



February 6, 2024

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

**Re: Notice of Exempt Modification – Antenna and RRU Swap/Add**  
**Property Address: 188 Moody Road, Enfield, CT**  
**Applicant: AT&T Mobility, LLC**

Dear Ms. Bachman:

On behalf of AT&T, please accept this application as notification pursuant to R.C.S.A. §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16- 50j-72(b) (2).

AT&T currently maintains a wireless telecommunications facility consisting of twelve (12) wireless telecommunication antennas at an antenna center line height of 158' on an existing 180-foot monopole, owned by SBA Communications, Troiano Realty Corp as the Property Owner.

AT&T desires to modify its existing telecommunications facility by removing three (3) antennas, swapping nine (9) antennas, adding six (6) remote radio units and associated lines. The centerline height of said antennas and remote radio units is and will remain at 158' on the existing antenna mount.

Attached is a summary of the planned modifications including power density calculations reflecting the change in AT&T's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

Please accept this letter pursuant to Regulation of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-510j-72(b) (2). In accordance with R.C.S.A., a copy of this letter is being sent to the following individuals: The Honorable Robert Cressotti, Mayor, Town of Enfield, Ellen Zoppo-Sassu, Town Manager, Town of Enfield, Troiano Realty Corp, Property Owner, and SBA as Tower Owner.

The following is a list of subsequent decisions by the Connecticut Siting Council:

- **EM-AT&T -049-230112** – AT&T Mobility, LLC notice of intent to modify an existing telecommunications facility located at 188 Moody Road Enfield, Connecticut.

The planned modifications to AT&T's facility fall squarely within those activities explicitly provided for in R.C.S.A. §16-50j-72(b) (2).

1. The proposed modifications will not result in an increase in the height of the existing tower. AT&T's replacement antennas will be installed at the 158-foot level of the 180-foot Monopole.
2. The proposed modifications will not involve any changes to ground-mounted equipment and, therefore, will not require and extension of the site boundary.
3. The proposed modifications will not increase the noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative worst-case RF emissions calculation for AT&T's modified facility is provided in the RF Emissions Compliance Report, included in Tab 2.
5. The proposed modifications will not cause a change or alteration in the physical or environmental



- characteristics of the site.
6. The tower and its foundation can support AT&T's proposed modifications. (See Structural Analysis Report included in Tab 3).

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

Sincerely,

Carolyn Seeley  
Real Estate Specialist  
Smartlink on behalf of AT&T  
(978) 760-5577  
Carolyn.seeley@smartlinkgroup.com

CC w/enclosures:

The Honorable Robert Cressotti, Mayor, Town of Enfield  
Ellen Zoppo-Sassu, Town Manager, Town of Enfield  
Troiano Realty Corp, Property Owner  
SBA Communications, Tower Owner

# 188 MOODY RD

**Location** 188 MOODY RD

**Mblu** 100 / / 0012 / /

**Acct#** 001600020130

**Owner** TROIANO REALTY CORP

**Assessment** \$1,799,800

**Appraisal** \$2,571,000

**PID** 2238

**Building Count** 1

**Fire District** 3

## Current Value

| Appraisal      |              |           |             |
|----------------|--------------|-----------|-------------|
| Valuation Year | Improvements | Land      | Total       |
| 2023           | \$1,739,000  | \$832,000 | \$2,571,000 |

| Assessment     |              |           |             |
|----------------|--------------|-----------|-------------|
| Valuation Year | Improvements | Land      | Total       |
| 2023           | \$1,217,400  | \$582,400 | \$1,799,800 |

## Owner of Record

**Owner** TROIANO REALTY CORP  
**Co-Owner**  
**Address** 0777 ENFIELD ST  
ENFIELD, CT 06082

**Sale Price** \$0  
**Certificate** 1  
**Book & Page** 0305/0468  
**Sale Date**

## Ownership History

| Ownership History   |            |             |             |           |
|---------------------|------------|-------------|-------------|-----------|
| Owner               | Sale Price | Certificate | Book & Page | Sale Date |
| TROIANO REALTY CORP | \$0        | 1           | 0305/0468   |           |

## Building Information

### Building 1 : Section 1

**Year Built:** 1965  
**Living Area:** 10,980  
**Replacement Cost:** \$516,969  
**Building Percent Good:** 47

Replacement Cost  
Less Depreciation:

\$243,000

**Building Attributes**

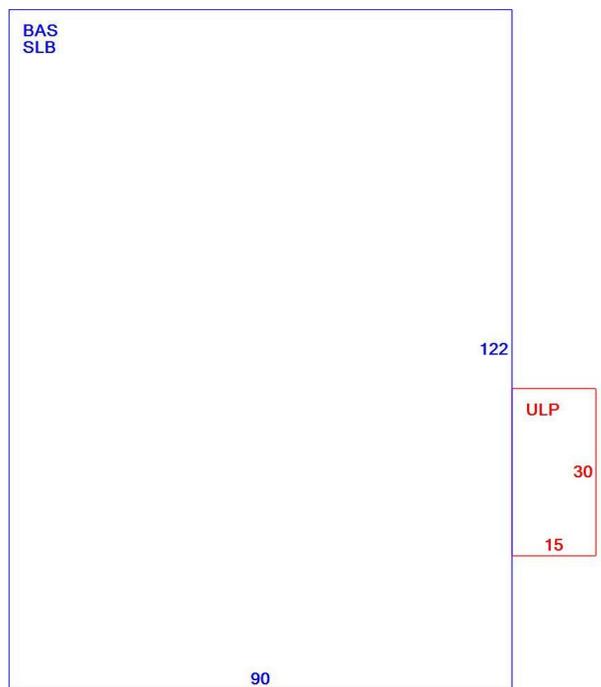
| Field            | Description          |
|------------------|----------------------|
| Style:           | Industrial Flex Bldg |
| Model            | Ind/Comm             |
| Grade            | Average              |
| Stories:         | 1                    |
| Occupancy        | 3.00                 |
| Exterior Wall 1  | Pre-finish Metl      |
| Exterior Wall 2  |                      |
| Roof Structure   | Gable                |
| Roof Cover       | Metal/Tin            |
| Interior Wall 1  | Minim/Masonry        |
| Interior Wall 2  |                      |
| Interior Floor 1 | Vinyl/Asphalt        |
| Interior Floor 2 |                      |
| Heating Fuel     | Gas                  |
| Heating Type     | Forced Air-Duc       |
| AC Type          | None                 |
| Struct Class     | 2.51                 |
| Bldg Use         | Industrial           |
| Total Rooms      |                      |
| Total Bedrms     |                      |
| Total Baths      |                      |
| Total H Bths     |                      |
| Extra Fixtures   |                      |
| 1st Floor Use:   |                      |
| Heat/AC          | None                 |
| Frame Type       | Steel                |
| Baths/Plumbing   | Average              |
| Ceiling/Wall     | None                 |
| Rooms/Prtns      | Average              |
| Wall Height      | 15.00                |
| % Comn Wall      |                      |

**Building Photo**



(<https://images.vgsi.com/photos2/EnfieldCTPhotos/\00\01\95\47.JPG>)

**Building Layout**



(ParcelSketch.ashx?pid=2238&bid=2238)

| Building Sub-Areas (sq ft) |                          |            | Legend      |
|----------------------------|--------------------------|------------|-------------|
| Code                       | Description              | Gross Area | Living Area |
| BAS                        | First Floor              | 10,980     | 10,980      |
| SLB                        | Slab                     | 10,980     | 0           |
| ULP                        | Uncvr'd Loading Platform | 450        | 0           |
|                            |                          | 22,410     | 10,980      |

**Extra Features**

| Extra Features |             |      |       | Legend |
|----------------|-------------|------|-------|--------|
| Code           | Description | Size | Value | Bldg # |

|      |            |            |          |   |
|------|------------|------------|----------|---|
| CAN1 | GAS CANOPY | 2000.00 SF | \$97,200 | 1 |
|------|------------|------------|----------|---|

**Land**

**Land Use**

**Use Code** 301  
**Description** Industrial  
**Zone** I-1  
**Neighborhood** C500  
**Alt Land Appr** No  
**Category**

**Land Line Valuation**

**Size (Acres)** 15.10  
**Frontage**  
**Depth**  
**Assessed Value** \$582,400  
**Appraised Value** \$832,000

**Outbuildings**

| Outbuildings |                    |          |                 |                 |           | <u>Legend</u> |
|--------------|--------------------|----------|-----------------|-----------------|-----------|---------------|
| Code         | Description        | Sub Code | Sub Description | Size            | Value     | Bldg #        |
| PAV1         | Paving             | AS       | Asphalt         | 32200.00 S.F.   | \$5,500   | 1             |
| TNK2         | Tank - Oil         |          |                 | 1015000.00 GALS | \$487,200 | 1             |
| FN2          | FENCE-6' CHAIN     |          |                 | 900.00 L.F.     | \$15,100  | 1             |
| TWR3         | Cell Twr3 Carriers |          |                 | 1.00 UNITS      | \$384,400 | 1             |
| SHD1         | Shed               | FR       | Frame           | 84.00 S.F.      | \$700     | 1             |
| SHD2         | Shed gd            | MS       | Masonry         | 144.00 S.F.     | \$1,600   | 1             |
| PAV1         | Paving             | CN       | Concrete        | 1575.00 S.F.    | \$5,800   | 1             |
| TNK2         | Tank - Oil         |          |                 | 135355.00 GALS  | \$406,100 | 1             |
| TNK2         | Tank - Oil         |          |                 | 20000.00 GALS   | \$92,400  | 1             |

**Valuation History**

| Appraisal      |              |           |             |
|----------------|--------------|-----------|-------------|
| Valuation Year | Improvements | Land      | Total       |
| 2022           | \$1,240,500  | \$832,000 | \$2,072,500 |
| 2021           | \$874,100    | \$832,000 | \$1,706,100 |
| 2020           | \$812,550    | \$705,920 | \$1,518,470 |

| Assessment     |              |           |             |
|----------------|--------------|-----------|-------------|
| Valuation Year | Improvements | Land      | Total       |
| 2022           | \$868,400    | \$582,400 | \$1,450,800 |
| 2021           | \$611,900    | \$582,400 | \$1,194,300 |
| 2020           | \$568,790    | \$494,150 | \$1,062,940 |



**Tower Engineering Solutions**

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

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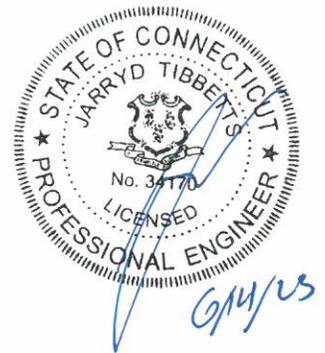
## Structural Analysis Report

**Existing 188 ft SUMMIT Monopole**  
**Customer Name: SBA Communications Corp**  
**Customer Site Number: CT46124-A**  
**Customer Site Name: Enfield-Moody Rd**  
**Carrier Name: AT&T (App#: 227770, V1)**  
**Carrier Site ID / Name: CTL05293 / Enfield - Moody Road**  
**Site Location: 188 Moody Rd**  
**Enfield, Connecticut**  
**Hartford County**  
**Latitude: 42.002000**  
**Longitude: -72.521694**

**Analysis Result:**

**Max Structural Usage: 93.2% [Pass]**  
**Max Foundation Usage: 67.4% [Pass]**  
**Additional Usage Caused by New Mount/Mount Modification: N/A**

**Report Prepared By: Sital Shrestha**





**Tower Engineering Solutions**

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

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## **Structural Analysis Report**

**Existing 188 ft SUMMIT Monopole**

**Customer Name: SBA Communications Corp**

**Customer Site Number: CT46124-A**

**Customer Site Name: Enfield-Moody Rd**

**Carrier Name: AT&T (App#: 227770, V1)**

**Carrier Site ID / Name: CTL05293 / Enfield - Moody Road**

**Site Location: 188 Moody Rd**

**Enfield, Connecticut**

**Hartford County**

**Latitude: 42.002000**

**Longitude: -72.521694**

### **Analysis Result:**

**Max Structural Usage: 93.2% [Pass]**

**Max Foundation Usage: 67.4% [Pass]**

**Additional Usage Caused by New Mount/Mount Modification: N/A**

**Report Prepared By: Sital Shrestha**

## Introduction

The purpose of this report is to summarize the analysis results on the 188 ft SUMMIT Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

## Sources of Information

|                              |   |
|------------------------------|---|
| <b>Tower Drawings</b>        | Summit, Job # 29200-155, dated 2/12/00  |
| <b>Foundation Drawing</b>    | Summit, Job # 29200-155, dated 2/12/00  |
| <b>Geotechnical Report</b>   | Tectonic, Project # 1170.C054, dated 9/17/98  |
| <b>Modification Drawings</b> | FDH Engineering, Project #1335291400 dated February 20, 2015<br>Tower Engineering Solutions, Job #19423 dated June 1, 2016<br>PCI by TES, Project No. 106450, dated September 22, 2021<br>PCI by TES, Project No. 127817, dated October 4, 2022 |
| <b>Mount Analysis</b>        | TEP, Project No. 350621, dated November 3, 2022   |

## Analysis Criteria

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

|   |   |
|---|---|
| <b>Wind Speed Used in the Analysis:</b> | 120.0 mph (3-Sec. Gust) (Ultimate wind speed)               |
| <b>Wind Speed with Ice:</b>             | 50 mph (3-Sec. Gust) with 1"1/2 radial ice concurrent       |
| <b>Service Load Wind Speed:</b>         | 60 mph + 0" Radial ice                                      |
| <b>Standard/Codes:</b>                  | TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code |
| <b>Exposure Category:</b>               | C   |
| <b>Risk Category:</b>                   | II  |
| <b>Topographic Category:</b>            | 1   |
| <b>Crest Height:</b>                    | 0 ft  |
| <b>Seismic Parameters:</b>              | $S_5 = 0.172, S_1 = 0.055$                                  |

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

## Existing Antennas, Mounts and Transmission Lines

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

| Items | Elevation (ft) | Qty. | Antenna Descriptions                         | Mount Type & Qty.   | Transmission Lines                           | Owner         |
|-------|----------------|------|--|---|--|---------------|
| 1     | 187.0          | 3    | Ericsson Air 32 KRD901146-1_B66A_B2A - Panel | Low Profile Platform w/Handrails with MODs [Kicker kit with collar mount] | (15) 1 1/4" Coax<br>(3) 1-1/4" Hybrid        | T-Mobile      |
| 2     |                | 3    | RFS APXVAARR24_43-U-NA20 (Octa) - Panel      |   |  |               |
| 3     |                | 3    | Ericsson AIR6449 B41 - Panel                 |   |  |               |
| 4     |                | 12   | Ericsson KRY 112 114-1 Double TMA            |   |  |               |
| 5     |                | 3    | Ericsson 4415 B25                            |   |  |               |
| 6     |                | 3    | Ericsson 4449 B71 + B85                      |   |  |               |
| 7     |                | 3    | Kathrein 782 11054 Smart Bias T              |   |  |               |
| 8     | 177.0          | 3    | JMA Wireless MX08FRO665-21- Panel            | (1) Commscope MC-PK8-DSH  | (1) 1.75" Hybrid                             | Dish Wireless |
| 9     |                | 3    | Fujitsu TA08025-B605- RRH                    |   |  |               |
| 10    |                | 3    | Fujitsu TA08025-B604- RRH                    |   |  |               |
| 11    |                | 1    | Raycap RDIDC-9181-PF-48- OVP                 |   |  |               |
| 12    | 168.0          | 1    | RFS APXV9ERR18-C-A20 - Panel                 | Low Profile Platform  | (3) 1-1/4" Fiber<br>(1) 0.7" Fiber           | Sprint        |
| 13    |                | 2    | RFS APXVSP18-C-A20 - Panel                   |   |  |               |
| 14    |                | 3    | RFS APXVTM14-C-120 - Panel                   |   |  |               |
| 15    |                | 4    | ACU-A20-N - RET                              |   |  |               |
| 16    |                | 3    | Alcatel-Lucent 1900MHz RRU                   |   |  |               |
| 17    |                | 3    | Alcatel-Lucent 800 MHz RRH                   |   |  |               |
| 18    |                | 3    | Alcatel-Lucent TD-RRH8x20-25 - RRU           |   |  |               |
| 19    |                | 3    | Alcatel-Lucent 800 MHz Filter                |   |  |               |
| -     | 158.0          | 3    | Kathrein 800 10121 - Panel                   | (1) Platform Mount [SitePro RMQP-12-H5]                                   | (12) 1 5/8"<br>(2) 3/8" Fiber<br>(6) 5/8" DC | AT&T          |
| -     |                | 3    | CCI HPA-65R-BUU-H8 - Panel                   |   |  |               |
| -     |                | 6    | Kathrein 800 10966 - Panel                   |   |  |               |
| -     |                | 6    | Powerwave LGP21401 TMA                       |   |  |               |
| -     |                | 6    | Kathrein 860-10025 RET                       |   |  |               |
| -     |                | 3    | Ericsson RRUS 4415 B25 RRU                   |   |  |               |
| -     |                | 3    | Ericsson 8843 B2 B66A RRU                    |   |  |               |
| -     |                | 3    | Ericsson 4449 B5 B12 RRU                     |   |  |               |
| -     |                | 3    | Ericsson RRUS-A2 RRU                         |   |  |               |
| -     |                | 2    | Raycap DC6-48-60-18-8F COVP                  |   |  |               |
| -     |                | 1    | Raycap DC6-48-60-0-8C COVP                   |   |  |               |

## 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 |
|-------|----------------|------|--------------------------------------|--|--|-------|
| 20    | 158.0          | 6    | Kathrein 800-10966- Panel            | (1) SitePro RMQP-12-H5<br>(Platform mount) | (6) 1 5/8" Coax<br>(2) 3/8" Fiber<br>(6) 5/8" DC Power | AT&T  |
| 21    |                | 3    | Cci HPA-65R-BUU-H8- Panel            |  |  |       |
| 22    |                | 6    | Kathrein 860 10025- RET              |  |  |       |
| 23    |                | 3    | Ericsson Radio 4449 B5 B12- RRH      |  |  |       |
| 24    |                | 3    | Ericsson RRUS 8843 B2 B66A- RRH      |  |  |       |
| 25    |                | 3    | Ericsson RRUS 4415 B30- RRH          |  |  |       |
| 26    |                | 3    | Ericsson 2012 B29- RRH               |  |  |       |
| 27    |                | 3    | Ericsson 4478 B14- RRH               |  |  |       |
| 28    |                | 1    | Raycap DC6-48-60-0-8F- OVP           |  |  |       |
| 29    |                | 2    | Raycap DC6-48-60-18-8F ("Squid")-OVP |  |  |       |

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

## **Analysis Results**

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

|             | Pole shafts  | Anchor Bolts | Base Plate   |
|-------------|--------------|--------------|--------------|
| Max. Usage: | <b>93.2%</b> | <b>81.5%</b> | <b>73.9%</b> |
| Pass/Fail   | <b>Pass</b>  | <b>Pass</b>  | <b>Pass</b>  |

## **Foundations**

|                    | Moment (Kip-Ft) | Shear (Kips) | Axial (Kips) |
|--------------------|-----------------|--------------|--------------|
| Analysis Reactions | 4976.2          | 35.8         | 54.0         |

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

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

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.7691 degrees under the operational wind speed as specified in the Analysis Criteria.

## **Conclusions**

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

## Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC**. Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.
2. The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.
3. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the ANSI/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.
4. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.
5. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.
6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

# Usage Diagram - Max Ratio 93.24% at 136.5ft

**Structure:** CT46124-A-SBA  
**Site Name:** Enfield-Moody Rd  
**Height:** 188.00 (ft)  
**Base Elev:** 0.000 (ft)

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

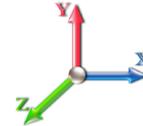
6/14/2023



Page: 1

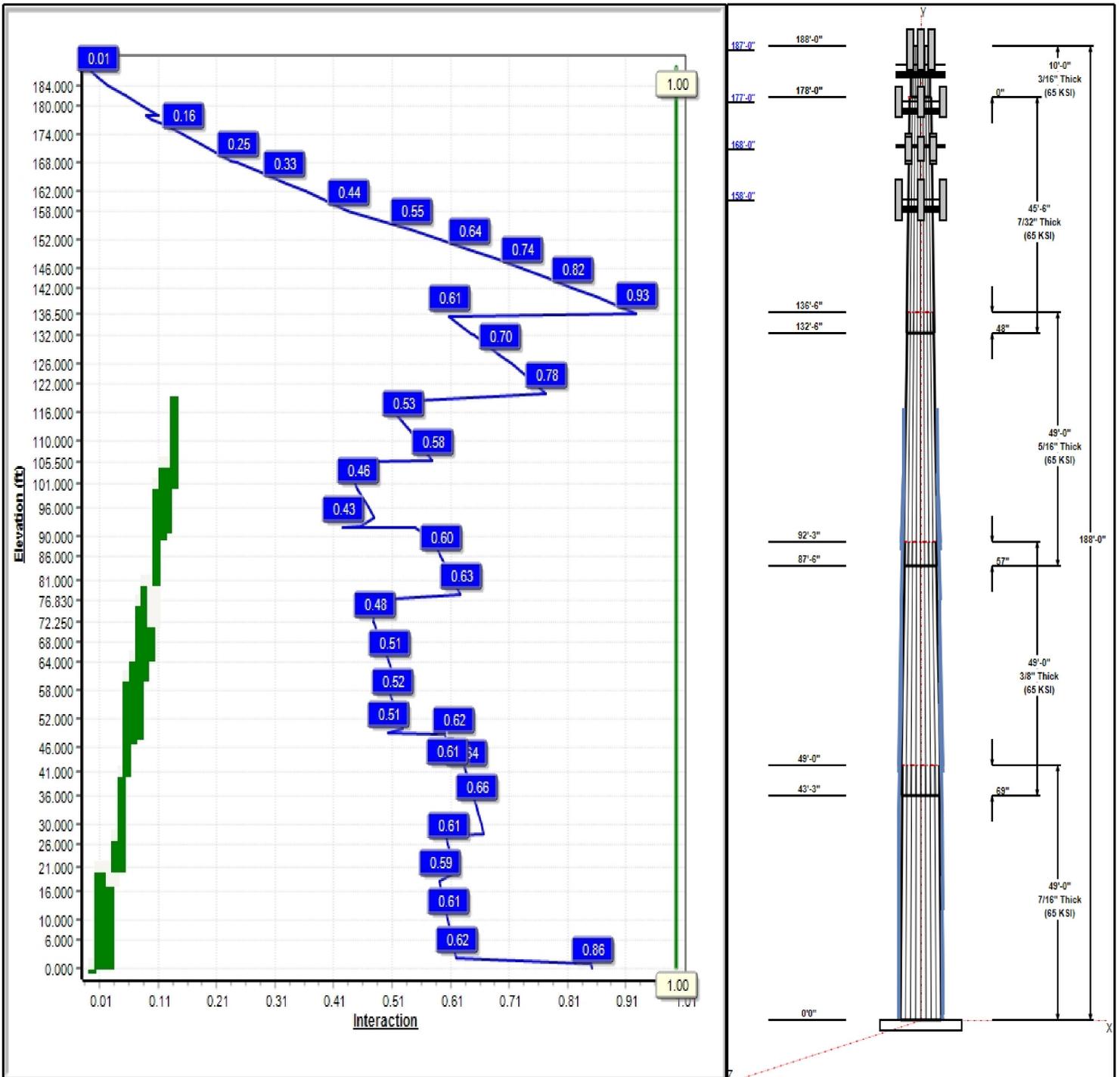
**Dead Load Factor:** 1.20  
**Wind Load Factor:** 1.00

**Load Case : 1.2D + 1.0W 120 mph Wind**



**Iterations:** 31

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## Structure: CT46124-A-SBA

**Type:** Custom  
**Site Name:** Enfield-Moody Rd  
**Height:** 188.00 (ft)  
**Base Elev:** 0.00 (ft)

**Base Shape:** 18 Sided  
**Taper:** 0.16603

6/14/2023

Page: 2



### Shaft Properties

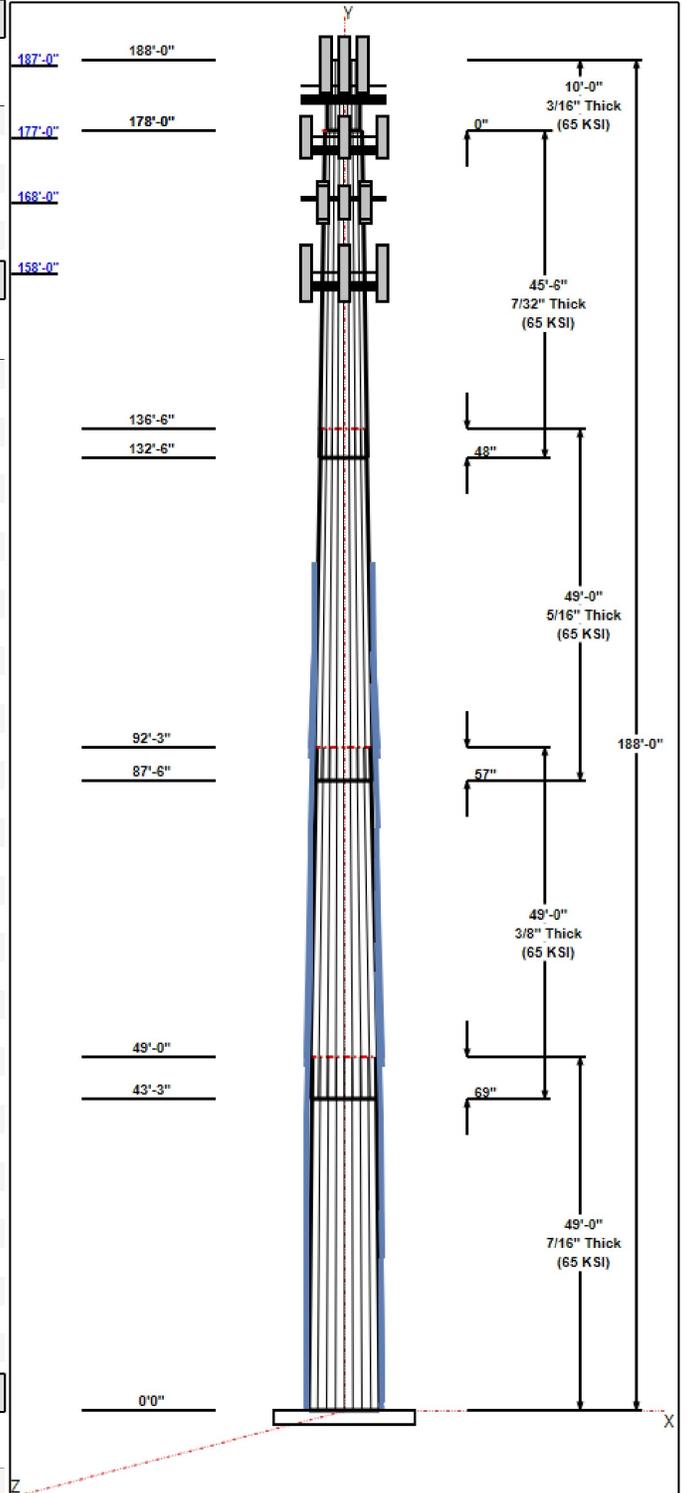
| Seq | Length (ft) | Top (in) | Bottom (in) | Thick (in) | Joint Type | Taper   | Grade (ksi) |
|-----|-------------|----------|-------------|------------|------------|---------|-------------|
| 1   | 49.00       | 43.60    | 51.74       | 0.438      |            | 0.16603 | 65          |
| 2   | 49.00       | 37.17    | 45.31       | 0.375      | Slip       | 0.16603 | 65          |
| 3   | 49.00       | 30.45    | 38.59       | 0.313      | Slip       | 0.16603 | 65          |
| 4   | 45.50       | 24.00    | 31.55       | 0.219      | Slip       | 0.16603 | 65          |
| 5   | 10.00       | 22.34    | 24.00       | 0.188      | Butt       | 0.00000 | 65          |

### Discrete Appurtenances

| Attach Elev (ft) | Force Elev (ft) | Qty | Description              | Carrier       |
|------------------|-----------------|-----|--------------------------|---------------|
| 187.00           | 187.00          | 3   | AIR6449 B41              | T-Mobile      |
| 187.00           | 187.00          | 3   | RRUS 4415 B25            | T-Mobile      |
| 187.00           | 187.00          | 1   | PRK-1245 (kicker kit)    | T-Mobile      |
| 187.00           | 187.00          | 1   | Collar Mount (3-Sided)   | T-Mobile      |
| 187.00           | 187.00          | 3   | Ericsson Radio 4449 B71  | T-Mobile      |
| 187.00           | 187.00          | 12  | Ericsson KRY 112 114-1   | T-Mobile      |
| 187.00           | 187.00          | 3   | Kathrein 782 11054-Smart | T-Mobile      |
| 187.00           | 187.00          | 3   | Ericsson                 | T-Mobile      |
| 187.00           | 187.00          | 3   | RFS                      | T-Mobile      |
| 184.00           | 184.00          | 1   | Platform w/ Hand Rail    | T-Mobile      |
| 177.00           | 177.00          | 3   | MX08FRO665-21            | Dish Wireless |
| 177.00           | 177.00          | 3   | TA08025-B604             | Dish Wireless |
| 177.00           | 177.00          | 3   | TA08025-B605             | Dish Wireless |
| 177.00           | 177.00          | 1   | RDIDC-9181-OF-48         | Dish Wireless |
| 177.00           | 177.00          | 1   | MC-PK8-DSH               | Dish Wireless |
| 168.50           | 168.50          | 1   | Low Profile Platform     | Sprint        |
| 168.00           | 168.00          | 2   | APXVSP18-C-A20           | Sprint        |
| 168.00           | 168.00          | 3   | 800 MHz Filters          | Sprint        |
| 168.00           | 168.00          | 3   | APXVTM14-C-120           | Sprint        |
| 168.00           | 168.00          | 3   | 1900 MHz RRH             | Sprint        |
| 168.00           | 168.00          | 3   | 800 MHz RRH              | Sprint        |
| 168.00           | 168.00          | 3   | TD-RRH8x20-25            | Sprint        |
| 168.00           | 168.00          | 4   | ACU-A20-N                | Sprint        |
| 168.00           | 168.00          | 1   | APXV9ERR18-C-A20         | Sprint        |
| 158.00           | 158.00          | 2   | Raycap DC6-48-60-18-8F   | AT&T          |
| 158.00           | 158.00          | 3   | Cci HPA-65R-BUU-H8       | AT&T          |
| 158.00           | 158.00          | 6   | Kathrein 860-10025 - RET | AT&T          |
| 158.00           | 158.00          | 3   | Ericsson 2012 B29 - RRU  | AT&T          |
| 158.00           | 158.00          | 3   | Ericsson 4478 B14 - RRU  | AT&T          |
| 158.00           | 158.00          | 1   | Raycap DC6-48-60-0-8F -  | AT&T          |
| 158.00           | 158.00          | 6   | Kathrein 800-10966       | AT&T          |
| 158.00           | 158.00          | 3   | Ericsson RRUS 4415 B30   | AT&T          |
| 158.00           | 158.00          | 3   | Ericsson 8843 B2 B66A -  | AT&T          |
| 158.00           | 158.00          | 3   | Ericsson 4449 B5 B12 -   | AT&T          |
| 158.00           | 158.00          | 1   | Platform Mount           | AT&T          |

### Linear Appurtenances

| Elev From (ft) | Elev To (ft) | Placement | Description   | Carrier       |
|----------------|--------------|-----------|---------------|---------------|
| 0.00           | 187.00       | Inside    | 1 1/4" Coax   | T-Mobile      |
| 0.00           | 187.00       | Inside    | 1-1/4" Hybrid | T-Mobile      |
| 0.00           | 177.00       | Inside    | 1.75" Hybrid  | Dish Wireless |
| 0.00           | 168.00       | Inside    | 0.7" Fiber    | Sprint        |
| 0.00           | 168.00       | Inside    | 1-1/4" Fiber  | Sprint        |
| 0.00           | 158.00       | Inside    | 1 5/8" Coax   | AT&T          |



## Structure: CT46124-A-SBA

|                                    |                             |           |
|------------------------------------|-----------------------------|-----------|
| <b>Type:</b> Custom                | <b>Base Shape:</b> 18 Sided | 6/14/2023 |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Taper:</b> 0.00000       |           |
| <b>Height:</b> 188.00 (ft)         |                             |           |
| <b>Base Elev:</b> 0.00 (ft)        |                             | Page: 3   |



|        |        |         |                         |      |
|--------|--------|---------|-------------------------|------|
| 0.00   | 158.00 | Inside  | 3/8" Fiber              | AT&T |
| 0.00   | 158.00 | Inside  | 5/8" DC Power           | AT&T |
| 107.25 | 121.25 | Outside | 1.25" Reinforcing plate |      |
| 90.25  | 107.25 | Outside | 1.25" Reinforcing plate |      |
| 43.25  | 100.00 | Inside  | 1.25" Reinforcing plate |      |
| 46.50  | 79.25  | Outside | 1.25" Reinforcing plate |      |
| 0.00   | 35.50  | Outside | 1.25" Reinforcing plate |      |

### Anchor Bolts

| Qty | Specifications | Grade<br>(ksi) | Arrangement |
|-----|----------------|----------------|-------------|
| 16  | 2.25" 18J      | 75.0           | Cluster     |

### Base Plate

| Thickness<br>(in) | Specifications<br>(in) | Grade<br>(ksi) | Geometry |
|-------------------|------------------------|----------------|----------|
| 3.2500            | 57.0                   | 50.0           | Clipped  |

### Reactions

| Load Case                        | Moment<br>(FT-Kips) | Shear<br>(Kips) | Axial<br>(Kips) |
|----------------------------------|---------------------|-----------------|-----------------|
| 1.2D + 1.0W 120 mph Wind         | 4976.2              | 35.8            | 54.0            |
| 0.9D + 1.0W 120 mph Wind         | 4898.5              | 35.8            | 40.5            |
| 1.2D + 1.0Di + 1.0Wi 50 mph Wind | 1624.9              | 11.6            | 84.5            |
| 1.2D + 1.0Ev + 1.0Eh             | 92.8                | 0.5             | 55.7            |
| 0.9D + 1.0Ev + 1.0Eh             | 91.4                | 0.5             | 42.2            |
| 1.0D + 1.0W 60 mph Wind          | 1104.1              | 8.0             | 45.0            |

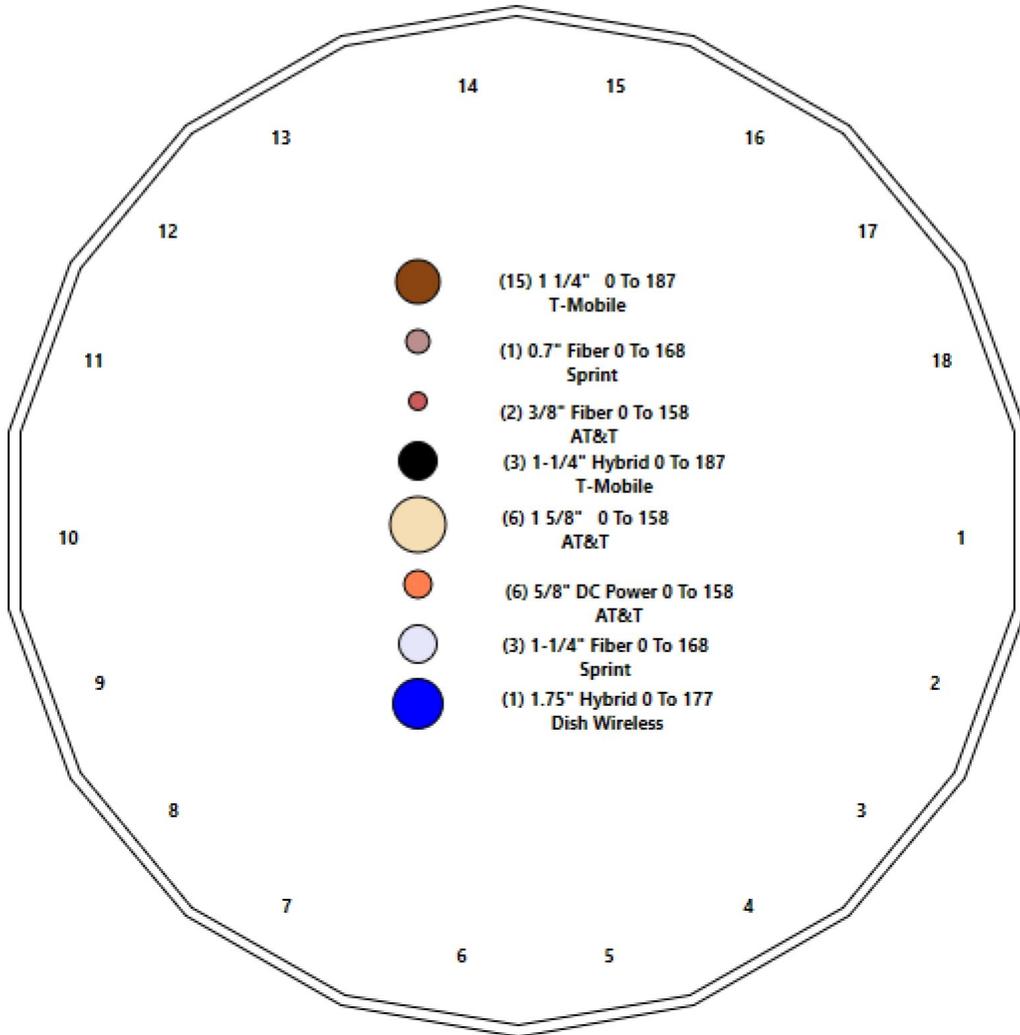
# Structure: CT46124-A-SBA - Coax Line Placement

**Type:** Monopole  
**Site Name:** Enfield-Moody Rd  
**Height:** 188.00 (ft)

6/14/2023



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## Shaft Properties

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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| Sec. No.                   | Shape | Length (ft) | Thick (in) | Fy (ksi) | Joint Type | Overlap (in) | Weight (lb)   |
|----------------------------|-------|-------------|------------|----------|------------|--------------|---------------|
| 1                          | 18    | 49.000      | 0.4375     | 65       |            | 0.00         | 10,936        |
| 2                          | 18    | 49.000      | 0.3750     | 65       | Slip       | 69.00        | 8,110         |
| 3                          | 18    | 49.000      | 0.3125     | 65       | Slip       | 57.00        | 5,657         |
| 4                          | 18    | 45.500      | 0.2188     | 65       | Slip       | 48.00        | 2,963         |
| 5                          | 18    | 10.000      | 0.1875     | 65       | Flange     | 0.00         | 482           |
| <b>Total Shaft Weight:</b> |       |             |            |          |            |              | <b>28,148</b> |

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        | 51.74    | 0.00      | 71.24       | 23688.52  | 19.44     | 118.26    | 43.60    | 49.00     | 59.94       | 14111.8   | 16.16     | 99.67     | 0.166026 |
| 2        | 45.31    | 43.25     | 53.48       | 13643.07  | 19.89     | 120.83    | 37.17    | 92.25     | 43.80       | 7493.55   | 16.07     | 99.13     | 0.166026 |
| 3        | 38.59    | 87.50     | 37.96       | 7026.65   | 20.36     | 123.48    | 30.45    | 136.50    | 29.89       | 3431.02   | 15.77     | 97.45     | 0.166026 |
| 4        | 31.55    | 132.5     | 21.76       | 2699.58   | 24.02     | 144.21    | 24.00    | 178.00    | 16.51       | 1180.03   | 17.93     | 109.6     | 0.166026 |
| 5        | 24.00    | 178.0     | 14.17       | 1015.22   | 21.16     | 128.00    | 22.34    | 188.00    | 14.17       | 1015.22   | 21.16     | 119.1     | 0.000000 |

### Additional Steel

| Elev From (ft) | Elev To (ft) | Qty | Description              | Fy (ksi) | Fu (ksi) | Offset (in) | Intermediate Connectors |              | Termination Connectors |              |           |           |
|----------------|--------------|-----|--------------------------|----------|----------|-------------|-------------------------|--------------|------------------------|--------------|-----------|-----------|
|                |              |     |                          |          |          |             | Description             | Spacing (in) | Description            | Spacing (in) | Lower Qty | Upper Qty |
| 0.00           | 1.00         | 3   | SOL 2 1/4" William R71   | 128      | 150      | 0.00        | 5/8" Hollo Bolt         | 12.00        | 5/8" Hollo Bolt        | 3.00         |           |           |
| 1.00           | 21.00        | 3   | LNP LP7X125-B-20A        | 65       | 80       | 0.00        | 5/8" Hollo Bolt         | 24.00        | 5/8" Hollo Bolt        | 3.00         |           |           |
| 1.00           | 21.00        | 1   | LNP LP6X125-B-20B        | 65       | 80       | 0.00        | 5/8" Hollo Bolt         | 24.00        | 5/8" Hollo Bolt        | 3.00         |           |           |
| 1.00           | 18.00        | 1   | LNP LP6X125-B-20T        | 65       | 80       | 0.00        | 5/8" Hollo Bolt         | 24.00        | 5/8" Hollo Bolt        | 3.00         |           | 12        |
| 21.00          | 27.75        | 1   | LNP LP6X125-B-20T        | 65       | 80       | 0.00        | 5/8" Hollo Bolt         | 24.00        | 5/8" Hollo Bolt        | 3.00         |           | 13        |
| 21.00          | 41.00        | 3   | LNP LP7X125-G-20AA       | 65       | 80       | 0.00        | 5/8" Hollo Bolt         | 24.00        | 5/8" Hollo Bolt        | 3.00         |           |           |
| 41.00          | 61.00        | 3   | LNP LP7X125-G-20AA       | 65       | 80       | 0.00        | 5/8" Hollo Bolt         | 24.00        | 5/8" Hollo Bolt        | 3.00         |           |           |
| 47.75          | 65.00        | 1   | LNP LP6X100-G-20TC       | 65       | 80       | 0.00        | 5/8" Hollo Bolt         | 24.00        | 5/8" Hollo Bolt        | 3.00         | 11        |           |
| 48.92          | 76.83        | 3   | PLT 5.5"x1 1/4"(1.25"hol | 65       | 80       | 0.00        | AJM20&sleeve            | 21.00        | AJM20&sleeve           | 3.00         | 10        | 10        |
| 61.00          | 81.00        | 3   | LNP LP6X125-G-20AB       | 65       | 80       | 0.00        | 5/8" Hollo Bolt         | 24.00        | 5/8" Hollo Bolt        | 3.00         |           |           |
| 65.00          | 72.25        | 1   | LNP LP6X100-G-10CT       | 65       | 80       | 0.00        | 5/8" Hollo Bolt         | 24.00        | 5/8" Hollo Bolt        | 3.00         |           | 11        |
| 81.00          | 101.0        | 3   | LNP LP6X125-G-20BB       | 65       | 80       | 0.00        | 5/8" Hollo Bolt         | 24.00        | 5/8" Hollo Bolt        | 3.00         |           |           |
| 90.50          | 105.5        | 1   | LNP LP6X100-G-20TT       | 65       | 80       | 0.00        | 5/8" Hollo Bolt         | 24.00        | 5/8" Hollo Bolt        | 3.00         | 10        | 10        |
| 91.92          | 105.5        | 3   | PLT 4.5"x 1-1/4"(1.25"ho | 65       | 80       | 0.00        | AJM20&sleeve            | 24.00        | AJM20&sleeve           | 3.00         | 7         | 7         |
| 101.0          | 118.0        | 3   | LNP LP6X125-G-20BT       | 65       | 80       | 0.00        | 5/8" Hollo Bolt         | 24.00        | 5/8" Hollo Bolt        | 3.00         |           | 12        |

## Load Summary

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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### Discrete Appurtenances

| No.            | Elev (ft) | Description                        | Qty        | No Ice           |           |             | Ice              |           |             | Hor. Ecc. (ft) | Vert Ecc (ft) |
|----------------|-----------|------------------------------------|------------|------------------|-----------|-------------|------------------|-----------|-------------|----------------|---------------|
|                |           |                                    |            | Weight (lb)      | CaAa (sf) | CaAa Factor | Weight (lb)      | CaAa (sf) | CaAa Factor |                |               |
| 1              | 187.00    | AIR6449 B41                        | 3          | 103.00           | 5.65      | 0.71        | 243.18           | 6.622     | 0.71        | 0.00           | 0.00          |
| 2              | 187.00    | RRUS 4415 B25                      | 3          | 46.00            | 1.64      | 0.50        | 88.02            | 2.167     | 0.50        | 0.00           | 0.00          |
| 3              | 187.00    | PRK-1245 (kicker kit)              | 1          | 464.91           | 7.50      | 1.00        | 796.69           | 15.528    | 1.00        | 0.00           | 0.00          |
| 4              | 187.00    | Collar Mount (3-Sided)             | 1          | 220.00           | 2.10      | 1.00        | 534.01           | 4.348     | 1.00        | 0.00           | 0.00          |
| 5              | 187.00    | Ericsson Radio 4449 B71 + B85      | 3          | 74.00            | 2.50      | 0.50        | 144.17           | 2.201     | 0.50        | 0.00           | 0.00          |
| 6              | 187.00    | Ericsson KRY 112 114-1 Double      | 12         | 11.00            | 0.41      | 0.50        | 22.02            | 0.896     | 0.50        | 0.00           | 0.00          |
| 7              | 187.00    | Kathrein 782 11054-Smart Bias T    | 3          | 1.80             | 0.22      | 0.50        | 4.33             | 0.725     | 0.50        | 0.00           | 0.00          |
| 8              | 187.00    | Ericsson KRD901146-1_B66A_B2A      | 3          | 132.20           | 6.51      | 0.86        | 320.29           | 7.658     | 0.86        | 0.00           | 0.00          |
| 9              | 187.00    | RFS APXVAARR24_43-U-NA20           | 3          | 128.00           | 18.24     | 0.70        | 556.46           | 22.184    | 0.70        | 0.00           | 0.00          |
| 10             | 184.00    | Platform w/ Hand Rail              | 1          | 1600.00          | 32.00     | 1.00        | 3743.18          | 60.500    | 1.00        | 0.00           | 0.00          |
| 11             | 177.00    | MX08FRO665-21                      | 3          | 64.50            | 12.49     | 0.74        | 360.23           | 13.979    | 0.74        | 0.00           | 0.00          |
| 12             | 177.00    | TA08025-B604                       | 3          | 63.90            | 1.96      | 0.50        | 115.37           | 2.530     | 0.50        | 0.00           | 0.00          |
| 13             | 177.00    | TA08025-B605                       | 3          | 75.00            | 1.96      | 0.50        | 128.18           | 2.530     | 0.50        | 0.00           | 0.00          |
| 14             | 177.00    | RDIDC-9181-OF-48                   | 1          | 21.90            | 2.01      | 0.50        | 76.04            | 2.588     | 0.50        | 0.00           | 0.00          |
| 15             | 177.00    | MC-PK8-DSH                         | 1          | 1727.00          | 32.00     | 1.00        | 3443.00          | 72.881    | 1.00        | 0.00           | 0.00          |
| 16             | 168.50    | Low Profile Platform               | 1          | 1400.00          | 22.00     | 1.00        | 2635.94          | 39.868    | 1.00        | 0.00           | 0.00          |
| 17             | 168.00    | APXVSP18-C-A20                     | 2          | 57.00            | 8.02      | 0.81        | 231.82           | 10.846    | 0.81        | 0.00           | 0.00          |
| 18             | 168.00    | 800 MHz Filters                    | 3          | 54.00            | 2.50      | 0.50        | 130.41           | 3.545     | 0.50        | 0.00           | 0.00          |
| 19             | 168.00    | APXVTM14-C-120                     | 3          | 56.00            | 6.34      | 0.78        | 218.61           | 7.467     | 0.78        | 0.00           | 0.00          |
| 20             | 168.00    | 1900 MHz RRH                       | 3          | 44.00            | 2.50      | 0.50        | 112.19           | 3.545     | 0.50        | 0.00           | 0.00          |
| 21             | 168.00    | 800 MHz RRH                        | 3          | 54.00            | 2.50      | 0.50        | 130.41           | 3.545     | 0.50        | 0.00           | 0.00          |
| 22             | 168.00    | TD-RRH8x20-25                      | 3          | 70.00            | 3.05      | 0.50        | 181.99           | 4.873     | 0.50        | 0.00           | 0.00          |
| 23             | 168.00    | ACU-A20-N                          | 4          | 1.00             | 0.14      | 0.50        | 5.34             | 0.440     | 0.67        | 0.00           | 0.00          |
| 24             | 168.00    | APXV9ERR18-C-A20                   | 1          | 62.00            | 8.02      | 0.81        | 245.55           | 10.846    | 0.81        | 0.00           | 0.00          |
| 25             | 158.00    | Raycap DC6-48-60-18-8F ("Squid") - | 2          | 31.80            | 1.47      | 0.50        | 93.95            | 2.174     | 0.50        | 0.00           | 0.00          |
| 26             | 158.00    | Cci HPA-65R-BUU-H8                 | 3          | 68.00            | 12.98     | 0.78        | 360.81           | 14.604    | 0.78        | 0.00           | 0.00          |
| 27             | 158.00    | Kathrein 860-10025 - RET           | 6          | 1.16             | 0.16      | 0.50        | 6.85             | 0.509     | 0.50        | 0.00           | 0.00          |
| 28             | 158.00    | Ericsson 2012 B29 - RRU            | 3          | 43.10            | 1.84      | 0.50        | 90.28            | 2.253     | 0.50        | 0.00           | 0.00          |
| 29             | 158.00    | Ericsson 4478 B14 - RRU            | 3          | 59.90            | 2.02      | 0.50        | 109.04           | 2.625     | 0.50        | 0.00           | 0.00          |
| 30             | 158.00    | Raycap DC6-48-60-0-8F - OVP        | 1          | 32.80            | 0.92      | 0.50        | 85.09            | 2.099     | 0.50        | 0.00           | 0.00          |
| 31             | 158.00    | Kathrein 800-10966                 | 6          | 114.60           | 14.31     | 0.71        | 474.35           | 19.177    | 0.71        | 0.00           | 0.00          |
| 32             | 158.00    | Ericsson RRUS 4415 B30 RRU         | 3          | 35.00            | 1.64      | 0.50        | 66.44            | 2.158     | 0.50        | 0.00           | 0.00          |
| 33             | 158.00    | Ericsson 8843 B2 B66A - RRU        | 3          | 72.00            | 1.64      | 0.50        | 119.09           | 2.139     | 0.50        | 0.00           | 0.00          |
| 34             | 158.00    | Ericsson 4449 B5 B12 - RRU         | 3          | 73.00            | 1.65      | 0.50        | 145.77           | 2.191     | 0.50        | 0.00           | 0.00          |
| 35             | 158.00    | Platform Mount [RMQP-12-H5]        | 1          | 2136.59          | 38.00     | 1.00        | 4235.60          | 85.998    | 1.00        | 0.00           | 0.00          |
| <b>Totals:</b> |           |                                    | <b>101</b> | <b>12,625.56</b> |           |             | <b>30,495.27</b> |           |             |                |               |

### Linear Appurtenances

| Bottom Elev. (ft) | Top Elev. (ft) | Description       | Exposed Width | Exposed |
|-------------------|----------------|-------------------|---------------|---------|
| 0.00              | 187.00         | (15) 1 1/4" Coax  | 0.00          | Inside  |
| 0.00              | 187.00         | (3) 1-1/4" Hybrid | 0.00          | Inside  |
| 0.00              | 177.00         | (1) 1.75" Hybrid  | 0.00          | Inside  |
| 0.00              | 168.00         | (1) 0.7" Fiber    | 0.00          | Inside  |
| 0.00              | 168.00         | (3) 1-1/4" Fiber  | 0.00          | Inside  |
| 0.00              | 158.00         | (6) 1 5/8" Coax   | 0.00          | Inside  |

## Discrete Appurtenances

| No.   | Elev<br>(ft) | Description                 | Qty | No Ice         |              |                | Ice            |              |                | Hor.<br>Ecc.<br>(ft) | Vert<br>Ecc<br>(ft) |
|-------|--------------|-----------------------------|-----|----------------|--------------|----------------|----------------|--------------|----------------|----------------------|---------------------|
|       |              |                             |     | Weight<br>(lb) | CaAa<br>(sf) | CaAa<br>Factor | Weight<br>(lb) | CaAa<br>(sf) | CaAa<br>Factor |                      |                     |
| 0.00  | 158.00       | (2) 3/8" Fiber              |     | 0.00           |              |                |                |              |                |                      |                     |
| 0.00  | 158.00       | (6) 5/8" DC Power           |     | 0.00           |              |                |                |              |                |                      |                     |
| 107.2 | 121.25       | (3) 1.25" Reinforcing plate |     | 1.25           |              |                |                |              |                |                      |                     |
| 90.25 | 107.25       | (3) 1.25" Reinforcing plate |     | 1.25           |              |                |                |              |                |                      |                     |
| 43.25 | 100.00       | (1) 1.25" Reinforcing plate |     | 0.00           |              |                |                |              |                |                      |                     |
| 46.50 | 79.25        | (3) 1.25" Reinforcing plate |     | 1.25           |              |                |                |              |                |                      |                     |
| 0.00  | 35.50        | (3) 1.25" Reinforcing plate |     | 1.25           |              |                |                |              |                |                      |                     |





Increment Length: 2 (ft)

| Elev<br>(ft)        | Description     | Thick<br>(in) | Flat<br>Dia<br>(in) | Area<br>(in^2) | Ix<br>(in^4) | W/t<br>Ratio | D/t<br>Ratio | Fy<br>(ksi) | Fb<br>(ksi) | Weight<br>(lb) | Additional Reinforcing |               |               |                |
|---------------------|-----------------|---------------|---------------------|----------------|--------------|--------------|--------------|-------------|-------------|----------------|------------------------|---------------|---------------|----------------|
|                     |                 |               |                     |                |              |              |              |             |             |                | Area<br>(in^2)         | Ixp<br>(in^4) | Iyp<br>(in^4) | Weight<br>(lb) |
| 174.00              |                 | 0.2188        | 24.664              | 16.976         | 1281.7       | 18.47        | 112.72       | 65          | 80          | 116.3          |                        |               |               |                |
| 176.00              |                 | 0.2188        | 24.332              | 16.745         | 1230.2       | 18.20        | 111.21       | 65          | 80          | 114.7          |                        |               |               |                |
| 177.00              |                 | 0.2188        | 24.166              | 16.630         | 1204.9       | 18.06        | 110.45       | 65          | 80          | 56.8           |                        |               |               |                |
| 178.00              | Top - Section 4 | 0.2188        | 24.000              | 16.515         | 1180.0       | 17.93        | 109.69       | 65          | 80          | 56.4           |                        |               |               |                |
| 178.00              | Bot - Section 5 | 0.1875        | 24.000              | 14.171         | 1015.2       | 20.92        | 128.00       | 65          | 77          |                |                        |               |               |                |
| 180.00              |                 | 0.1875        | 24.000              | 14.171         | 1015.2       | 21.16        | 128.00       | 65          | 77          | 96.4           |                        |               |               |                |
| 182.00              |                 | 0.1875        | 24.000              | 14.171         | 1015.2       | 21.16        | 128.00       | 65          | 77          | 96.4           |                        |               |               |                |
| 184.00              |                 | 0.1875        | 24.000              | 14.171         | 1015.2       | 21.16        | 128.00       | 65          | 77          | 96.4           |                        |               |               |                |
| 186.00              |                 | 0.1875        | 24.000              | 14.171         | 1015.2       | 21.16        | 128.00       | 65          | 77          | 96.4           |                        |               |               |                |
| 187.00              |                 | 0.1875        | 24.000              | 14.171         | 1015.2       | 21.16        | 128.00       | 65          | 77          | 48.2           |                        |               |               |                |
| 188.00              |                 | 0.1875        | 24.000              | 14.171         | 1015.2       | 21.16        | 128.00       | 65          | 77          | 48.2           |                        |               |               |                |
| <b>Total Weight</b> |                 |               |                     |                |              |              |              |             |             | <b>28148.4</b> | <b>15218.5</b>         |               |               |                |

## Wind Loading - Shaft

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|  |   |                      |
|--|---|----------------------|
| <b>Load Case:</b> 1.2D + 1.0W 120 mph Wind<br><br><b>Dead Load Factor</b> 1.20<br><b>Wind Load Factor</b> 1.00 |  | <b>Iterations</b> 31 |
|--|---|----------------------|

| Elev (ft) | Description     | Kzt  | Kz   | qz (psf) | qzGh (psf) | C (mph-ft) | Cf    | Ice Thick (in) | Tributary (ft) | Aa (sf) | CfAa (sf) | Wind Force X (lb) | Dead Load Ice (lb) | Tot Dead Load (lb) |
|-----------|-----------------|------|------|----------|------------|------------|-------|----------------|----------------|---------|-----------|-------------------|--------------------|--------------------|
| 0.00      | RB1             | 1.00 | 0.85 | 29.578   | 32.54      | 482.83     | 0.630 | 0.000          | 0.00           | 0.000   | 0.00      | 0.0               | 0.0                | 0.0                |
| 1.00      | RT1 RB2 RB3 RB4 | 1.00 | 0.85 | 29.578   | 32.54      | 481.28     | 0.630 | 0.000          | 1.00           | 4.371   | 2.75      | 89.6              | 0.0                | 290.4              |
| 2.00      |                 | 1.00 | 0.85 | 29.578   | 32.54      | 479.73     | 0.630 | 0.000          | 1.00           | 4.357   | 2.74      | 89.3              | 0.0                | 289.5              |
| 4.00      |                 | 1.00 | 0.85 | 29.578   | 32.54      | 476.63     | 0.630 | 0.000          | 2.00           | 8.672   | 5.46      | 177.8             | 0.0                | 576.1              |
| 6.00      |                 | 1.00 | 0.85 | 29.578   | 32.54      | 473.54     | 0.630 | 0.000          | 2.00           | 8.616   | 5.43      | 176.6             | 0.0                | 572.4              |
| 8.00      |                 | 1.00 | 0.85 | 29.578   | 32.54      | 470.44     | 0.630 | 0.000          | 2.00           | 8.560   | 5.39      | 175.5             | 0.0                | 568.6              |
| 10.00     |                 | 1.00 | 0.85 | 29.578   | 32.54      | 467.34     | 0.630 | 0.000          | 2.00           | 8.503   | 5.36      | 174.3             | 0.0                | 564.8              |
| 12.00     |                 | 1.00 | 0.85 | 29.578   | 32.54      | 464.24     | 0.630 | 0.000          | 2.00           | 8.447   | 5.32      | 173.1             | 0.0                | 561.1              |
| 14.00     |                 | 1.00 | 0.85 | 29.578   | 32.54      | 461.14     | 0.630 | 0.000          | 2.00           | 8.391   | 5.29      | 172.0             | 0.0                | 557.3              |
| 16.00     |                 | 1.00 | 0.86 | 29.943   | 32.94      | 460.86     | 0.630 | 0.000          | 2.00           | 8.335   | 5.25      | 173.0             | 0.0                | 553.5              |
| 18.00     | RT4             | 1.00 | 0.88 | 30.695   | 33.76      | 463.45     | 0.630 | 0.000          | 2.00           | 8.279   | 5.22      | 176.1             | 0.0                | 549.8              |
| 20.00     |                 | 1.00 | 0.90 | 31.383   | 34.52      | 465.43     | 0.630 | 0.000          | 2.00           | 8.223   | 5.18      | 178.8             | 0.0                | 546.0              |
| 21.00     | RT2 RT3 RB5 RB6 | 1.00 | 0.91 | 31.707   | 34.88      | 466.22     | 0.630 | 0.000          | 1.00           | 4.090   | 2.58      | 89.9              | 0.0                | 271.6              |
| 22.00     |                 | 1.00 | 0.92 | 32.019   | 35.22      | 466.90     | 0.630 | 0.000          | 1.00           | 4.076   | 2.57      | 90.4              | 0.0                | 270.6              |
| 24.00     |                 | 1.00 | 0.94 | 32.611   | 35.87      | 467.94     | 0.630 | 0.000          | 2.00           | 8.110   | 5.11      | 183.3             | 0.0                | 538.5              |
| 26.00     |                 | 1.00 | 0.95 | 33.166   | 36.48      | 468.62     | 0.630 | 0.000          | 2.00           | 8.054   | 5.07      | 185.1             | 0.0                | 534.7              |
| 27.75     | RT5             | 1.00 | 0.97 | 33.624   | 36.99      | 468.95     | 0.630 | 0.000          | 1.75           | 7.001   | 4.41      | 163.1             | 0.0                | 464.8              |
| 28.00     |                 | 1.00 | 0.97 | 33.687   | 37.06      | 468.98     | 0.630 | 0.000          | 0.25           | 0.997   | 0.63      | 23.3              | 0.0                | 66.2               |
| 30.00     |                 | 1.00 | 0.98 | 34.180   | 37.60      | 469.07     | 0.630 | 0.000          | 2.00           | 7.942   | 5.00      | 188.1             | 0.0                | 527.2              |
| 32.00     |                 | 1.00 | 1.00 | 34.648   | 38.11      | 468.91     | 0.630 | 0.000          | 2.00           | 7.885   | 4.97      | 189.3             | 0.0                | 523.4              |
| 34.00     |                 | 1.00 | 1.01 | 35.093   | 38.60      | 468.54     | 0.630 | 0.000          | 2.00           | 7.829   | 4.93      | 190.4             | 0.0                | 519.6              |
| 36.00     |                 | 1.00 | 1.02 | 35.517   | 39.07      | 467.97     | 0.630 | 0.000          | 2.00           | 7.773   | 4.90      | 191.3             | 0.0                | 515.9              |
| 38.00     |                 | 1.00 | 1.03 | 35.924   | 39.52      | 467.23     | 0.630 | 0.000          | 2.00           | 7.717   | 4.86      | 192.1             | 0.0                | 512.1              |
| 40.00     |                 | 1.00 | 1.04 | 36.314   | 39.95      | 466.33     | 0.630 | 0.000          | 2.00           | 7.661   | 4.83      | 192.8             | 0.0                | 508.3              |
| 41.00     | RT6 RB7         | 1.00 | 1.05 | 36.503   | 40.15      | 465.82     | 0.630 | 0.000          | 1.00           | 3.809   | 2.40      | 96.4              | 0.0                | 252.8              |
| 42.00     |                 | 1.00 | 1.05 | 36.689   | 40.36      | 465.28     | 0.630 | 0.000          | 1.00           | 3.795   | 2.39      | 96.5              | 0.0                | 251.8              |
| 43.25     | Bot - Section 2 | 1.00 | 1.06 | 36.916   | 40.61      | 464.55     | 0.630 | 0.000          | 1.25           | 4.724   | 2.98      | 120.9             | 0.0                | 313.5              |
| 44.00     |                 | 1.00 | 1.06 | 37.050   | 40.76      | 464.09     | 0.630 | 0.000          | 0.75           | 2.872   | 1.81      | 73.7              | 0.0                | 350.9              |
| 46.00     |                 | 1.00 | 1.07 | 37.398   | 41.14      | 462.78     | 0.630 | 0.000          | 2.00           | 7.619   | 4.80      | 197.5             | 0.0                | 931.0              |
| 47.75     | RB8             | 1.00 | 1.08 | 37.693   | 41.46      | 461.55     | 0.630 | 0.000          | 1.75           | 6.620   | 4.17      | 172.9             | 0.0                | 808.9              |
| 48.00     |                 | 1.00 | 1.08 | 37.735   | 41.51      | 461.36     | 0.630 | 0.000          | 0.25           | 0.942   | 0.59      | 24.6              | 0.0                | 115.1              |
| 48.92     | RB9             | 1.00 | 1.09 | 37.886   | 41.67      | 460.67     | 0.630 | 0.000          | 0.92           | 3.460   | 2.18      | 90.8              | 0.0                | 422.7              |
| 49.00     | Top - Section 1 | 1.00 | 1.09 | 37.899   | 41.69      | 460.61     | 0.630 | 0.000          | 0.08           | 0.300   | 0.19      | 7.9               | 0.0                | 36.7               |
| 50.00     |                 | 1.00 | 1.09 | 38.061   | 41.87      | 467.77     | 0.630 | 0.000          | 1.00           | 3.746   | 2.36      | 98.8              | 0.0                | 213.3              |
| 52.00     |                 | 1.00 | 1.10 | 38.376   | 42.21      | 466.18     | 0.630 | 0.000          | 2.00           | 7.450   | 4.69      | 198.1             | 0.0                | 424.3              |
| 54.00     |                 | 1.00 | 1.11 | 38.682   | 42.55      | 464.49     | 0.630 | 0.000          | 2.00           | 7.394   | 4.66      | 198.2             | 0.0                | 421.0              |
| 56.00     |                 | 1.00 | 1.12 | 38.980   | 42.88      | 462.71     | 0.630 | 0.000          | 2.00           | 7.338   | 4.62      | 198.2             | 0.0                | 417.8              |
| 58.00     |                 | 1.00 | 1.13 | 39.269   | 43.20      | 460.86     | 0.630 | 0.000          | 2.00           | 7.282   | 4.59      | 198.2             | 0.0                | 414.6              |
| 60.00     |                 | 1.00 | 1.14 | 39.550   | 43.50      | 458.92     | 0.630 | 0.000          | 2.00           | 7.226   | 4.55      | 198.0             | 0.0                | 411.3              |
| 61.00     | RT7 RB10        | 1.00 | 1.14 | 39.688   | 43.66      | 457.93     | 0.630 | 0.000          | 1.00           | 3.592   | 2.26      | 98.8              | 0.0                | 204.5              |
| 62.00     |                 | 1.00 | 1.14 | 39.824   | 43.81      | 456.91     | 0.630 | 0.000          | 1.00           | 3.578   | 2.25      | 98.7              | 0.0                | 203.7              |
| 64.00     |                 | 1.00 | 1.15 | 40.091   | 44.10      | 454.83     | 0.630 | 0.000          | 2.00           | 7.113   | 4.48      | 197.6             | 0.0                | 404.9              |
| 65.00     | RT8 RB11        | 1.00 | 1.16 | 40.222   | 44.24      | 453.77     | 0.630 | 0.000          | 1.00           | 3.535   | 2.23      | 98.5              | 0.0                | 201.2              |
| 66.00     |                 | 1.00 | 1.16 | 40.352   | 44.39      | 452.69     | 0.630 | 0.000          | 1.00           | 3.521   | 2.22      | 98.5              | 0.0                | 200.4              |
| 68.00     |                 | 1.00 | 1.17 | 40.606   | 44.67      | 450.48     | 0.630 | 0.000          | 2.00           | 7.001   | 4.41      | 197.0             | 0.0                | 398.4              |
| 70.00     |                 | 1.00 | 1.17 | 40.855   | 44.94      | 448.22     | 0.630 | 0.000          | 2.00           | 6.945   | 4.38      | 196.6             | 0.0                | 395.2              |
| 72.00     |                 | 1.00 | 1.18 | 41.098   | 45.21      | 445.90     | 0.630 | 0.000          | 2.00           | 6.888   | 4.34      | 196.2             | 0.0                | 392.0              |



## Wind Loading - Shaft

|                                    |                                   |                 |
|------------------------------------|-----------------------------------|-----------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023       |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                 |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                 |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                 |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Page:</b> 13 |
|                                    | <b>Struct Class:</b> II           |                 |



|                        |      |      |        |       |        |       |       |               |       |      |                 |     |                 |
|------------------------|------|------|--------|-------|--------|-------|-------|---------------|-------|------|-----------------|-----|-----------------|
| 164.00                 | 1.00 | 1.40 | 48.874 | 53.76 | 315.78 | 0.630 | 0.000 | 2.00          | 4.483 | 2.82 | 151.8           | 0.0 | 149.0           |
| 166.00                 | 1.00 | 1.41 | 48.999 | 53.90 | 312.19 | 0.630 | 0.000 | 2.00          | 4.427 | 2.79 | 150.3           | 0.0 | 147.1           |
| 168.00 Appurtenance(s) | 1.00 | 1.41 | 49.123 | 54.04 | 308.59 | 0.630 | 0.000 | 2.00          | 4.371 | 2.75 | 148.8           | 0.0 | 145.2           |
| 168.50 Appurtenance(s) | 1.00 | 1.41 | 49.154 | 54.07 | 307.69 | 0.630 | 0.000 | 0.50          | 1.084 | 0.68 | 36.9            | 0.0 | 36.0            |
| 170.00                 | 1.00 | 1.42 | 49.245 | 54.17 | 304.98 | 0.630 | 0.000 | 1.50          | 3.231 | 2.04 | 110.3           | 0.0 | 107.3           |
| 172.00                 | 1.00 | 1.42 | 49.367 | 54.30 | 301.35 | 0.630 | 0.000 | 2.00          | 4.258 | 2.68 | 145.7           | 0.0 | 141.5           |
| 174.00                 | 1.00 | 1.42 | 49.487 | 54.44 | 297.71 | 0.630 | 0.000 | 2.00          | 4.202 | 2.65 | 144.1           | 0.0 | 139.6           |
| 176.00                 | 1.00 | 1.43 | 49.606 | 54.57 | 294.06 | 0.630 | 0.000 | 2.00          | 4.146 | 2.61 | 142.5           | 0.0 | 137.7           |
| 177.00 Appurtenance(s) | 1.00 | 1.43 | 49.666 | 54.63 | 292.23 | 0.630 | 0.000 | 1.00          | 2.052 | 1.29 | 70.6            | 0.0 | 68.1            |
| 178.00 Top - Section 4 | 1.00 | 1.43 | 49.725 | 54.70 | 290.39 | 0.630 | 0.000 | 1.00          | 2.038 | 1.28 | 70.2            | 0.0 | 67.7            |
| 180.00                 | 1.00 | 1.43 | 49.842 | 54.83 | 290.73 | 0.630 | 0.000 | 2.00          | 4.062 | 2.56 | 140.3           | 0.0 | 115.7           |
| 182.00                 | 1.00 | 1.44 | 49.958 | 54.95 | 291.07 | 0.630 | 0.000 | 2.00          | 4.062 | 2.56 | 140.6           | 0.0 | 115.7           |
| 184.00 Appurtenance(s) | 1.00 | 1.44 | 50.073 | 55.08 | 291.41 | 0.630 | 0.000 | 2.00          | 4.062 | 2.56 | 140.9           | 0.0 | 115.7           |
| 186.00                 | 1.00 | 1.44 | 50.187 | 55.21 | 291.74 | 0.630 | 0.000 | 2.00          | 4.062 | 2.56 | 141.3           | 0.0 | 115.7           |
| 187.00 Appurtenance(s) | 1.00 | 1.44 | 50.244 | 55.27 | 291.90 | 0.630 | 0.000 | 1.00          | 2.031 | 1.28 | 70.7            | 0.0 | 57.9            |
| 188.00                 | 1.00 | 1.45 | 50.300 | 55.33 | 292.07 | 0.630 | 0.000 | 1.00          | 2.031 | 1.28 | 70.8            | 0.0 | 57.9            |
| <b>Totals:</b>         |      |      |        |       |        |       |       | <b>188.00</b> |       |      | <b>16,699.8</b> |     | <b>33,778.1</b> |

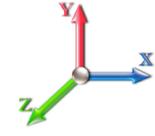
## Discrete Appurtenance Forces

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|  |                      |
|--|----------------------|
| <b>Load Case:</b> 1.2D + 1.0W 120 mph Wind | <b>Iterations</b> 31 |
| <b>Dead Load Factor</b> 1.20               |                      |
| <b>Wind Load Factor</b> 1.00               |                      |



| No.            | Elev (ft) | Description              | Qty | qz (psf) | qzGh (psf) | Orient Factor x | 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              | 187.00    | Ericsson Radio 4449 B71  | 3   | 50.244   | 55.268     | 0.38            | 0.75 | 2.81            | 266.40           | 0.000          | 0.000         | 155.44           | 0.00          | 0.00          |
| 2              | 187.00    | Ericsson KRY 112 114-1   | 12  | 50.244   | 55.268     | 0.38            | 0.75 | 1.84            | 158.40           | 0.000          | 0.000         | 101.97           | 0.00          | 0.00          |
| 3              | 187.00    | AIR6449 B41              | 3   | 50.244   | 55.268     | 0.53            | 0.75 | 9.03            | 370.80           | 0.000          | 0.000         | 498.84           | 0.00          | 0.00          |
| 4              | 187.00    | RRUS 4415 B25            | 3   | 50.244   | 55.268     | 0.38            | 0.75 | 1.84            | 165.60           | 0.000          | 0.000         | 101.97           | 0.00          | 0.00          |
| 5              | 187.00    | Kathrein 782 11054-Smart | 3   | 50.244   | 55.268     | 0.38            | 0.75 | 0.25            | 6.48             | 0.000          | 0.000         | 13.68            | 0.00          | 0.00          |
| 6              | 187.00    | Collar Mount (3-Sided)   | 1   | 50.244   | 55.268     | 1.00            | 1.00 | 2.10            | 264.00           | 0.000          | 0.000         | 116.06           | 0.00          | 0.00          |
| 7              | 187.00    | Ericsson                 | 3   | 50.244   | 55.268     | 0.65            | 0.75 | 12.60           | 475.92           | 0.000          | 0.000         | 696.20           | 0.00          | 0.00          |
| 8              | 187.00    | RFS                      | 3   | 50.244   | 55.268     | 0.52            | 0.75 | 28.73           | 460.80           | 0.000          | 0.000         | 1587.74          | 0.00          | 0.00          |
| 9              | 187.00    | PRK-1245 (kicker kit)    | 1   | 50.244   | 55.268     | 0.75            | 0.75 | 5.63            | 557.89           | 0.000          | 0.000         | 310.88           | 0.00          | 0.00          |
| 10             | 184.00    | Platform w/ Hand Rail    | 1   | 50.073   | 55.080     | 1.00            | 1.00 | 32.00           | 1920.00          | 0.000          | 0.000         | 1762.56          | 0.00          | 0.00          |
| 11             | 177.00    | TA08025-B604             | 3   | 49.666   | 54.632     | 0.38            | 0.75 | 2.21            | 230.04           | 0.000          | 0.000         | 120.46           | 0.00          | 0.00          |
| 12             | 177.00    | MX08FRO665-21            | 3   | 49.666   | 54.632     | 0.55            | 0.75 | 20.80           | 232.20           | 0.000          | 0.000         | 1136.12          | 0.00          | 0.00          |
| 13             | 177.00    | MC-PK8-DSH               | 1   | 49.666   | 54.632     | 1.00            | 1.00 | 32.00           | 2072.40          | 0.000          | 0.000         | 1748.23          | 0.00          | 0.00          |
| 14             | 177.00    | TA08025-B605             | 3   | 49.666   | 54.632     | 0.38            | 0.75 | 2.21            | 270.00           | 0.000          | 0.000         | 120.46           | 0.00          | 0.00          |
| 15             | 177.00    | RDIDC-9181-OF-48         | 1   | 49.666   | 54.632     | 0.38            | 0.75 | 0.75            | 26.28            | 0.000          | 0.000         | 41.18            | 0.00          | 0.00          |
| 16             | 168.50    | Low Profile Platform     | 1   | 49.154   | 54.069     | 1.00            | 1.00 | 22.00           | 1680.00          | 0.000          | 0.000         | 1189.52          | 0.00          | 0.00          |
| 17             | 168.00    | APXV9ERR18-C-A20         | 1   | 49.123   | 54.035     | 0.65            | 0.80 | 5.20            | 74.40            | 0.000          | 0.000         | 280.82           | 0.00          | 0.00          |
| 18             | 168.00    | ACU-A20-N                | 4   | 49.123   | 54.035     | 0.40            | 0.80 | 0.22            | 4.80             | 0.000          | 0.000         | 12.10            | 0.00          | 0.00          |
| 19             | 168.00    | TD-RRH8x20-25            | 3   | 49.123   | 54.035     | 0.40            | 0.80 | 3.66            | 252.00           | 0.000          | 0.000         | 197.77           | 0.00          | 0.00          |
| 20             | 168.00    | 800 MHz RRH              | 3   | 49.123   | 54.035     | 0.40            | 0.80 | 3.00            | 194.40           | 0.000          | 0.000         | 162.11           | 0.00          | 0.00          |
| 21             | 168.00    | 1900 MHz RRH             | 3   | 49.123   | 54.035     | 0.40            | 0.80 | 3.00            | 158.40           | 0.000          | 0.000         | 162.11           | 0.00          | 0.00          |
| 22             | 168.00    | APXVTM14-C-120           | 3   | 49.123   | 54.035     | 0.62            | 0.80 | 11.87           | 201.60           | 0.000          | 0.000         | 641.32           | 0.00          | 0.00          |
| 23             | 168.00    | 800 MHz Filters          | 3   | 49.123   | 54.035     | 0.40            | 0.80 | 3.00            | 194.40           | 0.000          | 0.000         | 162.11           | 0.00          | 0.00          |
| 24             | 168.00    | APXVSP18-C-A20           | 2   | 49.123   | 54.035     | 0.65            | 0.80 | 10.39           | 136.80           | 0.000          | 0.000         | 561.64           | 0.00          | 0.00          |
| 25             | 158.00    | Ericsson 8843 B2 B66A -  | 3   | 48.492   | 53.342     | 0.38            | 0.75 | 1.84            | 259.20           | 0.000          | 0.000         | 98.42            | 0.00          | 0.00          |
| 26             | 158.00    | Ericsson RRUS 4415 B30   | 3   | 48.492   | 53.342     | 0.38            | 0.75 | 1.84            | 126.00           | 0.000          | 0.000         | 98.42            | 0.00          | 0.00          |
| 27             | 158.00    | Ericsson 4449 B5 B12 -   | 3   | 48.492   | 53.342     | 0.38            | 0.75 | 1.86            | 262.80           | 0.000          | 0.000         | 99.02            | 0.00          | 0.00          |
| 28             | 158.00    | Kathrein 800-10966       | 6   | 48.492   | 53.342     | 0.53            | 0.75 | 45.72           | 825.12           | 0.000          | 0.000         | 2438.80          | 0.00          | 0.00          |
| 29             | 158.00    | Raycap DC6-48-60-18-8F   | 2   | 48.492   | 53.342     | 0.38            | 0.75 | 1.10            | 76.32            | 0.000          | 0.000         | 58.81            | 0.00          | 0.00          |
| 30             | 158.00    | Ericsson 2012 B29 - RRU  | 3   | 48.492   | 53.342     | 0.38            | 0.75 | 2.07            | 155.16           | 0.000          | 0.000         | 110.42           | 0.00          | 0.00          |
| 31             | 158.00    | Platform Mount           | 1   | 48.492   | 53.342     | 1.00            | 1.00 | 38.00           | 2563.91          | 0.000          | 0.000         | 2026.98          | 0.00          | 0.00          |
| 32             | 158.00    | Cci HPA-65R-BUU-H8       | 3   | 48.492   | 53.342     | 0.58            | 0.75 | 22.78           | 244.80           | 0.000          | 0.000         | 1215.12          | 0.00          | 0.00          |
| 33             | 158.00    | Kathrein 860-10025 - RET | 6   | 48.492   | 53.342     | 0.38            | 0.75 | 0.36            | 8.35             | 0.000          | 0.000         | 19.20            | 0.00          | 0.00          |
| 34             | 158.00    | Ericsson 4478 B14 - RRU  | 3   | 48.492   | 53.342     | 0.38            | 0.75 | 2.27            | 215.64           | 0.000          | 0.000         | 121.22           | 0.00          | 0.00          |
| 35             | 158.00    | Raycap DC6-48-60-0-8F -  | 1   | 48.492   | 53.342     | 0.38            | 0.75 | 0.35            | 39.36            | 0.000          | 0.000         | 18.40            | 0.00          | 0.00          |
| <b>Totals:</b> |           |                          |     |          |            |                 |      |                 | <b>15,150.67</b> |                |               | <b>18,186.09</b> |               |               |

## Total Applied Force Summary

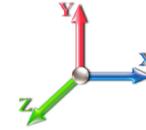
|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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**Load Case:** 1.2D + 1.0W 120 mph Wind

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



**Iterations**    31

| Elev<br>(ft) | Description | Lateral<br>FX (-)<br>(lb) | Axial<br>FY (-)<br>(lb) | Torsion<br>MY<br>(lb-ft) | Moment<br>MZ<br>(lb-ft) |
|--------------|-------------|---------------------------|-------------------------|--------------------------|-------------------------|
| 0.00         |             | 0.00                      | 0.00                    | 0.00                     | 0.00                    |
| 1.00         |             | 96.38                     | 319.54                  | 0.00                     | 0.00                    |
| 2.00         |             | 96.09                     | 318.60                  | 0.00                     | 0.00                    |
| 4.00         |             | 191.31                    | 634.38                  | 0.00                     | 0.00                    |
| 6.00         |             | 190.16                    | 630.61                  | 0.00                     | 0.00                    |
| 8.00         |             | 189.01                    | 626.85                  | 0.00                     | 0.00                    |
| 10.00        |             | 187.86                    | 623.08                  | 0.00                     | 0.00                    |
| 12.00        |             | 186.70                    | 619.32                  | 0.00                     | 0.00                    |
| 14.00        |             | 185.55                    | 615.55                  | 0.00                     | 0.00                    |
| 16.00        |             | 186.68                    | 611.79                  | 0.00                     | 0.00                    |
| 18.00        |             | 190.17                    | 608.02                  | 0.00                     | 0.00                    |
| 20.00        |             | 193.21                    | 604.26                  | 0.00                     | 0.00                    |
| 21.00        |             | 97.14                     | 300.72                  | 0.00                     | 0.00                    |
| 22.00        |             | 97.78                     | 299.77                  | 0.00                     | 0.00                    |
| 24.00        |             | 198.23                    | 596.72                  | 0.00                     | 0.00                    |
| 26.00        |             | 200.31                    | 592.96                  | 0.00                     | 0.00                    |
| 27.75        |             | 176.62                    | 515.75                  | 0.00                     | 0.00                    |
| 28.00        |             | 25.20                     | 73.44                   | 0.00                     | 0.00                    |
| 30.00        |             | 203.77                    | 585.43                  | 0.00                     | 0.00                    |
| 32.00        |             | 205.21                    | 581.66                  | 0.00                     | 0.00                    |
| 34.00        |             | 206.48                    | 577.90                  | 0.00                     | 0.00                    |
| 36.00        |             | 203.53                    | 574.13                  | 0.00                     | 0.00                    |
| 38.00        |             | 192.11                    | 570.37                  | 0.00                     | 0.00                    |
| 40.00        |             | 192.78                    | 566.60                  | 0.00                     | 0.00                    |
| 41.00        |             | 96.36                     | 281.89                  | 0.00                     | 0.00                    |
| 42.00        |             | 96.49                     | 280.95                  | 0.00                     | 0.00                    |
| 43.25        |             | 120.86                    | 349.86                  | 0.00                     | 0.00                    |
| 44.00        |             | 73.73                     | 372.77                  | 0.00                     | 0.00                    |
| 46.00        |             | 197.46                    | 989.24                  | 0.00                     | 0.00                    |
| 47.75        |             | 183.73                    | 859.85                  | 0.00                     | 0.00                    |
| 48.00        |             | 26.80                     | 122.40                  | 0.00                     | 0.00                    |
| 48.92        |             | 98.83                     | 449.49                  | 0.00                     | 0.00                    |
| 49.00        |             | 8.58                      | 39.02                   | 0.00                     | 0.00                    |
| 50.00        |             | 107.53                    | 242.47                  | 0.00                     | 0.00                    |
| 52.00        |             | 215.73                    | 482.51                  | 0.00                     | 0.00                    |
| 54.00        |             | 215.94                    | 479.28                  | 0.00                     | 0.00                    |
| 56.00        |             | 216.08                    | 476.06                  | 0.00                     | 0.00                    |
| 58.00        |             | 216.16                    | 472.83                  | 0.00                     | 0.00                    |
| 60.00        |             | 216.16                    | 469.60                  | 0.00                     | 0.00                    |
| 61.00        |             | 107.88                    | 233.59                  | 0.00                     | 0.00                    |
| 62.00        |             | 107.86                    | 232.78                  | 0.00                     | 0.00                    |
| 64.00        |             | 216.00                    | 463.15                  | 0.00                     | 0.00                    |
| 65.00        |             | 107.77                    | 230.36                  | 0.00                     | 0.00                    |
| 66.00        |             | 107.72                    | 229.56                  | 0.00                     | 0.00                    |
| 68.00        |             | 215.61                    | 456.69                  | 0.00                     | 0.00                    |
| 70.00        |             | 215.34                    | 453.46                  | 0.00                     | 0.00                    |
| 72.00        |             | 215.02                    | 450.24                  | 0.00                     | 0.00                    |

## Total Applied Force Summary

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|        |                  |         |         |      |
|--------|------------------|---------|---------|------|
| 72.25  | 26.78            | 56.05   | 0.00    | 0.00 |
| 74.00  | 187.73           | 390.96  | 0.00    | 0.00 |
| 76.00  | 214.24           | 443.78  | 0.00    | 0.00 |
| 76.83  | 88.64            | 183.22  | 0.00    | 0.00 |
| 78.00  | 124.87           | 257.33  | 0.00    | 0.00 |
| 80.00  | 206.08           | 437.33  | 0.00    | 0.00 |
| 81.00  | 96.66            | 217.45  | 0.00    | 0.00 |
| 82.00  | 96.50            | 216.65  | 0.00    | 0.00 |
| 84.00  | 192.74           | 430.87  | 0.00    | 0.00 |
| 86.00  | 192.03           | 427.64  | 0.00    | 0.00 |
| 87.50  | 143.45           | 318.61  | 0.00    | 0.00 |
| 88.00  | 48.45            | 183.22  | 0.00    | 0.00 |
| 90.00  | 193.68           | 729.20  | 0.00    | 0.00 |
| 90.50  | 50.68            | 181.38  | 0.00    | 0.00 |
| 91.92  | 150.88           | 513.09  | 0.00    | 0.00 |
| 92.00  | 8.48             | 28.82   | 0.00    | 0.00 |
| 92.25  | 26.49            | 89.99   | 0.00    | 0.00 |
| 94.00  | 185.41           | 315.63  | 0.00    | 0.00 |
| 96.00  | 211.24           | 358.20  | 0.00    | 0.00 |
| 98.00  | 210.45           | 355.51  | 0.00    | 0.00 |
| 100.00 | 209.63           | 352.82  | 0.00    | 0.00 |
| 101.00 | 104.39           | 175.40  | 0.00    | 0.00 |
| 102.00 | 104.18           | 174.73  | 0.00    | 0.00 |
| 104.00 | 207.91           | 347.44  | 0.00    | 0.00 |
| 105.50 | 155.27           | 258.82  | 0.00    | 0.00 |
| 105.58 | 8.25             | 13.76   | 0.00    | 0.00 |
| 106.00 | 43.33            | 72.17   | 0.00    | 0.00 |
| 108.00 | 206.09           | 342.06  | 0.00    | 0.00 |
| 110.00 | 205.13           | 339.37  | 0.00    | 0.00 |
| 112.00 | 204.16           | 336.68  | 0.00    | 0.00 |
| 114.00 | 203.16           | 333.99  | 0.00    | 0.00 |
| 116.00 | 202.13           | 331.30  | 0.00    | 0.00 |
| 118.00 | 201.08           | 328.61  | 0.00    | 0.00 |
| 120.00 | 200.02           | 325.92  | 0.00    | 0.00 |
| 122.00 | 191.03           | 323.23  | 0.00    | 0.00 |
| 124.00 | 176.69           | 320.54  | 0.00    | 0.00 |
| 126.00 | 175.49           | 317.85  | 0.00    | 0.00 |
| 128.00 | 174.26           | 315.17  | 0.00    | 0.00 |
| 130.00 | 173.02           | 312.48  | 0.00    | 0.00 |
| 132.00 | 171.76           | 309.79  | 0.00    | 0.00 |
| 132.50 | 42.69            | 77.03   | 0.00    | 0.00 |
| 134.00 | 129.49           | 362.83  | 0.00    | 0.00 |
| 136.00 | 171.59           | 479.77  | 0.00    | 0.00 |
| 136.50 | 42.65            | 119.23  | 0.00    | 0.00 |
| 138.00 | 127.54           | 173.62  | 0.00    | 0.00 |
| 140.00 | 168.96           | 229.85  | 0.00    | 0.00 |
| 142.00 | 167.62           | 227.96  | 0.00    | 0.00 |
| 144.00 | 166.26           | 226.08  | 0.00    | 0.00 |
| 146.00 | 164.89           | 224.20  | 0.00    | 0.00 |
| 148.00 | 163.50           | 222.31  | 0.00    | 0.00 |
| 150.00 | 162.09           | 220.43  | 0.00    | 0.00 |
| 152.00 | 160.67           | 218.55  | 0.00    | 0.00 |
| 154.00 | 159.24           | 216.67  | 0.00    | 0.00 |
| 156.00 | 157.79           | 214.78  | 0.00    | 0.00 |
| 158.00 | (34) attachments | 6461.12 | 4989.56 | 0.00 |
| 160.00 |                  | 154.84  | 193.50  | 0.00 |
| 162.00 |                  | 153.35  | 191.61  | 0.00 |

## Total Applied Force Summary

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|        |                  |                  |                  |             |             |
|--------|------------------|------------------|------------------|-------------|-------------|
| 164.00 |                  | 151.84           | 189.73           | 0.00        | 0.00        |
| 166.00 |                  | 150.32           | 187.85           | 0.00        | 0.00        |
| 168.00 | (22) attachments | 2328.75          | 1402.76          | 0.00        | 0.00        |
| 168.50 | (1) attachments  | 1226.44          | 1724.86          | 0.00        | 0.00        |
| 170.00 |                  | 110.25           | 133.89           | 0.00        | 0.00        |
| 172.00 |                  | 145.68           | 176.87           | 0.00        | 0.00        |
| 174.00 |                  | 144.11           | 174.99           | 0.00        | 0.00        |
| 176.00 |                  | 142.53           | 173.10           | 0.00        | 0.00        |
| 177.00 | (11) attachments | 3237.08          | 2916.77          | 0.00        | 0.00        |
| 178.00 |                  | 70.22            | 82.99            | 0.00        | 0.00        |
| 180.00 |                  | 140.29           | 146.36           | 0.00        | 0.00        |
| 182.00 |                  | 140.62           | 146.36           | 0.00        | 0.00        |
| 184.00 | (1) attachments  | 1903.51          | 2066.36          | 0.00        | 0.00        |
| 186.00 |                  | 141.26           | 146.36           | 0.00        | 0.00        |
| 187.00 | (32) attachments | 3653.50          | 2799.47          | 0.00        | 0.00        |
| 188.00 |                  | 70.79            | 57.86            | 0.00        | 0.00        |
|        | <b>Totals:</b>   | <b>35,759.95</b> | <b>54,047.11</b> | <b>0.00</b> | <b>0.00</b> |

## Linear Appurtenance Segment Forces (Factored)

**Structure:** CT46124-A-SBA **Code:** TIA-222-H 6/14/2023  
**Site Name:** Enfield-Moody Rd **Exposure:** C  
**Height:** 188.00 (ft) **Crest Height:** 0.00  
**Base Elev:** 0.000 (ft) **Site Class:** D - Stiff Soil  
**Gh:** 1.1 **Topography:** 1 **Struct Class:** II Page: 18



**Load Case:** 1.2D + 1.0W 120 mph Wind

**Iterations** 31

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



| Top Elev (ft) | Description       | Wind Exposed | Length (ft) | Ca    | Exposed Width (in) | Area (sqft) | CaAa (sqft) | Ra    | Cf Adjust Factor | qz (psf) | F X (lb) | Dead Load (lb) |
|---------------|-------------------|--------------|-------------|-------|--------------------|-------------|-------------|-------|------------------|----------|----------|----------------|
| 1.00          | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 29.578   | 6.78     | 0.00           |
| 2.00          | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 29.578   | 6.78     | 0.00           |
| 4.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 29.578   | 13.56    | 0.00           |
| 6.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 29.578   | 13.56    | 0.00           |
| 8.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 29.578   | 13.56    | 0.00           |
| 10.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 29.578   | 13.56    | 0.00           |
| 12.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 29.578   | 13.56    | 0.00           |
| 14.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 29.578   | 13.56    | 0.00           |
| 16.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 29.943   | 13.72    | 0.00           |
| 18.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 30.695   | 14.07    | 0.00           |
| 20.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 31.383   | 14.38    | 0.00           |
| 21.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 31.707   | 7.27     | 0.00           |
| 22.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 32.019   | 7.34     | 0.00           |
| 24.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 32.611   | 14.95    | 0.00           |
| 26.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 33.166   | 15.20    | 0.00           |
| 27.75         | 1.25" Reinforcing | Yes          | 1.75        | 2.000 | 1.25               | 0.18        | 0.36        | 0.000 | 0.000            | 33.624   | 13.48    | 0.00           |
| 28.00         | 1.25" Reinforcing | Yes          | 0.25        | 2.000 | 1.25               | 0.03        | 0.05        | 0.000 | 0.000            | 33.687   | 1.93     | 0.00           |
| 30.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 34.180   | 15.67    | 0.00           |
| 32.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 34.648   | 15.88    | 0.00           |
| 34.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 35.093   | 16.08    | 0.00           |
| 36.00         | 1.25" Reinforcing | Yes          | 1.50        | 2.000 | 1.25               | 0.16        | 0.31        | 0.000 | 0.000            | 35.517   | 12.21    | 0.00           |
| 47.75         | 1.25" Reinforcing | Yes          | 1.25        | 2.000 | 1.25               | 0.13        | 0.26        | 0.000 | 0.000            | 37.693   | 10.80    | 0.00           |
| 48.00         | 1.25" Reinforcing | Yes          | 0.25        | 2.000 | 1.25               | 0.03        | 0.05        | 0.000 | 0.000            | 37.735   | 2.16     | 0.00           |
| 48.92         | 1.25" Reinforcing | Yes          | 0.92        | 2.000 | 1.25               | 0.10        | 0.19        | 0.000 | 0.000            | 37.886   | 7.99     | 0.00           |
| 49.00         | 1.25" Reinforcing | Yes          | 0.08        | 2.000 | 1.25               | 0.01        | 0.02        | 0.000 | 0.000            | 37.899   | 0.69     | 0.00           |
| 50.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 38.061   | 8.72     | 0.00           |
| 52.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 38.376   | 17.59    | 0.00           |
| 54.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 38.682   | 17.73    | 0.00           |
| 56.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 38.980   | 17.87    | 0.00           |
| 58.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 39.269   | 18.00    | 0.00           |
| 60.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 39.550   | 18.13    | 0.00           |
| 61.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 39.688   | 9.10     | 0.00           |
| 62.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 39.824   | 9.13     | 0.00           |
| 64.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 40.091   | 18.38    | 0.00           |
| 65.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 40.222   | 9.22     | 0.00           |
| 66.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 40.352   | 9.25     | 0.00           |
| 68.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 40.606   | 18.61    | 0.00           |
| 70.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 40.855   | 18.72    | 0.00           |
| 72.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 41.098   | 18.84    | 0.00           |
| 72.25         | 1.25" Reinforcing | Yes          | 0.25        | 2.000 | 1.25               | 0.03        | 0.05        | 0.000 | 0.000            | 41.128   | 2.36     | 0.00           |
| 74.00         | 1.25" Reinforcing | Yes          | 1.75        | 2.000 | 1.25               | 0.18        | 0.36        | 0.000 | 0.000            | 41.335   | 16.58    | 0.00           |
| 76.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 41.568   | 19.05    | 0.00           |
| 76.83         | 1.25" Reinforcing | Yes          | 0.83        | 2.000 | 1.25               | 0.09        | 0.17        | 0.000 | 0.000            | 41.663   | 7.92     | 0.00           |
| 78.00         | 1.25" Reinforcing | Yes          | 1.17        | 2.000 | 1.25               | 0.12        | 0.24        | 0.000 | 0.000            | 41.796   | 11.21    | 0.00           |
| 80.00         | 1.25" Reinforcing | Yes          | 1.25        | 2.000 | 1.25               | 0.13        | 0.26        | 0.000 | 0.000            | 42.019   | 12.04    | 0.00           |
| 90.50         | 1.25" Reinforcing | Yes          | 0.25        | 2.000 | 1.25               | 0.03        | 0.05        | 0.000 | 0.000            | 43.125   | 2.47     | 0.00           |
| 91.92         | 1.25" Reinforcing | Yes          | 1.42        | 2.000 | 1.25               | 0.15        | 0.30        | 0.000 | 0.000            | 43.266   | 14.08    | 0.00           |

## Linear Appurtenance Segment Forces (Factored)

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|  |                      |
|--|----------------------|
| <b>Load Case:</b> 1.2D + 1.0W 120 mph Wind | <b>Iterations</b> 31 |
| <b>Dead Load Factor</b> 1.20               |                      |
| <b>Wind Load Factor</b> 1.00               |                      |

| Top Elev (ft)  | Description       | Wind Exposed | Length (ft) | Ca    | Exposed Width (in) | Area (sqft) | CaAa (sqft) | Ra    | Cf Adjust Factor | qz (psf)     | F X (lb)   | Dead Load (lb) |
|----------------|-------------------|--------------|-------------|-------|--------------------|-------------|-------------|-------|------------------|--------------|------------|----------------|
| 92.00          | 1.25" Reinforcing | Yes          | 0.08        | 2.000 | 1.25               | 0.01        | 0.02        | 0.000 | 0.000            | 43.274       | 0.79       | 0.00           |
| 92.25          | 1.25" Reinforcing | Yes          | 0.25        | 2.000 | 1.25               | 0.03        | 0.05        | 0.000 | 0.000            | 43.299       | 2.48       | 0.00           |
| 94.00          | 1.25" Reinforcing | Yes          | 1.75        | 2.000 | 1.25               | 0.18        | 0.36        | 0.000 | 0.000            | 43.470       | 17.43      | 0.00           |
| 96.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 43.664       | 20.01      | 0.00           |
| 98.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 43.853       | 20.10      | 0.00           |
| 100.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 44.040       | 20.19      | 0.00           |
| 101.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 44.133       | 10.11      | 0.00           |
| 102.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 44.224       | 10.13      | 0.00           |
| 104.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 44.406       | 20.35      | 0.00           |
| 105.50         | 1.25" Reinforcing | Yes          | 1.50        | 2.000 | 1.25               | 0.16        | 0.31        | 0.000 | 0.000            | 44.540       | 15.31      | 0.00           |
| 105.58         | 1.25" Reinforcing | Yes          | 0.08        | 2.000 | 1.25               | 0.01        | 0.02        | 0.000 | 0.000            | 44.547       | 0.82       | 0.00           |
| 106.00         | 1.25" Reinforcing | Yes          | 0.42        | 2.000 | 1.25               | 0.04        | 0.09        | 0.000 | 0.000            | 44.584       | 4.29       | 0.00           |
| 108.00         | 1.25" Reinforcing | Yes          | 0.75        | 2.000 | 1.25               | 0.08        | 0.16        | 0.000 | 0.000            | 44.760       | 7.69       | 0.00           |
| 108.00         | 1.25" Reinforcing | Yes          | 1.25        | 2.000 | 1.25               | 0.13        | 0.26        | 0.000 | 0.000            | 44.760       | 12.82      | 0.00           |
| 110.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 44.933       | 20.59      | 0.00           |
| 112.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 45.104       | 20.67      | 0.00           |
| 114.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 45.272       | 20.75      | 0.00           |
| 116.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 45.438       | 20.83      | 0.00           |
| 118.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 45.602       | 20.90      | 0.00           |
| 120.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 45.764       | 20.98      | 0.00           |
| 122.00         | 1.25" Reinforcing | Yes          | 1.25        | 2.000 | 1.25               | 0.13        | 0.26        | 0.000 | 0.000            | 45.923       | 13.16      | 0.00           |
| <b>Totals:</b> |                   |              |             |       |                    |             |             |       |                  | <b>874.1</b> | <b>0.0</b> |                |





## Calculated Forces

|                                    |                                   |                 |
|------------------------------------|-----------------------------------|-----------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023       |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                 |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                 |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                 |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Page:</b> 22 |
|                                    | <b>Struct Class:</b> II           |                 |



|        |        |        |      |         |      |        |         |        |        |        |        |        |       |       |
|--------|--------|--------|------|---------|------|--------|---------|--------|--------|--------|--------|--------|-------|-------|
| 166.00 | -10.06 | -15.08 | 0.00 | -187.96 | 0.00 | 187.96 | 1263.27 | 314.12 | 671.70 | 669.50 | 131.06 | -8.335 | 0.000 | 0.291 |
| 168.00 | -9.00  | -12.58 | 0.00 | -157.80 | 0.00 | 157.80 | 1252.00 | 310.07 | 654.51 | 654.91 | 134.55 | -8.401 | 0.000 | 0.250 |
| 168.50 | -7.47  | -11.12 | 0.00 | -151.52 | 0.00 | 151.52 | 1249.16 | 309.06 | 650.24 | 651.27 | 135.43 | -8.416 | 0.000 | 0.240 |
| 170.00 | -7.35  | -10.99 | 0.00 | -134.84 | 0.00 | 134.84 | 1240.60 | 306.02 | 637.53 | 640.40 | 138.07 | -8.458 | 0.000 | 0.218 |
| 172.00 | -7.18  | -10.83 | 0.00 | -112.85 | 0.00 | 112.85 | 1229.07 | 301.97 | 620.78 | 625.99 | 141.61 | -8.509 | 0.000 | 0.187 |
| 174.00 | -7.02  | -10.67 | 0.00 | -91.20  | 0.00 | 91.20  | 1217.40 | 297.93 | 604.26 | 611.66 | 145.17 | -8.553 | 0.000 | 0.156 |
| 176.00 | -6.87  | -10.50 | 0.00 | -69.87  | 0.00 | 69.87  | 1205.61 | 293.88 | 587.95 | 597.44 | 148.75 | -8.588 | 0.000 | 0.124 |
| 177.00 | -4.47  | -6.87  | 0.00 | -59.36  | 0.00 | 59.36  | 1199.66 | 291.86 | 579.88 | 590.36 | 150.55 | -8.603 | 0.000 | 0.105 |
| 178.00 | -4.39  | -6.79  | 0.00 | -52.50  | 0.00 | 52.50  | 1193.69 | 289.83 | 571.87 | 583.31 | 152.34 | -8.617 | 0.000 | 0.094 |
| 178.00 | -4.39  | -6.79  | 0.00 | -52.50  | 0.00 | 52.50  | 975.84  | 248.70 | 491.35 | 478.11 | 152.34 | -8.617 | 0.000 | 0.115 |
| 180.00 | -4.27  | -6.63  | 0.00 | -38.93  | 0.00 | 38.93  | 975.84  | 248.70 | 491.35 | 478.11 | 155.94 | -8.639 | 0.000 | 0.086 |
| 182.00 | -4.14  | -6.47  | 0.00 | -25.67  | 0.00 | 25.67  | 975.84  | 248.70 | 491.35 | 478.11 | 159.55 | -8.657 | 0.000 | 0.059 |
| 184.00 | -2.39  | -4.27  | 0.00 | -12.74  | 0.00 | 12.74  | 975.84  | 248.70 | 491.35 | 478.11 | 163.17 | -8.667 | 0.000 | 0.029 |
| 186.00 | -2.26  | -4.11  | 0.00 | -4.19   | 0.00 | 4.19   | 975.84  | 248.70 | 491.35 | 478.11 | 166.79 | -8.672 | 0.000 | 0.011 |
| 187.00 | -0.05  | -0.08  | 0.00 | -0.08   | 0.00 | 0.08   | 975.84  | 248.70 | 491.35 | 478.11 | 168.60 | -8.673 | 0.000 | 0.000 |
| 188.00 | 0.00   | -0.07  | 0.00 | 0.00    | 0.00 | 0.00   | 975.84  | 248.70 | 491.35 | 478.11 | 170.41 | -8.673 | 0.000 | 0.000 |





## Wind Loading - Shaft

|                                    |                                   |                 |
|------------------------------------|-----------------------------------|-----------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023       |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                 |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                 |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                 |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Page:</b> 25 |
|                                    | <b>Struct Class:</b> II           |                 |



|                        |      |      |        |       |        |       |       |               |       |      |                 |     |                 |
|------------------------|------|------|--------|-------|--------|-------|-------|---------------|-------|------|-----------------|-----|-----------------|
| 164.00                 | 1.00 | 1.40 | 48.874 | 53.76 | 315.78 | 0.630 | 0.000 | 2.00          | 4.483 | 2.82 | 151.8           | 0.0 | 111.7           |
| 166.00                 | 1.00 | 1.41 | 48.999 | 53.90 | 312.19 | 0.630 | 0.000 | 2.00          | 4.427 | 2.79 | 150.3           | 0.0 | 110.3           |
| 168.00 Appurtenance(s) | 1.00 | 1.41 | 49.123 | 54.04 | 308.59 | 0.630 | 0.000 | 2.00          | 4.371 | 2.75 | 148.8           | 0.0 | 108.9           |
| 168.50 Appurtenance(s) | 1.00 | 1.41 | 49.154 | 54.07 | 307.69 | 0.630 | 0.000 | 0.50          | 1.084 | 0.68 | 36.9            | 0.0 | 27.0            |
| 170.00                 | 1.00 | 1.42 | 49.245 | 54.17 | 304.98 | 0.630 | 0.000 | 1.50          | 3.231 | 2.04 | 110.3           | 0.0 | 80.5            |
| 172.00                 | 1.00 | 1.42 | 49.367 | 54.30 | 301.35 | 0.630 | 0.000 | 2.00          | 4.258 | 2.68 | 145.7           | 0.0 | 106.1           |
| 174.00                 | 1.00 | 1.42 | 49.487 | 54.44 | 297.71 | 0.630 | 0.000 | 2.00          | 4.202 | 2.65 | 144.1           | 0.0 | 104.7           |
| 176.00                 | 1.00 | 1.43 | 49.606 | 54.57 | 294.06 | 0.630 | 0.000 | 2.00          | 4.146 | 2.61 | 142.5           | 0.0 | 103.3           |
| 177.00 Appurtenance(s) | 1.00 | 1.43 | 49.666 | 54.63 | 292.23 | 0.630 | 0.000 | 1.00          | 2.052 | 1.29 | 70.6            | 0.0 | 51.1            |
| 178.00 Top - Section 4 | 1.00 | 1.43 | 49.725 | 54.70 | 290.39 | 0.630 | 0.000 | 1.00          | 2.038 | 1.28 | 70.2            | 0.0 | 50.8            |
| 180.00                 | 1.00 | 1.43 | 49.842 | 54.83 | 290.73 | 0.630 | 0.000 | 2.00          | 4.062 | 2.56 | 140.3           | 0.0 | 86.8            |
| 182.00                 | 1.00 | 1.44 | 49.958 | 54.95 | 291.07 | 0.630 | 0.000 | 2.00          | 4.062 | 2.56 | 140.6           | 0.0 | 86.8            |
| 184.00 Appurtenance(s) | 1.00 | 1.44 | 50.073 | 55.08 | 291.41 | 0.630 | 0.000 | 2.00          | 4.062 | 2.56 | 140.9           | 0.0 | 86.8            |
| 186.00                 | 1.00 | 1.44 | 50.187 | 55.21 | 291.74 | 0.630 | 0.000 | 2.00          | 4.062 | 2.56 | 141.3           | 0.0 | 86.8            |
| 187.00 Appurtenance(s) | 1.00 | 1.44 | 50.244 | 55.27 | 291.90 | 0.630 | 0.000 | 1.00          | 2.031 | 1.28 | 70.7            | 0.0 | 43.4            |
| 188.00                 | 1.00 | 1.45 | 50.300 | 55.33 | 292.07 | 0.630 | 0.000 | 1.00          | 2.031 | 1.28 | 70.8            | 0.0 | 43.4            |
| <b>Totals:</b>         |      |      |        |       |        |       |       | <b>188.00</b> |       |      | <b>16,699.8</b> |     | <b>25,333.6</b> |

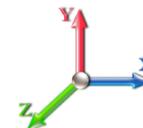
## Discrete Appurtenance Forces

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



**Load Case:** 0.9D + 1.0W 120 mph Wind

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



**Iterations** 31

| 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              | 187.00    | Ericsson Radio 4449 B71  | 3   | 50.244   | 55.268     | 0.38               | 0.75 | 2.81            | 199.80           | 0.000          | 0.000         | 155.44       | 0.00          | 0.00          |                  |
| 2              | 187.00    | Ericsson KRY 112 114-1   | 12  | 50.244   | 55.268     | 0.38               | 0.75 | 1.84            | 118.80           | 0.000          | 0.000         | 101.97       | 0.00          | 0.00          |                  |
| 3              | 187.00    | AIR6449 B41              | 3   | 50.244   | 55.268     | 0.53               | 0.75 | 9.03            | 278.10           | 0.000          | 0.000         | 498.84       | 0.00          | 0.00          |                  |
| 4              | 187.00    | RRUS 4415 B25            | 3   | 50.244   | 55.268     | 0.38               | 0.75 | 1.84            | 124.20           | 0.000          | 0.000         | 101.97       | 0.00          | 0.00          |                  |
| 5              | 187.00    | Kathrein 782 11054-Smart | 3   | 50.244   | 55.268     | 0.38               | 0.75 | 0.25            | 4.86             | 0.000          | 0.000         | 13.68        | 0.00          | 0.00          |                  |
| 6              | 187.00    | Collar Mount (3-Sided)   | 1   | 50.244   | 55.268     | 1.00               | 1.00 | 2.10            | 198.00           | 0.000          | 0.000         | 116.06       | 0.00          | 0.00          |                  |
| 7              | 187.00    | Ericsson                 | 3   | 50.244   | 55.268     | 0.65               | 0.75 | 12.60           | 356.94           | 0.000          | 0.000         | 696.20       | 0.00          | 0.00          |                  |
| 8              | 187.00    | RFS                      | 3   | 50.244   | 55.268     | 0.52               | 0.75 | 28.73           | 345.60           | 0.000          | 0.000         | 1587.74      | 0.00          | 0.00          |                  |
| 9              | 187.00    | PRK-1245 (kicker kit)    | 1   | 50.244   | 55.268     | 0.75               | 0.75 | 5.63            | 418.42           | 0.000          | 0.000         | 310.88       | 0.00          | 0.00          |                  |
| 10             | 184.00    | Platform w/ Hand Rail    | 1   | 50.073   | 55.080     | 1.00               | 1.00 | 32.00           | 1440.00          | 0.000          | 0.000         | 1762.56      | 0.00          | 0.00          |                  |
| 11             | 177.00    | TA08025-B604             | 3   | 49.666   | 54.632     | 0.38               | 0.75 | 2.21            | 172.53           | 0.000          | 0.000         | 120.46       | 0.00          | 0.00          |                  |
| 12             | 177.00    | MX08FRO665-21            | 3   | 49.666   | 54.632     | 0.55               | 0.75 | 20.80           | 174.15           | 0.000          | 0.000         | 1136.12      | 0.00          | 0.00          |                  |
| 13             | 177.00    | MC-PK8-DSH               | 1   | 49.666   | 54.632     | 1.00               | 1.00 | 32.00           | 1554.30          | 0.000          | 0.000         | 1748.23      | 0.00          | 0.00          |                  |
| 14             | 177.00    | TA08025-B605             | 3   | 49.666   | 54.632     | 0.38               | 0.75 | 2.21            | 202.50           | 0.000          | 0.000         | 120.46       | 0.00          | 0.00          |                  |
| 15             | 177.00    | RDIDC-9181-OF-48         | 1   | 49.666   | 54.632     | 0.38               | 0.75 | 0.75            | 19.71            | 0.000          | 0.000         | 41.18        | 0.00          | 0.00          |                  |
| 16             | 168.50    | Low Profile Platform     | 1   | 49.154   | 54.069     | 1.00               | 1.00 | 22.00           | 1260.00          | 0.000          | 0.000         | 1189.52      | 0.00          | 0.00          |                  |
| 17             | 168.00    | APXV9ERR18-C-A20         | 1   | 49.123   | 54.035     | 0.65               | 0.80 | 5.20            | 55.80            | 0.000          | 0.000         | 280.82       | 0.00          | 0.00          |                  |
| 18             | 168.00    | ACU-A20-N                | 4   | 49.123   | 54.035     | 0.40               | 0.80 | 0.22            | 3.60             | 0.000          | 0.000         | 12.10        | 0.00          | 0.00          |                  |
| 19             | 168.00    | TD-RRH8x20-25            | 3   | 49.123   | 54.035     | 0.40               | 0.80 | 3.66            | 189.00           | 0.000          | 0.000         | 197.77       | 0.00          | 0.00          |                  |
| 20             | 168.00    | 800 MHz RRH              | 3   | 49.123   | 54.035     | 0.40               | 0.80 | 3.00            | 145.80           | 0.000          | 0.000         | 162.11       | 0.00          | 0.00          |                  |
| 21             | 168.00    | 1900 MHz RRH             | 3   | 49.123   | 54.035     | 0.40               | 0.80 | 3.00            | 118.80           | 0.000          | 0.000         | 162.11       | 0.00          | 0.00          |                  |
| 22             | 168.00    | APXVTM14-C-120           | 3   | 49.123   | 54.035     | 0.62               | 0.80 | 11.87           | 151.20           | 0.000          | 0.000         | 641.32       | 0.00          | 0.00          |                  |
| 23             | 168.00    | 800 MHz Filters          | 3   | 49.123   | 54.035     | 0.40               | 0.80 | 3.00            | 145.80           | 0.000          | 0.000         | 162.11       | 0.00          | 0.00          |                  |
| 24             | 168.00    | APXVSPP18-C-A20          | 2   | 49.123   | 54.035     | 0.65               | 0.80 | 10.39           | 102.60           | 0.000          | 0.000         | 561.64       | 0.00          | 0.00          |                  |
| 25             | 158.00    | Ericsson 8843 B2 B66A -  | 3   | 48.492   | 53.342     | 0.38               | 0.75 | 1.84            | 194.40           | 0.000          | 0.000         | 98.42        | 0.00          | 0.00          |                  |
| 26             | 158.00    | Ericsson RRUS 4415 B30   | 3   | 48.492   | 53.342     | 0.38               | 0.75 | 1.84            | 94.50            | 0.000          | 0.000         | 98.42        | 0.00          | 0.00          |                  |
| 27             | 158.00    | Ericsson 4449 B5 B12 -   | 3   | 48.492   | 53.342     | 0.38               | 0.75 | 1.86            | 197.10           | 0.000          | 0.000         | 99.02        | 0.00          | 0.00          |                  |
| 28             | 158.00    | Kathrein 800-10966       | 6   | 48.492   | 53.342     | 0.53               | 0.75 | 45.72           | 618.84           | 0.000          | 0.000         | 2438.80      | 0.00          | 0.00          |                  |
| 29             | 158.00    | Raycap DC6-48-60-18-8F   | 2   | 48.492   | 53.342     | 0.38               | 0.75 | 1.10            | 57.24            | 0.000          | 0.000         | 58.81        | 0.00          | 0.00          |                  |
| 30             | 158.00    | Ericsson 2012 B29 - RRU  | 3   | 48.492   | 53.342     | 0.38               | 0.75 | 2.07            | 116.37           | 0.000          | 0.000         | 110.42       | 0.00          | 0.00          |                  |
| 31             | 158.00    | Platform Mount           | 1   | 48.492   | 53.342     | 1.00               | 1.00 | 38.00           | 1922.93          | 0.000          | 0.000         | 2026.98      | 0.00          | 0.00          |                  |
| 32             | 158.00    | Cci HPA-65R-BUU-H8       | 3   | 48.492   | 53.342     | 0.58               | 0.75 | 22.78           | 183.60           | 0.000          | 0.000         | 1215.12      | 0.00          | 0.00          |                  |
| 33             | 158.00    | Kathrein 860-10025 - RET | 6   | 48.492   | 53.342     | 0.38               | 0.75 | 0.36            | 6.26             | 0.000          | 0.000         | 19.20        | 0.00          | 0.00          |                  |
| 34             | 158.00    | Ericsson 4478 B14 - RRU  | 3   | 48.492   | 53.342     | 0.38               | 0.75 | 2.27            | 161.73           | 0.000          | 0.000         | 121.22       | 0.00          | 0.00          |                  |
| 35             | 158.00    | Raycap DC6-48-60-0-8F -  | 1   | 48.492   | 53.342     | 0.38               | 0.75 | 0.35            | 29.52            | 0.000          | 0.000         | 18.40        | 0.00          | 0.00          |                  |
| <b>Totals:</b> |           |                          |     |          |            |                    |      |                 | <b>11,363.00</b> |                |               |              |               |               | <b>18,186.09</b> |

## Total Applied Force Summary

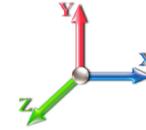
|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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**Load Case:** 0.9D + 1.0W 120 mph Wind

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



**Iterations**    31

| Elev<br>(ft) | Description | Lateral<br>FX (-)<br>(lb) | Axial<br>FY (-)<br>(lb) | Torsion<br>MY<br>(lb-ft) | Moment<br>MZ<br>(lb-ft) |
|--------------|-------------|---------------------------|-------------------------|--------------------------|-------------------------|
| 0.00         |             | 0.00                      | 0.00                    | 0.00                     | 0.00                    |
| 1.00         |             | 96.38                     | 239.66                  | 0.00                     | 0.00                    |
| 2.00         |             | 96.09                     | 238.95                  | 0.00                     | 0.00                    |
| 4.00         |             | 191.31                    | 475.78                  | 0.00                     | 0.00                    |
| 6.00         |             | 190.16                    | 472.96                  | 0.00                     | 0.00                    |
| 8.00         |             | 189.01                    | 470.14                  | 0.00                     | 0.00                    |
| 10.00        |             | 187.86                    | 467.31                  | 0.00                     | 0.00                    |
| 12.00        |             | 186.70                    | 464.49                  | 0.00                     | 0.00                    |
| 14.00        |             | 185.55                    | 461.66                  | 0.00                     | 0.00                    |
| 16.00        |             | 186.68                    | 458.84                  | 0.00                     | 0.00                    |
| 18.00        |             | 190.17                    | 456.02                  | 0.00                     | 0.00                    |
| 20.00        |             | 193.21                    | 453.19                  | 0.00                     | 0.00                    |
| 21.00        |             | 97.14                     | 225.54                  | 0.00                     | 0.00                    |
| 22.00        |             | 97.78                     | 224.83                  | 0.00                     | 0.00                    |
| 24.00        |             | 198.23                    | 447.54                  | 0.00                     | 0.00                    |
| 26.00        |             | 200.31                    | 444.72                  | 0.00                     | 0.00                    |
| 27.75        |             | 176.62                    | 386.81                  | 0.00                     | 0.00                    |
| 28.00        |             | 25.20                     | 55.08                   | 0.00                     | 0.00                    |
| 30.00        |             | 203.77                    | 439.07                  | 0.00                     | 0.00                    |
| 32.00        |             | 205.21                    | 436.25                  | 0.00                     | 0.00                    |
| 34.00        |             | 206.48                    | 433.42                  | 0.00                     | 0.00                    |
| 36.00        |             | 203.53                    | 430.60                  | 0.00                     | 0.00                    |
| 38.00        |             | 192.11                    | 427.77                  | 0.00                     | 0.00                    |
| 40.00        |             | 192.78                    | 424.95                  | 0.00                     | 0.00                    |
| 41.00        |             | 96.36                     | 211.42                  | 0.00                     | 0.00                    |
| 42.00        |             | 96.49                     | 210.71                  | 0.00                     | 0.00                    |
| 43.25        |             | 120.86                    | 262.39                  | 0.00                     | 0.00                    |
| 44.00        |             | 73.73                     | 279.58                  | 0.00                     | 0.00                    |
| 46.00        |             | 197.46                    | 741.93                  | 0.00                     | 0.00                    |
| 47.75        |             | 183.73                    | 644.89                  | 0.00                     | 0.00                    |
| 48.00        |             | 26.80                     | 91.80                   | 0.00                     | 0.00                    |
| 48.92        |             | 98.83                     | 337.12                  | 0.00                     | 0.00                    |
| 49.00        |             | 8.58                      | 29.26                   | 0.00                     | 0.00                    |
| 50.00        |             | 107.53                    | 181.85                  | 0.00                     | 0.00                    |
| 52.00        |             | 215.73                    | 361.88                  | 0.00                     | 0.00                    |
| 54.00        |             | 215.94                    | 359.46                  | 0.00                     | 0.00                    |
| 56.00        |             | 216.08                    | 357.04                  | 0.00                     | 0.00                    |
| 58.00        |             | 216.16                    | 354.62                  | 0.00                     | 0.00                    |
| 60.00        |             | 216.16                    | 352.20                  | 0.00                     | 0.00                    |
| 61.00        |             | 107.88                    | 175.19                  | 0.00                     | 0.00                    |
| 62.00        |             | 107.86                    | 174.59                  | 0.00                     | 0.00                    |
| 64.00        |             | 216.00                    | 347.36                  | 0.00                     | 0.00                    |
| 65.00        |             | 107.77                    | 172.77                  | 0.00                     | 0.00                    |
| 66.00        |             | 107.72                    | 172.17                  | 0.00                     | 0.00                    |
| 68.00        |             | 215.61                    | 342.52                  | 0.00                     | 0.00                    |
| 70.00        |             | 215.34                    | 340.10                  | 0.00                     | 0.00                    |
| 72.00        |             | 215.02                    | 337.68                  | 0.00                     | 0.00                    |

## Total Applied Force Summary

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|        |                          |         |      |      |
|--------|--------------------------|---------|------|------|
| 72.25  | 26.78                    | 42.04   | 0.00 | 0.00 |
| 74.00  | 187.73                   | 293.22  | 0.00 | 0.00 |
| 76.00  | 214.24                   | 332.84  | 0.00 | 0.00 |
| 76.83  | 88.64                    | 137.42  | 0.00 | 0.00 |
| 78.00  | 124.87                   | 193.00  | 0.00 | 0.00 |
| 80.00  | 206.08                   | 327.99  | 0.00 | 0.00 |
| 81.00  | 96.66                    | 163.09  | 0.00 | 0.00 |
| 82.00  | 96.50                    | 162.48  | 0.00 | 0.00 |
| 84.00  | 192.74                   | 323.15  | 0.00 | 0.00 |
| 86.00  | 192.03                   | 320.73  | 0.00 | 0.00 |
| 87.50  | 143.45                   | 238.96  | 0.00 | 0.00 |
| 88.00  | 48.45                    | 137.42  | 0.00 | 0.00 |
| 90.00  | 193.68                   | 546.90  | 0.00 | 0.00 |
| 90.50  | 50.68                    | 136.03  | 0.00 | 0.00 |
| 91.92  | 150.88                   | 384.82  | 0.00 | 0.00 |
| 92.00  | 8.48                     | 21.61   | 0.00 | 0.00 |
| 92.25  | 26.49                    | 67.50   | 0.00 | 0.00 |
| 94.00  | 185.41                   | 236.72  | 0.00 | 0.00 |
| 96.00  | 211.24                   | 268.65  | 0.00 | 0.00 |
| 98.00  | 210.45                   | 266.63  | 0.00 | 0.00 |
| 100.00 | 209.63                   | 264.62  | 0.00 | 0.00 |
| 101.00 | 104.39                   | 131.55  | 0.00 | 0.00 |
| 102.00 | 104.18                   | 131.05  | 0.00 | 0.00 |
| 104.00 | 207.91                   | 260.58  | 0.00 | 0.00 |
| 105.50 | 155.27                   | 194.11  | 0.00 | 0.00 |
| 105.58 | 8.25                     | 10.32   | 0.00 | 0.00 |
| 106.00 | 43.33                    | 54.13   | 0.00 | 0.00 |
| 108.00 | 206.09                   | 256.55  | 0.00 | 0.00 |
| 110.00 | 205.13                   | 254.53  | 0.00 | 0.00 |
| 112.00 | 204.16                   | 252.51  | 0.00 | 0.00 |
| 114.00 | 203.16                   | 250.49  | 0.00 | 0.00 |
| 116.00 | 202.13                   | 248.48  | 0.00 | 0.00 |
| 118.00 | 201.08                   | 246.46  | 0.00 | 0.00 |
| 120.00 | 200.02                   | 244.44  | 0.00 | 0.00 |
| 122.00 | 191.03                   | 242.43  | 0.00 | 0.00 |
| 124.00 | 176.69                   | 240.41  | 0.00 | 0.00 |
| 126.00 | 175.49                   | 238.39  | 0.00 | 0.00 |
| 128.00 | 174.26                   | 236.37  | 0.00 | 0.00 |
| 130.00 | 173.02                   | 234.36  | 0.00 | 0.00 |
| 132.00 | 171.76                   | 232.34  | 0.00 | 0.00 |
| 132.50 | 42.69                    | 57.77   | 0.00 | 0.00 |
| 134.00 | 129.49                   | 272.12  | 0.00 | 0.00 |
| 136.00 | 171.59                   | 359.82  | 0.00 | 0.00 |
| 136.50 | 42.65                    | 89.42   | 0.00 | 0.00 |
| 138.00 | 127.54                   | 130.22  | 0.00 | 0.00 |
| 140.00 | 168.96                   | 172.39  | 0.00 | 0.00 |
| 142.00 | 167.62                   | 170.97  | 0.00 | 0.00 |
| 144.00 | 166.26                   | 169.56  | 0.00 | 0.00 |
| 146.00 | 164.89                   | 168.15  | 0.00 | 0.00 |
| 148.00 | 163.50                   | 166.74  | 0.00 | 0.00 |
| 150.00 | 162.09                   | 165.32  | 0.00 | 0.00 |
| 152.00 | 160.67                   | 163.91  | 0.00 | 0.00 |
| 154.00 | 159.24                   | 162.50  | 0.00 | 0.00 |
| 156.00 | 157.79                   | 161.09  | 0.00 | 0.00 |
| 158.00 | (34) attachments 6461.12 | 3742.17 | 0.00 | 0.00 |
| 160.00 | 154.84                   | 145.12  | 0.00 | 0.00 |
| 162.00 | 153.35                   | 143.71  | 0.00 | 0.00 |

## Total Applied Force Summary

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|        |                  |                  |                  |             |             |
|--------|------------------|------------------|------------------|-------------|-------------|
| 164.00 |                  | 151.84           | 142.30           | 0.00        | 0.00        |
| 166.00 |                  | 150.32           | 140.88           | 0.00        | 0.00        |
| 168.00 | (22) attachments | 2328.75          | 1052.07          | 0.00        | 0.00        |
| 168.50 | (1) attachments  | 1226.44          | 1293.65          | 0.00        | 0.00        |
| 170.00 |                  | 110.25           | 100.42           | 0.00        | 0.00        |
| 172.00 |                  | 145.68           | 132.65           | 0.00        | 0.00        |
| 174.00 |                  | 144.11           | 131.24           | 0.00        | 0.00        |
| 176.00 |                  | 142.53           | 129.83           | 0.00        | 0.00        |
| 177.00 | (11) attachments | 3237.08          | 2187.57          | 0.00        | 0.00        |
| 178.00 |                  | 70.22            | 62.24            | 0.00        | 0.00        |
| 180.00 |                  | 140.29           | 109.77           | 0.00        | 0.00        |
| 182.00 |                  | 140.62           | 109.77           | 0.00        | 0.00        |
| 184.00 | (1) attachments  | 1903.51          | 1549.77          | 0.00        | 0.00        |
| 186.00 |                  | 141.26           | 109.77           | 0.00        | 0.00        |
| 187.00 | (32) attachments | 3653.50          | 2099.60          | 0.00        | 0.00        |
| 188.00 |                  | 70.79            | 43.40            | 0.00        | 0.00        |
|        | <b>Totals:</b>   | <b>35,759.95</b> | <b>40,535.33</b> | <b>0.00</b> | <b>0.00</b> |

## Linear Appurtenance Segment Forces (Factored)

**Structure:** CT46124-A-SBA  
**Site Name:** Enfield-Moody Rd  
**Height:** 188.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 1.1

**Code:** TIA-222-H  
**Exposure:** C  
**Crest Height:** 0.00  
**Site Class:** D - Stiff Soil  
**Topography:** 1  
**Struct Class:** II

6/14/2023  
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**Load Case:** 0.9D + 1.0W 120 mph Wind **Iterations** 31

**Dead Load Factor** 0.90

**Wind Load Factor** 1.00

| Top Elev (ft) | Description       | Wind Exposed | Length (ft) | Ca    | Exposed Width (in) | Area (sqft) | CaAa (sqft) | Ra    | Cf Adjust Factor | qz (psf) | F X (lb) | Dead Load (lb) |
|---------------|-------------------|--------------|-------------|-------|--------------------|-------------|-------------|-------|------------------|----------|----------|----------------|
| 1.00          | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 29.578   | 6.78     | 0.00           |
| 2.00          | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 29.578   | 6.78     | 0.00           |
| 4.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 29.578   | 13.56    | 0.00           |
| 6.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 29.578   | 13.56    | 0.00           |
| 8.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 29.578   | 13.56    | 0.00           |
| 10.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 29.578   | 13.56    | 0.00           |
| 12.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 29.578   | 13.56    | 0.00           |
| 14.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 29.578   | 13.56    | 0.00           |
| 16.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 29.943   | 13.72    | 0.00           |
| 18.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 30.695   | 14.07    | 0.00           |
| 20.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 31.383   | 14.38    | 0.00           |
| 21.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 31.707   | 7.27     | 0.00           |
| 22.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 32.019   | 7.34     | 0.00           |
| 24.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 32.611   | 14.95    | 0.00           |
| 26.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 33.166   | 15.20    | 0.00           |
| 27.75         | 1.25" Reinforcing | Yes          | 1.75        | 2.000 | 1.25               | 0.18        | 0.36        | 0.000 | 0.000            | 33.624   | 13.48    | 0.00           |
| 28.00         | 1.25" Reinforcing | Yes          | 0.25        | 2.000 | 1.25               | 0.03        | 0.05        | 0.000 | 0.000            | 33.687   | 1.93     | 0.00           |
| 30.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 34.180   | 15.67    | 0.00           |
| 32.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 34.648   | 15.88    | 0.00           |
| 34.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 35.093   | 16.08    | 0.00           |
| 36.00         | 1.25" Reinforcing | Yes          | 1.50        | 2.000 | 1.25               | 0.16        | 0.31        | 0.000 | 0.000            | 35.517   | 12.21    | 0.00           |
| 47.75         | 1.25" Reinforcing | Yes          | 1.25        | 2.000 | 1.25               | 0.13        | 0.26        | 0.000 | 0.000            | 37.693   | 10.80    | 0.00           |
| 48.00         | 1.25" Reinforcing | Yes          | 0.25        | 2.000 | 1.25               | 0.03        | 0.05        | 0.000 | 0.000            | 37.735   | 2.16     | 0.00           |
| 48.92         | 1.25" Reinforcing | Yes          | 0.92        | 2.000 | 1.25               | 0.10        | 0.19        | 0.000 | 0.000            | 37.886   | 7.99     | 0.00           |
| 49.00         | 1.25" Reinforcing | Yes          | 0.08        | 2.000 | 1.25               | 0.01        | 0.02        | 0.000 | 0.000            | 37.899   | 0.69     | 0.00           |
| 50.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 38.061   | 8.72     | 0.00           |
| 52.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 38.376   | 17.59    | 0.00           |
| 54.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 38.682   | 17.73    | 0.00           |
| 56.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 38.980   | 17.87    | 0.00           |
| 58.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 39.269   | 18.00    | 0.00           |
| 60.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 39.550   | 18.13    | 0.00           |
| 61.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 39.688   | 9.10     | 0.00           |
| 62.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 39.824   | 9.13     | 0.00           |
| 64.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 40.091   | 18.38    | 0.00           |
| 65.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 40.222   | 9.22     | 0.00           |
| 66.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 40.352   | 9.25     | 0.00           |
| 68.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 40.606   | 18.61    | 0.00           |
| 70.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 40.855   | 18.72    | 0.00           |
| 72.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 41.098   | 18.84    | 0.00           |
| 72.25         | 1.25" Reinforcing | Yes          | 0.25        | 2.000 | 1.25               | 0.03        | 0.05        | 0.000 | 0.000            | 41.128   | 2.36     | 0.00           |
| 74.00         | 1.25" Reinforcing | Yes          | 1.75        | 2.000 | 1.25               | 0.18        | 0.36        | 0.000 | 0.000            | 41.335   | 16.58    | 0.00           |
| 76.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 41.568   | 19.05    | 0.00           |
| 76.83         | 1.25" Reinforcing | Yes          | 0.83        | 2.000 | 1.25               | 0.09        | 0.17        | 0.000 | 0.000            | 41.663   | 7.92     | 0.00           |
| 78.00         | 1.25" Reinforcing | Yes          | 1.17        | 2.000 | 1.25               | 0.12        | 0.24        | 0.000 | 0.000            | 41.796   | 11.21    | 0.00           |
| 80.00         | 1.25" Reinforcing | Yes          | 1.25        | 2.000 | 1.25               | 0.13        | 0.26        | 0.000 | 0.000            | 42.019   | 12.04    | 0.00           |
| 90.50         | 1.25" Reinforcing | Yes          | 0.25        | 2.000 | 1.25               | 0.03        | 0.05        | 0.000 | 0.000            | 43.125   | 2.47     | 0.00           |
| 91.92         | 1.25" Reinforcing | Yes          | 1.42        | 2.000 | 1.25               | 0.15        | 0.30        | 0.000 | 0.000            | 43.266   | 14.08    | 0.00           |

## Linear Appurtenance Segment Forces (Factored)

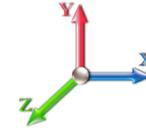
|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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**Load Case:** 0.9D + 1.0W 120 mph Wind

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



**Iterations** 31

| Top Elev (ft)  | Description       | Wind Exposed | Length (ft) | Ca    | Exposed Width (in) | Area (sqft) | CaAa (sqft) | Ra    | Cf Adjust Factor | qz (psf)     | F X (lb)   | Dead Load (lb) |
|----------------|-------------------|--------------|-------------|-------|--------------------|-------------|-------------|-------|------------------|--------------|------------|----------------|
| 92.00          | 1.25" Reinforcing | Yes          | 0.08        | 2.000 | 1.25               | 0.01        | 0.02        | 0.000 | 0.000            | 43.274       | 0.79       | 0.00           |
| 92.25          | 1.25" Reinforcing | Yes          | 0.25        | 2.000 | 1.25               | 0.03        | 0.05        | 0.000 | 0.000            | 43.299       | 2.48       | 0.00           |
| 94.00          | 1.25" Reinforcing | Yes          | 1.75        | 2.000 | 1.25               | 0.18        | 0.36        | 0.000 | 0.000            | 43.470       | 17.43      | 0.00           |
| 96.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 43.664       | 20.01      | 0.00           |
| 98.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 43.853       | 20.10      | 0.00           |
| 100.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 44.040       | 20.19      | 0.00           |
| 101.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 44.133       | 10.11      | 0.00           |
| 102.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 44.224       | 10.13      | 0.00           |
| 104.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 44.406       | 20.35      | 0.00           |
| 105.50         | 1.25" Reinforcing | Yes          | 1.50        | 2.000 | 1.25               | 0.16        | 0.31        | 0.000 | 0.000            | 44.540       | 15.31      | 0.00           |
| 105.58         | 1.25" Reinforcing | Yes          | 0.08        | 2.000 | 1.25               | 0.01        | 0.02        | 0.000 | 0.000            | 44.547       | 0.82       | 0.00           |
| 106.00         | 1.25" Reinforcing | Yes          | 0.42        | 2.000 | 1.25               | 0.04        | 0.09        | 0.000 | 0.000            | 44.584       | 4.29       | 0.00           |
| 108.00         | 1.25" Reinforcing | Yes          | 0.75        | 2.000 | 1.25               | 0.08        | 0.16        | 0.000 | 0.000            | 44.760       | 7.69       | 0.00           |
| 108.00         | 1.25" Reinforcing | Yes          | 1.25        | 2.000 | 1.25               | 0.13        | 0.26        | 0.000 | 0.000            | 44.760       | 12.82      | 0.00           |
| 110.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 44.933       | 20.59      | 0.00           |
| 112.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 45.104       | 20.67      | 0.00           |
| 114.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 45.272       | 20.75      | 0.00           |
| 116.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 45.438       | 20.83      | 0.00           |
| 118.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 45.602       | 20.90      | 0.00           |
| 120.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 45.764       | 20.98      | 0.00           |
| 122.00         | 1.25" Reinforcing | Yes          | 1.25        | 2.000 | 1.25               | 0.13        | 0.26        | 0.000 | 0.000            | 45.923       | 13.16      | 0.00           |
| <b>Totals:</b> |                   |              |             |       |                    |             |             |       |                  | <b>874.1</b> | <b>0.0</b> |                |





## Calculated Forces

|                                    |                                   |                 |
|------------------------------------|-----------------------------------|-----------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023       |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                 |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                 |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                 |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Page:</b> 34 |
|                                    | <b>Struct Class:</b> II           |                 |



|        |       |        |      |         |      |        |         |        |        |        |        |        |       |       |
|--------|-------|--------|------|---------|------|--------|---------|--------|--------|--------|--------|--------|-------|-------|
| 166.00 | -7.11 | -14.61 | 0.00 | -182.11 | 0.00 | 182.11 | 1263.27 | 314.12 | 671.70 | 669.50 | 128.26 | -8.133 | 0.000 | 0.280 |
| 168.00 | -6.39 | -12.16 | 0.00 | -152.88 | 0.00 | 152.88 | 1252.00 | 310.07 | 654.51 | 654.91 | 131.67 | -8.196 | 0.000 | 0.240 |
| 168.50 | -5.28 | -10.77 | 0.00 | -146.80 | 0.00 | 146.80 | 1249.16 | 309.06 | 650.24 | 651.27 | 132.53 | -8.211 | 0.000 | 0.231 |
| 170.00 | -5.19 | -10.65 | 0.00 | -130.65 | 0.00 | 130.65 | 1240.60 | 306.02 | 637.53 | 640.40 | 135.11 | -8.252 | 0.000 | 0.209 |
| 172.00 | -5.07 | -10.49 | 0.00 | -109.36 | 0.00 | 109.36 | 1229.07 | 301.97 | 620.78 | 625.99 | 138.56 | -8.302 | 0.000 | 0.180 |
| 174.00 | -4.95 | -10.33 | 0.00 | -88.38  | 0.00 | 88.38  | 1217.40 | 297.93 | 604.26 | 611.66 | 142.04 | -8.344 | 0.000 | 0.150 |
| 176.00 | -4.84 | -10.17 | 0.00 | -67.72  | 0.00 | 67.72  | 1205.61 | 293.88 | 587.95 | 597.44 | 145.53 | -8.378 | 0.000 | 0.119 |
| 177.00 | -3.15 | -6.65  | 0.00 | -57.55  | 0.00 | 57.55  | 1199.66 | 291.86 | 579.88 | 590.36 | 147.28 | -8.393 | 0.000 | 0.101 |
| 178.00 | -3.09 | -6.57  | 0.00 | -50.90  | 0.00 | 50.90  | 1193.69 | 289.83 | 571.87 | 583.31 | 149.03 | -8.406 | 0.000 | 0.090 |
| 178.00 | -3.09 | -6.57  | 0.00 | -50.90  | 0.00 | 50.90  | 975.84  | 248.70 | 491.35 | 478.11 | 149.03 | -8.406 | 0.000 | 0.110 |
| 180.00 | -3.00 | -6.42  | 0.00 | -37.75  | 0.00 | 37.75  | 975.84  | 248.70 | 491.35 | 478.11 | 152.55 | -8.427 | 0.000 | 0.083 |
| 182.00 | -2.91 | -6.27  | 0.00 | -24.91  | 0.00 | 24.91  | 975.84  | 248.70 | 491.35 | 478.11 | 156.07 | -8.445 | 0.000 | 0.056 |
| 184.00 | -1.66 | -4.15  | 0.00 | -12.38  | 0.00 | 12.38  | 975.84  | 248.70 | 491.35 | 478.11 | 159.60 | -8.455 | 0.000 | 0.028 |
| 186.00 | -1.57 | -4.00  | 0.00 | -4.08   | 0.00 | 4.08   | 975.84  | 248.70 | 491.35 | 478.11 | 163.13 | -8.460 | 0.000 | 0.010 |
| 187.00 | -0.03 | -0.08  | 0.00 | -0.08   | 0.00 | 0.08   | 975.84  | 248.70 | 491.35 | 478.11 | 164.89 | -8.460 | 0.000 | 0.000 |
| 188.00 | 0.00  | -0.07  | 0.00 | 0.00    | 0.00 | 0.00   | 975.84  | 248.70 | 491.35 | 478.11 | 166.66 | -8.460 | 0.000 | 0.000 |

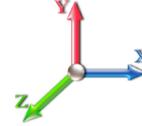
## Wind Loading - Shaft

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |
|                                    |                                   | <b>Page:</b> 35         |



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

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



**Iterations** 31

| Elev (ft) | Description     | Kzt  | Kz   | qz (psf) | qzGh (psf) | C (mph-ft) | Cf    | Ice Thick (in) | Tributary (ft) | Aa (sf) | CfAa (sf) | Wind Force X (lb) | Dead Load Ice (lb) | Tot Dead Load (lb) |
|-----------|-----------------|------|------|----------|------------|------------|-------|----------------|----------------|---------|-----------|-------------------|--------------------|--------------------|
| 0.00      | RB1             | 1.00 | 0.85 | 5.135    | 5.65       | 0.00       | 1.200 | 0.000          | 0.00           | 0.000   | 0.00      | 0.0               | 0.0                | 0.0                |
| 1.00      | RT1 RB2 RB3 RB4 | 1.00 | 0.85 | 5.135    | 5.65       | 0.00       | 1.200 | 1.057          | 1.00           | 4.547   | 5.46      | 30.8              | 69.7               | 360.1              |
| 2.00      |                 | 1.00 | 0.85 | 5.135    | 5.65       | 0.00       | 1.200 | 1.133          | 1.00           | 4.546   | 5.46      | 30.8              | 74.6               | 364.1              |
| 4.00      |                 | 1.00 | 0.85 | 5.135    | 5.65       | 0.00       | 1.200 | 1.215          | 2.00           | 9.077   | 10.89     | 61.5              | 159.2              | 735.3              |
| 6.00      |                 | 1.00 | 0.85 | 5.135    | 5.65       | 0.00       | 1.200 | 1.265          | 2.00           | 9.038   | 10.85     | 61.3              | 164.8              | 737.2              |
| 8.00      |                 | 1.00 | 0.85 | 5.135    | 5.65       | 0.00       | 1.200 | 1.302          | 2.00           | 8.994   | 10.79     | 61.0              | 168.7              | 737.3              |
| 10.00     |                 | 1.00 | 0.85 | 5.135    | 5.65       | 0.00       | 1.200 | 1.331          | 2.00           | 8.947   | 10.74     | 60.6              | 171.5              | 736.3              |
| 12.00     |                 | 1.00 | 0.85 | 5.135    | 5.65       | 0.00       | 1.200 | 1.356          | 2.00           | 8.899   | 10.68     | 60.3              | 173.6              | 734.7              |
| 14.00     |                 | 1.00 | 0.85 | 5.135    | 5.65       | 0.00       | 1.200 | 1.377          | 2.00           | 8.850   | 10.62     | 60.0              | 175.2              | 732.5              |
| 16.00     |                 | 1.00 | 0.86 | 5.198    | 5.72       | 0.00       | 1.200 | 1.395          | 2.00           | 8.800   | 10.56     | 60.4              | 176.5              | 730.0              |
| 18.00     | RT4             | 1.00 | 0.88 | 5.329    | 5.86       | 0.00       | 1.200 | 1.412          | 2.00           | 8.749   | 10.50     | 61.5              | 177.4              | 727.2              |
| 20.00     |                 | 1.00 | 0.90 | 5.448    | 5.99       | 0.00       | 1.200 | 1.427          | 2.00           | 8.698   | 10.44     | 62.6              | 178.2              | 724.2              |
| 21.00     | RT2 RT3 RB5 RB6 | 1.00 | 0.91 | 5.505    | 6.06       | 0.00       | 1.200 | 1.434          | 1.00           | 4.329   | 5.19      | 31.5              | 89.2               | 360.8              |
| 22.00     |                 | 1.00 | 0.92 | 5.559    | 6.11       | 0.00       | 1.200 | 1.440          | 1.00           | 4.316   | 5.18      | 31.7              | 89.4               | 360.0              |
| 24.00     |                 | 1.00 | 0.94 | 5.662    | 6.23       | 0.00       | 1.200 | 1.453          | 2.00           | 8.594   | 10.31     | 64.2              | 179.1              | 717.6              |
| 26.00     |                 | 1.00 | 0.95 | 5.758    | 6.33       | 0.00       | 1.200 | 1.465          | 2.00           | 8.542   | 10.25     | 64.9              | 179.4              | 714.1              |
| 27.75     | RT5             | 1.00 | 0.97 | 5.837    | 6.42       | 0.00       | 1.200 | 1.474          | 1.75           | 7.431   | 8.92      | 57.3              | 157.1              | 621.9              |
| 28.00     |                 | 1.00 | 0.97 | 5.848    | 6.43       | 0.00       | 1.200 | 1.476          | 0.25           | 1.058   | 1.27      | 8.2               | 22.4               | 88.6               |
| 30.00     |                 | 1.00 | 0.98 | 5.934    | 6.53       | 0.00       | 1.200 | 1.486          | 2.00           | 8.437   | 10.12     | 66.1              | 179.6              | 706.8              |
| 32.00     |                 | 1.00 | 1.00 | 6.015    | 6.62       | 0.00       | 1.200 | 1.495          | 2.00           | 8.384   | 10.06     | 66.6              | 179.5              | 703.0              |
| 34.00     |                 | 1.00 | 1.01 | 6.092    | 6.70       | 0.00       | 1.200 | 1.504          | 2.00           | 8.331   | 10.00     | 67.0              | 179.4              | 699.1              |
| 36.00     |                 | 1.00 | 1.02 | 6.166    | 6.78       | 0.00       | 1.200 | 1.513          | 2.00           | 8.277   | 9.93      | 67.4              | 179.2              | 695.1              |
| 38.00     |                 | 1.00 | 1.03 | 6.237    | 6.86       | 0.00       | 1.200 | 1.521          | 2.00           | 8.224   | 9.87      | 67.7              | 179.0              | 691.1              |
| 40.00     |                 | 1.00 | 1.04 | 6.305    | 6.93       | 0.00       | 1.200 | 1.529          | 2.00           | 8.170   | 9.80      | 68.0              | 178.6              | 687.0              |
| 41.00     | RT6 RB7         | 1.00 | 1.05 | 6.337    | 6.97       | 0.00       | 1.200 | 1.533          | 1.00           | 4.065   | 4.88      | 34.0              | 89.2               | 342.0              |
| 42.00     |                 | 1.00 | 1.05 | 6.370    | 7.01       | 0.00       | 1.200 | 1.537          | 1.00           | 4.051   | 4.86      | 34.1              | 89.1               | 340.9              |
| 43.25     | Bot - Section 2 | 1.00 | 1.06 | 6.409    | 7.05       | 0.00       | 1.200 | 1.541          | 1.25           | 5.045   | 6.05      | 42.7              | 111.2              | 424.7              |
| 44.00     |                 | 1.00 | 1.06 | 6.432    | 7.08       | 0.00       | 1.200 | 1.544          | 0.75           | 3.065   | 3.68      | 26.0              | 67.8               | 418.7              |
| 46.00     |                 | 1.00 | 1.07 | 6.493    | 7.14       | 0.00       | 1.200 | 1.551          | 2.00           | 8.136   | 9.76      | 69.7              | 180.3              | 1111.3             |
| 47.75     | RB8             | 1.00 | 1.08 | 6.544    | 7.20       | 0.00       | 1.200 | 1.556          | 1.75           | 7.074   | 8.49      | 61.1              | 157.4              | 966.2              |
| 48.00     |                 | 1.00 | 1.08 | 6.551    | 7.21       | 0.00       | 1.200 | 1.557          | 0.25           | 1.007   | 1.21      | 8.7               | 22.5               | 137.6              |
| 48.92     | RB9             | 1.00 | 1.09 | 6.577    | 7.24       | 0.00       | 1.200 | 1.560          | 0.92           | 3.699   | 4.44      | 32.1              | 82.6               | 505.3              |
| 49.00     | Top - Section 1 | 1.00 | 1.09 | 6.580    | 7.24       | 0.00       | 1.200 | 1.560          | 0.08           | 0.321   | 0.39      | 2.8               | 7.2                | 43.9               |
| 50.00     |                 | 1.00 | 1.09 | 6.608    | 7.27       | 0.00       | 1.200 | 1.564          | 1.00           | 4.007   | 4.81      | 34.9              | 89.6               | 303.0              |
| 52.00     |                 | 1.00 | 1.10 | 6.663    | 7.33       | 0.00       | 1.200 | 1.570          | 2.00           | 7.974   | 9.57      | 70.1              | 178.7              | 602.9              |
| 54.00     |                 | 1.00 | 1.11 | 6.716    | 7.39       | 0.00       | 1.200 | 1.576          | 2.00           | 7.919   | 9.50      | 70.2              | 178.0              | 599.1              |
| 56.00     |                 | 1.00 | 1.12 | 6.767    | 7.44       | 0.00       | 1.200 | 1.581          | 2.00           | 7.865   | 9.44      | 70.3              | 177.4              | 595.2              |
| 58.00     |                 | 1.00 | 1.13 | 6.817    | 7.50       | 0.00       | 1.200 | 1.587          | 2.00           | 7.811   | 9.37      | 70.3              | 176.7              | 591.3              |
| 60.00     |                 | 1.00 | 1.14 | 6.866    | 7.55       | 0.00       | 1.200 | 1.592          | 2.00           | 7.756   | 9.31      | 70.3              | 176.0              | 587.4              |
| 61.00     | RT7 RB10        | 1.00 | 1.14 | 6.890    | 7.58       | 0.00       | 1.200 | 1.595          | 1.00           | 3.858   | 4.63      | 35.1              | 87.8               | 292.3              |
| 62.00     |                 | 1.00 | 1.14 | 6.914    | 7.61       | 0.00       | 1.200 | 1.598          | 1.00           | 3.844   | 4.61      | 35.1              | 87.6               | 291.3              |
| 64.00     |                 | 1.00 | 1.15 | 6.960    | 7.66       | 0.00       | 1.200 | 1.603          | 2.00           | 7.647   | 9.18      | 70.3              | 174.5              | 579.4              |
| 65.00     | RT8 RB11        | 1.00 | 1.16 | 6.983    | 7.68       | 0.00       | 1.200 | 1.605          | 1.00           | 3.803   | 4.56      | 35.1              | 87.1               | 288.3              |
| 66.00     |                 | 1.00 | 1.16 | 7.005    | 7.71       | 0.00       | 1.200 | 1.608          | 1.00           | 3.789   | 4.55      | 35.0              | 86.9               | 287.3              |
| 68.00     |                 | 1.00 | 1.17 | 7.050    | 7.75       | 0.00       | 1.200 | 1.612          | 2.00           | 7.538   | 9.05      | 70.1              | 172.9              | 571.4              |
| 70.00     |                 | 1.00 | 1.17 | 7.093    | 7.80       | 0.00       | 1.200 | 1.617          | 2.00           | 7.484   | 8.98      | 70.1              | 172.1              | 567.3              |
| 72.00     |                 | 1.00 | 1.18 | 7.135    | 7.85       | 0.00       | 1.200 | 1.622          | 2.00           | 7.429   | 8.91      | 70.0              | 171.3              | 563.3              |



## Wind Loading - Shaft

|                                    |                                   |                 |
|------------------------------------|-----------------------------------|-----------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023       |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                 |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                 |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                 |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Page:</b> 37 |
|                                    | <b>Struct Class:</b> II           |                 |



|                        |      |      |       |      |      |       |       |               |       |      |                |       |                 |
|------------------------|------|------|-------|------|------|-------|-------|---------------|-------|------|----------------|-------|-----------------|
| 164.00                 | 1.00 | 1.40 | 8.485 | 9.33 | 0.00 | 1.200 | 1.761 | 2.00          | 5.070 | 6.08 | 56.8           | 123.8 | 272.8           |
| 166.00                 | 1.00 | 1.41 | 8.507 | 9.36 | 0.00 | 1.200 | 1.763 | 2.00          | 5.015 | 6.02 | 56.3           | 122.5 | 269.6           |
| 168.00 Appurtenance(s) | 1.00 | 1.41 | 8.528 | 9.38 | 0.00 | 1.200 | 1.765 | 2.00          | 4.959 | 5.95 | 55.8           | 121.2 | 266.5           |
| 168.50 Appurtenance(s) | 1.00 | 1.41 | 8.534 | 9.39 | 0.00 | 1.200 | 1.766 | 0.50          | 1.231 | 1.48 | 13.9           | 30.2  | 66.2            |
| 170.00                 | 1.00 | 1.42 | 8.550 | 9.40 | 0.00 | 1.200 | 1.767 | 1.50          | 3.672 | 4.41 | 41.4           | 89.9  | 197.3           |
| 172.00                 | 1.00 | 1.42 | 8.571 | 9.43 | 0.00 | 1.200 | 1.769 | 2.00          | 4.848 | 5.82 | 54.8           | 118.6 | 260.0           |
| 174.00                 | 1.00 | 1.42 | 8.592 | 9.45 | 0.00 | 1.200 | 1.771 | 2.00          | 4.793 | 5.75 | 54.4           | 117.3 | 256.8           |
| 176.00                 | 1.00 | 1.43 | 8.612 | 9.47 | 0.00 | 1.200 | 1.773 | 2.00          | 4.737 | 5.68 | 53.9           | 115.9 | 253.6           |
| 177.00 Appurtenance(s) | 1.00 | 1.43 | 8.623 | 9.48 | 0.00 | 1.200 | 1.774 | 1.00          | 2.348 | 2.82 | 26.7           | 57.6  | 125.8           |
| 178.00 Top - Section 4 | 1.00 | 1.43 | 8.633 | 9.50 | 0.00 | 1.200 | 1.775 | 1.00          | 2.334 | 2.80 | 26.6           | 57.3  | 125.0           |
| 180.00                 | 1.00 | 1.43 | 8.653 | 9.52 | 0.00 | 1.200 | 1.777 | 2.00          | 4.654 | 5.58 | 53.2           | 114.7 | 230.5           |
| 182.00                 | 1.00 | 1.44 | 8.673 | 9.54 | 0.00 | 1.200 | 1.779 | 2.00          | 4.655 | 5.59 | 53.3           | 114.9 | 230.6           |
| 184.00 Appurtenance(s) | 1.00 | 1.44 | 8.693 | 9.56 | 0.00 | 1.200 | 1.781 | 2.00          | 4.655 | 5.59 | 53.4           | 115.0 | 230.7           |
| 186.00                 | 1.00 | 1.44 | 8.713 | 9.58 | 0.00 | 1.200 | 1.783 | 2.00          | 4.656 | 5.59 | 53.6           | 115.1 | 230.9           |
| 187.00 Appurtenance(s) | 1.00 | 1.44 | 8.723 | 9.60 | 0.00 | 1.200 | 1.784 | 1.00          | 2.328 | 2.79 | 26.8           | 57.6  | 115.5           |
| 188.00                 | 1.00 | 1.45 | 8.733 | 9.61 | 0.00 | 1.200 | 1.785 | 1.00          | 2.328 | 2.79 | 26.8           | 57.6  | 115.5           |
| <b>Totals:</b>         |      |      |       |      |      |       |       | <b>188.00</b> |       |      | <b>6,019.9</b> |       | <b>48,354.1</b> |

## Discrete Appurtenance Forces

|                                    |                                   |                 |
|------------------------------------|-----------------------------------|-----------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023       |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                 |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                 |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                 |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Page:</b> 38 |
|                                    | <b>Struct Class:</b> II           |                 |

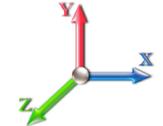


**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Dead Load Factor**     1.20

**Wind Load Factor**     1.00

**Iterations**     31



| 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              | 187.00    | Ericsson Radio 4449 B71  | 3   | 8.723    | 9.595      | 0.38               | 0.75 | 2.48            | 476.91           | 0.000          | 0.000         | 23.76           | 0.00          | 0.00          |
| 2              | 187.00    | Ericsson KRY 112 114-1   | 12  | 8.723    | 9.595      | 0.38               | 0.75 | 4.03            | 253.46           | 0.000          | 0.000         | 38.67           | 0.00          | 0.00          |
| 3              | 187.00    | AIR6449 B41              | 3   | 8.723    | 9.595      | 0.53               | 0.75 | 10.58           | 696.23           | 0.000          | 0.000         | 101.50          | 0.00          | 0.00          |
| 4              | 187.00    | RRUS 4415 B25            | 3   | 8.723    | 9.595      | 0.38               | 0.75 | 2.44            | 263.46           | 0.000          | 0.000         | 23.39           | 0.00          | 0.00          |
| 5              | 187.00    | Kathrein 782 11054-Smart | 3   | 8.723    | 9.595      | 0.38               | 0.75 | 0.82            | 7.48             | 0.000          | 0.000         | 7.83            | 0.00          | 0.00          |
| 6              | 187.00    | Collar Mount (3-Sided)   | 1   | 8.723    | 9.595      | 1.00               | 1.00 | 4.35            | 481.01           | 0.000          | 0.000         | 41.72           | 0.00          | 0.00          |
| 7              | 187.00    | Ericsson                 | 3   | 8.723    | 9.595      | 0.65               | 0.75 | 14.82           | 1040.19          | 0.000          | 0.000         | 142.19          | 0.00          | 0.00          |
| 8              | 187.00    | RFS                      | 3   | 8.723    | 9.595      | 0.52               | 0.75 | 34.94           | 1746.18          | 0.000          | 0.000         | 335.25          | 0.00          | 0.00          |
| 9              | 187.00    | PRK-1245 (kicker kit)    | 1   | 8.723    | 9.595      | 0.75               | 0.75 | 11.65           | 794.58           | 0.000          | 0.000         | 111.75          | 0.00          | 0.00          |
| 10             | 184.00    | Platform w/ Hand Rail    | 1   | 8.693    | 9.563      | 1.00               | 1.00 | 60.50           | 3463.18          | 0.000          | 0.000         | 578.53          | 0.00          | 0.00          |
| 11             | 177.00    | TA08025-B604             | 3   | 8.623    | 9.485      | 0.38               | 0.75 | 2.85            | 348.16           | 0.000          | 0.000         | 27.00           | 0.00          | 0.00          |
| 12             | 177.00    | MX08FRO665-21            | 3   | 8.623    | 9.485      | 0.55               | 0.75 | 23.28           | 917.78           | 0.000          | 0.000         | 220.76          | 0.00          | 0.00          |
| 13             | 177.00    | MC-PK8-DSH               | 1   | 8.623    | 9.485      | 1.00               | 1.00 | 72.88           | 3415.40          | 0.000          | 0.000         | 691.26          | 0.00          | 0.00          |
| 14             | 177.00    | TA08025-B605             | 3   | 8.623    | 9.485      | 0.38               | 0.75 | 2.85            | 391.73           | 0.000          | 0.000         | 27.00           | 0.00          | 0.00          |
| 15             | 177.00    | RDIDC-9181-OF-48         | 1   | 8.623    | 9.485      | 0.38               | 0.75 | 0.97            | 67.72            | 0.000          | 0.000         | 9.20            | 0.00          | 0.00          |
| 16             | 168.50    | Low Profile Platform     | 1   | 8.534    | 9.387      | 1.00               | 1.00 | 39.87           | 2515.94          | 0.000          | 0.000         | 374.24          | 0.00          | 0.00          |
| 17             | 168.00    | APXV9ERR18-C-A20         | 1   | 8.528    | 9.381      | 0.65               | 0.80 | 7.03            | 206.05           | 0.000          | 0.000         | 65.93           | 0.00          | 0.00          |
| 18             | 168.00    | ACU-A20-N                | 4   | 8.528    | 9.381      | 0.54               | 0.80 | 0.94            | 16.98            | 0.000          | 0.000         | 8.85            | 0.00          | 0.00          |
| 19             | 168.00    | TD-RRH8x20-25            | 3   | 8.528    | 9.381      | 0.40               | 0.80 | 5.85            | 587.96           | 0.000          | 0.000         | 54.86           | 0.00          | 0.00          |
| 20             | 168.00    | 800 MHz RRH              | 3   | 8.528    | 9.381      | 0.40               | 0.80 | 4.25            | 358.82           | 0.000          | 0.000         | 39.91           | 0.00          | 0.00          |
| 21             | 168.00    | 1900 MHz RRH             | 3   | 8.528    | 9.381      | 0.40               | 0.80 | 4.25            | 305.07           | 0.000          | 0.000         | 39.91           | 0.00          | 0.00          |
| 22             | 168.00    | APXVTM14-C-120           | 3   | 8.528    | 9.381      | 0.62               | 0.80 | 13.98           | 689.44           | 0.000          | 0.000         | 131.13          | 0.00          | 0.00          |
| 23             | 168.00    | 800 MHz Filters          | 3   | 8.528    | 9.381      | 0.40               | 0.80 | 4.25            | 358.82           | 0.000          | 0.000         | 39.91           | 0.00          | 0.00          |
| 24             | 168.00    | APXVSPP18-C-A20          | 2   | 8.528    | 9.381      | 0.65               | 0.80 | 14.06           | 387.44           | 0.000          | 0.000         | 131.86          | 0.00          | 0.00          |
| 25             | 158.00    | Ericsson 8843 B2 B66A -  | 3   | 8.419    | 9.261      | 0.38               | 0.75 | 2.41            | 364.47           | 0.000          | 0.000         | 22.29           | 0.00          | 0.00          |
| 26             | 158.00    | Ericsson RRUS 4415 B30   | 3   | 8.419    | 9.261      | 0.38               | 0.75 | 2.43            | 159.11           | 0.000          | 0.000         | 22.48           | 0.00          | 0.00          |
| 27             | 158.00    | Ericsson 4449 B5 B12 -   | 3   | 8.419    | 9.261      | 0.38               | 0.75 | 2.46            | 481.10           | 0.000          | 0.000         | 22.82           | 0.00          | 0.00          |
| 28             | 158.00    | Kathrein 800-10966       | 6   | 8.419    | 9.261      | 0.53               | 0.75 | 61.27           | 2983.64          | 0.000          | 0.000         | 567.42          | 0.00          | 0.00          |
| 29             | 158.00    | Raycap DC6-48-60-18-8F   | 2   | 8.419    | 9.261      | 0.38               | 0.75 | 1.63            | 165.21           | 0.000          | 0.000         | 15.10           | 0.00          | 0.00          |
| 30             | 158.00    | Ericsson 2012 B29 - RRU  | 3   | 8.419    | 9.261      | 0.38               | 0.75 | 2.53            | 194.70           | 0.000          | 0.000         | 23.47           | 0.00          | 0.00          |
| 31             | 158.00    | Plateform Mount          | 1   | 8.419    | 9.261      | 1.00               | 1.00 | 86.00           | 4541.51          | 0.000          | 0.000         | 796.40          | 0.00          | 0.00          |
| 32             | 158.00    | Cci HPA-65R-BUU-H8       | 3   | 8.419    | 9.261      | 0.58               | 0.75 | 25.63           | 1123.24          | 0.000          | 0.000         | 237.36          | 0.00          | 0.00          |
| 33             | 158.00    | Kathrein 860-10025 - RET | 6   | 8.419    | 9.261      | 0.38               | 0.75 | 1.15            | 33.86            | 0.000          | 0.000         | 10.61           | 0.00          | 0.00          |
| 34             | 158.00    | Ericsson 4478 B14 - RRU  | 3   | 8.419    | 9.261      | 0.38               | 0.75 | 2.95            | 327.95           | 0.000          | 0.000         | 27.35           | 0.00          | 0.00          |
| 35             | 158.00    | Raycap DC6-48-60-0-8F -  | 1   | 8.419    | 9.261      | 0.38               | 0.75 | 0.79            | 77.55            | 0.000          | 0.000         | 7.29            | 0.00          | 0.00          |
| <b>Totals:</b> |           |                          |     |          |            |                    |      |                 | <b>30,242.34</b> |                |               | <b>5,018.99</b> |               |               |

## Total Applied Force Summary

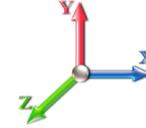
|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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

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



**Iterations** 31

| Elev<br>(ft) | Description | Lateral<br>FX (-)<br>(lb) | Axial<br>FY (-)<br>(lb) | Torsion<br>MY<br>(lb-ft) | Moment<br>MZ<br>(lb-ft) |
|--------------|-------------|---------------------------|-------------------------|--------------------------|-------------------------|
| 0.00         |             | 0.00                      | 0.00                    | 0.00                     | 0.00                    |
| 1.00         |             | 33.99                     | 394.11                  | 0.00                     | 0.00                    |
| 2.00         |             | 34.12                     | 398.47                  | 0.00                     | 0.00                    |
| 4.00         |             | 68.45                     | 805.00                  | 0.00                     | 0.00                    |
| 6.00         |             | 68.38                     | 807.53                  | 0.00                     | 0.00                    |
| 8.00         |             | 68.22                     | 808.05                  | 0.00                     | 0.00                    |
| 10.00        |             | 68.01                     | 807.44                  | 0.00                     | 0.00                    |
| 12.00        |             | 67.78                     | 806.09                  | 0.00                     | 0.00                    |
| 14.00        |             | 67.53                     | 804.21                  | 0.00                     | 0.00                    |
| 16.00        |             | 68.09                     | 801.94                  | 0.00                     | 0.00                    |
| 18.00        |             | 69.50                     | 799.35                  | 0.00                     | 0.00                    |
| 20.00        |             | 70.75                     | 796.52                  | 0.00                     | 0.00                    |
| 21.00        |             | 35.61                     | 397.04                  | 0.00                     | 0.00                    |
| 22.00        |             | 35.88                     | 396.27                  | 0.00                     | 0.00                    |
| 24.00        |             | 72.86                     | 790.28                  | 0.00                     | 0.00                    |
| 26.00        |             | 73.75                     | 786.93                  | 0.00                     | 0.00                    |
| 27.75        |             | 65.12                     | 685.70                  | 0.00                     | 0.00                    |
| 28.00        |             | 9.29                      | 97.73                   | 0.00                     | 0.00                    |
| 30.00        |             | 75.27                     | 779.87                  | 0.00                     | 0.00                    |
| 32.00        |             | 75.92                     | 776.18                  | 0.00                     | 0.00                    |
| 34.00        |             | 76.51                     | 772.41                  | 0.00                     | 0.00                    |
| 36.00        |             | 74.62                     | 764.76                  | 0.00                     | 0.00                    |
| 38.00        |             | 67.70                     | 749.33                  | 0.00                     | 0.00                    |
| 40.00        |             | 67.99                     | 745.24                  | 0.00                     | 0.00                    |
| 41.00        |             | 34.00                     | 371.12                  | 0.00                     | 0.00                    |
| 42.00        |             | 34.06                     | 370.08                  | 0.00                     | 0.00                    |
| 43.25        |             | 42.68                     | 461.11                  | 0.00                     | 0.00                    |
| 44.00        |             | 26.02                     | 440.55                  | 0.00                     | 0.00                    |
| 46.00        |             | 69.73                     | 1169.52                 | 0.00                     | 0.00                    |
| 47.75        |             | 67.65                     | 1027.07                 | 0.00                     | 0.00                    |
| 48.00        |             | 10.02                     | 146.84                  | 0.00                     | 0.00                    |
| 48.92        |             | 36.97                     | 539.35                  | 0.00                     | 0.00                    |
| 49.00        |             | 3.21                      | 46.83                   | 0.00                     | 0.00                    |
| 50.00        |             | 40.25                     | 340.02                  | 0.00                     | 0.00                    |
| 52.00        |             | 80.85                     | 677.13                  | 0.00                     | 0.00                    |
| 54.00        |             | 81.04                     | 673.37                  | 0.00                     | 0.00                    |
| 56.00        |             | 81.21                     | 669.57                  | 0.00                     | 0.00                    |
| 58.00        |             | 81.35                     | 665.75                  | 0.00                     | 0.00                    |
| 60.00        |             | 81.46                     | 661.89                  | 0.00                     | 0.00                    |
| 61.00        |             | 40.69                     | 329.57                  | 0.00                     | 0.00                    |
| 62.00        |             | 40.72                     | 328.60                  | 0.00                     | 0.00                    |
| 64.00        |             | 81.63                     | 654.08                  | 0.00                     | 0.00                    |
| 65.00        |             | 40.76                     | 325.66                  | 0.00                     | 0.00                    |
| 66.00        |             | 40.78                     | 324.67                  | 0.00                     | 0.00                    |
| 68.00        |             | 81.71                     | 646.18                  | 0.00                     | 0.00                    |
| 70.00        |             | 81.73                     | 642.19                  | 0.00                     | 0.00                    |
| 72.00        |             | 81.72                     | 638.18                  | 0.00                     | 0.00                    |

## Total Applied Force Summary

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|        |                  |         |          |      |
|--------|------------------|---------|----------|------|
| 72.25  | 10.19            | 79.53   | 0.00     | 0.00 |
| 74.00  | 71.46            | 554.70  | 0.00     | 0.00 |
| 76.00  | 81.66            | 630.10  | 0.00     | 0.00 |
| 76.83  | 33.82            | 260.40  | 0.00     | 0.00 |
| 78.00  | 47.67            | 365.83  | 0.00     | 0.00 |
| 80.00  | 77.00            | 615.59  | 0.00     | 0.00 |
| 81.00  | 34.60            | 301.07  | 0.00     | 0.00 |
| 82.00  | 34.56            | 300.03  | 0.00     | 0.00 |
| 84.00  | 69.08            | 596.68  | 0.00     | 0.00 |
| 86.00  | 68.88            | 592.49  | 0.00     | 0.00 |
| 87.50  | 51.50            | 441.70  | 0.00     | 0.00 |
| 88.00  | 17.38            | 224.84  | 0.00     | 0.00 |
| 90.00  | 69.50            | 894.67  | 0.00     | 0.00 |
| 90.50  | 18.88            | 224.83  | 0.00     | 0.00 |
| 91.92  | 58.08            | 642.12  | 0.00     | 0.00 |
| 92.00  | 3.26             | 36.09   | 0.00     | 0.00 |
| 92.25  | 10.20            | 112.69  | 0.00     | 0.00 |
| 94.00  | 71.48            | 473.76  | 0.00     | 0.00 |
| 96.00  | 81.56            | 537.94  | 0.00     | 0.00 |
| 98.00  | 81.38            | 534.25  | 0.00     | 0.00 |
| 100.00 | 81.19            | 530.56  | 0.00     | 0.00 |
| 101.00 | 40.47            | 264.02  | 0.00     | 0.00 |
| 102.00 | 40.42            | 263.09  | 0.00     | 0.00 |
| 104.00 | 80.78            | 523.13  | 0.00     | 0.00 |
| 105.50 | 60.41            | 389.99  | 0.00     | 0.00 |
| 105.58 | 3.21             | 20.76   | 0.00     | 0.00 |
| 106.00 | 16.87            | 108.85  | 0.00     | 0.00 |
| 108.00 | 80.33            | 515.65  | 0.00     | 0.00 |
| 110.00 | 80.09            | 511.90  | 0.00     | 0.00 |
| 112.00 | 79.84            | 508.13  | 0.00     | 0.00 |
| 114.00 | 79.58            | 504.35  | 0.00     | 0.00 |
| 116.00 | 79.31            | 500.57  | 0.00     | 0.00 |
| 118.00 | 79.04            | 496.77  | 0.00     | 0.00 |
| 120.00 | 78.76            | 492.97  | 0.00     | 0.00 |
| 122.00 | 73.35            | 482.44  | 0.00     | 0.00 |
| 124.00 | 64.46            | 467.40  | 0.00     | 0.00 |
| 126.00 | 64.09            | 463.53  | 0.00     | 0.00 |
| 128.00 | 63.71            | 459.65  | 0.00     | 0.00 |
| 130.00 | 63.33            | 455.76  | 0.00     | 0.00 |
| 132.00 | 62.94            | 451.87  | 0.00     | 0.00 |
| 132.50 | 15.66            | 112.47  | 0.00     | 0.00 |
| 134.00 | 47.45            | 469.90  | 0.00     | 0.00 |
| 136.00 | 62.95            | 621.31  | 0.00     | 0.00 |
| 136.50 | 15.65            | 154.54  | 0.00     | 0.00 |
| 138.00 | 46.85            | 278.87  | 0.00     | 0.00 |
| 140.00 | 62.13            | 368.94  | 0.00     | 0.00 |
| 142.00 | 61.72            | 365.82  | 0.00     | 0.00 |
| 144.00 | 61.30            | 362.70  | 0.00     | 0.00 |
| 146.00 | 60.87            | 359.56  | 0.00     | 0.00 |
| 148.00 | 60.44            | 356.42  | 0.00     | 0.00 |
| 150.00 | 60.00            | 353.28  | 0.00     | 0.00 |
| 152.00 | 59.55            | 350.13  | 0.00     | 0.00 |
| 154.00 | 59.11            | 346.97  | 0.00     | 0.00 |
| 156.00 | 58.65            | 343.81  | 0.00     | 0.00 |
| 158.00 | (34) attachments | 1810.78 | 10792.99 | 0.00 |
| 160.00 |                  | 57.73   | 319.94   | 0.00 |
| 162.00 |                  | 57.26   | 316.76   | 0.00 |

## Total Applied Force Summary

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|                |                  |                  |                  |             |
|----------------|------------------|------------------|------------------|-------------|
| 164.00         | 56.79            | 313.58           | 0.00             | 0.00        |
| 166.00         | 56.31            | 310.38           | 0.00             | 0.00        |
| 168.00         | (22) attachments | 568.18           | 3217.76          | 0.00        |
| 168.50         | (1) attachments  | 388.11           | 2591.03          | 0.00        |
| 170.00         |                  | 41.45            | 223.82           | 0.00        |
| 172.00         |                  | 54.85            | 295.45           | 0.00        |
| 174.00         |                  | 54.35            | 292.24           | 0.00        |
| 176.00         |                  | 53.85            | 289.03           | 0.00        |
| 177.00         | (11) attachments | 1001.94          | 5284.26          | 0.00        |
| 178.00         |                  | 26.59            | 140.28           | 0.00        |
| 180.00         |                  | 53.16            | 261.08           | 0.00        |
| 182.00         |                  | 53.29            | 261.21           | 0.00        |
| 184.00         | (1) attachments  | 631.95           | 3724.53          | 0.00        |
| 186.00         |                  | 53.55            | 261.48           | 0.00        |
| 187.00         | (32) attachments | 852.87           | 5890.28          | 0.00        |
| 188.00         |                  | 26.84            | 115.49           | 0.00        |
| <b>Totals:</b> |                  | <b>11,572.08</b> | <b>84,496.76</b> | <b>0.00</b> |

## Linear Appurtenance Segment Forces (Factored)

**Structure:** CT46124-A-SBA  
**Site Name:** Enfield-Moody Rd  
**Height:** 188.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 1.1

**Topography:** 1

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

6/14/2023

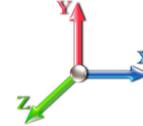
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**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

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

**Iterations** 31



| Top Elev (ft) | Description       | Wind Exposed | Length (ft) | Ca    | Exposed Width (in) | Area (sqft) | CaAa (sqft) | Ra    | Cf Adjust Factor | qz (psf) | F X (lb) | Dead Load (lb) |
|---------------|-------------------|--------------|-------------|-------|--------------------|-------------|-------------|-------|------------------|----------|----------|----------------|
| 1.00          | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.28        | 0.56        | 0.000 | 0.000            | 5.135    | 3.17     | 4.84           |
| 2.00          | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.29        | 0.59        | 0.000 | 0.000            | 5.135    | 3.31     | 5.27           |
| 4.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.61        | 1.23        | 0.000 | 0.000            | 5.135    | 6.93     | 11.47          |
| 6.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.63        | 1.26        | 0.000 | 0.000            | 5.135    | 7.12     | 12.07          |
| 8.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.64        | 1.28        | 0.000 | 0.000            | 5.135    | 7.26     | 12.52          |
| 10.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.65        | 1.30        | 0.000 | 0.000            | 5.135    | 7.37     | 12.88          |
| 12.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.66        | 1.32        | 0.000 | 0.000            | 5.135    | 7.46     | 13.18          |
| 14.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.67        | 1.33        | 0.000 | 0.000            | 5.135    | 7.54     | 13.44          |
| 16.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.67        | 1.35        | 0.000 | 0.000            | 5.198    | 7.70     | 13.68          |
| 18.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.68        | 1.36        | 0.000 | 0.000            | 5.329    | 7.96     | 13.89          |
| 20.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.68        | 1.37        | 0.000 | 0.000            | 5.448    | 8.20     | 14.08          |
| 21.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.34        | 0.69        | 0.000 | 0.000            | 5.505    | 4.16     | 7.08           |
| 22.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.34        | 0.69        | 0.000 | 0.000            | 5.559    | 4.21     | 7.13           |
| 24.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.69        | 1.39        | 0.000 | 0.000            | 5.662    | 8.63     | 14.42          |
| 26.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.70        | 1.39        | 0.000 | 0.000            | 5.758    | 8.82     | 14.57          |
| 27.75         | 1.25" Reinforcing | Yes          | 1.75        | 2.000 | 1.25               | 0.61        | 1.22        | 0.000 | 0.000            | 5.837    | 7.86     | 12.86          |
| 28.00         | 1.25" Reinforcing | Yes          | 0.25        | 2.000 | 1.25               | 0.09        | 0.18        | 0.000 | 0.000            | 5.848    | 1.13     | 1.84           |
| 30.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.70        | 1.41        | 0.000 | 0.000            | 5.934    | 9.19     | 14.84          |
| 32.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.71        | 1.41        | 0.000 | 0.000            | 6.015    | 9.35     | 14.97          |
| 34.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.71        | 1.42        | 0.000 | 0.000            | 6.092    | 9.51     | 15.09          |
| 36.00         | 1.25" Reinforcing | Yes          | 1.50        | 2.000 | 1.25               | 0.53        | 1.07        | 0.000 | 0.000            | 6.166    | 7.25     | 11.40          |
| 47.75         | 1.25" Reinforcing | Yes          | 1.25        | 2.000 | 1.25               | 0.45        | 0.91        | 0.000 | 0.000            | 6.544    | 6.54     | 9.86           |
| 48.00         | 1.25" Reinforcing | Yes          | 0.25        | 2.000 | 1.25               | 0.09        | 0.18        | 0.000 | 0.000            | 6.551    | 1.31     | 1.97           |
| 48.92         | 1.25" Reinforcing | Yes          | 0.92        | 2.000 | 1.25               | 0.34        | 0.67        | 0.000 | 0.000            | 6.577    | 4.85     | 7.28           |
| 49.00         | 1.25" Reinforcing | Yes          | 0.08        | 2.000 | 1.25               | 0.03        | 0.06        | 0.000 | 0.000            | 6.580    | 0.42     | 0.63           |
| 50.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.36        | 0.73        | 0.000 | 0.000            | 6.608    | 5.30     | 7.94           |
| 52.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.73        | 1.46        | 0.000 | 0.000            | 6.663    | 10.72    | 15.96          |
| 54.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.73        | 1.47        | 0.000 | 0.000            | 6.716    | 10.84    | 16.04          |
| 56.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.74        | 1.47        | 0.000 | 0.000            | 6.767    | 10.95    | 16.12          |
| 58.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.74        | 1.47        | 0.000 | 0.000            | 6.817    | 11.06    | 16.19          |
| 60.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.74        | 1.48        | 0.000 | 0.000            | 6.866    | 11.17    | 16.27          |
| 61.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.37        | 0.74        | 0.000 | 0.000            | 6.890    | 5.61     | 8.15           |
| 62.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.37        | 0.74        | 0.000 | 0.000            | 6.914    | 5.63     | 8.17           |
| 64.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.74        | 1.49        | 0.000 | 0.000            | 6.960    | 11.37    | 16.41          |
| 65.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.37        | 0.74        | 0.000 | 0.000            | 6.983    | 5.71     | 8.22           |
| 66.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.37        | 0.74        | 0.000 | 0.000            | 7.005    | 5.73     | 8.24           |
| 68.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.75        | 1.49        | 0.000 | 0.000            | 7.050    | 11.57    | 16.54          |
| 70.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.75        | 1.49        | 0.000 | 0.000            | 7.093    | 11.66    | 16.61          |
| 72.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.75        | 1.50        | 0.000 | 0.000            | 7.135    | 11.76    | 16.67          |
| 72.25         | 1.25" Reinforcing | Yes          | 0.25        | 2.000 | 1.25               | 0.09        | 0.19        | 0.000 | 0.000            | 7.140    | 1.47     | 2.08           |
| 74.00         | 1.25" Reinforcing | Yes          | 1.75        | 2.000 | 1.25               | 0.66        | 1.31        | 0.000 | 0.000            | 7.176    | 10.37    | 14.64          |
| 76.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.75        | 1.50        | 0.000 | 0.000            | 7.217    | 11.94    | 16.79          |
| 76.83         | 1.25" Reinforcing | Yes          | 0.83        | 2.000 | 1.25               | 0.31        | 0.62        | 0.000 | 0.000            | 7.233    | 4.97     | 6.98           |
| 78.00         | 1.25" Reinforcing | Yes          | 1.17        | 2.000 | 1.25               | 0.44        | 0.88        | 0.000 | 0.000            | 7.256    | 7.03     | 9.86           |
| 80.00         | 1.25" Reinforcing | Yes          | 1.25        | 2.000 | 1.25               | 0.47        | 0.94        | 0.000 | 0.000            | 7.295    | 7.57     | 10.57          |
| 90.50         | 1.25" Reinforcing | Yes          | 0.25        | 2.000 | 1.25               | 0.10        | 0.19        | 0.000 | 0.000            | 7.487    | 1.57     | 2.15           |
| 91.92         | 1.25" Reinforcing | Yes          | 1.42        | 2.000 | 1.25               | 0.54        | 1.08        | 0.000 | 0.000            | 7.511    | 8.94     | 12.23          |

## Linear Appurtenance Segment Forces (Factored)

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |
|                                    |                                   | <b>Page:</b> 43         |

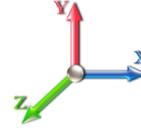


**Load Case:** 1.2D + 1.0Di + 1.0Wi 50 mph Wind

**Iterations** 31

**Dead Load Factor** 1.20

**Wind Load Factor** 1.00



| Top Elev (ft)  | Description       | Wind Exposed | Length (ft) | Ca    | Exposed Width (in) | Area (sqft) | CaAa (sqft) | Ra    | Cf Adjust Factor | qz (psf)     | F X (lb)     | Dead Load (lb) |
|----------------|-------------------|--------------|-------------|-------|--------------------|-------------|-------------|-------|------------------|--------------|--------------|----------------|
| 92.00          | 1.25" Reinforcing | Yes          | 0.08        | 2.000 | 1.25               | 0.03        | 0.06        | 0.000 | 0.000            | 7.513        | 0.50         | 0.69           |
| 92.25          | 1.25" Reinforcing | Yes          | 0.25        | 2.000 | 1.25               | 0.10        | 0.19        | 0.000 | 0.000            | 7.517        | 1.58         | 2.15           |
| 94.00          | 1.25" Reinforcing | Yes          | 1.75        | 2.000 | 1.25               | 0.67        | 1.34        | 0.000 | 0.000            | 7.547        | 11.09        | 15.12          |
| 96.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.76        | 1.53        | 0.000 | 0.000            | 7.580        | 12.75        | 17.33          |
| 98.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.77        | 1.53        | 0.000 | 0.000            | 7.613        | 12.83        | 17.37          |
| 100.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.77        | 1.53        | 0.000 | 0.000            | 7.646        | 12.90        | 17.42          |
| 101.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.38        | 0.77        | 0.000 | 0.000            | 7.662        | 6.47         | 8.72           |
| 102.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.38        | 0.77        | 0.000 | 0.000            | 7.678        | 6.49         | 8.73           |
| 104.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.77        | 1.54        | 0.000 | 0.000            | 7.709        | 13.05        | 17.51          |
| 105.50         | 1.25" Reinforcing | Yes          | 1.50        | 2.000 | 1.25               | 0.58        | 1.15        | 0.000 | 0.000            | 7.733        | 9.82         | 13.16          |
| 105.58         | 1.25" Reinforcing | Yes          | 0.08        | 2.000 | 1.25               | 0.03        | 0.06        | 0.000 | 0.000            | 7.734        | 0.52         | 0.70           |
| 106.00         | 1.25" Reinforcing | Yes          | 0.42        | 2.000 | 1.25               | 0.16        | 0.32        | 0.000 | 0.000            | 7.740        | 2.75         | 3.69           |
| 108.00         | 1.25" Reinforcing | Yes          | 0.75        | 2.000 | 1.25               | 0.29        | 0.58        | 0.000 | 0.000            | 7.771        | 4.94         | 6.60           |
| 108.00         | 1.25" Reinforcing | Yes          | 1.25        | 2.000 | 1.25               | 0.48        | 0.96        | 0.000 | 0.000            | 7.771        | 8.24         | 11.00          |
| 110.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.77        | 1.54        | 0.000 | 0.000            | 7.801        | 13.25        | 17.65          |
| 112.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.77        | 1.55        | 0.000 | 0.000            | 7.831        | 13.32        | 17.69          |
| 114.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.77        | 1.55        | 0.000 | 0.000            | 7.860        | 13.39        | 17.73          |
| 116.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.78        | 1.55        | 0.000 | 0.000            | 7.889        | 13.46        | 17.77          |
| 118.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.78        | 1.55        | 0.000 | 0.000            | 7.917        | 13.52        | 17.81          |
| 120.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.78        | 1.55        | 0.000 | 0.000            | 7.945        | 13.59        | 17.86          |
| 122.00         | 1.25" Reinforcing | Yes          | 1.25        | 2.000 | 1.25               | 0.49        | 0.97        | 0.000 | 0.000            | 7.973        | 8.53         | 11.18          |
| <b>Totals:</b> |                   |              |             |       |                    |             |             |       |                  | <b>533.2</b> | <b>782.0</b> |                |





## Calculated Forces

|                                    |                                   |                 |
|------------------------------------|-----------------------------------|-----------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023       |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                 |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                 |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                 |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Page:</b> 46 |
|                                    | <b>Struct Class:</b> II           |                 |



|        |        |       |      |        |      |       |         |        |        |        |       |        |       |       |
|--------|--------|-------|------|--------|------|-------|---------|--------|--------|--------|-------|--------|-------|-------|
| 166.00 | -22.64 | -4.95 | 0.00 | -61.36 | 0.00 | 61.36 | 1263.27 | 314.12 | 671.70 | 669.50 | 42.89 | -2.725 | 0.000 | 0.110 |
| 168.00 | -19.45 | -4.23 | 0.00 | -51.47 | 0.00 | 51.47 | 1252.00 | 310.07 | 654.51 | 654.91 | 44.04 | -2.746 | 0.000 | 0.094 |
| 168.50 | -16.88 | -3.72 | 0.00 | -49.35 | 0.00 | 49.35 | 1249.16 | 309.06 | 650.24 | 651.27 | 44.33 | -2.751 | 0.000 | 0.089 |
| 170.00 | -16.66 | -3.67 | 0.00 | -43.77 | 0.00 | 43.77 | 1240.60 | 306.02 | 637.53 | 640.40 | 45.19 | -2.765 | 0.000 | 0.082 |
| 172.00 | -16.36 | -3.61 | 0.00 | -36.42 | 0.00 | 36.42 | 1229.07 | 301.97 | 620.78 | 625.99 | 46.35 | -2.782 | 0.000 | 0.072 |
| 174.00 | -16.07 | -3.54 | 0.00 | -29.21 | 0.00 | 29.21 | 1217.40 | 297.93 | 604.26 | 611.66 | 47.52 | -2.796 | 0.000 | 0.061 |
| 176.00 | -15.79 | -3.48 | 0.00 | -22.12 | 0.00 | 22.12 | 1205.61 | 293.88 | 587.95 | 597.44 | 48.70 | -2.807 | 0.000 | 0.050 |
| 177.00 | -10.56 | -2.22 | 0.00 | -18.64 | 0.00 | 18.64 | 1199.66 | 291.86 | 579.88 | 590.36 | 49.28 | -2.812 | 0.000 | 0.040 |
| 178.00 | -10.42 | -2.19 | 0.00 | -16.42 | 0.00 | 16.42 | 1193.69 | 289.83 | 571.87 | 583.31 | 49.87 | -2.816 | 0.000 | 0.037 |
| 178.00 | -10.42 | -2.19 | 0.00 | -16.42 | 0.00 | 16.42 | 975.84  | 248.70 | 491.35 | 478.11 | 49.87 | -2.816 | 0.000 | 0.045 |
| 180.00 | -10.16 | -2.12 | 0.00 | -12.05 | 0.00 | 12.05 | 975.84  | 248.70 | 491.35 | 478.11 | 51.05 | -2.823 | 0.000 | 0.036 |
| 182.00 | -9.90  | -2.06 | 0.00 | -7.80  | 0.00 | 7.80  | 975.84  | 248.70 | 491.35 | 478.11 | 52.24 | -2.828 | 0.000 | 0.027 |
| 184.00 | -6.21  | -1.24 | 0.00 | -3.69  | 0.00 | 3.69  | 975.84  | 248.70 | 491.35 | 478.11 | 53.42 | -2.832 | 0.000 | 0.014 |
| 186.00 | -5.95  | -1.18 | 0.00 | -1.21  | 0.00 | 1.21  | 975.84  | 248.70 | 491.35 | 478.11 | 54.61 | -2.833 | 0.000 | 0.009 |
| 187.00 | -0.11  | -0.03 | 0.00 | -0.03  | 0.00 | 0.03  | 975.84  | 248.70 | 491.35 | 478.11 | 55.20 | -2.833 | 0.000 | 0.000 |
| 188.00 | 0.00   | -0.03 | 0.00 | 0.00   | 0.00 | 0.00  | 975.84  | 248.70 | 491.35 | 478.11 | 55.79 | -2.833 | 0.000 | 0.000 |

## Seismic Segment Forces (Factored)

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |

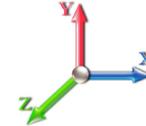


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**Load Case:** 1.2D + 1.0Ev + 1.0Eh

**Iterations** 26

|                                  |                                       |                |
|----------------------------------|---------------------------------------|----------------|
| <b>Gust Response Factor</b> 1.10 | <b>Sds</b> 0.18                       | <b>Ss</b> 0.17 |
| <b>Dead Load Factor</b> 1.20     | <b>Seismic Load Factor</b> 1.00       | <b>S1</b> 0.06 |
| <b>Wind Load Factor</b> 0.00     | <b>Structure Frequency (f1)</b> 0.22  | <b>SA</b> 0.02 |
|                                  | <b>Seismic Importance Factor</b> 1.00 |                |



| Top Elev (ft) | Description     | Wz (lb) | Hz (lb) | Vertical Ev (lb) | Lateral Fs (lb) | R: 1.50 |
|---------------|-----------------|---------|---------|------------------|-----------------|---------|
| 0.00          | RB1             | 0.00    | 0.00    | 0.00             | 0.00            |         |
| 1.00          | RT1 RB2 RB3 RB4 | 271.14  | 0.50    | 9.95             | 0.00            |         |
| 2.00          |                 | 270.36  | 1.50    | 9.92             | 0.00            |         |
| 4.00          |                 | 538.36  | 3.00    | 19.75            | 0.00            |         |
| 6.00          |                 | 535.22  | 5.00    | 19.64            | 0.00            |         |
| 8.00          |                 | 532.08  | 7.00    | 19.52            | 0.01            |         |
| 10.00         |                 | 528.94  | 9.00    | 19.41            | 0.01            |         |
| 12.00         |                 | 525.81  | 11.00   | 19.29            | 0.02            |         |
| 14.00         |                 | 522.67  | 13.00   | 19.18            | 0.02            |         |
| 16.00         |                 | 519.53  | 15.00   | 19.06            | 0.03            |         |
| 18.00         | RT4             | 516.39  | 17.00   | 18.95            | 0.04            |         |
| 20.00         |                 | 513.26  | 19.00   | 18.83            | 0.05            |         |
| 21.00         | RT2 RT3 RB5 RB6 | 255.45  | 20.50   | 9.37             | 0.01            |         |
| 22.00         |                 | 254.67  | 21.50   | 9.34             | 0.01            |         |
| 24.00         |                 | 506.98  | 23.00   | 18.60            | 0.07            |         |
| 26.00         |                 | 503.84  | 25.00   | 18.49            | 0.08            |         |
| 27.75         | RT5             | 438.29  | 26.88   | 16.08            | 0.07            |         |
| 28.00         |                 | 62.42   | 27.88   | 2.29             | 0.00            |         |
| 30.00         |                 | 497.57  | 29.00   | 18.26            | 0.10            |         |
| 32.00         |                 | 494.43  | 31.00   | 18.14            | 0.12            |         |
| 34.00         |                 | 491.29  | 33.00   | 18.03            | 0.13            |         |
| 36.00         |                 | 488.15  | 35.00   | 17.91            | 0.14            |         |
| 38.00         |                 | 485.01  | 37.00   | 17.80            | 0.16            |         |
| 40.00         |                 | 481.88  | 39.00   | 17.68            | 0.17            |         |
| 41.00         | RT6 RB7         | 239.76  | 40.50   | 8.80             | 0.05            |         |
| 42.00         |                 | 238.98  | 41.50   | 8.77             | 0.05            |         |
| 43.25         | Bot - Section 2 | 297.62  | 42.63   | 10.92            | 0.08            |         |
| 44.00         |                 | 314.28  | 43.63   | 11.53            | 0.09            |         |
| 46.00         |                 | 834.08  | 45.00   | 30.61            | 0.69            |         |
| 47.75         | RB8             | 725.04  | 46.88   | 26.60            | 0.57            |         |
| 48.00         |                 | 103.21  | 47.88   | 3.79             | 0.01            |         |
| 48.92         | RB9             | 379.04  | 48.46   | 13.91            | 0.17            |         |
| 49.00         | Top - Section 1 | 32.90   | 48.96   | 1.21             | 0.00            |         |
| 50.00         |                 | 206.91  | 49.50   | 7.59             | 0.05            |         |
| 52.00         |                 | 411.80  | 51.00   | 15.11            | 0.22            |         |
| 54.00         |                 | 409.11  | 53.00   | 15.01            | 0.23            |         |
| 56.00         |                 | 406.42  | 55.00   | 14.91            | 0.25            |         |
| 58.00         |                 | 403.73  | 57.00   | 14.81            | 0.26            |         |
| 60.00         |                 | 401.04  | 59.00   | 14.72            | 0.27            |         |
| 61.00         | RT7 RB10        | 199.51  | 60.50   | 7.32             | 0.07            |         |
| 62.00         |                 | 198.84  | 61.50   | 7.30             | 0.07            |         |
| 64.00         |                 | 395.66  | 63.00   | 14.52            | 0.31            |         |
| 65.00         | RT8 RB11        | 196.82  | 64.50   | 7.22             | 0.08            |         |
| 66.00         |                 | 196.15  | 65.50   | 7.20             | 0.08            |         |
| 68.00         |                 | 390.29  | 67.00   | 14.32            | 0.34            |         |
| 70.00         |                 | 387.60  | 69.00   | 14.22            | 0.35            |         |

## Seismic Segment Forces (Factored)

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|        |                 |        |        |        |        |
|--------|-----------------|--------|--------|--------|--------|
| 72.00  |                 | 384.91 | 71.00  | 14.12  | 0.37   |
| 72.25  | RT11            | 47.92  | 72.13  | 1.76   | 0.01   |
| 74.00  |                 | 334.29 | 73.13  | 12.27  | 0.29   |
| 76.00  |                 | 379.53 | 75.00  | 13.93  | 0.40   |
| 76.83  | RT9             | 156.71 | 76.41  | 5.75   | 0.07   |
| 78.00  |                 | 220.12 | 77.41  | 8.08   | 0.14   |
| 80.00  |                 | 374.15 | 79.00  | 13.73  | 0.43   |
| 81.00  | RT10 RB12       | 186.07 | 80.50  | 6.83   | 0.11   |
| 82.00  |                 | 185.39 | 81.50  | 6.80   | 0.11   |
| 84.00  |                 | 368.77 | 83.00  | 13.53  | 0.46   |
| 86.00  |                 | 366.08 | 85.00  | 13.43  | 0.48   |
| 87.50  | Bot - Section 3 | 272.79 | 86.75  | 10.01  | 0.27   |
| 88.00  |                 | 155.11 | 87.75  | 5.69   | 0.09   |
| 90.00  |                 | 617.38 | 89.00  | 22.65  | 1.48   |
| 90.50  | RB13            | 153.57 | 90.25  | 5.64   | 0.09   |
| 91.92  | RB14            | 434.47 | 91.21  | 15.94  | 0.77   |
| 92.00  |                 | 24.40  | 91.96  | 0.90   | 0.00   |
| 92.25  | Top - Section 2 | 76.21  | 92.13  | 2.80   | 0.02   |
| 94.00  |                 | 271.52 | 93.13  | 9.96   | 0.31   |
| 96.00  |                 | 308.21 | 95.00  | 11.31  | 0.42   |
| 98.00  |                 | 305.97 | 97.00  | 11.23  | 0.43   |
| 100.00 |                 | 303.73 | 99.00  | 11.14  | 0.44   |
| 101.00 | RT12 RB15       | 151.02 | 100.50 | 5.54   | 0.11   |
| 102.00 |                 | 150.46 | 101.50 | 5.52   | 0.11   |
| 104.00 |                 | 299.24 | 103.00 | 10.98  | 0.47   |
| 105.50 | RT13            | 222.96 | 104.75 | 8.18   | 0.27   |
| 105.58 | RT14            | 11.86  | 105.54 | 0.44   | 0.00   |
| 106.00 |                 | 62.18  | 105.79 | 2.28   | 0.02   |
| 108.00 |                 | 294.76 | 107.00 | 10.82  | 0.49   |
| 110.00 |                 | 292.52 | 109.00 | 10.73  | 0.50   |
| 112.00 |                 | 290.28 | 111.00 | 10.65  | 0.51   |
| 114.00 |                 | 288.04 | 113.00 | 10.57  | 0.52   |
| 116.00 |                 | 285.80 | 115.00 | 10.49  | 0.53   |
| 118.00 | RT15            | 283.55 | 117.00 | 10.40  | 0.54   |
| 120.00 |                 | 281.31 | 119.00 | 10.32  | 0.55   |
| 122.00 |                 | 279.07 | 121.00 | 10.24  | 0.56   |
| 124.00 |                 | 276.83 | 123.00 | 10.16  | 0.57   |
| 126.00 |                 | 274.59 | 125.00 | 10.08  | 0.58   |
| 128.00 |                 | 272.35 | 127.00 | 9.99   | 0.59   |
| 130.00 |                 | 270.11 | 129.00 | 9.91   | 0.60   |
| 132.00 |                 | 267.86 | 131.00 | 9.83   | 0.60   |
| 132.50 | Bot - Section 4 | 66.62  | 132.25 | 2.44   | 0.04   |
| 134.00 |                 | 309.64 | 133.25 | 11.36  | 0.84   |
| 136.00 |                 | 409.51 | 135.00 | 15.03  | 1.50   |
| 136.50 | Top - Section 3 | 101.78 | 136.25 | 3.73   | 0.09   |
| 138.00 |                 | 151.97 | 137.25 | 5.58   | 0.21   |
| 140.00 |                 | 201.25 | 139.00 | 7.38   | 0.38   |
| 142.00 |                 | 199.68 | 141.00 | 7.33   | 0.39   |
| 144.00 |                 | 198.11 | 143.00 | 7.27   | 0.39   |
| 146.00 |                 | 196.54 | 145.00 | 7.21   | 0.40   |
| 148.00 |                 | 194.97 | 147.00 | 7.15   | 0.40   |
| 150.00 |                 | 193.40 | 149.00 | 7.10   | 0.41   |
| 152.00 |                 | 191.83 | 151.00 | 7.04   | 0.41   |
| 154.00 |                 | 190.26 | 153.00 | 6.98   | 0.42   |
| 156.00 |                 | 188.69 | 155.00 | 6.92   | 0.42   |
| 158.00 | Appurtenance(s) | 4167.6 | 157.00 | 152.93 | 210.20 |
| 160.00 |                 | 168.04 | 159.00 | 6.17   | 0.35   |

## Seismic Segment Forces (Factored)

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|                |                 |                 |        |                    |                 |
|----------------|-----------------|-----------------|--------|--------------------|-----------------|
| 162.00         |                 | 166.47          | 161.00 | 6.11               | 0.35            |
| 164.00         |                 | 164.90          | 163.00 | 6.05               | 0.35            |
| 166.00         |                 | 163.33          | 165.00 | 5.99               | 0.36            |
| 168.00         | Appurtenance(s) | 1175.7          | 167.00 | 43.14              | 18.93           |
| 168.50         | Appurtenance(s) | 1438.8          | 168.25 | 52.80              | 28.77           |
| 170.00         |                 | 116.00          | 169.25 | 4.26               | 0.19            |
| 172.00         |                 | 153.29          | 171.00 | 5.62               | 0.34            |
| 174.00         |                 | 151.72          | 173.00 | 5.57               | 0.34            |
| 176.00         |                 | 150.15          | 175.00 | 5.51               | 0.34            |
| 177.00         | Appurtenance(s) | 2433.5          | 176.50 | 89.30              | 90.58           |
| 178.00         | Top - Section 4 | 71.71           | 177.50 | 2.63               | 0.08            |
| 180.00         |                 | 127.07          | 179.00 | 4.66               | 0.25            |
| 182.00         |                 | 127.07          | 181.00 | 4.66               | 0.26            |
| 184.00         | Appurtenance(s) | 1727.0          | 183.00 | 63.37              | 49.04           |
| 186.00         |                 | 127.07          | 185.00 | 4.66               | 0.27            |
| 187.00         | Appurtenance(s) | 2335.4          | 186.50 | 85.70              | 93.14           |
| 188.00         |                 | 48.22           | 187.50 | 1.77               | 0.04            |
| <b>Totals:</b> |                 | <b>45,892.3</b> |        | <b>1,683.9</b>     | <b>521.4</b>    |
|                |                 |                 |        | <b>Total Wind:</b> | <b>35,760.0</b> |





## Calculated Forces

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|        |        |       |      |       |      |      |         |        |        |        |      |       |       |
|--------|--------|-------|------|-------|------|------|---------|--------|--------|--------|------|-------|-------|
| 164.00 | -12.72 | -0.32 | 0.00 | -5.09 | 0.00 | 5.09 | 1274.41 | 318.16 | 689.12 | 684.18 | 2.63 | -0.18 | 0.017 |
| 166.00 | -12.52 | -0.32 | 0.00 | -4.45 | 0.00 | 4.45 | 1263.27 | 314.12 | 671.70 | 669.50 | 2.70 | -0.18 | 0.017 |
| 168.00 | -11.08 | -0.30 | 0.00 | -3.81 | 0.00 | 3.81 | 1252.00 | 310.07 | 654.51 | 654.91 | 2.78 | -0.18 | 0.015 |
| 168.50 | -9.30  | -0.26 | 0.00 | -3.66 | 0.00 | 3.66 | 1249.16 | 309.06 | 650.24 | 651.27 | 2.80 | -0.18 | 0.013 |
| 170.00 | -9.16  | -0.26 | 0.00 | -3.26 | 0.00 | 3.26 | 1240.60 | 306.02 | 637.53 | 640.40 | 2.86 | -0.18 | 0.012 |
| 172.00 | -8.98  | -0.26 | 0.00 | -2.74 | 0.00 | 2.74 | 1229.07 | 301.97 | 620.78 | 625.99 | 2.93 | -0.18 | 0.012 |
| 174.00 | -8.80  | -0.26 | 0.00 | -2.21 | 0.00 | 2.21 | 1217.40 | 297.93 | 604.26 | 611.66 | 3.01 | -0.18 | 0.011 |
| 176.00 | -8.62  | -0.26 | 0.00 | -1.69 | 0.00 | 1.69 | 1205.61 | 293.88 | 587.95 | 597.44 | 3.09 | -0.19 | 0.010 |
| 177.00 | -5.61  | -0.16 | 0.00 | -1.43 | 0.00 | 1.43 | 1199.66 | 291.86 | 579.88 | 590.36 | 3.13 | -0.19 | 0.007 |
| 178.00 | -5.53  | -0.16 | 0.00 | -1.27 | 0.00 | 1.27 | 1193.69 | 289.83 | 571.87 | 583.31 | 3.16 | -0.19 | 0.007 |
| 178.00 | -5.53  | -0.16 | 0.00 | -1.27 | 0.00 | 1.27 | 975.84  | 248.70 | 491.35 | 478.11 | 3.16 | -0.19 | 0.008 |
| 180.00 | -5.38  | -0.16 | 0.00 | -0.95 | 0.00 | 0.95 | 975.84  | 248.70 | 491.35 | 478.11 | 3.24 | -0.19 | 0.007 |
| 182.00 | -5.23  | -0.16 | 0.00 | -0.63 | 0.00 | 0.63 | 975.84  | 248.70 | 491.35 | 478.11 | 3.32 | -0.19 | 0.007 |
| 184.00 | -3.10  | -0.10 | 0.00 | -0.31 | 0.00 | 0.31 | 975.84  | 248.70 | 491.35 | 478.11 | 3.40 | -0.19 | 0.004 |
| 186.00 | -2.94  | -0.10 | 0.00 | -0.10 | 0.00 | 0.10 | 975.84  | 248.70 | 491.35 | 478.11 | 3.48 | -0.19 | 0.003 |
| 187.00 | -0.06  | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | 975.84  | 248.70 | 491.35 | 478.11 | 3.52 | -0.19 | 0.000 |
| 188.00 | 0.00   | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | 975.84  | 248.70 | 491.35 | 478.11 | 3.56 | -0.19 | 0.000 |

## Seismic Segment Forces (Factored)

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|  |      |                                 |      |            |      |                                  |                      |
|--|------|---------------------------------|------|------------|------|----------------------------------|----------------------|
| <b>Load Case:</b> 0.9D + 1.0Ev + 1.0Eh |      |                                 |      |            |      |                                  | <b>Iterations</b> 26 |
| <b>Gust Response Factor</b>            | 1.10 |                                 |      | <b>Sds</b> | 0.18 |                                  | <b>Ss</b> 0.17       |
| <b>Dead Load Factor</b>                | 0.90 | <b>Seismic Load Factor</b>      | 1.00 | <b>Sd1</b> | 0.09 |                                  | <b>S1</b> 0.06       |
| <b>Wind Load Factor</b>                | 0.00 | <b>Structure Frequency (f1)</b> | 0.22 | <b>SA</b>  | 0.02 | <b>Seismic Importance Factor</b> | 1.00                 |

| Top Elev (ft) | Description     | Wz (lb) | Hz (lb) | Vertical Ev (lb) | Lateral Fs (lb) |                |
|---------------|-----------------|---------|---------|------------------|-----------------|----------------|
|               |                 |         |         |                  |                 | <b>R: 1.50</b> |
| 0.00          | RB1             | 0.00    | 0.00    | 0.00             | 0.00            |                |
| 1.00          | RT1 RB2 RB3 RB4 | 263.86  | 0.50    | 9.68             | 0.00            |                |
| 2.00          |                 | 263.07  | 1.50    | 9.65             | 0.00            |                |
| 4.00          |                 | 523.79  | 3.00    | 19.22            | 0.00            |                |
| 6.00          |                 | 520.66  | 5.00    | 19.10            | 0.00            |                |
| 8.00          |                 | 517.52  | 7.00    | 18.99            | 0.01            |                |
| 10.00         |                 | 514.38  | 9.00    | 18.87            | 0.01            |                |
| 12.00         |                 | 511.24  | 11.00   | 18.76            | 0.02            |                |
| 14.00         |                 | 508.10  | 13.00   | 18.64            | 0.02            |                |
| 16.00         |                 | 504.97  | 15.00   | 18.53            | 0.03            |                |
| 18.00         | RT4             | 501.83  | 17.00   | 18.41            | 0.04            |                |
| 20.00         |                 | 498.69  | 19.00   | 18.30            | 0.04            |                |
| 21.00         | RT2 RT3 RB5 RB6 | 248.17  | 20.50   | 9.11             | 0.01            |                |
| 22.00         |                 | 247.38  | 21.50   | 9.08             | 0.01            |                |
| 24.00         |                 | 492.42  | 23.00   | 18.07            | 0.06            |                |
| 26.00         |                 | 489.28  | 25.00   | 17.95            | 0.07            |                |
| 27.75         | RT5             | 425.54  | 26.88   | 15.61            | 0.06            |                |
| 28.00         |                 | 60.60   | 27.88   | 2.22             | 0.00            |                |
| 30.00         |                 | 483.00  | 29.00   | 17.72            | 0.10            |                |
| 32.00         |                 | 479.86  | 31.00   | 17.61            | 0.11            |                |
| 34.00         |                 | 476.73  | 33.00   | 17.49            | 0.12            |                |
| 36.00         |                 | 473.59  | 35.00   | 17.38            | 0.14            |                |
| 38.00         |                 | 470.45  | 37.00   | 17.26            | 0.15            |                |
| 40.00         |                 | 467.31  | 39.00   | 17.15            | 0.16            |                |
| 41.00         | RT6 RB7         | 232.48  | 40.50   | 8.53             | 0.04            |                |
| 42.00         |                 | 231.69  | 41.50   | 8.50             | 0.05            |                |
| 43.25         | Bot - Section 2 | 288.52  | 42.63   | 10.59            | 0.08            |                |
| 44.00         |                 | 308.82  | 43.63   | 11.33            | 0.09            |                |
| 46.00         |                 | 819.51  | 45.00   | 30.07            | 0.68            |                |
| 47.75         | RB8             | 712.29  | 46.88   | 26.14            | 0.55            |                |
| 48.00         |                 | 101.39  | 47.88   | 3.72             | 0.01            |                |
| 48.92         | RB9             | 372.34  | 48.46   | 13.66            | 0.16            |                |
| 49.00         | Top - Section 1 | 32.32   | 48.96   | 1.19             | 0.00            |                |
| 50.00         |                 | 199.63  | 49.50   | 7.33             | 0.05            |                |
| 52.00         |                 | 397.24  | 51.00   | 14.58            | 0.20            |                |
| 54.00         |                 | 394.55  | 53.00   | 14.48            | 0.22            |                |
| 56.00         |                 | 391.86  | 55.00   | 14.38            | 0.23            |                |
| 58.00         |                 | 389.17  | 57.00   | 14.28            | 0.24            |                |
| 60.00         |                 | 386.48  | 59.00   | 14.18            | 0.26            |                |
| 61.00         | RT7 RB10        | 192.23  | 60.50   | 7.05             | 0.07            |                |
| 62.00         |                 | 191.56  | 61.50   | 7.03             | 0.07            |                |
| 64.00         |                 | 381.10  | 63.00   | 13.98            | 0.29            |                |
| 65.00         | RT8 RB11        | 189.54  | 64.50   | 6.95             | 0.07            |                |
| 66.00         |                 | 188.87  | 65.50   | 6.93             | 0.08            |                |
| 68.00         |                 | 375.72  | 67.00   | 13.79            | 0.31            |                |
| 70.00         |                 | 373.03  | 69.00   | 13.69            | 0.33            |                |

## Seismic Segment Forces (Factored)

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|        |                 |        |        |        |        |
|--------|-----------------|--------|--------|--------|--------|
| 72.00  |                 | 370.34 | 71.00  | 13.59  | 0.34   |
| 72.25  | RT11            | 46.10  | 72.13  | 1.69   | 0.01   |
| 74.00  |                 | 321.55 | 73.13  | 11.80  | 0.27   |
| 76.00  |                 | 364.96 | 75.00  | 13.39  | 0.37   |
| 76.83  | RT9             | 150.67 | 76.41  | 5.53   | 0.07   |
| 78.00  |                 | 211.60 | 77.41  | 7.76   | 0.13   |
| 80.00  |                 | 359.58 | 79.00  | 13.19  | 0.40   |
| 81.00  | RT10 RB12       | 178.78 | 80.50  | 6.56   | 0.10   |
| 82.00  |                 | 178.11 | 81.50  | 6.54   | 0.10   |
| 84.00  |                 | 354.20 | 83.00  | 13.00  | 0.43   |
| 86.00  |                 | 351.51 | 85.00  | 12.90  | 0.44   |
| 87.50  | Bot - Section 3 | 261.87 | 86.75  | 9.61   | 0.26   |
| 88.00  |                 | 151.47 | 87.75  | 5.56   | 0.09   |
| 90.00  |                 | 602.81 | 89.00  | 22.12  | 1.43   |
| 90.50  | RB13            | 149.93 | 90.25  | 5.50   | 0.09   |
| 91.92  | RB14            | 424.13 | 91.21  | 15.56  | 0.74   |
| 92.00  |                 | 23.82  | 91.96  | 0.87   | 0.00   |
| 92.25  | Top - Section 2 | 74.39  | 92.13  | 2.73   | 0.02   |
| 94.00  |                 | 258.78 | 93.13  | 9.50   | 0.29   |
| 96.00  |                 | 293.64 | 95.00  | 10.77  | 0.39   |
| 98.00  |                 | 291.40 | 97.00  | 10.69  | 0.40   |
| 100.00 |                 | 289.16 | 99.00  | 10.61  | 0.41   |
| 101.00 | RT12 RB15       | 143.74 | 100.50 | 5.27   | 0.10   |
| 102.00 |                 | 143.18 | 101.50 | 5.25   | 0.10   |
| 104.00 |                 | 284.68 | 103.00 | 10.45  | 0.43   |
| 105.50 | RT13            | 212.04 | 104.75 | 7.78   | 0.24   |
| 105.58 | RT14            | 11.27  | 105.54 | 0.41   | 0.00   |
| 106.00 |                 | 59.13  | 105.79 | 2.17   | 0.02   |
| 108.00 |                 | 280.20 | 107.00 | 10.28  | 0.45   |
| 110.00 |                 | 277.96 | 109.00 | 10.20  | 0.46   |
| 112.00 |                 | 275.71 | 111.00 | 10.12  | 0.46   |
| 114.00 |                 | 273.47 | 113.00 | 10.03  | 0.47   |
| 116.00 |                 | 271.23 | 115.00 | 9.95   | 0.48   |
| 118.00 | RT15            | 268.99 | 117.00 | 9.87   | 0.49   |
| 120.00 |                 | 266.75 | 119.00 | 9.79   | 0.50   |
| 122.00 |                 | 264.51 | 121.00 | 9.71   | 0.51   |
| 124.00 |                 | 262.27 | 123.00 | 9.62   | 0.52   |
| 126.00 |                 | 260.02 | 125.00 | 9.54   | 0.52   |
| 128.00 |                 | 257.78 | 127.00 | 9.46   | 0.53   |
| 130.00 |                 | 255.54 | 129.00 | 9.38   | 0.54   |
| 132.00 |                 | 253.30 | 131.00 | 9.29   | 0.55   |
| 132.50 | Bot - Section 4 | 62.97  | 132.25 | 2.31   | 0.03   |
| 134.00 |                 | 298.71 | 133.25 | 10.96  | 0.79   |
| 136.00 |                 | 394.95 | 135.00 | 14.49  | 1.41   |
| 136.50 | Top - Section 3 | 98.14  | 136.25 | 3.60   | 0.09   |
| 138.00 |                 | 141.04 | 137.25 | 5.18   | 0.19   |
| 140.00 |                 | 186.69 | 139.00 | 6.85   | 0.33   |
| 142.00 |                 | 185.12 | 141.00 | 6.79   | 0.34   |
| 144.00 |                 | 183.55 | 143.00 | 6.73   | 0.34   |
| 146.00 |                 | 181.98 | 145.00 | 6.68   | 0.35   |
| 148.00 |                 | 180.41 | 147.00 | 6.62   | 0.35   |
| 150.00 |                 | 178.84 | 149.00 | 6.56   | 0.35   |
| 152.00 |                 | 177.27 | 151.00 | 6.50   | 0.36   |
| 154.00 |                 | 175.70 | 153.00 | 6.45   | 0.36   |
| 156.00 |                 | 174.13 | 155.00 | 6.39   | 0.36   |
| 158.00 | Appurtenance(s) | 4153.1 | 157.00 | 152.39 | 211.05 |
| 160.00 |                 | 157.85 | 159.00 | 5.79   | 0.31   |

## Seismic Segment Forces (Factored)

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|        |                 |                 |        |                    |                 |
|--------|-----------------|-----------------|--------|--------------------|-----------------|
| 162.00 |                 | 156.28          | 161.00 | 5.73               | 0.31            |
| 164.00 |                 | 154.71          | 163.00 | 5.68               | 0.32            |
| 166.00 |                 | 153.14          | 165.00 | 5.62               | 0.32            |
| 168.00 | Appurtenance(s) | 1165.5          | 167.00 | 42.77              | 18.81           |
| 168.50 | Appurtenance(s) | 1436.6          | 168.25 | 52.72              | 29.00           |
| 170.00 |                 | 109.36          | 169.25 | 4.01               | 0.17            |
| 172.00 |                 | 144.44          | 171.00 | 5.30               | 0.30            |
| 174.00 |                 | 142.87          | 173.00 | 5.24               | 0.30            |
| 176.00 |                 | 141.30          | 175.00 | 5.18               | 0.30            |
| 177.00 | Appurtenance(s) | 2429.1          | 176.50 | 89.13              | 91.25           |
| 178.00 | Top - Section 4 | 67.88           | 177.50 | 2.49               | 0.07            |
| 180.00 |                 | 119.41          | 179.00 | 4.38               | 0.23            |
| 182.00 |                 | 119.41          | 181.00 | 4.38               | 0.23            |
| 184.00 | Appurtenance(s) | 1719.4          | 183.00 | 63.09              | 49.15           |
| 186.00 |                 | 119.41          | 185.00 | 4.38               | 0.24            |
| 187.00 | Appurtenance(s) | 2331.6          | 186.50 | 85.55              | 93.87           |
| 188.00 |                 | 48.22           | 187.50 | 1.77               | 0.04            |
|        | <b>Totals:</b>  | <b>44,612.7</b> |        | <b>1,637.0</b>     | <b>521.4</b>    |
|        |                 |                 |        | <b>Total Wind:</b> | <b>35,760.0</b> |





## Calculated Forces

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|        |       |       |      |       |      |      |         |        |        |        |      |       |       |
|--------|-------|-------|------|-------|------|------|---------|--------|--------|--------|------|-------|-------|
| 164.00 | -9.63 | -0.31 | 0.00 | -4.97 | 0.00 | 4.97 | 1274.41 | 318.16 | 689.12 | 684.18 | 2.58 | -0.17 | 0.015 |
| 166.00 | -9.48 | -0.31 | 0.00 | -4.35 | 0.00 | 4.35 | 1263.27 | 314.12 | 671.70 | 669.50 | 2.65 | -0.18 | 0.014 |
| 168.00 | -8.39 | -0.29 | 0.00 | -3.72 | 0.00 | 3.72 | 1252.00 | 310.07 | 654.51 | 654.91 | 2.73 | -0.18 | 0.012 |
| 168.50 | -7.04 | -0.26 | 0.00 | -3.58 | 0.00 | 3.58 | 1249.16 | 309.06 | 650.24 | 651.27 | 2.74 | -0.18 | 0.011 |
| 170.00 | -6.94 | -0.26 | 0.00 | -3.19 | 0.00 | 3.19 | 1240.60 | 306.02 | 637.53 | 640.40 | 2.80 | -0.18 | 0.011 |
| 172.00 | -6.80 | -0.26 | 0.00 | -2.68 | 0.00 | 2.68 | 1229.07 | 301.97 | 620.78 | 625.99 | 2.88 | -0.18 | 0.010 |
| 174.00 | -6.66 | -0.26 | 0.00 | -2.16 | 0.00 | 2.16 | 1217.40 | 297.93 | 604.26 | 611.66 | 2.95 | -0.18 | 0.009 |
| 176.00 | -6.53 | -0.26 | 0.00 | -1.65 | 0.00 | 1.65 | 1205.61 | 293.88 | 587.95 | 597.44 | 3.03 | -0.18 | 0.008 |
| 177.00 | -4.25 | -0.16 | 0.00 | -1.40 | 0.00 | 1.40 | 1199.66 | 291.86 | 579.88 | 590.36 | 3.07 | -0.18 | 0.006 |
| 178.00 | -4.19 | -0.16 | 0.00 | -1.24 | 0.00 | 1.24 | 1193.69 | 289.83 | 571.87 | 583.31 | 3.10 | -0.18 | 0.006 |
| 178.00 | -4.19 | -0.16 | 0.00 | -1.24 | 0.00 | 1.24 | 975.84  | 248.70 | 491.35 | 478.11 | 3.10 | -0.18 | 0.007 |
| 180.00 | -4.07 | -0.16 | 0.00 | -0.93 | 0.00 | 0.93 | 975.84  | 248.70 | 491.35 | 478.11 | 3.18 | -0.18 | 0.006 |
| 182.00 | -3.96 | -0.16 | 0.00 | -0.62 | 0.00 | 0.62 | 975.84  | 248.70 | 491.35 | 478.11 | 3.26 | -0.18 | 0.005 |
| 184.00 | -2.34 | -0.10 | 0.00 | -0.30 | 0.00 | 0.30 | 975.84  | 248.70 | 491.35 | 478.11 | 3.33 | -0.18 | 0.003 |
| 186.00 | -2.23 | -0.10 | 0.00 | -0.10 | 0.00 | 0.10 | 975.84  | 248.70 | 491.35 | 478.11 | 3.41 | -0.18 | 0.002 |
| 187.00 | -0.05 | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | 975.84  | 248.70 | 491.35 | 478.11 | 3.45 | -0.18 | 0.000 |
| 188.00 | 0.00  | 0.00  | 0.00 | 0.00  | 0.00 | 0.00 | 975.84  | 248.70 | 491.35 | 478.11 | 3.49 | -0.18 | 0.000 |





## Wind Loading - Shaft

|                                    |                                   |                 |
|------------------------------------|-----------------------------------|-----------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023       |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                 |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                 |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                 |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Page:</b> 61 |
|                                    | <b>Struct Class:</b> II           |                 |



|                        |      |      |        |       |        |       |       |               |       |      |                |     |                 |
|------------------------|------|------|--------|-------|--------|-------|-------|---------------|-------|------|----------------|-----|-----------------|
| 164.00                 | 1.00 | 1.40 | 10.932 | 12.03 | 157.89 | 0.630 | 0.000 | 2.00          | 4.483 | 2.82 | 34.0           | 0.0 | 124.2           |
| 166.00                 | 1.00 | 1.41 | 10.960 | 12.06 | 156.10 | 0.630 | 0.000 | 2.00          | 4.427 | 2.79 | 33.6           | 0.0 | 122.6           |
| 168.00 Appurtenance(s) | 1.00 | 1.41 | 10.988 | 12.09 | 154.30 | 0.630 | 0.000 | 2.00          | 4.371 | 2.75 | 33.3           | 0.0 | 121.0           |
| 168.50 Appurtenance(s) | 1.00 | 1.41 | 10.995 | 12.09 | 153.85 | 0.630 | 0.000 | 0.50          | 1.084 | 0.68 | 8.3            | 0.0 | 30.0            |
| 170.00                 | 1.00 | 1.42 | 11.015 | 12.12 | 152.49 | 0.630 | 0.000 | 1.50          | 3.231 | 2.04 | 24.7           | 0.0 | 89.4            |
| 172.00                 | 1.00 | 1.42 | 11.043 | 12.15 | 150.68 | 0.630 | 0.000 | 2.00          | 4.258 | 2.68 | 32.6           | 0.0 | 117.9           |
| 174.00                 | 1.00 | 1.42 | 11.070 | 12.18 | 148.86 | 0.630 | 0.000 | 2.00          | 4.202 | 2.65 | 32.2           | 0.0 | 116.3           |
| 176.00                 | 1.00 | 1.43 | 11.096 | 12.21 | 147.03 | 0.630 | 0.000 | 2.00          | 4.146 | 2.61 | 31.9           | 0.0 | 114.7           |
| 177.00 Appurtenance(s) | 1.00 | 1.43 | 11.109 | 12.22 | 146.11 | 0.630 | 0.000 | 1.00          | 2.052 | 1.29 | 15.8           | 0.0 | 56.8            |
| 178.00 Top - Section 4 | 1.00 | 1.43 | 11.123 | 12.23 | 145.20 | 0.630 | 0.000 | 1.00          | 2.038 | 1.28 | 15.7           | 0.0 | 56.4            |
| 180.00                 | 1.00 | 1.43 | 11.149 | 12.26 | 145.37 | 0.630 | 0.000 | 2.00          | 4.062 | 2.56 | 31.4           | 0.0 | 96.4            |
| 182.00                 | 1.00 | 1.44 | 11.175 | 12.29 | 145.54 | 0.630 | 0.000 | 2.00          | 4.062 | 2.56 | 31.5           | 0.0 | 96.4            |
| 184.00 Appurtenance(s) | 1.00 | 1.44 | 11.200 | 12.32 | 145.70 | 0.630 | 0.000 | 2.00          | 4.062 | 2.56 | 31.5           | 0.0 | 96.4            |
| 186.00                 | 1.00 | 1.44 | 11.226 | 12.35 | 145.87 | 0.630 | 0.000 | 2.00          | 4.062 | 2.56 | 31.6           | 0.0 | 96.4            |
| 187.00 Appurtenance(s) | 1.00 | 1.44 | 11.239 | 12.36 | 145.95 | 0.630 | 0.000 | 1.00          | 2.031 | 1.28 | 15.8           | 0.0 | 48.2            |
| 188.00                 | 1.00 | 1.45 | 11.251 | 12.38 | 146.03 | 0.630 | 0.000 | 1.00          | 2.031 | 1.28 | 15.8           | 0.0 | 48.2            |
| <b>Totals:</b>         |      |      |        |       |        |       |       | <b>188.00</b> |       |      | <b>3,735.5</b> |     | <b>28,148.4</b> |



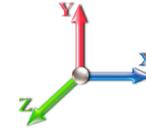
## Total Applied Force Summary

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |
|                                    |                                   | <b>Page:</b> 63         |



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

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



**Iterations** 29

| Elev<br>(ft) | Description | Lateral<br>FX (-)<br>(lb) | Axial<br>FY (-)<br>(lb) | Torsion<br>MY<br>(lb-ft) | Moment<br>MZ<br>(lb-ft) |
|--------------|-------------|---------------------------|-------------------------|--------------------------|-------------------------|
| 0.00         |             | 0.00                      | 0.00                    | 0.00                     | 0.00                    |
| 1.00         |             | 21.56                     | 266.29                  | 0.00                     | 0.00                    |
| 2.00         |             | 21.49                     | 265.50                  | 0.00                     | 0.00                    |
| 4.00         |             | 42.79                     | 528.65                  | 0.00                     | 0.00                    |
| 6.00         |             | 42.54                     | 525.51                  | 0.00                     | 0.00                    |
| 8.00         |             | 42.28                     | 522.37                  | 0.00                     | 0.00                    |
| 10.00        |             | 42.02                     | 519.24                  | 0.00                     | 0.00                    |
| 12.00        |             | 41.76                     | 516.10                  | 0.00                     | 0.00                    |
| 14.00        |             | 41.51                     | 512.96                  | 0.00                     | 0.00                    |
| 16.00        |             | 41.76                     | 509.82                  | 0.00                     | 0.00                    |
| 18.00        |             | 42.54                     | 506.68                  | 0.00                     | 0.00                    |
| 20.00        |             | 43.22                     | 503.55                  | 0.00                     | 0.00                    |
| 21.00        |             | 21.73                     | 250.60                  | 0.00                     | 0.00                    |
| 22.00        |             | 21.87                     | 249.81                  | 0.00                     | 0.00                    |
| 24.00        |             | 44.34                     | 497.27                  | 0.00                     | 0.00                    |
| 26.00        |             | 44.81                     | 494.13                  | 0.00                     | 0.00                    |
| 27.75        |             | 39.51                     | 429.79                  | 0.00                     | 0.00                    |
| 28.00        |             | 5.64                      | 61.20                   | 0.00                     | 0.00                    |
| 30.00        |             | 45.58                     | 487.86                  | 0.00                     | 0.00                    |
| 32.00        |             | 45.90                     | 484.72                  | 0.00                     | 0.00                    |
| 34.00        |             | 46.19                     | 481.58                  | 0.00                     | 0.00                    |
| 36.00        |             | 45.53                     | 478.44                  | 0.00                     | 0.00                    |
| 38.00        |             | 42.97                     | 475.30                  | 0.00                     | 0.00                    |
| 40.00        |             | 43.12                     | 472.17                  | 0.00                     | 0.00                    |
| 41.00        |             | 21.55                     | 234.91                  | 0.00                     | 0.00                    |
| 42.00        |             | 21.58                     | 234.12                  | 0.00                     | 0.00                    |
| 43.25        |             | 27.03                     | 291.55                  | 0.00                     | 0.00                    |
| 44.00        |             | 16.49                     | 310.64                  | 0.00                     | 0.00                    |
| 46.00        |             | 44.17                     | 824.37                  | 0.00                     | 0.00                    |
| 47.75        |             | 41.10                     | 716.54                  | 0.00                     | 0.00                    |
| 48.00        |             | 6.00                      | 102.00                  | 0.00                     | 0.00                    |
| 48.92        |             | 22.11                     | 374.57                  | 0.00                     | 0.00                    |
| 49.00        |             | 1.92                      | 32.51                   | 0.00                     | 0.00                    |
| 50.00        |             | 24.05                     | 202.06                  | 0.00                     | 0.00                    |
| 52.00        |             | 48.25                     | 402.09                  | 0.00                     | 0.00                    |
| 54.00        |             | 48.30                     | 399.40                  | 0.00                     | 0.00                    |
| 56.00        |             | 48.33                     | 396.71                  | 0.00                     | 0.00                    |
| 58.00        |             | 48.35                     | 394.02                  | 0.00                     | 0.00                    |
| 60.00        |             | 48.35                     | 391.33                  | 0.00                     | 0.00                    |
| 61.00        |             | 24.13                     | 194.66                  | 0.00                     | 0.00                    |
| 62.00        |             | 24.13                     | 193.99                  | 0.00                     | 0.00                    |
| 64.00        |             | 48.32                     | 385.96                  | 0.00                     | 0.00                    |
| 65.00        |             | 24.11                     | 191.97                  | 0.00                     | 0.00                    |
| 66.00        |             | 24.10                     | 191.30                  | 0.00                     | 0.00                    |
| 68.00        |             | 48.23                     | 380.58                  | 0.00                     | 0.00                    |
| 70.00        |             | 48.17                     | 377.89                  | 0.00                     | 0.00                    |
| 72.00        |             | 48.10                     | 375.20                  | 0.00                     | 0.00                    |

## Total Applied Force Summary

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|        |                  |         |         |      |
|--------|------------------|---------|---------|------|
| 72.25  | 5.99             | 46.71   | 0.00    | 0.00 |
| 74.00  | 41.99            | 325.80  | 0.00    | 0.00 |
| 76.00  | 47.92            | 369.82  | 0.00    | 0.00 |
| 76.83  | 19.83            | 152.68  | 0.00    | 0.00 |
| 78.00  | 27.93            | 214.44  | 0.00    | 0.00 |
| 80.00  | 46.10            | 364.44  | 0.00    | 0.00 |
| 81.00  | 21.62            | 181.21  | 0.00    | 0.00 |
| 82.00  | 21.58            | 180.54  | 0.00    | 0.00 |
| 84.00  | 43.11            | 359.06  | 0.00    | 0.00 |
| 86.00  | 42.95            | 356.37  | 0.00    | 0.00 |
| 87.50  | 32.09            | 265.51  | 0.00    | 0.00 |
| 88.00  | 10.84            | 152.69  | 0.00    | 0.00 |
| 90.00  | 43.32            | 607.67  | 0.00    | 0.00 |
| 90.50  | 11.34            | 151.15  | 0.00    | 0.00 |
| 91.92  | 33.75            | 427.58  | 0.00    | 0.00 |
| 92.00  | 1.90             | 24.01   | 0.00    | 0.00 |
| 92.25  | 5.92             | 75.00   | 0.00    | 0.00 |
| 94.00  | 41.47            | 263.03  | 0.00    | 0.00 |
| 96.00  | 47.25            | 298.50  | 0.00    | 0.00 |
| 98.00  | 47.07            | 296.26  | 0.00    | 0.00 |
| 100.00 | 46.89            | 294.02  | 0.00    | 0.00 |
| 101.00 | 23.35            | 146.17  | 0.00    | 0.00 |
| 102.00 | 23.30            | 145.61  | 0.00    | 0.00 |
| 104.00 | 46.51            | 289.53  | 0.00    | 0.00 |
| 105.50 | 34.73            | 215.68  | 0.00    | 0.00 |
| 105.58 | 1.85             | 11.47   | 0.00    | 0.00 |
| 106.00 | 9.69             | 60.15   | 0.00    | 0.00 |
| 108.00 | 46.10            | 285.05  | 0.00    | 0.00 |
| 110.00 | 45.89            | 282.81  | 0.00    | 0.00 |
| 112.00 | 45.67            | 280.57  | 0.00    | 0.00 |
| 114.00 | 45.44            | 278.33  | 0.00    | 0.00 |
| 116.00 | 45.21            | 276.09  | 0.00    | 0.00 |
| 118.00 | 44.98            | 273.84  | 0.00    | 0.00 |
| 120.00 | 44.74            | 271.60  | 0.00    | 0.00 |
| 122.00 | 42.73            | 269.36  | 0.00    | 0.00 |
| 124.00 | 39.52            | 267.12  | 0.00    | 0.00 |
| 126.00 | 39.25            | 264.88  | 0.00    | 0.00 |
| 128.00 | 38.98            | 262.64  | 0.00    | 0.00 |
| 130.00 | 38.70            | 260.40  | 0.00    | 0.00 |
| 132.00 | 38.42            | 258.16  | 0.00    | 0.00 |
| 132.50 | 9.55             | 64.19   | 0.00    | 0.00 |
| 134.00 | 28.97            | 302.35  | 0.00    | 0.00 |
| 136.00 | 38.38            | 399.80  | 0.00    | 0.00 |
| 136.50 | 9.54             | 99.36   | 0.00    | 0.00 |
| 138.00 | 28.53            | 144.68  | 0.00    | 0.00 |
| 140.00 | 37.79            | 191.54  | 0.00    | 0.00 |
| 142.00 | 37.49            | 189.97  | 0.00    | 0.00 |
| 144.00 | 37.19            | 188.40  | 0.00    | 0.00 |
| 146.00 | 36.88            | 186.83  | 0.00    | 0.00 |
| 148.00 | 36.57            | 185.26  | 0.00    | 0.00 |
| 150.00 | 36.26            | 183.69  | 0.00    | 0.00 |
| 152.00 | 35.94            | 182.12  | 0.00    | 0.00 |
| 154.00 | 35.62            | 180.55  | 0.00    | 0.00 |
| 156.00 | 35.29            | 178.99  | 0.00    | 0.00 |
| 158.00 | (34) attachments | 1445.25 | 4157.97 | 0.00 |
| 160.00 |                  | 34.64   | 161.25  | 0.00 |
| 162.00 |                  | 34.30   | 159.68  | 0.00 |

## Total Applied Force Summary

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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|                |                  |                 |                  |             |
|----------------|------------------|-----------------|------------------|-------------|
| 164.00         | 33.97            | 158.11          | 0.00             | 0.00        |
| 166.00         | 33.63            | 156.54          | 0.00             | 0.00        |
| 168.00         | (22) attachments | 520.91          | 1168.97          | 0.00        |
| 168.50         | (1) attachments  | 274.34          | 1437.39          | 0.00        |
| 170.00         |                  | 24.66           | 111.57           | 0.00        |
| 172.00         |                  | 32.59           | 147.39           | 0.00        |
| 174.00         |                  | 32.24           | 145.82           | 0.00        |
| 176.00         |                  | 31.88           | 144.25           | 0.00        |
| 177.00         | (11) attachments | 724.08          | 2430.64          | 0.00        |
| 178.00         |                  | 15.71           | 69.15            | 0.00        |
| 180.00         |                  | 31.38           | 121.96           | 0.00        |
| 182.00         |                  | 31.45           | 121.96           | 0.00        |
| 184.00         | (1) attachments  | 425.78          | 1721.96          | 0.00        |
| 186.00         |                  | 31.60           | 121.96           | 0.00        |
| 187.00         | (32) attachments | 817.23          | 2332.89          | 0.00        |
| 188.00         |                  | 15.83           | 48.22            | 0.00        |
| <b>Totals:</b> |                  | <b>7,998.94</b> | <b>45,039.26</b> | <b>0.00</b> |



## Linear Appurtenance Segment Forces (Factored)

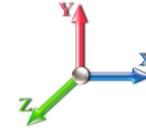
|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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

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



**Iterations** 29

| Top Elev (ft)  | Description       | Wind Exposed | Length (ft) | Ca    | Exposed Width (in) | Area (sqft) | CaAa (sqft) | Ra    | Cf Adjust Factor | qz (psf)     | F X (lb)   | Dead Load (lb) |
|----------------|-------------------|--------------|-------------|-------|--------------------|-------------|-------------|-------|------------------|--------------|------------|----------------|
| 92.00          | 1.25" Reinforcing | Yes          | 0.08        | 2.000 | 1.25               | 0.01        | 0.02        | 0.000 | 0.000            | 9.680        | 0.18       | 0.00           |
| 92.25          | 1.25" Reinforcing | Yes          | 0.25        | 2.000 | 1.25               | 0.03        | 0.05        | 0.000 | 0.000            | 9.685        | 0.55       | 0.00           |
| 94.00          | 1.25" Reinforcing | Yes          | 1.75        | 2.000 | 1.25               | 0.18        | 0.36        | 0.000 | 0.000            | 9.724        | 3.90       | 0.00           |
| 96.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 9.767        | 4.48       | 0.00           |
| 98.00          | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 9.809        | 4.50       | 0.00           |
| 100.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 9.851        | 4.52       | 0.00           |
| 101.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 9.872        | 2.26       | 0.00           |
| 102.00         | 1.25" Reinforcing | Yes          | 1.00        | 2.000 | 1.25               | 0.10        | 0.21        | 0.000 | 0.000            | 9.892        | 2.27       | 0.00           |
| 104.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 9.933        | 4.55       | 0.00           |
| 105.50         | 1.25" Reinforcing | Yes          | 1.50        | 2.000 | 1.25               | 0.16        | 0.31        | 0.000 | 0.000            | 9.963        | 3.42       | 0.00           |
| 105.58         | 1.25" Reinforcing | Yes          | 0.08        | 2.000 | 1.25               | 0.01        | 0.02        | 0.000 | 0.000            | 9.964        | 0.18       | 0.00           |
| 106.00         | 1.25" Reinforcing | Yes          | 0.42        | 2.000 | 1.25               | 0.04        | 0.09        | 0.000 | 0.000            | 9.973        | 0.96       | 0.00           |
| 108.00         | 1.25" Reinforcing | Yes          | 0.75        | 2.000 | 1.25               | 0.08        | 0.16        | 0.000 | 0.000            | 10.012       | 1.72       | 0.00           |
| 108.00         | 1.25" Reinforcing | Yes          | 1.25        | 2.000 | 1.25               | 0.13        | 0.26        | 0.000 | 0.000            | 10.012       | 2.87       | 0.00           |
| 110.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 10.051       | 4.61       | 0.00           |
| 112.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 10.089       | 4.62       | 0.00           |
| 114.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 10.127       | 4.64       | 0.00           |
| 116.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 10.164       | 4.66       | 0.00           |
| 118.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 10.200       | 4.68       | 0.00           |
| 120.00         | 1.25" Reinforcing | Yes          | 2.00        | 2.000 | 1.25               | 0.21        | 0.42        | 0.000 | 0.000            | 10.237       | 4.69       | 0.00           |
| 122.00         | 1.25" Reinforcing | Yes          | 1.25        | 2.000 | 1.25               | 0.13        | 0.26        | 0.000 | 0.000            | 10.272       | 2.94       | 0.00           |
| <b>Totals:</b> |                   |              |             |       |                    |             |             |       |                  | <b>195.5</b> | <b>0.0</b> |                |





## Calculated Forces

|                                    |                                   |                 |
|------------------------------------|-----------------------------------|-----------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023       |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                 |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                 |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                 |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Page:</b> 70 |
|                                    | <b>Struct Class:</b> II           |                 |



|        |        |       |      |        |      |       |         |        |        |        |       |        |       |       |
|--------|--------|-------|------|--------|------|-------|---------|--------|--------|--------|-------|--------|-------|-------|
| 166.00 | -10.02 | -3.33 | 0.00 | -41.57 | 0.00 | 41.57 | 1263.27 | 314.12 | 671.70 | 669.50 | 29.07 | -1.845 | 0.000 | 0.070 |
| 168.00 | -8.87  | -2.78 | 0.00 | -34.90 | 0.00 | 34.90 | 1252.00 | 310.07 | 654.51 | 654.91 | 29.84 | -1.859 | 0.000 | 0.060 |
| 168.50 | -7.44  | -2.46 | 0.00 | -33.52 | 0.00 | 33.52 | 1249.16 | 309.06 | 650.24 | 651.27 | 30.04 | -1.863 | 0.000 | 0.057 |
| 170.00 | -7.33  | -2.43 | 0.00 | -29.83 | 0.00 | 29.83 | 1240.60 | 306.02 | 637.53 | 640.40 | 30.62 | -1.872 | 0.000 | 0.053 |
| 172.00 | -7.18  | -2.39 | 0.00 | -24.97 | 0.00 | 24.97 | 1229.07 | 301.97 | 620.78 | 625.99 | 31.41 | -1.883 | 0.000 | 0.046 |
| 174.00 | -7.04  | -2.36 | 0.00 | -20.18 | 0.00 | 20.18 | 1217.40 | 297.93 | 604.26 | 611.66 | 32.20 | -1.893 | 0.000 | 0.039 |
| 176.00 | -6.90  | -2.32 | 0.00 | -15.46 | 0.00 | 15.46 | 1205.61 | 293.88 | 587.95 | 597.44 | 33.00 | -1.901 | 0.000 | 0.032 |
| 177.00 | -4.49  | -1.52 | 0.00 | -13.14 | 0.00 | 13.14 | 1199.66 | 291.86 | 579.88 | 590.36 | 33.39 | -1.904 | 0.000 | 0.026 |
| 178.00 | -4.42  | -1.50 | 0.00 | -11.62 | 0.00 | 11.62 | 1193.69 | 289.83 | 571.87 | 583.31 | 33.79 | -1.907 | 0.000 | 0.024 |
| 178.00 | -4.42  | -1.50 | 0.00 | -11.62 | 0.00 | 11.62 | 975.84  | 248.70 | 491.35 | 478.11 | 33.79 | -1.907 | 0.000 | 0.029 |
| 180.00 | -4.30  | -1.47 | 0.00 | -8.62  | 0.00 | 8.62  | 975.84  | 248.70 | 491.35 | 478.11 | 34.59 | -1.912 | 0.000 | 0.022 |
| 182.00 | -4.18  | -1.43 | 0.00 | -5.69  | 0.00 | 5.69  | 975.84  | 248.70 | 491.35 | 478.11 | 35.39 | -1.916 | 0.000 | 0.016 |
| 184.00 | -2.47  | -0.95 | 0.00 | -2.83  | 0.00 | 2.83  | 975.84  | 248.70 | 491.35 | 478.11 | 36.20 | -1.918 | 0.000 | 0.008 |
| 186.00 | -2.35  | -0.91 | 0.00 | -0.93  | 0.00 | 0.93  | 975.84  | 248.70 | 491.35 | 478.11 | 37.00 | -1.919 | 0.000 | 0.004 |
| 187.00 | -0.05  | -0.02 | 0.00 | -0.02  | 0.00 | 0.02  | 975.84  | 248.70 | 491.35 | 478.11 | 37.40 | -1.919 | 0.000 | 0.000 |
| 188.00 | 0.00   | -0.02 | 0.00 | 0.00   | 0.00 | 0.00  | 975.84  | 248.70 | 491.35 | 478.11 | 37.81 | -1.919 | 0.000 | 0.000 |

## Final Analysis Summary

|                                    |                                   |                         |
|------------------------------------|-----------------------------------|-------------------------|
| <b>Structure:</b> CT46124-A-SBA    | <b>Code:</b> TIA-222-H            | 6/14/2023               |
| <b>Site Name:</b> Enfield-Moody Rd | <b>Exposure:</b> C                |                         |
| <b>Height:</b> 188.00 (ft)         | <b>Crest Height:</b> 0.00         |                         |
| <b>Base Elev:</b> 0.000 (ft)       | <b>Site Class:</b> D - Stiff Soil |                         |
| <b>Gh:</b> 1.1                     | <b>Topography:</b> 1              | <b>Struct Class:</b> II |



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### Reactions

| Load Case                        | Shear FX<br>(kips) | Shear FZ<br>(kips) | Axial FY<br>(kips) | Moment MX<br>(ft-kips) | Moment MY<br>(ft-kips) | Moment MZ<br>(ft-kips) |
|----------------------------------|--------------------|--------------------|--------------------|------------------------|------------------------|------------------------|
| 1.2D + 1.0W 120 mph Wind         | 35.8               | 0.00               | 54.03              | 0.00                   | 0.00                   | 4976.22                |
| 0.9D + 1.0W 120 mph Wind         | 35.8               | 0.00               | 40.52              | 0.00                   | 0.00                   | 4898.52                |
| 1.2D + 1.0Di + 1.0Wi 50 mph Wind | 11.6               | 0.00               | 84.49              | 0.00                   | 0.00                   | 1624.95                |
| 1.2D + 1.0Ev + 1.0Eh             | 0.5                | 0.00               | 55.73              | 0.00                   | 0.00                   | 92.84                  |
| 0.9D + 1.0Ev + 1.0Eh             | 0.5                | 0.00               | 42.17              | 0.00                   | 0.00                   | 91.41                  |
| 1.0D + 1.0W 60 mph Wind          | 8.0                | 0.00               | 45.04              | 0.00                   | 0.00                   | 1104.06                |

### Max Stresses

| Load Case                        | Pu FY (-)<br>(kips) | Vu FX (-)<br>(kips) | Tu MY (-)<br>(ft-kips) | Mu MZ<br>(ft-kips) | Mu MX<br>(ft-kips) | Resultant Moment<br>(ft-kips) | phi Pn<br>(kips) | phi Vn<br>(kips) | phi Tn<br>(ft-kips) | phi Mn<br>(ft-kips) | Elev<br>(ft) | Stress Ratio |
|----------------------------------|---------------------|---------------------|------------------------|--------------------|--------------------|-------------------------------|------------------|------------------|---------------------|---------------------|--------------|--------------|
| 1.2D + 1.0W 120 mph Wind         | -17.44              | -24.26              | 0.00                   | -818.01            | 0.00               | -818.01                       | 1414.34          | 373.81           | 951.25              | 893.21              | 136.50       | 0.932        |
| 0.9D + 1.0W 120 mph Wind         | -12.51              | -23.66              | 0.00                   | -794.74            | 0.00               | -794.74                       | 1414.34          | 373.81           | 951.25              | 893.21              | 136.50       | 0.903        |
| 1.2D + 1.0Di + 1.0Wi 50 mph Wind | -38.12              | -7.91               | 0.00                   | -267.81            | 0.00               | -267.81                       | 1414.34          | 373.81           | 951.25              | 893.21              | 136.50       | 0.327        |
| 1.2D + 1.0Ev + 1.0Eh             | -20.70              | -0.55               | 0.00                   | -18.79             | 0.00               | -18.79                        | 1414.34          | 373.81           | 951.25              | 893.21              | 136.50       | 0.036        |
| 0.9D + 1.0Ev + 1.0Eh             | -15.67              | -0.53               | 0.00                   | -18.37             | 0.00               | -18.37                        | 1414.34          | 373.81           | 951.25              | 893.21              | 136.50       | 0.032        |
| 1.0D + 1.0W 60 mph Wind          | -16.60              | -5.37               | 0.00                   | -180.94            | 0.00               | -180.94                       | 1414.34          | 373.81           | 951.25              | 893.21              | 136.50       | 0.215        |

### Additional Steel Summary

| Elev From<br>(ft) | Elev To<br>(ft) | Member                         | Intermediate Connectors |              |                  | Lower Termination |                  |           |            | Upper Termination |                  |           |            | Max Member   |                  |                  |       |
|-------------------|-----------------|--------------------------------|-------------------------|--------------|------------------|-------------------|------------------|-----------|------------|-------------------|------------------|-----------|------------|--------------|------------------|------------------|-------|
|                   |                 |                                | VQ/I<br>(lb/in)         | Vu<br>(kips) | phi Vn<br>(kips) | MQ/I<br>(kips)    | phi Vn<br>(kips) | Num Req'd | Num Actual | MQ/I<br>(kips)    | phi Vn<br>(kips) | Num Req'd | Num Actual | Pu<br>(kips) | phi Pn<br>(kips) | phi Tn<br>(kips) | Ratio |
| 0.0               | 1.0             | (3) SOL-2 1/4" William R71     | 140.5                   | 1.69         | 25.3             | 233.4             | 25.3             | 10        | 0          | 233.2             | 25.3             | 10        | 0          | 233.41       | 459.1            | 468.91           | 0.508 |
| 1.0               | 21.0            | (3) LNP-LP7X125-B-20A          | -261.7                  | -6.28        | 25.3             | 357.7             | 25.3             | 15        | 0          | 385.8             | 25.3             |           |            | 386.69       | 460.8            | 435.94           | 0.887 |
| 1.0               | 21.0            | (1) LNP-LP6X125-B-20B          | 195.5                   | 4.69         | 25.3             | 270.7             | 25.3             | 11        | 0          | 288.3             | 25.3             |           |            | 299.02       | 395.0            | 360.94           | 0.828 |
| 1.0               | 18.0            | (1) LNP-LP6X125-B-20T          | 174.3                   | 4.18         | 25.3             | 240.3             | 25.3             | 10        | 0          | 261.6             | 22.7             | 12        | 12         | 272.13       | 395.0            | 360.94           | 0.754 |
| 21.0              | 27.8            | (1) LNP-LP6X125-B-20T          | 200.2                   | 4.80         | 25.3             | 204.7             | 25.3             |           |            | 283.0             | 22.7             | 13        | 13         | 287.54       | 395.0            | 360.94           | 0.797 |
| 21.0              | 41.0            | (3) LNP-LP7X125-G-20AA         | 303.1                   | 7.27         | 25.3             | 293.7             | 25.3             |           |            | 391.7             | 25.3             |           |            | 405.31       | 460.8            | 435.94           | 0.930 |
| 41.0              | 61.0            | (3) LNP-LP7X125-G-20AA         | 313.5                   | 7.52         | 25.3             | 391.7             | 25.3             |           |            | 297.0             | 25.3             |           |            | 391.72       | 460.8            | 435.94           | 0.899 |
| 47.8              | 65.0            | (1) LNP-LP6X100-G-20TC         | -171.1                  | -4.11        | 25.3             | 210.2             | 22.7             | 10        | 11         | 172.5             | 25.3             |           |            | 210.19       | 297.8            | 288.75           | 0.728 |
| 48.9              | 76.8            | (3) PLT-5.5"x1 1/4" (1.25"hol) | -248.7                  | -5.22        | 37.1             | 242.5             | 33.4             | 8         | 10         | 244.0             | 33.4             | 8         | 10         | 254.62       | 371.1            | 314.06           | 0.811 |
| 61.0              | 81.0            | (3) LNP-LP6X125-G-20AB         | 341.8                   | 8.20         | 25.3             | 243.5             | 25.3             |           |            | 322.5             | 25.3             |           |            | 327.70       | 395.0            | 360.94           | 0.908 |
| 65.0              | 72.3            | (1) LNP-LP6X100-G-10CT         | -162.1                  | -3.89        | 25.3             | 147.8             | 25.3             |           |            | 165.6             | 22.7             | 8         | 11         | 171.58       | 297.8            | 288.75           | 0.594 |
| 81.0              | 101.0           | (3) LNP-LP6X125-G-20BB         | 358.4                   | 8.60         | 25.3             | 244.0             | 25.3             |           |            | 226.4             | 25.3             |           |            | 320.68       | 395.0            | 360.94           | 0.888 |
| 90.5              | 105.5           | (1) LNP-LP6X100-G-20TT         | -215.5                  | -5.17        | 25.3             | 183.6             | 22.7             | 9         | 10         | 138.6             | 22.7             | 7         | 10         | 183.60       | 297.8            | 288.75           | 0.636 |
| 91.9              | 105.6           | (3) PLT-4.5"x 1-1/4" (1.25"ho  | -252.6                  | -6.06        | 37.1             | 178.7             | 33.4             | 6         | 7          | 181.1             | 33.4             | 6         | 7          | 187.28       | 296.2            | 239.06           | 0.783 |
| 101.0             | 118.0           | (3) LNP-LP6X125-G-20BT         | 433.2                   | 10.40        | 25.3             | 176.6             | 25.3             |           |            | 258.5             | 22.7             | 12        | 12         | 293.63       | 395.0            | 360.94           | 0.814 |

November 3, 2022



Smartlink, LLC  
1997 Annapolis Exchange Pkwy, Suite 200  
Annapolis, MD 21401

RE:      Site Number:                    CT5293  
            FA Number:                    10090926  
            PACE Number:                    MRCTB062416  
            PT Number:                      2051A146G6  
            TEP Number:                      350621  
            Site Name:                        ENFIELD EAST  
            Site Address:                    188 Moody Road  
    Enfield, CT 06082

To Whom It May Concern:

TEP Northeast (TEP NE) has been authorized by Smartlink to perform a mount analysis on the existing AT&T antenna/RRH mount to determine its capability of supporting the following additional loading (based on RFDS V1.0 dated 7/20/2022):

- (3) HPA-65R-BUU-H8 Antennas (92.4"x14.8"x7.4" – Wt. = 68 lbs. /each)
- (6) 800-10966 Antennas (96.0"x20.0"x6.9" – Wt. = 115 lbs. /each)
- (3) 4415 B30 RRH's (16.5"x13.4"x5.9" – Wt. = 46 lbs. /each) (Pos. 2)
- (3) 8843 B2/B66A RRH's (14.9"x13.2"x10.9" – Wt. = 72 lbs. /each) (Pos.3)
- (3) 4449 B5/B12 RRH's (17.9"x13.2"x9.4" – Wt. = 73 lbs. /each) (Pos. 4)
- (2) DC6-48-60-18-8F Surge Arrestor (31.4"x10.2" Ø – Wt. = 29 lbs. /each) (Standoff)
- (1) DC6-48-60-0-8F Surge Arrestor (31.4"x10.2" Ø – Wt. = 29 lbs. /each) (Standoff)
- **(3) RRUS-2012 B29 RRH's (16.5"x13.4"x6.4" – Wt. = 46 lbs. /each) (Pos. 2)**
- **(3) 4478 B14 RRH's (18.1"x13.4"x8.3" – Wt. = 60 lbs. /each) (Pos.3)**

\*Proposed equipment shown in bold.

Mount fabrication drawings prepared by SitePro1 P/N RMQP-12-H5 dated November 01, 2017, were used to perform this analysis. TEP NE conducted a ground audit of the existing AT&T antenna mount on September 30, 2022.

Mount Analysis Methods:

- This analysis was conducted in accordance with EIA/TIA-222-H, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, the International Building Code 2021 with 2022 Connecticut State Building Code, and AT&T Mount Technical Directive – R22.
- TEP NE considers this mount to be asymmetrical and has applied wind loads in 30 degree increments all around the mount. Per TIA-222-H and Appendix P of the Connecticut State Building Code, the max basic wind speed for this site is equal to 120 mph with a max basic wind speed with ice of 50 mph and a max ice thickness of 1.5 in. An escalated ice thickness of 1.75 in was used for this analysis.
- TEP NE considers this site to be exposure category C; tower is located near large, flat, open, terrain/grasslands.
- TEP NE considers this site to be topographic category 1; tower is located on flat terrain or the bottom of a hill or ridge.
- TEP NE considers this site to have a spectral response acceleration parameter at short periods,  $S_s$ , of 0.172 and a spectral response acceleration parameter at a period of 1 second,  $S_1$ , of 0.055.
- The mount has been analyzed with load combinations consisting of 500 lbs live load using a service wind speed of 30 mph wind on the worst case antenna. Analysis performed on each antenna pipe to determine worst case location; worst case location was antenna position 3.
- The mount has been analyzed with load combinations consisting of a 250 lbs live load in a worst case location on the mount.
- The existing mount is secured to the existing monopole with a ring mount and threaded rods. TEP NE considers the threaded rods to be the governing connection member.

Based on our evaluation, we have determined that the existing mount **IS CAPABLE** of supporting the proposed installation.

|                       | Component | Controlling Load Case | Stress Ratio | Pass/Fail |
|-----------------------|-----------|-----------------------|--------------|-----------|
| Existing Mount Rating | 210       | LC4                   | 73%          | PASS      |

Reference Documents:

- Fabrication drawings prepared by SitePro1 P/N RMQP-12-H5 dated November 01, 2017

This determination was based on the following limitations and assumptions:

1. TEP NE is not responsible for any modifications completed prior to and hereafter which TEP NE was not directly involved.
2. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
3. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
4. The existing mount has been adequately secured to the tower structure per the mount manufacturer's specifications.
5. All components pertaining to AT&T's mount must be tightened and re-plumbed prior to the installation of new appurtenances.
6. TEP NE performed a localized analysis on the mount itself and not on the supporting tower structure.

Please feel free to contact our office should you have any questions.

Respectfully Submitted,  
TEP Northeast



Michael Cabral  
Director



Daniel P. Hamm, PE  
Vice President

FIELD PHOTOS:



FIELD PHOTOS (CONT.):





## Wind & Ice Calculations

Date: 11/3/2022  
 Project Name: BENFIELD EAST  
 Project No.: CT5293  
 Designed By: KSBM Checked By: MSC



**2.6.5.2 Velocity Pressure Coeff:**

$$K_z = 2.01 (z/z_g)^{2/\alpha}$$

$K_z =$  **1.394**

$z =$  158.0 (ft)  
 $z_g =$  900 (ft)  
 $\alpha =$  9.5

$K_{zmin} \leq K_z \leq 2.01$

**Table 2-4**

| Exposure | $Z_g$   | $\alpha$ | $K_{zmin}$ | $K_c$ |
|----------|---------|----------|------------|-------|
| B        | 1200 ft | 7.0      | 0.70       | 0.9   |
| C        | 900 ft  | 9.5      | 0.85       | 1.0   |
| D        | 700 ft  | 11.5     | 1.03       | 1.1   |

**2.6.6.2 Topographic Factor:**

**Table 2-5**

| Topo. Category | $K_t$ | f    |
|----------------|-------|------|
| 2              | 0.43  | 1.25 |
| 3              | 0.53  | 2.0  |
| 4              | 0.72  | 1.5  |

$$K_{zt} = [1 + (K_c K_t / K_h)]^2$$

$$K_h = e^{(fz/H)}$$

$K_{zt} =$  **1**

$K_h =$  1

$K_c =$  1.0 (from Table 2-4)

$K_t =$  0 (from Table 2-5)

$f =$  0 (from Table 2-5)

$z =$  158.0

$z_s =$  177 (Mean elevation of base of structure above sea level)

$H =$  0 (Ht. of the crest above surrounding terrain)

$K_{zt} =$  1.00 (from 2.6.6.2.1)

$K_e =$  0.99 (from 2.6.8)

*(If Category 1 then  $K_{zt} = 1.0$ )*

Category = **1**

**2.6.10 Design Ice Thickness**

Max Ice Thickness =

$t_i =$  1.50 in

Importance Factor =

$I =$  1.00 (from Table 2-3)

$K_{iz} =$  1.17 (from Sec. 2.6.10)

$$t_{iz} = t_i * I * K_{iz} * (K_{zt})^{0.35}$$

$t_{iz} =$  1.75 in

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**2.6.9 Gust Effect Factor**

2.6.9.1 Self Supporting Lattice Structures

$G_h = 1.0$  Latticed Structures > 600 ft

$G_h = 0.85$  Latticed Structures 450 ft or less

$G_h = 0.85 + 0.15 [h/150 - 3.0]$   $h =$  ht. of structure

$h =$  192  $G_h =$  0.85

2.6.9.2 Guyed Masts  $G_h =$  0.85

2.6.9.3 Pole Structures  $G_h =$  1.1

2.6.9 Appurtenances  $G_h =$  1.0

2.6.9.4 Structures Supported on Other Structures

*(Cantilevered tubular or latticed spines, pole, structures on buildings (ht. : width ratio > 5))*

$G_h =$  1.35  $G_h =$  1.00

**2.6.11.2 Design Wind Force on Appurtenances**

$F = q_z * G_h * (EPA)_A$

$q_z = 0.00256 * K_z * K_{zt} * K_s * K_e * K_d * V_{max}^2$

|                |              |
|----------------|--------------|
| $q_z =$        | <b>48.49</b> |
| $q_{z(ice)} =$ | <b>8.42</b>  |
| $q_{z(30)} =$  | <b>3.03</b>  |

|                  |  |
|------------------|--|
| $K_z =$          | 1.394 (from 2.6.5.2)   |
| $K_{zt} =$       | 1.0 (from 2.6.6.2.1)   |
| $K_s =$          | 1.0 (from 2.6.7)   |
| $K_e =$          | 0.99 (from 2.6.8)  |
| $K_d =$          | <span style="background-color: yellow;">0.95</span> (from Table 2-2) |
| $V_{max} =$      | 120 mph (Ultimate Wind Speed)  |
| $V_{max(ice)} =$ | <span style="background-color: yellow;">50</span> mph                |
| $V_{30} =$       | <span style="background-color: gray;">30</span> mph                  |

**Table 2-2**

| Structure Type  | Wind Direction Probability Factor, $K_d$ |
|---|--|
| Latticed structures with triangular, square or rectangular cross sections             | 0.85                                     |
| Tubular pole structures, latticed structures with other cross sections, appurtenances | 0.95                                     |
| Tubular pole structures supporting antennas enclosed within a cylindrical shroud      | 1.00                                     |

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Determine Ca:

**Table 2-9**

| Force Coefficients (Ca) for Appurtenances |                               |                                   |                                   |                                   |
|---|-------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Member Type                               |                               | Aspect Ratio ≤ 2.5                | Aspect Ratio = 7                  | Aspect Ratio ≥ 25                 |
|   |                               | Ca                                | Ca                                | Ca                                |
| Flat                                      |                               | 1.2                               | 1.4                               | 2.0                               |
| Square/Rectangular HSS                    |                               | 1.2 - 2.8(r <sub>s</sub> ) ≥ 0.85 | 1.4 - 4.0(r <sub>s</sub> ) ≥ 0.90 | 2.0 - 6.0(r <sub>s</sub> ) ≥ 1.25 |
| Round                                     | C < 39<br>(Subcritical)       | 0.7                               | 0.8                               | 1.2                               |
|   | 39 ≤ C ≤ 78<br>(Transitional) | 4.14/(C <sup>0.485</sup> )        | 3.66/(C <sup>0.415</sup> )        | 46.8/(C <sup>1.0</sup> )          |
|   | C > 78<br>(Supercritical)     | 0.5                               | 0.6                               | 0.6                               |

Aspect Ratio is the overall length/width ratio in the plane normal to the wind direction.  
 (Aspect ratio is independent of the spacing between support points of a linear appurtenance,  
 Note: Linear interpolation may be used for aspect ratios other than those shown.

Ice Thickness = 1.75 in      Angle = 0 (deg)      Equivalent Angle = 180 (deg)

| Appurtenances                  | Height | Width | Depth | Flat Area | Aspect Ratio | Ca   | Force (lbs) | Force (lbs)<br>(w/ Ice) | Force (lbs)<br>(30 mph) |
|--------------------------------|--------|-------|-------|-----------|--------------|------|-------------|-------------------------|-------------------------|
| HPA-65R-BUU-H8 Antenna         | 92.4   | 14.8  | 7.4   | 9.50      | 6.24         | 1.37 | 629         | 140                     | 39                      |
| 800-10966 Antenna              | 96.0   | 20.0  | 6.9   | 13.33     | 4.80         | 1.30 | 842         | 178                     | 53                      |
| 4415 B30 RRH (Side)            | 16.5   | 5.9   | 13.4  | 0.68      | 2.80         | 1.21 | 40          | 13                      | 2                       |
| 4415 B30 RRH (Shielded)        | 16.5   | 3.0   | 13.4  | 0.34      | 5.59         | 1.34 | 22          | 10                      | 1                       |
| RRUS-2012 B29 RRH (Side)       | 16.5   | 6.4   | 13.4  | 0.73      | 2.58         | 1.20 | 43          | 14                      | 3                       |
| RRUS-2012 B29 RRH (Shielded)   | 16.5   | 3.2   | 13.4  | 0.37      | 5.16         | 1.32 | 23          | 10                      | 1                       |
| 4478 B14 RRH (Side)            | 18.1   | 8.3   | 13.4  | 1.04      | 2.18         | 1.20 | 61          | 18                      | 4                       |
| 4478 B14 RRH (Shielded)        | 18.1   | 4.2   | 13.4  | 0.52      | 4.36         | 1.28 | 32          | 12                      | 2                       |
| 8843 B2/B66A RRH (Side)        | 14.9   | 10.9  | 13.2  | 1.13      | 1.37         | 1.20 | 66          | 19                      | 4                       |
| 8843 B2/B66A RRH (Shielded)    | 14.9   | 5.5   | 13.2  | 0.56      | 2.73         | 1.21 | 33          | 12                      | 2                       |
| 4449 B5/B12 RRH                | 17.9   | 13.2  | 9.4   | 1.64      | 1.36         | 1.20 | 95          | 25                      | 6                       |
| 4449 B5/B12 RRH (Shielded)     | 17.9   | 0.0   | 9.4   | 0.00      | 0.00         | 1.20 | 0           | 5                       | 0                       |
| DC6-48-60-18-8F Surge Arrestor | 31.4   | 10.2  | 10.2  | 2.22      | 3.08         | 0.70 | 75          | 20                      | 5                       |
| DC6-48-60-0-8F Surge Arrestor  | 31.4   | 10.2  | 10.2  | 2.22      | 3.08         | 0.70 | 75          | 20                      | 5                       |
| HSS 4x4                        | 4.0    | 12.0  |       | 0.33      | 0.33         | 1.25 | 20          |                         |                         |
| Plate 6x3/8                    | 6.0    | 12.0  |       | 0.50      | 0.50         | 2.00 | 48          |                         |                         |
| 2x2 Angle                      | 2.0    | 12.0  |       | 0.17      | 0.17         | 2.00 | 16          |                         |                         |
| C 12x2                         | 2.0    | 12.0  |       | 0.17      | 0.17         | 2.00 | 16          |                         |                         |
| 2" Pipe                        | 2.4    | 12.0  |       | 0.20      | 0.20         | 1.20 | 12          |                         |                         |
| 3" Pipe                        | 3.5    | 12.0  |       | 0.29      | 0.29         | 1.20 | 17          |                         |                         |

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**WIND LOADS**

Angle = **30** (deg)

Ice Thickness = **1.75** in.

Equivalent Angle = **210** (deg)

WIND LOADS WITH NO ICE:

| Appurtenances                | Height | Width | Depth | Flat Area (normal) | Flat Area (side) | Aspect Ratio | Aspect Ratio | Ca (normal) | Ca (side) | Force (lbs) | Force (lbs) | Force (lbs) |
|------------------------------|--------|-------|-------|--------------------|------------------|--------------|--------------|-------------|-----------|-------------|-------------|-------------|
| HPA-65R-BUU-H8 Antenna       | 92.4   | 14.8  | 7.4   | 9.50               | 4.75             | 6.24         | 12.49        | 1.37        | 1.58      | 629         | 364         | 563         |
| 800-10966 Antenna            | 96.0   | 20.0  | 6.9   | 13.33              | 4.60             | 4.80         | 13.91        | 1.30        | 1.63      | 842         | 364         | 722         |
| 4415 B30 RRH (Side)          | 16.5   | 5.9   | 13.4  | 0.68               | 1.54             | 2.80         | 1.23         | 1.21        | 1.20      | 40          | 89          | 52          |
| 4415 B30 RRH (Shielded)      | 16.5   | 3.0   | 13.4  | 0.34               | 1.54             | 5.59         | 1.23         | 1.34        | 1.20      | 22          | 89          | 39          |
| RRUS-2012 B29 RRH (Side)     | 16.5   | 6.4   | 13.4  | 0.73               | 1.54             | 2.58         | 1.23         | 1.20        | 1.20      | 43          | 89          | 54          |
| RRUS-2012 B29 RRH (Shielded) | 16.5   | 3.2   | 13.4  | 0.37               | 1.54             | 5.16         | 1.23         | 1.32        | 1.20      | 23          | 89          | 40          |
| 4478 B14 RRH (Side)          | 18.1   | 8.3   | 13.4  | 1.04               | 1.68             | 2.18         | 1.35         | 1.20        | 1.20      | 61          | 98          | 70          |
| 4478 B14 RRH (Shielded)      | 18.1   | 4.2   | 13.4  | 0.52               | 1.68             | 4.36         | 1.35         | 1.28        | 1.20      | 32          | 98          | 49          |
| 8843 B2/B66A RRH (Side)      | 14.9   | 10.9  | 13.2  | 1.13               | 1.37             | 1.37         | 1.13         | 1.20        | 1.20      | 66          | 79          | 69          |
| 8843 B2/B66A RRH (Shielded)  | 14.9   | 5.5   | 13.2  | 0.56               | 1.37             | 2.73         | 1.13         | 1.21        | 1.20      | 33          | 79          | 45          |
| 4449 B5/B12 RRH              | 17.9   | 13.2  | 9.4   | 1.64               | 1.17             | 1.36         | 1.90         | 1.20        | 1.20      | 95          | 68          | 89          |
| 4449 B5/B12 RRH (Shielded)   | 17.9   | 0.0   | 9.4   | 0.00               | 1.17             | 0.00         | 1.90         | 1.20        | 1.20      | 0           | 68          | 17          |

WIND LOADS WITH ICE:

|                              |      |      |      |       |      |      |      |      |      |     |    |     |
|------------------------------|------|------|------|-------|------|------|------|------|------|-----|----|-----|
| HPA-65R-BUU-H8 Antenna       | 95.9 | 18.3 | 10.9 | 12.19 | 7.27 | 5.24 | 8.79 | 1.32 | 1.46 | 136 | 89 | 124 |
| 800-10966 Antenna            | 99.5 | 23.5 | 10.4 | 16.25 | 7.19 | 4.23 | 9.56 | 1.28 | 1.49 | 175 | 90 | 153 |
| 4415 B30 RRH (Side)          | 20.0 | 9.4  | 16.9 | 1.31  | 2.35 | 2.13 | 1.18 | 1.20 | 1.20 | 13  | 24 | 16  |
| 4415 B30 RRH (Shielded)      | 20.0 | 6.5  | 16.9 | 0.90  | 2.35 | 3.10 | 1.18 | 1.23 | 1.20 | 9   | 24 | 13  |
| RRUS-2012 B29 RRH (Side)     | 20.0 | 9.9  | 16.9 | 1.38  | 2.35 | 2.02 | 1.18 | 1.20 | 1.20 | 14  | 24 | 16  |
| RRUS-2012 B29 RRH (Shielded) | 20.0 | 6.7  | 16.9 | 0.93  | 2.35 | 2.98 | 1.18 | 1.22 | 1.20 | 10  | 24 | 13  |
| 4478 B14 RRH (Side)          | 21.6 | 11.8 | 16.9 | 1.77  | 2.54 | 1.83 | 1.28 | 1.20 | 1.20 | 18  | 26 | 20  |
| 4478 B14 RRH (Shielded)      | 21.6 | 7.7  | 16.9 | 1.15  | 2.54 | 2.82 | 1.28 | 1.21 | 1.20 | 12  | 26 | 15  |
| 8843 B2/B66A RRH (Side)      | 18.4 | 14.4 | 16.7 | 1.84  | 2.14 | 1.28 | 1.10 | 1.20 | 1.20 | 19  | 22 | 19  |
| 8843 B2/B66A RRH (Shielded)  | 18.4 | 9.0  | 16.7 | 1.15  | 2.14 | 2.05 | 1.10 | 1.20 | 1.20 | 12  | 22 | 14  |
| 4449 B5/B12 RRH              | 21.4 | 16.7 | 12.9 | 2.48  | 1.92 | 1.28 | 1.66 | 1.20 | 1.20 | 25  | 19 | 24  |
| 4449 B5/B12 RRH (Shielded)   | 21.4 | 3.5  | 12.9 | 0.52  | 1.92 | 6.10 | 1.66 | 1.36 | 1.20 | 6   | 19 | 9   |

WIND LOADS AT 30 MPH:

|                              |      |      |      |       |      |      |       |      |      |    |    |    |
|------------------------------|------|------|------|-------|------|------|-------|------|------|----|----|----|
| HPA-65R-BUU-H8 Antenna       | 92.4 | 14.8 | 7.4  | 9.50  | 4.75 | 6.24 | 12.49 | 1.37 | 1.58 | 39 | 23 | 35 |
| 800-10966 Antenna            | 96.0 | 20.0 | 6.9  | 13.33 | 4.60 | 4.80 | 13.91 | 1.30 | 1.63 | 53 | 23 | 45 |
| 4415 B30 RRH (Side)          | 16.5 | 5.9  | 13.4 | 0.68  | 1.54 | 2.80 | 1.23  | 1.21 | 1.20 | 2  | 6  | 3  |
| 4415 B30 RRH (Shielded)      | 16.5 | 3.0  | 13.4 | 0.34  | 1.54 | 5.59 | 1.23  | 1.34 | 1.20 | 1  | 6  | 2  |
| RRUS-2012 B29 RRH (Side)     | 16.5 | 6.4  | 13.4 | 0.73  | 1.54 | 2.58 | 1.23  | 1.20 | 1.20 | 3  | 6  | 3  |
| RRUS-2012 B29 RRH (Shielded) | 16.5 | 3.2  | 13.4 | 0.37  | 1.54 | 5.16 | 1.23  | 1.32 | 1.20 | 1  | 6  | 2  |
| 4478 B14 RRH (Side)          | 18.1 | 8.3  | 13.4 | 1.04  | 1.68 | 2.18 | 1.35  | 1.20 | 1.20 | 4  | 6  | 4  |
| 4478 B14 RRH (Shielded)      | 18.1 | 4.2  | 13.4 | 0.52  | 1.68 | 4.36 | 1.35  | 1.28 | 1.20 | 2  | 6  | 3  |
| 8843 B2/B66A RRH (Side)      | 14.9 | 10.9 | 13.2 | 1.13  | 1.37 | 1.37 | 1.13  | 1.20 | 1.20 | 4  | 5  | 4  |
| 8843 B2/B66A RRH (Shielded)  | 14.9 | 5.5  | 13.2 | 0.56  | 1.37 | 2.73 | 1.13  | 1.21 | 1.20 | 2  | 5  | 3  |
| 4449 B5/B12 RRH              | 17.9 | 13.2 | 9.4  | 1.64  | 1.17 | 1.36 | 1.90  | 1.20 | 1.20 | 6  | 4  | 6  |
| 4449 B5/B12 RRH (Shielded)   | 17.9 | 0.0  | 9.4  | 0.00  | 1.17 | 0.00 | 1.90  | 1.20 | 1.20 | 0  | 4  | 1  |

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 Designed By: KSBM Checked By: MSC



**WIND LOADS**

Angle = **60** (deg)

Ice Thickness = **1.75** in.

Equivalent Angle = **240** (deg)

**WIND LOADS WITH NO ICE:**

| Appurtenances                | Height | Width | Depth | Flat Area<br>(normal) | Flat Area<br>(side) | Ratio<br>(normal) | Ratio<br>(side) | Ca<br>(normal) | Ca<br>(side) | Force<br>(lbs) | Force<br>(lbs) | Force<br>(lbs) |
|------------------------------|--------|-------|-------|-----------------------|---------------------|-------------------|-----------------|----------------|--------------|----------------|----------------|----------------|
| HPA-65R-BUU-H8 Antenna       | 92.4   | 14.8  | 7.4   | 9.50                  | 4.75                | 6.24              | 12.49           | 1.37           | 1.58         | 629            | 364            | 431            |
| 800-10966 Antenna            | 96.0   | 20.0  | 6.9   | 13.33                 | 4.60                | 4.80              | 13.91           | 1.30           | 1.63         | 842            | 364            | 483            |
| 4415 B30 RRH (Side)          | 16.5   | 5.9   | 13.4  | 0.68                  | 1.54                | 2.80              | 1.23            | 1.21           | 1.20         | 40             | 89             | 77             |
| 4415 B30 RRH (Shielded)      | 16.5   | 3.0   | 13.4  | 0.34                  | 1.54                | 5.59              | 1.23            | 1.34           | 1.20         | 22             | 89             | 72             |
| RRUS-2012 B29 RRH (Side)     | 16.5   | 6.4   | 13.4  | 0.73                  | 1.54                | 2.58              | 1.23            | 1.20           | 1.20         | 43             | 89             | 78             |
| RRUS-2012 B29 RRH (Shielded) | 16.5   | 3.2   | 13.4  | 0.37                  | 1.54                | 5.16              | 1.23            | 1.32           | 1.20         | 23             | 89             | 73             |
| 4478 B14 RRH (Side)          | 18.1   | 8.3   | 13.4  | 1.04                  | 1.68                | 2.18              | 1.35            | 1.20           | 1.20         | 61             | 98             | 89             |
| 4478 B14 RRH (Shielded)      | 18.1   | 4.2   | 13.4  | 0.52                  | 1.68                | 4.36              | 1.35            | 1.28           | 1.20         | 32             | 98             | 82             |
| 8843 B2/B66A RRH (Side)      | 14.9   | 10.9  | 13.2  | 1.13                  | 1.37                | 1.37              | 1.13            | 1.20           | 1.20         | 66             | 79             | 76             |
| 8843 B2/B66A RRH (Shielded)  | 14.9   | 5.5   | 13.2  | 0.56                  | 1.37                | 2.73              | 1.13            | 1.21           | 1.20         | 33             | 79             | 68             |
| 4449 B5/B12 RRH              | 17.9   | 13.2  | 9.4   | 1.64                  | 1.17                | 1.36              | 1.90            | 1.20           | 1.20         | 95             | 68             | 75             |
| 4449 B5/B12 RRH (Shielded)   | 17.9   | 0.0   | 9.4   | 0.00                  | 1.17                | 0.00              | 1.90            | 1.20           | 1.20         | 0              | 68             | 51             |

**WIND LOADS WITH ICE:**

|                              |      |      |      |       |      |      |      |      |      |     |    |     |
|------------------------------|------|------|------|-------|------|------|------|------|------|-----|----|-----|
| HPA-65R-BUU-H8 Antenna       | 95.9 | 18.3 | 10.9 | 12.19 | 7.27 | 5.24 | 8.79 | 1.32 | 1.46 | 136 | 89 | 101 |
| 800-10966 Antenna            | 99.5 | 23.5 | 10.4 | 16.25 | 7.19 | 4.23 | 9.56 | 1.28 | 1.49 | 175 | 90 | 111 |
| 4415 B30 RRH (Side)          | 20.0 | 9.4  | 16.9 | 1.31  | 2.35 | 2.13 | 1.18 | 1.20 | 1.20 | 13  | 24 | 21  |
| 4415 B30 RRH (Shielded)      | 20.0 | 6.5  | 16.9 | 0.90  | 2.35 | 3.10 | 1.18 | 1.23 | 1.20 | 9   | 24 | 20  |
| RRUS-2012 B29 RRH (Side)     | 20.0 | 9.9  | 16.9 | 1.38  | 2.35 | 2.02 | 1.18 | 1.20 | 1.20 | 14  | 24 | 21  |
| RRUS-2012 B29 RRH (Shielded) | 20.0 | 6.7  | 16.9 | 0.93  | 2.35 | 2.98 | 1.18 | 1.22 | 1.20 | 10  | 24 | 20  |
| 4478 B14 RRH (Side)          | 21.6 | 11.8 | 16.9 | 1.77  | 2.54 | 1.83 | 1.28 | 1.20 | 1.20 | 18  | 26 | 24  |
| 4478 B14 RRH (Shielded)      | 21.6 | 7.7  | 16.9 | 1.15  | 2.54 | 2.82 | 1.28 | 1.21 | 1.20 | 12  | 26 | 22  |
| 8843 B2/B66A RRH (Side)      | 18.4 | 14.4 | 16.7 | 1.84  | 2.14 | 1.28 | 1.10 | 1.20 | 1.20 | 19  | 22 | 21  |
| 8843 B2/B66A RRH (Shielded)  | 18.4 | 9.0  | 16.7 | 1.15  | 2.14 | 2.05 | 1.10 | 1.20 | 1.20 | 12  | 22 | 19  |
| 4449 B5/B12 RRH              | 21.4 | 16.7 | 12.9 | 2.48  | 1.92 | 1.28 | 1.66 | 1.20 | 1.20 | 25  | 19 | 21  |
| 4449 B5/B12 RRH (Shielded)   | 21.4 | 3.5  | 12.9 | 0.52  | 1.92 | 6.10 | 1.66 | 1.36 | 1.20 | 6   | 19 | 16  |

**WIND LOADS AT 30 MPH:**

|                              |      |      |      |       |      |      |       |      |      |    |    |    |
|------------------------------|------|------|------|-------|------|------|-------|------|------|----|----|----|
| HPA-65R-BUU-H8 Antenna       | 92.4 | 14.8 | 7.4  | 9.50  | 4.75 | 6.24 | 12.49 | 1.37 | 1.58 | 39 | 23 | 27 |
| 800-10966 Antenna            | 96.0 | 20.0 | 6.9  | 13.33 | 4.60 | 4.80 | 13.91 | 1.30 | 1.63 | 53 | 23 | 30 |
| 4415 B30 RRH (Side)          | 16.5 | 5.9  | 13.4 | 0.68  | 1.54 | 2.80 | 1.23  | 1.21 | 1.20 | 2  | 6  | 5  |
| 4415 B30 RRH (Shielded)      | 16.5 | 3.0  | 13.4 | 0.34  | 1.54 | 5.59 | 1.23  | 1.34 | 1.20 | 1  | 6  | 5  |
| RRUS-2012 B29 RRH (Side)     | 16.5 | 6.4  | 13.4 | 0.73  | 1.54 | 2.58 | 1.23  | 1.20 | 1.20 | 3  | 6  | 5  |
| RRUS-2012 B29 RRH (Shielded) | 16.5 | 3.2  | 13.4 | 0.37  | 1.54 | 5.16 | 1.23  | 1.32 | 1.20 | 1  | 6  | 5  |
| 4478 B14 RRH (Side)          | 18.1 | 8.3  | 13.4 | 1.04  | 1.68 | 2.18 | 1.35  | 1.20 | 1.20 | 4  | 6  | 6  |
| 4478 B14 RRH (Shielded)      | 18.1 | 4.2  | 13.4 | 0.52  | 1.68 | 4.36 | 1.35  | 1.28 | 1.20 | 2  | 6  | 5  |
| 8843 B2/B66A RRH (Side)      | 14.9 | 10.9 | 13.2 | 1.13  | 1.37 | 1.37 | 1.13  | 1.20 | 1.20 | 4  | 5  | 5  |
| 8843 B2/B66A RRH (Shielded)  | 14.9 | 5.5  | 13.2 | 0.56  | 1.37 | 2.73 | 1.13  | 1.21 | 1.20 | 2  | 5  | 4  |
| 4449 B5/B12 RRH              | 17.9 | 13.2 | 9.4  | 1.64  | 1.17 | 1.36 | 1.90  | 1.20 | 1.20 | 6  | 4  | 5  |
| 4449 B5/B12 RRH (Shielded)   | 17.9 | 0.0  | 9.4  | 0.00  | 1.17 | 0.00 | 1.90  | 1.20 | 1.20 | 0  | 4  | 3  |



**WIND LOADS**

Angle = 90 (deg)      Ice Thickness = 1.75 in.      Equivalent Angle = 270 (deg)

**WIND LOADS WITH NO ICE:**

| Appurtenances                | Height | Width | Depth | Flat Area<br>(normal) | Flat Area<br>(side) | Ratio<br>(normal) | Ratio<br>(side) | Ca<br>(normal) | Ca<br>(side) | Force<br>(lbs) | Force<br>(lbs) | Force<br>(lbs) |
|------------------------------|--------|-------|-------|-----------------------|---------------------|-------------------|-----------------|----------------|--------------|----------------|----------------|----------------|
| HPA-65R-BUU-H8 Antenna       | 92.4   | 14.8  | 7.4   | 9.50                  | 4.75                | 6.24              | 12.49           | 1.37           | 1.58         | 629            | 364            | 364            |
| 800-10966 Antenna            | 96.0   | 20.0  | 6.9   | 13.33                 | 4.60                | 4.80              | 13.91           | 1.30           | 1.63         | 842            | 364            | 364            |
| 4415 B30 RRH (Side)          | 16.5   | 5.9   | 13.4  | 0.68                  | 1.54                | 2.80              | 1.23            | 1.21           | 1.20         | 40             | 89             | 89             |
| 4415 B30 RRH (Shielded)      | 16.5   | 3.0   | 13.4  | 0.34                  | 1.54                | 5.59              | 1.23            | 1.34           | 1.20         | 22             | 89             | 89             |
| RRUS-2012 B29 RRH (Side)     | 16.5   | 6.4   | 13.4  | 0.73                  | 1.54                | 2.58              | 1.23            | 1.20           | 1.20         | 43             | 89             | 89             |
| RRUS-2012 B29 RRH (Shielded) | 16.5   | 3.2   | 13.4  | 0.37                  | 1.54                | 5.16              | 1.23            | 1.32           | 1.20         | 23             | 89             | 89             |
| 4478 B14 RRH (Side)          | 18.1   | 8.3   | 13.4  | 1.04                  | 1.68                | 2.18              | 1.35            | 1.20           | 1.20         | 61             | 98             | 98             |
| 4478 B14 RRH (Shielded)      | 18.1   | 4.2   | 13.4  | 0.52                  | 1.68                | 4.36              | 1.35            | 1.28           | 1.20         | 32             | 98             | 98             |
| 8843 B2/B66A RRH (Side)      | 14.9   | 10.9  | 13.2  | 1.13                  | 1.37                | 1.37              | 1.13            | 1.20           | 1.20         | 66             | 79             | 79             |
| 8843 B2/B66A RRH (Shielded)  | 14.9   | 5.5   | 13.2  | 0.56                  | 1.37                | 2.73              | 1.13            | 1.21           | 1.20         | 33             | 79             | 79             |
| 4449 B5/B12 RRH              | 17.9   | 13.2  | 9.4   | 1.64                  | 1.17                | 1.36              | 1.90            | 1.20           | 1.20         | 95             | 68             | 68             |
| 4449 B5/B12 RRH (Shielded)   | 17.9   | 0.0   | 9.4   | 0.00                  | 1.17                | 0.00              | 1.90            | 1.20           | 1.20         | 0              | 68             | 68             |

**WIND LOADS WITH ICE:**

|                              |      |      |      |       |      |      |      |      |      |     |    |    |
|------------------------------|------|------|------|-------|------|------|------|------|------|-----|----|----|
| HPA-65R-BUU-H8 Antenna       | 95.9 | 18.3 | 10.9 | 12.19 | 7.27 | 5.24 | 8.79 | 1.32 | 1.46 | 136 | 89 | 89 |
| 800-10966 Antenna            | 99.5 | 23.5 | 10.4 | 16.25 | 7.19 | 4.23 | 9.56 | 1.28 | 1.49 | 175 | 90 | 90 |
| 4415 B30 RRH (Side)          | 20.0 | 9.4  | 16.9 | 1.31  | 2.35 | 2.13 | 1.18 | 1.20 | 1.20 | 13  | 24 | 24 |
| 4415 B30 RRH (Shielded)      | 20.0 | 6.5  | 16.9 | 0.90  | 2.35 | 3.10 | 1.18 | 1.23 | 1.20 | 9   | 24 | 24 |
| RRUS-2012 B29 RRH (Side)     | 20.0 | 9.9  | 16.9 | 1.38  | 2.35 | 2.02 | 1.18 | 1.20 | 1.20 | 14  | 24 | 24 |
| RRUS-2012 B29 RRH (Shielded) | 20.0 | 6.7  | 16.9 | 0.93  | 2.35 | 2.98 | 1.18 | 1.22 | 1.20 | 10  | 24 | 24 |
| 4478 B14 RRH (Side)          | 21.6 | 11.8 | 16.9 | 1.77  | 2.54 | 1.83 | 1.28 | 1.20 | 1.20 | 18  | 26 | 26 |
| 4478 B14 RRH (Shielded)      | 21.6 | 7.7  | 16.9 | 1.15  | 2.54 | 2.82 | 1.28 | 1.21 | 1.20 | 12  | 26 | 26 |
| 8843 B2/B66A RRH (Side)      | 18.4 | 14.4 | 16.7 | 1.84  | 2.14 | 1.28 | 1.10 | 1.20 | 1.20 | 19  | 22 | 22 |
| 8843 B2/B66A RRH (Shielded)  | 18.4 | 9.0  | 16.7 | 1.15  | 2.14 | 2.05 | 1.10 | 1.20 | 1.20 | 12  | 22 | 22 |
| 4449 B5/B12 RRH              | 21.4 | 16.7 | 12.9 | 2.48  | 1.92 | 1.28 | 1.66 | 1.20 | 1.20 | 25  | 19 | 19 |
| 4449 B5/B12 RRH (Shielded)   | 21.4 | 3.5  | 12.9 | 0.52  | 1.92 | 6.10 | 1.66 | 1.36 | 1.20 | 6   | 19 | 19 |

**WIND LOADS AT 30 MPH:**

|                              |      |      |      |       |      |      |       |      |      |    |    |    |
|------------------------------|------|------|------|-------|------|------|-------|------|------|----|----|----|
| HPA-65R-BUU-H8 Antenna       | 92.4 | 14.8 | 7.4  | 9.50  | 4.75 | 6.24 | 12.49 | 1.37 | 1.58 | 39 | 23 | 23 |
| 800-10966 Antenna            | 96.0 | 20.0 | 6.9  | 13.33 | 4.60 | 4.80 | 13.91 | 1.30 | 1.63 | 53 | 23 | 23 |
| 4415 B30 RRH (Side)          | 16.5 | 5.9  | 13.4 | 0.68  | 1.54 | 2.80 | 1.23  | 1.21 | 1.20 | 2  | 6  | 6  |
| 4415 B30 RRH (Shielded)      | 16.5 | 3.0  | 13.4 | 0.34  | 1.54 | 5.59 | 1.23  | 1.34 | 1.20 | 1  | 6  | 6  |
| RRUS-2012 B29 RRH (Side)     | 16.5 | 6.4  | 13.4 | 0.73  | 1.54 | 2.58 | 1.23  | 1.20 | 1.20 | 3  | 6  | 6  |
| RRUS-2012 B29 RRH (Shielded) | 16.5 | 3.2  | 13.4 | 0.37  | 1.54 | 5.16 | 1.23  | 1.32 | 1.20 | 1  | 6  | 6  |
| 4478 B14 RRH (Side)          | 18.1 | 8.3  | 13.4 | 1.04  | 1.68 | 2.18 | 1.35  | 1.20 | 1.20 | 4  | 6  | 6  |
| 4478 B14 RRH (Shielded)      | 18.1 | 4.2  | 13.4 | 0.52  | 1.68 | 4.36 | 1.35  | 1.28 | 1.20 | 2  | 6  | 6  |
| 8843 B2/B66A RRH (Side)      | 14.9 | 10.9 | 13.2 | 1.13  | 1.37 | 1.37 | 1.13  | 1.20 | 1.20 | 4  | 5  | 5  |
| 8843 B2/B66A RRH (Shielded)  | 14.9 | 5.5  | 13.2 | 0.56  | 1.37 | 2.73 | 1.13  | 1.21 | 1.20 | 2  | 5  | 5  |
| 4449 B5/B12 RRH              | 17.9 | 13.2 | 9.4  | 1.64  | 1.17 | 1.36 | 1.90  | 1.20 | 1.20 | 6  | 4  | 4  |
| 4449 B5/B12 RRH (Shielded)   | 17.9 | 0.0  | 9.4  | 0.00  | 1.17 | 0.00 | 1.90  | 1.20 | 1.20 | 0  | 4  | 4  |



**WIND LOADS**

Angle = **120** (deg)      Ice Thickness = **1.75** in.      Equivalent Angle = **300** (deg)

**WIND LOADS WITH NO ICE:**

| Appurtenances                | Height | Width | Depth | Flat Area<br>(normal) | Flat Area<br>(side) | Ratio<br>(normal) | Ratio<br>(side) | Ca<br>(normal) | Ca<br>(side) | Force<br>(lbs) | Force<br>(lbs) | Force<br>(lbs) |
|------------------------------|--------|-------|-------|-----------------------|---------------------|-------------------|-----------------|----------------|--------------|----------------|----------------|----------------|
| HPA-65R-BUU-H8 Antenna       | 92.4   | 14.8  | 7.4   | 9.50                  | 4.75                | 6.24              | 12.49           | 1.37           | 1.58         | 629            | 364            | 431            |
| 800-10966 Antenna            | 96.0   | 20.0  | 6.9   | 13.33                 | 4.60                | 4.80              | 13.91           | 1.30           | 1.63         | 842            | 364            | 483            |
| 4415 B30 RRH (Side)          | 16.5   | 5.9   | 13.4  | 0.68                  | 1.54                | 2.80              | 1.23            | 1.21           | 1.20         | 40             | 89             | 77             |
| 4415 B30 RRH (Shielded)      | 16.5   | 3.0   | 13.4  | 0.34                  | 1.54                | 5.59              | 1.23            | 1.34           | 1.20         | 22             | 89             | 72             |
| RRUS-2012 B29 RRH (Side)     | 16.5   | 6.4   | 13.4  | 0.73                  | 1.54                | 2.58              | 1.23            | 1.20           | 1.20         | 43             | 89             | 78             |
| RRUS-2012 B29 RRH (Shielded) | 16.5   | 3.2   | 13.4  | 0.37                  | 1.54                | 5.16              | 1.23            | 1.32           | 1.20         | 23             | 89             | 73             |
| 4478 B14 RRH (Side)          | 18.1   | 8.3   | 13.4  | 1.04                  | 1.68                | 2.18              | 1.35            | 1.20           | 1.20         | 61             | 98             | 89             |
| 4478 B14 RRH (Shielded)      | 18.1   | 4.2   | 13.4  | 0.52                  | 1.68                | 4.36              | 1.35            | 1.28           | 1.20         | 32             | 98             | 82             |
| 8843 B2/B66A RRH (Side)      | 14.9   | 10.9  | 13.2  | 1.13                  | 1.37                | 1.37              | 1.13            | 1.20           | 1.20         | 66             | 79             | 76             |
| 8843 B2/B66A RRH (Shielded)  | 14.9   | 5.5   | 13.2  | 0.56                  | 1.37                | 2.73              | 1.13            | 1.21           | 1.20         | 33             | 79             | 68             |
| 4449 B5/B12 RRH              | 17.9   | 13.2  | 9.4   | 1.64                  | 1.17                | 1.36              | 1.90            | 1.20           | 1.20         | 95             | 68             | 75             |
| 4449 B5/B12 RRH (Shielded)   | 17.9   | 0.0   | 9.4   | 0.00                  | 1.17                | 0.00              | 1.90            | 1.20           | 1.20         | 0              | 68             | 51             |

**WIND LOADS WITH ICE:**

|                              |      |      |      |       |      |      |      |      |      |     |    |     |
|------------------------------|------|------|------|-------|------|------|------|------|------|-----|----|-----|
| HPA-65R-BUU-H8 Antenna       | 95.9 | 18.3 | 10.9 | 12.19 | 7.27 | 5.24 | 8.79 | 1.32 | 1.46 | 136 | 89 | 101 |
| 800-10966 Antenna            | 99.5 | 23.5 | 10.4 | 16.25 | 7.19 | 4.23 | 9.56 | 1.28 | 1.49 | 175 | 90 | 111 |
| 4415 B30 RRH (Side)          | 20.0 | 9.4  | 16.9 | 1.31  | 2.35 | 2.13 | 1.18 | 1.20 | 1.20 | 13  | 24 | 21  |
| 4415 B30 RRH (Shielded)      | 20.0 | 6.5  | 16.9 | 0.90  | 2.35 | 3.10 | 1.18 | 1.23 | 1.20 | 9   | 24 | 20  |
| RRUS-2012 B29 RRH (Side)     | 20.0 | 9.9  | 16.9 | 1.38  | 2.35 | 2.02 | 1.18 | 1.20 | 1.20 | 14  | 24 | 21  |
| RRUS-2012 B29 RRH (Shielded) | 20.0 | 6.7  | 16.9 | 0.93  | 2.35 | 2.98 | 1.18 | 1.22 | 1.20 | 10  | 24 | 20  |
| 4478 B14 RRH (Side)          | 21.6 | 11.8 | 16.9 | 1.77  | 2.54 | 1.83 | 1.28 | 1.20 | 1.20 | 18  | 26 | 24  |
| 4478 B14 RRH (Shielded)      | 21.6 | 7.7  | 16.9 | 1.15  | 2.54 | 2.82 | 1.28 | 1.21 | 1.20 | 12  | 26 | 22  |
| 8843 B2/B66A RRH (Side)      | 18.4 | 14.4 | 16.7 | 1.84  | 2.14 | 1.28 | 1.10 | 1.20 | 1.20 | 19  | 22 | 21  |
| 8843 B2/B66A RRH (Shielded)  | 18.4 | 9.0  | 16.7 | 1.15  | 2.14 | 2.05 | 1.10 | 1.20 | 1.20 | 12  | 22 | 19  |
| 4449 B5/B12 RRH              | 21.4 | 16.7 | 12.9 | 2.48  | 1.92 | 1.28 | 1.66 | 1.20 | 1.20 | 25  | 19 | 21  |
| 4449 B5/B12 RRH (Shielded)   | 21.4 | 3.5  | 12.9 | 0.52  | 1.92 | 6.10 | 1.66 | 1.36 | 1.20 | 6   | 19 | 16  |

**WIND LOADS AT 30 MPH:**

|                              |      |      |      |       |      |      |       |      |      |    |    |    |
|------------------------------|------|------|------|-------|------|------|-------|------|------|----|----|----|
| HPA-65R-BUU-H8 Antenna       | 92.4 | 14.8 | 7.4  | 9.50  | 4.75 | 6.24 | 12.49 | 1.37 | 1.58 | 39 | 23 | 27 |
| 800-10966 Antenna            | 96.0 | 20.0 | 6.9  | 13.33 | 4.60 | 4.80 | 13.91 | 1.30 | 1.63 | 53 | 23 | 30 |
| 4415 B30 RRH (Side)          | 16.5 | 5.9  | 13.4 | 0.68  | 1.54 | 2.80 | 1.23  | 1.21 | 1.20 | 2  | 6  | 5  |
| 4415 B30 RRH (Shielded)      | 16.5 | 3.0  | 13.4 | 0.34  | 1.54 | 5.59 | 1.23  | 1.34 | 1.20 | 1  | 6  | 5  |
| RRUS-2012 B29 RRH (Side)     | 16.5 | 6.4  | 13.4 | 0.73  | 1.54 | 2.58 | 1.23  | 1.20 | 1.20 | 3  | 6  | 5  |
| RRUS-2012 B29 RRH (Shielded) | 16.5 | 3.2  | 13.4 | 0.37  | 1.54 | 5.16 | 1.23  | 1.32 | 1.20 | 1  | 6  | 5  |
| 4478 B14 RRH (Side)          | 18.1 | 8.3  | 13.4 | 1.04  | 1.68 | 2.18 | 1.35  | 1.20 | 1.20 | 4  | 6  | 6  |
| 4478 B14 RRH (Shielded)      | 18.1 | 4.2  | 13.4 | 0.52  | 1.68 | 4.36 | 1.35  | 1.28 | 1.20 | 2  | 6  | 5  |
| 8843 B2/B66A RRH (Side)      | 14.9 | 10.9 | 13.2 | 1.13  | 1.37 | 1.37 | 1.13  | 1.20 | 1.20 | 4  | 5  | 5  |
| 8843 B2/B66A RRH (Shielded)  | 14.9 | 5.5  | 13.2 | 0.56  | 1.37 | 2.73 | 1.13  | 1.21 | 1.20 | 2  | 5  | 4  |
| 4449 B5/B12 RRH              | 17.9 | 13.2 | 9.4  | 1.64  | 1.17 | 1.36 | 1.90  | 1.20 | 1.20 | 6  | 4  | 5  |
| 4449 B5/B12 RRH (Shielded)   | 17.9 | 0.0  | 9.4  | 0.00  | 1.17 | 0.00 | 1.90  | 1.20 | 1.20 | 0  | 4  | 3  |

Date: 11/3/2022  
 Project Name: BENFIELD EAST  
 Project No.: CT5293  
 Designed By: KSBM Checked By: MSC



**WIND LOADS**

Angle = **150** (deg)      Ice Thickness = **1.75** in.      Equivalent Angle = **330** (deg)

**WIND LOADS WITH NO ICE:**

| Appurtenances                | Height | Width | Depth | Flat Area<br>(normal) | Flat Area<br>(side) | Ratio<br>(normal) | Ratio<br>(side) | Ca<br>(normal) | Ca<br>(side) | Force<br>(lbs) | Force<br>(lbs) | Force<br>(lbs) |
|------------------------------|--------|-------|-------|-----------------------|---------------------|-------------------|-----------------|----------------|--------------|----------------|----------------|----------------|
| HPA-65R-BUU-H8 Antenna       | 92.4   | 14.8  | 7.4   | 9.50                  | 4.75                | 6.24              | 12.49           | 1.37           | 1.58         | 629            | 364            | 563            |
| 800-10966 Antenna            | 96.0   | 20.0  | 6.9   | 13.33                 | 4.60                | 4.80              | 13.91           | 1.30           | 1.63         | 842            | 364            | 722            |
| 4415 B30 RRH (Side)          | 16.5   | 5.9   | 13.4  | 0.68                  | 1.54                | 2.80              | 1.23            | 1.21           | 1.20         | 40             | 89             | 52             |
| 4415 B30 RRH (Shielded)      | 16.5   | 3.0   | 13.4  | 0.34                  | 1.54                | 5.59              | 1.23            | 1.34           | 1.20         | 22             | 89             | 39             |
| RRUS-2012 B29 RRH (Side)     | 16.5   | 6.4   | 13.4  | 0.73                  | 1.54                | 2.58              | 1.23            | 1.20           | 1.20         | 43             | 89             | 54             |
| RRUS-2012 B29 RRH (Shielded) | 16.5   | 3.2   | 13.4  | 0.37                  | 1.54                | 5.16              | 1.23            | 1.32           | 1.20         | 23             | 89             | 40             |
| 4478 B14 RRH (Side)          | 18.1   | 8.3   | 13.4  | 1.04                  | 1.68                | 2.18              | 1.35            | 1.20           | 1.20         | 61             | 98             | 70             |
| 4478 B14 RRH (Shielded)      | 18.1   | 4.2   | 13.4  | 0.52                  | 1.68                | 4.36              | 1.35            | 1.28           | 1.20         | 32             | 98             | 49             |
| 8843 B2/B66A RRH (Side)      | 14.9   | 10.9  | 13.2  | 1.13                  | 1.37                | 1.37              | 1.13            | 1.20           | 1.20         | 66             | 79             | 69             |
| 8843 B2/B66A RRH (Shielded)  | 14.9   | 5.5   | 13.2  | 0.56                  | 1.37                | 2.73              | 1.13            | 1.21           | 1.20         | 33             | 79             | 45             |
| 4449 B5/B12 RRH              | 17.9   | 13.2  | 9.4   | 1.64                  | 1.17                | 1.36              | 1.90            | 1.20           | 1.20         | 95             | 68             | 89             |
| 4449 B5/B12 RRH (Shielded)   | 17.9   | 0.0   | 9.4   | 0.00                  | 1.17                | 0.00              | 1.90            | 1.20           | 1.20         | 0              | 68             | 17             |

**WIND LOADS WITH ICE:**

|                              |      |      |      |       |      |      |      |      |      |     |    |     |
|------------------------------|------|------|------|-------|------|------|------|------|------|-----|----|-----|
| HPA-65R-BUU-H8 Antenna       | 95.9 | 18.3 | 10.9 | 12.19 | 7.27 | 5.24 | 8.79 | 1.32 | 1.46 | 136 | 89 | 124 |
| 800-10966 Antenna            | 99.5 | 23.5 | 10.4 | 16.25 | 7.19 | 4.23 | 9.56 | 1.28 | 1.49 | 175 | 90 | 153 |
| 4415 B30 RRH (Side)          | 20.0 | 9.4  | 16.9 | 1.31  | 2.35 | 2.13 | 1.18 | 1.20 | 1.20 | 13  | 24 | 16  |
| 4415 B30 RRH (Shielded)      | 20.0 | 6.5  | 16.9 | 0.90  | 2.35 | 3.10 | 1.18 | 1.23 | 1.20 | 9   | 24 | 13  |
| RRUS-2012 B29 RRH (Side)     | 20.0 | 9.9  | 16.9 | 1.38  | 2.35 | 2.02 | 1.18 | 1.20 | 1.20 | 14  | 24 | 16  |
| RRUS-2012 B29 RRH (Shielded) | 20.0 | 6.7  | 16.9 | 0.93  | 2.35 | 2.98 | 1.18 | 1.22 | 1.20 | 10  | 24 | 13  |
| 4478 B14 RRH (Side)          | 21.6 | 11.8 | 16.9 | 1.77  | 2.54 | 1.83 | 1.28 | 1.20 | 1.20 | 18  | 26 | 20  |
| 4478 B14 RRH (Shielded)      | 21.6 | 7.7  | 16.9 | 1.15  | 2.54 | 2.82 | 1.28 | 1.21 | 1.20 | 12  | 26 | 15  |
| 8843 B2/B66A RRH (Side)      | 18.4 | 14.4 | 16.7 | 1.84  | 2.14 | 1.28 | 1.10 | 1.20 | 1.20 | 19  | 22 | 19  |
| 8843 B2/B66A RRH (Shielded)  | 18.4 | 9.0  | 16.7 | 1.15  | 2.14 | 2.05 | 1.10 | 1.20 | 1.20 | 12  | 22 | 14  |
| 4449 B5/B12 RRH              | 21.4 | 16.7 | 12.9 | 2.48  | 1.92 | 1.28 | 1.66 | 1.20 | 1.20 | 25  | 19 | 24  |
| 4449 B5/B12 RRH (Shielded)   | 21.4 | 3.5  | 12.9 | 0.52  | 1.92 | 6.10 | 1.66 | 1.36 | 1.20 | 6   | 19 | 9   |

**WIND LOADS AT 30 MPH:**

|                              |      |      |      |       |      |      |       |      |      |    |    |    |
|------------------------------|------|------|------|-------|------|------|-------|------|------|----|----|----|
| HPA-65R-BUU-H8 Antenna       | 92.4 | 14.8 | 7.4  | 9.50  | 4.75 | 6.24 | 12.49 | 1.37 | 1.58 | 39 | 23 | 35 |
| 800-10966 Antenna            | 96.0 | 20.0 | 6.9  | 13.33 | 4.60 | 4.80 | 13.91 | 1.30 | 1.63 | 53 | 23 | 45 |
| 4415 B30 RRH (Side)          | 16.5 | 5.9  | 13.4 | 0.68  | 1.54 | 2.80 | 1.23  | 1.21 | 1.20 | 2  | 6  | 3  |
| 4415 B30 RRH (Shielded)      | 16.5 | 3.0  | 13.4 | 0.34  | 1.54 | 5.59 | 1.23  | 1.34 | 1.20 | 1  | 6  | 2  |
| RRUS-2012 B29 RRH (Side)     | 16.5 | 6.4  | 13.4 | 0.73  | 1.54 | 2.58 | 1.23  | 1.20 | 1.20 | 3  | 6  | 3  |
| RRUS-2012 B29 RRH (Shielded) | 16.5 | 3.2  | 13.4 | 0.37  | 1.54 | 5.16 | 1.23  | 1.32 | 1.20 | 1  | 6  | 2  |
| 4478 B14 RRH (Side)          | 18.1 | 8.3  | 13.4 | 1.04  | 1.68 | 2.18 | 1.35  | 1.20 | 1.20 | 4  | 6  | 4  |
| 4478 B14 RRH (Shielded)      | 18.1 | 4.2  | 13.4 | 0.52  | 1.68 | 4.36 | 1.35  | 1.28 | 1.20 | 2  | 6  | 3  |
| 8843 B2/B66A RRH (Side)      | 14.9 | 10.9 | 13.2 | 1.13  | 1.37 | 1.37 | 1.13  | 1.20 | 1.20 | 4  | 5  | 4  |
| 8843 B2/B66A RRH (Shielded)  | 14.9 | 5.5  | 13.2 | 0.56  | 1.37 | 2.73 | 1.13  | 1.21 | 1.20 | 2  | 5  | 3  |
| 4449 B5/B12 RRH              | 17.9 | 13.2 | 9.4  | 1.64  | 1.17 | 1.36 | 1.90  | 1.20 | 1.20 | 6  | 4  | 6  |
| 4449 B5/B12 RRH (Shielded)   | 17.9 | 0.0  | 9.4  | 0.00  | 1.17 | 0.00 | 1.90  | 1.20 | 1.20 | 0  | 4  | 1  |

Date: 11/3/2022

Project Name: ENFIELD EAST

Project No.: CT5293

Designed By: KSBM Checked By: MSC



ICE WEIGHT CALCULATIONS

Thickness of ice: 1.75 in.
Density of ice: 56 pcf

HPA-65R-BUU-H8 Antenna

Weight of ice based on total radial SF area:
Height (in): 92.4
Width (in): 14.8
Depth (in): 7.4
Total weight of ice on object: 301 lbs
Weight of object: 68.0 lbs
Combined weight of ice and object: 369 lbs

800-10966 Antenna

Weight of ice based on total radial SF area:
Height (in): 96.0
Width (in): 20.0
Depth (in): 6.9
Total weight of ice on object: 392 lbs
Weight of object: 115.0 lbs
Combined weight of ice and object: 507 lbs

4415 B30 RRH

Weight of ice based on total radial SF area:
Height (in): 16.5
Width (in): 13.4
Depth (in): 5.9
Total weight of ice on object: 48 lbs
Weight of object: 46.0 lbs
Combined weight of ice and object: 94 lbs

RRUS-2012 B29 RRH

Weight of ice based on total radial SF area:
Height (in): 16.5
Width (in): 13.4
Depth (in): 6.4
Total weight of ice on object: 49 lbs
Weight of object: 46.0 lbs
Combined weight of ice and object: 95 lbs

4478 B14 RRH

Weight of ice based on total radial SF area:
Height (in): 18.1
Width (in): 13.4
Depth (in): 8.3
Total weight of ice on object: 56 lbs
Weight of object: 60.0 lbs
Combined weight of ice and object: 116 lbs

8843 B2/B66A RRH

Weight of ice based on total radial SF area:
Height (in): 14.9
Width (in): 13.2
Depth (in): 10.9
Total weight of ice on object: 50 lbs
Weight of object: 72.0 lbs
Combined weight of ice and object: 122 lbs

4449 B5/B12 RRH

Weight of ice based on total radial SF area:
Height (in): 17.9
Width (in): 13.2
Depth (in): 9.4
Total weight of ice on object: 57 lbs
Weight of object: 73.0 lbs
Combined weight of ice and object: 130 lbs

DC6-48-60-18-8F Surge Arrestor

Weight of ice based on total radial SF area:
Depth (in): 31.4
Diameter(in): 10.2
Total weight of ice on object: 67 lbs
Weight of object: 29 lbs
Combined weight of ice and object: 96 lbs

DC6-48-60-0-8F Surge Arrestor

Weight of ice based on total radial SF area:
Depth (in): 31.4
Diameter(in): 10.2
Total weight of ice on object: 67 lbs
Weight of object: 29 lbs
Combined weight of ice and object: 96 lbs

2" pipe

Per foot weight of ice:
diameter (in): 2.38
Per foot weight of ice on object: 9 plf

3" Pipe

Per foot weight of ice:
diameter (in): 3.5
Per foot weight of ice on object: 11 plf

C 12x2

Weight of ice based on total radial SF area:
Height (in): 12
Width (in): 2
Per foot weight of ice on object: 30 plf

PL 6x3/8

Weight of ice based on total radial SF area:
Height (in): 6
Width (in): 0.38
Per foot weight of ice on object: 17 plf

HSS 4x4

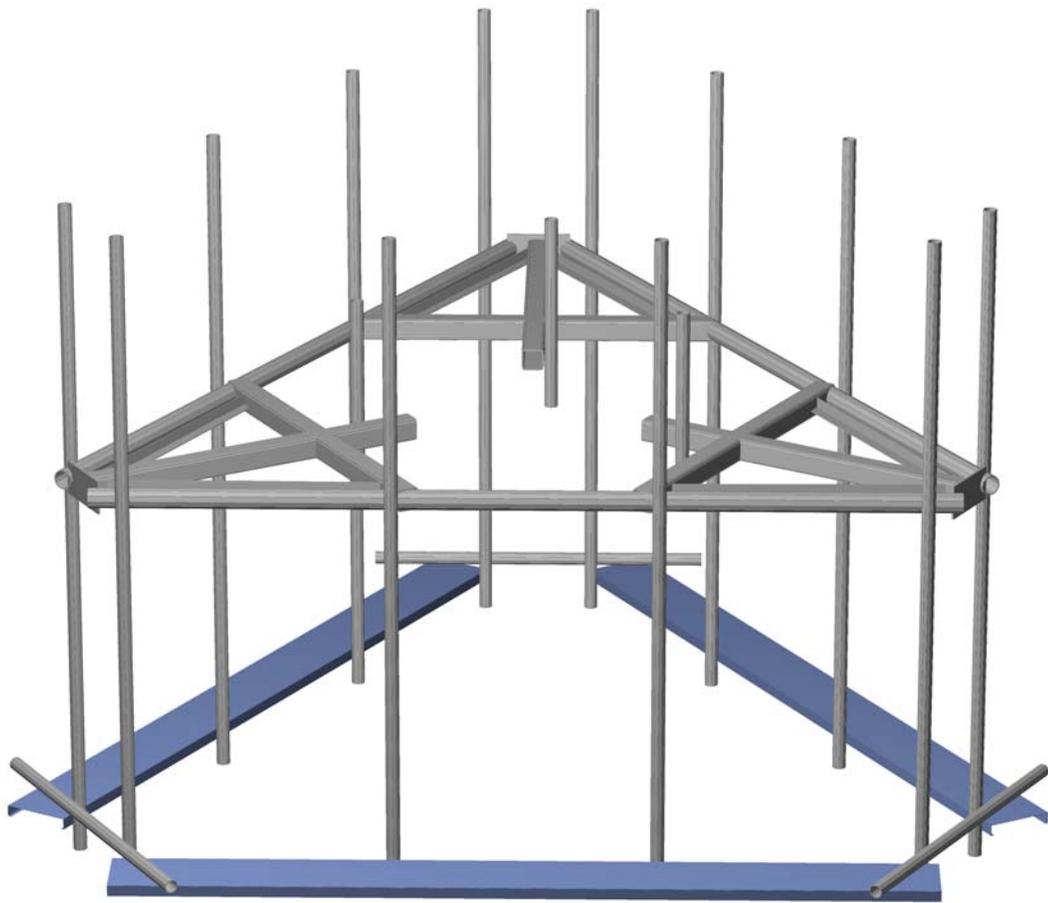
Weight of ice based on total radial SF area:
Height (in): 4
Width (in): 4
Per foot weight of ice on object: 16 plf

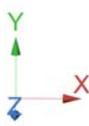
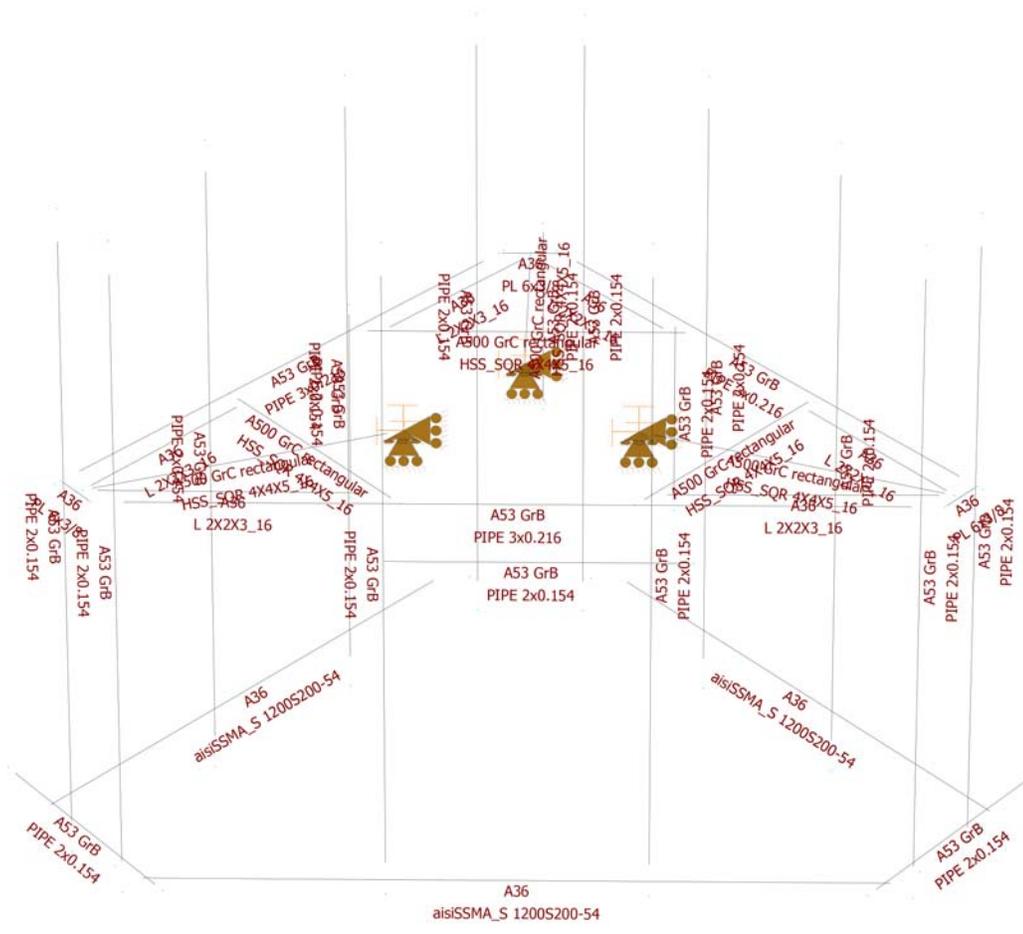
L 2x2 Angles

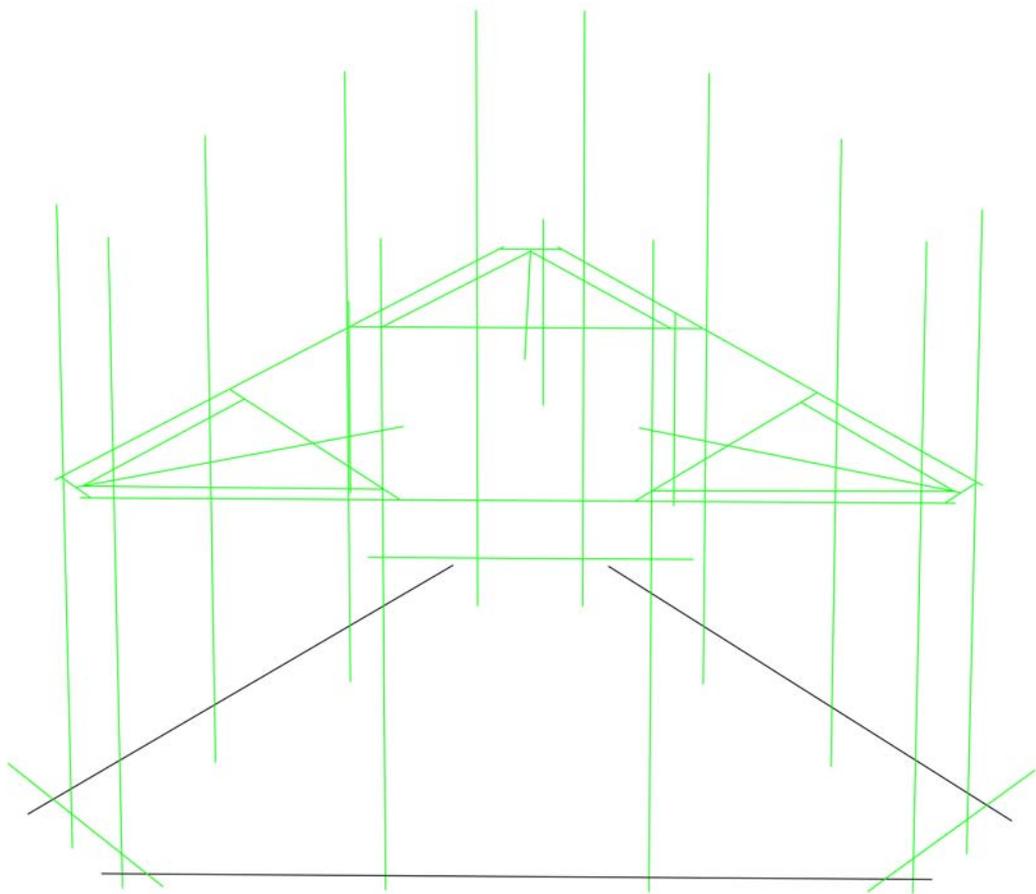
Weight of ice based on total radial SF area:
Height (in): 2
Width (in): 2
Per foot weight of ice on object: 10 plf

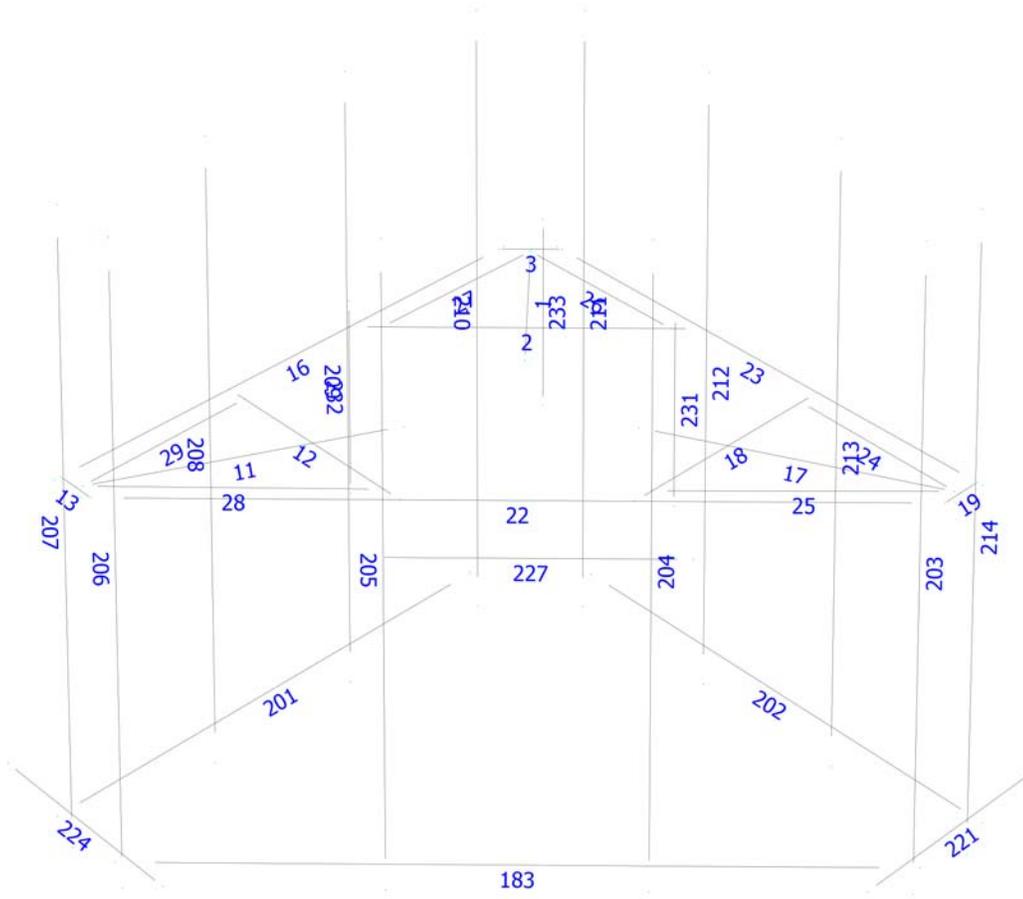


**Mount Calculations  
(Existing Conditions)**









## Load data

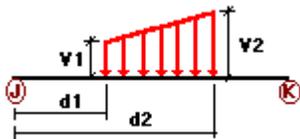
### GLOSSARY

Comb : Indicates if load condition is a load combination

### Load Conditions

| Condition | Description                      | Comb. | Category |
|-----------|----------------------------------|-------|----------|
| DL        | Dead Load                        | No    | DL       |
| W0        | Wind Load 0/60/120 deg           | No    | WIND     |
| W30       | Wind Load 30/90/150 deg          | No    | WIND     |
| Di        | Ice Load                         | No    | LL       |
| Wi0       | Ice Wind Load 0/60/120 deg       | No    | WIND     |
| Wi30      | Ice Wind Load 30/90/150 deg      | No    | WIND     |
| WL0       | WL 30 mph 0/60/120 deg           | No    | WIND     |
| WL30      | WL 30 mph 30/90/150 deg          | No    | WIND     |
| LL1       | 250 lb Live Load Center of Mount | No    | LL       |
| LL2       | 250 lb Live Load End of Mount    | No    | LL       |
| LLa1      | 500 lb Live Load Antenna 1       | No    | LL       |
| LLa2      | 500 lb Live Load Antenna 2       | No    | LL       |
| LLa3      | 500 lb Live Load Antenna 3       | No    | LL       |
| LLa4      | 500 lb Live Load Antenna 4       | No    | LL       |

### Distributed force on members



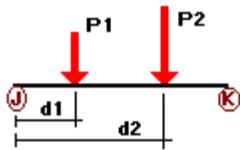
| Condition | Member | Dir1 | Val1<br>[Kip/ft] | Val2<br>[Kip/ft] | Dist1<br>[ft] | %  | Dist2<br>[ft] | %   |
|-----------|--------|------|------------------|------------------|---------------|----|---------------|-----|
| DL        | 1      | y    | -0.01            | -0.01            | 1.50          | No | 100.00        | Yes |
|           | 2      | y    | -0.01            | 0.00             | 0.00          | No | 0.00          | No  |
|           | 11     | y    | -0.01            | -0.01            | 1.50          | No | 100.00        | Yes |
|           | 12     | y    | -0.01            | 0.00             | 0.00          | No | 0.00          | No  |
|           | 17     | y    | -0.01            | -0.01            | 1.50          | No | 100.00        | Yes |
|           | 18     | y    | -0.01            | 0.00             | 0.00          | No | 0.00          | No  |
|           | 24     | y    | -0.01            | 0.00             | 0.00          | No | 0.00          | No  |
|           | 25     | y    | -0.01            | 0.00             | 0.00          | No | 0.00          | No  |
|           | 26     | y    | -0.01            | 0.00             | 0.00          | No | 0.00          | No  |
|           | 27     | y    | -0.01            | 0.00             | 0.00          | No | 0.00          | No  |
|           | 28     | y    | -0.01            | 0.00             | 0.00          | No | 0.00          | No  |
| W0        | 183    | y    | -0.01            | 0.00             | 0.00          | No | 0.00          | No  |
|           | 201    | y    | -0.01            | 0.00             | 0.00          | No | 0.00          | No  |
|           | 202    | y    | -0.01            | 0.00             | 0.00          | No | 0.00          | No  |
|           | 1      | z    | -0.02            | 0.00             | 0.00          | No | 0.00          | No  |

|     |     |   |        |      |      |    |      |    |
|-----|-----|---|--------|------|------|----|------|----|
|     | 2   | z | -0.02  | 0.00 | 0.00 | No | 0.00 | No |
|     | 3   | z | -0.048 | 0.00 | 0.00 | No | 0.00 | No |
|     | 11  | z | -0.02  | 0.00 | 0.00 | No | 0.00 | No |
|     | 12  | z | -0.02  | 0.00 | 0.00 | No | 0.00 | No |
|     | 13  | z | -0.048 | 0.00 | 0.00 | No | 0.00 | No |
|     | 16  | z | -0.017 | 0.00 | 0.00 | No | 0.00 | No |
|     | 17  | z | -0.02  | 0.00 | 0.00 | No | 0.00 | No |
|     | 18  | z | -0.02  | 0.00 | 0.00 | No | 0.00 | No |
|     | 19  | z | -0.048 | 0.00 | 0.00 | No | 0.00 | No |
|     | 22  | z | -0.017 | 0.00 | 0.00 | No | 0.00 | No |
|     | 23  | z | -0.017 | 0.00 | 0.00 | No | 0.00 | No |
|     | 24  | z | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 25  | z | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 26  | z | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 27  | z | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 28  | z | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 29  | z | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 183 | z | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 201 | z | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 202 | z | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 203 | z | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 207 | z | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 208 | z | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 209 | z | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 210 | z | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 211 | z | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 212 | z | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 213 | z | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 214 | z | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 221 | z | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 224 | z | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 227 | z | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 231 | z | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 232 | z | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 233 | z | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
| W30 | 1   | x | -0.02  | 0.00 | 0.00 | No | 0.00 | No |
|     | 2   | x | -0.02  | 0.00 | 0.00 | No | 0.00 | No |
|     | 3   | x | -0.048 | 0.00 | 0.00 | No | 0.00 | No |
|     | 11  | x | -0.02  | 0.00 | 0.00 | No | 0.00 | No |
|     | 12  | x | -0.02  | 0.00 | 0.00 | No | 0.00 | No |
|     | 13  | x | -0.048 | 0.00 | 0.00 | No | 0.00 | No |
|     | 16  | x | -0.017 | 0.00 | 0.00 | No | 0.00 | No |
|     | 17  | x | -0.02  | 0.00 | 0.00 | No | 0.00 | No |
|     | 18  | x | -0.02  | 0.00 | 0.00 | No | 0.00 | No |
|     | 19  | x | -0.048 | 0.00 | 0.00 | No | 0.00 | No |
|     | 23  | x | -0.017 | 0.00 | 0.00 | No | 0.00 | No |
|     | 24  | x | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 25  | x | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 26  | x | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 27  | x | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 28  | x | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 29  | x | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 201 | x | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 202 | x | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|     | 203 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 204 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 205 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 206 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 207 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|     | 208 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |

|    |     |   |        |      |      |    |      |    |
|----|-----|---|--------|------|------|----|------|----|
|    | 209 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|    | 210 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|    | 211 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|    | 212 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|    | 213 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|    | 214 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|    | 221 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|    | 224 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|    | 227 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|    | 231 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|    | 232 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
|    | 233 | x | -0.012 | 0.00 | 0.00 | No | 0.00 | No |
| Di | 1   | y | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|    | 2   | y | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|    | 3   | y | -0.017 | 0.00 | 0.00 | No | 0.00 | No |
|    | 11  | y | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|    | 12  | y | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|    | 13  | y | -0.017 | 0.00 | 0.00 | No | 0.00 | No |
|    | 16  | y | -0.011 | 0.00 | 0.00 | No | 0.00 | No |
|    | 17  | y | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|    | 18  | y | -0.016 | 0.00 | 0.00 | No | 0.00 | No |
|    | 19  | y | -0.017 | 0.00 | 0.00 | No | 0.00 | No |
|    | 22  | y | -0.011 | 0.00 | 0.00 | No | 0.00 | No |
|    | 23  | y | -0.011 | 0.00 | 0.00 | No | 0.00 | No |
|    | 24  | y | -0.01  | 0.00 | 0.00 | No | 0.00 | No |
|    | 25  | y | -0.01  | 0.00 | 0.00 | No | 0.00 | No |
|    | 26  | y | -0.01  | 0.00 | 0.00 | No | 0.00 | No |
|    | 27  | y | -0.01  | 0.00 | 0.00 | No | 0.00 | No |
|    | 28  | y | -0.01  | 0.00 | 0.00 | No | 0.00 | No |
|    | 29  | y | -0.01  | 0.00 | 0.00 | No | 0.00 | No |
|    | 183 | y | -0.03  | 0.00 | 0.00 | No | 0.00 | No |
|    | 201 | y | -0.03  | 0.00 | 0.00 | No | 0.00 | No |
|    | 202 | y | -0.03  | 0.00 | 0.00 | No | 0.00 | No |
|    | 203 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 204 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 205 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 206 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 207 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 208 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 209 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 210 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 211 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 212 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 213 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 214 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 221 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 224 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 227 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 231 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 232 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |
|    | 233 | y | -0.009 | 0.00 | 0.00 | No | 0.00 | No |

---

### Concentrated forces on members



| Condition | Member | Dir1   | Value1<br>[Kip] | Dist1<br>[ft] | %   |
|-----------|--------|--------|-----------------|---------------|-----|
| DL        | 204    | y      | -0.034          | 1.00          | No  |
|           |        | y      | -0.034          | 8.00          | No  |
|           |        | y      | -0.046          | 3.00          | No  |
|           |        | y      | -0.046          | 3.00          | No  |
|           | 205    | y      | -0.058          | 1.00          | No  |
|           |        | y      | -0.058          | 8.00          | No  |
|           |        | y      | -0.06           | 3.00          | No  |
|           |        | y      | -0.072          | 3.00          | No  |
|           | 206    | y      | -0.058          | 1.00          | No  |
|           |        | y      | -0.058          | 8.00          | No  |
|           |        | y      | -0.073          | 3.00          | No  |
|           | 208    | y      | -0.034          | 1.00          | No  |
|           |        | y      | -0.034          | 8.00          | No  |
|           |        | y      | -0.046          | 3.00          | No  |
|           | 209    | y      | -0.046          | 3.00          | No  |
|           |        | y      | -0.058          | 1.00          | No  |
|           |        | y      | -0.058          | 8.00          | No  |
|           |        | y      | -0.06           | 3.00          | No  |
|           | 210    | y      | -0.072          | 3.00          | No  |
|           |        | y      | -0.058          | 1.00          | No  |
|           |        | y      | -0.058          | 8.00          | No  |
|           |        | y      | -0.073          | 3.00          | No  |
|           | 212    | y      | -0.073          | 3.00          | No  |
|           |        | y      | -0.034          | 1.00          | No  |
|           |        | y      | -0.034          | 8.00          | No  |
|           |        | y      | -0.046          | 3.00          | No  |
|           | 213    | y      | -0.046          | 3.00          | No  |
|           |        | y      | -0.058          | 1.00          | No  |
|           |        | y      | -0.058          | 8.00          | No  |
|           |        | y      | -0.06           | 3.00          | No  |
|           | 214    | y      | -0.072          | 3.00          | No  |
|           |        | y      | -0.058          | 1.00          | No  |
|           |        | y      | -0.058          | 8.00          | No  |
|           |        | y      | -0.073          | 3.00          | No  |
|           | 231    | y      | -0.029          | 50.00         | Yes |
|           |        | y      | -0.029          | 50.00         | Yes |
| y         |        | -0.029 | 50.00           | Yes           |     |
| W0        | 204    | z      | -0.315          | 1.00          | No  |
|           |        | z      | -0.315          | 8.00          | No  |
|           |        | z      | -0.022          | 3.00          | No  |
|           |        | z      | -0.023          | 3.00          | No  |
|           | 205    | z      | -0.421          | 1.00          | No  |
|           |        | z      | -0.421          | 8.00          | No  |
|           |        | z      | -0.032          | 3.00          | No  |
|           |        | z      | -0.033          | 3.00          | No  |
|           | 206    | z      | -0.421          | 1.00          | No  |
|           |        | z      | -0.421          | 8.00          | No  |
|           | 208    | z      | -0.216          | 1.00          | No  |
|           |        | z      | -0.216          | 8.00          | No  |
|           |        | z      | -0.073          | 3.00          | No  |
|           |        | z      | -0.073          | 3.00          | No  |
|           | 209    | z      | -0.242          | 1.00          | No  |
|           |        | z      | -0.242          | 8.00          | No  |
|           |        | z      | -0.082          | 3.00          | No  |
|           |        | z      | -0.082          | 3.00          | No  |
|           | 210    | z      | -0.242          | 1.00          | No  |
|           |        | z      | -0.242          | 8.00          | No  |

|     |     |   |        |       |     |
|-----|-----|---|--------|-------|-----|
|     |     | z | -0.051 | 3.00  | No  |
|     | 212 | z | -0.216 | 1.00  | No  |
|     |     | z | -0.216 | 8.00  | No  |
|     |     | z | -0.073 | 3.00  | No  |
|     | 213 | z | -0.242 | 1.00  | No  |
|     |     | z | -0.242 | 8.00  | No  |
|     |     | z | -0.082 | 3.00  | No  |
|     | 214 | z | -0.242 | 1.00  | No  |
|     |     | z | -0.242 | 8.00  | No  |
|     |     | z | -0.051 | 3.00  | No  |
|     | 231 | z | -0.075 | 50.00 | Yes |
|     | 232 | z | -0.075 | 50.00 | Yes |
|     | 233 | z | -0.075 | 50.00 | Yes |
| W30 | 204 | x | -0.183 | 1.00  | No  |
|     |     | x | -0.183 | 8.00  | No  |
|     |     | x | -0.089 | 3.00  | No  |
|     | 205 | x | -0.182 | 1.00  | No  |
|     |     | x | -0.182 | 8.00  | No  |
|     |     | x | -0.098 | 3.00  | No  |
|     | 206 | x | -0.182 | 1.00  | No  |
|     |     | x | -0.182 | 8.00  | No  |
|     |     | x | -0.068 | 3.00  | No  |
|     | 208 | x | -0.282 | 1.00  | No  |
|     |     | x | -0.282 | 8.00  | No  |
|     |     | x | -0.04  | 3.00  | No  |
|     | 209 | x | -0.362 | 1.00  | No  |
|     |     | x | -0.362 | 8.00  | No  |
|     |     | x | -0.049 | 3.00  | No  |
|     | 210 | x | -0.362 | 1.00  | No  |
|     |     | x | -0.362 | 8.00  | No  |
|     |     | x | -0.017 | 3.00  | No  |
|     | 212 | x | -0.282 | 1.00  | No  |
|     |     | x | -0.282 | 8.00  | No  |
|     |     | x | -0.04  | 3.00  | No  |
|     | 213 | x | -0.362 | 1.00  | No  |
|     |     | x | -0.362 | 8.00  | No  |
|     |     | x | -0.049 | 3.00  | No  |
|     | 214 | x | -0.362 | 1.00  | No  |
|     |     | x | -0.362 | 8.00  | No  |
|     |     | x | -0.017 | 3.00  | No  |
|     | 231 | x | -0.075 | 50.00 | Yes |
|     | 232 | x | -0.075 | 50.00 | Yes |
|     | 233 | x | -0.075 | 50.00 | Yes |
| Di  | 204 | y | -0.151 | 1.00  | No  |
|     |     | y | -0.151 | 8.00  | No  |
|     |     | y | -0.048 | 3.00  | No  |
|     |     | y | -0.049 | 3.00  | No  |
|     | 205 | y | -0.196 | 1.00  | No  |
|     |     | y | -0.196 | 8.00  | No  |
|     |     | y | -0.056 | 3.00  | No  |
|     |     | y | -0.05  | 3.00  | No  |
|     | 206 | y | -0.196 | 1.00  | No  |
|     |     | y | -0.196 | 8.00  | No  |
|     |     | y | -0.057 | 3.00  | No  |
|     | 208 | y | -0.151 | 1.00  | No  |
|     |     | y | -0.151 | 8.00  | No  |
|     |     | y | -0.048 | 3.00  | No  |
|     |     | y | -0.049 | 3.00  | No  |
|     | 209 | y | -0.196 | 1.00  | No  |
|     |     | y | -0.196 | 8.00  | No  |

|      |     |   |        |       |     |
|------|-----|---|--------|-------|-----|
|      |     | y | -0.056 | 3.00  | No  |
|      |     | y | -0.05  | 3.00  | No  |
|      | 210 | y | -0.196 | 1.00  | No  |
|      |     | y | -0.196 | 8.00  | No  |
|      |     | y | -0.057 | 3.00  | No  |
|      | 212 | y | -0.151 | 1.00  | No  |
|      |     | y | -0.151 | 8.00  | No  |
|      |     | y | -0.048 | 3.00  | No  |
|      |     | y | -0.049 | 3.00  | No  |
|      | 213 | y | -0.196 | 1.00  | No  |
|      |     | y | -0.196 | 8.00  | No  |
|      |     | y | -0.056 | 3.00  | No  |
|      |     | y | -0.05  | 3.00  | No  |
|      | 214 | y | -0.196 | 1.00  | No  |
|      |     | y | -0.196 | 8.00  | No  |
|      |     | y | -0.057 | 3.00  | No  |
|      | 231 | y | -0.067 | 50.00 | Yes |
|      | 232 | y | -0.067 | 50.00 | Yes |
|      | 233 | y | -0.067 | 50.00 | Yes |
| Wi0  | 204 | z | -0.071 | 1.00  | No  |
|      |     | z | -0.071 | 8.00  | No  |
|      |     | z | -0.01  | 3.00  | No  |
|      |     | z | -0.01  | 3.00  | No  |
|      | 205 | z | -0.09  | 1.00  | No  |
|      |     | z | -0.09  | 8.00  | No  |
|      |     | z | -0.012 | 3.00  | No  |
|      |     | z | -0.012 | 3.00  | No  |
|      | 206 | z | -0.09  | 1.00  | No  |
|      |     | z | -0.09  | 8.00  | No  |
|      |     | z | -0.005 | 3.00  | No  |
|      | 208 | z | -0.051 | 1.00  | No  |
|      |     | z | -0.051 | 8.00  | No  |
|      |     | z | -0.02  | 3.00  | No  |
|      | 209 | z | -0.056 | 1.00  | No  |
|      |     | z | -0.056 | 8.00  | No  |
|      |     | z | -0.022 | 3.00  | No  |
|      | 210 | z | -0.056 | 1.00  | No  |
|      |     | z | -0.056 | 8.00  | No  |
|      |     | z | -0.016 | 3.00  | No  |
|      | 212 | z | -0.051 | 1.00  | No  |
|      |     | z | -0.051 | 8.00  | No  |
|      |     | z | -0.02  | 3.00  | No  |
|      | 213 | z | -0.056 | 1.00  | No  |
|      |     | z | -0.056 | 8.00  | No  |
|      |     | z | -0.022 | 3.00  | No  |
|      | 214 | z | -0.056 | 1.00  | No  |
|      |     | z | -0.056 | 8.00  | No  |
|      |     | z | -0.016 | 3.00  | No  |
|      | 231 | z | -0.02  | 50.00 | Yes |
|      | 232 | z | -0.02  | 50.00 | Yes |
|      | 233 | z | -0.02  | 50.00 | Yes |
| Wi30 | 204 | x | -0.045 | 1.00  | No  |
|      |     | x | -0.045 | 8.00  | No  |
|      |     | x | -0.024 | 3.00  | No  |
|      | 205 | x | -0.045 | 1.00  | No  |
|      |     | x | -0.045 | 8.00  | No  |
|      |     | x | -0.026 | 3.00  | No  |
|      | 206 | x | -0.045 | 1.00  | No  |
|      |     | x | -0.045 | 8.00  | No  |
|      |     | x | -0.019 | 3.00  | No  |

|      |     |   |        |       |     |
|------|-----|---|--------|-------|-----|
|      | 208 | x | -0.063 | 1.00  | No  |
|      |     | x | -0.063 | 8.00  | No  |
|      |     | x | -0.013 | 3.00  | No  |
|      | 209 | x | -0.077 | 1.00  | No  |
|      |     | x | -0.077 | 8.00  | No  |
|      |     | x | -0.015 | 3.00  | No  |
|      | 210 | x | -0.077 | 1.00  | No  |
|      |     | x | -0.077 | 8.00  | No  |
|      |     | x | -0.009 | 3.00  | No  |
|      | 212 | x | -0.063 | 1.00  | No  |
|      |     | x | -0.063 | 8.00  | No  |
|      |     | x | -0.013 | 3.00  | No  |
|      | 213 | x | -0.077 | 1.00  | No  |
|      |     | x | -0.077 | 8.00  | No  |
|      |     | x | -0.015 | 3.00  | No  |
|      | 214 | x | -0.077 | 1.00  | No  |
|      |     | x | -0.077 | 8.00  | No  |
|      |     | x | -0.009 | 3.00  | No  |
|      | 231 | x | -0.02  | 50.00 | Yes |
|      | 232 | x | -0.02  | 50.00 | Yes |
|      | 233 | x | -0.02  | 50.00 | Yes |
| WLO  | 204 | z | -0.02  | 1.00  | No  |
|      |     | z | -0.02  | 8.00  | No  |
|      |     | z | -0.001 | 3.00  | No  |
|      |     | z | -0.001 | 3.00  | No  |
|      | 205 | z | -0.027 | 1.00  | No  |
|      |     | z | -0.027 | 8.00  | No  |
|      |     | z | -0.002 | 3.00  | No  |
|      |     | z | -0.002 | 3.00  | No  |
|      | 206 | z | -0.027 | 1.00  | No  |
|      |     | z | -0.027 | 8.00  | No  |
|      | 208 | z | -0.014 | 1.00  | No  |
|      |     | z | -0.014 | 8.00  | No  |
|      |     | z | -0.005 | 3.00  | No  |
|      | 209 | z | -0.016 | 1.00  | No  |
|      |     | z | -0.016 | 8.00  | No  |
|      |     | z | -0.005 | 3.00  | No  |
|      | 210 | z | -0.016 | 1.00  | No  |
|      |     | z | -0.016 | 8.00  | No  |
|      |     | z | -0.003 | 3.00  | No  |
|      | 212 | z | -0.014 | 1.00  | No  |
|      |     | z | -0.014 | 8.00  | No  |
|      |     | z | -0.005 | 3.00  | No  |
|      | 213 | z | -0.016 | 1.00  | No  |
|      |     | z | -0.016 | 8.00  | No  |
|      |     | z | -0.005 | 3.00  | No  |
|      | 214 | z | -0.016 | 1.00  | No  |
|      |     | z | -0.016 | 8.00  | No  |
|      |     | z | -0.003 | 3.00  | No  |
|      | 231 | z | -0.005 | 50.00 | Yes |
|      | 232 | z | -0.005 | 50.00 | Yes |
|      | 233 | z | -0.005 | 50.00 | Yes |
| WL30 | 204 | x | -0.012 | 1.00  | No  |
|      |     | x | -0.012 | 8.00  | No  |
|      |     | x | -0.006 | 3.00  | No  |
|      | 205 | x | -0.012 | 1.00  | No  |
|      |     | x | -0.012 | 8.00  | No  |
|      |     | x | -0.006 | 3.00  | No  |
|      | 206 | x | -0.012 | 1.00  | No  |
|      |     | x | -0.012 | 8.00  | No  |

|      |     |   |        |       |     |
|------|-----|---|--------|-------|-----|
|      |     | x | -0.004 | 3.00  | No  |
| 208  |     | x | -0.018 | 1.00  | No  |
|      |     | x | -0.018 | 8.00  | No  |
|      |     | x | -0.002 | 3.00  | No  |
| 209  |     | x | -0.023 | 1.00  | No  |
|      |     | x | -0.023 | 8.00  | No  |
|      |     | x | -0.003 | 3.00  | No  |
| 210  |     | x | -0.023 | 1.00  | No  |
|      |     | x | -0.023 | 8.00  | No  |
|      |     | x | -0.001 | 3.00  | No  |
| 212  |     | x | -0.018 | 1.00  | No  |
|      |     | x | -0.018 | 8.00  | No  |
|      |     | x | -0.002 | 3.00  | No  |
| 213  |     | x | -0.023 | 1.00  | No  |
|      |     | x | -0.023 | 8.00  | No  |
|      |     | x | -0.003 | 3.00  | No  |
| 214  |     | x | -0.023 | 1.00  | No  |
|      |     | x | -0.023 | 8.00  | No  |
|      |     | x | -0.001 | 3.00  | No  |
| 231  |     | x | -0.005 | 50.00 | Yes |
| 232  |     | x | -0.005 | 50.00 | Yes |
| 233  |     | x | -0.005 | 50.00 | Yes |
| LL1  | 22  | y | -0.25  | 50.00 | Yes |
| LL2  | 22  | y | -0.25  | 0.00  | Yes |
| LLa1 | 203 | y | -0.50  | 50.00 | Yes |
| LLa2 | 204 | y | -0.50  | 50.00 | Yes |
| LLa3 | 205 | y | -0.50  | 50.00 | Yes |
| LLa4 | 206 | y | -0.50  | 50.00 | Yes |

### Self weight multipliers for load conditions

| Condition | Description                      | Self weight multiplier |       |       |       |
|-----------|----------------------------------|------------------------|-------|-------|-------|
|           |                                  | Comb.                  | MultX | MultY | MultZ |
| DL        | Dead Load                        | No                     | 0.00  | -1.00 | 0.00  |
| W0        | Wind Load 0/60/120 deg           | No                     | 0.00  | 0.00  | 0.00  |
| W30       | Wind Load 30/90/150 deg          | No                     | 0.00  | 0.00  | 0.00  |
| Di        | Ice Load                         | No                     | 0.00  | 0.00  | 0.00  |
| Wi0       | Ice Wind Load 0/60/120 deg       | No                     | 0.00  | 0.00  | 0.00  |
| Wi30      | Ice Wind Load 30/90/150 deg      | No                     | 0.00  | 0.00  | 0.00  |
| WL0       | WL 30 mph 0/60/120 deg           | No                     | 0.00  | 0.00  | 0.00  |
| WL30      | WL 30 mph 30/90/150 deg          | No                     | 0.00  | 0.00  | 0.00  |
| LL1       | 250 lb Live Load Center of Mount | No                     | 0.00  | 0.00  | 0.00  |
| LL2       | 250 lb Live Load End of Mount    | No                     | 0.00  | 0.00  | 0.00  |
| LLa1      | 500 lb Live Load Antenna 1       | No                     | 0.00  | 0.00  | 0.00  |
| LLa2      | 500 lb Live Load Antenna 2       | No                     | 0.00  | 0.00  | 0.00  |
| LLa3      | 500 lb Live Load Antenna 3       | No                     | 0.00  | 0.00  | 0.00  |
| LLa4      | 500 lb Live Load Antenna 4       | No                     | 0.00  | 0.00  | 0.00  |

### Earthquake (Dynamic analysis only)

| <b>Condition</b> | <b>a/g</b> | <b>Ang.</b><br>[Deg] | <b>Damp.</b><br>[%] |
|------------------|------------|----------------------|---------------------|
| DL               | 0.00       | 0.00                 | 0.00                |
| W0               | 0.00       | 0.00                 | 0.00                |
| W30              | 0.00       | 0.00                 | 0.00                |
| Di               | 0.00       | 0.00                 | 0.00                |
| Wi0              | 0.00       | 0.00                 | 0.00                |
| Wi30             | 0.00       | 0.00                 | 0.00                |
| WL0              | 0.00       | 0.00                 | 0.00                |
| WL30             | 0.00       | 0.00                 | 0.00                |
| LL1              | 0.00       | 0.00                 | 0.00                |
| LL2              | 0.00       | 0.00                 | 0.00                |
| LLa1             | 0.00       | 0.00                 | 0.00                |
| LLa2             | 0.00       | 0.00                 | 0.00                |
| LLa3             | 0.00       | 0.00                 | 0.00                |
| LLa4             | 0.00       | 0.00                 | 0.00                |

## Steel Code Check

**Report: Summary - Group by member**

**Load conditions to be included in design :**

- LC1=1.2DL+W0
- LC2=1.2DL+W30
- LC3=1.2DL-W0
- LC4=1.2DL-W30
- LC5=0.9DL+W0
- LC6=0.9DL+W30
- LC7=0.9DL-W0
- LC8=0.9DL-W30
- LC9=1.2DL+Di+Wi0
- LC10=1.2DL+Di+Wi30
- LC11=1.2DL+Di-Wi0
- LC12=1.2DL+Di-Wi30
- LC13=1.4DL
- LC14=1.2DL+1.6LL1
- LC15=1.2DL+1.6LL2
- LC16=1.2DL+W0+1.6LLa1
- LC17=1.2DL+W30+1.6LLa1
- LC18=1.2DL-W0+1.6LLa1
- LC19=1.2DL-W30+1.6LLa1
- LC20=1.2DL+W0+1.6LLa2
- LC21=1.2DL+W30+1.6LLa2
- LC22=1.2DL-W0+1.6LLa2
- LC23=1.2DL-W30+1.6LLa2
- LC24=1.2DL+W0+1.6LLa3
- LC25=1.2DL+W30+1.6LLa3
- LC26=1.2DL-W0+1.6LLa3
- LC27=1.2DL-W30+1.6LLa3
- LC28=1.2DL+W0+1.6LLa4
- LC29=1.2DL+W30+1.6LLa4
- LC30=1.2DL-W0+1.6LLa4
- LC31=1.2DL-W30+1.6LLa4

| Description | Section                       | Member     | Ctrl Eq.       | Ratio       | Status               | Reference  |
|-------------|-------------------------------|------------|----------------|-------------|----------------------|------------|
|             | <i>aisiSSMA_S 1200S200-54</i> | <b>183</b> | LC4 at 98.96%  | 0.70        | With warnings        | Eq. H1.2-1 |
|             |                               | <b>201</b> | LC1 at 1.25%   | <b>0.73</b> | <b>With warnings</b> | Eq. H1.2-1 |
|             |                               | <b>202</b> | LC2 at 33.75%  | 0.68        | With warnings        | Eq. H1.2-1 |
|             | <i>HSS_SQR 4X4X5_16</i>       | <b>1</b>   | LC12 at 0.00%  | 0.39        | OK                   |            |
|             |                               | <b>2</b>   | LC10 at 50.00% | 0.18        | OK                   |            |
|             |                               | <b>11</b>  | LC9 at 0.00%   | <b>0.39</b> | <b>OK</b>            |            |
|             |                               | <b>12</b>  | LC11 at 50.00% | 0.18        | OK                   |            |
|             |                               | <b>17</b>  | LC9 at 0.00%   | 0.39        | OK                   |            |
|             |                               | <b>18</b>  | LC10 at 50.00% | 0.18        | OK                   |            |
|             | <i>L 2X2X3_16</i>             | <b>24</b>  | LC4 at 100.00% | 0.31        | OK                   |            |
|             |                               | <b>25</b>  | LC7 at 0.00%   | 0.24        | OK                   |            |
|             |                               | <b>26</b>  | LC5 at 0.00%   | 0.21        | OK                   |            |
|             |                               | <b>27</b>  | LC2 at 100.00% | 0.24        | OK                   |            |
|             |                               | <b>28</b>  | LC3 at 100.00% | <b>0.31</b> | <b>OK</b>            |            |
|             |                               | <b>29</b>  | LC2 at 0.00%   | 0.29        | OK                   |            |
|             | <i>PIPE 2x0.154</i>           | <b>203</b> | LC1 at 40.63%  | 0.38        | OK                   |            |

|            |               |             |           |
|------------|---------------|-------------|-----------|
| <b>204</b> | LC4 at 41.67% | 0.57        | OK        |
| <b>205</b> | LC3 at 39.58% | 0.71        | OK        |
| <b>206</b> | LC3 at 39.06% | 0.66        | OK        |
| <b>207</b> | LC3 at 40.63% | 0.45        | OK        |
| <b>208</b> | LC3 at 41.67% | 0.62        | OK        |
| <b>209</b> | LC4 at 41.67% | 0.67        | OK        |
| <b>210</b> | LC4 at 40.63% | <b>0.73</b> | <b>OK</b> |
| <b>211</b> | LC2 at 40.63% | 0.51        | OK        |
| <b>212</b> | LC2 at 41.67% | 0.61        | OK        |
| <b>213</b> | LC4 at 41.67% | 0.70        | OK        |
| <b>214</b> | LC4 at 40.63% | 0.66        | OK        |
| <b>221</b> | LC3 at 34.38% | 0.27        | OK        |
| <b>224</b> | LC3 at 65.63% | 0.33        | OK        |
| <b>227</b> | LC4 at 34.38% | 0.36        | OK        |
| <b>231</b> | LC4 at 65.63% | 0.03        | OK        |
| <b>232</b> | LC2 at 65.63% | 0.03        | OK        |
| <b>233</b> | LC1 at 65.63% | 0.03        | OK        |

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**PIPE 3x0.216**

|           |               |             |           |
|-----------|---------------|-------------|-----------|
| <b>16</b> | LC4 at 36.81% | <b>0.21</b> | <b>OK</b> |
| <b>22</b> | LC1 at 36.11% | 0.18        | OK        |
| <b>23</b> | LC2 at 36.11% | 0.19        | OK        |

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**PL 6x3/8**

|           |               |             |           |
|-----------|---------------|-------------|-----------|
| <b>3</b>  | LC2 at 50.00% | 0.16        | OK        |
| <b>13</b> | LC4 at 50.00% | 0.17        | OK        |
| <b>19</b> | LC1 at 50.00% | <b>0.18</b> | <b>OK</b> |

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## Geometry data

### GLOSSARY

|            |  |
|------------|--|
| Cb22, Cb33 | : Moment gradient coefficients   |
| Cm22, Cm33 | : Coefficients applied to bending term in interaction formula                                |
| d0         | : Tapered member section depth at J end of member  |
| DJX        | : Rigid end offset distance measured from J node in axis X                                   |
| DJY        | : Rigid end offset distance measured from J node in axis Y                                   |
| DJZ        | : Rigid end offset distance measured from J node in axis Z                                   |
| DKX        | : Rigid end offset distance measured from K node in axis X                                   |
| DKY        | : Rigid end offset distance measured from K node in axis Y                                   |
| DKZ        | : Rigid end offset distance measured from K node in axis Z                                   |
| dL         | : Tapered member section depth at K end of member  |
| Ig factor  | : Inertia reduction factor (Effective Inertia/Gross Inertia) for reinforced concrete members |
| K22        | : Effective length factor about axis 2   |
| K33        | : Effective length factor about axis 3   |
| L22        | : Member length for calculation of axial capacity  |
| L33        | : Member length for calculation of axial capacity  |
| LB pos     | : Lateral unbraced length of the compression flange in the positive side of local axis 2     |
| LB neg     | : Lateral unbraced length of the compression flange in the negative side of local axis 2     |
| RX         | : Rotation about X   |
| RY         | : Rotation about Y   |
| RZ         | : Rotation about Z   |
| TO         | : 1 = Tension only member    0 = Normal member   |
| TX         | : Translation in X   |
| TY         | : Translation in Y   |
| TZ         | : Translation in Z   |

### Nodes

| Node | X<br>[ft] | Y<br>[ft] | Z<br>[ft] | Rigid Floor |
|------|-----------|-----------|-----------|-------------|
| 3    | 0.00      | 0.00      | -2.00     | 0           |
| 5    | 0.00      | 0.00      | -7.33     | 0           |
| 6    | -2.709    | 0.00      | -3.50     | 0           |
| 7    | 2.709     | 0.00      | -3.50     | 0           |
| 8    | -0.50     | 0.00      | -7.33     | 0           |
| 9    | 0.50      | 0.00      | -7.33     | 0           |
| 10   | 2.212     | 0.00      | -3.50     | 0           |
| 11   | -2.212    | 0.00      | -3.50     | 0           |
| 28   | -1.7321   | 0.00      | 1.00      | 0           |
| 30   | -6.348    | 0.00      | 3.665     | 0           |
| 31   | -1.6766   | 0.00      | 4.0961    | 0           |
| 32   | -4.3856   | 0.00      | -0.5961   | 0           |
| 33   | -6.098    | 0.00      | 4.098     | 0           |
| 34   | -6.598    | 0.00      | 3.232     | 0           |
| 35   | -4.1371   | 0.00      | -0.1656   | 0           |
| 36   | -1.9251   | 0.00      | 3.6656    | 0           |
| 39   | 1.7321    | 0.00      | 1.00      | 0           |
| 41   | 6.348     | 0.00      | 3.665     | 0           |
| 42   | 4.3856    | 0.00      | -0.5961   | 0           |
| 43   | 1.6766    | 0.00      | 4.0961    | 0           |
| 44   | 6.598     | 0.00      | 3.232     | 0           |
| 45   | 6.098     | 0.00      | 4.098     | 0           |
| 46   | 1.9251    | 0.00      | 3.6656    | 0           |

|     |         |       |         |   |
|-----|---------|-------|---------|---|
| 47  | 4.1371  | 0.00  | -0.1656 | 0 |
| 375 | 6.2566  | 0.00  | 3.6122  | 0 |
| 377 | 0.00    | 0.00  | -7.2245 | 0 |
| 379 | -6.2566 | 0.00  | 3.6122  | 0 |
| 724 | 6.25    | 0.00  | 4.098   | 0 |
| 725 | -6.25   | 0.00  | 4.098   | 0 |
| 726 | -0.424  | 0.00  | -7.4617 | 0 |
| 727 | 6.674   | 0.00  | 3.3637  | 0 |
| 728 | -6.674  | 0.00  | 3.3637  | 0 |
| 729 | 0.424   | 0.00  | -7.4617 | 0 |
| 731 | 5.8333  | -5.50 | 4.4961  | 0 |
| 732 | -5.8333 | -5.50 | 4.4961  | 0 |
| 767 | -0.977  | -5.50 | -7.2998 | 0 |
| 768 | -6.8104 | -5.50 | 2.8038  | 0 |
| 769 | 6.8104  | -5.50 | 2.8038  | 0 |
| 770 | 0.977   | -5.50 | -7.2998 | 0 |
| 771 | 5.75    | 4.00  | 4.298   | 0 |
| 772 | 5.75    | -6.00 | 4.298   | 0 |
| 773 | 1.9167  | 4.00  | 4.298   | 0 |
| 774 | 1.9167  | -6.00 | 4.298   | 0 |
| 775 | -1.9167 | 4.00  | 4.298   | 0 |
| 776 | -1.9167 | -6.00 | 4.298   | 0 |
| 777 | -5.75   | 4.00  | 4.298   | 0 |
| 778 | -5.75   | -6.00 | 4.298   | 0 |
| 779 | -6.5972 | 4.00  | 2.8306  | 0 |
| 780 | -6.5972 | -6.00 | 2.8306  | 0 |
| 781 | -4.6805 | 4.00  | -0.4891 | 0 |
| 782 | -4.6805 | -6.00 | -0.4891 | 0 |
| 783 | -2.7639 | 4.00  | -3.8089 | 0 |
| 784 | -2.7639 | -6.00 | -3.8089 | 0 |
| 785 | -0.8472 | 4.00  | -7.1287 | 0 |
| 786 | -0.8472 | -6.00 | -7.1287 | 0 |
| 787 | 0.8472  | 4.00  | -7.1287 | 0 |
| 788 | 0.8472  | -6.00 | -7.1287 | 0 |
| 789 | 2.7639  | 4.00  | -3.8089 | 0 |
| 790 | 2.7639  | -6.00 | -3.8089 | 0 |
| 791 | 4.6805  | 4.00  | -0.4891 | 0 |
| 792 | 4.6805  | -6.00 | -0.4891 | 0 |
| 793 | 6.5972  | 4.00  | 2.8306  | 0 |
| 794 | 6.5972  | -6.00 | 2.8306  | 0 |
| 803 | 5.0342  | -5.25 | 5.9377  | 0 |
| 805 | 7.6594  | -5.25 | 1.3909  | 0 |
| 814 | -7.6594 | -5.25 | 1.3909  | 0 |
| 815 | 2.6251  | -5.25 | -7.3287 | 0 |
| 818 | -5.0342 | -5.25 | 5.9377  | 0 |
| 819 | -2.6251 | -5.25 | -7.3287 | 0 |
| 826 | 2.2482  | 2.00  | 1.6059  | 0 |
| 827 | 2.2482  | -1.00 | 1.6059  | 0 |
| 828 | -2.5149 | 2.00  | 1.1441  | 0 |
| 829 | -2.5149 | -1.00 | 1.1441  | 0 |
| 830 | 0.2667  | 2.00  | -2.75   | 0 |
| 831 | 0.2667  | -1.00 | -2.75   | 0 |

---

## Restraints

| Node | TX | TY | TZ | RX | RY | RZ |
|------|----|----|----|----|----|----|
| 3    | 1  | 1  | 1  | 1  | 1  | 1  |
| 28   | 1  | 1  | 1  | 1  | 1  | 1  |
| 39   | 1  | 1  | 1  | 1  | 1  | 1  |

## Members

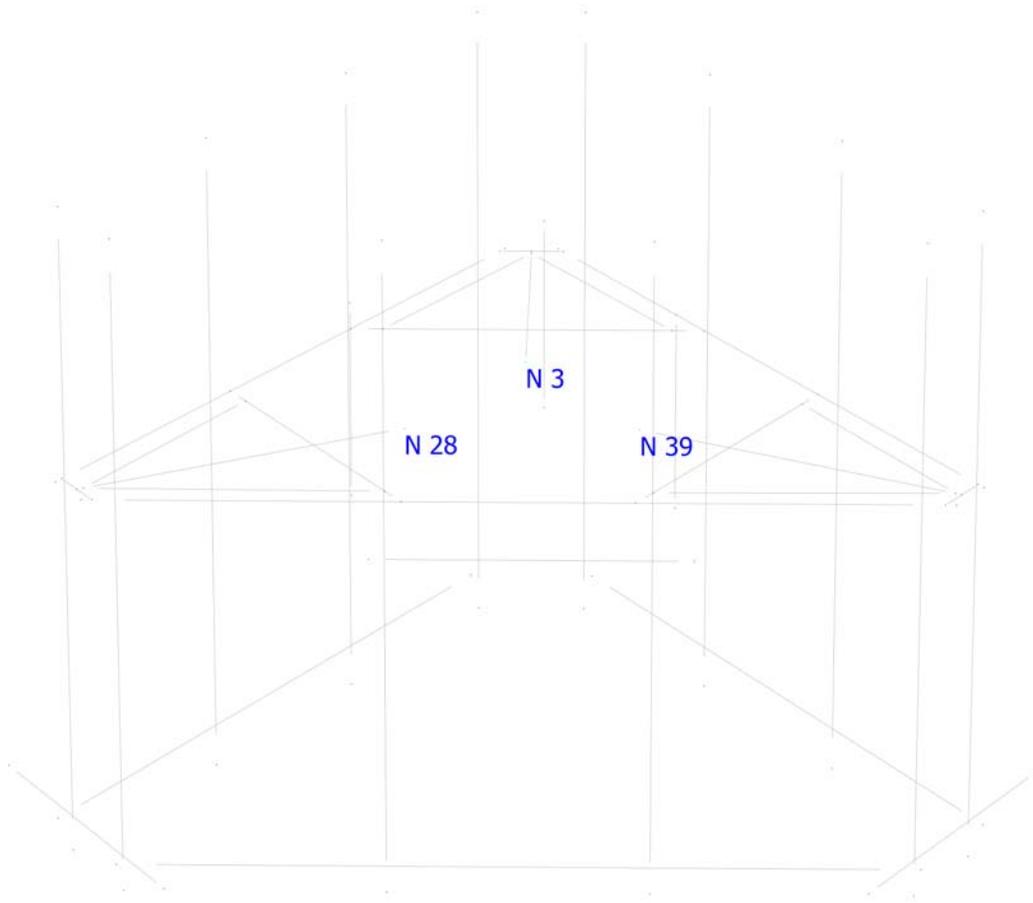
| Member | NJ  | NK  | Description | Section                | Material             | d0<br>[in] | dL<br>[in] | Ig factor |
|--------|-----|-----|-------------|------------------------|----------------------|------------|------------|-----------|
| 1      | 3   | 5   |             | HSS_SQR 4X4X5_16       | A500 GrC rectangular | 0.00       | 0.00       | 0.00      |
| 2      | 7   | 6   |             | HSS_SQR 4X4X5_16       | A500 GrC rectangular | 0.00       | 0.00       | 0.00      |
| 3      | 8   | 9   |             | PL 6x3/8               | A36                  | 0.00       | 0.00       | 0.00      |
| 11     | 28  | 30  |             | HSS_SQR 4X4X5_16       | A500 GrC rectangular | 0.00       | 0.00       | 0.00      |
| 12     | 32  | 31  |             | HSS_SQR 4X4X5_16       | A500 GrC rectangular | 0.00       | 0.00       | 0.00      |
| 13     | 33  | 34  |             | PL 6x3/8               | A36                  | 0.00       | 0.00       | 0.00      |
| 16     | 728 | 726 |             | PIPE 3x0.216           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 17     | 39  | 41  |             | HSS_SQR 4X4X5_16       | A500 GrC rectangular | 0.00       | 0.00       | 0.00      |
| 18     | 43  | 42  |             | HSS_SQR 4X4X5_16       | A500 GrC rectangular | 0.00       | 0.00       | 0.00      |
| 19     | 44  | 45  |             | PL 6x3/8               | A36                  | 0.00       | 0.00       | 0.00      |
| 22     | 725 | 724 |             | PIPE 3x0.216           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 23     | 727 | 729 |             | PIPE 3x0.216           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 24     | 47  | 375 |             | L 2X2X3_16             | A36                  | 0.00       | 0.00       | 0.00      |
| 25     | 46  | 375 |             | L 2X2X3_16             | A36                  | 0.00       | 0.00       | 0.00      |
| 26     | 10  | 377 |             | L 2X2X3_16             | A36                  | 0.00       | 0.00       | 0.00      |
| 27     | 11  | 377 |             | L 2X2X3_16             | A36                  | 0.00       | 0.00       | 0.00      |
| 28     | 36  | 379 |             | L 2X2X3_16             | A36                  | 0.00       | 0.00       | 0.00      |
| 29     | 379 | 35  |             | L 2X2X3_16             | A36                  | 0.00       | 0.00       | 0.00      |
| 183    | 732 | 731 |             | aisiSSMA_S 1200S200-54 | A36                  | 0.00       | 0.00       | 0.00      |
| 201    | 767 | 768 |             | aisiSSMA_S 1200S200-54 | A36                  | 0.00       | 0.00       | 0.00      |
| 202    | 769 | 770 |             | aisiSSMA_S 1200S200-54 | A36                  | 0.00       | 0.00       | 0.00      |
| 203    | 771 | 772 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 204    | 773 | 774 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 205    | 775 | 776 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 206    | 777 | 778 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 207    | 779 | 780 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 208    | 781 | 782 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 209    | 783 | 784 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 210    | 785 | 786 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 211    | 787 | 788 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 212    | 789 | 790 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 213    | 791 | 792 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 214    | 793 | 794 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 221    | 803 | 805 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 224    | 814 | 818 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 227    | 815 | 819 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 231    | 826 | 827 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 232    | 828 | 829 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |
| 233    | 830 | 831 |             | PIPE 2x0.154           | A53 GrB              | 0.00       | 0.00       | 0.00      |

## Orientation of local axes

| Member | Rotation<br>[Deg] | Axes23 | NX    | NY   | NZ   |
|--------|-------------------|--------|-------|------|------|
| 25     | 270.00            | 0      | 0.00  | 0.00 | 0.00 |
| 26     | 270.00            | 0      | 0.00  | 0.00 | 0.00 |
| 183    | 90.00             | 0      | 0.00  | 0.00 | 0.00 |
| 201    | 90.00             | 0      | 0.00  | 0.00 | 0.00 |
| 202    | 90.00             | 0      | 0.00  | 0.00 | 0.00 |
| 203    | 0.00              | 2      | -1.00 | 0.00 | 0.00 |
| 204    | 0.00              | 2      | -1.00 | 0.00 | 0.00 |
| 205    | 0.00              | 2      | -1.00 | 0.00 | 0.00 |
| 206    | 0.00              | 2      | -1.00 | 0.00 | 0.00 |
| 207    | 0.00              | 2      | -1.00 | 0.00 | 0.00 |
| 208    | 0.00              | 2      | -1.00 | 0.00 | 0.00 |
| 209    | 0.00              | 2      | -1.00 | 0.00 | 0.00 |
| 210    | 0.00              | 2      | -1.00 | 0.00 | 0.00 |
| 211    | 0.00              | 2      | -1.00 | 0.00 | 0.00 |
| 212    | 0.00              | 2      | -1.00 | 0.00 | 0.00 |
| 213    | 0.00              | 2      | -1.00 | 0.00 | 0.00 |
| 214    | 0.00              | 2      | -1.00 | 0.00 | 0.00 |

### Rigid end offsets

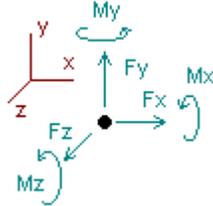
| Member | DJX<br>[in] | DJY<br>[in] | DJZ<br>[in] | DKX<br>[in] | DKY<br>[in] | DKZ<br>[in] |
|--------|-------------|-------------|-------------|-------------|-------------|-------------|
| 183    | -2.00       | 0.00        | 5.00        | 2.00        | 0.00        | 5.00        |
| 201    | -3.3301     | 0.00        | -4.2321     | -5.3301     | 0.00        | -0.7679     |
| 202    | 5.3301      | 0.00        | -0.7679     | 3.3301      | 0.00        | -4.2321     |



## Analysis result

### Envelope for nodal reactions

Note.-  $I_c$  is the controlling load condition



Direction of positive forces and moments

Envelope of nodal reactions for :

- LC1=1.2DL+W0
- LC2=1.2DL+W30
- LC3=1.2DL-W0
- LC4=1.2DL-W30
- LC5=0.9DL+W0
- LC6=0.9DL+W30
- LC7=0.9DL-W0
- LC8=0.9DL-W30
- LC9=1.2DL+Di+W0
- LC10=1.2DL+Di+W30
- LC11=1.2DL+Di-W0
- LC12=1.2DL+Di-W30
- LC13=1.4DL
- LC14=1.2DL+1.6LL1
- LC15=1.2DL+1.6LL2
- LC16=1.2DL+W0+1.6LLa1
- LC17=1.2DL+W30+1.6LLa1
- LC18=1.2DL-W0+1.6LLa1
- LC19=1.2DL-W30+1.6LLa1
- LC20=1.2DL+W0+1.6LLa2
- LC21=1.2DL+W30+1.6LLa2
- LC22=1.2DL-W0+1.6LLa2
- LC23=1.2DL-W30+1.6LLa2
- LC24=1.2DL+W0+1.6LLa3
- LC25=1.2DL+W30+1.6LLa3
- LC26=1.2DL-W0+1.6LLa3
- LC27=1.2DL-W30+1.6LLa3
- LC28=1.2DL+W0+1.6LLa4
- LC29=1.2DL+W30+1.6LLa4
- LC30=1.2DL-W0+1.6LLa4
- LC31=1.2DL-W30+1.6LLa4

| Node |     | Forces      |       |             |       |             |       | Moments        |       |                |       |                |       |
|------|-----|-------------|-------|-------------|-------|-------------|-------|----------------|-------|----------------|-------|----------------|-------|
|      |     | Fx<br>[Kip] | $I_c$ | Fy<br>[Kip] | $I_c$ | Fz<br>[Kip] | $I_c$ | Mx<br>[Kip*ft] | $I_c$ | My<br>[Kip*ft] | $I_c$ | Mz<br>[Kip*ft] | $I_c$ |
| 3    | Max | 2.464       | LC2   | 3.951       | LC11  | 3.826       | LC1   | 7.97587        | LC11  | 2.55030        | LC4   | 0.57039        | LC6   |
|      | Min | -2.463      | LC4   | 0.574       | LC5   | -3.815      | LC7   | 0.58801        | LC5   | -2.54924       | LC2   | -0.68156       | LC4   |
| 28   | Max | 3.098       | LC2   | 3.944       | LC12  | 2.698       | LC5   | -0.42277       | LC7   | 1.83000        | LC1   | -0.56823       | LC6   |
|      | Min | -3.089      | LC8   | 0.669       | LC6   | -2.705      | LC3   | -4.10936       | LC12  | -1.82633       | LC3   | -6.81654       | LC12  |

|    |     |        |     |       |      |        |     |          |     |          |     |         |      |
|----|-----|--------|-----|-------|------|--------|-----|----------|-----|----------|-----|---------|------|
| 39 | Max | 3.334  | LC6 | 3.948 | LC10 | 2.235  | LC5 | -0.34760 | LC7 | 1.31975  | LC3 | 6.95857 | LC10 |
|    | Min | -3.344 | LC4 | 0.651 | LC8  | -2.241 | LC3 | -3.82434 | LC9 | -1.32000 | LC1 | 0.71170 | LC8  |

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## Connection Check

Date: 11/3/2022  
Project Name: ENFIELD EAST  
Project No.: CT5293  
Designed By: KSBM      Checked By: MSC



### CHECK CONNECTION CAPACITY (Worst Case)

**Reference:** AISC Steel Construction Manual 14th Edition (ASD)

**Bolt Type =**                      A36 5/8" (Threaded Rod)

#### Allowable Tensile Load =

$$F_{Tall} = 6673 \text{ lbs.}$$

#### Allowable Shear Load =

$$F_{Vall} = 4004 \text{ lbs.}$$

### TENSILE FORCES

**Reaction**                      **F = 3826 lbs.**      (See Bentley Output)

### SHEAR FORCES

**Reactions in X direction:**      2464 lbs.      (See Bentley Output)

**Reactions in Y direction:**      3951 lbs.      (See Bentley Output)

**Resultant:**                      4656 lbs.

**No. of Supports =**                      1

**No. of Bolts / Support =**              3

#### Tension Design Load /Bolts =

$$f_t = 1275.33 \text{ lbs.} < 6673 \text{ lbs.} \text{ Therefore, OK!}$$

#### Shear Design Load / Bolts=

$$f_v = 1552.12 \text{ lbs.} < 4004 \text{ lbs.} \text{ Therefore, OK!}$$

### CHECK COMBINED TENSION AND SHEAR

$$\begin{array}{rclclcl} f_t / F_T & + & f_v / F_V & \leq & 1.0 \\ 0.191 & + & 0.388 & = & 0.579 < 1.0 \text{ Therefore, OK!} \end{array}$$

**PROJECT INFORMATION**

SCOPE OF WORK: ITEMS TO BE MOUNTED ON THE EXISTING MONOPOLE:

- INSTALL AT&T RRUS: 4478 B14 (700/AWS) @ POS. 3 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- INSTALL AT&T RRUS: 2012 B29 @ POS. 2 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- RELOCATED EXISTING AT&T RRUS: 8843 B2/B66A (1900/AWS) @ POS. 3 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- RELOCATED EXISTING AT&T RRUS: 4415 B30 (WCS) @ POS. 4 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- RELOCATED EXISTING AT&T SURGE ARRESTOR DC6-48-60-18-8F (TOTAL OF 3) (RELOCATED TO PROPOSED PIPE MAST)
- INSTALL AT&T (6) Y-CABLES.

ITEMS TO BE MOUNTED IN EQUIPMENT LOCATION:

- ADD 1xIDLe CABLE

FINAL CONFIGURATION=6630+XMU/6630+IDLE

- ADD (2) RECTIFIERS TO EXISTING DC POWER PLANT
- REMOVE & REPLACE EXISTING (3) 155AH BATTERY STRINGS WITH (3) STRINGS OF 190AH BATTERY STRINGS

ITEMS TO BE REMOVED:

- DECOMMISSION EXISTING AT&T ANTENNA: 800-10121 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- DECOMMISSION EXISTING AT&T TMAS: LGP21401 (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- DECOMMISSION EXISTING AT&T DIPLEXERS: LGP21901 (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- DECOMMISSION EXISTING AT&T 3-SECTOR PLATFORM MOUNT (TOTAL OF 1)

ITEMS TO REMAIN:

- (9) ANTENNAS, (9) RRUS, (3) SURGE ARRESTORS, (6) 1-5/8" COAX CABLES, (6) DC POWER & (2) FIBER.



**SITE NUMBER: CTL05293**  
**SITE NAME: ENFIELD EAST**  
**FA CODE: 10090926**

**PACE ID: MRCTB062416, MRCTB062265, MRCTB062295**

**PROJECT: BWE SOFTWARE CARRIER, LTE 6C & LTE 7C, 2023 UPGRADE**

RFDS: FINAL-APPROVED V2 RFDS DATED 12/12/23  
 SITE ADDRESS: 188 MOODY ROAD  
 ENFIELD, CT 06082  
 LATITUDE: 42.0023919° N, 42° 0' 8.61" N  
 LONGITUDE: 72.5214989° W, 72° 31' 17.39" W  
 TYPE OF SITE: MONOPOLE / OUTDOOR EQUIPMENT  
 STRUCTURE HEIGHT: 192'-0"±  
 RAD CENTER: 158'-0"±  
 CURRENT USE: TELECOMMUNICATIONS FACILITY  
 PROPOSED USE: TELECOMMUNICATIONS FACILITY

**VICINITY MAP**

**DIRECTIONS TO SITE:**

HEAD SOUTH TOWARD ENTERPRISE DR, TURN LEFT ONTO ENTERPRISE DR, TURN LEFT ONTO CAPITAL BLVD, USE THE LEFT LANE TO TURN LEFT ONTO STATE HWY 411, TURN LEFT TO MERGE WITH I-91 N, MERGE WITH I-91 N, PARTS OF THIS ROAD MAY BE CLOSED AT CERTAIN TIMES OR DAYS, TAKE EXIT 48 FOR CT-220/ELM ST TOWARD THOMPSONVILLE, USE THE RIGHT 2 LANES TO TURN RIGHT AFTER FRIENDLY'S (ON THE RIGHT), TURN RIGHT ONTO ELM ST, CONTINUE ONTO MOODY RD, TURN RIGHT, ENFIELD, CT 06082.



**GENERAL NOTES**

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3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T MOBILITY REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
4. CONSTRUCTION DRAWINGS ARE VALID FOR SIX MONTHS AFTER ENGINEER OF RECORD'S STAMPED AND SIGNED SUBMITTAL DATE LISTED HEREIN.

**DRAWING INDEX**

| SHEET NO. | DESCRIPTION                 | REV. |
|-----------|-----------------------------|------|
| T-1       | TITLE SHEET                 | 2    |
| GN-1      | GENERAL NOTES               | 2    |
| A-1       | COMPOUND & EQUIPMENT PLANS  | 2    |
| A-2       | ANTENNA LAYOUTS & ELEVATION | 2    |
| A-3       | DETAILS                     | 2    |
| A-4       | DETAILS                     | 2    |
| G-1       | GROUNDING DETAILS           | 2    |
| RF-1      | RF PLUMBING DIAGRAM         | 2    |

**SBA SITE ID: CT46124**  
**FCC #: 1270231**

**72 HOURS**



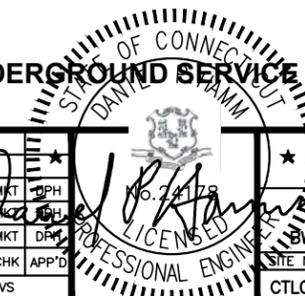
**CALL BEFORE YOU DIG**



CALL TOLL FREE 1-800-922-4455

OR CALL 811

**UNDERGROUND SERVICE ALERT**



**SITE NUMBER: CTL05293**  
**SITE NAME: ENFIELD EAST**  
**SBA SITE ID: CT46124**



500 ENTERPRISE DRIVE, SUITE 3A  
 ROCKY HILL, CT 06067

| NO. | DATE     | REVISIONS               | BY | CHK | APP'D | SITE NUMBER | DRAWING NUMBER | REV |
|-----|----------|-------------------------|----|-----|-------|-------------|----------------|-----|
| 2   | 01/04/24 | ISSUED FOR CONSTRUCTION | JS | MKT | PH    | CTL05293    | T-1            | 2   |
| 1   | 01/23/23 | ISSUED FOR REVIEW       | MJ | MKT | PH    |             |                |     |
| 0   | 11/18/22 | ISSUED FOR REVIEW       | MJ | MKT | PH    |             |                |     |

SCALE: AS SHOWN    DESIGNED BY: AT    DRAWN BY: VS

AT&T

TITLE SHEET

BWE SOFTWARE CARRIER, LTE 6C & LTE 7C

**GROUNDING NOTES**

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. 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.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81 STANDARDS) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. 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.
5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS AND #2 AWG STRANDED COPPER FOR OUTDOOR BTS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

**GENERAL NOTES**

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:  
 CONTRACTOR – SMARTLINK  
 SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)  
 OWNER – AT&T MOBILITY
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR 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.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCH UP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
20. **APPLICABLE BUILDING CODES:**  
 SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

**BUILDING CODE: IBC 2021 WITH 2022 CT STATE BUILDING CODE AMENDMENTS  
 ELECTRICAL CODE: 2020 NATIONAL ELECTRICAL CODE (NFPA 70-2020)**

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

**AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;**

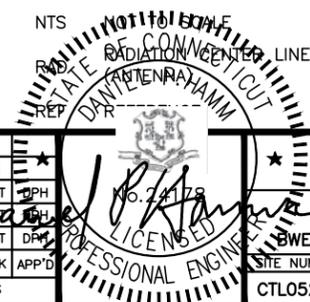
**AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;**

**TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-H, STRUCTURAL STANDARDS FOR STEEL**

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

**ABBREVIATIONS**

|      |                               |     |                          |      |                            |
|------|-------------------------------|-----|--------------------------|------|----------------------------|
| AGL  | ABOVE GRADE LEVEL             | EQ  | EQUAL                    | REQ  | REQUIRED                   |
| AWG  | AMERICAN WIRE GAUGE           | GC  | GENERAL CONTRACTOR       | RF   | RADIO FREQUENCY            |
| BBU  | BATTERY BACKUP UNIT           | GRC | GALVANIZED RIGID CONDUIT | TBD  | TO BE DETERMINED           |
| BTCW | BARE TINNED SOLID COPPER WIRE | MGB | MASTER GROUND BAR        | TBR  | TO BE REMOVED              |
| BGR  | BURIED GROUND RING            | MIN | MINIMUM                  | TBRR | TO BE REMOVED AND REPLACED |
| BTS  | BASE TRANSCEIVER STATION      | P   | PROPOSED                 | TYP  | TYPICAL                    |
| E    | EXISTING                      | NTS | NOT TO SCALE             | UG   | UNDER GROUND               |
| EGB  | EQUIPMENT GROUND BAR          | RAD | RADIATION CENTER LINE    | VIF  | VERIFY IN FIELD            |
| EGR  | EQUIPMENT GROUND RING         | REP | REPAIR                   |      |                            |



**SITE NUMBER: CTL05293  
 SITE NAME: ENFIELD EAST  
 SBA SITE ID: CT46124**  
  
**188 MOODY ROAD  
 ENFIELD, CT 06082  
 HARTFORD COUNTY**



|   |  |                                 |                      |  |  |   |  |
|---|--|---------------------------------|----------------------|--|--|---|--|
| 2 01/04/24 ISSUED FOR CONSTRUCTION JS MKT MPH<br>1 01/23/23 ISSUED FOR REVIEW MJ MKT MPH<br>0 11/18/22 ISSUED FOR REVIEW MJ MKT MPH |  | REVISIONS<br>BY: MKT APP'D: MPH |                      | SCALE: AS SHOWN<br>DESIGNED BY: AT<br>DRAWN BY: VS |  | AT&T<br>GENERAL NOTES<br>BOWE SOFTWARE CARRIER, LTE 6C & LTE 7C |  |
| SITE NUMBER: CTL05293   |  |                                 | DRAWING NUMBER: GN-1 |  |  | REV: 2  |  |

**NOTE TO GENERAL CONTRACTOR: (PRIOR TO CONSTRUCTION COMPLETION)**

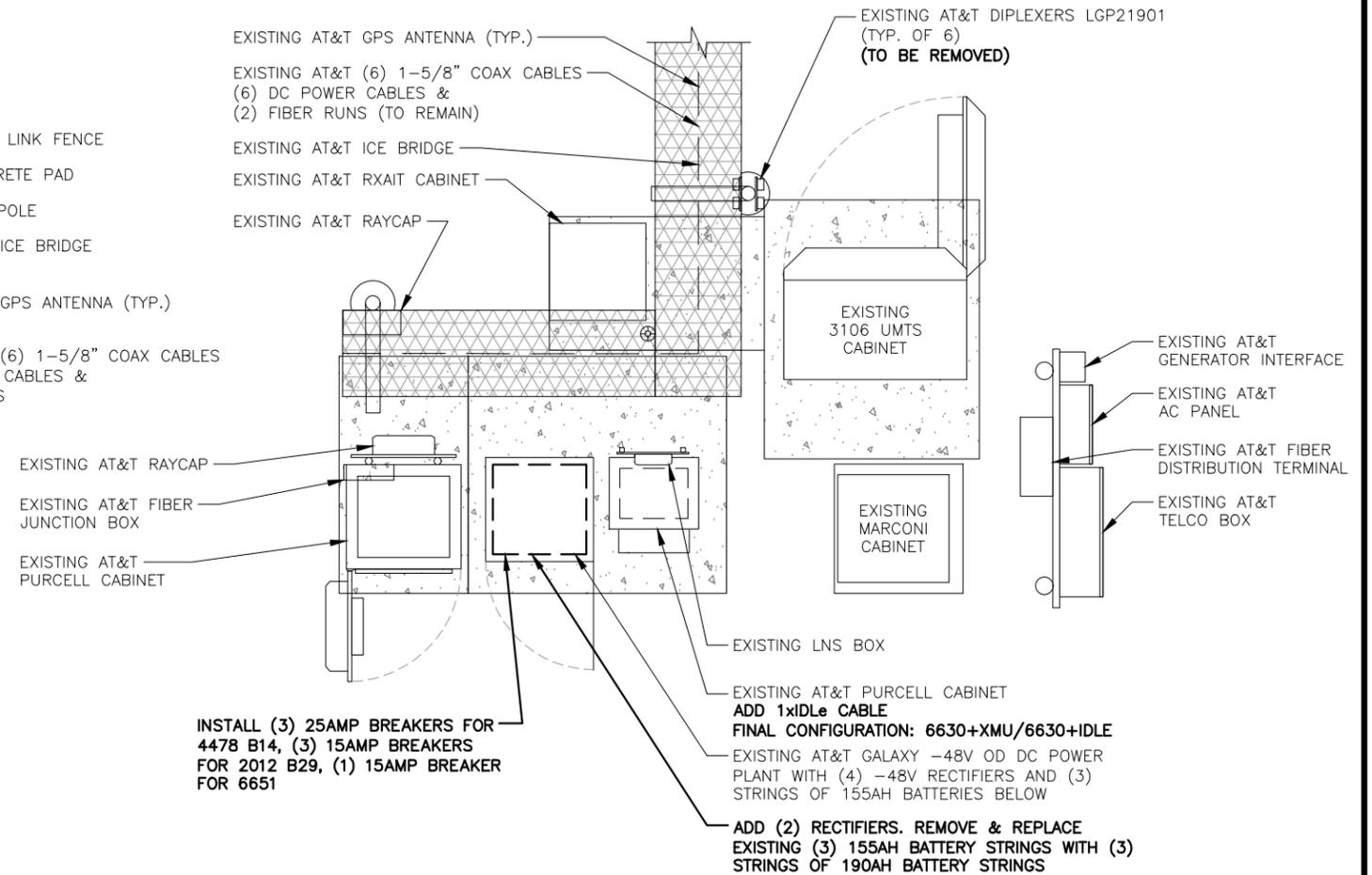
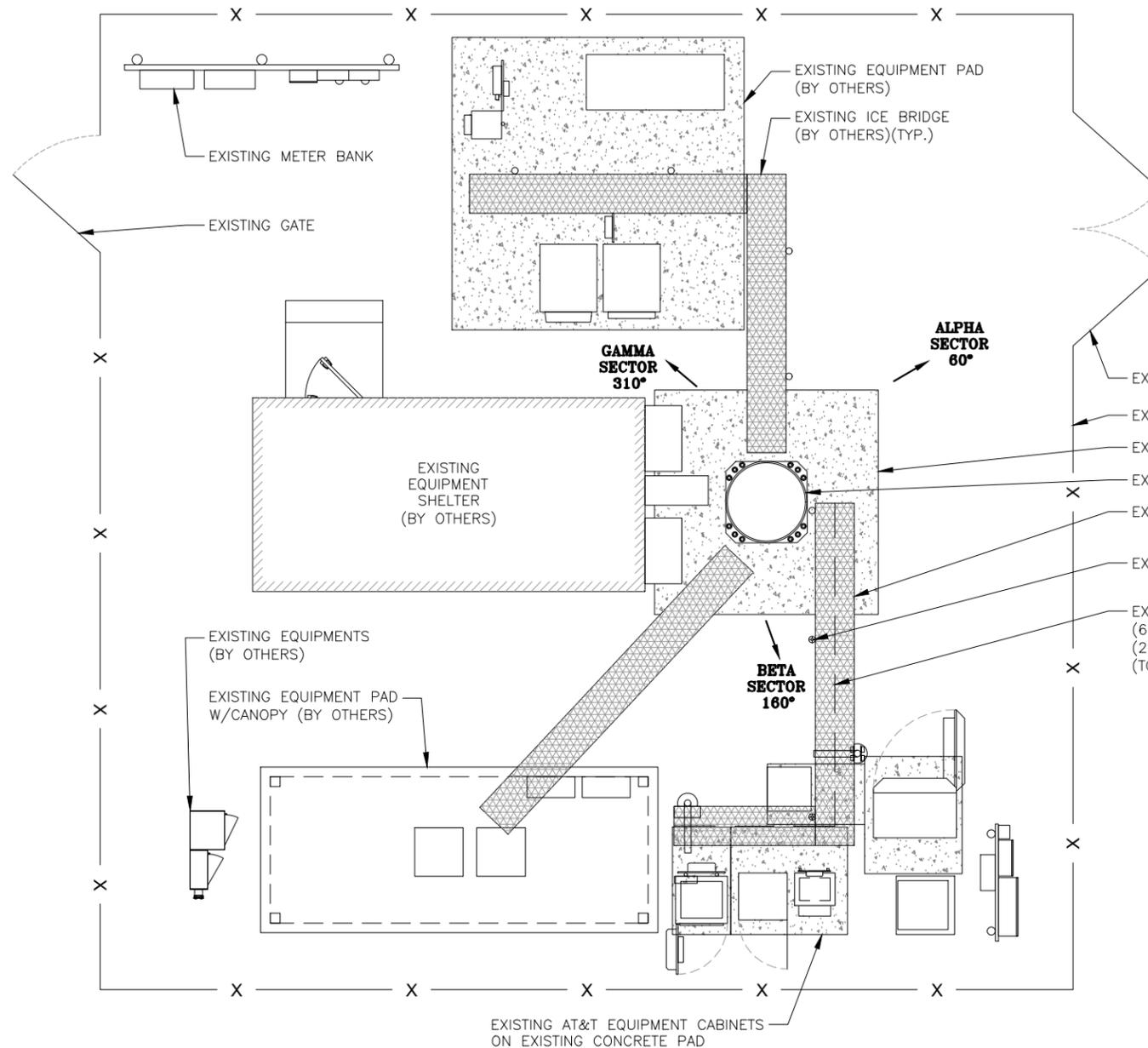
- TEP NORTHEAST (TEP OPCO, LLC.) TO PERFORM POST/CLIMB AND INSPECTION TO CONFIRM PROPOSED INSTALLATION COMPLIES WITH THE RECORD STAMPED DRAWINGS AND STRUCTURAL REPORTS PRIOR TO SUBMITTING FCCA (FINAL CONSTRUCTION CONTROL AFFIDAVIT). GC IS RESPONSIBLE FOR COORDINATING INSPECTIONS WITH TEP NORTHEAST (TEP OPCO, LLC.) PRIOR TO CONSTRUCTION BEING COMPLETED.

**NOTE:**

REFER TO FINAL-APPROVED V2 RFDS DATED 12/12/23

**NOTE:**

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: TEP NORTHEAST DATED: NOVEMBER 03, 2022



**COMPOUND PLAN**

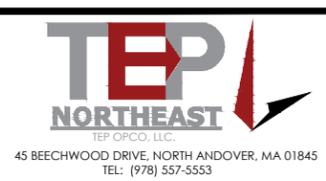
22x34 SCALE: 1/4"=1'-0"  
11x17 SCALE: 1/8"=1'-0"

1  
A-1



**EQUIPMENT PLAN**

22x34 SCALE: 1/2"=1'-0"  
11x17 SCALE: 1/4"=1'-0"



**SITE NUMBER: CTL05293**  
**SITE NAME: ENFIELD EAST**  
**SBA SITE ID: CT46124**

**188 MOODY ROAD**  
**ENFIELD, CT 06082**  
**HARTFORD COUNTY**

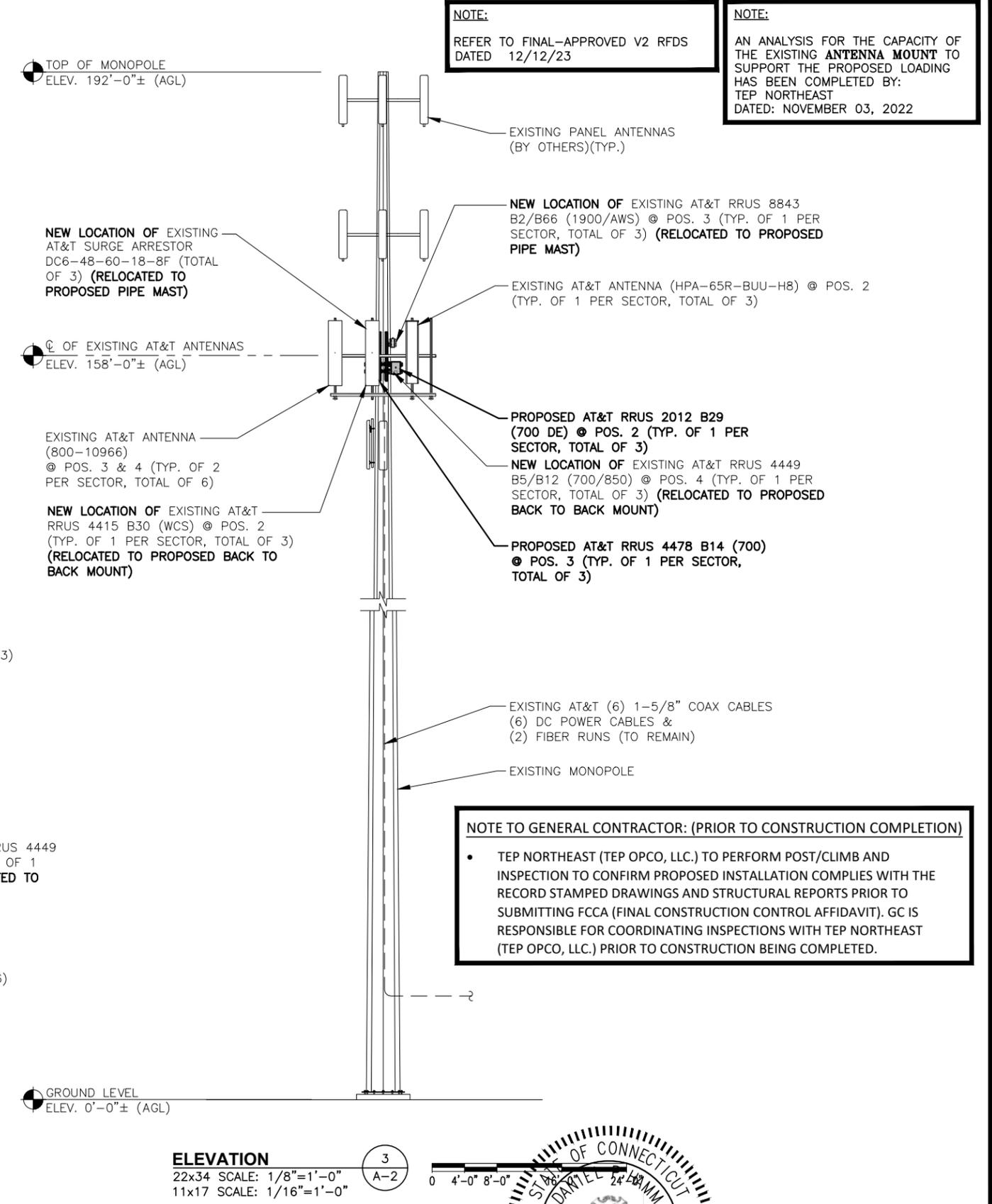
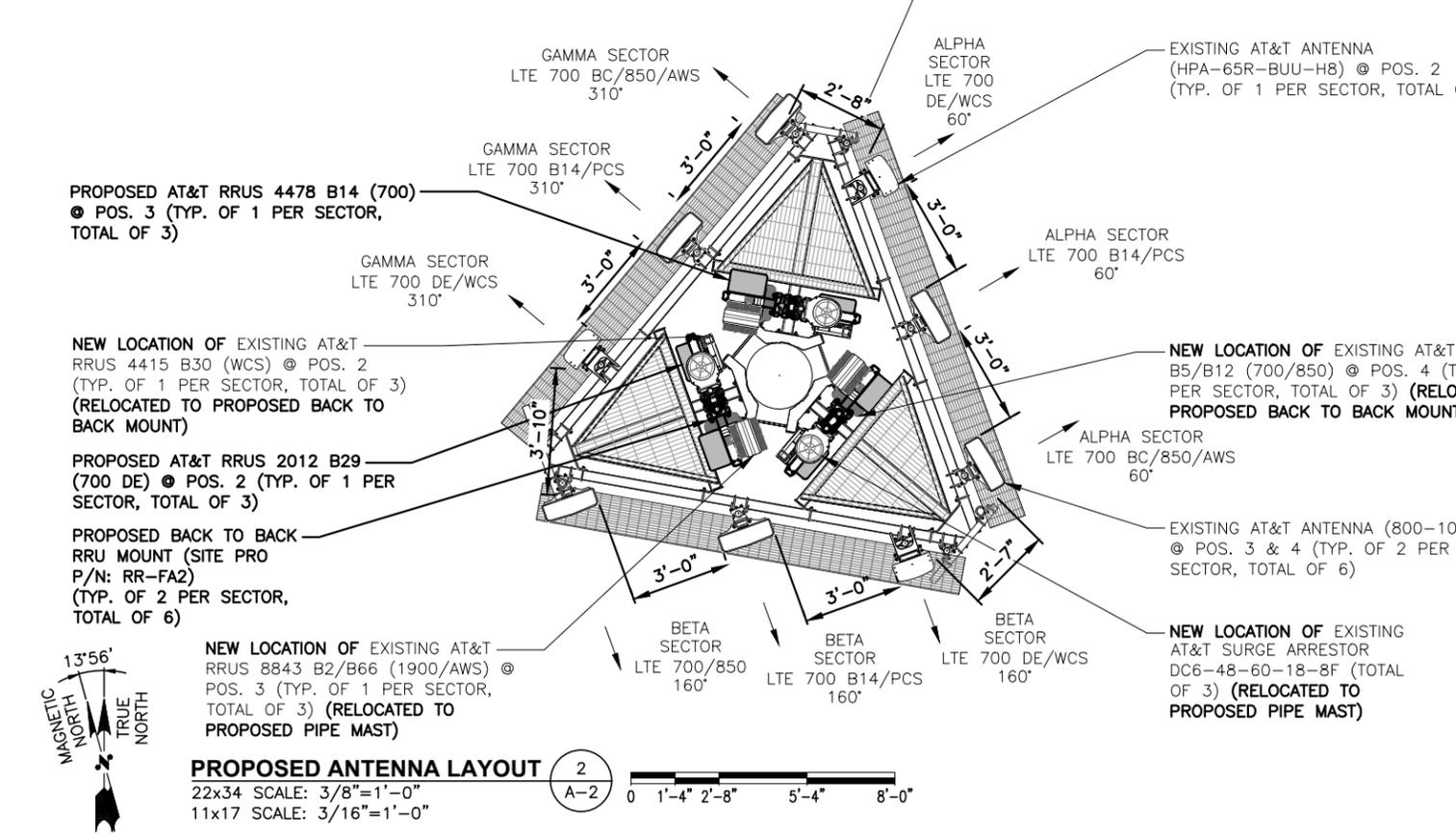
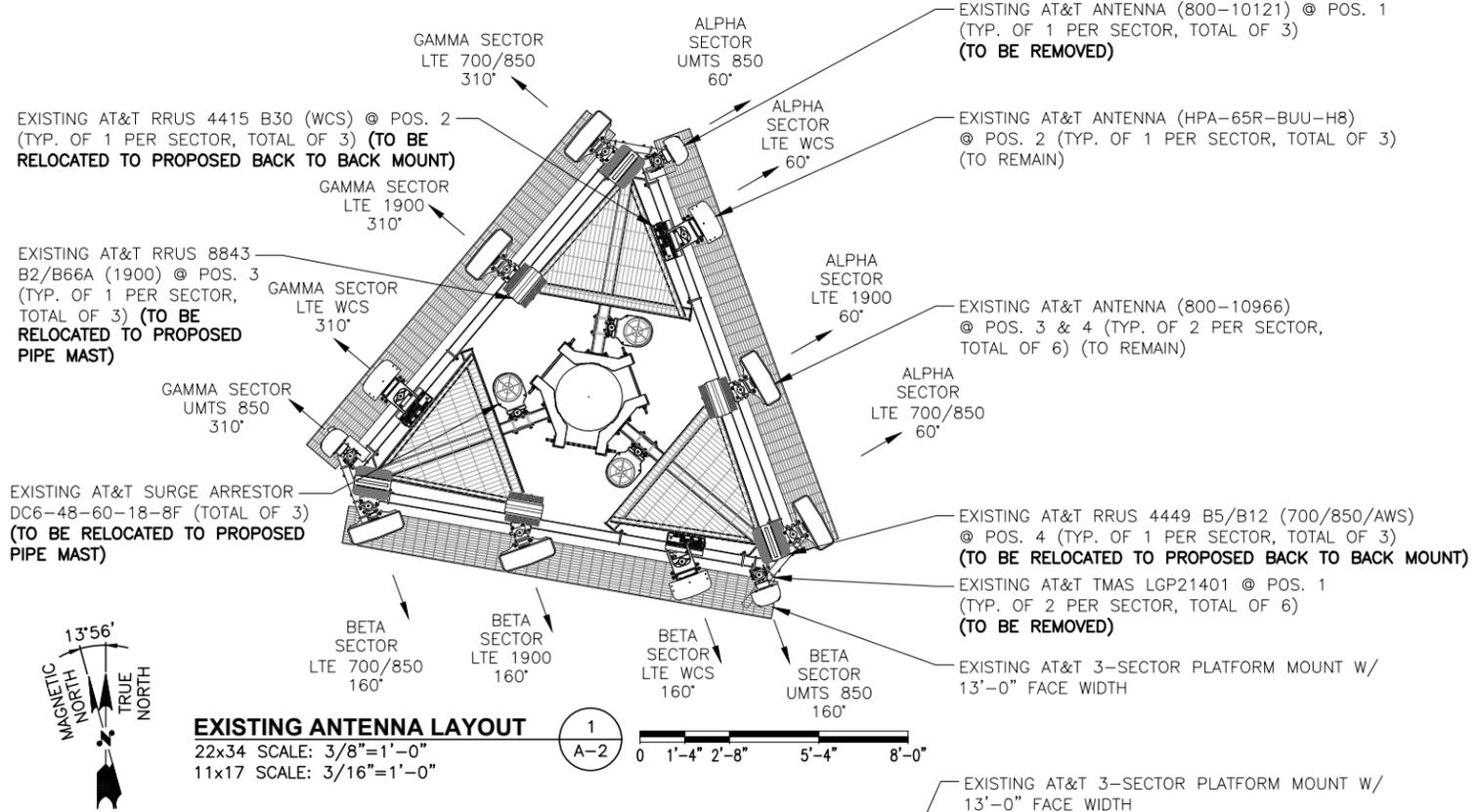


| NO. | DATE     | REVISIONS               | BY | CHK | APP'D |
|-----|----------|-------------------------|----|-----|-------|
| 2   | 01/04/24 | ISSUED FOR CONSTRUCTION | JS | MKT | PH    |
| 1   | 01/23/23 | ISSUED FOR REVIEW       | MJ | MKT | DR    |
| 0   | 11/18/22 | ISSUED FOR REVIEW       | MJ | MKT | DR    |

SCALE: AS SHOWN    DESIGNED BY: AT    DRAWN BY: VS

| SITE NUMBER | DRAWING NUMBER | REV |
|-------------|----------------|-----|
| CTL05293    | A-1            | 2   |

AT&T  
COMPOUND & EQUIPMENT PLANS  
BWE SOFTWARE CARRIER, LTE 6C & LTE 7C

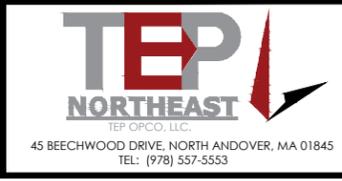
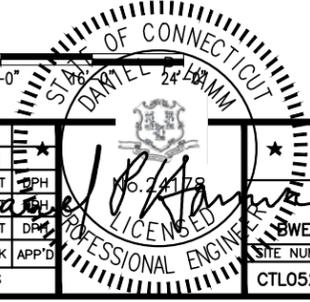


**NOTE:**  
REFER TO FINAL-APPROVED V2 RFDS DATED 12/12/23

**NOTE:**  
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: TEP NORTHEAST DATED: NOVEMBER 03, 2022

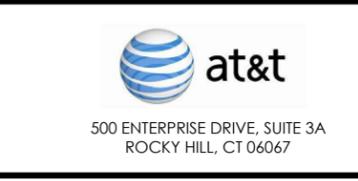
**NOTE TO GENERAL CONTRACTOR: (PRIOR TO CONSTRUCTION COMPLETION)**

- TEP NORTHEAST (TEP OP&CO, LLC.) TO PERFORM POST/CLIMB AND INSPECTION TO CONFIRM PROPOSED INSTALLATION COMPLIES WITH THE RECORD STAMPED DRAWINGS AND STRUCTURAL REPORTS PRIOR TO SUBMITTING FCCA (FINAL CONSTRUCTION CONTROL AFFIDAVIT). GC IS RESPONSIBLE FOR COORDINATING INSPECTIONS WITH TEP NORTHEAST (TEP OP&CO, LLC.) PRIOR TO CONSTRUCTION BEING COMPLETED.



**SITE NUMBER: CTL05293**  
**SITE NAME: ENFIELD EAST**  
**SBA SITE ID: CT46124**

188 MOODY ROAD  
ENFIELD, CT 06082  
HARTFORD COUNTY



| NO. | DATE     | REVISIONS               | BY | CHK | APP'D |
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SCALE: AS SHOWN    DESIGNED BY: AT    DRAWN BY: VS

| SITE NUMBER | DRAWING NUMBER | REV |
|-------------|----------------|-----|
| CTL05293    | A-2            | 2   |

AT&T  
ANTENNA LAYOUTS & ELEVATION  
RADIO MOBILE SOFTWARE CARRIER, LTE 6C & LTE 7C

**ANTENNA SCHEDULE**

FINAL-APPROVED V2 RFDS DATED 12/12/23

| SECTOR | EXISTING/<br>PROPOSED | BAND               | ANTENNA        | SIZE (INCHES)<br>(L x W x D) | ANTENNA<br>CL. HEIGHT | AZIMUTH | TMA/<br>DIPLEXER | RRU   | SIZE (INCHES)<br>(L x W x D) | FEEDER                      | RAYCAP                        |
|--------|-----------------------|--------------------|----------------|------------------------------|-----------------------|---------|------------------|---|------------------------------|-----------------------------|-------------------------------|
| A1     | -                     | -                  | -              | -                            | -                     | -       | -                | -   | -                            | (E)(2) 1-5/8" COAX          | (E)(1) RAYCAP DC6-48-60-18-8F |
| A2     | EXISTING              | LTE 700 DE/WCS     | HPA-65R-BUU-H8 | 92.4"x14.8"x7.4"             | 158'-0"±              | 60°     | -                | (E)(1)RRUS-4415 B30 (WCS)<br>(P)(1)RRUS-2012 B29                | 98.4"x11.7"x4.9"             | (E)(2) DC POWER             | (E)(1) RAYCAP DC6-48-60-18-8F |
| A3     | EXISTING              | LTE 700 B14/PCS    | 800-10966      | 96"x20"x6.9"                 | 158'-0"±              | 60°     | -                | (P)(1)RRUS-4478 B14 (700)<br>(E)(1)RRUS-8843 B2/B66A (1900/AWS) | 18.1"x13.4"x8.3"             | (P)(1)(Y-CABLE)             | (E)(1) RAYCAP DC6-48-60-18-8F |
| A4     | EXISTING              | LTE 700 BC/850/AWS | 800-10966      | 96"x20"x6.9"                 | 158'-0"±              | 60°     | -                | (E)(1)RRUS-4449 B5/B12 (700/850/AWS)                            | -                            | (P)(1)(Y-CABLE)             | (E)(1) RAYCAP DC6-48-60-18-8F |
| B1     | -                     | -                  | -              | -                            | -                     | -       | -                | -   | -                            | (E)(2) 1-5/8" COAX          | (E)(1) RAYCAP DC6-48-60-18-8F |
| B2     | EXISTING              | LTE 700 DE/WCS     | HPA-65R-BUU-H8 | 92.4"x14.8"x7.4"             | 158'-0"±              | 160°    | -                | (E)(1)RRUS-4415 B30 (WCS)<br>(P)(1)RRUS-2012 B29                | 98.4"x11.7"x4.9"             | (E)(2) DC POWER & (1) FIBER | (E)(1) RAYCAP DC6-48-60-18-8F |
| B3     | EXISTING              | LTE 700 B14/PCS    | 800-10966      | 96"x20"x6.9"                 | 158'-0"±              | 160°    | -                | (P)(1)RRUS-4478 B14 (700)<br>(E)(1)RRUS-8843 B2/B66A (1900/AWS) | 18.1"x13.4"x8.3"             | (P)(1)(Y-CABLE)             | (E)(1) RAYCAP DC6-48-60-18-8F |
| B4     | EXISTING              | LTE 700 BC/850/AWS | 800-10966      | 96"x20"x6.9"                 | 158'-0"±              | 160°    | -                | (E)(1)RRUS-4449 B5/B12 (700/850/AWS)                            | -                            | (P)(1)(Y-CABLE)             | (E)(1) RAYCAP DC6-48-60-18-8F |
| C1     | -                     | -                  | -              | -                            | -                     | -       | -                | -   | -                            | (E)(2) 1-5/8" COAX          | (E)(1) RAYCAP DC6-48-60-18-8F |
| C2     | EXISTING              | LTE 700 DE/WCS     | HPA-65R-BUU-H8 | 92.4"x14.8"x7.4"             | 158'-0"±              | 310°    | -                | (E)(1)RRUS-4415 B30 (WCS)<br>(P)(1)RRUS-2012 B29                | 98.4"x11.7"x4.9"             | (E)(2) DC POWER & (1) FIBER | (E)(1) RAYCAP DC6-48-60-18-8F |
| C3     | EXISTING              | LTE 700 B14/PCS    | 800-10966      | 96"x20"x6.9"                 | 158'-0"±              | 310°    | -                | (P)(1)RRUS-4478 B14 (700)<br>(E)(1)RRUS-8843 B2/B66A (1900/AWS) | 18.1"x13.4"x8.3"             | (P)(1)(Y-CABLE)             | (E)(1) RAYCAP DC6-48-60-18-8F |
| C4     | EXISTING              | LTE 700 BC/850/AWS | 800-10966      | 96"x20"x6.9"                 | 158'-0"±              | 310°    | -                | (E)(1)RRUS-4449 B5/B12 (700/850/AWS)                            | -                            | (P)(1)(Y-CABLE)             | (E)(1) RAYCAP DC6-48-60-18-8F |

| RRU CHART |                           |                   |
|-----------|---------------------------|-------------------|
| QUANTITY  | MODEL                     | SIZE (L x W x D)  |
| P(3)      | 4478 B14 (700)            | 18.1"x13.4"x8.3"  |
| P(3)      | RRUS-2012 B29             | 98.4"x11.7"x4.9"  |
| E(3)      | 8843 B2/B66A (1900/AWS)   | 14.9"x13.2"x10.9" |
| E(3)      | 4449 B5/B12 (700/850/AWS) | 17.9"x13.2"x10.4" |
| E(3)      | 4415 B30 (WCS)            | 16.5"x13.4"x5.9"  |

NOTE:  
MOUNT PER MANUFACTURER'S SPECIFICATIONS

NOTE:  
REFER TO FINAL-APPROVED V2 RFDS DATED 12/12/23

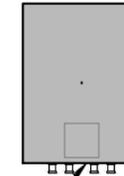
NOTE:  
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY:  
TEP NORTHEAST  
DATED: NOVEMBER 03, 2022

NOTE:  
SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER

PROPOSED RRU REFER TO THE FINAL RFDS AND CHART FOR QUANTITY, MODEL AND DIMENSIONS

NOTE:  
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

PROPOSED RRUS DETAIL  
SCALE: N.T.S.

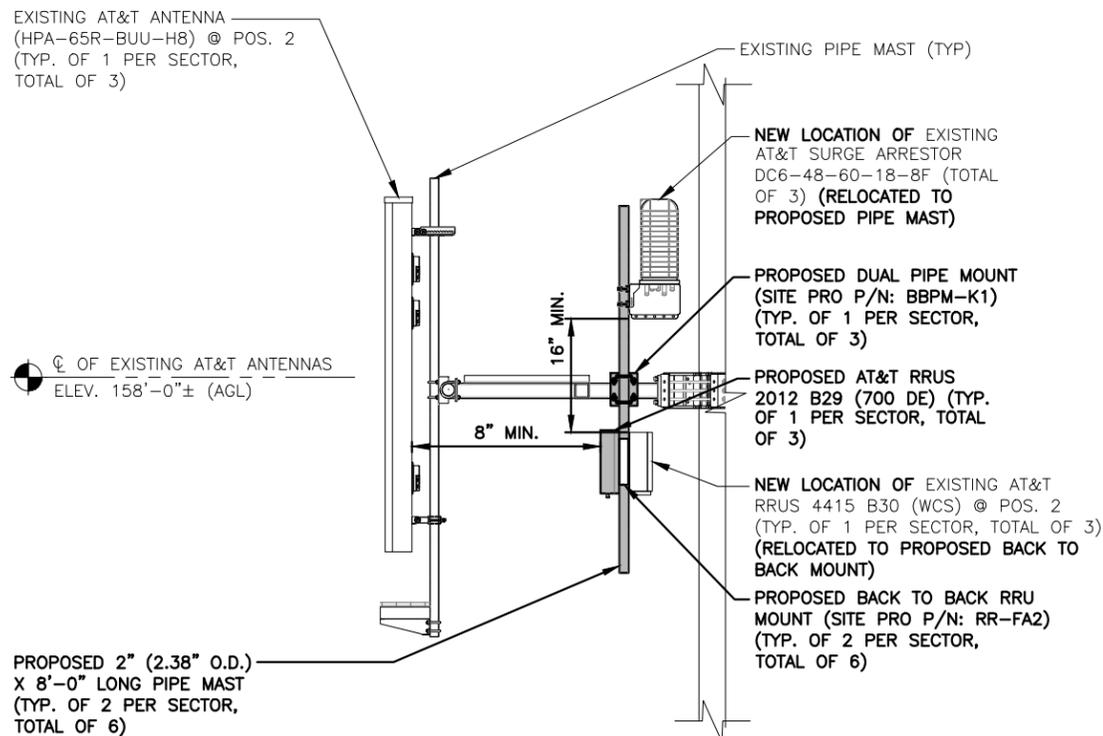


NOTE TO GENERAL CONTRACTOR: (PRIOR TO CONSTRUCTION COMPLETION)

- TEP NORTHEAST (TEP OPCO, LLC.) TO PERFORM POST/CLIMB AND INSPECTION TO CONFIRM PROPOSED INSTALLATION COMPLIES WITH THE RECORD STAMPED DRAWINGS AND STRUCTURAL REPORTS PRIOR TO SUBMITTING FCCA (FINAL CONSTRUCTION CONTROL AFFIDAVIT). GC IS RESPONSIBLE FOR COORDINATING INSPECTIONS WITH TEP NORTHEAST (TEP OPCO, LLC.) PRIOR TO CONSTRUCTION BEING COMPLETED.

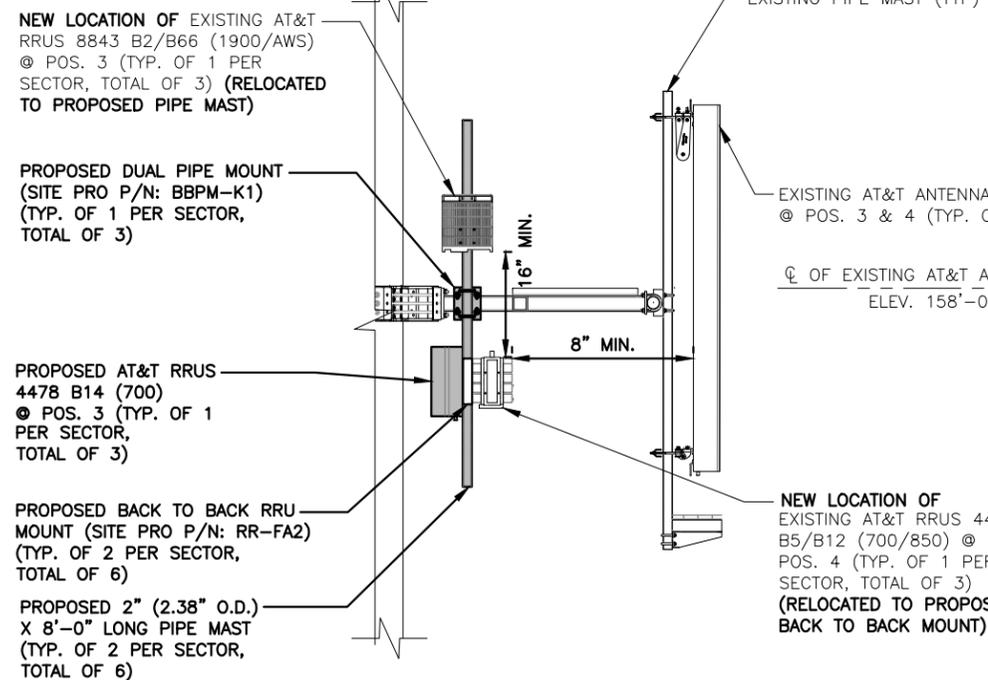
**FINAL ANTENNA CONFIGURATION**

SCALE: N.T.S.



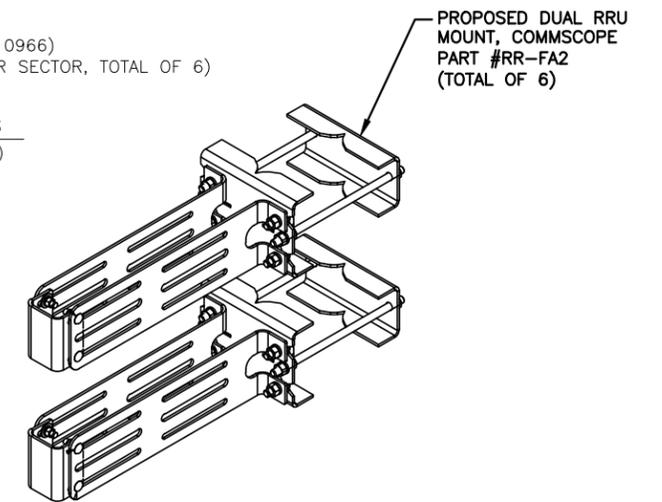
**EXISTING ANTENNA @ POS. 2**

22x34 SCALE: 1/2"=1'-0"  
11x17 SCALE: 1/4"=1'-0"



**EXISTING ANTENNA @ POS. 3**

22x34 SCALE: 1/2"=1'-0"  
11x17 SCALE: 1/4"=1'-0"



**PROPOSED BACK TO BACK MOUNT COMMSCOPE (RR-FA2)**

SCALE: N.T.S.



SITE NUMBER: CTL05293  
SITE NAME: ENFIELD EAST  
SBA SITE ID: CT46124

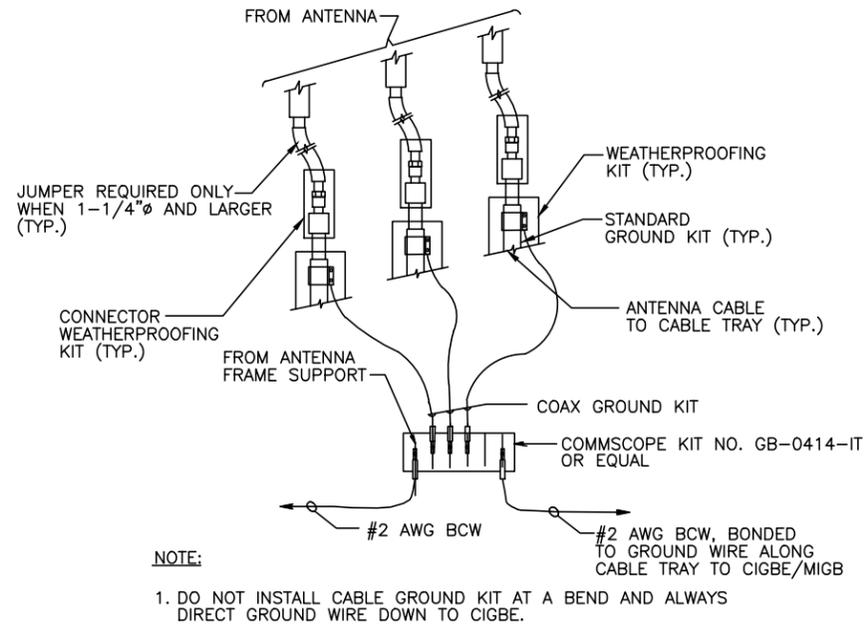
188 MOODY ROAD  
ENFIELD, CT 06082  
HARTFORD COUNTY



|                 |          |                         |              |     |       |
|-----------------|----------|-------------------------|--------------|-----|-------|
| 2               | 01/04/24 | ISSUED FOR CONSTRUCTION | JS           | MKT | DPH   |
| 1               | 01/23/23 | ISSUED FOR REVIEW       | MJ           | MKT | DPH   |
| 0               | 11/18/22 | ISSUED FOR REVIEW       | MJ           | MKT | DPH   |
| NO.             | DATE     | REVISIONS               | BY           | CHK | APP'D |
| SCALE: AS SHOWN |          | DESIGNED BY: AT         | DRAWN BY: VS |     |       |

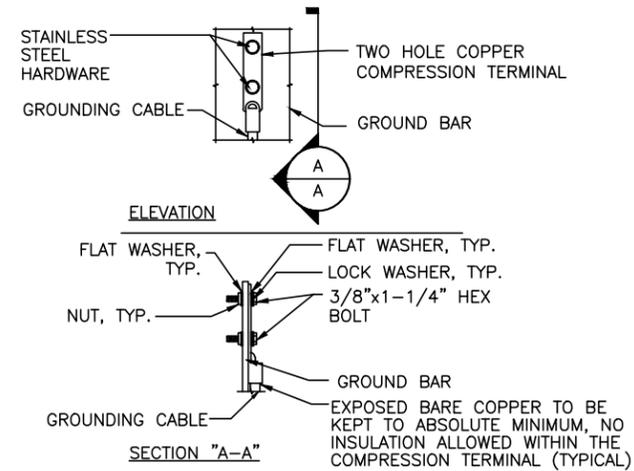


|   |                |
|---|----------------|
| AT&T                                    |                |
| DETAILS                                 |                |
| RADIO SOFTWARE CARRIER, LTE 6C & LTE 7C |                |
| SITE NUMBER                             | DRAWING NUMBER |
| CTL05293                                | A-3            |
| REV                                     | 2              |



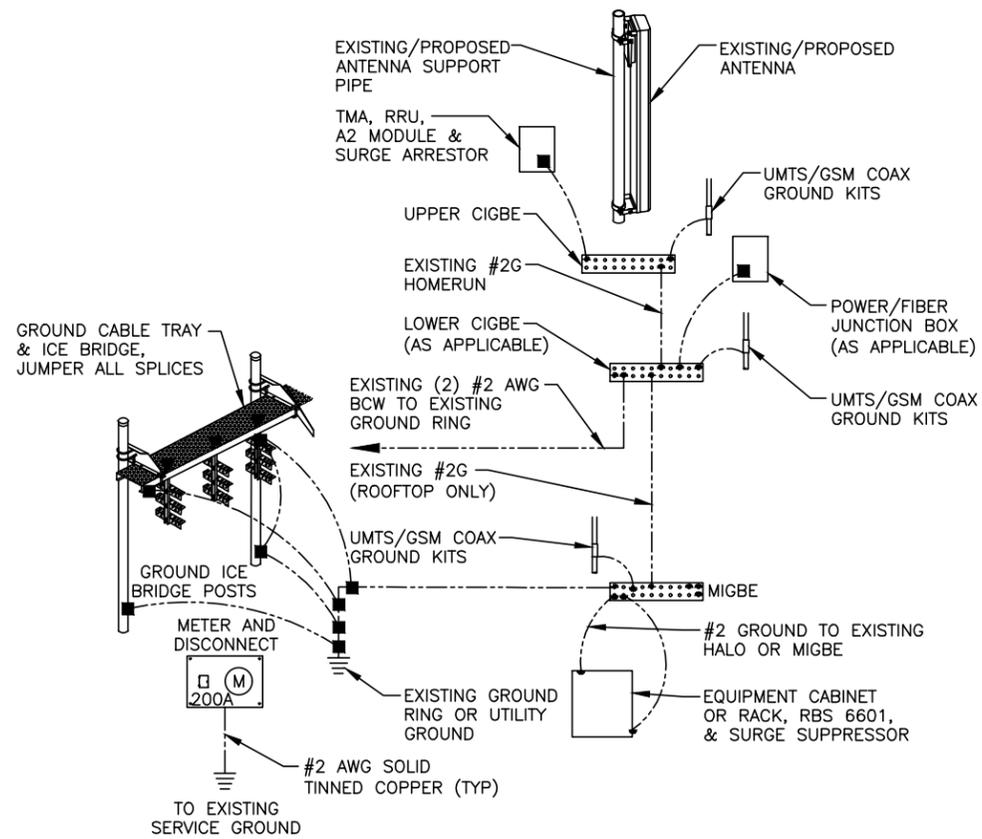
**GROUND WIRE TO GROUND BAR CONNECTION DETAIL** 1  
SCALE: N.T.S. G-1

**AT&T GROUNDING STANDARDS TO BE FOLLOWED:**  
 ATT-TP-76416  
 ATT-TP-76300  
 ATT-CEM-18002  
 ATT-002-290-531  
 ATT-002-290-701  
 ATT-CEM-23001



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

**TYPICAL GROUND BAR CONNECTION DETAIL** 3  
SCALE: N.T.S. G-1



**GROUNDING RISER DIAGRAM** 2  
SCALE: N.T.S. G-1

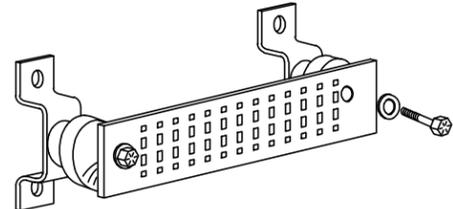
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

**SECTION "P" - SURGE PRODUCERS**

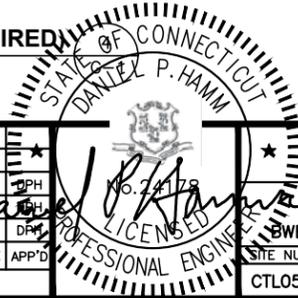
- CABLE ENTRY PORTS (HATCH PLATES) (#2 AWG)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2 AWG)
- TELCO GROUND BAR
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2 AWG)
- +24V POWER SUPPLY RETURN BAR (#2 AWG)
- 48V POWER SUPPLY RETURN BAR (#2 AWG)
- RECTIFIER FRAMES.

**SECTION "A" - SURGE ABSORBERS**

- INTERIOR GROUND RING (#2 AWG)
- EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2 AWG)
- METALLIC COLD WATER PIPE (IF AVAILABLE) (#2 AWG)
- BUILDING STEEL (IF AVAILABLE) (#2 AWG)



**GROUND BAR - DETAIL (AS REQUIRED)**  
SCALE: N.T.S.

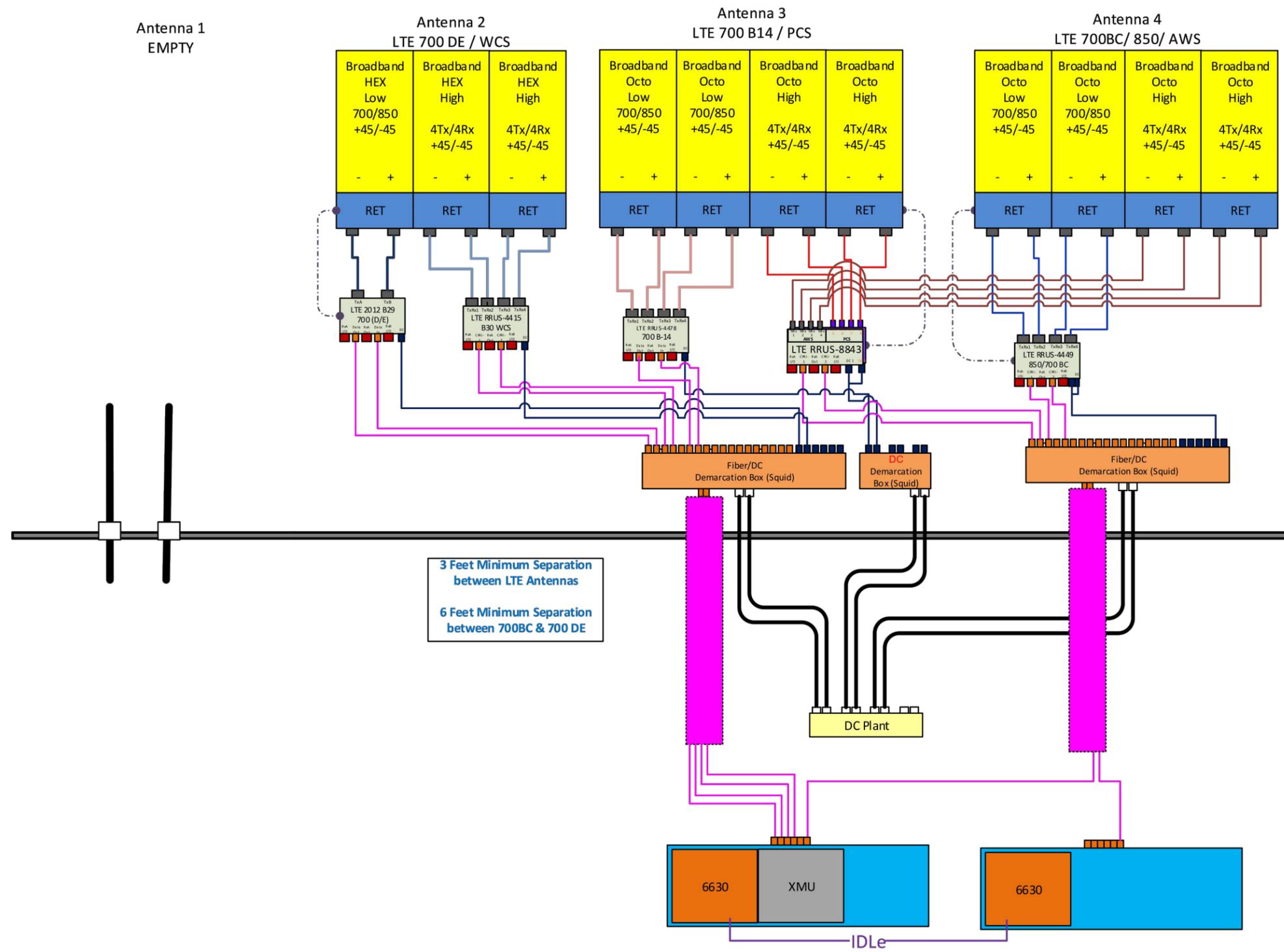


**SITE NUMBER: CTL05293**  
**SITE NAME: ENFIELD EAST**  
**SBA SITE ID: CT46124**  
 188 MOODY ROAD  
 ENFIELD, CT 06082  
 HARTFORD COUNTY



|                 |          |                         |                   |                   |           |                                       |           |
|-----------------|----------|-------------------------|-------------------|-------------------|-----------|---------------------------------------|-----------|
|                 |          |                         |                   |                   |           | AT&T                                  |           |
|                 |          |                         |                   |                   |           | GROUNDING DETAILS                     |           |
|                 |          |                         |                   |                   |           | BWE SOFTWARE CARRIER, LTE 6C & LTE 7C |           |
| NO.             | DATE     | ISSUED FOR CONSTRUCTION | ISSUED FOR REVIEW | ISSUED FOR REVIEW | REVISIONS | BY                                    | CHK APP'D |
| 2               | 01/04/24 | ISSUED FOR CONSTRUCTION | ISSUED FOR REVIEW | ISSUED FOR REVIEW |           |                                       |           |
| 1               | 01/23/23 | ISSUED FOR CONSTRUCTION | ISSUED FOR REVIEW | ISSUED FOR REVIEW |           |                                       |           |
| 0               | 11/18/22 | ISSUED FOR CONSTRUCTION | ISSUED FOR REVIEW | ISSUED FOR REVIEW |           |                                       |           |
| SCALE: AS SHOWN |          | DESIGNED BY: AT         |                   | DRAWN BY: VS      |           |                                       |           |
| SITE NUMBER     |          | DRAWING NUMBER          |                   | REV               |           |                                       |           |
| CTL05293        |          | G-1                     |                   | 2                 |           |                                       |           |

# FINAL-APPROVED V2 RFDS DATED 12/12/23



**NOTE:**  
 1. CONTRACTOR TO CONFIRM ALL PARTS.  
 2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS

**NOTE:**  
 REFER TO FINAL-APPROVED V2 RFDS DATED 12/12/23

**RF PLUMBING DIAGRAM** 1  
 SCALE: N.T.S



**SITE NUMBER: CTL05293**  
**SITE NAME: ENFIELD EAST**  
**SBA SITE ID: CT46124**  
 188 MOODY ROAD  
 ENFIELD, CT 06082  
 HARTFORD COUNTY



| NO. | DATE     | REVISIONS               | BY | CHK | APP'D |
|-----|----------|-------------------------|----|-----|-------|
| 2   | 01/04/24 | ISSUED FOR CONSTRUCTION | JS | MKT | DPH   |
| 1   | 01/23/23 | ISSUED FOR REVIEW       | JS | MKT | DPH   |
| 0   | 11/18/22 | ISSUED FOR REVIEW       | MJ | MKT | DPH   |

SCALE: AS SHOWN    DESIGNED BY: AT    DRAWN BY: VS

| AT&T                                  |                |     |
|---------------------------------------|----------------|-----|
| RF PLUMBING DIAGRAM                   |                |     |
| BWE SOFTWARE CARRIER, LTE 6C & LTE 7C |                |     |
| SITE NUMBER                           | DRAWING NUMBER | REV |
| CTL05293                              | RF-1           | 2   |

## RADIO FREQUENCY EMISSIONS ANALYSIS REPORT

### EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS



**Site Name:** ENFIELD EAST  
**AT&T Mobility FA#** 10090926  
**Site ID:** CTL05293  
**Project Name:** LTE 7C  
**Address:** 188 MOODY ROAD, ENFIELD, CT  
 06082  
**County:** HARTFORD  
**Latitude:** 42.0023919  
**Longitude:** -72.5214989  
**Structure Type:** MONOPOLE  
**Property Owner:** NA  
**Property Contact:** NA

### AT&T Existing Facility

#### Report Information

**Report Writer:** Monti Kumar                      **Report Generated Date:** 05-19-2023

#### Site Compliance Statement

|   |           |
|---|-----------|
| <b>Compliance Status</b>                                  | Compliant |
| <b>Cumulative General Population % MPE (Ground Level)</b> | 0.1029%   |

May 19, 2023

### Emissions Analysis for Site: **CTL05293– ENFIELD EAST**

MobileComm Professionals, Inc was directed to analyze the proposed AT&T facility located at **188 MOODY ROAD, ENFIELD, CT 06082**, for the purpose of determining whether the emissions from the Proposed AT&T 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 milliwatts per square centimeter ( $mW/cm^2$ ) or microwatts per square centimeter ( $\mu W/cm^2$ ). The number of  $mW/cm^2$  or  $\mu W/cm^2$  calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

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

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

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter ( $mW/cm^2$ ). The general population exposure limits for the 700 and 850 MHz Bands are approximately  $0.467 mW/cm^2$  and  $0.567 mW/cm^2$  respectively or  $466.667 \mu W/cm^2$  and  $566.667 \mu W/cm^2$  respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS), 2300 MHz (WCS), 3540 MHz (DoD Band) and 3840 MHz (C-Band) bands is  $1 mW/cm^2$  or  $1000 \mu W/cm^2$ . Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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.

## 1. Theoretical Calculations: Methods and Procedures

MobileComm Professionals, Inc has performed theoretical modeling of the site using a software tool, RoofMaster® Version 40.12.23.2022, which incorporates calculation methodologies detailed in FCC OET 65. RoofMaster® uses a cylindrical model for conservative power density predictions within the near field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations, the power decreases inversely with the square of the distance. The modeling is based on worst-case assumptions in terms of transmitter power and duty cycle. No losses were included in the power calculations unless they were specifically provided for the project.

In OET 65, a far field model is presented to calculate the spatial peak power density. The RoofMaster® implementation of this model incorporates antenna manufacturer's horizontal and vertical pattern data to determine the power density in all directions. This model yields the power density at a single point in space. In order to determine the spatial power density for comparison to the FCC limits, the average of several points calculated within the human profile (0-6') must be conducted. RoofMaster® calculates seven power density values between 0-6' above the specified study plane and performs a linear spatial average.

The following table details the antennas and operating parameters for the AT&T antenna system as well as any other antenna systems at the site. This is based on antenna information provided by the client and data compiled from other sources where necessary. The data below was input into Roofmaster® to perform the theoretical exposure calculations at the ground.

The theoretical calculations performed in Roofmaster® determine the cumulative exposure at all sample points at ground level (0-6' spatial average). The results from highest cumulative sample point at ground level surrounding the site are displayed in the table below. The contribution from directional antennas to the maximum cumulative totals varies greatly depending on location; therefore, the contribution from one antenna sector at the highest calculated exposure point may be greater or less than other sectors since sectorized directional antennas are pointed in different directions and there is not much overlapping exposure.

The contribution to the cumulative power density and % MPE for each antenna/frequency band is listed in the table. The cumulative power density and cumulative % MPE are displayed at the bottom of the table.

## 2. Antenna Inventory & Power Data

| Sector | Ant ID | Operator | Antenna Mfg | Antenna Model        | Antenna Type | FREQ. (MHz) | TECH.    | AZ. (°) | H B W (°) | Antenna Gain (dBd) | Antenna Aperture (ft) | #of Channels | Transmitter Power Per Channel (Watts) | Total ERP (Watts) | Total EIRP (Watts) | Height (ft) | Calculated Power Density ( $\mu\text{W}/\text{cm}^2$ ) | Allowable MPE ( $\mu\text{W}/\text{cm}^2$ ) | Calculated MPE% |
|--------|--------|----------|-------------|----------------------|--------------|-------------|----------|---------|-----------|--------------------|-----------------------|--------------|---------------------------------------|-------------------|--------------------|-------------|--|---|-----------------|
| A      | 1      | AT&T     | CCI         | HPA-65R-BUU-H8       | Panel        | 700         | LTE(B29) | 60      | 65        | 13.15              | 7.7                   | 2            | 40.00                                 | 1472.62           | 2415.96            | 158.00      | 0.000038   | 466.67                                      | 0.000008        |
| A      | 1      | AT&T     | CCI         | HPA-65R-BUU-H8       | Panel        | 2300        | LTE      | 60      | 60        | 15.55              | 7.7                   | 4            | 25.00                                 | 3198.90           | 5248.07            | 158.00      | 0.000084   | 1000.00                                     | 0.000008        |
| A      | 2      | AT&T     | Kathrein    | 80010966             | Panel        | 700         | LTE(FN)  | 60      | 66        | 13.55              | 8                     | 4            | 40.00                                 | 3229.39           | 5298.10            | 158.00      | 0.000134   | 466.67                                      | 0.000029        |
| A      | 2      | AT&T     | Kathrein    | 80010966             | Panel        | 1900        | LTE/5G   | 60      | 64        | 15.85              | 8                     | 4            | 40.00                                 | 5484.28           | 8997.46            | 158.00      | 0.000000   | 1000.00                                     | 0.000000        |
| A      | 3      | AT&T     | Kathrein    | 80010966             | Panel        | 700         | LTE(B12) | 60      | 66        | 13.55              | 8                     | 4            | 40.00                                 | 3229.39           | 5298.10            | 158.00      | 0.000165   | 466.67                                      | 0.000035        |
| A      | 3      | AT&T     | Kathrein    | 80010966             | Panel        | 850         | 5G       | 60      | 65        | 14.25              | 8                     | 4            | 40.00                                 | 3794.20           | 6224.72            | 158.00      | 0.000037   | 566.67                                      | 0.000007        |
| A      | 3      | AT&T     | Kathrein    | 80010966             | Panel        | 2100        | LTE/5G   | 60      | 62        | 16.15              | 8                     | 4            | 40.00                                 | 5876.52           | 9640.95            | 158.00      | 0.000038   | 1000.00                                     | 0.000004        |
| B      | 4      | AT&T     | CCI         | HPA-65R-BUU-H8       | Panel        | 700         | LTE(B29) | 160     | 65        | 13.15              | 7.7                   | 2            | 40.00                                 | 1472.62           | 2415.96            | 158.00      | 0.033262   | 466.67                                      | 0.007128        |
| B      | 4      | AT&T     | CCI         | HPA-65R-BUU-H8       | Panel        | 2300        | LTE      | 160     | 60        | 15.55              | 7.7                   | 4            | 25.00                                 | 3198.90           | 5248.07            | 158.00      | 0.041688   | 1000.00                                     | 0.004169        |
| B      | 5      | AT&T     | Kathrein    | 80010966             | Panel        | 700         | LTE(FN)  | 160     | 66        | 13.55              | 8                     | 4            | 40.00                                 | 3229.39           | 5298.10            | 158.00      | 0.050730   | 466.67                                      | 0.010871        |
| B      | 5      | AT&T     | Kathrein    | 80010966             | Panel        | 1900        | LTE/5G   | 160     | 64        | 15.85              | 8                     | 4            | 40.00                                 | 5484.28           | 8997.46            | 158.00      | 0.042366   | 1000.00                                     | 0.004237        |
| B      | 6      | AT&T     | Kathrein    | 80010966             | Panel        | 700         | LTE(B12) | 160     | 66        | 13.55              | 8                     | 4            | 40.00                                 | 3229.39           | 5298.10            | 158.00      | 0.051295   | 466.67                                      | 0.010992        |
| B      | 6      | AT&T     | Kathrein    | 80010966             | Panel        | 850         | 5G       | 160     | 65        | 14.25              | 8                     | 4            | 40.00                                 | 3794.20           | 6224.72            | 158.00      | 0.051438   | 566.67                                      | 0.009077        |
| B      | 6      | AT&T     | Kathrein    | 80010966             | Panel        | 2100        | LTE/5G   | 160     | 62        | 16.15              | 8                     | 4            | 40.00                                 | 5876.52           | 9640.95            | 158.00      | 0.046306   | 1000.00                                     | 0.004631        |
| C      | 7      | AT&T     | CCI         | HPA-65R-BUU-H8       | Panel        | 700         | LTE(B29) | 310     | 65        | 13.15              | 7.7                   | 2            | 40.00                                 | 1472.62           | 2415.96            | 158.00      | 0.000101   | 466.67                                      | 0.000022        |
| C      | 7      | AT&T     | CCI         | HPA-65R-BUU-H8       | Panel        | 2300        | LTE      | 310     | 60        | 15.55              | 7.7                   | 4            | 25.00                                 | 3198.90           | 5248.07            | 158.00      | 0.000182   | 1000.00                                     | 0.000018        |
| C      | 8      | AT&T     | Kathrein    | 80010966             | Panel        | 700         | LTE(FN)  | 310     | 66        | 13.55              | 8                     | 4            | 40.00                                 | 3229.39           | 5298.10            | 158.00      | 0.000260   | 466.67                                      | 0.000056        |
| C      | 8      | AT&T     | Kathrein    | 80010966             | Panel        | 1900        | LTE/5G   | 310     | 64        | 15.85              | 8                     | 4            | 40.00                                 | 5484.28           | 8997.46            | 158.00      | 0.000131   | 1000.00                                     | 0.000013        |
| C      | 9      | AT&T     | Kathrein    | 80010966             | Panel        | 700         | LTE(B12) | 310     | 66        | 13.55              | 8                     | 4            | 40.00                                 | 3229.39           | 5298.10            | 158.00      | 0.000055   | 466.67                                      | 0.000012        |
| C      | 9      | AT&T     | Kathrein    | 80010966             | Panel        | 850         | 5G       | 310     | 65        | 14.25              | 8                     | 4            | 40.00                                 | 3794.20           | 6224.72            | 158.00      | 0.000258   | 566.67                                      | 0.000046        |
| C      | 9      | AT&T     | Kathrein    | 80010966             | Panel        | 2100        | LTE/5G   | 310     | 62        | 16.15              | 8                     | 4            | 40.00                                 | 5876.52           | 9640.95            | 158.00      | 0.000010   | 1000.00                                     | 0.000001        |
| A      | 10     | T-Mobile | Ericsson    | KRD901146-1_A        | Panel        | 1900        | GSM      | 30      | 63.3      | 15.35              | 4.94                  | 4            | 30.00                                 | 4113.21           | 6748.10            | 187.00      | 0.000011   | 1000.00                                     | 0.000001        |
| A      | 10     | T-Mobile | Ericsson    | KRD901146-1_A        | Panel        | 1900        | LTE      | 30      | 63.3      | 15.35              | 4.94                  | 2            | 60.00                                 | 4113.21           | 6748.10            | 187.00      | 0.000011   | 1000.00                                     | 0.000001        |
| A      | 10     | T-Mobile | Ericsson    | KRD901146-1_A        | Panel        | 2100        | LTE      | 30      | 63.3      | 15.35              | 4.94                  | 2            | 60.00                                 | 4113.21           | 6748.10            | 187.00      | 0.000009   | 1000.00                                     | 0.000001        |
| A      | 11     | T-Mobile | RFS         | APXVAARR24_43-U-NA20 | Panel        | 600         | LTE      | 30      | 69        | 13.25              | 8                     | 2            | 30.00                                 | 1130.19           | 1854.18            | 187.00      | 0.000080   | 400.00                                      | 0.000020        |
| A      | 11     | T-Mobile | RFS         | APXVAARR24_43-U-NA20 | Panel        | 600         | 5G       | 30      | 69        | 13.25              | 8                     | 1            | 80.00                                 | 1506.92           | 2472.24            | 187.00      | 0.000107   | 400.00                                      | 0.000027        |
| A      | 11     | T-Mobile | RFS         | APXVAARR24_43-U-NA20 | Panel        | 700         | LTE      | 30      | 64        | 13.65              | 8                     | 2            | 30.00                                 | 1239.23           | 2033.06            | 187.00      | 0.000129   | 466.67                                      | 0.000028        |
| A      | 11     | T-Mobile | RFS         | APXVAARR24_43-U-NA20 | Panel        | 1900        | LTE      | 30      | 63        | 16.05              | 8                     | 2            | 60.00                                 | 4307.06           | 7066.12            | 187.00      | 0.000110   | 1000.00                                     | 0.000011        |
| A      | 12     | T-Mobile | Ericsson    | AIR6449_LTE_B41      | Panel        | 2500        | LTE      | 30      | 12.5      | 22.65              | 2.75                  | 1            | 40.67                                 | 7485.61           | 12280.81           | 187.00      | 0.001245   | 1000.00                                     | 0.000124        |
| A      | 12     | T-Mobile | Ericsson    | AIR6449_NR_B41       | Panel        | 2500        | 5G       | 30      | 12.5      | 22.65              | 2.75                  | 1            | 67.78                                 | 12476.02          | 20468.02           | 187.00      | 0.002074   | 1000.00                                     | 0.000207        |

**Table 2.1: Antenna Inventory & Power Data**

\*NOTE: 75% Duty Cycle and adjusted power reduction factor of 0.32 was applied to the AIR6449 & AIR6449 antennas per guidance from AT&T. Specifications were not available for the Ericsson AIR 6449 antenna. Per AT&T, specifications for the AIR 6449 antenna were used to model the 6449 due to its similarity.

| Sector | Ant ID | Operator  | Antenna Mfg | Antenna Model        | Antenna Type | FREQ. (MHz) | TECH. | AZ. (°) | H B W (°) | Antenna Gain (dBi) | Antenna Aperture (ft) | #of Channels | Transmitter Power Per Channel (Watts) | Total ERP (Watts) | Total EIRP (Watts) | Height (ft)                                    | Calculated Power Density (μW/cm <sup>2</sup> ) | Allowable MPE (μW/cm <sup>2</sup> ) | Calculated MPE% |
|--------|--------|-----------|-------------|----------------------|--------------|-------------|-------|---------|-----------|--------------------|-----------------------|--------------|---------------------------------------|-------------------|--------------------|--|--|-------------------------------------|-----------------|
| B      | 13     | T-Mobile  | Ericsson    | KRD901146-1_A        | Panel        | 1900        | GSM   | 140     | 63.3      | 15.35              | 4.94                  | 4            | 30.00                                 | 4113.21           | 6748.10            | 187.00   | 0.015872                                       | 1000.00                             | 0.001587        |
| B      | 13     | T-Mobile  | Ericsson    | KRD901146-1_A        | Panel        | 1900        | LTE   | 140     | 63.3      | 15.35              | 4.94                  | 2            | 60.00                                 | 4113.21           | 6748.10            | 187.00   | 0.015872                                       | 1000.00                             | 0.001587        |
| B      | 13     | T-Mobile  | Ericsson    | KRD901146-1_A        | Panel        | 2100        | LTE   | 140     | 63.3      | 15.35              | 4.94                  | 2            | 60.00                                 | 4113.21           | 6748.10            | 187.00   | 0.010557                                       | 1000.00                             | 0.001056        |
| B      | 14     | T-Mobile  | RFS         | APXVAARR24_43-U-NA20 | Panel        | 600         | LTE   | 140     | 69        | 13.25              | 8                     | 2            | 30.00                                 | 1130.19           | 1854.18            | 187.00   | 0.010538                                       | 400.00                              | 0.002635        |
| B      | 14     | T-Mobile  | RFS         | APXVAARR24_43-U-NA20 | Panel        | 600         | 5G    | 140     | 69        | 13.25              | 8                     | 1            | 80.00                                 | 1506.92           | 2472.24            | 187.00   | 0.014051                                       | 400.00                              | 0.003513        |
| B      | 14     | T-Mobile  | RFS         | APXVAARR24_43-U-NA20 | Panel        | 700         | LTE   | 140     | 64        | 13.65              | 8                     | 2            | 30.00                                 | 1239.23           | 2033.06            | 187.00   | 0.009805                                       | 466.67                              | 0.002101        |
| B      | 14     | T-Mobile  | RFS         | APXVAARR24_43-U-NA20 | Panel        | 1900        | LTE   | 140     | 63        | 16.05              | 8                     | 2            | 60.00                                 | 4307.06           | 7066.12            | 187.00   | 0.016873                                       | 1000.00                             | 0.001687        |
| B      | 15     | T-Mobile  | Ericsson    | AIR6449_LTE_B41      | Panel        | 2500        | LTE   | 140     | 12.5      | 22.65              | 2.75                  | 1            | 40.67                                 | 7485.61           | 12280.81           | 187.00   | 0.093880                                       | 1000.00                             | 0.009388        |
| B      | 15     | T-Mobile  | Ericsson    | AIR6449_NR_B41       | Panel        | 2500        | 5G    | 140     | 12.5      | 22.65              | 2.75                  | 1            | 67.78                                 | 12476.02          | 20468.02           | 187.00   | 0.156466                                       | 1000.00                             | 0.015647        |
| C      | 16     | T-Mobile  | Ericsson    | KRD901146-1_A        | Panel        | 1900        | GSM   | 240     | 63.3      | 15.35              | 4.94                  | 4            | 30.00                                 | 4113.21           | 6748.10            | 187.00   | 0.002891                                       | 1000.00                             | 0.000289        |
| C      | 16     | T-Mobile  | Ericsson    | KRD901146-1_A        | Panel        | 1900        | LTE   | 240     | 63.3      | 15.35              | 4.94                  | 2            | 60.00                                 | 4113.21           | 6748.10            | 187.00   | 0.002891                                       | 1000.00                             | 0.000289        |
| C      | 16     | T-Mobile  | Ericsson    | KRD901146-1_A        | Panel        | 2100        | LTE   | 240     | 63.3      | 15.35              | 4.94                  | 2            | 60.00                                 | 4113.21           | 6748.10            | 187.00   | 0.003049                                       | 1000.00                             | 0.000305        |
| C      | 17     | T-Mobile  | RFS         | APXVAARR24_43-U-NA20 | Panel        | 600         | LTE   | 240     | 69        | 13.25              | 8                     | 2            | 30.00                                 | 1130.19           | 1854.18            | 187.00   | 0.000212                                       | 400.00                              | 0.000053        |
| C      | 17     | T-Mobile  | RFS         | APXVAARR24_43-U-NA20 | Panel        | 600         | 5G    | 240     | 69        | 13.25              | 8                     | 1            | 80.00                                 | 1506.92           | 2472.24            | 187.00   | 0.000283                                       | 400.00                              | 0.000071        |
| C      | 17     | T-Mobile  | RFS         | APXVAARR24_43-U-NA20 | Panel        | 700         | LTE   | 240     | 64        | 13.65              | 8                     | 2            | 30.00                                 | 1239.23           | 2033.06            | 187.00   | 0.000025                                       | 466.67                              | 0.000005        |
| C      | 17     | T-Mobile  | RFS         | APXVAARR24_43-U-NA20 | Panel        | 1900        | LTE   | 240     | 63        | 16.05              | 8                     | 2            | 60.00                                 | 4307.06           | 7066.12            | 187.00   | 0.000295                                       | 1000.00                             | 0.000030        |
| C      | 18     | T-Mobile  | Ericsson    | AIR6449_LTE_B41      | Panel        | 2500        | LTE   | 240     | 12.5      | 22.65              | 2.75                  | 1            | 40.67                                 | 7485.61           | 12280.81           | 187.00   | 0.004236                                       | 1000.00                             | 0.000424        |
| C      | 18     | T-Mobile  | Ericsson    | AIR6449_NR_B41       | Panel        | 2500        | 5G    | 240     | 12.5      | 22.65              | 2.75                  | 1            | 67.78                                 | 12476.02          | 20468.02           | 187.00   | 0.007060                                       | 1000.00                             | 0.000706        |
| A      | 19     | Sprint    | RFS         | APXV9ERR18-C-A20     | Panel        | 850         | CDMA  | 0       | 80        | 11.85              | 6                     | 1            | 20.00                                 | 272.92            | 447.74             | 168.00   | 0.000007                                       | 566.67                              | 0.000001        |
| A      | 19     | Sprint    | RFS         | APXV9ERR18-C-A20     | Panel        | 850         | LTE   | 0       | 80        | 11.85              | 6                     | 2            | 20.00                                 | 545.83            | 895.49             | 168.00   | 0.000014                                       | 566.67                              | 0.000002        |
| A      | 19     | Sprint    | RFS         | APXV9ERR18-C-A20     | Panel        | 1900        | CDMA  | 0       | 80        | 14.85              | 6                     | 5            | 16.00                                 | 2178.16           | 3573.47            | 168.00   | 0.000040                                       | 1000.00                             | 0.000004        |
| A      | 19     | Sprint    | RFS         | APXV9ERR18-C-A20     | Panel        | 1900        | LTE   | 0       | 80        | 14.85              | 6                     | 2            | 40.00                                 | 2178.16           | 3573.47            | 168.00   | 0.000040                                       | 1000.00                             | 0.000004        |
| A      | 20     | Sprint    | RFS         | APXVTM14-C-I20       | Panel        | 2500        | LTE   | 0       | 65        | 16.4               | 4.69                  | 8            | 20.00                                 | 6224.72           | 10212.22           | 168.00   | 0.000006                                       | 1000.00                             | 0.000001        |
| B      | 21     | Sprint    | RFS         | APXVSP18-C-A20       | Panel        | 850         | CDMA  | 130     | 65        | 13.35              | 6                     | 1            | 20.00                                 | 385.50            | 632.46             | 168.00   | 0.005065                                       | 566.67                              | 0.000894        |
| B      | 21     | Sprint    | RFS         | APXVSP18-C-A20       | Panel        | 850         | LTE   | 130     | 65        | 13.35              | 6                     | 2            | 20.00                                 | 771.01            | 1264.91            | 168.00   | 0.010130                                       | 566.67                              | 0.001788        |
| B      | 21     | Sprint    | RFS         | APXVSP18-C-A20       | Panel        | 1900        | CDMA  | 130     | 65        | 15.85              | 6                     | 5            | 16.00                                 | 2742.14           | 4498.73            | 168.00   | 0.018977                                       | 1000.00                             | 0.001898        |
| B      | 21     | Sprint    | RFS         | APXVSP18-C-A20       | Panel        | 1900        | LTE   | 130     | 65        | 15.85              | 6                     | 2            | 40.00                                 | 2742.14           | 4498.73            | 168.00   | 0.018977                                       | 1000.00                             | 0.001898        |
| B      | 22     | Sprint    | RFS         | APXVTM14-C-I20       | Panel        | 2500        | LTE   | 150     | 65        | 16.4               | 4.69                  | 8            | 20.00                                 | 6224.72           | 10212.22           | 168.00   | 0.016224                                       | 1000.00                             | 0.001622        |
| C      | 23     | Sprint    | RFS         | APXVSP18-C-A20       | Panel        | 850         | CDMA  | 240     | 65        | 13.35              | 6                     | 1            | 20.00                                 | 385.50            | 632.46             | 168.00   | 0.000068                                       | 566.67                              | 0.000012        |
| C      | 23     | Sprint    | RFS         | APXVSP18-C-A20       | Panel        | 850         | LTE   | 240     | 65        | 13.35              | 6                     | 2            | 20.00                                 | 771.01            | 1264.91            | 168.00   | 0.000135                                       | 566.67                              | 0.000024        |
| C      | 23     | Sprint    | RFS         | APXVSP18-C-A20       | Panel        | 1900        | CDMA  | 240     | 65        | 15.85              | 6                     | 5            | 16.00                                 | 2742.14           | 4498.73            | 168.00   | 0.000347                                       | 1000.00                             | 0.000035        |
| C      | 23     | Sprint    | RFS         | APXVSP18-C-A20       | Panel        | 1900        | LTE   | 240     | 65        | 15.85              | 6                     | 2            | 40.00                                 | 2742.14           | 4498.73            | 168.00   | 0.000347                                       | 1000.00                             | 0.000035        |
| C      | 24     | Sprint    | RFS         | APXVTM14-C-I20       | Panel        | 2500        | LTE   | 240     | 65        | 16.4               | 4.69                  | 8            | 20.00                                 | 6224.72           | 10212.22           | 168.00   | 0.001109                                       | 1000.00                             | 0.000111        |
| A      | 25     | Metro PCS | Kathrein    | 742213               | Panel        | 1900        | LTE   | 0       | 65        | 17.05              | 6.4                   | 1            | 60.00                                 | 2711.14           | 4447.86            | 148.00   | 0.000001                                       | 1000.00                             | 0.000000        |
| B      | 26     | Metro PCS | Kathrein    | 742213               | Panel        | 1900        | LTE   | 120     | 65        | 17.05              | 6.4                   | 1            | 60.00                                 | 2711.14           | 4447.86            | 148.00   | 0.013417                                       | 1000.00                             | 0.001342        |
| C      | 27     | Metro PCS | Kathrein    | 742213               | Panel        | 1900        | LTE   | 240     | 65        | 17.05              | 6.4                   | 1            | 60.00                                 | 2711.14           | 4447.86            | 148.00   | 0.001184                                       | 1000.00                             | 0.000118        |
|        |        |           |             |                      |              |             |       |         |           |                    |                       |              |                                       |                   |                    | Calculated Power Density (μW/cm <sup>2</sup> ) | 0.773298%                                      | Calculated MPE%                     | 0.1029%         |

**Table 2.2: Antenna Inventory & Power Data**

\*NOTE: 75% Duty Cycle and adjusted power reduction factor of 0.32 was applied to the AIR6449 & AIR6449 antennas per guidance from AT&T. Specifications were not available for the Ericsson AIR 6449 antenna. Per AT&T, specifications for the AIR 6449 antenna were used to model the 6449 due to its similarity.

### 3. Compliance Summary

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

The anticipated composite MPE value for this site assuming all carriers present is 0.1029% of the allowable FCC established general public limit sampled at the ground level.

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 within the allowable 100% threshold standard per the federal government.



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WEST BOYLSTON, MA  
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WINDSOR LOCKS, CT  
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**TOTAL SHIPMENT WEIGHT** 2 lbs / 0.91 kgs

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- 10:54 AM  
Arrived at FedEx hub  
MEMPHIS, TN
- 3:06 PM  
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MEMPHIS, TN
- 6:29 PM  
At destination sort facility  
EAST GRANBY, CT

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- 10:23 AM  
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MEMPHIS, TN
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EAST GRANBY, CT

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BOCA RATON, FL  
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