



Filed by:

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

November 16, 2021

Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: **Tower Share Application**
267 Norwich Westerly Rd., N. Stonington, CT
Latitude: 41.437114
Longitude: -71.881467
Dish Site# BOBOS00044A

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 **267 Norwich Westerly Rd., N. Stonington, Connecticut**.

Dish Wireless LLC proposes to install three (3) 600/1900/2100 MHz antennas and six (6) RRUs, at the 127-foot level of the existing 150-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 September 14, 2021 Exhibit 10. Also included is a Structural Analysis prepared by TES, dated August 31, 2021, 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 N. Stonington's Planning & Zoning Commission May 6, 1999. 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 Noel Bishop, First Selectman for the Town of Westbrook, David Maiden-Building Official, as well as the tower owner (Crown Castle) and property owner (Toby Hill Farm LLC).

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 127-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 18.53% 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 N. Stonington. 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 Intent 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 127-foot level of the existing 150-foot tower would have an insignificant visual impact on the area around the tower. Dish Wireless LLC ground equipment would be installed within the existing facility compound. Dish Wireless LLC shared use would therefore not cause any significant alteration in the physical or environmental characteristics of the existing site. Additionally, as evidenced by Exhibit 7, the proposed antennas would not increase radio frequency emissions to a level at or above the Federal Communications Commission safety standard.
- D. Economic Feasibility. Dish Wireless LLC will be entering into an agreement with the owner of this facility to mutually agreeable terms. As previously mentioned, the Letter of Intent has been provided by the owner to assist Dish Wireless LLC with this tower sharing application.
- E. Public Safety Concerns. As discussed above, the tower is structurally capable of supporting Dish Wireless LLC proposed loading.

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

Attachments:



cc: Michael A. Urgo, First Selectman / with attachments
Old Town Hall, 40 Main St., North Stonington, CT 06359
Nathan Reichart, Planning, Development & Zoning Official/ with attachments
Old Town Hall, 40 Main St., North Stonington, CT 06359
North Stonington Volunteer Fire Co. / with attachments
25 Rocky Hollow Rd. North Stonington, CT 06359 (SBA 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 N. Stonington P&Z SP#99-031 (5/6/99) |
| Exhibit 7 | EME Report | EBI Consulting 11/5/21 |
| Exhibit 8 | Structural Analysis | TES 8/31/21 |
| Exhibit 9 | Mount Analysis | B+T Group 7/21/21 |
| Exhibit 10 | Construction Drawings | B+T Group 9/14/21 |

EXHIBIT 1

Copy of check

EXHIBIT 2

Letter of Intent

November 16, 2021

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: 267 Norwich Westerly Rd., N. Stonington, CT
Dish Wireless Site No: BOBOS00044A
Site No: CT01210-S

Dear Ms. Bachman:

Please let the following serve as Evidence of Intent to allow Dish Wireless' shared use of the existing SBA telecommunications site at **267 Norwich Westerly Rd., N. Stonington, CT.**

SBA Properties, 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 127' 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@sbsite.com

EXHIBIT 3

Fedex Labels

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

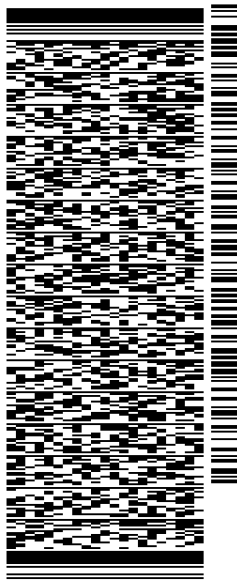
SHIP DATE: 16NOV21
ACTWGT: 2.00 LB
CAD: 105843304/NET4400

BILL SENDER

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

NEW BRITAIN CT 06051

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



J212221101801uv

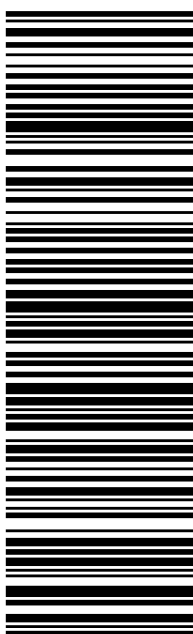
56D.J29A7E/FE4A

TRK# 7752 2722 7023
0201

WED - 17 NOV 11:30A
PRIORITY OVERNIGHT

EB BDLA

06051
CT:US BDL



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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.



TRACK ANOTHER SHIPMENT

775227227023



[ADD NICKNAME](#)

ON TIME

Scheduled delivery:
Wednesday, 11/17/2021 before 11:30 am



PICKED UP
WESTBOROUGH, MA

[GET STATUS UPDATES](#)

FROM
WESTBOROUGH, MA US

TO
NEW BRITAIN, CT US
[MANAGE DELIVERY](#)

Travel History

Shipment Facts

Travel History

TIME ZONE
Local Scan Time



Tuesday, November 16, 2021

4:18 PM

WESTBOROUGH, MA

Picked up
Tendered at FedEx Office

1:48 PM

Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBER
775227227023

SERVICE
FedEx Priority Overnight

WEIGHT
2 lbs / 0.91 kgs

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
2 lbs / 0.91 kgs

TERMS
Shipper

SHIPPER REFERENCE
10-56-92009-6089

PACKAGING
FedEx Pak

SPECIAL HANDLING SECTION
Deliver Weekday

ACTUAL PICK UP

STANDARD TRANSIT

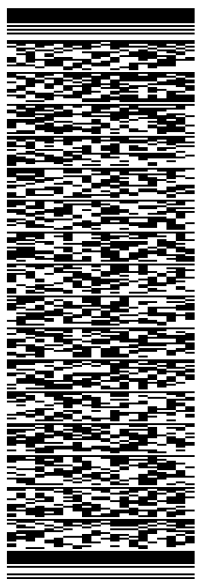
SCHEDULED DELIVERY

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

SHIP DATE: 16NOV21
ACTWGT: 1.00 LB
CAD: 105843304/NET4400
BILL SENDER

TO MICHAEL A. URGO
OLD TOWN HALL
FIRST SELECTMAN
40 MAIN ST
NORTH STONINGTON CT 06359
(508) 251-0720 X 3807
REF: 1056-92009-6089
PO: DEPT:

56D.J29A7E/FE4A

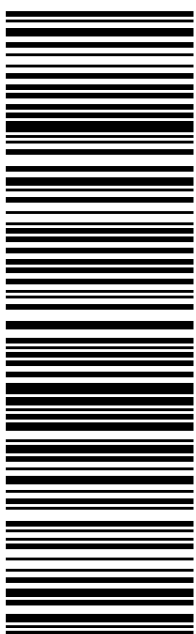


J212221101801uv

TRK# 7752 2726 7336
0201
WED - 17 NOV 1:00P
PRIORITY OVERNIGHT

EB GONA

06359
CT-US BDL



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775227267336



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Wednesday, 11/17/2021 before 1:00 pm



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WESTBOROUGH, MA

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FROM
SBA COMMUNICATIONS CORPORATION
Rick Woods
134 Flanders Rd
Suite 125
WESTBOROUGH, MA US 01581
508-614-0389

TO
Michael A. Urgo
Old Town Hall
First Selectman
40 Main St
NORTH STONINGTON, CT US 06359
508-251-0720

MANAGE DELIVERY

Travel History

Shipment Facts

Travel History

TIME ZONE
Local Scan Time

Tuesday, November 16, 2021

4:18 PM

WESTBOROUGH, MA

Picked up
Tendered at FedEx Office

1:50 PM

Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBER
775227267336

SERVICE
FedEx Priority Overnight

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TOTAL PIECES
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TOTAL SHIPMENT WEIGHT
1 lbs / 0.45 kgs

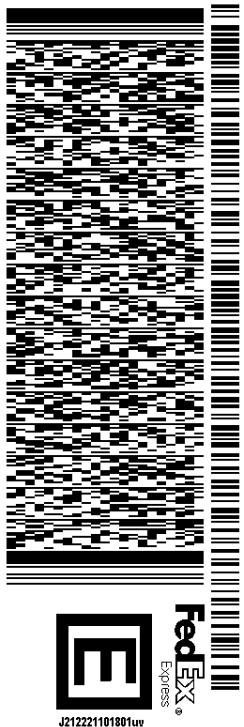
TERMS

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

SHIP DATE: 16NOV21
ACTWGT: 1.00 LB
CAD: 105843304/NET4400
BILL SENDER

TO NATHAN REICHART
OLD TOWN HALL
PLAN, DEVELOP. & ZONE OFFICER
40 MAIN ST
NORTH STONINGTON CT 06359
(508) 251-0720 X 3807 REF: 1056-92009-6089
INV: DEPT:
PO:

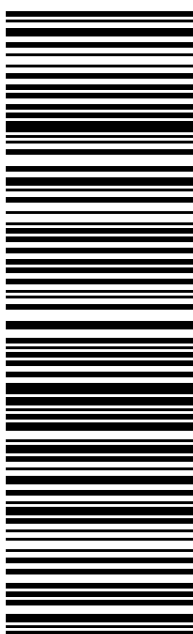
56D.J29A7E/FE4A



TRK# 7752 2729 2705
0201
WED - 17 NOV 1:00P
PRIORITY OVERNIGHT

EB GONA

06359
CT-US BDL



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775227292705



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Wednesday, 11/17/2021 before 1:00 pm



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WESTBOROUGH, MA

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FROM
SBA COMMUNICATIONS CORPORATION
Rick Woods
134 Flanders Rd
Suite 125
WESTBOROUGH, MA US 01581
508-614-0389

TO
Nathan Reichart
Old Town Hall
Plan, Develop. & Zone Officer
40 Main St
NORTH STONINGTON, CT US 06359
508-251-0720

MANAGE DELIVERY

Travel History

Shipment Facts

Travel History

TIME ZONE
Local Scan Time

Tuesday, November 16, 2021

4:18 PM

WESTBOROUGH, MA

Picked up
Tendered at FedEx Office

1:51 PM

Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBER
775227292705

SERVICE
FedEx Priority Overnight

WEIGHT
1 lbs / 0.45 kgs

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
1 lbs / 0.45 kgs

TERMS

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

SHIP DATE: 16NOV21
ACTWGT: 1.00 LB
CAD: 105843304/NET4400
BILL SENDER

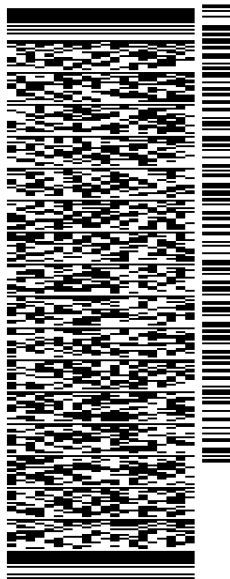
TO

NO. STONINGTON VOL. FIRE CO.
25 ROCKY HOLLOW RD

NORTH STONINGTON CT 06359

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

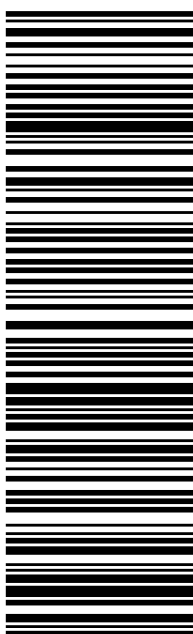
56D.J29A7E/FE4A



TRK# 7752 2732 7552 WED - 17 NOV 1:00P
0201 PRIORITY OVERNIGHT

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06359
CT-US BDL



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775227327552



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WESTBOROUGH, MA

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FROM
SBA COMMUNICATIONS CORPORATION
Rick Woods
134 Flanders Rd
Suite 125
WESTBOROUGH, MA US 01581
508-614-0389

TO
No. Stonington Vol. Fire Co.
25 Rocky Hollow Rd
NORTH STONINGTON, CT US 06359
508-251-0720

MANAGE DELIVERY

Travel History

Shipment Facts

Travel History

TIME ZONE
Local Scan Time

Tuesday, November 16, 2021

4:18 PM

WESTBOROUGH, MA

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Tendered at FedEx Office

1:53 PM

Shipment information sent to FedEx

Shipment Facts

TRACKING NUMBER
775227327552

SERVICE
FedEx Priority Overnight

WEIGHT
1 lbs / 0.45 kgs

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
1 lbs / 0.45 kgs

TERMS

EXHIBIT 4

Property Card

Town of North Stonington, CT

Property Listing Report

Map Block Lot **109 3238**

Building # **1** Unique Identifier **I0182600**

Property Information

| | |
|-------------------|---|
| Property Location | 267 NRWH WSTLY RD |
| Mailing Address | 40 MAIN ST NORTH STONINGTON CT 063590279 |
| Land Use | Governmental Building |
| Zoning Code | R40 |
| Neighborhood | C130 |

| | |
|--------------|--------------------------------------|
| Owner | NO STONINGTON VOL FIRE CO INC |
| Co-Owner | |
| Book / Page | 0111/0760 |
| Land Class | Commercial |
| Census Tract | 7071 |
| Acreage | 2.57 |

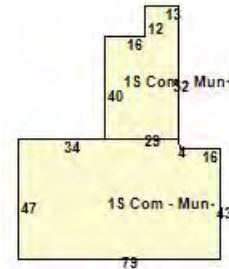
Valuation Summary

(Assessed value = 70% of Appraised Value)

| Item | Appraised | Assessed |
|--------------|---------------|---------------|
| Buildings | 392700 | 274890 |
| Outbuildings | 22500 | 15750 |
| Land | 138200 | 96740 |
| Total | 553400 | 387380 |

Utility Information

| | |
|--------------|-----------|
| Electric | NA |
| Gas | NA |
| Sewer | NA |
| Public Water | NA |
| Well | NA |



Primary Construction Details

| | |
|-------------------|---------------------|
| Year Built | 1964 |
| Building Desc. | Commercial |
| Building Style | |
| Stories | 1 |
| Exterior Walls | Concr/Cinder |
| Exterior Walls 2 | Brick Veneer |
| Interior Walls | None/Minumum |
| Interior Walls 2 | Panel |
| Interior Floors 1 | Concrete |
| Interior Floors 2 | Hardwood |

| | |
|----------------|------------------|
| Heating Fuel | Oil |
| Heating Type | Hot Water |
| AC Type | None |
| Bedrooms | 0 |
| Full Bathrooms | 0 |
| Half Bathrooms | 0 |
| Extra Fixtures | 0 |
| Total Rooms | 0 |
| Bath Style | NA |
| Kitchen Style | |
| Occupancy | 0 |

| | |
|--------------------|------------------------|
| Building Use | Governmental |
| Building Condition | Average |
| Frame Type | C |
| Fireplaces | 0 |
| Bsmt Gar | 0 |
| Fin Bsmt Area | 900 |
| Fin Bsmt Quality | Average Quality |
| Building Grade | 0 |
| Roof Style | Flat |
| Roof Cover | Tar and Gravel |

Report Created On

10/6/2021

Town of North Stonington, CT

Property Listing Report

Map Block Lot **109 3238**

Building # **1**

Unique Identifier

10182600

Detached Outbuildings

| Type | Description | Area (sq ft) | Condition | Year Built |
|--------|-------------|--------------|-----------|------------|
| Shed | Frame | 100 | Average | 2000 |
| Fence | 4 Ft Chain | 75 | Average | 1970 |
| Paving | Paving | 17500 | Average | 2000 |
| Shed | Frame | 80 | Average | 1970 |
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Attached Extra Features

| Type | Description | Area (sq ft) | Condition | Year Built |
|------|-------------|--------------|-----------|------------|
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Sales History

| Owner of Record | Book/ Page | Sale Date | Sale Price |
|-------------------------------|------------|------------|------------|
| NO STONINGTON VOL FIRE CO INC | 0111_0760 | 10/8/1996 | 0 |
| TOWN OF NORTH STONINGTON | 0108_0651 | 1/25/1996 | 0 |
| STATE OF CONNECTICUT | 0026_0498 | 12/17/1954 | 0 |

EXHIBIT 5

Property Map

Google Maps 267 Norwich-Westerly Rd



Map data ©2021 200 ft

Google Maps 267 Norwich-Westerly Rd



Imagery ©2021 Maxar Technologies, RIGIS, USDA Farm Service Agency, Map data ©2021 200 ft

EXHIBIT 6

Zoning Approval



Town of

NORTH STONINGTON, CT.

PLANNING & ZONING COMMISSION

May 13, 1999

CERTIFIED MAIL

SBA Inc.
125 Shaw Street
Suite 116
New London, Connecticut 06320

NOTICE OF DECISION

At the Special Meeting of the North Stonington Planning & Zoning Commission held on Thursday, May 6, 1999, at the New Town Hall located at 40 Main Street, North Stonington, Connecticut, the Commission acted as follows:

SP#99-031 Application of SBA Inc., of 125 Shaw Street, Suite 116, New London, Connecticut and Sprint Spectrum, LP (Sprint PCS) of 9 Barnes Industrial Road, Wallingford, Connecticut to allow a Special Permit for a 150' multi-tenant monopole and related equipment on land located at the intersection of Route 2/Rocky Hollow Road at 267 Norwich-Westerly Road (a.k.a. Route 2) land is owned by North Stonington Volunteer Fire Co. Inc., Tax map #221, Lot #1.01, was approved with the following conditions applied:

- 1). Iron Pins shall be set before signing and the proper symbol shall be shown on Sheet S-1, enlarged view.
- 2). Note shall be amended to the site plan indicating that no more than 4 antenna support platforms each holding no more than 12 panel antennas, are approved; and the installation of additional support platforms and/or antennas shall require an approved site plan modification.
- 3). Note symbols #8 through #10 on Sheet C-2 shall be removed from the site plan or labeled as "omitted".
- 4). SE&SC narrative note #17 on Sheet C-4 shall be moved to under note #10 and renumbered.
- 5). The words "with topsoil added" shall be inserted into note #13 on Sheet C-4 after the word "roughened."
- 6). A description of the lightening suppression system shall be added to the site plan.

EXHIBIT 7

EME Report

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

Dish Wireless Existing Facility

Site ID: BOBOS00044A

267 Norwich Westerly Road
North Stonington, Connecticut 06359

November 5, 2021

EBI Project Number: 6221006469

| Site Compliance Summary | |
|---|------------------|
| Compliance Status: | COMPLIANT |
| Site total MPE% of FCC general population allowable limit: | 18.53% |

November 5, 2021

Dish Wireless

Emissions Analysis for Site: BOBOS00044A

EBI Consulting was directed to analyze the proposed Dish Wireless facility located at **267 Norwich Westerly Road in North Stonington, Connecticut** for the purpose of determining whether the emissions from the Proposed Dish Wireless Antenna Installation located on this property are within specified federal limits.

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

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

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

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

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed Dish Wireless Wireless antenna facility located at 267 Norwich Westerly Road in North Stonington, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since Dish Wireless is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 20 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower.

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

- 1) 4 n71 channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 4 n70 channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 3) 4 n66 channels (AWS Band - 2190 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 5) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 20 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative

estimate as gain reductions for these particular antennas are typically much higher in this direction.

- 6) The antennas used in this modeling are the JMA MX08FRO665-21 for the 600 MHz / 1900 MHz / 2190 MHz channel(s) in Sector A, the JMA MX08FRO665-21 for the 600 MHz / 1900 MHz / 2190 MHz channel(s) in Sector B, the JMA MX08FRO665-21 for the 600 MHz / 1900 MHz / 2190 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 20 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 7) The antenna mounting height centerline of the proposed antennas is 127 feet above ground level (AGL).
- 8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.
- 9) All calculations were done with respect to uncontrolled / general population threshold limits.

Dish Wireless Site Inventory and Power Data

| | | | | | |
|---------------------|-----------------------------------|---------------------|-----------------------------------|---------------------|-----------------------------------|
| Sector: | A | Sector: | B | Sector: | C |
| Antenna #: | 1 | Antenna #: | 1 | Antenna #: | 1 |
| Make / Model: | JMA MX08FRO665-21 | Make / Model: | JMA MX08FRO665-21 | Make / Model: | JMA MX08FRO665-21 |
| Frequency Bands: | 600 MHz / 1900 MHz / 2190 MHz | Frequency Bands: | 600 MHz / 1900 MHz / 2190 MHz | Frequency Bands: | 600 MHz / 1900 MHz / 2190 MHz |
| Gain: | 17.45 dBd / 22.65 dBd / 22.65 dBd | Gain: | 17.45 dBd / 22.65 dBd / 22.65 dBd | Gain: | 17.45 dBd / 22.65 dBd / 22.65 dBd |
| Height (AGL): | 127 feet | Height (AGL): | 127 feet | Height (AGL): | 127 feet |
| Channel Count: | 12 | Channel Count: | 12 | Channel Count: | 12 |
| Total TX Power (W): | 440 Watts | Total TX Power (W): | 440 Watts | Total TX Power (W): | 440 Watts |
| ERP (W): | 5,236.31 | ERP (W): | 5,236.31 | ERP (W): | 5,236.31 |
| Antenna AI MPE %: | 1.62% | Antenna BI MPE %: | 1.62% | Antenna CI MPE %: | 1.62% |

| Site Composite MPE % | |
|----------------------------------|---------------|
| Carrier | MPE % |
| Dish Wireless (Max at Sector A): | 1.62% |
| Sprint | 4.22% |
| AT&T | 8.18% |
| T-Mobile | 2.28% |
| Verizon | 2.23% |
| Site Total MPE % : | 18.53% |

| Dish Wireless MPE % Per Sector | |
|--------------------------------|---------------|
| Dish Wireless Sector A Total: | 1.62% |
| Dish Wireless Sector B Total: | 1.62% |
| Dish Wireless Sector C Total: | 1.62% |
| | |
| Site Total MPE % : | 18.53% |

| Dish Wireless Maximum MPE Power Values (Sector A) | | | | | | | |
|--|------------|-------------------------|---------------|---|-----------------|---|------------------|
| Dish Wireless Frequency Band / Technology (Sector A) | # Channels | Watts ERP (Per Channel) | Height (feet) | Total Power Density ($\mu\text{W}/\text{cm}^2$) | Frequency (MHz) | Allowable MPE ($\mu\text{W}/\text{cm}^2$) | Calculated % MPE |
| Dish Wireless 600 MHz n71 | 4 | 223.68 | 127.0 | 2.20 | 600 MHz n71 | 400 | 0.55% |
| Dish Wireless 1900 MHz n70 | 4 | 542.70 | 127.0 | 5.33 | 1900 MHz n70 | 1000 | 0.53% |
| Dish Wireless 2190 MHz n66 | 4 | 542.70 | 127.0 | 5.33 | 2190 MHz n66 | 1000 | 0.53% |
| | | | | | | Total: | 1.62% |

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

Summary

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

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

| Dish Wireless Sector | Power Density Value (%) |
|---|-------------------------|
| Sector A: | 1.62% |
| Sector B: | 1.62% |
| Sector C: | 1.62% |
| Dish Wireless Maximum MPE % (Sector A): | 1.62% |
| | |
| Site Total: | 18.53% |
| | |
| Site Compliance Status: | COMPLIANT |

The anticipated composite MPE value for this site assuming all carriers present is **18.53%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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

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 150 ft Valmont Monopole
Customer Name: SBA Communications Corp
Customer Site Number: CT01210-S
Customer Site Name: North Stonington
Carrier Name: Dish Wireless (App#: 163157-1)
Carrier Site ID / Name: BOBOS00044A / 0
Site Location: 267 Norwich Westerly Road
N. Stonington, Connecticut
New London County
Latitude: 41.437066
Longitude: -71.881488

Analysis Result:

Max Structural Usage: 99.9% [Pass]
Max Foundation Usage: 84.0% [Pass]
Additional Usage Caused by New Mount/Mount Modification: N/A



Report Prepared By: Changzhi Zang

Introduction

The purpose of this report is to summarize the analysis results on the 150 ft Valmont Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

| | |
|------------------------------|--|
| Tower Drawings | Monopole original structural design report prepared by Valmont. Dated 08-31-1999. Order No 18771-99. Monopole previous structural report prepared by FDH Engineering, Inc. Dated 03-05-2015. Project No 15BFHB1400. |
| Foundation Drawing | Valmont Microflect, DWG # 2856-F dated 07/15/1999 |
| Geotechnical Report | Monopole geotechnical report prepared by Jaworski Geotech, Inc. Dated 06-08-1999. Project No 99128G. |
| Modification Drawings | N/A |
| Mount Analysis | T-Mobile's App#: 116563, v3 |

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 $V_{ult} = 135.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 105.0$ mph (3-Sec. Gust) |
| Wind Speed with Ice: | 50 mph (3-Sec. Gust) with 3/4" radial ice concurrent |
| Operational Wind Speed: | 60 mph + 0" Radial ice |
| Standard/Codes: | TIA-222-G-2 / 2015 IBC / 2018 Connecticut State Building Code |
| Exposure Category: | C |
| Structure Class: | II |
| Topographic Category: | 1 |
| Crest Height: | 0 ft |
| Seismic Parameters: | $S_S = 0.162$, $S_1 = 0.058$ |

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 | 147.0 | 3 | Ericsson Air 21 B2A/B4P - Panel | (1) Low Profile w/ Handrail Kit and Tie Back Kit (Commscope MT-195-14 & VSR-MS-B) (1) Platform Reinforcement Kit (Sitepro PRK-1245L), (1) V-Brace Kit (Sitepro PRK-SFS-L) & (3) New 2.5 STD 8' Mount Pipes | (8) 1 5/8" (1) 1 5/8" Fiber (3) 1.90" Fiber | T-Mobile |
| 2 | | 3 | Ericsson Air 21 B4A/B2P - Panel | | | |
| 3 | | 3 | RFS APXVAALL24-43-U-NA20 - Panel | | | |
| 4 | | 3 | Ericsson KRY 112 144/1 TMA's | | | |
| 5 | | 3 | Ericsson 4449 B71 + B85 RRU's | | | |
| 6 | 137.0 | 3 | Antel BXA-70063/6CF - Panel | Low Profile Platform | (12) 1 5/8" | Verizon |
| 7 | | 6 | Antel LPA-80080/4CF - Panel | | | |
| 8 | | 3 | Ryma MGD5-800T2 - Panel | | | |
| 9 | | 6 | RFS FD9R6004/2C-3L Diplexers | | | |
| 10 | | 2 | Cleargain 850/1900 TMA's | | | |
| 15 | 120.0 | 3 | Commscope NNVV-65B-R4 - Panel | Platform w/ Handrail (Sitepro RMQP-496-HK) | (4) 1-1/4" Fiber | Sprint Nextel |
| 16 | 117.0 | 3 | RFS APXVTM14-C-I20 - Panel | | | |
| 17 | | 3 | ALU 1900 Mhz | | | |
| 18 | | 6 | ALU 800 Mhz | | | |
| 19 | | 3 | ALU TD-RRH8x20-25 | | | |
| 20 | 107.0 | 3 | Kathrein 7770 | Low Profile Platform w/Site Pro 1 HRK14 | (12) 1 5/8" (3) 3" Conduit {Conduit 1: [(1) 1/2" Fiber + (2) 3/4" DC] Conduit 2: [(1) 1/2" Fiber + (2) 1" DC] Conduit 3: [(1) 1" DC]} | AT&T |
| 21 | | 6 | Cci DMP65R-BU8DA | | | |
| 22 | | 6 | Powerwave LGP21401 TMA | | | |
| 23 | | 3 | Ericsson RRUS 4449 B5/B12 | | | |
| 24 | | 3 | Ericsson RRUS 4478 B14 | | | |
| 25 | | 3 | Ericsson RRUS 8843 B2 B66A | | | |
| 26 | | 1 | Raycap DC6-48-60-18-8F | | | |
| 27 | | 1 | Raycap DC9-48-60-24-8C-EV | | | |

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 |
|-------|----------------|------|------------------------------------|--------------------------------------|--------------------|------------------|
| 11 | 127.0 | 3 | JMA Wireless MX08FRO665-21 - Panel | Platform w/ Handrail [MC-PK8-DSH] | (1) 1.6" Hybrid | Dish Wireless |
| 12 | | 3 | Fujitsu TA08025-B605 - RRU | | | |
| 13 | | 3 | Fujitsu TA08025-B604 - RRU | | | |
| 14 | | 1 | Raycap RDIDC-9181-PF-48 - COVP | | | |

All the proposed transmission lines are assumed running outside of the pole shafts. These lines shall be strapped tightly to the face of the pole shafts. Stacking lines is not allowed.

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: | 99.9% | 85.1% | 70.9% |
| Pass/Fail | Pass | Pass | Pass |

Foundations

| | Moment (Kip-Ft) | Shear (Kips) | Axial (Kips) |
|--------------------|-----------------|--------------|--------------|
| Analysis Reactions | 5155.9 | 46.7 | 55.9 |

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 1.6146 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 ANSI/TIA-222-G standards, the 2015 IBC and the 2018 Connecticut State Building Code under the design basic wind speed 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 99.86% at 99.7ft

Structure: CT01210-S-SBA
Site Name: North Stonington
Height: 150.00 (ft)
Base Elev: 0.000 (ft)

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

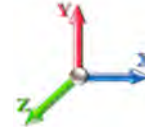
8/31/2021



Page: 1

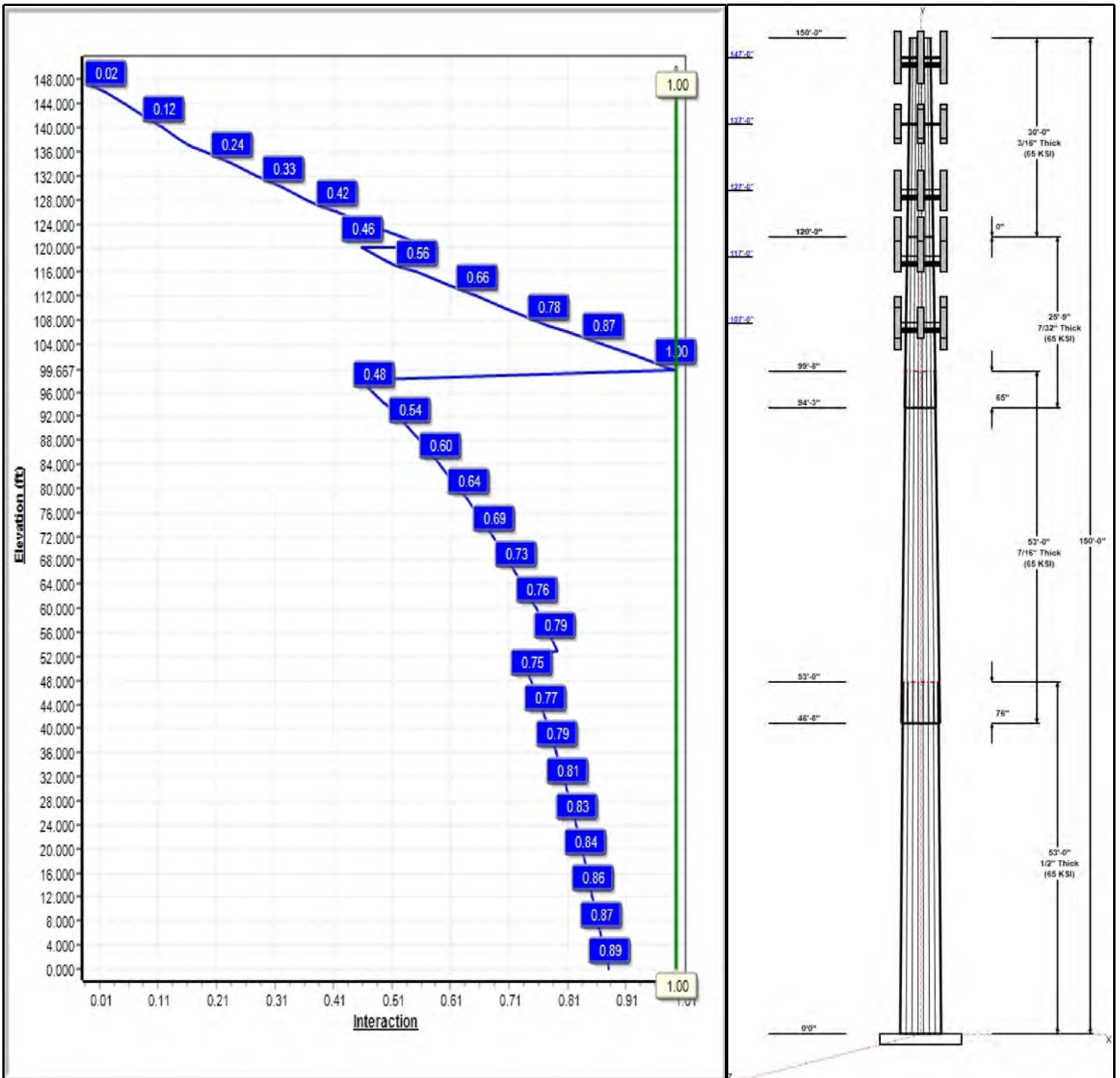
Dead Load Factor: 1.20
Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 105 mph Wind



Iterations: 28

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Structure: CT01210-S-SBA

Type: Tapered
Site Name: North Stonington
Height: 150.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 16 Sided
Taper: 0.18000

8/31/2021

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Shaft Properties

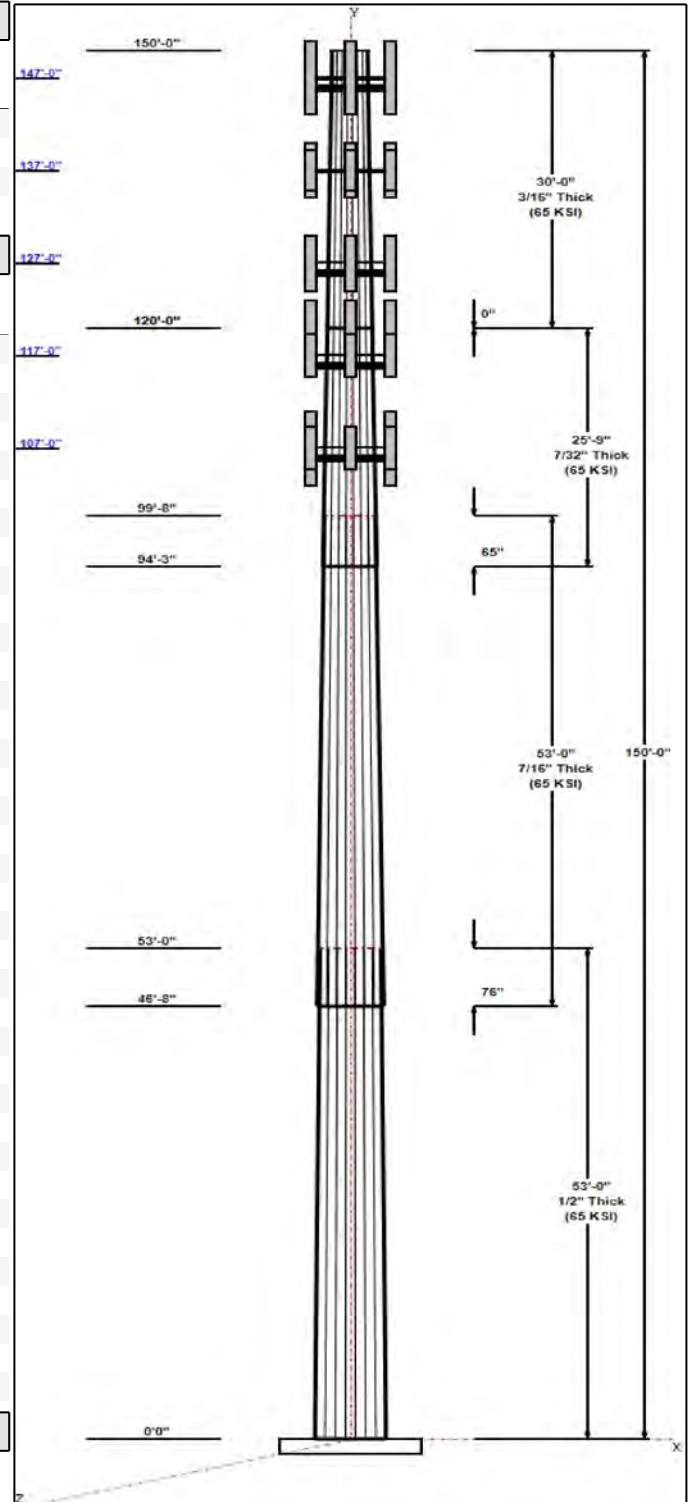
| Seq | Length (ft) | Top (in) | Bottom (in) | Thick (in) | Joint Type | Taper | Grade (ksi) |
|-----|-------------|----------|-------------|------------|------------|---------|-------------|
| 1 | 53.00 | 40.46 | 50.00 | 0.500 | | 0.18000 | 65 |
| 2 | 53.00 | 32.93 | 42.47 | 0.438 | Slip | 0.18000 | 65 |
| 3 | 25.75 | 29.71 | 34.35 | 0.219 | Slip | 0.18000 | 65 |
| 4 | 30.00 | 24.31 | 29.71 | 0.188 | Butt | 0.18000 | 65 |

Discrete Appurtenances

| Attach Elev (ft) | Force Elev (ft) | Qty | Description | Carrier |
|------------------|-----------------|-----|------------------------------|---------------|
| 150.00 | 153.50 | 1 | Lightning Rod | --- |
| 147.00 | 147.00 | 3 | Ericsson Air 21 B2A/B4P | T-Mobile |
| 147.00 | 147.00 | 3 | Ericsson Air 21 B4A/B2P | T-Mobile |
| 147.00 | 147.00 | 3 | RFS | T-Mobile |
| 147.00 | 147.00 | 3 | Ericsson KRY 112 144/1 | T-Mobile |
| 147.00 | 147.00 | 3 | Ericsson 4449 B71 + B85 | T-Mobile |
| 147.00 | 147.00 | 1 | Platform w/ Hand Rail | T-Mobile |
| 147.00 | 147.00 | 1 | Tie Back Kit (Commscope) | T-Mobile |
| 147.00 | 147.00 | 1 | Rreinforcement Kit (Sitepro) | T-Mobile |
| 147.00 | 147.00 | 1 | V-Brace Kit (Sitepro) | T-Mobile |
| 137.00 | 137.00 | 3 | Antel BXA-70063/6CF | Verizon |
| 137.00 | 137.00 | 6 | Antel LPA-80080/4CF | Verizon |
| 137.00 | 137.00 | 3 | Rymsa MGD5-800T2 | Verizon |
| 137.00 | 137.00 | 6 | RFS FD9R6004/2C-3L | Verizon |
| 137.00 | 137.00 | 2 | Cleargain 850/1900 TMA's | Verizon |
| 137.00 | 137.00 | 1 | Low Profile Platform | Verizon |
| 127.00 | 127.00 | 3 | JMA Wireless | Dish Wireless |
| 127.00 | 127.00 | 3 | Fujitsu TA08025-B605 | Dish Wireless |
| 127.00 | 127.00 | 3 | Fujitsu TA08025-B604 | Dish Wireless |
| 127.00 | 127.00 | 1 | Raycap | Dish Wireless |
| 127.00 | 127.00 | 1 | MC-PK8-DSH | Dish Wireless |
| 117.00 | 117.00 | 3 | RFS APXVTM14-C-I20 | Sprint Nextel |
| 117.00 | 120.00 | 3 | Commscope | Sprint Nextel |
| 117.00 | 117.00 | 3 | ALU 1900 Mhz | Sprint Nextel |
| 117.00 | 117.00 | 6 | ALU 800 Mhz | Sprint Nextel |
| 117.00 | 117.00 | 3 | ALU TD-RRH8x20-25 | Sprint Nextel |
| 117.00 | 117.00 | 1 | Sitepro RMQP-496-HK | Sprint Nextel |
| 107.00 | 107.00 | 3 | Ericsson 4449 B5/B12 | AT&T |
| 107.00 | 107.00 | 3 | Ericsson RRUS 4478 B14 | AT&T |
| 107.00 | 107.00 | 3 | Ericsson 8843 B2 B66A | AT&T |
| 107.00 | 107.00 | 1 | Raycap | AT&T |
| 107.00 | 107.00 | 1 | Site Pro HRK14 | AT&T |
| 107.00 | 107.00 | 6 | Cci DMP65R-BU8DA | AT&T |
| 107.00 | 107.00 | 1 | Raycap DC6-48-60-18-8F | AT&T |
| 107.00 | 107.00 | 3 | Powerwave 7770 | AT&T |
| 107.00 | 107.00 | 6 | Powerwave/LGP21401 | AT&T |
| 107.00 | 107.00 | 1 | Low Profile Platform | AT&T |

Linear Appurtenances

| Elev From (ft) | Elev To (ft) | Placement | Description | Carrier |
|----------------|--------------|-----------|--------------|---------------|
| 3.00 | 147.00 | Inside | 1 5/8" Coax | T-Mobile |
| 3.00 | 147.00 | Inside | 1 5/8" Fiber | T-Mobile |
| 3.00 | 147.00 | Inside | 1.90" Fiber | T-Mobile |
| 3.00 | 137.00 | Inside | 1 5/8" Coax | Verizon |
| 3.00 | 127.00 | Inside | 1.6" Hybrid | Dish Wireless |



Structure: CT01210-S-SBA

| | | |
|------------------------------------|-----------------------------|-----------|
| Type: Tapered | Base Shape: 16 Sided | 8/31/2021 |
| Site Name: North Stonington | Taper: 0.18000 | |
| Height: 150.00 (ft) | | |
| Base Elev: 0.00 (ft) | | Page: 3 |



| | | | | |
|------|--------|--------|------------------|---------------|
| 3.00 | 117.00 | Inside | 1-1/4" Fiber | Sprint Nextel |
| 3.00 | 107.00 | Inside | 1 5/8" Coax | AT&T |
| 3.00 | 107.00 | Inside | 1" DC | AT&T |
| 3.00 | 107.00 | Inside | 1/2" Fiber Cable | AT&T |
| 3.00 | 107.00 | Inside | 3" Coax | AT&T |
| 3.00 | 107.00 | Inside | 3/4" DC | AT&T |

Anchor Bolts

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

Base Plate

| Thickness (in) | Specifications (in) | Grade (ksi) | Geometry |
|----------------|---------------------|-------------|----------|
| 2.7500 | 64.3 | 60.0 | Polygon |

Reactions

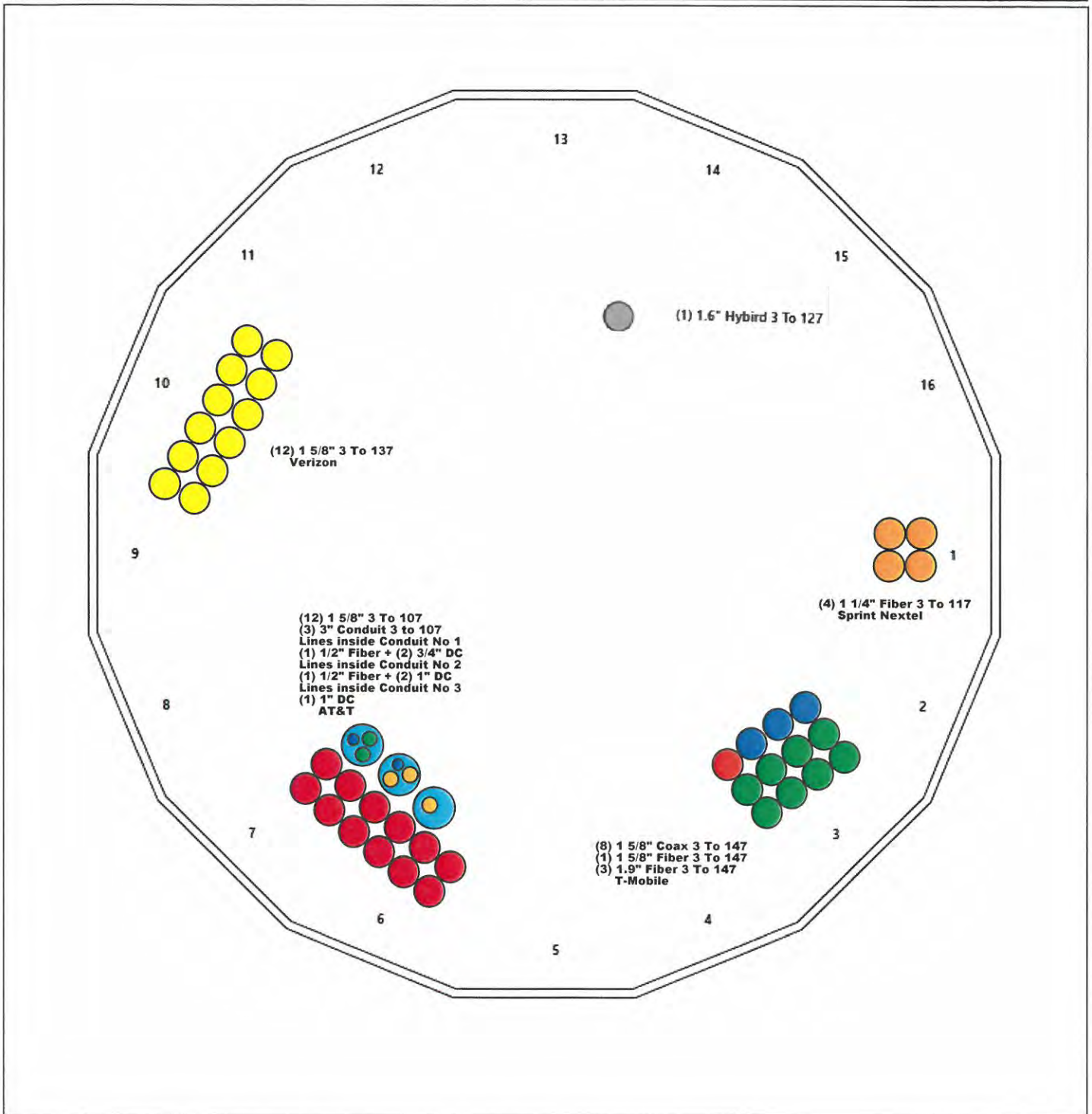
| Load Case | Moment (FT-Kips) | Shear (Kips) | Axial (Kips) |
|----------------------------------|------------------|--------------|--------------|
| 1.2D + 1.6W 105 mph Wind | 5155.9 | 46.7 | 55.9 |
| 0.9D + 1.6W 105 mph Wind | 5091.5 | 46.7 | 41.9 |
| 1.2D + 1.0Di + 1.0Wi 50 mph Wind | 1284.7 | 11.3 | 84.5 |
| 1.2D + 1.0E | 125.2 | 1.1 | 55.9 |
| 0.9D + 1.0E | 123.5 | 1.1 | 42.0 |
| 1.0D + 1.0W 60 mph Wind | 1046.1 | 9.5 | 46.6 |

Structure: GT01210-S-SBA - Coax Line Placement

Type: Monopole
Site Name: North Stonington
Height: 150.00 (ft)

4/5/2021

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Shaft Properties

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



Page: 5

| Sec. No. | Shape | Length (ft) | Thick (in) | Fy (ksi) | Joint Type | Overlap (in) | Weight (lb) |
|----------------------------|-------|-------------|------------|----------|------------|--------------|---------------|
| 1 | 16 | 53.000 | 0.5000 | 65 | | 0.00 | 12,867 |
| 2 | 16 | 53.000 | 0.4375 | 65 | Slip | 76.00 | 9,380 |
| 3 | 16 | 25.750 | 0.2188 | 65 | Slip | 65.00 | 1,945 |
| 4 | 16 | 30.000 | 0.1875 | 65 | Flange | 0.00 | 1,638 |
| Total Shaft Weight: | | | | | | | 25,830 |

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 | 50.00 | 0.00 | 78.95 | 24439.41 | 18.30 | 100.00 | 40.46 | 53.00 | 63.74 | 12857.1 | 14.50 | 80.92 | 0.180003 |
| 2 | 42.47 | 46.67 | 58.67 | 13097.52 | 17.72 | 97.09 | 32.93 | 99.67 | 45.35 | 6050.90 | 13.38 | 75.28 | 0.180003 |
| 3 | 34.35 | 94.25 | 23.82 | 3504.31 | 29.64 | 157.02 | 29.71 | 120.00 | 20.58 | 2261.65 | 25.43 | 135.8 | 0.180003 |
| 4 | 29.71 | 120.0 | 17.66 | 1944.73 | 29.93 | 158.46 | 24.31 | 150.00 | 14.43 | 1060.92 | 24.20 | 129.6 | 0.180003 |

Load Summary

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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Discrete Appurtenances

| No. | Elev (ft) | Description | Qty | No Ice | | | Ice | | | Hor. Ecc. (ft) | Vert Ecc (ft) |
|----------------|-----------|---------------------------------|-----------|------------------|-----------|-------------|------------------|-----------|-------------|----------------|---------------|
| | | | | Weight (lb) | CaAa (sf) | CaAa Factor | Weight (lb) | CaAa (sf) | CaAa Factor | | |
| 1 | 150.00 | Lightning Rod | 1 | 35.00 | 1.05 | 1.00 | 66.41 | 3.424 | 1.00 | 0.00 | 3.50 |
| 2 | 147.00 | Ericsson Air 21 B2A/B4P | 3 | 91.50 | 6.04 | 0.85 | 258.15 | 7.126 | 0.85 | 0.00 | 0.00 |
| 3 | 147.00 | Ericsson Air 21 B4A/B2P | 3 | 90.30 | 6.04 | 0.85 | 256.95 | 7.126 | 0.85 | 0.00 | 0.00 |
| 4 | 147.00 | RFS APXVAALL24-43-U-NA20 | 3 | 122.80 | 20.24 | 0.72 | 511.29 | 22.115 | 0.72 | 0.00 | 0.00 |
| 5 | 147.00 | Ericsson KRY 112 144/1 TMA's | 3 | 11.00 | 0.35 | 0.50 | 25.22 | 0.742 | 0.50 | 0.00 | 0.00 |
| 6 | 147.00 | Ericsson 4449 B71 + B85 RRU's | 3 | 75.00 | 1.95 | 0.50 | 156.29 | 2.538 | 0.50 | 0.00 | 0.00 |
| 7 | 147.00 | Platform w/ Hand Rail | 1 | 2000.00 | 36.50 | 1.00 | 4090.03 | 55.572 | 1.00 | 0.00 | 0.00 |
| 8 | 147.00 | Tie Back Kit (Commscope | 1 | 123.10 | 4.17 | 1.00 | 243.17 | 9.399 | 1.00 | 0.00 | 0.00 |
| 9 | 147.00 | Rreinforcement Kit (Sitepro | 1 | 464.91 | 9.50 | 1.00 | 788.80 | 19.428 | 1.00 | 0.00 | 0.00 |
| 10 | 147.00 | V-Brace Kit (Sitepro PRK-SFS-L) | 1 | 197.00 | 6.30 | 1.00 | 471.49 | 12.884 | 1.00 | 0.00 | 0.00 |
| 11 | 137.00 | Antel BXA-70063/6CF | 3 | 14.90 | 7.58 | 0.72 | 160.19 | 10.322 | 0.72 | 0.00 | 0.00 |
| 12 | 137.00 | Antel LPA-80080/4CF | 6 | 12.00 | 5.40 | 0.74 | 145.25 | 6.388 | 0.74 | 0.00 | 0.00 |
| 13 | 137.00 | Ryma MGD5-800T2 | 3 | 15.40 | 3.36 | 0.78 | 83.32 | 5.141 | 0.78 | 0.00 | 0.00 |
| 14 | 137.00 | RFS FD9R6004/2C-3L | 6 | 3.10 | 0.36 | 0.50 | 11.05 | 0.799 | 0.50 | 0.00 | 0.00 |
| 15 | 137.00 | Cleargain 850/1900 TMA's | 2 | 5.50 | 0.52 | 0.50 | 17.04 | 1.045 | 0.50 | 0.00 | 0.00 |
| 16 | 137.00 | Low Profile Platform | 1 | 1500.00 | 22.00 | 1.00 | 2797.10 | 39.502 | 1.00 | 0.00 | 0.00 |
| 17 | 127.00 | JMA Wireless MX08FRO665-21 | 3 | 64.50 | 12.49 | 0.74 | 350.57 | 13.931 | 0.74 | 0.00 | 0.00 |
| 18 | 127.00 | Fujitsu TA08025-B605 | 3 | 75.00 | 1.96 | 0.50 | 126.44 | 2.512 | 0.50 | 0.00 | 0.00 |
| 19 | 127.00 | Fujitsu TA08025-B604 | 3 | 63.90 | 1.96 | 0.50 | 113.69 | 2.512 | 0.50 | 0.00 | 0.00 |
| 20 | 127.00 | Raycap RDIDC-9181-PF-48 | 1 | 21.90 | 2.01 | 0.50 | 74.27 | 2.569 | 0.50 | 0.00 | 0.00 |
| 21 | 127.00 | MC-PK8-DSH | 1 | 1727.00 | 37.59 | 1.00 | 3386.97 | 84.044 | 1.00 | 0.00 | 0.00 |
| 22 | 117.00 | RFS APXVTM14-C-I20 | 3 | 56.20 | 6.34 | 0.77 | 211.90 | 7.424 | 0.77 | 0.00 | 0.00 |
| 23 | 117.00 | Commscope NNVV-65B-R4 | 3 | 77.40 | 12.27 | 0.80 | 355.95 | 13.690 | 0.80 | 0.00 | 3.00 |
| 24 | 117.00 | ALU 1900 Mhz | 3 | 60.00 | 2.77 | 0.50 | 141.39 | 4.007 | 0.50 | 0.00 | 0.00 |
| 25 | 117.00 | ALU 800 Mhz | 6 | 53.00 | 2.49 | 0.50 | 125.15 | 3.606 | 0.50 | 0.00 | 0.00 |
| 26 | 117.00 | ALU TD-RRH8x20-25 | 3 | 70.00 | 4.05 | 0.50 | 177.20 | 4.842 | 0.50 | 0.00 | 0.00 |
| 27 | 117.00 | Sitepro RMQP-496-HK | 1 | 2449.00 | 46.00 | 1.00 | 4950.49 | 77.324 | 1.00 | 0.00 | 0.00 |
| 28 | 107.00 | Ericsson 4449 B5/B12 | 3 | 70.00 | 1.65 | 0.50 | 135.42 | 2.168 | 0.50 | 0.00 | 0.00 |
| 29 | 107.00 | Ericsson RRUS 4478 B14 | 3 | 59.90 | 1.84 | 0.50 | 105.34 | 2.349 | 0.50 | 0.00 | 0.00 |
| 30 | 107.00 | Ericsson 8843 B2 B66A | 3 | 75.00 | 1.65 | 0.50 | 146.63 | 2.168 | 0.50 | 0.00 | 0.00 |
| 31 | 107.00 | Raycap DC9-48-60-18-8C-EV | 1 | 16.00 | 4.78 | 0.50 | 135.62 | 5.635 | 0.50 | 0.00 | 0.00 |
| 32 | 107.00 | Site Pro HRK14 | 1 | 302.36 | 8.13 | 1.00 | 649.27 | 15.812 | 1.00 | 0.00 | 0.00 |
| 33 | 107.00 | Cci DMP65R-BU8DA | 6 | 39.00 | 13.49 | 1.00 | 376.28 | 36.369 | 1.00 | 0.00 | 0.00 |
| 34 | 107.00 | Raycap DC6-48-60-18-8F | 1 | 31.80 | 0.92 | 0.67 | 91.57 | 1.343 | 0.67 | 0.00 | 0.00 |
| 35 | 107.00 | Powerwave 7770 | 3 | 35.00 | 5.50 | 0.73 | 164.70 | 6.527 | 0.73 | 0.00 | 0.00 |
| 36 | 107.00 | Powerwave/LGP21401 | 6 | 5.50 | 0.27 | 0.50 | 13.65 | 0.654 | 0.50 | 0.00 | 0.00 |
| 37 | 107.00 | Low Profile Platform | 1 | 1500.00 | 22.00 | 1.00 | 2765.43 | 39.075 | 1.00 | 0.00 | 0.00 |
| Totals: | | | 99 | 14,438.07 | | | 35,014.89 | | | | |

Linear Appurtenances

| Bottom Elev. (ft) | Top Elev. (ft) | Description | Exposed Width | Exposed |
|-------------------|----------------|------------------|---------------|---------|
| 3.00 | 147.00 | (8) 1 5/8" Coax | 0.00 | Inside |
| 3.00 | 147.00 | (1) 1 5/8" Fiber | 0.00 | Inside |
| 3.00 | 147.00 | (3) 1.90" Fiber | 0.00 | Inside |
| 3.00 | 137.00 | (12) 1 5/8" Coax | 0.00 | Inside |

Discrete Appurtenances

| No. | Elev (ft) | Description | Qty | No Ice | | | Ice | | | Hor. Ecc. (ft) | Vert Ecc (ft) |
|------|--------------|----------------------|-----|----------------|--------------|----------------|----------------|--------------|----------------|----------------------|---------------------|
| | | | | Weight (lb) | CaAa (sf) | CaAa Factor | Weight (lb) | CaAa (sf) | CaAa Factor | | |
| 3.00 | 127.00 | (1) 1.6" Hybird | | 0.00 | | Inside | | | | | |
| 3.00 | 117.00 | (4) 1-1/4" Fiber | | 0.00 | | Inside | | | | | |
| 3.00 | 107.00 | (12) 1 5/8" Coax | | 0.00 | | Inside | | | | | |
| 3.00 | 107.00 | (3) 1" DC | | 0.00 | | Inside | | | | | |
| 3.00 | 107.00 | (2) 1/2" Fiber Cable | | 0.00 | | Inside | | | | | |
| 3.00 | 107.00 | (3) 3" Coax | | 0.00 | | Inside | | | | | |
| 3.00 | 107.00 | (2) 3/4" DC | | 0.00 | | Inside | | | | | |

Shaft Section Properties

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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Increment Length: 2 (ft)

| Elev (ft) | Description | Thick (in) | Dia (in) | Area (in ²) | Ix (in ⁴) | W/t Ratio | D/t Ratio | Fpy (ksi) | S (in ³) | Weight (lb) |
|--------------|-----------------|---------------|-------------|----------------------------|--------------------------|--------------|--------------|--------------|-------------------------|----------------|
| 0.00 | | 0.5000 | 50.000 | 78.953 | 24439.4 | 18.30 | 100.00 | 81.9 | 958.8 | 0.0 |
| 2.00 | | 0.5000 | 49.640 | 78.378 | 23910.0 | 18.16 | 99.28 | 82.0 | 944.8 | 535.4 |
| 4.00 | | 0.5000 | 49.280 | 77.804 | 23388.4 | 18.01 | 98.56 | 82.2 | 931.0 | 531.5 |
| 6.00 | | 0.5000 | 48.920 | 77.230 | 22874.4 | 17.87 | 97.84 | 82.4 | 917.2 | 527.5 |
| 8.00 | | 0.5000 | 48.560 | 76.656 | 22367.9 | 17.73 | 97.12 | 82.5 | 903.5 | 523.6 |
| 10.00 | | 0.5000 | 48.200 | 76.081 | 21869.0 | 17.58 | 96.40 | 82.5 | 890.0 | 519.7 |
| 12.00 | | 0.5000 | 47.840 | 75.507 | 21377.6 | 17.44 | 95.68 | 82.5 | 876.5 | 515.8 |
| 14.00 | | 0.5000 | 47.480 | 74.933 | 20893.6 | 17.30 | 94.96 | 82.5 | 863.2 | 511.9 |
| 16.00 | | 0.5000 | 47.120 | 74.359 | 20416.9 | 17.15 | 94.24 | 82.5 | 849.9 | 508.0 |
| 18.00 | | 0.5000 | 46.760 | 73.785 | 19947.6 | 17.01 | 93.52 | 82.5 | 836.8 | 504.1 |
| 20.00 | | 0.5000 | 46.400 | 73.210 | 19485.5 | 16.87 | 92.80 | 82.5 | 823.8 | 500.2 |
| 22.00 | | 0.5000 | 46.040 | 72.636 | 19030.6 | 16.72 | 92.08 | 82.5 | 810.8 | 496.3 |
| 24.00 | | 0.5000 | 45.680 | 72.062 | 18582.8 | 16.58 | 91.36 | 82.5 | 798.0 | 492.4 |
| 26.00 | | 0.5000 | 45.320 | 71.488 | 18142.1 | 16.44 | 90.64 | 82.5 | 785.2 | 488.5 |
| 28.00 | | 0.5000 | 44.960 | 70.914 | 17708.5 | 16.29 | 89.92 | 82.5 | 772.6 | 484.6 |
| 30.00 | | 0.5000 | 44.600 | 70.339 | 17281.8 | 16.15 | 89.20 | 82.5 | 760.1 | 480.7 |
| 32.00 | | 0.5000 | 44.240 | 69.765 | 16862.0 | 16.01 | 88.48 | 82.5 | 747.6 | 476.7 |
| 34.00 | | 0.5000 | 43.880 | 69.191 | 16449.0 | 15.87 | 87.76 | 82.5 | 735.3 | 472.8 |
| 36.00 | | 0.5000 | 43.520 | 68.617 | 16042.9 | 15.72 | 87.04 | 82.5 | 723.1 | 468.9 |
| 38.00 | | 0.5000 | 43.160 | 68.042 | 15643.5 | 15.58 | 86.32 | 82.5 | 711.0 | 465.0 |
| 40.00 | | 0.5000 | 42.800 | 67.468 | 15250.8 | 15.44 | 85.60 | 82.5 | 699.0 | 461.1 |
| 42.00 | | 0.5000 | 42.440 | 66.894 | 14864.7 | 15.29 | 84.88 | 82.5 | 687.0 | 457.2 |
| 44.00 | | 0.5000 | 42.080 | 66.320 | 14485.2 | 15.15 | 84.16 | 82.5 | 675.2 | 453.3 |
| 46.00 | | 0.5000 | 41.720 | 65.746 | 14112.2 | 15.01 | 83.44 | 82.5 | 663.5 | 449.4 |
| 46.67 | Bot - Section 2 | 0.5000 | 41.600 | 65.554 | 13989.3 | 14.96 | 83.20 | 82.5 | 659.6 | 148.9 |
| 48.00 | | 0.5000 | 41.360 | 65.171 | 13745.6 | 14.86 | 82.72 | 82.5 | 651.9 | 562.0 |
| 50.00 | | 0.5000 | 41.000 | 64.597 | 13385.5 | 14.72 | 82.00 | 82.5 | 640.4 | 836.9 |
| 52.00 | | 0.5000 | 40.640 | 64.023 | 13031.7 | 14.58 | 81.28 | 82.5 | 629.0 | 829.5 |
| 53.00 | Top - Section 1 | 0.4375 | 41.335 | 57.077 | 12060.6 | 17.20 | 94.48 | 0.0 | 0.0 | 412.0 |
| 54.00 | | 0.4375 | 41.155 | 56.826 | 11902.0 | 17.12 | 94.07 | 82.5 | 567.3 | 193.8 |
| 56.00 | | 0.4375 | 40.795 | 56.324 | 11589.1 | 16.96 | 93.25 | 82.5 | 557.2 | 385.0 |
| 58.00 | | 0.4375 | 40.435 | 55.821 | 11281.7 | 16.79 | 92.42 | 82.5 | 547.3 | 381.6 |
| 60.00 | | 0.4375 | 40.075 | 55.319 | 10979.8 | 16.63 | 91.60 | 82.5 | 537.4 | 378.2 |
| 62.00 | | 0.4375 | 39.715 | 54.816 | 10683.4 | 16.47 | 90.78 | 82.5 | 527.7 | 374.8 |
| 64.00 | | 0.4375 | 39.355 | 54.314 | 10392.3 | 16.30 | 89.95 | 82.5 | 518.0 | 371.3 |
| 66.00 | | 0.4375 | 38.995 | 53.812 | 10106.5 | 16.14 | 89.13 | 82.5 | 508.4 | 367.9 |
| 68.00 | | 0.4375 | 38.635 | 53.309 | 9826.1 | 15.97 | 88.31 | 82.5 | 498.9 | 364.5 |
| 70.00 | | 0.4375 | 38.275 | 52.807 | 9550.9 | 15.81 | 87.49 | 82.5 | 489.5 | 361.1 |
| 72.00 | | 0.4375 | 37.915 | 52.304 | 9280.8 | 15.65 | 86.66 | 82.5 | 480.2 | 357.7 |
| 74.00 | | 0.4375 | 37.555 | 51.802 | 9015.9 | 15.48 | 85.84 | 82.5 | 470.9 | 354.2 |
| 76.00 | | 0.4375 | 37.195 | 51.299 | 8756.1 | 15.32 | 85.02 | 82.5 | 461.8 | 350.8 |
| 78.00 | | 0.4375 | 36.835 | 50.797 | 8501.4 | 15.16 | 84.19 | 82.5 | 452.7 | 347.4 |
| 80.00 | | 0.4375 | 36.475 | 50.294 | 8251.6 | 14.99 | 83.37 | 82.5 | 443.8 | 344.0 |
| 82.00 | | 0.4375 | 36.115 | 49.792 | 8006.8 | 14.83 | 82.55 | 82.5 | 434.9 | 340.6 |
| 84.00 | | 0.4375 | 35.755 | 49.290 | 7766.8 | 14.66 | 81.73 | 82.5 | 426.1 | 337.2 |
| 86.00 | | 0.4375 | 35.395 | 48.787 | 7531.7 | 14.50 | 80.90 | 82.5 | 417.4 | 333.7 |
| 88.00 | | 0.4375 | 35.035 | 48.285 | 7301.4 | 14.34 | 80.08 | 82.5 | 408.8 | 330.3 |
| 90.00 | | 0.4375 | 34.675 | 47.782 | 7075.8 | 14.17 | 79.26 | 82.5 | 400.3 | 326.9 |
| 92.00 | | 0.4375 | 34.315 | 47.280 | 6855.0 | 14.01 | 78.43 | 82.5 | 391.9 | 323.5 |
| 94.00 | | 0.4375 | 33.955 | 46.777 | 6638.7 | 13.85 | 77.61 | 82.5 | 383.5 | 320.1 |

Increment Length: 2 (ft)

| Elev (ft) | Description | Thick (in) | Dia (in) | Area (in^2) | Ix (in^4) | W/t Ratio | D/t Ratio | Fpy (ksi) | S (in^3) | Weight (lb) |
|-----------|-----------------|------------|----------|-------------|-----------|-----------|-----------|-----------|----------|-------------|
| 94.25 | Bot - Section 3 | 0.4375 | 33.910 | 46.715 | 6612.0 | 13.83 | 77.51 | 82.5 | 382.5 | 39.8 |
| 96.00 | | 0.4375 | 33.595 | 46.275 | 6427.1 | 13.68 | 76.79 | 82.5 | 375.3 | 418.0 |
| 98.00 | | 0.4375 | 33.235 | 45.773 | 6220.0 | 13.52 | 75.96 | 82.5 | 367.1 | 472.9 |
| 99.67 | Top - Section 2 | 0.2188 | 33.372 | 23.135 | 3212.5 | 28.75 | 152.56 | 0.0 | 0.0 | 390.2 |
| 100.00 | | 0.2188 | 33.312 | 23.093 | 3195.1 | 28.70 | 152.28 | 70.1 | 188.1 | 26.2 |
| 102.00 | | 0.2188 | 32.952 | 22.842 | 3091.9 | 28.37 | 150.64 | 70.5 | 184.1 | 156.3 |
| 104.00 | | 0.2188 | 32.592 | 22.591 | 2991.0 | 28.05 | 148.99 | 70.8 | 180.0 | 154.6 |
| 106.00 | | 0.2188 | 32.232 | 22.339 | 2892.3 | 27.72 | 147.35 | 71.2 | 176.0 | 152.9 |
| 107.00 | | 0.2188 | 32.052 | 22.214 | 2843.8 | 27.55 | 146.52 | 71.4 | 174.0 | 75.8 |
| 108.00 | | 0.2188 | 31.872 | 22.088 | 2795.8 | 27.39 | 145.70 | 71.6 | 172.1 | 75.4 |
| 110.00 | | 0.2188 | 31.512 | 21.837 | 2701.5 | 27.06 | 144.06 | 71.9 | 168.2 | 149.5 |
| 112.00 | | 0.2188 | 31.152 | 21.586 | 2609.4 | 26.74 | 142.41 | 72.3 | 164.3 | 147.8 |
| 114.00 | | 0.2188 | 30.792 | 21.334 | 2519.3 | 26.41 | 140.76 | 72.7 | 160.5 | 146.0 |
| 116.00 | | 0.2188 | 30.432 | 21.083 | 2431.4 | 26.08 | 139.12 | 73.1 | 156.7 | 144.3 |
| 117.00 | | 0.2188 | 30.252 | 20.958 | 2388.2 | 25.92 | 138.30 | 73.2 | 154.9 | 71.5 |
| 118.00 | | 0.2188 | 30.072 | 20.832 | 2345.5 | 25.75 | 137.47 | 73.4 | 153.0 | 71.1 |
| 120.00 | Top - Section 3 | 0.2188 | 29.712 | 20.581 | 2261.7 | 25.43 | 135.83 | 73.8 | 149.3 | 140.9 |
| 120.00 | Bot - Section 4 | 0.1875 | 29.712 | 17.659 | 1944.7 | 29.66 | 158.46 | 68.7 | 128.4 | |
| 122.00 | | 0.1875 | 29.352 | 17.444 | 1874.5 | 29.55 | 156.54 | 69.1 | 125.3 | 119.4 |
| 124.00 | | 0.1875 | 28.992 | 17.229 | 1805.9 | 29.17 | 154.62 | 69.6 | 122.2 | 118.0 |
| 126.00 | | 0.1875 | 28.632 | 17.013 | 1739.0 | 28.78 | 152.70 | 70.0 | 119.1 | 116.5 |
| 127.00 | | 0.1875 | 28.452 | 16.906 | 1706.2 | 28.59 | 151.74 | 70.2 | 117.6 | 57.7 |
| 128.00 | | 0.1875 | 28.272 | 16.798 | 1673.8 | 28.40 | 150.78 | 70.4 | 116.1 | 57.3 |
| 130.00 | | 0.1875 | 27.912 | 16.583 | 1610.3 | 28.02 | 148.86 | 70.9 | 113.2 | 113.6 |
| 132.00 | | 0.1875 | 27.552 | 16.367 | 1548.4 | 27.64 | 146.94 | 71.3 | 110.2 | 112.1 |
| 134.00 | | 0.1875 | 27.192 | 16.152 | 1488.0 | 27.26 | 145.02 | 71.7 | 107.3 | 110.7 |
| 136.00 | | 0.1875 | 26.832 | 15.937 | 1429.3 | 26.87 | 143.10 | 72.2 | 104.5 | 109.2 |
| 137.00 | | 0.1875 | 26.652 | 15.829 | 1400.6 | 26.68 | 142.14 | 72.4 | 103.1 | 54.0 |
| 138.00 | | 0.1875 | 26.472 | 15.721 | 1372.2 | 26.49 | 141.18 | 72.6 | 101.7 | 53.7 |
| 140.00 | | 0.1875 | 26.112 | 15.506 | 1316.6 | 26.11 | 139.26 | 73.0 | 98.9 | 106.3 |
| 142.00 | | 0.1875 | 25.752 | 15.291 | 1262.5 | 25.73 | 137.34 | 73.5 | 96.2 | 104.8 |
| 144.00 | | 0.1875 | 25.392 | 15.075 | 1209.9 | 25.35 | 135.42 | 73.9 | 93.5 | 103.3 |
| 146.00 | | 0.1875 | 25.032 | 14.860 | 1158.8 | 24.96 | 133.50 | 74.3 | 90.8 | 101.9 |
| 147.00 | | 0.1875 | 24.852 | 14.752 | 1133.8 | 24.77 | 132.54 | 74.5 | 89.5 | 50.4 |
| 148.00 | | 0.1875 | 24.672 | 14.645 | 1109.1 | 24.58 | 131.58 | 74.8 | 88.2 | 50.0 |
| 150.00 | | 0.1875 | 24.312 | 14.429 | 1060.9 | 24.20 | 129.66 | 75.2 | 85.6 | 98.9 |
| | | | | | | | | | | 25829.7 |

Wind Loading - Shaft

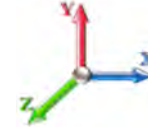
| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



Load Case: 1.2D + 1.6W 105 mph Wind

Iterations 28

Dead Load Factor 1.20
Wind Load Factor 1.60



| Elev (ft) | Description | Kzt | Kz | qz (psf) | qzGh (psf) | C (mph-ft) | Cf | Ice Thick (in) | Tributary (ft) | Aa (sf) | CfAa (sf) | Wind Force X (lb) | Dead Load Ice (lb) | Tot Dead Load (lb) |
|-----------|-----------------|------|------|----------|------------|------------|-------|----------------|----------------|---------|-----------|-------------------|--------------------|--------------------|
| 0.00 | | 1.00 | 0.85 | 22.791 | 25.07 | 411.26 | 0.750 | 0.000 | 0.00 | 0.000 | 0.00 | 0.0 | 0.0 | 0.0 |
| 2.00 | | 1.00 | 0.85 | 22.791 | 25.07 | 408.30 | 0.750 | 0.000 | 2.00 | 8.466 | 6.35 | 254.7 | 0.0 | 642.4 |
| 4.00 | | 1.00 | 0.85 | 22.791 | 25.07 | 405.34 | 0.750 | 0.000 | 2.00 | 8.405 | 6.30 | 252.9 | 0.0 | 637.7 |
| 6.00 | | 1.00 | 0.85 | 22.791 | 25.07 | 402.37 | 0.750 | 0.000 | 2.00 | 8.344 | 6.26 | 251.0 | 0.0 | 633.1 |
| 8.00 | | 1.00 | 0.85 | 22.791 | 25.07 | 399.41 | 0.750 | 0.000 | 2.00 | 8.282 | 6.21 | 249.2 | 0.0 | 628.4 |
| 10.00 | | 1.00 | 0.85 | 22.791 | 25.07 | 396.45 | 0.750 | 0.000 | 2.00 | 8.221 | 6.17 | 247.3 | 0.0 | 623.7 |
| 12.00 | | 1.00 | 0.85 | 22.791 | 25.07 | 393.49 | 0.750 | 0.000 | 2.00 | 8.160 | 6.12 | 245.5 | 0.0 | 619.0 |
| 14.00 | | 1.00 | 0.85 | 22.791 | 25.07 | 390.53 | 0.750 | 0.000 | 2.00 | 8.099 | 6.07 | 243.6 | 0.0 | 614.3 |
| 16.00 | | 1.00 | 0.86 | 23.072 | 25.38 | 389.95 | 0.750 | 0.000 | 2.00 | 8.038 | 6.03 | 244.8 | 0.0 | 609.6 |
| 18.00 | | 1.00 | 0.88 | 23.652 | 26.02 | 391.80 | 0.750 | 0.000 | 2.00 | 7.977 | 5.98 | 249.0 | 0.0 | 604.9 |
| 20.00 | | 1.00 | 0.90 | 24.182 | 26.60 | 393.12 | 0.750 | 0.000 | 2.00 | 7.915 | 5.94 | 252.7 | 0.0 | 600.2 |
| 22.00 | | 1.00 | 0.92 | 24.672 | 27.14 | 394.00 | 0.750 | 0.000 | 2.00 | 7.854 | 5.89 | 255.8 | 0.0 | 595.5 |
| 24.00 | | 1.00 | 0.94 | 25.128 | 27.64 | 394.52 | 0.750 | 0.000 | 2.00 | 7.793 | 5.84 | 258.5 | 0.0 | 590.9 |
| 26.00 | | 1.00 | 0.95 | 25.555 | 28.11 | 394.72 | 0.750 | 0.000 | 2.00 | 7.732 | 5.80 | 260.8 | 0.0 | 586.2 |
| 28.00 | | 1.00 | 0.97 | 25.957 | 28.55 | 394.65 | 0.750 | 0.000 | 2.00 | 7.671 | 5.75 | 262.8 | 0.0 | 581.5 |
| 30.00 | | 1.00 | 0.98 | 26.337 | 28.97 | 394.35 | 0.750 | 0.000 | 2.00 | 7.610 | 5.71 | 264.5 | 0.0 | 576.8 |
| 32.00 | | 1.00 | 1.00 | 26.697 | 29.37 | 393.83 | 0.750 | 0.000 | 2.00 | 7.548 | 5.66 | 266.0 | 0.0 | 572.1 |
| 34.00 | | 1.00 | 1.01 | 27.040 | 29.74 | 393.13 | 0.750 | 0.000 | 2.00 | 7.487 | 5.62 | 267.2 | 0.0 | 567.4 |
| 36.00 | | 1.00 | 1.02 | 27.367 | 30.10 | 392.25 | 0.750 | 0.000 | 2.00 | 7.426 | 5.57 | 268.3 | 0.0 | 562.7 |
| 38.00 | | 1.00 | 1.03 | 27.681 | 30.45 | 391.23 | 0.750 | 0.000 | 2.00 | 7.365 | 5.52 | 269.1 | 0.0 | 558.0 |
| 40.00 | | 1.00 | 1.04 | 27.981 | 30.78 | 390.07 | 0.750 | 0.000 | 2.00 | 7.304 | 5.48 | 269.8 | 0.0 | 553.3 |
| 42.00 | | 1.00 | 1.05 | 28.270 | 31.10 | 388.78 | 0.750 | 0.000 | 2.00 | 7.242 | 5.43 | 270.3 | 0.0 | 548.6 |
| 44.00 | | 1.00 | 1.06 | 28.548 | 31.40 | 387.37 | 0.750 | 0.000 | 2.00 | 7.181 | 5.39 | 270.6 | 0.0 | 544.0 |
| 46.00 | | 1.00 | 1.07 | 28.817 | 31.70 | 385.86 | 0.750 | 0.000 | 2.00 | 7.120 | 5.34 | 270.8 | 0.0 | 539.3 |
| 46.67 | Bot - Section 2 | 1.00 | 1.08 | 28.904 | 31.79 | 385.33 | 0.750 | 0.000 | 0.67 | 2.360 | 1.77 | 90.0 | 0.0 | 178.7 |
| 48.00 | | 1.00 | 1.08 | 29.076 | 31.98 | 384.25 | 0.750 | 0.000 | 1.33 | 4.798 | 3.60 | 184.2 | 0.0 | 674.4 |
| 50.00 | | 1.00 | 1.09 | 29.327 | 32.26 | 382.54 | 0.750 | 0.000 | 2.00 | 7.146 | 5.36 | 276.7 | 0.0 | 1004.2 |
| 52.00 | | 1.00 | 1.10 | 29.570 | 32.53 | 380.75 | 0.750 | 0.000 | 2.00 | 7.085 | 5.31 | 276.6 | 0.0 | 995.4 |
| 53.00 | Top - Section 1 | 1.00 | 1.11 | 29.689 | 32.66 | 379.83 | 0.750 | 0.000 | 1.00 | 3.520 | 2.64 | 137.9 | 0.0 | 494.4 |
| 54.00 | | 1.00 | 1.11 | 29.806 | 32.79 | 387.11 | 0.750 | 0.000 | 1.00 | 3.504 | 2.63 | 137.9 | 0.0 | 232.6 |
| 56.00 | | 1.00 | 1.12 | 30.035 | 33.04 | 385.20 | 0.750 | 0.000 | 2.00 | 6.963 | 5.22 | 276.1 | 0.0 | 462.0 |
| 58.00 | | 1.00 | 1.13 | 30.258 | 33.28 | 383.21 | 0.750 | 0.000 | 2.00 | 6.902 | 5.18 | 275.7 | 0.0 | 457.9 |
| 60.00 | | 1.00 | 1.14 | 30.475 | 33.52 | 381.16 | 0.750 | 0.000 | 2.00 | 6.841 | 5.13 | 275.2 | 0.0 | 453.8 |
| 62.00 | | 1.00 | 1.14 | 30.686 | 33.75 | 379.04 | 0.750 | 0.000 | 2.00 | 6.779 | 5.08 | 274.6 | 0.0 | 449.7 |
| 64.00 | | 1.00 | 1.15 | 30.892 | 33.98 | 376.86 | 0.750 | 0.000 | 2.00 | 6.718 | 5.04 | 273.9 | 0.0 | 445.6 |
| 66.00 | | 1.00 | 1.16 | 31.092 | 34.20 | 374.62 | 0.750 | 0.000 | 2.00 | 6.657 | 4.99 | 273.2 | 0.0 | 441.5 |
| 68.00 | | 1.00 | 1.17 | 31.288 | 34.42 | 372.33 | 0.750 | 0.000 | 2.00 | 6.596 | 4.95 | 272.4 | 0.0 | 437.4 |
| 70.00 | | 1.00 | 1.17 | 31.480 | 34.63 | 369.99 | 0.750 | 0.000 | 2.00 | 6.535 | 4.90 | 271.5 | 0.0 | 433.3 |
| 72.00 | | 1.00 | 1.18 | 31.667 | 34.83 | 367.60 | 0.750 | 0.000 | 2.00 | 6.474 | 4.86 | 270.6 | 0.0 | 429.2 |
| 74.00 | | 1.00 | 1.19 | 31.850 | 35.04 | 365.16 | 0.750 | 0.000 | 2.00 | 6.412 | 4.81 | 269.6 | 0.0 | 425.1 |
| 76.00 | | 1.00 | 1.19 | 32.030 | 35.23 | 362.68 | 0.750 | 0.000 | 2.00 | 6.351 | 4.76 | 268.5 | 0.0 | 421.0 |
| 78.00 | | 1.00 | 1.20 | 32.205 | 35.43 | 360.15 | 0.750 | 0.000 | 2.00 | 6.290 | 4.72 | 267.4 | 0.0 | 416.9 |
| 80.00 | | 1.00 | 1.21 | 32.377 | 35.62 | 357.58 | 0.750 | 0.000 | 2.00 | 6.229 | 4.67 | 266.2 | 0.0 | 412.8 |
| 82.00 | | 1.00 | 1.21 | 32.546 | 35.80 | 354.97 | 0.750 | 0.000 | 2.00 | 6.168 | 4.63 | 265.0 | 0.0 | 408.7 |
| 84.00 | | 1.00 | 1.22 | 32.712 | 35.98 | 352.33 | 0.750 | 0.000 | 2.00 | 6.106 | 4.58 | 263.7 | 0.0 | 404.6 |
| 86.00 | | 1.00 | 1.23 | 32.874 | 36.16 | 349.65 | 0.750 | 0.000 | 2.00 | 6.045 | 4.53 | 262.3 | 0.0 | 400.5 |
| 88.00 | | 1.00 | 1.23 | 33.034 | 36.34 | 346.93 | 0.750 | 0.000 | 2.00 | 5.984 | 4.49 | 260.9 | 0.0 | 396.4 |

Wind Loading - Shaft

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | | | | | | | | | | | | |
|------------------------|------|------|--------|-------|--------|-------|-------|---------------|-------|------|-----------------|-----|-----------------|
| 90.00 | 1.00 | 1.24 | 33.190 | 36.51 | 344.18 | 0.750 | 0.000 | 2.00 | 5.923 | 4.44 | 259.5 | 0.0 | 392.3 |
| 92.00 | 1.00 | 1.24 | 33.344 | 36.68 | 341.39 | 0.750 | 0.000 | 2.00 | 5.862 | 4.40 | 258.0 | 0.0 | 388.2 |
| 94.00 | 1.00 | 1.25 | 33.496 | 36.85 | 338.58 | 0.750 | 0.000 | 2.00 | 5.801 | 4.35 | 256.5 | 0.0 | 384.1 |
| 94.25 Bot - Section 3 | 1.00 | 1.25 | 33.514 | 36.87 | 338.22 | 0.750 | 0.000 | 0.25 | 0.721 | 0.54 | 31.9 | 0.0 | 47.7 |
| 96.00 | 1.00 | 1.25 | 33.644 | 37.01 | 335.73 | 0.750 | 0.000 | 1.75 | 5.084 | 3.81 | 225.8 | 0.0 | 501.6 |
| 98.00 | 1.00 | 1.26 | 33.791 | 37.17 | 332.85 | 0.750 | 0.000 | 2.00 | 5.753 | 4.31 | 256.6 | 0.0 | 567.5 |
| 99.67 Top - Section 2 | 1.00 | 1.26 | 33.911 | 37.30 | 330.44 | 0.750 | 0.000 | 1.67 | 4.747 | 3.56 | 212.5 | 0.0 | 468.2 |
| 100.00 | 1.00 | 1.27 | 33.935 | 37.33 | 334.34 | 0.750 | 0.000 | 0.33 | 0.944 | 0.71 | 42.3 | 0.0 | 31.5 |
| 102.00 | 1.00 | 1.27 | 34.077 | 37.48 | 331.42 | 0.750 | 0.000 | 2.00 | 5.630 | 4.22 | 253.3 | 0.0 | 187.6 |
| 104.00 | 1.00 | 1.28 | 34.216 | 37.64 | 328.47 | 0.750 | 0.000 | 2.00 | 5.569 | 4.18 | 251.5 | 0.0 | 185.5 |
| 106.00 | 1.00 | 1.28 | 34.354 | 37.79 | 325.49 | 0.750 | 0.000 | 2.00 | 5.508 | 4.13 | 249.8 | 0.0 | 183.5 |
| 107.00 Appurtenance(s) | 1.00 | 1.28 | 34.422 | 37.86 | 323.99 | 0.750 | 0.000 | 1.00 | 2.731 | 2.05 | 124.1 | 0.0 | 91.0 |
| 108.00 | 1.00 | 1.29 | 34.489 | 37.94 | 322.49 | 0.750 | 0.000 | 1.00 | 2.716 | 2.04 | 123.6 | 0.0 | 90.4 |
| 110.00 | 1.00 | 1.29 | 34.623 | 38.08 | 319.46 | 0.750 | 0.000 | 2.00 | 5.386 | 4.04 | 246.1 | 0.0 | 179.4 |
| 112.00 | 1.00 | 1.30 | 34.754 | 38.23 | 316.41 | 0.750 | 0.000 | 2.00 | 5.324 | 3.99 | 244.3 | 0.0 | 177.3 |
| 114.00 | 1.00 | 1.30 | 34.884 | 38.37 | 313.34 | 0.750 | 0.000 | 2.00 | 5.263 | 3.95 | 242.4 | 0.0 | 175.3 |
| 116.00 | 1.00 | 1.31 | 35.012 | 38.51 | 310.24 | 0.750 | 0.000 | 2.00 | 5.202 | 3.90 | 240.4 | 0.0 | 173.2 |
| 117.00 Appurtenance(s) | 1.00 | 1.31 | 35.075 | 38.58 | 308.69 | 0.750 | 0.000 | 1.00 | 2.578 | 1.93 | 119.4 | 0.0 | 85.8 |
| 118.00 | 1.00 | 1.31 | 35.138 | 38.65 | 307.13 | 0.750 | 0.000 | 1.00 | 2.563 | 1.92 | 118.9 | 0.0 | 85.3 |
| 120.00 Top - Section 3 | 1.00 | 1.32 | 35.263 | 38.79 | 303.99 | 0.750 | 0.000 | 2.00 | 5.080 | 3.81 | 236.4 | 0.0 | 169.1 |
| 122.00 | 1.00 | 1.32 | 35.386 | 38.92 | 300.83 | 0.750 | 0.000 | 2.00 | 5.018 | 3.76 | 234.4 | 0.0 | 143.3 |
| 124.00 | 1.00 | 1.32 | 35.507 | 39.06 | 297.65 | 0.750 | 0.000 | 2.00 | 4.957 | 3.72 | 232.3 | 0.0 | 141.6 |
| 126.00 | 1.00 | 1.33 | 35.627 | 39.19 | 294.44 | 0.750 | 0.000 | 2.00 | 4.896 | 3.67 | 230.2 | 0.0 | 139.8 |
| 127.00 Appurtenance(s) | 1.00 | 1.33 | 35.686 | 39.25 | 292.84 | 0.750 | 0.000 | 1.00 | 2.425 | 1.82 | 114.2 | 0.0 | 69.3 |
| 128.00 | 1.00 | 1.33 | 35.745 | 39.32 | 291.22 | 0.750 | 0.000 | 1.00 | 2.410 | 1.81 | 113.7 | 0.0 | 68.8 |
| 130.00 | 1.00 | 1.34 | 35.862 | 39.45 | 287.99 | 0.750 | 0.000 | 2.00 | 4.774 | 3.58 | 226.0 | 0.0 | 136.3 |
| 132.00 | 1.00 | 1.34 | 35.977 | 39.58 | 284.73 | 0.750 | 0.000 | 2.00 | 4.713 | 3.53 | 223.8 | 0.0 | 134.5 |
| 134.00 | 1.00 | 1.35 | 36.091 | 39.70 | 281.45 | 0.750 | 0.000 | 2.00 | 4.651 | 3.49 | 221.6 | 0.0 | 132.8 |
| 136.00 | 1.00 | 1.35 | 36.204 | 39.82 | 278.16 | 0.750 | 0.000 | 2.00 | 4.590 | 3.44 | 219.4 | 0.0 | 131.0 |
| 137.00 Appurtenance(s) | 1.00 | 1.35 | 36.260 | 39.89 | 276.51 | 0.750 | 0.000 | 1.00 | 2.272 | 1.70 | 108.8 | 0.0 | 64.9 |
| 138.00 | 1.00 | 1.35 | 36.316 | 39.95 | 274.85 | 0.750 | 0.000 | 1.00 | 2.257 | 1.69 | 108.2 | 0.0 | 64.4 |
| 140.00 | 1.00 | 1.36 | 36.426 | 40.07 | 271.52 | 0.750 | 0.000 | 2.00 | 4.468 | 3.35 | 214.8 | 0.0 | 127.5 |
| 142.00 | 1.00 | 1.36 | 36.535 | 40.19 | 268.18 | 0.750 | 0.000 | 2.00 | 4.407 | 3.31 | 212.5 | 0.0 | 125.8 |
| 144.00 | 1.00 | 1.37 | 36.642 | 40.31 | 264.82 | 0.750 | 0.000 | 2.00 | 4.346 | 3.26 | 210.2 | 0.0 | 124.0 |
| 146.00 | 1.00 | 1.37 | 36.749 | 40.42 | 261.45 | 0.750 | 0.000 | 2.00 | 4.284 | 3.21 | 207.8 | 0.0 | 122.2 |
| 147.00 Appurtenance(s) | 1.00 | 1.37 | 36.802 | 40.48 | 259.75 | 0.750 | 0.000 | 1.00 | 2.119 | 1.59 | 102.9 | 0.0 | 60.5 |
| 148.00 | 1.00 | 1.37 | 36.854 | 40.54 | 258.06 | 0.750 | 0.000 | 1.00 | 2.104 | 1.58 | 102.4 | 0.0 | 60.0 |
| 150.00 Appurtenance(s) | 1.00 | 1.38 | 36.959 | 40.65 | 254.65 | 0.750 | 0.000 | 2.00 | 4.162 | 3.12 | 203.0 | 0.0 | 118.7 |
| Totals: | | | | | | | | 150.00 | | | 18,914.7 | | 30,995.6 |

Discrete Appurtenance Forces

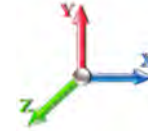
| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 28

| 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 | 150.00 | Lightning Rod | 1 | 37.139 | 40.852 | 1.00 | 1.00 | 1.05 | 42.00 | 0.000 | 3.500 | 68.63 | 0.00 | 240.21 |
| 2 | 147.00 | Ericsson 4449 B71 + B85 | 3 | 36.802 | 40.482 | 0.38 | 0.75 | 2.19 | 270.00 | 0.000 | 0.000 | 142.09 | 0.00 | 0.00 |
| 3 | 147.00 | Ericsson Air 21 B2A/B4P | 3 | 36.802 | 40.482 | 0.64 | 0.75 | 11.55 | 329.40 | 0.000 | 0.000 | 748.21 | 0.00 | 0.00 |
| 4 | 147.00 | RFS | 3 | 36.802 | 40.482 | 0.54 | 0.75 | 32.79 | 442.08 | 0.000 | 0.000 | 2123.77 | 0.00 | 0.00 |
| 5 | 147.00 | Ericsson KRY 112 144/1 | 3 | 36.802 | 40.482 | 0.38 | 0.75 | 0.39 | 39.60 | 0.000 | 0.000 | 25.50 | 0.00 | 0.00 |
| 6 | 147.00 | Ericsson Air 21 B4A/B2P | 3 | 36.802 | 40.482 | 0.64 | 0.75 | 11.55 | 325.08 | 0.000 | 0.000 | 748.21 | 0.00 | 0.00 |
| 7 | 147.00 | Tie Back Kit (Commscope) | 1 | 36.802 | 40.482 | 1.00 | 1.00 | 4.17 | 147.72 | 0.000 | 0.000 | 270.10 | 0.00 | 0.00 |
| 8 | 147.00 | Rreinforcement Kit | 1 | 36.802 | 40.482 | 1.00 | 1.00 | 9.50 | 557.89 | 0.000 | 0.000 | 615.33 | 0.00 | 0.00 |
| 9 | 147.00 | V-Brace Kit (Sitepro) | 1 | 36.802 | 40.482 | 1.00 | 1.00 | 6.30 | 236.40 | 0.000 | 0.000 | 408.06 | 0.00 | 0.00 |
| 10 | 147.00 | Platform w/ Hand Rail | 1 | 36.802 | 40.482 | 1.00 | 1.00 | 36.50 | 2400.00 | 0.000 | 0.000 | 2364.15 | 0.00 | 0.00 |
| 11 | 137.00 | Rymsa MGD5-800T2 | 3 | 36.260 | 39.886 | 0.62 | 0.80 | 6.29 | 55.44 | 0.000 | 0.000 | 401.41 | 0.00 | 0.00 |
| 12 | 137.00 | Antel BXA-70063/6CF | 3 | 36.260 | 39.886 | 0.58 | 0.80 | 13.10 | 53.64 | 0.000 | 0.000 | 835.90 | 0.00 | 0.00 |
| 13 | 137.00 | Antel LPA-80080/4CF | 6 | 36.260 | 39.886 | 0.59 | 0.80 | 19.18 | 86.40 | 0.000 | 0.000 | 1224.07 | 0.00 | 0.00 |
| 14 | 137.00 | Cleargain 850/1900 TMA's | 2 | 36.260 | 39.886 | 0.40 | 0.80 | 0.42 | 13.20 | 0.000 | 0.000 | 26.55 | 0.00 | 0.00 |
| 15 | 137.00 | RFS FD9R6004/2C-3L | 6 | 36.260 | 39.886 | 0.40 | 0.80 | 0.86 | 22.32 | 0.000 | 0.000 | 55.14 | 0.00 | 0.00 |
| 16 | 137.00 | Low Profile Platform | 1 | 36.260 | 39.886 | 1.00 | 1.00 | 22.00 | 1800.00 | 0.000 | 0.000 | 1403.99 | 0.00 | 0.00 |
| 17 | 127.00 | Fujitsu TA08025-B605 | 3 | 35.686 | 39.255 | 0.38 | 0.75 | 2.21 | 270.00 | 0.000 | 0.000 | 138.49 | 0.00 | 0.00 |
| 18 | 127.00 | JMA Wireless | 3 | 35.686 | 39.255 | 0.55 | 0.75 | 20.80 | 232.20 | 0.000 | 0.000 | 1306.13 | 0.00 | 0.00 |
| 19 | 127.00 | MC-PK8-DSH | 1 | 35.686 | 39.255 | 1.00 | 1.00 | 37.59 | 2072.40 | 0.000 | 0.000 | 2360.93 | 0.00 | 0.00 |
| 20 | 127.00 | Fujitsu TA08025-B604 | 3 | 35.686 | 39.255 | 0.38 | 0.75 | 2.21 | 230.04 | 0.000 | 0.000 | 138.49 | 0.00 | 0.00 |
| 21 | 127.00 | Raycap | 1 | 35.686 | 39.255 | 0.38 | 0.75 | 0.75 | 26.28 | 0.000 | 0.000 | 47.34 | 0.00 | 0.00 |
| 22 | 117.00 | Sitepro RMQP-496-HK | 1 | 35.075 | 38.583 | 1.00 | 1.00 | 46.00 | 2938.80 | 0.000 | 0.000 | 2839.69 | 0.00 | 0.00 |
| 23 | 117.00 | ALU TD-RRH8x20-25 | 3 | 35.075 | 38.583 | 0.38 | 0.75 | 4.56 | 252.00 | 0.000 | 0.000 | 281.27 | 0.00 | 0.00 |
| 24 | 117.00 | ALU 800 Mhz | 6 | 35.075 | 38.583 | 0.38 | 0.75 | 5.60 | 381.60 | 0.000 | 0.000 | 345.86 | 0.00 | 0.00 |
| 25 | 117.00 | ALU 1900 Mhz | 3 | 35.075 | 38.583 | 0.38 | 0.75 | 3.12 | 216.00 | 0.000 | 0.000 | 192.37 | 0.00 | 0.00 |
| 26 | 117.00 | Commscope | 3 | 35.263 | 38.789 | 0.60 | 0.75 | 22.09 | 278.64 | 0.000 | 3.000 | 1370.71 | 0.00 | 4112.12 |
| 27 | 117.00 | RFS APXVTM14-C-I20 | 3 | 35.075 | 38.583 | 0.58 | 0.75 | 10.98 | 202.32 | 0.000 | 0.000 | 678.07 | 0.00 | 0.00 |
| 28 | 107.00 | Ericsson 8843 B2 B66A | 3 | 34.422 | 37.864 | 0.38 | 0.75 | 1.86 | 270.00 | 0.000 | 0.000 | 112.46 | 0.00 | 0.00 |
| 29 | 107.00 | Raycap | 1 | 34.422 | 37.864 | 0.38 | 0.75 | 1.79 | 19.20 | 0.000 | 0.000 | 108.59 | 0.00 | 0.00 |
| 30 | 107.00 | Powerwave 7770 | 3 | 34.422 | 37.864 | 0.55 | 0.75 | 9.03 | 126.00 | 0.000 | 0.000 | 547.28 | 0.00 | 0.00 |
| 31 | 107.00 | Ericsson RRUS 4478 B14 | 3 | 34.422 | 37.864 | 0.38 | 0.75 | 2.07 | 215.64 | 0.000 | 0.000 | 125.40 | 0.00 | 0.00 |
| 32 | 107.00 | Ericsson 4449 B5/B12 | 3 | 34.422 | 37.864 | 0.38 | 0.75 | 1.86 | 252.00 | 0.000 | 0.000 | 112.46 | 0.00 | 0.00 |
| 33 | 107.00 | Raycap DC6-48-60-18-8F | 1 | 34.422 | 37.864 | 0.50 | 0.75 | 0.46 | 38.16 | 0.000 | 0.000 | 28.01 | 0.00 | 0.00 |
| 34 | 107.00 | Powerwave/LGP21401 | 6 | 34.422 | 37.864 | 0.38 | 0.75 | 0.61 | 39.60 | 0.000 | 0.000 | 36.80 | 0.00 | 0.00 |
| 35 | 107.00 | Low Profile Platform | 1 | 34.422 | 37.864 | 1.00 | 1.00 | 22.00 | 1800.00 | 0.000 | 0.000 | 1332.80 | 0.00 | 0.00 |
| 36 | 107.00 | Site Pro HRK14 | 1 | 34.422 | 37.864 | 1.00 | 1.00 | 8.13 | 362.83 | 0.000 | 0.000 | 492.53 | 0.00 | 0.00 |
| 37 | 107.00 | Cci DMP65R-BU8DA | 6 | 34.422 | 37.864 | 0.75 | 0.75 | 60.70 | 280.80 | 0.000 | 0.000 | 3677.63 | 0.00 | 0.00 |

Totals: 17,325.68

27,734.42

Total Applied Force Summary

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 28

| Elev (ft) | Description | Lateral FX (-) (lb) | Axial FY (-) (lb) | Torsion MY (lb-ft) | Moment MZ (lb-ft) |
|--------------|-------------|---------------------------|-------------------------|--------------------------|-------------------------|
| 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | | 254.69 | 642.43 | 0.00 | 0.00 |
| 4.00 | | 252.85 | 700.09 | 0.00 | 0.00 |
| 6.00 | | 251.01 | 757.75 | 0.00 | 0.00 |
| 8.00 | | 249.17 | 753.06 | 0.00 | 0.00 |
| 10.00 | | 247.33 | 748.37 | 0.00 | 0.00 |
| 12.00 | | 245.49 | 743.68 | 0.00 | 0.00 |
| 14.00 | | 243.65 | 738.99 | 0.00 | 0.00 |
| 16.00 | | 244.79 | 734.30 | 0.00 | 0.00 |
| 18.00 | | 249.03 | 729.61 | 0.00 | 0.00 |
| 20.00 | | 252.66 | 724.92 | 0.00 | 0.00 |
| 22.00 | | 255.79 | 720.23 | 0.00 | 0.00 |
| 24.00 | | 258.49 | 715.55 | 0.00 | 0.00 |
| 26.00 | | 260.82 | 710.86 | 0.00 | 0.00 |
| 28.00 | | 262.83 | 706.17 | 0.00 | 0.00 |
| 30.00 | | 264.54 | 701.48 | 0.00 | 0.00 |
| 32.00 | | 266.01 | 696.79 | 0.00 | 0.00 |
| 34.00 | | 267.24 | 692.10 | 0.00 | 0.00 |
| 36.00 | | 268.27 | 687.41 | 0.00 | 0.00 |
| 38.00 | | 269.10 | 682.72 | 0.00 | 0.00 |
| 40.00 | | 269.76 | 678.03 | 0.00 | 0.00 |
| 42.00 | | 270.27 | 673.34 | 0.00 | 0.00 |
| 44.00 | | 270.62 | 668.65 | 0.00 | 0.00 |
| 46.00 | | 270.84 | 663.96 | 0.00 | 0.00 |
| 46.67 | | 90.03 | 220.28 | 0.00 | 0.00 |
| 48.00 | | 184.16 | 757.50 | 0.00 | 0.00 |
| 50.00 | | 276.65 | 1128.92 | 0.00 | 0.00 |
| 52.00 | | 276.56 | 1120.13 | 0.00 | 0.00 |
| 53.00 | | 137.94 | 556.77 | 0.00 | 0.00 |
| 54.00 | | 137.88 | 294.90 | 0.00 | 0.00 |
| 56.00 | | 276.06 | 586.72 | 0.00 | 0.00 |
| 58.00 | | 275.66 | 582.62 | 0.00 | 0.00 |
| 60.00 | | 275.17 | 578.52 | 0.00 | 0.00 |
| 62.00 | | 274.60 | 574.41 | 0.00 | 0.00 |
| 64.00 | | 273.95 | 570.31 | 0.00 | 0.00 |
| 66.00 | | 273.22 | 566.21 | 0.00 | 0.00 |
| 68.00 | | 272.41 | 562.10 | 0.00 | 0.00 |
| 70.00 | | 271.54 | 558.00 | 0.00 | 0.00 |
| 72.00 | | 270.60 | 553.90 | 0.00 | 0.00 |
| 74.00 | | 269.59 | 549.79 | 0.00 | 0.00 |
| 76.00 | | 268.52 | 545.69 | 0.00 | 0.00 |
| 78.00 | | 267.39 | 541.59 | 0.00 | 0.00 |
| 80.00 | | 266.21 | 537.48 | 0.00 | 0.00 |
| 82.00 | | 264.97 | 533.38 | 0.00 | 0.00 |
| 84.00 | | 263.67 | 529.28 | 0.00 | 0.00 |
| 86.00 | | 262.33 | 525.17 | 0.00 | 0.00 |
| 88.00 | | 260.93 | 521.07 | 0.00 | 0.00 |

Total Applied Force Summary

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | | | | |
|----------------|------------------|------------------|------------------|-------------|-----------------|
| 90.00 | | 259.49 | 516.97 | 0.00 | 0.00 |
| 92.00 | | 258.00 | 512.86 | 0.00 | 0.00 |
| 94.00 | | 256.47 | 508.76 | 0.00 | 0.00 |
| 94.25 | | 31.89 | 63.31 | 0.00 | 0.00 |
| 96.00 | | 225.77 | 610.75 | 0.00 | 0.00 |
| 98.00 | | 256.59 | 692.23 | 0.00 | 0.00 |
| 99.67 | | 212.49 | 572.15 | 0.00 | 0.00 |
| 100.00 | | 42.30 | 52.24 | 0.00 | 0.00 |
| 102.00 | | 253.25 | 312.26 | 0.00 | 0.00 |
| 104.00 | | 251.53 | 310.21 | 0.00 | 0.00 |
| 106.00 | | 249.76 | 308.16 | 0.00 | 0.00 |
| 107.00 | (28) attachments | 6698.06 | 3557.54 | 0.00 | 0.00 |
| 108.00 | | 123.63 | 126.47 | 0.00 | 0.00 |
| 110.00 | | 246.13 | 251.40 | 0.00 | 0.00 |
| 112.00 | | 244.26 | 249.35 | 0.00 | 0.00 |
| 114.00 | | 242.35 | 247.30 | 0.00 | 0.00 |
| 116.00 | | 240.41 | 245.24 | 0.00 | 0.00 |
| 117.00 | (19) attachments | 5827.32 | 4391.21 | 0.00 | 4112.12 |
| 118.00 | | 118.87 | 116.76 | 0.00 | 0.00 |
| 120.00 | | 236.44 | 231.98 | 0.00 | 0.00 |
| 122.00 | | 234.41 | 206.22 | 0.00 | 0.00 |
| 124.00 | | 232.34 | 204.46 | 0.00 | 0.00 |
| 126.00 | | 230.25 | 202.70 | 0.00 | 0.00 |
| 127.00 | (11) attachments | 4105.62 | 2931.61 | 0.00 | 0.00 |
| 128.00 | | 113.70 | 99.05 | 0.00 | 0.00 |
| 130.00 | | 225.98 | 196.79 | 0.00 | 0.00 |
| 132.00 | | 223.80 | 195.03 | 0.00 | 0.00 |
| 134.00 | | 221.60 | 193.27 | 0.00 | 0.00 |
| 136.00 | | 219.36 | 191.51 | 0.00 | 0.00 |
| 137.00 | (21) attachments | 4055.81 | 2126.10 | 0.00 | 0.00 |
| 138.00 | | 108.19 | 79.68 | 0.00 | 0.00 |
| 140.00 | | 214.82 | 158.04 | 0.00 | 0.00 |
| 142.00 | | 212.52 | 156.28 | 0.00 | 0.00 |
| 144.00 | | 210.18 | 154.52 | 0.00 | 0.00 |
| 146.00 | | 207.83 | 152.76 | 0.00 | 0.00 |
| 147.00 | (19) attachments | 7548.36 | 4823.90 | 0.00 | 0.00 |
| 148.00 | | 102.35 | 60.02 | 0.00 | 0.00 |
| 150.00 | (1) attachments | 271.68 | 160.72 | 0.00 | 240.21 |
| Totals: | | 46,649.09 | 55,935.05 | 0.00 | 4,352.33 |

Calculated Forces

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



| | |
|--|----------------------|
| Load Case: 1.2D + 1.6W 105 mph Wind | Iterations 28 |
| Dead Load Factor 1.20 | |
| Wind Load Factor 1.60 | |

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (-) (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation Sway (deg) | Rotation Twist (deg) | Stress Ratio |
|---------------|------------------|------------------|---------------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|---------------------|----------------------|--------------|
| 0.00 | -55.88 | -46.71 | 0.00 | -5155.8 | 0.00 | 5155.89 | 5817.07 | 2908.54 | 11858.0 | 5886.84 | 0.00 | 0.000 | 0.000 | 0.886 |
| 2.00 | -55.15 | -46.57 | 0.00 | -5062.4 | 0.00 | 5062.48 | 5786.20 | 2893.10 | 11708.4 | 5812.58 | 0.03 | -0.119 | 0.000 | 0.881 |
| 4.00 | -54.35 | -46.43 | 0.00 | -4969.3 | 0.00 | 4969.34 | 5755.15 | 2877.58 | 11559.4 | 5738.61 | 0.10 | -0.238 | 0.000 | 0.876 |
| 6.00 | -53.50 | -46.28 | 0.00 | -4876.4 | 0.00 | 4876.49 | 5723.94 | 2861.97 | 11411.0 | 5664.94 | 0.23 | -0.358 | 0.000 | 0.870 |
| 8.00 | -52.65 | -46.14 | 0.00 | -4783.9 | 0.00 | 4783.93 | 5692.56 | 2846.28 | 11263.2 | 5591.57 | 0.40 | -0.478 | 0.000 | 0.865 |
| 10.00 | -51.81 | -45.99 | 0.00 | -4691.6 | 0.00 | 4691.65 | 5652.47 | 2826.24 | 11099.3 | 5510.17 | 0.63 | -0.599 | 0.000 | 0.861 |
| 12.00 | -50.97 | -45.85 | 0.00 | -4599.6 | 0.00 | 4599.66 | 5609.81 | 2804.91 | 10931.5 | 5426.88 | 0.91 | -0.720 | 0.000 | 0.857 |
| 14.00 | -50.14 | -45.70 | 0.00 | -4507.9 | 0.00 | 4507.97 | 5567.15 | 2783.57 | 10765.0 | 5344.23 | 1.24 | -0.841 | 0.000 | 0.853 |
| 16.00 | -49.31 | -45.55 | 0.00 | -4416.5 | 0.00 | 4416.57 | 5524.49 | 2762.24 | 10599.8 | 5262.21 | 1.61 | -0.962 | 0.000 | 0.848 |
| 18.00 | -48.49 | -45.39 | 0.00 | -4325.4 | 0.00 | 4325.47 | 5481.83 | 2740.91 | 10435.9 | 5180.82 | 2.04 | -1.084 | 0.000 | 0.844 |
| 20.00 | -47.67 | -45.23 | 0.00 | -4234.6 | 0.00 | 4234.69 | 5439.17 | 2719.58 | 10273.2 | 5100.07 | 2.53 | -1.206 | 0.000 | 0.839 |
| 22.00 | -46.86 | -45.05 | 0.00 | -4144.2 | 0.00 | 4144.24 | 5396.51 | 2698.25 | 10111.8 | 5019.95 | 3.06 | -1.329 | 0.000 | 0.835 |
| 24.00 | -46.06 | -44.88 | 0.00 | -4054.1 | 0.00 | 4054.14 | 5353.84 | 2676.92 | 9951.76 | 4940.47 | 3.64 | -1.451 | 0.000 | 0.829 |
| 26.00 | -45.26 | -44.69 | 0.00 | -3964.3 | 0.00 | 3964.39 | 5311.18 | 2655.59 | 9792.93 | 4861.62 | 4.27 | -1.574 | 0.000 | 0.824 |
| 28.00 | -44.46 | -44.51 | 0.00 | -3875.0 | 0.00 | 3875.00 | 5268.52 | 2634.26 | 9635.38 | 4783.41 | 4.96 | -1.697 | 0.000 | 0.819 |
| 30.00 | -43.67 | -44.32 | 0.00 | -3785.9 | 0.00 | 3785.99 | 5225.86 | 2612.93 | 9479.11 | 4705.83 | 5.70 | -1.820 | 0.000 | 0.813 |
| 32.00 | -42.89 | -44.12 | 0.00 | -3697.3 | 0.00 | 3697.36 | 5183.20 | 2591.60 | 9324.12 | 4628.89 | 6.49 | -1.943 | 0.000 | 0.807 |
| 34.00 | -42.11 | -43.92 | 0.00 | -3609.1 | 0.00 | 3609.12 | 5140.54 | 2570.27 | 9170.40 | 4552.57 | 7.33 | -2.066 | 0.000 | 0.801 |
| 36.00 | -41.34 | -43.71 | 0.00 | -3521.2 | 0.00 | 3521.29 | 5097.88 | 2548.94 | 9017.97 | 4476.90 | 8.22 | -2.190 | 0.000 | 0.795 |
| 38.00 | -40.58 | -43.51 | 0.00 | -3433.8 | 0.00 | 3433.86 | 5055.22 | 2527.61 | 8866.81 | 4401.86 | 9.16 | -2.313 | 0.000 | 0.788 |
| 40.00 | -39.82 | -43.29 | 0.00 | -3346.8 | 0.00 | 3346.86 | 5012.56 | 2506.28 | 8716.92 | 4327.45 | 10.16 | -2.436 | 0.000 | 0.782 |
| 42.00 | -39.07 | -43.08 | 0.00 | -3260.2 | 0.00 | 3260.27 | 4969.90 | 2484.95 | 8568.32 | 4253.68 | 11.21 | -2.560 | 0.000 | 0.775 |
| 44.00 | -38.32 | -42.86 | 0.00 | -3174.1 | 0.00 | 3174.12 | 4927.23 | 2463.62 | 8420.99 | 4180.54 | 12.31 | -2.683 | 0.000 | 0.767 |
| 46.00 | -37.61 | -42.61 | 0.00 | -3088.4 | 0.00 | 3088.40 | 4884.57 | 2442.29 | 8274.95 | 4108.03 | 13.46 | -2.806 | 0.000 | 0.760 |
| 46.67 | -37.35 | -42.55 | 0.00 | -3059.9 | 0.00 | 3059.99 | 4870.35 | 2435.18 | 8226.55 | 4084.00 | 13.85 | -2.847 | 0.000 | 0.757 |
| 48.00 | -36.52 | -42.39 | 0.00 | -3003.2 | 0.00 | 3003.26 | 4841.91 | 2420.96 | 8130.17 | 4036.16 | 14.66 | -2.929 | 0.000 | 0.752 |
| 50.00 | -35.32 | -42.13 | 0.00 | -2918.4 | 0.00 | 2918.47 | 4799.25 | 2399.63 | 7986.68 | 3964.92 | 15.91 | -3.052 | 0.000 | 0.744 |
| 52.00 | -34.15 | -41.85 | 0.00 | -2834.2 | 0.00 | 2834.21 | 4756.59 | 2378.30 | 7844.47 | 3894.32 | 17.22 | -3.174 | 0.000 | 0.735 |
| 53.00 | -33.56 | -41.72 | 0.00 | -2792.3 | 0.00 | 2792.35 | 4740.56 | 2120.28 | 7137.82 | 3543.51 | 17.89 | -3.236 | 0.000 | 0.796 |
| 54.00 | -33.20 | -41.62 | 0.00 | -2750.6 | 0.00 | 2750.64 | 4221.90 | 2110.95 | 7074.79 | 3512.22 | 18.57 | -3.297 | 0.000 | 0.791 |
| 56.00 | -32.54 | -41.38 | 0.00 | -2667.4 | 0.00 | 2667.40 | 4184.57 | 2092.28 | 6949.58 | 3450.06 | 19.98 | -3.426 | 0.000 | 0.781 |
| 58.00 | -31.88 | -41.14 | 0.00 | -2584.6 | 0.00 | 2584.63 | 4147.24 | 2073.62 | 6825.49 | 3388.46 | 21.44 | -3.555 | 0.000 | 0.771 |
| 60.00 | -31.23 | -40.90 | 0.00 | -2502.3 | 0.00 | 2502.34 | 4109.91 | 2054.96 | 6702.51 | 3327.41 | 22.96 | -3.684 | 0.000 | 0.760 |
| 62.00 | -30.58 | -40.66 | 0.00 | -2420.5 | 0.00 | 2420.54 | 4072.58 | 2036.29 | 6580.65 | 3266.91 | 24.53 | -3.811 | 0.000 | 0.749 |
| 64.00 | -29.94 | -40.41 | 0.00 | -2339.2 | 0.00 | 2339.22 | 4035.25 | 2017.63 | 6459.92 | 3206.97 | 26.15 | -3.938 | 0.000 | 0.737 |
| 66.00 | -29.31 | -40.17 | 0.00 | -2258.3 | 0.00 | 2258.39 | 3997.93 | 1998.96 | 6340.29 | 3147.59 | 27.83 | -4.064 | 0.000 | 0.725 |
| 68.00 | -28.68 | -39.92 | 0.00 | -2178.0 | 0.00 | 2178.06 | 3960.60 | 1980.30 | 6221.79 | 3088.76 | 29.56 | -4.189 | 0.000 | 0.713 |
| 70.00 | -28.06 | -39.66 | 0.00 | -2098.2 | 0.00 | 2098.23 | 3923.27 | 1961.63 | 6104.41 | 3030.48 | 31.34 | -4.313 | 0.000 | 0.700 |
| 72.00 | -27.45 | -39.41 | 0.00 | -2018.9 | 0.00 | 2018.90 | 3885.94 | 1942.97 | 5988.14 | 2972.76 | 33.17 | -4.435 | 0.000 | 0.687 |
| 74.00 | -26.84 | -39.16 | 0.00 | -1940.0 | 0.00 | 1940.08 | 3848.61 | 1924.31 | 5872.99 | 2915.60 | 35.05 | -4.557 | 0.000 | 0.673 |
| 76.00 | -26.23 | -38.90 | 0.00 | -1861.7 | 0.00 | 1861.77 | 3811.28 | 1905.64 | 5758.96 | 2858.99 | 36.98 | -4.677 | 0.000 | 0.658 |
| 78.00 | -25.64 | -38.64 | 0.00 | -1783.9 | 0.00 | 1783.98 | 3773.96 | 1886.98 | 5646.05 | 2802.94 | 38.97 | -4.795 | 0.000 | 0.644 |
| 80.00 | -25.05 | -38.38 | 0.00 | -1706.7 | 0.00 | 1706.70 | 3736.63 | 1868.31 | 5534.25 | 2747.44 | 41.00 | -4.912 | 0.000 | 0.628 |
| 82.00 | -24.46 | -38.12 | 0.00 | -1629.9 | 0.00 | 1629.94 | 3699.30 | 1849.65 | 5423.58 | 2692.49 | 43.08 | -5.027 | 0.000 | 0.612 |
| 84.00 | -23.88 | -37.86 | 0.00 | -1553.7 | 0.00 | 1553.70 | 3661.97 | 1830.99 | 5314.02 | 2638.10 | 45.21 | -5.140 | 0.000 | 0.596 |
| 86.00 | -23.31 | -37.59 | 0.00 | -1477.9 | 0.00 | 1477.99 | 3624.64 | 1812.32 | 5205.58 | 2584.27 | 47.38 | -5.251 | 0.000 | 0.579 |
| 88.00 | -22.75 | -37.33 | 0.00 | -1402.8 | 0.00 | 1402.81 | 3587.31 | 1793.66 | 5098.25 | 2530.99 | 49.60 | -5.360 | 0.000 | 0.561 |
| 90.00 | -22.19 | -37.06 | 0.00 | -1328.1 | 0.00 | 1328.15 | 3549.99 | 1774.99 | 4992.05 | 2478.26 | 51.87 | -5.466 | 0.000 | 0.543 |

Calculated Forces

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



| | | | | | | | | | | | | | | |
|--------|--------|--------|------|---------|------|---------|---------|---------|---------|---------|--------|--------|-------|-------|
| 92.00 | -21.64 | -36.79 | 0.00 | -1254.0 | 0.00 | 1254.03 | 3512.66 | 1756.33 | 4886.96 | 2426.09 | 54.18 | -5.570 | 0.000 | 0.523 |
| 94.00 | -21.12 | -36.51 | 0.00 | -1180.4 | 0.00 | 1180.45 | 3475.33 | 1737.66 | 4782.99 | 2374.48 | 56.53 | -5.671 | 0.000 | 0.504 |
| 94.25 | -21.03 | -36.49 | 0.00 | -1171.3 | 0.00 | 1171.32 | 3470.66 | 1735.33 | 4770.08 | 2368.07 | 56.83 | -5.684 | 0.000 | 0.501 |
| 96.00 | -20.39 | -36.24 | 0.00 | -1107.4 | 0.00 | 1107.46 | 3438.00 | 1719.00 | 4680.14 | 2323.42 | 58.92 | -5.770 | 0.000 | 0.483 |
| 98.00 | -19.67 | -35.94 | 0.00 | -1034.9 | 0.00 | 1034.99 | 3400.67 | 1700.34 | 4578.41 | 2272.92 | 61.36 | -5.864 | 0.000 | 0.462 |
| 99.67 | -19.10 | -35.68 | 0.00 | -975.09 | 0.00 | 975.09 | 1458.24 | 729.12 | 1997.89 | 991.83 | 63.42 | -5.941 | 0.000 | 0.999 |
| 100.00 | -18.99 | -35.67 | 0.00 | -963.20 | 0.00 | 963.20 | 1456.89 | 728.44 | 1992.39 | 989.11 | 63.83 | -5.956 | 0.000 | 0.989 |
| 102.00 | -18.61 | -35.44 | 0.00 | -891.86 | 0.00 | 891.86 | 1448.65 | 724.33 | 1959.44 | 972.75 | 66.36 | -6.121 | 0.000 | 0.932 |
| 104.00 | -18.23 | -35.20 | 0.00 | -820.99 | 0.00 | 820.99 | 1440.25 | 720.13 | 1926.51 | 956.40 | 68.95 | -6.279 | 0.000 | 0.873 |
| 106.00 | -17.88 | -34.95 | 0.00 | -750.59 | 0.00 | 750.59 | 1431.68 | 715.84 | 1893.60 | 940.06 | 71.61 | -6.428 | 0.000 | 0.813 |
| 107.00 | -15.07 | -27.92 | 0.00 | -715.64 | 0.00 | 715.64 | 1427.33 | 713.67 | 1877.17 | 931.90 | 72.96 | -6.501 | 0.000 | 0.780 |
| 108.00 | -14.91 | -27.81 | 0.00 | -687.72 | 0.00 | 687.72 | 1422.94 | 711.47 | 1860.74 | 923.75 | 74.33 | -6.571 | 0.000 | 0.756 |
| 110.00 | -14.62 | -27.57 | 0.00 | -632.11 | 0.00 | 632.11 | 1414.04 | 707.02 | 1827.92 | 907.46 | 77.11 | -6.705 | 0.000 | 0.708 |
| 112.00 | -14.35 | -27.32 | 0.00 | -576.98 | 0.00 | 576.98 | 1404.97 | 702.48 | 1795.15 | 891.19 | 79.94 | -6.832 | 0.000 | 0.659 |
| 114.00 | -14.08 | -27.08 | 0.00 | -522.34 | 0.00 | 522.34 | 1395.73 | 697.86 | 1762.45 | 874.95 | 82.82 | -6.952 | 0.000 | 0.609 |
| 116.00 | -13.82 | -26.83 | 0.00 | -468.17 | 0.00 | 468.17 | 1386.32 | 693.16 | 1729.81 | 858.75 | 85.75 | -7.064 | 0.000 | 0.557 |
| 117.00 | -10.17 | -20.52 | 0.00 | -437.23 | 0.00 | 437.23 | 1381.56 | 690.78 | 1713.52 | 850.66 | 87.23 | -7.117 | 0.000 | 0.522 |
| 118.00 | -10.04 | -20.40 | 0.00 | -416.71 | 0.00 | 416.71 | 1376.75 | 688.37 | 1697.25 | 842.59 | 88.73 | -7.168 | 0.000 | 0.503 |
| 120.00 | -9.81 | -20.15 | 0.00 | -375.91 | 0.00 | 375.91 | 1367.01 | 683.50 | 1664.77 | 826.46 | 91.74 | -7.264 | 0.000 | 0.463 |
| 120.00 | -9.81 | -20.15 | 0.00 | -375.91 | 0.00 | 375.91 | 1091.99 | 545.99 | 1332.66 | 661.59 | 91.74 | -7.264 | 0.000 | 0.579 |
| 122.00 | -9.60 | -19.91 | 0.00 | -335.61 | 0.00 | 335.61 | 1085.46 | 542.73 | 1308.44 | 649.56 | 94.80 | -7.354 | 0.000 | 0.527 |
| 124.00 | -9.40 | -19.67 | 0.00 | -295.80 | 0.00 | 295.80 | 1078.76 | 539.38 | 1284.21 | 637.54 | 97.89 | -7.450 | 0.000 | 0.474 |
| 126.00 | -9.20 | -19.42 | 0.00 | -256.46 | 0.00 | 256.46 | 1071.89 | 535.95 | 1259.98 | 625.51 | 101.03 | -7.537 | 0.000 | 0.420 |
| 127.00 | -6.83 | -14.97 | 0.00 | -237.04 | 0.00 | 237.04 | 1068.40 | 534.20 | 1247.88 | 619.50 | 102.60 | -7.577 | 0.000 | 0.390 |
| 128.00 | -6.73 | -14.85 | 0.00 | -222.07 | 0.00 | 222.07 | 1064.86 | 532.43 | 1235.77 | 613.49 | 104.19 | -7.615 | 0.000 | 0.369 |
| 130.00 | -6.55 | -14.61 | 0.00 | -192.37 | 0.00 | 192.37 | 1057.66 | 528.83 | 1211.58 | 601.48 | 107.39 | -7.686 | 0.000 | 0.327 |
| 132.00 | -6.37 | -14.37 | 0.00 | -163.16 | 0.00 | 163.16 | 1050.29 | 525.14 | 1187.41 | 589.48 | 110.61 | -7.749 | 0.000 | 0.284 |
| 134.00 | -6.20 | -14.13 | 0.00 | -134.42 | 0.00 | 134.42 | 1042.75 | 521.38 | 1163.27 | 577.50 | 113.86 | -7.803 | 0.000 | 0.239 |
| 136.00 | -6.03 | -13.89 | 0.00 | -106.17 | 0.00 | 106.17 | 1035.05 | 517.52 | 1139.18 | 565.54 | 117.13 | -7.849 | 0.000 | 0.194 |
| 137.00 | -4.47 | -9.58 | 0.00 | -92.28 | 0.00 | 92.28 | 1031.13 | 515.57 | 1127.15 | 559.57 | 118.77 | -7.869 | 0.000 | 0.170 |
| 138.00 | -4.41 | -9.46 | 0.00 | -82.70 | 0.00 | 82.70 | 1027.18 | 513.59 | 1115.14 | 553.60 | 120.42 | -7.887 | 0.000 | 0.154 |
| 140.00 | -4.28 | -9.23 | 0.00 | -63.77 | 0.00 | 63.77 | 1019.14 | 509.57 | 1091.15 | 541.69 | 123.72 | -7.917 | 0.000 | 0.122 |
| 142.00 | -4.15 | -9.00 | 0.00 | -45.31 | 0.00 | 45.31 | 1010.93 | 505.47 | 1067.22 | 529.81 | 127.03 | -7.941 | 0.000 | 0.090 |
| 144.00 | -4.02 | -8.77 | 0.00 | -27.31 | 0.00 | 27.31 | 1002.56 | 501.28 | 1043.37 | 517.97 | 130.35 | -7.957 | 0.000 | 0.057 |
| 146.00 | -3.90 | -8.55 | 0.00 | -9.77 | 0.00 | 9.77 | 994.02 | 497.01 | 1019.60 | 506.17 | 133.68 | -7.966 | 0.000 | 0.024 |
| 147.00 | -0.17 | -0.40 | 0.00 | -1.22 | 0.00 | 1.22 | 989.69 | 494.84 | 1007.74 | 500.29 | 135.34 | -7.967 | 0.000 | 0.003 |
| 148.00 | -0.12 | -0.29 | 0.00 | -0.82 | 0.00 | 0.82 | 985.31 | 492.66 | 995.91 | 494.41 | 137.00 | -7.967 | 0.000 | 0.002 |
| 150.00 | 0.00 | -0.27 | 0.00 | -0.24 | 0.00 | 0.24 | 976.44 | 488.22 | 972.32 | 482.70 | 140.33 | -7.968 | 0.000 | 0.000 |

Wind Loading - Shaft

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



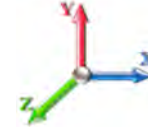
Page: 17

Load Case: 0.9D + 1.6W 105 mph Wind

Iterations 28

Dead Load Factor 0.90

Wind Load Factor 1.60



| Elev (ft) | Description | Kzt | Kz | qz (psf) | qzGh (psf) | C (mph-ft) | Cf | Ice Thick (in) | Tributary (ft) | Aa (sf) | CfAa (sf) | Wind Force X (lb) | Dead Load Ice (lb) | Tot Dead Load (lb) |
|-----------|-----------------|------|------|----------|------------|------------|-------|----------------|----------------|---------|-----------|-------------------|--------------------|--------------------|
| 0.00 | | 1.00 | 0.85 | 22.791 | 25.07 | 411.26 | 0.750 | 0.000 | 0.00 | 0.000 | 0.00 | 0.0 | 0.0 | 0.0 |
| 2.00 | | 1.00 | 0.85 | 22.791 | 25.07 | 408.30 | 0.750 | 0.000 | 2.00 | 8.466 | 6.35 | 254.7 | 0.0 | 481.8 |
| 4.00 | | 1.00 | 0.85 | 22.791 | 25.07 | 405.34 | 0.750 | 0.000 | 2.00 | 8.405 | 6.30 | 252.9 | 0.0 | 478.3 |
| 6.00 | | 1.00 | 0.85 | 22.791 | 25.07 | 402.37 | 0.750 | 0.000 | 2.00 | 8.344 | 6.26 | 251.0 | 0.0 | 474.8 |
| 8.00 | | 1.00 | 0.85 | 22.791 | 25.07 | 399.41 | 0.750 | 0.000 | 2.00 | 8.282 | 6.21 | 249.2 | 0.0 | 471.3 |
| 10.00 | | 1.00 | 0.85 | 22.791 | 25.07 | 396.45 | 0.750 | 0.000 | 2.00 | 8.221 | 6.17 | 247.3 | 0.0 | 467.8 |
| 12.00 | | 1.00 | 0.85 | 22.791 | 25.07 | 393.49 | 0.750 | 0.000 | 2.00 | 8.160 | 6.12 | 245.5 | 0.0 | 464.2 |
| 14.00 | | 1.00 | 0.85 | 22.791 | 25.07 | 390.53 | 0.750 | 0.000 | 2.00 | 8.099 | 6.07 | 243.6 | 0.0 | 460.7 |
| 16.00 | | 1.00 | 0.86 | 23.072 | 25.38 | 389.95 | 0.750 | 0.000 | 2.00 | 8.038 | 6.03 | 244.8 | 0.0 | 457.2 |
| 18.00 | | 1.00 | 0.88 | 23.652 | 26.02 | 391.80 | 0.750 | 0.000 | 2.00 | 7.977 | 5.98 | 249.0 | 0.0 | 453.7 |
| 20.00 | | 1.00 | 0.90 | 24.182 | 26.60 | 393.12 | 0.750 | 0.000 | 2.00 | 7.915 | 5.94 | 252.7 | 0.0 | 450.2 |
| 22.00 | | 1.00 | 0.92 | 24.672 | 27.14 | 394.00 | 0.750 | 0.000 | 2.00 | 7.854 | 5.89 | 255.8 | 0.0 | 446.7 |
| 24.00 | | 1.00 | 0.94 | 25.128 | 27.64 | 394.52 | 0.750 | 0.000 | 2.00 | 7.793 | 5.84 | 258.5 | 0.0 | 443.1 |
| 26.00 | | 1.00 | 0.95 | 25.555 | 28.11 | 394.72 | 0.750 | 0.000 | 2.00 | 7.732 | 5.80 | 260.8 | 0.0 | 439.6 |
| 28.00 | | 1.00 | 0.97 | 25.957 | 28.55 | 394.65 | 0.750 | 0.000 | 2.00 | 7.671 | 5.75 | 262.8 | 0.0 | 436.1 |
| 30.00 | | 1.00 | 0.98 | 26.337 | 28.97 | 394.35 | 0.750 | 0.000 | 2.00 | 7.610 | 5.71 | 264.5 | 0.0 | 432.6 |
| 32.00 | | 1.00 | 1.00 | 26.697 | 29.37 | 393.83 | 0.750 | 0.000 | 2.00 | 7.548 | 5.66 | 266.0 | 0.0 | 429.1 |
| 34.00 | | 1.00 | 1.01 | 27.040 | 29.74 | 393.13 | 0.750 | 0.000 | 2.00 | 7.487 | 5.62 | 267.2 | 0.0 | 425.6 |
| 36.00 | | 1.00 | 1.02 | 27.367 | 30.10 | 392.25 | 0.750 | 0.000 | 2.00 | 7.426 | 5.57 | 268.3 | 0.0 | 422.0 |
| 38.00 | | 1.00 | 1.03 | 27.681 | 30.45 | 391.23 | 0.750 | 0.000 | 2.00 | 7.365 | 5.52 | 269.1 | 0.0 | 418.5 |
| 40.00 | | 1.00 | 1.04 | 27.981 | 30.78 | 390.07 | 0.750 | 0.000 | 2.00 | 7.304 | 5.48 | 269.8 | 0.0 | 415.0 |
| 42.00 | | 1.00 | 1.05 | 28.270 | 31.10 | 388.78 | 0.750 | 0.000 | 2.00 | 7.242 | 5.43 | 270.3 | 0.0 | 411.5 |
| 44.00 | | 1.00 | 1.06 | 28.548 | 31.40 | 387.37 | 0.750 | 0.000 | 2.00 | 7.181 | 5.39 | 270.6 | 0.0 | 408.0 |
| 46.00 | | 1.00 | 1.07 | 28.817 | 31.70 | 385.86 | 0.750 | 0.000 | 2.00 | 7.120 | 5.34 | 270.8 | 0.0 | 404.5 |
| 46.67 | Bot - Section 2 | 1.00 | 1.08 | 28.904 | 31.79 | 385.33 | 0.750 | 0.000 | 0.67 | 2.360 | 1.77 | 90.0 | 0.0 | 134.0 |
| 48.00 | | 1.00 | 1.08 | 29.076 | 31.98 | 384.25 | 0.750 | 0.000 | 1.33 | 4.798 | 3.60 | 184.2 | 0.0 | 505.8 |
| 50.00 | | 1.00 | 1.09 | 29.327 | 32.26 | 382.54 | 0.750 | 0.000 | 2.00 | 7.146 | 5.36 | 276.7 | 0.0 | 753.2 |
| 52.00 | | 1.00 | 1.10 | 29.570 | 32.53 | 380.75 | 0.750 | 0.000 | 2.00 | 7.085 | 5.31 | 276.6 | 0.0 | 746.6 |
| 53.00 | Top - Section 1 | 1.00 | 1.11 | 29.689 | 32.66 | 379.83 | 0.750 | 0.000 | 1.00 | 3.520 | 2.64 | 137.9 | 0.0 | 370.8 |
| 54.00 | | 1.00 | 1.11 | 29.806 | 32.79 | 387.11 | 0.750 | 0.000 | 1.00 | 3.504 | 2.63 | 137.9 | 0.0 | 174.4 |
| 56.00 | | 1.00 | 1.12 | 30.035 | 33.04 | 385.20 | 0.750 | 0.000 | 2.00 | 6.963 | 5.22 | 276.1 | 0.0 | 346.5 |
| 58.00 | | 1.00 | 1.13 | 30.258 | 33.28 | 383.21 | 0.750 | 0.000 | 2.00 | 6.902 | 5.18 | 275.7 | 0.0 | 343.4 |
| 60.00 | | 1.00 | 1.14 | 30.475 | 33.52 | 381.16 | 0.750 | 0.000 | 2.00 | 6.841 | 5.13 | 275.2 | 0.0 | 340.4 |
| 62.00 | | 1.00 | 1.14 | 30.686 | 33.75 | 379.04 | 0.750 | 0.000 | 2.00 | 6.779 | 5.08 | 274.6 | 0.0 | 337.3 |
| 64.00 | | 1.00 | 1.15 | 30.892 | 33.98 | 376.86 | 0.750 | 0.000 | 2.00 | 6.718 | 5.04 | 273.9 | 0.0 | 334.2 |
| 66.00 | | 1.00 | 1.16 | 31.092 | 34.20 | 374.62 | 0.750 | 0.000 | 2.00 | 6.657 | 4.99 | 273.2 | 0.0 | 331.1 |
| 68.00 | | 1.00 | 1.17 | 31.288 | 34.42 | 372.33 | 0.750 | 0.000 | 2.00 | 6.596 | 4.95 | 272.4 | 0.0 | 328.1 |
| 70.00 | | 1.00 | 1.17 | 31.480 | 34.63 | 369.99 | 0.750 | 0.000 | 2.00 | 6.535 | 4.90 | 271.5 | 0.0 | 325.0 |
| 72.00 | | 1.00 | 1.18 | 31.667 | 34.83 | 367.60 | 0.750 | 0.000 | 2.00 | 6.474 | 4.86 | 270.6 | 0.0 | 321.9 |
| 74.00 | | 1.00 | 1.19 | 31.850 | 35.04 | 365.16 | 0.750 | 0.000 | 2.00 | 6.412 | 4.81 | 269.6 | 0.0 | 318.8 |
| 76.00 | | 1.00 | 1.19 | 32.030 | 35.23 | 362.68 | 0.750 | 0.000 | 2.00 | 6.351 | 4.76 | 268.5 | 0.0 | 315.7 |
| 78.00 | | 1.00 | 1.20 | 32.205 | 35.43 | 360.15 | 0.750 | 0.000 | 2.00 | 6.290 | 4.72 | 267.4 | 0.0 | 312.7 |
| 80.00 | | 1.00 | 1.21 | 32.377 | 35.62 | 357.58 | 0.750 | 0.000 | 2.00 | 6.229 | 4.67 | 266.2 | 0.0 | 309.6 |
| 82.00 | | 1.00 | 1.21 | 32.546 | 35.80 | 354.97 | 0.750 | 0.000 | 2.00 | 6.168 | 4.63 | 265.0 | 0.0 | 306.5 |
| 84.00 | | 1.00 | 1.22 | 32.712 | 35.98 | 352.33 | 0.750 | 0.000 | 2.00 | 6.106 | 4.58 | 263.7 | 0.0 | 303.4 |
| 86.00 | | 1.00 | 1.23 | 32.874 | 36.16 | 349.65 | 0.750 | 0.000 | 2.00 | 6.045 | 4.53 | 262.3 | 0.0 | 300.4 |
| 88.00 | | 1.00 | 1.23 | 33.034 | 36.34 | 346.93 | 0.750 | 0.000 | 2.00 | 5.984 | 4.49 | 260.9 | 0.0 | 297.3 |

Wind Loading - Shaft

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | | | | | | | | | | | | | | | |
|------------------------|------|------|--------|-------|--------|-------|-------|---------------|-------|------|-------|-----------------|-------|--|--|-----------------|
| 90.00 | 1.00 | 1.24 | 33.190 | 36.51 | 344.18 | 0.750 | 0.000 | 2.00 | 5.923 | 4.44 | 259.5 | 0.0 | 294.2 | | | |
| 92.00 | 1.00 | 1.24 | 33.344 | 36.68 | 341.39 | 0.750 | 0.000 | 2.00 | 5.862 | 4.40 | 258.0 | 0.0 | 291.1 | | | |
| 94.00 | 1.00 | 1.25 | 33.496 | 36.85 | 338.58 | 0.750 | 0.000 | 2.00 | 5.801 | 4.35 | 256.5 | 0.0 | 288.1 | | | |
| 94.25 Bot - Section 3 | 1.00 | 1.25 | 33.514 | 36.87 | 338.22 | 0.750 | 0.000 | 0.25 | 0.721 | 0.54 | 31.9 | 0.0 | 35.8 | | | |
| 96.00 | 1.00 | 1.25 | 33.644 | 37.01 | 335.73 | 0.750 | 0.000 | 1.75 | 5.084 | 3.81 | 225.8 | 0.0 | 376.2 | | | |
| 98.00 | 1.00 | 1.26 | 33.791 | 37.17 | 332.85 | 0.750 | 0.000 | 2.00 | 5.753 | 4.31 | 256.6 | 0.0 | 425.6 | | | |
| 99.67 Top - Section 2 | 1.00 | 1.26 | 33.911 | 37.30 | 330.44 | 0.750 | 0.000 | 1.67 | 4.747 | 3.56 | 212.5 | 0.0 | 351.2 | | | |
| 100.00 | 1.00 | 1.27 | 33.935 | 37.33 | 334.34 | 0.750 | 0.000 | 0.33 | 0.944 | 0.71 | 42.3 | 0.0 | 23.6 | | | |
| 102.00 | 1.00 | 1.27 | 34.077 | 37.48 | 331.42 | 0.750 | 0.000 | 2.00 | 5.630 | 4.22 | 253.3 | 0.0 | 140.7 | | | |
| 104.00 | 1.00 | 1.28 | 34.216 | 37.64 | 328.47 | 0.750 | 0.000 | 2.00 | 5.569 | 4.18 | 251.5 | 0.0 | 139.1 | | | |
| 106.00 | 1.00 | 1.28 | 34.354 | 37.79 | 325.49 | 0.750 | 0.000 | 2.00 | 5.508 | 4.13 | 249.8 | 0.0 | 137.6 | | | |
| 107.00 Appurtenance(s) | 1.00 | 1.28 | 34.422 | 37.86 | 323.99 | 0.750 | 0.000 | 1.00 | 2.731 | 2.05 | 124.1 | 0.0 | 68.2 | | | |
| 108.00 | 1.00 | 1.29 | 34.489 | 37.94 | 322.49 | 0.750 | 0.000 | 1.00 | 2.716 | 2.04 | 123.6 | 0.0 | 67.8 | | | |
| 110.00 | 1.00 | 1.29 | 34.623 | 38.08 | 319.46 | 0.750 | 0.000 | 2.00 | 5.386 | 4.04 | 246.1 | 0.0 | 134.5 | | | |
| 112.00 | 1.00 | 1.30 | 34.754 | 38.23 | 316.41 | 0.750 | 0.000 | 2.00 | 5.324 | 3.99 | 244.3 | 0.0 | 133.0 | | | |
| 114.00 | 1.00 | 1.30 | 34.884 | 38.37 | 313.34 | 0.750 | 0.000 | 2.00 | 5.263 | 3.95 | 242.4 | 0.0 | 131.4 | | | |
| 116.00 | 1.00 | 1.31 | 35.012 | 38.51 | 310.24 | 0.750 | 0.000 | 2.00 | 5.202 | 3.90 | 240.4 | 0.0 | 129.9 | | | |
| 117.00 Appurtenance(s) | 1.00 | 1.31 | 35.075 | 38.58 | 308.69 | 0.750 | 0.000 | 1.00 | 2.578 | 1.93 | 119.4 | 0.0 | 64.4 | | | |
| 118.00 | 1.00 | 1.31 | 35.138 | 38.65 | 307.13 | 0.750 | 0.000 | 1.00 | 2.563 | 1.92 | 118.9 | 0.0 | 64.0 | | | |
| 120.00 Top - Section 3 | 1.00 | 1.32 | 35.263 | 38.79 | 303.99 | 0.750 | 0.000 | 2.00 | 5.080 | 3.81 | 236.4 | 0.0 | 126.8 | | | |
| 122.00 | 1.00 | 1.32 | 35.386 | 38.92 | 300.83 | 0.750 | 0.000 | 2.00 | 5.018 | 3.76 | 234.4 | 0.0 | 107.5 | | | |
| 124.00 | 1.00 | 1.32 | 35.507 | 39.06 | 297.65 | 0.750 | 0.000 | 2.00 | 4.957 | 3.72 | 232.3 | 0.0 | 106.2 | | | |
| 126.00 | 1.00 | 1.33 | 35.627 | 39.19 | 294.44 | 0.750 | 0.000 | 2.00 | 4.896 | 3.67 | 230.2 | 0.0 | 104.9 | | | |
| 127.00 Appurtenance(s) | 1.00 | 1.33 | 35.686 | 39.25 | 292.84 | 0.750 | 0.000 | 1.00 | 2.425 | 1.82 | 114.2 | 0.0 | 51.9 | | | |
| 128.00 | 1.00 | 1.33 | 35.745 | 39.32 | 291.22 | 0.750 | 0.000 | 1.00 | 2.410 | 1.81 | 113.7 | 0.0 | 51.6 | | | |
| 130.00 | 1.00 | 1.34 | 35.862 | 39.45 | 287.99 | 0.750 | 0.000 | 2.00 | 4.774 | 3.58 | 226.0 | 0.0 | 102.2 | | | |
| 132.00 | 1.00 | 1.34 | 35.977 | 39.58 | 284.73 | 0.750 | 0.000 | 2.00 | 4.713 | 3.53 | 223.8 | 0.0 | 100.9 | | | |
| 134.00 | 1.00 | 1.35 | 36.091 | 39.70 | 281.45 | 0.750 | 0.000 | 2.00 | 4.651 | 3.49 | 221.6 | 0.0 | 99.6 | | | |
| 136.00 | 1.00 | 1.35 | 36.204 | 39.82 | 278.16 | 0.750 | 0.000 | 2.00 | 4.590 | 3.44 | 219.4 | 0.0 | 98.3 | | | |
| 137.00 Appurtenance(s) | 1.00 | 1.35 | 36.260 | 39.89 | 276.51 | 0.750 | 0.000 | 1.00 | 2.272 | 1.70 | 108.8 | 0.0 | 48.6 | | | |
| 138.00 | 1.00 | 1.35 | 36.316 | 39.95 | 274.85 | 0.750 | 0.000 | 1.00 | 2.257 | 1.69 | 108.2 | 0.0 | 48.3 | | | |
| 140.00 | 1.00 | 1.36 | 36.426 | 40.07 | 271.52 | 0.750 | 0.000 | 2.00 | 4.468 | 3.35 | 214.8 | 0.0 | 95.6 | | | |
| 142.00 | 1.00 | 1.36 | 36.535 | 40.19 | 268.18 | 0.750 | 0.000 | 2.00 | 4.407 | 3.31 | 212.5 | 0.0 | 94.3 | | | |
| 144.00 | 1.00 | 1.37 | 36.642 | 40.31 | 264.82 | 0.750 | 0.000 | 2.00 | 4.346 | 3.26 | 210.2 | 0.0 | 93.0 | | | |
| 146.00 | 1.00 | 1.37 | 36.749 | 40.42 | 261.45 | 0.750 | 0.000 | 2.00 | 4.284 | 3.21 | 207.8 | 0.0 | 91.7 | | | |
| 147.00 Appurtenance(s) | 1.00 | 1.37 | 36.802 | 40.48 | 259.75 | 0.750 | 0.000 | 1.00 | 2.119 | 1.59 | 102.9 | 0.0 | 45.3 | | | |
| 148.00 | 1.00 | 1.37 | 36.854 | 40.54 | 258.06 | 0.750 | 0.000 | 1.00 | 2.104 | 1.58 | 102.4 | 0.0 | 45.0 | | | |
| 150.00 Appurtenance(s) | 1.00 | 1.38 | 36.959 | 40.65 | 254.65 | 0.750 | 0.000 | 2.00 | 4.162 | 3.12 | 203.0 | 0.0 | 89.0 | | | |
| Totals: | | | | | | | | 150.00 | | | | 18,914.7 | | | | 23,246.7 |

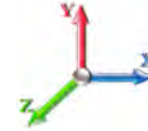
Discrete Appurtenance Forces

| | | | |
|------------------------------------|---------------------------------------|-------------------------|----------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 | |
| Site Name: North Stonington | Exposure: C | | |
| Height: 150.00 (ft) | Crest Height: 0.00 | | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | | |
| Gh: 1.1 | Topography: 1 | Struct Class: II | Page: 19 |



Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 28

| 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 | 150.00 | Lightning Rod | 1 | 37.139 | 40.852 | 1.00 | 1.00 | 1.05 | 31.50 | 0.000 | 3.500 | 68.63 | 0.00 | 240.21 |
| 2 | 147.00 | Ericsson 4449 B71 + B85 | 3 | 36.802 | 40.482 | 0.38 | 0.75 | 2.19 | 202.50 | 0.000 | 0.000 | 142.09 | 0.00 | 0.00 |
| 3 | 147.00 | Ericsson Air 21 B2A/B4P | 3 | 36.802 | 40.482 | 0.64 | 0.75 | 11.55 | 247.05 | 0.000 | 0.000 | 748.21 | 0.00 | 0.00 |
| 4 | 147.00 | RFS | 3 | 36.802 | 40.482 | 0.54 | 0.75 | 32.79 | 331.56 | 0.000 | 0.000 | 2123.77 | 0.00 | 0.00 |
| 5 | 147.00 | Ericsson KRY 112 144/1 | 3 | 36.802 | 40.482 | 0.38 | 0.75 | 0.39 | 29.70 | 0.000 | 0.000 | 25.50 | 0.00 | 0.00 |
| 6 | 147.00 | Ericsson Air 21 B4A/B2P | 3 | 36.802 | 40.482 | 0.64 | 0.75 | 11.55 | 243.81 | 0.000 | 0.000 | 748.21 | 0.00 | 0.00 |
| 7 | 147.00 | Tie Back Kit (Commscope | 1 | 36.802 | 40.482 | 1.00 | 1.00 | 4.17 | 110.79 | 0.000 | 0.000 | 270.10 | 0.00 | 0.00 |
| 8 | 147.00 | Rreinforcement Kit | 1 | 36.802 | 40.482 | 1.00 | 1.00 | 9.50 | 418.42 | 0.000 | 0.000 | 615.33 | 0.00 | 0.00 |
| 9 | 147.00 | V-Brace Kit (Sitepro | 1 | 36.802 | 40.482 | 1.00 | 1.00 | 6.30 | 177.30 | 0.000 | 0.000 | 408.06 | 0.00 | 0.00 |
| 10 | 147.00 | Platform w/ Hand Rail | 1 | 36.802 | 40.482 | 1.00 | 1.00 | 36.50 | 1800.00 | 0.000 | 0.000 | 2364.15 | 0.00 | 0.00 |
| 11 | 137.00 | Rymsa MGD5-800T2 | 3 | 36.260 | 39.886 | 0.62 | 0.80 | 6.29 | 41.58 | 0.000 | 0.000 | 401.41 | 0.00 | 0.00 |
| 12 | 137.00 | Antel BXA-70063/6CF | 3 | 36.260 | 39.886 | 0.58 | 0.80 | 13.10 | 40.23 | 0.000 | 0.000 | 835.90 | 0.00 | 0.00 |
| 13 | 137.00 | Antel LPA-80080/4CF | 6 | 36.260 | 39.886 | 0.59 | 0.80 | 19.18 | 64.80 | 0.000 | 0.000 | 1224.07 | 0.00 | 0.00 |
| 14 | 137.00 | Cleargain 850/1900 TMA's | 2 | 36.260 | 39.886 | 0.40 | 0.80 | 0.42 | 9.90 | 0.000 | 0.000 | 26.55 | 0.00 | 0.00 |
| 15 | 137.00 | RFS FD9R6004/2C-3L | 6 | 36.260 | 39.886 | 0.40 | 0.80 | 0.86 | 16.74 | 0.000 | 0.000 | 55.14 | 0.00 | 0.00 |
| 16 | 137.00 | Low Profile Platform | 1 | 36.260 | 39.886 | 1.00 | 1.00 | 22.00 | 1350.00 | 0.000 | 0.000 | 1403.99 | 0.00 | 0.00 |
| 17 | 127.00 | Fujitsu TA08025-B605 | 3 | 35.686 | 39.255 | 0.38 | 0.75 | 2.21 | 202.50 | 0.000 | 0.000 | 138.49 | 0.00 | 0.00 |
| 18 | 127.00 | JMA Wireless | 3 | 35.686 | 39.255 | 0.55 | 0.75 | 20.80 | 174.15 | 0.000 | 0.000 | 1306.13 | 0.00 | 0.00 |
| 19 | 127.00 | MC-PK8-DSH | 1 | 35.686 | 39.255 | 1.00 | 1.00 | 37.59 | 1554.30 | 0.000 | 0.000 | 2360.93 | 0.00 | 0.00 |
| 20 | 127.00 | Fujitsu TA08025-B604 | 3 | 35.686 | 39.255 | 0.38 | 0.75 | 2.21 | 172.53 | 0.000 | 0.000 | 138.49 | 0.00 | 0.00 |
| 21 | 127.00 | Raycap | 1 | 35.686 | 39.255 | 0.38 | 0.75 | 0.75 | 19.71 | 0.000 | 0.000 | 47.34 | 0.00 | 0.00 |
| 22 | 117.00 | Sitepro RMQP-496-HK | 1 | 35.075 | 38.583 | 1.00 | 1.00 | 46.00 | 2204.10 | 0.000 | 0.000 | 2839.69 | 0.00 | 0.00 |
| 23 | 117.00 | ALU TD-RRH8x20-25 | 3 | 35.075 | 38.583 | 0.38 | 0.75 | 4.56 | 189.00 | 0.000 | 0.000 | 281.27 | 0.00 | 0.00 |
| 24 | 117.00 | ALU 800 Mhz | 6 | 35.075 | 38.583 | 0.38 | 0.75 | 5.60 | 286.20 | 0.000 | 0.000 | 345.86 | 0.00 | 0.00 |
| 25 | 117.00 | ALU 1900 Mhz | 3 | 35.075 | 38.583 | 0.38 | 0.75 | 3.12 | 162.00 | 0.000 | 0.000 | 192.37 | 0.00 | 0.00 |
| 26 | 117.00 | Commscope | 3 | 35.263 | 38.789 | 0.60 | 0.75 | 22.09 | 208.98 | 0.000 | 3.000 | 1370.71 | 0.00 | 4112.12 |
| 27 | 117.00 | RFS APXVTM14-C-I20 | 3 | 35.075 | 38.583 | 0.58 | 0.75 | 10.98 | 151.74 | 0.000 | 0.000 | 678.07 | 0.00 | 0.00 |
| 28 | 107.00 | Ericsson 8843 B2 B66A | 3 | 34.422 | 37.864 | 0.38 | 0.75 | 1.86 | 202.50 | 0.000 | 0.000 | 112.46 | 0.00 | 0.00 |
| 29 | 107.00 | Raycap | 1 | 34.422 | 37.864 | 0.38 | 0.75 | 1.79 | 14.40 | 0.000 | 0.000 | 108.59 | 0.00 | 0.00 |
| 30 | 107.00 | Powerwave 7770 | 3 | 34.422 | 37.864 | 0.55 | 0.75 | 9.03 | 94.50 | 0.000 | 0.000 | 547.28 | 0.00 | 0.00 |
| 31 | 107.00 | Ericsson RRUS 4478 B14 | 3 | 34.422 | 37.864 | 0.38 | 0.75 | 2.07 | 161.73 | 0.000 | 0.000 | 125.40 | 0.00 | 0.00 |
| 32 | 107.00 | Ericsson 4449 B5/B12 | 3 | 34.422 | 37.864 | 0.38 | 0.75 | 1.86 | 189.00 | 0.000 | 0.000 | 112.46 | 0.00 | 0.00 |
| 33 | 107.00 | Raycap DC6-48-60-18-8F | 1 | 34.422 | 37.864 | 0.50 | 0.75 | 0.46 | 28.62 | 0.000 | 0.000 | 28.01 | 0.00 | 0.00 |
| 34 | 107.00 | Powerwave/LGP21401 | 6 | 34.422 | 37.864 | 0.38 | 0.75 | 0.61 | 29.70 | 0.000 | 0.000 | 36.80 | 0.00 | 0.00 |
| 35 | 107.00 | Low Profile Platform | 1 | 34.422 | 37.864 | 1.00 | 1.00 | 22.00 | 1350.00 | 0.000 | 0.000 | 1332.80 | 0.00 | 0.00 |
| 36 | 107.00 | Site Pro HRK14 | 1 | 34.422 | 37.864 | 1.00 | 1.00 | 8.13 | 272.12 | 0.000 | 0.000 | 492.53 | 0.00 | 0.00 |
| 37 | 107.00 | Cci DMP65R-BU8DA | 6 | 34.422 | 37.864 | 0.75 | 0.75 | 60.70 | 210.60 | 0.000 | 0.000 | 3677.63 | 0.00 | 0.00 |
| Totals: | | | | | | | | | 12,994.26 | | | 27,734.42 | | |

Total Applied Force Summary

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |

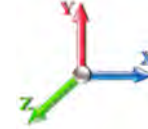


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Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 28

| Elev (ft) | Description | Lateral FX (-) (lb) | Axial FY (-) (lb) | Torsion MY (lb-ft) | Moment MZ (lb-ft) |
|--------------|-------------|---------------------------|-------------------------|--------------------------|-------------------------|
| 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | | 254.69 | 481.83 | 0.00 | 0.00 |
| 4.00 | | 252.85 | 525.07 | 0.00 | 0.00 |
| 6.00 | | 251.01 | 568.31 | 0.00 | 0.00 |
| 8.00 | | 249.17 | 564.80 | 0.00 | 0.00 |
| 10.00 | | 247.33 | 561.28 | 0.00 | 0.00 |
| 12.00 | | 245.49 | 557.76 | 0.00 | 0.00 |
| 14.00 | | 243.65 | 554.24 | 0.00 | 0.00 |
| 16.00 | | 244.79 | 550.73 | 0.00 | 0.00 |
| 18.00 | | 249.03 | 547.21 | 0.00 | 0.00 |
| 20.00 | | 252.66 | 543.69 | 0.00 | 0.00 |
| 22.00 | | 255.79 | 540.18 | 0.00 | 0.00 |
| 24.00 | | 258.49 | 536.66 | 0.00 | 0.00 |
| 26.00 | | 260.82 | 533.14 | 0.00 | 0.00 |
| 28.00 | | 262.83 | 529.62 | 0.00 | 0.00 |
| 30.00 | | 264.54 | 526.11 | 0.00 | 0.00 |
| 32.00 | | 266.01 | 522.59 | 0.00 | 0.00 |
| 34.00 | | 267.24 | 519.07 | 0.00 | 0.00 |
| 36.00 | | 268.27 | 515.56 | 0.00 | 0.00 |
| 38.00 | | 269.10 | 512.04 | 0.00 | 0.00 |
| 40.00 | | 269.76 | 508.52 | 0.00 | 0.00 |
| 42.00 | | 270.27 | 505.01 | 0.00 | 0.00 |
| 44.00 | | 270.62 | 501.49 | 0.00 | 0.00 |
| 46.00 | | 270.84 | 497.97 | 0.00 | 0.00 |
| 46.67 | | 90.03 | 165.21 | 0.00 | 0.00 |
| 48.00 | | 184.16 | 568.12 | 0.00 | 0.00 |
| 50.00 | | 276.65 | 846.69 | 0.00 | 0.00 |
| 52.00 | | 276.56 | 840.10 | 0.00 | 0.00 |
| 53.00 | | 137.94 | 417.58 | 0.00 | 0.00 |
| 54.00 | | 137.88 | 221.18 | 0.00 | 0.00 |
| 56.00 | | 276.06 | 440.04 | 0.00 | 0.00 |
| 58.00 | | 275.66 | 436.96 | 0.00 | 0.00 |
| 60.00 | | 275.17 | 433.89 | 0.00 | 0.00 |
| 62.00 | | 274.60 | 430.81 | 0.00 | 0.00 |
| 64.00 | | 273.95 | 427.73 | 0.00 | 0.00 |
| 66.00 | | 273.22 | 424.65 | 0.00 | 0.00 |
| 68.00 | | 272.41 | 421.58 | 0.00 | 0.00 |
| 70.00 | | 271.54 | 418.50 | 0.00 | 0.00 |
| 72.00 | | 270.60 | 415.42 | 0.00 | 0.00 |
| 74.00 | | 269.59 | 412.35 | 0.00 | 0.00 |
| 76.00 | | 268.52 | 409.27 | 0.00 | 0.00 |
| 78.00 | | 267.39 | 406.19 | 0.00 | 0.00 |
| 80.00 | | 266.21 | 403.11 | 0.00 | 0.00 |
| 82.00 | | 264.97 | 400.04 | 0.00 | 0.00 |
| 84.00 | | 263.67 | 396.96 | 0.00 | 0.00 |
| 86.00 | | 262.33 | 393.88 | 0.00 | 0.00 |
| 88.00 | | 260.93 | 390.80 | 0.00 | 0.00 |

Total Applied Force Summary

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | | | | |
|----------------|------------------|------------------|------------------|-------------|-----------------|
| 90.00 | | 259.49 | 387.73 | 0.00 | 0.00 |
| 92.00 | | 258.00 | 384.65 | 0.00 | 0.00 |
| 94.00 | | 256.47 | 381.57 | 0.00 | 0.00 |
| 94.25 | | 31.89 | 47.48 | 0.00 | 0.00 |
| 96.00 | | 225.77 | 458.06 | 0.00 | 0.00 |
| 98.00 | | 256.59 | 519.17 | 0.00 | 0.00 |
| 99.67 | | 212.49 | 429.11 | 0.00 | 0.00 |
| 100.00 | | 42.30 | 39.18 | 0.00 | 0.00 |
| 102.00 | | 253.25 | 234.20 | 0.00 | 0.00 |
| 104.00 | | 251.53 | 232.66 | 0.00 | 0.00 |
| 106.00 | | 249.76 | 231.12 | 0.00 | 0.00 |
| 107.00 | (28) attachments | 6698.06 | 2668.16 | 0.00 | 0.00 |
| 108.00 | | 123.63 | 94.85 | 0.00 | 0.00 |
| 110.00 | | 246.13 | 188.55 | 0.00 | 0.00 |
| 112.00 | | 244.26 | 187.01 | 0.00 | 0.00 |
| 114.00 | | 242.35 | 185.47 | 0.00 | 0.00 |
| 116.00 | | 240.41 | 183.93 | 0.00 | 0.00 |
| 117.00 | (19) attachments | 5827.32 | 3293.41 | 0.00 | 4112.12 |
| 118.00 | | 118.87 | 87.57 | 0.00 | 0.00 |
| 120.00 | | 236.44 | 173.99 | 0.00 | 0.00 |
| 122.00 | | 234.41 | 154.66 | 0.00 | 0.00 |
| 124.00 | | 232.34 | 153.35 | 0.00 | 0.00 |
| 126.00 | | 230.25 | 152.03 | 0.00 | 0.00 |
| 127.00 | (11) attachments | 4105.62 | 2198.71 | 0.00 | 0.00 |
| 128.00 | | 113.70 | 74.29 | 0.00 | 0.00 |
| 130.00 | | 225.98 | 147.59 | 0.00 | 0.00 |
| 132.00 | | 223.80 | 146.27 | 0.00 | 0.00 |
| 134.00 | | 221.60 | 144.95 | 0.00 | 0.00 |
| 136.00 | | 219.36 | 143.63 | 0.00 | 0.00 |
| 137.00 | (21) attachments | 4055.81 | 1594.57 | 0.00 | 0.00 |
| 138.00 | | 108.19 | 59.76 | 0.00 | 0.00 |
| 140.00 | | 214.82 | 118.53 | 0.00 | 0.00 |
| 142.00 | | 212.52 | 117.21 | 0.00 | 0.00 |
| 144.00 | | 210.18 | 115.89 | 0.00 | 0.00 |
| 146.00 | | 207.83 | 114.57 | 0.00 | 0.00 |
| 147.00 | (19) attachments | 7548.36 | 3617.92 | 0.00 | 0.00 |
| 148.00 | | 102.35 | 45.01 | 0.00 | 0.00 |
| 150.00 | (1) attachments | 271.68 | 120.54 | 0.00 | 240.21 |
| Totals: | | 46,649.09 | 41,951.29 | 0.00 | 4,352.33 |

Calculated Forces

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



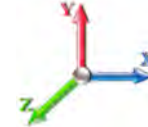
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Load Case: 0.9D + 1.6W 105 mph Wind

Iterations 28

Dead Load Factor 0.90

Wind Load Factor 1.60



| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (-) (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation Sway (deg) | Rotation Twist (deg) | Stress Ratio |
|---------------|------------------|------------------|---------------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|---------------------|----------------------|--------------|
| 0.00 | -41.90 | -46.69 | 0.00 | -5091.4 | 0.00 | 5091.47 | 5817.07 | 2908.54 | 11858.0 | 5886.84 | 0.00 | 0.000 | 0.000 | 0.872 |
| 2.00 | -41.32 | -46.52 | 0.00 | -4998.0 | 0.00 | 4998.09 | 5786.20 | 2893.10 | 11708.4 | 5812.58 | 0.03 | -0.117 | 0.000 | 0.867 |
| 4.00 | -40.70 | -46.35 | 0.00 | -4905.0 | 0.00 | 4905.05 | 5755.15 | 2877.58 | 11559.4 | 5738.61 | 0.10 | -0.235 | 0.000 | 0.862 |
| 6.00 | -40.04 | -46.18 | 0.00 | -4812.3 | 0.00 | 4812.34 | 5723.94 | 2861.97 | 11411.0 | 5664.94 | 0.22 | -0.353 | 0.000 | 0.857 |
| 8.00 | -39.38 | -46.01 | 0.00 | -4719.9 | 0.00 | 4719.98 | 5692.56 | 2846.28 | 11263.2 | 5591.57 | 0.40 | -0.472 | 0.000 | 0.851 |
| 10.00 | -38.73 | -45.84 | 0.00 | -4627.9 | 0.00 | 4627.96 | 5652.47 | 2826.24 | 11099.3 | 5510.17 | 0.62 | -0.591 | 0.000 | 0.847 |
| 12.00 | -38.08 | -45.67 | 0.00 | -4536.2 | 0.00 | 4536.29 | 5609.81 | 2804.91 | 10931.5 | 5426.88 | 0.90 | -0.710 | 0.000 | 0.843 |
| 14.00 | -37.43 | -45.49 | 0.00 | -4444.9 | 0.00 | 4444.96 | 5567.15 | 2783.57 | 10765.0 | 5344.23 | 1.22 | -0.830 | 0.000 | 0.839 |
| 16.00 | -36.79 | -45.32 | 0.00 | -4353.9 | 0.00 | 4353.98 | 5524.49 | 2762.24 | 10599.8 | 5262.21 | 1.59 | -0.950 | 0.000 | 0.834 |
| 18.00 | -36.16 | -45.13 | 0.00 | -4263.3 | 0.00 | 4263.35 | 5481.83 | 2740.91 | 10435.9 | 5180.82 | 2.02 | -1.070 | 0.000 | 0.830 |
| 20.00 | -35.52 | -44.95 | 0.00 | -4173.0 | 0.00 | 4173.08 | 5439.17 | 2719.58 | 10273.2 | 5100.07 | 2.49 | -1.190 | 0.000 | 0.825 |
| 22.00 | -34.89 | -44.75 | 0.00 | -4083.1 | 0.00 | 4083.19 | 5396.51 | 2698.25 | 10111.8 | 5019.95 | 3.02 | -1.310 | 0.000 | 0.820 |
| 24.00 | -34.27 | -44.55 | 0.00 | -3993.6 | 0.00 | 3993.69 | 5353.84 | 2676.92 | 9951.76 | 4940.47 | 3.59 | -1.431 | 0.000 | 0.815 |
| 26.00 | -33.65 | -44.35 | 0.00 | -3904.5 | 0.00 | 3904.59 | 5311.18 | 2655.59 | 9792.93 | 4861.62 | 4.22 | -1.552 | 0.000 | 0.810 |
| 28.00 | -33.03 | -44.14 | 0.00 | -3815.8 | 0.00 | 3815.89 | 5268.52 | 2634.26 | 9635.38 | 4783.41 | 4.89 | -1.673 | 0.000 | 0.804 |
| 30.00 | -32.42 | -43.93 | 0.00 | -3727.6 | 0.00 | 3727.61 | 5225.86 | 2612.93 | 9479.11 | 4705.83 | 5.62 | -1.794 | 0.000 | 0.799 |
| 32.00 | -31.82 | -43.71 | 0.00 | -3639.7 | 0.00 | 3639.76 | 5183.20 | 2591.60 | 9324.12 | 4628.89 | 6.40 | -1.916 | 0.000 | 0.793 |
| 34.00 | -31.22 | -43.50 | 0.00 | -3552.3 | 0.00 | 3552.33 | 5140.54 | 2570.27 | 9170.40 | 4552.57 | 7.23 | -2.037 | 0.000 | 0.787 |
| 36.00 | -30.62 | -43.27 | 0.00 | -3465.3 | 0.00 | 3465.34 | 5097.88 | 2548.94 | 9017.97 | 4476.90 | 8.11 | -2.158 | 0.000 | 0.780 |
| 38.00 | -30.03 | -43.05 | 0.00 | -3378.7 | 0.00 | 3378.79 | 5055.22 | 2527.61 | 8866.81 | 4401.86 | 9.04 | -2.280 | 0.000 | 0.774 |
| 40.00 | -29.44 | -42.82 | 0.00 | -3292.7 | 0.00 | 3292.70 | 5012.56 | 2506.28 | 8716.92 | 4327.45 | 10.02 | -2.401 | 0.000 | 0.767 |
| 42.00 | -28.86 | -42.59 | 0.00 | -3207.0 | 0.00 | 3207.06 | 4969.90 | 2484.95 | 8568.32 | 4253.68 | 11.05 | -2.522 | 0.000 | 0.760 |
| 44.00 | -28.28 | -42.36 | 0.00 | -3121.8 | 0.00 | 3121.88 | 4927.23 | 2463.62 | 8420.99 | 4180.54 | 12.13 | -2.644 | 0.000 | 0.753 |
| 46.00 | -27.73 | -42.10 | 0.00 | -3037.1 | 0.00 | 3037.17 | 4884.57 | 2442.29 | 8274.95 | 4108.03 | 13.27 | -2.764 | 0.000 | 0.745 |
| 46.67 | -27.53 | -42.03 | 0.00 | -3009.1 | 0.00 | 3009.10 | 4870.35 | 2435.18 | 8226.55 | 4084.00 | 13.66 | -2.805 | 0.000 | 0.743 |
| 48.00 | -26.90 | -41.87 | 0.00 | -2953.0 | 0.00 | 2953.06 | 4841.91 | 2420.96 | 8130.17 | 4036.16 | 14.45 | -2.886 | 0.000 | 0.738 |
| 50.00 | -25.98 | -41.60 | 0.00 | -2869.3 | 0.00 | 2869.32 | 4799.25 | 2399.63 | 7986.68 | 3964.92 | 15.69 | -3.006 | 0.000 | 0.729 |
| 52.00 | -25.09 | -41.32 | 0.00 | -2786.1 | 0.00 | 2786.12 | 4756.59 | 2378.30 | 7844.47 | 3894.32 | 16.97 | -3.127 | 0.000 | 0.721 |
| 53.00 | -24.64 | -41.19 | 0.00 | -2744.8 | 0.00 | 2744.80 | 4740.56 | 2120.28 | 7137.82 | 3543.51 | 17.63 | -3.187 | 0.000 | 0.781 |
| 54.00 | -24.36 | -41.08 | 0.00 | -2703.6 | 0.00 | 2703.61 | 4721.90 | 2110.95 | 7074.79 | 3512.22 | 18.31 | -3.247 | 0.000 | 0.776 |
| 56.00 | -23.84 | -40.83 | 0.00 | -2621.4 | 0.00 | 2621.46 | 4184.57 | 2092.28 | 6949.58 | 3450.06 | 19.69 | -3.375 | 0.000 | 0.766 |
| 58.00 | -23.33 | -40.58 | 0.00 | -2539.8 | 0.00 | 2539.81 | 4147.24 | 2073.62 | 6825.49 | 3388.46 | 21.13 | -3.501 | 0.000 | 0.756 |
| 60.00 | -22.83 | -40.33 | 0.00 | -2458.6 | 0.00 | 2458.65 | 4109.91 | 2054.96 | 6702.51 | 3327.41 | 22.63 | -3.627 | 0.000 | 0.745 |
| 62.00 | -22.33 | -40.07 | 0.00 | -2378.0 | 0.00 | 2378.00 | 4072.58 | 2036.29 | 6580.65 | 3266.91 | 24.17 | -3.753 | 0.000 | 0.734 |
| 64.00 | -21.83 | -39.82 | 0.00 | -2297.8 | 0.00 | 2297.85 | 4035.25 | 2017.63 | 6459.92 | 3206.97 | 25.77 | -3.877 | 0.000 | 0.722 |
| 66.00 | -21.34 | -39.56 | 0.00 | -2218.2 | 0.00 | 2218.21 | 3997.93 | 1998.96 | 6340.29 | 3147.59 | 27.42 | -4.001 | 0.000 | 0.710 |
| 68.00 | -20.86 | -39.31 | 0.00 | -2139.0 | 0.00 | 2139.08 | 3960.60 | 1980.30 | 6221.79 | 3088.76 | 29.12 | -4.123 | 0.000 | 0.698 |
| 70.00 | -20.38 | -39.05 | 0.00 | -2060.4 | 0.00 | 2060.47 | 3923.27 | 1961.63 | 6104.41 | 3030.48 | 30.88 | -4.245 | 0.000 | 0.686 |
| 72.00 | -19.90 | -38.79 | 0.00 | -1982.3 | 0.00 | 1982.37 | 3885.94 | 1942.97 | 5988.14 | 2972.76 | 32.68 | -4.366 | 0.000 | 0.672 |
| 74.00 | -19.43 | -38.53 | 0.00 | -1904.8 | 0.00 | 1904.80 | 3848.61 | 1924.31 | 5872.99 | 2915.60 | 34.53 | -4.485 | 0.000 | 0.659 |
| 76.00 | -18.97 | -38.27 | 0.00 | -1827.7 | 0.00 | 1827.74 | 3811.28 | 1905.64 | 5758.96 | 2858.99 | 36.44 | -4.602 | 0.000 | 0.645 |
| 78.00 | -18.51 | -38.01 | 0.00 | -1751.2 | 0.00 | 1751.20 | 3773.96 | 1886.98 | 5646.05 | 2802.94 | 38.39 | -4.719 | 0.000 | 0.630 |
| 80.00 | -18.06 | -37.74 | 0.00 | -1675.1 | 0.00 | 1675.19 | 3736.63 | 1868.31 | 5534.25 | 2747.44 | 40.39 | -4.833 | 0.000 | 0.615 |
| 82.00 | -17.61 | -37.48 | 0.00 | -1599.7 | 0.00 | 1599.71 | 3699.30 | 1849.65 | 5423.58 | 2692.49 | 42.43 | -4.946 | 0.000 | 0.599 |
| 84.00 | -17.16 | -37.21 | 0.00 | -1524.7 | 0.00 | 1524.75 | 3661.97 | 1830.99 | 5314.02 | 2638.10 | 44.53 | -5.057 | 0.000 | 0.583 |
| 86.00 | -16.72 | -36.95 | 0.00 | -1450.3 | 0.00 | 1450.32 | 3624.64 | 1812.32 | 5205.58 | 2584.27 | 46.67 | -5.166 | 0.000 | 0.566 |
| 88.00 | -16.29 | -36.68 | 0.00 | -1376.4 | 0.00 | 1376.42 | 3587.31 | 1793.66 | 5098.25 | 2530.99 | 48.85 | -5.273 | 0.000 | 0.549 |
| 90.00 | -15.86 | -36.42 | 0.00 | -1303.0 | 0.00 | 1303.06 | 3549.99 | 1774.99 | 4992.05 | 2478.26 | 51.08 | -5.378 | 0.000 | 0.531 |

Calculated Forces

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | | | | | | | | | | | | | |
|--------|--------|--------|------|---------|------|---------|---------|---------|---------|---------|--------|--------|-------|-------|
| 92.00 | -15.44 | -36.15 | 0.00 | -1230.2 | 0.00 | 1230.22 | 3512.66 | 1756.33 | 4886.96 | 2426.09 | 53.35 | -5.479 | 0.000 | 0.512 |
| 94.00 | -15.05 | -35.88 | 0.00 | -1157.9 | 0.00 | 1157.91 | 3475.33 | 1737.66 | 4782.99 | 2374.48 | 55.67 | -5.578 | 0.000 | 0.492 |
| 94.25 | -14.98 | -35.85 | 0.00 | -1148.9 | 0.00 | 1148.95 | 3470.66 | 1735.33 | 4770.08 | 2368.07 | 55.96 | -5.591 | 0.000 | 0.490 |
| 96.00 | -14.49 | -35.60 | 0.00 | -1086.2 | 0.00 | 1086.21 | 3438.00 | 1719.00 | 4680.14 | 2323.42 | 58.02 | -5.675 | 0.000 | 0.472 |
| 98.00 | -13.95 | -35.32 | 0.00 | -1015.0 | 0.00 | 1015.00 | 3400.67 | 1700.34 | 4578.41 | 2272.92 | 60.42 | -5.768 | 0.000 | 0.451 |
| 99.67 | -13.51 | -35.07 | 0.00 | -956.14 | 0.00 | 956.14 | 1458.24 | 729.12 | 1997.89 | 991.83 | 62.44 | -5.843 | 0.000 | 0.976 |
| 100.00 | -13.42 | -35.05 | 0.00 | -944.44 | 0.00 | 944.44 | 1456.89 | 728.44 | 1992.39 | 989.11 | 62.85 | -5.858 | 0.000 | 0.966 |
| 102.00 | -13.12 | -34.81 | 0.00 | -874.35 | 0.00 | 874.35 | 1448.65 | 724.33 | 1959.44 | 972.75 | 65.33 | -6.020 | 0.000 | 0.910 |
| 104.00 | -12.82 | -34.57 | 0.00 | -804.73 | 0.00 | 804.73 | 1440.25 | 720.13 | 1926.51 | 956.40 | 67.89 | -6.174 | 0.000 | 0.853 |
| 106.00 | -12.56 | -34.32 | 0.00 | -735.59 | 0.00 | 735.59 | 1431.68 | 715.84 | 1893.60 | 940.06 | 70.50 | -6.321 | 0.000 | 0.794 |
| 107.00 | -10.61 | -27.38 | 0.00 | -701.28 | 0.00 | 701.28 | 1427.33 | 713.67 | 1877.17 | 931.90 | 71.83 | -6.392 | 0.000 | 0.761 |
| 108.00 | -10.49 | -27.26 | 0.00 | -673.90 | 0.00 | 673.90 | 1422.94 | 711.47 | 1860.74 | 923.75 | 73.17 | -6.460 | 0.000 | 0.738 |
| 110.00 | -10.27 | -27.02 | 0.00 | -619.37 | 0.00 | 619.37 | 1414.04 | 707.02 | 1827.92 | 907.46 | 75.90 | -6.592 | 0.000 | 0.691 |
| 112.00 | -10.05 | -26.78 | 0.00 | -565.33 | 0.00 | 565.33 | 1404.97 | 702.48 | 1795.15 | 891.19 | 78.69 | -6.717 | 0.000 | 0.643 |
| 114.00 | -9.84 | -26.54 | 0.00 | -511.77 | 0.00 | 511.77 | 1395.73 | 697.86 | 1762.45 | 874.95 | 81.52 | -6.834 | 0.000 | 0.593 |
| 116.00 | -9.65 | -26.29 | 0.00 | -458.70 | 0.00 | 458.70 | 1386.32 | 693.16 | 1729.81 | 858.75 | 84.40 | -6.944 | 0.000 | 0.543 |
| 117.00 | -7.07 | -20.11 | 0.00 | -428.31 | 0.00 | 428.31 | 1381.56 | 690.78 | 1713.52 | 850.66 | 85.86 | -6.996 | 0.000 | 0.509 |
| 118.00 | -6.98 | -19.99 | 0.00 | -408.20 | 0.00 | 408.20 | 1376.75 | 688.37 | 1697.25 | 842.59 | 87.33 | -7.046 | 0.000 | 0.490 |
| 120.00 | -6.80 | -19.74 | 0.00 | -368.22 | 0.00 | 368.22 | 1367.01 | 683.50 | 1664.77 | 826.46 | 90.29 | -7.140 | 0.000 | 0.451 |
| 120.00 | -6.80 | -19.74 | 0.00 | -368.22 | 0.00 | 368.22 | 1091.99 | 545.99 | 1332.66 | 661.59 | 90.29 | -7.140 | 0.000 | 0.564 |
| 122.00 | -6.65 | -19.50 | 0.00 | -328.73 | 0.00 | 328.73 | 1085.46 | 542.73 | 1308.44 | 649.56 | 93.30 | -7.228 | 0.000 | 0.513 |
| 124.00 | -6.49 | -19.26 | 0.00 | -289.72 | 0.00 | 289.72 | 1078.76 | 539.38 | 1284.21 | 637.54 | 96.34 | -7.322 | 0.000 | 0.462 |
| 126.00 | -6.35 | -19.02 | 0.00 | -251.19 | 0.00 | 251.19 | 1071.89 | 535.95 | 1259.98 | 625.51 | 99.42 | -7.407 | 0.000 | 0.409 |
| 127.00 | -4.69 | -14.67 | 0.00 | -232.17 | 0.00 | 232.17 | 1068.40 | 534.20 | 1247.88 | 619.50 | 100.97 | -7.446 | 0.000 | 0.380 |
| 128.00 | -4.62 | -14.55 | 0.00 | -217.50 | 0.00 | 217.50 | 1064.86 | 532.43 | 1235.77 | 613.49 | 102.53 | -7.484 | 0.000 | 0.360 |
| 130.00 | -4.49 | -14.31 | 0.00 | -188.40 | 0.00 | 188.40 | 1057.66 | 528.83 | 1211.58 | 601.48 | 105.67 | -7.553 | 0.000 | 0.318 |
| 132.00 | -4.36 | -14.08 | 0.00 | -159.77 | 0.00 | 159.77 | 1050.29 | 525.14 | 1187.41 | 589.48 | 108.84 | -7.614 | 0.000 | 0.276 |
| 134.00 | -4.23 | -13.84 | 0.00 | -131.61 | 0.00 | 131.61 | 1042.75 | 521.38 | 1163.27 | 577.50 | 112.03 | -7.668 | 0.000 | 0.233 |
| 136.00 | -4.11 | -13.61 | 0.00 | -103.93 | 0.00 | 103.93 | 1035.05 | 517.52 | 1139.18 | 565.54 | 115.25 | -7.713 | 0.000 | 0.188 |
| 137.00 | -3.07 | -9.38 | 0.00 | -90.32 | 0.00 | 90.32 | 1031.13 | 515.57 | 1127.15 | 559.57 | 116.86 | -7.732 | 0.000 | 0.165 |
| 138.00 | -3.03 | -9.26 | 0.00 | -80.95 | 0.00 | 80.95 | 1027.18 | 513.59 | 1115.14 | 553.60 | 118.48 | -7.750 | 0.000 | 0.149 |
| 140.00 | -2.93 | -9.03 | 0.00 | -62.42 | 0.00 | 62.42 | 1019.14 | 509.57 | 1091.15 | 541.69 | 121.72 | -7.779 | 0.000 | 0.118 |
| 142.00 | -2.84 | -8.81 | 0.00 | -44.36 | 0.00 | 44.36 | 1010.93 | 505.47 | 1067.22 | 529.81 | 124.97 | -7.802 | 0.000 | 0.087 |
| 144.00 | -2.75 | -8.59 | 0.00 | -26.74 | 0.00 | 26.74 | 1002.56 | 501.28 | 1043.37 | 517.97 | 128.24 | -7.818 | 0.000 | 0.055 |
| 146.00 | -2.67 | -8.36 | 0.00 | -9.57 | 0.00 | 9.57 | 994.02 | 497.01 | 1019.60 | 506.17 | 131.50 | -7.827 | 0.000 | 0.022 |
| 147.00 | -0.11 | -0.39 | 0.00 | -1.20 | 0.00 | 1.20 | 989.69 | 494.84 | 1007.74 | 500.29 | 133.14 | -7.828 | 0.000 | 0.003 |
| 148.00 | -0.08 | -0.29 | 0.00 | -0.81 | 0.00 | 0.81 | 985.31 | 492.66 | 995.91 | 494.41 | 134.77 | -7.829 | 0.000 | 0.002 |
| 150.00 | 0.00 | -0.27 | 0.00 | -0.24 | 0.00 | 0.24 | 976.44 | 488.22 | 972.32 | 482.70 | 138.04 | -7.829 | 0.000 | 0.000 |

Wind Loading - Shaft

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |
| | | Page: 24 |

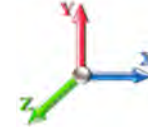


Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 27

Dead Load Factor 1.20

Wind Load Factor 1.00



| Elev (ft) | Description | Kzt | Kz | qz (psf) | qzGh (psf) | C (mph-ft) | Cf | Ice Thick (in) | Tributary (ft) | Aa (sf) | CfAa (sf) | Wind Force X (lb) | Dead Load Ice (lb) | Tot Dead Load (lb) |
|--------------|-----------------|------|------|-------------|---------------|---------------|-------|----------------------|-------------------|------------|--------------|-------------------------|--------------------------|-----------------------------|
| 0.00 | | 1.00 | 0.85 | 5.168 | 5.68 | 0.00 | 1.200 | 0.000 | 0.00 | 0.000 | 0.00 | 0.0 | 0.0 | 0.0 |
| 2.00 | | 1.00 | 0.85 | 5.168 | 5.68 | 0.00 | 1.200 | 1.133 | 2.00 | 8.844 | 10.61 | 60.3 | 145.5 | 787.9 |
| 4.00 | | 1.00 | 0.85 | 5.168 | 5.68 | 0.00 | 1.200 | 1.215 | 2.00 | 8.810 | 10.57 | 60.1 | 155.1 | 792.8 |
| 6.00 | | 1.00 | 0.85 | 5.168 | 5.68 | 0.00 | 1.200 | 1.265 | 2.00 | 8.765 | 10.52 | 59.8 | 160.5 | 793.6 |
| 8.00 | | 1.00 | 0.85 | 5.168 | 5.68 | 0.00 | 1.200 | 1.302 | 2.00 | 8.716 | 10.46 | 59.5 | 164.1 | 792.5 |
| 10.00 | | 1.00 | 0.85 | 5.168 | 5.68 | 0.00 | 1.200 | 1.331 | 2.00 | 8.665 | 10.40 | 59.1 | 166.7 | 790.4 |
| 12.00 | | 1.00 | 0.85 | 5.168 | 5.68 | 0.00 | 1.200 | 1.356 | 2.00 | 8.612 | 10.33 | 58.7 | 168.6 | 787.6 |
| 14.00 | | 1.00 | 0.85 | 5.168 | 5.68 | 0.00 | 1.200 | 1.377 | 2.00 | 8.558 | 10.27 | 58.4 | 170.1 | 784.4 |
| 16.00 | | 1.00 | 0.86 | 5.232 | 5.76 | 0.00 | 1.200 | 1.395 | 2.00 | 8.503 | 10.20 | 58.7 | 171.1 | 780.8 |
| 18.00 | | 1.00 | 0.88 | 5.363 | 5.90 | 0.00 | 1.200 | 1.412 | 2.00 | 8.447 | 10.14 | 59.8 | 171.9 | 776.9 |
| 20.00 | | 1.00 | 0.90 | 5.483 | 6.03 | 0.00 | 1.200 | 1.427 | 2.00 | 8.391 | 10.07 | 60.7 | 172.5 | 772.7 |
| 22.00 | | 1.00 | 0.92 | 5.595 | 6.15 | 0.00 | 1.200 | 1.440 | 2.00 | 8.334 | 10.00 | 61.5 | 172.9 | 768.4 |
| 24.00 | | 1.00 | 0.94 | 5.698 | 6.27 | 0.00 | 1.200 | 1.453 | 2.00 | 8.277 | 9.93 | 62.3 | 173.1 | 764.0 |
| 26.00 | | 1.00 | 0.95 | 5.795 | 6.37 | 0.00 | 1.200 | 1.465 | 2.00 | 8.220 | 9.86 | 62.9 | 173.2 | 759.4 |
| 28.00 | | 1.00 | 0.97 | 5.886 | 6.47 | 0.00 | 1.200 | 1.476 | 2.00 | 8.163 | 9.80 | 63.4 | 173.2 | 754.7 |
| 30.00 | | 1.00 | 0.98 | 5.972 | 6.57 | 0.00 | 1.200 | 1.486 | 2.00 | 8.105 | 9.73 | 63.9 | 173.1 | 749.9 |
| 32.00 | | 1.00 | 1.00 | 6.054 | 6.66 | 0.00 | 1.200 | 1.495 | 2.00 | 8.047 | 9.66 | 64.3 | 172.9 | 745.0 |
| 34.00 | | 1.00 | 1.01 | 6.132 | 6.74 | 0.00 | 1.200 | 1.504 | 2.00 | 7.989 | 9.59 | 64.7 | 172.6 | 740.0 |
| 36.00 | | 1.00 | 1.02 | 6.206 | 6.83 | 0.00 | 1.200 | 1.513 | 2.00 | 7.930 | 9.52 | 65.0 | 172.3 | 735.0 |
| 38.00 | | 1.00 | 1.03 | 6.277 | 6.90 | 0.00 | 1.200 | 1.521 | 2.00 | 7.872 | 9.45 | 65.2 | 171.8 | 729.9 |
| 40.00 | | 1.00 | 1.04 | 6.345 | 6.98 | 0.00 | 1.200 | 1.529 | 2.00 | 7.813 | 9.38 | 65.4 | 171.4 | 724.7 |
| 42.00 | | 1.00 | 1.05 | 6.410 | 7.05 | 0.00 | 1.200 | 1.537 | 2.00 | 7.755 | 9.31 | 65.6 | 170.8 | 719.5 |
| 44.00 | | 1.00 | 1.06 | 6.474 | 7.12 | 0.00 | 1.200 | 1.544 | 2.00 | 7.696 | 9.24 | 65.8 | 170.2 | 714.2 |
| 46.00 | | 1.00 | 1.07 | 6.534 | 7.19 | 0.00 | 1.200 | 1.551 | 2.00 | 7.637 | 9.16 | 65.9 | 169.6 | 708.9 |
| 46.67 | Bot - Section 2 | 1.00 | 1.08 | 6.554 | 7.21 | 0.00 | 1.200 | 1.553 | 0.67 | 2.532 | 3.04 | 21.9 | 56.5 | 235.2 |
| 48.00 | | 1.00 | 1.08 | 6.593 | 7.25 | 0.00 | 1.200 | 1.557 | 1.33 | 5.144 | 6.17 | 44.8 | 114.9 | 789.3 |
| 50.00 | | 1.00 | 1.09 | 6.650 | 7.32 | 0.00 | 1.200 | 1.564 | 2.00 | 7.668 | 9.20 | 67.3 | 171.7 | 1175.9 |
| 52.00 | | 1.00 | 1.10 | 6.705 | 7.38 | 0.00 | 1.200 | 1.570 | 2.00 | 7.609 | 9.13 | 67.3 | 171.0 | 1166.4 |
| 53.00 | Top - Section 1 | 1.00 | 1.11 | 6.732 | 7.41 | 0.00 | 1.200 | 1.573 | 1.00 | 3.782 | 4.54 | 33.6 | 85.3 | 579.7 |
| 54.00 | | 1.00 | 1.11 | 6.759 | 7.43 | 0.00 | 1.200 | 1.576 | 1.00 | 3.767 | 4.52 | 33.6 | 85.1 | 317.7 |
| 56.00 | | 1.00 | 1.12 | 6.811 | 7.49 | 0.00 | 1.200 | 1.581 | 2.00 | 7.490 | 8.99 | 67.3 | 169.4 | 631.4 |
| 58.00 | | 1.00 | 1.13 | 6.861 | 7.55 | 0.00 | 1.200 | 1.587 | 2.00 | 7.431 | 8.92 | 67.3 | 168.6 | 626.5 |
| 60.00 | | 1.00 | 1.14 | 6.910 | 7.60 | 0.00 | 1.200 | 1.592 | 2.00 | 7.371 | 8.85 | 67.2 | 167.7 | 621.5 |
| 62.00 | | 1.00 | 1.14 | 6.958 | 7.65 | 0.00 | 1.200 | 1.598 | 2.00 | 7.312 | 8.77 | 67.2 | 166.8 | 616.6 |
| 64.00 | | 1.00 | 1.15 | 7.005 | 7.71 | 0.00 | 1.200 | 1.603 | 2.00 | 7.252 | 8.70 | 67.1 | 165.9 | 611.6 |
| 66.00 | | 1.00 | 1.16 | 7.050 | 7.76 | 0.00 | 1.200 | 1.608 | 2.00 | 7.193 | 8.63 | 66.9 | 165.0 | 606.5 |
| 68.00 | | 1.00 | 1.17 | 7.095 | 7.80 | 0.00 | 1.200 | 1.612 | 2.00 | 7.133 | 8.56 | 66.8 | 164.0 | 601.5 |
| 70.00 | | 1.00 | 1.17 | 7.138 | 7.85 | 0.00 | 1.200 | 1.617 | 2.00 | 7.074 | 8.49 | 66.7 | 163.1 | 596.4 |
| 72.00 | | 1.00 | 1.18 | 7.181 | 7.90 | 0.00 | 1.200 | 1.622 | 2.00 | 7.014 | 8.42 | 66.5 | 162.1 | 591.3 |
| 74.00 | | 1.00 | 1.19 | 7.222 | 7.94 | 0.00 | 1.200 | 1.626 | 2.00 | 6.954 | 8.35 | 66.3 | 161.1 | 586.2 |
| 76.00 | | 1.00 | 1.19 | 7.263 | 7.99 | 0.00 | 1.200 | 1.631 | 2.00 | 6.895 | 8.27 | 66.1 | 160.0 | 581.0 |
| 78.00 | | 1.00 | 1.20 | 7.303 | 8.03 | 0.00 | 1.200 | 1.635 | 2.00 | 6.835 | 8.20 | 65.9 | 159.0 | 575.9 |
| 80.00 | | 1.00 | 1.21 | 7.342 | 8.08 | 0.00 | 1.200 | 1.639 | 2.00 | 6.775 | 8.13 | 65.7 | 157.9 | 570.7 |
| 82.00 | | 1.00 | 1.21 | 7.380 | 8.12 | 0.00 | 1.200 | 1.643 | 2.00 | 6.715 | 8.06 | 65.4 | 156.8 | 565.5 |
| 84.00 | | 1.00 | 1.22 | 7.418 | 8.16 | 0.00 | 1.200 | 1.647 | 2.00 | 6.655 | 7.99 | 65.2 | 155.7 | 560.3 |
| 86.00 | | 1.00 | 1.23 | 7.454 | 8.20 | 0.00 | 1.200 | 1.651 | 2.00 | 6.596 | 7.91 | 64.9 | 154.6 | 555.1 |
| 88.00 | | 1.00 | 1.23 | 7.491 | 8.24 | 0.00 | 1.200 | 1.655 | 2.00 | 6.536 | 7.84 | 64.6 | 153.4 | 549.8 |

Wind Loading - Shaft

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | | | | | | | | | | | | |
|------------------------|------|------|-------|------|------|-------|---------------|------|-------|------|------|----------------|-----------------|
| 90.00 | 1.00 | 1.24 | 7.526 | 8.28 | 0.00 | 1.200 | 1.658 | 2.00 | 6.476 | 7.77 | 64.3 | 152.3 | 544.6 |
| 92.00 | 1.00 | 1.24 | 7.561 | 8.32 | 0.00 | 1.200 | 1.662 | 2.00 | 6.416 | 7.70 | 64.0 | 151.1 | 539.3 |
| 94.00 | 1.00 | 1.25 | 7.595 | 8.35 | 0.00 | 1.200 | 1.666 | 2.00 | 6.356 | 7.63 | 63.7 | 149.9 | 534.0 |
| 94.25 Bot - Section 3 | 1.00 | 1.25 | 7.600 | 8.36 | 0.00 | 1.200 | 1.666 | 0.25 | 0.790 | 0.95 | 7.9 | 18.7 | 66.4 |
| 96.00 | 1.00 | 1.25 | 7.629 | 8.39 | 0.00 | 1.200 | 1.669 | 1.75 | 5.570 | 6.68 | 56.1 | 131.8 | 633.4 |
| 98.00 | 1.00 | 1.26 | 7.662 | 8.43 | 0.00 | 1.200 | 1.672 | 2.00 | 6.310 | 7.57 | 63.8 | 149.4 | 716.9 |
| 99.67 Top - Section 2 | 1.00 | 1.26 | 7.690 | 8.46 | 0.00 | 1.200 | 1.675 | 1.67 | 5.212 | 6.25 | 52.9 | 123.7 | 591.9 |
| 100.00 | 1.00 | 1.27 | 7.695 | 8.46 | 0.00 | 1.200 | 1.676 | 0.33 | 1.037 | 1.24 | 10.5 | 24.7 | 56.2 |
| 102.00 | 1.00 | 1.27 | 7.727 | 8.50 | 0.00 | 1.200 | 1.679 | 2.00 | 6.190 | 7.43 | 63.1 | 147.0 | 334.5 |
| 104.00 | 1.00 | 1.28 | 7.759 | 8.53 | 0.00 | 1.200 | 1.682 | 2.00 | 6.130 | 7.36 | 62.8 | 145.7 | 331.3 |
| 106.00 | 1.00 | 1.28 | 7.790 | 8.57 | 0.00 | 1.200 | 1.686 | 2.00 | 6.070 | 7.28 | 62.4 | 144.5 | 328.0 |
| 107.00 Appurtenance(s) | 1.00 | 1.28 | 7.805 | 8.59 | 0.00 | 1.200 | 1.687 | 1.00 | 3.012 | 3.61 | 31.0 | 71.9 | 162.9 |
| 108.00 | 1.00 | 1.29 | 7.821 | 8.60 | 0.00 | 1.200 | 1.689 | 1.00 | 2.997 | 3.60 | 30.9 | 71.6 | 162.1 |
| 110.00 | 1.00 | 1.29 | 7.851 | 8.64 | 0.00 | 1.200 | 1.692 | 2.00 | 5.949 | 7.14 | 61.7 | 142.0 | 321.3 |
| 112.00 | 1.00 | 1.30 | 7.881 | 8.67 | 0.00 | 1.200 | 1.695 | 2.00 | 5.889 | 7.07 | 61.3 | 140.7 | 318.0 |
| 114.00 | 1.00 | 1.30 | 7.910 | 8.70 | 0.00 | 1.200 | 1.698 | 2.00 | 5.829 | 6.99 | 60.9 | 139.4 | 314.7 |
| 116.00 | 1.00 | 1.31 | 7.939 | 8.73 | 0.00 | 1.200 | 1.701 | 2.00 | 5.769 | 6.92 | 60.5 | 138.1 | 311.3 |
| 117.00 Appurtenance(s) | 1.00 | 1.31 | 7.954 | 8.75 | 0.00 | 1.200 | 1.702 | 1.00 | 2.862 | 3.43 | 30.0 | 68.7 | 154.6 |
| 118.00 | 1.00 | 1.31 | 7.968 | 8.76 | 0.00 | 1.200 | 1.704 | 1.00 | 2.847 | 3.42 | 29.9 | 68.4 | 153.7 |
| 120.00 Top - Section 3 | 1.00 | 1.32 | 7.996 | 8.80 | 0.00 | 1.200 | 1.707 | 2.00 | 5.649 | 6.78 | 59.6 | 135.5 | 304.6 |
| 122.00 | 1.00 | 1.32 | 8.024 | 8.83 | 0.00 | 1.200 | 1.710 | 2.00 | 5.588 | 6.71 | 59.2 | 134.2 | 277.5 |
| 124.00 | 1.00 | 1.32 | 8.051 | 8.86 | 0.00 | 1.200 | 1.712 | 2.00 | 5.528 | 6.63 | 58.8 | 132.9 | 274.4 |
| 126.00 | 1.00 | 1.33 | 8.079 | 8.89 | 0.00 | 1.200 | 1.715 | 2.00 | 5.468 | 6.56 | 58.3 | 131.5 | 271.3 |
| 127.00 Appurtenance(s) | 1.00 | 1.33 | 8.092 | 8.90 | 0.00 | 1.200 | 1.716 | 1.00 | 2.711 | 3.25 | 29.0 | 65.4 | 134.7 |
| 128.00 | 1.00 | 1.33 | 8.105 | 8.92 | 0.00 | 1.200 | 1.718 | 1.00 | 2.696 | 3.24 | 28.8 | 65.1 | 133.9 |
| 130.00 | 1.00 | 1.34 | 8.132 | 8.95 | 0.00 | 1.200 | 1.720 | 2.00 | 5.347 | 6.42 | 57.4 | 128.8 | 265.1 |
| 132.00 | 1.00 | 1.34 | 8.158 | 8.97 | 0.00 | 1.200 | 1.723 | 2.00 | 5.287 | 6.34 | 56.9 | 127.5 | 262.0 |
| 134.00 | 1.00 | 1.35 | 8.184 | 9.00 | 0.00 | 1.200 | 1.726 | 2.00 | 5.227 | 6.27 | 56.5 | 126.1 | 258.9 |
| 136.00 | 1.00 | 1.35 | 8.210 | 9.03 | 0.00 | 1.200 | 1.728 | 2.00 | 5.166 | 6.20 | 56.0 | 124.7 | 255.7 |
| 137.00 Appurtenance(s) | 1.00 | 1.35 | 8.222 | 9.04 | 0.00 | 1.200 | 1.729 | 1.00 | 2.560 | 3.07 | 27.8 | 62.0 | 126.9 |
| 138.00 | 1.00 | 1.35 | 8.235 | 9.06 | 0.00 | 1.200 | 1.731 | 1.00 | 2.545 | 3.05 | 27.7 | 61.7 | 126.1 |
| 140.00 | 1.00 | 1.36 | 8.260 | 9.09 | 0.00 | 1.200 | 1.733 | 2.00 | 5.046 | 6.05 | 55.0 | 121.9 | 249.5 |
| 142.00 | 1.00 | 1.36 | 8.285 | 9.11 | 0.00 | 1.200 | 1.736 | 2.00 | 4.985 | 5.98 | 54.5 | 120.5 | 246.3 |
| 144.00 | 1.00 | 1.37 | 8.309 | 9.14 | 0.00 | 1.200 | 1.738 | 2.00 | 4.925 | 5.91 | 54.0 | 119.1 | 243.1 |
| 146.00 | 1.00 | 1.37 | 8.333 | 9.17 | 0.00 | 1.200 | 1.741 | 2.00 | 4.864 | 5.84 | 53.5 | 117.7 | 240.0 |
| 147.00 Appurtenance(s) | 1.00 | 1.37 | 8.345 | 9.18 | 0.00 | 1.200 | 1.742 | 1.00 | 2.410 | 2.89 | 26.5 | 58.5 | 119.0 |
| 148.00 | 1.00 | 1.37 | 8.357 | 9.19 | 0.00 | 1.200 | 1.743 | 1.00 | 2.394 | 2.87 | 26.4 | 58.2 | 118.2 |
| 150.00 Appurtenance(s) | 1.00 | 1.38 | 8.381 | 9.22 | 0.00 | 1.200 | 1.745 | 2.00 | 4.744 | 5.69 | 52.5 | 114.9 | 233.6 |
| Totals: | | | | | | | 150.00 | | | | | 4,662.9 | 42,500.8 |

Discrete Appurtenance Forces

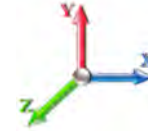
| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 27

| 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 | 150.00 | Lightning Rod | 1 | 8.421 | 9.264 | 1.00 | 1.00 | 3.42 | 64.41 | 0.000 | 3.500 | 31.71 | 0.00 | 111.00 |
| 2 | 147.00 | Ericsson 4449 B71 + B85 | 3 | 8.345 | 9.180 | 0.38 | 0.75 | 2.86 | 513.88 | 0.000 | 0.000 | 26.21 | 0.00 | 0.00 |
| 3 | 147.00 | Ericsson Air 21 B2A/B4P | 3 | 8.345 | 9.180 | 0.64 | 0.75 | 13.63 | 829.35 | 0.000 | 0.000 | 125.11 | 0.00 | 0.00 |
| 4 | 147.00 | RFS | 3 | 8.345 | 9.180 | 0.54 | 0.75 | 35.83 | 1975.95 | 0.000 | 0.000 | 328.88 | 0.00 | 0.00 |
| 5 | 147.00 | Ericsson KRY 112 144/1 | 3 | 8.345 | 9.180 | 0.38 | 0.75 | 0.83 | 65.77 | 0.000 | 0.000 | 7.66 | 0.00 | 0.00 |
| 6 | 147.00 | Ericsson Air 21 B4A/B2P | 3 | 8.345 | 9.180 | 0.64 | 0.75 | 13.63 | 825.03 | 0.000 | 0.000 | 125.11 | 0.00 | 0.00 |
| 7 | 147.00 | Tie Back Kit (Commscope | 1 | 8.345 | 9.180 | 1.00 | 1.00 | 9.40 | 230.89 | 0.000 | 0.000 | 86.28 | 0.00 | 0.00 |
| 8 | 147.00 | Rreinforcement Kit | 1 | 8.345 | 9.180 | 1.00 | 1.00 | 19.43 | 786.69 | 0.000 | 0.000 | 178.34 | 0.00 | 0.00 |
| 9 | 147.00 | V-Brace Kit (Sitepro | 1 | 8.345 | 9.180 | 1.00 | 1.00 | 12.88 | 423.89 | 0.000 | 0.000 | 118.27 | 0.00 | 0.00 |
| 10 | 147.00 | Platform w/ Hand Rail | 1 | 8.345 | 9.180 | 1.00 | 1.00 | 55.57 | 3890.03 | 0.000 | 0.000 | 510.12 | 0.00 | 0.00 |
| 11 | 137.00 | Rymsa MGD5-800T2 | 3 | 8.222 | 9.044 | 0.62 | 0.80 | 9.62 | 200.09 | 0.000 | 0.000 | 87.03 | 0.00 | 0.00 |
| 12 | 137.00 | Antel BXA-70063/6CF | 3 | 8.222 | 9.044 | 0.58 | 0.80 | 17.84 | 363.50 | 0.000 | 0.000 | 161.33 | 0.00 | 0.00 |
| 13 | 137.00 | Antel LPA-80080/4CF | 6 | 8.222 | 9.044 | 0.59 | 0.80 | 22.69 | 885.93 | 0.000 | 0.000 | 205.23 | 0.00 | 0.00 |
| 14 | 137.00 | Cleargain 850/1900 TMA's | 2 | 8.222 | 9.044 | 0.40 | 0.80 | 0.84 | 29.67 | 0.000 | 0.000 | 7.56 | 0.00 | 0.00 |
| 15 | 137.00 | RFS FD9R6004/2C-3L | 6 | 8.222 | 9.044 | 0.40 | 0.80 | 1.92 | 56.24 | 0.000 | 0.000 | 17.35 | 0.00 | 0.00 |
| 16 | 137.00 | Low Profile Platform | 1 | 8.222 | 9.044 | 1.00 | 1.00 | 39.50 | 2797.10 | 0.000 | 0.000 | 357.28 | 0.00 | 0.00 |
| 17 | 127.00 | Fujitsu TA08025-B605 | 3 | 8.092 | 8.901 | 0.38 | 0.75 | 2.83 | 386.52 | 0.000 | 0.000 | 25.15 | 0.00 | 0.00 |
| 18 | 127.00 | JMA Wireless | 3 | 8.092 | 8.901 | 0.55 | 0.75 | 23.19 | 888.81 | 0.000 | 0.000 | 206.46 | 0.00 | 0.00 |
| 19 | 127.00 | MC-PK8-DSH | 1 | 8.092 | 8.901 | 1.00 | 1.00 | 84.04 | 3359.37 | 0.000 | 0.000 | 748.10 | 0.00 | 0.00 |
| 20 | 127.00 | Fujitsu TA08025-B604 | 3 | 8.092 | 8.901 | 0.38 | 0.75 | 2.83 | 343.12 | 0.000 | 0.000 | 25.15 | 0.00 | 0.00 |
| 21 | 127.00 | Raycap | 1 | 8.092 | 8.901 | 0.38 | 0.75 | 0.96 | 65.95 | 0.000 | 0.000 | 8.57 | 0.00 | 0.00 |
| 22 | 117.00 | Sitepro RMQP-496-HK | 1 | 7.954 | 8.749 | 1.00 | 1.00 | 77.32 | 4650.29 | 0.000 | 0.000 | 676.50 | 0.00 | 0.00 |
| 23 | 117.00 | ALU TD-RRH8x20-25 | 3 | 7.954 | 8.749 | 0.38 | 0.75 | 5.45 | 573.60 | 0.000 | 0.000 | 47.65 | 0.00 | 0.00 |
| 24 | 117.00 | ALU 800 Mhz | 6 | 7.954 | 8.749 | 0.38 | 0.75 | 8.11 | 687.87 | 0.000 | 0.000 | 70.98 | 0.00 | 0.00 |
| 25 | 117.00 | ALU 1900 Mhz | 3 | 7.954 | 8.749 | 0.38 | 0.75 | 4.51 | 388.46 | 0.000 | 0.000 | 39.44 | 0.00 | 0.00 |
| 26 | 117.00 | Commscope | 3 | 7.996 | 8.796 | 0.60 | 0.75 | 24.64 | 916.89 | 0.000 | 3.000 | 216.75 | 0.00 | 650.25 |
| 27 | 117.00 | RFS APXVTM14-C-I20 | 3 | 7.954 | 8.749 | 0.58 | 0.75 | 12.86 | 669.42 | 0.000 | 0.000 | 112.53 | 0.00 | 0.00 |
| 28 | 107.00 | Ericsson 8843 B2 B66A | 3 | 7.805 | 8.586 | 0.38 | 0.75 | 2.44 | 484.90 | 0.000 | 0.000 | 20.94 | 0.00 | 0.00 |
| 29 | 107.00 | Raycap | 1 | 7.805 | 8.586 | 0.38 | 0.75 | 2.11 | 109.02 | 0.000 | 0.000 | 18.14 | 0.00 | 0.00 |
| 30 | 107.00 | Powerwave 7770 | 3 | 7.805 | 8.586 | 0.55 | 0.75 | 10.72 | 515.09 | 0.000 | 0.000 | 92.05 | 0.00 | 0.00 |
| 31 | 107.00 | Ericsson RRUS 4478 B14 | 3 | 7.805 | 8.586 | 0.38 | 0.75 | 2.64 | 316.86 | 0.000 | 0.000 | 22.69 | 0.00 | 0.00 |
| 32 | 107.00 | Ericsson 4449 B5/B12 | 3 | 7.805 | 8.586 | 0.38 | 0.75 | 2.44 | 448.25 | 0.000 | 0.000 | 20.94 | 0.00 | 0.00 |
| 33 | 107.00 | Raycap DC6-48-60-18-8F | 1 | 7.805 | 8.586 | 0.50 | 0.75 | 0.68 | 80.23 | 0.000 | 0.000 | 5.80 | 0.00 | 0.00 |
| 34 | 107.00 | Powerwave/LGP21401 | 6 | 7.805 | 8.586 | 0.38 | 0.75 | 1.47 | 74.09 | 0.000 | 0.000 | 12.64 | 0.00 | 0.00 |
| 35 | 107.00 | Low Profile Platform | 1 | 7.805 | 8.586 | 1.00 | 1.00 | 39.07 | 2765.43 | 0.000 | 0.000 | 335.49 | 0.00 | 0.00 |
| 36 | 107.00 | Site Pro HRK14 | 1 | 7.805 | 8.586 | 1.00 | 1.00 | 15.81 | 1012.10 | 0.000 | 0.000 | 135.76 | 0.00 | 0.00 |
| 37 | 107.00 | Cci DMP65R-BU8DA | 6 | 7.805 | 8.586 | 0.75 | 0.75 | 163.66 | 1704.47 | 0.000 | 0.000 | 1405.18 | 0.00 | 0.00 |

Totals: 34,379.17

6,620.42

Total Applied Force Summary

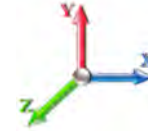
| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 27

| Elev (ft) | Description | Lateral FX (-) (lb) | Axial FY (-) (lb) | Torsion MY (lb-ft) | Moment MZ (lb-ft) |
|--------------|-------------|---------------------------|-------------------------|--------------------------|-------------------------|
| 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | | 60.33 | 787.93 | 0.00 | 0.00 |
| 4.00 | | 60.10 | 855.17 | 0.00 | 0.00 |
| 6.00 | | 59.79 | 918.26 | 0.00 | 0.00 |
| 8.00 | | 59.46 | 917.18 | 0.00 | 0.00 |
| 10.00 | | 59.11 | 915.08 | 0.00 | 0.00 |
| 12.00 | | 58.75 | 912.31 | 0.00 | 0.00 |
| 14.00 | | 58.38 | 909.06 | 0.00 | 0.00 |
| 16.00 | | 58.72 | 905.45 | 0.00 | 0.00 |
| 18.00 | | 59.80 | 901.56 | 0.00 | 0.00 |
| 20.00 | | 60.74 | 897.44 | 0.00 | 0.00 |
| 22.00 | | 61.55 | 893.14 | 0.00 | 0.00 |
| 24.00 | | 62.26 | 888.69 | 0.00 | 0.00 |
| 26.00 | | 62.88 | 884.10 | 0.00 | 0.00 |
| 28.00 | | 63.42 | 879.39 | 0.00 | 0.00 |
| 30.00 | | 63.89 | 874.59 | 0.00 | 0.00 |
| 32.00 | | 64.30 | 869.69 | 0.00 | 0.00 |
| 34.00 | | 64.66 | 864.72 | 0.00 | 0.00 |
| 36.00 | | 64.96 | 859.67 | 0.00 | 0.00 |
| 38.00 | | 65.22 | 854.56 | 0.00 | 0.00 |
| 40.00 | | 65.44 | 849.39 | 0.00 | 0.00 |
| 42.00 | | 65.62 | 844.17 | 0.00 | 0.00 |
| 44.00 | | 65.76 | 838.90 | 0.00 | 0.00 |
| 46.00 | | 65.87 | 833.58 | 0.00 | 0.00 |
| 46.67 | | 21.91 | 276.75 | 0.00 | 0.00 |
| 48.00 | | 44.77 | 872.43 | 0.00 | 0.00 |
| 50.00 | | 67.31 | 1300.63 | 0.00 | 0.00 |
| 52.00 | | 67.34 | 1291.10 | 0.00 | 0.00 |
| 53.00 | | 33.61 | 642.06 | 0.00 | 0.00 |
| 54.00 | | 33.61 | 380.00 | 0.00 | 0.00 |
| 56.00 | | 67.34 | 756.13 | 0.00 | 0.00 |
| 58.00 | | 67.30 | 751.20 | 0.00 | 0.00 |
| 60.00 | | 67.24 | 746.24 | 0.00 | 0.00 |
| 62.00 | | 67.16 | 741.26 | 0.00 | 0.00 |
| 64.00 | | 67.06 | 736.24 | 0.00 | 0.00 |
| 66.00 | | 66.94 | 731.21 | 0.00 | 0.00 |
| 68.00 | | 66.81 | 726.15 | 0.00 | 0.00 |
| 70.00 | | 66.65 | 721.07 | 0.00 | 0.00 |
| 72.00 | | 66.48 | 715.97 | 0.00 | 0.00 |
| 74.00 | | 66.30 | 710.84 | 0.00 | 0.00 |
| 76.00 | | 66.10 | 705.70 | 0.00 | 0.00 |
| 78.00 | | 65.89 | 700.55 | 0.00 | 0.00 |
| 80.00 | | 65.66 | 695.37 | 0.00 | 0.00 |
| 82.00 | | 65.42 | 690.18 | 0.00 | 0.00 |
| 84.00 | | 65.17 | 684.97 | 0.00 | 0.00 |
| 86.00 | | 64.90 | 679.74 | 0.00 | 0.00 |
| 88.00 | | 64.62 | 674.51 | 0.00 | 0.00 |

Total Applied Force Summary

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | | | | |
|----------------|------------------|------------------|------------------|-------------|---------------|
| 90.00 | | 64.33 | 669.25 | 0.00 | 0.00 |
| 92.00 | | 64.03 | 663.99 | 0.00 | 0.00 |
| 94.00 | | 63.72 | 658.71 | 0.00 | 0.00 |
| 94.25 | | 7.93 | 82.03 | 0.00 | 0.00 |
| 96.00 | | 56.10 | 742.52 | 0.00 | 0.00 |
| 98.00 | | 63.82 | 841.63 | 0.00 | 0.00 |
| 99.67 | | 52.91 | 695.82 | 0.00 | 0.00 |
| 100.00 | | 10.54 | 76.94 | 0.00 | 0.00 |
| 102.00 | | 63.14 | 459.23 | 0.00 | 0.00 |
| 104.00 | | 62.78 | 455.95 | 0.00 | 0.00 |
| 106.00 | | 62.41 | 452.65 | 0.00 | 0.00 |
| 107.00 | (28) attachments | 2100.67 | 7735.68 | 0.00 | 0.00 |
| 108.00 | | 30.94 | 198.09 | 0.00 | 0.00 |
| 110.00 | | 61.66 | 393.38 | 0.00 | 0.00 |
| 112.00 | | 61.26 | 390.05 | 0.00 | 0.00 |
| 114.00 | | 60.86 | 386.71 | 0.00 | 0.00 |
| 116.00 | | 60.46 | 383.37 | 0.00 | 0.00 |
| 117.00 | (19) attachments | 1193.90 | 8077.12 | 0.00 | 650.25 |
| 118.00 | | 29.94 | 185.17 | 0.00 | 0.00 |
| 120.00 | | 59.62 | 367.49 | 0.00 | 0.00 |
| 122.00 | | 59.19 | 340.41 | 0.00 | 0.00 |
| 124.00 | | 58.75 | 337.32 | 0.00 | 0.00 |
| 126.00 | | 58.31 | 334.22 | 0.00 | 0.00 |
| 127.00 | (11) attachments | 1042.40 | 5209.89 | 0.00 | 0.00 |
| 128.00 | | 28.85 | 164.14 | 0.00 | 0.00 |
| 130.00 | | 57.40 | 325.61 | 0.00 | 0.00 |
| 132.00 | | 56.93 | 322.49 | 0.00 | 0.00 |
| 134.00 | | 56.46 | 319.36 | 0.00 | 0.00 |
| 136.00 | | 55.98 | 316.23 | 0.00 | 0.00 |
| 137.00 | (21) attachments | 863.57 | 4489.64 | 0.00 | 0.00 |
| 138.00 | | 27.67 | 141.35 | 0.00 | 0.00 |
| 140.00 | | 55.01 | 279.98 | 0.00 | 0.00 |
| 142.00 | | 54.52 | 276.83 | 0.00 | 0.00 |
| 144.00 | | 54.02 | 273.67 | 0.00 | 0.00 |
| 146.00 | | 53.51 | 270.50 | 0.00 | 0.00 |
| 147.00 | (19) attachments | 1532.52 | 9675.72 | 0.00 | 0.00 |
| 148.00 | | 26.41 | 118.18 | 0.00 | 0.00 |
| 150.00 | (1) attachments | 84.19 | 298.03 | 0.00 | 111.00 |
| Totals: | | 11,283.30 | 84,493.68 | 0.00 | 761.25 |

Calculated Forces

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |

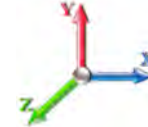


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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 27

Dead Load Factor 1.20
Wind Load Factor 1.00



| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (-) (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation Sway (deg) | Rotation Twist (deg) | Stress Ratio |
|---------------|------------------|------------------|---------------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|---------------------|----------------------|--------------|
| 0.00 | -84.49 | -11.31 | 0.00 | -1284.7 | 0.00 | 1284.73 | 5817.07 | 2908.54 | 11858.0 | 5886.84 | 0.00 | 0.000 | 0.000 | 0.233 |
| 2.00 | -83.70 | -11.29 | 0.00 | -1262.1 | 0.00 | 1262.12 | 5786.20 | 2893.10 | 11708.4 | 5812.58 | 0.01 | -0.030 | 0.000 | 0.232 |
| 4.00 | -82.84 | -11.27 | 0.00 | -1239.5 | 0.00 | 1239.54 | 5755.15 | 2877.58 | 11559.4 | 5738.61 | 0.03 | -0.059 | 0.000 | 0.230 |
| 6.00 | -81.91 | -11.25 | 0.00 | -1217.0 | 0.00 | 1217.00 | 5723.94 | 2861.97 | 11411.0 | 5664.94 | 0.06 | -0.089 | 0.000 | 0.229 |
| 8.00 | -80.99 | -11.23 | 0.00 | -1194.5 | 0.00 | 1194.50 | 5692.56 | 2846.28 | 11263.2 | 5591.57 | 0.10 | -0.119 | 0.000 | 0.228 |
| 10.00 | -80.07 | -11.21 | 0.00 | -1172.0 | 0.00 | 1172.03 | 5652.47 | 2826.24 | 11099.3 | 5510.17 | 0.16 | -0.149 | 0.000 | 0.227 |
| 12.00 | -79.15 | -11.19 | 0.00 | -1149.6 | 0.00 | 1149.60 | 5609.81 | 2804.91 | 10931.5 | 5426.88 | 0.23 | -0.180 | 0.000 | 0.226 |
| 14.00 | -78.24 | -11.17 | 0.00 | -1127.2 | 0.00 | 1127.22 | 5567.15 | 2783.57 | 10765.0 | 5344.23 | 0.31 | -0.210 | 0.000 | 0.225 |
| 16.00 | -77.32 | -11.15 | 0.00 | -1104.8 | 0.00 | 1104.87 | 5524.49 | 2762.24 | 10599.8 | 5262.21 | 0.40 | -0.240 | 0.000 | 0.224 |
| 18.00 | -76.42 | -11.13 | 0.00 | -1082.5 | 0.00 | 1082.56 | 5481.83 | 2740.91 | 10435.9 | 5180.82 | 0.51 | -0.271 | 0.000 | 0.223 |
| 20.00 | -75.51 | -11.11 | 0.00 | -1060.3 | 0.00 | 1060.30 | 5439.17 | 2719.58 | 10273.2 | 5100.07 | 0.63 | -0.301 | 0.000 | 0.222 |
| 22.00 | -74.62 | -11.08 | 0.00 | -1038.0 | 0.00 | 1038.09 | 5396.51 | 2698.25 | 10111.8 | 5019.95 | 0.76 | -0.332 | 0.000 | 0.221 |
| 24.00 | -73.72 | -11.05 | 0.00 | -1015.9 | 0.00 | 1015.93 | 5353.84 | 2676.92 | 9951.76 | 4940.47 | 0.91 | -0.363 | 0.000 | 0.219 |
| 26.00 | -72.83 | -11.02 | 0.00 | -993.83 | 0.00 | 993.83 | 5311.18 | 2655.59 | 9792.93 | 4861.62 | 1.07 | -0.393 | 0.000 | 0.218 |
| 28.00 | -71.95 | -10.99 | 0.00 | -971.79 | 0.00 | 971.79 | 5268.52 | 2634.26 | 9635.38 | 4783.41 | 1.24 | -0.424 | 0.000 | 0.217 |
| 30.00 | -71.07 | -10.96 | 0.00 | -949.81 | 0.00 | 949.81 | 5225.86 | 2612.93 | 9479.11 | 4705.83 | 1.42 | -0.455 | 0.000 | 0.215 |
| 32.00 | -70.19 | -10.92 | 0.00 | -927.89 | 0.00 | 927.89 | 5183.20 | 2591.60 | 9324.12 | 4628.89 | 1.62 | -0.486 | 0.000 | 0.214 |
| 34.00 | -69.32 | -10.89 | 0.00 | -906.05 | 0.00 | 906.05 | 5140.54 | 2570.27 | 9170.40 | 4552.57 | 1.83 | -0.517 | 0.000 | 0.213 |
| 36.00 | -68.46 | -10.85 | 0.00 | -884.27 | 0.00 | 884.27 | 5097.88 | 2548.94 | 9017.97 | 4476.90 | 2.05 | -0.548 | 0.000 | 0.211 |
| 38.00 | -67.60 | -10.82 | 0.00 | -862.56 | 0.00 | 862.56 | 5055.22 | 2527.61 | 8866.81 | 4401.86 | 2.29 | -0.579 | 0.000 | 0.209 |
| 40.00 | -66.74 | -10.78 | 0.00 | -840.93 | 0.00 | 840.93 | 5012.56 | 2506.28 | 8716.92 | 4327.45 | 2.54 | -0.610 | 0.000 | 0.208 |
| 42.00 | -65.89 | -10.74 | 0.00 | -819.37 | 0.00 | 819.37 | 4969.90 | 2484.95 | 8568.32 | 4253.68 | 2.80 | -0.641 | 0.000 | 0.206 |
| 44.00 | -65.05 | -10.70 | 0.00 | -797.89 | 0.00 | 797.89 | 4927.23 | 2463.62 | 8420.99 | 4180.54 | 3.08 | -0.672 | 0.000 | 0.204 |
| 46.00 | -64.21 | -10.65 | 0.00 | -776.50 | 0.00 | 776.50 | 4884.57 | 2442.29 | 8274.95 | 4108.03 | 3.37 | -0.703 | 0.000 | 0.202 |
| 46.67 | -63.93 | -10.64 | 0.00 | -769.40 | 0.00 | 769.40 | 4870.35 | 2435.18 | 8226.55 | 4084.00 | 3.46 | -0.713 | 0.000 | 0.202 |
| 48.00 | -63.06 | -10.61 | 0.00 | -755.21 | 0.00 | 755.21 | 4841.91 | 2420.96 | 8130.17 | 4036.16 | 3.67 | -0.734 | 0.000 | 0.200 |
| 50.00 | -61.75 | -10.56 | 0.00 | -733.99 | 0.00 | 733.99 | 4799.25 | 2399.63 | 7986.68 | 3964.92 | 3.98 | -0.765 | 0.000 | 0.198 |
| 52.00 | -60.46 | -10.50 | 0.00 | -712.87 | 0.00 | 712.87 | 4756.59 | 2378.30 | 7844.47 | 3894.32 | 4.31 | -0.795 | 0.000 | 0.196 |
| 53.00 | -59.81 | -10.47 | 0.00 | -702.38 | 0.00 | 702.38 | 4740.56 | 2120.28 | 7137.82 | 3543.51 | 4.48 | -0.811 | 0.000 | 0.212 |
| 54.00 | -59.43 | -10.46 | 0.00 | -691.90 | 0.00 | 691.90 | 4221.90 | 2110.95 | 7074.79 | 3512.22 | 4.65 | -0.826 | 0.000 | 0.211 |
| 56.00 | -58.67 | -10.41 | 0.00 | -670.99 | 0.00 | 670.99 | 4184.57 | 2092.28 | 6949.58 | 3450.06 | 5.00 | -0.859 | 0.000 | 0.209 |
| 58.00 | -57.91 | -10.37 | 0.00 | -650.16 | 0.00 | 650.16 | 4147.24 | 2073.62 | 6825.49 | 3388.46 | 5.37 | -0.891 | 0.000 | 0.206 |
| 60.00 | -57.16 | -10.32 | 0.00 | -629.43 | 0.00 | 629.43 | 4109.91 | 2054.96 | 6702.51 | 3327.41 | 5.75 | -0.924 | 0.000 | 0.203 |
| 62.00 | -56.42 | -10.27 | 0.00 | -608.79 | 0.00 | 608.79 | 4072.58 | 2036.29 | 6580.65 | 3266.91 | 6.14 | -0.956 | 0.000 | 0.200 |
| 64.00 | -55.67 | -10.22 | 0.00 | -588.24 | 0.00 | 588.24 | 4035.25 | 2017.63 | 6459.92 | 3206.97 | 6.55 | -0.988 | 0.000 | 0.197 |
| 66.00 | -54.94 | -10.17 | 0.00 | -567.79 | 0.00 | 567.79 | 3997.93 | 1998.96 | 6340.29 | 3147.59 | 6.97 | -1.019 | 0.000 | 0.194 |
| 68.00 | -54.21 | -10.12 | 0.00 | -547.44 | 0.00 | 547.44 | 3960.60 | 1980.30 | 6221.79 | 3088.76 | 7.40 | -1.051 | 0.000 | 0.191 |
| 70.00 | -53.48 | -10.07 | 0.00 | -527.20 | 0.00 | 527.20 | 3923.27 | 1961.63 | 6104.41 | 3030.48 | 7.85 | -1.082 | 0.000 | 0.188 |
| 72.00 | -52.76 | -10.02 | 0.00 | -507.05 | 0.00 | 507.05 | 3885.94 | 1942.97 | 5988.14 | 2972.76 | 8.31 | -1.112 | 0.000 | 0.184 |
| 74.00 | -52.05 | -9.97 | 0.00 | -487.01 | 0.00 | 487.01 | 3848.61 | 1924.31 | 5872.99 | 2915.60 | 8.78 | -1.143 | 0.000 | 0.181 |
| 76.00 | -51.34 | -9.91 | 0.00 | -467.07 | 0.00 | 467.07 | 3811.28 | 1905.64 | 5758.96 | 2858.99 | 9.27 | -1.173 | 0.000 | 0.177 |
| 78.00 | -50.64 | -9.86 | 0.00 | -447.24 | 0.00 | 447.24 | 3773.96 | 1886.98 | 5646.05 | 2802.94 | 9.77 | -1.203 | 0.000 | 0.173 |
| 80.00 | -49.94 | -9.81 | 0.00 | -427.52 | 0.00 | 427.52 | 3736.63 | 1868.31 | 5534.25 | 2747.44 | 10.28 | -1.232 | 0.000 | 0.169 |
| 82.00 | -49.24 | -9.75 | 0.00 | -407.91 | 0.00 | 407.91 | 3699.30 | 1849.65 | 5423.58 | 2692.49 | 10.80 | -1.261 | 0.000 | 0.165 |
| 84.00 | -48.56 | -9.69 | 0.00 | -388.42 | 0.00 | 388.42 | 3661.97 | 1830.99 | 5314.02 | 2638.10 | 11.33 | -1.289 | 0.000 | 0.161 |
| 86.00 | -47.87 | -9.64 | 0.00 | -369.03 | 0.00 | 369.03 | 3624.64 | 1812.32 | 5205.58 | 2584.27 | 11.88 | -1.317 | 0.000 | 0.156 |
| 88.00 | -47.20 | -9.58 | 0.00 | -349.76 | 0.00 | 349.76 | 3587.31 | 1793.66 | 5098.25 | 2530.99 | 12.44 | -1.344 | 0.000 | 0.151 |
| 90.00 | -46.52 | -9.52 | 0.00 | -330.61 | 0.00 | 330.61 | 3549.99 | 1774.99 | 4992.05 | 2478.26 | 13.01 | -1.371 | 0.000 | 0.147 |

Calculated Forces

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | | | | | | | | | | | | | |
|--------|--------|-------|------|---------|------|--------|---------|---------|---------|---------|-------|--------|-------|-------|
| 92.00 | -45.86 | -9.46 | 0.00 | -311.57 | 0.00 | 311.57 | 3512.66 | 1756.33 | 4886.96 | 2426.09 | 13.59 | -1.396 | 0.000 | 0.142 |
| 94.00 | -45.20 | -9.39 | 0.00 | -292.65 | 0.00 | 292.65 | 3475.33 | 1737.66 | 4782.99 | 2374.48 | 14.18 | -1.421 | 0.000 | 0.136 |
| 94.25 | -45.11 | -9.39 | 0.00 | -290.31 | 0.00 | 290.31 | 3470.66 | 1735.33 | 4770.08 | 2368.07 | 14.25 | -1.425 | 0.000 | 0.136 |
| 96.00 | -44.37 | -9.33 | 0.00 | -273.88 | 0.00 | 273.88 | 3438.00 | 1719.00 | 4680.14 | 2323.42 | 14.78 | -1.446 | 0.000 | 0.131 |
| 98.00 | -43.53 | -9.26 | 0.00 | -255.21 | 0.00 | 255.21 | 3400.67 | 1700.34 | 4578.41 | 2272.92 | 15.39 | -1.469 | 0.000 | 0.125 |
| 99.67 | -42.83 | -9.20 | 0.00 | -239.77 | 0.00 | 239.77 | 1458.24 | 729.12 | 1997.89 | 991.83 | 15.90 | -1.488 | 0.000 | 0.271 |
| 100.00 | -42.75 | -9.21 | 0.00 | -236.71 | 0.00 | 236.71 | 1456.89 | 728.44 | 1992.39 | 989.11 | 16.01 | -1.492 | 0.000 | 0.269 |
| 102.00 | -42.29 | -9.16 | 0.00 | -218.30 | 0.00 | 218.30 | 1448.65 | 724.33 | 1959.44 | 972.75 | 16.64 | -1.532 | 0.000 | 0.254 |
| 104.00 | -41.83 | -9.11 | 0.00 | -199.98 | 0.00 | 199.98 | 1440.25 | 720.13 | 1926.51 | 956.40 | 17.29 | -1.571 | 0.000 | 0.238 |
| 106.00 | -41.37 | -9.06 | 0.00 | -181.76 | 0.00 | 181.76 | 1431.68 | 715.84 | 1893.60 | 940.06 | 17.96 | -1.607 | 0.000 | 0.222 |
| 107.00 | -33.70 | -6.75 | 0.00 | -172.70 | 0.00 | 172.70 | 1427.33 | 713.67 | 1877.17 | 931.90 | 18.30 | -1.625 | 0.000 | 0.209 |
| 108.00 | -33.50 | -6.73 | 0.00 | -165.96 | 0.00 | 165.96 | 1422.94 | 711.47 | 1860.74 | 923.75 | 18.64 | -1.642 | 0.000 | 0.203 |
| 110.00 | -33.10 | -6.67 | 0.00 | -152.51 | 0.00 | 152.51 | 1414.04 | 707.02 | 1827.92 | 907.46 | 19.34 | -1.674 | 0.000 | 0.192 |
| 112.00 | -32.71 | -6.62 | 0.00 | -139.17 | 0.00 | 139.17 | 1404.97 | 702.48 | 1795.15 | 891.19 | 20.04 | -1.705 | 0.000 | 0.180 |
| 114.00 | -32.32 | -6.56 | 0.00 | -125.94 | 0.00 | 125.94 | 1395.73 | 697.86 | 1762.45 | 874.95 | 20.76 | -1.734 | 0.000 | 0.167 |
| 116.00 | -31.94 | -6.50 | 0.00 | -112.82 | 0.00 | 112.82 | 1386.32 | 693.16 | 1729.81 | 858.75 | 21.50 | -1.761 | 0.000 | 0.155 |
| 117.00 | -23.90 | -5.06 | 0.00 | -105.67 | 0.00 | 105.67 | 1381.56 | 690.78 | 1713.52 | 850.66 | 21.87 | -1.773 | 0.000 | 0.142 |
| 118.00 | -23.71 | -5.03 | 0.00 | -100.61 | 0.00 | 100.61 | 1376.75 | 688.37 | 1697.25 | 842.59 | 22.24 | -1.786 | 0.000 | 0.137 |
| 120.00 | -23.35 | -4.97 | 0.00 | -90.55 | 0.00 | 90.55 | 1367.01 | 683.50 | 1664.77 | 826.46 | 22.99 | -1.809 | 0.000 | 0.127 |
| 120.00 | -23.35 | -4.97 | 0.00 | -90.55 | 0.00 | 90.55 | 1091.99 | 545.99 | 1332.66 | 661.59 | 22.99 | -1.809 | 0.000 | 0.158 |
| 122.00 | -23.01 | -4.91 | 0.00 | -80.61 | 0.00 | 80.61 | 1085.46 | 542.73 | 1308.44 | 649.56 | 23.76 | -1.830 | 0.000 | 0.145 |
| 124.00 | -22.67 | -4.85 | 0.00 | -70.80 | 0.00 | 70.80 | 1078.76 | 539.38 | 1284.21 | 637.54 | 24.53 | -1.853 | 0.000 | 0.132 |
| 126.00 | -22.34 | -4.78 | 0.00 | -61.10 | 0.00 | 61.10 | 1071.89 | 535.95 | 1259.98 | 625.51 | 25.31 | -1.874 | 0.000 | 0.119 |
| 127.00 | -17.16 | -3.57 | 0.00 | -56.32 | 0.00 | 56.32 | 1068.40 | 534.20 | 1247.88 | 619.50 | 25.70 | -1.884 | 0.000 | 0.107 |
| 128.00 | -17.00 | -3.54 | 0.00 | -52.74 | 0.00 | 52.74 | 1064.86 | 532.43 | 1235.77 | 613.49 | 26.10 | -1.893 | 0.000 | 0.102 |
| 130.00 | -16.67 | -3.48 | 0.00 | -45.65 | 0.00 | 45.65 | 1057.66 | 528.83 | 1211.58 | 601.48 | 26.89 | -1.910 | 0.000 | 0.092 |
| 132.00 | -16.35 | -3.42 | 0.00 | -38.69 | 0.00 | 38.69 | 1050.29 | 525.14 | 1187.41 | 589.48 | 27.70 | -1.924 | 0.000 | 0.081 |
| 134.00 | -16.04 | -3.35 | 0.00 | -31.86 | 0.00 | 31.86 | 1042.75 | 521.38 | 1163.27 | 577.50 | 28.51 | -1.937 | 0.000 | 0.071 |
| 136.00 | -15.72 | -3.29 | 0.00 | -25.15 | 0.00 | 25.15 | 1035.05 | 517.52 | 1139.18 | 565.54 | 29.32 | -1.948 | 0.000 | 0.060 |
| 137.00 | -11.26 | -2.27 | 0.00 | -21.87 | 0.00 | 21.87 | 1031.13 | 515.57 | 1127.15 | 559.57 | 29.73 | -1.953 | 0.000 | 0.050 |
| 138.00 | -11.12 | -2.24 | 0.00 | -19.59 | 0.00 | 19.59 | 1027.18 | 513.59 | 1115.14 | 553.60 | 30.14 | -1.957 | 0.000 | 0.046 |
| 140.00 | -10.84 | -2.18 | 0.00 | -15.11 | 0.00 | 15.11 | 1019.14 | 509.57 | 1091.15 | 541.69 | 30.96 | -1.964 | 0.000 | 0.039 |
| 142.00 | -10.57 | -2.12 | 0.00 | -10.75 | 0.00 | 10.75 | 1010.93 | 505.47 | 1067.22 | 529.81 | 31.78 | -1.970 | 0.000 | 0.031 |
| 144.00 | -10.30 | -2.05 | 0.00 | -6.52 | 0.00 | 6.52 | 1002.56 | 501.28 | 1043.37 | 517.97 | 32.61 | -1.974 | 0.000 | 0.023 |
| 146.00 | -10.03 | -1.99 | 0.00 | -2.41 | 0.00 | 2.41 | 994.02 | 497.01 | 1019.60 | 506.17 | 33.44 | -1.976 | 0.000 | 0.015 |
| 147.00 | -0.41 | -0.12 | 0.00 | -0.42 | 0.00 | 0.42 | 989.69 | 494.84 | 1007.74 | 500.29 | 33.85 | -1.976 | 0.000 | 0.001 |
| 148.00 | -0.29 | -0.09 | 0.00 | -0.30 | 0.00 | 0.30 | 985.31 | 492.66 | 995.91 | 494.41 | 34.27 | -1.976 | 0.000 | 0.001 |
| 150.00 | 0.00 | -0.08 | 0.00 | -0.11 | 0.00 | 0.11 | 976.44 | 488.22 | 972.32 | 482.70 | 35.09 | -1.977 | 0.000 | 0.000 |

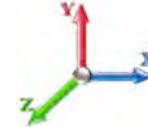
Seismic Segment Forces (Factored)

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | |
|----------------------------------|--------------------------------------|---------------------------------------|
| Load Case: 1.2D + 1.0E | | Iterations 24 |
| Gust Response Factor 1.10 | Sds 0.11 | Ss 0.16 |
| Dead Load Factor 1.20 | Seismic Load Factor 1.00 | S1 0.06 |
| Wind Load Factor 0.00 | Structure Frequency (f1) 0.30 | SA 0.01 |
| | | Seismic Importance Factor 1.00 |



| Top Elev (ft) | Description | Wz (lb) | a | b | c | Lateral Fs (lb) | R: 1.50 |
|---------------|-----------------|---------|------|-------|------|-----------------|---------|
| 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2.00 | | 535.36 | 0.00 | 0.01 | 0.01 | 4.11 | |
| 4.00 | | 531.45 | 0.00 | 0.03 | 0.01 | 6.41 | |
| 6.00 | | 527.55 | 0.00 | 0.04 | 0.02 | 7.90 | |
| 8.00 | | 523.64 | 0.01 | 0.05 | 0.03 | 8.91 | |
| 10.00 | | 519.73 | 0.01 | 0.05 | 0.03 | 9.61 | |
| 12.00 | | 515.82 | 0.01 | 0.06 | 0.03 | 10.10 | |
| 14.00 | | 511.91 | 0.02 | 0.06 | 0.04 | 10.43 | |
| 16.00 | | 508.01 | 0.02 | 0.06 | 0.04 | 10.66 | |
| 18.00 | | 504.10 | 0.03 | 0.07 | 0.04 | 10.80 | |
| 20.00 | | 500.19 | 0.03 | 0.07 | 0.04 | 10.90 | |
| 22.00 | | 496.28 | 0.04 | 0.07 | 0.04 | 10.96 | |
| 24.00 | | 492.38 | 0.05 | 0.07 | 0.04 | 10.99 | |
| 26.00 | | 488.47 | 0.06 | 0.07 | 0.04 | 11.01 | |
| 28.00 | | 484.56 | 0.07 | 0.07 | 0.04 | 11.03 | |
| 30.00 | | 480.65 | 0.08 | 0.07 | 0.04 | 11.05 | |
| 32.00 | | 476.74 | 0.09 | 0.07 | 0.04 | 11.07 | |
| 34.00 | | 472.84 | 0.10 | 0.07 | 0.04 | 11.09 | |
| 36.00 | | 468.93 | 0.11 | 0.07 | 0.04 | 11.12 | |
| 38.00 | | 465.02 | 0.12 | 0.07 | 0.03 | 11.16 | |
| 40.00 | | 461.11 | 0.13 | 0.07 | 0.03 | 11.19 | |
| 42.00 | | 457.21 | 0.15 | 0.07 | 0.03 | 11.21 | |
| 44.00 | | 453.30 | 0.16 | 0.07 | 0.03 | 11.23 | |
| 46.00 | | 449.39 | 0.18 | 0.07 | 0.03 | 11.22 | |
| 46.67 | Bot - Section 2 | 148.93 | 0.18 | 0.06 | 0.03 | 3.73 | |
| 48.00 | | 561.97 | 0.19 | 0.06 | 0.02 | 14.11 | |
| 50.00 | | 836.86 | 0.21 | 0.06 | 0.02 | 21.06 | |
| 52.00 | | 829.53 | 0.23 | 0.06 | 0.02 | 20.81 | |
| 53.00 | Top - Section 1 | 412.02 | 0.24 | 0.06 | 0.02 | 10.30 | |
| 54.00 | | 193.79 | 0.24 | 0.06 | 0.02 | 4.81 | |
| 56.00 | | 385.02 | 0.26 | 0.05 | 0.02 | 9.39 | |
| 58.00 | | 381.60 | 0.28 | 0.05 | 0.01 | 9.03 | |
| 60.00 | | 378.18 | 0.30 | 0.04 | 0.01 | 8.55 | |
| 62.00 | | 374.77 | 0.32 | 0.04 | 0.01 | 7.94 | |
| 64.00 | | 371.35 | 0.34 | 0.03 | 0.01 | 7.16 | |
| 66.00 | | 367.93 | 0.37 | 0.03 | 0.01 | 6.20 | |
| 68.00 | | 364.51 | 0.39 | 0.02 | 0.01 | 5.06 | |
| 70.00 | | 361.09 | 0.41 | 0.01 | 0.01 | 3.73 | |
| 72.00 | | 357.67 | 0.44 | 0.01 | 0.01 | 2.26 | |
| 74.00 | | 354.25 | 0.46 | 0.00 | 0.01 | 0.67 | |
| 76.00 | | 350.83 | 0.49 | -0.01 | 0.01 | -0.97 | |
| 78.00 | | 347.41 | 0.51 | -0.02 | 0.01 | -2.58 | |
| 80.00 | | 343.99 | 0.54 | -0.03 | 0.01 | -4.10 | |
| 82.00 | | 340.57 | 0.56 | -0.04 | 0.01 | -5.46 | |
| 84.00 | | 337.15 | 0.59 | -0.05 | 0.01 | -6.63 | |
| 86.00 | | 333.73 | 0.62 | -0.06 | 0.02 | -7.58 | |

Seismic Segment Forces (Factored)

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | | | | | |
|----------------|-----------------|-----------------|------|-------|--------------------|-----------------|
| 88.00 | | 330.31 | 0.65 | -0.07 | 0.02 | -8.31 |
| 90.00 | | 326.89 | 0.68 | -0.08 | 0.03 | -8.83 |
| 92.00 | | 323.48 | 0.71 | -0.09 | 0.03 | -9.14 |
| 94.00 | | 320.06 | 0.74 | -0.10 | 0.04 | -9.27 |
| 94.25 | Bot - Section 3 | 39.77 | 0.75 | -0.10 | 0.04 | -1.15 |
| 96.00 | | 418.03 | 0.77 | -0.11 | 0.05 | -12.18 |
| 98.00 | | 472.94 | 0.81 | -0.11 | 0.06 | -13.63 |
| 99.67 | Top - Section 2 | 390.20 | 0.83 | -0.12 | 0.06 | -10.99 |
| 100.00 | | 26.22 | 0.84 | -0.12 | 0.07 | -0.73 |
| 102.00 | | 156.31 | 0.87 | -0.12 | 0.08 | -4.18 |
| 104.00 | | 154.60 | 0.91 | -0.12 | 0.09 | -3.87 |
| 106.00 | | 152.89 | 0.94 | -0.12 | 0.11 | -3.50 |
| 107.00 | Appurtenance(s) | 2912.6 | 0.96 | -0.12 | 0.11 | -63.12 |
| 108.00 | | 75.37 | 0.98 | -0.11 | 0.12 | -1.53 |
| 110.00 | | 149.47 | 1.02 | -0.11 | 0.14 | -2.59 |
| 112.00 | | 147.76 | 1.05 | -0.09 | 0.16 | -2.06 |
| 114.00 | | 146.05 | 1.09 | -0.07 | 0.18 | -1.48 |
| 116.00 | | 144.34 | 1.13 | -0.05 | 0.21 | -0.85 |
| 117.00 | Appurtenance(s) | 3629.3 | 1.15 | -0.04 | 0.22 | -13.14 |
| 118.00 | | 71.10 | 1.17 | -0.02 | 0.23 | -0.09 |
| 120.00 | Top - Section 3 | 140.92 | 1.21 | 0.01 | 0.26 | 0.54 |
| 122.00 | | 119.45 | 1.25 | 0.06 | 0.29 | 1.12 |
| 124.00 | | 117.98 | 1.29 | 0.11 | 0.33 | 1.80 |
| 126.00 | | 116.52 | 1.33 | 0.17 | 0.37 | 2.53 |
| 127.00 | Appurtenance(s) | 2416.8 | 1.35 | 0.20 | 0.39 | 60.50 |
| 128.00 | | 57.34 | 1.38 | 0.24 | 0.41 | 1.63 |
| 130.00 | | 113.59 | 1.42 | 0.32 | 0.45 | 4.06 |
| 132.00 | | 112.12 | 1.46 | 0.42 | 0.50 | 4.88 |
| 134.00 | | 110.66 | 1.51 | 0.52 | 0.55 | 5.72 |
| 136.00 | | 109.19 | 1.55 | 0.64 | 0.61 | 6.59 |
| 137.00 | Appurtenance(s) | 1746.5 | 1.58 | 0.71 | 0.64 | 113.22 |
| 138.00 | | 53.68 | 1.60 | 0.78 | 0.67 | 3.73 |
| 140.00 | | 106.26 | 1.65 | 0.93 | 0.73 | 8.40 |
| 142.00 | | 104.79 | 1.69 | 1.10 | 0.81 | 9.34 |
| 144.00 | | 103.33 | 1.74 | 1.29 | 0.88 | 10.30 |
| 146.00 | | 101.86 | 1.79 | 1.50 | 0.96 | 11.28 |
| 147.00 | Appurtenance(s) | 4007.1 | 1.82 | 1.61 | 1.00 | 466.55 |
| 148.00 | | 50.02 | 1.84 | 1.73 | 1.05 | 6.12 |
| 150.00 | Appurtenance(s) | 133.93 | 1.89 | 1.98 | 1.14 | 17.99 |
| Totals: | | 40,267.8 | | | | 907.3 |
| | | | | | Total Wind: | 46,649.1 |

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

Calculated Forces

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | | | | | | | | | |
|----------------------------------|--|--------------------------------------|---------------------------------|----------------|-----------------|---------------------------------------|--|--|----------------|----------------------|
| Load Case: 1.2D + 1.0E | | | | | | | | | | Iterations 24 |
| Gust Response Factor 1.10 | | | | | Sds 0.11 | | | | | Ss 0.16 |
| Dead Load Factor 1.20 | | | Seismic Load Factor 1.00 | | | Sd1 0.04 | | | S1 0.06 | |
| Wind Load Factor 0.00 | | Structure Frequency (f1) 0.30 | | SA 0.01 | | 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 | -55.93 | -1.11 | 0.00 | -125.17 | 0.00 | 125.17 | 5817.07 | 2908.54 | 11858.0 | 5886.84 | 0.00 | 0.00 | 0.00 | 0.031 |
| 2.00 | -55.29 | -1.10 | 0.00 | -122.96 | 0.00 | 122.96 | 5786.20 | 2893.10 | 11708.4 | 5812.58 | 0.00 | 0.00 | 0.00 | 0.031 |
| 4.00 | -54.59 | -1.10 | 0.00 | -120.76 | 0.00 | 120.76 | 5755.15 | 2877.58 | 11559.4 | 5738.61 | 0.00 | -0.01 | 0.00 | 0.031 |
| 6.00 | -53.83 | -1.09 | 0.00 | -118.56 | 0.00 | 118.56 | 5723.94 | 2861.97 | 11411.0 | 5664.94 | 0.01 | -0.01 | 0.00 | 0.030 |
| 8.00 | -53.08 | -1.09 | 0.00 | -116.37 | 0.00 | 116.37 | 5692.56 | 2846.28 | 11263.2 | 5591.57 | 0.01 | -0.01 | 0.00 | 0.030 |
| 10.00 | -52.33 | -1.08 | 0.00 | -114.19 | 0.00 | 114.19 | 5652.47 | 2826.24 | 11099.3 | 5510.17 | 0.02 | -0.01 | 0.00 | 0.030 |
| 12.00 | -51.59 | -1.07 | 0.00 | -112.03 | 0.00 | 112.03 | 5609.81 | 2804.91 | 10931.5 | 5426.88 | 0.02 | -0.02 | 0.00 | 0.030 |
| 14.00 | -50.85 | -1.07 | 0.00 | -109.88 | 0.00 | 109.88 | 5567.15 | 2783.57 | 10765.0 | 5344.23 | 0.03 | -0.02 | 0.00 | 0.030 |
| 16.00 | -50.12 | -1.06 | 0.00 | -107.75 | 0.00 | 107.75 | 5524.49 | 2762.24 | 10599.8 | 5262.21 | 0.04 | -0.02 | 0.00 | 0.030 |
| 18.00 | -49.39 | -1.05 | 0.00 | -105.63 | 0.00 | 105.63 | 5481.83 | 2740.91 | 10435.9 | 5180.82 | 0.05 | -0.03 | 0.00 | 0.029 |
| 20.00 | -48.66 | -1.04 | 0.00 | -103.54 | 0.00 | 103.54 | 5439.17 | 2719.58 | 10273.2 | 5100.07 | 0.06 | -0.03 | 0.00 | 0.029 |
| 22.00 | -47.94 | -1.03 | 0.00 | -101.46 | 0.00 | 101.46 | 5396.51 | 2698.25 | 10111.8 | 5019.95 | 0.07 | -0.03 | 0.00 | 0.029 |
| 24.00 | -47.23 | -1.02 | 0.00 | -99.39 | 0.00 | 99.39 | 5353.84 | 2676.92 | 9951.76 | 4940.47 | 0.09 | -0.04 | 0.00 | 0.029 |
| 26.00 | -46.51 | -1.01 | 0.00 | -97.35 | 0.00 | 97.35 | 5311.18 | 2655.59 | 9792.93 | 4861.62 | 0.10 | -0.04 | 0.00 | 0.029 |
| 28.00 | -45.81 | -1.00 | 0.00 | -95.32 | 0.00 | 95.32 | 5268.52 | 2634.26 | 9635.38 | 4783.41 | 0.12 | -0.04 | 0.00 | 0.029 |
| 30.00 | -45.11 | -1.00 | 0.00 | -93.31 | 0.00 | 93.31 | 5225.86 | 2612.93 | 9479.11 | 4705.83 | 0.14 | -0.04 | 0.00 | 0.028 |
| 32.00 | -44.41 | -0.99 | 0.00 | -91.32 | 0.00 | 91.32 | 5183.20 | 2591.60 | 9324.12 | 4628.89 | 0.16 | -0.05 | 0.00 | 0.028 |
| 34.00 | -43.72 | -0.98 | 0.00 | -89.35 | 0.00 | 89.35 | 5140.54 | 2570.27 | 9170.40 | 4552.57 | 0.18 | -0.05 | 0.00 | 0.028 |
| 36.00 | -43.03 | -0.97 | 0.00 | -87.40 | 0.00 | 87.40 | 5097.88 | 2548.94 | 9017.97 | 4476.90 | 0.20 | -0.05 | 0.00 | 0.028 |
| 38.00 | -42.35 | -0.96 | 0.00 | -85.47 | 0.00 | 85.47 | 5055.22 | 2527.61 | 8866.81 | 4401.86 | 0.22 | -0.06 | 0.00 | 0.028 |
| 40.00 | -41.67 | -0.95 | 0.00 | -83.55 | 0.00 | 83.55 | 5012.56 | 2506.28 | 8716.92 | 4327.45 | 0.25 | -0.06 | 0.00 | 0.028 |
| 42.00 | -41.00 | -0.94 | 0.00 | -81.65 | 0.00 | 81.65 | 4969.90 | 2484.95 | 8568.32 | 4253.68 | 0.27 | -0.06 | 0.00 | 0.027 |
| 44.00 | -40.33 | -0.93 | 0.00 | -79.78 | 0.00 | 79.78 | 4927.23 | 2463.62 | 8420.99 | 4180.54 | 0.30 | -0.07 | 0.00 | 0.027 |
| 46.00 | -39.66 | -0.92 | 0.00 | -77.92 | 0.00 | 77.92 | 4884.57 | 2442.29 | 8274.95 | 4108.03 | 0.33 | -0.07 | 0.00 | 0.027 |
| 46.67 | -39.44 | -0.91 | 0.00 | -77.31 | 0.00 | 77.31 | 4870.35 | 2435.18 | 8226.55 | 4084.00 | 0.34 | -0.07 | 0.00 | 0.027 |
| 48.00 | -38.69 | -0.90 | 0.00 | -76.09 | 0.00 | 76.09 | 4841.91 | 2420.96 | 8130.17 | 4036.16 | 0.36 | -0.07 | 0.00 | 0.027 |
| 50.00 | -37.56 | -0.88 | 0.00 | -74.29 | 0.00 | 74.29 | 4799.25 | 2399.63 | 7986.68 | 3964.92 | 0.39 | -0.08 | 0.00 | 0.027 |
| 52.00 | -36.44 | -0.86 | 0.00 | -72.53 | 0.00 | 72.53 | 4756.59 | 2378.30 | 7844.47 | 3894.32 | 0.42 | -0.08 | 0.00 | 0.026 |
| 53.00 | -35.88 | -0.85 | 0.00 | -71.67 | 0.00 | 71.67 | 4740.56 | 2120.28 | 7137.82 | 3543.51 | 0.44 | -0.08 | 0.00 | 0.029 |
| 54.00 | -35.58 | -0.85 | 0.00 | -70.82 | 0.00 | 70.82 | 4221.90 | 2110.95 | 7074.79 | 3512.22 | 0.45 | -0.08 | 0.00 | 0.029 |
| 56.00 | -35.00 | -0.84 | 0.00 | -69.12 | 0.00 | 69.12 | 4184.57 | 2092.28 | 6949.58 | 3450.06 | 0.49 | -0.08 | 0.00 | 0.028 |
| 58.00 | -34.42 | -0.83 | 0.00 | -67.45 | 0.00 | 67.45 | 4147.24 | 2073.62 | 6825.49 | 3388.46 | 0.53 | -0.09 | 0.00 | 0.028 |
| 60.00 | -33.84 | -0.82 | 0.00 | -65.79 | 0.00 | 65.79 | 4109.91 | 2054.96 | 6702.51 | 3327.41 | 0.56 | -0.09 | 0.00 | 0.028 |
| 62.00 | -33.26 | -0.82 | 0.00 | -64.14 | 0.00 | 64.14 | 4072.58 | 2036.29 | 6580.65 | 3266.91 | 0.60 | -0.09 | 0.00 | 0.028 |
| 64.00 | -32.69 | -0.81 | 0.00 | -62.51 | 0.00 | 62.51 | 4035.25 | 2017.63 | 6459.92 | 3206.97 | 0.64 | -0.10 | 0.00 | 0.028 |
| 66.00 | -32.13 | -0.80 | 0.00 | -60.89 | 0.00 | 60.89 | 3997.93 | 1998.96 | 6340.29 | 3147.59 | 0.69 | -0.10 | 0.00 | 0.027 |
| 68.00 | -31.56 | -0.80 | 0.00 | -59.28 | 0.00 | 59.28 | 3960.60 | 1980.30 | 6221.79 | 3088.76 | 0.73 | -0.11 | 0.00 | 0.027 |
| 70.00 | -31.01 | -0.80 | 0.00 | -57.68 | 0.00 | 57.68 | 3923.27 | 1961.63 | 6104.41 | 3030.48 | 0.77 | -0.11 | 0.00 | 0.027 |
| 72.00 | -30.45 | -0.80 | 0.00 | -56.08 | 0.00 | 56.08 | 3885.94 | 1942.97 | 5988.14 | 2972.76 | 0.82 | -0.11 | 0.00 | 0.027 |
| 74.00 | -29.90 | -0.80 | 0.00 | -54.49 | 0.00 | 54.49 | 3848.61 | 1924.31 | 5872.99 | 2915.60 | 0.87 | -0.12 | 0.00 | 0.026 |
| 76.00 | -29.36 | -0.80 | 0.00 | -52.90 | 0.00 | 52.90 | 3811.28 | 1905.64 | 5758.96 | 2858.99 | 0.92 | -0.12 | 0.00 | 0.026 |
| 78.00 | -28.81 | -0.80 | 0.00 | -51.31 | 0.00 | 51.31 | 3773.96 | 1886.98 | 5646.05 | 2802.94 | 0.97 | -0.12 | 0.00 | 0.026 |
| 80.00 | -28.28 | -0.80 | 0.00 | -49.71 | 0.00 | 49.71 | 3736.63 | 1868.31 | 5534.25 | 2747.44 | 1.02 | -0.13 | 0.00 | 0.026 |
| 82.00 | -27.74 | -0.80 | 0.00 | -48.12 | 0.00 | 48.12 | 3699.30 | 1849.65 | 5423.58 | 2692.49 | 1.07 | -0.13 | 0.00 | 0.025 |
| 84.00 | -27.21 | -0.80 | 0.00 | -46.52 | 0.00 | 46.52 | 3661.97 | 1830.99 | 5314.02 | 2638.10 | 1.13 | -0.13 | 0.00 | 0.025 |
| 86.00 | -26.69 | -0.80 | 0.00 | -44.92 | 0.00 | 44.92 | 3624.64 | 1812.32 | 5205.58 | 2584.27 | 1.18 | -0.14 | 0.00 | 0.025 |
| 88.00 | -26.17 | -0.80 | 0.00 | -43.33 | 0.00 | 43.33 | 3587.31 | 1793.66 | 5098.25 | 2530.99 | 1.24 | -0.14 | 0.00 | 0.024 |

Calculated Forces

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | | | | | | | | | | | | |
|--------|--------|-------|------|--------|------|-------|---------|---------|---------|---------|------|-------|-------|
| 90.00 | -25.65 | -0.80 | 0.00 | -41.73 | 0.00 | 41.73 | 3549.99 | 1774.99 | 4992.05 | 2478.26 | 1.30 | -0.14 | 0.024 |
| 92.00 | -25.14 | -0.80 | 0.00 | -40.13 | 0.00 | 40.13 | 3512.66 | 1756.33 | 4886.96 | 2426.09 | 1.36 | -0.15 | 0.024 |
| 94.00 | -24.63 | -0.80 | 0.00 | -38.53 | 0.00 | 38.53 | 3475.33 | 1737.66 | 4782.99 | 2374.48 | 1.42 | -0.15 | 0.023 |
| 94.25 | -24.57 | -0.80 | 0.00 | -38.33 | 0.00 | 38.33 | 3470.66 | 1735.33 | 4770.08 | 2368.07 | 1.43 | -0.15 | 0.023 |
| 96.00 | -23.96 | -0.80 | 0.00 | -36.93 | 0.00 | 36.93 | 3438.00 | 1719.00 | 4680.14 | 2323.42 | 1.48 | -0.15 | 0.023 |
| 98.00 | -23.26 | -0.80 | 0.00 | -35.33 | 0.00 | 35.33 | 3400.67 | 1700.34 | 4578.41 | 2272.92 | 1.55 | -0.16 | 0.022 |
| 99.67 | -22.69 | -0.80 | 0.00 | -34.00 | 0.00 | 34.00 | 1458.24 | 729.12 | 1997.89 | 991.83 | 1.60 | -0.16 | 0.050 |
| 100.00 | -22.64 | -0.80 | 0.00 | -33.74 | 0.00 | 33.74 | 1456.89 | 728.44 | 1992.39 | 989.11 | 1.61 | -0.16 | 0.050 |
| 102.00 | -22.33 | -0.80 | 0.00 | -32.14 | 0.00 | 32.14 | 1448.65 | 724.33 | 1959.44 | 972.75 | 1.68 | -0.16 | 0.048 |
| 104.00 | -22.02 | -0.80 | 0.00 | -30.54 | 0.00 | 30.54 | 1440.25 | 720.13 | 1926.51 | 956.40 | 1.75 | -0.17 | 0.047 |
| 106.00 | -21.71 | -0.80 | 0.00 | -28.93 | 0.00 | 28.93 | 1431.68 | 715.84 | 1893.60 | 940.06 | 1.82 | -0.18 | 0.046 |
| 107.00 | -18.15 | -0.79 | 0.00 | -28.13 | 0.00 | 28.13 | 1427.33 | 713.67 | 1877.17 | 931.90 | 1.86 | -0.18 | 0.043 |
| 108.00 | -18.02 | -0.79 | 0.00 | -27.34 | 0.00 | 27.34 | 1422.94 | 711.47 | 1860.74 | 923.75 | 1.90 | -0.18 | 0.042 |
| 110.00 | -17.77 | -0.79 | 0.00 | -25.75 | 0.00 | 25.75 | 1414.04 | 707.02 | 1827.92 | 907.46 | 1.98 | -0.19 | 0.041 |
| 112.00 | -17.52 | -0.79 | 0.00 | -24.17 | 0.00 | 24.17 | 1404.97 | 702.48 | 1795.15 | 891.19 | 2.05 | -0.19 | 0.040 |
| 114.00 | -17.28 | -0.80 | 0.00 | -22.58 | 0.00 | 22.58 | 1395.73 | 697.86 | 1762.45 | 874.95 | 2.14 | -0.20 | 0.038 |
| 116.00 | -17.03 | -0.80 | 0.00 | -20.98 | 0.00 | 20.98 | 1386.32 | 693.16 | 1729.81 | 858.75 | 2.22 | -0.20 | 0.037 |
| 117.00 | -12.64 | -0.78 | 0.00 | -20.19 | 0.00 | 20.19 | 1381.56 | 690.78 | 1713.52 | 850.66 | 2.26 | -0.20 | 0.033 |
| 118.00 | -12.52 | -0.78 | 0.00 | -19.41 | 0.00 | 19.41 | 1376.75 | 688.37 | 1697.25 | 842.59 | 2.31 | -0.21 | 0.032 |
| 120.00 | -12.29 | -0.78 | 0.00 | -17.85 | 0.00 | 17.85 | 1367.01 | 683.50 | 1664.77 | 826.46 | 2.39 | -0.21 | 0.031 |
| 120.00 | -12.29 | -0.78 | 0.00 | -17.85 | 0.00 | 17.85 | 1091.99 | 545.99 | 1332.66 | 661.59 | 2.39 | -0.21 | 0.038 |
| 122.00 | -12.08 | -0.78 | 0.00 | -16.28 | 0.00 | 16.28 | 1085.46 | 542.73 | 1308.44 | 649.56 | 2.48 | -0.22 | 0.036 |
| 124.00 | -11.88 | -0.78 | 0.00 | -14.72 | 0.00 | 14.72 | 1078.76 | 539.38 | 1284.21 | 637.54 | 2.57 | -0.22 | 0.034 |
| 126.00 | -11.68 | -0.78 | 0.00 | -13.17 | 0.00 | 13.17 | 1071.89 | 535.95 | 1259.98 | 625.51 | 2.67 | -0.22 | 0.032 |
| 127.00 | -8.74 | -0.70 | 0.00 | -12.39 | 0.00 | 12.39 | 1068.40 | 534.20 | 1247.88 | 619.50 | 2.71 | -0.23 | 0.028 |
| 128.00 | -8.65 | -0.70 | 0.00 | -11.69 | 0.00 | 11.69 | 1064.86 | 532.43 | 1235.77 | 613.49 | 2.76 | -0.23 | 0.027 |
| 130.00 | -8.45 | -0.70 | 0.00 | -10.28 | 0.00 | 10.28 | 1057.66 | 528.83 | 1211.58 | 601.48 | 2.86 | -0.23 | 0.025 |
| 132.00 | -8.25 | -0.69 | 0.00 | -8.89 | 0.00 | 8.89 | 1050.29 | 525.14 | 1187.41 | 589.48 | 2.96 | -0.24 | 0.023 |
| 134.00 | -8.06 | -0.69 | 0.00 | -7.50 | 0.00 | 7.50 | 1042.75 | 521.38 | 1163.27 | 577.50 | 3.06 | -0.24 | 0.021 |
| 136.00 | -7.87 | -0.68 | 0.00 | -6.13 | 0.00 | 6.13 | 1035.05 | 517.52 | 1139.18 | 565.54 | 3.16 | -0.24 | 0.018 |
| 137.00 | -5.74 | -0.56 | 0.00 | -5.45 | 0.00 | 5.45 | 1031.13 | 515.57 | 1127.15 | 559.57 | 3.21 | -0.24 | 0.015 |
| 138.00 | -5.66 | -0.55 | 0.00 | -4.89 | 0.00 | 4.89 | 1027.18 | 513.59 | 1115.14 | 553.60 | 3.26 | -0.24 | 0.014 |
| 140.00 | -5.51 | -0.54 | 0.00 | -3.78 | 0.00 | 3.78 | 1019.14 | 509.57 | 1091.15 | 541.69 | 3.36 | -0.25 | 0.012 |
| 142.00 | -5.35 | -0.54 | 0.00 | -2.69 | 0.00 | 2.69 | 1010.93 | 505.47 | 1067.22 | 529.81 | 3.46 | -0.25 | 0.010 |
| 144.00 | -5.20 | -0.52 | 0.00 | -1.62 | 0.00 | 1.62 | 1002.56 | 501.28 | 1043.37 | 517.97 | 3.57 | -0.25 | 0.008 |
| 146.00 | -5.04 | -0.51 | 0.00 | -0.57 | 0.00 | 0.57 | 994.02 | 497.01 | 1019.60 | 506.17 | 3.67 | -0.25 | 0.006 |
| 147.00 | -0.22 | -0.02 | 0.00 | -0.06 | 0.00 | 0.06 | 989.69 | 494.84 | 1007.74 | 500.29 | 3.72 | -0.25 | 0.000 |
| 148.00 | -0.16 | -0.02 | 0.00 | -0.04 | 0.00 | 0.04 | 985.31 | 492.66 | 995.91 | 494.41 | 3.78 | -0.25 | 0.000 |
| 150.00 | 0.00 | -0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 976.44 | 488.22 | 972.32 | 482.70 | 3.88 | -0.25 | 0.000 |

Seismic Segment Forces (Factored)

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |

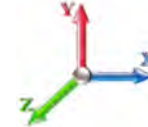


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Load Case: 0.9D + 1.0E

Iterations 24

| | | | |
|----------------------------------|--------------------------------------|-----------------|---------------------------------------|
| Gust Response Factor 1.10 | Sds 0.11 | Ss 0.16 | |
| Dead Load Factor 0.90 | Seismic Load Factor 1.00 | Sd1 0.04 | S1 0.06 |
| Wind Load Factor 0.00 | Structure Frequency (f1) 0.30 | SA 0.01 | Seismic Importance Factor 1.00 |



| Top Elev (ft) | Description | Wz (lb) | a | b | c | Lateral Fs (lb) | R: 1.50 |
|---------------|-----------------|---------|------|-------|------|-----------------|---------|
| 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2.00 | | 535.36 | 0.00 | 0.01 | 0.01 | 4.11 | |
| 4.00 | | 531.45 | 0.00 | 0.03 | 0.01 | 6.41 | |
| 6.00 | | 527.55 | 0.00 | 0.04 | 0.02 | 7.90 | |
| 8.00 | | 523.64 | 0.01 | 0.05 | 0.03 | 8.91 | |
| 10.00 | | 519.73 | 0.01 | 0.05 | 0.03 | 9.61 | |
| 12.00 | | 515.82 | 0.01 | 0.06 | 0.03 | 10.10 | |
| 14.00 | | 511.91 | 0.02 | 0.06 | 0.04 | 10.43 | |
| 16.00 | | 508.01 | 0.02 | 0.06 | 0.04 | 10.66 | |
| 18.00 | | 504.10 | 0.03 | 0.07 | 0.04 | 10.80 | |
| 20.00 | | 500.19 | 0.03 | 0.07 | 0.04 | 10.90 | |
| 22.00 | | 496.28 | 0.04 | 0.07 | 0.04 | 10.96 | |
| 24.00 | | 492.38 | 0.05 | 0.07 | 0.04 | 10.99 | |
| 26.00 | | 488.47 | 0.06 | 0.07 | 0.04 | 11.01 | |
| 28.00 | | 484.56 | 0.07 | 0.07 | 0.04 | 11.03 | |
| 30.00 | | 480.65 | 0.08 | 0.07 | 0.04 | 11.05 | |
| 32.00 | | 476.74 | 0.09 | 0.07 | 0.04 | 11.07 | |
| 34.00 | | 472.84 | 0.10 | 0.07 | 0.04 | 11.09 | |
| 36.00 | | 468.93 | 0.11 | 0.07 | 0.04 | 11.12 | |
| 38.00 | | 465.02 | 0.12 | 0.07 | 0.03 | 11.16 | |
| 40.00 | | 461.11 | 0.13 | 0.07 | 0.03 | 11.19 | |
| 42.00 | | 457.21 | 0.15 | 0.07 | 0.03 | 11.21 | |
| 44.00 | | 453.30 | 0.16 | 0.07 | 0.03 | 11.23 | |
| 46.00 | | 449.39 | 0.18 | 0.07 | 0.03 | 11.22 | |
| 46.67 | Bot - Section 2 | 148.93 | 0.18 | 0.06 | 0.03 | 3.73 | |
| 48.00 | | 561.97 | 0.19 | 0.06 | 0.02 | 14.11 | |
| 50.00 | | 836.86 | 0.21 | 0.06 | 0.02 | 21.06 | |
| 52.00 | | 829.53 | 0.23 | 0.06 | 0.02 | 20.81 | |
| 53.00 | Top - Section 1 | 412.02 | 0.24 | 0.06 | 0.02 | 10.30 | |
| 54.00 | | 193.79 | 0.24 | 0.06 | 0.02 | 4.81 | |
| 56.00 | | 385.02 | 0.26 | 0.05 | 0.02 | 9.39 | |
| 58.00 | | 381.60 | 0.28 | 0.05 | 0.01 | 9.03 | |
| 60.00 | | 378.18 | 0.30 | 0.04 | 0.01 | 8.55 | |
| 62.00 | | 374.77 | 0.32 | 0.04 | 0.01 | 7.94 | |
| 64.00 | | 371.35 | 0.34 | 0.03 | 0.01 | 7.16 | |
| 66.00 | | 367.93 | 0.37 | 0.03 | 0.01 | 6.20 | |
| 68.00 | | 364.51 | 0.39 | 0.02 | 0.01 | 5.06 | |
| 70.00 | | 361.09 | 0.41 | 0.01 | 0.01 | 3.73 | |
| 72.00 | | 357.67 | 0.44 | 0.01 | 0.01 | 2.26 | |
| 74.00 | | 354.25 | 0.46 | 0.00 | 0.01 | 0.67 | |
| 76.00 | | 350.83 | 0.49 | -0.01 | 0.01 | -0.97 | |
| 78.00 | | 347.41 | 0.51 | -0.02 | 0.01 | -2.58 | |
| 80.00 | | 343.99 | 0.54 | -0.03 | 0.01 | -4.10 | |
| 82.00 | | 340.57 | 0.56 | -0.04 | 0.01 | -5.46 | |
| 84.00 | | 337.15 | 0.59 | -0.05 | 0.01 | -6.63 | |
| 86.00 | | 333.73 | 0.62 | -0.06 | 0.02 | -7.58 | |

Seismic Segment Forces (Factored)

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | | | | | |
|--------|-----------------|-----------------|------|-------|------|-----------------------------|
| 88.00 | | 330.31 | 0.65 | -0.07 | 0.02 | -8.31 |
| 90.00 | | 326.89 | 0.68 | -0.08 | 0.03 | -8.83 |
| 92.00 | | 323.48 | 0.71 | -0.09 | 0.03 | -9.14 |
| 94.00 | | 320.06 | 0.74 | -0.10 | 0.04 | -9.27 |
| 94.25 | Bot - Section 3 | 39.77 | 0.75 | -0.10 | 0.04 | -1.15 |
| 96.00 | | 418.03 | 0.77 | -0.11 | 0.05 | -12.18 |
| 98.00 | | 472.94 | 0.81 | -0.11 | 0.06 | -13.63 |
| 99.67 | Top - Section 2 | 390.20 | 0.83 | -0.12 | 0.06 | -10.99 |
| 100.00 | | 26.22 | 0.84 | -0.12 | 0.07 | -0.73 |
| 102.00 | | 156.31 | 0.87 | -0.12 | 0.08 | -4.18 |
| 104.00 | | 154.60 | 0.91 | -0.12 | 0.09 | -3.87 |
| 106.00 | | 152.89 | 0.94 | -0.12 | 0.11 | -3.50 |
| 107.00 | Appurtenance(s) | 2912.6 | 0.96 | -0.12 | 0.11 | -63.12 |
| 108.00 | | 75.37 | 0.98 | -0.11 | 0.12 | -1.53 |
| 110.00 | | 149.47 | 1.02 | -0.11 | 0.14 | -2.59 |
| 112.00 | | 147.76 | 1.05 | -0.09 | 0.16 | -2.06 |
| 114.00 | | 146.05 | 1.09 | -0.07 | 0.18 | -1.48 |
| 116.00 | | 144.34 | 1.13 | -0.05 | 0.21 | -0.85 |
| 117.00 | Appurtenance(s) | 3629.3 | 1.15 | -0.04 | 0.22 | -13.14 |
| 118.00 | | 71.10 | 1.17 | -0.02 | 0.23 | -0.09 |
| 120.00 | Top - Section 3 | 140.92 | 1.21 | 0.01 | 0.26 | 0.54 |
| 122.00 | | 119.45 | 1.25 | 0.06 | 0.29 | 1.12 |
| 124.00 | | 117.98 | 1.29 | 0.11 | 0.33 | 1.80 |
| 126.00 | | 116.52 | 1.33 | 0.17 | 0.37 | 2.53 |
| 127.00 | Appurtenance(s) | 2416.8 | 1.35 | 0.20 | 0.39 | 60.50 |
| 128.00 | | 57.34 | 1.38 | 0.24 | 0.41 | 1.63 |
| 130.00 | | 113.59 | 1.42 | 0.32 | 0.45 | 4.06 |
| 132.00 | | 112.12 | 1.46 | 0.42 | 0.50 | 4.88 |
| 134.00 | | 110.66 | 1.51 | 0.52 | 0.55 | 5.72 |
| 136.00 | | 109.19 | 1.55 | 0.64 | 0.61 | 6.59 |
| 137.00 | Appurtenance(s) | 1746.5 | 1.58 | 0.71 | 0.64 | 113.22 |
| 138.00 | | 53.68 | 1.60 | 0.78 | 0.67 | 3.73 |
| 140.00 | | 106.26 | 1.65 | 0.93 | 0.73 | 8.40 |
| 142.00 | | 104.79 | 1.69 | 1.10 | 0.81 | 9.34 |
| 144.00 | | 103.33 | 1.74 | 1.29 | 0.88 | 10.30 |
| 146.00 | | 101.86 | 1.79 | 1.50 | 0.96 | 11.28 |
| 147.00 | Appurtenance(s) | 4007.1 | 1.82 | 1.61 | 1.00 | 466.55 |
| 148.00 | | 50.02 | 1.84 | 1.73 | 1.05 | 6.12 |
| 150.00 | Appurtenance(s) | 133.93 | 1.89 | 1.98 | 1.14 | 17.99 |
| | Totals: | 40,267.8 | | | | 907.3 |
| | | | | | | Total Wind: 46,649.1 |

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

Calculated Forces

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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Load Case: 0.9D + 1.0E

Iterations 24

Gust Response Factor 1.10

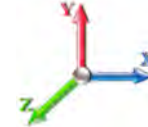
Sds 0.11

Ss 0.16

Dead Load Factor 0.90 **Seismic Load Factor** 1.00 **Sd1** 0.04

S1 0.06

Wind Load Factor 0.00 **Structure Frequency (f1)** 0.30 **SA** 0.01 **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 | -41.95 | -1.10 | 0.00 | -123.49 | 0.00 | 123.49 | 5817.07 | 2908.54 | 11858.0 | 5886.84 | 0.00 | 0.00 | 0.00 | 0.028 |
| 2.00 | -41.47 | -1.10 | 0.00 | -121.28 | 0.00 | 121.28 | 5786.20 | 2893.10 | 11708.4 | 5812.58 | 0.00 | 0.00 | 0.00 | 0.028 |
| 4.00 | -40.94 | -1.10 | 0.00 | -119.07 | 0.00 | 119.07 | 5755.15 | 2877.58 | 11559.4 | 5738.61 | 0.00 | -0.01 | 0.00 | 0.028 |
| 6.00 | -40.38 | -1.09 | 0.00 | -116.87 | 0.00 | 116.87 | 5723.94 | 2861.97 | 11411.0 | 5664.94 | 0.01 | -0.01 | 0.00 | 0.028 |
| 8.00 | -39.81 | -1.09 | 0.00 | -114.69 | 0.00 | 114.69 | 5692.56 | 2846.28 | 11263.2 | 5591.57 | 0.01 | -0.01 | 0.00 | 0.028 |
| 10.00 | -39.25 | -1.08 | 0.00 | -112.52 | 0.00 | 112.52 | 5652.47 | 2826.24 | 11099.3 | 5510.17 | 0.02 | -0.01 | 0.00 | 0.027 |
| 12.00 | -38.69 | -1.07 | 0.00 | -110.36 | 0.00 | 110.36 | 5609.81 | 2804.91 | 10931.5 | 5426.88 | 0.02 | -0.02 | 0.00 | 0.027 |
| 14.00 | -38.14 | -1.06 | 0.00 | -108.22 | 0.00 | 108.22 | 5567.15 | 2783.57 | 10765.0 | 5344.23 | 0.03 | -0.02 | 0.00 | 0.027 |
| 16.00 | -37.59 | -1.05 | 0.00 | -106.10 | 0.00 | 106.10 | 5524.49 | 2762.24 | 10599.8 | 5262.21 | 0.04 | -0.02 | 0.00 | 0.027 |
| 18.00 | -37.04 | -1.04 | 0.00 | -104.00 | 0.00 | 104.00 | 5481.83 | 2740.91 | 10435.9 | 5180.82 | 0.05 | -0.03 | 0.00 | 0.027 |
| 20.00 | -36.50 | -1.03 | 0.00 | -101.91 | 0.00 | 101.91 | 5439.17 | 2719.58 | 10273.2 | 5100.07 | 0.06 | -0.03 | 0.00 | 0.027 |
| 22.00 | -35.96 | -1.02 | 0.00 | -99.85 | 0.00 | 99.85 | 5396.51 | 2698.25 | 10111.8 | 5019.95 | 0.07 | -0.03 | 0.00 | 0.027 |
| 24.00 | -35.42 | -1.01 | 0.00 | -97.80 | 0.00 | 97.80 | 5353.84 | 2676.92 | 9951.76 | 4940.47 | 0.09 | -0.03 | 0.00 | 0.026 |
| 26.00 | -34.89 | -1.00 | 0.00 | -95.77 | 0.00 | 95.77 | 5311.18 | 2655.59 | 9792.93 | 4861.62 | 0.10 | -0.04 | 0.00 | 0.026 |
| 28.00 | -34.36 | -1.00 | 0.00 | -93.76 | 0.00 | 93.76 | 5268.52 | 2634.26 | 9635.38 | 4783.41 | 0.12 | -0.04 | 0.00 | 0.026 |
| 30.00 | -33.83 | -0.99 | 0.00 | -91.77 | 0.00 | 91.77 | 5225.86 | 2612.93 | 9479.11 | 4705.83 | 0.14 | -0.04 | 0.00 | 0.026 |
| 32.00 | -33.31 | -0.98 | 0.00 | -89.80 | 0.00 | 89.80 | 5183.20 | 2591.60 | 9324.12 | 4628.89 | 0.16 | -0.05 | 0.00 | 0.026 |
| 34.00 | -32.79 | -0.97 | 0.00 | -87.85 | 0.00 | 87.85 | 5140.54 | 2570.27 | 9170.40 | 4552.57 | 0.18 | -0.05 | 0.00 | 0.026 |
| 36.00 | -32.27 | -0.96 | 0.00 | -85.91 | 0.00 | 85.91 | 5097.88 | 2548.94 | 9017.97 | 4476.90 | 0.20 | -0.05 | 0.00 | 0.026 |
| 38.00 | -31.76 | -0.95 | 0.00 | -84.00 | 0.00 | 84.00 | 5055.22 | 2527.61 | 8866.81 | 4401.86 | 0.22 | -0.06 | 0.00 | 0.025 |
| 40.00 | -31.25 | -0.94 | 0.00 | -82.11 | 0.00 | 82.11 | 5012.56 | 2506.28 | 8716.92 | 4327.45 | 0.24 | -0.06 | 0.00 | 0.025 |
| 42.00 | -30.75 | -0.93 | 0.00 | -80.24 | 0.00 | 80.24 | 4969.90 | 2484.95 | 8568.32 | 4253.68 | 0.27 | -0.06 | 0.00 | 0.025 |
| 44.00 | -30.25 | -0.92 | 0.00 | -78.38 | 0.00 | 78.38 | 4927.23 | 2463.62 | 8420.99 | 4180.54 | 0.30 | -0.06 | 0.00 | 0.025 |
| 46.00 | -29.75 | -0.91 | 0.00 | -76.55 | 0.00 | 76.55 | 4884.57 | 2442.29 | 8274.95 | 4108.03 | 0.32 | -0.07 | 0.00 | 0.025 |
| 46.67 | -29.58 | -0.90 | 0.00 | -75.95 | 0.00 | 75.95 | 4870.35 | 2435.18 | 8226.55 | 4084.00 | 0.33 | -0.07 | 0.00 | 0.025 |
| 48.00 | -29.01 | -0.89 | 0.00 | -74.75 | 0.00 | 74.75 | 4841.91 | 2420.96 | 8130.17 | 4036.16 | 0.35 | -0.07 | 0.00 | 0.025 |
| 50.00 | -28.17 | -0.87 | 0.00 | -72.97 | 0.00 | 72.97 | 4799.25 | 2399.63 | 7986.68 | 3964.92 | 0.38 | -0.07 | 0.00 | 0.024 |
| 52.00 | -27.33 | -0.85 | 0.00 | -71.23 | 0.00 | 71.23 | 4756.59 | 2378.30 | 7844.47 | 3894.32 | 0.42 | -0.08 | 0.00 | 0.024 |
| 53.00 | -26.91 | -0.84 | 0.00 | -70.39 | 0.00 | 70.39 | 4740.56 | 2120.28 | 7137.82 | 3543.51 | 0.43 | -0.08 | 0.00 | 0.026 |
| 54.00 | -26.69 | -0.83 | 0.00 | -69.55 | 0.00 | 69.55 | 4721.90 | 2110.95 | 7074.79 | 3512.22 | 0.45 | -0.08 | 0.00 | 0.026 |
| 56.00 | -26.25 | -0.82 | 0.00 | -67.88 | 0.00 | 67.88 | 4184.57 | 2092.28 | 6949.58 | 3450.06 | 0.48 | -0.08 | 0.00 | 0.026 |
| 58.00 | -25.81 | -0.82 | 0.00 | -66.23 | 0.00 | 66.23 | 4147.24 | 2073.62 | 6825.49 | 3388.46 | 0.52 | -0.09 | 0.00 | 0.026 |
| 60.00 | -25.38 | -0.81 | 0.00 | -64.60 | 0.00 | 64.60 | 4109.91 | 2054.96 | 6702.51 | 3327.41 | 0.56 | -0.09 | 0.00 | 0.026 |
| 62.00 | -24.95 | -0.80 | 0.00 | -62.98 | 0.00 | 62.98 | 4072.58 | 2036.29 | 6580.65 | 3266.91 | 0.59 | -0.09 | 0.00 | 0.025 |
| 64.00 | -24.52 | -0.79 | 0.00 | -61.38 | 0.00 | 61.38 | 4035.25 | 2017.63 | 6459.92 | 3206.97 | 0.63 | -0.10 | 0.00 | 0.025 |
| 66.00 | -24.09 | -0.79 | 0.00 | -59.79 | 0.00 | 59.79 | 3997.93 | 1998.96 | 6340.29 | 3147.59 | 0.67 | -0.10 | 0.00 | 0.025 |
| 68.00 | -23.67 | -0.79 | 0.00 | -58.21 | 0.00 | 58.21 | 3960.60 | 1980.30 | 6221.79 | 3088.76 | 0.72 | -0.10 | 0.00 | 0.025 |
| 70.00 | -23.25 | -0.78 | 0.00 | -56.64 | 0.00 | 56.64 | 3923.27 | 1961.63 | 6104.41 | 3030.48 | 0.76 | -0.11 | 0.00 | 0.025 |
| 72.00 | -22.84 | -0.78 | 0.00 | -55.08 | 0.00 | 55.08 | 3885.94 | 1942.97 | 5988.14 | 2972.76 | 0.81 | -0.11 | 0.00 | 0.024 |
| 74.00 | -22.43 | -0.78 | 0.00 | -53.52 | 0.00 | 53.52 | 3848.61 | 1924.31 | 5872.99 | 2915.60 | 0.85 | -0.11 | 0.00 | 0.024 |
| 76.00 | -22.02 | -0.78 | 0.00 | -51.96 | 0.00 | 51.96 | 3811.28 | 1905.64 | 5758.96 | 2858.99 | 0.90 | -0.12 | 0.00 | 0.024 |
| 78.00 | -21.61 | -0.78 | 0.00 | -50.40 | 0.00 | 50.40 | 3773.96 | 1886.98 | 5646.05 | 2802.94 | 0.95 | -0.12 | 0.00 | 0.024 |
| 80.00 | -21.21 | -0.78 | 0.00 | -48.84 | 0.00 | 48.84 | 3736.63 | 1868.31 | 5534.25 | 2747.44 | 1.00 | -0.12 | 0.00 | 0.023 |
| 82.00 | -20.81 | -0.78 | 0.00 | -47.27 | 0.00 | 47.27 | 3699.30 | 1849.65 | 5423.58 | 2692.49 | 1.05 | -0.13 | 0.00 | 0.023 |
| 84.00 | -20.41 | -0.78 | 0.00 | -45.71 | 0.00 | 45.71 | 3661.97 | 1830.99 | 5314.02 | 2638.10 | 1.11 | -0.13 | 0.00 | 0.023 |
| 86.00 | -20.02 | -0.78 | 0.00 | -44.15 | 0.00 | 44.15 | 3624.64 | 1812.32 | 5205.58 | 2584.27 | 1.16 | -0.13 | 0.00 | 0.023 |
| 88.00 | -19.63 | -0.78 | 0.00 | -42.58 | 0.00 | 42.58 | 3587.31 | 1793.66 | 5098.25 | 2530.99 | 1.22 | -0.14 | 0.00 | 0.022 |

Calculated Forces

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | | | | | | | | | | | | |
|--------|--------|-------|------|--------|------|-------|---------|---------|---------|---------|------|-------|-------|
| 90.00 | -19.24 | -0.78 | 0.00 | -41.02 | 0.00 | 41.02 | 3549.99 | 1774.99 | 4992.05 | 2478.26 | 1.28 | -0.14 | 0.022 |
| 92.00 | -18.85 | -0.78 | 0.00 | -39.45 | 0.00 | 39.45 | 3512.66 | 1756.33 | 4886.96 | 2426.09 | 1.34 | -0.14 | 0.022 |
| 94.00 | -18.47 | -0.78 | 0.00 | -37.89 | 0.00 | 37.89 | 3475.33 | 1737.66 | 4782.99 | 2374.48 | 1.40 | -0.15 | 0.021 |
| 94.25 | -18.42 | -0.78 | 0.00 | -37.69 | 0.00 | 37.69 | 3470.66 | 1735.33 | 4770.08 | 2368.07 | 1.41 | -0.15 | 0.021 |
| 96.00 | -17.97 | -0.78 | 0.00 | -36.32 | 0.00 | 36.32 | 3438.00 | 1719.00 | 4680.14 | 2323.42 | 1.46 | -0.15 | 0.021 |
| 98.00 | -17.45 | -0.78 | 0.00 | -34.76 | 0.00 | 34.76 | 3400.67 | 1700.34 | 4578.41 | 2272.92 | 1.52 | -0.15 | 0.020 |
| 99.67 | -17.02 | -0.78 | 0.00 | -33.45 | 0.00 | 33.45 | 1458.24 | 729.12 | 1997.89 | 991.83 | 1.58 | -0.16 | 0.045 |
| 100.00 | -16.98 | -0.78 | 0.00 | -33.19 | 0.00 | 33.19 | 1456.89 | 728.44 | 1992.39 | 989.11 | 1.59 | -0.16 | 0.045 |
| 102.00 | -16.74 | -0.78 | 0.00 | -31.63 | 0.00 | 31.63 | 1448.65 | 724.33 | 1959.44 | 972.75 | 1.65 | -0.16 | 0.044 |
| 104.00 | -16.51 | -0.78 | 0.00 | -30.06 | 0.00 | 30.06 | 1440.25 | 720.13 | 1926.51 | 956.40 | 1.72 | -0.17 | 0.043 |
| 106.00 | -16.28 | -0.78 | 0.00 | -28.49 | 0.00 | 28.49 | 1431.68 | 715.84 | 1893.60 | 940.06 | 1.79 | -0.17 | 0.042 |
| 107.00 | -13.61 | -0.78 | 0.00 | -27.71 | 0.00 | 27.71 | 1427.33 | 713.67 | 1877.17 | 931.90 | 1.83 | -0.18 | 0.039 |
| 108.00 | -13.52 | -0.78 | 0.00 | -26.93 | 0.00 | 26.93 | 1422.94 | 711.47 | 1860.74 | 923.75 | 1.87 | -0.18 | 0.039 |
| 110.00 | -13.33 | -0.78 | 0.00 | -25.37 | 0.00 | 25.37 | 1414.04 | 707.02 | 1827.92 | 907.46 | 1.94 | -0.18 | 0.037 |
| 112.00 | -13.14 | -0.78 | 0.00 | -23.82 | 0.00 | 23.82 | 1404.97 | 702.48 | 1795.15 | 891.19 | 2.02 | -0.19 | 0.036 |
| 114.00 | -12.96 | -0.78 | 0.00 | -22.26 | 0.00 | 22.26 | 1395.73 | 697.86 | 1762.45 | 874.95 | 2.10 | -0.19 | 0.035 |
| 116.00 | -12.77 | -0.78 | 0.00 | -20.70 | 0.00 | 20.70 | 1386.32 | 693.16 | 1729.81 | 858.75 | 2.18 | -0.20 | 0.033 |
| 117.00 | -9.48 | -0.77 | 0.00 | -19.92 | 0.00 | 19.92 | 1381.56 | 690.78 | 1713.52 | 850.66 | 2.23 | -0.20 | 0.030 |
| 118.00 | -9.39 | -0.77 | 0.00 | -19.15 | 0.00 | 19.15 | 1376.75 | 688.37 | 1697.25 | 842.59 | 2.27 | -0.20 | 0.030 |
| 120.00 | -9.22 | -0.77 | 0.00 | -17.61 | 0.00 | 17.61 | 1367.01 | 683.50 | 1664.77 | 826.46 | 2.35 | -0.21 | 0.028 |
| 120.00 | -9.22 | -0.77 | 0.00 | -17.61 | 0.00 | 17.61 | 1091.99 | 545.99 | 1332.66 | 661.59 | 2.35 | -0.21 | 0.035 |
| 122.00 | -9.06 | -0.77 | 0.00 | -16.07 | 0.00 | 16.07 | 1085.46 | 542.73 | 1308.44 | 649.56 | 2.44 | -0.21 | 0.033 |
| 124.00 | -8.91 | -0.77 | 0.00 | -14.54 | 0.00 | 14.54 | 1078.76 | 539.38 | 1284.21 | 637.54 | 2.53 | -0.22 | 0.031 |
| 126.00 | -8.76 | -0.76 | 0.00 | -13.01 | 0.00 | 13.01 | 1071.89 | 535.95 | 1259.98 | 625.51 | 2.62 | -0.22 | 0.029 |
| 127.00 | -6.56 | -0.69 | 0.00 | -12.24 | 0.00 | 12.24 | 1068.40 | 534.20 | 1247.88 | 619.50 | 2.67 | -0.22 | 0.026 |
| 128.00 | -6.48 | -0.69 | 0.00 | -11.55 | 0.00 | 11.55 | 1064.86 | 532.43 | 1235.77 | 613.49 | 2.72 | -0.22 | 0.025 |
| 130.00 | -6.34 | -0.69 | 0.00 | -10.16 | 0.00 | 10.16 | 1057.66 | 528.83 | 1211.58 | 601.48 | 2.81 | -0.23 | 0.023 |
| 132.00 | -6.19 | -0.68 | 0.00 | -8.78 | 0.00 | 8.78 | 1050.29 | 525.14 | 1187.41 | 589.48 | 2.91 | -0.23 | 0.021 |
| 134.00 | -6.04 | -0.68 | 0.00 | -7.41 | 0.00 | 7.41 | 1042.75 | 521.38 | 1163.27 | 577.50 | 3.01 | -0.23 | 0.019 |
| 136.00 | -5.90 | -0.67 | 0.00 | -6.06 | 0.00 | 6.06 | 1035.05 | 517.52 | 1139.18 | 565.54 | 3.11 | -0.24 | 0.016 |
| 137.00 | -4.31 | -0.55 | 0.00 | -5.39 | 0.00 | 5.39 | 1031.13 | 515.57 | 1127.15 | 559.57 | 3.16 | -0.24 | 0.014 |
| 138.00 | -4.25 | -0.55 | 0.00 | -4.84 | 0.00 | 4.84 | 1027.18 | 513.59 | 1115.14 | 553.60 | 3.21 | -0.24 | 0.013 |
| 140.00 | -4.13 | -0.54 | 0.00 | -3.74 | 0.00 | 3.74 | 1019.14 | 509.57 | 1091.15 | 541.69 | 3.31 | -0.24 | 0.011 |
| 142.00 | -4.01 | -0.53 | 0.00 | -2.66 | 0.00 | 2.66 | 1010.93 | 505.47 | 1067.22 | 529.81 | 3.41 | -0.24 | 0.009 |
| 144.00 | -3.90 | -0.52 | 0.00 | -1.60 | 0.00 | 1.60 | 1002.56 | 501.28 | 1043.37 | 517.97 | 3.51 | -0.24 | 0.007 |
| 146.00 | -3.78 | -0.51 | 0.00 | -0.57 | 0.00 | 0.57 | 994.02 | 497.01 | 1019.60 | 506.17 | 3.61 | -0.24 | 0.005 |
| 147.00 | -0.17 | -0.02 | 0.00 | -0.06 | 0.00 | 0.06 | 989.69 | 494.84 | 1007.74 | 500.29 | 3.66 | -0.24 | 0.000 |
| 148.00 | -0.12 | -0.02 | 0.00 | -0.04 | 0.00 | 0.04 | 985.31 | 492.66 | 995.91 | 494.41 | 3.71 | -0.24 | 0.000 |
| 150.00 | 0.00 | -0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 976.44 | 488.22 | 972.32 | 482.70 | 3.82 | -0.24 | 0.000 |

Wind Loading - Shaft

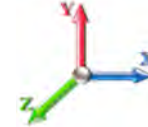
| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 26

Dead Load Factor 1.00
Wind Load Factor 1.00



| Elev (ft) | Description | Kzt | Kz | qz (psf) | qzGh (psf) | C (mph-ft) | Cf | Ice Thick (in) | Tributary (ft) | Aa (sf) | CfAa (sf) | Wind Force X (lb) | Dead Load Ice (lb) | Tot Dead Load (lb) |
|-----------|-----------------|------|------|----------|------------|------------|-------|----------------|----------------|---------|-----------|-------------------|--------------------|--------------------|
| 0.00 | | 1.00 | 0.85 | 7.442 | 8.19 | 235.00 | 0.750 | 0.000 | 0.00 | 0.000 | 0.00 | 0.0 | 0.0 | 0.0 |
| 2.00 | | 1.00 | 0.85 | 7.442 | 8.19 | 233.31 | 0.750 | 0.000 | 2.00 | 8.466 | 6.35 | 52.0 | 0.0 | 535.4 |
| 4.00 | | 1.00 | 0.85 | 7.442 | 8.19 | 231.62 | 0.750 | 0.000 | 2.00 | 8.405 | 6.30 | 51.6 | 0.0 | 531.5 |
| 6.00 | | 1.00 | 0.85 | 7.442 | 8.19 | 229.93 | 0.750 | 0.000 | 2.00 | 8.344 | 6.26 | 51.2 | 0.0 | 527.5 |
| 8.00 | | 1.00 | 0.85 | 7.442 | 8.19 | 228.24 | 0.750 | 0.000 | 2.00 | 8.282 | 6.21 | 50.9 | 0.0 | 523.6 |
| 10.00 | | 1.00 | 0.85 | 7.442 | 8.19 | 226.54 | 0.750 | 0.000 | 2.00 | 8.221 | 6.17 | 50.5 | 0.0 | 519.7 |
| 12.00 | | 1.00 | 0.85 | 7.442 | 8.19 | 224.85 | 0.750 | 0.000 | 2.00 | 8.160 | 6.12 | 50.1 | 0.0 | 515.8 |
| 14.00 | | 1.00 | 0.85 | 7.442 | 8.19 | 223.16 | 0.750 | 0.000 | 2.00 | 8.099 | 6.07 | 49.7 | 0.0 | 511.9 |
| 16.00 | | 1.00 | 0.86 | 7.534 | 8.29 | 222.83 | 0.750 | 0.000 | 2.00 | 8.038 | 6.03 | 50.0 | 0.0 | 508.0 |
| 18.00 | | 1.00 | 0.88 | 7.723 | 8.50 | 223.89 | 0.750 | 0.000 | 2.00 | 7.977 | 5.98 | 50.8 | 0.0 | 504.1 |
| 20.00 | | 1.00 | 0.90 | 7.896 | 8.69 | 224.64 | 0.750 | 0.000 | 2.00 | 7.915 | 5.94 | 51.6 | 0.0 | 500.2 |
| 22.00 | | 1.00 | 0.92 | 8.056 | 8.86 | 225.15 | 0.750 | 0.000 | 2.00 | 7.854 | 5.89 | 52.2 | 0.0 | 496.3 |
| 24.00 | | 1.00 | 0.94 | 8.205 | 9.03 | 225.44 | 0.750 | 0.000 | 2.00 | 7.793 | 5.84 | 52.8 | 0.0 | 492.4 |
| 26.00 | | 1.00 | 0.95 | 8.345 | 9.18 | 225.56 | 0.750 | 0.000 | 2.00 | 7.732 | 5.80 | 53.2 | 0.0 | 488.5 |
| 28.00 | | 1.00 | 0.97 | 8.476 | 9.32 | 225.52 | 0.750 | 0.000 | 2.00 | 7.671 | 5.75 | 53.6 | 0.0 | 484.6 |
| 30.00 | | 1.00 | 0.98 | 8.600 | 9.46 | 225.34 | 0.750 | 0.000 | 2.00 | 7.610 | 5.71 | 54.0 | 0.0 | 480.7 |
| 32.00 | | 1.00 | 1.00 | 8.717 | 9.59 | 225.05 | 0.750 | 0.000 | 2.00 | 7.548 | 5.66 | 54.3 | 0.0 | 476.7 |
| 34.00 | | 1.00 | 1.01 | 8.829 | 9.71 | 224.64 | 0.750 | 0.000 | 2.00 | 7.487 | 5.62 | 54.5 | 0.0 | 472.8 |
| 36.00 | | 1.00 | 1.02 | 8.936 | 9.83 | 224.15 | 0.750 | 0.000 | 2.00 | 7.426 | 5.57 | 54.7 | 0.0 | 468.9 |
| 38.00 | | 1.00 | 1.03 | 9.039 | 9.94 | 223.56 | 0.750 | 0.000 | 2.00 | 7.365 | 5.52 | 54.9 | 0.0 | 465.0 |
| 40.00 | | 1.00 | 1.04 | 9.137 | 10.05 | 222.90 | 0.750 | 0.000 | 2.00 | 7.304 | 5.48 | 55.1 | 0.0 | 461.1 |
| 42.00 | | 1.00 | 1.05 | 9.231 | 10.15 | 222.16 | 0.750 | 0.000 | 2.00 | 7.242 | 5.43 | 55.2 | 0.0 | 457.2 |
| 44.00 | | 1.00 | 1.06 | 9.322 | 10.25 | 221.36 | 0.750 | 0.000 | 2.00 | 7.181 | 5.39 | 55.2 | 0.0 | 453.3 |
| 46.00 | | 1.00 | 1.07 | 9.410 | 10.35 | 220.49 | 0.750 | 0.000 | 2.00 | 7.120 | 5.34 | 55.3 | 0.0 | 449.4 |
| 46.67 | Bot - Section 2 | 1.00 | 1.08 | 9.438 | 10.38 | 220.19 | 0.750 | 0.000 | 0.67 | 2.360 | 1.77 | 18.4 | 0.0 | 148.9 |
| 48.00 | | 1.00 | 1.08 | 9.494 | 10.44 | 219.57 | 0.750 | 0.000 | 1.33 | 4.798 | 3.60 | 37.6 | 0.0 | 562.0 |
| 50.00 | | 1.00 | 1.09 | 9.576 | 10.53 | 218.60 | 0.750 | 0.000 | 2.00 | 7.146 | 5.36 | 56.5 | 0.0 | 836.9 |
| 52.00 | | 1.00 | 1.10 | 9.656 | 10.62 | 217.57 | 0.750 | 0.000 | 2.00 | 7.085 | 5.31 | 56.4 | 0.0 | 829.5 |
| 53.00 | Top - Section 1 | 1.00 | 1.11 | 9.694 | 10.66 | 217.04 | 0.750 | 0.000 | 1.00 | 3.520 | 2.64 | 28.2 | 0.0 | 412.0 |
| 54.00 | | 1.00 | 1.11 | 9.733 | 10.71 | 221.21 | 0.750 | 0.000 | 1.00 | 3.504 | 2.63 | 28.1 | 0.0 | 193.8 |
| 56.00 | | 1.00 | 1.12 | 9.807 | 10.79 | 220.11 | 0.750 | 0.000 | 2.00 | 6.963 | 5.22 | 56.3 | 0.0 | 385.0 |
| 58.00 | | 1.00 | 1.13 | 9.880 | 10.87 | 218.98 | 0.750 | 0.000 | 2.00 | 6.902 | 5.18 | 56.3 | 0.0 | 381.6 |
| 60.00 | | 1.00 | 1.14 | 9.951 | 10.95 | 217.80 | 0.750 | 0.000 | 2.00 | 6.841 | 5.13 | 56.2 | 0.0 | 378.2 |
| 62.00 | | 1.00 | 1.14 | 10.020 | 11.02 | 216.59 | 0.750 | 0.000 | 2.00 | 6.779 | 5.08 | 56.0 | 0.0 | 374.8 |
| 64.00 | | 1.00 | 1.15 | 10.087 | 11.10 | 215.35 | 0.750 | 0.000 | 2.00 | 6.718 | 5.04 | 55.9 | 0.0 | 371.3 |
| 66.00 | | 1.00 | 1.16 | 10.153 | 11.17 | 214.07 | 0.750 | 0.000 | 2.00 | 6.657 | 4.99 | 55.8 | 0.0 | 367.9 |
| 68.00 | | 1.00 | 1.17 | 10.217 | 11.24 | 212.76 | 0.750 | 0.000 | 2.00 | 6.596 | 4.95 | 55.6 | 0.0 | 364.5 |
| 70.00 | | 1.00 | 1.17 | 10.279 | 11.31 | 211.42 | 0.750 | 0.000 | 2.00 | 6.535 | 4.90 | 55.4 | 0.0 | 361.1 |
| 72.00 | | 1.00 | 1.18 | 10.340 | 11.37 | 210.06 | 0.750 | 0.000 | 2.00 | 6.474 | 4.86 | 55.2 | 0.0 | 357.7 |
| 74.00 | | 1.00 | 1.19 | 10.400 | 11.44 | 208.66 | 0.750 | 0.000 | 2.00 | 6.412 | 4.81 | 55.0 | 0.0 | 354.2 |
| 76.00 | | 1.00 | 1.19 | 10.459 | 11.50 | 207.24 | 0.750 | 0.000 | 2.00 | 6.351 | 4.76 | 54.8 | 0.0 | 350.8 |
| 78.00 | | 1.00 | 1.20 | 10.516 | 11.57 | 205.80 | 0.750 | 0.000 | 2.00 | 6.290 | 4.72 | 54.6 | 0.0 | 347.4 |
| 80.00 | | 1.00 | 1.21 | 10.572 | 11.63 | 204.33 | 0.750 | 0.000 | 2.00 | 6.229 | 4.67 | 54.3 | 0.0 | 344.0 |
| 82.00 | | 1.00 | 1.21 | 10.627 | 11.69 | 202.84 | 0.750 | 0.000 | 2.00 | 6.168 | 4.63 | 54.1 | 0.0 | 340.6 |
| 84.00 | | 1.00 | 1.22 | 10.681 | 11.75 | 201.33 | 0.750 | 0.000 | 2.00 | 6.106 | 4.58 | 53.8 | 0.0 | 337.2 |
| 86.00 | | 1.00 | 1.23 | 10.734 | 11.81 | 199.80 | 0.750 | 0.000 | 2.00 | 6.045 | 4.53 | 53.5 | 0.0 | 333.7 |
| 88.00 | | 1.00 | 1.23 | 10.787 | 11.87 | 198.24 | 0.750 | 0.000 | 2.00 | 5.984 | 4.49 | 53.3 | 0.0 | 330.3 |

Wind Loading - Shaft

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | | | | | | | | | | | | | | | |
|------------------------|------|------|--------|-------|--------|-------|-------|---------------|-------|------|------|----------------|-------|--|--|-----------------|
| 90.00 | 1.00 | 1.24 | 10.838 | 11.92 | 196.67 | 0.750 | 0.000 | 2.00 | 5.923 | 4.44 | 53.0 | 0.0 | 326.9 | | | |
| 92.00 | 1.00 | 1.24 | 10.888 | 11.98 | 195.08 | 0.750 | 0.000 | 2.00 | 5.862 | 4.40 | 52.7 | 0.0 | 323.5 | | | |
| 94.00 | 1.00 | 1.25 | 10.937 | 12.03 | 193.47 | 0.750 | 0.000 | 2.00 | 5.801 | 4.35 | 52.3 | 0.0 | 320.1 | | | |
| 94.25 Bot - Section 3 | 1.00 | 1.25 | 10.943 | 12.04 | 193.27 | 0.750 | 0.000 | 0.25 | 0.721 | 0.54 | 6.5 | 0.0 | 39.8 | | | |
| 96.00 | 1.00 | 1.25 | 10.986 | 12.08 | 191.85 | 0.750 | 0.000 | 1.75 | 5.084 | 3.81 | 46.1 | 0.0 | 418.0 | | | |
| 98.00 | 1.00 | 1.26 | 11.034 | 12.14 | 190.20 | 0.750 | 0.000 | 2.00 | 5.753 | 4.31 | 52.4 | 0.0 | 472.9 | | | |
| 99.67 Top - Section 2 | 1.00 | 1.26 | 11.073 | 12.18 | 188.82 | 0.750 | 0.000 | 1.67 | 4.747 | 3.56 | 43.4 | 0.0 | 390.2 | | | |
| 100.00 | 1.00 | 1.27 | 11.081 | 12.19 | 191.05 | 0.750 | 0.000 | 0.33 | 0.944 | 0.71 | 8.6 | 0.0 | 26.2 | | | |
| 102.00 | 1.00 | 1.27 | 11.127 | 12.24 | 189.38 | 0.750 | 0.000 | 2.00 | 5.630 | 4.22 | 51.7 | 0.0 | 156.3 | | | |
| 104.00 | 1.00 | 1.28 | 11.173 | 12.29 | 187.70 | 0.750 | 0.000 | 2.00 | 5.569 | 4.18 | 51.3 | 0.0 | 154.6 | | | |
| 106.00 | 1.00 | 1.28 | 11.218 | 12.34 | 185.99 | 0.750 | 0.000 | 2.00 | 5.508 | 4.13 | 51.0 | 0.0 | 152.9 | | | |
| 107.00 Appurtenance(s) | 1.00 | 1.28 | 11.240 | 12.36 | 185.14 | 0.750 | 0.000 | 1.00 | 2.731 | 2.05 | 25.3 | 0.0 | 75.8 | | | |
| 108.00 | 1.00 | 1.29 | 11.262 | 12.39 | 184.28 | 0.750 | 0.000 | 1.00 | 2.716 | 2.04 | 25.2 | 0.0 | 75.4 | | | |
| 110.00 | 1.00 | 1.29 | 11.305 | 12.44 | 182.55 | 0.750 | 0.000 | 2.00 | 5.386 | 4.04 | 50.2 | 0.0 | 149.5 | | | |
| 112.00 | 1.00 | 1.30 | 11.348 | 12.48 | 180.81 | 0.750 | 0.000 | 2.00 | 5.324 | 3.99 | 49.8 | 0.0 | 147.8 | | | |
| 114.00 | 1.00 | 1.30 | 11.391 | 12.53 | 179.05 | 0.750 | 0.000 | 2.00 | 5.263 | 3.95 | 49.5 | 0.0 | 146.0 | | | |
| 116.00 | 1.00 | 1.31 | 11.432 | 12.58 | 177.28 | 0.750 | 0.000 | 2.00 | 5.202 | 3.90 | 49.1 | 0.0 | 144.3 | | | |
| 117.00 Appurtenance(s) | 1.00 | 1.31 | 11.453 | 12.60 | 176.39 | 0.750 | 0.000 | 1.00 | 2.578 | 1.93 | 24.4 | 0.0 | 71.5 | | | |
| 118.00 | 1.00 | 1.31 | 11.474 | 12.62 | 175.50 | 0.750 | 0.000 | 1.00 | 2.563 | 1.92 | 24.3 | 0.0 | 71.1 | | | |
| 120.00 Top - Section 3 | 1.00 | 1.32 | 11.514 | 12.67 | 173.71 | 0.750 | 0.000 | 2.00 | 5.080 | 3.81 | 48.3 | 0.0 | 140.9 | | | |
| 122.00 | 1.00 | 1.32 | 11.554 | 12.71 | 171.90 | 0.750 | 0.000 | 2.00 | 5.018 | 3.76 | 47.8 | 0.0 | 119.4 | | | |
| 124.00 | 1.00 | 1.32 | 11.594 | 12.75 | 170.08 | 0.750 | 0.000 | 2.00 | 4.957 | 3.72 | 47.4 | 0.0 | 118.0 | | | |
| 126.00 | 1.00 | 1.33 | 11.633 | 12.80 | 168.25 | 0.750 | 0.000 | 2.00 | 4.896 | 3.67 | 47.0 | 0.0 | 116.5 | | | |
| 127.00 Appurtenance(s) | 1.00 | 1.33 | 11.653 | 12.82 | 167.34 | 0.750 | 0.000 | 1.00 | 2.425 | 1.82 | 23.3 | 0.0 | 57.7 | | | |
| 128.00 | 1.00 | 1.33 | 11.672 | 12.84 | 166.41 | 0.750 | 0.000 | 1.00 | 2.410 | 1.81 | 23.2 | 0.0 | 57.3 | | | |
| 130.00 | 1.00 | 1.34 | 11.710 | 12.88 | 164.56 | 0.750 | 0.000 | 2.00 | 4.774 | 3.58 | 46.1 | 0.0 | 113.6 | | | |
| 132.00 | 1.00 | 1.34 | 11.748 | 12.92 | 162.70 | 0.750 | 0.000 | 2.00 | 4.713 | 3.53 | 45.7 | 0.0 | 112.1 | | | |
| 134.00 | 1.00 | 1.35 | 11.785 | 12.96 | 160.83 | 0.750 | 0.000 | 2.00 | 4.651 | 3.49 | 45.2 | 0.0 | 110.7 | | | |
| 136.00 | 1.00 | 1.35 | 11.822 | 13.00 | 158.95 | 0.750 | 0.000 | 2.00 | 4.590 | 3.44 | 44.8 | 0.0 | 109.2 | | | |
| 137.00 Appurtenance(s) | 1.00 | 1.35 | 11.840 | 13.02 | 158.00 | 0.750 | 0.000 | 1.00 | 2.272 | 1.70 | 22.2 | 0.0 | 54.0 | | | |
| 138.00 | 1.00 | 1.35 | 11.858 | 13.04 | 157.06 | 0.750 | 0.000 | 1.00 | 2.257 | 1.69 | 22.1 | 0.0 | 53.7 | | | |
| 140.00 | 1.00 | 1.36 | 11.894 | 13.08 | 155.16 | 0.750 | 0.000 | 2.00 | 4.468 | 3.35 | 43.8 | 0.0 | 106.3 | | | |
| 142.00 | 1.00 | 1.36 | 11.930 | 13.12 | 153.25 | 0.750 | 0.000 | 2.00 | 4.407 | 3.31 | 43.4 | 0.0 | 104.8 | | | |
| 144.00 | 1.00 | 1.37 | 11.965 | 13.16 | 151.33 | 0.750 | 0.000 | 2.00 | 4.346 | 3.26 | 42.9 | 0.0 | 103.3 | | | |
| 146.00 | 1.00 | 1.37 | 12.000 | 13.20 | 149.40 | 0.750 | 0.000 | 2.00 | 4.284 | 3.21 | 42.4 | 0.0 | 101.9 | | | |
| 147.00 Appurtenance(s) | 1.00 | 1.37 | 12.017 | 13.22 | 148.43 | 0.750 | 0.000 | 1.00 | 2.119 | 1.59 | 21.0 | 0.0 | 50.4 | | | |
| 148.00 | 1.00 | 1.37 | 12.034 | 13.24 | 147.46 | 0.750 | 0.000 | 1.00 | 2.104 | 1.58 | 20.9 | 0.0 | 50.0 | | | |
| 150.00 Appurtenance(s) | 1.00 | 1.38 | 12.068 | 13.27 | 145.51 | 0.750 | 0.000 | 2.00 | 4.162 | 3.12 | 41.4 | 0.0 | 98.9 | | | |
| Totals: | | | | | | | | 150.00 | | | | 3,860.1 | | | | 25,829.7 |

Discrete Appurtenance Forces

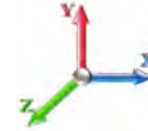
| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 26

| No. | Elev (ft) | Description | Qty | qz (psf) | qzGh (psf) | Orient Factor x Ka | Ka | Total CaAa (sf) | Dead Load (lb) | Horiz Ecc (ft) | Vert Ecc (ft) | Wind FX (lb) | Mom Y (lb-ft) | Mom Z (lb-ft) |
|-----|-----------|--------------------------|-----|----------|------------|--------------------|------|-----------------|----------------|----------------|---------------|--------------|---------------|---------------|
| 1 | 150.00 | Lightning Rod | 1 | 12.127 | 13.340 | 1.00 | 1.00 | 1.05 | 35.00 | 0.000 | 3.500 | 14.01 | 0.00 | 49.02 |
| 2 | 147.00 | Ericsson 4449 B71 + B85 | 3 | 12.017 | 13.219 | 0.38 | 0.75 | 2.19 | 225.00 | 0.000 | 0.000 | 29.00 | 0.00 | 0.00 |
| 3 | 147.00 | Ericsson Air 21 B2A/B4P | 3 | 12.017 | 13.219 | 0.64 | 0.75 | 11.55 | 274.50 | 0.000 | 0.000 | 152.69 | 0.00 | 0.00 |
| 4 | 147.00 | RFS | 3 | 12.017 | 13.219 | 0.54 | 0.75 | 32.79 | 368.40 | 0.000 | 0.000 | 433.42 | 0.00 | 0.00 |
| 5 | 147.00 | Ericsson KRY 112 144/1 | 3 | 12.017 | 13.219 | 0.38 | 0.75 | 0.39 | 33.00 | 0.000 | 0.000 | 5.20 | 0.00 | 0.00 |
| 6 | 147.00 | Ericsson Air 21 B4A/B2P | 3 | 12.017 | 13.219 | 0.64 | 0.75 | 11.55 | 270.90 | 0.000 | 0.000 | 152.69 | 0.00 | 0.00 |
| 7 | 147.00 | Tie Back Kit (Commscope | 1 | 12.017 | 13.219 | 1.00 | 1.00 | 4.17 | 123.10 | 0.000 | 0.000 | 55.12 | 0.00 | 0.00 |
| 8 | 147.00 | Rreinforcement Kit | 1 | 12.017 | 13.219 | 1.00 | 1.00 | 9.50 | 464.91 | 0.000 | 0.000 | 125.58 | 0.00 | 0.00 |
| 9 | 147.00 | V-Brace Kit (Sitepro | 1 | 12.017 | 13.219 | 1.00 | 1.00 | 6.30 | 197.00 | 0.000 | 0.000 | 83.28 | 0.00 | 0.00 |
| 10 | 147.00 | Platform w/ Hand Rail | 1 | 12.017 | 13.219 | 1.00 | 1.00 | 36.50 | 2000.00 | 0.000 | 0.000 | 482.48 | 0.00 | 0.00 |
| 11 | 137.00 | Rymsa MGD5-800T2 | 3 | 11.840 | 13.024 | 0.62 | 0.80 | 6.29 | 46.20 | 0.000 | 0.000 | 81.92 | 0.00 | 0.00 |
| 12 | 137.00 | Antel BXA-70063/6CF | 3 | 11.840 | 13.024 | 0.58 | 0.80 | 13.10 | 44.70 | 0.000 | 0.000 | 170.59 | 0.00 | 0.00 |
| 13 | 137.00 | Antel LPA-80080/4CF | 6 | 11.840 | 13.024 | 0.59 | 0.80 | 19.18 | 72.00 | 0.000 | 0.000 | 249.81 | 0.00 | 0.00 |
| 14 | 137.00 | Cleargain 850/1900 TMA's | 2 | 11.840 | 13.024 | 0.40 | 0.80 | 0.42 | 11.00 | 0.000 | 0.000 | 5.42 | 0.00 | 0.00 |
| 15 | 137.00 | RFS FD9R6004/2C-3L | 6 | 11.840 | 13.024 | 0.40 | 0.80 | 0.86 | 18.60 | 0.000 | 0.000 | 11.25 | 0.00 | 0.00 |
| 16 | 137.00 | Low Profile Platform | 1 | 11.840 | 13.024 | 1.00 | 1.00 | 22.00 | 1500.00 | 0.000 | 0.000 | 286.53 | 0.00 | 0.00 |
| 17 | 127.00 | Fujitsu TA08025-B605 | 3 | 11.653 | 12.818 | 0.38 | 0.75 | 2.21 | 225.00 | 0.000 | 0.000 | 28.26 | 0.00 | 0.00 |
| 18 | 127.00 | JMA Wireless | 3 | 11.653 | 12.818 | 0.55 | 0.75 | 20.80 | 193.50 | 0.000 | 0.000 | 266.56 | 0.00 | 0.00 |
| 19 | 127.00 | MC-PK8-DSH | 1 | 11.653 | 12.818 | 1.00 | 1.00 | 37.59 | 1727.00 | 0.000 | 0.000 | 481.82 | 0.00 | 0.00 |
| 20 | 127.00 | Fujitsu TA08025-B604 | 3 | 11.653 | 12.818 | 0.38 | 0.75 | 2.21 | 191.70 | 0.000 | 0.000 | 28.26 | 0.00 | 0.00 |
| 21 | 127.00 | Raycap | 1 | 11.653 | 12.818 | 0.38 | 0.75 | 0.75 | 21.90 | 0.000 | 0.000 | 9.66 | 0.00 | 0.00 |
| 22 | 117.00 | Sitepro RMQP-496-HK | 1 | 11.453 | 12.598 | 1.00 | 1.00 | 46.00 | 2449.00 | 0.000 | 0.000 | 579.53 | 0.00 | 0.00 |
| 23 | 117.00 | ALU TD-RRH8x20-25 | 3 | 11.453 | 12.598 | 0.38 | 0.75 | 4.56 | 210.00 | 0.000 | 0.000 | 57.40 | 0.00 | 0.00 |
| 24 | 117.00 | ALU 800 Mhz | 6 | 11.453 | 12.598 | 0.38 | 0.75 | 5.60 | 318.00 | 0.000 | 0.000 | 70.58 | 0.00 | 0.00 |
| 25 | 117.00 | ALU 1900 Mhz | 3 | 11.453 | 12.598 | 0.38 | 0.75 | 3.12 | 180.00 | 0.000 | 0.000 | 39.26 | 0.00 | 0.00 |
| 26 | 117.00 | Commscope | 3 | 11.514 | 12.666 | 0.60 | 0.75 | 22.09 | 232.20 | 0.000 | 3.000 | 279.74 | 0.00 | 839.21 |
| 27 | 117.00 | RFS APXVTM14-C-I20 | 3 | 11.453 | 12.598 | 0.58 | 0.75 | 10.98 | 168.60 | 0.000 | 0.000 | 138.38 | 0.00 | 0.00 |
| 28 | 107.00 | Ericsson 8843 B2 B66A | 3 | 11.240 | 12.364 | 0.38 | 0.75 | 1.86 | 225.00 | 0.000 | 0.000 | 22.95 | 0.00 | 0.00 |
| 29 | 107.00 | Raycap | 1 | 11.240 | 12.364 | 0.38 | 0.75 | 1.79 | 16.00 | 0.000 | 0.000 | 22.16 | 0.00 | 0.00 |
| 30 | 107.00 | Powerwave 7770 | 3 | 11.240 | 12.364 | 0.55 | 0.75 | 9.03 | 105.00 | 0.000 | 0.000 | 111.69 | 0.00 | 0.00 |
| 31 | 107.00 | Ericsson RRUS 4478 B14 | 3 | 11.240 | 12.364 | 0.38 | 0.75 | 2.07 | 179.70 | 0.000 | 0.000 | 25.59 | 0.00 | 0.00 |
| 32 | 107.00 | Ericsson 4449 B5/B12 | 3 | 11.240 | 12.364 | 0.38 | 0.75 | 1.86 | 210.00 | 0.000 | 0.000 | 22.95 | 0.00 | 0.00 |
| 33 | 107.00 | Raycap DC6-48-60-18-8F | 1 | 11.240 | 12.364 | 0.50 | 0.75 | 0.46 | 31.80 | 0.000 | 0.000 | 5.72 | 0.00 | 0.00 |
| 34 | 107.00 | Powerwave/LGP21401 | 6 | 11.240 | 12.364 | 0.38 | 0.75 | 0.61 | 33.00 | 0.000 | 0.000 | 7.51 | 0.00 | 0.00 |
| 35 | 107.00 | Low Profile Platform | 1 | 11.240 | 12.364 | 1.00 | 1.00 | 22.00 | 1500.00 | 0.000 | 0.000 | 272.00 | 0.00 | 0.00 |
| 36 | 107.00 | Site Pro HRK14 | 1 | 11.240 | 12.364 | 1.00 | 1.00 | 8.13 | 302.36 | 0.000 | 0.000 | 100.52 | 0.00 | 0.00 |
| 37 | 107.00 | Cci DMP65R-BU8DA | 6 | 11.240 | 12.364 | 0.75 | 0.75 | 60.70 | 234.00 | 0.000 | 0.000 | 750.54 | 0.00 | 0.00 |

Totals: 14,438.07

5,660.09

Total Applied Force Summary

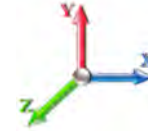
| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 26

| Elev (ft) | Description | Lateral FX (-) (lb) | Axial FY (-) (lb) | Torsion MY (lb-ft) | Moment MZ (lb-ft) |
|--------------|-------------|---------------------------|-------------------------|--------------------------|-------------------------|
| 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | | 51.98 | 535.36 | 0.00 | 0.00 |
| 4.00 | | 51.60 | 583.41 | 0.00 | 0.00 |
| 6.00 | | 51.23 | 631.46 | 0.00 | 0.00 |
| 8.00 | | 50.85 | 627.55 | 0.00 | 0.00 |
| 10.00 | | 50.48 | 623.64 | 0.00 | 0.00 |
| 12.00 | | 50.10 | 619.73 | 0.00 | 0.00 |
| 14.00 | | 49.72 | 615.83 | 0.00 | 0.00 |
| 16.00 | | 49.96 | 611.92 | 0.00 | 0.00 |
| 18.00 | | 50.82 | 608.01 | 0.00 | 0.00 |
| 20.00 | | 51.56 | 604.10 | 0.00 | 0.00 |
| 22.00 | | 52.20 | 600.20 | 0.00 | 0.00 |
| 24.00 | | 52.75 | 596.29 | 0.00 | 0.00 |
| 26.00 | | 53.23 | 592.38 | 0.00 | 0.00 |
| 28.00 | | 53.64 | 588.47 | 0.00 | 0.00 |
| 30.00 | | 53.99 | 584.56 | 0.00 | 0.00 |
| 32.00 | | 54.29 | 580.66 | 0.00 | 0.00 |
| 34.00 | | 54.54 | 576.75 | 0.00 | 0.00 |
| 36.00 | | 54.75 | 572.84 | 0.00 | 0.00 |
| 38.00 | | 54.92 | 568.93 | 0.00 | 0.00 |
| 40.00 | | 55.05 | 565.03 | 0.00 | 0.00 |
| 42.00 | | 55.16 | 561.12 | 0.00 | 0.00 |
| 44.00 | | 55.23 | 557.21 | 0.00 | 0.00 |
| 46.00 | | 55.27 | 553.30 | 0.00 | 0.00 |
| 46.67 | | 18.37 | 183.57 | 0.00 | 0.00 |
| 48.00 | | 37.58 | 631.25 | 0.00 | 0.00 |
| 50.00 | | 56.46 | 940.77 | 0.00 | 0.00 |
| 52.00 | | 56.44 | 933.44 | 0.00 | 0.00 |
| 53.00 | | 28.15 | 463.97 | 0.00 | 0.00 |
| 54.00 | | 28.14 | 245.75 | 0.00 | 0.00 |
| 56.00 | | 56.34 | 488.94 | 0.00 | 0.00 |
| 58.00 | | 56.26 | 485.52 | 0.00 | 0.00 |
| 60.00 | | 56.16 | 482.10 | 0.00 | 0.00 |
| 62.00 | | 56.04 | 478.68 | 0.00 | 0.00 |
| 64.00 | | 55.91 | 475.26 | 0.00 | 0.00 |
| 66.00 | | 55.76 | 471.84 | 0.00 | 0.00 |
| 68.00 | | 55.59 | 468.42 | 0.00 | 0.00 |
| 70.00 | | 55.42 | 465.00 | 0.00 | 0.00 |
| 72.00 | | 55.22 | 461.58 | 0.00 | 0.00 |
| 74.00 | | 55.02 | 458.16 | 0.00 | 0.00 |
| 76.00 | | 54.80 | 454.74 | 0.00 | 0.00 |
| 78.00 | | 54.57 | 451.32 | 0.00 | 0.00 |
| 80.00 | | 54.33 | 447.90 | 0.00 | 0.00 |
| 82.00 | | 54.08 | 444.48 | 0.00 | 0.00 |
| 84.00 | | 53.81 | 441.06 | 0.00 | 0.00 |
| 86.00 | | 53.54 | 437.65 | 0.00 | 0.00 |
| 88.00 | | 53.25 | 434.23 | 0.00 | 0.00 |

Total Applied Force Summary

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | | | | |
|----------------|------------------|-----------------|------------------|-------------|---------------|
| 90.00 | | 52.96 | 430.81 | 0.00 | 0.00 |
| 92.00 | | 52.65 | 427.39 | 0.00 | 0.00 |
| 94.00 | | 52.34 | 423.97 | 0.00 | 0.00 |
| 94.25 | | 6.51 | 52.76 | 0.00 | 0.00 |
| 96.00 | | 46.08 | 508.96 | 0.00 | 0.00 |
| 98.00 | | 52.36 | 576.85 | 0.00 | 0.00 |
| 99.67 | | 43.37 | 476.79 | 0.00 | 0.00 |
| 100.00 | | 8.63 | 43.54 | 0.00 | 0.00 |
| 102.00 | | 51.68 | 260.22 | 0.00 | 0.00 |
| 104.00 | | 51.33 | 258.51 | 0.00 | 0.00 |
| 106.00 | | 50.97 | 256.80 | 0.00 | 0.00 |
| 107.00 | (28) attachments | 1366.95 | 2964.62 | 0.00 | 0.00 |
| 108.00 | | 25.23 | 105.39 | 0.00 | 0.00 |
| 110.00 | | 50.23 | 209.50 | 0.00 | 0.00 |
| 112.00 | | 49.85 | 207.79 | 0.00 | 0.00 |
| 114.00 | | 49.46 | 206.08 | 0.00 | 0.00 |
| 116.00 | | 49.06 | 204.37 | 0.00 | 0.00 |
| 117.00 | (19) attachments | 1189.25 | 3659.34 | 0.00 | 839.21 |
| 118.00 | | 24.26 | 97.30 | 0.00 | 0.00 |
| 120.00 | | 48.25 | 193.32 | 0.00 | 0.00 |
| 122.00 | | 47.84 | 171.85 | 0.00 | 0.00 |
| 124.00 | | 47.42 | 170.38 | 0.00 | 0.00 |
| 126.00 | | 46.99 | 168.92 | 0.00 | 0.00 |
| 127.00 | (11) attachments | 837.88 | 2443.01 | 0.00 | 0.00 |
| 128.00 | | 23.20 | 82.54 | 0.00 | 0.00 |
| 130.00 | | 46.12 | 163.99 | 0.00 | 0.00 |
| 132.00 | | 45.67 | 162.52 | 0.00 | 0.00 |
| 134.00 | | 45.22 | 161.06 | 0.00 | 0.00 |
| 136.00 | | 44.77 | 159.59 | 0.00 | 0.00 |
| 137.00 | (21) attachments | 827.72 | 1771.75 | 0.00 | 0.00 |
| 138.00 | | 22.08 | 66.40 | 0.00 | 0.00 |
| 140.00 | | 43.84 | 131.70 | 0.00 | 0.00 |
| 142.00 | | 43.37 | 130.23 | 0.00 | 0.00 |
| 144.00 | | 42.89 | 128.77 | 0.00 | 0.00 |
| 146.00 | | 42.41 | 127.30 | 0.00 | 0.00 |
| 147.00 | (19) attachments | 1540.48 | 4019.91 | 0.00 | 0.00 |
| 148.00 | | 20.89 | 50.02 | 0.00 | 0.00 |
| 150.00 | (1) attachments | 55.44 | 133.93 | 0.00 | 49.02 |
| Totals: | | 9,520.22 | 46,612.54 | 0.00 | 888.23 |

Calculated Forces

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | |
|---|---|
| Load Case: 1.0D + 1.0W 60 mph Wind | Iterations 26 |
| Dead Load Factor 1.00 |  |
| Wind Load Factor 1.00 | |

| Seg Elev (ft) | Pu FY (-) (kips) | Vu FX (-) (kips) | Tu MY (-) (ft-kips) | Mu MZ (ft-kips) | Mu MX (ft-kips) | Resultant Moment (ft-kips) | phi Pn (kips) | phi Vn (kips) | phi Tn (ft-kips) | phi Mn (ft-kips) | Total Deflect (in) | Rotation Sway (deg) | Rotation Twist (deg) | Stress Ratio |
|---------------|------------------|------------------|---------------------|-----------------|-----------------|----------------------------|---------------|---------------|------------------|------------------|--------------------|---------------------|----------------------|--------------|
| 0.00 | -46.61 | -9.53 | 0.00 | -1046.0 | 0.00 | 1046.09 | 5817.07 | 2908.54 | 11858.0 | 5886.84 | 0.00 | 0.000 | 0.000 | 0.186 |
| 2.00 | -46.07 | -9.50 | 0.00 | -1027.0 | 0.00 | 1027.03 | 5786.20 | 2893.10 | 11708.4 | 5812.58 | 0.01 | -0.024 | 0.000 | 0.185 |
| 4.00 | -45.48 | -9.46 | 0.00 | -1008.0 | 0.00 | 1008.04 | 5755.15 | 2877.58 | 11559.4 | 5738.61 | 0.02 | -0.048 | 0.000 | 0.184 |
| 6.00 | -44.85 | -9.43 | 0.00 | -989.11 | 0.00 | 989.11 | 5723.94 | 2861.97 | 11411.0 | 5664.94 | 0.05 | -0.073 | 0.000 | 0.182 |
| 8.00 | -44.22 | -9.40 | 0.00 | -970.25 | 0.00 | 970.25 | 5692.56 | 2846.28 | 11263.2 | 5591.57 | 0.08 | -0.097 | 0.000 | 0.181 |
| 10.00 | -43.59 | -9.36 | 0.00 | -951.46 | 0.00 | 951.46 | 5652.47 | 2826.24 | 11099.3 | 5510.17 | 0.13 | -0.121 | 0.000 | 0.180 |
| 12.00 | -42.97 | -9.33 | 0.00 | -932.73 | 0.00 | 932.73 | 5609.81 | 2804.91 | 10931.5 | 5426.88 | 0.18 | -0.146 | 0.000 | 0.180 |
| 14.00 | -42.35 | -9.30 | 0.00 | -914.07 | 0.00 | 914.07 | 5567.15 | 2783.57 | 10765.0 | 5344.23 | 0.25 | -0.171 | 0.000 | 0.179 |
| 16.00 | -41.73 | -9.26 | 0.00 | -895.47 | 0.00 | 895.47 | 5524.49 | 2762.24 | 10599.8 | 5262.21 | 0.33 | -0.195 | 0.000 | 0.178 |
| 18.00 | -41.12 | -9.23 | 0.00 | -876.94 | 0.00 | 876.94 | 5481.83 | 2740.91 | 10435.9 | 5180.82 | 0.41 | -0.220 | 0.000 | 0.177 |
| 20.00 | -40.51 | -9.19 | 0.00 | -858.48 | 0.00 | 858.48 | 5439.17 | 2719.58 | 10273.2 | 5100.07 | 0.51 | -0.245 | 0.000 | 0.176 |
| 22.00 | -39.91 | -9.15 | 0.00 | -840.10 | 0.00 | 840.10 | 5396.51 | 2698.25 | 10111.8 | 5019.95 | 0.62 | -0.269 | 0.000 | 0.175 |
| 24.00 | -39.31 | -9.12 | 0.00 | -821.79 | 0.00 | 821.79 | 5353.84 | 2676.92 | 9951.76 | 4940.47 | 0.74 | -0.294 | 0.000 | 0.174 |
| 26.00 | -38.71 | -9.08 | 0.00 | -803.56 | 0.00 | 803.56 | 5311.18 | 2655.59 | 9792.93 | 4861.62 | 0.87 | -0.319 | 0.000 | 0.173 |
| 28.00 | -38.12 | -9.04 | 0.00 | -785.40 | 0.00 | 785.40 | 5268.52 | 2634.26 | 9635.38 | 4783.41 | 1.01 | -0.344 | 0.000 | 0.171 |
| 30.00 | -37.53 | -9.00 | 0.00 | -767.33 | 0.00 | 767.33 | 5225.86 | 2612.93 | 9479.11 | 4705.83 | 1.16 | -0.369 | 0.000 | 0.170 |
| 32.00 | -36.95 | -8.95 | 0.00 | -749.34 | 0.00 | 749.34 | 5183.20 | 2591.60 | 9324.12 | 4628.89 | 1.32 | -0.394 | 0.000 | 0.169 |
| 34.00 | -36.37 | -8.91 | 0.00 | -731.44 | 0.00 | 731.44 | 5140.54 | 2570.27 | 9170.40 | 4552.57 | 1.49 | -0.419 | 0.000 | 0.168 |
| 36.00 | -35.79 | -8.87 | 0.00 | -713.62 | 0.00 | 713.62 | 5097.88 | 2548.94 | 9017.97 | 4476.90 | 1.67 | -0.444 | 0.000 | 0.166 |
| 38.00 | -35.22 | -8.82 | 0.00 | -695.88 | 0.00 | 695.88 | 5055.22 | 2527.61 | 8866.81 | 4401.86 | 1.86 | -0.469 | 0.000 | 0.165 |
| 40.00 | -34.65 | -8.78 | 0.00 | -678.24 | 0.00 | 678.24 | 5012.56 | 2506.28 | 8716.92 | 4327.45 | 2.06 | -0.494 | 0.000 | 0.164 |
| 42.00 | -34.08 | -8.73 | 0.00 | -660.68 | 0.00 | 660.68 | 4969.90 | 2484.95 | 8568.32 | 4253.68 | 2.27 | -0.519 | 0.000 | 0.162 |
| 44.00 | -33.52 | -8.69 | 0.00 | -643.22 | 0.00 | 643.22 | 4927.23 | 2463.62 | 8420.99 | 4180.54 | 2.50 | -0.544 | 0.000 | 0.161 |
| 46.00 | -32.97 | -8.64 | 0.00 | -625.84 | 0.00 | 625.84 | 4884.57 | 2442.29 | 8274.95 | 4108.03 | 2.73 | -0.569 | 0.000 | 0.159 |
| 46.67 | -32.78 | -8.62 | 0.00 | -620.09 | 0.00 | 620.09 | 4870.35 | 2435.18 | 8226.55 | 4084.00 | 2.81 | -0.577 | 0.000 | 0.159 |
| 48.00 | -32.15 | -8.59 | 0.00 | -608.59 | 0.00 | 608.59 | 4841.91 | 2420.96 | 8130.17 | 4036.16 | 2.97 | -0.594 | 0.000 | 0.157 |
| 50.00 | -31.21 | -8.54 | 0.00 | -591.41 | 0.00 | 591.41 | 4799.25 | 2399.63 | 7986.68 | 3964.92 | 3.23 | -0.619 | 0.000 | 0.156 |
| 52.00 | -30.27 | -8.48 | 0.00 | -574.34 | 0.00 | 574.34 | 4756.59 | 2378.30 | 7844.47 | 3894.32 | 3.49 | -0.643 | 0.000 | 0.154 |
| 53.00 | -29.81 | -8.45 | 0.00 | -565.86 | 0.00 | 565.86 | 4740.56 | 2120.28 | 7137.82 | 3543.51 | 3.63 | -0.656 | 0.000 | 0.167 |
| 54.00 | -29.56 | -8.43 | 0.00 | -557.40 | 0.00 | 557.40 | 4221.90 | 2110.95 | 7074.79 | 3512.22 | 3.77 | -0.668 | 0.000 | 0.166 |
| 56.00 | -29.06 | -8.38 | 0.00 | -540.54 | 0.00 | 540.54 | 4184.57 | 2092.28 | 6949.58 | 3450.06 | 4.05 | -0.695 | 0.000 | 0.164 |
| 58.00 | -28.58 | -8.33 | 0.00 | -523.77 | 0.00 | 523.77 | 4147.24 | 2073.62 | 6825.49 | 3388.46 | 4.35 | -0.721 | 0.000 | 0.161 |
| 60.00 | -28.09 | -8.29 | 0.00 | -507.10 | 0.00 | 507.10 | 4109.91 | 2054.96 | 6702.51 | 3327.41 | 4.66 | -0.747 | 0.000 | 0.159 |
| 62.00 | -27.61 | -8.24 | 0.00 | -490.53 | 0.00 | 490.53 | 4072.58 | 2036.29 | 6580.65 | 3266.91 | 4.98 | -0.773 | 0.000 | 0.157 |
| 64.00 | -27.13 | -8.18 | 0.00 | -474.06 | 0.00 | 474.06 | 4035.25 | 2017.63 | 6459.92 | 3206.97 | 5.30 | -0.798 | 0.000 | 0.155 |
| 66.00 | -26.66 | -8.13 | 0.00 | -457.69 | 0.00 | 457.69 | 3997.93 | 1998.96 | 6340.29 | 3147.59 | 5.64 | -0.824 | 0.000 | 0.152 |
| 68.00 | -26.19 | -8.08 | 0.00 | -441.42 | 0.00 | 441.42 | 3960.60 | 1980.30 | 6221.79 | 3088.76 | 5.99 | -0.849 | 0.000 | 0.150 |
| 70.00 | -25.72 | -8.03 | 0.00 | -425.26 | 0.00 | 425.26 | 3923.27 | 1961.63 | 6104.41 | 3030.48 | 6.36 | -0.874 | 0.000 | 0.147 |
| 72.00 | -25.25 | -7.98 | 0.00 | -409.19 | 0.00 | 409.19 | 3885.94 | 1942.97 | 5988.14 | 2972.76 | 6.73 | -0.899 | 0.000 | 0.144 |
| 74.00 | -24.79 | -7.93 | 0.00 | -393.23 | 0.00 | 393.23 | 3848.61 | 1924.31 | 5872.99 | 2915.60 | 7.11 | -0.924 | 0.000 | 0.141 |
| 76.00 | -24.34 | -7.88 | 0.00 | -377.38 | 0.00 | 377.38 | 3811.28 | 1905.64 | 5758.96 | 2858.99 | 7.50 | -0.948 | 0.000 | 0.138 |
| 78.00 | -23.88 | -7.82 | 0.00 | -361.62 | 0.00 | 361.62 | 3773.96 | 1886.98 | 5646.05 | 2802.94 | 7.90 | -0.972 | 0.000 | 0.135 |
| 80.00 | -23.43 | -7.77 | 0.00 | -345.97 | 0.00 | 345.97 | 3736.63 | 1868.31 | 5534.25 | 2747.44 | 8.32 | -0.996 | 0.000 | 0.132 |
| 82.00 | -22.99 | -7.72 | 0.00 | -330.43 | 0.00 | 330.43 | 3699.30 | 1849.65 | 5423.58 | 2692.49 | 8.74 | -1.019 | 0.000 | 0.129 |
| 84.00 | -22.54 | -7.67 | 0.00 | -314.99 | 0.00 | 314.99 | 3661.97 | 1830.99 | 5314.02 | 2638.10 | 9.17 | -1.042 | 0.000 | 0.126 |
| 86.00 | -22.10 | -7.61 | 0.00 | -299.66 | 0.00 | 299.66 | 3624.64 | 1812.32 | 5205.58 | 2584.27 | 9.61 | -1.064 | 0.000 | 0.122 |
| 88.00 | -21.67 | -7.56 | 0.00 | -284.43 | 0.00 | 284.43 | 3587.31 | 1793.66 | 5098.25 | 2530.99 | 10.06 | -1.086 | 0.000 | 0.118 |
| 90.00 | -21.23 | -7.51 | 0.00 | -269.31 | 0.00 | 269.31 | 3549.99 | 1774.99 | 4992.05 | 2478.26 | 10.52 | -1.108 | 0.000 | 0.115 |

Calculated Forces

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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| | | | | | | | | | | | | | | |
|--------|--------|-------|------|---------|------|--------|---------|---------|---------|---------|-------|--------|-------|-------|
| 92.00 | -20.81 | -7.45 | 0.00 | -254.29 | 0.00 | 254.29 | 3512.66 | 1756.33 | 4886.96 | 2426.09 | 10.99 | -1.129 | 0.000 | 0.111 |
| 94.00 | -20.38 | -7.40 | 0.00 | -239.38 | 0.00 | 239.38 | 3475.33 | 1737.66 | 4782.99 | 2374.48 | 11.47 | -1.150 | 0.000 | 0.107 |
| 94.25 | -20.33 | -7.39 | 0.00 | -237.53 | 0.00 | 237.53 | 3470.66 | 1735.33 | 4770.08 | 2368.07 | 11.53 | -1.152 | 0.000 | 0.106 |
| 96.00 | -19.82 | -7.34 | 0.00 | -224.59 | 0.00 | 224.59 | 3438.00 | 1719.00 | 4680.14 | 2323.42 | 11.96 | -1.170 | 0.000 | 0.102 |
| 98.00 | -19.24 | -7.29 | 0.00 | -209.91 | 0.00 | 209.91 | 3400.67 | 1700.34 | 4578.41 | 2272.92 | 12.45 | -1.189 | 0.000 | 0.098 |
| 99.67 | -18.76 | -7.23 | 0.00 | -197.77 | 0.00 | 197.77 | 1458.24 | 729.12 | 1997.89 | 991.83 | 12.87 | -1.204 | 0.000 | 0.212 |
| 100.00 | -18.72 | -7.23 | 0.00 | -195.35 | 0.00 | 195.35 | 1456.89 | 728.44 | 1992.39 | 989.11 | 12.95 | -1.207 | 0.000 | 0.210 |
| 102.00 | -18.45 | -7.18 | 0.00 | -180.89 | 0.00 | 180.89 | 1448.65 | 724.33 | 1959.44 | 972.75 | 13.46 | -1.241 | 0.000 | 0.199 |
| 104.00 | -18.19 | -7.14 | 0.00 | -166.52 | 0.00 | 166.52 | 1440.25 | 720.13 | 1926.51 | 956.40 | 13.99 | -1.273 | 0.000 | 0.187 |
| 106.00 | -17.93 | -7.09 | 0.00 | -152.25 | 0.00 | 152.25 | 1431.68 | 715.84 | 1893.60 | 940.06 | 14.53 | -1.303 | 0.000 | 0.175 |
| 107.00 | -15.00 | -5.66 | 0.00 | -145.16 | 0.00 | 145.16 | 1427.33 | 713.67 | 1877.17 | 931.90 | 14.81 | -1.318 | 0.000 | 0.166 |
| 108.00 | -14.89 | -5.64 | 0.00 | -139.50 | 0.00 | 139.50 | 1422.94 | 711.47 | 1860.74 | 923.75 | 15.08 | -1.332 | 0.000 | 0.162 |
| 110.00 | -14.68 | -5.59 | 0.00 | -128.23 | 0.00 | 128.23 | 1414.04 | 707.02 | 1827.92 | 907.46 | 15.65 | -1.359 | 0.000 | 0.152 |
| 112.00 | -14.47 | -5.54 | 0.00 | -117.06 | 0.00 | 117.06 | 1404.97 | 702.48 | 1795.15 | 891.19 | 16.22 | -1.385 | 0.000 | 0.142 |
| 114.00 | -14.27 | -5.49 | 0.00 | -105.98 | 0.00 | 105.98 | 1395.73 | 697.86 | 1762.45 | 874.95 | 16.81 | -1.409 | 0.000 | 0.131 |
| 116.00 | -14.06 | -5.44 | 0.00 | -95.00 | 0.00 | 95.00 | 1386.32 | 693.16 | 1729.81 | 858.75 | 17.40 | -1.432 | 0.000 | 0.121 |
| 117.00 | -10.43 | -4.16 | 0.00 | -88.72 | 0.00 | 88.72 | 1381.56 | 690.78 | 1713.52 | 850.66 | 17.71 | -1.443 | 0.000 | 0.112 |
| 118.00 | -10.33 | -4.14 | 0.00 | -84.56 | 0.00 | 84.56 | 1376.75 | 688.37 | 1697.25 | 842.59 | 18.01 | -1.453 | 0.000 | 0.108 |
| 120.00 | -10.14 | -4.09 | 0.00 | -76.29 | 0.00 | 76.29 | 1367.01 | 683.50 | 1664.77 | 826.46 | 18.62 | -1.473 | 0.000 | 0.100 |
| 120.00 | -10.14 | -4.09 | 0.00 | -76.29 | 0.00 | 76.29 | 1091.99 | 545.99 | 1332.66 | 661.59 | 18.62 | -1.473 | 0.000 | 0.125 |
| 122.00 | -9.97 | -4.04 | 0.00 | -68.11 | 0.00 | 68.11 | 1085.46 | 542.73 | 1308.44 | 649.56 | 19.24 | -1.491 | 0.000 | 0.114 |
| 124.00 | -9.80 | -3.99 | 0.00 | -60.04 | 0.00 | 60.04 | 1078.76 | 539.38 | 1284.21 | 637.54 | 19.87 | -1.510 | 0.000 | 0.103 |
| 126.00 | -9.63 | -3.94 | 0.00 | -52.06 | 0.00 | 52.06 | 1071.89 | 535.95 | 1259.98 | 625.51 | 20.51 | -1.528 | 0.000 | 0.092 |
| 127.00 | -7.21 | -3.04 | 0.00 | -48.12 | 0.00 | 48.12 | 1068.40 | 534.20 | 1247.88 | 619.50 | 20.83 | -1.536 | 0.000 | 0.084 |
| 128.00 | -7.13 | -3.01 | 0.00 | -45.08 | 0.00 | 45.08 | 1064.86 | 532.43 | 1235.77 | 613.49 | 21.15 | -1.544 | 0.000 | 0.080 |
| 130.00 | -6.96 | -2.97 | 0.00 | -39.05 | 0.00 | 39.05 | 1057.66 | 528.83 | 1211.58 | 601.48 | 21.80 | -1.558 | 0.000 | 0.072 |
| 132.00 | -6.80 | -2.92 | 0.00 | -33.12 | 0.00 | 33.12 | 1050.29 | 525.14 | 1187.41 | 589.48 | 22.46 | -1.571 | 0.000 | 0.063 |
| 134.00 | -6.64 | -2.87 | 0.00 | -27.29 | 0.00 | 27.29 | 1042.75 | 521.38 | 1163.27 | 577.50 | 23.12 | -1.582 | 0.000 | 0.054 |
| 136.00 | -6.48 | -2.82 | 0.00 | -21.55 | 0.00 | 21.55 | 1035.05 | 517.52 | 1139.18 | 565.54 | 23.78 | -1.591 | 0.000 | 0.044 |
| 137.00 | -4.74 | -1.94 | 0.00 | -18.73 | 0.00 | 18.73 | 1031.13 | 515.57 | 1127.15 | 559.57 | 24.12 | -1.595 | 0.000 | 0.038 |
| 138.00 | -4.67 | -1.92 | 0.00 | -16.78 | 0.00 | 16.78 | 1027.18 | 513.59 | 1115.14 | 553.60 | 24.45 | -1.599 | 0.000 | 0.035 |
| 140.00 | -4.54 | -1.87 | 0.00 | -12.94 | 0.00 | 12.94 | 1019.14 | 509.57 | 1091.15 | 541.69 | 25.12 | -1.605 | 0.000 | 0.028 |
| 142.00 | -4.41 | -1.83 | 0.00 | -9.20 | 0.00 | 9.20 | 1010.93 | 505.47 | 1067.22 | 529.81 | 25.80 | -1.610 | 0.000 | 0.022 |
| 144.00 | -4.28 | -1.78 | 0.00 | -5.54 | 0.00 | 5.54 | 1002.56 | 501.28 | 1043.37 | 517.97 | 26.47 | -1.613 | 0.000 | 0.015 |
| 146.00 | -4.16 | -1.73 | 0.00 | -1.98 | 0.00 | 1.98 | 994.02 | 497.01 | 1019.60 | 506.17 | 27.15 | -1.615 | 0.000 | 0.008 |
| 147.00 | -0.18 | -0.08 | 0.00 | -0.25 | 0.00 | 0.25 | 989.69 | 494.84 | 1007.74 | 500.29 | 27.49 | -1.615 | 0.000 | 0.001 |
| 148.00 | -0.13 | -0.06 | 0.00 | -0.17 | 0.00 | 0.17 | 985.31 | 492.66 | 995.91 | 494.41 | 27.83 | -1.615 | 0.000 | 0.000 |
| 150.00 | 0.00 | -0.06 | 0.00 | -0.05 | 0.00 | 0.05 | 976.44 | 488.22 | 972.32 | 482.70 | 28.50 | -1.616 | 0.000 | 0.000 |

Final Analysis Summary

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SBA | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |



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Reactions

| Load Case | Shear FX (kips) | Shear FZ (kips) | Axial FY (kips) | Moment MX (ft-kips) | Moment MY (ft-kips) | Moment MZ (ft-kips) |
|----------------------------------|-----------------------|-----------------------|-----------------------|---------------------------|---------------------------|---------------------------|
| 1.2D + 1.6W 105 mph Wind | 46.7 | 0.00 | 55.88 | 0.00 | 0.00 | 5155.89 |
| 0.9D + 1.6W 105 mph Wind | 46.7 | 0.00 | 41.90 | 0.00 | 0.00 | 5091.47 |
| 1.2D + 1.0Di + 1.0Wi 50 mph Wind | 11.3 | 0.00 | 84.49 | 0.00 | 0.00 | 1284.73 |
| 1.2D + 1.0E | 1.1 | 0.00 | 55.93 | 0.00 | 0.00 | 125.17 |
| 0.9D + 1.0E | 1.1 | 0.00 | 41.95 | 0.00 | 0.00 | 123.49 |
| 1.0D + 1.0W 60 mph Wind | 9.5 | 0.00 | 46.61 | 0.00 | 0.00 | 1046.09 |

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 105 mph Wind | -19.10 | -35.68 | 0.00 | -975.09 | 0.00 | -975.09 | 1458.24 | 729.12 | 1997.89 | 991.83 | 99.67 | 0.999 |
| 0.9D + 1.6W 105 mph Wind | -13.51 | -35.07 | 0.00 | -956.14 | 0.00 | -956.14 | 1458.24 | 729.12 | 1997.89 | 991.83 | 99.67 | 0.976 |
| 1.2D + 1.0Di + 1.0Wi 50 mph Wind | -42.83 | -9.20 | 0.00 | -239.77 | 0.00 | -239.77 | 1458.24 | 729.12 | 1997.89 | 991.83 | 99.67 | 0.271 |
| 1.2D + 1.0E | -22.69 | -0.80 | 0.00 | -34.00 | 0.00 | -34.00 | 1458.24 | 729.12 | 1997.89 | 991.83 | 99.67 | 0.050 |
| 0.9D + 1.0E | -17.02 | -0.78 | 0.00 | -33.45 | 0.00 | -33.45 | 1458.24 | 729.12 | 1997.89 | 991.83 | 99.67 | 0.045 |
| 1.0D + 1.0W 60 mph Wind | -18.76 | -7.23 | 0.00 | -197.77 | 0.00 | -197.77 | 1458.24 | 729.12 | 1997.89 | 991.83 | 99.67 | 0.212 |

Base Plate Summary

| | | |
|------------------------------------|---------------------------------------|-------------------------|
| Structure: CT01210-S-SB | Code: EIA/TIA-222-G | 8/31/2021 |
| Site Name: North Stonington | Exposure: C | |
| Height: 150.00 (ft) | Crest Height: 0.00 | |
| Base Elev: 0.000 (ft) | Site Class: B - Competent Rock | |
| Gh: 1.1 | Topography: 1 | Struct Class: II |
| | | Page: 47 |



| Reactions | Base Plate | Anchor Bolts |
|---------------------------------|------------------------------------|---------------------------------|
| Original Design | Yield (ksi): 60.00 | Bolt Circle: 58.26 |
| Moment (kip-ft): 4272.00 | Width (in): 64.26 | Number Bolts: 20.00 |
| Axial (kip): 55.10 | Style: Polygon | Bolt Type: 2.25" 18J |
| Shear (kip): 28.10 | Polygon Sides: 16.00 | Bolt Diameter (in): 2.25 |
| Analysis (1.2D + 1.6W) | Clip Length (in): 0.00 | Yield (ksi): 75.00 |
| Moment (kip-ft): 5155.89 | Effective Len (in): 12.35 | Ultimate (ksi): 100.00 |
| Axial (kip): 55.88 | Moment (kip-in): 894.64 | Arrangement: Radial |
| Shear (kip): 46.71 | Allow Stress (ksi): 81.00 | Cluster Dist (in): 0.00 |
| | Applied Stress (ksi): 57.51 | Start Angle (deg): 0.00 |
| | Stress Ratio: 0.71 | Compression |
| | | Force (kip): 216.62 |
| | | Allowable (kip): 260.00 |
| | | Ratio: 0.85 |
| | | Tension |
| | | Force (kip): 208.17 |
| | | Allowable (kip): 260.00 |
| | | Ratio: 0.82 |



Monopole Mat Foundation Design

Date

4/5/2021

| | | | |
|-----------------------|-----------------------|--------------------------------|---------------|
| Customer Name: | SBA Comunication Corp | EIA/TIA Standard: | EIA-222-G |
| Site Name: | North Stonington | Structure Height (Ft.): | 150 |
| Site Number: | 114434 | Engineer Name: | S. Hesselbeir |
| Engr. Number: | | Engineer Login ID: | |

Foundation Info Obtained from:

Drawings/Calculations

Structure Type:

Monopole

Analysis or Design?

Analysis

Base Reactions (Factored):

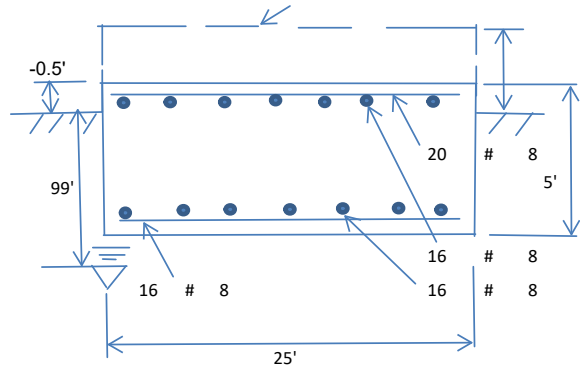
| | | | |
|----------------------|------|---------------------|--------|
| Axial Load (Kips): | 55.9 | Shear Force (Kips): | 46.7 |
| Uplift Force (Kips): | 0.0 | Moment (Kips-ft): | 5155.9 |

Allowable overstress %: 5.0%

Foundation Geometries:

| | | | | | |
|---------------------------|------|-------------------------|------|--------------------------|----|
| Anchor Bolt Circle (ft.): | 4.86 | Depth of Base BG (ft.): | 5.50 | Mods required -Yes/No ?: | No |
| Thickness of Pad (ft.): | 5.00 | Width of Pad (ft.): | 25 | | |
| Length of Pad (ft.): | 25 | | | | |

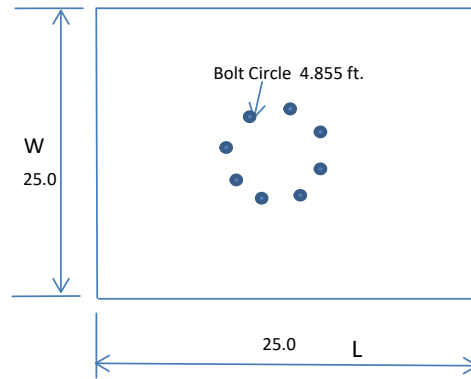
Final Length of pad (ft) 25.0 Final width of pad (ft): 25.0



Material Properties and Reabr Info:

| | | | | |
|--|------|---------------------------|-------|-----|
| Concrete Strength (psi): | 3000 | Steel Elastic Modulus: | 29000 | ksi |
| Pad Rebar Yield (Ksi): | 60 | Tie Spacing (in): | 12.0 | |
| Pad Steel Rebar Size (#): | 8 | | | |
| Concrete Cover (in.): | 3 | Unit Weight of Concrete: | 150.0 | pcf |
| Rebar at the bottom of the concrete pad: | | | | |
| Qty. of Rebar in Pad (L): | 20 | Qty. of Rebar in Pad (W): | 20 | |
| Rebar at the top of the concrete pad: | | | | |
| Qty. of Rebar in Pad (L): | 16 | Qty. of Rebar in Pad (W): | 16 | |

Apply 1.35 factor for e/w Per G: 1.35



Soil Design Parameters:

| | | | | | | |
|--------------------------------------|-------|--|------|-----|--------------------------|----|
| Water Table B.G.S. (ft): | 99.0 | Unit Weight of Water: | 62.4 | pcf | Angle from Top of Pad: | 30 |
| Ultimate Bearing Pressure (psf): | 18000 | Ultimate Skin Friction: | | Psf | Angle from Bottm of Pad: | 25 |
| Consider Friction for O.T.M. (Y/N): | No | Consider Friction for bearing (Y/N): | No | | Angle from Bottm of Pad: | 25 |
| Consider soil hor. resist. for OTM.: | Yes | Reduction factor on the maximum soil bearing pressure: | 1.00 | | | |

Foundation Analysis and Design:

| | | | |
|--|---------|--|--------|
| Uplift Strength Reduction Factor: | 0.75 | Compression Strength Reduction Factor: | 0.75 |
| Total Dry Soil Volume (cu. Ft.): | 301.24 | Total Dry Soil Weight (Kips): | 30.12 |
| Total Buoyant Soil Volume (cu. Ft.): | 0.00 | Total Buoyant Soil Weight (Kips): | 0.00 |
| Total Effective Soil Weight (Kips): | 30.12 | Weight from the Concrete Block at Top (K): | 0.00 |
| Total Dry Concrete Volume (cu. Ft.): | 3125.00 | Total Dry Concrete Weight (Kips): | 468.75 |
| Total Buoyant Concrete Volume (cu. Ft.): | 0.00 | Total Buoyant Concrete Weight (Kips): | 0.00 |
| Total Effective Concrete Weight (Kips): | 468.75 | Total Vertical Load on Base (Kips): | 554.75 |

Check Soil Capacities:

| | | | | | | |
|--|--------|---|--|-------|------|-----|
| Calculated Maxium Net Soil Pressure under the base (psf): | 4237 | < | Allowable Factored Soil Bearing (psf): | 13500 | 0.31 | OK! |
| Allowable Foundation Overturning Resistance (kips-ft.): | 6310.8 | > | Design Factored Momont (kips-ft): | 5283 | 0.84 | OK! |
| Factor of Safety Against Overturning (O. R. Moment/Design Moment): | 1.19 | | | | | OK! |

Load/
Capacity
Ratio

Check the capacities of Reinforcing Concrete:

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

Concrete Pad:

| | | | | | | |
|---|--------|-----|--|--------|------|-----|
| One-Way Design Shear Capacity (L-Direction, Kips): | 1392.6 | > | One-Way Factored Shear (L-D. Kips): | 297.3 | 0.21 | OK! |
| One-Way Design Shear Capacity (W-Direction, Kips): | 1392.6 | > | One-Way Factored Shear (W-D., Kips) | 297.3 | 0.21 | OK! |
| One-Way Design Shear Capacity (Corner-Corner. Kips): | 1671.1 | > | One-Way Factored Shear (C-C, Kips): | 714.9 | 0.43 | OK! |
| Lower Steel Pad Reinforcement Ratio (L-Direct.): | 0.0009 | OK! | Lower Steel Pad Reinf. Ratio (W-Direc | 0.0009 | | |
| Lower Steel Pad Moment Capacity (L-Direction. Kips-ft): | 3973.1 | > | Moment at Bottom (L-Direct. K-Ft): | 760.3 | 0.19 | OK! |
| Lower Steel Pad Moment Capacity (W-Direction. Kips-ft): | 3973.1 | > | Moment at Bottom (W-Direct. K-Ft): | 760.3 | 0.19 | OK! |
| Lower Steel Pad Moment Capacity (Corner-Corner,K-ft): | 5607.7 | > | Moment at Bottom (C-C Dir. K-Ft): | 1075.2 | 0.19 | OK! |
| Upper Steel Pad Reinforcement Ratio (L-Direct.): | 0.0007 | OK! | Upper Steel Reinf. Ratio (W-Direct.): | 0.0007 | | |
| Upper Steel Pad Moment Capacity (L-Direction. Kips-ft): | 3185.5 | > | Moment at the top (L-Dir Kips-Ft): | 302.8 | 0.10 | OK! |
| Upper Steel Pad Moment Capacity (W-Direction. Kips-ft): | 3185.5 | > | Moment at the top (W-Dir Kips-Ft): | 302.8 | 0.10 | OK! |
| Upper Steel Pad Moment Capacity (Corner-Corner. K-ft): | 4497.9 | > | Moment at the top (C-C Direc. K-Ft): | 753.4 | 0.17 | OK! |

EXHIBIT 9

Antenna Mount Analysis



July 21, 2021

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: BOBOS00044A
Site Name: N/A

SBA Network Services Designation: **Site Number:** CT01210-S
Site Name: North Stonington
Application Number: 163157, v1

Engineering Firm Designation: **B+T Group Project Number:** 149430.003.01

Site Data: 267 Norwich Westerly Road, North Stonington, CT, 06359, New London County
Latitude 41.43706°, Longitude -71.88148°
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

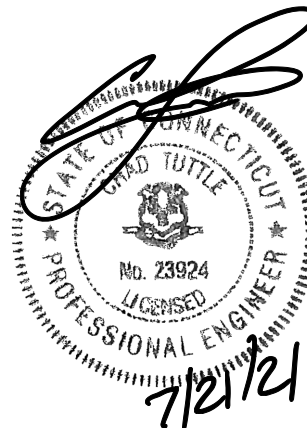
Sufficient Capacity
(Passing at 77.7%)

This analysis has been performed in accordance with the 2018 Connecticut State Building Code based upon an ultimate 3-second gust wind speed of 135 mph converted to a nominal 3-second gust wind speed of 105 mph per Section 1609.3 and Appendix N as required for use in the ANSI/TIA-222-G Standard per Exception #5 of Section 1609.1.1. Exposure Category C and Risk Category II were used in this analysis.

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: Rose Denny

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



Chad E. Tuttle, P.E.

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RISA-3D Output

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Additional Calculations

1) INTRODUCTION

The mount consists of Commscope Platform mount, Part #MC-PK8-DSH at 127 ft., attached to monopole at 267 Norwich Westerly Road, North Stonington, CT, 06359, New London 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-G-2-2005 Structural Standard for Antenna Supporting Structures and Antennas – Addendum 2 using a 3-second gust wind speed of 105 mph with no ice and 50 mph with 0.75 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 30° increments in the wind direction. The analyzed loading is detailed in Table 1.

Table 1 – Proposed Equipment Information

| Loading | RAD Center Elev. (ft.) | Position | Qty. | Description | Note |
|----------|------------------------|----------|------|----------------------------|------|
| Proposed | 127 | 1 | 3 | JMA Wireless MX08FRO665-21 | 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 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 |
|-----------|------------------|------------------|---------------------------|
| Colo App | Proposed Loading | Date: 06/23/2021 | SBA Network Services, LLC |
| RFDS | | Date: 05/26/2021 | |

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

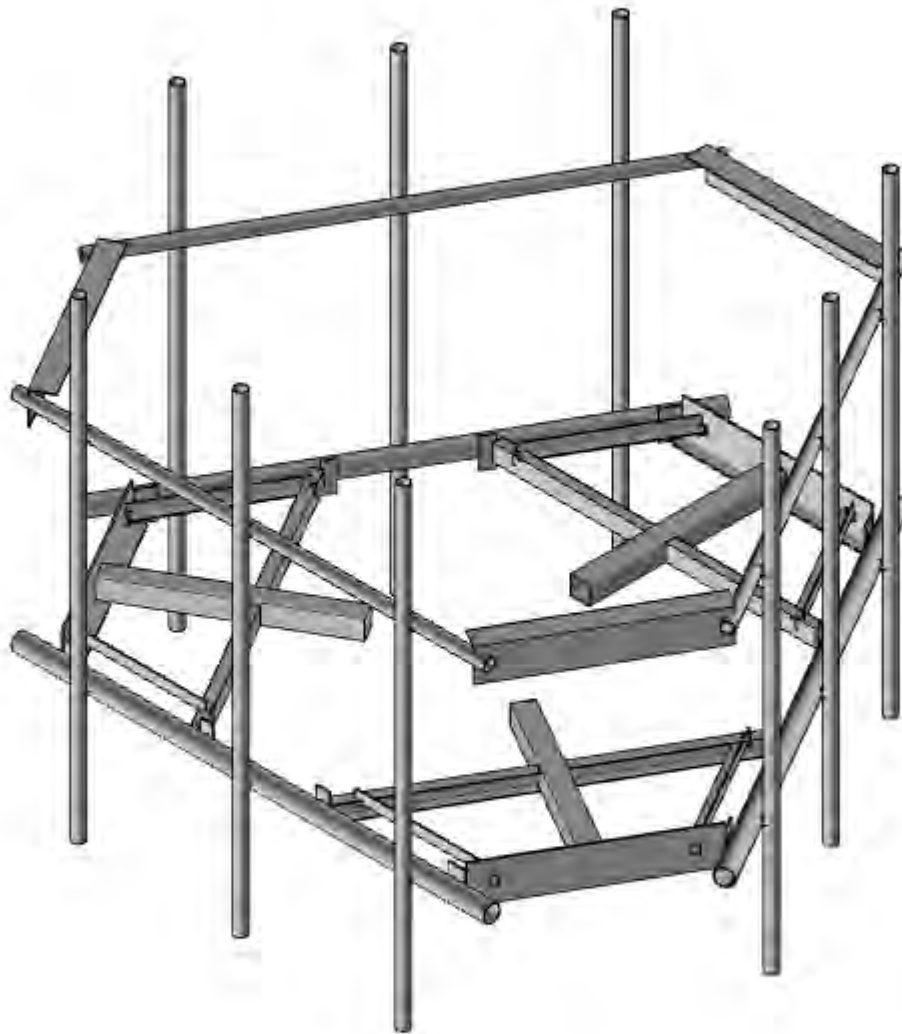
| Notes | Component | Elevation (ft.) | % Capacity | Pass / Fail |
|-------|-------------------|-----------------|------------|-------------|
| - | Main Horizontals | 127 | 14.7 | Pass |
| - | Support Rails | 127 | 77.7 | Pass |
| - | Support Tubes | 127 | 74.9 | Pass |
| - | Support Channels | 127 | 42.0 | Pass |
| - | Support Angles | 127 | 54.3 | Pass |
| - | Mount Pipes | 127 | 60.2 | Pass |
| - | Connection Plates | 127 | 28.1 | Pass |
| - | Connection Angles | 127 | 37.3 | Pass |
| - | Connection Bolts | 127 | 77.26 | 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-G standard for the proposed loading. (Refer to the RISA output for the specific members).

APPENDIX A

(RISA-3D Output)



Envelope Only Solution

B+T Group

VP

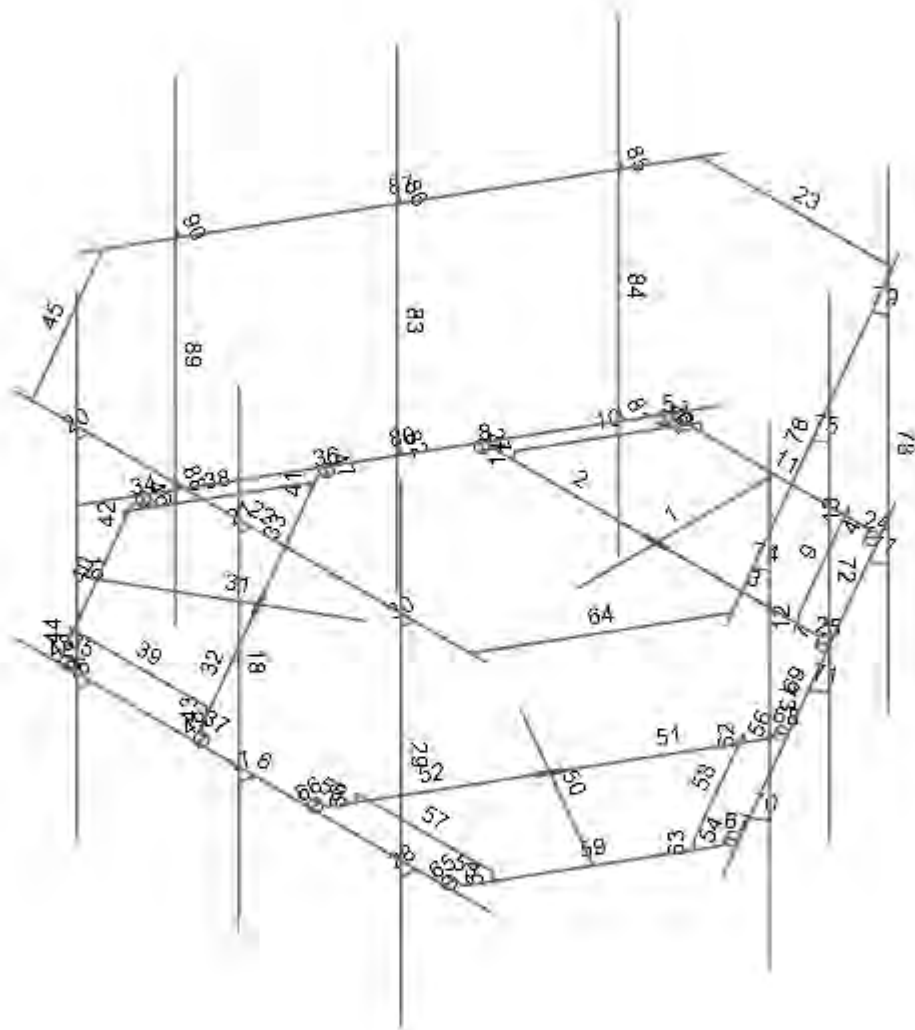
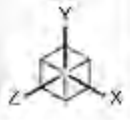
149430.003.01

CT01210-S - North Stonington

SK-1

Jul 21, 2021

149430_003_01_North Stonington...



Envelope Only Solution

B+T Group

VP

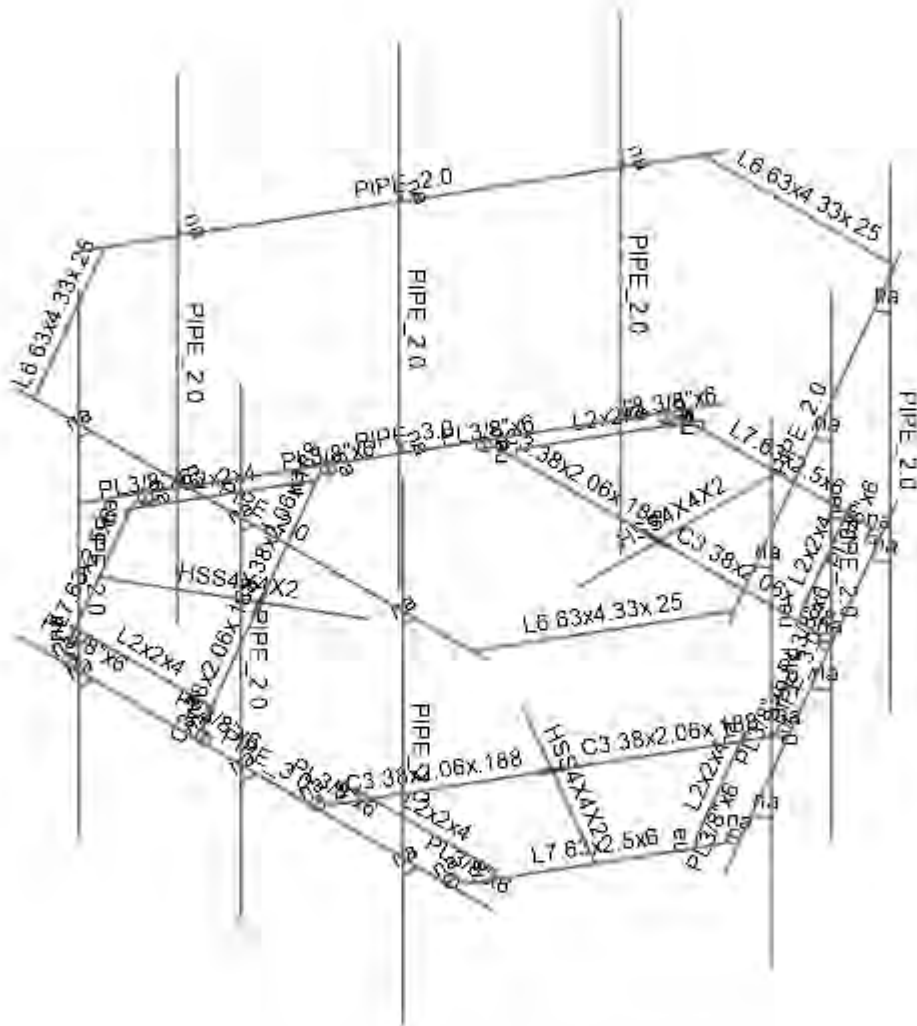
149430.003.01

CT01210-S - North Stonington

SK-2

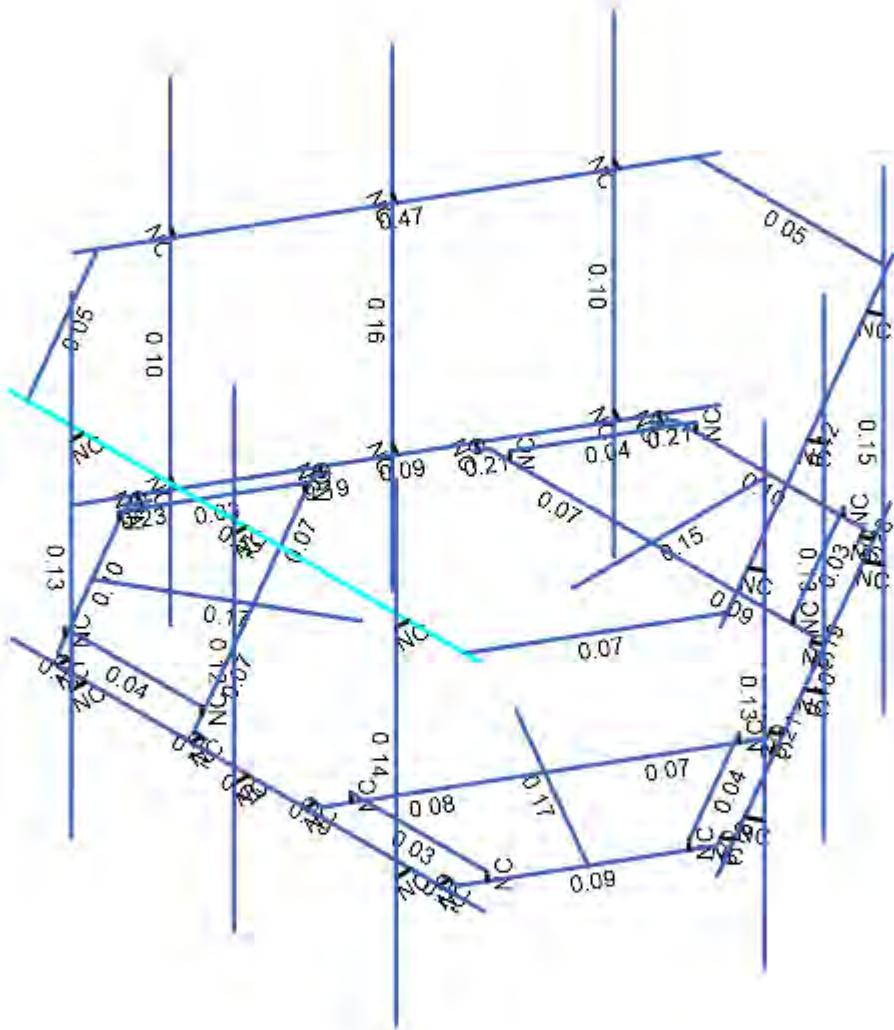
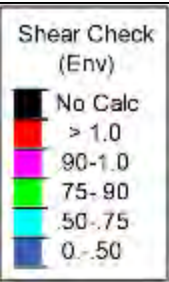
Jul 21, 2021

149430_003_01_North Stonington...



Envelope Only Solution

| | | |
|---------------|------------------------------|-----------------------------------|
| B+T Group | CT01210-S - North Stonington | SK-3 |
| VP | | Jul 21, 2021 |
| 149430.003.01 | | 149430_003_01_North Stonington... |



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

| | | |
|---------------|------------------------------|-----------------------------------|
| B+T Group | CT01210-S - North Stonington | SK-5 |
| VP | | Jul 21, 2021 |
| 149430.003.01 | | 149430_003_01_North Stonington... |

Hot Rolled Steel Section Sets

| | Label | Shape | Type | Design List | Material | Design Rule | Area [in ²] | Iyy [in ⁴] | Izz [in ⁴] | J [in ⁴] |
|---|--------|-----------------|--------|--------------|----------------|-------------|-------------------------|------------------------|------------------------|----------------------|
| 1 | MF-H1 | PIPE 3.0 | Beam | Pipe | A53 Gr.B | Typical | 2.07 | 2.85 | 2.85 | 5.69 |
| 2 | MF-H2 | PIPE 2.0 | Beam | Pipe | A53 Gr.B | Typical | 1.02 | 0.627 | 0.627 | 1.25 |
| 3 | SF-H1 | HSS4X4X2 | Beam | Tube | A500 Gr.B Rect | Typical | 1.77 | 4.4 | 4.4 | 6.91 |
| 4 | SF-H2 | C3.38x2.06x.188 | Beam | Channel | A36 Gr.36 | Typical | 1.339 | 0.562 | 2.4 | 0.015 |
| 5 | SF-H3 | L2x2x4 | Beam | Single Angle | A36 Gr.36 | Typical | 0.944 | 0.346 | 0.346 | 0.021 |
| 6 | SF-H4 | L7.63x2.5x6 | Beam | Single Angle | A36 Gr.36 | Typical | 3.658 | 1.307 | 22.092 | 0.163 |
| 7 | MF-P1 | PIPE 2.0 | Column | Pipe | A53 Gr.B | Typical | 1.02 | 0.627 | 0.627 | 1.25 |
| 8 | MF-CP1 | PL3/8"x6 | Beam | RECT | A36 Gr.36 | Typical | 2.25 | 0.026 | 6.75 | 0.101 |
| 9 | MF-H3 | L6.63x4.33x.25 | Beam | Single Angle | A36 Gr.36 | Typical | 2.678 | 4.383 | 12.502 | 0.054 |

Member Primary Data

| | Label | I Node | J Node | Rotate(deg) | Section/Shape | Type | Design List | Material | Design Rule |
|----|-------|--------|--------|-------------|---------------|--------|--------------|----------------|-------------|
| 1 | 1 | 1 | 2 | | SF-H1 | Beam | Tube | A500 Gr.B Rect | Typical |
| 2 | 2 | 5 | 3 | 180 | SF-H2 | Beam | Channel | A36 Gr.36 | Typical |
| 3 | 3 | 3 | 4 | 180 | SF-H2 | Beam | Channel | A36 Gr.36 | Typical |
| 4 | 4 | 7 | 8 | | MF-CP1 | Beam | RECT | A36 Gr.36 | Typical |
| 5 | 5 | 6 | 9 | | MF-CP1 | Beam | RECT | A36 Gr.36 | Typical |
| 6 | 6 | 14 | 15 | | MF-H1 | Beam | Pipe | A53 Gr.B | Typical |
| 7 | 7 | 16 | 4 | | MF-CP1 | Beam | RECT | A36 Gr.36 | Typical |
| 8 | 8 | 5 | 19 | | MF-CP1 | Beam | RECT | A36 Gr.36 | Typical |
| 9 | 9 | 25 | 24 | | SF-H3 | Beam | Single Angle | A36 Gr.36 | Typical |
| 10 | 10 | 23 | 22 | | SF-H3 | Beam | Single Angle | A36 Gr.36 | Typical |
| 11 | 11 | 6 | 7 | | SF-H4 | Beam | Single Angle | A36 Gr.36 | Typical |
| 12 | 12 | 28 | 24 | | RIGID | None | None | RIGID | Typical |
| 13 | 13 | 29 | 25 | | RIGID | None | None | RIGID | Typical |
| 14 | 14 | 27 | 23 | | RIGID | None | None | RIGID | Typical |
| 15 | 15 | 26 | 22 | | RIGID | None | None | RIGID | Typical |
| 16 | 16 | 32 | 30 | | RIGID | None | None | RIGID | Typical |
| 17 | 17 | 33 | 31 | | RIGID | None | None | RIGID | Typical |
| 18 | 18 | 37 | 35 | | MF-P1 | Column | Pipe | A53 Gr.B | Typical |
| 19 | 19 | 36 | 34 | | MF-P1 | Column | Pipe | A53 Gr.B | 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 | A53 Gr.B | Typical |
| 23 | 23 | 44 | 45 | 180 | MF-H3 | Beam | Single Angle | A36 Gr.36 | Typical |
| 24 | 24 | 11 | 10 | | RIGID | None | None | RIGID | Typical |
| 25 | 25 | 18 | 17 | | RIGID | None | None | RIGID | Typical |
| 26 | 26 | 13 | 12 | | RIGID | None | None | RIGID | Typical |
| 27 | 27 | 21 | 20 | | RIGID | None | None | RIGID | Typical |
| 28 | 28 | 47 | 46 | | RIGID | None | None | RIGID | Typical |
| 29 | 29 | 49 | 48 | | MF-P1 | Column | Pipe | A53 Gr.B | Typical |
| 30 | 30 | 50 | 51 | | RIGID | None | None | RIGID | 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 | 80 | 81 | 180 | MF-H3 | Beam | Single Angle | A36 Gr.36 | Typical |
| 46 | 46 | 63 | 62 | | RIGID | None | None | RIGID | Typical |

Member Primary Data (Continued)

| Label | I Node | J Node | Rotate(deg) | Section/Shape | Type | Design List | Material | Design Rule |
|-------|--------|--------|-------------|---------------|--------|-------------|----------------|-------------|
| 47 | 47 | 68 | 67 | | RIGID | None | RIGID | Typical |
| 48 | 48 | 65 | 64 | | RIGID | None | RIGID | Typical |
| 49 | 49 | 71 | 70 | | RIGID | None | RIGID | Typical |
| 50 | 50 | 82 | 83 | | SF-H1 | Beam | A500 Gr.B Rect | Typical |
| 51 | 51 | 86 | 84 | 180 | SF-H2 | Beam | A36 Gr.36 | Typical |
| 52 | 52 | 84 | 85 | 180 | SF-H2 | Beam | A36 Gr.36 | Typical |
| 53 | 53 | 88 | 89 | | MF-CP1 | Beam | A36 Gr.36 | Typical |
| 54 | 54 | 87 | 90 | | MF-CP1 | Beam | A36 Gr.36 | Typical |
| 55 | 55 | 95 | 85 | | MF-CP1 | Beam | A36 Gr.36 | Typical |
| 56 | 56 | 86 | 98 | | MF-CP1 | Beam | A36 Gr.36 | Typical |
| 57 | 57 | 104 | 103 | | SF-H3 | Beam | A36 Gr.36 | Typical |
| 58 | 58 | 102 | 101 | | SF-H3 | Beam | A36 Gr.36 | Typical |
| 59 | 59 | 87 | 88 | | SF-H4 | Beam | A36 Gr.36 | Typical |
| 60 | 60 | 107 | 103 | | RIGID | None | RIGID | Typical |
| 61 | 61 | 108 | 104 | | RIGID | None | RIGID | Typical |
| 62 | 62 | 106 | 102 | | RIGID | None | RIGID | Typical |
| 63 | 63 | 105 | 101 | | RIGID | None | RIGID | Typical |
| 64 | 64 | 109 | 110 | 180 | MF-H3 | Beam | A36 Gr.36 | Typical |
| 65 | 65 | 92 | 91 | | RIGID | None | RIGID | Typical |
| 66 | 66 | 97 | 96 | | RIGID | None | RIGID | Typical |
| 67 | 67 | 94 | 93 | | RIGID | None | RIGID | Typical |
| 68 | 68 | 100 | 99 | | RIGID | None | RIGID | Typical |
| 69 | 69 | 111 | 112 | | MF-H1 | Beam | A53 Gr.B | Typical |
| 70 | 70 | 115 | 113 | | RIGID | None | RIGID | Typical |
| 71 | 71 | 116 | 114 | | RIGID | None | RIGID | Typical |
| 72 | 72 | 120 | 118 | | MF-P1 | Column | A53 Gr.B | Typical |
| 73 | 73 | 119 | 117 | | MF-P1 | Column | A53 Gr.B | Typical |
| 74 | 74 | 121 | 123 | | RIGID | None | RIGID | Typical |
| 75 | 75 | 122 | 124 | | RIGID | None | RIGID | Typical |
| 76 | 76 | 125 | 126 | | MF-H2 | Beam | A53 Gr.B | Typical |
| 77 | 77 | 128 | 127 | | RIGID | None | RIGID | Typical |
| 78 | 78 | 130 | 129 | | MF-P1 | Column | A53 Gr.B | Typical |
| 79 | 79 | 131 | 132 | | RIGID | None | RIGID | Typical |
| 80 | 80 | 133 | 134 | | MF-H1 | Beam | A53 Gr.B | Typical |
| 81 | 81 | 137 | 135 | | RIGID | None | RIGID | Typical |
| 82 | 82 | 138 | 136 | | RIGID | None | RIGID | Typical |
| 83 | 83 | 142 | 140 | | MF-P1 | Column | A53 Gr.B | Typical |
| 84 | 84 | 141 | 139 | | MF-P1 | Column | A53 Gr.B | Typical |
| 85 | 85 | 143 | 145 | | RIGID | None | RIGID | Typical |
| 86 | 86 | 144 | 146 | | RIGID | None | RIGID | Typical |
| 87 | 87 | 147 | 148 | | MF-H2 | Beam | A53 Gr.B | Typical |
| 88 | 88 | 150 | 149 | | RIGID | None | RIGID | Typical |
| 89 | 89 | 152 | 151 | | MF-P1 | Column | A53 Gr.B | Typical |
| 90 | 90 | 153 | 154 | | RIGID | None | RIGID | Typical |

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 | Live Load a | LL | | 3 | | | |
| 10 | Live Load b | LL | | 3 | | | |
| 11 | Live Load c | LL | | 3 | | | |



Basic Load Cases (Continued)

| | BLC Description | Category | Y Gravity | Nodal | Point | Distributed | Area(Member) |
|----|----------------------------|----------|-----------|-------|-------|-------------|--------------|
| 12 | Live Load d | LL | | | | | |
| 13 | Maint LL 1 | LL | | | 1 | | |
| 14 | Maint LL 2 | LL | | | 1 | | |
| 15 | Maint LL 3 | LL | | | 1 | | |
| 16 | Maint LL 4 | LL | | | 1 | | |
| 17 | Maint LL 5 | LL | | | 1 | | |
| 18 | Maint LL 6 | LL | | | 1 | | |
| 19 | Maint LL 7 | LL | | | 1 | | |
| 20 | Maint LL 8 | LL | | | 1 | | |
| 21 | Maint LL 9 | LL | | | 1 | | |
| 22 | Maint LL 10 | LL | | | 1 | | |
| 23 | Maint LL 11 | LL | | | 1 | | |
| 24 | Maint LL 12 | LL | | | 1 | | |
| 25 | Maint LL 13 | LL | | | 1 | | |
| 26 | Maint LL 14 | LL | | | 1 | | |
| 27 | Maint LL 15 | LL | | | 1 | | |
| 31 | BLC 1 Transient Area Loads | None | | | | 9 | |
| 32 | BLC 8 Transient Area Loads | None | | | | 9 | |

Load Combinations

| | Description | Solve | PDelta | BLC | Factor | BLC | Factor | BLC | Factor | BLC | Factor |
|----|-------------------------|-------|--------|-----|--------|-----|--------|-----|--------|-----|--------|
| 1 | 1.4 Dead | Yes | Y | 1 | 1.4 | | | | | | |
| 2 | 0.9 D + 1.6 - 0 W | Yes | Y | 1 | 0.9 | 2 | 1.6 | | | | |
| 3 | 0.9 D + 1.6 - 30 W | Yes | Y | 1 | 0.9 | 2 | 1.386 | 3 | 0.8 | | |
| 4 | 0.9 D + 1.6 - 60 W | Yes | Y | 1 | 0.9 | 3 | 1.386 | 2 | 0.8 | | |
| 5 | 0.9 D + 1.6 - 90 W | Yes | Y | 1 | 0.9 | 3 | 1.6 | | | | |
| 6 | 0.9 D + 1.6 - 120 W | Yes | Y | 1 | 0.9 | 3 | 1.386 | 2 | -0.8 | | |
| 7 | 0.9 D + 1.6 - 150 W | Yes | Y | 1 | 0.9 | 2 | -1.386 | 3 | 0.8 | | |
| 8 | 0.9 D + 1.6 - 180 W | Yes | Y | 1 | 0.9 | 2 | -1.6 | | | | |
| 9 | 0.9 D + 1.6 - 210 W | Yes | Y | 1 | 0.9 | 2 | -1.386 | 3 | -0.8 | | |
| 10 | 0.9 D + 1.6 - 240 W | Yes | Y | 1 | 0.9 | 3 | -1.386 | 2 | -0.8 | | |
| 11 | 0.9 D + 1.6 - 270 W | Yes | Y | 1 | 0.9 | 3 | -1.6 | | | | |
| 12 | 0.9 D + 1.6 - 300 W | Yes | Y | 1 | 0.9 | 3 | -1.386 | 2 | 0.8 | | |
| 13 | 0.9 D + 1.6 - 330 W | Yes | Y | 1 | 0.9 | 2 | 1.386 | 3 | -0.8 | | |
| 14 | 1.2 D + 1.6 - 0 W | Yes | Y | 1 | 1.2 | 2 | 1.6 | | | | |
| 15 | 1.2 D + 1.6 - 30 W | Yes | Y | 1 | 1.2 | 2 | 1.386 | 3 | 0.8 | | |
| 16 | 1.2 D + 1.6 - 60 W | Yes | Y | 1 | 1.2 | 3 | 1.386 | 2 | 0.8 | | |
| 17 | 1.2 D + 1.6 - 90 W | Yes | Y | 1 | 1.2 | 3 | 1.6 | | | | |
| 18 | 1.2 D + 1.6 - 120 W | Yes | Y | 1 | 1.2 | 3 | 1.386 | 2 | -0.8 | | |
| 19 | 1.2 D + 1.6 - 150 W | Yes | Y | 1 | 1.2 | 2 | -1.386 | 3 | 0.8 | | |
| 20 | 1.2 D + 1.6 - 180 W | Yes | Y | 1 | 1.2 | 2 | -1.6 | | | | |
| 21 | 1.2 D + 1.6 - 210 W | Yes | Y | 1 | 1.2 | 2 | -1.386 | 3 | -0.8 | | |
| 22 | 1.2 D + 1.6 - 240 W | Yes | Y | 1 | 1.2 | 3 | -1.386 | 2 | -0.8 | | |
| 23 | 1.2 D + 1.6 - 270 W | Yes | Y | 1 | 1.2 | 3 | -1.6 | | | | |
| 24 | 1.2 D + 1.6 - 300 W | Yes | Y | 1 | 1.2 | 3 | -1.386 | 2 | 0.8 | | |
| 25 | 1.2 D + 1.6 - 330 W | Yes | Y | 1 | 1.2 | 2 | 1.386 | 3 | -0.8 | | |
| 26 | 0.9 D + 1.6 - 0 W/Ice | Yes | Y | 1 | 0.9 | 4 | 1.6 | | | 8 | 1 |
| 27 | 0.9 D + 1.6 - 30 W/Ice | Yes | Y | 1 | 0.9 | 4 | 1.386 | 5 | 0.8 | 8 | 1 |
| 28 | 0.9 D + 1.6 - 60 W/Ice | Yes | Y | 1 | 0.9 | 5 | 1.386 | 4 | 0.8 | 8 | 1 |
| 29 | 0.9 D + 1.6 - 90 W/Ice | Yes | Y | 1 | 0.9 | 5 | 1.6 | | | 8 | 1 |
| 30 | 0.9 D + 1.6 - 120 W/Ice | Yes | Y | 1 | 0.9 | 5 | 1.386 | 4 | -0.8 | 8 | 1 |
| 31 | 0.9 D + 1.6 - 150 W/Ice | Yes | Y | 1 | 0.9 | 4 | -1.386 | 5 | 0.8 | 8 | 1 |
| 32 | 0.9 D + 1.6 - 180 W/Ice | Yes | Y | 1 | 0.9 | 4 | -1.6 | | | 8 | 1 |
| 33 | 0.9 D + 1.6 - 210 W/Ice | Yes | Y | 1 | 0.9 | 4 | -1.386 | 5 | -0.8 | 8 | 1 |
| 34 | 0.9 D + 1.6 - 240 W/Ice | Yes | Y | 1 | 0.9 | 5 | -1.386 | 4 | -0.8 | 8 | 1 |
| 35 | 0.9 D + 1.6 - 270 W/Ice | Yes | Y | 1 | 0.9 | 5 | -1.6 | | | 8 | 1 |
| 36 | 0.9 D + 1.6 - 300 W/Ice | Yes | Y | 1 | 0.9 | 5 | -1.386 | 4 | 0.8 | 8 | 1 |
| 37 | 0.9 D + 1.6 - 330 W/Ice | Yes | Y | 1 | 0.9 | 4 | 1.386 | 5 | -0.8 | 8 | 1 |



Load Combinations (Continued)

| | Description | Solve | PDelta | BLC | Factor | BLC | Factor | BLC | Factor | BLC | Factor |
|----|------------------------------------|-------|--------|-----|--------|-----|--------|-----|--------|-----|--------|
| 38 | 1.2 D + 1.0 - 0 W/Ice | Yes | Y | 1 | 1.2 | 4 | 1 | | | 8 | 1 |
| 39 | 1.2 D + 1.0 - 30 W/Ice | Yes | Y | 1 | 1.2 | 4 | 0.866 | 5 | 0.5 | 8 | 1 |
| 40 | 1.2 D + 1.0 - 60 W/Ice | Yes | Y | 1 | 1.2 | 5 | 0.866 | 4 | 0.5 | 8 | 1 |
| 41 | 1.2 D + 1.0 - 90 W/Ice | Yes | Y | 1 | 1.2 | 5 | 1 | | | 8 | 1 |
| 42 | 1.2 D + 1.0 - 120 W/Ice | Yes | Y | 1 | 1.2 | 5 | 0.866 | 4 | -0.5 | 8 | 1 |
| 43 | 1.2 D + 1.0 - 150 W/Ice | Yes | Y | 1 | 1.2 | 4 | -0.866 | 5 | 0.5 | 8 | 1 |
| 44 | 1.2 D + 1.0 - 180 W/Ice | Yes | Y | 1 | 1.2 | 4 | -1 | | | 8 | 1 |
| 45 | 1.2 D + 1.0 - 210 W/Ice | Yes | Y | 1 | 1.2 | 4 | -0.866 | 5 | -0.5 | 8 | 1 |
| 46 | 1.2 D + 1.0 - 240 W/Ice | Yes | Y | 1 | 1.2 | 5 | -0.866 | 4 | -0.5 | 8 | 1 |
| 47 | 1.2 D + 1.0 - 270 W/Ice | Yes | Y | 1 | 1.2 | 5 | -1 | | | 8 | 1 |
| 48 | 1.2 D + 1.0 - 300 W/Ice | Yes | Y | 1 | 1.2 | 5 | -0.866 | 4 | 0.5 | 8 | 1 |
| 49 | 1.2 D + 1.0 - 330 W/Ice | Yes | Y | 1 | 1.2 | 4 | 0.866 | 5 | -0.5 | 8 | 1 |
| 50 | 1.2 D + 1.5 LL a + Service - 0 W | Yes | Y | 1 | 1.2 | 6 | 1 | | | 9 | 1.5 |
| 51 | 1.2 D + 1.5 LL a + Service - 30 W | Yes | Y | 1 | 1.2 | 6 | 0.866 | 7 | 0.5 | 9 | 1.5 |
| 52 | 1.2 D + 1.5 LL a + Service - 60 W | Yes | Y | 1 | 1.2 | 7 | 0.866 | 6 | 0.5 | 9 | 1.5 |
| 53 | 1.2 D + 1.5 LL a + Service - 90 W | Yes | Y | 1 | 1.2 | 7 | 1 | | | 9 | 1.5 |
| 54 | 1.2 D + 1.5 LL a + Service - 120 W | Yes | Y | 1 | 1.2 | 7 | 0.866 | 6 | -0.5 | 9 | 1.5 |
| 55 | 1.2 D + 1.5 LL a + Service - 150 W | Yes | Y | 1 | 1.2 | 6 | -0.866 | 7 | 0.5 | 9 | 1.5 |
| 56 | 1.2 D + 1.5 LL a + Service - 180 W | Yes | Y | 1 | 1.2 | 6 | -1 | | | 9 | 1.5 |
| 57 | 1.2 D + 1.5 LL a + Service - 210 W | Yes | Y | 1 | 1.2 | 6 | -0.866 | 7 | -0.5 | 9 | 1.5 |
| 58 | 1.2 D + 1.5 LL a + Service - 240 W | Yes | Y | 1 | 1.2 | 7 | -0.866 | 6 | -0.5 | 9 | 1.5 |
| 59 | 1.2 D + 1.5 LL a + Service - 270 W | Yes | Y | 1 | 1.2 | 7 | -1 | | | 9 | 1.5 |
| 60 | 1.2 D + 1.5 LL a + Service - 300 W | Yes | Y | 1 | 1.2 | 7 | -0.866 | 6 | 0.5 | 9 | 1.5 |
| 61 | 1.2 D + 1.5 LL a + Service - 330 W | Yes | Y | 1 | 1.2 | 6 | 0.866 | 7 | -0.5 | 9 | 1.5 |
| 62 | 1.2 D + 1.5 LL b + Service - 0 W | Yes | Y | 1 | 1.2 | 6 | 1 | | | 10 | 1.5 |
| 63 | 1.2 D + 1.5 LL b + Service - 30 W | Yes | Y | 1 | 1.2 | 6 | 0.866 | 7 | 0.5 | 10 | 1.5 |
| 64 | 1.2 D + 1.5 LL b + Service - 60 W | Yes | Y | 1 | 1.2 | 7 | 0.866 | 6 | 0.5 | 10 | 1.5 |
| 65 | 1.2 D + 1.5 LL b + Service - 90 W | Yes | Y | 1 | 1.2 | 7 | 1 | | | 10 | 1.5 |
| 66 | 1.2 D + 1.5 LL b + Service - 120 W | Yes | Y | 1 | 1.2 | 7 | 0.866 | 6 | -0.5 | 10 | 1.5 |
| 67 | 1.2 D + 1.5 LL b + Service - 150 W | Yes | Y | 1 | 1.2 | 6 | -0.866 | 7 | 0.5 | 10 | 1.5 |
| 68 | 1.2 D + 1.5 LL b + Service - 180 W | Yes | Y | 1 | 1.2 | 6 | -1 | | | 10 | 1.5 |
| 69 | 1.2 D + 1.5 LL b + Service - 210 W | Yes | Y | 1 | 1.2 | 6 | -0.866 | 7 | -0.5 | 10 | 1.5 |
| 70 | 1.2 D + 1.5 LL b + Service - 240 W | Yes | Y | 1 | 1.2 | 7 | -0.866 | 6 | -0.5 | 10 | 1.5 |
| 71 | 1.2 D + 1.5 LL b + Service - 270 W | Yes | Y | 1 | 1.2 | 7 | -1 | | | 10 | 1.5 |
| 72 | 1.2 D + 1.5 LL b + Service - 300 W | Yes | Y | 1 | 1.2 | 7 | -0.866 | 6 | 0.5 | 10 | 1.5 |
| 73 | 1.2 D + 1.5 LL b + Service - 330 W | Yes | Y | 1 | 1.2 | 6 | 0.866 | 7 | -0.5 | 10 | 1.5 |
| 74 | 1.2 D + 1.5 LL c + Service - 0 W | Yes | Y | 1 | 1.2 | 6 | 1 | | | 11 | 1.5 |
| 75 | 1.2 D + 1.5 LL c + Service - 30 W | Yes | Y | 1 | 1.2 | 6 | 0.866 | 7 | 0.5 | 11 | 1.5 |
| 76 | 1.2 D + 1.5 LL c + Service - 60 W | Yes | Y | 1 | 1.2 | 7 | 0.866 | 6 | 0.5 | 11 | 1.5 |
| 77 | 1.2 D + 1.5 LL c + Service - 90 W | Yes | Y | 1 | 1.2 | 7 | 1 | | | 11 | 1.5 |
| 78 | 1.2 D + 1.5 LL c + Service - 120 W | Yes | Y | 1 | 1.2 | 7 | 0.866 | 6 | -0.5 | 11 | 1.5 |
| 79 | 1.2 D + 1.5 LL c + Service - 150 W | Yes | Y | 1 | 1.2 | 6 | -0.866 | 7 | 0.5 | 11 | 1.5 |
| 80 | 1.2 D + 1.5 LL c + Service - 180 W | Yes | Y | 1 | 1.2 | 6 | -1 | | | 11 | 1.5 |
| 81 | 1.2 D + 1.5 LL c + Service - 210 W | Yes | Y | 1 | 1.2 | 6 | -0.866 | 7 | -0.5 | 11 | 1.5 |
| 82 | 1.2 D + 1.5 LL c + Service - 240 W | Yes | Y | 1 | 1.2 | 7 | -0.866 | 6 | -0.5 | 11 | 1.5 |
| 83 | 1.2 D + 1.5 LL c + Service - 270 W | Yes | Y | 1 | 1.2 | 7 | -1 | | | 11 | 1.5 |
| 84 | 1.2 D + 1.5 LL c + Service - 300 W | Yes | Y | 1 | 1.2 | 7 | -0.866 | 6 | 0.5 | 11 | 1.5 |
| 85 | 1.2 D + 1.5 LL c + Service - 330 W | Yes | Y | 1 | 1.2 | 6 | 0.866 | 7 | -0.5 | 11 | 1.5 |
| 86 | 1.2 D + 1.5 LL d + Service - 0 W | Yes | Y | 1 | 1.2 | 6 | 1 | | | 12 | 1.5 |
| 87 | 1.2 D + 1.5 LL d + Service - 30 W | Yes | Y | 1 | 1.2 | 6 | 0.866 | 7 | 0.5 | 12 | 1.5 |
| 88 | 1.2 D + 1.5 LL d + Service - 60 W | Yes | Y | 1 | 1.2 | 7 | 0.866 | 6 | 0.5 | 12 | 1.5 |
| 89 | 1.2 D + 1.5 LL d + Service - 90 W | Yes | Y | 1 | 1.2 | 7 | 1 | | | 12 | 1.5 |
| 90 | 1.2 D + 1.5 LL d + Service - 120 W | Yes | Y | 1 | 1.2 | 7 | 0.866 | 6 | -0.5 | 12 | 1.5 |
| 91 | 1.2 D + 1.5 LL d + Service - 150 W | Yes | Y | 1 | 1.2 | 6 | -0.866 | 7 | 0.5 | 12 | 1.5 |
| 92 | 1.2 D + 1.5 LL d + Service - 180 W | Yes | Y | 1 | 1.2 | 6 | -1 | | | 12 | 1.5 |
| 93 | 1.2 D + 1.5 LL d + Service - 210 W | Yes | Y | 1 | 1.2 | 6 | -0.866 | 7 | -0.5 | 12 | 1.5 |
| 94 | 1.2 D + 1.5 LL d + Service - 240 W | Yes | Y | 1 | 1.2 | 7 | -0.866 | 6 | -0.5 | 12 | 1.5 |
| 95 | 1.2 D + 1.5 LL d + Service - 270 W | Yes | Y | 1 | 1.2 | 7 | -1 | | | 12 | 1.5 |



Load Combinations (Continued)

| | Description | Solve | PDelta | BLC | Factor | BLC | Factor | BLC | Factor | BLC | Factor |
|-----|------------------------------------|-------|--------|-----|--------|-----|--------|-----|--------|-----|--------|
| 96 | 1.2 D + 1.5 LL d + Service - 300 W | Yes | Y | 1 | 1.2 | 7 | -0.866 | 6 | 0.5 | 12 | 1.5 |
| 97 | 1.2 D + 1.5 LL d + Service - 330 W | Yes | Y | 1 | 1.2 | 6 | 0.866 | 7 | -0.5 | 12 | 1.5 |
| 98 | 1.2 D + 1.5 LL Maint (1) | Yes | Y | 1 | 1.2 | | | | | 13 | 1.5 |
| 99 | 1.2 D + 1.5 LL Maint (2) | Yes | Y | 1 | 1.2 | | | | | 14 | 1.5 |
| 100 | 1.2 D + 1.5 LL Maint (3) | Yes | Y | 1 | 1.2 | | | | | 15 | 1.5 |
| 101 | 1.2 D + 1.5 LL Maint (4) | Yes | Y | 1 | 1.2 | | | | | 16 | 1.5 |
| 102 | 1.2 D + 1.5 LL Maint (5) | Yes | Y | 1 | 1.2 | | | | | 17 | 1.5 |
| 103 | 1.2 D + 1.5 LL Maint (6) | Yes | Y | 1 | 1.2 | | | | | 18 | 1.5 |
| 104 | 1.2 D + 1.5 LL Maint (7) | Yes | Y | 1 | 1.2 | | | | | 19 | 1.5 |
| 105 | 1.2 D + 1.5 LL Maint (8) | Yes | Y | 1 | 1.2 | | | | | 20 | 1.5 |
| 106 | 1.2 D + 1.5 LL Maint (9) | Yes | Y | 1 | 1.2 | | | | | 21 | 1.5 |
| 107 | 1.2 D + 1.5 LL Maint (10) | Yes | Y | 1 | 1.2 | | | | | 22 | 1.5 |
| 108 | 1.2 D + 1.5 LL Maint (11) | Yes | Y | 1 | 1.2 | | | | | 23 | 1.5 |
| 109 | 1.2 D + 1.5 LL Maint (12) | Yes | Y | 1 | 1.2 | | | | | 24 | 1.5 |
| 110 | 1.2 D + 1.5 LL Maint (13) | Yes | Y | 1 | 1.2 | | | | | 25 | 1.5 |
| 111 | 1.2 D + 1.5 LL Maint (14) | Yes | Y | 1 | 1.2 | | | | | 26 | 1.5 |
| 112 | 1.2 D + 1.5 LL Maint (15) | Yes | Y | 1 | 1.2 | | | | | 27 | 1.5 |
| 113 | 1.2 D + 1.5 LL Maint (16) | Yes | Y | 1 | 1.2 | | | | | 28 | 1.5 |
| 114 | 1.2 D + 1.5 LL Maint (17) | Yes | Y | 1 | 1.2 | | | | | 29 | 1.5 |
| 115 | 1.2 D + 1.5 LL Maint (18) | Yes | Y | 1 | 1.2 | | | | | 30 | 1.5 |

Member Point Loads (BLC 1 : Dead)

| | Member Label | Direction | Magnitude [k, k-ft] | Location [(ft, %)] |
|----|--------------|-----------|---------------------|--------------------|
| 1 | 29 | Y | -0.032 | %15 |
| 2 | 29 | Y | -0.032 | %85 |
| 3 | 29 | Y | -0.075 | %20 |
| 4 | 29 | Y | -0.064 | %50 |
| 5 | 29 | Y | 0 | 0 |
| 6 | 89 | Y | -0.032 | %15 |
| 7 | 89 | Y | -0.032 | %85 |
| 8 | 89 | Y | -0.075 | %20 |
| 9 | 89 | Y | -0.064 | %50 |
| 10 | 89 | Y | 0 | 0 |
| 11 | 78 | Y | -0.032 | %15 |
| 12 | 78 | Y | -0.032 | %85 |
| 13 | 78 | Y | -0.075 | %20 |
| 14 | 78 | Y | -0.064 | %50 |
| 15 | 78 | Y | 0 | 0 |
| 16 | 31 | Y | -0.022 | %20 |
| 17 | 31 | Y | 0 | 0 |
| 18 | 31 | Y | 0 | 0 |
| 19 | 31 | Y | 0 | 0 |
| 20 | 31 | Y | 0 | 0 |

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

| | Member Label | Direction | Magnitude [k, k-ft] | Location [(ft, %)] |
|----|--------------|-----------|---------------------|--------------------|
| 1 | 29 | Z | -0.223 | %15 |
| 2 | 29 | Z | -0.223 | %85 |
| 3 | 29 | Z | -0.07 | %20 |
| 4 | 29 | Z | -0.07 | %50 |
| 5 | 29 | Z | 0 | 0 |
| 6 | 89 | Z | -0.223 | %15 |
| 7 | 89 | Z | -0.223 | %85 |
| 8 | 89 | Z | -0.07 | %20 |
| 9 | 89 | Z | -0.07 | %50 |
| 10 | 89 | Z | 0 | 0 |
| 11 | 78 | Z | -0.223 | %15 |



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

| | Member Label | Direction | Magnitude [k, k-ft] | Location [(ft, %)] |
|----|--------------|-----------|---------------------|--------------------|
| 12 | 78 | Z | -0.223 | %85 |
| 13 | 78 | Z | -0.07 | %20 |
| 14 | 78 | Z | -0.07 | %50 |
| 15 | 78 | Z | 0 | 0 |
| 16 | 31 | Z | -0.072 | %20 |
| 17 | 31 | Z | 0 | 0 |
| 18 | 31 | Z | 0 | 0 |
| 19 | 31 | Z | 0 | 0 |
| 20 | 31 | Z | 0 | 0 |

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

| | Member Label | Direction | Magnitude [k, k-ft] | Location [(ft, %)] |
|----|--------------|-----------|---------------------|--------------------|
| 1 | 29 | X | -0.089 | %15 |
| 2 | 29 | X | -0.089 | %85 |
| 3 | 29 | X | -0.042 | %20 |
| 4 | 29 | X | -0.037 | %50 |
| 5 | 29 | X | 0 | 0 |
| 6 | 89 | X | -0.089 | %15 |
| 7 | 89 | X | -0.089 | %85 |
| 8 | 89 | X | -0.042 | %20 |
| 9 | 89 | X | -0.037 | %50 |
| 10 | 89 | X | 0 | 0 |
| 11 | 78 | X | -0.089 | %15 |
| 12 | 78 | X | -0.089 | %85 |
| 13 | 78 | X | -0.042 | %20 |
| 14 | 78 | X | -0.037 | %50 |
| 15 | 78 | X | 0 | 0 |
| 16 | 31 | X | -0.04 | %20 |
| 17 | 31 | X | 0 | 0 |
| 18 | 31 | X | 0 | 0 |
| 19 | 31 | X | 0 | 0 |
| 20 | 31 | X | 0 | 0 |

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

| | Member Label | Direction | Magnitude [k, k-ft] | Location [(ft, %)] |
|----|--------------|-----------|---------------------|--------------------|
| 1 | 29 | Z | -0.062 | %15 |
| 2 | 29 | Z | -0.062 | %85 |
| 3 | 29 | Z | -0.024 | %20 |
| 4 | 29 | Z | -0.024 | %50 |
| 5 | 29 | Z | 0 | 0 |
| 6 | 89 | Z | -0.062 | %15 |
| 7 | 89 | Z | -0.062 | %85 |
| 8 | 89 | Z | -0.024 | %20 |
| 9 | 89 | Z | -0.024 | %50 |
| 10 | 89 | Z | 0 | 0 |
| 11 | 78 | Z | -0.062 | %15 |
| 12 | 78 | Z | -0.062 | %85 |
| 13 | 78 | Z | -0.024 | %20 |
| 14 | 78 | Z | -0.024 | %50 |
| 15 | 78 | Z | 0 | 0 |
| 16 | 31 | Z | -0.024 | %20 |
| 17 | 31 | Z | 0 | 0 |
| 18 | 31 | Z | 0 | 0 |
| 19 | 31 | Z | 0 | 0 |
| 20 | 31 | Z | 0 | 0 |

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

| | Member Label | Direction | Magnitude [k, k-ft] | Location [(ft, %)] |
|----|--------------|-----------|---------------------|--------------------|
| 1 | 29 | X | -0.03 | %15 |
| 2 | 29 | X | -0.03 | %85 |
| 3 | 29 | X | -0.016 | %20 |
| 4 | 29 | X | -0.015 | %50 |
| 5 | 29 | X | 0 | 0 |
| 6 | 89 | X | -0.03 | %15 |
| 7 | 89 | X | -0.03 | %85 |
| 8 | 89 | X | -0.016 | %20 |
| 9 | 89 | X | -0.015 | %50 |
| 10 | 89 | X | 0 | 0 |
| 11 | 78 | X | -0.03 | %15 |
| 12 | 78 | X | -0.03 | %85 |
| 13 | 78 | X | -0.016 | %20 |
| 14 | 78 | X | -0.015 | %50 |
| 15 | 78 | X | 0 | 0 |
| 16 | 31 | X | -0.016 | %20 |
| 17 | 31 | X | 0 | 0 |
| 18 | 31 | X | 0 | 0 |
| 19 | 31 | X | 0 | 0 |
| 20 | 31 | X | 0 | 0 |

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

| | Member Label | Direction | Magnitude [k, k-ft] | Location [(ft, %)] |
|----|--------------|-----------|---------------------|--------------------|
| 1 | 29 | Z | -0.018 | %15 |
| 2 | 29 | Z | -0.018 | %85 |
| 3 | 29 | Z | -0.006 | %20 |
| 4 | 29 | Z | -0.006 | %50 |
| 5 | 29 | Z | 0 | 0 |
| 6 | 89 | Z | -0.018 | %15 |
| 7 | 89 | Z | -0.018 | %85 |
| 8 | 89 | Z | -0.006 | %20 |
| 9 | 89 | Z | -0.006 | %50 |
| 10 | 89 | Z | 0 | 0 |
| 11 | 78 | Z | -0.018 | %15 |
| 12 | 78 | Z | -0.018 | %85 |
| 13 | 78 | Z | -0.006 | %20 |
| 14 | 78 | Z | -0.006 | %50 |
| 15 | 78 | Z | 0 | 0 |
| 16 | 31 | Z | -0.006 | %20 |
| 17 | 31 | Z | 0 | 0 |
| 18 | 31 | Z | 0 | 0 |
| 19 | 31 | Z | 0 | 0 |
| 20 | 31 | Z | 0 | 0 |

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

| | Member Label | Direction | Magnitude [k, k-ft] | Location [(ft, %)] |
|----|--------------|-----------|---------------------|--------------------|
| 1 | 29 | X | -0.007 | %15 |
| 2 | 29 | X | -0.007 | %85 |
| 3 | 29 | X | -0.004 | %20 |
| 4 | 29 | X | -0.003 | %50 |
| 5 | 29 | X | 0 | 0 |
| 6 | 89 | X | -0.007 | %15 |
| 7 | 89 | X | -0.007 | %85 |
| 8 | 89 | X | -0.004 | %20 |
| 9 | 89 | X | -0.003 | %50 |
| 10 | 89 | X | 0 | 0 |
| 11 | 78 | X | -0.007 | %15 |

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

| | Member Label | Direction | Magnitude [k, k-ft] | Location [(ft, %)] |
|----|--------------|-----------|---------------------|--------------------|
| 12 | 78 | X | -0.007 | %85 |
| 13 | 78 | X | -0.004 | %20 |
| 14 | 78 | X | -0.003 | %50 |
| 15 | 78 | X | 0 | 0 |
| 16 | 31 | X | -0.003 | %20 |
| 17 | 31 | X | 0 | 0 |
| 18 | 31 | X | 0 | 0 |
| 19 | 31 | X | 0 | 0 |
| 20 | 31 | X | 0 | 0 |

Member Point Loads (BLC 8 : Ice)

| | Member Label | Direction | Magnitude [k, k-ft] | Location [(ft, %)] |
|----|--------------|-----------|---------------------|--------------------|
| 1 | 29 | Y | -0.146 | %15 |
| 2 | 29 | Y | -0.146 | %85 |
| 3 | 29 | Y | -0.053 | %20 |
| 4 | 29 | Y | -0.051 | %50 |
| 5 | 29 | Y | 0 | 0 |
| 6 | 89 | Y | -0.146 | %15 |
| 7 | 89 | Y | -0.146 | %85 |
| 8 | 89 | Y | -0.053 | %20 |
| 9 | 89 | Y | -0.051 | %50 |
| 10 | 89 | Y | 0 | 0 |
| 11 | 78 | Y | -0.146 | %15 |
| 12 | 78 | Y | -0.146 | %85 |
| 13 | 78 | Y | -0.053 | %20 |
| 14 | 78 | Y | -0.051 | %50 |
| 15 | 78 | Y | 0 | 0 |
| 16 | 31 | Y | -0.053 | %20 |
| 17 | 31 | Y | 0 | 0 |
| 18 | 31 | Y | 0 | 0 |
| 19 | 31 | Y | 0 | 0 |
| 20 | 31 | Y | 0 | 0 |

Member Point Loads (BLC 13 : Maint LL 1)

| | Member Label | Direction | Magnitude [k, k-ft] | Location [(ft, %)] |
|---|--------------|-----------|---------------------|--------------------|
| 1 | 22 | Y | -0.25 | %5 |

Member Point Loads (BLC 14 : Maint LL 2)

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

Member Point Loads (BLC 15 : Maint LL 3)

| | Member Label | Direction | Magnitude [k, k-ft] | Location [(ft, %)] |
|---|--------------|-----------|---------------------|--------------------|
| 1 | 87 | Y | -0.25 | %5 |

Member Point Loads (BLC 16 : Maint LL 4)

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

Member Point Loads (BLC 17 : Maint LL 5)

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



Member Point Loads (BLC 18 : Maint LL 6)

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

Member Point Loads (BLC 19 : Maint LL 7)

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

Member Point Loads (BLC 20 : Maint LL 8)

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

Member Point Loads (BLC 21 : Maint LL 9)

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

Member Point Loads (BLC 22 : Maint LL 10)

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

Member Point Loads (BLC 23 : Maint LL 11)

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

Member Point Loads (BLC 24 : Maint LL 12)

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

Member Point Loads (BLC 25 : Maint LL 13)

| | Member Label | Direction | Magnitude [k, k-ft] | Location [(ft, %)] |
|---|--------------|-----------|---------------------|--------------------|
| 1 | 31 | Y | -0.25 | %95 |

Member Point Loads (BLC 26 : Maint LL 14)

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

Member Point Loads (BLC 27 : 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 | -0.017 | -0.017 | 0 | %100 |
| 2 | 2 | Z | -0.015 | -0.015 | 0 | %100 |
| 3 | 3 | Z | -0.015 | -0.015 | 0 | %100 |
| 4 | 4 | Z | -0.021 | -0.021 | 0 | %100 |
| 5 | 5 | Z | -0.021 | -0.021 | 0 | %100 |
| 6 | 6 | Z | -0.011 | -0.011 | 0 | %100 |
| 7 | 7 | Z | -0.021 | -0.021 | 0 | %100 |
| 8 | 8 | Z | -0.021 | -0.021 | 0 | %100 |
| 9 | 9 | Z | -0.01 | -0.01 | 0 | %100 |
| 10 | 10 | Z | -0.01 | -0.01 | 0 | %100 |
| 11 | 11 | Z | -0.029 | -0.029 | 0 | %100 |
| 12 | 18 | Z | -0.009 | -0.009 | 0 | %100 |
| 13 | 19 | Z | -0.009 | -0.009 | 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, %)] |
|--------|-------|-----------|---|---------------------------------------|--------------------------|------------------------|
| 14 | 22 | Z | -0.009 | -0.009 | 0 | %100 |
| 15 | 23 | Z | -0.026 | -0.026 | 0 | %100 |
| 16 | 29 | Z | -0.009 | -0.009 | 0 | %100 |
| 17 | 31 | Z | -0.017 | -0.017 | 0 | %100 |
| 18 | 32 | Z | -0.015 | -0.015 | 0 | %100 |
| 19 | 33 | Z | -0.015 | -0.015 | 0 | %100 |
| 20 | 34 | Z | -0.021 | -0.021 | 0 | %100 |
| 21 | 35 | Z | -0.021 | -0.021 | 0 | %100 |
| 22 | 36 | Z | -0.021 | -0.021 | 0 | %100 |
| 23 | 37 | Z | -0.021 | -0.021 | 0 | %100 |
| 24 | 38 | Z | -0.01 | -0.01 | 0 | %100 |
| 25 | 39 | Z | -0.01 | -0.01 | 0 | %100 |
| 26 | 40 | Z | -0.029 | -0.029 | 0 | %100 |
| 27 | 45 | Z | -0.026 | -0.026 | 0 | %100 |
| 28 | 50 | Z | -0.017 | -0.017 | 0 | %100 |
| 29 | 51 | Z | -0.015 | -0.015 | 0 | %100 |
| 30 | 52 | Z | -0.015 | -0.015 | 0 | %100 |
| 31 | 53 | Z | -0.021 | -0.021 | 0 | %100 |
| 32 | 54 | Z | -0.021 | -0.021 | 0 | %100 |
| 33 | 55 | Z | -0.021 | -0.021 | 0 | %100 |
| 34 | 56 | Z | -0.021 | -0.021 | 0 | %100 |
| 35 | 57 | Z | -0.01 | -0.01 | 0 | %100 |
| 36 | 58 | Z | -0.01 | -0.01 | 0 | %100 |
| 37 | 59 | Z | -0.029 | -0.029 | 0 | %100 |
| 38 | 64 | Z | -0.026 | -0.026 | 0 | %100 |
| 39 | 69 | Z | -0.011 | -0.011 | 0 | %100 |
| 40 | 72 | Z | -0.009 | -0.009 | 0 | %100 |
| 41 | 73 | Z | -0.009 | -0.009 | 0 | %100 |
| 42 | 76 | Z | -0.009 | -0.009 | 0 | %100 |
| 43 | 78 | Z | -0.009 | -0.009 | 0 | %100 |
| 44 | 80 | Z | -0.011 | -0.011 | 0 | %100 |
| 45 | 83 | Z | -0.009 | -0.009 | 0 | %100 |
| 46 | 84 | Z | -0.009 | -0.009 | 0 | %100 |
| 47 | 87 | Z | -0.009 | -0.009 | 0 | %100 |
| 48 | 89 | Z | -0.009 | -0.009 | 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 | -0.017 | -0.017 | 0 | %100 |
| 2 | 2 | X | -0.015 | -0.015 | 0 | %100 |
| 3 | 3 | X | -0.015 | -0.015 | 0 | %100 |
| 4 | 4 | X | -0.021 | -0.021 | 0 | %100 |
| 5 | 5 | X | -0.021 | -0.021 | 0 | %100 |
| 6 | 6 | X | -0.011 | -0.011 | 0 | %100 |
| 7 | 7 | X | -0.021 | -0.021 | 0 | %100 |
| 8 | 8 | X | -0.021 | -0.021 | 0 | %100 |
| 9 | 9 | X | -0.01 | -0.01 | 0 | %100 |
| 10 | 10 | X | -0.01 | -0.01 | 0 | %100 |
| 11 | 11 | X | -0.029 | -0.029 | 0 | %100 |
| 12 | 18 | X | -0.009 | -0.009 | 0 | %100 |
| 13 | 19 | X | -0.009 | -0.009 | 0 | %100 |
| 14 | 22 | X | -0.009 | -0.009 | 0 | %100 |
| 15 | 23 | X | -0.026 | -0.026 | 0 | %100 |
| 16 | 29 | X | -0.009 | -0.009 | 0 | %100 |
| 17 | 31 | X | -0.017 | -0.017 | 0 | %100 |
| 18 | 32 | X | -0.015 | -0.015 | 0 | %100 |
| 19 | 33 | X | -0.015 | -0.015 | 0 | %100 |
| 20 | 34 | X | -0.021 | -0.021 | 0 | %100 |



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

| Member | Label | Direction | Start Magnitude [k/ft, F, ksf, k-ft/ft] | End Magnitude [k/ft, F, ksf, k-ft/ft] | Start Location [(ft, %)] | End Location [(ft, %)] |
|--------|-------|-----------|---|---------------------------------------|--------------------------|------------------------|
| 21 | 35 | X | -0.021 | -0.021 | 0 | %100 |
| 22 | 36 | X | -0.021 | -0.021 | 0 | %100 |
| 23 | 37 | X | -0.021 | -0.021 | 0 | %100 |
| 24 | 38 | X | -0.01 | -0.01 | 0 | %100 |
| 25 | 39 | X | -0.01 | -0.01 | 0 | %100 |
| 26 | 40 | X | -0.029 | -0.029 | 0 | %100 |
| 27 | 45 | X | -0.026 | -0.026 | 0 | %100 |
| 28 | 50 | X | -0.017 | -0.017 | 0 | %100 |
| 29 | 51 | X | -0.015 | -0.015 | 0 | %100 |
| 30 | 52 | X | -0.015 | -0.015 | 0 | %100 |
| 31 | 53 | X | -0.021 | -0.021 | 0 | %100 |
| 32 | 54 | X | -0.021 | -0.021 | 0 | %100 |
| 33 | 55 | X | -0.021 | -0.021 | 0 | %100 |
| 34 | 56 | X | -0.021 | -0.021 | 0 | %100 |
| 35 | 57 | X | -0.01 | -0.01 | 0 | %100 |
| 36 | 58 | X | -0.01 | -0.01 | 0 | %100 |
| 37 | 59 | X | -0.029 | -0.029 | 0 | %100 |
| 38 | 64 | X | -0.026 | -0.026 | 0 | %100 |
| 39 | 69 | X | -0.011 | -0.011 | 0 | %100 |
| 40 | 72 | X | -0.009 | -0.009 | 0 | %100 |
| 41 | 73 | X | -0.009 | -0.009 | 0 | %100 |
| 42 | 76 | X | -0.009 | -0.009 | 0 | %100 |
| 43 | 78 | X | -0.009 | -0.009 | 0 | %100 |
| 44 | 80 | X | -0.011 | -0.011 | 0 | %100 |
| 45 | 83 | X | -0.009 | -0.009 | 0 | %100 |
| 46 | 84 | X | -0.009 | -0.009 | 0 | %100 |
| 47 | 87 | X | -0.009 | -0.009 | 0 | %100 |
| 48 | 89 | X | -0.009 | -0.009 | 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 | -0.008 | -0.008 | 0 | %100 |
| 2 | 2 | Z | -0.007 | -0.007 | 0 | %100 |
| 3 | 3 | Z | -0.007 | -0.007 | 0 | %100 |
| 4 | 4 | Z | -0.015 | -0.015 | 0 | %100 |
| 5 | 5 | Z | -0.015 | -0.015 | 0 | %100 |
| 6 | 6 | Z | -0.003 | -0.003 | 0 | %100 |
| 7 | 7 | Z | -0.018 | -0.018 | 0 | %100 |
| 8 | 8 | Z | -0.018 | -0.018 | 0 | %100 |
| 9 | 9 | Z | -0.007 | -0.007 | 0 | %100 |
| 10 | 10 | Z | -0.007 | -0.007 | 0 | %100 |
| 11 | 11 | Z | -0.011 | -0.011 | 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 | 23 | Z | -0.01 | -0.01 | 0 | %100 |
| 16 | 29 | Z | -0.002 | -0.002 | 0 | %100 |
| 17 | 31 | Z | -0.008 | -0.008 | 0 | %100 |
| 18 | 32 | Z | -0.007 | -0.007 | 0 | %100 |
| 19 | 33 | Z | -0.007 | -0.007 | 0 | %100 |
| 20 | 34 | Z | -0.015 | -0.015 | 0 | %100 |
| 21 | 35 | Z | -0.015 | -0.015 | 0 | %100 |
| 22 | 36 | Z | -0.018 | -0.018 | 0 | %100 |
| 23 | 37 | Z | -0.018 | -0.018 | 0 | %100 |
| 24 | 38 | Z | -0.007 | -0.007 | 0 | %100 |
| 25 | 39 | Z | -0.007 | -0.007 | 0 | %100 |
| 26 | 40 | Z | -0.011 | -0.011 | 0 | %100 |
| 27 | 45 | Z | -0.01 | -0.01 | 0 | %100 |



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

| Member | Label | Direction | Start Magnitude [k/ft, F, ksf, k-ft/ft] | End Magnitude [k/ft, F, ksf, k-ft/ft] | Start Location [(ft, %)] | End Location [(ft, %)] |
|--------|-------|-----------|---|---------------------------------------|--------------------------|------------------------|
| 28 | 50 | Z | -0.008 | -0.008 | 0 | %100 |
| 29 | 51 | Z | -0.007 | -0.007 | 0 | %100 |
| 30 | 52 | Z | -0.007 | -0.007 | 0 | %100 |
| 31 | 53 | Z | -0.015 | -0.015 | 0 | %100 |
| 32 | 54 | Z | -0.015 | -0.015 | 0 | %100 |
| 33 | 55 | Z | -0.018 | -0.018 | 0 | %100 |
| 34 | 56 | Z | -0.018 | -0.018 | 0 | %100 |
| 35 | 57 | Z | -0.007 | -0.007 | 0 | %100 |
| 36 | 58 | Z | -0.007 | -0.007 | 0 | %100 |
| 37 | 59 | Z | -0.011 | -0.011 | 0 | %100 |
| 38 | 64 | Z | -0.01 | -0.01 | 0 | %100 |
| 39 | 69 | Z | -0.003 | -0.003 | 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 | -0.003 | -0.003 | 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 | -0.008 | -0.008 | 0 | %100 |
| 2 | 2 | X | -0.007 | -0.007 | 0 | %100 |
| 3 | 3 | X | -0.007 | -0.007 | 0 | %100 |
| 4 | 4 | X | -0.015 | -0.015 | 0 | %100 |
| 5 | 5 | X | -0.015 | -0.015 | 0 | %100 |
| 6 | 6 | X | -0.003 | -0.003 | 0 | %100 |
| 7 | 7 | X | -0.018 | -0.018 | 0 | %100 |
| 8 | 8 | X | -0.018 | -0.018 | 0 | %100 |
| 9 | 9 | X | -0.007 | -0.007 | 0 | %100 |
| 10 | 10 | X | -0.007 | -0.007 | 0 | %100 |
| 11 | 11 | X | -0.011 | -0.011 | 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 | 23 | X | -0.01 | -0.01 | 0 | %100 |
| 16 | 29 | X | -0.002 | -0.002 | 0 | %100 |
| 17 | 31 | X | -0.008 | -0.008 | 0 | %100 |
| 18 | 32 | X | -0.007 | -0.007 | 0 | %100 |
| 19 | 33 | X | -0.007 | -0.007 | 0 | %100 |
| 20 | 34 | X | -0.015 | -0.015 | 0 | %100 |
| 21 | 35 | X | -0.015 | -0.015 | 0 | %100 |
| 22 | 36 | X | -0.018 | -0.018 | 0 | %100 |
| 23 | 37 | X | -0.018 | -0.018 | 0 | %100 |
| 24 | 38 | X | -0.007 | -0.007 | 0 | %100 |
| 25 | 39 | X | -0.007 | -0.007 | 0 | %100 |
| 26 | 40 | X | -0.011 | -0.011 | 0 | %100 |
| 27 | 45 | X | -0.01 | -0.01 | 0 | %100 |
| 28 | 50 | X | -0.008 | -0.008 | 0 | %100 |
| 29 | 51 | X | -0.007 | -0.007 | 0 | %100 |
| 30 | 52 | X | -0.007 | -0.007 | 0 | %100 |
| 31 | 53 | X | -0.015 | -0.015 | 0 | %100 |
| 32 | 54 | X | -0.015 | -0.015 | 0 | %100 |
| 33 | 55 | X | -0.018 | -0.018 | 0 | %100 |
| 34 | 56 | X | -0.018 | -0.018 | 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, %)] |
|--------|-------|-----------|---|---------------------------------------|--------------------------|------------------------|
| 35 | 57 | X | -0.007 | -0.007 | 0 | %100 |
| 36 | 58 | X | -0.007 | -0.007 | 0 | %100 |
| 37 | 59 | X | -0.011 | -0.011 | 0 | %100 |
| 38 | 64 | X | -0.01 | -0.01 | 0 | %100 |
| 39 | 69 | X | -0.003 | -0.003 | 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 | -0.003 | -0.003 | 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 | -0.0005 | -0.0005 | 0 | %100 |
| 7 | 7 | Z | -0.002 | -0.002 | 0 | %100 |
| 8 | 8 | Z | -0.002 | -0.002 | 0 | %100 |
| 9 | 9 | Z | -0.0008 | -0.0008 | 0 | %100 |
| 10 | 10 | Z | -0.0008 | -0.0008 | 0 | %100 |
| 11 | 11 | Z | -0.002 | -0.002 | 0 | %100 |
| 12 | 18 | Z | -0.0003 | -0.0003 | 0 | %100 |
| 13 | 19 | Z | -0.0003 | -0.0003 | 0 | %100 |
| 14 | 22 | Z | -0.0003 | -0.0003 | 0 | %100 |
| 15 | 23 | Z | -0.002 | -0.002 | 0 | %100 |
| 16 | 29 | Z | -0.0003 | -0.0003 | 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 | -0.0008 | -0.0008 | 0 | %100 |
| 25 | 39 | Z | -0.0008 | -0.0008 | 0 | %100 |
| 26 | 40 | Z | -0.002 | -0.002 | 0 | %100 |
| 27 | 45 | 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 | -0.0008 | -0.0008 | 0 | %100 |
| 36 | 58 | Z | -0.0008 | -0.0008 | 0 | %100 |
| 37 | 59 | Z | -0.002 | -0.002 | 0 | %100 |
| 38 | 64 | Z | -0.002 | -0.002 | 0 | %100 |
| 39 | 69 | Z | -0.0005 | -0.0005 | 0 | %100 |
| 40 | 72 | Z | -0.0003 | -0.0003 | 0 | %100 |
| 41 | 73 | Z | -0.0003 | -0.0003 | 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, %)] |
|--------|-------|-----------|---|---------------------------------------|--------------------------|------------------------|
| 42 | 76 | Z | -0.0003 | -0.0003 | 0 | %100 |
| 43 | 78 | Z | -0.0003 | -0.0003 | 0 | %100 |
| 44 | 80 | Z | -0.0005 | -0.0005 | 0 | %100 |
| 45 | 83 | Z | -0.0003 | -0.0003 | 0 | %100 |
| 46 | 84 | Z | -0.0003 | -0.0003 | 0 | %100 |
| 47 | 87 | Z | -0.0003 | -0.0003 | 0 | %100 |
| 48 | 89 | Z | -0.0003 | -0.0003 | 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 | -0.0005 | -0.0005 | 0 | %100 |
| 7 | 7 | X | -0.002 | -0.002 | 0 | %100 |
| 8 | 8 | X | -0.002 | -0.002 | 0 | %100 |
| 9 | 9 | X | -0.0008 | -0.0008 | 0 | %100 |
| 10 | 10 | X | -0.0008 | -0.0008 | 0 | %100 |
| 11 | 11 | X | -0.002 | -0.002 | 0 | %100 |
| 12 | 18 | X | -0.0003 | -0.0003 | 0 | %100 |
| 13 | 19 | X | -0.0003 | -0.0003 | 0 | %100 |
| 14 | 22 | X | -0.0003 | -0.0003 | 0 | %100 |
| 15 | 23 | X | -0.002 | -0.002 | 0 | %100 |
| 16 | 29 | X | -0.0003 | -0.0003 | 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 | -0.0008 | -0.0008 | 0 | %100 |
| 25 | 39 | X | -0.0008 | -0.0008 | 0 | %100 |
| 26 | 40 | X | -0.002 | -0.002 | 0 | %100 |
| 27 | 45 | 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 | -0.0008 | -0.0008 | 0 | %100 |
| 36 | 58 | X | -0.0008 | -0.0008 | 0 | %100 |
| 37 | 59 | X | -0.002 | -0.002 | 0 | %100 |
| 38 | 64 | X | -0.002 | -0.002 | 0 | %100 |
| 39 | 69 | X | -0.0005 | -0.0005 | 0 | %100 |
| 40 | 72 | X | -0.0003 | -0.0003 | 0 | %100 |
| 41 | 73 | X | -0.0003 | -0.0003 | 0 | %100 |
| 42 | 76 | X | -0.0003 | -0.0003 | 0 | %100 |
| 43 | 78 | X | -0.0003 | -0.0003 | 0 | %100 |
| 44 | 80 | X | -0.0005 | -0.0005 | 0 | %100 |
| 45 | 83 | X | -0.0003 | -0.0003 | 0 | %100 |
| 46 | 84 | X | -0.0003 | -0.0003 | 0 | %100 |
| 47 | 87 | X | -0.0003 | -0.0003 | 0 | %100 |
| 48 | 89 | X | -0.0003 | -0.0003 | 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 | -0.015 | -0.015 | 0 | %100 |
| 2 | 2 | Y | -0.012 | -0.012 | 0 | %100 |
| 3 | 3 | Y | -0.012 | -0.012 | 0 | %100 |
| 4 | 4 | Y | -0.016 | -0.016 | 0 | %100 |
| 5 | 5 | Y | -0.016 | -0.016 | 0 | %100 |
| 6 | 6 | Y | -0.011 | -0.011 | 0 | %100 |
| 7 | 7 | Y | -0.016 | -0.016 | 0 | %100 |
| 8 | 8 | Y | -0.016 | -0.016 | 0 | %100 |
| 9 | 9 | Y | -0.01 | -0.01 | 0 | %100 |
| 10 | 10 | Y | -0.01 | -0.01 | 0 | %100 |
| 11 | 11 | Y | -0.02 | -0.02 | 0 | %100 |
| 12 | 18 | Y | -0.009 | -0.009 | 0 | %100 |
| 13 | 19 | Y | -0.009 | -0.009 | 0 | %100 |
| 14 | 22 | Y | -0.009 | -0.009 | 0 | %100 |
| 15 | 23 | Y | -0.02 | -0.02 | 0 | %100 |
| 16 | 29 | Y | -0.009 | -0.009 | 0 | %100 |
| 17 | 31 | Y | -0.015 | -0.015 | 0 | %100 |
| 18 | 32 | Y | -0.012 | -0.012 | 0 | %100 |
| 19 | 33 | Y | -0.012 | -0.012 | 0 | %100 |
| 20 | 34 | Y | -0.016 | -0.016 | 0 | %100 |
| 21 | 35 | Y | -0.016 | -0.016 | 0 | %100 |
| 22 | 36 | Y | -0.016 | -0.016 | 0 | %100 |
| 23 | 37 | Y | -0.016 | -0.016 | 0 | %100 |
| 24 | 38 | Y | -0.01 | -0.01 | 0 | %100 |
| 25 | 39 | Y | -0.01 | -0.01 | 0 | %100 |
| 26 | 40 | Y | -0.02 | -0.02 | 0 | %100 |
| 27 | 45 | Y | -0.02 | -0.02 | 0 | %100 |
| 28 | 50 | Y | -0.015 | -0.015 | 0 | %100 |
| 29 | 51 | Y | -0.012 | -0.012 | 0 | %100 |
| 30 | 52 | Y | -0.012 | -0.012 | 0 | %100 |
| 31 | 53 | Y | -0.016 | -0.016 | 0 | %100 |
| 32 | 54 | Y | -0.016 | -0.016 | 0 | %100 |
| 33 | 55 | Y | -0.016 | -0.016 | 0 | %100 |
| 34 | 56 | Y | -0.016 | -0.016 | 0 | %100 |
| 35 | 57 | Y | -0.01 | -0.01 | 0 | %100 |
| 36 | 58 | Y | -0.01 | -0.01 | 0 | %100 |
| 37 | 59 | Y | -0.02 | -0.02 | 0 | %100 |
| 38 | 64 | Y | -0.02 | -0.02 | 0 | %100 |
| 39 | 69 | Y | -0.011 | -0.011 | 0 | %100 |
| 40 | 72 | Y | -0.009 | -0.009 | 0 | %100 |
| 41 | 73 | Y | -0.009 | -0.009 | 0 | %100 |
| 42 | 76 | Y | -0.009 | -0.009 | 0 | %100 |
| 43 | 78 | Y | -0.009 | -0.009 | 0 | %100 |
| 44 | 80 | Y | -0.011 | -0.011 | 0 | %100 |
| 45 | 83 | Y | -0.009 | -0.009 | 0 | %100 |
| 46 | 84 | Y | -0.009 | -0.009 | 0 | %100 |
| 47 | 87 | Y | -0.009 | -0.009 | 0 | %100 |
| 48 | 89 | Y | -0.009 | -0.009 | 0 | %100 |

Member Distributed Loads (BLC 31 : 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 | 9 | Y | -0.015 | -0.015 | 0 | 2.078 |
| 2 | 10 | Y | -0.014 | -0.02 | 0.231 | 1.27 |
| 3 | 10 | Y | -0.02 | -0.026 | 1.27 | 2.309 |
| 4 | 38 | Y | -0.035 | -0.016 | 0 | 1.155 |
| 5 | 38 | Y | -0.016 | 0.0006163 | 1.155 | 2.309 |
| 6 | 39 | Y | -0.018 | -0.016 | 0.231 | 2.309 |
| 7 | 57 | Y | -0.035 | -0.016 | 0 | 1.155 |

Member Distributed Loads (BLC 31 : BLC 1 Transient Area Loads) (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 57 | Y | -0.016 | 0.0006163 | 1.155 | 2.309 |
| 9 58 | Y | -0.018 | -0.016 | 0.231 | 2.309 |

Member Distributed Loads (BLC 32 : 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 9 | Y | -0.012 | -0.012 | 0 | 2.078 |
| 2 10 | Y | -0.012 | -0.016 | 0.231 | 1.27 |
| 3 10 | Y | -0.016 | -0.021 | 1.27 | 2.309 |
| 4 38 | Y | -0.028 | -0.013 | 0 | 1.155 |
| 5 38 | Y | -0.013 | 0.0005053 | 1.155 | 2.309 |
| 6 39 | Y | -0.015 | -0.013 | 0.231 | 2.309 |
| 7 57 | Y | -0.028 | -0.013 | 0 | 1.155 |
| 8 57 | Y | -0.013 | 0.0005053 | 1.155 | 2.309 |
| 9 58 | Y | -0.015 | -0.013 | 0.231 | 2.309 |

Member Area Loads (BLC 1 : Dead)

| | Node A | Node B | Node C | Node D | Direction | Load Direction | Magnitude [ksf] |
|---|--------|--------|--------|--------|-----------|----------------|-----------------|
| 1 | 23 | 22 | 25 | 24 | Y | Two Way | -0.01 |
| 2 | 73 | 72 | 75 | 74 | Y | Two Way | -0.01 |
| 3 | 102 | 101 | 104 | 103 | 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 | 23 | 22 | 25 | 24 | Y | Two Way | -0.008 |
| 2 | 73 | 72 | 75 | 74 | Y | Two Way | -0.008 |
| 3 | 102 | 101 | 104 | 103 | Y | Two Way | -0.008 |

Node Loads and Enforced Displacements (BLC 9 : Live Load a)

| | Node Label | L, D, M | Direction | Magnitude [(k, k-ft), (in, rad), (k*s ² /ft, k*s ² *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 10 : Live Load b)

| | Node Label | L, D, M | Direction | Magnitude [(k, k-ft), (in, rad), (k*s ² /ft, k*s ² *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 11 : Live Load c)

| | Node Label | L, D, M | Direction | Magnitude [(k, k-ft), (in, rad), (k*s ² /ft, k*s ² *ft)] |
|---|------------|---------|-----------|--|
| 1 | 46 | L | Y | -0.5 |
| 2 | 127 | L | Y | -0.5 |
| 3 | 149 | L | Y | -0.5 |

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 | 1.732 | 5 | 2.257 | 14 | 1.874 | 2 | 5.62 | 14 | 1.731 | 11 | 0.428 | 84 |
| 2 | | min | -1.739 | 23 | -1.037 | 8 | -1.975 | 20 | -3.206 | 8 | -1.735 | 17 | -0.241 | 54 |
| 3 | 53 | max | 1.614 | 5 | 2.159 | 42 | 2.237 | 14 | 1.176 | 13 | 2.214 | 3 | 1.876 | 12 |
| 4 | | min | -1.694 | 23 | -0.655 | 12 | -2.178 | 8 | -2.249 | 19 | -2.212 | 21 | -4.103 | 18 |
| 5 | 82 | max | 1.52 | 17 | 2.076 | 46 | 2.383 | 14 | 1.295 | 3 | 2.223 | 7 | 3.947 | 22 |
| 6 | | min | -1.433 | 11 | -0.683 | 4 | -2.341 | 8 | -2.677 | 21 | -2.225 | 25 | -1.929 | 4 |
| 7 | Totals: | max | 4.854 | 5 | 5.58 | 44 | 6.481 | 14 | | | | | | |
| 8 | | min | -4.854 | 23 | 1.589 | 2 | -6.481 | 20 | | | | | | |

Envelope AISC 13TH (360-05): 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 | 0.749 | 0 | 25 | 0.146 | 0 | y | 25 | 70.173 | 73.278 | 8.24 | 8.24 | 1.895 | H1-1b | | | | | |
| 2 | 2 | C3.38x2.06x.188 | 0.409 | 2.592 | 15 | 0.069 | 0.351 | y | 40 | 38.433 | 43.394 | 1.694 | 4.483 | 1.591 | H1-1b | | | | | |
| 3 | 3 | C3.38x2.06x.188 | 0.42 | 0 | 25 | 0.095 | 2.241 | z | 20 | 38.433 | 43.394 | 1.694 | 4.483 | 1.583 | H1-1b | | | | | |
| 4 | 4 | PL3/8"x6 | 0.131 | 0.164 | 19 | 0.281 | 0 | y | 14 | 68.802 | 72.9 | 0.57 | 9.113 | 2.71 | H1-1b | | | | | |
| 5 | 5 | PL3/8"x6 | 0.12 | 0 | 15 | 0.211 | 0 | y | 14 | 68.802 | 72.9 | 0.57 | 9.113 | 2.25 | H1-1b | | | | | |
| 6 | 6 | PIPE 3.0 | 0.126 | 4 | 19 | 0.073 | 4 | | 17 | 46.291 | 65.205 | 5.749 | 5.749 | 1.58 | H1-1b | | | | | |
| 7 | 7 | PL3/8"x6 | 0.225 | 0.208 | 20 | 0.191 | 0.208 | y | 49 | 70.705 | 72.9 | 0.57 | 9.113 | 1.5 | H1-1b | | | | | |
| 8 | 8 | PL3/8"x6 | 0.213 | 0 | 25 | 0.215 | 0 | y | 39 | 70.705 | 72.9 | 0.57 | 9.113 | 2.854 | H1-1b | | | | | |
| 9 | 9 | L2x2x4 | 0.39 | 0 | 19 | 0.031 | 2.309 | y | 59 | 23.349 | 30.586 | 0.691 | 1.577 | 1.5 | H2-1 | | | | | |
| 10 | 10 | L2x2x4 | 0.32 | 2.309 | 20 | 0.042 | 2.309 | y | 40 | 23.349 | 30.586 | 0.691 | 1.577 | 1.5 | H2-1 | | | | | |
| 11 | 11 | L7.63x2.5x6 | 0.543 | 1.604 | 8 | 0.098 | 1.57 | z | 15 | 73.845 | 118.523 | 1.798 | 13.709 | 1.239 | H2-1 | | | | | |
| 12 | 18 | PIPE 2.0 | 0.447 | 5.833 | 17 | 0.12 | 5.833 | | 18 | 14.916 | 32.13 | 1.872 | 1.872 | 3 | H1-1b | | | | | |
| 13 | 19 | PIPE 2.0 | 0.471 | 2.167 | 22 | 0.126 | 5.833 | | 21 | 14.916 | 32.13 | 1.872 | 1.872 | 3 | H1-1b | | | | | |
| 14 | 22 | PIPE 2.0 | 0.777 | 6.75 | 14 | 0.519 | 7.667 | | 14 | 14.916 | 32.13 | 1.872 | 1.872 | 2.632 | H3-6 | | | | | |
| 15 | 23 | L6.63x4.33x.25 | 0.298 | 3.25 | 6 | 0.049 | 3.25 | z | 24 | 49.975 | 86.751 | 2.311 | 6.976 | 1.5 | H2-1 | | | | | |
| 16 | 29 | PIPE 2.0 | 0.449 | 5.833 | 18 | 0.139 | 2.167 | | 20 | 14.916 | 32.13 | 1.872 | 1.872 | 3 | H1-1b | | | | | |
| 17 | 31 | HSS4X4X2 | 0.703 | 0 | 19 | 0.165 | 0 | z | 15 | 70.173 | 73.278 | 8.24 | 8.24 | 1.927 | H1-1b | | | | | |
| 18 | 32 | C3.38x2.06x.188 | 0.414 | 2.592 | 19 | 0.07 | 0.351 | y | 45 | 38.433 | 43.394 | 1.694 | 4.483 | 1.593 | H1-1b | | | | | |
| 19 | 33 | C3.38x2.06x.188 | 0.347 | 0 | 29 | 0.069 | 2.241 | z | 24 | 38.433 | 43.394 | 1.694 | 4.483 | 1.628 | H1-1b | | | | | |
| 20 | 34 | PL3/8"x6 | 0.108 | 0.164 | 22 | 0.228 | 0 | y | 19 | 68.802 | 72.9 | 0.57 | 9.113 | 1.518 | H1-1b | | | | | |
| 21 | 35 | PL3/8"x6 | 0.126 | 0 | 19 | 0.164 | 0 | y | 18 | 68.802 | 72.9 | 0.57 | 9.113 | 2.047 | H1-1b | | | | | |
| 22 | 36 | PL3/8"x6 | 0.19 | 0.208 | 19 | 0.189 | 0.208 | y | 41 | 70.705 | 72.9 | 0.57 | 9.113 | 2.455 | H1-1b | | | | | |
| 23 | 37 | PL3/8"x6 | 0.166 | 0 | 17 | 0.215 | 0 | y | 43 | 70.705 | 72.9 | 0.57 | 9.113 | 2.923 | H1-1b | | | | | |
| 24 | 38 | L2x2x4 | 0.291 | 0 | 23 | 0.03 | 0 | y | 51 | 23.349 | 30.586 | 0.691 | 1.577 | 1.5 | H2-1 | | | | | |
| 25 | 39 | L2x2x4 | 0.292 | 2.309 | 25 | 0.042 | 0 | y | 44 | 23.349 | 30.586 | 0.691 | 1.577 | 1.5 | H2-1 | | | | | |
| 26 | 40 | L7.63x2.5x6 | 0.399 | 1.604 | 12 | 0.097 | 1.57 | z | 19 | 73.845 | 118.523 | 1.798 | 13.738 | 1.246 | H2-1 | | | | | |
| 27 | 45 | L6.63x4.33x.25 | 0.359 | 0 | 2 | 0.054 | 0 | y | 15 | 49.975 | 86.751 | 2.311 | 6.976 | 1.5 | H2-1 | | | | | |
| 28 | 50 | HSS4X4X2 | 0.739 | 0 | 21 | 0.174 | 0 | z | 19 | 70.173 | 73.278 | 8.24 | 8.24 | 1.894 | H1-1b | | | | | |
| 29 | 51 | C3.38x2.06x.188 | 0.387 | 2.592 | 47 | 0.069 | 0.351 | y | 49 | 38.433 | 43.394 | 1.694 | 4.483 | 1.635 | H1-1b | | | | | |
| 30 | 52 | C3.38x2.06x.188 | 0.418 | 0 | 21 | 0.078 | 2.241 | z | 15 | 38.433 | 43.394 | 1.694 | 4.483 | 1.582 | H1-1b | | | | | |
| 31 | 53 | PL3/8"x6 | 0.153 | 0.164 | 14 | 0.225 | 0 | y | 22 | 68.802 | 72.9 | 0.57 | 9.113 | 2.682 | H1-1b | | | | | |
| 32 | 54 | PL3/8"x6 | 0.095 | 0 | 23 | 0.184 | 0 | y | 21 | 68.802 | 72.9 | 0.57 | 9.113 | 2.06 | H1-1b | | | | | |
| 33 | 55 | PL3/8"x6 | 0.17 | 0.208 | 22 | 0.191 | 0.208 | y | 45 | 70.705 | 72.9 | 0.57 | 9.113 | 2.394 | H1-1b | | | | | |
| 34 | 56 | PL3/8"x6 | 0.217 | 0 | 21 | 0.21 | 0 | y | 47 | 70.705 | 72.9 | 0.57 | 9.113 | 2.81 | H1-1b | | | | | |
| 35 | 57 | L2x2x4 | 0.386 | 0 | 15 | 0.032 | 2.309 | z | 20 | 23.349 | 30.586 | 0.691 | 1.577 | 1.5 | H2-1 | | | | | |
| 36 | 58 | L2x2x4 | 0.256 | 2.309 | 16 | 0.042 | 0 | y | 49 | 23.349 | 30.586 | 0.691 | 1.577 | 1.5 | H2-1 | | | | | |
| 37 | 59 | L7.63x2.5x6 | 0.492 | 1.604 | 3 | 0.087 | 1.604 | y | 84 | 73.845 | 118.523 | 1.798 | 14.059 | 1.319 | H2-1 | | | | | |
| 38 | 64 | L6.63x4.33x.25 | 0.373 | 3.25 | 2 | 0.065 | 3.25 | z | 20 | 49.975 | 86.751 | 2.311 | 6.976 | 1.5 | H2-1 | | | | | |
| 39 | 69 | PIPE 3.0 | 0.147 | 4 | 14 | 0.099 | 4 | | 21 | 46.291 | 65.205 | 5.749 | 5.749 | 1.556 | H1-1b | | | | | |
| 40 | 72 | PIPE 2.0 | 0.589 | 5.833 | 21 | 0.134 | 5.833 | | 21 | 14.916 | 32.13 | 1.872 | 1.872 | 3 | H1-1b | | | | | |
| 41 | 73 | PIPE 2.0 | 0.602 | 2.167 | 14 | 0.133 | 5.833 | | 25 | 14.916 | 32.13 | 1.872 | 1.872 | 3 | H1-1b | | | | | |
| 42 | 76 | PIPE 2.0 | 0.633 | 1.25 | 25 | 0.422 | 1.25 | | 25 | 14.916 | 32.13 | 1.872 | 1.872 | 2.234 | H3-6 | | | | | |
| 43 | 78 | PIPE 2.0 | 0.529 | 5.833 | 21 | 0.146 | 2.167 | | 25 | 14.916 | 32.13 | 1.872 | 1.872 | 3 | H1-1b | | | | | |
| 44 | 80 | PIPE 3.0 | 0.141 | 4 | 14 | 0.093 | 3.083 | | 25 | 46.291 | 65.205 | 5.749 | 5.749 | 1.428 | H1-1b | | | | | |
| 45 | 83 | PIPE 2.0 | 0.584 | 5.833 | 25 | 0.158 | 5.833 | | 14 | 14.916 | 32.13 | 1.872 | 1.872 | 3 | H1-1b | | | | | |
| 46 | 84 | PIPE 2.0 | 0.503 | 5.833 | 19 | 0.095 | 5.833 | | 17 | 14.916 | 32.13 | 1.872 | 1.872 | 3 | H1-1b | | | | | |
| 47 | 87 | PIPE 2.0 | 0.697 | 6.75 | 21 | 0.473 | 7.667 | | 21 | 14.916 | 32.13 | 1.872 | 1.872 | 2.492 | H3-6 | | | | | |
| 48 | 89 | PIPE 2.0 | 0.599 | 5.833 | 14 | 0.1 | 5.833 | | 18 | 14.916 | 32.13 | 1.872 | 1.872 | 3 | H1-1b | | | | | |

APPENDIX B

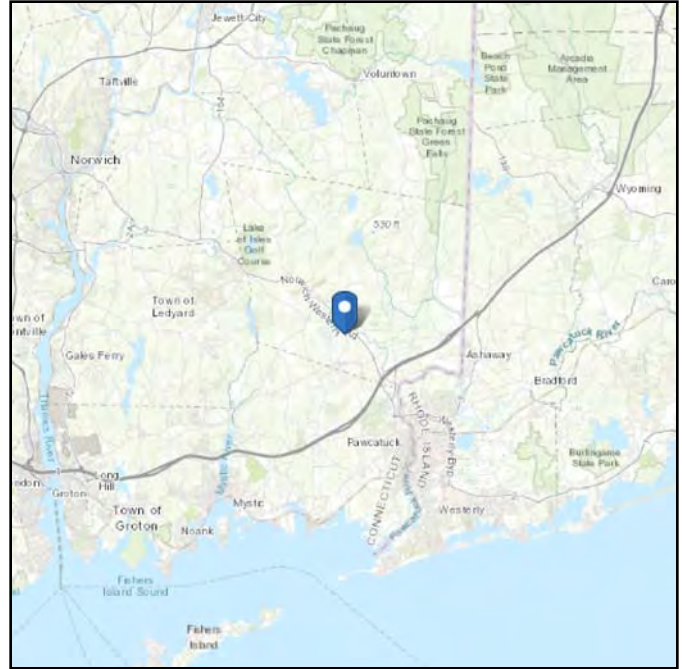
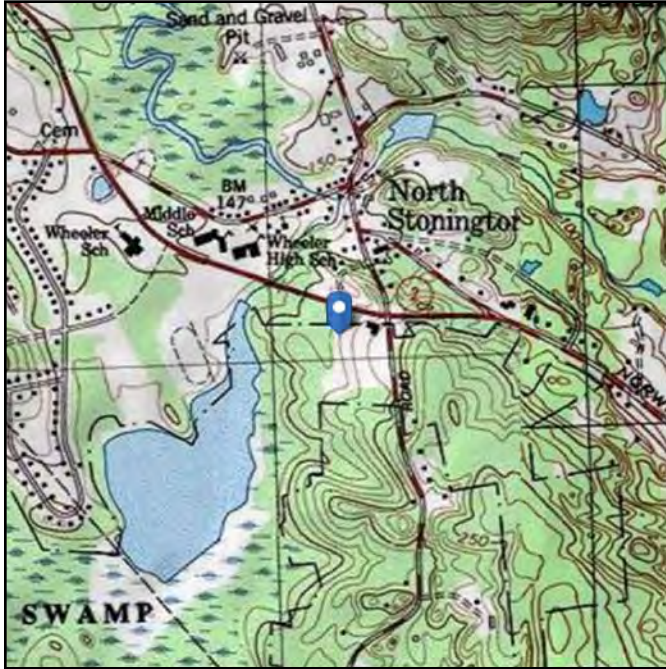
(Additional Calculations)

ASCE 7 Hazards Report

Address:
No Address at This
Location

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 174.69 ft (NAVD 88)
Latitude: 41.437066
Longitude: -71.881488

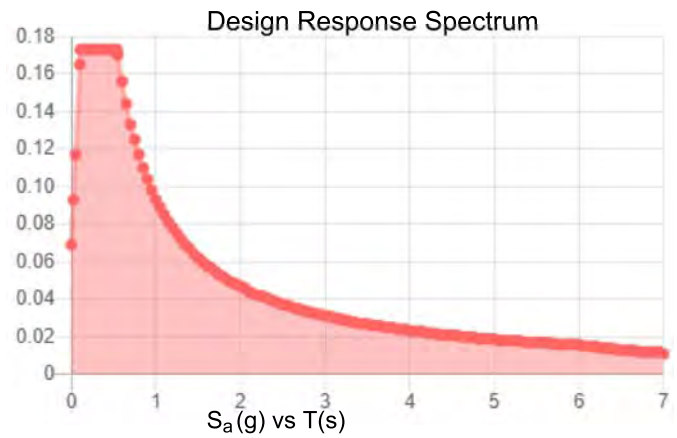
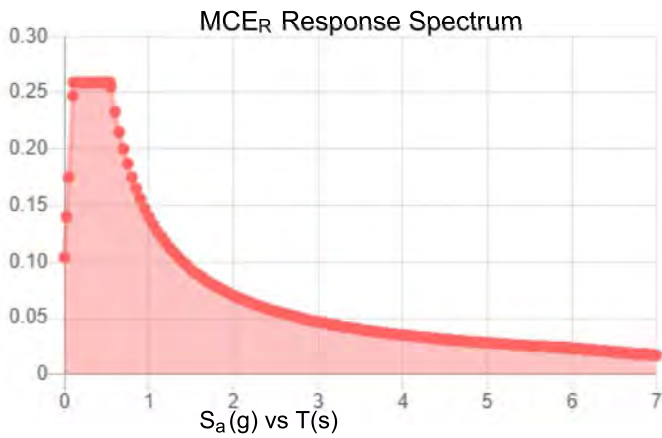


Site Soil Class: D - Stiff Soil

Results:

| | | | |
|------------|-------|--------------------|-------|
| S_s : | 0.162 | S_{DS} : | 0.173 |
| S_1 : | 0.058 | S_{D1} : | 0.093 |
| F_a : | 1.6 | T_L : | 6 |
| F_v : | 2.4 | PGA : | 0.081 |
| S_{MS} : | 0.259 | PGA _M : | 0.129 |
| S_{M1} : | 0.14 | F _{PGA} : | 1.6 |
| | | I_e : | 1 |

Seismic Design Category B



Data Accessed:

Wed Jul 21 2021

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness: 0.75 in.

Concurrent Temperature: 15 F

Gust Speed: 50 mph

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

Date Accessed: Wed Jul 21 2021

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

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

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

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

| | | |
|---------|---|-------------|
| PROJECT | 149430.003.01 - North Stonington | KSC |
| SUBJECT | Platform Mount Analysis | |
| DATE | 07/21/21 | 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 | : | 1.874 | k |
| Vertical Shear | : | 2.257 | k |
| Horizontal Shear | : | 1.732 | k |
| Torsion | : | 0.428 | k.ft |
| Moment from Horizontal Forces | : | 1.731 | k.ft |
| Moment from Vertical Forces | : | 5.619 | k.ft |

Bolt Parameters

| | | | |
|----------------------------------|---|-------|-----------------|
| Bolt Grade | : | A307 | |
| 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 | : | 1.5 | in |
| Bolt edge distance, plate width | : | 1.5 | in |
| Total Number of Bolts | : | 4 | bolts |

Summary of Forces

| | | | |
|-------------------------------|---|-------|---|
| Shear Resultant Force | : | 2.84 | k |
| Force from Horz. Moment | : | 3.14 | k |
| Force from Vert. Moment | : | 10.18 | k |
| Shear Load / Bolt | : | 0.71 | k |
| Tension Load / Bolt | : | 0.47 | k |
| Resultant from Moments / Bolt | : | 5.32 | k |

Bolt Checks

| | | | | |
|---|---|---------------|--------|-------------------|
| Nominal Tensile Stress, F_{nt} | : | 45.00 | ksi | [AISC Table J3.2] |
| Available Tensile Stress, ΦR_{nt} | : | 10.36 | k/bolt | [Eq. J3-1] |
| Unity Check, Bolt Tension | : | 55.91% | | OKAY |
| Nominal Shear Stress, F_{nv} | : | 24.00 | ksi | [AISC Table J3.2] |
| Available Shear Stress, ΦR_{nv} | : | 5.53 | k/bolt | [Eq. J3-1] |
| Unity Check, Bolt Shear | : | 21.35% | | OKAY |
| Unity Check, Combined | : | 77.26% | | OKAY |
| Available Bearing Strength, ΦR_n | : | 34.66 | k/bolt | |
| Unity Check, Bolt Bearing | : | 2.05% | | OKAY |

EXHIBIT 10

Construction Drawings



DISH Wireless L.L.C. SITE ID:

BOBOS00044A

DISH Wireless L.L.C. SITE ADDRESS:

**267 NORWICH WESTERLY ROAD
NORTH STONINGTON, CT 06359**



By Stephen Roth at 3:52:23 PM, 9/14/2021

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 TOWER 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: NO STONINGTON VOL FIRE CO INC
 ADDRESS: 8051 CONGRESS AVE BOCA RATON, FL 33487

TOWER TYPE: MONOPOLE

TOWER CO SITE ID: CT01210-S

TOWER APP NUMBER: 163157

COUNTY: NEW LONDON

LATITUDE (NAD 83): 41° 26' 13.44" N 41.437067 N

LONGITUDE (NAD 83): 71° 52' 53.36" W 71.881489 W

ZONING JURISDICTION: NORTH STONINGTON

ZONING DISTRICT: R40

PARCEL NUMBER: 109-3237

OCCUPANCY GROUP: U

CONSTRUCTION TYPE: II-B

POWER COMPANY: EVERSOURCE

TELEPHONE COMPANY: AT&T

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: JEAN COTTRELL
 JEAN.COTTRELL@DISH.COM

CONSTRUCTION MANAGER: JAVIER SOTO
 JAVIER.SOTO@DISH.COM

RF ENGINEER: ARVIN SEBASTIAN
 ARVIN.SEBASTIAN@DISH.COM



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



8051 CONGRESS AVENUE
BOCA RATON, FL 33487



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



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

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

DRAWN BY: ANS CHECKED BY: MRE APPROVED BY: BLB

RFDS REV #: 0

CONSTRUCTION DOCUMENTS

| SUBMITTALS | | |
|------------|---------|-------------------------|
| REV | DATE | DESCRIPTION |
| A | 7/26/21 | ISSUED FOR REVIEW |
| 0 | 9/13/21 | ISSUED FOR CONSTRUCTION |
| | | |
| | | |
| | | |

A&E PROJECT NUMBER
149430.001.01

DISH Wireless L.L.C.
 PROJECT INFORMATION
BOBOS00044A
 267 NORWICH WESTERLY
 ROAD
 NORTH STONINGTON, CT
 06359

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

CONNECTICUT CODE 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 WESTERLY STATE AIRPORT:
 CONTINUE TO AIRPORT RD, HEAD SOUTHWEST, TURN LEFT, TURN LEFT, TAKE RI-78 W TO CT-2 W IN NORTH STONINGTON, TURN RIGHT ONTO AIRPORT RD, CONTINUE STRAIGHT ONTO RI-78 W (SIGNS FOR I-95), CONTINUE ONTO CT-78 W, ENTERING CONNECTICUT, USE THE RIGHT 2 LANES TO TURN RIGHT ONTO CT-2 W (SIGNS FOR NORWICH/I-95), AT THE ROUNDABOUT, TAKE THE 2ND EXIT ONTO CT-2 W/STATE HWY 184, CONTINUE TO FOLLOW CT-2 W. ARRIVE AT BOBOS00044A.

VICINITY MAP



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.



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



8051 CONGRESS AVENUE
BOCA RATON, FL 33487



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



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PEC.0001564
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RFDS REV #: 0

CONSTRUCTION DOCUMENTS

SUBMITTALS

| REV | DATE | DESCRIPTION |
|-----|---------|-------------------------|
| A | 7/26/21 | ISSUED FOR REVIEW |
| 0 | 9/13/21 | ISSUED FOR CONSTRUCTION |
| | | |
| | | |
| | | |

A&E PROJECT NUMBER
149430.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBOS00044A
267 NORWICH WESTERLY
ROAD
NORTH STONINGTON, CT
06359

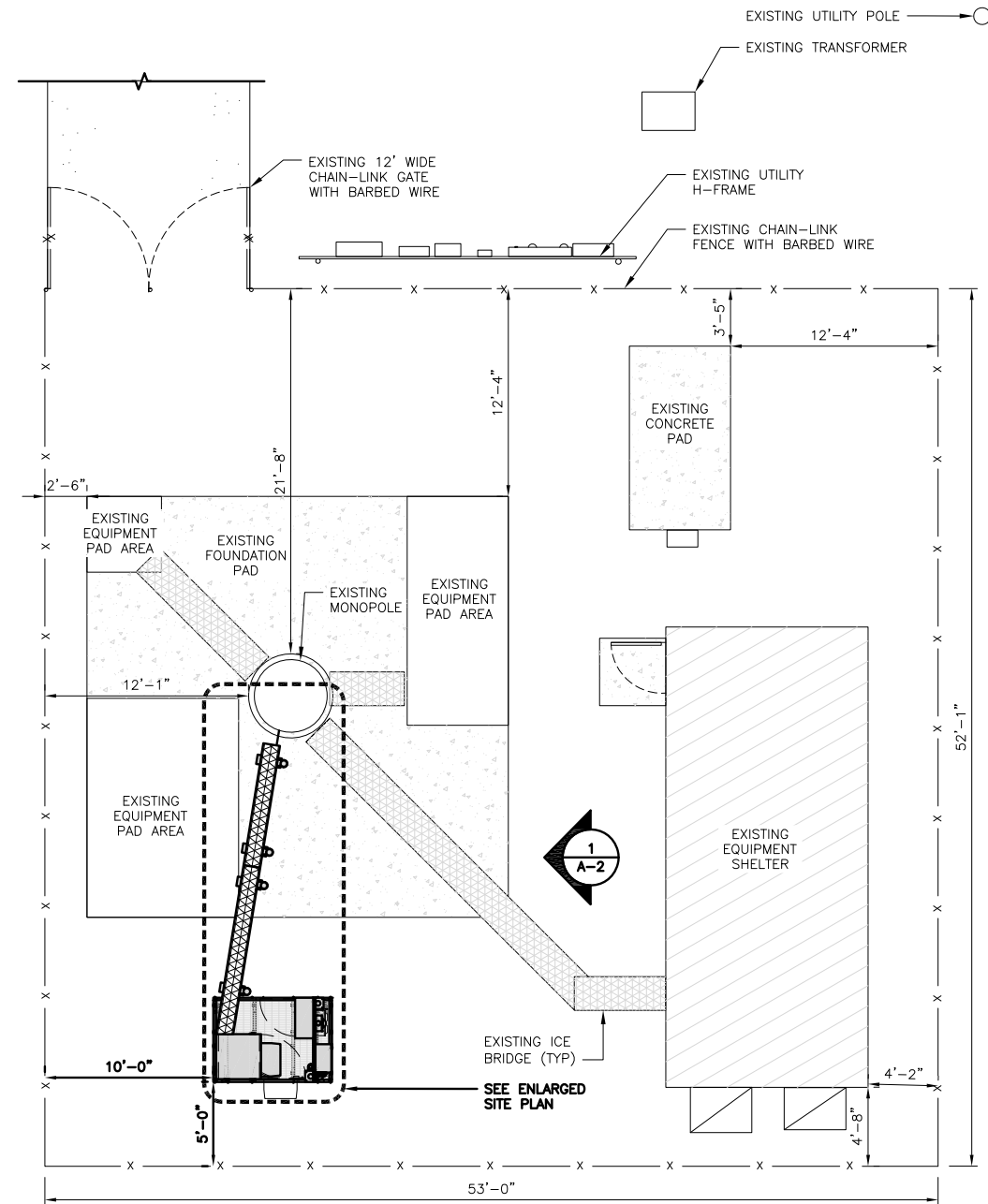
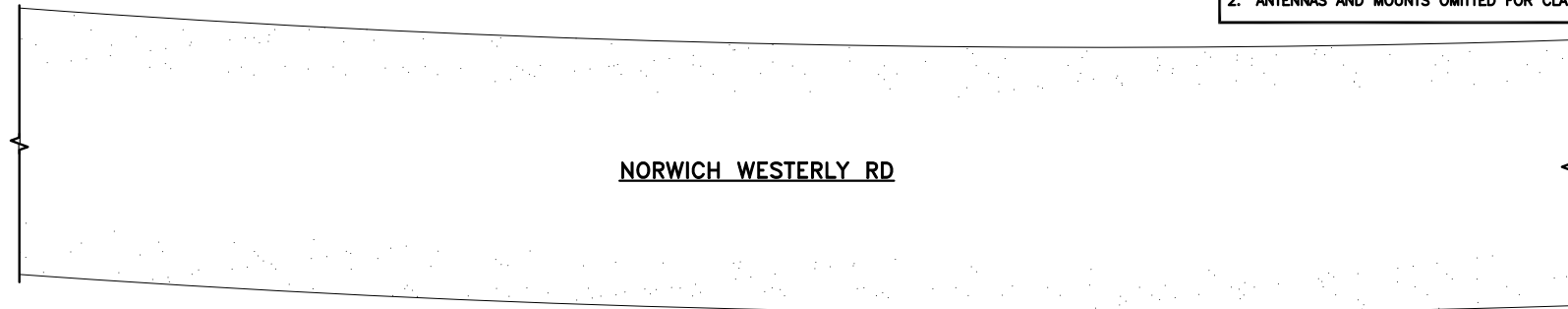
SHEET TITLE
SITE SURVEY

SHEET NUMBER
LS1

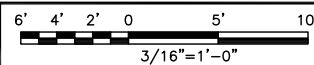
CLIENT PROVIDED SURVEY
UNAVAILABLE AT TIME OF ISSUE

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.



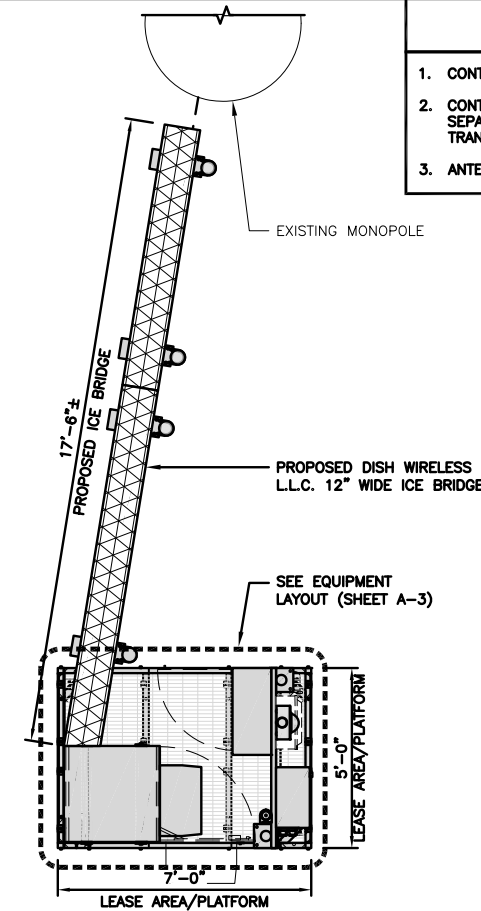
OVERALL SITE PLAN



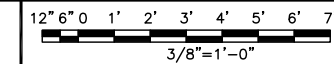
1

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



2

NOT USED

3



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



8051 CONGRESS AVENUE
BOCA RATON, FL 33487



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ANS MRE BLB

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NORTH STONINGTON, CT 06359

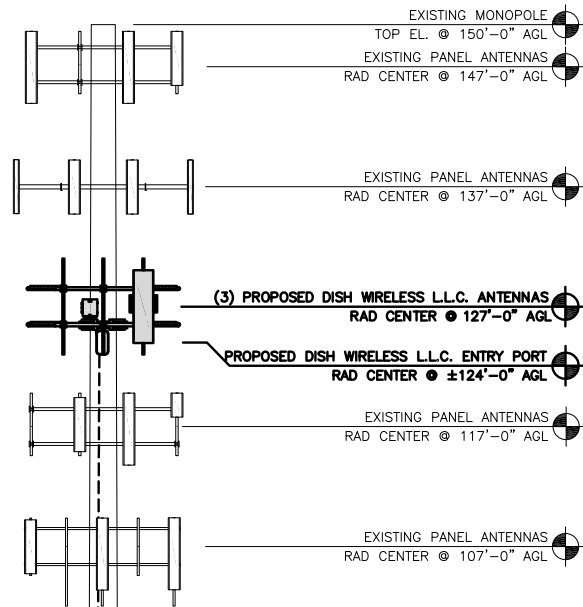
SHEET TITLE
OVERALL AND ENLARGED SITE PLAN

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.



(1) PROPOSED DISH WIRELESS L.L.C. HYBRID CABLE ROUTED INSIDE POLE

EXISTING MONOPOLE

PROPOSED DISH WIRELESS L.L.C. ICE BRIDGE

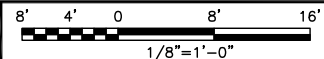
PROPOSED DISH WIRELESS L.L.C. EQUIPMENT ON PROPOSED STEEL PLATFORM

PROPOSED DISH WIRELESS L.L.C. GPS UNIT

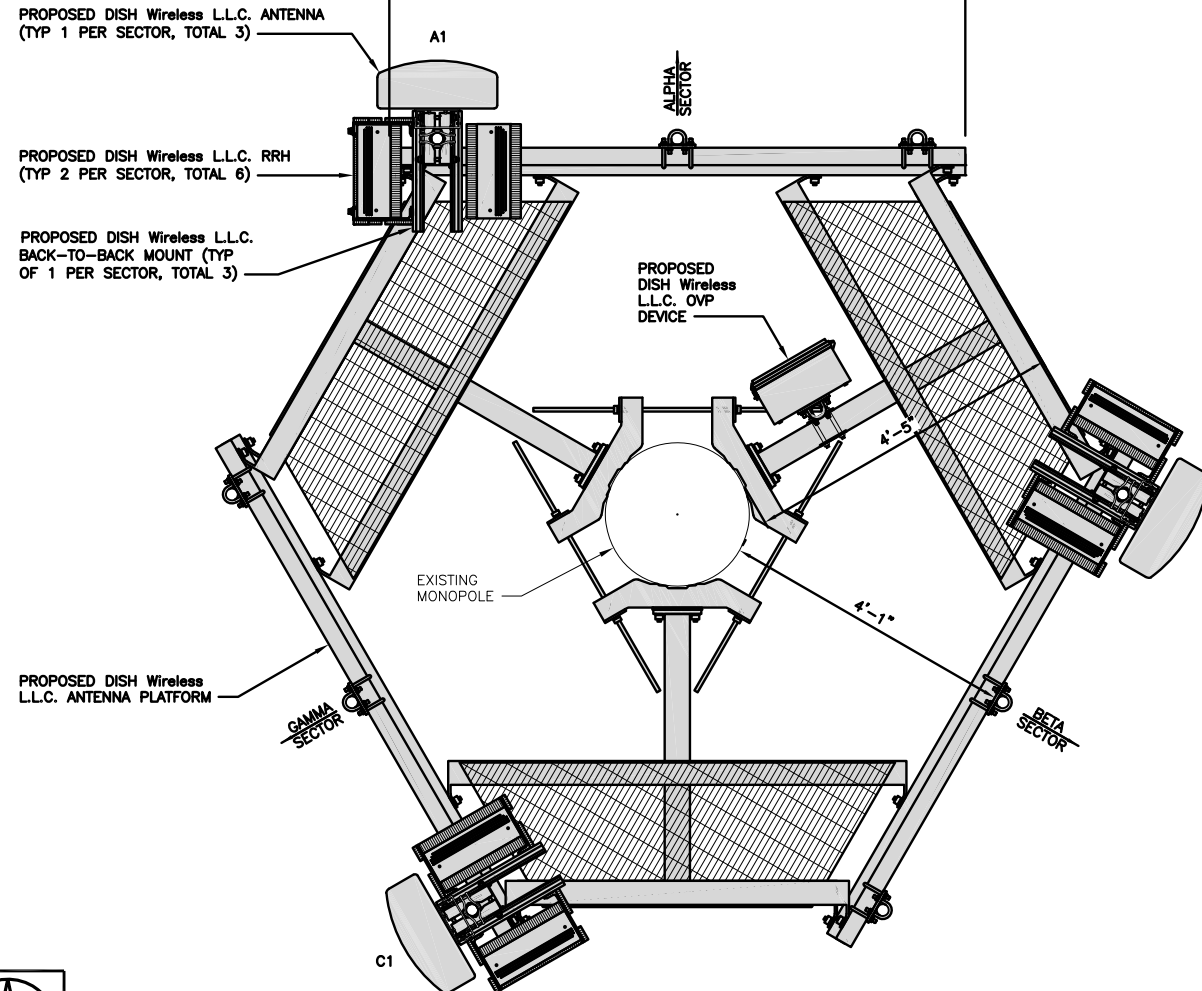
EXISTING ENTRY PORT

EXISTING MONOPOLE BOTTOM EL. @ 6" AGL

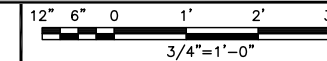
PROPOSED EAST ELEVATION



1



ANTENNA LAYOUT



2

| SECTOR | POSITION | ANTENNA | | | | | TRANSMISSION CABLE | |
|--------|----------|----------------------|-----------------------------|------------|---------------|---------|--------------------|--|
| | | EXISTING OR PROPOSED | MANUFACTURER - MODEL NUMBER | TECHNOLOGY | SIZE (HxW) | AZIMUTH | RAD CENTER | FEED LINE TYPE AND LENGTH |
| ALPHA | A1 | PROPOSED | JMA WIRELESS-MX08FR0665-21 | 5G | 72.0" x 20.0" | 0° | 127'-0" | (1) HIGH-CAPACITY HYBRID CABLE (170' LONG) |
| BETA | B1 | PROPOSED | JMA WIRELESS-MX08FR0665-21 | 5G | 72.0" x 20.0" | 120° | 127'-0" | |
| GAMMA | C1 | PROPOSED | JMA WIRELESS-MX08FR0665-21 | 5G | 72.0" x 20.0" | 240° | 127'-0" | |

| SECTOR | POSITION | RRH | | NOTES |
|--------|----------|-----------------------------|------------|--|
| | | MANUFACTURER - MODEL NUMBER | TECHNOLOGY | |
| ALPHA | A1 | FUJITSU - TA08025-B605 | 5G | 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. |
| | A1 | FUJITSU - TA08025-B604 | 5G | |
| BETA | B1 | FUJITSU - TA08025-B605 | 5G | |
| | B1 | FUJITSU - TA08025-B604 | 5G | |
| GAMMA | C1 | FUJITSU - TA08025-B605 | 5G | |
| | C1 | FUJITSU - TA08025-B604 | 5G | |

ANTENNA SCHEDULE

NO SCALE

3



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



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149430.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBOS00044A
267 NORWICH WESTERLY ROAD
NORTH STONINGTON, CT 06359

SHEET TITLE
ELEVATION, ANTENNA LAYOUT AND SCHEDULE

SHEET NUMBER

A-2



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



8051 CONGRESS AVENUE
BOCA RATON, FL 33487



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267 NORWICH WESTERLY ROAD
NORTH STONINGTON, CT 06359

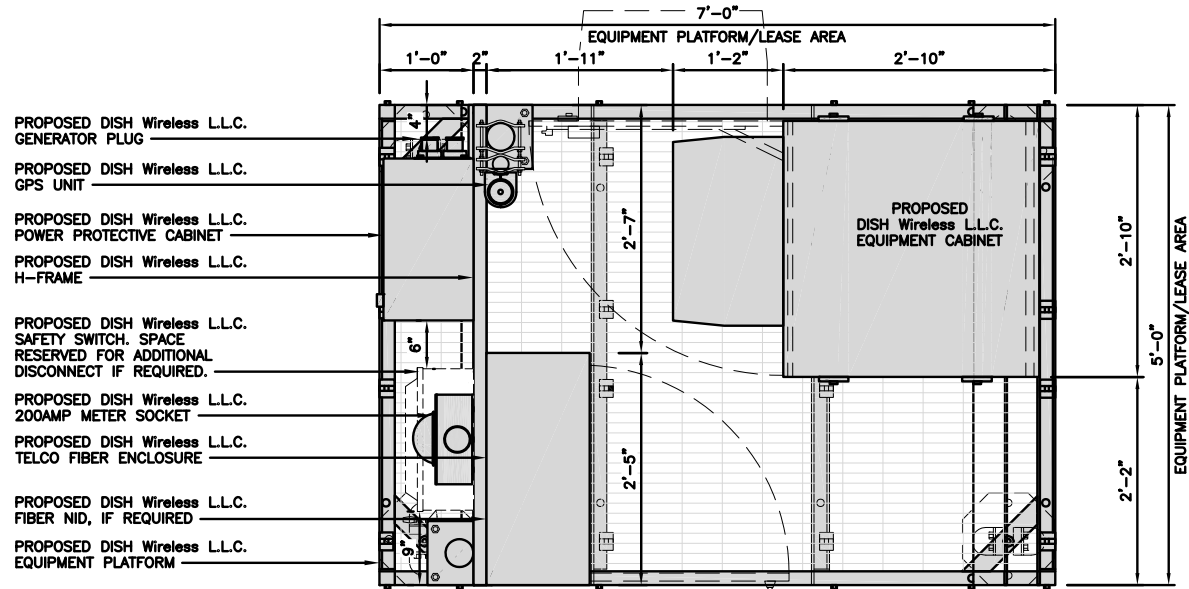
SHEET TITLE
EQUIPMENT PLATFORM AND H-FRAME DETAILS

SHEET NUMBER

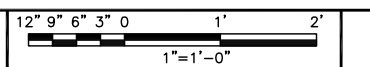
A-3

NOTES

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

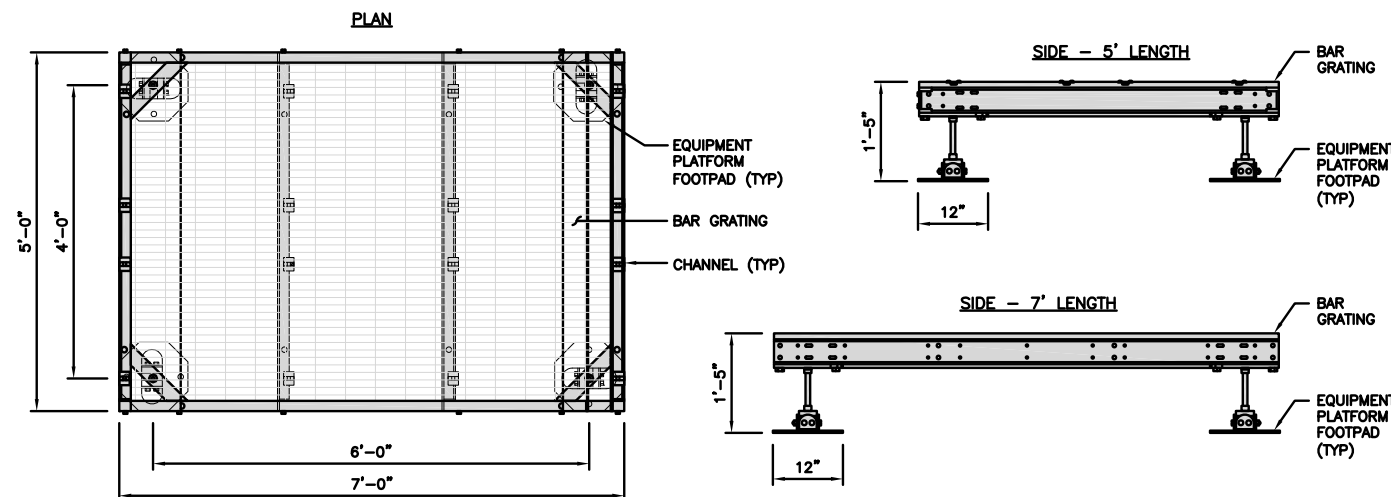


PLATFORM EQUIPMENT PLAN



| | |
|---|-------------|
| 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"

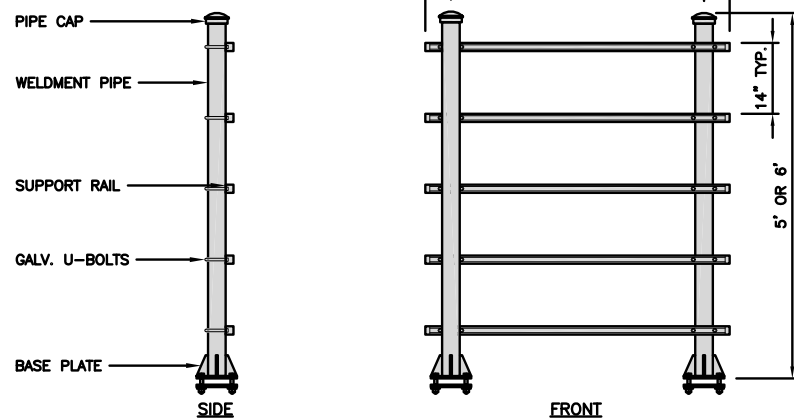


PLATFORM DETAIL

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

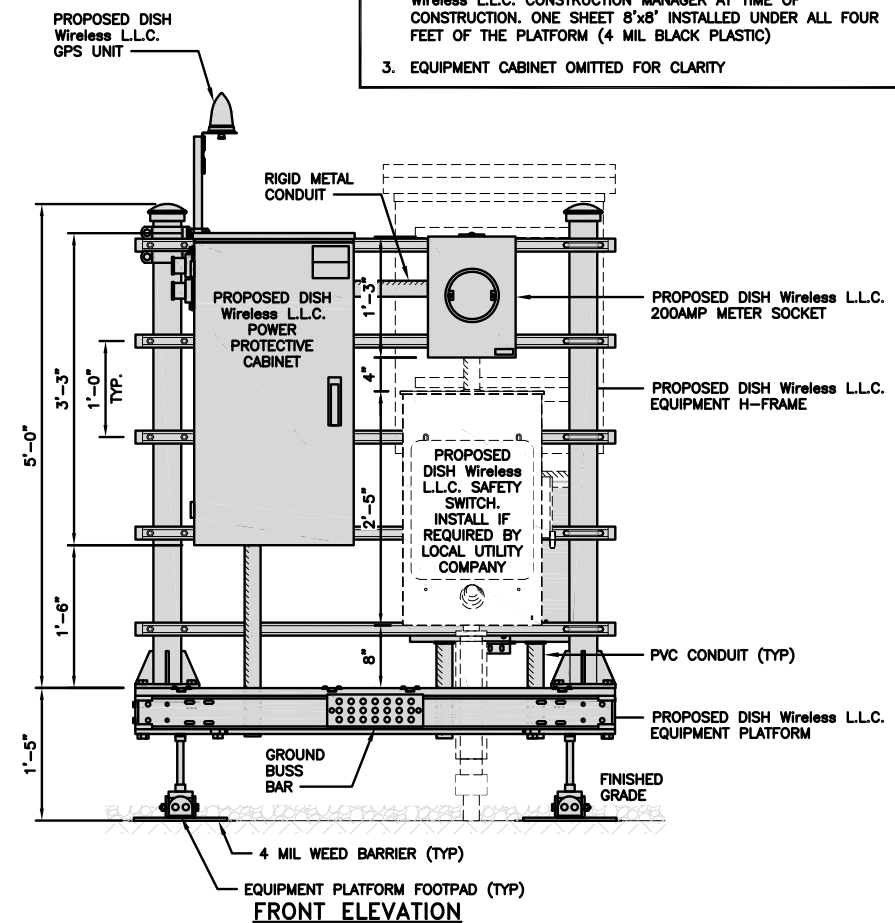


H-FRAME DETAIL

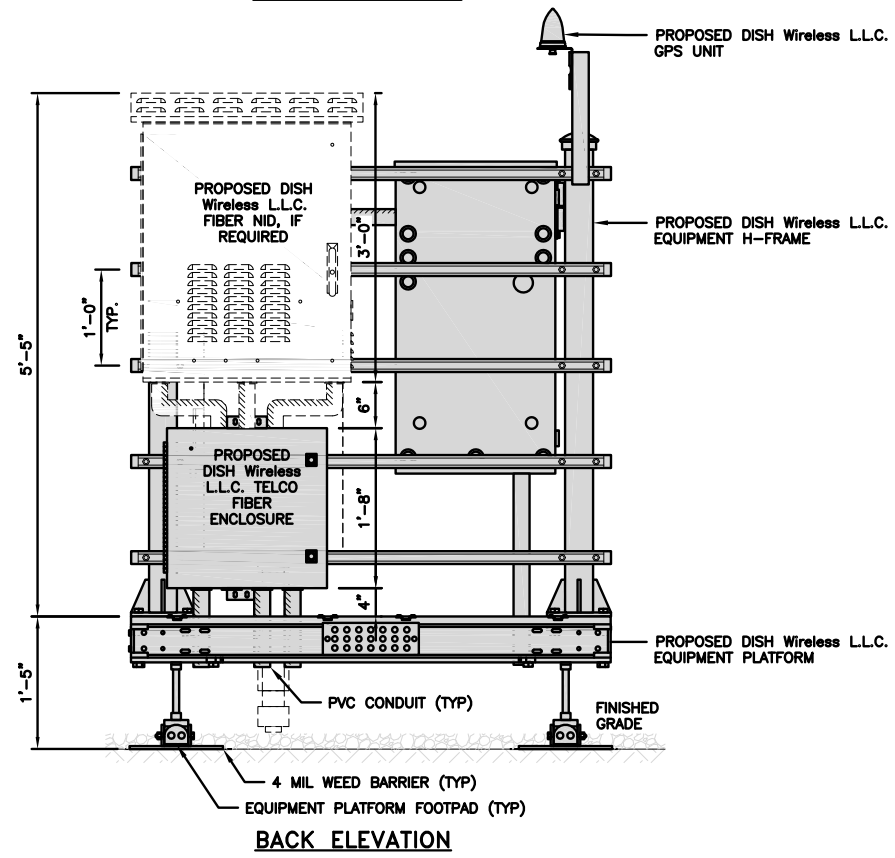
NO SCALE 3

NOT USED

NO SCALE 4

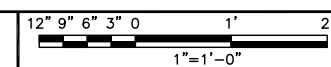


FRONT ELEVATION

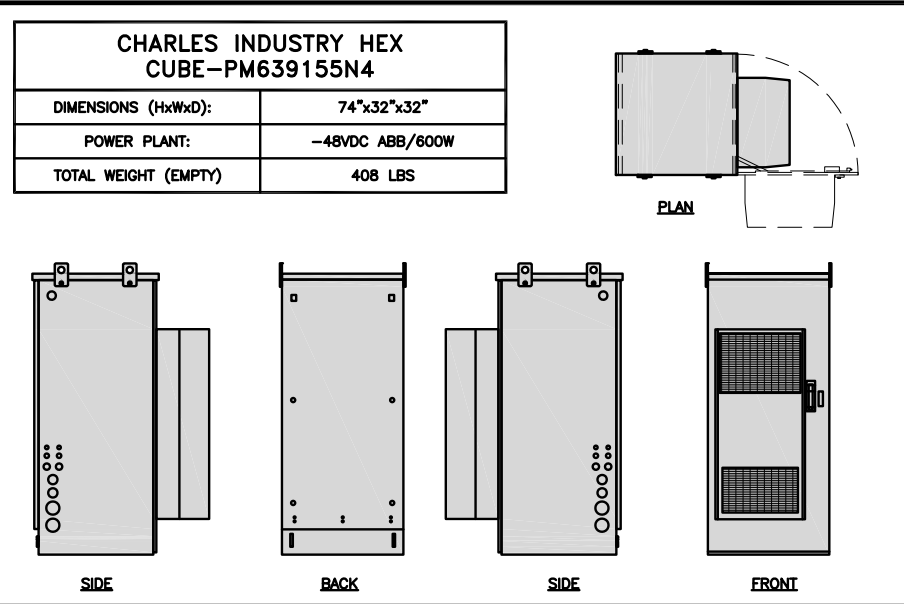


BACK ELEVATION

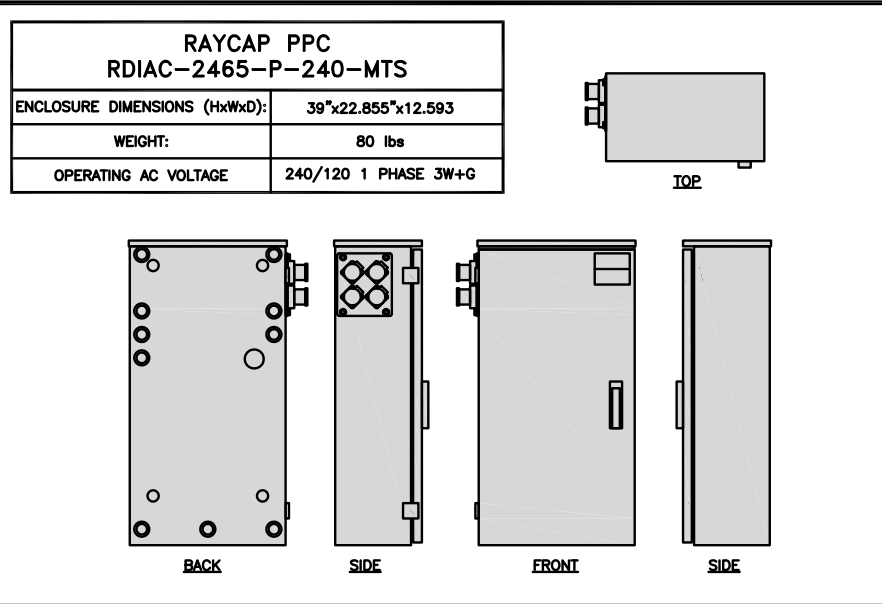
H-FRAME EQUIPMENT ELEVATION



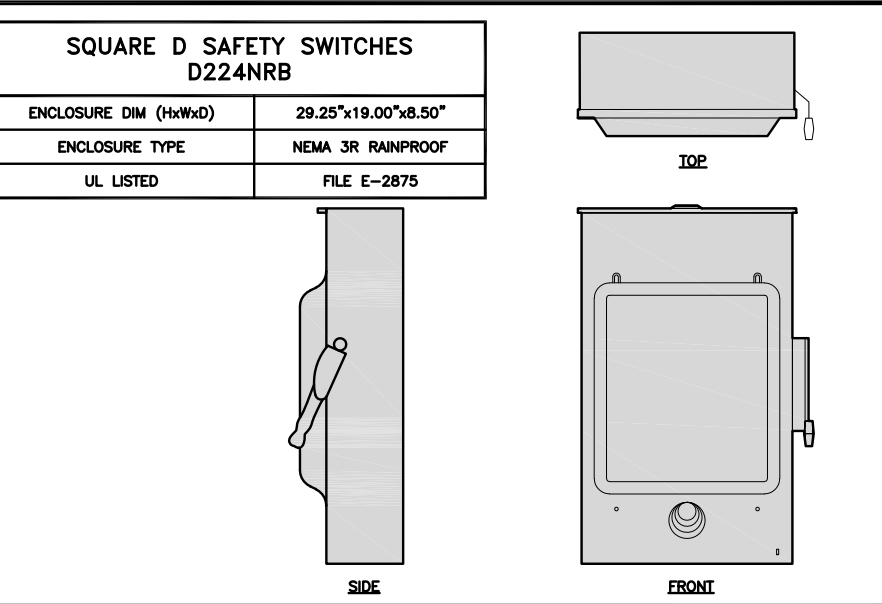
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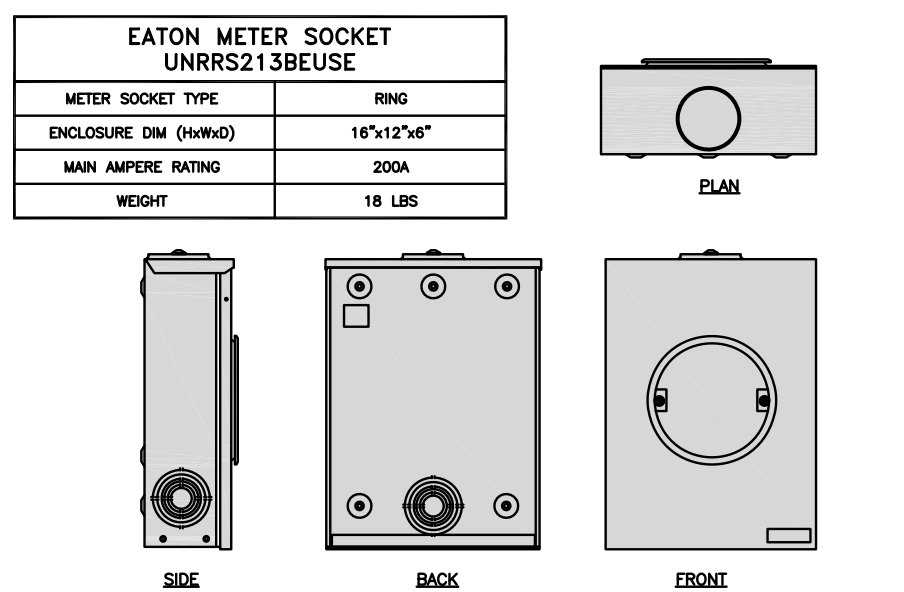
CABINET DETAIL NO SCALE 1



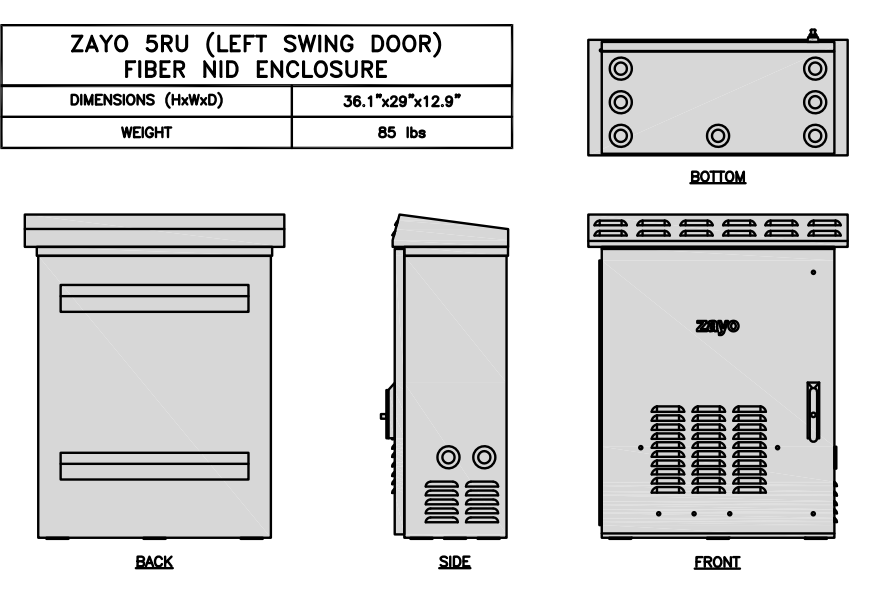
POWER PROTECTION CABINET (PPC) DETAIL NO SCALE 2



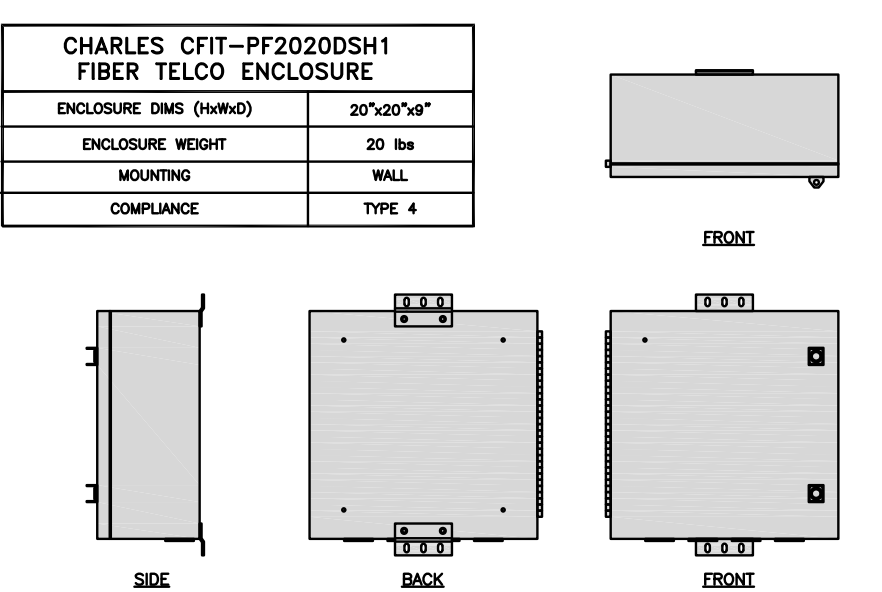
SAFETY SWITCH DETAIL NO SCALE 3



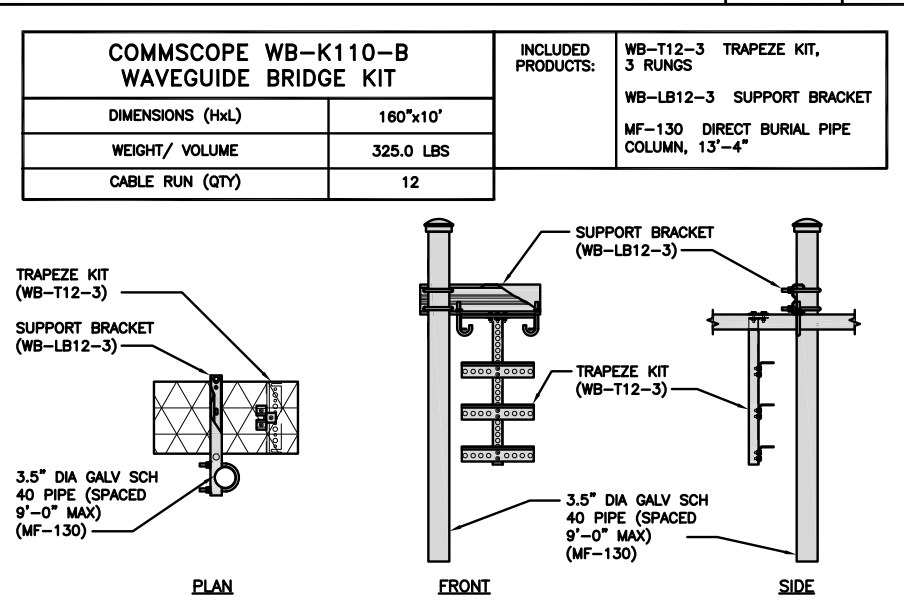
METER SOCKET DETAIL NO SCALE 4



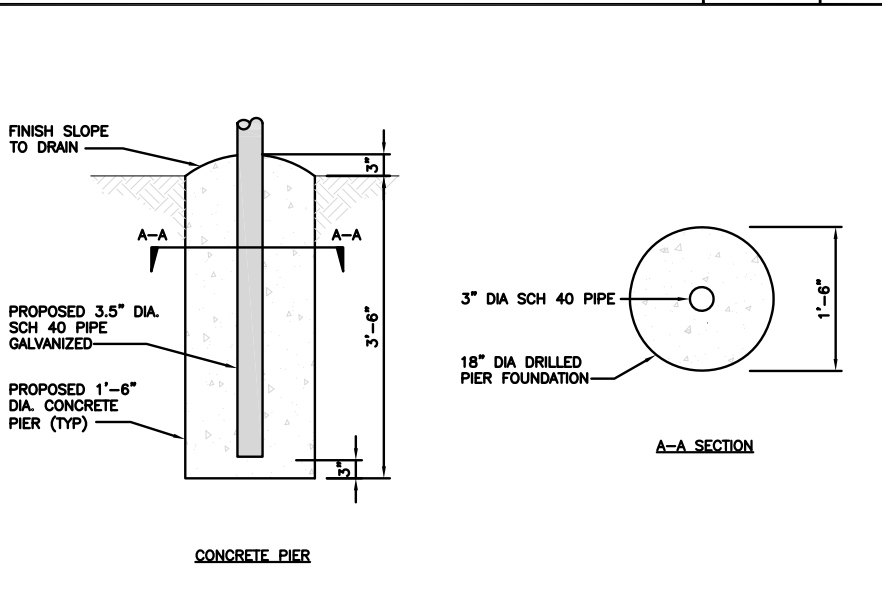
FIBER NID ENCLOSURE DETAIL NO SCALE 5



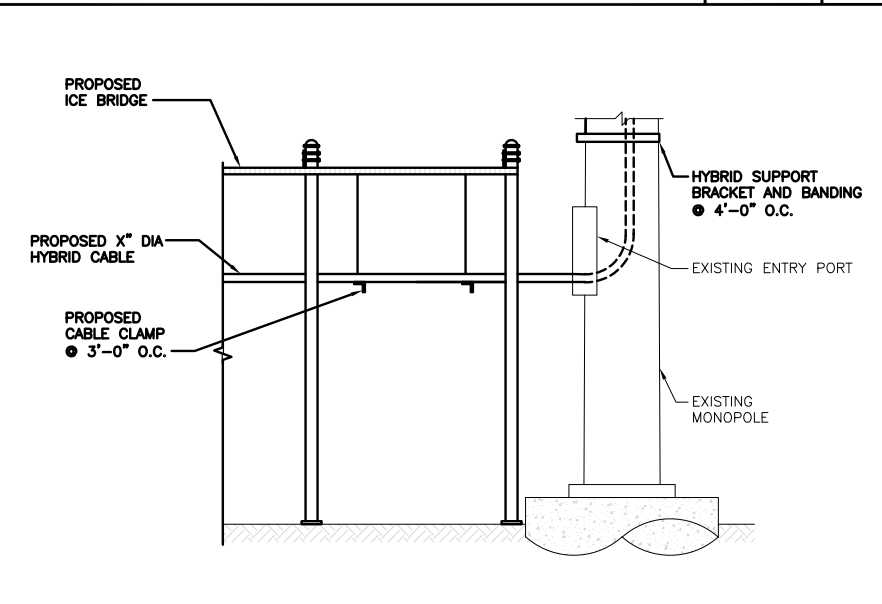
FIBER TELCO ENCLOSURE DETAIL NO SCALE 6



ICE BRIDGE DETAIL NO SCALE 7



TYPICAL ICE BRIDGE CONCRETE PIER DETAIL NO SCALE 8



HYBRID CABLE RUN NO SCALE 9

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

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BOCA RATON, FL 33487

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9/13/21

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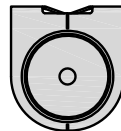
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DISH Wireless L.L.C.
PROJECT INFORMATION
BOBOS00044A
267 NORWICH WESTERLY ROAD
NORTH STONINGTON, CT 06359

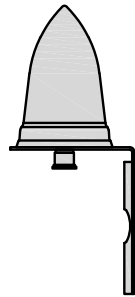
SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-4

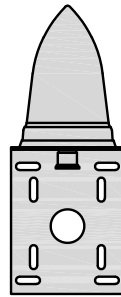
| PCTEL GPSGL-TMG-SPI-40NCB | |
|------------------------------|------------------------|
| DIMENSIONS (DIAxH) MM/INCH | 81x184mm 3.2"x7.25" |
| WEIGHT W/ACCESSORIES | 075 lbs |
| CONNECTOR | N-FEMALE |
| FREQUENCY RANGE | 1590 ± 30MHz |



TOP



BACK

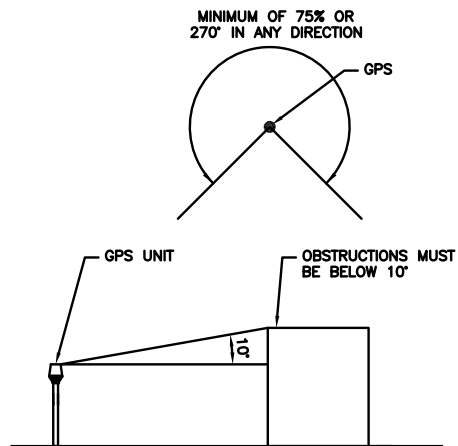


SIDE

GPS DETAIL

NO SCALE

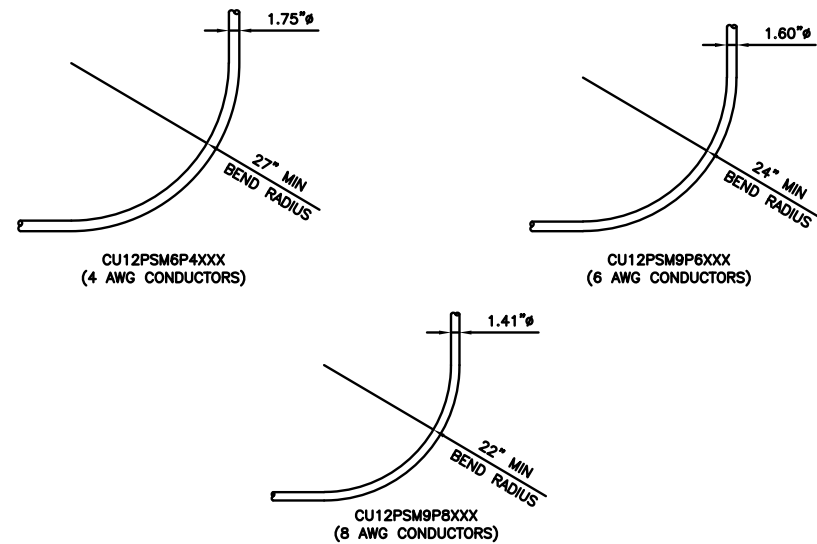
1



GPS MINIMUM SKY VIEW REQUIREMENTS

NO SCALE

2

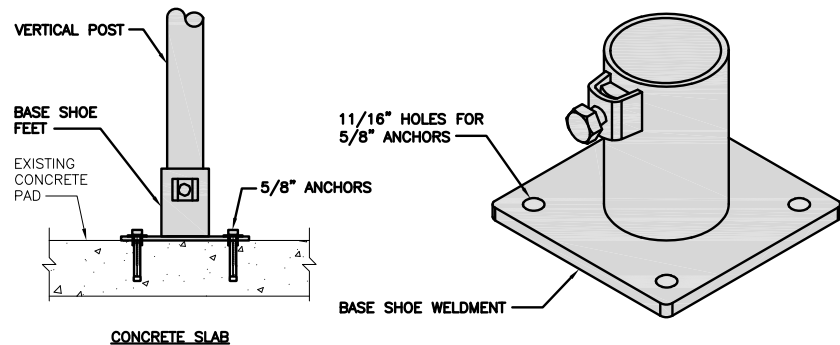


CABLES UNLIMITED HYBRID CABLE
MINIMUM BEND RADIUS

NO SCALE

3

| SITEPRO1 BSF35 BASE SHOE FEET | |
|----------------------------------|------------------|
| DIMENSIONS (HxWxL) | 8"x8"x1/2" |
| WEIGHT | 15.0 LBS |
| POST SIZE: | 2-7/8" OR 3-1/2" |



ICE BRIDGE PIPE MOUNT 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

dish
wireless.

5701 SOUTH SANTA FE DRIVE
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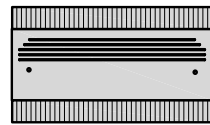
DISH Wireless L.L.C.
PROJECT INFORMATION
BOBOS00044A
267 NORWICH WESTERLY
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NORTH STONINGTON, CT
06359

SHEET TITLE
EQUIPMENT DETAILS

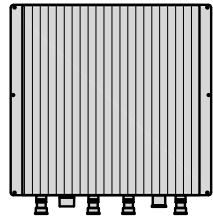
SHEET NUMBER

A-5

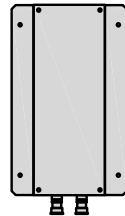
| FUJITSU TRIPLE BAND TA08025-B605 | |
|-------------------------------------|------------------------|
| DIMENSIONS (HxWxD) | 14.9"x15.7"x9" |
| WEIGHT | 74.95 lbs |
| CONNECTOR TYPE | 4.3-10 RF CONNECTOR |
| POWER SUPPLY | DC -58~-36V |



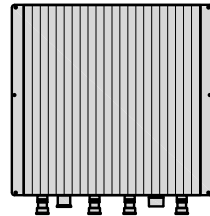
PLAN



BACK



SIDE



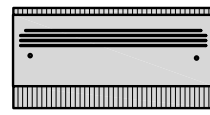
FRONT

RRH DETAIL

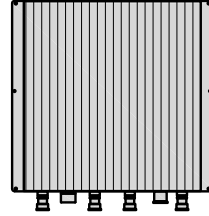
NO SCALE

1

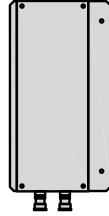
| FUJITSU DUAL BAND TA08025-B604 | |
|-----------------------------------|------------------------|
| DIMENSIONS (HxWxD) | 14.9"x15.7"x7.8" |
| WEIGHT | 63.9 lbs |
| CONNECTOR TYPE | 4.3-10 RF CONNECTOR |
| POWER SUPPLY | DC -58~-36V |



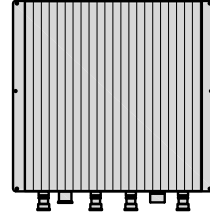
PLAN



BACK



SIDE



FRONT

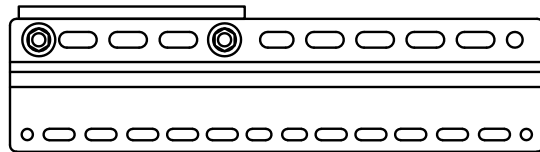
RRH DETAIL

NO SCALE

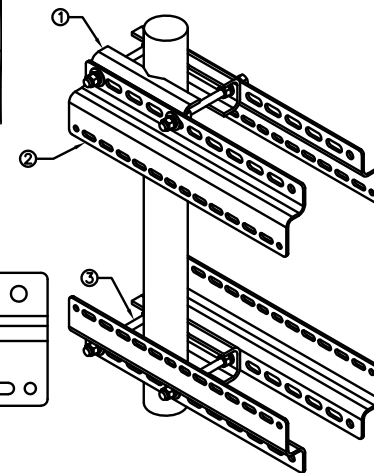
2

| SABRE DOUBLE Z-BRACKET C10123155 | |
|-------------------------------------|-----------------|
| DIMENSIONS (HxWxD) (1 BRACKET) | 5"x20"x1-13/16" |
| WEIGHT (FULL ASSEMBLY) | 35.79 lbs |
| PACKAGE QUANTITY | 4 |

| # | DESCRIPTION |
|---|--------------------------------|
| 1 | PLATE, CHANNEL BRACKET |
| 2 | RRH Z BRACKET, 3/16" |
| 3 | THREADED ROD ASSEMBLY 1/2"x12" |



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

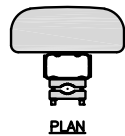


RRH MOUNT DETAIL

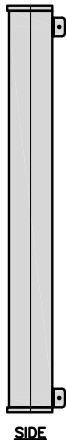
NO SCALE

3

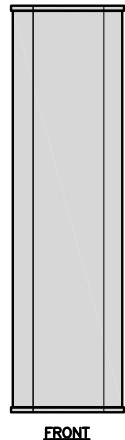
| JMA MX08FRO665-21 | |
|--------------------------|-------------------|
| DIMENSIONS (HxWxD) | 72"x20.0"x8.0" |
| RF PORTS, CONNECTOR TYPE | 8 x 4.3-10 FEMALE |
| WEIGHT | 64.5 lbs |
| WEIGHT WITH BRACKETS | 82.5 lbs |



PLAN



SIDE



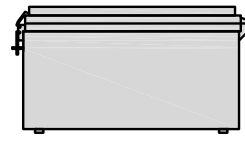
FRONT

ANTENNA DETAIL

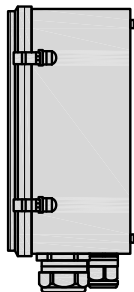
NO SCALE

4

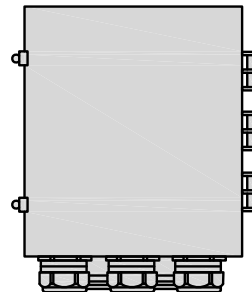
| RAYCAP RDIC-9181-PF-48 DC SURGE PROTECTION (OVP) | |
|---|---------------------|
| DIMENSIONS (HxWxD) | 18.98"x14.39"x8.15" |
| WEIGHT | 21.82 LBS |



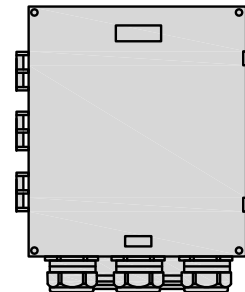
PLAN



SIDE



BACK



FRONT

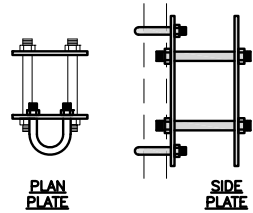
SURGE SUPPRESSION DETAIL (OVP)

NO SCALE

7

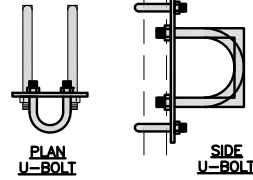
| COMMSCOPE XP-2040 CROSSOVER PLATE | |
|--------------------------------------|---------|
| DIMENSIONS (HxW) | 10"x12" |
| WEIGHT | 11 lbs |

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



PLAN
U-BOLT

SIDE
U-BOLT



PLAN
U-BOLT

SIDE
U-BOLT

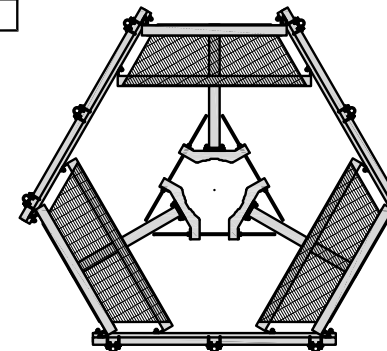
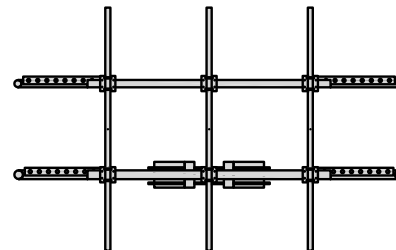
RRH/OVP MOUNT DETAIL

NO SCALE

8

| SITEPRO1 SNP8HR-396 SNUB-NOSE PLATFORM | |
|---|-----------------|
| FACE SIZE | 8'-0" |
| WEIGHT | 1786.28 LB |
| ANTENNA PIPE MOUNTS | (6) 2-3/8" O.D. |

NOTE:
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ANTENNA PLATFORM DETAIL

NO SCALE

9



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ANS MRE BLB

RFDS REV #: 0

CONSTRUCTION
DOCUMENTS

| SUBMITTALS | | |
|------------|---------|-------------------------|
| REV | DATE | DESCRIPTION |
| A | 7/26/21 | ISSUED FOR REVIEW |
| 0 | 9/13/21 | ISSUED FOR CONSTRUCTION |

A&E PROJECT NUMBER
149430.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBOS00044A
267 NORWICH WESTERLY
ROAD
NORTH STONINGTON, CT
06359

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER

A-6

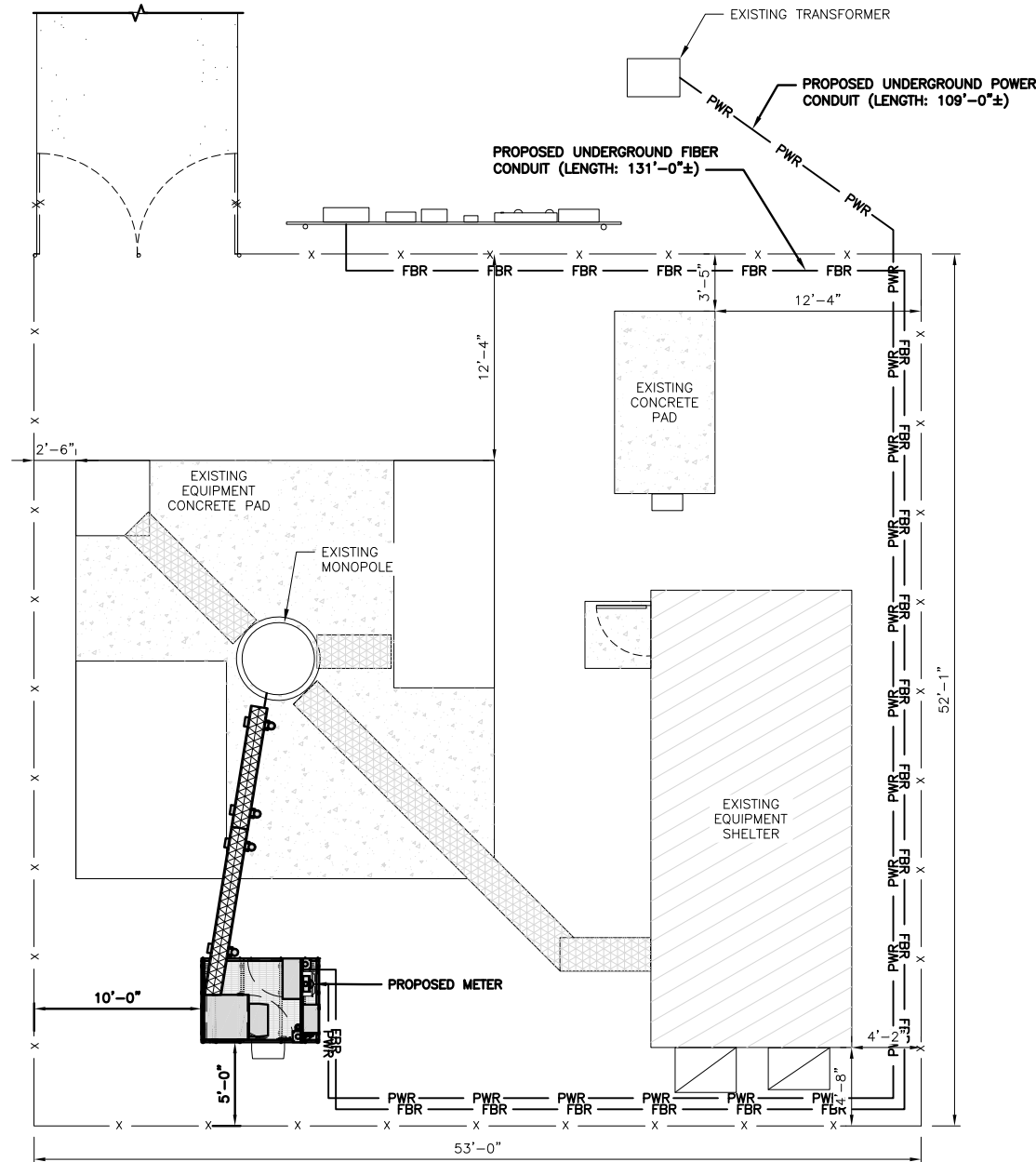
FINAL POWER OR FIBER DESIGN
NOT AVAILABLE AT TIME OF ISSUE

NOTES

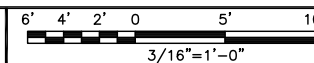
1. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED UNDERGROUND UTILITY CONDUIT ROUTE.
2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.

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



UTILITY ROUTE PLAN



1

ELECTRICAL NOTES

NO SCALE

2



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RFDS REV #: 0

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267 NORWICH WESTERLY
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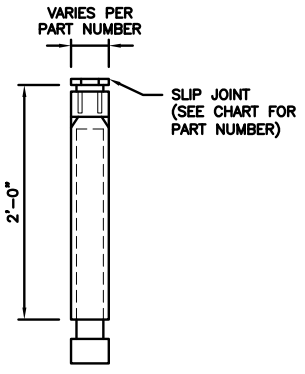
SHEET TITLE
ELECTRICAL/FIBER ROUTE
PLAN AND NOTES

SHEET NUMBER

E-1

CARLON EXPANSION FITTINGS

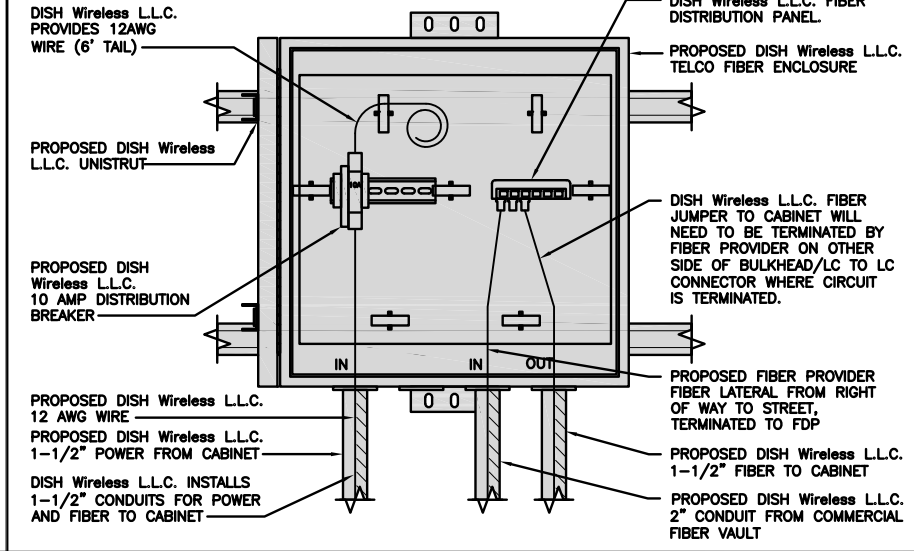
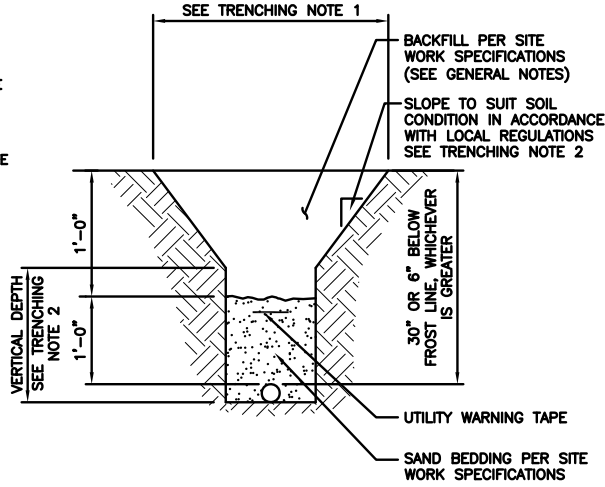
| COUPLING END PART# | MALE TERMINAL ADAPTER END PART# | SIZE | STD CTN QTY. | TRAVEL LENGTH |
|--------------------|---------------------------------|--------|--------------|---------------|
| E945D | E945DX | 1/2" | 20 | 4" |
| E945E | E945EX | 3/4" | 15 | 4" |
| E945F | E945FX | 1" | 10 | 4" |
| E945G | 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.

TRENCHING NOTES

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



EXPANSION JOINT DETAIL

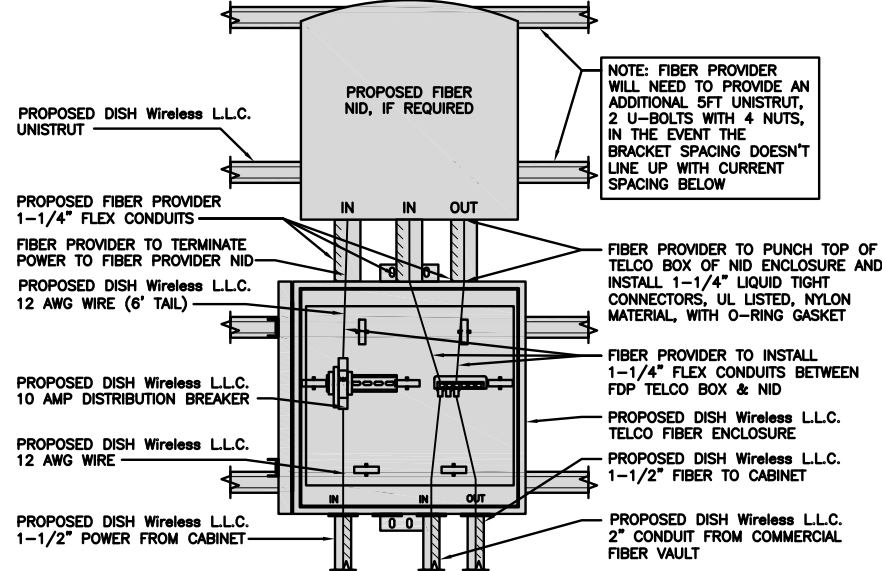
NO SCALE 1

TYPICAL UNDERGROUND TRENCH DETAIL

NO SCALE 2

DARK TELCO BOX – INTERIOR WIRING LAYOUT

NO SCALE 3



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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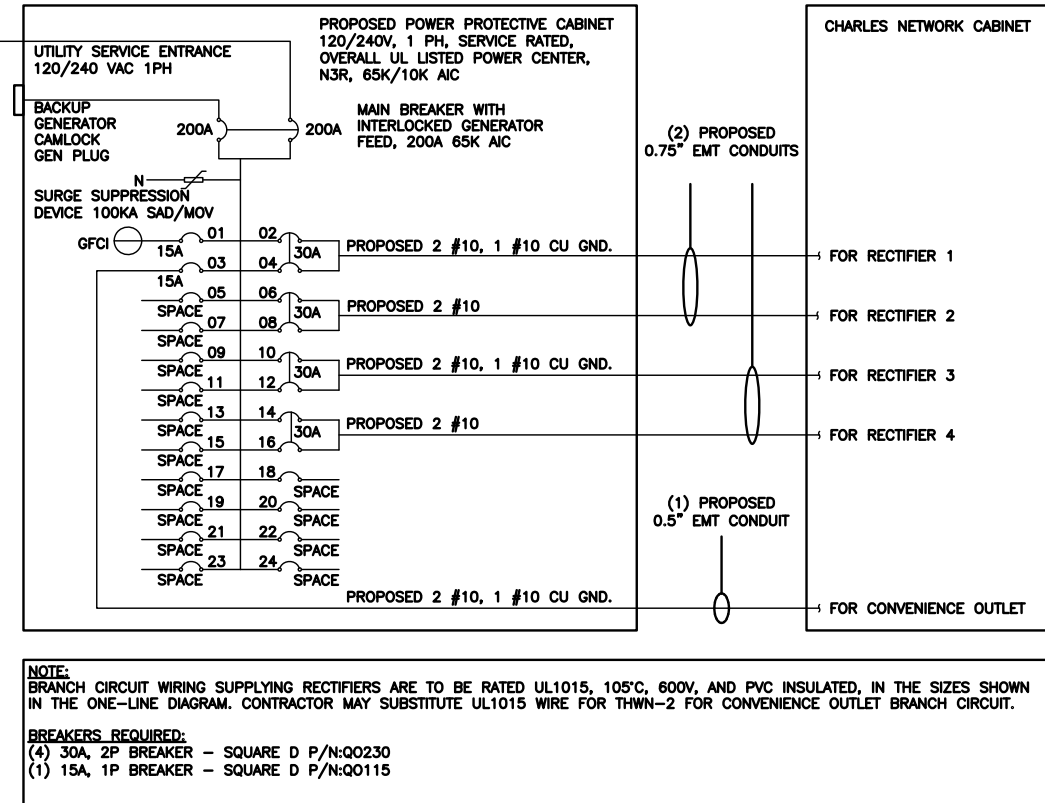
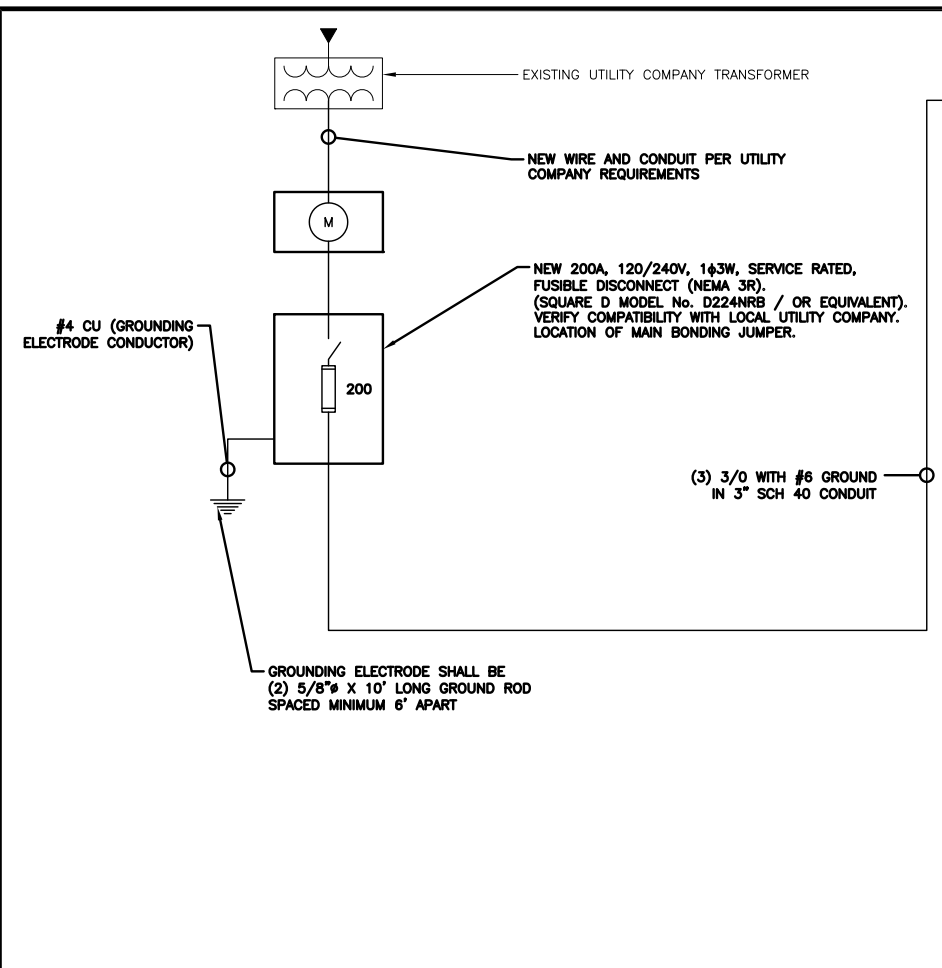
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A&E PROJECT NUMBER
149430.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBOS00044A
267 NORWICH WESTERLY ROAD
NORTH STONINGTON, CT 06359

SHEET TITLE
ELECTRICAL DETAILS

SHEET NUMBER
E-2



NOTES

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

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

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

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

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

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

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

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

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

PPC ONE-LINE DIAGRAM

NO SCALE 1

| PROPOSED CHARLES PANEL SCHEDULE | | | | | | | | | | |
|---|-------------------|-----|------|-------|-------|-------|------|-------------------|-------|-----------------------------|
| LOAD SERVED | VOLT AMPS (WATTS) | | TRIP | CKT # | PHASE | CKT # | TRIP | VOLT AMPS (WATTS) | | LOAD SERVED |
| | L1 | L2 | | | | | | L1 | L2 | |
| PPC GFCI OUTLET | 180 | 180 | 15A | 1 | A | 2 | 30A | 2880 | 2880 | ABB/GE INFINITY RECTIFIER 1 |
| CHARLES GFCI OUTLET | 180 | 180 | 15A | 3 | B | 4 | 30A | 2880 | 2880 | ABB/GE INFINITY RECTIFIER 1 |
| -SPACE- | | | | 5 | A | 6 | 30A | 2880 | 2880 | ABB/GE INFINITY RECTIFIER 2 |
| -SPACE- | | | | 7 | B | 8 | 30A | 2880 | 2880 | ABB/GE INFINITY RECTIFIER 2 |
| -SPACE- | | | | 9 | A | 10 | 30A | 2880 | 2880 | ABB/GE INFINITY RECTIFIER 3 |
| -SPACE- | | | | 11 | B | 12 | 30A | 2880 | 2880 | ABB/GE INFINITY RECTIFIER 3 |
| -SPACE- | | | | 13 | A | 14 | 30A | 2880 | 2880 | ABB/GE INFINITY RECTIFIER 4 |
| -SPACE- | | | | 15 | B | 16 | 30A | 2880 | 2880 | ABB/GE INFINITY RECTIFIER 4 |
| -SPACE- | | | | 17 | A | 18 | | | | -SPACE- |
| -SPACE- | | | | 19 | B | 20 | | | | -SPACE- |
| -SPACE- | | | | 21 | A | 22 | | | | -SPACE- |
| -SPACE- | | | | 23 | B | 24 | | | | -SPACE- |
| VOLTAGE AMPS | | 180 | 180 | | | | | 11520 | 11520 | |
| 200A MCB, 1 ϕ , 24 SPACE, 120/240V | | | | L1 | L2 | | | | | |
| MB RATING: 65,000 AIC | | | | 11700 | 11700 | | | | | VOLTAGE AMPS |
| | | | | 98 | 98 | | | | | AMPS |
| | | | | 98 | 98 | | | | | MAX AMPS |
| | | | | 123 | 123 | | | | | MAX 125% |

PANEL SCHEDULE

NO SCALE 2

NOT USED

NO SCALE 3



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CONSTRUCTION DOCUMENTS

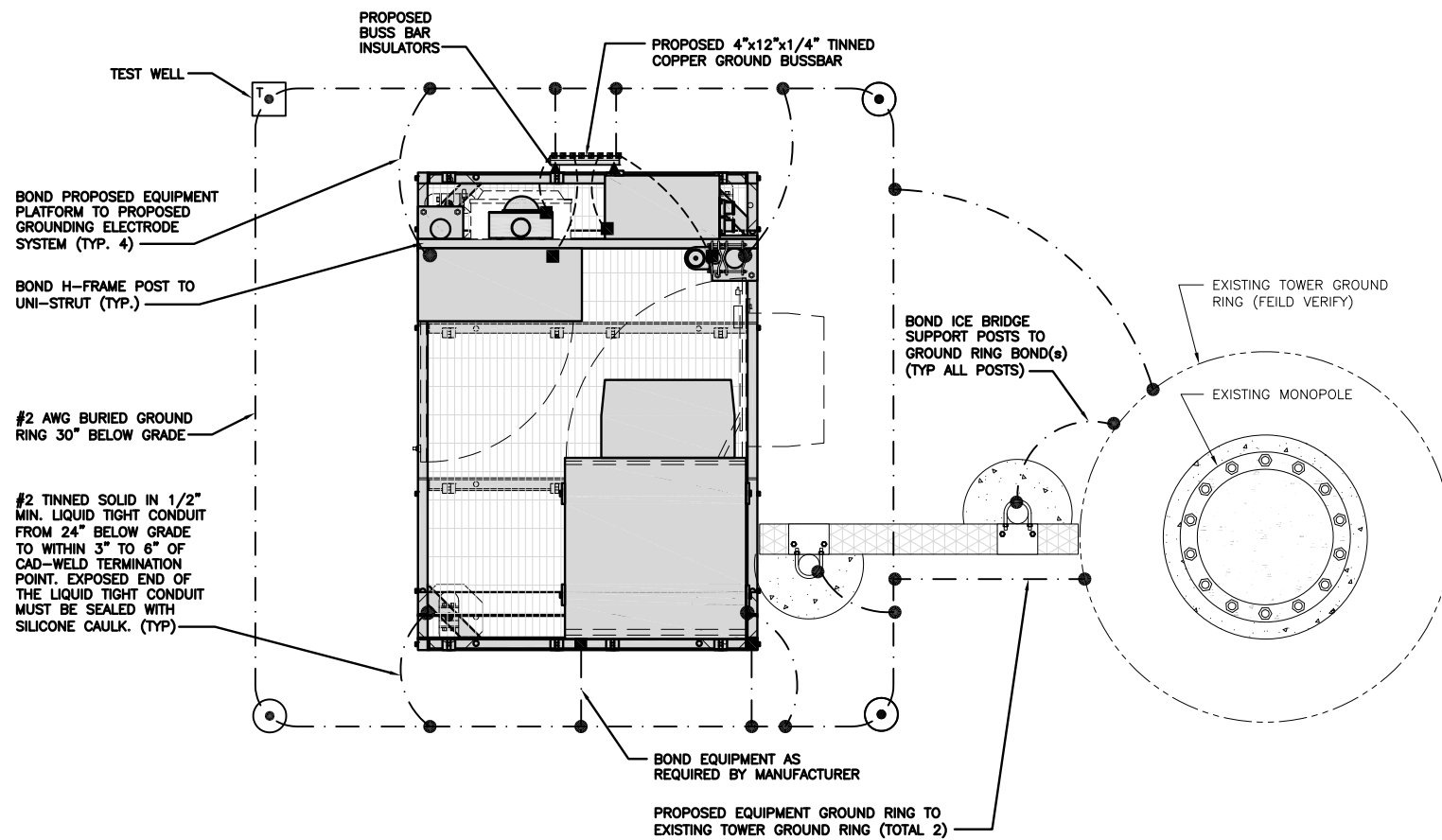
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DISH Wireless L.L.C.
PROJECT INFORMATION
BOBOS00044A
267 NORWICH WESTERLY ROAD
NORTH STONINGTON, CT 06359

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

SHEET NUMBER
E-3

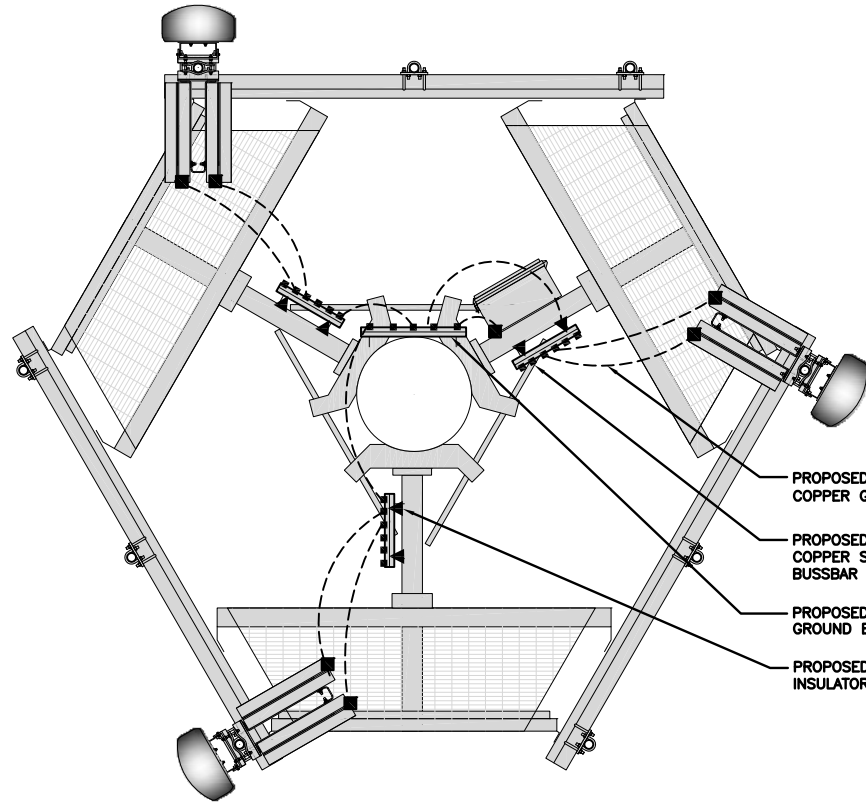


TYPICAL EQUIPMENT GROUNDING PLAN

NO SCALE 1

NOTES

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



TYPICAL ANTENNA GROUNDING PLAN

NO SCALE 2

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



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



8051 CONGRESS AVENUE
BOCA RATON, FL 33487



1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
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PEC.0001564
Expires 2/10/22

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| ANS | MRE | BLB |

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CONSTRUCTION DOCUMENTS

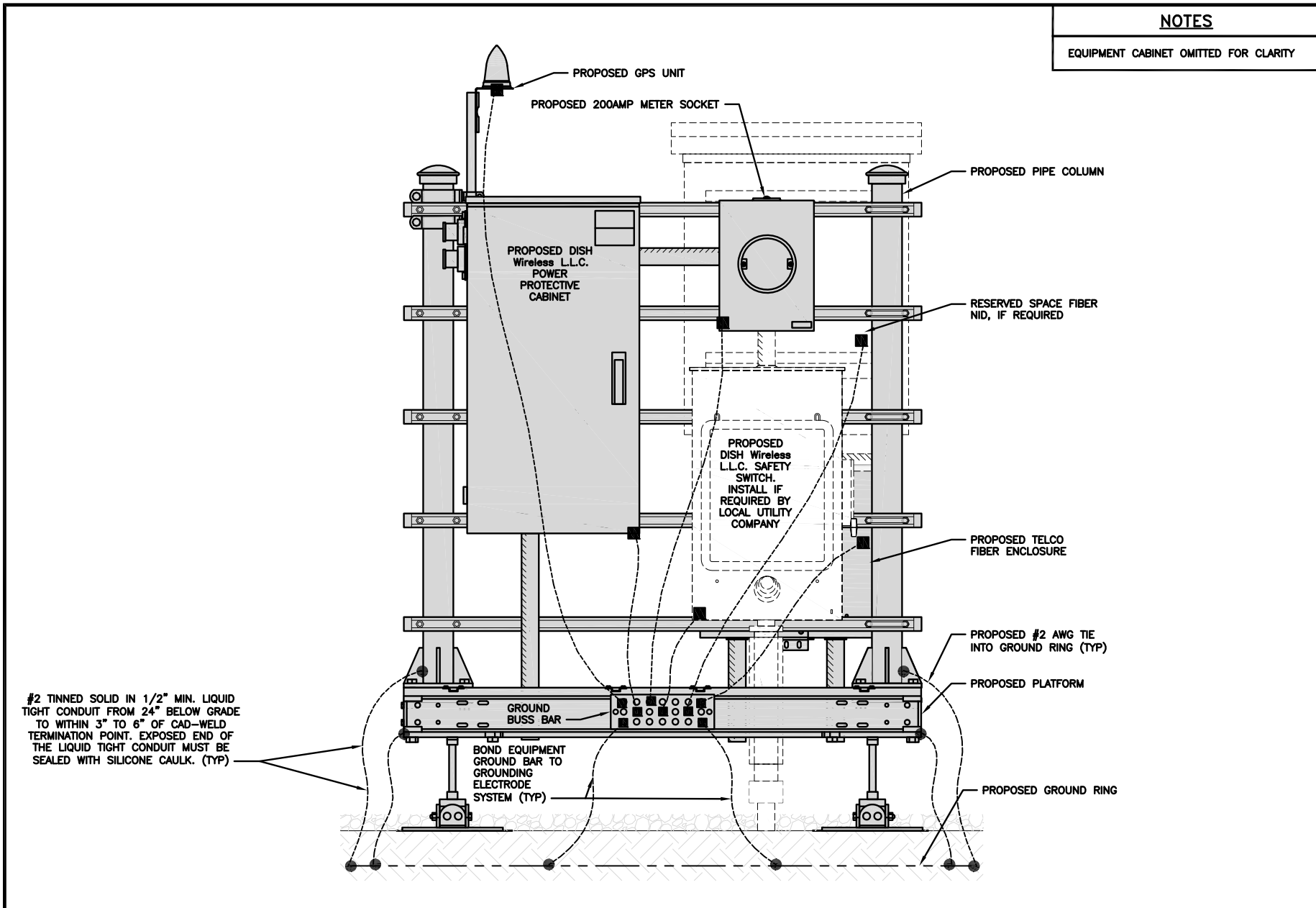
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A&E PROJECT NUMBER
149430.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBOS00044A
267 NORWICH WESTERLY
ROAD
NORTH STONINGTON, CT
06359

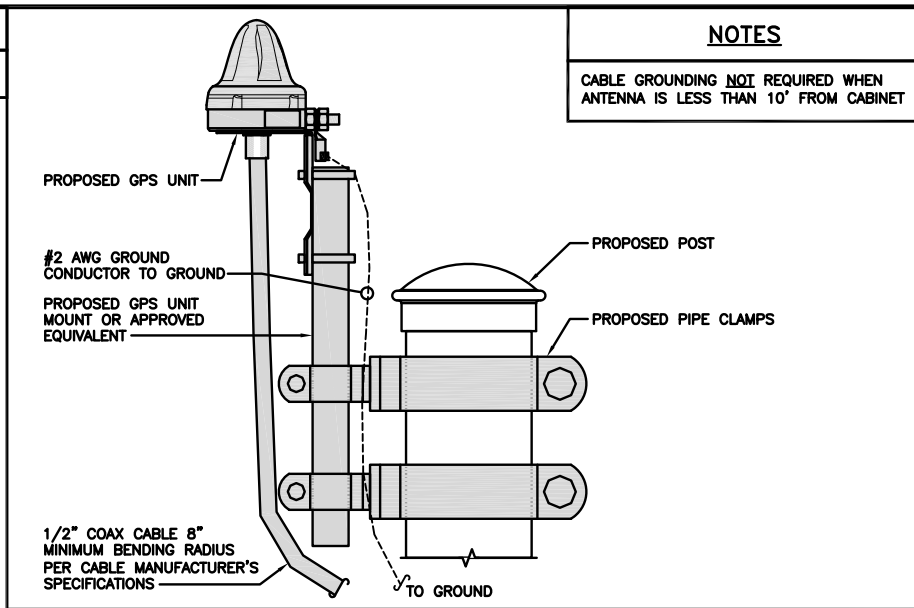
SHEET TITLE
GROUNDING PLANS
AND NOTES

SHEET NUMBER
G-1



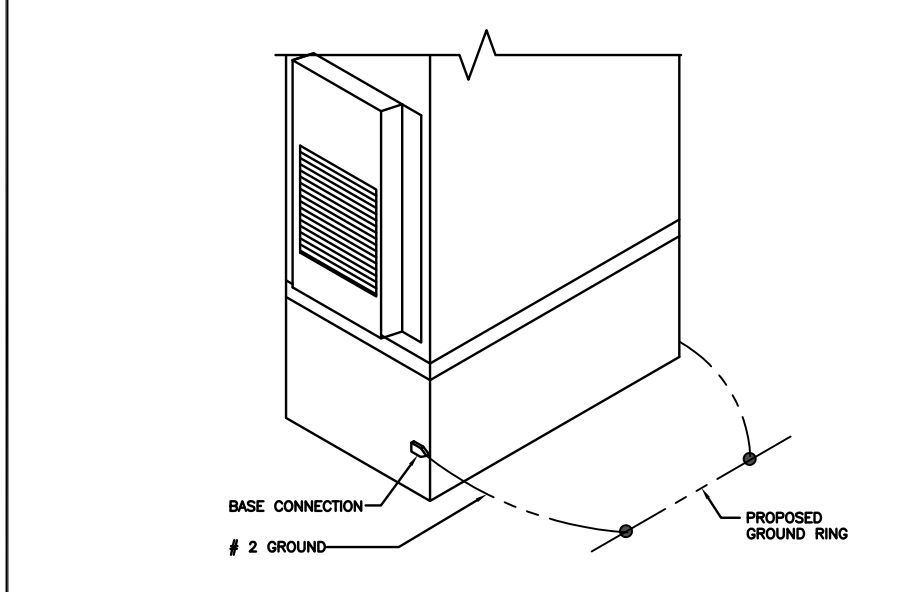
H-FRAME GROUNDING DETAIL

NO SCALE 1



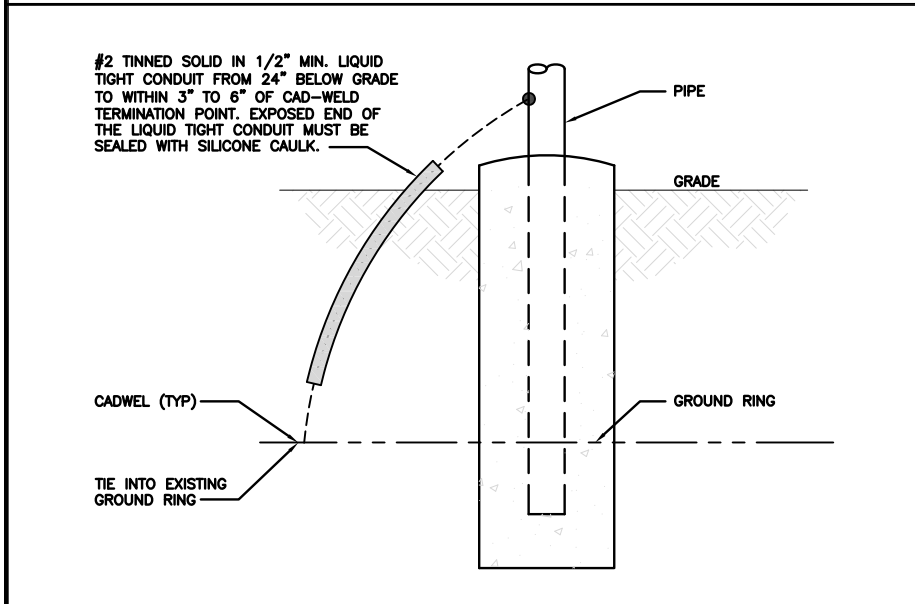
TYPICAL GPS UNIT GROUNDING

NO SCALE 2



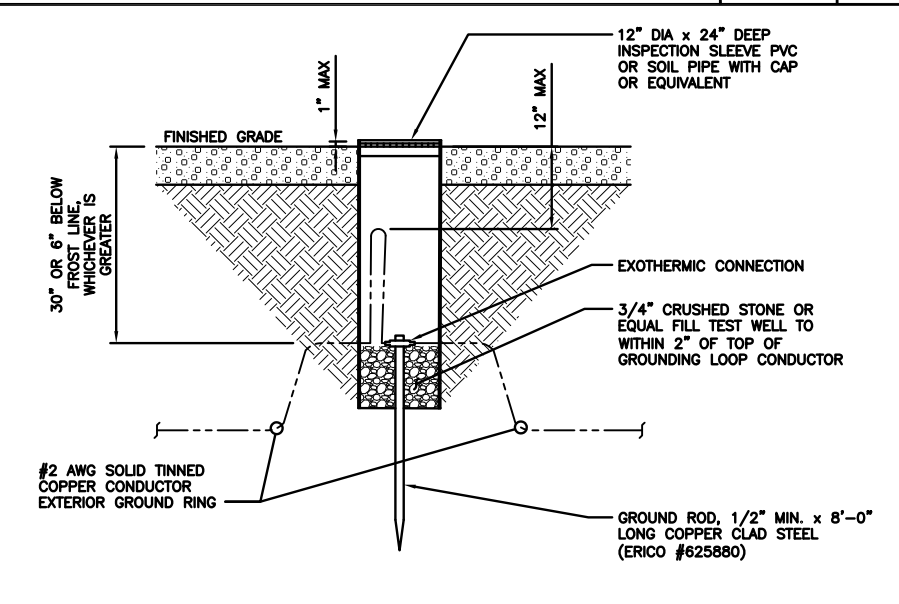
OUTDOOR CABINET GROUNDING

NO SCALE 3



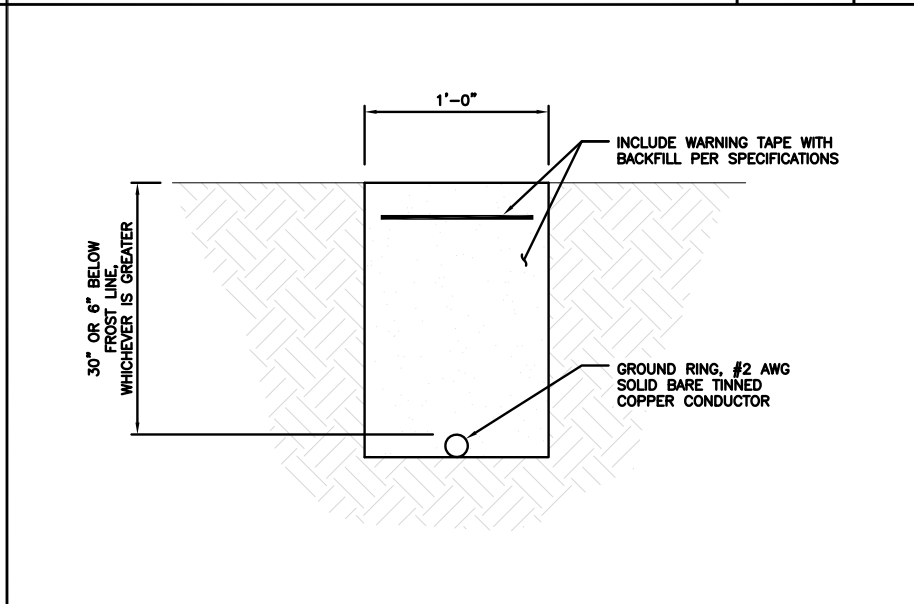
TRANSITIONING GROUND DETAIL

NO SCALE 4



TYPICAL TEST GROUND ROD WITH INSPECTION SLEEVE

NO SCALE 5



TYPICAL GROUND RING TRENCH

NO SCALE 6



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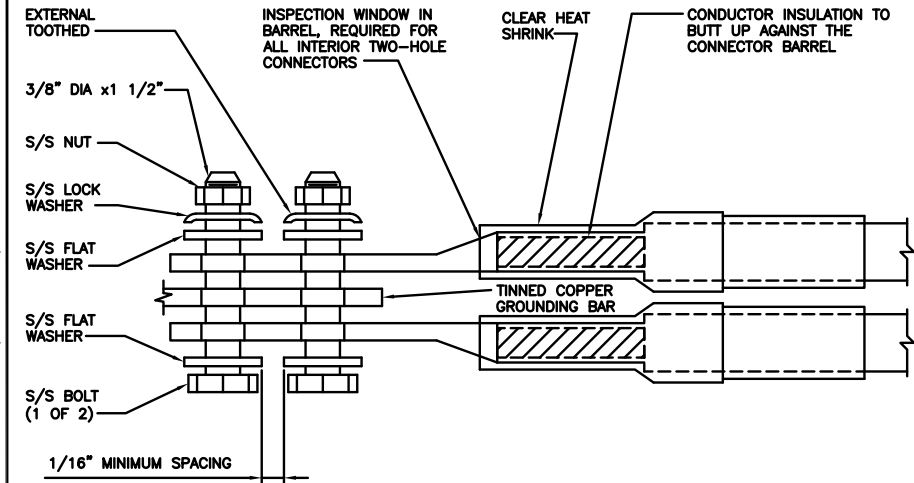
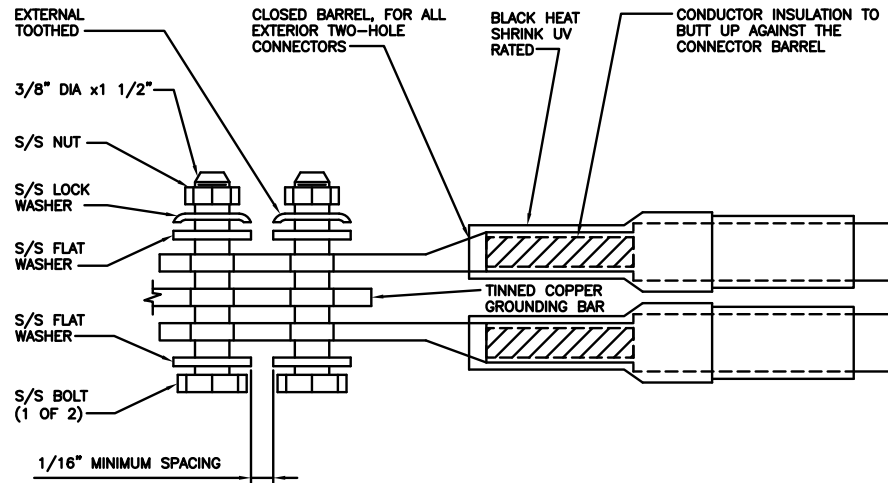
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DISH Wireless L.L.C.
PROJECT INFORMATION
BOBOS00044A
267 NORWICH WESTERLY ROAD
NORTH STONINGTON, CT 06359

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

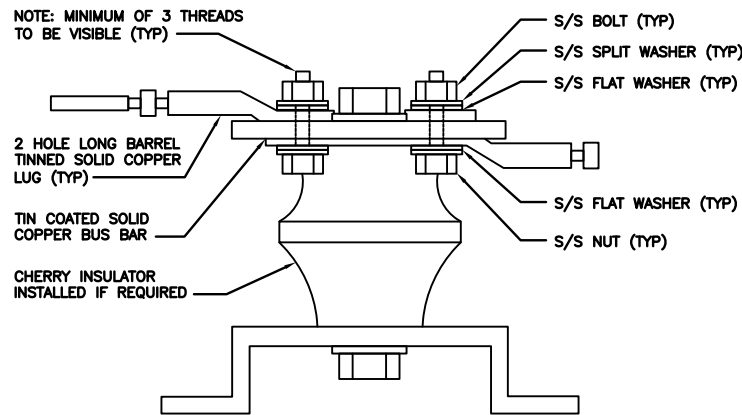
NO SCALE

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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267 NORWICH WESTERLY ROAD
NORTH STONINGTON, CT 06359

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
G-3

RF JUMPER COLOR CODING

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

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

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

| ALPHA RRH | | | | BETA RRH | | | | GAMMA RRH | | | |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| PORT 1 + SLANT | PORT 2 - SLANT | PORT 3 + SLANT | PORT 4 - SLANT | PORT 1 + SLANT | PORT 2 - SLANT | PORT 3 + SLANT | PORT 4 - SLANT | PORT 1 + SLANT | PORT 2 - SLANT | PORT 3 + SLANT | PORT 4 - SLANT |
| RED | RED | RED | RED | BLUE | BLUE | BLUE | BLUE | GREEN | GREEN | GREEN | GREEN |
| ORANGE | ORANGE | RED | RED | ORANGE | ORANGE | BLUE | BLUE | ORANGE | ORANGE | GREEN | GREEN |
| | WHITE (-) PORT | ORANGE | ORANGE | | WHITE (-) PORT | ORANGE | ORANGE | | WHITE (-) PORT | ORANGE | ORANGE |
| | | | WHITE (-) PORT | | | | WHITE (-) PORT | | | | WHITE (-) PORT |

MID-BAND RRH -
(AWS BANDS N66+N70)

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

| | | | | | | | | | | | |
|--------|-------------------|--------|-------------------|--------|-------------------|--------|-------------------|--------|-------------------|--------|-------------------|
| RED | RED | RED | RED | BLUE | BLUE | BLUE | BLUE | GREEN | GREEN | GREEN | GREEN |
| PURPLE | PURPLE | RED | RED | PURPLE | PURPLE | BLUE | BLUE | PURPLE | PURPLE | GREEN | GREEN |
| | WHITE (-) PORT | PURPLE | PURPLE | | WHITE (-) PORT | PURPLE | PURPLE | | WHITE (-) PORT | PURPLE | PURPLE |
| | | | WHITE (-) PORT | | | | WHITE (-) PORT | | | | WHITE (-) PORT |

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 1 | EXAMPLE 2 | EXAMPLE 3 |
|-----------|-----------|-----------|
| RED | RED | RED |
| BLUE | BLUE | |
| GREEN | GREEN | ORANGE |
| ORANGE | YELLOW | PURPLE |
| PURPLE | | |

FIBER JUMPERS TO RRHs

LOW-BAND RRH FIBER CABLES HAVE SECTOR
STRIPE ONLY

| LOW BAND RRH | HIGH BAND RRH | LOW BAND RRH | HIGH BAND RRH | LOW BAND RRH | HIGH BAND RRH |
|--------------|---------------|--------------|---------------|--------------|---------------|
| RED | RED | BLUE | BLUE | GREEN | GREEN |
| | PURPLE | | PURPLE | | PURPLE |

POWER CABLES TO RRHs

LOW-BAND RRH POWER CABLES HAVE SECTOR
STRIPE ONLY

| LOW BAND RRH | HIGH BAND RRH | LOW BAND RRH | HIGH BAND RRH | LOW BAND RRH | HIGH BAND RRH |
|--------------|---------------|--------------|---------------|--------------|---------------|
| RED | RED | BLUE | BLUE | GREEN | GREEN |
| | PURPLE | | PURPLE | | PURPLE |

RET MOTORS AT ANTENNAS

| ANTENNA 1 LOW BAND/ "IN" | ANTENNA 1 HIGH BAND/ "IN" | ANTENNA 1 LOW BAND/ "IN" | ANTENNA 1 HIGH BAND/ "IN" | ANTENNA 1 LOW BAND/ "IN" | ANTENNA 1 HIGH BAND/ "IN" |
|--------------------------------|---------------------------------|--------------------------------|---------------------------------|--------------------------------|---------------------------------|
| RED | RED | BLUE | BLUE | GREEN | GREEN |
| | PURPLE | | PURPLE | | PURPLE |

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

| FORWARD AZIMUTH OF 0-120 DEGREES | | FORWARD AZIMUTH OF 120-240 DEGREES | | FORWARD AZIMUTH OF 240-360 DEGREES | |
|----------------------------------|-----------|------------------------------------|-----------|------------------------------------|-----------|
| PRIMARY | SECONDARY | PRIMARY | SECONDARY | PRIMARY | SECONDARY |
| WHITE | WHITE | WHITE | WHITE | WHITE | WHITE |
| RED | RED | BLUE | BLUE | GREEN | GREEN |
| WHITE | WHITE | WHITE | WHITE | WHITE | WHITE |
| | RED | | BLUE | | GREEN |
| | WHITE | | WHITE | | WHITE |
| | WHITE | | WHITE | | WHITE |

RF CABLE COLOR CODES

NO SCALE

1

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



AWS
(N66+N70+H-BLOCK)



CBRS TECH
(3 GHz)



NEGATIVE SLANT PORT
ON ANT/RRH



ALPHA SECTOR



BETA SECTOR



GAMMA SECTOR



COLOR IDENTIFIER

NO SCALE

2

NOTES

CONTRACTOR TO REFER TO FINAL CONSTRUCTION
RFDS FOR ALL RF DETAILS. FINAL RFDS IS IN
NEXYSONE.

NOT USED

NO SCALE

3

NOT USED

NO SCALE

4



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LITTLETON, CO 80120



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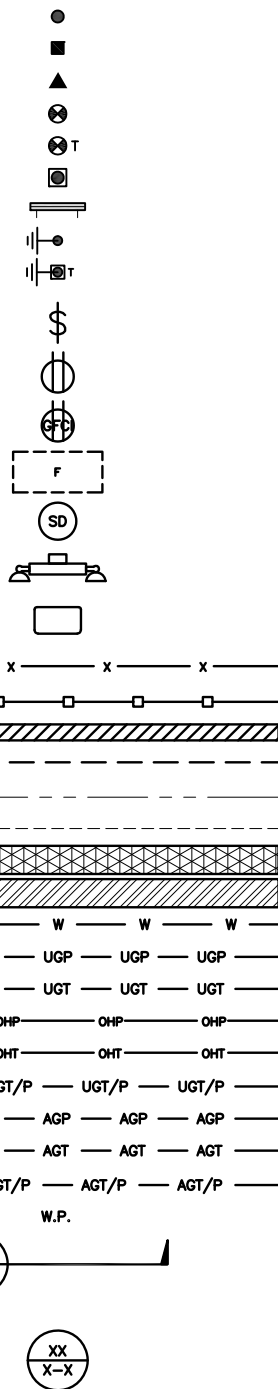
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DISH Wireless L.L.C.
PROJECT INFORMATION
BOBOS00044A
267 NORWICH WESTERLY
ROAD
NORTH STONINGTON, CT
06359

SHEET TITLE
RF
CABLE COLOR CODES

SHEET NUMBER
RF-1

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



LEGEND

AB ANCHOR BOLT
 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 UNINTERRUPTIBLE POWER SYSTEM (DC POWER PLANT)
 VIF VERIFIED IN FIELD
 W WIDE
 W/ WITH
 WD WOOD
 WP WEATHERPROOF
 WT WEIGHT

ABBREVIATIONS



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 267 NORWICH WESTERLY
 ROAD
 NORTH STONINGTON, CT
 06359

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.
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| RFDS REV #: | | 0 |

CONSTRUCTION DOCUMENTS

| SUBMITTALS | | |
|------------|---------|-------------------------|
| REV | DATE | DESCRIPTION |
| A | 7/26/21 | ISSUED FOR REVIEW |
| 0 | 9/13/21 | ISSUED FOR CONSTRUCTION |
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A&E PROJECT NUMBER
149430.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBOS00044A
267 NORWICH WESTERLY ROAD
NORTH STONINGTON, CT 06359

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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RFDS REV #: 0

CONSTRUCTION DOCUMENTS

| SUBMITTALS | | |
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| REV | DATE | DESCRIPTION |
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| 0 | 9/13/21 | ISSUED FOR CONSTRUCTION |
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A&E PROJECT NUMBER
149430.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBOS00044A
267 NORWICH WESTERLY
ROAD
NORTH STONINGTON, CT
06359

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.



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ANS MRE BLB

RFDS REV #: 0

CONSTRUCTION DOCUMENTS

| SUBMITTALS | | |
|------------|---------|-------------------------|
| REV | DATE | DESCRIPTION |
| A | 7/26/21 | ISSUED FOR REVIEW |
| 0 | 9/13/21 | ISSUED FOR CONSTRUCTION |
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A&E PROJECT NUMBER
149430.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION
BOBOS00044A
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SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-4