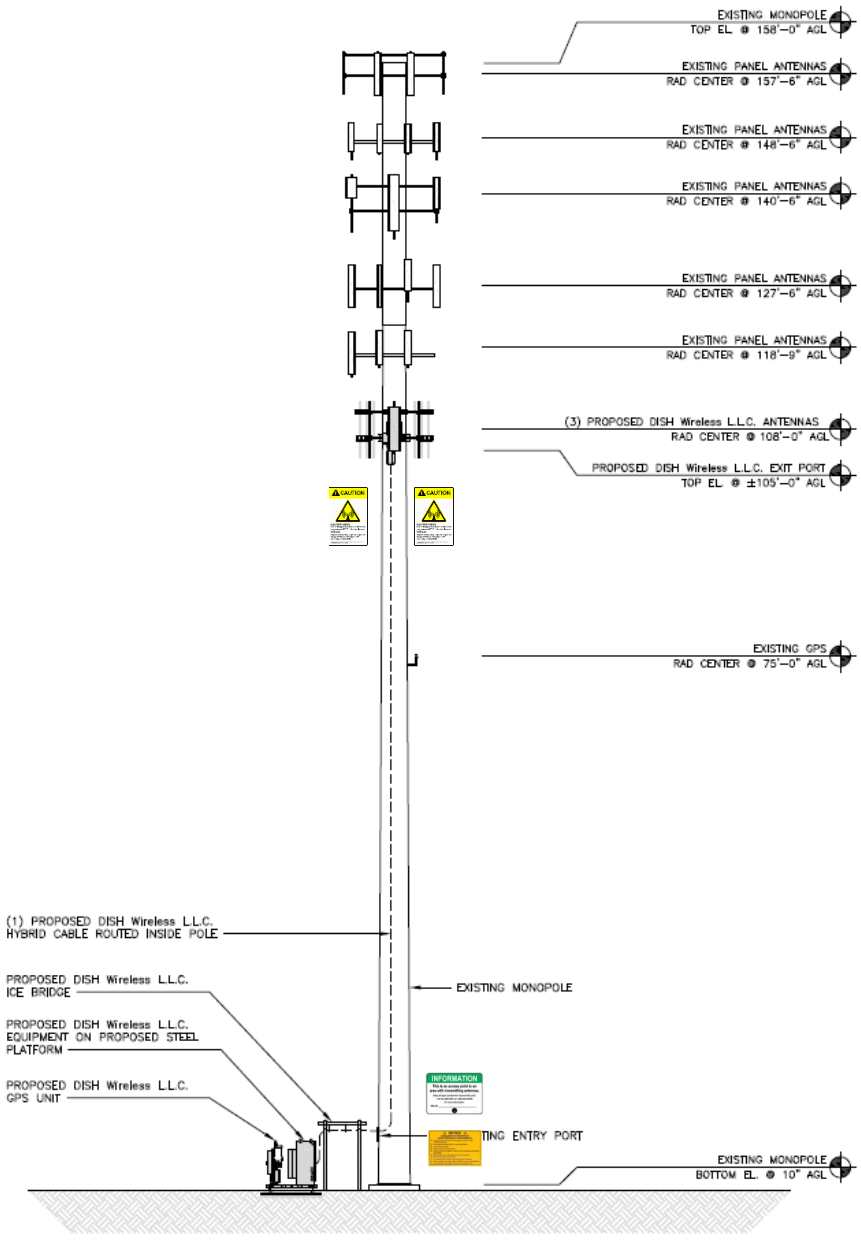
FCC Report and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released August 1, 1996.

FCC Report and Order, Notice of Proposed Rulemaking, Memorandum Opinion and Order (FCC 19-126), *Proposed Changes in the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields; Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies,* released December 4, 2019.

FCC Office of Engineering and Technology (OET) Bulletin 65, “Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields”, Edition 97-01, August 1997.

FCC Office of Engineering and Technology (OET) Bulletin 56, “Questions and Answers About Biological Effects and Potential Hazards of RF Radiation”, edition 4, August 1999.

Appendix C. Proposed Signage



NOC Information Sign		Caution Sign	
Guidelines Sign		Warning Sign	
Notice Sign			

Appendix D. Summary of Expert Qualifications

Daniel J. Collins, Chief Technical Officer, Pinnacle Telecom Group, LLC

Synopsis:	• 40+ years of experience in all aspects of wireless system engineering, related regulation, and RF exposure • Has performed or led RF exposure compliance assessments on more than 20,000 antenna sites since the latest FCC regulations went into effect in 1997 • Has provided testimony as an RF compliance expert more than 1,500 times since 1997 • Have been accepted as an FCC compliance expert in New York, New Jersey, Connecticut, Pennsylvania and more than 40 other states, as well as by the FCC
Education:	• B.E.E., City College of New York (Sch. Of Eng.), 1971 • M.B.A., 1982, Fairleigh Dickinson University, 1982 • Bronx High School of Science, 1966
Current Responsibilities:	• Leads all PTG staff work involving RF safety and FCC compliance, microwave and satellite system engineering, and consulting on wireless technology and regulation
Prior Experience:	• Edwards & Kelcey, VP – RF Engineering and Chief Information Technology Officer, 1996-99 • Bellcore (a Bell Labs offshoot after AT&T's 1984 divestiture), Executive Director – Regulation and Public Policy, 1983-96 • AT&T (Corp. HQ), Division Manager – RF Engineering, and Director – Radio Spectrum Management, 1977-83 • AT&T Long Lines, Group Supervisor – Microwave Radio System Design, 1972-77
Specific RF Safety / Compliance Experience:	• Involved in RF exposure matters since 1972 • Have had lead corporate responsibility for RF safety and compliance at AT&T, Bellcore, Edwards & Kelcey, and PTG • While at AT&T, helped develop the mathematical models for calculating RF exposure levels • Have been relied on for compliance by all major wireless carriers, as well as by the federal government, several state and local governments, equipment manufacturers, system integrators, and other consulting / engineering firms
Other Background:	• Author, *Microwave System Engineering* (AT&T, 1974) • Co-author and executive editor, *A Guide to New Technologies and Services* (Bellcore, 1993) • National Spectrum Management Association (NSMA) – former three-term President and Chairman of the Board of Directors; was founding member, twice-elected Vice President, long-time member of the Board, and was named an NSMA Fellow in 1991 • Have published more than 35 articles in industry magazines

EXHIBIT 8

Structural Analysis

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

Structural Analysis Report

Existing 158 ft PennSummit Monopole
Customer Name: SBA Communications Corp
Customer Site Number: CT46131-A
Customer Site Name: Easton-Everetts Rd
Carrier Name: Dish Wireless (App#: 182295-1)
Carrier Site ID / Name: NJJER01147B / 0
Site Location: 206 Everett Road
Easton, Connecticut
Fairfield County
Latitude: 41.290333
Longitude: -73.282666

Analysis Result:

Max Structural Usage: 91.4% [Pass]
Max Foundation Usage: 83.0% [Pass]
Additional Usage Caused by New Mount/Mount Modification: N/A

Report Prepared By: Kevin Azisllari

Introduction

The purpose of this report is to summarize the analysis results on the 158 ft PennSummit Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Paul J. Ford Job # 29202-0378 (For PennSummit Tubular Design # 5951), dated 12/19/2002
Foundation Drawing	Paul J. Ford Job # 29202-0378 (For PennSummit Tubular Design # 5951), dated 12/19/2002
Geotechnical Report	Tectonic Engineering Consultants W.O. # 1170.C912, dated 03/30/2000
Modification Drawings	Vertical Solutions Project # 131141.01 As-Builts, Dated 11/06/2013

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the TIA-222-G-2**.** In accordance with this standard, the structure was analyzed using **TESPoles,** a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed V_{ult} = 120.0 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 93.0 mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	S_S = 0.215, S_1 = 0.066

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

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	158.5	3	RFS - APXVSPP18-C-A20 - Panel	Low Profile Platform w/ Collar Mount, Handrail Kit (SitePro HRK14-U) and Platform Reinforcement Kit (SitePro PRK-1245L)	(4) 1 1/4" Fiber	Sprint Nextel
2		3	Commscope - DT465B-2XR - Panel			
3		3	RFS - ACU-A20-N - RET			
4		3	ALU - 1900 MHz - RRU			
5		6	ALU - 800 MHz - RRU			
6		3	ALU - TD-RRH8x20-25 - RRU			
7		3	Alu - 800 Filters			
8	149.0*	12*	Decibel - DB844H90E-XY - Panel*	Low Profile Platform*	(12) 1 1/4"*	
9	138.0	3	Ericsson - AIR6449 B41 - Panel	Low Profile Platform w/ Handrail and V-Brace tie-back	(9) 1 1/4" (3) 1-1/4" Fiber	T-Mobile
10		3	RFS - APXVAALL24-43-U-NA20 - Panel			
11		6	RFS - APX16DWV-16DWVS-E-A20 - Panel			
12		3	Ericsson - KRY 112 144/1 - TMAs			
13		3	Ericsson - 4449 B71 + B85 - RRU			
14		3	Ericsson - 4424 B25 - RRU			
15		3	Ericsson - 4415 B66A - RRU			
16		3	Kathrein - 782 11056 - Bias T			
17	128.0	6	Andrew - DB846F65ZAXY – Panel	Low Profile Platform	(6) 1 5/8" (2) 1 5/8" Fiber	Verizon
18		6	Andrew - JAHH-65B-R3B - Panel			
19		3	Alcatel Lucent - RRH2x60-700 - RRH			
20		3	Alcatel Lucent - RRH4X45-AWS - RRH			
21		2	RFS - DB-T1-6Z-8AB-0Z - SP			
22	118.0	3	Powerwave - P65-16-XLH-RR – Panel	Low Profile Platform	(12) 1 1/4" (1) 3/8" RET (2) 5/8" DC inside (1) 3" Innerduct	AT&T
23		6	Powerwave - 7770 - Panel			
24		6	Powerwave - LGP21401 - TMA			
25		3	Powerwave - TT19-08BP111-001 - TMA			
26		6	Ericsson - RRUS-11 - RRU			
27		1	Raycap - DC6-48-60-18 - SP			
28	75.0	1	GPS	Pipe Mount	(1) 1/2"	Sprint Nextel

*Equipment has been decommissioned but remains installed.

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

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	108.0	3	Commscope FFVV-65B-R2 - Panel	Platform w/HKR Commscope MC-PK8-DSH	(1) 1.6" Hybrid	Dish Wireless
2		3	Fujitsu TA08025-B605			
3		3	Fujitsu TA08025-B604			
4		1	Raycap RDIDC-9181-PF-48			

Coax can be installed inside or outside of the pole shaft.

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:	**91.4%**	**73.6%**	**67.4%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)
Analysis Reactions	4672.5	39.4

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

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.3277 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 87.87% at 39.0ft

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022
Site Name:	Easton-Everetts Rd	**Exposure:**	C	
Height:	158.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

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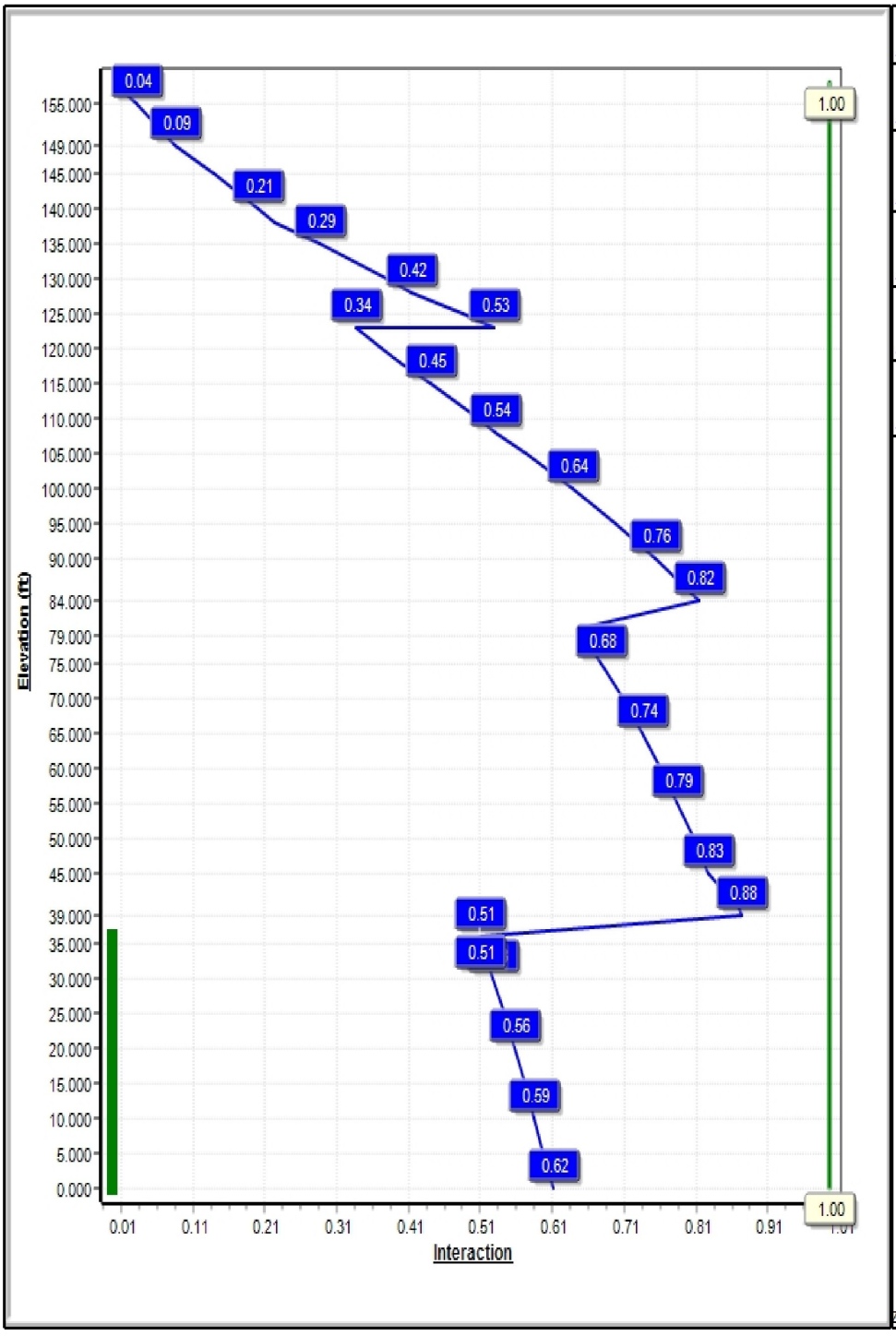
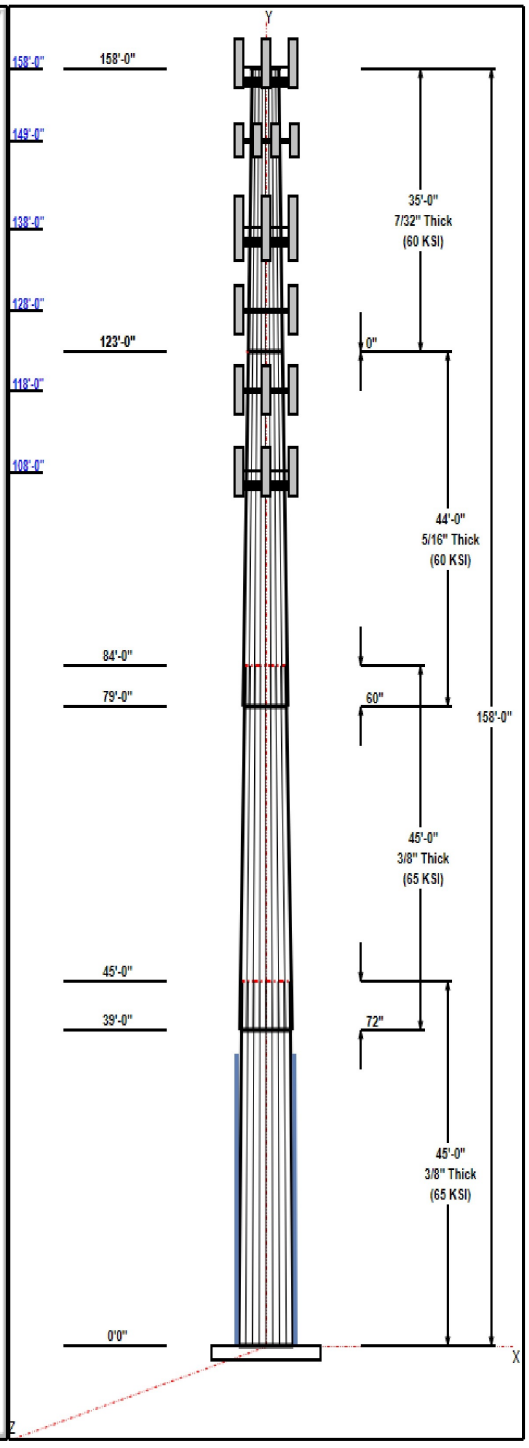
Dead Load Factor:	1.20	**Iterations:**	24
Wind Load Factor:	1.60		

Load Case : 1.2D + 1.6W 93 mph Wind





Structure: CT46131-A-SBA

Type: Tapered
Site Name: Easton-Everetts Rd
Height: 158.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.20320

1/18/2022

Tower Engineering Solutions

Shaft Properties

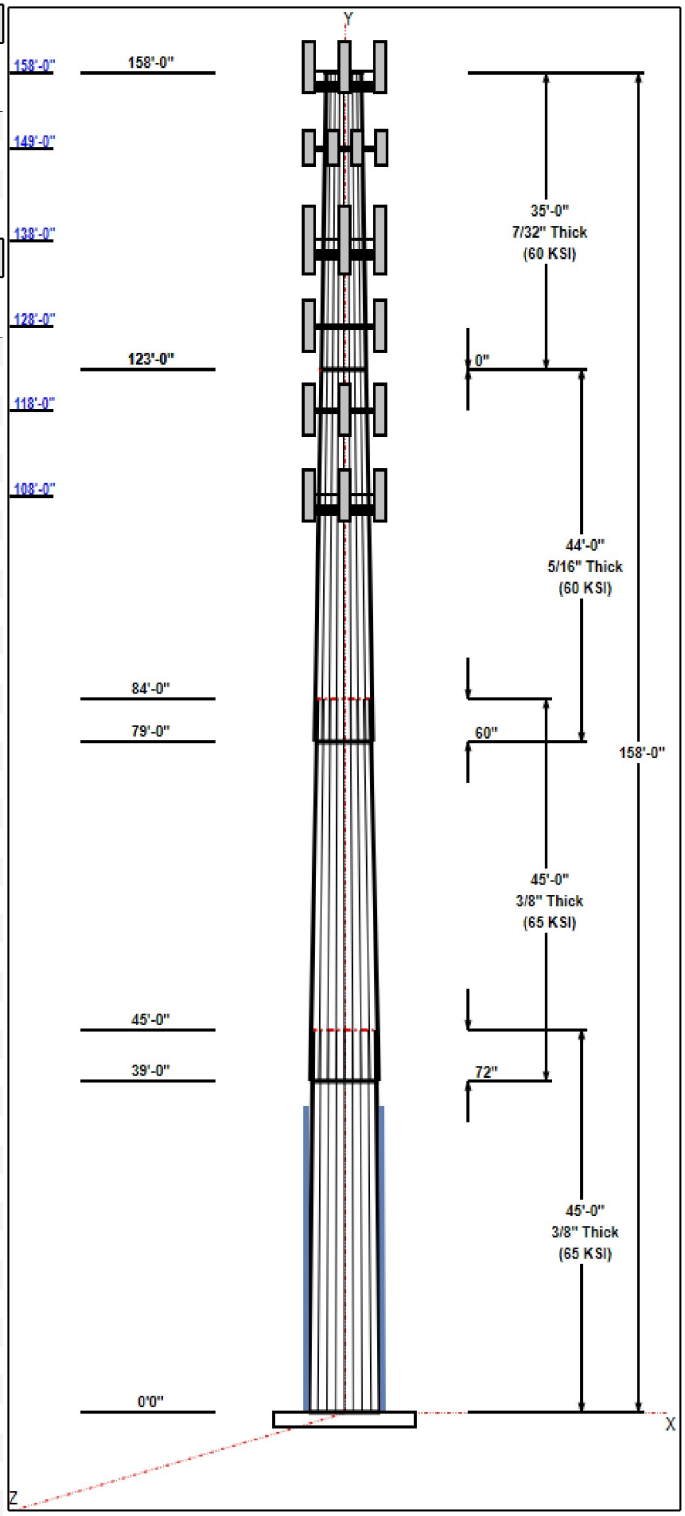
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	45.00	45.59	54.73	0.375		0.20320	65
2	45.00	38.41	47.56	0.375	Slip	0.20320	65
3	44.00	31.11	40.05	0.313	Slip	0.20320	60
4	35.00	24.00	31.11	0.219	Butt	0.20320	60

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
158.00	158.00	1	Site Pro PRK-1245 (kicker	Sprint Nextel
158.00	158.00	1	Site Pro HRK14	Sprint Nextel
158.00	158.50	3	RFS - APXVSPP18-C-A20	Sprint Nextel
158.00	158.50	3	Commscope -	Sprint Nextel
158.00	158.50	3	ALU - TD-RRH8x20-25 -	Sprint Nextel
158.00	158.50	6	ALU - 800 MHz - RRU	Sprint Nextel
158.00	158.50	1	Low Profile Platform	Sprint Nextel
158.00	158.50	3	RFS - ACU-A20-N - RET	Sprint Nextel
158.00	158.50	3	ALU - 1900 MHz - RRU	Sprint Nextel
158.00	158.50	3	Alu - 800 Filters	Sprint Nextel
158.00	158.00	1	Collar Mount	Sprint Nextel
149.00	149.00	1	Low Profile Platform	Sprint Nextel
149.00	149.00	12	DB844H90E-XY	Sprint Nextel
138.00	138.00	1	Platform w/ HR & V-Brace	T-Mobile
138.00	138.00	3	AIR6449 B41	T-Mobile
138.00	138.00	3	APXVAA24_43-U-A20	T-Mobile
138.00	138.00	6	APX16DWV-16DWVS-E-A	T-Mobile
138.00	138.00	3	KRY 112 144/1	T-Mobile
138.00	138.00	3	4449 B71 + B85	T-Mobile
138.00	138.00	3	RRUS 4415 B25	T-Mobile
138.00	138.00	3	Radio 4415 Protruding w/	T-Mobile
138.00	138.00	3	782 10663	T-Mobile
128.00	128.00	6	Andrew - JAHH-65B-R3B	Verizon
128.00	128.00	3	Alcatel Lucent -	Verizon
128.00	128.00	3	Alcatel Lucent -	Verizon
128.00	128.00	2	RFS - DB-T1-6Z-8AB-0Z -	Verizon
128.00	128.00	1	Low Profile Platform	Verizon
128.00	128.00	6	Andrew - DB846F65ZAXY	Verizon
118.00	118.00	1	Low Profile Platform	AT&T
118.00	118.00	3	P65-16-XLH-RR	AT&T
118.00	118.00	6	7770	AT&T
118.00	118.00	6	LGP21401	AT&T
118.00	118.00	3	TT19-08BP111-001	AT&T
118.00	118.00	6	RRUS-11	AT&T
118.00	118.00	1	DC6-48-60-18	AT&T
108.00	108.00	3	Commscope	Dish Wireless
108.00	108.00	3	Fujitsu TA08025-B605	Dish Wireless
108.00	108.00	3	Fujitsu TA08025-B604	Dish Wireless
108.00	108.00	1	Raycap	Dish Wireless
108.00	108.00	1	Platform Commscope	Dish Wireless
75.00	75.00	1	GPS	Sprint Nextel

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	158.00	Inside	1 1/4" Coax	Sprint



0.00	149.00	Inside	1 1/4" Coax	Sprint
0.00	138.00	Inside	1 1/4" Coax	T-Mobile
0.00	138.00	Inside	1-1/4" Fiber	T-Mobile
0.00	128.00	Outside	1 5/8" Coax	Verizon
0.00	128.00	Outside	1 5/8" Fiber	Verizon
0.00	118.00	Inside	1 1/4" Coax	AT&T
0.00	118.00	Inside	3" Innerduct	AT&T
0.00	118.00	Inside	3/8" RET	AT&T
0.00	118.00	Inside	5/8" DC	AT&T
0.00	108.00	Inside	1.6" Hybrid	Dish Wireless
0.00	75.00	Inside	1/2" Coax	Sprint Nextel
0.00	39.00	Outside	1.25" Reinforcing plate	

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
16	2.25" 18J	75.0	Cluster

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
3.2500	60.0	50.0	Clipped

Reactions

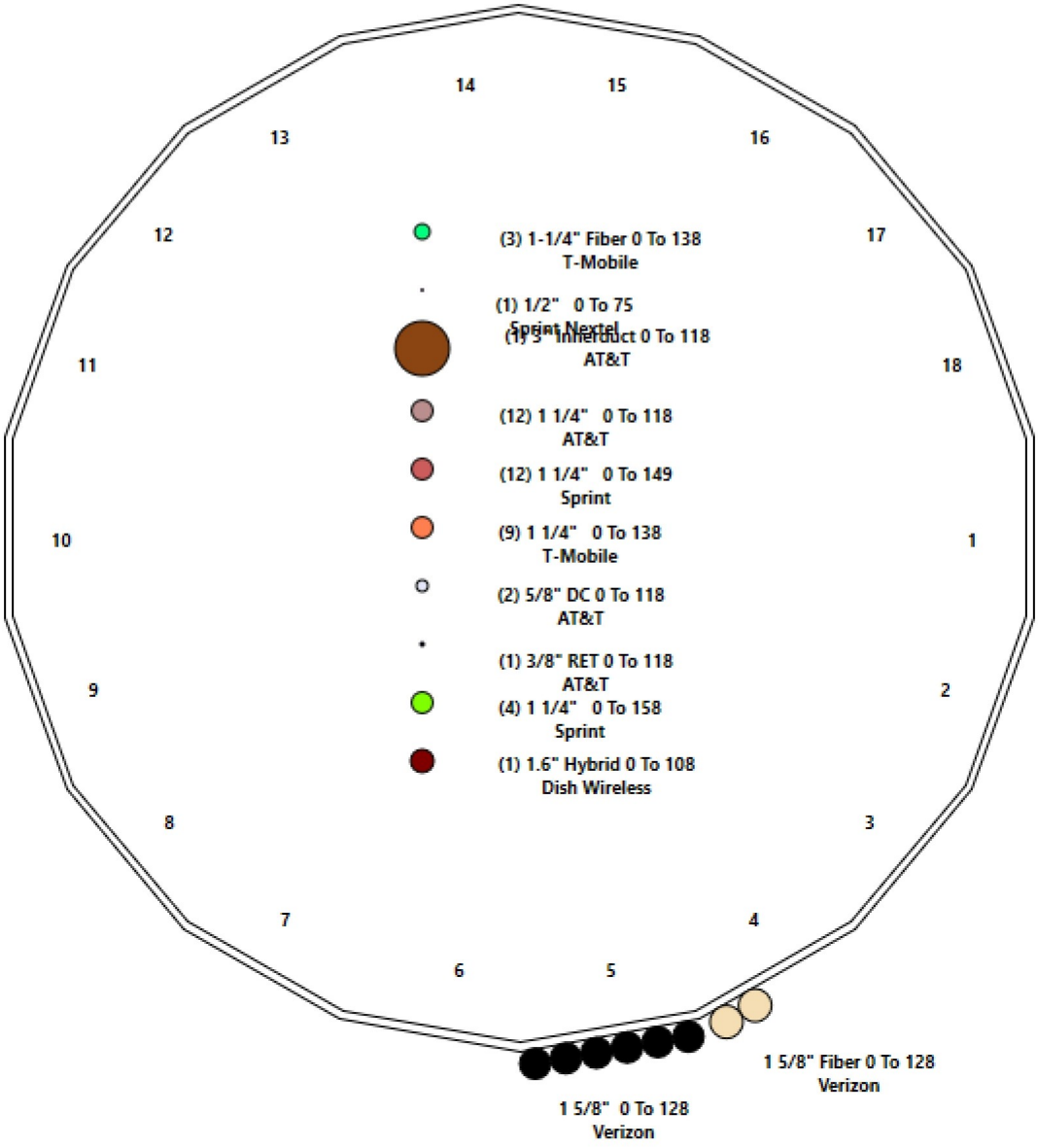
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 93 mph Wind	4672.5	39.4	61.2
0.9D + 1.6W 93 mph Wind	4618.5	39.4	45.9
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1435.5	12.0	95.9
1.2D + 1.0E	320.9	2.5	61.3
0.9D + 1.0E	316.8	2.5	46.0
1.0D + 1.0W 60 mph Wind	1208.1	10.2	51.1

Structure: CT46131-A-SBA - Coax Line Placement

Type: Monopole
Site Name: Easton-Everetts Rd
Height: 158.00 (ft)

1/18/2022

Tower Engineering Solutions



Shaft Properties

Structure:	CT46131-A-SBA		**Code:**	EIA/TIA-222-G	1/18/2022
Site Name:	Easton-Everetts Rd		**Exposure:**	C	
Height:	158.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 5

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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	45.000	0.3750	65		0.00	9,073
2	18	45.000	0.3750	65	Slip	72.00	7,765
3	18	44.000	0.3125	60	Slip	60.00	5,238
4	18	35.000	0.2188	60	Flange	0.00	2,261
					Total Shaft Weight:		**24,337**

	Bottom						Top						
Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	54.73	0.00	64.69	24148.72	24.32	145.95	45.59	45.00	53.81	13896.7	20.02	121.5	0.203196
2	47.56	39.00	56.15	15792.80	20.95	126.81	38.41	84.00	45.27	8275.19	16.65	102.4	0.203196
3	40.05	79.00	39.42	7864.62	21.19	128.17	31.11	123.00	30.55	3661.17	16.14	99.56	0.203196
4	31.11	123.0	21.45	2586.87	23.66	142.19	24.00	158.00	16.51	1180.03	17.93	109.6	0.203196

Additional Steel

							Intermediate Connectors		Termination Connectors			
Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Fu (ksi)	Offset (in)	Description	Spacing (in)	Description	Spacing (in)	Lower Qty	Upper Qty
0.00	36.00	4	PLT 7.625x1.5(31mm Hole	50	65	0.00	AJM20&sleeve	15.00	AJM20&sleeve	3.00	15	12

Load Summary

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

Tower Engineering Solutions

Discrete Appurtenances

				No Ice			Ice				
No.	Elev (ft)	Description	Qty	Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
1	158.00	Site Pro PRK-1245 (kicker kit)	1	464.91	9.50	1.00	791.15	19.500	1.00	0.00	0.00
2	158.00	Site Pro HRK14	1	302.36	8.13	1.00	663.05	16.117	1.00	0.00	0.00
3	158.00	RFS - APXVSPP18-C-A20	3	57.00	8.02	0.83	230.75	10.828	0.85	0.00	0.50
4	158.00	Commscope - DT465B-2XR	3	58.00	9.10	0.83	286.69	10.447	0.85	0.00	0.50
5	158.00	ALU - TD-RRH8x20-25 - RRU	3	70.00	4.05	0.67	168.24	5.471	0.67	0.00	0.50
6	158.00	ALU - 800 MHz - RRU	6	53.00	2.49	0.67	127.35	3.640	0.67	0.00	0.50
7	158.00	Low Profile Platform	1	1200.00	25.00	1.00	2252.58	46.052	1.00	0.00	0.50
8	158.00	RFS - ACU-A20-N - RET	3	1.00	0.14	0.67	5.32	0.438	0.67	0.00	0.50
9	158.00	ALU - 1900 MHz - RRU	3	44.00	3.80	0.67	153.73	5.197	0.67	0.00	0.50
10	158.00	Alu - 800 Filters	3	8.80	0.78	0.50	26.54	1.430	0.50	0.00	0.50
11	158.00	Collar Mount	1	350.00	5.00	1.00	644.72	8.509	1.00	0.00	0.00
12	149.00	Low Profile Platform	1	1200.00	25.00	1.00	2246.43	45.929	1.00	0.00	0.00
13	149.00	DB844H90E-XY	12	14.00	3.05	1.10	116.72	3.908	1.08	0.00	0.00
14	138.00	Platform w/ HR & V-Brace	1	2246.00	51.70	1.00	5355.76	89.639	1.00	0.00	0.00
15	138.00	AIR6449 B41	3	103.00	5.65	0.71	238.98	6.593	0.73	0.00	0.00
16	138.00	APXVAA24_43-U-A20	3	99.00	20.24	0.73	236.07	23.042	0.75	0.00	0.00
17	138.00	APX16DWV-16DWVS-E-A20	6	40.70	6.61	0.62	156.79	8.770	0.64	0.00	0.00
18	138.00	KRY 112 144/1	3	11.00	0.41	0.50	21.69	0.881	0.50	0.00	0.00
19	138.00	4449 B71 + B85	3	73.20	1.97	0.67	130.46	2.535	0.67	0.00	0.00
20	138.00	RRUS 4415 B25	3	46.00	1.64	0.67	86.76	2.151	0.67	0.00	0.00
21	138.00	Radio 4415 Protruding w/ Fan	3	49.60	1.86	0.67	101.11	2.504	0.67	0.00	0.00
22	138.00	782 10663	3	5.30	0.28	0.50	14.67	0.678	0.50	0.00	0.00
23	128.00	Andrew - JAHH-65B-R3B	6	63.30	9.11	0.83	287.07	10.431	0.85	0.00	0.00
24	128.00	Alcatel Lucent - RRH2x60-700 - RRH	3	55.00	3.36	0.67	140.03	4.127	0.67	0.00	0.00
25	128.00	Alcatel Lucent - RRH4X45-AWS -	3	56.80	2.54	0.67	142.66	3.413	0.67	0.00	0.00
26	128.00	RFS - DB-T1-6Z-8AB-0Z - SP	2	18.90	4.80	0.50	138.07	8.758	0.50	0.00	0.00
27	128.00	Low Profile Platform	1	1500.00	22.00	1.00	2788.32	39.384	1.00	0.00	0.00
28	128.00	Andrew - DB846F65ZAXY	6	21.00	7.05	0.94	207.89	8.280	0.95	0.00	0.00
29	118.00	Low Profile Platform	1	1500.00	22.00	1.00	2777.88	39.243	1.00	0.00	0.00
30	118.00	P65-16-XLH-RR	3	53.00	8.16	0.79	214.14	10.896	0.81	0.00	0.00
31	118.00	7770	6	35.00	5.50	0.77	166.67	6.527	0.80	0.00	0.00
32	118.00	LGP21401	6	14.10	1.29	0.67	38.51	2.106	0.67	0.00	0.00
33	118.00	TT19-08BP111-001	3	16.00	0.64	0.67	35.76	1.219	0.67	0.00	0.00
34	118.00	RRUS-11	6	51.00	2.52	0.50	121.56	3.138	0.50	0.00	0.00
35	118.00	DC6-48-60-18	1	31.80	0.92	1.00	92.16	1.348	1.00	0.00	0.00
36	108.00	Commscope FFVV-65B-R2	3	70.80	12.27	0.74	346.76	13.679	0.74	0.00	0.00
37	108.00	Fujitsu TA08025-B605	3	75.00	1.96	0.80	125.61	2.503	0.80	0.00	0.00
38	108.00	Fujitsu TA08025-B604	3	63.90	1.96	0.76	112.89	2.503	0.76	0.00	0.00
39	108.00	Raycap RDIDC-9181-PF-48	1	21.90	2.01	0.79	73.43	2.560	0.79	0.00	0.00
40	108.00	Platform Commscope MC-PK8-DSH	1	1727.00	37.59	1.00	3360.29	83.297	1.00	0.00	0.00
41	75.00	GPS	1	3.70	0.01	1.00	3.70	0.010	1.00	0.00	0.00
		Totals:	**128**	**15,471.27**			**37,817.82**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
0.00	158.00	(4) 1 1/4" Coax			0.00	Inside					
0.00	149.00	(12) 1 1/4" Coax			0.00	Inside					
0.00	138.00	(9) 1 1/4" Coax			0.00	Inside					
0.00	138.00	(3) 1-1/4" Fiber			0.00	Inside					
0.00	128.00	(6) 1 5/8" Coax			1.98	Outside					
0.00	128.00	(2) 1 5/8" Fiber			0.00	Outside					
0.00	118.00	(12) 1 1/4" Coax			0.00	Inside					
0.00	118.00	(1) 3" Innerduct			0.00	Inside					
0.00	118.00	(1) 3/8" RET			0.00	Inside					
0.00	118.00	(2) 5/8" DC			0.00	Inside					
0.00	108.00	(1) 1.6" Hybrid			0.00	Inside					
0.00	75.00	(1) 1/2" Coax			0.00	Inside					
0.00	39.00	(4) 1.25" Reinforcing plate			3.00	Outside					

Shaft Section Properties

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Tower Engineering Solutions

Increment Length: **5 (ft)**

											Additional Reinforcing			
Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)	Area (in^2)	Ixp (in^4)	Iyp (in^4)	Weight (lb)
0.00	RB1	0.3750	54.730	64.694	24148.7	24.32	145.95	65	73	0.0	45.75	21320.2	15073.2	
5.00		0.3750	53.714	63.484	22819.7	23.85	143.24	65	73	1090.4	45.75	20560.3	14538.2	778.4
10.00		0.3750	52.698	62.275	21540.4	23.37	140.53	65	74	1069.8	45.75	19814.2	14012.8	778.4
15.00		0.3750	51.682	61.066	20309.9	22.89	137.82	65	74	1049.3	45.75	19082.0	13497.3	778.4
20.00		0.3750	50.666	59.857	19127.1	22.41	135.11	65	75	1028.7	45.75	18363.6	12991.5	778.4
25.00		0.3750	49.650	58.648	17991.1	21.94	132.40	65	76	1008.1	45.75	17659.1	12495.4	778.4
30.00		0.3750	48.634	57.438	16901.0	21.46	129.69	65	76	987.5	45.75	16968.4	12009.2	778.4
35.00		0.3750	47.618	56.229	15855.9	20.98	126.98	65	77	967.0	45.75	16291.6	11532.6	778.4
36.00	RT1	0.3750	47.415	55.987	15652.2	20.88	126.44	65	77	190.9	45.75	16157.9	11438.5	155.7
39.00	Bot - Section 2	0.3750	46.805	55.262	15051.6	20.60	124.81	65	77	567.8				
40.00		0.3750	46.602	55.020	14854.8	20.50	124.27	65	77	378.3				
45.00	Top - Section 1	0.3750	46.336	54.703	14599.9	20.38	123.56	65	77	1866.8				
50.00		0.3750	45.320	53.494	13652.9	19.90	120.85	65	78	920.4				
55.00		0.3750	44.304	52.285	12747.8	19.42	118.14	65	79	899.9				
60.00		0.3750	43.288	51.076	11883.6	18.94	115.44	65	79	879.3				
65.00		0.3750	42.272	49.866	11059.4	18.47	112.73	65	80	858.7				
70.00		0.3750	41.256	48.657	10274.2	17.99	110.02	65	80	838.1				
75.00		0.3750	40.240	47.448	9527.1	17.51	107.31	65	81	817.6				
79.00	Bot - Section 3	0.3750	39.428	46.481	8956.2	17.13	105.14	65	81	639.2				
80.00		0.3750	39.224	46.239	8817.1	17.03	104.60	65	81	291.5				
84.00	Top - Section 2	0.3125	39.037	38.408	7276.7	20.62	124.92	60	72	1151.0				
85.00		0.3125	38.833	38.206	7162.8	20.50	124.27	60	72	130.4				
90.00		0.3125	37.817	37.199	6610.8	19.93	121.02	60	73	641.5				
95.00		0.3125	36.801	36.191	6088.0	19.35	117.76	60	73	624.3				
100.00		0.3125	35.785	35.183	5593.5	18.78	114.51	60	74	607.2				
105.00		0.3125	34.769	34.176	5126.5	18.21	111.26	60	75	590.0				
108.00		0.3125	34.160	33.571	4859.2	17.86	109.31	60	75	345.8				
110.00		0.3125	33.753	33.168	4686.3	17.63	108.01	60	75	227.1				
115.00		0.3125	32.737	32.160	4272.0	17.06	104.76	60	76	555.7				
118.00		0.3125	32.128	31.556	4035.6	16.72	102.81	60	76	325.2				
120.00		0.3125	31.721	31.153	3882.9	16.49	101.51	60	76	213.4				
123.00	Top - Section 3	0.3125	31.112	30.548	3661.2	16.14	99.56	60	76	314.9				
123.00	Bot - Section 4	0.2188	31.112	21.454	2586.9	23.06	142.19	60	69					
125.00		0.2188	30.705	21.171	2486.1	23.33	140.34	60	69	145.0				
128.00		0.2188	30.096	20.748	2339.9	22.84	137.55	60	70	214.0				
130.00		0.2188	29.689	20.466	2245.8	22.52	135.69	60	70	140.2				
135.00		0.2188	28.674	19.760	2021.4	21.70	131.05	60	71	342.2				
138.00		0.2188	28.064	19.337	1894.3	21.21	128.26	60	71	199.6				
140.00		0.2188	27.658	19.055	1812.5	20.88	126.41	60	72	130.6				
145.00		0.2188	26.642	18.349	1618.5	20.06	121.76	60	73	318.2				
149.00		0.2188	25.829	17.785	1473.7	19.40	118.05	60	73	245.9				
150.00		0.2188	25.626	17.644	1438.9	19.24	117.12	60	74	60.3				
155.00		0.2188	24.610	16.938	1273.1	18.42	112.48	60	74	294.2				
158.00		0.2188	24.000	16.515	1180.0	17.93	109.69	60	75	170.7				
									Total Weight	**24336.9**				**5604.5**

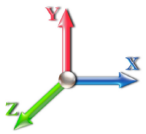
Wind Loading - Shaft

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00	RB1	1.00	0.85	17.879	19.67	397.09	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	17.879	19.67	389.72	0.650	0.000	5.00	22.941	14.91	469.2	0.0	1308.5
10.00		1.00	0.85	17.879	19.67	382.34	0.650	0.000	5.00	22.511	14.63	460.4	0.0	1283.8
15.00		1.00	0.85	17.879	19.67	374.97	0.650	0.000	5.00	22.081	14.35	451.6	0.0	1259.1
20.00		1.00	0.90	18.971	20.87	378.65	0.650	0.000	5.00	21.651	14.07	469.9	0.0	1234.4
25.00		1.00	0.95	19.883	21.87	379.88	0.650	0.000	5.00	21.222	13.79	482.7	0.0	1209.7
30.00		1.00	0.98	20.661	22.73	379.32	0.650	0.000	5.00	20.792	13.51	491.4	0.0	1185.0
35.00		1.00	1.01	21.343	23.48	377.47	0.654 *	0.000	5.00	20.362	13.31	500.0	0.0	1160.4
36.00	RT1	1.00	1.02	21.470	23.62	376.97	0.656 *	0.000	1.00	4.021	2.64	99.7	0.0	229.1
39.00	Bot - Section 2	1.00	1.04	21.834	24.02	375.28	0.658 *	0.000	3.00	11.959	7.87	302.4	0.0	681.4
40.00		1.00	1.04	21.951	24.15	374.64	0.650	0.000	1.00	4.015	2.61	100.8	0.0	454.0
45.00	Top - Section 1	1.00	1.07	22.502	24.75	371.05	0.650	0.000	5.00	19.820	12.88	510.2	0.0	2240.2
50.00		1.00	1.09	23.007	25.31	373.00	0.650	0.000	5.00	19.390	12.60	510.3	0.0	1104.5
55.00		1.00	1.12	23.473	25.82	368.31	0.650	0.000	5.00	18.960	12.32	509.1	0.0	1079.8
60.00		1.00	1.14	23.907	26.30	363.18	0.650	0.000	5.00	18.530	12.04	506.8	0.0	1055.1
65.00		1.00	1.16	24.313	26.74	357.65	0.650	0.000	5.00	18.100	11.77	503.4	0.0	1030.4
70.00		1.00	1.17	24.696	27.17	351.79	0.650	0.000	5.00	17.670	11.49	499.2	0.0	1005.8
75.00	Appurtenance(s)	1.00	1.19	25.057	27.56	345.63	0.650	0.000	5.00	17.240	11.21	494.2	0.0	981.1
79.00	Bot - Section 3	1.00	1.20	25.333	27.87	340.51	0.650	0.000	4.00	13.483	8.76	390.7	0.0	767.1
80.00		1.00	1.21	25.400	27.94	339.20	0.650	0.000	1.00	3.381	2.20	98.2	0.0	349.8
84.00	Top - Section 2	1.00	1.22	25.662	28.23	333.88	0.650	0.000	4.00	13.350	8.68	391.9	0.0	1381.2
85.00		1.00	1.22	25.726	28.30	337.97	0.650	0.000	1.00	3.295	2.14	97.0	0.0	156.4
90.00		1.00	1.24	26.037	28.64	331.11	0.650	0.000	5.00	16.215	10.54	483.0	0.0	769.8
95.00		1.00	1.25	26.336	28.97	324.06	0.650	0.000	5.00	15.785	10.26	475.6	0.0	749.2
100.00		1.00	1.27	26.621	29.28	316.82	0.650	0.000	5.00	15.356	9.98	467.7	0.0	728.6
105.00		1.00	1.28	26.896	29.59	309.41	0.650	0.000	5.00	14.926	9.70	459.3	0.0	708.0
108.00	Appurtenance(s)	1.00	1.29	27.056	29.76	304.88	0.650	0.000	3.00	8.749	5.69	270.8	0.0	414.9
110.00		1.00	1.29	27.161	29.88	301.84	0.650	0.000	2.00	5.747	3.74	178.6	0.0	272.5
115.00		1.00	1.30	27.416	30.16	294.13	0.650	0.000	5.00	14.066	9.14	441.2	0.0	666.9
118.00	Appurtenance(s)	1.00	1.31	27.565	30.32	289.43	0.650	0.000	3.00	8.233	5.35	259.6	0.0	390.3
120.00		1.00	1.32	27.663	30.43	286.28	0.650	0.000	2.00	5.403	3.51	171.0	0.0	256.1
123.00	Top - Section 3	1.00	1.32	27.807	30.59	281.51	0.650	0.000	3.00	7.975	5.18	253.7	0.0	377.9
125.00		1.00	1.33	27.902	30.69	278.30	0.650	0.000	2.00	5.231	3.40	167.0	0.0	174.1
128.00	Appurtenance(s)	1.00	1.33	28.042	30.85	273.46	0.650	0.000	3.00	7.717	5.02	247.6	0.0	256.8
130.00		1.00	1.34	28.133	30.95	270.21	0.650	0.000	2.00	5.059	3.29	162.8	0.0	168.3
135.00		1.00	1.35	28.358	31.19	262.00	0.650	0.000	5.00	12.347	8.03	400.5	0.0	410.6
138.00	Appurtenance(s)	1.00	1.35	28.489	31.34	257.02	0.650	0.000	3.00	7.202	4.68	234.7	0.0	239.5
140.00		1.00	1.36	28.576	31.43	253.69	0.650	0.000	2.00	4.715	3.06	154.1	0.0	156.8
145.00		1.00	1.37	28.788	31.67	245.27	0.650	0.000	5.00	11.487	7.47	378.3	0.0	381.8
149.00	Appurtenance(s)	1.00	1.38	28.953	31.85	238.47	0.650	0.000	4.00	8.880	5.77	294.1	0.0	295.1
150.00		1.00	1.38	28.994	31.89	236.76	0.650	0.000	1.00	2.177	1.42	72.2	0.0	72.3
155.00		1.00	1.39	29.195	32.11	228.16	0.650	0.000	5.00	10.627	6.91	354.9	0.0	353.0
158.00	Appurtenance(s)	1.00	1.39	29.313	32.24	222.96	0.650	0.000	3.00	6.170	4.01	206.9	0.0	204.9
								Totals:	**158.00**			**14,473.0**		**29,204.3**

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

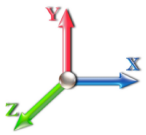
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 10	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	158.00	Alu - 800 Filters	3	29.332	32.265	0.38	0.75	0.88	31.68	0.000	0.500	45.30	0.00	22.65
2	158.00	Collar Mount	1	29.313	32.244	1.00	1.00	5.00	420.00	0.000	0.000	257.95	0.00	0.00
3	158.00	Low Profile Platform	1	29.332	32.265	0.75	0.75	18.75	1440.00	0.000	0.500	967.96	0.00	483.98
4	158.00	RFS - ACU-A20-N - RET	3	29.332	32.265	0.50	0.75	0.21	3.60	0.000	0.500	10.90	0.00	5.45
5	158.00	ALU - 1900 MHz - RRU	3	29.332	32.265	0.50	0.75	5.73	158.40	0.000	0.500	295.73	0.00	147.87
6	158.00	ALU - 800 MHz - RRU	6	29.332	32.265	0.50	0.75	7.51	381.60	0.000	0.500	387.56	0.00	193.78
7	158.00	Site Pro PRK-1245 (kicker	1	29.313	32.244	1.00	1.00	9.50	557.89	0.000	0.000	490.11	0.00	0.00
8	158.00	Site Pro HRK14	1	29.313	32.244	1.00	1.00	8.13	362.83	0.000	0.000	419.43	0.00	0.00
9	158.00	RFS - APXVSPP18-C-A20	3	29.332	32.265	0.62	0.75	14.96	205.20	0.000	0.500	772.27	0.00	386.13
10	158.00	Commscope -	3	29.332	32.265	0.62	0.75	16.95	208.80	0.000	0.500	875.21	0.00	437.60
11	158.00	ALU - TD-RRH8x20-25 -	3	29.332	32.265	0.50	0.75	6.11	252.00	0.000	0.500	315.19	0.00	157.59
12	149.00	Low Profile Platform	1	28.953	31.848	1.00	1.00	25.00	1440.00	0.000	0.000	1273.93	0.00	0.00
13	149.00	DB844H90E-XY	12	28.953	31.848	0.83	0.75	30.19	201.60	0.000	0.000	1538.65	0.00	0.00
14	138.00	Platform w/ HR & V-Brace	1	28.489	31.338	1.00	1.00	51.70	2695.20	0.000	0.000	2592.29	0.00	0.00
15	138.00	KRY 112 144/1	3	28.489	31.338	0.38	0.75	0.46	39.60	0.000	0.000	23.13	0.00	0.00
16	138.00	APX16DWV-16DWVS-E-A	6	28.489	31.338	0.46	0.75	18.44	293.04	0.000	0.000	924.70	0.00	0.00
17	138.00	APXVAA24_43-U-A20	3	28.489	31.338	0.55	0.75	33.24	356.40	0.000	0.000	1666.90	0.00	0.00
18	138.00	AIR6449 B41	3	28.489	31.338	0.53	0.75	9.03	370.80	0.000	0.000	452.57	0.00	0.00
19	138.00	782 10663	3	28.489	31.338	0.38	0.75	0.32	19.08	0.000	0.000	15.79	0.00	0.00
20	138.00	Radio 4415 Protruding w/	3	28.489	31.338	0.50	0.75	2.80	178.56	0.000	0.000	140.59	0.00	0.00
21	138.00	RRUS 4415 B25	3	28.489	31.338	0.50	0.75	2.47	165.60	0.000	0.000	123.96	0.00	0.00
22	138.00	4449 B71 + B85	3	28.489	31.338	0.50	0.75	2.97	263.52	0.000	0.000	148.91	0.00	0.00
23	128.00	RFS - DB-T1-6Z-8AB-0Z -	2	28.042	30.846	0.40	0.80	3.84	45.36	0.000	0.000	189.52	0.00	0.00
24	128.00	Alcatel Lucent -	3	28.042	30.846	0.54	0.80	4.08	204.48	0.000	0.000	201.57	0.00	0.00
25	128.00	Alcatel Lucent -	3	28.042	30.846	0.54	0.80	5.40	198.00	0.000	0.000	266.65	0.00	0.00
26	128.00	Andrew - JAHH-65B-R3B	6	28.042	30.846	0.62	0.75	33.94	455.76	0.000	0.000	1675.24	0.00	0.00
27	128.00	Andrew - DB846F65ZAXY	6	28.042	30.846	0.75	0.80	31.81	151.20	0.000	0.000	1569.91	0.00	0.00
28	128.00	Low Profile Platform	1	28.042	30.846	0.80	0.80	17.60	1800.00	0.000	0.000	868.62	0.00	0.00
29	118.00	7770	6	27.565	30.322	0.62	0.80	20.33	252.00	0.000	0.000	986.22	0.00	0.00
30	118.00	Low Profile Platform	1	27.565	30.322	0.80	0.80	17.60	1800.00	0.000	0.000	853.87	0.00	0.00
31	118.00	P65-16-XLH-RR	3	27.565	30.322	0.63	0.80	15.47	190.80	0.000	0.000	750.60	0.00	0.00
32	118.00	TT19-08BP111-001	3	27.565	30.322	0.54	0.80	1.03	57.60	0.000	0.000	49.93	0.00	0.00
33	118.00	LGP21401	6	27.565	30.322	0.54	0.80	4.15	101.52	0.000	0.000	201.27	0.00	0.00
34	118.00	RRUS-11	6	27.565	30.322	0.40	0.80	6.05	367.20	0.000	0.000	293.42	0.00	0.00
35	118.00	DC6-48-60-18	1	27.565	30.322	0.80	0.80	0.74	38.16	0.000	0.000	35.71	0.00	0.00
36	108.00	Platform Commscope	1	27.056	29.762	1.00	1.00	37.59	2072.40	0.000	0.000	1790.00	0.00	0.00
37	108.00	Raycap	1	27.056	29.762	0.59	0.75	1.19	26.28	0.000	0.000	56.71	0.00	0.00
38	108.00	Fujitsu TA08025-B604	3	27.056	29.762	0.57	0.75	3.35	230.04	0.000	0.000	159.60	0.00	0.00
39	108.00	Fujitsu TA08025-B605	3	27.056	29.762	0.60	0.75	3.53	270.00	0.000	0.000	168.00	0.00	0.00
40	108.00	Commscope	3	27.056	29.762	0.55	0.75	20.43	254.88	0.000	0.000	972.84	0.00	0.00
41	75.00	GPS	1	25.057	27.563	1.00	1.00	0.01	4.44	0.000	0.000	0.44	0.00	0.00
							Totals:		**18,565.52**			**24,829.13**		

Total Applied Force Summary

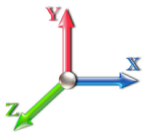
Structure:	CT46131-A-SBA		**Code:**	EIA/TIA-222-G	1/18/2022
Site Name:	Easton-Everetts Rd		**Exposure:**	C	
Height:	158.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 11

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		469.23	2477.48	0.00	0.00
10.00		460.44	2452.79	0.00	0.00
15.00		451.65	2428.10	0.00	0.00
20.00		469.89	2403.41	0.00	0.00
25.00		482.71	2378.72	0.00	0.00
30.00		491.44	2354.04	0.00	0.00
35.00		500.00	2329.35	0.00	0.00
36.00		99.71	462.91	0.00	0.00
39.00		302.40	1382.80	0.00	0.00
40.00		100.84	500.94	0.00	0.00
45.00		510.20	2475.09	0.00	0.00
50.00		510.33	1339.43	0.00	0.00
55.00		509.13	1314.74	0.00	0.00
60.00		506.79	1290.05	0.00	0.00
65.00		503.45	1265.36	0.00	0.00
70.00		499.22	1240.67	0.00	0.00
75.00	(1) attachments	494.64	1220.43	0.00	0.00
79.00		390.74	954.24	0.00	0.00
80.00		98.23	396.63	0.00	0.00
84.00		391.93	1568.41	0.00	0.00
85.00		96.96	203.21	0.00	0.00
90.00		483.00	1003.71	0.00	0.00
95.00		475.58	983.14	0.00	0.00
100.00		467.65	962.57	0.00	0.00
105.00		459.25	941.99	0.00	0.00
108.00	(11) attachments	3417.96	3408.92	0.00	0.00
110.00		178.56	361.73	0.00	0.00
115.00		441.17	889.93	0.00	0.00
118.00	(26) attachments	3430.64	3331.36	0.00	0.00
120.00		170.98	322.78	0.00	0.00
123.00		253.71	478.00	0.00	0.00
125.00		166.97	240.78	0.00	0.00
128.00	(21) attachments	5019.07	3211.64	0.00	0.00
130.00		162.82	214.76	0.00	0.00
135.00		400.54	526.81	0.00	0.00
138.00	(28) attachments	6323.55	4690.97	0.00	0.00
140.00		154.14	182.11	0.00	0.00
145.00		378.29	445.19	0.00	0.00
149.00	(13) attachments	3106.70	1987.38	0.00	0.00
150.00		72.21	75.50	0.00	0.00
155.00		354.93	368.86	0.00	0.00
158.00	(28) attachments	5044.50	4236.41	0.00	1835.06
	Totals:	**39,302.17**	**61,303.35**	**0.00**	**1,835.06**

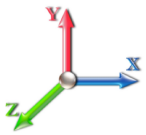
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.090	0.000	17.879	0.00	37.44
5.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.090	0.000	17.879	0.00	13.20
5.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.090	0.000	17.879	0.00	934.08
10.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.092	0.000	17.879	0.00	37.44
10.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.092	0.000	17.879	0.00	13.20
10.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.092	0.000	17.879	0.00	934.08
15.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.094	0.000	17.879	0.00	37.44
15.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.094	0.000	17.879	0.00	13.20
15.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.094	0.000	17.879	0.00	934.08
20.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.096	0.000	18.971	0.00	37.44
20.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.096	0.000	18.971	0.00	13.20
20.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.096	0.000	18.971	0.00	934.08
25.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.098	0.000	19.883	0.00	37.44
25.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.098	0.000	19.883	0.00	13.20
25.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.098	0.000	19.883	0.00	934.08
30.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.100	0.000	20.661	0.00	37.44
30.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.100	0.000	20.661	0.00	13.20
30.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.100	0.000	20.661	0.00	934.08
35.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.102	1.006	21.343	0.00	37.44
35.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.102	1.006	21.343	0.00	13.20
35.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.102	1.006	21.343	0.00	934.08
36.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.103	1.010	21.470	0.00	7.49
36.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.103	1.010	21.470	0.00	2.64
36.00	1.25" Reinforcing	Yes	1.00	0.000	3.00	0.25	0.00	0.103	1.010	21.470	0.00	186.82
39.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.104	1.012	21.834	0.00	22.46
39.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.104	1.012	21.834	0.00	7.92
39.00	1.25" Reinforcing	Yes	3.00	0.000	3.00	0.75	0.00	0.104	1.012	21.834	0.00	560.45
40.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.042	0.000	21.951	0.00	7.49
40.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.042	0.000	21.951	0.00	2.64
45.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.042	0.000	22.502	0.00	37.44
45.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.042	0.000	22.502	0.00	13.20
50.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.043	0.000	23.007	0.00	37.44
50.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.043	0.000	23.007	0.00	13.20
55.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.044	0.000	23.473	0.00	37.44
55.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.044	0.000	23.473	0.00	13.20
60.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.045	0.000	23.907	0.00	37.44
60.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.045	0.000	23.907	0.00	13.20
65.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.046	0.000	24.313	0.00	37.44
65.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.046	0.000	24.313	0.00	13.20
70.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.047	0.000	24.696	0.00	37.44
70.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.047	0.000	24.696	0.00	13.20
75.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.048	0.000	25.057	0.00	37.44
75.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.048	0.000	25.057	0.00	13.20
79.00	1 5/8" Coax	Yes	4.00	0.000	1.98	0.66	0.00	0.049	0.000	25.333	0.00	29.95
79.00	1 5/8" Fiber	Yes	4.00	0.000	0.00	0.00	0.00	0.049	0.000	25.333	0.00	10.56
80.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.050	0.000	25.400	0.00	7.49
80.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.050	0.000	25.400	0.00	2.64

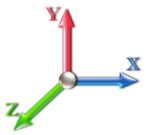
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
84.00	1 5/8" Coax	Yes	4.00	0.000	1.98	0.66	0.00	0.050	0.000	25.662	0.00	29.95
84.00	1 5/8" Fiber	Yes	4.00	0.000	0.00	0.00	0.00	0.050	0.000	25.662	0.00	10.56
85.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.050	0.000	25.726	0.00	7.49
85.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.050	0.000	25.726	0.00	2.64
90.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.051	0.000	26.037	0.00	37.44
90.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.051	0.000	26.037	0.00	13.20
95.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.052	0.000	26.336	0.00	37.44
95.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.052	0.000	26.336	0.00	13.20
100.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.054	0.000	26.621	0.00	37.44
100.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.054	0.000	26.621	0.00	13.20
105.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.055	0.000	26.896	0.00	37.44
105.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.055	0.000	26.896	0.00	13.20
108.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.057	0.000	27.056	0.00	22.46
108.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.057	0.000	27.056	0.00	7.92
110.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.057	0.000	27.161	0.00	14.98
110.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.057	0.000	27.161	0.00	5.28
115.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.059	0.000	27.416	0.00	37.44
115.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.059	0.000	27.416	0.00	13.20
118.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.060	0.000	27.565	0.00	22.46
118.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.060	0.000	27.565	0.00	7.92
120.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.061	0.000	27.663	0.00	14.98
120.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.061	0.000	27.663	0.00	5.28
123.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.062	0.000	27.807	0.00	22.46
123.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.062	0.000	27.807	0.00	7.92
125.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.063	0.000	27.902	0.00	14.98
125.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	27.902	0.00	5.28
128.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.064	0.000	28.042	0.00	22.46
128.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.064	0.000	28.042	0.00	7.92
										Totals:	**0.0**	**8,582.2**

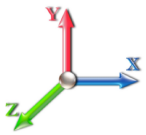
Calculated Forces

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 14	

Load Case: 1.2D + 1.6W 93 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-61.24	-39.39	0.00	-4672.5	0.00	4672.51	4238.25	2119.12	9474.98	4744.53	0.00	0.000	0.000	0.615
5.00	-58.65	-39.09	0.00	-4475.5	0.00	4475.55	4191.13	2095.57	9193.31	4603.49	0.09	-0.166	0.000	0.602
10.00	-56.09	-38.78	0.00	-4280.1	0.00	4280.11	4142.79	2071.40	8912.98	4463.11	0.35	-0.333	0.000	0.589
15.00	-53.55	-38.47	0.00	-4086.2	0.00	4086.20	4093.23	2046.62	8634.14	4323.49	0.79	-0.500	0.000	0.576
20.00	-51.04	-38.13	0.00	-3893.8	0.00	3893.85	4042.45	2021.22	8356.93	4184.68	1.40	-0.668	0.000	0.562
25.00	-48.56	-37.75	0.00	-3703.2	0.00	3703.23	3990.44	1995.22	8081.53	4046.77	2.19	-0.836	0.000	0.547
30.00	-46.11	-37.36	0.00	-3514.4	0.00	3514.46	3937.21	1968.60	7808.07	3909.84	3.16	-1.004	0.000	0.532
35.00	-43.72	-36.89	0.00	-3327.6	0.00	3327.66	3882.75	1941.38	7536.73	3773.96	4.30	-1.173	0.000	0.517
36.00	-43.22	-36.84	0.00	-3290.7	0.00	3290.77	3871.71	1935.86	7482.72	3746.92	4.55	-1.207	0.000	0.514
36.00	-43.22	-36.84	0.00	-3290.7	0.00	3290.77	3871.71	1935.86	7482.72	3746.92	4.55	-1.207	0.000	0.514
39.00	-41.79	-36.56	0.00	-3180.2	0.00	3180.26	3838.31	1919.15	7321.27	3666.08	5.34	-1.309	0.000	0.879
40.00	-41.18	-36.58	0.00	-3143.7	0.00	3143.70	3827.07	1913.54	7267.64	3639.22	5.62	-1.369	0.000	0.875
45.00	-38.53	-36.20	0.00	-2960.8	0.00	2960.82	3812.30	1906.15	7197.58	3604.14	7.21	-1.661	0.000	0.832
50.00	-37.03	-35.83	0.00	-2779.8	0.00	2779.83	3755.07	1877.54	6931.57	3470.94	9.11	-1.955	0.000	0.811
55.00	-35.56	-35.45	0.00	-2600.6	0.00	2600.67	3696.63	1848.32	6668.16	3339.04	11.31	-2.235	0.000	0.789
60.00	-34.12	-35.06	0.00	-2423.4	0.00	2423.42	3636.96	1818.48	6407.52	3208.52	13.80	-2.516	0.000	0.765
65.00	-32.71	-34.66	0.00	-2248.1	0.00	2248.13	3576.08	1788.04	6149.79	3079.47	16.59	-2.795	0.000	0.740
70.00	-31.34	-34.25	0.00	-2074.8	0.00	2074.85	3513.96	1756.98	5895.14	2951.95	19.66	-3.073	0.000	0.712
75.00	-30.00	-33.81	0.00	-1903.6	0.00	1903.63	3450.63	1725.31	5643.71	2826.05	23.03	-3.349	0.000	0.683
79.00	-28.99	-33.43	0.00	-1768.3	0.00	1768.38	3399.08	1699.54	5445.00	2726.55	25.93	-3.568	0.000	0.657
80.00	-28.52	-33.38	0.00	-1734.9	0.00	1734.95	3386.07	1693.03	5395.67	2701.84	26.68	-3.624	0.000	0.651
84.00	-26.91	-32.95	0.00	-1601.4	0.00	1601.43	2492.17	1246.08	3964.65	1985.27	29.81	-3.839	0.000	0.818
85.00	-26.61	-32.92	0.00	-1568.4	0.00	1568.48	2483.20	1241.60	3929.49	1967.67	30.62	-3.893	0.000	0.809
90.00	-25.48	-32.50	0.00	-1403.8	0.00	1403.88	2437.73	1218.86	3754.97	1880.28	34.85	-4.189	0.000	0.758
95.00	-24.38	-32.07	0.00	-1241.3	0.00	1241.39	2391.17	1195.58	3582.65	1793.99	39.39	-4.473	0.000	0.703
100.00	-23.31	-31.63	0.00	-1081.0	0.00	1081.05	2343.52	1171.76	3412.67	1708.87	44.22	-4.744	0.000	0.643
105.00	-22.30	-31.17	0.00	-922.89	0.00	922.89	2294.79	1147.40	3245.17	1624.99	49.32	-4.999	0.000	0.578
108.00	-19.15	-27.51	0.00	-829.38	0.00	829.38	2265.03	1132.52	3145.91	1575.29	52.50	-5.145	0.000	0.536
110.00	-18.73	-27.35	0.00	-774.37	0.00	774.37	2244.98	1122.49	3080.27	1542.43	54.68	-5.239	0.000	0.511
115.00	-17.81	-26.88	0.00	-637.64	0.00	637.64	2194.08	1097.04	2918.13	1461.23	60.28	-5.453	0.000	0.445
118.00	-14.79	-23.17	0.00	-557.01	0.00	557.01	2163.02	1081.51	2822.22	1413.21	63.74	-5.573	0.000	0.401
120.00	-14.45	-22.99	0.00	-510.68	0.00	510.68	2136.45	1068.22	2751.59	1377.84	66.08	-5.648	0.000	0.378
123.00	-13.96	-22.71	0.00	-441.72	0.00	441.72	2094.98	1047.49	2645.31	1324.62	69.66	-5.753	0.000	0.341
123.00	-13.96	-22.71	0.00	-441.72	0.00	441.72	1330.70	665.35	1690.49	846.50	69.66	-5.753	0.000	0.533
125.00	-13.70	-22.54	0.00	-396.31	0.00	396.31	1319.70	659.85	1654.32	828.39	72.08	-5.818	0.000	0.490
128.00	-10.99	-17.24	0.00	-328.69	0.00	328.69	1302.88	651.44	1600.34	801.36	75.78	-5.942	0.000	0.419
130.00	-10.76	-17.08	0.00	-294.22	0.00	294.22	1291.45	645.73	1564.57	783.45	78.28	-6.018	0.000	0.385
135.00	-10.24	-16.64	0.00	-208.84	0.00	208.84	1262.12	631.06	1475.93	739.06	84.66	-6.177	0.000	0.291
138.00	-6.26	-9.85	0.00	-158.92	0.00	158.92	1244.00	622.00	1423.34	712.73	88.56	-6.255	0.000	0.228
140.00	-6.08	-9.69	0.00	-139.21	0.00	139.21	1231.70	615.85	1388.54	695.30	91.19	-6.300	0.000	0.205
145.00	-5.67	-9.27	0.00	-90.77	0.00	90.77	1200.20	600.10	1302.53	652.23	97.82	-6.390	0.000	0.144
149.00	-4.04	-5.96	0.00	-53.69	0.00	53.69	1174.22	587.11	1234.81	618.32	103.19	-6.441	0.000	0.090
150.00	-3.97	-5.88	0.00	-47.73	0.00	47.73	1167.61	583.81	1218.04	609.93	104.54	-6.451	0.000	0.082
155.00	-3.64	-5.49	0.00	-18.31	0.00	18.31	1133.94	566.97	1135.21	568.45	111.30	-6.483	0.000	0.036
158.00	0.00	-5.04	0.00	-1.84	0.00	1.84	1113.22	556.61	1086.36	543.99	115.37	-6.490	0.000	0.003

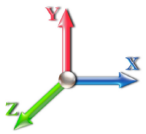
Wind Loading - Shaft

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00	RB1	1.00	0.85	17.879	19.67	397.09	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	17.879	19.67	389.72	0.650	0.000	5.00	22.941	14.91	469.2	0.0	981.4
10.00		1.00	0.85	17.879	19.67	382.34	0.650	0.000	5.00	22.511	14.63	460.4	0.0	962.8
15.00		1.00	0.85	17.879	19.67	374.97	0.650	0.000	5.00	22.081	14.35	451.6	0.0	944.3
20.00		1.00	0.90	18.971	20.87	378.65	0.650	0.000	5.00	21.651	14.07	469.9	0.0	925.8
25.00		1.00	0.95	19.883	21.87	379.88	0.650	0.000	5.00	21.222	13.79	482.7	0.0	907.3
30.00		1.00	0.98	20.661	22.73	379.32	0.650	0.000	5.00	20.792	13.51	491.4	0.0	888.8
35.00		1.00	1.01	21.343	23.48	377.47	0.654 *	0.000	5.00	20.362	13.31	500.0	0.0	870.3
36.00	RT1	1.00	1.02	21.470	23.62	376.97	0.656 *	0.000	1.00	4.021	2.64	99.7	0.0	171.8
39.00	Bot - Section 2	1.00	1.04	21.834	24.02	375.28	0.658 *	0.000	3.00	11.959	7.87	302.4	0.0	511.1
40.00		1.00	1.04	21.951	24.15	374.64	0.650	0.000	1.00	4.015	2.61	100.8	0.0	340.5
45.00	Top - Section 1	1.00	1.07	22.502	24.75	371.05	0.650	0.000	5.00	19.820	12.88	510.2	0.0	1680.1
50.00		1.00	1.09	23.007	25.31	373.00	0.650	0.000	5.00	19.390	12.60	510.3	0.0	828.4
55.00		1.00	1.12	23.473	25.82	368.31	0.650	0.000	5.00	18.960	12.32	509.1	0.0	809.9
60.00		1.00	1.14	23.907	26.30	363.18	0.650	0.000	5.00	18.530	12.04	506.8	0.0	791.4
65.00		1.00	1.16	24.313	26.74	357.65	0.650	0.000	5.00	18.100	11.77	503.4	0.0	772.8
70.00		1.00	1.17	24.696	27.17	351.79	0.650	0.000	5.00	17.670	11.49	499.2	0.0	754.3
75.00	Appurtenance(s)	1.00	1.19	25.057	27.56	345.63	0.650	0.000	5.00	17.240	11.21	494.2	0.0	735.8
79.00	Bot - Section 3	1.00	1.20	25.333	27.87	340.51	0.650	0.000	4.00	13.483	8.76	390.7	0.0	575.3
80.00		1.00	1.21	25.400	27.94	339.20	0.650	0.000	1.00	3.381	2.20	98.2	0.0	262.4
84.00	Top - Section 2	1.00	1.22	25.662	28.23	333.88	0.650	0.000	4.00	13.350	8.68	391.9	0.0	1035.9
85.00		1.00	1.22	25.726	28.30	337.97	0.650	0.000	1.00	3.295	2.14	97.0	0.0	117.3
90.00		1.00	1.24	26.037	28.64	331.11	0.650	0.000	5.00	16.215	10.54	483.0	0.0	577.3
95.00		1.00	1.25	26.336	28.97	324.06	0.650	0.000	5.00	15.785	10.26	475.6	0.0	561.9
100.00		1.00	1.27	26.621	29.28	316.82	0.650	0.000	5.00	15.356	9.98	467.7	0.0	546.5
105.00		1.00	1.28	26.896	29.59	309.41	0.650	0.000	5.00	14.926	9.70	459.3	0.0	531.0
108.00	Appurtenance(s)	1.00	1.29	27.056	29.76	304.88	0.650	0.000	3.00	8.749	5.69	270.8	0.0	311.2
110.00		1.00	1.29	27.161	29.88	301.84	0.650	0.000	2.00	5.747	3.74	178.6	0.0	204.4
115.00		1.00	1.30	27.416	30.16	294.13	0.650	0.000	5.00	14.066	9.14	441.2	0.0	500.2
118.00	Appurtenance(s)	1.00	1.31	27.565	30.32	289.43	0.650	0.000	3.00	8.233	5.35	259.6	0.0	292.7
120.00		1.00	1.32	27.663	30.43	286.28	0.650	0.000	2.00	5.403	3.51	171.0	0.0	192.0
123.00	Top - Section 3	1.00	1.32	27.807	30.59	281.51	0.650	0.000	3.00	7.975	5.18	253.7	0.0	283.4
125.00		1.00	1.33	27.902	30.69	278.30	0.650	0.000	2.00	5.231	3.40	167.0	0.0	130.5
128.00	Appurtenance(s)	1.00	1.33	28.042	30.85	273.46	0.650	0.000	3.00	7.717	5.02	247.6	0.0	192.6
130.00		1.00	1.34	28.133	30.95	270.21	0.650	0.000	2.00	5.059	3.29	162.8	0.0	126.2
135.00		1.00	1.35	28.358	31.19	262.00	0.650	0.000	5.00	12.347	8.03	400.5	0.0	308.0
138.00	Appurtenance(s)	1.00	1.35	28.489	31.34	257.02	0.650	0.000	3.00	7.202	4.68	234.7	0.0	179.6
140.00		1.00	1.36	28.576	31.43	253.69	0.650	0.000	2.00	4.715	3.06	154.1	0.0	117.6
145.00		1.00	1.37	28.788	31.67	245.27	0.650	0.000	5.00	11.487	7.47	378.3	0.0	286.4
149.00	Appurtenance(s)	1.00	1.38	28.953	31.85	238.47	0.650	0.000	4.00	8.880	5.77	294.1	0.0	221.3
150.00		1.00	1.38	28.994	31.89	236.76	0.650	0.000	1.00	2.177	1.42	72.2	0.0	54.2
155.00		1.00	1.39	29.195	32.11	228.16	0.650	0.000	5.00	10.627	6.91	354.9	0.0	264.8
158.00	Appurtenance(s)	1.00	1.39	29.313	32.24	222.96	0.650	0.000	3.00	6.170	4.01	206.9	0.0	153.7
								Totals:	**158.00**			**14,473.0**		**21,903.2**

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

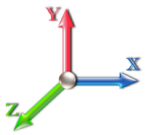
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	158.00	Alu - 800 Filters	3	29.332	32.265	0.38	0.75	0.88	23.76	0.000	0.500	45.30	0.00	22.65
2	158.00	Collar Mount	1	29.313	32.244	1.00	1.00	5.00	315.00	0.000	0.000	257.95	0.00	0.00
3	158.00	Low Profile Platform	1	29.332	32.265	0.75	0.75	18.75	1080.00	0.000	0.500	967.96	0.00	483.98
4	158.00	RFS - ACU-A20-N - RET	3	29.332	32.265	0.50	0.75	0.21	2.70	0.000	0.500	10.90	0.00	5.45
5	158.00	ALU - 1900 MHz - RRU	3	29.332	32.265	0.50	0.75	5.73	118.80	0.000	0.500	295.73	0.00	147.87
6	158.00	ALU - 800 MHz - RRU	6	29.332	32.265	0.50	0.75	7.51	286.20	0.000	0.500	387.56	0.00	193.78
7	158.00	Site Pro PRK-1245 (kicker	1	29.313	32.244	1.00	1.00	9.50	418.42	0.000	0.000	490.11	0.00	0.00
8	158.00	Site Pro HRK14	1	29.313	32.244	1.00	1.00	8.13	272.12	0.000	0.000	419.43	0.00	0.00
9	158.00	RFS - APXVSPP18-C-A20	3	29.332	32.265	0.62	0.75	14.96	153.90	0.000	0.500	772.27	0.00	386.13
10	158.00	Commscope -	3	29.332	32.265	0.62	0.75	16.95	156.60	0.000	0.500	875.21	0.00	437.60
11	158.00	ALU - TD-RRH8x20-25 -	3	29.332	32.265	0.50	0.75	6.11	189.00	0.000	0.500	315.19	0.00	157.59
12	149.00	Low Profile Platform	1	28.953	31.848	1.00	1.00	25.00	1080.00	0.000	0.000	1273.93	0.00	0.00
13	149.00	DB844H90E-XY	12	28.953	31.848	0.83	0.75	30.19	151.20	0.000	0.000	1538.65	0.00	0.00
14	138.00	Platform w/ HR & V-Brace	1	28.489	31.338	1.00	1.00	51.70	2021.40	0.000	0.000	2592.29	0.00	0.00
15	138.00	KRY 112 144/1	3	28.489	31.338	0.38	0.75	0.46	29.70	0.000	0.000	23.13	0.00	0.00
16	138.00	APX16DWV-16DWVS-E-A	6	28.489	31.338	0.46	0.75	18.44	219.78	0.000	0.000	924.70	0.00	0.00
17	138.00	APXVAA24_43-U-A20	3	28.489	31.338	0.55	0.75	33.24	267.30	0.000	0.000	1666.90	0.00	0.00
18	138.00	AIR6449 B41	3	28.489	31.338	0.53	0.75	9.03	278.10	0.000	0.000	452.57	0.00	0.00
19	138.00	782 10663	3	28.489	31.338	0.38	0.75	0.32	14.31	0.000	0.000	15.79	0.00	0.00
20	138.00	Radio 4415 Protruding w/	3	28.489	31.338	0.50	0.75	2.80	133.92	0.000	0.000	140.59	0.00	0.00
21	138.00	RRUS 4415 B25	3	28.489	31.338	0.50	0.75	2.47	124.20	0.000	0.000	123.96	0.00	0.00
22	138.00	4449 B71 + B85	3	28.489	31.338	0.50	0.75	2.97	197.64	0.000	0.000	148.91	0.00	0.00
23	128.00	RFS - DB-T1-6Z-8AB-0Z -	2	28.042	30.846	0.40	0.80	3.84	34.02	0.000	0.000	189.52	0.00	0.00
24	128.00	Alcatel Lucent -	3	28.042	30.846	0.54	0.80	4.08	153.36	0.000	0.000	201.57	0.00	0.00
25	128.00	Alcatel Lucent -	3	28.042	30.846	0.54	0.80	5.40	148.50	0.000	0.000	266.65	0.00	0.00
26	128.00	Andrew - JAHH-65B-R3B	6	28.042	30.846	0.62	0.75	33.94	341.82	0.000	0.000	1675.24	0.00	0.00
27	128.00	Andrew - DB846F65ZAXY	6	28.042	30.846	0.75	0.80	31.81	113.40	0.000	0.000	1569.91	0.00	0.00
28	128.00	Low Profile Platform	1	28.042	30.846	0.80	0.80	17.60	1350.00	0.000	0.000	868.62	0.00	0.00
29	118.00	7770	6	27.565	30.322	0.62	0.80	20.33	189.00	0.000	0.000	986.22	0.00	0.00
30	118.00	Low Profile Platform	1	27.565	30.322	0.80	0.80	17.60	1350.00	0.000	0.000	853.87	0.00	0.00
31	118.00	P65-16-XLH-RR	3	27.565	30.322	0.63	0.80	15.47	143.10	0.000	0.000	750.60	0.00	0.00
32	118.00	TT19-08BP111-001	3	27.565	30.322	0.54	0.80	1.03	43.20	0.000	0.000	49.93	0.00	0.00
33	118.00	LGP21401	6	27.565	30.322	0.54	0.80	4.15	76.14	0.000	0.000	201.27	0.00	0.00
34	118.00	RRUS-11	6	27.565	30.322	0.40	0.80	6.05	275.40	0.000	0.000	293.42	0.00	0.00
35	118.00	DC6-48-60-18	1	27.565	30.322	0.80	0.80	0.74	28.62	0.000	0.000	35.71	0.00	0.00
36	108.00	Platform Commscope	1	27.056	29.762	1.00	1.00	37.59	1554.30	0.000	0.000	1790.00	0.00	0.00
37	108.00	Raycap	1	27.056	29.762	0.59	0.75	1.19	19.71	0.000	0.000	56.71	0.00	0.00
38	108.00	Fujitsu TA08025-B604	3	27.056	29.762	0.57	0.75	3.35	172.53	0.000	0.000	159.60	0.00	0.00
39	108.00	Fujitsu TA08025-B605	3	27.056	29.762	0.60	0.75	3.53	202.50	0.000	0.000	168.00	0.00	0.00
40	108.00	Commscope	3	27.056	29.762	0.55	0.75	20.43	191.16	0.000	0.000	972.84	0.00	0.00
41	75.00	GPS	1	25.057	27.563	1.00	1.00	0.01	3.33	0.000	0.000	0.44	0.00	0.00
							Totals:		**13,924.14**			**24,829.13**		

Total Applied Force Summary

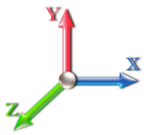
Structure:	CT46131-A-SBA		**Code:**	EIA/TIA-222-G	1/18/2022
Site Name:	Easton-Everetts Rd		**Exposure:**	C	
Height:	158.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 17

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		469.23	1858.11	0.00	0.00
10.00		460.44	1839.59	0.00	0.00
15.00		451.65	1821.08	0.00	0.00
20.00		469.89	1802.56	0.00	0.00
25.00		482.71	1784.04	0.00	0.00
30.00		491.44	1765.53	0.00	0.00
35.00		500.00	1747.01	0.00	0.00
36.00		99.71	347.18	0.00	0.00
39.00		302.40	1037.10	0.00	0.00
40.00		100.84	375.71	0.00	0.00
45.00		510.20	1856.32	0.00	0.00
50.00		510.33	1004.57	0.00	0.00
55.00		509.13	986.05	0.00	0.00
60.00		506.79	967.54	0.00	0.00
65.00		503.45	949.02	0.00	0.00
70.00		499.22	930.51	0.00	0.00
75.00	(1) attachments	494.64	915.32	0.00	0.00
79.00		390.74	715.68	0.00	0.00
80.00		98.23	297.47	0.00	0.00
84.00		391.93	1176.31	0.00	0.00
85.00		96.96	152.41	0.00	0.00
90.00		483.00	752.79	0.00	0.00
95.00		475.58	737.36	0.00	0.00
100.00		467.65	721.92	0.00	0.00
105.00		459.25	706.49	0.00	0.00
108.00	(11) attachments	3417.96	2556.69	0.00	0.00
110.00		178.56	271.30	0.00	0.00
115.00		441.17	667.44	0.00	0.00
118.00	(26) attachments	3430.64	2498.52	0.00	0.00
120.00		170.98	242.09	0.00	0.00
123.00		253.71	358.50	0.00	0.00
125.00		166.97	180.58	0.00	0.00
128.00	(21) attachments	5019.07	2408.73	0.00	0.00
130.00		162.82	161.07	0.00	0.00
135.00		400.54	395.11	0.00	0.00
138.00	(28) attachments	6323.55	3518.23	0.00	0.00
140.00		154.14	136.58	0.00	0.00
145.00		378.29	333.89	0.00	0.00
149.00	(13) attachments	3106.70	1490.54	0.00	0.00
150.00		72.21	56.63	0.00	0.00
155.00		354.93	276.65	0.00	0.00
158.00	(28) attachments	5044.50	3177.31	0.00	1835.06
	Totals:	**39,302.17**	**45,977.51**	**0.00**	**1,835.06**

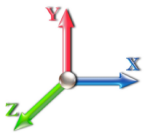
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.090	0.000	17.879	0.00	28.08
5.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.090	0.000	17.879	0.00	9.90
5.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.090	0.000	17.879	0.00	700.56
10.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.092	0.000	17.879	0.00	28.08
10.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.092	0.000	17.879	0.00	9.90
10.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.092	0.000	17.879	0.00	700.56
15.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.094	0.000	17.879	0.00	28.08
15.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.094	0.000	17.879	0.00	9.90
15.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.094	0.000	17.879	0.00	700.56
20.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.096	0.000	18.971	0.00	28.08
20.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.096	0.000	18.971	0.00	9.90
20.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.096	0.000	18.971	0.00	700.56
25.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.098	0.000	19.883	0.00	28.08
25.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.098	0.000	19.883	0.00	9.90
25.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.098	0.000	19.883	0.00	700.56
30.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.100	0.000	20.661	0.00	28.08
30.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.100	0.000	20.661	0.00	9.90
30.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.100	0.000	20.661	0.00	700.56
35.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.102	1.006	21.343	0.00	28.08
35.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.102	1.006	21.343	0.00	9.90
35.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.102	1.006	21.343	0.00	700.56
36.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.103	1.010	21.470	0.00	5.62
36.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.103	1.010	21.470	0.00	1.98
36.00	1.25" Reinforcing	Yes	1.00	0.000	3.00	0.25	0.00	0.103	1.010	21.470	0.00	140.11
39.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.104	1.012	21.834	0.00	16.85
39.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.104	1.012	21.834	0.00	5.94
39.00	1.25" Reinforcing	Yes	3.00	0.000	3.00	0.75	0.00	0.104	1.012	21.834	0.00	420.34
40.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.042	0.000	21.951	0.00	5.62
40.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.042	0.000	21.951	0.00	1.98
45.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.042	0.000	22.502	0.00	28.08
45.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.042	0.000	22.502	0.00	9.90
50.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.043	0.000	23.007	0.00	28.08
50.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.043	0.000	23.007	0.00	9.90
55.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.044	0.000	23.473	0.00	28.08
55.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.044	0.000	23.473	0.00	9.90
60.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.045	0.000	23.907	0.00	28.08
60.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.045	0.000	23.907	0.00	9.90
65.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.046	0.000	24.313	0.00	28.08
65.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.046	0.000	24.313	0.00	9.90
70.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.047	0.000	24.696	0.00	28.08
70.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.047	0.000	24.696	0.00	9.90
75.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.048	0.000	25.057	0.00	28.08
75.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.048	0.000	25.057	0.00	9.90
79.00	1 5/8" Coax	Yes	4.00	0.000	1.98	0.66	0.00	0.049	0.000	25.333	0.00	22.46
79.00	1 5/8" Fiber	Yes	4.00	0.000	0.00	0.00	0.00	0.049	0.000	25.333	0.00	7.92
80.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.050	0.000	25.400	0.00	5.62
80.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.050	0.000	25.400	0.00	1.98

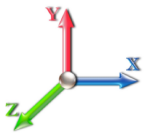
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
84.00	1 5/8" Coax	Yes	4.00	0.000	1.98	0.66	0.00	0.050	0.000	25.662	0.00	22.46
84.00	1 5/8" Fiber	Yes	4.00	0.000	0.00	0.00	0.00	0.050	0.000	25.662	0.00	7.92
85.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.050	0.000	25.726	0.00	5.62
85.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.050	0.000	25.726	0.00	1.98
90.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.051	0.000	26.037	0.00	28.08
90.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.051	0.000	26.037	0.00	9.90
95.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.052	0.000	26.336	0.00	28.08
95.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.052	0.000	26.336	0.00	9.90
100.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.054	0.000	26.621	0.00	28.08
100.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.054	0.000	26.621	0.00	9.90
105.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.055	0.000	26.896	0.00	28.08
105.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.055	0.000	26.896	0.00	9.90
108.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.057	0.000	27.056	0.00	16.85
108.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.057	0.000	27.056	0.00	5.94
110.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.057	0.000	27.161	0.00	11.23
110.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.057	0.000	27.161	0.00	3.96
115.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.059	0.000	27.416	0.00	28.08
115.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.059	0.000	27.416	0.00	9.90
118.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.060	0.000	27.565	0.00	16.85
118.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.060	0.000	27.565	0.00	5.94
120.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.061	0.000	27.663	0.00	11.23
120.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.061	0.000	27.663	0.00	3.96
123.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.062	0.000	27.807	0.00	16.85
123.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.062	0.000	27.807	0.00	5.94
125.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.063	0.000	27.902	0.00	11.23
125.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	27.902	0.00	3.96
128.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.064	0.000	28.042	0.00	16.85
128.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.064	0.000	28.042	0.00	5.94
									Totals:		**0.0**	**6,436.7**

Calculated Forces

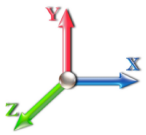
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 20	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 93 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-45.92	-39.37	0.00	-4618.5	0.00	4618.54	4238.25	2119.12	9474.98	4744.53	0.00	0.000	0.000	0.606
5.00	-43.95	-39.02	0.00	-4421.7	0.00	4421.70	4191.13	2095.57	9193.31	4603.49	0.09	-0.164	0.000	0.593
10.00	-42.00	-38.68	0.00	-4226.5	0.00	4226.59	4142.79	2071.40	8912.98	4463.11	0.35	-0.329	0.000	0.580
15.00	-40.07	-38.33	0.00	-4033.2	0.00	4033.21	4093.23	2046.62	8634.14	4323.49	0.78	-0.494	0.000	0.566
20.00	-38.17	-37.95	0.00	-3841.5	0.00	3841.58	4042.45	2021.22	8356.93	4184.68	1.39	-0.660	0.000	0.552
25.00	-36.28	-37.55	0.00	-3651.8	0.00	3651.84	3990.44	1995.22	8081.53	4046.77	2.17	-0.825	0.000	0.538
30.00	-34.42	-37.13	0.00	-3464.0	0.00	3464.09	3937.21	1968.60	7808.07	3909.84	3.12	-0.991	0.000	0.523
35.00	-32.61	-36.65	0.00	-3278.4	0.00	3278.45	3882.75	1941.38	7536.73	3773.96	4.25	-1.157	0.000	0.508
36.00	-32.23	-36.58	0.00	-3241.8	0.00	3241.80	3871.71	1935.86	7482.72	3746.92	4.49	-1.191	0.000	0.505
36.00	-32.23	-36.58	0.00	-3241.8	0.00	3241.80	3871.71	1935.86	7482.72	3746.92	4.49	-1.191	0.000	0.505
39.00	-31.14	-36.30	0.00	-3132.0	0.00	3132.05	3838.31	1919.15	7321.27	3666.08	5.27	-1.292	0.000	0.863
40.00	-30.66	-36.29	0.00	-3095.7	0.00	3095.74	3827.07	1913.54	7267.64	3639.22	5.55	-1.350	0.000	0.859
45.00	-28.64	-35.87	0.00	-2914.3	0.00	2914.31	3812.30	1906.15	7197.58	3604.14	7.12	-1.638	0.000	0.816
50.00	-27.48	-35.47	0.00	-2734.9	0.00	2734.95	3755.07	1877.54	6931.57	3470.94	8.99	-1.927	0.000	0.796
55.00	-26.34	-35.05	0.00	-2557.6	0.00	2557.61	3696.63	1848.32	6668.16	3339.04	11.16	-2.203	0.000	0.773
60.00	-25.23	-34.63	0.00	-2382.3	0.00	2382.36	3636.96	1818.48	6407.52	3208.52	13.61	-2.479	0.000	0.750
65.00	-24.14	-34.20	0.00	-2209.2	0.00	2209.23	3576.08	1788.04	6149.79	3079.47	16.36	-2.754	0.000	0.725
70.00	-23.08	-33.76	0.00	-2038.2	0.00	2038.25	3513.96	1756.98	5895.14	2951.95	19.39	-3.027	0.000	0.697
75.00	-22.05	-33.31	0.00	-1869.4	0.00	1869.45	3450.63	1725.31	5643.71	2826.05	22.70	-3.297	0.000	0.668
79.00	-21.28	-32.93	0.00	-1736.2	0.00	1736.22	3399.08	1699.54	5445.00	2726.55	25.56	-3.513	0.000	0.643
80.00	-20.91	-32.86	0.00	-1703.2	0.00	1703.29	3386.07	1693.03	5395.67	2701.84	26.30	-3.567	0.000	0.637
84.00	-19.69	-32.44	0.00	-1571.8	0.00	1571.86	2492.17	1246.08	3964.65	1985.27	29.37	-3.779	0.000	0.800
85.00	-19.45	-32.39	0.00	-1539.4	0.00	1539.42	2483.20	1241.60	3929.49	1967.67	30.17	-3.832	0.000	0.791
90.00	-18.57	-31.95	0.00	-1377.4	0.00	1377.47	2437.73	1218.86	3754.97	1880.28	34.34	-4.122	0.000	0.741
95.00	-17.72	-31.50	0.00	-1217.7	0.00	1217.73	2391.17	1195.58	3582.65	1793.99	38.80	-4.401	0.000	0.687
100.00	-16.90	-31.06	0.00	-1060.2	0.00	1060.20	2343.52	1171.76	3412.67	1708.87	43.55	-4.667	0.000	0.628
105.00	-16.13	-30.60	0.00	-904.92	0.00	904.92	2294.79	1147.40	3245.17	1624.99	48.57	-4.917	0.000	0.565
108.00	-13.82	-27.00	0.00	-813.13	0.00	813.13	2265.03	1132.52	3145.91	1575.29	51.71	-5.060	0.000	0.523
110.00	-13.50	-26.83	0.00	-759.14	0.00	759.14	2244.98	1122.49	3080.27	1542.43	53.84	-5.152	0.000	0.499
115.00	-12.80	-26.37	0.00	-624.98	0.00	624.98	2194.08	1097.04	2918.13	1461.23	59.35	-5.362	0.000	0.434
118.00	-10.60	-22.73	0.00	-545.89	0.00	545.89	2163.02	1081.51	2822.22	1413.21	62.75	-5.479	0.000	0.392
120.00	-10.34	-22.56	0.00	-500.42	0.00	500.42	2136.45	1068.22	2751.59	1377.84	65.06	-5.553	0.000	0.368
123.00	-9.98	-22.28	0.00	-432.76	0.00	432.76	2094.98	1047.49	2645.31	1324.62	68.58	-5.655	0.000	0.332
123.00	-9.98	-22.28	0.00	-432.76	0.00	432.76	1330.70	665.35	1690.49	846.50	68.58	-5.655	0.000	0.520
125.00	-9.78	-22.11	0.00	-388.19	0.00	388.19	1319.70	659.85	1654.32	828.39	70.96	-5.719	0.000	0.477
128.00	-7.86	-16.89	0.00	-321.85	0.00	321.85	1302.88	651.44	1600.34	801.36	74.59	-5.841	0.000	0.408
130.00	-7.68	-16.73	0.00	-288.07	0.00	288.07	1291.45	645.73	1564.57	783.45	77.05	-5.915	0.000	0.374
135.00	-7.29	-16.30	0.00	-204.42	0.00	204.42	1262.12	631.06	1475.93	739.06	83.32	-6.071	0.000	0.283
138.00	-4.46	-9.65	0.00	-155.51	0.00	155.51	1244.00	622.00	1423.34	712.73	87.15	-6.147	0.000	0.222
140.00	-4.33	-9.48	0.00	-136.22	0.00	136.22	1231.70	615.85	1388.54	695.30	89.73	-6.191	0.000	0.200
145.00	-4.03	-9.08	0.00	-88.80	0.00	88.80	1200.20	600.10	1302.53	652.23	96.26	-6.279	0.000	0.140
149.00	-2.89	-5.83	0.00	-52.50	0.00	52.50	1174.22	587.11	1234.81	618.32	101.53	-6.329	0.000	0.087
150.00	-2.83	-5.75	0.00	-46.68	0.00	46.68	1167.61	583.81	1218.04	609.93	102.85	-6.339	0.000	0.079
155.00	-2.60	-5.37	0.00	-17.93	0.00	17.93	1133.94	566.97	1135.21	568.45	109.50	-6.370	0.000	0.034
158.00	0.00	-5.04	0.00	-1.84	0.00	1.84	1113.22	556.61	1086.36	543.99	113.50	-6.377	0.000	0.003

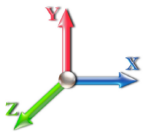
Wind Loading - Shaft

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00	RB1	1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.242	5.00	23.976	28.77	163.6	427.6	1736.1
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.331	5.00	23.620	28.34	161.1	450.5	1734.3
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.386	5.00	23.237	27.88	158.5	460.8	1719.9
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.427	5.00	22.840	27.41	165.3	465.6	1700.0
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.459	5.00	22.437	26.92	170.2	467.1	1676.8
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.486	5.00	22.030	26.44	173.7	466.4	1651.5
35.00		1.00	1.01	6.169	6.79	0.00	1.207 *	1.509	5.00	21.619	26.09	177.1	464.3	1624.7
36.00	RT1	1.00	1.02	6.206	6.83	0.00	1.212 *	1.513	1.00	4.273	5.18	35.3	92.7	321.9
39.00	Bot - Section 2	1.00	1.04	6.311	6.94	0.00	1.215 *	1.525	3.00	12.722	15.45	107.3	277.0	958.4
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.529	1.00	4.270	5.12	35.8	93.6	547.6
45.00	Top - Section 1	1.00	1.07	6.504	7.15	0.00	1.200	1.547	5.00	21.109	25.33	181.2	464.1	2704.2
50.00		1.00	1.09	6.650	7.32	0.00	1.200	1.564	5.00	20.693	24.83	181.6	459.2	1563.7
55.00		1.00	1.12	6.785	7.46	0.00	1.200	1.579	5.00	20.275	24.33	181.6	453.7	1533.5
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.592	5.00	19.857	23.83	181.1	447.6	1502.8
65.00		1.00	1.16	7.028	7.73	0.00	1.200	1.605	5.00	19.438	23.33	180.3	441.1	1471.6
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.617	5.00	19.018	22.82	179.2	434.2	1440.0
75.00	Appurtenance(s)	1.00	1.19	7.243	7.97	0.00	1.200	1.628	5.00	18.597	22.32	177.8	427.0	1408.1
79.00	Bot - Section 3	1.00	1.20	7.322	8.05	0.00	1.200	1.637	4.00	14.574	17.49	140.9	336.8	1103.8
80.00		1.00	1.21	7.342	8.08	0.00	1.200	1.639	1.00	3.654	4.38	35.4	85.2	435.0
84.00	Top - Section 2	1.00	1.22	7.418	8.16	0.00	1.200	1.647	4.00	14.448	17.34	141.5	335.7	1716.9
85.00		1.00	1.22	7.436	8.18	0.00	1.200	1.649	1.00	3.569	4.28	35.0	83.6	240.0
90.00		1.00	1.24	7.526	8.28	0.00	1.200	1.658	5.00	17.597	21.12	174.8	410.0	1179.7
95.00		1.00	1.25	7.612	8.37	0.00	1.200	1.667	5.00	17.175	20.61	172.6	401.7	1150.9
100.00		1.00	1.27	7.695	8.46	0.00	1.200	1.676	5.00	16.752	20.10	170.2	393.2	1121.8
105.00		1.00	1.28	7.774	8.55	0.00	1.200	1.684	5.00	16.329	19.59	167.6	384.4	1092.5
108.00	Appurtenance(s)	1.00	1.29	7.821	8.60	0.00	1.200	1.689	3.00	9.593	11.51	99.0	227.5	642.4
110.00		1.00	1.29	7.851	8.64	0.00	1.200	1.692	2.00	6.311	7.57	65.4	150.2	422.7
115.00		1.00	1.30	7.925	8.72	0.00	1.200	1.699	5.00	15.482	18.58	162.0	366.5	1033.4
118.00	Appurtenance(s)	1.00	1.31	7.968	8.76	0.00	1.200	1.704	3.00	9.085	10.90	95.6	216.6	606.8
120.00		1.00	1.32	7.996	8.80	0.00	1.200	1.707	2.00	5.972	7.17	63.0	142.9	399.0
123.00	Top - Section 3	1.00	1.32	8.038	8.84	0.00	1.200	1.711	3.00	8.831	10.60	93.7	211.0	588.9
125.00		1.00	1.33	8.065	8.87	0.00	1.200	1.714	2.00	5.802	6.96	61.8	139.1	313.2
128.00	Appurtenance(s)	1.00	1.33	8.105	8.92	0.00	1.200	1.718	3.00	8.576	10.29	91.8	205.3	462.1
130.00		1.00	1.34	8.132	8.95	0.00	1.200	1.720	2.00	5.632	6.76	60.5	135.3	303.6
135.00		1.00	1.35	8.197	9.02	0.00	1.200	1.727	5.00	13.786	16.54	149.2	328.7	739.4
138.00	Appurtenance(s)	1.00	1.35	8.235	9.06	0.00	1.200	1.731	3.00	8.067	9.68	87.7	193.7	433.2
140.00		1.00	1.36	8.260	9.09	0.00	1.200	1.733	2.00	5.293	6.35	57.7	127.6	284.3
145.00		1.00	1.37	8.321	9.15	0.00	1.200	1.739	5.00	12.936	15.52	142.1	309.1	690.9
149.00	Appurtenance(s)	1.00	1.38	8.369	9.21	0.00	1.200	1.744	4.00	10.043	12.05	110.9	240.9	535.9
150.00		1.00	1.38	8.381	9.22	0.00	1.200	1.745	1.00	2.468	2.96	27.3	59.8	132.1
155.00		1.00	1.39	8.439	9.28	0.00	1.200	1.751	5.00	12.086	14.50	134.6	289.0	642.0
158.00	Appurtenance(s)	1.00	1.39	8.473	9.32	0.00	1.200	1.754	3.00	7.047	8.46	78.8	169.7	374.6
								Totals:	**158.00**			**5,229.7**		**41,940.2**

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

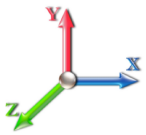
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 22	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	158.00	Alu - 800 Filters	3	8.478	9.326	0.38	0.75	1.61	69.89	0.000	0.500	15.01	0.00	7.50
2	158.00	Collar Mount	1	8.473	9.320	1.00	1.00	8.51	614.72	0.000	0.000	79.30	0.00	0.00
3	158.00	Low Profile Platform	1	8.478	9.326	0.75	0.75	34.54	2192.58	0.000	0.500	322.12	0.00	161.06
4	158.00	RFS - ACU-A20-N - RET	3	8.478	9.326	0.50	0.75	0.66	12.66	0.000	0.500	6.16	0.00	3.08
5	158.00	ALU - 1900 MHz - RRU	3	8.478	9.326	0.50	0.75	7.83	394.00	0.000	0.500	73.07	0.00	36.54
6	158.00	ALU - 800 MHz - RRU	6	8.478	9.326	0.50	0.75	10.97	701.07	0.000	0.500	102.34	0.00	51.17
7	158.00	Site Pro PRK-1245 (kicker	1	8.473	9.320	1.00	1.00	19.50	789.04	0.000	0.000	181.74	0.00	0.00
8	158.00	Site Pro HRK14	1	8.473	9.320	1.00	1.00	16.12	1025.89	0.000	0.000	150.21	0.00	0.00
9	158.00	RFS - APXVSPP18-C-A20	3	8.478	9.326	0.64	0.75	20.73	577.96	0.000	0.500	193.37	0.00	96.68
10	158.00	Commscope -	3	8.478	9.326	0.63	0.75	19.89	735.88	0.000	0.500	185.47	0.00	92.73
11	158.00	ALU - TD-RRH8x20-25 -	3	8.478	9.326	0.50	0.75	8.25	480.72	0.000	0.500	76.92	0.00	38.46
12	149.00	Low Profile Platform	1	8.369	9.206	1.00	1.00	45.93	2186.43	0.000	0.000	422.81	0.00	0.00
13	149.00	DB844H90E-XY	12	8.369	9.206	0.81	0.75	37.98	1602.19	0.000	0.000	349.64	0.00	0.00
14	138.00	Platform w/ HR & V-Brace	1	8.235	9.058	1.00	1.00	89.64	4800.96	0.000	0.000	811.98	0.00	0.00
15	138.00	KRY 112 144/1	3	8.235	9.058	0.38	0.75	0.99	62.38	0.000	0.000	8.98	0.00	0.00
16	138.00	APX16DWV-16DWVS-E-A	6	8.235	9.058	0.48	0.75	25.26	788.56	0.000	0.000	228.79	0.00	0.00
17	138.00	APXVAA24_43-U-A20	3	8.235	9.058	0.56	0.75	38.88	457.12	0.000	0.000	352.22	0.00	0.00
18	138.00	AIR6449 B41	3	8.235	9.058	0.55	0.75	10.83	683.64	0.000	0.000	98.09	0.00	0.00
19	138.00	782 10663	3	8.235	9.058	0.38	0.75	0.76	39.08	0.000	0.000	6.91	0.00	0.00
20	138.00	Radio 4415 Protruding w/	3	8.235	9.058	0.50	0.75	3.77	300.08	0.000	0.000	34.19	0.00	0.00
21	138.00	RRUS 4415 B25	3	8.235	9.058	0.50	0.75	3.24	259.69	0.000	0.000	29.37	0.00	0.00
22	138.00	4449 B71 + B85	3	8.235	9.058	0.50	0.75	3.82	260.11	0.000	0.000	34.61	0.00	0.00
23	128.00	RFS - DB-T1-6Z-8AB-0Z -	2	8.105	8.916	0.40	0.80	7.01	229.51	0.000	0.000	62.47	0.00	0.00
24	128.00	Alcatel Lucent -	3	8.105	8.916	0.54	0.80	5.49	412.26	0.000	0.000	48.93	0.00	0.00
25	128.00	Alcatel Lucent -	3	8.105	8.916	0.54	0.80	6.64	391.89	0.000	0.000	59.16	0.00	0.00
26	128.00	Andrew - JAHH-65B-R3B	6	8.105	8.916	0.63	0.75	39.71	1479.20	0.000	0.000	354.05	0.00	0.00
27	128.00	Andrew - DB846F65ZAXY	6	8.105	8.916	0.76	0.80	37.76	1398.52	0.000	0.000	336.66	0.00	0.00
28	128.00	Low Profile Platform	1	8.105	8.916	0.80	0.80	31.51	2788.32	0.000	0.000	280.92	0.00	0.00
29	118.00	7770	6	7.968	8.765	0.64	0.80	25.06	1252.04	0.000	0.000	219.68	0.00	0.00
30	118.00	Low Profile Platform	1	7.968	8.765	0.80	0.80	31.39	2777.88	0.000	0.000	275.16	0.00	0.00
31	118.00	P65-16-XLH-RR	3	7.968	8.765	0.65	0.80	21.18	532.61	0.000	0.000	185.65	0.00	0.00
32	118.00	TT19-08BP111-001	3	7.968	8.765	0.54	0.80	1.96	99.48	0.000	0.000	17.18	0.00	0.00
33	118.00	LGP21401	6	7.968	8.765	0.54	0.80	6.77	205.37	0.000	0.000	59.36	0.00	0.00
34	118.00	RRUS-11	6	7.968	8.765	0.40	0.80	7.53	694.56	0.000	0.000	66.01	0.00	0.00
35	118.00	DC6-48-60-18	1	7.968	8.765	0.80	0.80	1.08	80.82	0.000	0.000	9.45	0.00	0.00
36	108.00	Platform Commscope	1	7.821	8.603	1.00	1.00	83.30	3332.69	0.000	0.000	716.58	0.00	0.00
37	108.00	Raycap	1	7.821	8.603	0.59	0.75	1.52	65.11	0.000	0.000	13.05	0.00	0.00
38	108.00	Fujitsu TA08025-B604	3	7.821	8.603	0.57	0.75	4.28	340.72	0.000	0.000	36.82	0.00	0.00
39	108.00	Fujitsu TA08025-B605	3	7.821	8.603	0.60	0.75	4.51	384.04	0.000	0.000	38.76	0.00	0.00
40	108.00	Commscope	3	7.821	8.603	0.55	0.75	22.78	885.37	0.000	0.000	195.93	0.00	0.00
41	75.00	GPS	1	7.243	7.967	1.00	1.00	0.01	8.14	0.000	0.000	0.08	0.00	0.00
							Totals:		**36,393.15**			**6,739.18**		

Total Applied Force Summary

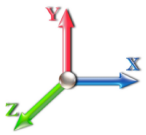
Structure:	CT46131-A-SBA		**Code:**	EIA/TIA-222-G	1/18/2022
Site Name:	Easton-Everetts Rd		**Exposure:**	C	
Height:	158.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 23

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		163.56	3055.94	0.00	0.00
10.00		161.13	3065.99	0.00	0.00
15.00		158.51	3059.02	0.00	0.00
20.00		165.32	3044.58	0.00	0.00
25.00		170.22	3025.84	0.00	0.00
30.00		173.67	3004.27	0.00	0.00
35.00		177.06	2980.67	0.00	0.00
36.00		35.34	593.17	0.00	0.00
39.00		107.29	1773.43	0.00	0.00
40.00		35.77	621.81	0.00	0.00
45.00		181.23	3077.10	0.00	0.00
50.00		181.64	1938.19	0.00	0.00
55.00		181.59	1909.49	0.00	0.00
60.00		181.13	1880.15	0.00	0.00
65.00		180.32	1850.26	0.00	0.00
70.00		179.20	1819.88	0.00	0.00
75.00	(1) attachments	177.88	1797.22	0.00	0.00
79.00		140.87	1408.59	0.00	0.00
80.00		35.41	511.23	0.00	0.00
84.00		141.47	2022.50	0.00	0.00
85.00		35.04	316.46	0.00	0.00
90.00		174.82	1562.84	0.00	0.00
95.00		172.58	1534.89	0.00	0.00
100.00		170.16	1506.68	0.00	0.00
105.00		167.57	1478.24	0.00	0.00
108.00	(11) attachments	1100.18	5882.10	0.00	0.00
110.00		65.40	572.99	0.00	0.00
115.00		161.95	1409.79	0.00	0.00
118.00	(26) attachments	928.04	6475.71	0.00	0.00
120.00		63.03	527.34	0.00	0.00
123.00		93.69	781.73	0.00	0.00
125.00		61.77	441.87	0.00	0.00
128.00	(21) attachments	1233.94	7355.01	0.00	0.00
130.00		60.46	350.10	0.00	0.00
135.00		149.16	855.52	0.00	0.00
138.00	(28) attachments	1692.83	8154.50	0.00	0.00
140.00		57.71	309.69	0.00	0.00
145.00		142.09	754.24	0.00	0.00
149.00	(13) attachments	883.39	4375.25	0.00	0.00
150.00		27.30	135.31	0.00	0.00
155.00		134.63	657.81	0.00	0.00
158.00	(28) attachments	1464.53	7978.51	0.00	487.23
	Totals:	**11,968.84**	**95,855.94**	**0.00**	**487.23**

Linear Appurtenance Segment Forces (Factored)

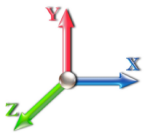
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.86	0.00	0.090	0.000	5.168	0.00	114.06
5.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.090	0.000	5.168	0.00	45.28
5.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	2.29	0.00	0.090	0.000	5.168	0.00	976.24
10.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.93	0.00	0.092	0.000	5.168	0.00	119.58
10.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.092	0.000	5.168	0.00	48.07
10.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	2.36	0.00	0.092	0.000	5.168	0.00	979.72
15.00	1 5/8" Coax	Yes	5.00	0.000	1.98	1.98	0.00	0.094	0.000	5.168	0.00	123.04
15.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.094	0.000	5.168	0.00	49.84
15.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	2.41	0.00	0.094	0.000	5.168	0.00	981.92
20.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.01	0.00	0.096	0.000	5.483	0.00	125.61
20.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.096	0.000	5.483	0.00	51.17
20.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	2.44	0.00	0.096	0.000	5.483	0.00	983.56
25.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.04	0.00	0.098	0.000	5.747	0.00	127.66
25.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.098	0.000	5.747	0.00	52.23
25.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	2.47	0.00	0.098	0.000	5.747	0.00	984.88
30.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.06	0.00	0.100	0.000	5.972	0.00	129.38
30.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.100	0.000	5.972	0.00	53.14
30.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	2.49	0.00	0.100	0.000	5.972	0.00	985.99
35.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.08	0.00	0.102	1.006	6.169	0.00	130.87
35.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.102	1.006	6.169	0.00	53.92
35.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	2.51	0.00	0.102	1.006	6.169	0.00	986.95
36.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.42	0.00	0.103	1.010	6.206	0.00	26.23
36.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.103	1.010	6.206	0.00	10.81
36.00	1.25" Reinforcing	Yes	1.00	0.000	3.00	0.50	0.00	0.103	1.010	6.206	0.00	197.43
39.00	1 5/8" Coax	Yes	3.00	0.000	1.98	1.26	0.00	0.104	1.012	6.311	0.00	79.16
39.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.104	1.012	6.311	0.00	32.69
39.00	1.25" Reinforcing	Yes	3.00	0.000	3.00	1.51	0.00	0.104	1.012	6.311	0.00	592.58
40.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.42	0.00	0.042	0.000	6.345	0.00	26.44
40.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.042	0.000	6.345	0.00	10.92
45.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.11	0.00	0.042	0.000	6.504	0.00	133.36
45.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.042	0.000	6.504	0.00	55.23
50.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.13	0.00	0.043	0.000	6.650	0.00	134.43
50.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.043	0.000	6.650	0.00	55.80
55.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.14	0.00	0.044	0.000	6.785	0.00	135.41
55.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.044	0.000	6.785	0.00	56.32
60.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.15	0.00	0.045	0.000	6.910	0.00	136.31
60.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.045	0.000	6.910	0.00	56.80
65.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.16	0.00	0.046	0.000	7.028	0.00	137.16
65.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.046	0.000	7.028	0.00	57.25
70.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.17	0.00	0.047	0.000	7.138	0.00	137.94
70.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.047	0.000	7.138	0.00	57.67
75.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.18	0.00	0.048	0.000	7.243	0.00	138.68
75.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.048	0.000	7.243	0.00	58.07
79.00	1 5/8" Coax	Yes	4.00	0.000	1.98	1.75	0.00	0.049	0.000	7.322	0.00	111.39
79.00	1 5/8" Fiber	Yes	4.00	0.000	0.00	0.00	0.00	0.049	0.000	7.322	0.00	46.69
80.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.44	0.00	0.050	0.000	7.342	0.00	27.88
80.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.050	0.000	7.342	0.00	11.69

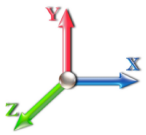
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 25	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
84.00	1 5/8" Coax	Yes	4.00	0.000	1.98	1.76	0.00	0.050	0.000	7.418	0.00	111.93
84.00	1 5/8" Fiber	Yes	4.00	0.000	0.00	0.00	0.00	0.050	0.000	7.418	0.00	46.98
85.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.44	0.00	0.050	0.000	7.436	0.00	28.01
85.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.050	0.000	7.436	0.00	11.76
90.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.21	0.00	0.051	0.000	7.526	0.00	140.67
90.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.051	0.000	7.526	0.00	59.13
95.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.21	0.00	0.052	0.000	7.612	0.00	141.27
95.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.052	0.000	7.612	0.00	59.46
100.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.22	0.00	0.054	0.000	7.695	0.00	141.84
100.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.054	0.000	7.695	0.00	59.76
105.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.23	0.00	0.055	0.000	7.774	0.00	142.38
105.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.055	0.000	7.774	0.00	60.06
108.00	1 5/8" Coax	Yes	3.00	0.000	1.98	1.34	0.00	0.057	0.000	7.821	0.00	85.62
108.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.057	0.000	7.821	0.00	36.14
110.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.89	0.00	0.057	0.000	7.851	0.00	57.16
110.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.057	0.000	7.851	0.00	24.14
115.00	1 5/8" Coax	Yes	5.00	0.000	1.98	2.24	0.00	0.059	0.000	7.925	0.00	143.41
115.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.059	0.000	7.925	0.00	60.62
118.00	1 5/8" Coax	Yes	3.00	0.000	1.98	1.35	0.00	0.060	0.000	7.968	0.00	86.22
118.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.060	0.000	7.968	0.00	36.47
120.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.90	0.00	0.061	0.000	7.996	0.00	57.56
120.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.061	0.000	7.996	0.00	24.35
123.00	1 5/8" Coax	Yes	3.00	0.000	1.98	1.35	0.00	0.062	0.000	8.038	0.00	86.51
123.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.062	0.000	8.038	0.00	36.62
125.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.90	0.00	0.063	0.000	8.065	0.00	57.75
125.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	8.065	0.00	24.45
128.00	1 5/8" Coax	Yes	3.00	0.000	1.98	1.35	0.00	0.064	0.000	8.105	0.00	86.78
128.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.064	0.000	8.105	0.00	36.77
										Totals:	**0.0**	**12,571.3**

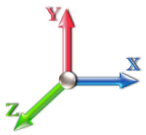
Calculated Forces

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 26	

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 24

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-95.85	-12.01	0.00	-1435.4	0.00	1435.49	4238.25	2119.12	9474.98	4744.53	0.00	0.000	0.000	0.200
5.00	-92.78	-11.93	0.00	-1375.4	0.00	1375.43	4191.13	2095.57	9193.31	4603.49	0.03	-0.051	0.000	0.195
10.00	-89.71	-11.85	0.00	-1315.7	0.00	1315.79	4142.79	2071.40	8912.98	4463.11	0.11	-0.102	0.000	0.191
15.00	-86.64	-11.76	0.00	-1256.5	0.00	1256.56	4093.23	2046.62	8634.14	4323.49	0.24	-0.154	0.000	0.187
20.00	-83.58	-11.66	0.00	-1197.7	0.00	1197.77	4042.45	2021.22	8356.93	4184.68	0.43	-0.205	0.000	0.182
25.00	-80.55	-11.55	0.00	-1139.4	0.00	1139.48	3990.44	1995.22	8081.53	4046.77	0.67	-0.257	0.000	0.178
30.00	-77.53	-11.43	0.00	-1081.7	0.00	1081.74	3937.21	1968.60	7808.07	3909.84	0.97	-0.309	0.000	0.173
35.00	-74.55	-11.28	0.00	-1024.5	0.00	1024.59	3882.75	1941.38	7536.73	3773.96	1.32	-0.361	0.000	0.168
36.00	-73.95	-11.26	0.00	-1013.3	0.00	1013.32	3871.71	1935.86	7482.72	3746.92	1.40	-0.371	0.000	0.167
36.00	-73.95	-11.26	0.00	-1013.3	0.00	1013.32	3871.71	1935.86	7482.72	3746.92	1.40	-0.371	0.000	0.167
39.00	-72.17	-11.18	0.00	-979.52	0.00	979.52	3838.31	1919.15	7321.27	3666.08	1.64	-0.403	0.000	0.286
40.00	-71.54	-11.20	0.00	-968.35	0.00	968.35	3827.07	1913.54	7267.64	3639.22	1.73	-0.421	0.000	0.285
45.00	-68.45	-11.11	0.00	-912.33	0.00	912.33	3812.30	1906.15	7197.58	3604.14	2.22	-0.511	0.000	0.271
50.00	-66.50	-11.01	0.00	-856.80	0.00	856.80	3755.07	1877.54	6931.57	3470.94	2.80	-0.602	0.000	0.265
55.00	-64.57	-10.90	0.00	-801.76	0.00	801.76	3696.63	1848.32	6668.16	3339.04	3.48	-0.688	0.000	0.258
60.00	-62.68	-10.79	0.00	-747.25	0.00	747.25	3636.96	1818.48	6407.52	3208.52	4.25	-0.775	0.000	0.250
65.00	-60.81	-10.68	0.00	-693.29	0.00	693.29	3576.08	1788.04	6149.79	3079.47	5.10	-0.861	0.000	0.242
70.00	-58.98	-10.56	0.00	-639.91	0.00	639.91	3513.96	1756.98	5895.14	2951.95	6.05	-0.946	0.000	0.234
75.00	-57.17	-10.42	0.00	-587.12	0.00	587.12	3450.63	1725.31	5643.71	2826.05	7.09	-1.031	0.000	0.224
79.00	-55.76	-10.30	0.00	-545.43	0.00	545.43	3399.08	1699.54	5445.00	2726.55	7.98	-1.099	0.000	0.216
80.00	-55.24	-10.29	0.00	-535.13	0.00	535.13	3386.07	1693.03	5395.67	2701.84	8.21	-1.116	0.000	0.214
84.00	-53.22	-10.15	0.00	-493.96	0.00	493.96	2492.17	1246.08	3964.65	1985.27	9.18	-1.183	0.000	0.270
85.00	-52.89	-10.16	0.00	-483.81	0.00	483.81	2483.20	1241.60	3929.49	1967.67	9.43	-1.199	0.000	0.267
90.00	-51.32	-10.03	0.00	-433.03	0.00	433.03	2437.73	1218.86	3754.97	1880.28	10.73	-1.290	0.000	0.251
95.00	-49.77	-9.90	0.00	-382.88	0.00	382.88	2391.17	1195.58	3582.65	1793.99	12.13	-1.378	0.000	0.234
100.00	-48.26	-9.76	0.00	-333.40	0.00	333.40	2343.52	1171.76	3412.67	1708.87	13.62	-1.462	0.000	0.216
105.00	-46.77	-9.60	0.00	-284.62	0.00	284.62	2294.79	1147.40	3245.17	1624.99	15.20	-1.541	0.000	0.196
108.00	-40.92	-8.37	0.00	-255.82	0.00	255.82	2265.03	1132.52	3145.91	1575.29	16.18	-1.586	0.000	0.181
110.00	-40.34	-8.32	0.00	-239.09	0.00	239.09	2244.98	1122.49	3080.27	1542.43	16.85	-1.615	0.000	0.173
115.00	-38.93	-8.15	0.00	-197.50	0.00	197.50	2194.08	1097.04	2918.13	1461.23	18.58	-1.681	0.000	0.153
118.00	-32.48	-7.05	0.00	-173.04	0.00	173.04	2163.02	1081.51	2822.22	1413.21	19.64	-1.718	0.000	0.138
120.00	-31.95	-6.99	0.00	-158.95	0.00	158.95	2136.45	1068.22	2751.59	1377.84	20.37	-1.741	0.000	0.130
123.00	-31.17	-6.88	0.00	-137.99	0.00	137.99	2094.98	1047.49	2645.31	1324.62	21.47	-1.774	0.000	0.119
123.00	-31.17	-6.88	0.00	-137.99	0.00	137.99	1330.70	665.35	1690.49	846.50	21.47	-1.774	0.000	0.187
125.00	-30.73	-6.82	0.00	-124.23	0.00	124.23	1319.70	659.85	1654.32	828.39	22.22	-1.794	0.000	0.173
128.00	-23.41	-5.37	0.00	-103.76	0.00	103.76	1302.88	651.44	1600.34	801.36	23.36	-1.833	0.000	0.148
130.00	-23.06	-5.31	0.00	-93.02	0.00	93.02	1291.45	645.73	1564.57	783.45	24.14	-1.857	0.000	0.137
135.00	-22.21	-5.15	0.00	-66.46	0.00	66.46	1262.12	631.06	1475.93	739.06	26.11	-1.908	0.000	0.108
138.00	-14.11	-3.19	0.00	-51.01	0.00	51.01	1244.00	622.00	1423.34	712.73	27.32	-1.933	0.000	0.083
140.00	-13.80	-3.13	0.00	-44.63	0.00	44.63	1231.70	615.85	1388.54	695.30	28.13	-1.947	0.000	0.075
145.00	-13.05	-2.96	0.00	-29.00	0.00	29.00	1200.20	600.10	1302.53	652.23	30.18	-1.976	0.000	0.055
149.00	-8.71	-1.93	0.00	-17.15	0.00	17.15	1174.22	587.11	1234.81	618.32	31.85	-1.992	0.000	0.035
150.00	-8.58	-1.90	0.00	-15.22	0.00	15.22	1167.61	583.81	1218.04	609.93	32.26	-1.995	0.000	0.032
155.00	-7.92	-1.74	0.00	-5.72	0.00	5.72	1133.94	566.97	1135.21	568.45	34.36	-2.006	0.000	0.017
158.00	0.00	-1.46	0.00	-0.49	0.00	0.49	1113.22	556.61	1086.36	543.99	35.62	-2.008	0.000	0.001

Seismic Segment Forces (Factored)

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	

Tower Engineering Solutions

Load Case:	1.2D + 1.0E							**Iterations**	22
Gust Response Factor	1.10				**Sds**	0.23		**Ss**	0.21
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.11		**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.27		**SA**	0.03	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00	RB1	0.00	0.00	0.00	0.00	0.00	
5.00		1090.4	0.00	0.03	0.02	28.75	
10.00		1069.8	0.01	0.05	0.03	39.32	
15.00		1049.2	0.02	0.06	0.04	43.78	
20.00		1028.6	0.03	0.07	0.04	45.53	
25.00		1008.1	0.05	0.07	0.04	46.08	
30.00		987.54	0.07	0.07	0.04	46.23	
35.00		966.96	0.09	0.07	0.04	46.33	
36.00	RT1	190.92	0.10	0.07	0.04	9.19	
39.00	Bot - Section 2	567.83	0.12	0.07	0.04	27.75	
40.00		378.30	0.12	0.07	0.03	18.58	
45.00	Top - Section 1	1866.8	0.15	0.07	0.03	93.85	
50.00		920.43	0.19	0.06	0.02	46.97	
55.00		899.86	0.23	0.06	0.02	45.68	
60.00		879.28	0.27	0.05	0.01	42.65	
65.00		858.71	0.32	0.04	0.01	36.90	
70.00		838.13	0.37	0.03	0.01	27.45	
75.00	Appurtenance(s)	821.26	0.43	0.01	0.01	14.01	
79.00	Bot - Section 3	639.24	0.47	-0.01	0.01	0.78	
80.00		291.53	0.48	-0.01	0.01	-0.88	
84.00	Top - Section 2	1151.0	0.53	-0.03	0.01	-22.82	
85.00		130.35	0.55	-0.03	0.01	-3.11	
90.00		641.47	0.61	-0.06	0.02	-26.44	
95.00		624.32	0.68	-0.08	0.03	-32.87	
100.00		607.18	0.76	-0.10	0.04	-34.95	
105.00		590.03	0.83	-0.12	0.06	-33.25	
108.00	Appurtenance(s)	2723.7	0.88	-0.12	0.08	-144.05	
110.00		227.10	0.92	-0.12	0.09	-11.24	
115.00		555.74	1.00	-0.11	0.13	-20.75	
118.00	Appurtenance(s)	2664.6	1.05	-0.09	0.16	-73.48	
120.00		213.38	1.09	-0.08	0.18	-4.28	
123.00	Top - Section 3	314.93	1.15	-0.04	0.22	-2.27	
125.00		145.04	1.18	-0.01	0.24	0.34	
128.00	Appurtenance(s)	2592.9	1.24	0.05	0.29	47.42	
130.00		140.24	1.28	0.09	0.32	4.20	
135.00		342.20	1.38	0.25	0.41	21.49	
138.00	Appurtenance(s)	3851.0	1.44	0.37	0.48	327.72	
140.00		130.64	1.48	0.46	0.52	13.20	
145.00		318.19	1.59	0.75	0.66	46.10	
149.00	Appurtenance(s)	1613.9	1.68	1.05	0.79	296.98	
150.00		60.28	1.70	1.14	0.82	11.72	
155.00		294.18	1.82	1.63	1.01	73.47	
158.00	Appurtenance(s)	3522.4	1.89	1.98	1.14	1006.75	
	Totals:	**39,808.2**				**2,098.8**	**Total Wind:** **39,302.2**

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

Calculated Forces

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

TES Tower Engineering Solutions

Load Case:	1.2D + 1.0E							**Iterations**	22
Gust Response Factor	1.10			**Sds**	0.23			**Ss**	0.21
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.11			**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.27	**SA**	0.03	**Seismic Importance Factor**			1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-61.30	-2.51	0.00	-320.94	0.00	320.94	4238.25	2119.12	9474.98	4744.53		0.00	0.00	0.050
5.00	-58.83	-2.50	0.00	-308.37	0.00	308.37	4191.13	2095.57	9193.31	4603.49		0.01	-0.01	0.049
10.00	-56.37	-2.47	0.00	-295.88	0.00	295.88	4142.79	2071.40	8912.98	4463.11		0.02	-0.02	0.048
15.00	-53.94	-2.43	0.00	-283.53	0.00	283.53	4093.23	2046.62	8634.14	4323.49		0.05	-0.03	0.047
20.00	-51.54	-2.40	0.00	-271.36	0.00	271.36	4042.45	2021.22	8356.93	4184.68		0.10	-0.05	0.046
25.00	-49.16	-2.36	0.00	-259.37	0.00	259.37	3990.44	1995.22	8081.53	4046.77		0.15	-0.06	0.045
30.00	-46.81	-2.32	0.00	-247.57	0.00	247.57	3937.21	1968.60	7808.07	3909.84		0.22	-0.07	0.044
35.00	-44.48	-2.28	0.00	-235.97	0.00	235.97	3882.75	1941.38	7536.73	3773.96		0.30	-0.08	0.043
36.00	-44.01	-2.27	0.00	-233.69	0.00	233.69	3871.71	1935.86	7482.72	3746.92		0.32	-0.08	0.042
36.00	-44.01	-2.27	0.00	-233.69	0.00	233.69	3871.71	1935.86	7482.72	3746.92		0.32	-0.08	0.042
39.00	-42.63	-2.25	0.00	-226.88	0.00	226.88	3838.31	1919.15	7321.27	3666.08		0.37	-0.09	0.073
40.00	-42.13	-2.24	0.00	-224.63	0.00	224.63	3827.07	1913.54	7267.64	3639.22		0.39	-0.10	0.073
45.00	-39.65	-2.15	0.00	-213.46	0.00	213.46	3812.30	1906.15	7197.58	3604.14		0.50	-0.12	0.070
50.00	-38.31	-2.12	0.00	-202.70	0.00	202.70	3755.07	1877.54	6931.57	3470.94		0.63	-0.14	0.069
55.00	-37.00	-2.08	0.00	-192.12	0.00	192.12	3696.63	1848.32	6668.16	3339.04		0.79	-0.16	0.068
60.00	-35.71	-2.05	0.00	-181.72	0.00	181.72	3636.96	1818.48	6407.52	3208.52		0.97	-0.18	0.066
65.00	-34.44	-2.02	0.00	-171.49	0.00	171.49	3576.08	1788.04	6149.79	3079.47		1.17	-0.20	0.065
70.00	-33.20	-2.00	0.00	-161.40	0.00	161.40	3513.96	1756.98	5895.14	2951.95		1.39	-0.22	0.064
75.00	-31.98	-1.99	0.00	-151.41	0.00	151.41	3450.63	1725.31	5643.71	2826.05		1.63	-0.24	0.063
79.00	-31.02	-1.99	0.00	-143.45	0.00	143.45	3399.08	1699.54	5445.00	2726.55		1.84	-0.26	0.062
80.00	-30.63	-2.00	0.00	-141.46	0.00	141.46	3386.07	1693.03	5395.67	2701.84		1.90	-0.27	0.061
84.00	-29.06	-1.99	0.00	-133.47	0.00	133.47	2492.17	1246.08	3964.65	1985.27		2.13	-0.28	0.079
85.00	-28.85	-2.00	0.00	-131.48	0.00	131.48	2483.20	1241.60	3929.49	1967.67		2.19	-0.29	0.078
90.00	-27.85	-2.01	0.00	-121.48	0.00	121.48	2437.73	1218.86	3754.97	1880.28		2.50	-0.31	0.076
95.00	-26.87	-2.01	0.00	-111.44	0.00	111.44	2391.17	1195.58	3582.65	1793.99		2.85	-0.34	0.073
100.00	-25.90	-2.02	0.00	-101.38	0.00	101.38	2343.52	1171.76	3412.67	1708.87		3.21	-0.36	0.070
105.00	-24.96	-2.02	0.00	-91.28	0.00	91.28	2294.79	1147.40	3245.17	1624.99		3.61	-0.39	0.067
108.00	-21.55	-2.00	0.00	-85.22	0.00	85.22	2265.03	1132.52	3145.91	1575.29		3.85	-0.40	0.064
110.00	-21.19	-2.01	0.00	-81.22	0.00	81.22	2244.98	1122.49	3080.27	1542.43		4.03	-0.41	0.062
115.00	-20.30	-2.01	0.00	-71.19	0.00	71.19	2194.08	1097.04	2918.13	1461.23		4.47	-0.44	0.058
118.00	-16.97	-1.98	0.00	-65.17	0.00	65.17	2163.02	1081.51	2822.22	1413.21		4.75	-0.45	0.054
120.00	-16.64	-1.98	0.00	-61.20	0.00	61.20	2136.45	1068.22	2751.59	1377.84		4.94	-0.46	0.052
123.00	-16.16	-1.98	0.00	-55.25	0.00	55.25	2094.98	1047.49	2645.31	1324.62		5.23	-0.47	0.049
123.00	-16.16	-1.98	0.00	-55.25	0.00	55.25	1330.70	665.35	1690.49	846.50		5.23	-0.47	0.077
125.00	-15.92	-1.98	0.00	-51.29	0.00	51.29	1319.70	659.85	1654.32	828.39		5.43	-0.48	0.074
128.00	-12.71	-1.91	0.00	-45.33	0.00	45.33	1302.88	651.44	1600.34	801.36		5.73	-0.50	0.066
130.00	-12.50	-1.91	0.00	-41.51	0.00	41.51	1291.45	645.73	1564.57	783.45		5.94	-0.51	0.063
135.00	-11.97	-1.89	0.00	-31.96	0.00	31.96	1262.12	631.06	1475.93	739.06		6.49	-0.53	0.053
138.00	-7.28	-1.52	0.00	-26.29	0.00	26.29	1244.00	622.00	1423.34	712.73		6.82	-0.54	0.043
140.00	-7.10	-1.50	0.00	-23.26	0.00	23.26	1231.70	615.85	1388.54	695.30		7.05	-0.55	0.039
145.00	-6.65	-1.45	0.00	-15.74	0.00	15.74	1200.20	600.10	1302.53	652.23		7.64	-0.56	0.030
149.00	-4.67	-1.14	0.00	-9.92	0.00	9.92	1174.22	587.11	1234.81	618.32		8.11	-0.57	0.020
150.00	-4.59	-1.13	0.00	-8.78	0.00	8.78	1167.61	583.81	1218.04	609.93		8.23	-0.57	0.018
155.00	-4.23	-1.05	0.00	-3.15	0.00	3.15	1133.94	566.97	1135.21	568.45		8.84	-0.58	0.009
158.00	0.00	-1.01	0.00	0.00	0.00	0.00	1113.22	556.61	1086.36	543.99		9.20	-0.58	0.000

Seismic Segment Forces (Factored)

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 29	

Tower Engineering Solutions

Load Case:	0.9D + 1.0E							**Iterations**	22
Gust Response Factor	1.10				**Sds**	0.23		**Ss**	0.21
Dead Load Factor	0.90	**Seismic Load Factor**	1.00		**Sd1**	0.11		**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.27		**SA**	0.03	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00	RB1	0.00	0.00	0.00	0.00	0.00	
5.00		1090.4	0.00	0.03	0.02	28.75	
10.00		1069.8	0.01	0.05	0.03	39.32	
15.00		1049.2	0.02	0.06	0.04	43.78	
20.00		1028.6	0.03	0.07	0.04	45.53	
25.00		1008.1	0.05	0.07	0.04	46.08	
30.00		987.54	0.07	0.07	0.04	46.23	
35.00		966.96	0.09	0.07	0.04	46.33	
36.00	RT1	190.92	0.10	0.07	0.04	9.19	
39.00	Bot - Section 2	567.83	0.12	0.07	0.04	27.75	
40.00		378.30	0.12	0.07	0.03	18.58	
45.00	Top - Section 1	1866.8	0.15	0.07	0.03	93.85	
50.00		920.43	0.19	0.06	0.02	46.97	
55.00		899.86	0.23	0.06	0.02	45.68	
60.00		879.28	0.27	0.05	0.01	42.65	
65.00		858.71	0.32	0.04	0.01	36.90	
70.00		838.13	0.37	0.03	0.01	27.45	
75.00	Appurtenance(s)	821.26	0.43	0.01	0.01	14.01	
79.00	Bot - Section 3	639.24	0.47	-0.01	0.01	0.78	
80.00		291.53	0.48	-0.01	0.01	-0.88	
84.00	Top - Section 2	1151.0	0.53	-0.03	0.01	-22.82	
85.00		130.35	0.55	-0.03	0.01	-3.11	
90.00		641.47	0.61	-0.06	0.02	-26.44	
95.00		624.32	0.68	-0.08	0.03	-32.87	
100.00		607.18	0.76	-0.10	0.04	-34.95	
105.00		590.03	0.83	-0.12	0.06	-33.25	
108.00	Appurtenance(s)	2723.7	0.88	-0.12	0.08	-144.05	
110.00		227.10	0.92	-0.12	0.09	-11.24	
115.00		555.74	1.00	-0.11	0.13	-20.75	
118.00	Appurtenance(s)	2664.6	1.05	-0.09	0.16	-73.48	
120.00		213.38	1.09	-0.08	0.18	-4.28	
123.00	Top - Section 3	314.93	1.15	-0.04	0.22	-2.27	
125.00		145.04	1.18	-0.01	0.24	0.34	
128.00	Appurtenance(s)	2592.9	1.24	0.05	0.29	47.42	
130.00		140.24	1.28	0.09	0.32	4.20	
135.00		342.20	1.38	0.25	0.41	21.49	
138.00	Appurtenance(s)	3851.0	1.44	0.37	0.48	327.72	
140.00		130.64	1.48	0.46	0.52	13.20	
145.00		318.19	1.59	0.75	0.66	46.10	
149.00	Appurtenance(s)	1613.9	1.68	1.05	0.79	296.98	
150.00		60.28	1.70	1.14	0.82	11.72	
155.00		294.18	1.82	1.63	1.01	73.47	
158.00	Appurtenance(s)	3522.4	1.89	1.98	1.14	1006.75	
	Totals:	**39,808.2**				**2,098.8**	**Total Wind:** **39,302.2**

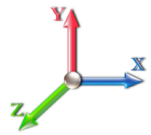
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 30	

IES Tower Engineering Solutions

Load Case: 0.9D + 1.0E



Gust Response Factor	1.10			**Sds**	0.23			**Iterations**	22
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.11			**Ss**	0.21
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.27	**SA**	0.03			**S1**	0.07
								Seismic Importance Factor	1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-45.98	-2.51	0.00	-316.82	0.00	316.82	4238.25	2119.12	9474.98	4744.53		0.00	0.00	0.047
5.00	-44.12	-2.49	0.00	-304.25	0.00	304.25	4191.13	2095.57	9193.31	4603.49		0.01	-0.01	0.046
10.00	-42.28	-2.46	0.00	-291.79	0.00	291.79	4142.79	2071.40	8912.98	4463.11		0.02	-0.02	0.045
15.00	-40.46	-2.42	0.00	-279.48	0.00	279.48	4093.23	2046.62	8634.14	4323.49		0.05	-0.03	0.044
20.00	-38.65	-2.39	0.00	-267.36	0.00	267.36	4042.45	2021.22	8356.93	4184.68		0.10	-0.05	0.043
25.00	-36.87	-2.35	0.00	-255.43	0.00	255.43	3990.44	1995.22	8081.53	4046.77		0.15	-0.06	0.042
30.00	-35.10	-2.30	0.00	-243.70	0.00	243.70	3937.21	1968.60	7808.07	3909.84		0.22	-0.07	0.041
35.00	-33.36	-2.26	0.00	-232.17	0.00	232.17	3882.75	1941.38	7536.73	3773.96		0.29	-0.08	0.040
36.00	-33.01	-2.25	0.00	-229.91	0.00	229.91	3871.71	1935.86	7482.72	3746.92		0.31	-0.08	0.040
36.00	-33.01	-2.25	0.00	-229.91	0.00	229.91	3871.71	1935.86	7482.72	3746.92		0.31	-0.08	0.040
39.00	-31.97	-2.23	0.00	-223.15	0.00	223.15	3838.31	1919.15	7321.27	3666.08		0.37	-0.09	0.069
40.00	-31.60	-2.21	0.00	-220.93	0.00	220.93	3827.07	1913.54	7267.64	3639.22		0.38	-0.09	0.069
45.00	-29.74	-2.13	0.00	-209.85	0.00	209.85	3812.30	1906.15	7197.58	3604.14		0.49	-0.11	0.066
50.00	-28.73	-2.09	0.00	-199.21	0.00	199.21	3755.07	1877.54	6931.57	3470.94		0.63	-0.14	0.065
55.00	-27.75	-2.05	0.00	-188.76	0.00	188.76	3696.63	1848.32	6668.16	3339.04		0.78	-0.16	0.064
60.00	-26.78	-2.02	0.00	-178.51	0.00	178.51	3636.96	1818.48	6407.52	3208.52		0.95	-0.18	0.063
65.00	-25.83	-1.98	0.00	-168.43	0.00	168.43	3576.08	1788.04	6149.79	3079.47		1.15	-0.20	0.062
70.00	-24.90	-1.96	0.00	-158.51	0.00	158.51	3513.96	1756.98	5895.14	2951.95		1.37	-0.22	0.061
75.00	-23.98	-1.95	0.00	-148.69	0.00	148.69	3450.63	1725.31	5643.71	2826.05		1.61	-0.24	0.060
79.00	-23.27	-1.95	0.00	-140.88	0.00	140.88	3399.08	1699.54	5445.00	2726.55		1.81	-0.26	0.059
80.00	-22.97	-1.96	0.00	-138.92	0.00	138.92	3386.07	1693.03	5395.67	2701.84		1.87	-0.26	0.058
84.00	-21.79	-1.96	0.00	-131.10	0.00	131.10	2492.17	1246.08	3964.65	1985.27		2.10	-0.28	0.075
85.00	-21.64	-1.96	0.00	-129.14	0.00	129.14	2483.20	1241.60	3929.49	1967.67		2.15	-0.28	0.074
90.00	-20.88	-1.97	0.00	-119.34	0.00	119.34	2437.73	1218.86	3754.97	1880.28		2.46	-0.31	0.072
95.00	-20.15	-1.97	0.00	-109.51	0.00	109.51	2391.17	1195.58	3582.65	1793.99		2.80	-0.33	0.069
100.00	-19.42	-1.97	0.00	-99.66	0.00	99.66	2343.52	1171.76	3412.67	1708.87		3.16	-0.36	0.067
105.00	-18.72	-1.98	0.00	-89.79	0.00	89.79	2294.79	1147.40	3245.17	1624.99		3.55	-0.38	0.063
108.00	-16.16	-1.96	0.00	-83.86	0.00	83.86	2265.03	1132.52	3145.91	1575.29		3.79	-0.40	0.060
110.00	-15.89	-1.96	0.00	-79.94	0.00	79.94	2244.98	1122.49	3080.27	1542.43		3.96	-0.41	0.059
115.00	-15.22	-1.96	0.00	-70.11	0.00	70.11	2194.08	1097.04	2918.13	1461.23		4.40	-0.43	0.055
118.00	-12.72	-1.95	0.00	-64.22	0.00	64.22	2163.02	1081.51	2822.22	1413.21		4.67	-0.44	0.051
120.00	-12.48	-1.95	0.00	-60.32	0.00	60.32	2136.45	1068.22	2751.59	1377.84		4.86	-0.45	0.050
123.00	-12.12	-1.95	0.00	-54.48	0.00	54.48	2094.98	1047.49	2645.31	1324.62		5.14	-0.46	0.047
123.00	-12.12	-1.95	0.00	-54.48	0.00	54.48	1330.70	665.35	1690.49	846.50		5.14	-0.46	0.073
125.00	-11.94	-1.95	0.00	-50.58	0.00	50.58	1319.70	659.85	1654.32	828.39		5.34	-0.47	0.070
128.00	-9.53	-1.88	0.00	-44.74	0.00	44.74	1302.88	651.44	1600.34	801.36		5.64	-0.49	0.063
130.00	-9.37	-1.88	0.00	-40.97	0.00	40.97	1291.45	645.73	1564.57	783.45		5.85	-0.50	0.060
135.00	-8.97	-1.86	0.00	-31.57	0.00	31.57	1262.12	631.06	1475.93	739.06		6.38	-0.52	0.050
138.00	-5.46	-1.50	0.00	-25.99	0.00	25.99	1244.00	622.00	1423.34	712.73		6.71	-0.53	0.041
140.00	-5.32	-1.49	0.00	-22.99	0.00	22.99	1231.70	615.85	1388.54	695.30		6.94	-0.54	0.037
145.00	-4.99	-1.44	0.00	-15.56	0.00	15.56	1200.20	600.10	1302.53	652.23		7.51	-0.56	0.028
149.00	-3.50	-1.13	0.00	-9.81	0.00	9.81	1174.22	587.11	1234.81	618.32		7.98	-0.56	0.019
150.00	-3.44	-1.11	0.00	-8.69	0.00	8.69	1167.61	583.81	1218.04	609.93		8.10	-0.57	0.017
155.00	-3.17	-1.04	0.00	-3.12	0.00	3.12	1133.94	566.97	1135.21	568.45		8.70	-0.57	0.008
158.00	0.00	-1.01	0.00	0.00	0.00	0.00	1113.22	556.61	1086.36	543.99		9.06	-0.57	0.000

Wind Loading - Shaft

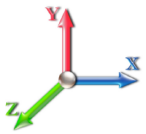
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 31	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00	RB1	1.00	0.85	7.442	8.19	256.18	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	251.43	0.650	0.000	5.00	22.941	14.91	122.1	0.0	1090.4
10.00		1.00	0.85	7.442	8.19	246.67	0.650	0.000	5.00	22.511	14.63	119.8	0.0	1069.8
15.00		1.00	0.85	7.442	8.19	241.92	0.650	0.000	5.00	22.081	14.35	117.5	0.0	1049.3
20.00		1.00	0.90	7.896	8.69	244.29	0.650	0.000	5.00	21.651	14.07	122.2	0.0	1028.7
25.00		1.00	0.95	8.276	9.10	245.08	0.650	0.000	5.00	21.222	13.79	125.6	0.0	1008.1
30.00		1.00	0.98	8.600	9.46	244.72	0.650	0.000	5.00	20.792	13.51	127.8	0.0	987.5
35.00		1.00	1.01	8.883	9.77	243.53	0.654 *	0.000	5.00	20.362	13.31	130.1	0.0	967.0
36.00	RT1	1.00	1.02	8.936	9.83	243.21	0.656 *	0.000	1.00	4.021	2.64	25.9	0.0	190.9
39.00	Bot - Section 2	1.00	1.04	9.088	10.00	242.11	0.658 *	0.000	3.00	11.959	7.87	78.7	0.0	567.8
40.00		1.00	1.04	9.137	10.05	241.71	0.650	0.000	1.00	4.015	2.61	26.2	0.0	378.3
45.00	Top - Section 1	1.00	1.07	9.366	10.30	239.39	0.650	0.000	5.00	19.820	12.88	132.7	0.0	1866.8
50.00		1.00	1.09	9.576	10.53	240.64	0.650	0.000	5.00	19.390	12.60	132.8	0.0	920.4
55.00		1.00	1.12	9.770	10.75	237.62	0.650	0.000	5.00	18.960	12.32	132.4	0.0	899.9
60.00		1.00	1.14	9.951	10.95	234.31	0.650	0.000	5.00	18.530	12.04	131.8	0.0	879.3
65.00		1.00	1.16	10.120	11.13	230.74	0.650	0.000	5.00	18.100	11.77	131.0	0.0	858.7
70.00		1.00	1.17	10.279	11.31	226.96	0.650	0.000	5.00	17.670	11.49	129.9	0.0	838.1
75.00	Appurtenance(s)	1.00	1.19	10.430	11.47	222.99	0.650	0.000	5.00	17.240	11.21	128.6	0.0	817.6
79.00	Bot - Section 3	1.00	1.20	10.544	11.60	219.68	0.650	0.000	4.00	13.483	8.76	101.6	0.0	639.2
80.00		1.00	1.21	10.572	11.63	218.84	0.650	0.000	1.00	3.381	2.20	25.6	0.0	291.5
84.00	Top - Section 2	1.00	1.22	10.681	11.75	215.41	0.650	0.000	4.00	13.350	8.68	102.0	0.0	1151.0
85.00		1.00	1.22	10.708	11.78	218.04	0.650	0.000	1.00	3.295	2.14	25.2	0.0	130.4
90.00		1.00	1.24	10.838	11.92	213.62	0.650	0.000	5.00	16.215	10.54	125.7	0.0	641.5
95.00		1.00	1.25	10.962	12.06	209.07	0.650	0.000	5.00	15.785	10.26	123.7	0.0	624.3
100.00		1.00	1.27	11.081	12.19	204.40	0.650	0.000	5.00	15.356	9.98	121.7	0.0	607.2
105.00		1.00	1.28	11.195	12.31	199.62	0.650	0.000	5.00	14.926	9.70	119.5	0.0	590.0
108.00	Appurtenance(s)	1.00	1.29	11.262	12.39	196.70	0.650	0.000	3.00	8.749	5.69	70.4	0.0	345.8
110.00		1.00	1.29	11.305	12.44	194.74	0.650	0.000	2.00	5.747	3.74	46.5	0.0	227.1
115.00		1.00	1.30	11.412	12.55	189.76	0.650	0.000	5.00	14.066	9.14	114.8	0.0	555.7
118.00	Appurtenance(s)	1.00	1.31	11.474	12.62	186.73	0.650	0.000	3.00	8.233	5.35	67.5	0.0	325.2
120.00		1.00	1.32	11.514	12.67	184.70	0.650	0.000	2.00	5.403	3.51	44.5	0.0	213.4
123.00	Top - Section 3	1.00	1.32	11.574	12.73	181.62	0.650	0.000	3.00	7.975	5.18	66.0	0.0	314.9
125.00		1.00	1.33	11.614	12.78	179.55	0.650	0.000	2.00	5.231	3.40	43.4	0.0	145.0
128.00	Appurtenance(s)	1.00	1.33	11.672	12.84	176.43	0.650	0.000	3.00	7.717	5.02	64.4	0.0	214.0
130.00		1.00	1.34	11.710	12.88	174.33	0.650	0.000	2.00	5.059	3.29	42.4	0.0	140.2
135.00		1.00	1.35	11.803	12.98	169.03	0.650	0.000	5.00	12.347	8.03	104.2	0.0	342.2
138.00	Appurtenance(s)	1.00	1.35	11.858	13.04	165.82	0.650	0.000	3.00	7.202	4.68	61.1	0.0	199.6
140.00		1.00	1.36	11.894	13.08	163.67	0.650	0.000	2.00	4.715	3.06	40.1	0.0	130.6
145.00		1.00	1.37	11.982	13.18	158.24	0.650	0.000	5.00	11.487	7.47	98.4	0.0	318.2
149.00	Appurtenance(s)	1.00	1.38	12.051	13.26	153.85	0.650	0.000	4.00	8.880	5.77	76.5	0.0	245.9
150.00		1.00	1.38	12.068	13.27	152.75	0.650	0.000	1.00	2.177	1.42	18.8	0.0	60.3
155.00		1.00	1.39	12.152	13.37	147.20	0.650	0.000	5.00	10.627	6.91	92.3	0.0	294.2
158.00	Appurtenance(s)	1.00	1.39	12.201	13.42	143.84	0.650	0.000	3.00	6.170	4.01	53.8	0.0	170.7
								Totals:	**158.00**			**3,765.1**		**24,336.9**

* Cf Adjusted by Linear Load Ra Effect

Discrete Appurtenance Forces

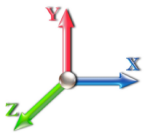
Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 32	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

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	158.00	Alu - 800 Filters	3	12.209	13.430	0.38	0.75	0.88	26.40	0.000	0.500	11.78	0.00	5.89
2	158.00	Collar Mount	1	12.201	13.421	1.00	1.00	5.00	350.00	0.000	0.000	67.10	0.00	0.00
3	158.00	Low Profile Platform	1	12.209	13.430	0.75	0.75	18.75	1200.00	0.000	0.500	251.81	0.00	125.91
4	158.00	RFS - ACU-A20-N - RET	3	12.209	13.430	0.50	0.75	0.21	3.00	0.000	0.500	2.83	0.00	1.42
5	158.00	ALU - 1900 MHz - RRU	3	12.209	13.430	0.50	0.75	5.73	132.00	0.000	0.500	76.93	0.00	38.47
6	158.00	ALU - 800 MHz - RRU	6	12.209	13.430	0.50	0.75	7.51	318.00	0.000	0.500	100.82	0.00	50.41
7	158.00	Site Pro PRK-1245 (kicker	1	12.201	13.421	1.00	1.00	9.50	464.91	0.000	0.000	127.50	0.00	0.00
8	158.00	Site Pro HRK14	1	12.201	13.421	1.00	1.00	8.13	302.36	0.000	0.000	109.11	0.00	0.00
9	158.00	RFS - APXVSPP18-C-A20	3	12.209	13.430	0.62	0.75	14.96	171.00	0.000	0.500	200.90	0.00	100.45
10	158.00	Commscope -	3	12.209	13.430	0.62	0.75	16.95	174.00	0.000	0.500	227.68	0.00	113.84
11	158.00	ALU - TD-RRH8x20-25 -	3	12.209	13.430	0.50	0.75	6.11	210.00	0.000	0.500	81.99	0.00	41.00
12	149.00	Low Profile Platform	1	12.051	13.256	1.00	1.00	25.00	1200.00	0.000	0.000	331.41	0.00	0.00
13	149.00	DB844H90E-XY	12	12.051	13.256	0.83	0.75	30.19	168.00	0.000	0.000	400.27	0.00	0.00
14	138.00	Platform w/ HR & V-Brace	1	11.858	13.044	1.00	1.00	51.70	2246.00	0.000	0.000	674.37	0.00	0.00
15	138.00	KRY 112 144/1	3	11.858	13.044	0.38	0.75	0.46	33.00	0.000	0.000	6.02	0.00	0.00
16	138.00	APX16DWV-16DWVS-E-A	6	11.858	13.044	0.46	0.75	18.44	244.20	0.000	0.000	240.56	0.00	0.00
17	138.00	APXVAA24_43-U-A20	3	11.858	13.044	0.55	0.75	33.24	297.00	0.000	0.000	433.64	0.00	0.00
18	138.00	AIR6449 B41	3	11.858	13.044	0.53	0.75	9.03	309.00	0.000	0.000	117.73	0.00	0.00
19	138.00	782 10663	3	11.858	13.044	0.38	0.75	0.32	15.90	0.000	0.000	4.11	0.00	0.00
20	138.00	Radio 4415 Protruding w/	3	11.858	13.044	0.50	0.75	2.80	148.80	0.000	0.000	36.57	0.00	0.00
21	138.00	RRUS 4415 B25	3	11.858	13.044	0.50	0.75	2.47	138.00	0.000	0.000	32.25	0.00	0.00
22	138.00	4449 B71 + B85	3	11.858	13.044	0.50	0.75	2.97	219.60	0.000	0.000	38.74	0.00	0.00
23	128.00	RFS - DB-T1-6Z-8AB-0Z -	2	11.672	12.839	0.40	0.80	3.84	37.80	0.000	0.000	49.30	0.00	0.00
24	128.00	Alcatel Lucent -	3	11.672	12.839	0.54	0.80	4.08	170.40	0.000	0.000	52.44	0.00	0.00
25	128.00	Alcatel Lucent -	3	11.672	12.839	0.54	0.80	5.40	165.00	0.000	0.000	69.37	0.00	0.00
26	128.00	Andrew - JAHH-65B-R3B	6	11.672	12.839	0.62	0.75	33.94	379.80	0.000	0.000	435.81	0.00	0.00
27	128.00	Andrew - DB846F65ZAXY	6	11.672	12.839	0.75	0.80	31.81	126.00	0.000	0.000	408.40	0.00	0.00
28	128.00	Low Profile Platform	1	11.672	12.839	0.80	0.80	17.60	1500.00	0.000	0.000	225.97	0.00	0.00
29	118.00	7770	6	11.474	12.621	0.62	0.80	20.33	210.00	0.000	0.000	256.56	0.00	0.00
30	118.00	Low Profile Platform	1	11.474	12.621	0.80	0.80	17.60	1500.00	0.000	0.000	222.13	0.00	0.00
31	118.00	P65-16-XLH-RR	3	11.474	12.621	0.63	0.80	15.47	159.00	0.000	0.000	195.26	0.00	0.00
32	118.00	TT19-08BP111-001	3	11.474	12.621	0.54	0.80	1.03	48.00	0.000	0.000	12.99	0.00	0.00
33	118.00	LGP21401	6	11.474	12.621	0.54	0.80	4.15	84.60	0.000	0.000	52.36	0.00	0.00
34	118.00	RRUS-11	6	11.474	12.621	0.40	0.80	6.05	306.00	0.000	0.000	76.33	0.00	0.00
35	118.00	DC6-48-60-18	1	11.474	12.621	0.80	0.80	0.74	31.80	0.000	0.000	9.29	0.00	0.00
36	108.00	Platform Commscope	1	11.262	12.388	1.00	1.00	37.59	1727.00	0.000	0.000	465.66	0.00	0.00
37	108.00	Raycap	1	11.262	12.388	0.59	0.75	1.19	21.90	0.000	0.000	14.75	0.00	0.00
38	108.00	Fujitsu TA08025-B604	3	11.262	12.388	0.57	0.75	3.35	191.70	0.000	0.000	41.52	0.00	0.00
39	108.00	Fujitsu TA08025-B605	3	11.262	12.388	0.60	0.75	3.53	225.00	0.000	0.000	43.70	0.00	0.00
40	108.00	Commscope	3	11.262	12.388	0.55	0.75	20.43	212.40	0.000	0.000	253.08	0.00	0.00
41	75.00	GPS	1	10.430	11.473	1.00	1.00	0.01	3.70	0.000	0.000	0.11	0.00	0.00
							Totals:		**15,471.27**			**6,459.19**		

Total Applied Force Summary

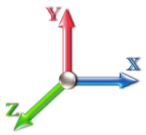
Structure:	CT46131-A-SBA		**Code:**	EIA/TIA-222-G	1/18/2022
Site Name:	Easton-Everetts Rd		**Exposure:**	C	
Height:	158.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 33

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		122.07	2064.56	0.00	0.00
10.00		119.78	2043.99	0.00	0.00
15.00		117.49	2023.42	0.00	0.00
20.00		122.24	2002.84	0.00	0.00
25.00		125.58	1982.27	0.00	0.00
30.00		127.85	1961.70	0.00	0.00
35.00		130.07	1941.12	0.00	0.00
36.00		25.94	385.76	0.00	0.00
39.00		78.67	1152.33	0.00	0.00
40.00		26.23	417.45	0.00	0.00
45.00		132.73	2062.58	0.00	0.00
50.00		132.76	1116.19	0.00	0.00
55.00		132.45	1095.62	0.00	0.00
60.00		131.84	1075.04	0.00	0.00
65.00		130.97	1054.47	0.00	0.00
70.00		129.87	1033.89	0.00	0.00
75.00	(1) attachments	128.68	1017.02	0.00	0.00
79.00		101.65	795.20	0.00	0.00
80.00		25.55	330.52	0.00	0.00
84.00		101.96	1307.01	0.00	0.00
85.00		25.22	169.34	0.00	0.00
90.00		125.65	836.43	0.00	0.00
95.00		123.72	819.28	0.00	0.00
100.00		121.66	802.14	0.00	0.00
105.00		119.47	784.99	0.00	0.00
108.00	(11) attachments	889.17	2840.77	0.00	0.00
110.00		46.45	301.44	0.00	0.00
115.00		114.77	741.60	0.00	0.00
118.00	(26) attachments	892.47	2776.13	0.00	0.00
120.00		44.48	268.99	0.00	0.00
123.00		66.00	398.34	0.00	0.00
125.00		43.44	200.65	0.00	0.00
128.00	(21) attachments	1305.69	2676.37	0.00	0.00
130.00		42.36	178.97	0.00	0.00
135.00		104.20	439.01	0.00	0.00
138.00	(28) attachments	1645.04	3909.14	0.00	0.00
140.00		40.10	151.76	0.00	0.00
145.00		98.41	370.99	0.00	0.00
149.00	(13) attachments	808.20	1656.15	0.00	0.00
150.00		18.78	62.92	0.00	0.00
155.00		92.33	307.38	0.00	0.00
158.00	(28) attachments	1312.31	3530.34	0.00	477.38
	Totals:	**10,224.29**	**51,086.13**	**0.00**	**477.38**

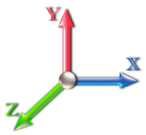
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 34	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.090	0.000	7.442	0.00	31.20
5.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.090	0.000	7.442	0.00	11.00
5.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.090	0.000	7.442	0.00	778.40
10.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.092	0.000	7.442	0.00	31.20
10.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.092	0.000	7.442	0.00	11.00
10.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.092	0.000	7.442	0.00	778.40
15.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.094	0.000	7.442	0.00	31.20
15.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.094	0.000	7.442	0.00	11.00
15.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.094	0.000	7.442	0.00	778.40
20.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.096	0.000	7.896	0.00	31.20
20.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.096	0.000	7.896	0.00	11.00
20.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.096	0.000	7.896	0.00	778.40
25.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.098	0.000	8.276	0.00	31.20
25.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.098	0.000	8.276	0.00	11.00
25.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.098	0.000	8.276	0.00	778.40
30.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.100	0.000	8.600	0.00	31.20
30.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.100	0.000	8.600	0.00	11.00
30.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.100	0.000	8.600	0.00	778.40
35.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.102	1.006	8.883	0.00	31.20
35.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.102	1.006	8.883	0.00	11.00
35.00	1.25" Reinforcing	Yes	5.00	0.000	3.00	1.25	0.00	0.102	1.006	8.883	0.00	778.40
36.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.103	1.010	8.936	0.00	6.24
36.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.103	1.010	8.936	0.00	2.20
36.00	1.25" Reinforcing	Yes	1.00	0.000	3.00	0.25	0.00	0.103	1.010	8.936	0.00	155.68
39.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.104	1.012	9.088	0.00	18.72
39.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.104	1.012	9.088	0.00	6.60
39.00	1.25" Reinforcing	Yes	3.00	0.000	3.00	0.75	0.00	0.104	1.012	9.088	0.00	467.04
40.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.042	0.000	9.137	0.00	6.24
40.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.042	0.000	9.137	0.00	2.20
45.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.042	0.000	9.366	0.00	31.20
45.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.042	0.000	9.366	0.00	11.00
50.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.043	0.000	9.576	0.00	31.20
50.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.043	0.000	9.576	0.00	11.00
55.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.044	0.000	9.770	0.00	31.20
55.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.044	0.000	9.770	0.00	11.00
60.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.045	0.000	9.951	0.00	31.20
60.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.045	0.000	9.951	0.00	11.00
65.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.046	0.000	10.120	0.00	31.20
65.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.046	0.000	10.120	0.00	11.00
70.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.047	0.000	10.279	0.00	31.20
70.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.047	0.000	10.279	0.00	11.00
75.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.048	0.000	10.430	0.00	31.20
75.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.048	0.000	10.430	0.00	11.00
79.00	1 5/8" Coax	Yes	4.00	0.000	1.98	0.66	0.00	0.049	0.000	10.544	0.00	24.96
79.00	1 5/8" Fiber	Yes	4.00	0.000	0.00	0.00	0.00	0.049	0.000	10.544	0.00	8.80
80.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.050	0.000	10.572	0.00	6.24
80.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.050	0.000	10.572	0.00	2.20

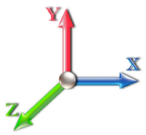
Linear Appurtenance Segment Forces (Factored)

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 35	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
84.00	1 5/8" Coax	Yes	4.00	0.000	1.98	0.66	0.00	0.050	0.000	10.681	0.00	24.96
84.00	1 5/8" Fiber	Yes	4.00	0.000	0.00	0.00	0.00	0.050	0.000	10.681	0.00	8.80
85.00	1 5/8" Coax	Yes	1.00	0.000	1.98	0.17	0.00	0.050	0.000	10.708	0.00	6.24
85.00	1 5/8" Fiber	Yes	1.00	0.000	0.00	0.00	0.00	0.050	0.000	10.708	0.00	2.20
90.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.051	0.000	10.838	0.00	31.20
90.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.051	0.000	10.838	0.00	11.00
95.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.052	0.000	10.962	0.00	31.20
95.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.052	0.000	10.962	0.00	11.00
100.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.054	0.000	11.081	0.00	31.20
100.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.054	0.000	11.081	0.00	11.00
105.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.055	0.000	11.195	0.00	31.20
105.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.055	0.000	11.195	0.00	11.00
108.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.057	0.000	11.262	0.00	18.72
108.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.057	0.000	11.262	0.00	6.60
110.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.057	0.000	11.305	0.00	12.48
110.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.057	0.000	11.305	0.00	4.40
115.00	1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	0.059	0.000	11.412	0.00	31.20
115.00	1 5/8" Fiber	Yes	5.00	0.000	0.00	0.00	0.00	0.059	0.000	11.412	0.00	11.00
118.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.060	0.000	11.474	0.00	18.72
118.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.060	0.000	11.474	0.00	6.60
120.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.061	0.000	11.514	0.00	12.48
120.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.061	0.000	11.514	0.00	4.40
123.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.062	0.000	11.574	0.00	18.72
123.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.062	0.000	11.574	0.00	6.60
125.00	1 5/8" Coax	Yes	2.00	0.000	1.98	0.33	0.00	0.063	0.000	11.614	0.00	12.48
125.00	1 5/8" Fiber	Yes	2.00	0.000	0.00	0.00	0.00	0.063	0.000	11.614	0.00	4.40
128.00	1 5/8" Coax	Yes	3.00	0.000	1.98	0.49	0.00	0.064	0.000	11.672	0.00	18.72
128.00	1 5/8" Fiber	Yes	3.00	0.000	0.00	0.00	0.00	0.064	0.000	11.672	0.00	6.60
										Totals:	**0.0**	**7,151.8**

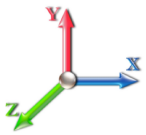
Calculated Forces

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 36	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

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	-51.08	-10.24	0.00	-1208.1	0.00	1208.13	4238.25	2119.12	9474.98	4744.53	0.00	0.000	0.000	0.164
5.00	-49.01	-10.16	0.00	-1156.9	0.00	1156.91	4191.13	2095.57	9193.31	4603.49	0.02	-0.043	0.000	0.160
10.00	-46.96	-10.07	0.00	-1106.1	0.00	1106.13	4142.79	2071.40	8912.98	4463.11	0.09	-0.086	0.000	0.157
15.00	-44.93	-9.98	0.00	-1055.7	0.00	1055.78	4093.23	2046.62	8634.14	4323.49	0.20	-0.129	0.000	0.153
20.00	-42.92	-9.89	0.00	-1005.8	0.00	1005.86	4042.45	2021.22	8356.93	4184.68	0.36	-0.173	0.000	0.149
25.00	-40.93	-9.79	0.00	-956.42	0.00	956.42	3990.44	1995.22	8081.53	4046.77	0.57	-0.216	0.000	0.145
30.00	-38.96	-9.68	0.00	-907.49	0.00	907.49	3937.21	1968.60	7808.07	3909.84	0.82	-0.260	0.000	0.141
35.00	-37.02	-9.56	0.00	-859.09	0.00	859.09	3882.75	1941.38	7536.73	3773.96	1.11	-0.303	0.000	0.137
36.00	-36.63	-9.54	0.00	-849.53	0.00	849.53	3871.71	1935.86	7482.72	3746.92	1.18	-0.312	0.000	0.136
36.00	-36.63	-9.54	0.00	-849.53	0.00	849.53	3871.71	1935.86	7482.72	3746.92	1.18	-0.312	0.000	0.136
39.00	-35.47	-9.47	0.00	-820.91	0.00	820.91	3838.31	1919.15	7321.27	3666.08	1.38	-0.338	0.000	0.233
40.00	-35.05	-9.47	0.00	-811.44	0.00	811.44	3827.07	1913.54	7267.64	3639.22	1.45	-0.354	0.000	0.232
45.00	-32.97	-9.36	0.00	-764.10	0.00	764.10	3812.30	1906.15	7197.58	3604.14	1.86	-0.429	0.000	0.221
50.00	-31.85	-9.26	0.00	-717.28	0.00	717.28	3755.07	1877.54	6931.57	3470.94	2.35	-0.505	0.000	0.215
55.00	-30.74	-9.16	0.00	-670.96	0.00	670.96	3696.63	1848.32	6668.16	3339.04	2.92	-0.577	0.000	0.209
60.00	-29.65	-9.05	0.00	-625.16	0.00	625.16	3636.96	1818.48	6407.52	3208.52	3.57	-0.650	0.000	0.203
65.00	-28.59	-8.95	0.00	-579.89	0.00	579.89	3576.08	1788.04	6149.79	3079.47	4.28	-0.722	0.000	0.196
70.00	-27.55	-8.84	0.00	-535.16	0.00	535.16	3513.96	1756.98	5895.14	2951.95	5.08	-0.793	0.000	0.189
75.00	-26.52	-8.72	0.00	-490.97	0.00	490.97	3450.63	1725.31	5643.71	2826.05	5.95	-0.864	0.000	0.181
79.00	-25.72	-8.63	0.00	-456.08	0.00	456.08	3399.08	1699.54	5445.00	2726.55	6.70	-0.921	0.000	0.175
80.00	-25.39	-8.61	0.00	-447.46	0.00	447.46	3386.07	1693.03	5395.67	2701.84	6.89	-0.935	0.000	0.173
84.00	-24.08	-8.50	0.00	-413.02	0.00	413.02	2492.17	1246.08	3964.65	1985.27	7.70	-0.991	0.000	0.218
85.00	-23.90	-8.49	0.00	-404.52	0.00	404.52	2483.20	1241.60	3929.49	1967.67	7.91	-1.005	0.000	0.215
90.00	-23.06	-8.38	0.00	-362.06	0.00	362.06	2437.73	1218.86	3754.97	1880.28	9.00	-1.081	0.000	0.202
95.00	-22.23	-8.27	0.00	-320.16	0.00	320.16	2391.17	1195.58	3582.65	1793.99	10.17	-1.154	0.000	0.188
100.00	-21.42	-8.16	0.00	-278.82	0.00	278.82	2343.52	1171.76	3412.67	1708.87	11.42	-1.224	0.000	0.172
105.00	-20.63	-8.04	0.00	-238.04	0.00	238.04	2294.79	1147.40	3245.17	1624.99	12.74	-1.290	0.000	0.156
108.00	-17.81	-7.09	0.00	-213.93	0.00	213.93	2265.03	1132.52	3145.91	1575.29	13.56	-1.328	0.000	0.144
110.00	-17.50	-7.05	0.00	-199.74	0.00	199.74	2244.98	1122.49	3080.27	1542.43	14.12	-1.352	0.000	0.137
115.00	-16.76	-6.93	0.00	-164.48	0.00	164.48	2194.08	1097.04	2918.13	1461.23	15.57	-1.407	0.000	0.120
118.00	-14.00	-5.98	0.00	-143.68	0.00	143.68	2163.02	1081.51	2822.22	1413.21	16.47	-1.438	0.000	0.108
120.00	-13.73	-5.93	0.00	-131.73	0.00	131.73	2136.45	1068.22	2751.59	1377.84	17.07	-1.457	0.000	0.102
123.00	-13.34	-5.86	0.00	-113.94	0.00	113.94	2094.98	1047.49	2645.31	1324.62	18.00	-1.484	0.000	0.092
123.00	-13.34	-5.86	0.00	-113.94	0.00	113.94	1330.70	665.35	1690.49	846.50	18.00	-1.484	0.000	0.145
125.00	-13.13	-5.82	0.00	-102.22	0.00	102.22	1319.70	659.85	1654.32	828.39	18.62	-1.501	0.000	0.133
128.00	-10.49	-4.45	0.00	-84.77	0.00	84.77	1302.88	651.44	1600.34	801.36	19.58	-1.533	0.000	0.114
130.00	-10.31	-4.40	0.00	-75.87	0.00	75.87	1291.45	645.73	1564.57	783.45	20.22	-1.553	0.000	0.105
135.00	-9.87	-4.29	0.00	-53.85	0.00	53.85	1262.12	631.06	1475.93	739.06	21.87	-1.594	0.000	0.081
138.00	-6.01	-2.54	0.00	-40.97	0.00	40.97	1244.00	622.00	1423.34	712.73	22.88	-1.614	0.000	0.062
140.00	-5.86	-2.50	0.00	-35.89	0.00	35.89	1231.70	615.85	1388.54	695.30	23.56	-1.625	0.000	0.056
145.00	-5.49	-2.39	0.00	-23.40	0.00	23.40	1200.20	600.10	1302.53	652.23	25.28	-1.649	0.000	0.040
149.00	-3.86	-1.54	0.00	-13.84	0.00	13.84	1174.22	587.11	1234.81	618.32	26.66	-1.662	0.000	0.026
150.00	-3.80	-1.52	0.00	-12.30	0.00	12.30	1167.61	583.81	1218.04	609.93	27.01	-1.664	0.000	0.023
155.00	-3.49	-1.41	0.00	-4.72	0.00	4.72	1133.94	566.97	1135.21	568.45	28.76	-1.673	0.000	0.011
158.00	0.00	-1.31	0.00	-0.48	0.00	0.48	1113.22	556.61	1086.36	543.99	29.81	-1.675	0.000	0.001

Final Analysis Summary

Structure:	CT46131-A-SBA	**Code:**	EIA/TIA-222-G	1/18/2022	
Site Name:	Easton-Everetts Rd	**Exposure:**	C		
Height:	158.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 37	

Tower Engineering Solutions

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 93 mph Wind	39.4	0.00	61.24	0.00	0.00	4672.51
0.9D + 1.6W 93 mph Wind	39.4	0.00	45.92	0.00	0.00	4618.54
1.2D + 1.0Di + 1.0Wi 50 mph Wind	12.0	0.00	95.85	0.00	0.00	1435.49
1.2D + 1.0E	2.5	0.00	61.30	0.00	0.00	320.94
0.9D + 1.0E	2.5	0.00	45.98	0.00	0.00	316.82
1.0D + 1.0W 60 mph Wind	10.2	0.00	51.08	0.00	0.00	1208.13

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 93 mph Wind	-41.79	-36.56	0.00	-3180.2	0.00	-3180.2	3838.31	1919.1	7321.27	3666.08	39.00	0.879
0.9D + 1.6W 93 mph Wind	-31.14	-36.30	0.00	-3132.0	0.00	-3132.0	3838.31	1919.1	7321.27	3666.08	39.00	0.863
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-72.17	-11.18	0.00	-979.52	0.00	-979.52	3838.31	1919.1	7321.27	3666.08	39.00	0.286
1.2D + 1.0E	-29.06	-1.99	0.00	-133.47	0.00	-133.47	2492.17	1246.0	3964.65	1985.27	84.00	0.079
0.9D + 1.0E	-21.79	-1.96	0.00	-131.10	0.00	-131.10	2492.17	1246.0	3964.65	1985.27	84.00	0.075
1.0D + 1.0W 60 mph Wind	-35.47	-9.47	0.00	-820.91	0.00	-820.91	3838.31	1919.1	7321.27	3666.08	39.00	0.233

Additional Steel Summary

			Intermediate Connectors			Lower Termination				Upper Termination				Max Member			
Elev From (ft)	Elev To (ft)	Member	VQ/I (lb/in)	Vu (kips)	phi Vn (kips)	MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	Pu (kips)	phi Pn (kips)	phi Tn (kips)	Ratio
0.0	36.0	(4) PLT-7.625x1.5(31mm Hol	348.4	5.23	37.1	423.8	37.1	12	15	373.5	37.1	11	12	423.83	503.5	463.76	0.914

Base Plate Summary

Structure:	CT46131-A-SB		**Code:**	EIA/TIA-222-G	1/18/2022
Site Name:	Easton-Everetts Rd		**Exposure:**	C	
Height:	158.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 38

Tower Engineering Solutions

Reactions	
Original Design	
Moment (kip-ft):	2888.00
Axial (kip):	26.60
Shear (kip):	30.40
Analysis (1.2D + 1.6W)	
Moment (kip-ft):	4672.51
Axial (kip):	61.24
Shear (kip):	39.39

Base Plate	
Yield (ksi):	50.00
Width (in):	60.00
Style:	Clipped
Polygon Sides:	4.00
Clip Length (in):	10.00
Effective Len (in):	8.42
Moment (kip-in):	674.89
Allow Stress (ksi):	67.50
Applied Stress (ksi):	45.23
Stress Ratio:	0.67

Anchor Bolts	
Bolt Circle:	62.00
Number Bolts:	16.00
Bolt Type:	2.25" 18J
Bolt Diameter (in):	2.25
Yield (ksi):	75.00
Ultimate (ksi):	100.00
Arrangement:	Clustered
Cluster Dist (in):	6.00
Start Angle (deg):	45.00
Compression	
Force (kip):	186.51
Allowable (kip):	260.00
Ratio:	0.74
Tension	
Force (kip):	174.53
Allowable (kip):	260.00
Ratio:	0.69

Pier Foundation Design For Monopole

				Date
				1/17/2022
Customer Name:	**Dish Wireless**	**EIA/TIA Standard:**	EIA-222-G
Site Name:		**Structure Height (Ft.):**	158
Site Number:	CT46131-A-SBA	**Engineer Name:**	K. Azisllari
Engr. Number:	122179	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

Analysis or Design? Analysis

Acceptable overstress (5.0%

Base Reactions (Factored):

Axial Load (Kips):	61.2	Shear Force (Kips):	39.4
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4672.5

Foundation Geometries:

Diameter of Pier (ft.):	7.0	Depth of Base B. G. S. :	22.0	ft.
Pier Height A. G. (ft.):	0.50			

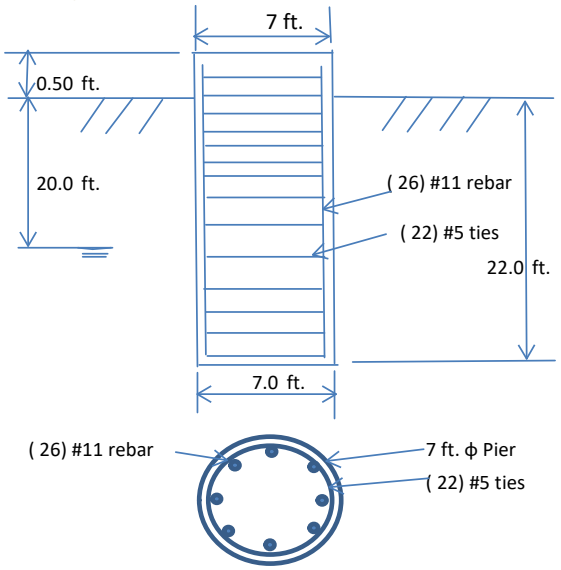
Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield strength:	60	ksi
Vertical Rebar Size #:	11	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	26	Tie Spacing:	18.0	in.
Concrete Cover (in.):	3	Concrete unit weight:	150.0	pcf

Soil Design Parameters:

Water Table B.G.S. (ft):	20.0	Unit weight of water:	62.4	psf
Ratio of Uplift/Axial Skin Friction:	1.0	Pullout failure Angle:	30	(°)

Skin Frictions are to be obtained from: Soil Report



Monopole Pier Foundation

Depth of Layers (ft) Top	Depth of Layers (ft) Bottom	γ_{soil} (pcf)	ϕ (°)	Cohesion (psf)	Ultimate Skin Friction (psf)	Ultimate Bearing (psf)	Soil Types
0.0	4.0	115	0	0			Sand
4.0	20.0	125	38	0			Sand
20.0	25.0	125	38	0			Sand
25.0	30.0						

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

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Soil Bearing Strength Reduction Factor:	0.75	
Total Dry Soil Volume from Conical Failure (cu. Ft.):	6742	Dry Soil Weight from Conical Failure:	829	Kips
Total Buoyant Soil Volume from Conical Failure (cu. Ft.):	28	Buoyant Soil Weight from Conical Failure (Ki	0	Kips
Total Dry Concrete Volume (cu. Ft.):	789	Total Dry Concrete Weight:	118.3	Kips
Total Buoyant Concrete Volume (cu. Ft.):	77.0	Total Buoyant Concrete Weight:	6.74	Kips
Total Effective Concrete Weight (Kips):	125.1	Total Effective Soil Weight:	829.5	Kips
Total Effective Vertical Load on Base (Kips):	90.9			

Check Soil Capacities:

					Usage	
Allowable Foundation Overturning Resistance (kips-ft.):	6331.0	>	Design Factored Moment (kips-ft):	5281	0.83	OK!
Factor of Safety of Passive Soil Resistance against Moment:	1.20	OK!				

Check the capacities of Reinforceing Concrete:

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

Reinforcing Concrete Pier:

					Usage	
Vertical Steel Rebar Area (sq. in./each):	1.56		Tie / Stirrup Area (sq. in./each):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	6590.1	>	Design Factored Moment (Mu, K-Ft):	4874.1	0.74	OK!
Calculated Shear Capacity (Kips):	970.0	>	Design Factored Shear (Kips):	529.8	0.55	OK!
Calculated Tension Capacity (Tn, Kips):	2190.2	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	7295	>	Design Factored Axial Load (Pu Kips):	61.2	0.01	OK!
Moment & Axial Strength Combination:	0.74	OK!	Max. Allowable Tie/Stirrup Spacing:	8.86	in.	
Pier Reinforcement Ratio:	0.007	Reinforcement Ratio is satisfied per ACI				

EXHIBIT 9

Antenna Mount Analysis

January 10, 2022

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

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

Subject:	**Appurtenance Mount Analysis Report**	
Carrier Designation:	***Dish Wireless* Co-Locate**	
	Site Number:	NJJER01147B
	Site Name:	N/A
***SBA Network Services Designation*:**	**Site Number:**	CT46131-A
	Site Name:	Easton-Everetts Rd
	Application Number:	182295, v1
Engineering Firm Designation:	**B+T Group Project Number:**	160318.003.01
Site Data:	**206 Everett Road, Easton, CT, 06612, Fairfield County** **Latitude *41.29033*°, Longitude *-73.28266*°** **Monopole** **8' 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 54.2%)**

This analysis utilizes an ultimate 3-second gust wind speed of 117 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria

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: Isaac Fulton

Respectfully submitted by: B&T Engineering, Inc.
COA: PEC.0001564 Expires: 02/10/2022

Chad E. Tuttle, P.E.

TABLE OF CONTENTS

1) INTRODUCTION

The mount consists of Commscope platform mount (Part# MC-PK8-DSH) at 108 ft., attached to monopole at 206 Everett Road, Easton, CT, 06612, Fairfield 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 117 mph with no ice and 50 mph with 1 inch escalated ice thickness. Exposure Category C, 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 30º 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	108	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
SBA Application	Proposed Loading	Date: 12/06/2021	SBA Network Services, LLC.
RFDS		Date: 11/11/2021	

3) ANALYSIS PROCEDURE

3.1) Analysis Method

RISA-3D (Version 19.0.4), 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 areas 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

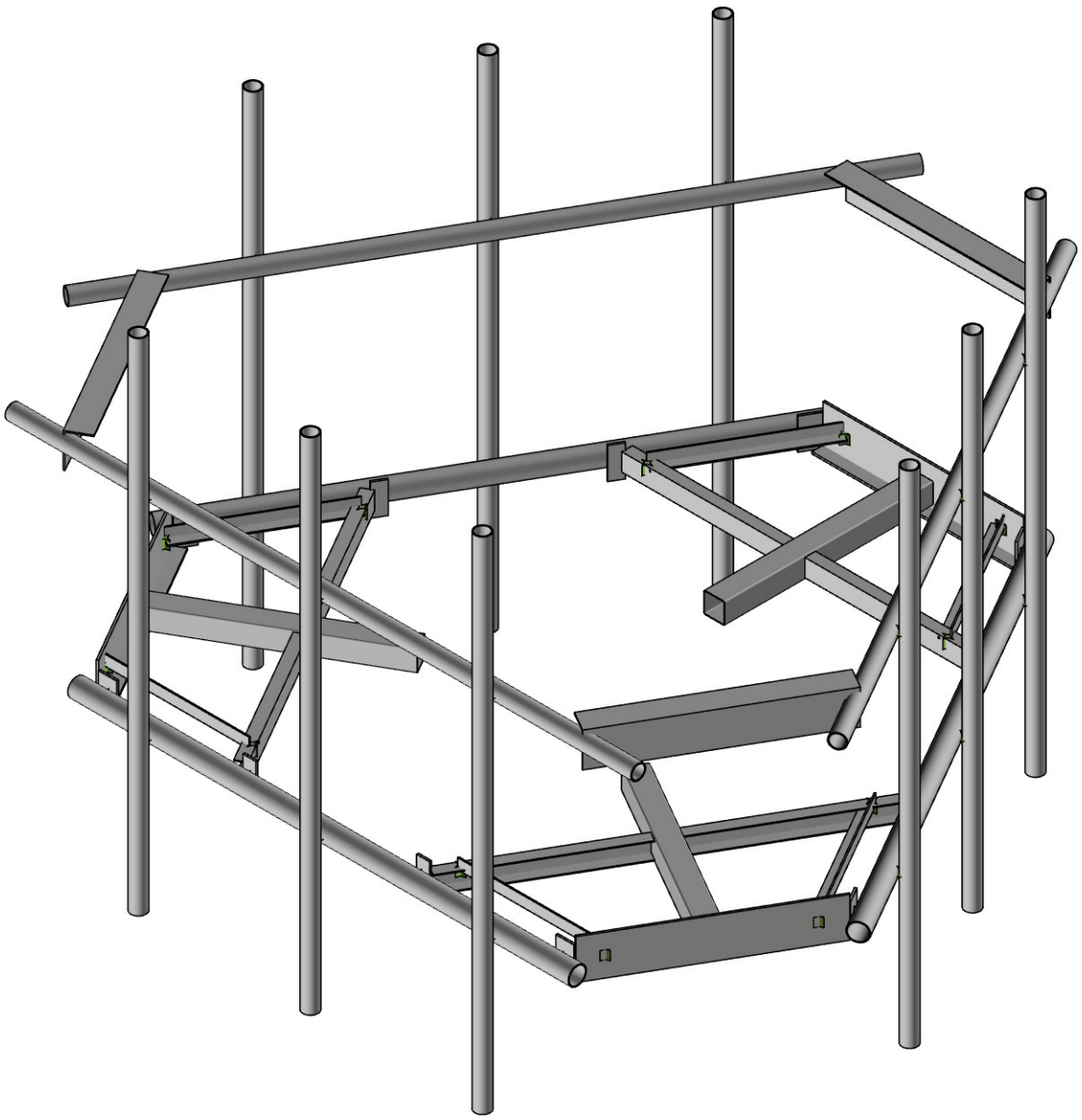
Notes	Component	Elevation (ft.)	% Capacity	Pass / Fail
-	Main Face Horizontals	108	8.3	Pass
-	Support Rails	108	15.4	Pass
-	Support Tubes	108	54.2	Pass
-	Support Channels	108	37.5	Pass
-	Support Angles	108	40.2	Pass
-	Mount Pipes	108	16.8	Pass
-	Connection Plates	108	19.9	Pass
-	Connection Angles	108	25.6	Pass
-	Connection Bolts	108	28.4	Pass

5) RECOMMENDATIONS

The Commscope platform mount, (Part #MC-PK8-DSH) 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

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KR		Jan 08, 2022
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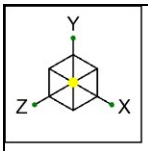

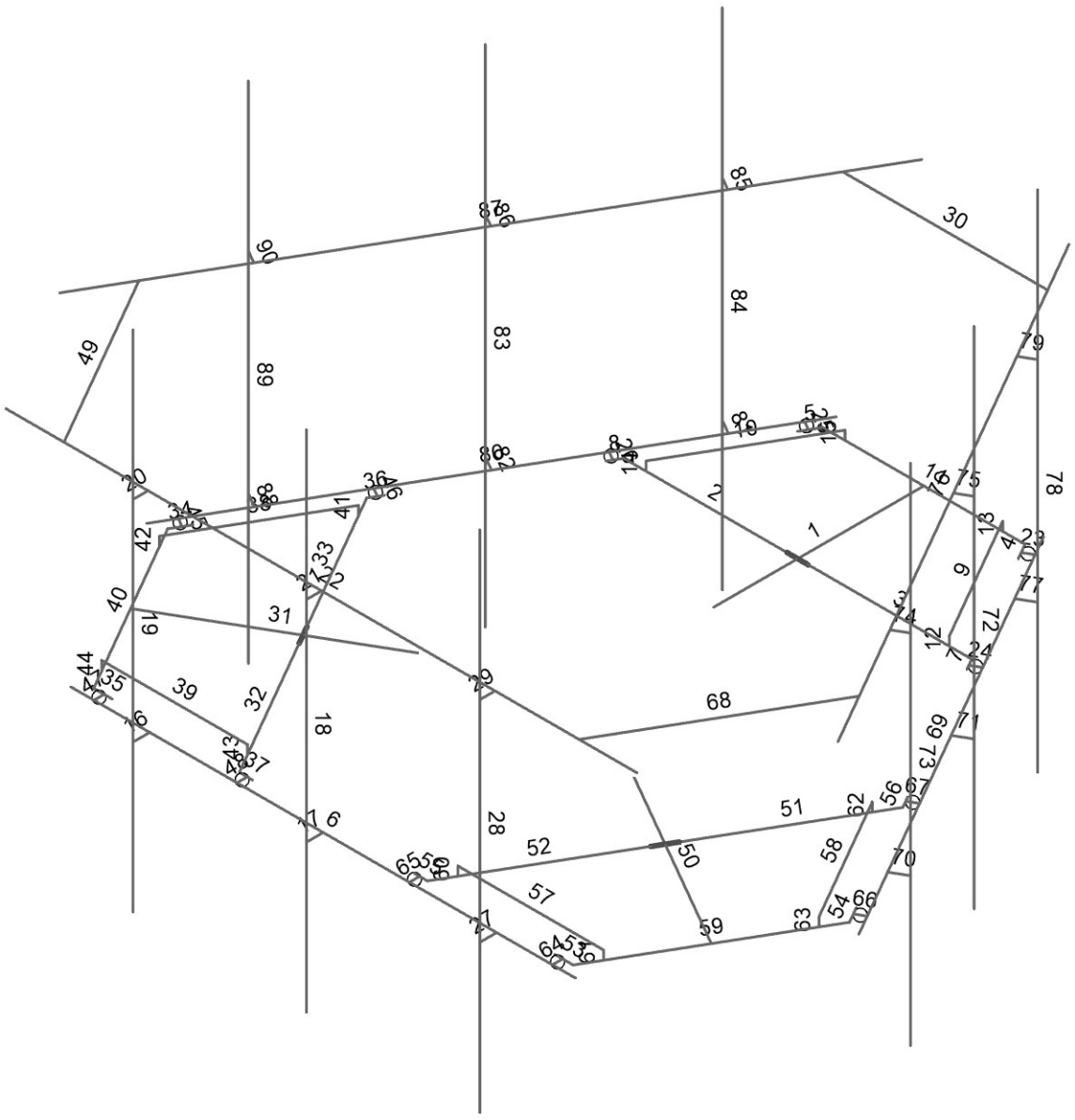

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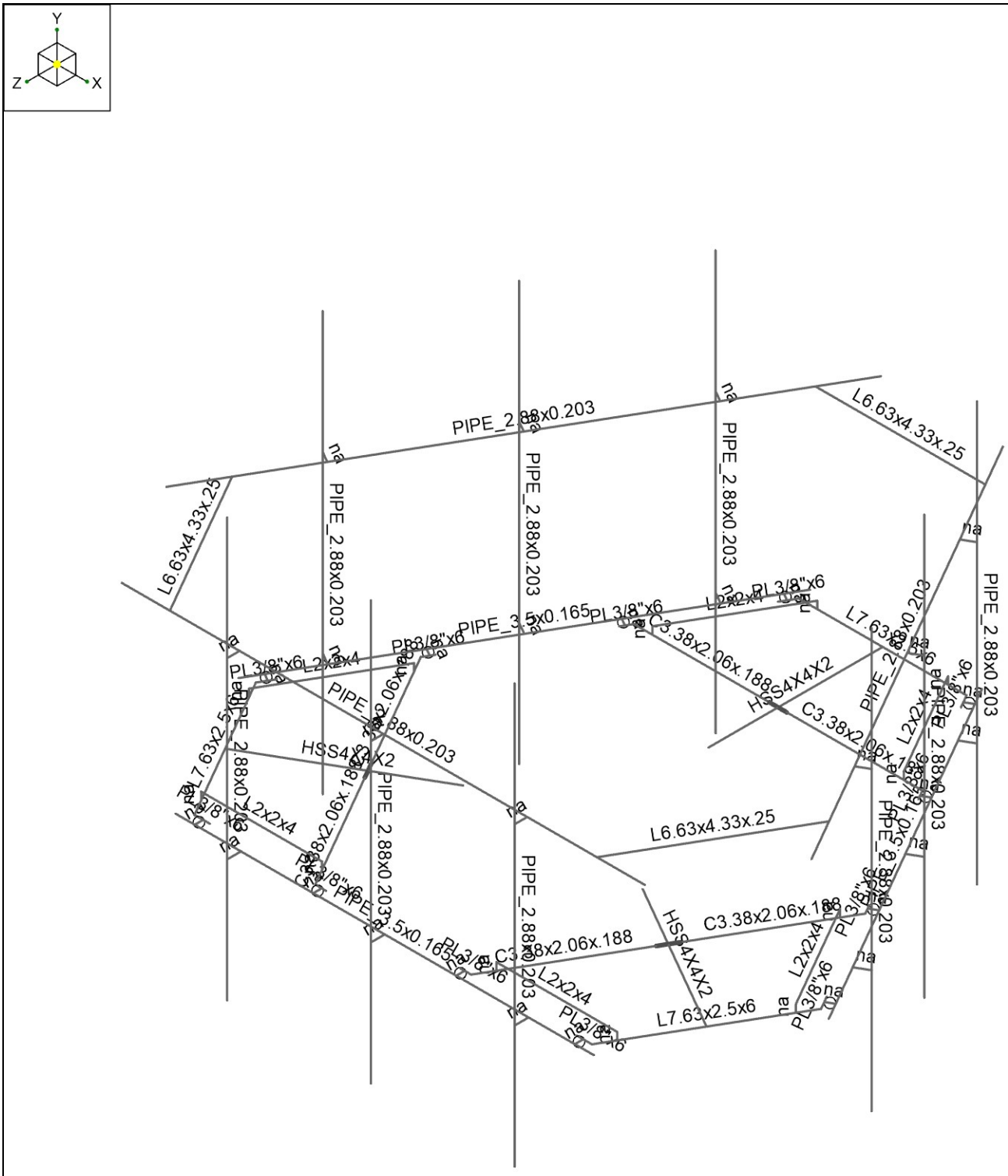

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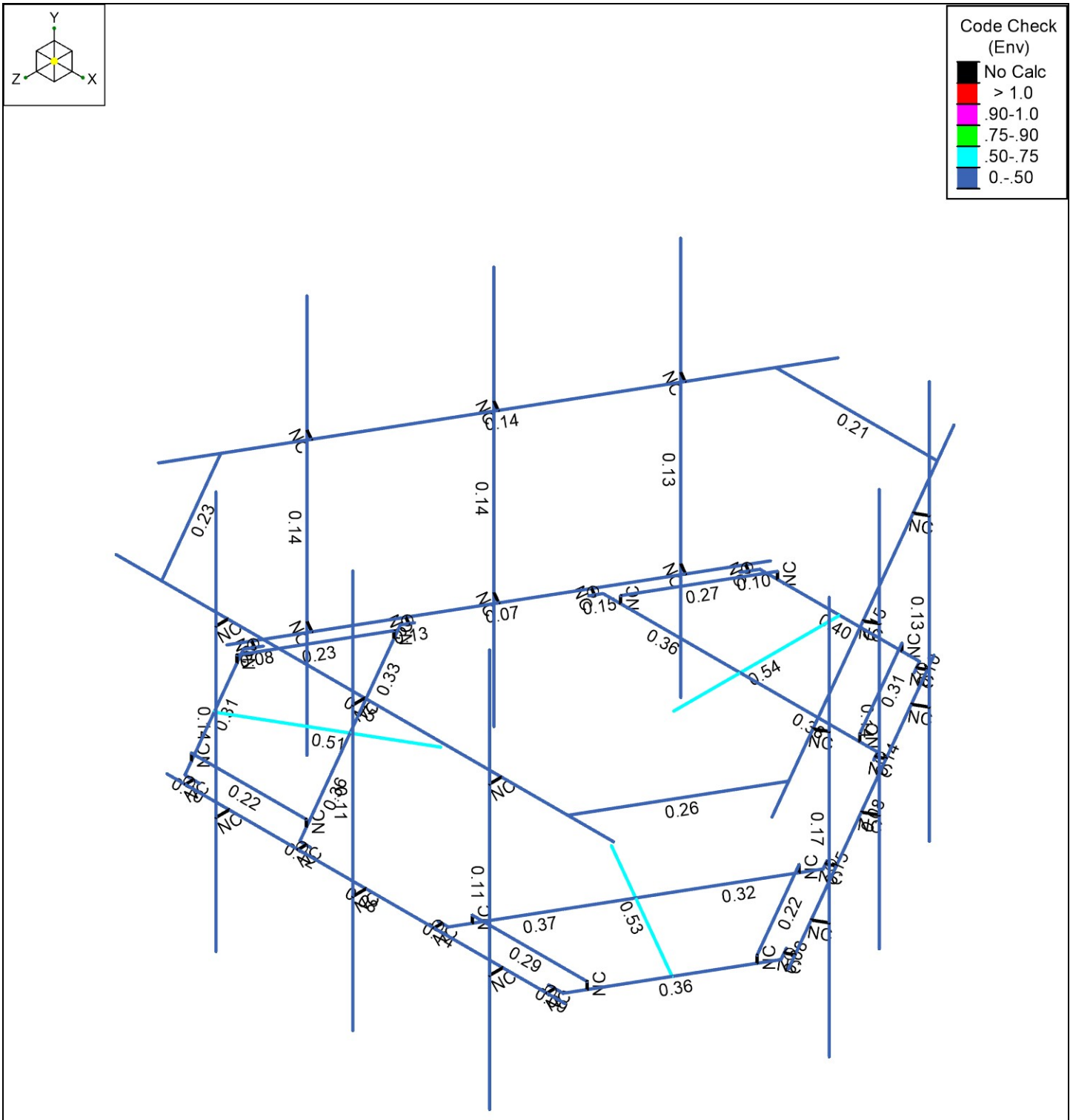

Member Code Checks Displayed (Enveloped)
Envelope Only Solution

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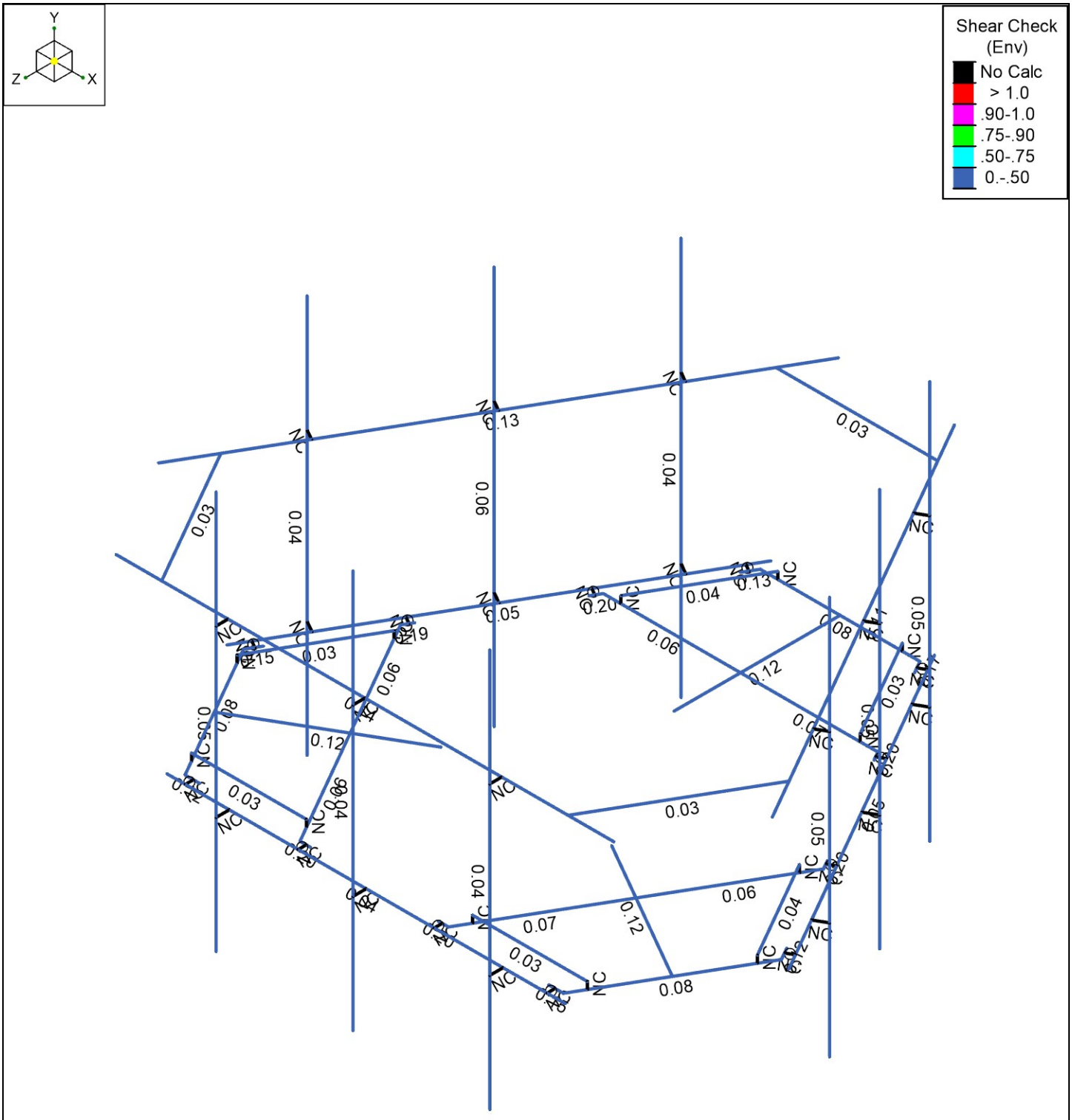

Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

B+T Group	CT46131-A - Easton-Everetts Rd	SK-5
KR		Jan 08, 2022
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Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	1	0	0	-1.981574	
2	2	0	0	-5.314907	
3	3	0	0	-3.314907	
4	4	2.758333	0	-3.314907	
5	5	-2.758333	0	-3.314907	
6	6	-1.603633	0	-5.314907	
7	7	1.603633	0	-5.314907	
8	8	1.749466	0	-5.062316	
9	9	-1.749466	0	-5.062316	
10	10	1.686966	0	-5.170569	
11	11	1.826822	0	-5.251315	
12	12	-1.686966	0	-5.170569	
13	13	-1.826822	0	-5.251315	
14	14	-3.999998	0	4.207732	
15	15	3.999998	0	4.207732	
16	16	2.8625	0	-3.134485	
17	17	2.820833	0	-3.206655	
18	18	2.960689	0	-3.2874	
19	19	-2.8625	0	-3.134485	
20	20	-2.820833	0	-3.206655	
21	21	-2.960689	0	-3.2874	
22	22	-1.25	0.140833	-5.314907	
23	23	-2.404701	0.140833	-3.314907	
24	24	2.404701	0.140833	-3.314907	
25	25	1.25	0.140833	-5.314907	
26	26	-1.25	0	-5.314907	
27	27	-2.404701	0	-3.314907	
28	28	2.404701	0	-3.314907	
29	29	1.25	0	-5.314907	
30	30	-2.749998	0	4.207732	
31	31	0.000002	0	4.207732	
32	32	-2.749998	0	4.473357	
33	33	0.000002	0	4.473357	
34	34	-2.749998	-2.333667	4.473357	
35	35	0.000002	-2.333667	4.473357	
36	36	-2.749998	5.666335	4.473357	
37	37	0.000002	5.666335	4.473357	
38	38	-2.749998	3.333337	4.473357	
39	39	0.000002	3.333337	4.473357	
40	40	-2.749998	3.333337	4.233773	
41	41	0.000002	3.333337	4.233773	
42	42	-5	3.333337	4.233773	
43	43	5	3.333337	4.233773	
44	44	2.749998	0	4.207732	
45	45	2.749998	0	4.473357	
46	46	2.749998	-2.333667	4.473357	
47	47	2.749998	5.666335	4.473357	
48	48	2.749998	3.333337	4.473357	
49	49	2.749998	3.333337	4.233773	
50	50	0	0	0	
51	51	1.625039	3.333337	-5.652896	
52	52	-1.625039	3.333337	-5.652896	
53	53	-1.716093	0	0.990787	
54	54	-4.602844	0	2.657453	
55	55	-2.870794	0	1.657453	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
56	56	-4.24996	0	-0.731333	
57	57	-1.491627	0	4.04624	
58	58	-3.801028	0	4.04624	
59	59	-5.404661	0	1.268667	
60	60	-5.258827	0	1.016076	
61	61	-3.509361	0	4.04624	
62	62	-5.321327	0	1.124329	
63	63	-5.461183	0	1.043583	
64	64	-3.634361	0	4.04624	
65	65	-3.634361	0	4.207732	
66	66	-4.145794	0	-0.911755	
67	67	-4.187461	0	-0.839586	
68	68	-4.327317	0	-0.920331	
69	69	-1.283294	0	4.04624	
70	70	-1.366628	0	4.04624	
71	71	-1.366628	0	4.207732	
72	72	-3.977844	0.140833	3.739985	
73	73	-1.668443	0.140833	3.739985	
74	74	-4.073144	0.140833	-0.425078	
75	75	-5.227844	0.140833	1.574922	
76	76	-3.977844	0	3.739985	
77	77	-1.668443	0	3.739985	
78	78	-4.073144	0	-0.425078	
79	79	-5.227844	0	1.574922	
80	80	-5.708071	3.333337	1.419123	
81	81	-4.083032	3.333337	4.233773	
82	82	1.716093	0	0.990787	
83	83	4.602844	0	2.657453	
84	84	2.870794	0	1.657453	
85	85	1.491627	0	4.04624	
86	86	4.24996	0	-0.731333	
87	87	5.404661	0	1.268667	
88	88	3.801028	0	4.04624	
89	89	3.509361	0	4.04624	
90	90	5.258827	0	1.016076	
91	91	3.634361	0	4.04624	
92	92	3.634361	0	4.207732	
93	93	5.321327	0	1.124329	
94	94	5.461183	0	1.043583	
95	95	1.283294	0	4.04624	
96	96	1.366628	0	4.04624	
97	97	1.366628	0	4.207732	
98	98	4.145794	0	-0.911755	
99	99	4.187461	0	-0.839586	
100	100	4.327317	0	-0.920331	
101	101	5.227844	0.140833	1.574922	
102	102	4.073144	0.140833	-0.425078	
103	103	1.668443	0.140833	3.739985	
104	104	3.977844	0.140833	3.739985	
105	105	5.227844	0	1.574922	
106	106	4.073144	0	-0.425078	
107	107	1.668443	0	3.739985	
108	108	3.977844	0	3.739985	
109	109	4.083032	3.333337	4.233773	
110	110	5.708071	3.333337	1.419123	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
111	111	5.644002	0	1.360234	
112	112	1.644004	0	-5.567966	
113	113	5.019002	0	0.277702	
114	114	3.644002	0	-2.103868	
115	115	5.24904	0	0.14489	
116	116	3.87404	0	-2.23668	
117	117	5.24904	-2.333667	0.14489	
118	118	3.87404	-2.333667	-2.23668	
119	119	5.24904	5.666335	0.14489	
120	120	3.87404	5.666335	-2.23668	
121	121	5.24904	3.333337	0.14489	
122	122	3.87404	3.333337	-2.23668	
123	123	5.041554	3.333337	0.264681	
124	124	3.666554	3.333337	-2.116888	
125	125	6.166555	3.333337	2.21324	
126	126	1.166555	3.333337	-6.447014	
127	127	2.269004	0	-4.485434	
128	128	2.499042	0	-4.618247	
129	129	2.499042	-2.333667	-4.618247	
130	130	2.499042	5.666335	-4.618247	
131	131	2.499042	3.333337	-4.618247	
132	132	2.291556	3.333337	-4.498455	
133	133	-1.644004	0	-5.567966	
134	134	-5.644002	0	1.360234	
135	135	-2.269004	0	-4.485434	
136	136	-3.644004	0	-2.103864	
137	137	-2.499042	0	-4.618247	
138	138	-3.874042	0	-2.236677	
139	139	-2.499042	-2.333667	-4.618247	
140	140	-3.874042	-2.333667	-2.236677	
141	141	-2.499042	5.666335	-4.618247	
142	142	-3.874042	5.666335	-2.236677	
143	143	-2.499042	3.333337	-4.618247	
144	144	-3.874042	3.333337	-2.236677	
145	145	-2.291556	3.333337	-4.498455	
146	146	-3.666556	3.333337	-2.116885	
147	147	-1.166555	3.333337	-6.447014	
148	148	-6.166555	3.333337	2.21324	
149	149	-5.019002	0	0.277702	
150	150	-5.24904	0	0.14489	
151	151	-5.24904	-2.333667	0.14489	
152	152	-5.24904	5.666335	0.14489	
153	153	-5.24904	3.333337	0.14489	
154	154	-5.041554	3.333337	0.264681	

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						

Node Boundary Conditions (Continued)

	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]
9	20						
10	22						
11	25						
12	26						
13	29						
14	53	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
15	54						
16	55						
17	56						
18	57						
19	66						
20	67						
21	69						
22	70						
23	72						
24	75						
25	76						
26	79						
27	82	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
28	83						
29	84						
30	85						
31	86						
32	95						
33	96						
34	98						
35	99						
36	101						
37	104						
38	105						
39	108						

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [k/ft³]	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
8	A500 Gr.C	29000	11154	0.3	0.65	0.49	46	1.4	62	1.3

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	MF-H1	PIPE_3.5x0.165	Beam	Pipe	A500 Gr.C	Typical	1.729	2.409	2.409	4.819
2	MF-H2	PIPE_2.88x0.203	Beam	Pipe	A500 Gr.C	Typical	1.707	1.538	1.538	3.076
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_2.88x0.203	Column	Pipe	A500 Gr.C	Typical	1.707	1.538	1.538	3.076
8	MF-CP1	PL3/8"x6	Beam	RECT	A36 Gr.36	Typical	2.25	0.026	6.75	0.101

Hot Rolled Steel Section Sets (Continued)

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
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	A500 Gr.C	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	32	30		RIGID	None	None	RIGID	Typical
17	17	33	31		RIGID	None	None	RIGID	Typical
18	18	37	35		MF-P1	Column	Pipe	A500 Gr.C	Typical
19	19	36	34		MF-P1	Column	Pipe	A500 Gr.C	Typical
20	20	38	40		RIGID	None	None	RIGID	Typical
21	21	39	41		RIGID	None	None	RIGID	Typical
22	22	42	43		MF-H2	Beam	Pipe	A500 Gr.C	Typical
23	23	11	10		RIGID	None	None	RIGID	Typical
24	24	18	17		RIGID	None	None	RIGID	Typical
25	25	13	12		RIGID	None	None	RIGID	Typical
26	26	21	20		RIGID	None	None	RIGID	Typical
27	27	45	44		RIGID	None	None	RIGID	Typical
28	28	47	46		MF-P1	Column	Pipe	A500 Gr.C	Typical
29	29	48	49		RIGID	None	None	RIGID	Typical
30	30	51	52	180	MF-H3	Beam	Single Angle	A36 Gr.36	Typical
31	31	53	54		SF-H1	Beam	Tube	A500 Gr.B Rect	Typical
32	32	57	55	180	SF-H2	Beam	Channel	A36 Gr.36	Typical
33	33	55	56	180	SF-H2	Beam	Channel	A36 Gr.36	Typical
34	34	59	60		MF-CP1	Beam	RECT	A36 Gr.36	Typical
35	35	58	61		MF-CP1	Beam	RECT	A36 Gr.36	Typical
36	36	66	56		MF-CP1	Beam	RECT	A36 Gr.36	Typical
37	37	57	69		MF-CP1	Beam	RECT	A36 Gr.36	Typical
38	38	75	74		SF-H3	Beam	Single Angle	A36 Gr.36	Typical
39	39	73	72		SF-H3	Beam	Single Angle	A36 Gr.36	Typical
40	40	58	59		SF-H4	Beam	Single Angle	A36 Gr.36	Typical
41	41	78	74		RIGID	None	None	RIGID	Typical
42	42	79	75		RIGID	None	None	RIGID	Typical
43	43	77	73		RIGID	None	None	RIGID	Typical
44	44	76	72		RIGID	None	None	RIGID	Typical
45	45	63	62		RIGID	None	None	RIGID	Typical
46	46	68	67		RIGID	None	None	RIGID	Typical
47	47	65	64		RIGID	None	None	RIGID	Typical
48	48	71	70		RIGID	None	None	RIGID	Typical
49	49	80	81	180	MF-H3	Beam	Single Angle	A36 Gr.36	Typical
50	50	82	83		SF-H1	Beam	Tube	A500 Gr.B Rect	Typical
51	51	86	84	180	SF-H2	Beam	Channel	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
52	52	84	85	180	SF-H2	Beam	Channel	A36 Gr.36	Typical
53	53	88	89		MF-CP1	Beam	RECT	A36 Gr.36	Typical
54	54	87	90		MF-CP1	Beam	RECT	A36 Gr.36	Typical
55	55	95	85		MF-CP1	Beam	RECT	A36 Gr.36	Typical
56	56	86	98		MF-CP1	Beam	RECT	A36 Gr.36	Typical
57	57	104	103		SF-H3	Beam	Single Angle	A36 Gr.36	Typical
58	58	102	101		SF-H3	Beam	Single Angle	A36 Gr.36	Typical
59	59	87	88		SF-H4	Beam	Single Angle	A36 Gr.36	Typical
60	60	107	103		RIGID	None	None	RIGID	Typical
61	61	108	104		RIGID	None	None	RIGID	Typical
62	62	106	102		RIGID	None	None	RIGID	Typical
63	63	105	101		RIGID	None	None	RIGID	Typical
64	64	92	91		RIGID	None	None	RIGID	Typical
65	65	97	96		RIGID	None	None	RIGID	Typical
66	66	94	93		RIGID	None	None	RIGID	Typical
67	67	100	99		RIGID	None	None	RIGID	Typical
68	68	109	110	180	MF-H3	Beam	Single Angle	A36 Gr.36	Typical
69	69	111	112		MF-H1	Beam	Pipe	A500 Gr.C	Typical
70	70	115	113		RIGID	None	None	RIGID	Typical
71	71	116	114		RIGID	None	None	RIGID	Typical
72	72	120	118		MF-P1	Column	Pipe	A500 Gr.C	Typical
73	73	119	117		MF-P1	Column	Pipe	A500 Gr.C	Typical
74	74	121	123		RIGID	None	None	RIGID	Typical
75	75	122	124		RIGID	None	None	RIGID	Typical
76	76	125	126		MF-H2	Beam	Pipe	A500 Gr.C	Typical
77	77	128	127		RIGID	None	None	RIGID	Typical
78	78	130	129		MF-P1	Column	Pipe	A500 Gr.C	Typical
79	79	131	132		RIGID	None	None	RIGID	Typical
80	80	133	134		MF-H1	Beam	Pipe	A500 Gr.C	Typical
81	81	137	135		RIGID	None	None	RIGID	Typical
82	82	138	136		RIGID	None	None	RIGID	Typical
83	83	142	140		MF-P1	Column	Pipe	A500 Gr.C	Typical
84	84	141	139		MF-P1	Column	Pipe	A500 Gr.C	Typical
85	85	143	145		RIGID	None	None	RIGID	Typical
86	86	144	146		RIGID	None	None	RIGID	Typical
87	87	147	148		MF-H2	Beam	Pipe	A500 Gr.C	Typical
88	88	150	149		RIGID	None	None	RIGID	Typical
89	89	152	151		MF-P1	Column	Pipe	A500 Gr.C	Typical
90	90	153	154		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

Member Advanced Data (Continued)

	Label	I Release	I Offset [in]	J Offset [in]	Physical	Deflection Ratio Options	Seismic DR
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	Default	None
23	23	OOOOOX			Yes	** NA **	None
24	24	OOOOOX			Yes	** NA **	None
25	25	OOOOOX			Yes	** NA **	None
26	26	OOOOOX			Yes	** NA **	None
27	27				Yes	** NA **	None
28	28				Yes	** NA **	None
29	29				Yes	** NA **	None
30	30				Yes	N/A	None
31	31				Yes	N/A	None
32	32			2	Yes	N/A	None
33	33		2		Yes	N/A	None
34	34				Yes	N/A	None
35	35				Yes	N/A	None
36	36				Yes	N/A	None
37	37				Yes	N/A	None
38	38				Yes	N/A	None
39	39				Yes	N/A	None
40	40				Yes	N/A	None
41	41				Yes	** NA **	None
42	42				Yes	** NA **	None
43	43				Yes	** NA **	None
44	44				Yes	** NA **	None
45	45	OOOOOX			Yes	** NA **	None
46	46	OOOOOX			Yes	** NA **	None
47	47	OOOOOX			Yes	** NA **	None
48	48	OOOOOX			Yes	** NA **	None
49	49				Yes	N/A	None
50	50				Yes	N/A	None
51	51			2	Yes	N/A	None
52	52		2		Yes	N/A	None
53	53				Yes	N/A	None
54	54				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	** NA **	None
61	61				Yes	** NA **	None
62	62				Yes	** NA **	None
63	63				Yes	** NA **	None
64	64	OOOOOX			Yes	** NA **	None
65	65	OOOOOX			Yes	** NA **	None
66	66	OOOOOX			Yes	** NA **	None
67	67	OOOOOX			Yes	** NA **	None
68	68				Yes	N/A	None

Member Advanced Data (Continued)

	Label	I Release	I Offset [in]	J Offset [in]	Physical	Deflection Ratio Options	Seismic DR
69	69				Yes	N/A	None
70	70				Yes	** NA **	None
71	71				Yes	** NA **	None
72	72				Yes	** NA **	None
73	73				Yes	** NA **	None
74	74				Yes	** NA **	None
75	75				Yes	** NA **	None
76	76				Yes	N/A	None
77	77				Yes	** NA **	None
78	78				Yes	** NA **	None
79	79				Yes	** NA **	None
80	80				Yes	N/A	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	N/A	None
88	88				Yes	** NA **	None
89	89				Yes	** NA **	None
90	90				Yes	** NA **	None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [ft]	Lcomp top [ft]	Function
1	1	SF-H1	3.333	Lbyy	Lateral
2	2	SF-H2	2.758	Lbyy	Lateral
3	3	SF-H2	2.758	Lbyy	Lateral
4	4	MF-CP1	0.292	Lbyy	Lateral
5	5	MF-CP1	0.292	Lbyy	Lateral
6	6	MF-H1	8	Lbyy	Lateral
7	7	MF-CP1	0.208	Lbyy	Lateral
8	8	MF-CP1	0.208	Lbyy	Lateral
9	9	SF-H3	2.309	Lbyy	Lateral
10	10	SF-H3	2.309	Lbyy	Lateral
11	11	SF-H4	3.207	Lbyy	Lateral
12	18	MF-P1	8	Lbyy	Lateral
13	19	MF-P1	8	Lbyy	Lateral
14	22	MF-H2	10	Lbyy	Lateral
15	28	MF-P1	8	Lbyy	Lateral
16	30	MF-H3	3.25	Lbyy	Lateral
17	31	SF-H1	3.333	Lbyy	Lateral
18	32	SF-H2	2.758	Lbyy	Lateral
19	33	SF-H2	2.758	Lbyy	Lateral
20	34	MF-CP1	0.292	Lbyy	Lateral
21	35	MF-CP1	0.292	Lbyy	Lateral
22	36	MF-CP1	0.208	Lbyy	Lateral
23	37	MF-CP1	0.208	Lbyy	Lateral
24	38	SF-H3	2.309	Lbyy	Lateral
25	39	SF-H3	2.309	Lbyy	Lateral
26	40	SF-H4	3.207	Lbyy	Lateral
27	49	MF-H3	3.25	Lbyy	Lateral
28	50	SF-H1	3.333	Lbyy	Lateral
29	51	SF-H2	2.758	Lbyy	Lateral
30	52	SF-H2	2.758	Lbyy	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lcomp top [ft]	Function
31	53	MF-CP1	0.292	Lbyy	Lateral
32	54	MF-CP1	0.292	Lbyy	Lateral
33	55	MF-CP1	0.208	Lbyy	Lateral
34	56	MF-CP1	0.208	Lbyy	Lateral
35	57	SF-H3	2.309	Lbyy	Lateral
36	58	SF-H3	2.309	Lbyy	Lateral
37	59	SF-H4	3.207	Lbyy	Lateral
38	68	MF-H3	3.25	Lbyy	Lateral
39	69	MF-H1	8	Lbyy	Lateral
40	72	MF-P1	8	Lbyy	Lateral
41	73	MF-P1	8	Lbyy	Lateral
42	76	MF-H2	10	Lbyy	Lateral
43	78	MF-P1	8	Lbyy	Lateral
44	80	MF-H1	8	Lbyy	Lateral
45	83	MF-P1	8	Lbyy	Lateral
46	84	MF-P1	8	Lbyy	Lateral
47	87	MF-H2	10	Lbyy	Lateral
48	89	MF-P1	8	Lbyy	Lateral

Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	28	Y	-0.035	%15
2	28	Y	-0.035	%85
3	28	Y	-0.075	%15
4	28	Y	-0.064	%50
5	28	Y	0	0
6	89	Y	-0.035	%15
7	89	Y	-0.035	%85
8	89	Y	-0.075	%15
9	89	Y	-0.064	%50
10	89	Y	0	0
11	78	Y	-0.035	%15
12	78	Y	-0.035	%85
13	78	Y	-0.075	%15
14	78	Y	-0.064	%50
15	78	Y	0	0
16	1	Y	-0.022	%20
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	28	Z	-0.233	%15
2	28	Z	-0.233	%85
3	28	Z	-0.075	%15
4	28	Z	-0.075	%50
5	28	Z	0	0
6	89	Z	-0.233	%15
7	89	Z	-0.233	%85
8	89	Z	-0.075	%15
9	89	Z	-0.075	%50

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
10	89	Z	0	0
11	78	Z	-0.233	%15
12	78	Z	-0.233	%85
13	78	Z	-0.075	%15
14	78	Z	-0.075	%50
15	78	Z	0	0
16	1	Z	-0.043	%20
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	28	X	-0.093	%15
2	28	X	-0.093	%85
3	28	X	-0.045	%15
4	28	X	-0.039	%50
5	28	X	0	0
6	89	X	-0.093	%15
7	89	X	-0.093	%85
8	89	X	-0.045	%15
9	89	X	-0.039	%50
10	89	X	0	0
11	78	X	-0.093	%15
12	78	X	-0.093	%85
13	78	X	-0.045	%15
14	78	X	-0.039	%50
15	78	X	0	0
16	1	X	-0.076	%20
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	28	Z	-0.043	%15
2	28	Z	-0.043	%85
3	28	Z	-0.014	%15
4	28	Z	-0.014	%50
5	28	Z	0	0
6	89	Z	-0.043	%15
7	89	Z	-0.043	%85
8	89	Z	-0.014	%15
9	89	Z	-0.014	%50
10	89	Z	0	0
11	78	Z	-0.043	%15
12	78	Z	-0.043	%85
13	78	Z	-0.014	%15
14	78	Z	-0.014	%50
15	78	Z	0	0
16	1	Z	-0.008	%20

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
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	28	X	-0.017	%15
2	28	X	-0.017	%85
3	28	X	-0.008	%15
4	28	X	-0.007	%50
5	28	X	0	0
6	89	X	-0.017	%15
7	89	X	-0.017	%85
8	89	X	-0.008	%15
9	89	X	-0.007	%50
10	89	X	0	0
11	78	X	-0.017	%15
12	78	X	-0.017	%85
13	78	X	-0.008	%15
14	78	X	-0.007	%50
15	78	X	0	0
16	1	X	-0.014	%20
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	28	Z	-0.015	%15
2	28	Z	-0.015	%85
3	28	Z	-0.005	%15
4	28	Z	-0.005	%50
5	28	Z	0	0
6	89	Z	-0.015	%15
7	89	Z	-0.015	%85
8	89	Z	-0.005	%15
9	89	Z	-0.005	%50
10	89	Z	0	0
11	78	Z	-0.015	%15
12	78	Z	-0.015	%85
13	78	Z	-0.005	%15
14	78	Z	-0.005	%50
15	78	Z	0	0
16	1	Z	-0.003	%20
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	28	X	-0.006	%15
2	28	X	-0.006	%85
3	28	X	-0.003	%15
4	28	X	-0.003	%50
5	28	X	0	0
6	89	X	-0.006	%15
7	89	X	-0.006	%85
8	89	X	-0.003	%15
9	89	X	-0.003	%50
10	89	X	0	0
11	78	X	-0.006	%15
12	78	X	-0.006	%85
13	78	X	-0.003	%15
14	78	X	-0.003	%50
15	78	X	0	0
16	1	X	-0.005	%20
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	28	Y	-0.092	%15
2	28	Y	-0.092	%85
3	28	Y	-0.034	%15
4	28	Y	-0.033	%50
5	28	Y	0	0
6	89	Y	-0.092	%15
7	89	Y	-0.092	%85
8	89	Y	-0.034	%15
9	89	Y	-0.033	%50
10	89	Y	0	0
11	78	Y	-0.092	%15
12	78	Y	-0.092	%85
13	78	Y	-0.034	%15
14	78	Y	-0.033	%50
15	78	Y	0	0
16	1	Y	-0.034	%20
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	28	Z	-0.014	%15
2	28	Z	-0.014	%85
3	28	Z	-0.015	%15
4	28	Z	-0.013	%50
5	28	Z	0	0
6	89	Z	-0.014	%15

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

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
7	89	Z	-0.014	%85
8	89	Z	-0.015	%15
9	89	Z	-0.013	%50
10	89	Z	0	0
11	78	Z	-0.014	%15
12	78	Z	-0.014	%85
13	78	Z	-0.015	%15
14	78	Z	-0.013	%50
15	78	Z	0	0
16	1	Z	-0.004	%20
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	28	X	-0.014	%15
2	28	X	-0.014	%85
3	28	X	-0.015	%15
4	28	X	-0.013	%50
5	28	X	0	0
6	89	X	-0.014	%15
7	89	X	-0.014	%85
8	89	X	-0.015	%15
9	89	X	-0.013	%50
10	89	X	0	0
11	78	X	-0.014	%15
12	78	X	-0.014	%85
13	78	X	-0.015	%15
14	78	X	-0.013	%50
15	78	X	0	0
16	1	X	-0.004	%20
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	22	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	87	Y	-0.25	%5

Member Point Loads (BLC 18 : Maint LL 4)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	80	Y	-0.25	%5

Member Point Loads (BLC 19 : Maint LL 5)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	76	Y	-0.25	%5

Member Point Loads (BLC 20 : Maint LL 6)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	69	Y	-0.25	%5

Member Point Loads (BLC 21 : Maint LL 7)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	22	Y	-0.25	%95

Member Point Loads (BLC 22 : Maint LL 8)

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

Member Point Loads (BLC 23 : Maint LL 9)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	87	Y	-0.25	%95

Member Point Loads (BLC 24 : Maint LL 10)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	80	Y	-0.25	%95

Member Point Loads (BLC 25 : Maint LL 11)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	76	Y	-0.25	%95

Member Point Loads (BLC 26 : Maint LL 12)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	69	Y	-0.25	%95

Member Point Loads (BLC 27 : Maint LL 13)

	Member Label	Direction	Magnitude [k, k-ft]	Location [(ft, %)]
1	31	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	50	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	-0.019	-0.019	0	%100
2	2	Z	-0.016	-0.016	0	%100
3	3	Z	-0.016	-0.016	0	%100
4	4	Z	-0.023	-0.023	0	%100
5	5	Z	-0.023	-0.023	0	%100
6	6	Z	-0.013	-0.013	0	%100
7	7	Z	-0.023	-0.023	0	%100
8	8	Z	-0.023	-0.023	0	%100
9	9	Z	-0.01	-0.01	0	%100
10	10	Z	-0.01	-0.01	0	%100
11	11	Z	-0.031	-0.031	0	%100
12	18	Z	-0.011	-0.011	0	%100
13	19	Z	-0.011	-0.011	0	%100
14	22	Z	-0.011	-0.011	0	%100
15	28	Z	-0.011	-0.011	0	%100
16	30	Z	-0.028	-0.028	0	%100
17	31	Z	-0.019	-0.019	0	%100
18	32	Z	-0.016	-0.016	0	%100
19	33	Z	-0.016	-0.016	0	%100
20	34	Z	-0.023	-0.023	0	%100
21	35	Z	-0.023	-0.023	0	%100
22	36	Z	-0.023	-0.023	0	%100
23	37	Z	-0.023	-0.023	0	%100
24	38	Z	-0.01	-0.01	0	%100
25	39	Z	-0.01	-0.01	0	%100
26	40	Z	-0.031	-0.031	0	%100
27	49	Z	-0.028	-0.028	0	%100
28	50	Z	-0.019	-0.019	0	%100
29	51	Z	-0.016	-0.016	0	%100
30	52	Z	-0.016	-0.016	0	%100
31	53	Z	-0.023	-0.023	0	%100
32	54	Z	-0.023	-0.023	0	%100
33	55	Z	-0.023	-0.023	0	%100
34	56	Z	-0.023	-0.023	0	%100
35	57	Z	-0.01	-0.01	0	%100
36	58	Z	-0.01	-0.01	0	%100
37	59	Z	-0.031	-0.031	0	%100
38	68	Z	-0.028	-0.028	0	%100
39	69	Z	-0.013	-0.013	0	%100
40	72	Z	-0.011	-0.011	0	%100
41	73	Z	-0.011	-0.011	0	%100
42	76	Z	-0.011	-0.011	0	%100
43	78	Z	-0.011	-0.011	0	%100
44	80	Z	-0.013	-0.013	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, %)]
45	83	Z	-0.011	-0.011	0	%100
46	84	Z	-0.011	-0.011	0	%100
47	87	Z	-0.011	-0.011	0	%100
48	89	Z	-0.011	-0.011	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	-0.019	-0.019	0	%100
2	2	X	-0.016	-0.016	0	%100
3	3	X	-0.016	-0.016	0	%100
4	4	X	-0.023	-0.023	0	%100
5	5	X	-0.023	-0.023	0	%100
6	6	X	-0.013	-0.013	0	%100
7	7	X	-0.023	-0.023	0	%100
8	8	X	-0.023	-0.023	0	%100
9	9	X	-0.01	-0.01	0	%100
10	10	X	-0.01	-0.01	0	%100
11	11	X	-0.031	-0.031	0	%100
12	18	X	-0.011	-0.011	0	%100
13	19	X	-0.011	-0.011	0	%100
14	22	X	-0.011	-0.011	0	%100
15	28	X	-0.011	-0.011	0	%100
16	30	X	-0.028	-0.028	0	%100
17	31	X	-0.019	-0.019	0	%100
18	32	X	-0.016	-0.016	0	%100
19	33	X	-0.016	-0.016	0	%100
20	34	X	-0.023	-0.023	0	%100
21	35	X	-0.023	-0.023	0	%100
22	36	X	-0.023	-0.023	0	%100
23	37	X	-0.023	-0.023	0	%100
24	38	X	-0.01	-0.01	0	%100
25	39	X	-0.01	-0.01	0	%100
26	40	X	-0.031	-0.031	0	%100
27	49	X	-0.028	-0.028	0	%100
28	50	X	-0.019	-0.019	0	%100
29	51	X	-0.016	-0.016	0	%100
30	52	X	-0.016	-0.016	0	%100
31	53	X	-0.023	-0.023	0	%100
32	54	X	-0.023	-0.023	0	%100
33	55	X	-0.023	-0.023	0	%100
34	56	X	-0.023	-0.023	0	%100
35	57	X	-0.01	-0.01	0	%100
36	58	X	-0.01	-0.01	0	%100
37	59	X	-0.031	-0.031	0	%100
38	68	X	-0.028	-0.028	0	%100
39	69	X	-0.013	-0.013	0	%100
40	72	X	-0.011	-0.011	0	%100
41	73	X	-0.011	-0.011	0	%100
42	76	X	-0.011	-0.011	0	%100
43	78	X	-0.011	-0.011	0	%100
44	80	X	-0.013	-0.013	0	%100
45	83	X	-0.011	-0.011	0	%100
46	84	X	-0.011	-0.011	0	%100
47	87	X	-0.011	-0.011	0	%100
48	89	X	-0.011	-0.011	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	-0.006	-0.006	0	%100
2	2	Z	-0.005	-0.005	0	%100
3	3	Z	-0.005	-0.005	0	%100
4	4	Z	-0.009	-0.009	0	%100
5	5	Z	-0.009	-0.009	0	%100
6	6	Z	-0.002	-0.002	0	%100
7	7	Z	-0.011	-0.011	0	%100
8	8	Z	-0.011	-0.011	0	%100
9	9	Z	-0.004	-0.004	0	%100
10	10	Z	-0.004	-0.004	0	%100
11	11	Z	-0.008	-0.008	0	%100
12	18	Z	-0.002	-0.002	0	%100
13	19	Z	-0.002	-0.002	0	%100
14	22	Z	-0.002	-0.002	0	%100
15	28	Z	-0.002	-0.002	0	%100
16	30	Z	-0.007	-0.007	0	%100
17	31	Z	-0.006	-0.006	0	%100
18	32	Z	-0.005	-0.005	0	%100
19	33	Z	-0.005	-0.005	0	%100
20	34	Z	-0.009	-0.009	0	%100
21	35	Z	-0.009	-0.009	0	%100
22	36	Z	-0.011	-0.011	0	%100
23	37	Z	-0.011	-0.011	0	%100
24	38	Z	-0.004	-0.004	0	%100
25	39	Z	-0.004	-0.004	0	%100
26	40	Z	-0.008	-0.008	0	%100
27	49	Z	-0.007	-0.007	0	%100
28	50	Z	-0.006	-0.006	0	%100
29	51	Z	-0.005	-0.005	0	%100
30	52	Z	-0.005	-0.005	0	%100
31	53	Z	-0.009	-0.009	0	%100
32	54	Z	-0.009	-0.009	0	%100
33	55	Z	-0.011	-0.011	0	%100
34	56	Z	-0.011	-0.011	0	%100
35	57	Z	-0.004	-0.004	0	%100
36	58	Z	-0.004	-0.004	0	%100
37	59	Z	-0.008	-0.008	0	%100
38	68	Z	-0.007	-0.007	0	%100
39	69	Z	-0.002	-0.002	0	%100
40	72	Z	-0.002	-0.002	0	%100
41	73	Z	-0.002	-0.002	0	%100
42	76	Z	-0.002	-0.002	0	%100
43	78	Z	-0.002	-0.002	0	%100
44	80	Z	-0.002	-0.002	0	%100
45	83	Z	-0.002	-0.002	0	%100
46	84	Z	-0.002	-0.002	0	%100
47	87	Z	-0.002	-0.002	0	%100
48	89	Z	-0.002	-0.002	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	-0.006	-0.006	0	%100
2	2	X	-0.005	-0.005	0	%100
3	3	X	-0.005	-0.005	0	%100

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, %)]
4	4	X	-0.009	-0.009	0	%100
5	5	X	-0.009	-0.009	0	%100
6	6	X	-0.002	-0.002	0	%100
7	7	X	-0.011	-0.011	0	%100
8	8	X	-0.011	-0.011	0	%100
9	9	X	-0.004	-0.004	0	%100
10	10	X	-0.004	-0.004	0	%100
11	11	X	-0.008	-0.008	0	%100
12	18	X	-0.002	-0.002	0	%100
13	19	X	-0.002	-0.002	0	%100
14	22	X	-0.002	-0.002	0	%100
15	28	X	-0.002	-0.002	0	%100
16	30	X	-0.007	-0.007	0	%100
17	31	X	-0.006	-0.006	0	%100
18	32	X	-0.005	-0.005	0	%100
19	33	X	-0.005	-0.005	0	%100
20	34	X	-0.009	-0.009	0	%100
21	35	X	-0.009	-0.009	0	%100
22	36	X	-0.011	-0.011	0	%100
23	37	X	-0.011	-0.011	0	%100
24	38	X	-0.004	-0.004	0	%100
25	39	X	-0.004	-0.004	0	%100
26	40	X	-0.008	-0.008	0	%100
27	49	X	-0.007	-0.007	0	%100
28	50	X	-0.006	-0.006	0	%100
29	51	X	-0.005	-0.005	0	%100
30	52	X	-0.005	-0.005	0	%100
31	53	X	-0.009	-0.009	0	%100
32	54	X	-0.009	-0.009	0	%100
33	55	X	-0.011	-0.011	0	%100
34	56	X	-0.011	-0.011	0	%100
35	57	X	-0.004	-0.004	0	%100
36	58	X	-0.004	-0.004	0	%100
37	59	X	-0.008	-0.008	0	%100
38	68	X	-0.007	-0.007	0	%100
39	69	X	-0.002	-0.002	0	%100
40	72	X	-0.002	-0.002	0	%100
41	73	X	-0.002	-0.002	0	%100
42	76	X	-0.002	-0.002	0	%100
43	78	X	-0.002	-0.002	0	%100
44	80	X	-0.002	-0.002	0	%100
45	83	X	-0.002	-0.002	0	%100
46	84	X	-0.002	-0.002	0	%100
47	87	X	-0.002	-0.002	0	%100
48	89	X	-0.002	-0.002	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	-0.001	-0.001	0	%100
2	2	Z	-0.001	-0.001	0	%100
3	3	Z	-0.001	-0.001	0	%100
4	4	Z	-0.002	-0.002	0	%100
5	5	Z	-0.002	-0.002	0	%100
6	6	Z	-0.0004	-0.0004	0	%100
7	7	Z	-0.002	-0.002	0	%100

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, %)]
8	8	Z	-0.002	-0.002	0	%100
9	9	Z	-0.0007	-0.0007	0	%100
10	10	Z	-0.0007	-0.0007	0	%100
11	11	Z	-0.002	-0.002	0	%100
12	18	Z	-0.0004	-0.0004	0	%100
13	19	Z	-0.0004	-0.0004	0	%100
14	22	Z	-0.0004	-0.0004	0	%100
15	28	Z	-0.0004	-0.0004	0	%100
16	30	Z	-0.002	-0.002	0	%100
17	31	Z	-0.001	-0.001	0	%100
18	32	Z	-0.001	-0.001	0	%100
19	33	Z	-0.001	-0.001	0	%100
20	34	Z	-0.002	-0.002	0	%100
21	35	Z	-0.002	-0.002	0	%100
22	36	Z	-0.002	-0.002	0	%100
23	37	Z	-0.002	-0.002	0	%100
24	38	Z	-0.0007	-0.0007	0	%100
25	39	Z	-0.0007	-0.0007	0	%100
26	40	Z	-0.002	-0.002	0	%100
27	49	Z	-0.002	-0.002	0	%100
28	50	Z	-0.001	-0.001	0	%100
29	51	Z	-0.001	-0.001	0	%100
30	52	Z	-0.001	-0.001	0	%100
31	53	Z	-0.002	-0.002	0	%100
32	54	Z	-0.002	-0.002	0	%100
33	55	Z	-0.002	-0.002	0	%100
34	56	Z	-0.002	-0.002	0	%100
35	57	Z	-0.0007	-0.0007	0	%100
36	58	Z	-0.0007	-0.0007	0	%100
37	59	Z	-0.002	-0.002	0	%100
38	68	Z	-0.002	-0.002	0	%100
39	69	Z	-0.0004	-0.0004	0	%100
40	72	Z	-0.0004	-0.0004	0	%100
41	73	Z	-0.0004	-0.0004	0	%100
42	76	Z	-0.0004	-0.0004	0	%100
43	78	Z	-0.0004	-0.0004	0	%100
44	80	Z	-0.0004	-0.0004	0	%100
45	83	Z	-0.0004	-0.0004	0	%100
46	84	Z	-0.0004	-0.0004	0	%100
47	87	Z	-0.0004	-0.0004	0	%100
48	89	Z	-0.0004	-0.0004	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	-0.001	-0.001	0	%100
2	2	X	-0.001	-0.001	0	%100
3	3	X	-0.001	-0.001	0	%100
4	4	X	-0.002	-0.002	0	%100
5	5	X	-0.002	-0.002	0	%100
6	6	X	-0.0004	-0.0004	0	%100
7	7	X	-0.002	-0.002	0	%100
8	8	X	-0.002	-0.002	0	%100
9	9	X	-0.0007	-0.0007	0	%100
10	10	X	-0.0007	-0.0007	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	18	X	-0.0004	-0.0004	0	%100
13	19	X	-0.0004	-0.0004	0	%100
14	22	X	-0.0004	-0.0004	0	%100
15	28	X	-0.0004	-0.0004	0	%100
16	30	X	-0.002	-0.002	0	%100
17	31	X	-0.001	-0.001	0	%100
18	32	X	-0.001	-0.001	0	%100
19	33	X	-0.001	-0.001	0	%100
20	34	X	-0.002	-0.002	0	%100
21	35	X	-0.002	-0.002	0	%100
22	36	X	-0.002	-0.002	0	%100
23	37	X	-0.002	-0.002	0	%100
24	38	X	-0.0007	-0.0007	0	%100
25	39	X	-0.0007	-0.0007	0	%100
26	40	X	-0.002	-0.002	0	%100
27	49	X	-0.002	-0.002	0	%100
28	50	X	-0.001	-0.001	0	%100
29	51	X	-0.001	-0.001	0	%100
30	52	X	-0.001	-0.001	0	%100
31	53	X	-0.002	-0.002	0	%100
32	54	X	-0.002	-0.002	0	%100
33	55	X	-0.002	-0.002	0	%100
34	56	X	-0.002	-0.002	0	%100
35	57	X	-0.0007	-0.0007	0	%100
36	58	X	-0.0007	-0.0007	0	%100
37	59	X	-0.002	-0.002	0	%100
38	68	X	-0.002	-0.002	0	%100
39	69	X	-0.0004	-0.0004	0	%100
40	72	X	-0.0004	-0.0004	0	%100
41	73	X	-0.0004	-0.0004	0	%100
42	76	X	-0.0004	-0.0004	0	%100
43	78	X	-0.0004	-0.0004	0	%100
44	80	X	-0.0004	-0.0004	0	%100
45	83	X	-0.0004	-0.0004	0	%100
46	84	X	-0.0004	-0.0004	0	%100
47	87	X	-0.0004	-0.0004	0	%100
48	89	X	-0.0004	-0.0004	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	-0.013	-0.013	0	%100
12	18	Y	-0.006	-0.006	0	%100
13	19	Y	-0.006	-0.006	0	%100
14	22	Y	-0.006	-0.006	0	%100
15	28	Y	-0.006	-0.006	0	%100

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, %)]
16	30	Y	-0.012	-0.012	0	%100
17	31	Y	-0.009	-0.009	0	%100
18	32	Y	-0.007	-0.007	0	%100
19	33	Y	-0.007	-0.007	0	%100
20	34	Y	-0.01	-0.01	0	%100
21	35	Y	-0.01	-0.01	0	%100
22	36	Y	-0.01	-0.01	0	%100
23	37	Y	-0.01	-0.01	0	%100
24	38	Y	-0.005	-0.005	0	%100
25	39	Y	-0.005	-0.005	0	%100
26	40	Y	-0.013	-0.013	0	%100
27	49	Y	-0.012	-0.012	0	%100
28	50	Y	-0.009	-0.009	0	%100
29	51	Y	-0.007	-0.007	0	%100
30	52	Y	-0.007	-0.007	0	%100
31	53	Y	-0.01	-0.01	0	%100
32	54	Y	-0.01	-0.01	0	%100
33	55	Y	-0.01	-0.01	0	%100
34	56	Y	-0.01	-0.01	0	%100
35	57	Y	-0.005	-0.005	0	%100
36	58	Y	-0.005	-0.005	0	%100
37	59	Y	-0.013	-0.013	0	%100
38	68	Y	-0.012	-0.012	0	%100
39	69	Y	-0.006	-0.006	0	%100
40	72	Y	-0.006	-0.006	0	%100
41	73	Y	-0.006	-0.006	0	%100
42	76	Y	-0.006	-0.006	0	%100
43	78	Y	-0.006	-0.006	0	%100
44	80	Y	-0.006	-0.006	0	%100
45	83	Y	-0.006	-0.006	0	%100
46	84	Y	-0.006	-0.006	0	%100
47	87	Y	-0.006	-0.006	0	%100
48	89	Y	-0.006	-0.006	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	-0.0009	-0.0009	0	%100
3	3	Z	-0.0009	-0.0009	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	-0.0006	-0.0006	0	%100
10	10	Z	-0.0006	-0.0006	0	%100
11	11	Z	-0.002	-0.002	0	%100
12	18	Z	-0.001	-0.001	0	%100
13	19	Z	-0.001	-0.001	0	%100
14	22	Z	-0.001	-0.001	0	%100
15	28	Z	-0.001	-0.001	0	%100
16	30	Z	-0.002	-0.002	0	%100
17	31	Z	-0.001	-0.001	0	%100
18	32	Z	-0.0009	-0.0009	0	%100
19	33	Z	-0.0009	-0.0009	0	%100

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, %)]
20	34	Z	-0.001	-0.001	0	%100
21	35	Z	-0.001	-0.001	0	%100
22	36	Z	-0.001	-0.001	0	%100
23	37	Z	-0.001	-0.001	0	%100
24	38	Z	-0.0006	-0.0006	0	%100
25	39	Z	-0.0006	-0.0006	0	%100
26	40	Z	-0.002	-0.002	0	%100
27	49	Z	-0.002	-0.002	0	%100
28	50	Z	-0.001	-0.001	0	%100
29	51	Z	-0.0009	-0.0009	0	%100
30	52	Z	-0.0009	-0.0009	0	%100
31	53	Z	-0.001	-0.001	0	%100
32	54	Z	-0.001	-0.001	0	%100
33	55	Z	-0.001	-0.001	0	%100
34	56	Z	-0.001	-0.001	0	%100
35	57	Z	-0.0006	-0.0006	0	%100
36	58	Z	-0.0006	-0.0006	0	%100
37	59	Z	-0.002	-0.002	0	%100
38	68	Z	-0.002	-0.002	0	%100
39	69	Z	-0.001	-0.001	0	%100
40	72	Z	-0.001	-0.001	0	%100
41	73	Z	-0.001	-0.001	0	%100
42	76	Z	-0.001	-0.001	0	%100
43	78	Z	-0.001	-0.001	0	%100
44	80	Z	-0.001	-0.001	0	%100
45	83	Z	-0.001	-0.001	0	%100
46	84	Z	-0.001	-0.001	0	%100
47	87	Z	-0.001	-0.001	0	%100
48	89	Z	-0.001	-0.001	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	-0.0009	-0.0009	0	%100
3	3	X	-0.0009	-0.0009	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	-0.0006	-0.0006	0	%100
10	10	X	-0.0006	-0.0006	0	%100
11	11	X	-0.002	-0.002	0	%100
12	18	X	-0.001	-0.001	0	%100
13	19	X	-0.001	-0.001	0	%100
14	22	X	-0.001	-0.001	0	%100
15	28	X	-0.001	-0.001	0	%100
16	30	X	-0.002	-0.002	0	%100
17	31	X	-0.001	-0.001	0	%100
18	32	X	-0.0009	-0.0009	0	%100
19	33	X	-0.0009	-0.0009	0	%100
20	34	X	-0.001	-0.001	0	%100
21	35	X	-0.001	-0.001	0	%100
22	36	X	-0.001	-0.001	0	%100
23	37	X	-0.001	-0.001	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, %)]
24	38	X	-0.0006	-0.0006	0	%100
25	39	X	-0.0006	-0.0006	0	%100
26	40	X	-0.002	-0.002	0	%100
27	49	X	-0.002	-0.002	0	%100
28	50	X	-0.001	-0.001	0	%100
29	51	X	-0.0009	-0.0009	0	%100
30	52	X	-0.0009	-0.0009	0	%100
31	53	X	-0.001	-0.001	0	%100
32	54	X	-0.001	-0.001	0	%100
33	55	X	-0.001	-0.001	0	%100
34	56	X	-0.001	-0.001	0	%100
35	57	X	-0.0006	-0.0006	0	%100
36	58	X	-0.0006	-0.0006	0	%100
37	59	X	-0.002	-0.002	0	%100
38	68	X	-0.002	-0.002	0	%100
39	69	X	-0.001	-0.001	0	%100
40	72	X	-0.001	-0.001	0	%100
41	73	X	-0.001	-0.001	0	%100
42	76	X	-0.001	-0.001	0	%100
43	78	X	-0.001	-0.001	0	%100
44	80	X	-0.001	-0.001	0	%100
45	83	X	-0.001	-0.001	0	%100
46	84	X	-0.001	-0.001	0	%100
47	87	X	-0.001	-0.001	0	%100
48	89	X	-0.001	-0.001	0	%100

Member Distributed Loads (BLC 30 : 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	39	Y	-0.016	-0.035	1.155	2.309
2	57	Y	-0.035	-0.016	0	1.155
3	57	Y	-0.016	0.0006164	1.155	2.309
4	58	Y	-0.018	-0.016	0.231	2.309
5	9	Y	-0.014	-0.016	0	2.078
6	10	Y	-0.014	-0.02	0.231	1.27
7	10	Y	-0.02	-0.026	1.27	2.309
8	38	Y	-0.017	-0.017	0	2.078
9	39	Y	0.0006163	-0.016	0	1.155

Member Distributed Loads (BLC 31 : 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	38	Y	-0.009	-0.009	0	2.078
2	39	Y	0.000332	-0.009	0	1.155
3	39	Y	-0.009	-0.019	1.155	2.309
4	57	Y	-0.017	-0.008	0	1.155
5	57	Y	-0.008	0.0003082	1.155	2.309
6	58	Y	-0.009	-0.008	0.231	2.309
7	9	Y	-0.007	-0.008	0	2.078
8	10	Y	-0.007	-0.01	0.231	1.27
9	10	Y	-0.01	-0.013	1.27	2.309

Member Area Loads (BLC 1 : Dead)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [ksf]
1	72	73	74	75	Y	Two Way	-0.01
2	103	104	101	102	Y	Two Way	-0.01
3	23	22	25	24	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	72	73	74	75	Y	Two Way	-0.005
2	103	104	101	102	Y	Two Way	-0.005
3	23	22	25	24	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*s²/ft, k*s²*ft)]
1	30	L	Y	-0.5
2	113	L	Y	-0.5
3	135	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*s²/ft, k*s²*ft)]
1	31	L	Y	-0.5
2	114	L	Y	-0.5
3	136	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*s²/ft, k*s²*ft)]
1	44	L	Y	-0.5
2	127	L	Y	-0.5
3	149	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	48	
3	90 Wind - No Ice	WLX			20	48	
4	0 Wind - Ice	WLZ			20	48	
5	90 Wind - Ice	WLX			20	48	
6	0 Wind - Service	WLZ			20	48	
7	90 Wind - Service	WLX			20	48	
8	Ice	OL1			20	48	3
9	0 Seismic	ELZ			20	48	
10	90 Seismic	ELX			20	48	
11	Live Load a	LL		3			
12	Live Load b	LL		3			
13	Live Load c	LL		3			
14	Live Load d	LL					
15	Maint LL 1	LL			1		
16	Maint LL 2	LL			1		
17	Maint LL 3	LL			1		
18	Maint LL 4	LL			1		

Basic Load Cases (Continued)

	BLC Description	Category	Y Gravity	Nodal	Point	Distributed	Area(Member)
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	BLC 1 Transient Area Loads	None				9	
31	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				
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

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
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
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

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
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

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	1.201	5	1.794	2	1.496	2	4.019	2	1.187	11	0.359	97
2		min	-1.202	11	-0.147	8	-1.622	8	-0.887	8	-1.186	5	-0.208	89
3	53	max	1.16	5	1.665	18	1.391	2	0.305	13	1.385	3	0.284	12
4		min	-1.267	11	0.035	12	-1.327	8	-1.741	43	-1.385	9	-3.064	6
5	82	max	1.162	5	1.658	22	1.637	2	0.277	3	1.442	7	2.955	10
6		min	-1.054	11	0.028	4	-1.575	8	-1.977	9	-1.442	13	-0.353	4
7	Totals:	max	3.523	5	4.669	56	4.524	2						
8		min	-3.523	11	2.419	2	-4.524	8						

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	0.542	0	13	0.124	0	y	73	70.173	73.278	8.24	8.24	2.012	H1-1b
2	2	C3.38x2.06x.188	0.361	2.592	3	0.06	0.351	y	64	35.676	43.394	1.694	4.483	1.6	H1-1b
3	3	C3.38x2.06x.188	0.375	0	13	0.075	2.241	z	8	35.676	43.394	1.694	4.483	1.595	H1-1b
4	4	PL3/8"x6	0.098	0	2	0.17	0	y	2	68.997	72.9	0.57	9.113	2.303	H1-1b
5	5	PL3/8"x6	0.101	0	3	0.131	0	y	2	68.997	72.9	0.57	9.113	1.903	H1-1b
6	6	PIPE_3.5x0.165	0.079	6.75	7	0.04	4		4	45.872	71.57	6.336	6.336	1.962	H1-1b
7	7	PL3/8"x6	0.145	0.208	8	0.195	0.208	y	50	70.882	72.9	0.57	9.113	1.38	H1-1b
8	8	PL3/8"x6	0.148	0	13	0.199	0	y	50	70.882	72.9	0.57	9.113	2.881	H1-1b
9	9	L2x2x4	0.306	0	8	0.031	2.309	y	48	23.349	30.586	0.691	1.577	1.5	H2-1
10	10	L2x2x4	0.266	2.309	8	0.035	0	y	64	23.349	30.586	0.691	1.577	1.5	H2-1
11	11	L7.63x2.5x6	0.402	1.604	8	0.079	1.604	z	2	75.414	118.523	1.798	13.75	1.243	H2-1
12	18	PIPE_2.88x0.203	0.113	5.583	5	0.044	5.583		6	35.519	70.68	5.029	5.029	3	H1-1b
13	19	PIPE_2.88x0.203	0.139	2.333	9	0.049	5.583		9	35.519	70.68	5.029	5.029	3	H1-1b
14	22	PIPE_2.88x0.203	0.154	7.812	2	0.14	9.062		2	24.131	70.68	5.029	5.029	2.393	H1-1b
15	28	PIPE_2.88x0.203	0.113	2.333	7	0.044	5.583		8	35.519	70.68	5.029	5.029	3	H1-1b
16	30	L6.63x4.33x.25	0.205	3.25	6	0.026	3.25	z	12	51.794	86.751	2.311	6.976	1.5	H2-1
17	31	HSS4X4X2	0.508	0	7	0.123	0	y	65	70.173	73.278	8.24	8.24	2.029	H1-1b
18	32	C3.38x2.06x.188	0.356	2.592	7	0.06	0.351	y	68	35.676	43.394	1.694	4.483	1.599	H1-1b
19	33	C3.38x2.06x.188	0.326	0	56	0.063	2.241	y	48	35.676	43.394	1.703	4.483	1.621	H1-1b
20	34	PL3/8"x6	0.083	0	6	0.151	0	y	66	68.997	72.9	0.57	9.113	2.288	H1-1b
21	35	PL3/8"x6	0.098	0	7	0.121	0	y	42	68.997	72.9	0.57	9.113	1.829	H1-1b
22	36	PL3/8"x6	0.126	0.208	13	0.194	0.208	y	54	70.882	72.9	0.57	9.113	1.899	H1-1b
23	37	PL3/8"x6	0.119	0	5	0.2	0	y	55	70.882	72.9	0.57	9.113	2.954	H1-1b
24	38	L2x2x4	0.232	0	12	0.031	2.309	y	40	23.349	30.586	0.691	1.577	1.5	H2-1
25	39	L2x2x4	0.223	2.309	13	0.035	0	y	68	23.349	30.586	0.691	1.577	1.5	H2-1
26	40	L7.63x2.5x6	0.306	1.604	12	0.079	0	z	66	75.414	118.523	1.798	13.833	1.261	H2-1
27	49	L6.63x4.33x.25	0.227	0	2	0.03	3.25	y	9	51.794	86.751	2.311	6.976	1.5	H2-1
28	50	HSS4X4X2	0.534	0	9	0.124	0	y	69	70.173	73.278	8.24	8.24	2.009	H1-1b
29	51	C3.38x2.06x.188	0.325	2.592	57	0.06	0.351	y	73	35.676	43.394	1.703	4.483	1.619	H1-1b
30	52	C3.38x2.06x.188	0.368	0	9	0.066	2.241	z	3	35.676	43.394	1.694	4.483	1.594	H1-1b
31	53	PL3/8"x6	0.093	0.164	3	0.149	0	y	70	68.997	72.9	0.57	9.113	2.099	H1-1b
32	54	PL3/8"x6	0.08	0	11	0.123	0	y	45	68.997	72.9	0.57	9.113	1.818	H1-1b
33	55	PL3/8"x6	0.137	0.085	2	0.195	0.208	y	57	70.882	72.9	0.57	9.113	1.648	H1-1b

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

	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
34	56	PL3/8"x6	0.15	0	9	0.197	0	y	59	70.882	72.9	0.57	9.113	2.898	H1-1b
35	57	L2x2x4	0.294	0	3	0.03	2.309	y	44	23.349	30.586	0.691	1.577	1.5	H2-1
36	58	L2x2x4	0.222	2.309	4	0.035	0	y	72	23.349	30.586	0.691	1.577	1.5	H2-1
37	59	L7.63x2.5x6	0.356	1.604	3	0.079	0	z	70	75.414	118.523	1.798	14.194	1.345	H2-1
38	68	L6.63x4.33x.25	0.256	3.25	2	0.034	3.25	z	8	51.794	86.751	2.311	6.976	1.5	H2-1
39	69	PIPE_3.5x0.165	0.083	1.25	2	0.052	4		8	45.872	71.57	6.336	6.336	1.782	H1-1b
40	72	PIPE_2.88x0.203	0.142	5.583	9	0.051	5.583		9	35.519	70.68	5.029	5.029	3	H1-1b
41	73	PIPE_2.88x0.203	0.168	2.333	2	0.049	5.583		13	35.519	70.68	5.029	5.029	3	H1-1b
42	76	PIPE_2.88x0.203	0.148	2.188	13	0.113	2.188		13	24.131	70.68	5.029	5.029	2.255	H1-1b
43	78	PIPE_2.88x0.203	0.127	5.583	9	0.046	5.583		2	35.519	70.68	5.029	5.029	3	H1-1b
44	80	PIPE_3.5x0.165	0.072	4	2	0.05	2.667		13	45.872	71.57	6.336	6.336	1.466	H1-1b
45	83	PIPE_2.88x0.203	0.141	5.583	13	0.057	5.583		2	35.519	70.68	5.029	5.029	3	H1-1b
46	84	PIPE_2.88x0.203	0.133	2.333	6	0.037	5.583		5	35.519	70.68	5.029	5.029	3	H1-1b
47	87	PIPE_2.88x0.203	0.142	7.813	9	0.125	9.063		9	24.131	70.68	5.029	5.029	2.524	H1-1b
48	89	PIPE_2.88x0.203	0.144	5.583	2	0.037	5.583		6	35.519	70.68	5.029	5.029	3	H1-1b

APPENDIX B

(Additional Calculations)

PROJECT	**160318.003.01 - Easton-Everetts Rd, C KSC**				
SUBJECT	**Platform Mount Analysis**				
DATE	**01/10/22**	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	:	1.496	k
Vertical Shear	:	1.794	k
Horizontal Shear	:	1.201	k
Torsion	:	0.359	k.ft
Moment from Horizontal Forces	:	1.187	k.ft
Moment from Vertical Forces	:	4.019	k.ft

Bolt Parameters

Bolt Grade	:	A325	
Bolt Diameter	:	0.625	in
Nominal Bolt Area	:	0.307	in^2
Bolt spacing, Horizontal	:	6	in
Bolt spacing, Vertical	:	6	in
Bolt edge distance, plate height	:	1	in
Bolt edge distance, plate width	:	1	in
Total Number of Bolts	:	4	bolts

Summary of Forces

Shear Resultant Force	:	2.16	k
Force from Horz. Moment	:	2.15	k
Force from Vert. Moment	:	7.28	k
Shear Load / Bolt	:	0.54	k
Tension Load / Bolt	:	0.37	k
Resultant from Moments / Bolt	:	3.80	k

Bolt Checks

Nominal Tensile Stress, F_{nt}	:	90.00	ksi	[AISC Table J3.2]
Available Tensile Stress, ΦR_{nt}	:	20.72	k/bolt	[Eq. J3-1]
Unity Check, Bolt Tension	:	**20.12%**		**OKAY**
Nominal Shear Stress, F_{nv}	:	48.00	ksi	[AISC Table J3.2]
Available Shear Stress, ΦR_{nv}	:	11.05	k/bolt	[Eq. J3-1]
Unity Check, Bolt Shear	:	**8.27%**		**OKAY**
Unity Check, Combined	:	**28.39%**		**OKAY**
Available Bearing Strength, ΦR_n	:	18.35	k/bolt	
Unity Check, Bolt Bearing	:	**2.94%**		**OKAY**

EXHIBIT 10

Construction Drawings

DISH Wireless L.L.C. SITE ID:

NJJER01147B

DISH Wireless L.L.C. SITE ADDRESS:

206 EVERETT ROAD
EASTON, CT 06612

SBA APPROVED

By Stephen Roth at 3:12:24 PM, 2/4/2022

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:
- INSTALL (3) PROPOSED PANEL ANTENNAS (1 PER SECTOR)
- INSTALL (1) PROPOSED ANTENNA PLATFORM MOUNT
- INSTALL PROPOSED JUMPERS
- INSTALL (6) PROPOSED RRUs (2 PER SECTOR)
- INSTALL (1) PROPOSED OVER VOLTAGE PROTECTION DEVICE (OVP)
- INSTALL (1) PROPOSED HYBRID CABLE

GROUND SCOPE OF WORK:
- INSTALL (1) PROPOSED METAL PLATFORM
- INSTALL (1) PROPOSED ICE BRIDGE
- INSTALL (1) PROPOSED PPC CABINET
- INSTALL (1) PROPOSED EQUIPMENT CABINET
- INSTALL (1) PROPOSED POWER CONDUIT
- INSTALL (1) PROPOSED TELCO CONDUIT
- INSTALL (1) PROPOSED TELCO-FIBER BOX
- INSTALL (1) PROPOSED GPS UNIT
- INSTALL (1) PROPOSED SAFETY SWITCH (IF REQUIRED)
- INSTALL (1) PROPOSED FIBER NID (IF REQUIRED)
- INSTALL (1) PROPOSED METER SOCKET

SITE INFORMATION

PROPERTY OWNER:	BARNEY JOAN 1/2 INT & BARNEY DAVID 1/2
ADDRESS:	206 EVERETT RD MONROE, CT 6468
TOWER TYPE:	MONOPOLE
TOWER CO SITE ID:	CT46131-A
TOWER APP NUMBER:	182295
COUNTY:	FAIRFIELD
LATITUDE (NAD 83):	41° 17' 25.19" N 41.29033
LONGITUDE (NAD 83):	73° 16' 57.72" W -73.2827000000
ZONING JURISDICTION:	FAIRFIELD COUNTY
ZONING DISTRICT:	RESIDENTIAL
PARCEL NUMBER:	9610 9611 1
OCCUPANCY GROUP:	U
CONSTRUCTION TYPE:	II-B
POWER COMPANY:	T.B.D.
TELEPHONE COMPANY:	T.B.D.

PROJECT DIRECTORY

APPLICANT:	DISH Wireless L.L.C. 5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120
TOWER OWNER:	SBA COMMUNICATAIONS CORP. 8051 CONGRESS AVENUE BOCA RATON, FL 33487 (800) 487-7483
SITE DESIGNER:	B+T GROUP 1717 S. BOULDER AVE, SUITE 300 TULSA, OK 74119 (918) 587-4630
SITE ACQUISITION:	WILLIAM SNIDER william.snider@dish.com
CONST. MANAGER:	MICHAEL NARDUCCI michael.narducci@dish.com
RF ENGINEER:	MURUGABIRAN JAYAPAL murugabiran.jayapal@dish.com

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	2018 CT STATE BUILDING CODE/2015 IBC W/ CT AMENDMENTS
MECHANICAL	2018 CT STATE BUILDING CODE/2015 IMC W/ CT AMENDMENTS
ELECTRICAL	2018 CT STATE BUILDING CODE/2017 NEC W/ CT AMENDMENTS

SITE PHOTO

DIRECTIONS

DIRECTIONS FROM 3 ADP BLVD, ROSELAND, NJ:
DEPART 3 ADP BLVD, ROSELAND, NJ 07068 ON BECKER FARM RD. TURN RIGHT ONTO CR-527 [LIVINGSTON AVE]. TAKE RAMP (RIGHT) ONTO I-280. AT EXIT 17B, STAY ON I-280. TAKE RAMP ONTO I-95 [NEW JERSEY TPKE]. STAY ON I-95 [NEW JERSEY TPKE]. AT EXIT 73, STAY ON I-95 [NEW ERSEY TPKE]. STAY ON I-95 [US-1]. AT EXIT 3, KEEP STRAIGHT ONTO RAMP [3]. TAKE RAMP (RIGHT) ONTO I-87 [MAJOR DEEGAN EXPY]. AT EXIT 4, TAKE RAMP (RIGHT) ONTO CENTRAL PARK AVE. KEEP RIGHT ONTO RAMP. TAKE RAMP (LEFT) ONTO CROSS COUNTY PKWY. MERGE ONTO HUTCHINSON RIVER PKWY N. ROAD NAME CHANGES TO CT-15 [MERRITT PKWY]. AT EXIT 46, BEAR RIGHT ONTO RAMP. TURN RIGHT ONTO JEFFERSON ST, THEN IMMEDIATELY TURN RIGHT ONTO CT-59 [EASTON TPKE]. KEEP STRAIGHT ONTO T-59 [SPORT HILL RD]. BEAR RIGHT ONTO CT-59 [STEPNEY RD]. BEAR RIGHT ONTO SHERWOOD RD. TURN RIGHT ONTO EVERETT RD. TURN LEFT ONTO ACCESS ROAD. ARRIVE AT NJJER01147B.

SHEET INDEX

SHEET NO.	SHEET TITLE
T-1	TITLE SHEET
LS-1	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	GENERAL NOTES
GN-3	GENERAL NOTES
GN-4	GENERAL NOTES

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

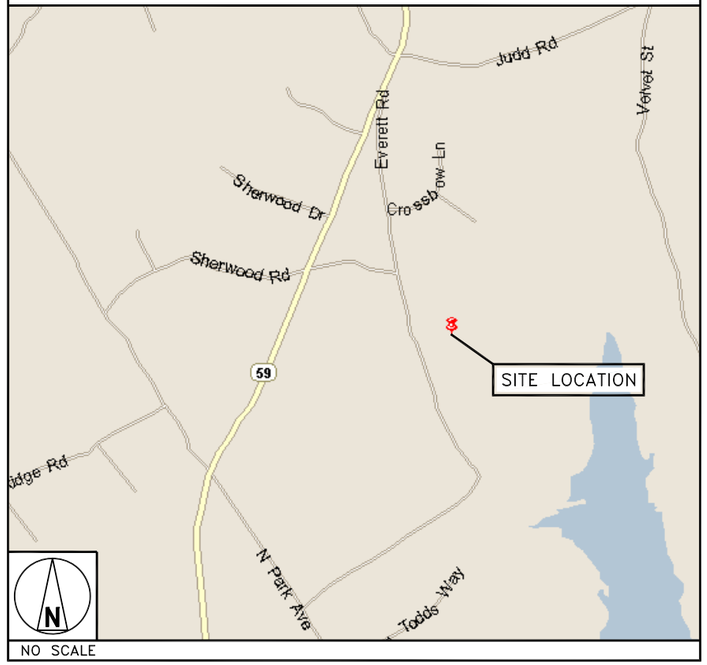
GENERAL NOTES

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.

VICINITY MAP



NO SCALE

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

8051 CONGRESS AVENUE
BOCA RATON, FL 33487

B+T GRP
1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
www.btgrp.com

STATE OF CONNECTICUT
CHAD J. TUTTLE
No. 23924
LICENSED
PROFESSIONAL ENGINEER
2/2/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/22

DRAWN BY:	CHECKED BY:	APPROVED BY:
CH	BLJ	BLJ

RFDS REV #: 1.0

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	1/13/22	ISSUED FOR REVIEW
0	2/2/22	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER

160318.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION

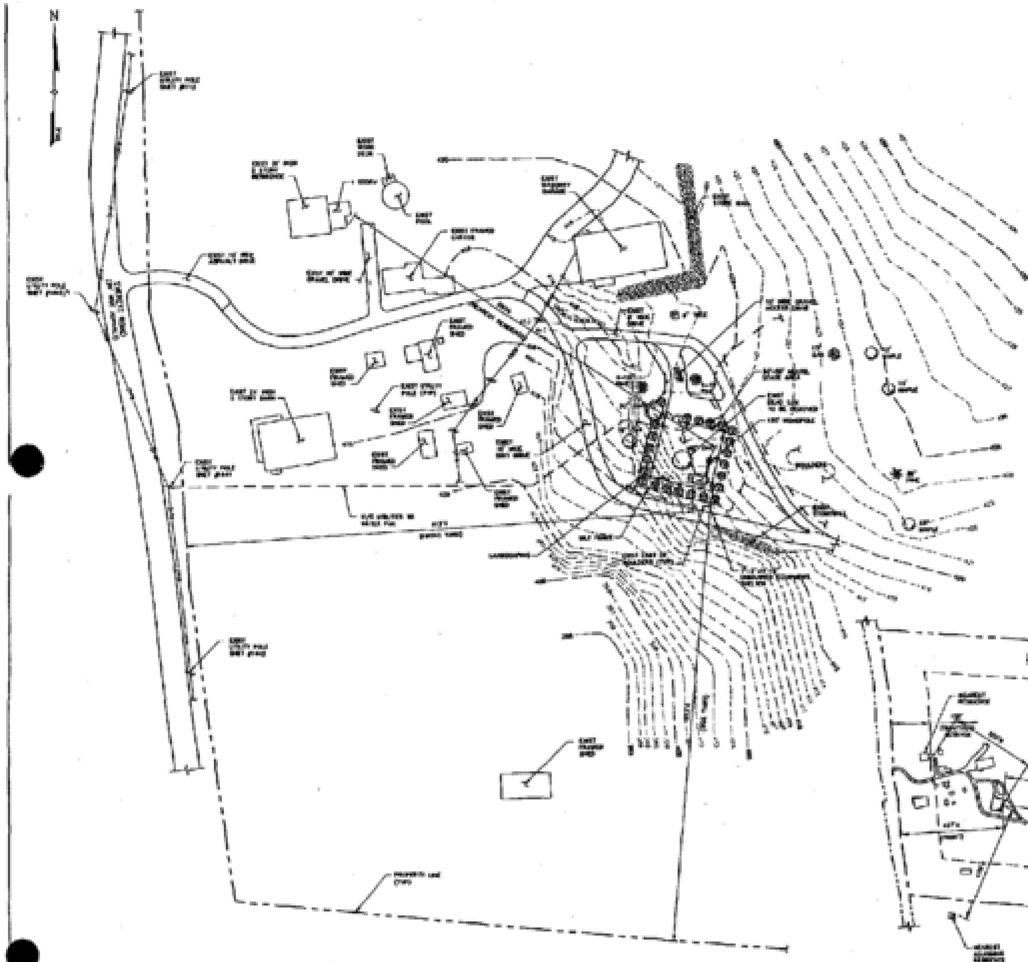
NJJER01147B
206 EVERETT ROAD
EASTON, CT 06612

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1



PARTIAL SITE PLAN

MONOPOLE SETBACKS

GENERAL NOTES

BULK REQUIREMENTS

LEGEND

TECTONIC

NEXTEL

APPROVALS

CONSTRUCTION ______ DATE: ______

LEASING ______ DATE: ______

RF ______ DATE: ______

ZONING ______ DATE: ______

CC ______ DATE: ______

NETWORK ENG. ______ DATE: ______

CT-0912
206 EVERETT ROAD
EASTON, CT
06612

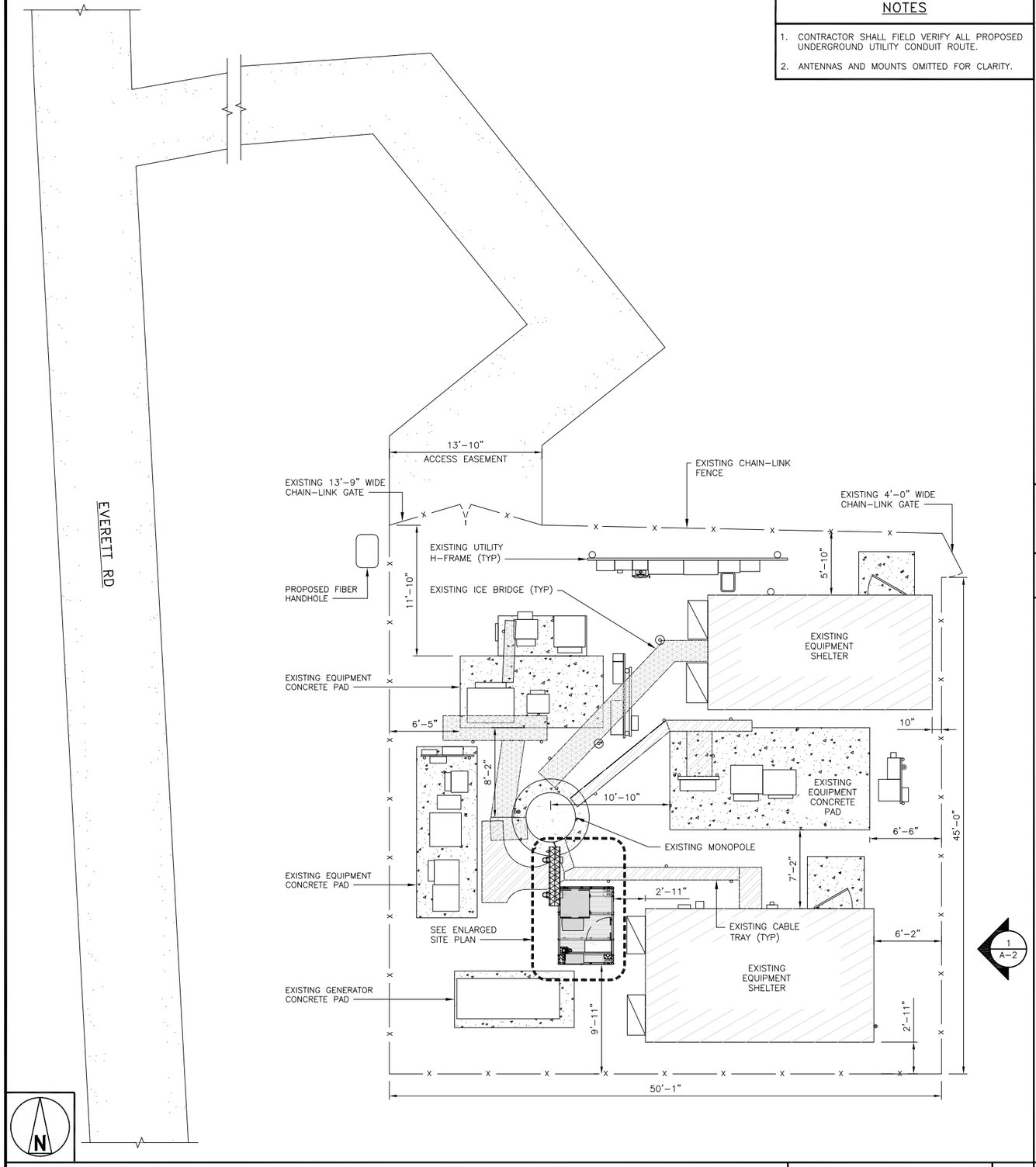
NEXTEL COMMUNICATIONS
OF THE MID-ATLANTIC, INC
DBA NEXTEL COMMUNICATIONS
100 CORPORATE PLACE
ROCKY HILL, CT 06067
OFFICE: (860) 513-5400
FAX: (860) 513-5444

PARTIAL SITE PLAN

C-2

NOTES

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



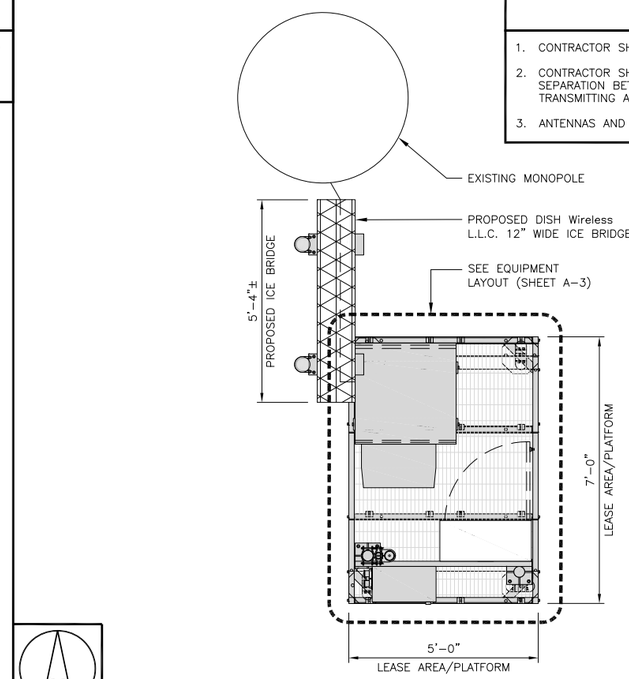
OVERALL SITE PLAN

6' 4' 2' 0 5' 10'
3/16"=1'-0"

1

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.



ENLARGED SITE PLAN

12" 6" 0 1' 2' 3' 4' 5'
1/2"=1'-0"

2

AERIAL MAP

NO SCALE

3

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SUITE 300
TULSA, OK 74119
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STATE OF CONNECTICUT
CHAD BUTLER
No. 23924
LICENSED
PROFESSIONAL ENGINEER
2/2/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/22

DRAWN BY:	CHECKED BY:	APPROVED BY:
CH	BLJ	BLJ

RFDS REV #: 1.0

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	1/13/22	ISSUED FOR REVIEW
0	2/2/22	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER
160318.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION

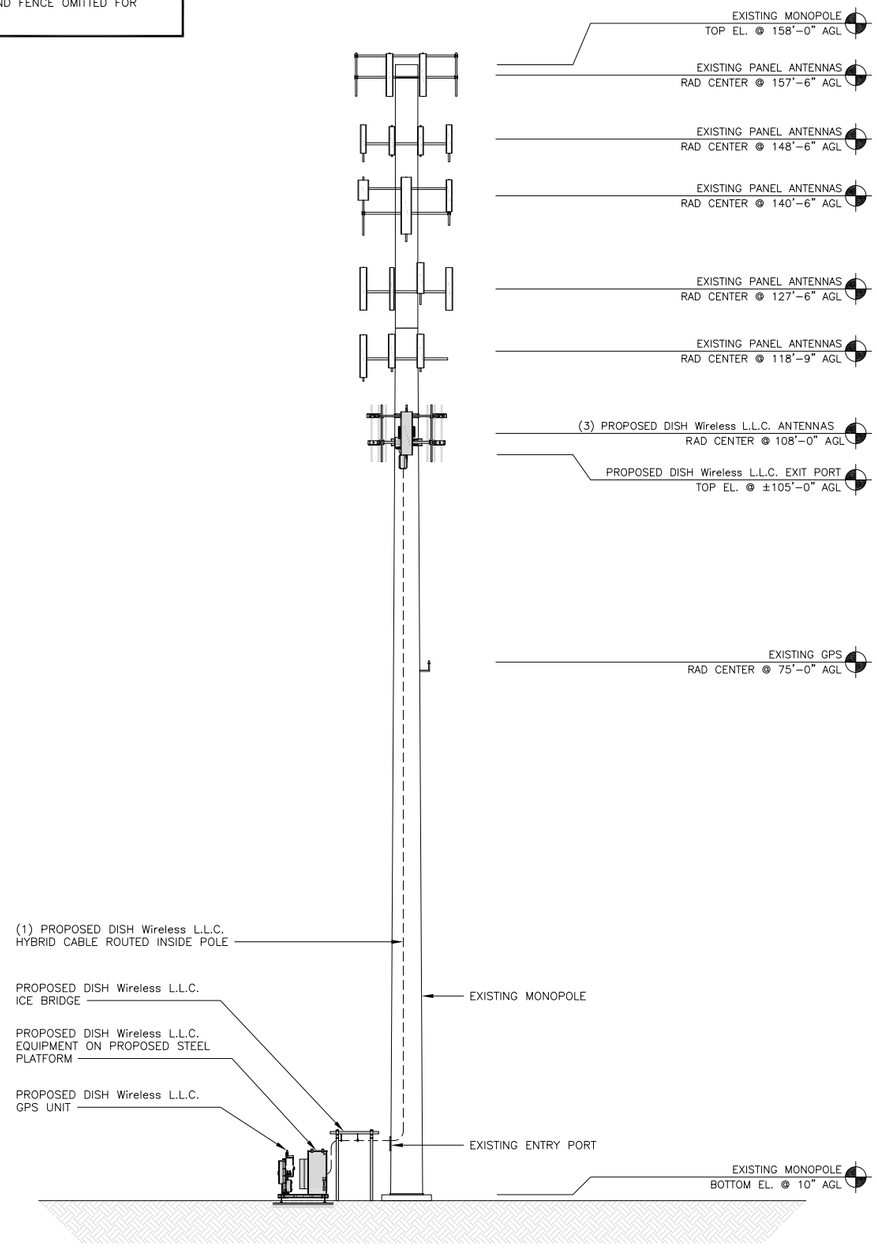
NJJER01147B
206 EVERETT ROAD
EASTON, CT 06612

SHEET TITLE
OVERALL AND ENLARGED SITE PLAN

SHEET NUMBER
A-1

NOTES

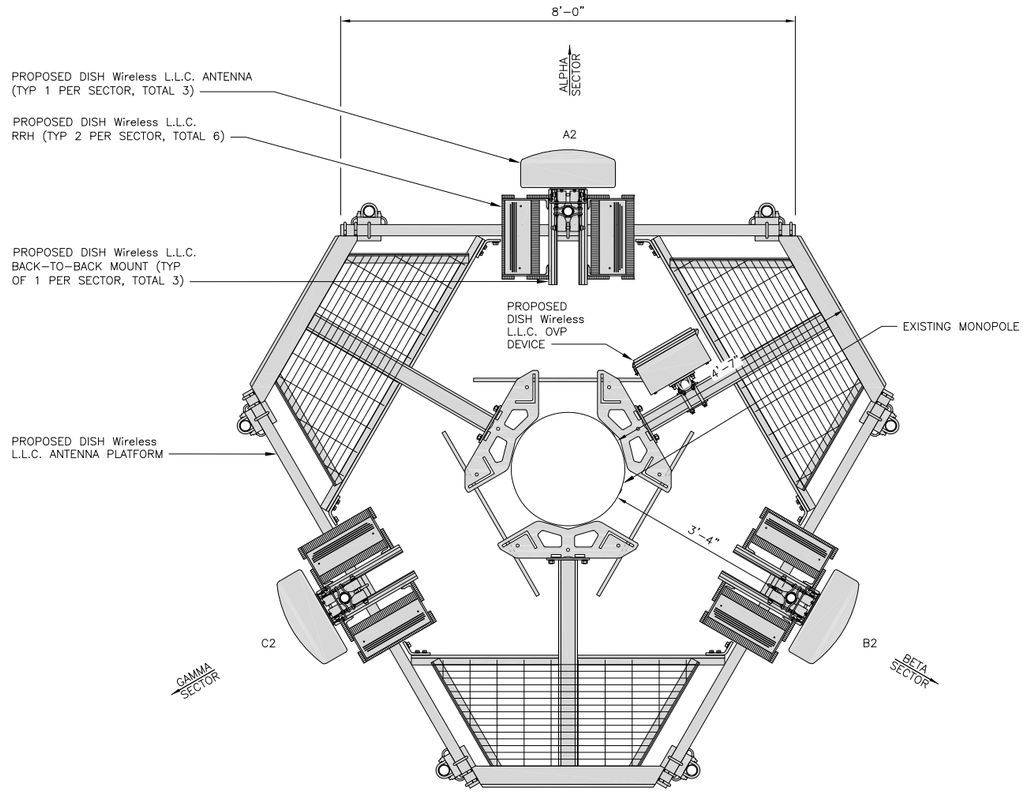
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNA AND MW DISH SPECIFICATIONS REFER TO ANTENNA SCHEDULE AND TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS
3. EXISTING EQUIPMENT AND FENCE OMITTED FOR CLARITY.



PROPOSED EAST ELEVATION

12' 8' 4' 0 10' 20'
3/32"=1'-0"

1



*AZIMUTHS ARE TENTATIVE, NEEDS CONFIRMATION BEFORE CONSTRUCTION STARTS

ANTENNA LAYOUT

12" 6" 0 1' 2' 3'
3/4"=1'-0"

2

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	POS.	MANUFACTURER MODEL
A1	--	--	--	--	--	(1) HIGH-CAPACITY HYBRID CABLE (140' LONG)	FUJITSU- TA08025-B605	5G	A2	(1) RAYCAP RDIDC-9181-PF-48
A2	PROPOSED	COMMSCOPE – FFVV-65B-R2	5G	0°	108'-0"		FUJITSU- TA08025-B604	5G	A2	
A3	--	--	--	--	--		--	--	--	
B1	--	--	--	--	--	SHARED W/ALPHA	FUJITSU- TA08025-B605	5G	B2	SHARED W/ALPHA
B2	PROPOSED	COMMSCOPE – FFVV-65B-R2	5G	120°	108'-0"		FUJITSU- TA08025-B604	5G	B2	
B3	--	--	--	--	--		--	--	--	
C1	--	--	--	--	--	SHARED W/ALPHA	FUJITSU- TA08025-B605	5G	C2	SHARED W/ALPHA
C2	PROPOSED	COMMSCOPE – FFVV-65B-R2	5G	240°	108'-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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PROJECT INFORMATION

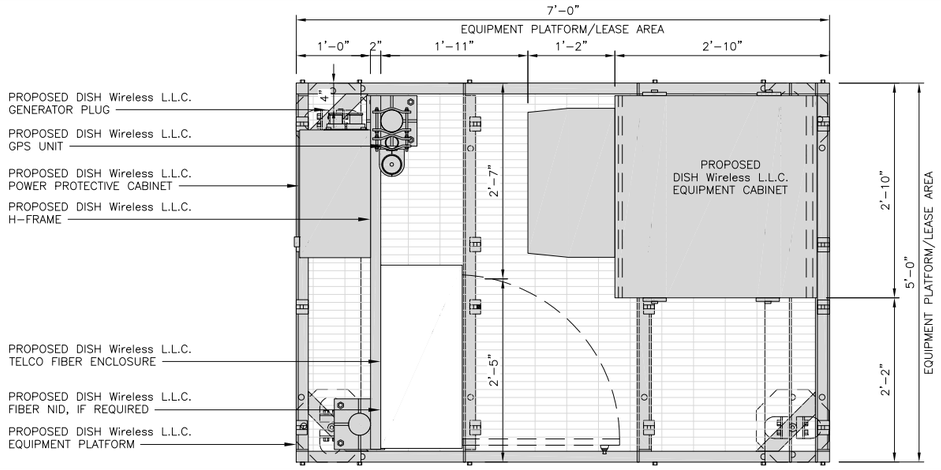
NJJER01147B
206 EVERETT ROAD
EASTON, CT 06612

SHEET TITLE

ELEVATION, ANTENNA LAYOUT AND SCHEDULE

SHEET NUMBER

A-2



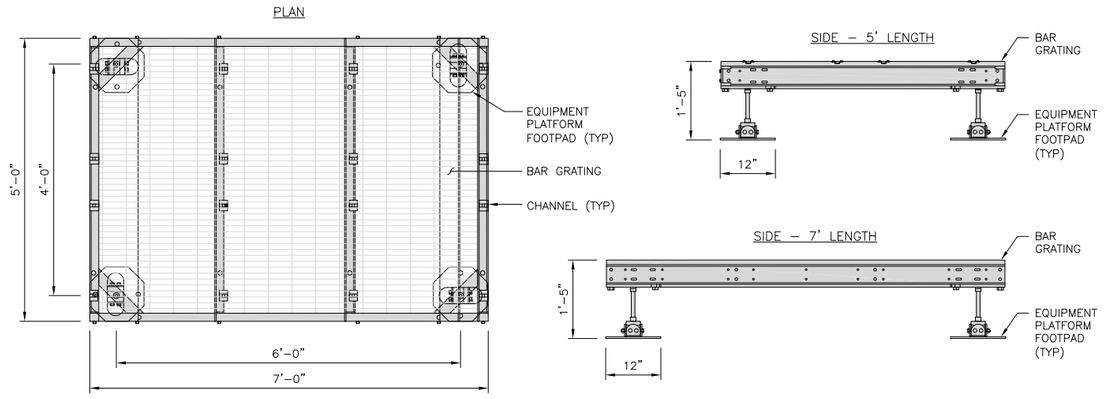
PLATFORM EQUIPMENT PLAN

12" 9" 6" 3" 0 1' 2'
1"=1'-0"

1

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

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



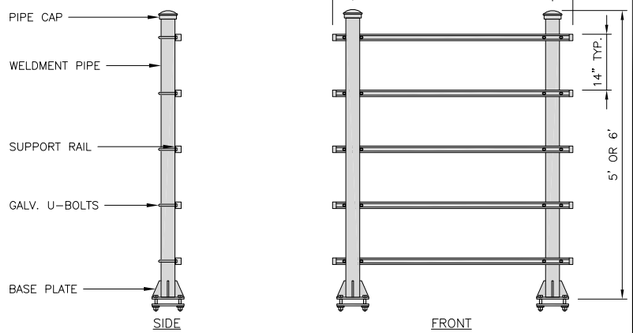
PLATFORM DETAIL

NO SCALE

2

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

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



H-FRAME DETAIL

NO SCALE

3

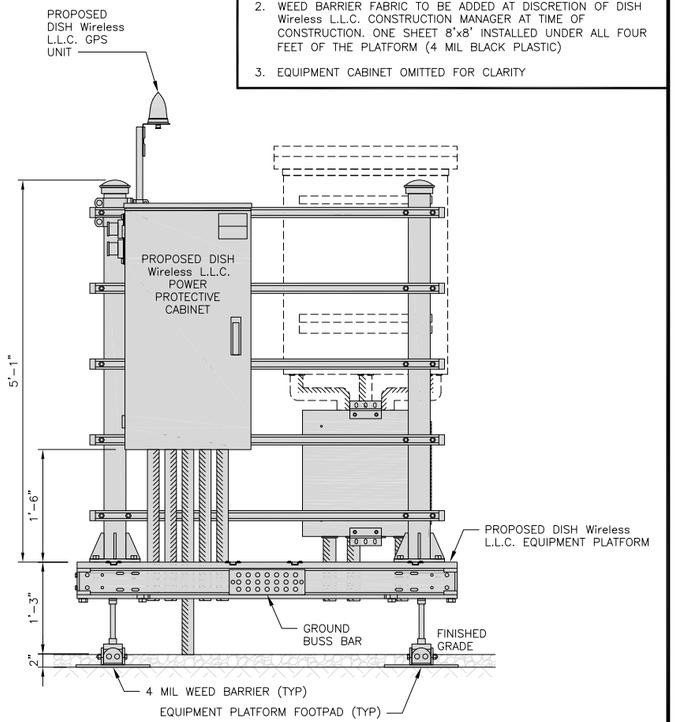
NOT USED

NO SCALE

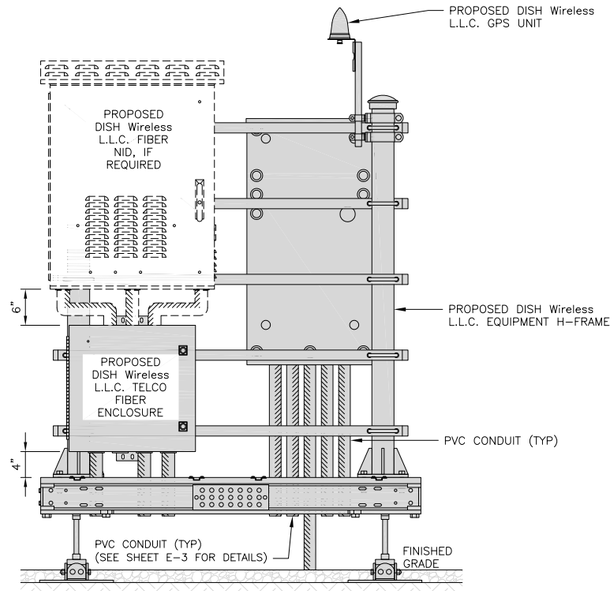
4

NOTES

1. CONTRACTOR TO BURY PLATFORM FEET WITH A MINIMUM OF 2" OF FILL PER EXISTING SITE SURFACE
2. 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)
3. EQUIPMENT CABINET OMITTED FOR CLARITY



FRONT ELEVATION



BACK ELEVATION

H-FRAME EQUIPMENT ELEVATION

12" 9" 6" 3" 0 1' 2'
1"=1'-0"

5

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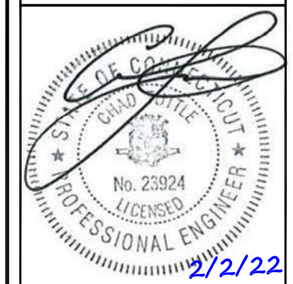

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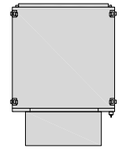
DISH Wireless L.L.C.
PROJECT INFORMATION

NJJER01147B
206 EVERETT ROAD
EASTON, CT 06612

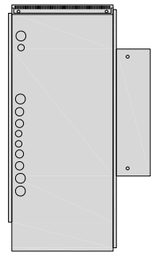
SHEET TITLE
EQUIPMENT PLATFORM AND H-FRAME DETAILS

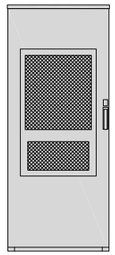
SHEET NUMBER
A-3

ENERSYS HEX 20000059996	
DIMENSIONS (HxWxD)	73"x30"x32"
POWER SYSTEM	-48V ALPHA/600A
HEATER	800W
TOTAL WEIGHT (EMPTY)	376 lbs


PLAN


BACK

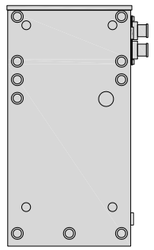

SIDE


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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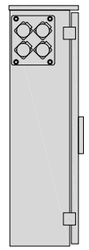
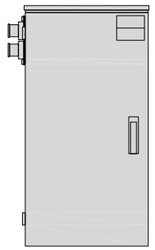

SIDE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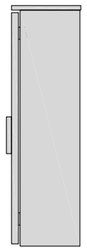
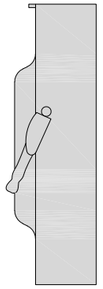
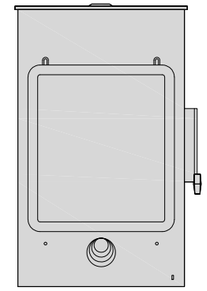

SIDE

POWER PROTECTION CABINET (PPC) DETAIL | NO SCALE | 2

SQUARE D SAFETY SWITCHES D224NRB	
ENCLOSURE DIM (HxWxD)	29.25"x19.00"x8.50"
ENCLOSURE TYPE	NEMA 3R RAINPROOF
UL LISTED	FILE E-2875

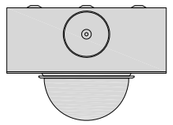

TOP


SIDE


FRONT

SAFETY SWITCH DETAIL | NO SCALE | 3

EATON METER SOCKET UNRRS213BEUSE	
DIMENSIONS (HxWxD)	16"x12"x6"
TYPE	RING
AMPERAGE RATING	200 CONT. AMP
WEIGHT	18 lbs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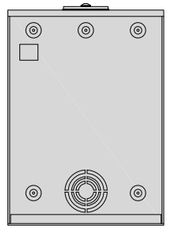
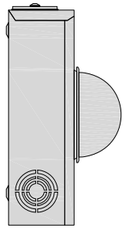

BACK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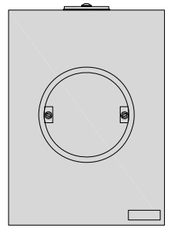
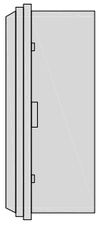

FRONT

METER BANK DETAIL | NO SCALE | 4

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


TOP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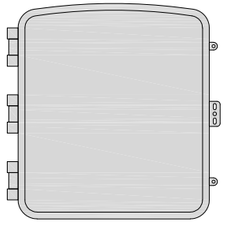
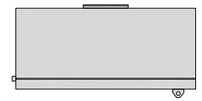
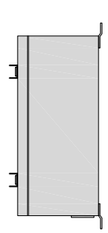

FRONT

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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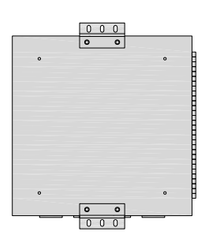
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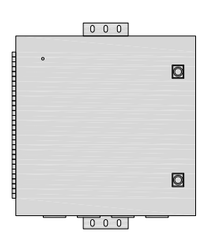
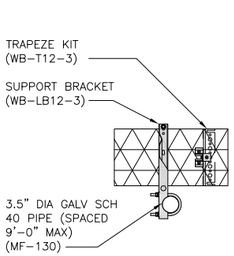

FRONT

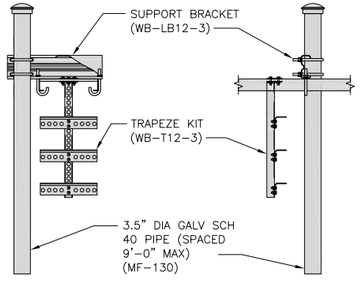
FIBER TELCO ENCLOSURE DETAIL | NO SCALE | 6

COMMSCOPE WB-K110-B WAVEGUIDE BRIDGE KIT	
DIMENSIONS (HxL)	160"x10'
WEIGHT/ VOLUME	325.0 LBS
CABLE RUN (QTY)	12

INCLUDED PRODUCTS:	
	WB-T12-3 TRAPEZE KIT, 3 RUNGS
	WB-LB12-3 SUPPORT BRACKET
	MF-130 DIRECT BURIAL PIPE COLUMN, 13'-4"

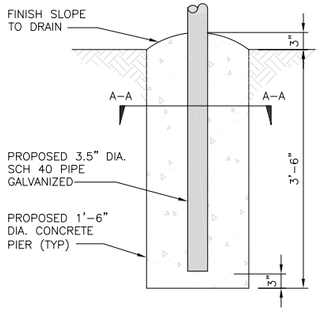


PLAN

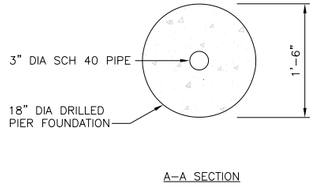


FRONT SIDE

ICE BRIDGE DETAIL | NO SCALE | 7

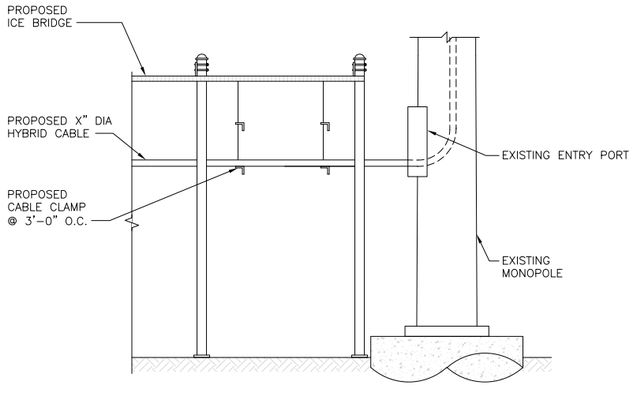


CONCRETE PIER



A-A SECTION

TYPICAL ICE BRIDGE CONCRETE PIER DETAIL | NO SCALE | 8



HYBRID CABLE RUN | NO SCALE | 9

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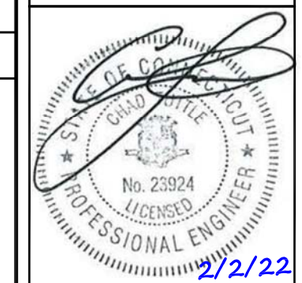

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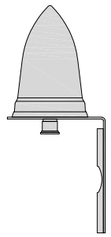
EQUIPMENT DETAILS

SHEET NUMBER

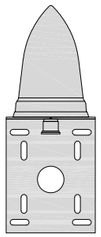
A-4

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

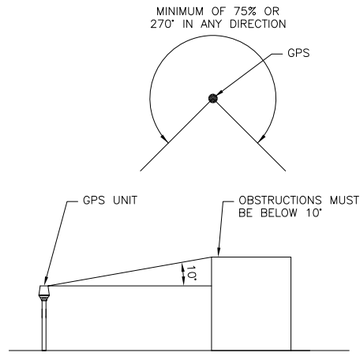


BACK

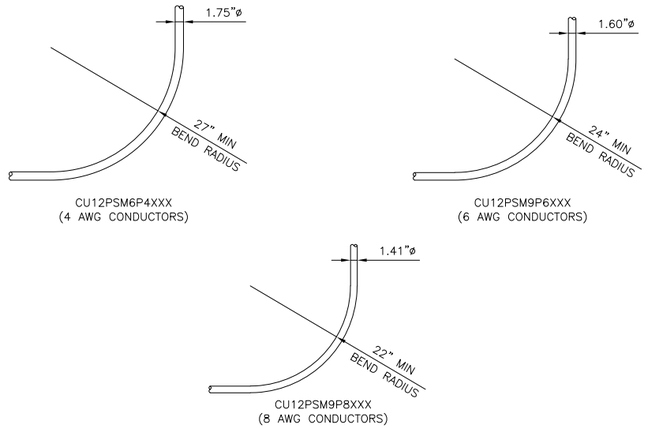


SIDE

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

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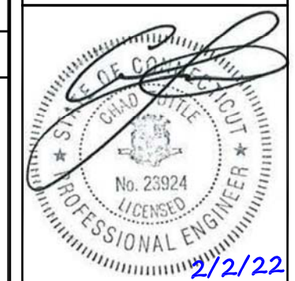

2/2/22

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RFDS REV #: 1.0

CONSTRUCTION DOCUMENTS

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A	1/13/22	ISSUED FOR REVIEW
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A&E PROJECT NUMBER

160318.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION

NJJER01147B
206 EVERETT ROAD
EASTON, CT 06612

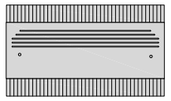
SHEET TITLE

EQUIPMENT DETAILS

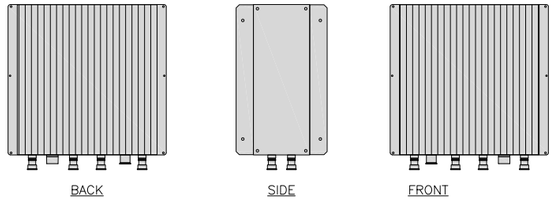
SHEET NUMBER

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



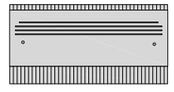
PLAN



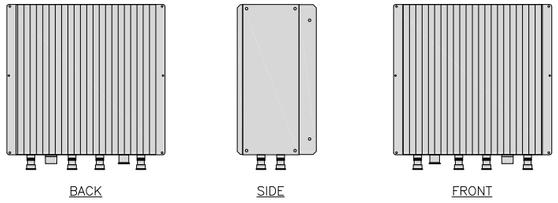
BACK SIDE FRONT

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



PLAN

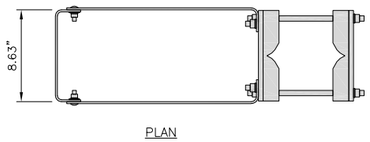


BACK SIDE FRONT

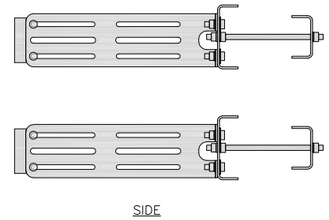
RRH DETAIL | NO SCALE | 2

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



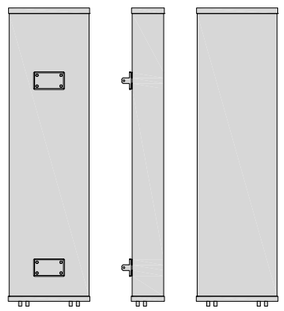
SIDE

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

RRH MOUNT DETAIL | NO SCALE | 3

COMMSCOPE FFVV-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

PLAN



BACK SIDE FRONT

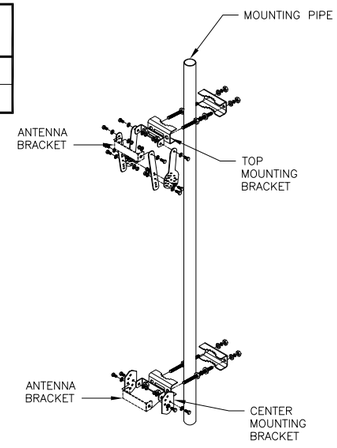
ANTENNA DETAIL | NO SCALE | 4

NOT USED | NO SCALE | 5

JMA ANTENNA MOUNT BRACKET #91900318	
TOTAL WEIGHT (WITH BRACKETS)	18 lbs (8.18 Kg)
POLE DIAMETER RANGE	2.5" TO 4.5"

NOTE:
KIT #91900318: TOP AND BOTTOM BRACKETS FOR 4-,6-, AND 8-FOOT ANTENNAS

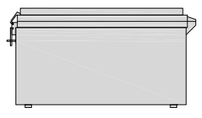
ANTENNA BRACKET NOT PART OF KIT



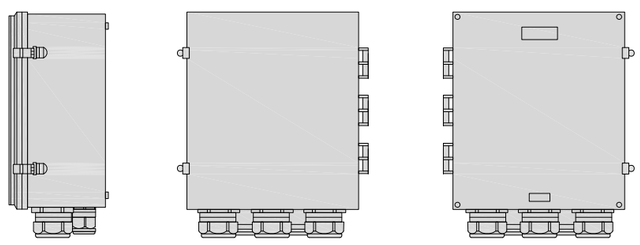
NOTE:
OR DISH Wireless L.L.C.
APPROVED EQUIVALENT

ANTENNA BRACKET DETAIL | NO SCALE | 6

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



PLAN



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

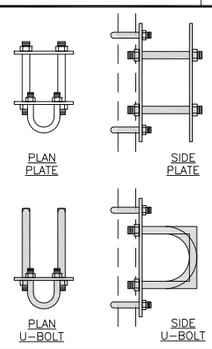
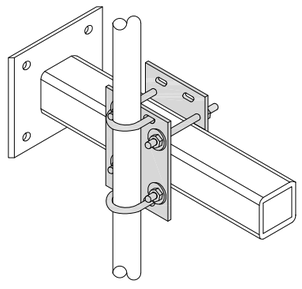


PLATE PLATE U-BOLT U-BOLT



RRH/OVP MOUNT DETAIL | NO SCALE | 8

COMMSCOPE MC-PK8-DSH	
FACE WIDTH	96"
WEIGHT	1373.08 lbs
NOTE: 15" TO 38" O.D.	

NOTE:
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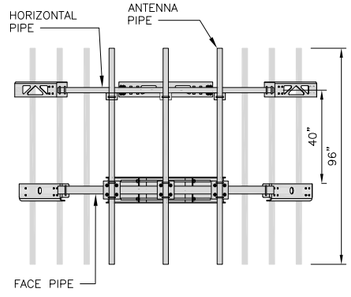
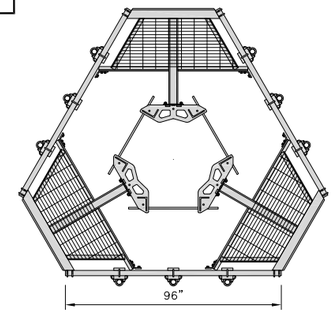
APPROVED EQUIVALENT





ANTENNA PLATFORM DETAIL | NO SCALE | 9

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2/2/22

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DISH Wireless L.L.C.
PROJECT INFORMATION

NJJER01147B
206 EVERETT ROAD
EASTON, CT 06612

SHEET TITLE

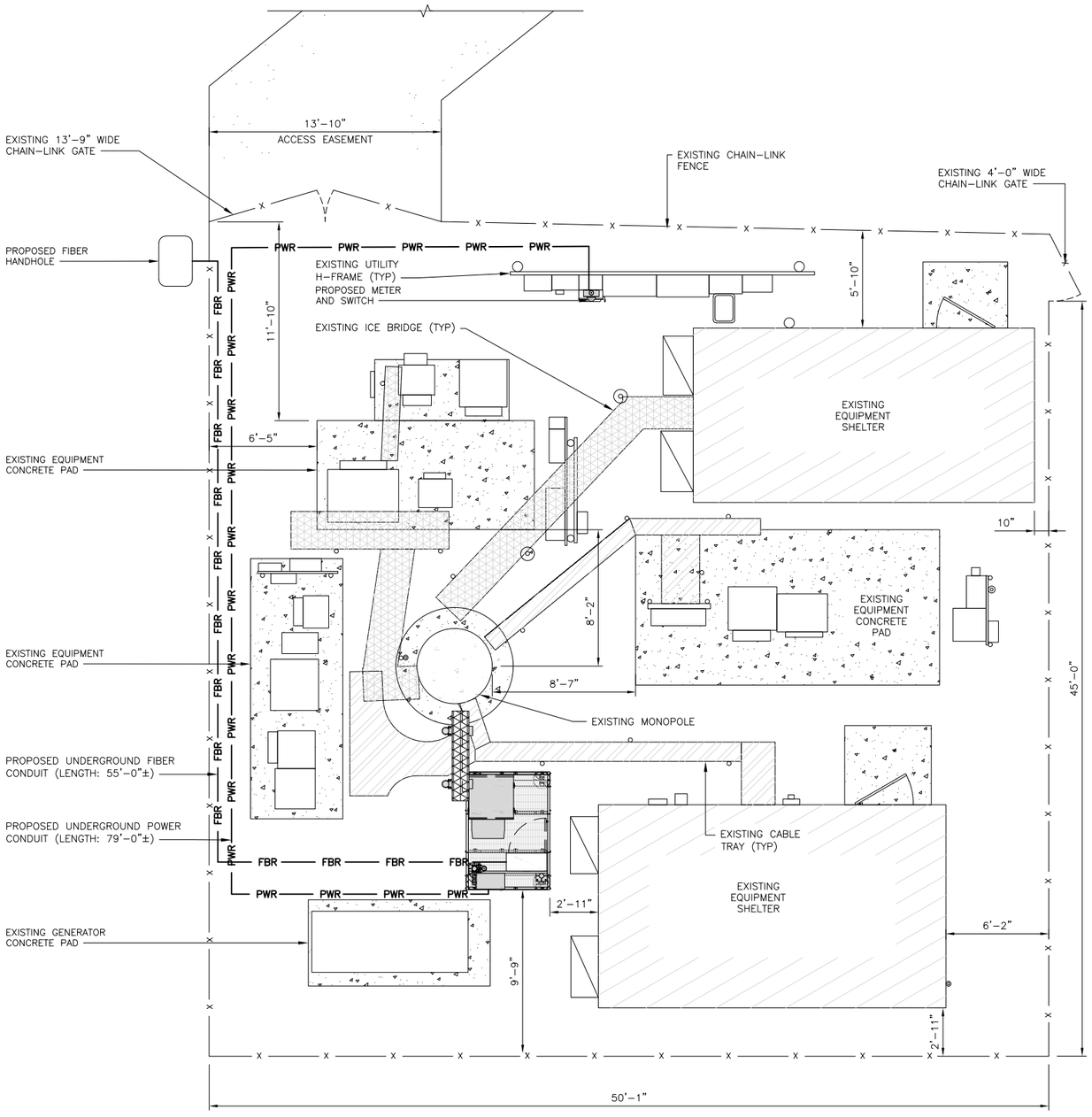
EQUIPMENT DETAILS

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.



N

UTILITY ROUTE PLAN

4' 2' 0 4' 8'
1/4"=1'-0"

1

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

ELECTRICAL NOTES

NO SCALE

2

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PROJECT INFORMATION

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206 EVERETT ROAD
EASTON, CT 06612

SHEET TITLE

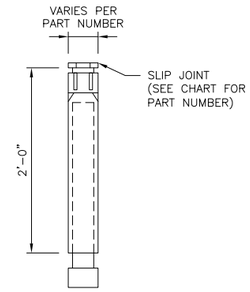
ELECTRICAL/FIBER ROUTE PLAN AND NOTES

SHEET NUMBER

E-1

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"

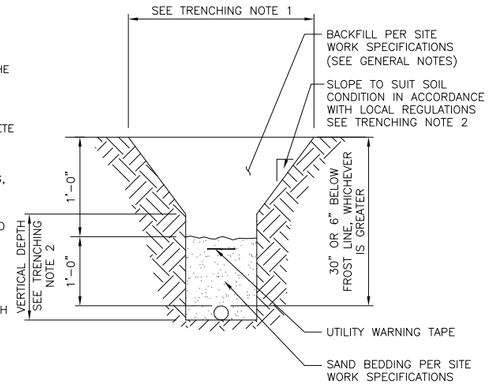


NOTE:
CONTRACTOR TO INSTALL EXPANSION FITTING SLIP JOINT AT METER CENTER CONDUIT TERMINATION, AS PER LOCAL UTILITY POLICY, ORDINANCE AND/OR SPECIFIED REQUIREMENT.

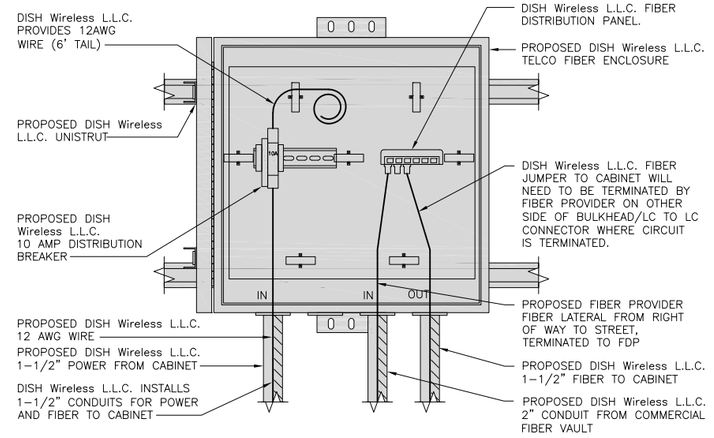
EXPANSION JOINT DETAIL | NO SCALE | 1

TRENCHING NOTES

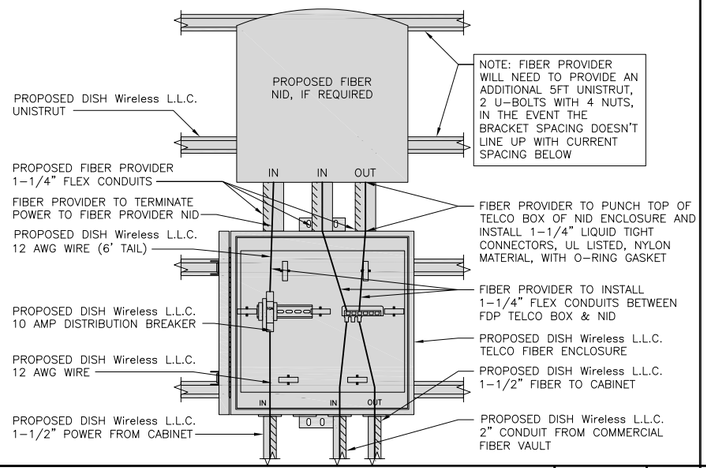
1. CONTRACTOR SHALL RESTORE THE TRENCH TO ITS ORIGINAL CONDITIONS BY EITHER SEEDING OR SODDING GRASS AREAS, OR REPLACING ASPHALT OR CONCRETE AREAS TO ITS ORIGINAL CROSS SECTION.
2. TRENCHING SAFETY; INCLUDING, BUT NOT LIMITED TO SOIL CLASSIFICATION, SLOPING, AND SHORING, SHALL BE GOVERNED BY THE CURRENT OSHA TRENCHING AND EXCAVATION SAFETY STANDARDS.
3. 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.



TYPICAL UNDERGROUND TRENCH DETAIL | NO SCALE | 2



DARK TELCO BOX – INTERIOR WIRING LAYOUT | NO SCALE | 3



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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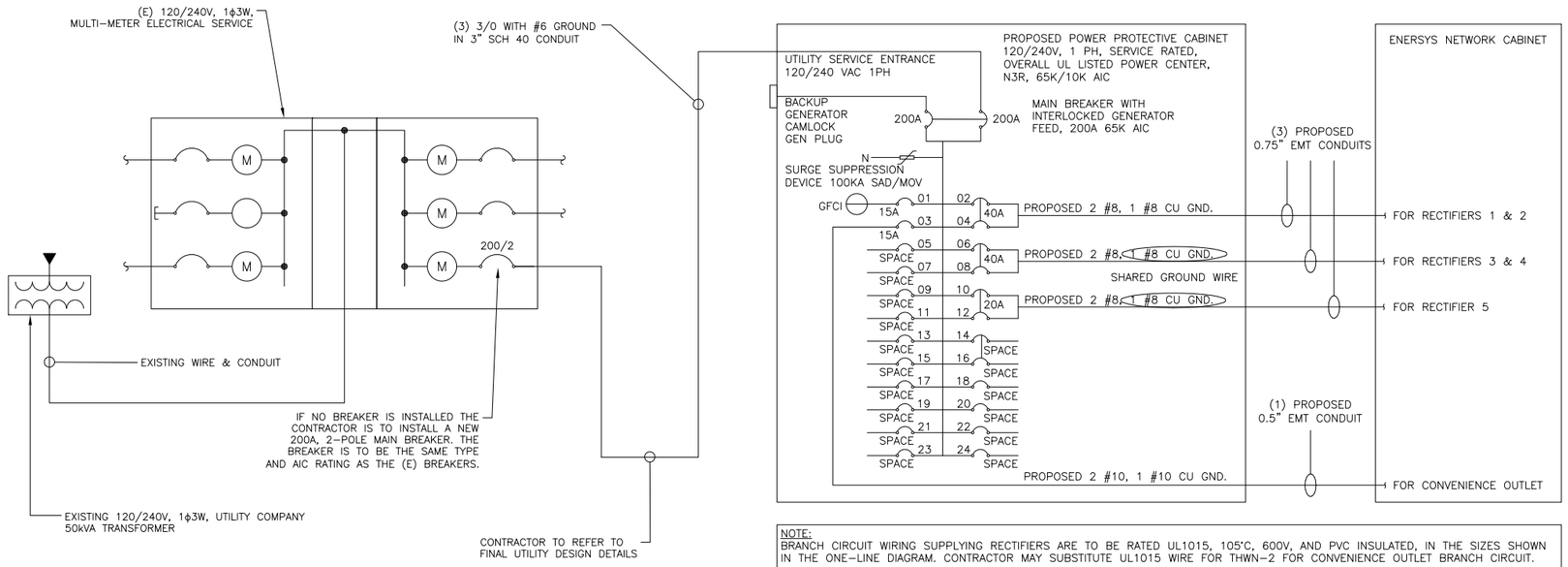
206 EVERETT ROAD
EASTON, CT 06612

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:
(2) 40A, 2P BREAKER - SQUARE D P/N:QO240
(1) 20A, 2P BREAKER - SQUARE D P/N:QO220
(1) 20A, 1P BREAKER - SQUARE D P/N:QO120

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.

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 (3 CONDUITS): USING UL1015, CU.

#8 - 0.0552 SQ. IN X 2 = 0.1103 SQ. IN
#8 - 0.0131 SQ. IN X 1 = 0.0131 SQ. IN <BARE GROUND
TOTAL = 0.1234 SQ. IN

0.75" EMT CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (3) 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.

PPC ONE-LINE DIAGRAM — NO SCALE — 1

PROPOSED ENERSYS PANEL SCHEDULE

LOAD SERVED	VOLT AMPS (WATTS) L1	VOLT AMPS (WATTS) L2	TRIP	CKT #	PHASE	CKT #	TRIP	VOLT AMPS (WATTS) L1	VOLT AMPS (WATTS) L2	LOAD SERVED
PPC GFCI OUTLET	180		15A	1	A	2	40A	3840		ENERSYS ALPHA CORDEX
ENERSYS GFCI OUTLET		180	15A	3	B	4			3840	RECTIFIERS 1 & 2
-SPACE-				5	A	6	40A	3840		ENERSYS ALPHA CORDEX
-SPACE-				7	B	8			3840	RECTIFIER 3 & 4
-SPACE-				9	A	10	20A	1920		ENERSYS ALPHA CORDEX
-SPACE-				11	B	12			1920	RECTIFIER 5
-SPACE-				13	A	14				-SPACE-
-SPACE-				15	B	16				-SPACE-
-SPACE-				17	A	18				-SPACE-
-SPACE-				19	B	20				-SPACE-
-SPACE-				21	A	22				-SPACE-
-SPACE-				23	B	24				-SPACE-
VOLTAGE AMPS	180	180						9500	9500	

200A MCB, 1ϕ, 24 SPACE, 120/240V	L1	L2	
MB RATING: 65,000 AIC	9680	9680	VOLTAGE AMPS
	81	81	AMPS
	81		MAX AMPS
	102		MAX 125%

PANEL SCHEDULE — NO SCALE — 2

NOT USED — NO SCALE — 3

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STATE OF CONNECTICUT — CHAD HUTTLE — No. 23924 LICENSED PROFESSIONAL ENGINEER — 2/2/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/22

DRAWN BY:	CHECKED BY:	APPROVED BY:
CH	BLJ	BLJ

RFDS REV #: 1.0

CONSTRUCTION DOCUMENTS

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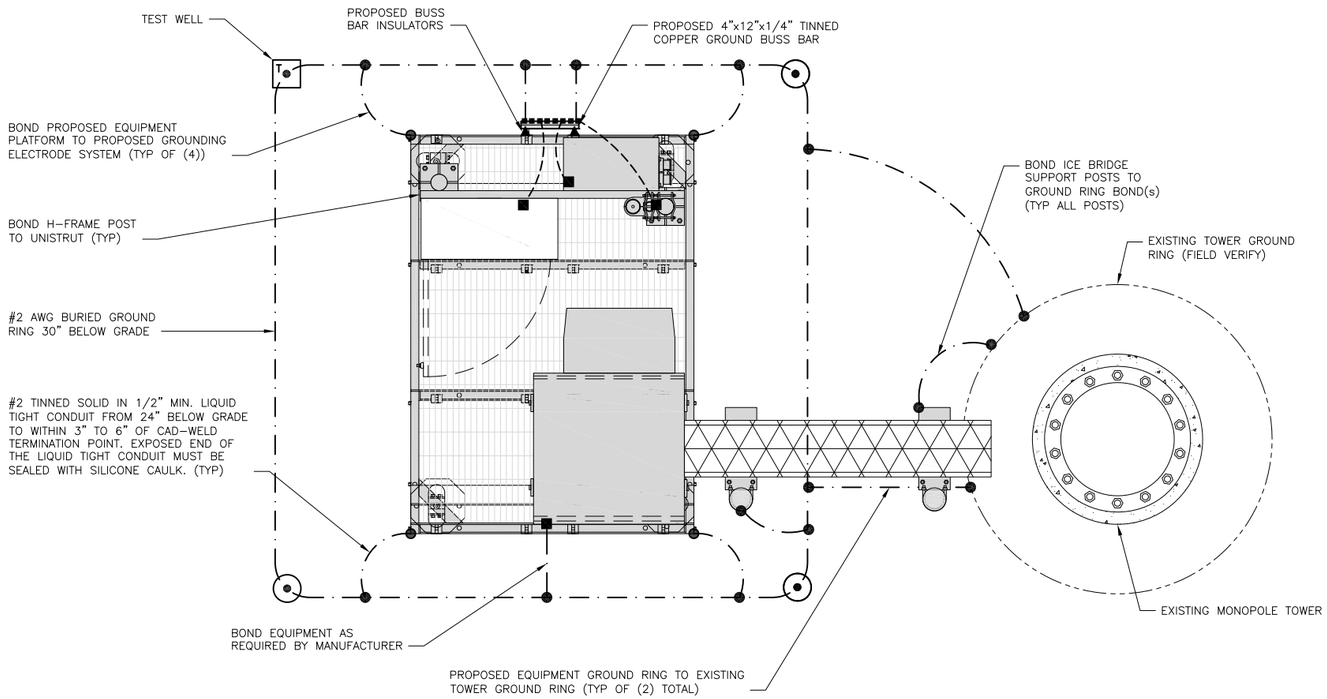
A&E PROJECT NUMBER
160318.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION
NJJER01147B
206 EVERETT ROAD
EASTON, CT 06612

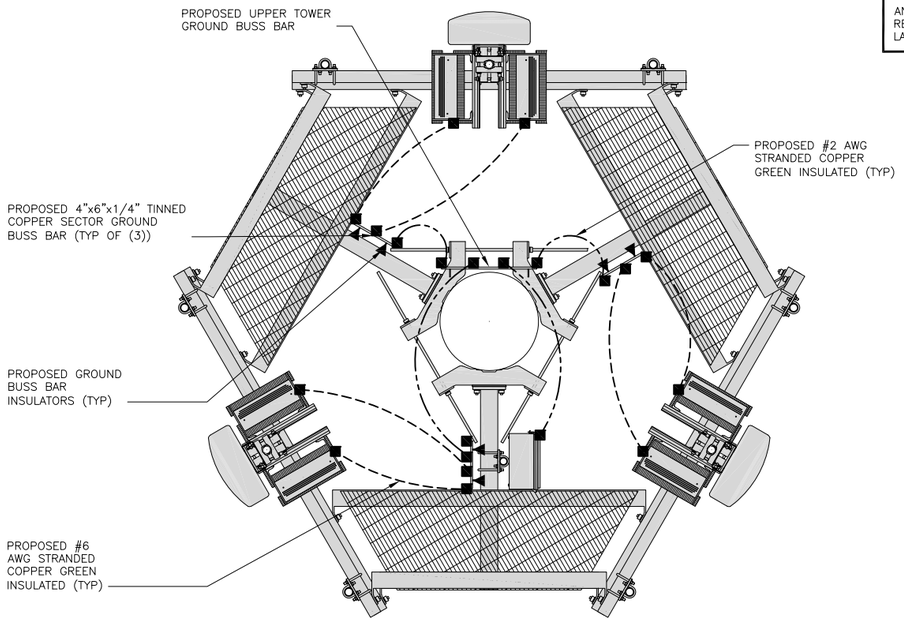
SHEET TITLE
ELECTRICAL ONE-LINE, FAULT CALCS & PANEL SCHEDULE

SHEET NUMBER
E-3



TYPICAL EQUIPMENT GROUNDING PLAN

NO SCALE | 1



TYPICAL ANTENNA GROUNDING PLAN

NO SCALE | 2

NOTES

ANTENNAS AND OVP SHOWN ARE GENERIC AND NOT REFERENCING TO A SPECIFIC MANUFACTURER. THIS LAYOUT IS FOR REFERENCE PURPOSES ONLY

- EXOTHERMIC CONNECTION
- MECHANICAL CONNECTION
- GROUND BUS BAR
- GROUND ROD
- TEST GROUND ROD WITH INSPECTION SLEEVE
- #6 AWG STRANDED & INSULATED
- #2 AWG SOLID COPPER TINNED
- #2 AWG STRANDED & INSULATED
- BUSS BAR INSULATOR

GROUNDING LEGEND

1. GROUNDING IS SHOWN DIAGRAMMATICALLY ONLY.
2. 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.
3. 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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PROJECT INFORMATION

NJJER01147B
206 EVERETT ROAD
EASTON, CT 06612

SHEET TITLE

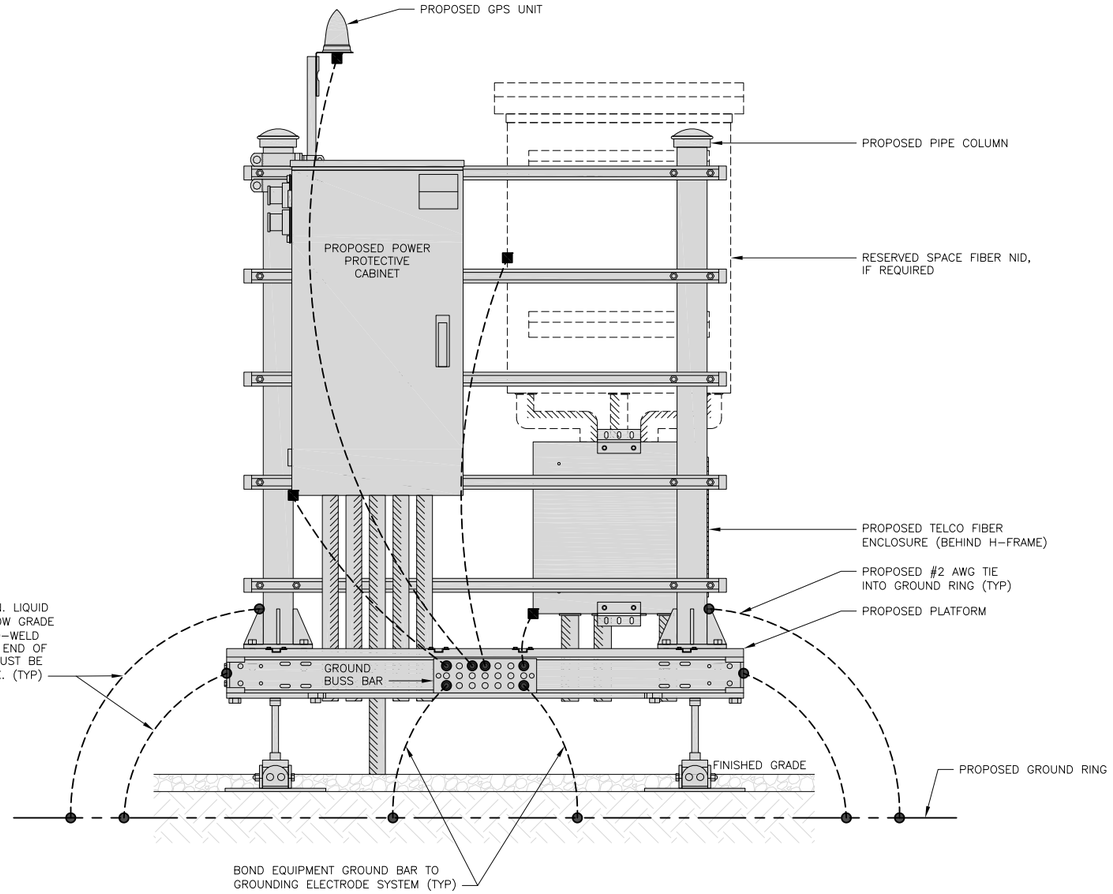
GROUNDING PLANS AND NOTES

SHEET NUMBER

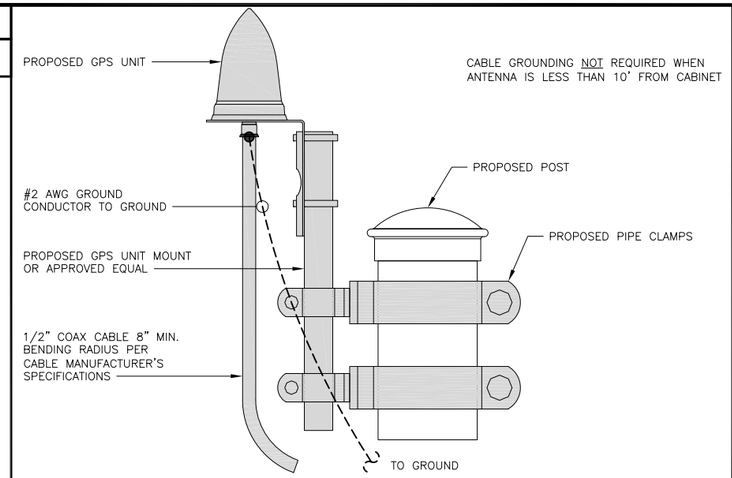
G-1

NOTES

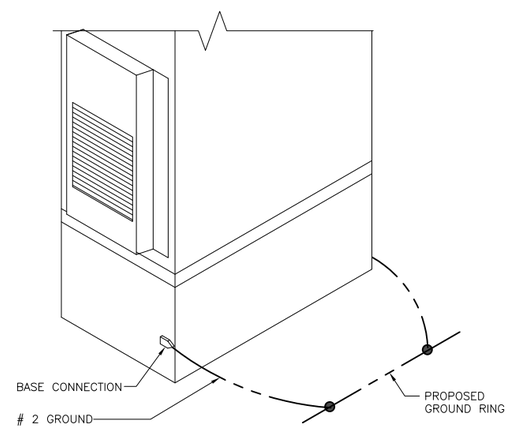
EQUIPMENT CABINET OMITTED FOR CLARITY



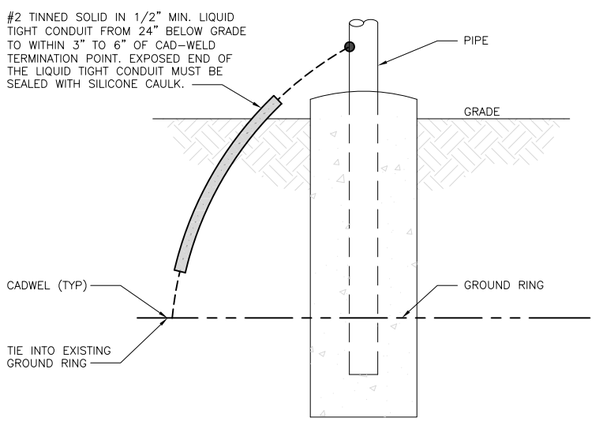
H-FRAME GROUNDING DETAIL | NO SCALE | 1



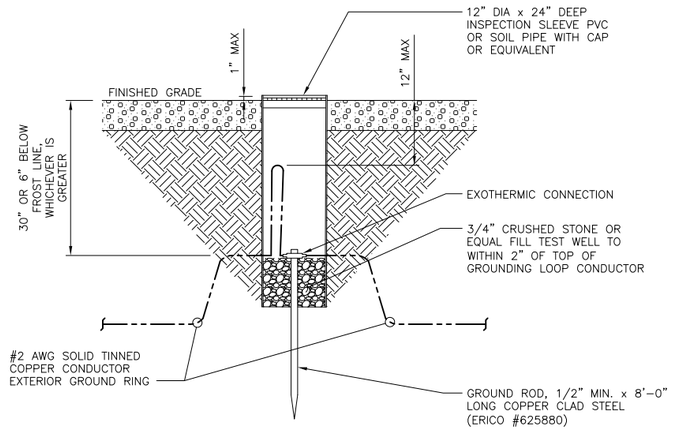
TYPICAL GPS UNIT GROUNDING | NO SCALE | 2



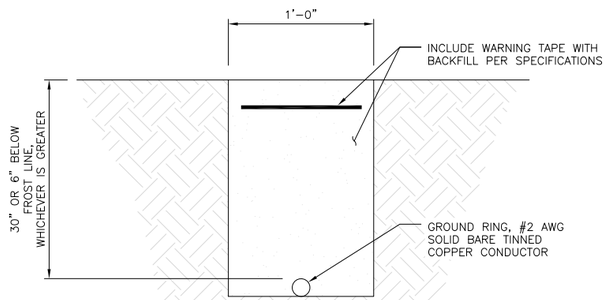
OUTDOOR CABINET GROUNDING | NO SCALE | 3



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

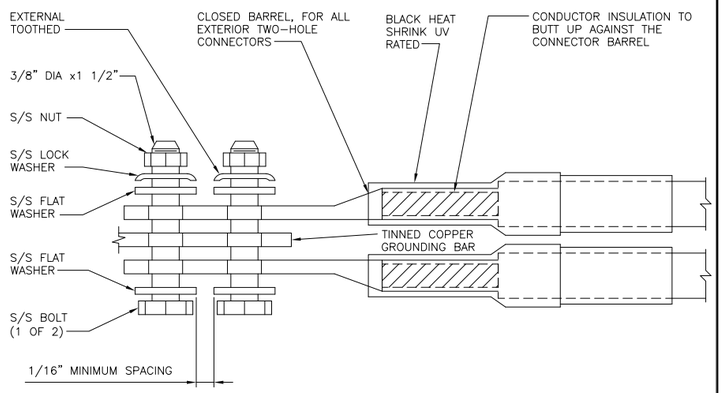
GROUNDING DETAILS

SHEET NUMBER

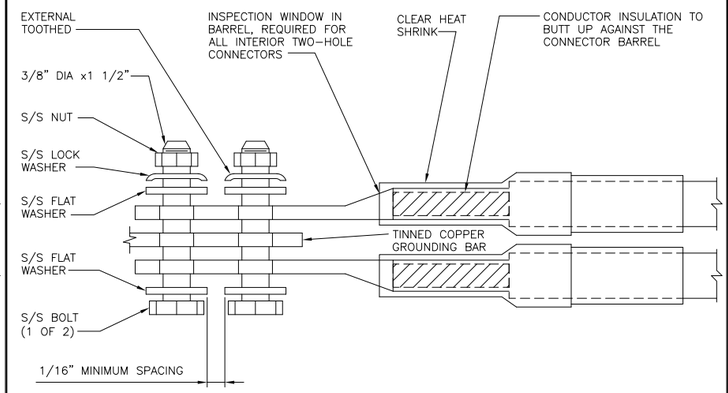
G-2

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).

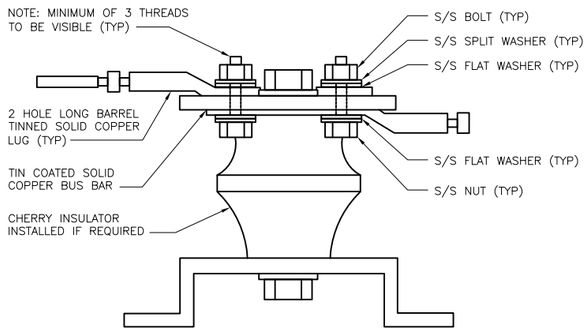
TYPICAL GROUNDING NOTES | NO SCALE | 1



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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EASTON, CT 06612

SHEET TITLE

GROUNDING DETAILS

SHEET NUMBER

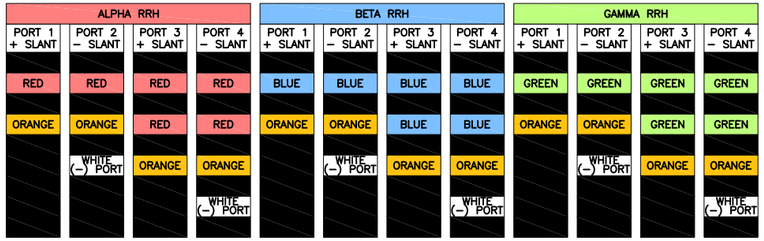
G-3

HYBRID/DISCREET CABLES

3/4" TAPE WIDTHS WITH 3/4" SPACING

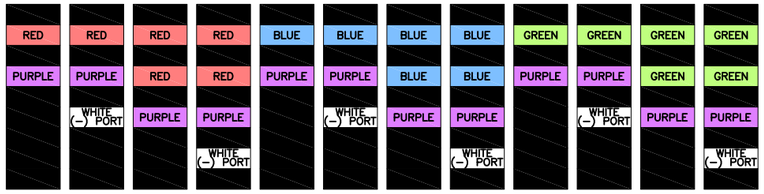
LOW–BAND RRH
(600 MHz N71 BASEBAND) +
(850 MHz N26 BAND) +
(700 MHz N29 BAND) – OPTIONAL PER MARKET

ADD FREQUENCY COLOR TO SECTOR BAND
(CBRS WILL USE YELLOW BAND)



MID–BAND RRH
(AWS BANDS N66+N70)

ADD FREQUENCY COLOR TO SECTOR BAND
(CBRS WILL USE YELLOW BANDS)



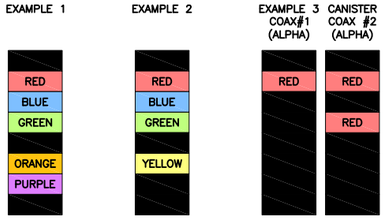
HYBRID/DISCREET CABLES

INCLUDE SECTOR BANDS BEING SUPPORTED ALONG WITH FREQUENCY BANDS.

EXAMPLE 1 – HYBRID, OR DISCREET, SUPPORTS ALL SECTORS, BOTH LOW–BANDS AND MID–BANDS.

EXAMPLE 2 – HYBRID, OR DISCREET, SUPPORTS CBRS ONLY, ALL SECTORS.

EXAMPLE 3 – MAIN COAX WITH GROUND MOUNTED RRHs.



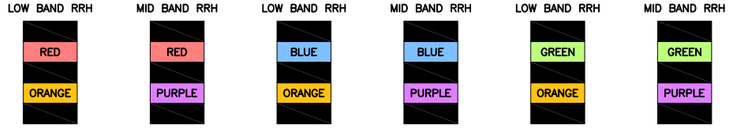
CONTRACTOR TO REFER TO FINAL CONSTRUCTION RFDS FOR ALL RD DETAILS. FINAL RFDS IS IN NEXSYSONE.

FIBER JUMPERS TO RRHs

LOW–BAND HHR FIBER CABLES HAVE SECTOR STRIPE ONLY.

POWER CABLES TO RRHs

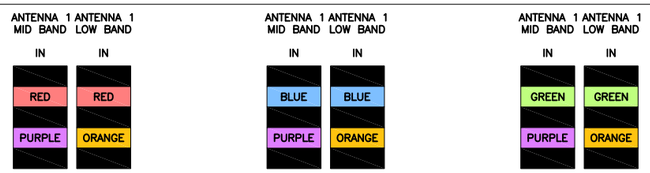
LOW–BAND RRH POWER CABLES HAVE SECTOR STRIPE ONLY



RET MOTORS AT ANTENNAS

RET CONTROL IS HANDLED BY THE MID–BAND RRH WHEN ONE SET OF RET PORTS EXIST ON ANTENNA.

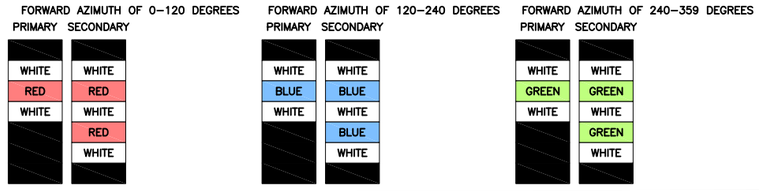
SEPARATE RET CABLES ARE USED WHEN ANTENNA PORTS PROVIDE INPUTS FOR BOTH LOW AND MID BANDS.



MICROWAVE RADIO LINKS

LINKS WILL HAVE A 1.5–2 INCH WHITE WRAP WITH THE AZIMUTH COLOR OVERLAPPING IN THE MIDDLE.
ADD ADDITIONAL SECTOR COLOR BANDS FOR EACH ADDITIONAL MW RADIO.

MICROWAVE CABLES WILL REQUIRE P–TOUCH LABELS INSIDE THE CABINET TO IDENTIFY THE LOCAL AND REMOTE SITE ID's.



RF CABLE COLOR CODES | NO SCALE | 1

LOW BANDS (N71+N26) OPTIONAL – (N29): ORANGE

AWS (N66+N70+H–BLOCK): PURPLE

CBRS TECH (3 GHz): YELLOW

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

NOT USED | NO SCALE | 4

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EASTON, CT 06612

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–DDBTXD

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

W.P.

SECTION REFERENCE

XX
X–X

DETAIL REFERENCE

XX
X–X

LEGEND

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

ABBREVIATIONS

dish wireless.
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CHAD J. CHILE
No. 23924
LICENSED
PROFESSIONAL ENGINEER

2/2/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/22

DRAWN BY:	CHECKED BY:	APPROVED BY:
CH	BLJ	BLJ

RFDS REV #: 1.0

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	1/13/22	ISSUED FOR REVIEW
0	2/2/22	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER

160318.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION

NJJER01147B
206 EVERETT ROAD
EASTON, CT 06612

SHEET TITLE

LEGEND AND ABBREVIATIONS

SHEET NUMBER

GN-1

SITE ACTIVITY REQUIREMENTS:

1. 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.

2. "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.

3. 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.

4. 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).

5. 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."

6. 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.

7. 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.

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

9. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES INCLUDING PRIVATE LOCATES SERVICES PRIOR TO THE START OF CONSTRUCTION.

10. 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.

11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND DISH PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.

12. 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.

13. 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.

14. 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.

15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.

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

17. 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.

18. 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.

19. 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.

20. 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.

21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

22. 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:

1.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

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.

7. 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.

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

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

10. 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.

11. 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.

12. 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

13. 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.

14. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

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B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/22

DRAWN BY:	CHECKED BY:	APPROVED BY:
CH	BLJ	BLJ

RFDS REV #: 1.0

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	1/13/22	ISSUED FOR REVIEW
0	2/2/22	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER

160318.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION

NJJER01147B
206 EVERETT ROAD
EASTON, CT 06612

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-2

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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STATE OF CONNECTICUT
CHAD TITLE
No. 23924
LICENSED
PROFESSIONAL ENGINEER
2/2/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/22

DRAWN BY:	CHECKED BY:	APPROVED BY:
CH	BLJ	BLJ

RFDS REV #: 1.0

CONSTRUCTION DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	1/13/22	ISSUED FOR REVIEW
0	2/2/22	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER
160318.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION

NJJER01147B
206 EVERETT ROAD
EASTON, CT 06612

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-3

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.

dish wireless.

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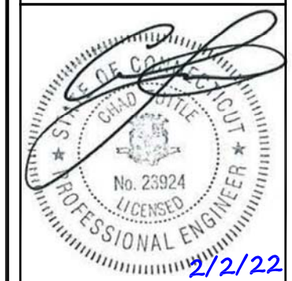

2/2/22

B&T ENGINEERING, INC.
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