



Filed by:

*Kri Pelletier, Property Specialist - SBA Communications
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May 2, 2016

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

Notice of Exempt Modification
229 Cheshire Road, Prospect, CT 06712
41.50790 N
-72.95100 W
T-Mobile#: CTNH303A_L700

Dear Ms. Bachman:

T-Mobile currently maintains three (3) antennas at the 160-foot level of the existing 162-foot Monopole Tower at 229 Cheshire Rd. The tower is owned by SBA Towers, LLC. The property is owned by Boardman W. Kathan. T-Mobile now intends to install six (6) new L700MHz antennas. These antennas would be installed at the 160-foot level of the tower. T-Mobile also intends to:

Remove:

- None

Remove and Replace:

- Remove (3) RFS APX16DWV Panel Antennas and replace with (3) Ericsson AIR21 B4A/B2P Panel Antennas
- Remove existing antenna mount and replace with (1) CommScope MC-HPM1250 antenna mount

Install:

- (3) Andrew LNX-6515DS Panel Antennas
- (3) Ericsson S11B12 Remote Radio Heads
- (3) Ericsson S11B2 Remote Radio Heads
- (1) 1-5/8" Hybrid Fiber Line

Existing Equipment to Remain (Entitlements):

- (1) 3106 Equipment Cabinet
- (1) S12000 Equipment Cabinet
- (12) 1-5/8" Coax Lines
- (6) Tower Mounted Amplifiers (to be physically removed while retaining the entitlement)



This facility was approved by the Town of Prospect's Planning and Zoning Commission with Special Permit on October 22, 1999. (Town Site # 10125-036.) Under Section 300, a compound was approved within a 100' x 100' parcel of land in a residential zone accessed from Cheshire Road beyond a gate or other means accessible by Town Officials. The Monopole Tower was initially approved at a height of 150'. (T-Mobile was later approved a 12' Extension to the Monopole as referenced in FDH drawings dated 8/30/05, and noted in the Council's Database of CSC-Approved Telecommunications Sites.) Initial construction drawings were provided by URS Greiner Woodward Clyde of Rocky Hill, CT dated October 19, 1999. This modification complies with all tower conditions.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16.50j-72(b)(2). In accordance with R.C.S.A. § 16.50j-73, a copy of this letter is being sent to the Honorable Robert J. Chatfield, Mayor of Prospect, as well as the property owner. (Separate notice is not being sent to tower owner, as it belongs to SBA.)

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. §16.50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modification will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modification will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading with certain modifications.

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

Sincerely,

Kri Pelletier
Property Specialist
SBA COMMUNICATIONS CORPORATION
134 Flanders Rd., Suite 125
Westborough, MA 01581

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kpelletier@sbsite.com

Attachments

cc: The Honorable Robert J. Chatfield—as elected official
Prospect Town Hall 36 Center Street, Prospect, CT 06712
Boardman W. Kathan—as property owner
229 Cheshire Road Prospect CT 06712



POWER DENSITY

T-Mobile Site Inventory and Power Data

| | | | | | |
|-----------------|------------------------------|-----------------|------------------------------|-----------------|------------------------------|
| Sector: | A | Sector: | B | Sector: | C |
| Antenna #: | 1 | Antenna #: | 1 | Antenna #: | 1 |
| Make / Model: | AIR21 B2A/B4P | Make / Model: | AIR21 B2A/B4P | Make / Model: | AIR21 B2A/B4P |
| Gain: | 15.35 dBd | Gain: | 15.35 dBd | Gain: | 15.35 dBd |
| Height (AGL): | 180 | Height (AGL): | 180 | Height (AGL): | 180 |
| Frequency Bands | 1900 UMTS/ LTE 2100 (AWS) | Frequency Bands | 1900 UMTS/ LTE 2100 (AWS) | Frequency Bands | 1900 UMTS/ LTE 2100 (AWS) |
| Channel Count | 3 | Channel Count | 3 | # PCS Channels: | 3 |
| Total TX Power: | 90 | Total TX Power: | 90 | # AWS Channels: | 90 |
| ERP (W): | 3084.91 | ERP (W): | 3084.91 | ERP (W): | 3084.91 |
| Antenna A1 MPE% | 1.1 | Antenna B1 MPE% | 1.1 | Antenna C1 MPE% | 1.1 |
| Antenna #: | 2 | Antenna #: | 2 | Antenna #: | 2 |
| Make / Model: | LNX-6515DS-VTM | Make / Model: | LNX-6515DS-VTM | Make / Model: | LNX-6515DS-VTM |
| Gain: | 14.55 dBd | Gain: | 14.55 dBd | Gain: | 14.55 dBd |
| Height (AGL): | 180 | Height (AGL): | 180 | Height (AGL): | 180 |
| Frequency Bands | LTE 700 | Frequency Bands | LTE 700 | Frequency Bands | LTE 700 |
| Channel Count | 1 | Channel Count | 1 | Channel Count | 1 |
| Total TX Power: | 30 | Total TX Power: | 30 | Total TX Power: | 30 |
| ERP (W): | 855.31 | ERP (W): | 855.31 | ERP (W): | 855.31 |
| Antenna A2 MPE% | 1.2 | Antenna B2 MPE% | 1.2 | Antenna C2 MPE% | 1.2 |

| Site Composite MPE% | |
|--------------------------|---------------|
| Carrier | MPE% |
| T-Mobile | 6.9 % |
| Sprint | 3.6 % |
| Verizon | 4.2 % |
| ATT | 2.8 % |
| Site Total MPE %: | 17.5 % |

| | |
|--------------------------|------------|
| T-Mobile Sector 1 Total: | 2.3 % |
| T-Mobile Sector 2 Total: | 2.3% |
| T-Mobile Sector 3 Total: | 2.3 % |
| Site Total: | 6.9 |

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

T-Mobile Existing Facility

Site ID: CTNH303A

E-PROSPECT
229 CHESHIRE ROAD
PROPECT, CT 06712

April 29, 2016

| Site Compliance Summary | |
|--|------------------|
| Compliance Status: | COMPLIANT |
| Site total MPE% of FCC general public allowable limit: | 17.5 % |

April 29, 2016

T-Mobile USA
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 06002

Emissions Analysis for Site: **CTNH303A – E-PROSPECT**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **229 CHESHIRE ROAD, PROSPECT, CT** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

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

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

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

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

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

exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at **229 CHESHIRE ROAD, PROSPECT, CT** using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6 foot person standing at the base of the tower.

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

- 1) 2 UMTS channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel
- 2) 1 LTE channels (700 Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 3) 1 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 5) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications [minus 10 dB] (if required) was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 6) The antennas used in this modeling are the AIR21 B2A/B4P for 1900 MHz (PCS) and 2100 MHz (AWS) and the LNX-6515DS-VTM for the 700 MHz channels. This is based on feedback from the carrier with regards to anticipated antenna selection. The AIR21 B2A/B4P has a maximum gain of **15.35 dBd** at its main lobe, and the LNX-6515DS-VTM has a maximum gain of **14.55 dBd** at its main lobe. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

- 7) The antenna mounting height centerline of the proposed antennas is 160 Feet above ground level (AGL).
- 8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

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

T-Mobile Site Inventory and Power Data

| Sector: | A | Sector: | B | Sector: | C |
|-----------------|------------------------------|-----------------|------------------------------|-----------------|------------------------------|
| Antenna #: | 1 | Antenna #: | 1 | Antenna #: | 1 |
| Make / Model: | AIR21 B2A/B4P | Make / Model: | AIR21 B2A/B4P | Make / Model: | AIR21 B2A/B4P |
| Gain: | 15.35 dBd | Gain: | 15.35 dBd | Gain: | 15.35 dBd |
| Height (AGL): | 180 | Height (AGL): | 180 | Height (AGL): | 180 |
| Frequency Bands | 1900 UMTS/ LTE 2100 (AWS) | Frequency Bands | 1900 UMTS/ LTE 2100 (AWS) | Frequency Bands | 1900 UMTS/ LTE 2100 (AWS) |
| Channel Count | 3 | Channel Count | 3 | # PCS Channels: | 3 |
| Total TX Power: | 90 | Total TX Power: | 90 | # AWS Channels: | 90 |
| ERP (W): | 3084.91 | ERP (W): | 3084.91 | ERP (W): | 3084.91 |
| Antenna A1 MPE% | 1.1 | Antenna B1 MPE% | 1.1 | Antenna C1 MPE% | 1.1 |
| Antenna #: | 2 | Antenna #: | 2 | Antenna #: | 2 |
| Make / Model: | LNX-6515DS-VTM | Make / Model: | LNX-6515DS-VTM | Make / Model: | LNX-6515DS-VTM |
| Gain: | 14.55 dBd | Gain: | 14.55 dBd | Gain: | 14.55 dBd |
| Height (AGL): | 180 | Height (AGL): | 180 | Height (AGL): | 180 |
| Frequency Bands | LTE 700 | Frequency Bands | LTE 700 | Frequency Bands | LTE 700 |
| Channel Count | 1 | Channel Count | 1 | Channel Count | 1 |
| Total TX Power: | 30 | Total TX Power: | 30 | Total TX Power: | 30 |
| ERP (W): | 855.31 | ERP (W): | 855.31 | ERP (W): | 855.31 |
| Antenna A2 MPE% | 1.2 | Antenna B2 MPE% | 1.2 | Antenna C2 MPE% | 1.2 |

| Site Composite MPE% | |
|--------------------------|---------------|
| Carrier | MPE% |
| T-Mobile | 6.9 % |
| Sprint | 3.6 % |
| Verizon | 4.2 % |
| ATT | 2.8 % |
| Site Total MPE %: | 17.5 % |

| | |
|--------------------------|------------|
| T-Mobile Sector 1 Total: | 2.3 % |
| T-Mobile Sector 2 Total: | 2.3% |
| T-Mobile Sector 3 Total: | 2.3 % |
| Site Total: | 6.9 |

Summary

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

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general public exposure to RF Emissions are shown here:

| T-Mobile Sector | Power Density Value (%) |
|-------------------------|-------------------------|
| Sector 1: | 2.3% |
| Sector 2: | 2.3 % |
| Sector 3 : | 2.3% |
| T-Mobile Total: | 6.9 % |
| | |
| Site Total: | 17.5 % |
| | |
| Site Compliance Status: | Compliant |

The anticipated composite MPE value for this site assuming all carriers present is **17.5%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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



Brian Frazier
Sr. RF Engineer

EBI Consulting
21 B Street
Burlington, MA 01803`



Tower Engineering Solutions

Phone (972) 483-0607, Fax (972) 975-9615
8445 Freeport Parkway, Suite 375, Irving, Texas 75063

Post-Mod Structural Analysis Report

Existing EEI 162 ft Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT02694-B

Customer Site Name: E-Prospect

Carrier Name: T-Mobile

Carrier Site ID/ Name: CTNH303A

Site Location: 229 Cheshire Road

Prospect, Connecticut

New Haven County

Latitude: 41.507881

Longitude: -72.951025

Analysis Result:

Max Structural Usage: 97.8% [Pass]

Max Foundation Usage: 99.0% [Pass]

Report Prepared By : Uma S Atluri



Introduction

The purpose of this report is to summarize the analysis results on the 162 ft Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any existing modification listed under Sources of Information was assumed completed and was included in this analysis.

The proposed modification by **TES** listed under Sources of Information was considered completed and was included in this analysis.

Sources of Information

| | |
|------------------------------|--|
| Tower Drawings | EEL, Job # 5816, dated 10/15/1999 |
| Foundation Drawing | EEL, Job # 5816, dated 10/21/1999 |
| Geotechnical Report | DR. Clarence Welti, P.E, Dated 10/14/1999 |
| Existing Modification | FDH, Job # 05-09107E, dated 9/30/2005:FDH, Job # 1320001400, dated 6/13/2013 |
| Proposed Modification | TES Job # 20927 |

Analysis Criteria

The analysis was performed in accordance with the requirements and stipulations of the ANSI/TIA/EIA 222-F. 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.

| | |
|---|---|
| Basic Wind Speed Used in the Analysis: | 85.0 mph (fastest mile) |
| Basic Wind Speed with Ice: | 74 mph (fastest mile) with 1/2" radial ice concurrent |
| Operational Wind Speed: | 50 mph + 0" Radial ice |
| Standard/Codes: | ANSI/TIA/EIA 222-F / 2005 Connecticut State Building Code |

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 |
|-------|----------------|------|--------------------------------|----------------------|--|----------|
| - | 160.0 | 3 | RFS ATMAA1412D-1A20-TMAs | (3) 5' Stand Offs | (12) 1 5/8"* | T-Mobile |
| | | 3 | RFS ATMPP1412D-1CWA-TMAs | | | |
| | | 3 | RFS APX16PV-16VL-E- Panel | | | |
| 7 | 147.0 | 3 | ALU 1900 MHz RRUs | Low Profile Platform | (3) 1-1/4" | Sprint |
| 8 | | 4 | ALU 800 MHz Filters | | | |
| 9 | | 3 | ALU 800 MHz RRUs | | | |
| 10 | | 3 | ALU TD-RRH8x20-25 RRUs | | | |
| 11 | | 4 | RFS ACU-A20-N RETs | | | |
| 12 | | 3 | RFS APXVSP18-C-A20 - Panel | | | |
| 13 | | 3 | RFS APXVTM14-C-120 - Panel | | | |
| 14 | 137.0 | 3 | Andrew LNX-6514DS-T4M - Panel | Low Profile Platform | (12) 1 5/8" | Verizon |
| 15 | | 2 | Antel LPA-80063/4CF - Panel | | | |
| 16 | | 6 | RFS FD9R6004/2C-3L Diplexer | | | |
| 17 | | 3 | Ryma MG D3-800TV - Panel | | | |
| 18 | | 4 | Swedcom SC-E 6014 rev2 - Panel | | | |
| 19 | 117.0 | 4 | Andrew SBNH-1D6565C - Panel | Low Profile Platform | (12) 1 5/8" (1) 3" Innerduct ((2) 3/4" DC (1) 1/2" Fiber, inside of Innerduct) | AT&T |
| 20 | | 6 | CCI DTMAPB7819VG12A | | | |
| 21 | | 3 | CSS DBC-750 | | | |
| 22 | | 3 | Kathrein 800-10121 - Panel | | | |
| 23 | | 6 | Kathrein 860 10025 RET | | | |
| 24 | | 2 | KMW AM-X-CD-16-6500T - Panel | | | |
| 25 | | 3 | Powerwave LGP 13519 | | | |
| 26 | 114.5 | 6 | Ericsson RRUS 11 RRU | | | |
| 27 | | 3 | Raycap DC6-48-60-18-8F | | | |

*lines outside of the pole, triple Stacked.

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

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

| Items | Elevation (ft) | Qty. | Antenna Descriptions | Mount Type & Qty. | Transmission Lines | Owner |
|-------|----------------|------|----------------------------------|----------------------------|---------------------------------|----------|
| 1 | 160.0 | 3 | RFS ATMAA1412D-1A20-TMAs | (3) CommScope MC-HPM1250-B | (12) 1 5/8" (1) 1 5/8" Fiber | T-Mobile |
| 2 | | 3 | RFS ATMPP1412D-1CWA-TMAs | | | |
| 3 | | 3 | Ericsson Air 21 B4A/B2P - Panel | | | |
| 4 | | 3 | Ericsson S11B12-RRU | | | |
| 5 | | 3 | Ericsson S11 B2-RRU | | | |
| 6 | 158.0 | 3 | Commscope LNX-6515DS-VTM - Panel | | | |

All the proposed transmission lines are considered running outside of the pole shafts, triple stacked. These lines shall be strapped tightly to the face of the pole shafts.

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 | Flange Bolts at 150' | Flange Plate at 150' |
|-------------|--------------|--------------|--------------|----------------------|----------------------|
| Max. Usage: | 97.8% | 94.0% | 74.0% | 15.0% | 36.0% |
| Pass/Fail | Pass | Pass | Fail | Fail | Fail |

Foundations

| | Moment (Kip-Ft) | Shear (Kips) | Axial (Kips) |
|--------------------|-----------------|--------------|--------------|
| Analysis Reactions | 3383.5 | 29.7 | 49.0 |

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.

Operational Condition (Rigidity):

Maximum twist and sway of the microwave dishes under the operational wind speed as specified in the Analysis Criteria are listed in the table below:

| Elevation (ft) | Antenna / Dish | Carrier | Twist (deg) | Sway (deg) |
|----------------|-----------------|----------|-------------|------------|
| 160.0 | Various - Panel | T-Mobile | 0.000 | 2.572 |

It is recommended that the carriers review the twist and sway values of the microwave dishes.

Conclusions

Based on the analysis results, the structure and its foundation will be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the design ANSI/TIA/EIA 222-F standards under a basic wind speed of 85 mph no ice and 74 mph with 1/2" radial ice after the following proposed modification is successfully completed.

- Proposed modification design drawing by **TES** Job # 20927

Pre-Mod Installation Determination

We have also checked this tower to determine if the proposed T-Mobile equipment loading can be installed prior to the completion of the required modifications. We ran a reduced wind loading case as required by TIA-1019 considering a construction period of no more than 6 months.

The tower and foundations passed, so the Carrier can proceed and install their proposed loading prior to the mods completion. Please be aware that this approval is being provided and is based on the method outlined in TIA-1019. This approval is not a blanket approval and there is still a risk that the tower will experience a wind event that cannot be predicted by TIA-1019 or our Engineers. In the event of an unforeseen wind event, Tower Engineering Solutions will not be liable nor responsible for damage to the tower or the Carriers equipment. Additionally, the tower cannot go beyond the 6 month construction period without the modifications being completed. If the modifications cannot be completed within 6 months from the completed installation of the Carrier's proposed equipment, TES must be notified immediately for further review.

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 analysis is based on the presumption that the tower members and components along with any existing reinforcement items have been correctly and properly designed, manufactured, installed and maintained.
3. All the existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion.
4. An initial tension of 10% of the break strength on all the existing guy wires was assumed in all the structural analyses of guyed towers unless different values were provided by the client. **TES** cannot take responsibility for the deviations in the analysis results because of differences in the initial tension forces of the existing guy wires.
5. Secondary component or connection secondary components, welds and bolts are assumed to be able to carry their intended original design loads. **TES** cannot take responsibility for verification of the adequacy on the connections, bolts and welds present in the structure.
6. 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 or/and ice loads are different from the minimum values recommended by the EIA/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.
7. 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.
8. 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.
9. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

Usage Diagram - Max Stress 97.8% at 120.0ft

Structure: CT02694-B-SBA
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69

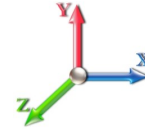
4/5/2016



Page: 1

Dead Load Factor: 1.00
 Wind Load Factor: 1.00

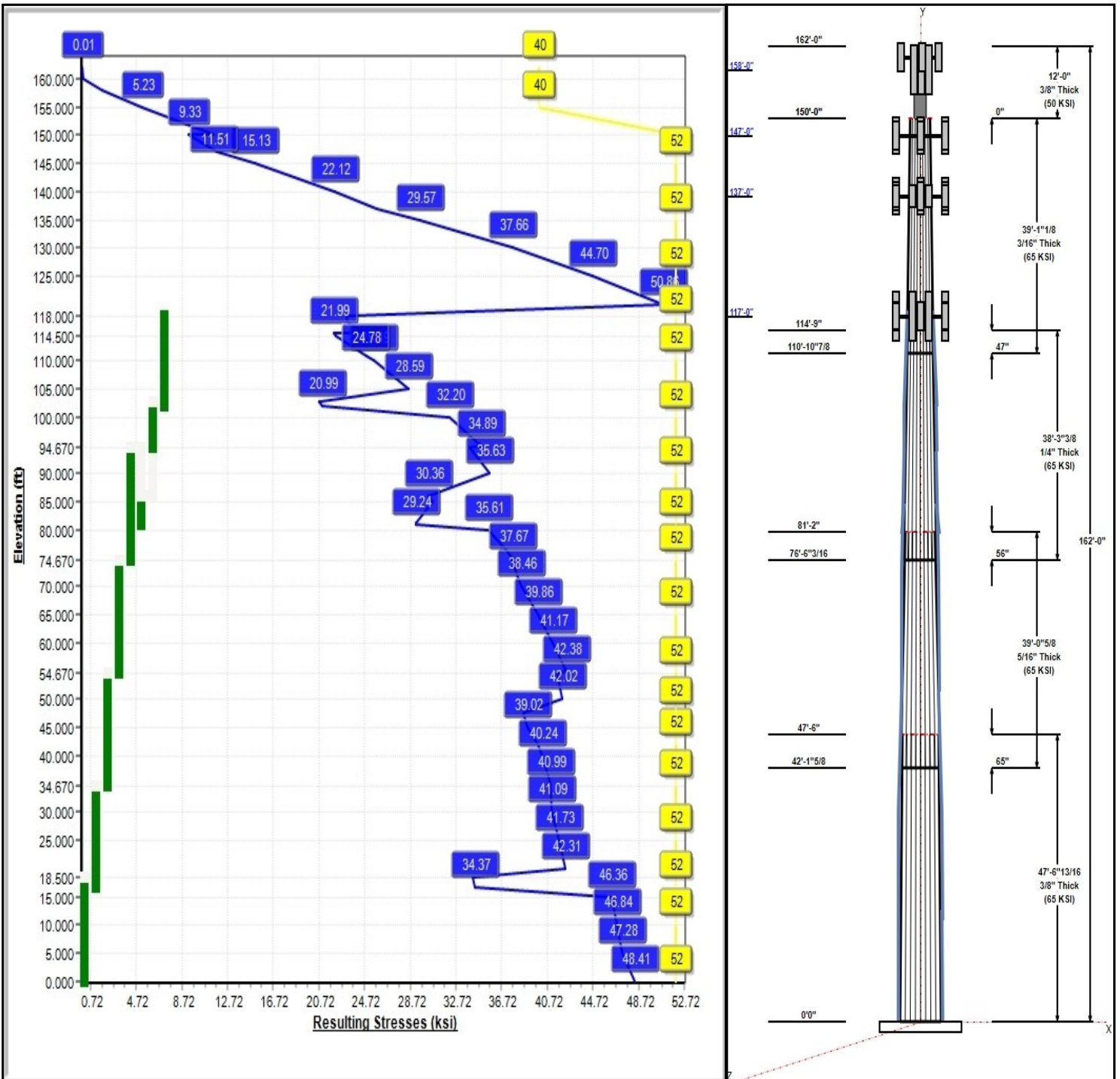
Load Case : 85 mph Wind with 0 in Ice



Iterations: 27

- 52 Allowable Stress
- 51 Resulting Stress

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Structure: CT02694-B-SBA

Type: Custom
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.19333

4/5/2016

Page: 2



Shaft Properties

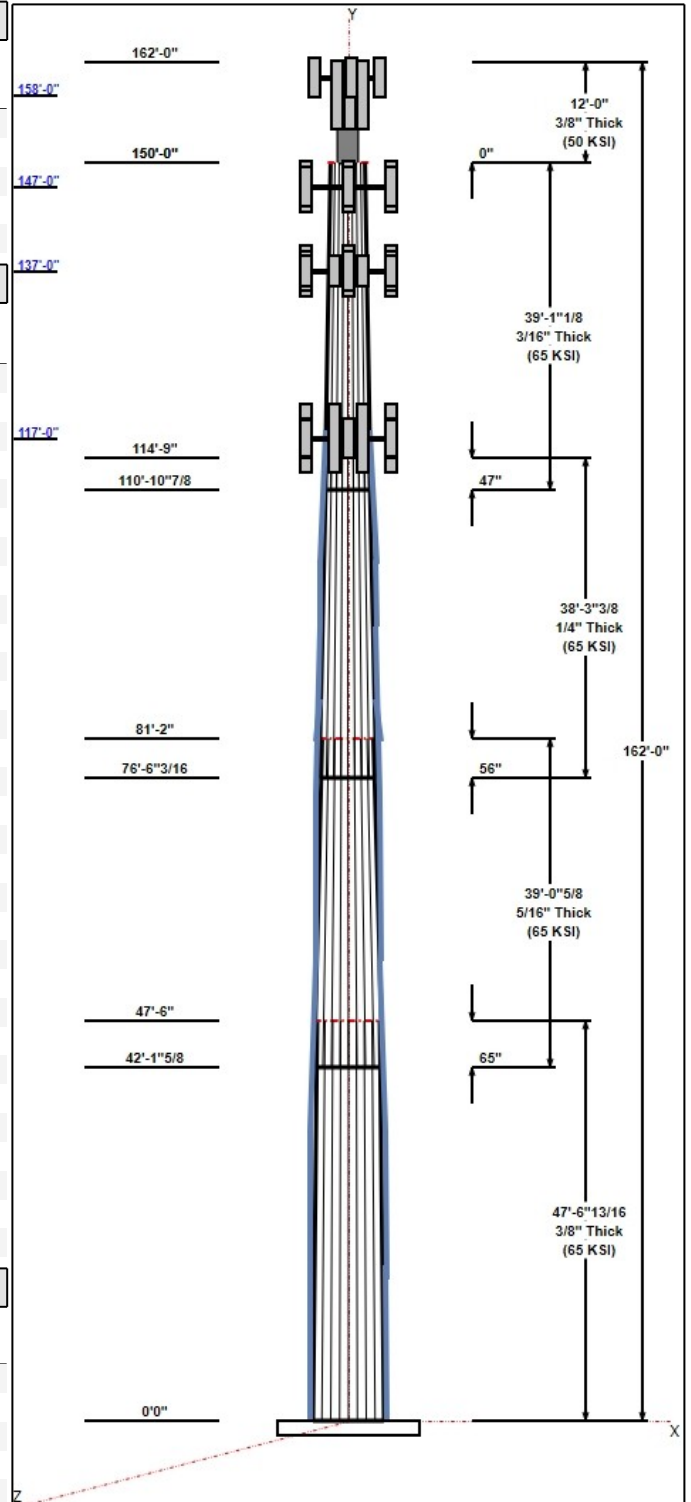
| Seq | Length (ft) | Top (in) | Bottom (in) | Thick (in) | Joint Type | Taper | Grade (ksi) |
|-----|-------------|----------|-------------|------------|------------|---------|-------------|
| 1 | 47.57 | 37.80 | 47.00 | 0.375 | | 0.19333 | 65 |
| 2 | 39.05 | 31.93 | 39.48 | 0.313 | Slip | 0.19333 | 65 |
| 3 | 38.28 | 25.93 | 33.33 | 0.250 | Slip | 0.19333 | 65 |
| 4 | 39.09 | 19.50 | 27.06 | 0.188 | Slip | 0.19333 | 65 |
| 5 | 12.00 | 12.75 | 12.75 | 0.375 | Butt | 0.00000 | 50 |

Discrete Appurtenances

| Attach Elev (ft) | Force Elev (ft) | Qty | Description | Carrier |
|------------------|-----------------|-----|-------------------------|----------|
| 160.00 | 160.00 | 3 | CommScope | T-Mobile |
| 160.00 | 160.00 | 3 | Ericsson Air 21 B4A/B2P | T-Mobile |
| 160.00 | 160.00 | 3 | Ericsson S11 B2-RRU | T-Mobile |
| 160.00 | 160.00 | 3 | Ericsson S11B12-RRU | T-Mobile |
| 160.00 | 160.00 | 3 | RFS | T-Mobile |
| 160.00 | 160.00 | 3 | RFS | T-Mobile |
| 158.00 | 158.00 | 3 | Commscope | T-Mobile |
| 147.00 | 147.00 | 3 | ALU 1900 MHz RRUs | Sprint |
| 147.00 | 147.00 | 4 | ALU 800 MHz Filters | Sprint |
| 147.00 | 147.00 | 3 | ALU 800 MHz RRUs | Sprint |
| 147.00 | 147.00 | 3 | ALU TD-RRH8x20-25 | Sprint |
| 147.00 | 147.00 | 1 | Low Profile Platform | Sprint |
| 147.00 | 147.00 | 4 | RFS ACU-A20-N RETs | Sprint |
| 147.00 | 147.00 | 3 | RFS APXVSP18-C-A20 | Sprint |
| 147.00 | 147.00 | 3 | RFS APXVTM14-C-120 | Sprint |
| 137.00 | 137.00 | 3 | Andrew LNX-6514DS-T4M | Verizon |
| 137.00 | 137.00 | 2 | Antel LPA-80063/4CF | Verizon |
| 137.00 | 137.00 | 1 | Low Profile Platform | Verizon |
| 137.00 | 137.00 | 6 | RFS FD9R6004/2C-3L | Verizon |
| 137.00 | 137.00 | 3 | Rymasa MG D3-800TV | Verizon |
| 137.00 | 137.00 | 4 | Swedcom SC-E 6014 rev2 | Verizon |
| 117.00 | 117.00 | 4 | Andrew SBNH-1D6565C | AT&T |
| 117.00 | 117.00 | 6 | CCI DTMAPB7819VG12A | AT&T |
| 117.00 | 117.00 | 3 | CSS DBC-750 | AT&T |
| 117.00 | 117.00 | 3 | Kathrein 800-10121 | AT&T |
| 117.00 | 117.00 | 6 | Kathrein 860 10025 RET | AT&T |
| 117.00 | 117.00 | 2 | KMW AM-X-CD-16-6500T | AT&T |
| 117.00 | 117.00 | 1 | Low Profile Platform | AT&T |
| 117.00 | 117.00 | 3 | Powerwave LGP 13519 | AT&T |
| 114.50 | 114.50 | 6 | Ericsson RRUS 11 | AT&T |
| 114.50 | 114.50 | 3 | Raycap DC6-48-60-18-8F | AT&T |

Linear Appurtenances

| Elev From (ft) | Elev To (ft) | Placement | Description | Carrier |
|----------------|--------------|-----------|-------------------|----------|
| 0.00 | 160.00 | Outside | 1 5/8" Coax | T-Mobile |
| 0.00 | 160.00 | Outside | 1 5/8" Fiber | T-Mobile |
| 0.00 | 147.00 | Inside | 1-1/4" Fiber | Sprint |
| 0.00 | 137.00 | Inside | 1 5/8" Coax | Verizon |
| 100.00 | 120.00 | Outside | Reinforcing plate | |
| 0.00 | 117.00 | Inside | 1 5/8" Coax | AT&T |
| 0.00 | 117.00 | Inside | 1/2" Fiber | AT&T |
| 0.00 | 117.00 | Inside | 3" Innerduct | AT&T |
| 0.00 | 117.00 | Inside | 3/4" DC | AT&T |
| 0.00 | 104.70 | Outside | Reinforcing plate | |



Structure: CT02694-B-SBA

Type: Custom
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.00000

4/5/2016

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Anchor Bolts

| Qty | Specifications | Grade (ksi) | Arrangement |
|-----|----------------|-------------|-------------|
| 12 | 2.25" 18J | 75.0 | Radial |

Base Plate

| Thickness (in) | Specifications (in) | Grade (ksi) | Geometry |
|----------------|---------------------|-------------|----------|
| 1.7500 | 62.0 | 60.0 | Round |

Reactions

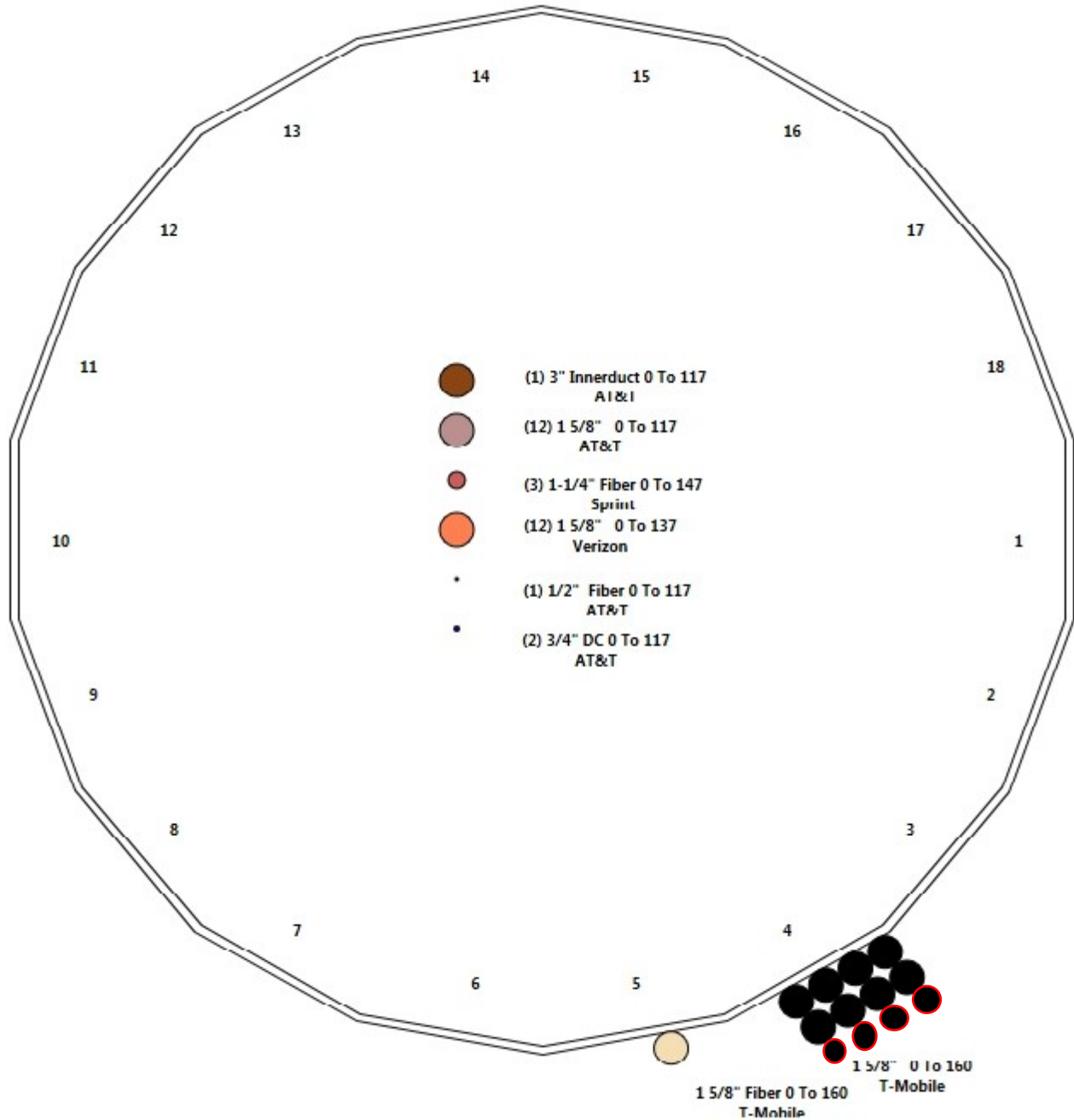
| Load Case | Moment | Shear | Axial |
|------------------------------|--------|-------|-------|
| 85 mph Wind with 0" Ice | 3383.5 | 29.7 | 40.2 |
| 73.61 mph Wind with 0.5" Ice | 2964.9 | 25.4 | 49.0 |
| 50 mph Wind with 0" Ice | 1172.8 | 10.3 | 40.3 |

Structure: CT02694-B-SBA - Coax Line Placement

Type: Monopole
Site Name: E-Prospect
Height: 162.00 (ft)

4/5/2016

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Shaft Properties

Structure: CT02694-B-SBA
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
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| Sec. No. | Shape | Length (ft) | Thick (in) | Fy (ksi) | Joint Type | Overlap (in) | Weight (lb) |
|----------------------------|-------|-------------|------------|----------|------------|--------------|---------------|
| 1 | 18 | 47.570 | 0.3750 | 65 | | 0.00 | 8,097 |
| 2 | 18 | 39.050 | 0.3125 | 65 | Slip | 65.20 | 4,664 |
| 3 | 18 | 38.280 | 0.2500 | 65 | Slip | 56.04 | 3,037 |
| 4 | 18 | 39.095 | 0.1875 | 65 | Slip | 46.70 | 1,828 |
| 5 | R | 12.000 | 0.3750 | 50 | Flange | 0.00 | 595 |
| Total Shaft Weight: | | | | | | | 18,221 |

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 | 47.00 | 0.00 | 55.49 | 15241.66 | 20.69 | 125.33 | 37.80 | 47.57 | 44.55 | 7884.43 | 16.36 | 100.81 | 0.193333 |
| 2 | 39.48 | 42.14 | 38.85 | 7528.78 | 20.87 | 126.33 | 31.93 | 81.19 | 31.36 | 3960.34 | 16.61 | 102.17 | 0.193333 |
| 3 | 33.33 | 76.52 | 26.25 | 3629.53 | 22.10 | 133.33 | 25.93 | 114.8 | 20.38 | 1697.93 | 16.88 | 103.72 | 0.193333 |
| 4 | 27.06 | 110.9 | 15.99 | 1458.78 | 24.04 | 144.31 | 19.50 | 150.0 | 11.49 | 541.58 | 16.93 | 104.00 | 0.193333 |
| 5 | 12.75 | 150.0 | 14.58 | 279.29 | 0.00 | 34.00 | 12.75 | 162.0 | 14.58 | 279.29 | 0.00 | 34.00 | 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 | 18.50 | 3 | PLT 6.5x1.25(1.25 Hole) | 65 | 80 | 0.00 | AJM20&sleeve | 18.00 | AJM20&sleeve | | 12 | 12 |
| 16.67 | 34.67 | 3 | PLT 6"X1-1/4"(1.25" | 65 | 80 | 0.00 | AJM20&sleeve | 18.00 | AJM20&sleeve | | 11 | |
| 34.67 | 54.67 | 3 | PLT 5.75x1.25(1.25" | 65 | 80 | 0.00 | AJM20&sleeve | 18.00 | AJM20&sleeve | | | |
| 54.67 | 74.67 | 3 | PLT 5.25"x1" | 65 | 80 | 0.00 | AJM20&sleeve | 18.00 | AJM20&sleeve | | | |
| 74.67 | 94.67 | 3 | PLT 5.25"x1" | 65 | 80 | 0.00 | AJM20&sleeve | 18.00 | AJM20&sleeve | | | |
| 81.00 | 86.00 | 3 | PLT C6x13 (1.25" hole) | 50 | 65 | 0.00 | 5/8" Hollo Bolt | 24.00 | 5/8" Hollo Bolt | | 8 | 8 |
| 94.67 | 102.6 | 3 | PLT 4.5"x 1-1/4"(1.25"ho | 65 | 80 | 0.00 | AJM20&sleeve | 18.00 | AJM20&sleeve | | | 8 |
| 102.0 | 118.0 | 3 | LNP LP6X100-G-20TT | 65 | 80 | 0.00 | 5/8" Hollo Bolt | 24.00 | 5/8" Hollo Bolt | | 8 | 8 |

Loading Summary

Structure: CT02694-B-SBA
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
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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 | 160.00 | CommScope MC-HPM1250-B | 3 | 200.00 | 8.00 | 0.75 | 250.00 | 10.500 | 0.75 | 0.00 | 0.00 |
| 2 | 160.00 | Ericsson Air 21 B4A/B2P | 3 | 90.40 | 6.58 | 0.86 | 128.10 | 6.970 | 0.86 | 0.00 | 0.00 |
| 3 | 160.00 | Ericsson S11 B2-RRU | 3 | 50.00 | 3.31 | 0.50 | 67.10 | 3.520 | 0.50 | 0.00 | 0.00 |
| 4 | 160.00 | Ericsson S11B12-RRU | 3 | 51.00 | 3.31 | 0.50 | 67.10 | 3.520 | 0.50 | 0.00 | 0.00 |
| 5 | 160.00 | RFS ATMAA1412D-1A20-TMAs | 3 | 13.00 | 1.17 | 0.50 | 20.60 | 1.390 | 0.50 | 0.00 | 0.00 |
| 6 | 160.00 | RFS ATMP1412D-1CWA-TMAs | 3 | 12.50 | 1.17 | 0.50 | 19.50 | 1.400 | 0.50 | 0.00 | 0.00 |
| 7 | 158.00 | CommScope LNX-6515DS-VTM | 3 | 49.80 | 11.45 | 0.80 | 115.70 | 12.380 | 0.80 | 0.00 | 0.00 |
| 8 | 147.00 | ALU 1900 MHz RRUs | 3 | 60.00 | 2.77 | 0.50 | 83.90 | 3.130 | 0.50 | 0.00 | 0.00 |
| 9 | 147.00 | ALU 800 MHz Filters | 4 | 8.80 | 0.78 | 0.50 | 13.80 | 0.960 | 0.50 | 0.00 | 0.00 |
| 10 | 147.00 | ALU 800 MHz RRUs | 3 | 53.00 | 2.49 | 0.50 | 74.10 | 2.820 | 0.50 | 0.00 | 0.00 |
| 11 | 147.00 | ALU TD-RRH8x20-25 RRUs | 3 | 70.00 | 4.72 | 0.50 | 92.00 | 4.970 | 0.50 | 0.00 | 0.00 |
| 12 | 147.00 | Low Profile Platform | 1 | 1200.00 | 20.00 | 1.00 | 1800.00 | 27.000 | 1.00 | 0.00 | 0.00 |
| 13 | 147.00 | RFS ACU-A20-N RETs | 4 | 1.00 | 0.14 | 0.50 | 2.30 | 0.220 | 0.50 | 0.00 | 0.00 |
| 14 | 147.00 | RFS APXVSP18-C-A20 | 3 | 57.00 | 8.26 | 0.83 | 106.50 | 9.080 | 0.83 | 0.00 | 0.00 |
| 15 | 147.00 | RFS APXVTM14-C-120 | 3 | 56.00 | 6.90 | 0.79 | 91.90 | 7.290 | 0.79 | 0.00 | 0.00 |
| 16 | 137.00 | Andrew LNX-6514DS-T4M | 3 | 33.10 | 8.33 | 0.80 | 83.10 | 9.150 | 0.80 | 0.00 | 0.00 |
| 17 | 137.00 | Antel LPA-80063/4CF | 2 | 20.00 | 7.00 | 0.93 | 0.00 | 7.620 | 0.93 | 0.00 | 0.00 |
| 18 | 137.00 | Low Profile Platform | 1 | 1200.00 | 20.00 | 1.00 | 1800.00 | 27.000 | 1.00 | 0.00 | 0.00 |
| 19 | 137.00 | RFS FD9R6004/2C-3L Diplexer | 6 | 3.10 | 0.36 | 0.50 | 5.40 | 0.500 | 0.50 | 0.00 | 0.00 |
| 20 | 137.00 | RymSA MG D3-800TV | 3 | 19.80 | 3.45 | 0.78 | 0.00 | 3.970 | 0.78 | 0.00 | 0.00 |
| 21 | 137.00 | Swedcom SC-E 6014 rev2 | 4 | 15.00 | 3.55 | 0.97 | 42.10 | 4.060 | 0.97 | 0.00 | 0.00 |
| 22 | 117.00 | Andrew SBNH-1D6565C | 4 | 66.10 | 11.44 | 0.80 | 132.00 | 12.370 | 0.80 | 0.00 | 0.00 |
| 23 | 117.00 | CCI DTMABP7819VG12A | 6 | 19.20 | 1.14 | 0.67 | 26.50 | 1.360 | 0.67 | 0.00 | 0.00 |
| 24 | 117.00 | CSS DBC-750 | 3 | 4.80 | 0.51 | 0.50 | 7.70 | 0.660 | 0.50 | 0.00 | 0.00 |
| 25 | 117.00 | Kathrein 800-10121 | 3 | 44.10 | 5.45 | 0.79 | 77.00 | 6.090 | 0.79 | 0.00 | 0.00 |
| 26 | 117.00 | Kathrein 860 10025 RET | 6 | 1.20 | 0.18 | 0.50 | 2.80 | 0.280 | 0.50 | 0.00 | 0.00 |
| 27 | 117.00 | KMW AM-X-CD-16-6500T | 2 | 33.00 | 6.62 | 0.81 | 74.50 | 7.270 | 0.81 | 0.00 | 0.00 |
| 28 | 117.00 | Low Profile Platform | 1 | 1200.00 | 20.00 | 1.00 | 1800.00 | 27.000 | 1.00 | 0.00 | 0.00 |
| 29 | 117.00 | Powerwave LGP 13519 | 3 | 5.30 | 0.34 | 0.50 | 8.00 | 0.470 | 0.50 | 0.00 | 0.00 |
| 30 | 114.50 | Ericsson RRUS 11 | 6 | 50.70 | 2.94 | 0.67 | 66.00 | 3.140 | 0.67 | 0.00 | 0.00 |
| 31 | 114.50 | Raycap DC6-48-60-18-8F | 3 | 20.00 | 1.26 | 0.67 | 35.10 | 1.460 | 0.67 | 0.00 | 0.00 |
| Totals: | | | 101 | 7,184.20 | | | 10,896.20 | | | | |

Linear Appurtenances

| Bottom Elev. (ft) | Top Elev. (ft) | Description | No Ice | | Ice | | Exposed |
|-------------------|----------------|-----------------------|----------------|--------------|----------------|--------------|---------|
| | | | Weight (lb/ft) | CaAa (sf/ft) | Weight (lb/ft) | CaAa (sf/ft) | |
| 0.00 | 160.00 | (8) 1 5/8" Coax | 12.48 | 0.57 | 24.00 | 0.80 | Outside |
| 0.00 | 160.00 | (1) 1 5/8" Fiber | 1.10 | 0.00 | 1.10 | 0.00 | Outside |
| 0.00 | 147.00 | (3) 1-1/4" Fiber | 2.86 | 0.00 | 2.86 | 0.00 | Inside |
| 0.00 | 137.00 | (12) 1 5/8" Coax | 12.48 | 0.00 | 12.48 | 0.00 | Inside |
| 100.00 | 120.00 | (1) Reinforcing plate | 0.17 | 0.00 | 0.27 | 0.00 | Outside |
| 0.00 | 117.00 | (12) 1 5/8" Coax | 12.48 | 0.00 | 12.48 | 0.00 | Inside |
| 0.00 | 117.00 | (1) 1/2" Fiber | 0.16 | 0.00 | 0.16 | 0.00 | Inside |
| 0.00 | 117.00 | (1) 3" Innerduct | 0.40 | 0.00 | 0.40 | 0.00 | Inside |
| 0.00 | 117.00 | (2) 3/4" DC | 0.80 | 0.00 | 0.80 | 0.00 | Inside |

Discrete Appurtenances

| No. | Elev (ft) | Description | Qty | No Ice | | | Ice | | | Hor. Ecc. (ft) | Vert Ecc (ft) |
|----------------|--------------|-----------------------|-----|-----------------|--------------|----------------|-----------------|--------------|----------------|----------------------|---------------------|
| | | | | Weight (lb) | CaAa (sf) | CaAa Factor | Weight (lb) | CaAa (sf) | CaAa Factor | | |
| 0.00 | 104.70 | (1) Reinforcing plate | | 0.21 | 0.00 | | 0.31 | 0.00 | Outside | | |
| Totals: | | | | 5,947.94 | | | 7,803.32 | | | | |

Shaft Section Properties

Structure: CT02694-B-SBA
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
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Increment Length: 5 (ft)

Additional Reinforcing

| Elev (ft) | Description | Thick (in) | Flat Dia (in) | Area (in^2) | Ix (in^4) | W/t Ratio | D/t Ratio | Fy (ksi) | Fb (ksi) | Weight (lb) | Area (in^2) | Ixp (in^4) | Iyp (in^4) | Weight (lb) |
|-----------|-----------------|------------|---------------|-------------|-----------|-----------|-----------|----------|----------|-------------|-------------|------------|------------|-------------|
| 0.00 | RB1 | 0.3750 | 47.000 | 55.493 | 15241.7 | 20.69 | 125.33 | 65 | 52 | 0.0 | 24.38 | 8697.5 | 5479.8 | 0.0 |
| 5.00 | | 0.3750 | 46.033 | 54.343 | 14313.2 | 20.23 | 122.76 | 65 | 52 | 934.4 | 24.38 | 8353.3 | 5264.0 | 414.7 |
| 10.00 | | 0.3750 | 45.067 | 53.192 | 13423.2 | 19.78 | 120.18 | 65 | 52 | 914.8 | 24.38 | 8016.1 | 5052.6 | 414.7 |
| 15.00 | | 0.3750 | 44.100 | 52.042 | 12570.9 | 19.33 | 117.60 | 65 | 52 | 895.2 | 24.38 | 7685.9 | 4845.5 | 414.7 |
| 16.67 | RB2 | 0.3750 | 43.777 | 51.658 | 12294.4 | 19.17 | 116.74 | 65 | 52 | 294.6 | 46.88 | 13327.7 | 10528.4 | 266.4 |
| 18.50 | RT1 | 0.3750 | 43.423 | 51.236 | 11996.2 | 19.01 | 115.80 | 65 | 52 | 320.4 | 46.88 | 13120.1 | 10364.9 | 291.9 |
| 20.00 | | 0.3750 | 43.133 | 50.891 | 11755.4 | 18.87 | 115.02 | 65 | 52 | 260.6 | 22.50 | 5575.5 | 5575.5 | 114.8 |
| 25.00 | | 0.3750 | 42.167 | 49.741 | 10976.0 | 18.42 | 112.44 | 65 | 52 | 856.1 | 22.50 | 5336.8 | 5336.8 | 382.8 |
| 30.00 | | 0.3750 | 41.200 | 48.590 | 10231.9 | 17.96 | 109.87 | 65 | 52 | 836.5 | 22.50 | 5103.3 | 5103.3 | 382.8 |
| 34.67 | RT2 | 0.3750 | 40.297 | 47.516 | 9567.9 | 17.54 | 107.46 | 65 | 52 | 763.6 | 22.50 | 4890.1 | 4890.1 | 357.5 |
| 35.00 | | 0.3750 | 40.233 | 47.440 | 9522.1 | 17.51 | 107.29 | 65 | 52 | 53.3 | 21.56 | 4669.4 | 4669.4 | 24.2 |
| 40.00 | | 0.3750 | 39.267 | 46.289 | 8846.0 | 17.05 | 104.71 | 65 | 52 | 797.3 | 21.56 | 4455.7 | 4455.7 | 366.9 |
| 42.14 | Bot - Section 2 | 0.3750 | 38.854 | 45.797 | 8567.1 | 16.86 | 103.61 | 65 | 52 | 334.8 | 21.56 | 4366.0 | 4366.0 | 156.8 |
| 45.00 | | 0.3750 | 38.300 | 45.139 | 8202.6 | 16.60 | 102.13 | 65 | 52 | 818.8 | 21.56 | 4381.4 | 4381.4 | 210.1 |
| 47.57 | Top - Section 1 | 0.3125 | 38.428 | 37.805 | 6939.1 | 20.27 | 122.97 | 65 | 52 | 724.9 | 21.56 | 4274.5 | 4274.5 | 188.6 |
| 50.00 | | 0.3125 | 37.958 | 37.339 | 6685.7 | 20.01 | 121.47 | 65 | 52 | 310.7 | 21.56 | 4174.6 | 4174.6 | 178.3 |
| 54.67 | RT3 | 0.3125 | 37.055 | 36.443 | 6216.1 | 19.50 | 118.58 | 65 | 52 | 586.2 | 21.56 | 3986.0 | 3986.0 | 342.6 |
| 55.00 | | 0.3125 | 36.992 | 36.380 | 6183.8 | 19.46 | 118.37 | 65 | 52 | 40.9 | 19.69 | 3622.8 | 3622.8 | 22.1 |
| 60.00 | | 0.3125 | 36.025 | 35.421 | 5707.6 | 18.92 | 115.28 | 65 | 52 | 610.8 | 19.69 | 3443.2 | 3443.2 | 334.9 |
| 65.00 | | 0.3125 | 35.058 | 34.462 | 5256.6 | 18.37 | 112.19 | 65 | 52 | 594.5 | 19.69 | 3268.1 | 3268.1 | 334.9 |
| 70.00 | | 0.3125 | 34.092 | 33.504 | 4829.9 | 17.83 | 109.09 | 65 | 52 | 578.2 | 19.69 | 3097.7 | 3097.7 | 334.9 |
| 74.67 | RT4 | 0.3125 | 33.189 | 32.608 | 4452.9 | 17.32 | 106.20 | 65 | 52 | 525.3 | 19.69 | 2942.6 | 2942.6 | 312.8 |
| 75.00 | | 0.3125 | 33.125 | 32.545 | 4427.0 | 17.28 | 106.00 | 65 | 52 | 36.6 | 18.75 | 2790.2 | 2790.2 | 21.0 |
| 76.52 | Bot - Section 3 | 0.3125 | 32.832 | 32.254 | 4309.4 | 17.11 | 105.06 | 65 | 52 | 167.2 | 18.75 | 2743.2 | 2743.2 | 96.7 |
| 80.00 | | 0.3125 | 32.158 | 31.586 | 4047.2 | 16.73 | 102.91 | 65 | 52 | 686.3 | 18.75 | 2715.5 | 2715.5 | 222.2 |
| 81.00 | RB6 | 0.3125 | 31.965 | 31.394 | 3973.9 | 16.63 | 102.29 | 65 | 52 | 194.4 | 30.24 | 5083.0 | 4191.2 | 102.8 |
| 81.19 | Top - Section 2 | 0.2500 | 32.429 | 25.533 | 3340.4 | 21.46 | 129.72 | 65 | 52 | 36.2 | 30.24 | 5072.6 | 4182.6 | 19.2 |
| 85.00 | | 0.2500 | 31.692 | 24.948 | 3116.0 | 20.94 | 126.77 | 65 | 52 | 327.5 | 30.24 | 4862.4 | 4007.5 | 391.9 |
| 86.00 | RT6 | 0.2500 | 31.498 | 24.795 | 3058.9 | 20.81 | 125.99 | 65 | 52 | 84.6 | 30.24 | 4808.1 | 3962.4 | 102.8 |
| 90.00 | | 0.2500 | 30.725 | 24.181 | 2837.4 | 20.26 | 122.90 | 65 | 52 | 333.3 | 18.75 | 2417.0 | 2417.0 | 255.1 |
| 94.67 | RT5 | 0.2500 | 29.822 | 23.465 | 2592.6 | 19.62 | 119.29 | 65 | 52 | 378.6 | 18.75 | 2283.6 | 2283.6 | 297.9 |
| 95.00 | | 0.2500 | 29.758 | 23.414 | 2575.8 | 19.58 | 119.03 | 65 | 52 | 26.3 | 16.88 | 2043.5 | 2043.5 | 18.9 |
| 100.00 | | 0.2500 | 28.792 | 22.647 | 2330.9 | 18.90 | 115.17 | 65 | 52 | 391.8 | 16.88 | 1919.1 | 1919.1 | 287.1 |
| 102.00 | RB8 | 0.2500 | 28.405 | 22.340 | 2237.4 | 18.62 | 113.62 | 65 | 52 | 153.1 | 34.88 | 3843.6 | 3843.6 | 237.3 |
| 102.67 | RT7 | 0.2500 | 28.275 | 22.237 | 2206.7 | 18.53 | 113.10 | 65 | 52 | 50.8 | 34.88 | 3810.3 | 3810.3 | 79.5 |
| 105.00 | | 0.2500 | 27.825 | 21.880 | 2102.0 | 18.21 | 111.30 | 65 | 52 | 174.9 | 18.00 | 1897.2 | 1897.2 | 142.7 |
| 110.00 | | 0.2500 | 26.858 | 21.113 | 1888.6 | 17.53 | 107.43 | 65 | 52 | 365.7 | 18.00 | 1773.9 | 1773.9 | 306.2 |
| 110.91 | Bot - Section 4 | 0.2500 | 26.683 | 20.974 | 1851.6 | 17.41 | 106.73 | 65 | 52 | 64.8 | 18.00 | 1752.1 | 1752.1 | 55.4 |
| 114.50 | | 0.2500 | 25.988 | 20.423 | 1709.3 | 16.92 | 103.95 | 65 | 52 | 446.3 | 18.00 | 1712.4 | 1712.4 | 220.2 |
| 114.80 | Top - Section 3 | 0.1875 | 26.306 | 15.543 | 1339.6 | 23.33 | 140.30 | 65 | 52 | 36.3 | 18.00 | 1705.4 | 1705.4 | 18.2 |
| 115.00 | | 0.1875 | 26.267 | 15.520 | 1333.6 | 23.29 | 140.09 | 65 | 52 | 10.7 | 18.00 | 1700.6 | 1700.6 | 12.5 |
| 117.00 | | 0.1875 | 25.880 | 15.290 | 1275.2 | 22.93 | 138.03 | 65 | 52 | 104.8 | 18.00 | 1653.5 | 1653.5 | 122.5 |
| 118.00 | RT8 | 0.1875 | 25.687 | 15.175 | 1246.6 | 22.75 | 137.00 | 65 | 52 | 51.8 | 18.00 | 1630.2 | 1630.2 | 61.2 |
| 120.00 | | 0.1875 | 25.300 | 14.945 | 1190.7 | 22.38 | 134.93 | 65 | 52 | 102.5 | | | | |
| 125.00 | | 0.1875 | 24.333 | 14.369 | 1058.5 | 21.47 | 129.78 | 65 | 52 | 249.4 | | | | |
| 130.00 | | 0.1875 | 23.367 | 13.794 | 936.4 | 20.56 | 124.62 | 65 | 52 | 239.6 | | | | |
| 135.00 | | 0.1875 | 22.400 | 13.219 | 824.0 | 19.65 | 119.47 | 65 | 52 | 229.8 | | | | |
| 137.00 | | 0.1875 | 22.013 | 12.989 | 781.7 | 19.29 | 117.40 | 65 | 52 | 89.2 | | | | |
| 140.00 | | 0.1875 | 21.433 | 12.643 | 721.1 | 18.75 | 114.31 | 65 | 52 | 130.8 | | | | |
| 145.00 | | 0.1875 | 20.467 | 12.068 | 627.0 | 17.84 | 109.16 | 65 | 52 | 210.2 | | | | |
| 147.00 | | 0.1875 | 20.080 | 11.838 | 591.9 | 17.47 | 107.09 | 65 | 52 | 81.3 | | | | |
| 150.00 | Top - Section 4 | 0.0000 | 0.000 | 0.000 | 0.0 | NAN | NAN | 0 | 0 | 119.1 | | | | |

Increment Length: 5 (ft)

| Elev (ft) | Description | Thick (in) | Flat Dia (in) | Area (in^2) | Ix (in^4) | W/t Ratio | D/t Ratio | Fy (ksi) | Fb (ksi) | Weight (lb) | Additional Reinforcing | | |
|---------------------|-----------------|---------------|---------------------|----------------|--------------|--------------|--------------|-------------|-------------|----------------|------------------------|---------------|---------------|
| | | | | | | | | | | | Area (in^2) | Ixp (in^4) | Iyp (in^4) |
| 150.00 | Bot - Section 5 | 0.1875 | 19.500 | 11.493 | 541.6 | 16.93 | 104.00 | 65 | 52 | | | | |
| 155.00 | | 0.3750 | 12.750 | 14.579 | 279.3 | 0.00 | 34.00 | 50 | 40 | 248.0 | | | |
| 158.00 | | 0.3750 | 12.750 | 14.579 | 279.3 | 0.00 | 34.00 | 50 | 40 | 148.8 | | | |
| 160.00 | | 0.3750 | 12.750 | 14.579 | 279.3 | 0.00 | 34.00 | 50 | 40 | 99.2 | | | |
| 162.00 | | 0.3750 | 12.750 | 14.579 | 279.3 | 0.00 | 34.00 | 50 | 40 | 99.2 | | | |
| Total Weight | | | | | | | | | | 18221.3 | | | 8919.1 |

Wind Loading - Shaft

Structure: CT02694-B-SBA
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

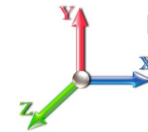
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
 Page: 10



Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 27

| 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 | 0.00 | 1.00 | 18.496 | 31.26 | 332.92 | 0.650 | 0.000 | 0.00 | 0.000 | 0.00 | 0.0 | 0.0 | 0.0 |
| 5.00 | | 0.00 | 1.00 | 18.496 | 31.26 | 326.07 | 0.650 | 0.000 | 5.00 | 19.382 | 12.60 | 393.8 | 0.0 | 1763.8 |
| 10.00 | | 0.00 | 1.00 | 18.496 | 31.26 | 319.22 | 0.650 | 0.000 | 5.00 | 18.979 | 12.34 | 385.6 | 0.0 | 1744.2 |
| 15.00 | | 0.00 | 1.00 | 18.496 | 31.26 | 312.38 | 0.650 | 0.000 | 5.00 | 18.576 | 12.07 | 377.4 | 0.0 | 1724.7 |
| 16.67 | RB2 | 0.00 | 1.00 | 18.496 | 31.26 | 310.09 | 0.650 | 0.000 | 1.67 | 6.115 | 3.97 | 124.2 | 0.0 | 827.4 |
| 18.50 | RT1 | 0.00 | 1.00 | 18.496 | 31.26 | 307.58 | 0.650 | 0.000 | 1.83 | 6.649 | 4.32 | 135.1 | 0.0 | 904.1 |
| 20.00 | | 0.00 | 1.00 | 18.496 | 31.26 | 305.53 | 0.650 | 0.000 | 1.50 | 5.410 | 3.52 | 109.9 | 0.0 | 490.3 |
| 25.00 | | 0.00 | 1.00 | 18.496 | 31.26 | 298.68 | 0.650 | 0.000 | 5.00 | 17.771 | 11.55 | 361.1 | 0.0 | 1621.7 |
| 30.00 | | 0.00 | 1.00 | 18.496 | 31.26 | 291.83 | 0.650 | 0.000 | 5.00 | 17.368 | 11.29 | 352.9 | 0.0 | 1602.1 |
| 34.67 | RT2 | 0.00 | 1.01 | 18.759 | 31.70 | 287.46 | 0.650 | 0.000 | 4.67 | 15.858 | 10.31 | 326.8 | 0.0 | 1478.7 |
| 35.00 | | 0.00 | 1.02 | 18.810 | 31.79 | 287.39 | 0.650 | 0.000 | 0.33 | 1.107 | 0.72 | 22.9 | 0.0 | 101.7 |
| 40.00 | | 0.00 | 1.06 | 19.541 | 33.02 | 285.89 | 0.650 | 0.000 | 5.00 | 16.563 | 10.77 | 355.5 | 0.0 | 1531.1 |
| 42.14 | Bot - Section 2 | 0.00 | 1.07 | 19.834 | 33.52 | 284.99 | 0.650 | 0.000 | 2.14 | 6.955 | 4.52 | 151.5 | 0.0 | 648.3 |
| 45.00 | | 0.00 | 1.09 | 20.210 | 34.15 | 283.58 | 0.650 | 0.000 | 2.86 | 9.354 | 6.08 | 207.7 | 0.0 | 1239.0 |
| 47.57 | Top - Section 1 | 0.00 | 1.11 | 20.533 | 34.70 | 282.13 | 0.650 | 0.000 | 2.57 | 8.283 | 5.38 | 186.8 | 0.0 | 1102.0 |
| 50.00 | | 0.00 | 1.13 | 20.827 | 35.20 | 285.31 | 0.650 | 0.000 | 2.43 | 7.734 | 5.03 | 176.9 | 0.0 | 667.3 |
| 54.67 | RT3 | 0.00 | 1.16 | 21.366 | 36.11 | 282.10 | 0.650 | 0.000 | 4.67 | 14.596 | 9.49 | 342.6 | 0.0 | 1271.5 |
| 55.00 | | 0.00 | 1.16 | 21.402 | 36.17 | 281.86 | 0.650 | 0.000 | 0.33 | 1.018 | 0.66 | 23.9 | 0.0 | 85.1 |
| 60.00 | | 0.00 | 1.19 | 21.941 | 37.08 | 277.93 | 0.650 | 0.000 | 5.00 | 15.212 | 9.89 | 366.6 | 0.0 | 1280.7 |
| 65.00 | | 0.00 | 1.21 | 22.449 | 37.94 | 273.58 | 0.650 | 0.000 | 5.00 | 14.809 | 9.63 | 365.2 | 0.0 | 1264.4 |
| 70.00 | | 0.00 | 1.24 | 22.929 | 38.75 | 268.87 | 0.650 | 0.000 | 5.00 | 14.406 | 9.36 | 362.9 | 0.0 | 1248.1 |
| 74.67 | RT4 | 0.00 | 1.26 | 23.356 | 39.47 | 264.17 | 0.650 | 0.000 | 4.67 | 13.092 | 8.51 | 335.9 | 0.0 | 1151.0 |
| 75.00 | | 0.00 | 1.26 | 23.386 | 39.52 | 263.83 | 0.650 | 0.000 | 0.33 | 0.912 | 0.59 | 23.4 | 0.0 | 78.7 |
| 76.52 | Bot - Section 3 | 0.00 | 1.27 | 23.520 | 39.75 | 262.25 | 0.650 | 0.000 | 1.52 | 4.168 | 2.71 | 107.7 | 0.0 | 360.7 |
| 80.00 | | 0.00 | 1.29 | 23.821 | 40.26 | 258.51 | 0.650 | 0.000 | 3.48 | 9.578 | 6.23 | 250.6 | 0.0 | 1130.6 |
| 81.00 | RB6 | 0.00 | 1.29 | 23.906 | 40.40 | 257.41 | 0.650 | 0.000 | 1.00 | 2.713 | 1.76 | 71.3 | 0.0 | 400.0 |
| 81.19 | Top - Section 2 | 0.00 | 1.29 | 23.921 | 40.43 | 257.20 | 0.650 | 0.000 | 0.19 | 0.505 | 0.33 | 13.3 | 0.0 | 74.5 |
| 85.00 | | 0.00 | 1.31 | 24.237 | 40.96 | 256.97 | 0.650 | 0.000 | 3.81 | 10.188 | 6.62 | 271.3 | 0.0 | 1111.4 |
| 86.00 | RT6 | 0.00 | 1.31 | 24.318 | 41.10 | 255.83 | 0.650 | 0.000 | 1.00 | 2.633 | 1.71 | 70.3 | 0.0 | 290.2 |
| 90.00 | | 0.00 | 1.33 | 24.636 | 41.63 | 251.18 | 0.650 | 0.000 | 4.00 | 10.371 | 6.74 | 280.7 | 0.0 | 843.5 |
| 94.67 | RT5 | 0.00 | 1.35 | 24.995 | 42.24 | 245.56 | 0.650 | 0.000 | 4.67 | 11.781 | 7.66 | 323.5 | 0.0 | 974.3 |
| 95.00 | | 0.00 | 1.35 | 25.020 | 42.28 | 245.16 | 0.650 | 0.000 | 0.33 | 0.819 | 0.53 | 22.5 | 0.0 | 64.2 |
| 100.00 | | 0.00 | 1.37 | 25.389 | 42.91 | 238.94 | 0.650 | 0.000 | 5.00 | 12.198 | 7.93 | 340.2 | 0.0 | 966.0 |
| 102.00 | RB8 | 0.00 | 1.38 | 25.533 | 43.15 | 236.40 | 0.650 | 0.000 | 2.00 | 4.766 | 3.10 | 133.7 | 0.0 | 627.8 |
| 102.67 | RT7 | 0.00 | 1.38 | 25.581 | 43.23 | 235.54 | 0.650 | 0.000 | 0.67 | 1.582 | 1.03 | 44.5 | 0.0 | 209.8 |
| 105.00 | | 0.00 | 1.39 | 25.745 | 43.51 | 232.53 | 0.650 | 0.000 | 2.33 | 5.446 | 3.54 | 154.0 | 0.0 | 460.3 |
| 110.00 | | 0.00 | 1.41 | 26.090 | 44.09 | 225.95 | 0.650 | 0.000 | 5.00 | 11.392 | 7.41 | 326.5 | 0.0 | 978.2 |
| 110.91 | Bot - Section 4 | 0.00 | 1.41 | 26.151 | 44.20 | 224.74 | 0.650 | 0.000 | 0.91 | 2.019 | 1.31 | 58.0 | 0.0 | 175.7 |
| 114.50 | Appurtenance(s) | 0.00 | 1.43 | 26.390 | 44.60 | 219.89 | 0.650 | 0.000 | 3.59 | 8.002 | 5.20 | 232.0 | 0.0 | 886.7 |
| 114.80 | Top - Section 3 | 0.00 | 1.43 | 26.410 | 44.63 | 219.48 | 0.650 | 0.000 | 0.30 | 0.651 | 0.42 | 18.9 | 0.0 | 72.6 |
| 115.00 | | 0.00 | 1.43 | 26.423 | 44.66 | 222.38 | 0.650 | 0.000 | 0.20 | 0.445 | 0.29 | 12.9 | 0.0 | 35.7 |
| 117.00 | Appurtenance(s) | 0.00 | 1.44 | 26.554 | 44.88 | 219.65 | 0.650 | 0.000 | 2.00 | 4.346 | 2.82 | 126.8 | 0.0 | 349.8 |
| 118.00 | RT8 | 0.00 | 1.44 | 26.618 | 44.99 | 218.27 | 0.650 | 0.000 | 1.00 | 2.149 | 1.40 | 62.8 | 0.0 | 174.3 |
| 120.00 | | 0.00 | 1.45 | 26.747 | 45.20 | 215.50 | 0.650 | 0.000 | 2.00 | 4.249 | 2.76 | 124.8 | 0.0 | 102.5 |
| 125.00 | | 0.00 | 1.46 | 27.060 | 45.73 | 208.48 | 0.650 | 0.000 | 5.00 | 10.340 | 6.72 | 307.4 | 0.0 | 249.4 |
| 130.00 | | 0.00 | 1.48 | 27.365 | 46.25 | 201.32 | 0.650 | 0.000 | 5.00 | 9.938 | 6.46 | 298.7 | 0.0 | 239.6 |
| 135.00 | | 0.00 | 1.50 | 27.662 | 46.75 | 194.04 | 0.650 | 0.000 | 5.00 | 9.535 | 6.20 | 289.7 | 0.0 | 229.8 |
| 137.00 | Appurtenance(s) | 0.00 | 1.50 | 27.778 | 46.95 | 191.09 | 0.650 | 0.000 | 2.00 | 3.701 | 2.41 | 112.9 | 0.0 | 89.2 |

Wind Loading - Shaft

Structure: CT02694-B-SBA

Code: EIA/TIA-222-F

4/5/2016



Site Name: E-Prospect

Exposure: C

Height: 162.00 (ft)

Gh: 1.69

Page: 11

Base Elev: 0.000 (ft)

Struct Class: II

| | | | | | | | | | | | | | |
|------------------------|------|------|--------|-------|--------|-------|-------|---------------|-------|------|-----------------|-----|-----------------|
| 140.00 | 0.00 | 1.51 | 27.951 | 47.24 | 186.63 | 0.650 | 0.000 | 3.00 | 5.431 | 3.53 | 166.7 | 0.0 | 130.8 |
| 145.00 | 0.00 | 1.53 | 28.233 | 47.71 | 179.11 | 0.650 | 0.000 | 5.00 | 8.729 | 5.67 | 270.7 | 0.0 | 210.2 |
| 147.00 Appurtenance(s) | 0.00 | 1.53 | 28.343 | 47.90 | 176.07 | 0.650 | 0.000 | 2.00 | 3.379 | 2.20 | 105.2 | 0.0 | 81.3 |
| 150.00 Top - Section 4 | 0.00 | 1.54 | 28.507 | 48.18 | 171.48 | 0.650 | 0.000 | 3.00 | 4.948 | 3.22 | 154.9 | 0.0 | 119.1 |
| 155.00 | 0.00 | 1.56 | 28.776 | 48.63 | 112.65 | 0.590 | 0.000 | 5.00 | 5.313 | 3.13 | 152.4 | 0.0 | 248.0 |
| 158.00 Appurtenance(s) | 0.00 | 1.56 | 28.934 | 48.90 | 112.96 | 0.590 | 0.000 | 3.00 | 3.188 | 1.88 | 92.0 | 0.0 | 148.8 |
| 160.00 Appurtenance(s) | 0.00 | 1.57 | 29.038 | 49.07 | 113.16 | 0.590 | 0.000 | 2.00 | 2.125 | 1.25 | 61.5 | 0.0 | 99.2 |
| 162.00 | 0.00 | 1.58 | 29.141 | 49.25 | 113.36 | 0.590 | 0.000 | 2.00 | 2.125 | 1.25 | 61.7 | 0.0 | 99.2 |
| Totals: | | | | | | | | 162.00 | | | 10,608.9 | | 36,059.5 |

Discrete Appurtenance Forces

Structure: CT02694-B-SB
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

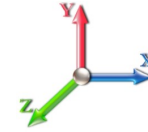
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
 Page: 12



Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 27

| No. | Elev (ft) | Description | Qty | qz (psf) | qzGh (psf) | CaAa Factor | Total CaAa (sf) | Dead Load (lb) | Horiz Ecc (ft) | Vert Ecc (ft) | Wind FX (lb) | Mom Y (lb-ft) | Mom Z (lb-ft) |
|----------------|-----------|-------------------------|-----|----------|------------|-------------|-----------------|-----------------|----------------|---------------|------------------|---------------|---------------|
| 1 | 160.00 | RFS | 3 | 29.038 | 49.074 | 0.50 | 1.75 | 39.00 | 0.000 | 0.000 | 86.12 | 0.00 | 0.00 |
| 2 | 160.00 | Ericsson S11B12-RRU | 3 | 29.038 | 49.074 | 0.50 | 4.96 | 153.00 | 0.000 | 0.000 | 243.65 | 0.00 | 0.00 |
| 3 | 160.00 | Ericsson S11 B2-RRU | 3 | 29.038 | 49.074 | 0.50 | 4.96 | 150.00 | 0.000 | 0.000 | 243.65 | 0.00 | 0.00 |
| 4 | 160.00 | Ericsson Air 21 B4A/B2P | 3 | 29.038 | 49.074 | 0.86 | 16.98 | 271.20 | 0.000 | 0.000 | 833.10 | 0.00 | 0.00 |
| 5 | 160.00 | CommScope | 3 | 29.038 | 49.074 | 0.75 | 18.00 | 600.00 | 0.000 | 0.000 | 883.33 | 0.00 | 0.00 |
| 6 | 160.00 | RFS | 3 | 29.038 | 49.074 | 0.50 | 1.75 | 37.50 | 0.000 | 0.000 | 86.12 | 0.00 | 0.00 |
| 7 | 158.00 | Commscope | 3 | 28.934 | 48.898 | 0.80 | 27.48 | 149.40 | 0.000 | 0.000 | 1343.72 | 0.00 | 0.00 |
| 8 | 147.00 | ALU 800 MHz Filters | 4 | 28.343 | 47.900 | 0.50 | 1.56 | 35.20 | 0.000 | 0.000 | 74.72 | 0.00 | 0.00 |
| 9 | 147.00 | ALU 800 MHz RRUs | 3 | 28.343 | 47.900 | 0.50 | 3.74 | 159.00 | 0.000 | 0.000 | 178.91 | 0.00 | 0.00 |
| 10 | 147.00 | ALU TD-RRH8x20-25 RRUs | 3 | 28.343 | 47.900 | 0.50 | 7.08 | 210.00 | 0.000 | 0.000 | 339.13 | 0.00 | 0.00 |
| 11 | 147.00 | ALU 1900 MHz RRUs | 3 | 28.343 | 47.900 | 0.50 | 4.16 | 180.00 | 0.000 | 0.000 | 199.03 | 0.00 | 0.00 |
| 12 | 147.00 | RFS APXVTM14-C-120 | 3 | 28.343 | 47.900 | 0.79 | 16.35 | 168.00 | 0.000 | 0.000 | 783.31 | 0.00 | 0.00 |
| 13 | 147.00 | Low Profile Platform | 1 | 28.343 | 47.900 | 1.00 | 20.00 | 1200.00 | 0.000 | 0.000 | 958.00 | 0.00 | 0.00 |
| 14 | 147.00 | RFS ACU-A20-N RETs | 4 | 28.343 | 47.900 | 0.50 | 0.28 | 4.00 | 0.000 | 0.000 | 13.41 | 0.00 | 0.00 |
| 15 | 147.00 | RFS APXVSPP18-C-A20 | 3 | 28.343 | 47.900 | 0.83 | 20.57 | 171.00 | 0.000 | 0.000 | 985.18 | 0.00 | 0.00 |
| 16 | 137.00 | Swedcom SC-E 6014 rev2 | 4 | 27.778 | 46.946 | 0.97 | 13.77 | 60.00 | 0.000 | 0.000 | 646.63 | 0.00 | 0.00 |
| 17 | 137.00 | RFS FD9R6004/2C-3L | 6 | 27.778 | 46.946 | 0.50 | 1.08 | 18.60 | 0.000 | 0.000 | 50.70 | 0.00 | 0.00 |
| 18 | 137.00 | Low Profile Platform | 1 | 27.778 | 46.946 | 1.00 | 20.00 | 1200.00 | 0.000 | 0.000 | 938.91 | 0.00 | 0.00 |
| 19 | 137.00 | Antel LPA-80063/4CF | 2 | 27.778 | 46.946 | 0.93 | 13.02 | 40.00 | 0.000 | 0.000 | 611.23 | 0.00 | 0.00 |
| 20 | 137.00 | Andrew LNX-6514DS-T4M | 3 | 27.778 | 46.946 | 0.80 | 19.99 | 99.30 | 0.000 | 0.000 | 938.54 | 0.00 | 0.00 |
| 21 | 137.00 | Rymasa MG D3-800TV | 3 | 27.778 | 46.946 | 0.78 | 8.07 | 59.40 | 0.000 | 0.000 | 378.99 | 0.00 | 0.00 |
| 22 | 117.00 | Kathrein 800-10121 | 3 | 26.554 | 44.876 | 0.79 | 12.92 | 132.30 | 0.000 | 0.000 | 579.64 | 0.00 | 0.00 |
| 23 | 117.00 | Andrew SBNH-1D6565C | 4 | 26.554 | 44.876 | 0.80 | 36.61 | 264.40 | 0.000 | 0.000 | 1642.82 | 0.00 | 0.00 |
| 24 | 117.00 | CCI DTMAPB7819VG12A | 6 | 26.554 | 44.876 | 0.67 | 4.58 | 115.20 | 0.000 | 0.000 | 205.66 | 0.00 | 0.00 |
| 25 | 117.00 | CSS DBC-750 | 3 | 26.554 | 44.876 | 0.50 | 0.77 | 14.40 | 0.000 | 0.000 | 34.33 | 0.00 | 0.00 |
| 26 | 117.00 | KMW AM-X-CD-16-6500T | 2 | 26.554 | 44.876 | 0.81 | 10.72 | 66.00 | 0.000 | 0.000 | 481.27 | 0.00 | 0.00 |
| 27 | 117.00 | Kathrein 860 10025 RET | 6 | 26.554 | 44.876 | 0.50 | 0.54 | 7.20 | 0.000 | 0.000 | 24.23 | 0.00 | 0.00 |
| 28 | 117.00 | Low Profile Platform | 1 | 26.554 | 44.876 | 1.00 | 20.00 | 1200.00 | 0.000 | 0.000 | 897.52 | 0.00 | 0.00 |
| 29 | 117.00 | Powerwave LGP 13519 | 3 | 26.554 | 44.876 | 0.50 | 0.51 | 15.90 | 0.000 | 0.000 | 22.89 | 0.00 | 0.00 |
| 30 | 114.50 | Raycap DC6-48-60-18-8F | 3 | 26.390 | 44.600 | 0.67 | 2.53 | 60.00 | 0.000 | 0.000 | 112.95 | 0.00 | 0.00 |
| 31 | 114.50 | Ericsson RRUS 11 | 6 | 26.390 | 44.600 | 0.67 | 11.82 | 304.20 | 0.000 | 0.000 | 527.12 | 0.00 | 0.00 |
| Totals: | | | | | | | | 7,184.20 | | | 15,344.83 | | |

Total Applied Force Summary

Structure: CT02694-B-SB
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

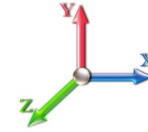
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
 Page: 13



Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 27

| Elev (ft) | Description | Lateral FX (-) (lb) | Axial FY (-) (lb) | Torsion MY (lb-ft) | Moment MZ (lb-ft) |
|-----------|--------------------|---------------------|-------------------|--------------------|-------------------|
| 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | | 482.89 | 1563.95 | 0.00 | 0.00 |
| 10.00 | | 474.70 | 1544.38 | 0.00 | 0.00 |
| 15.00 | | 466.52 | 1524.80 | 0.00 | 0.00 |
| 16.67 | | 153.99 | 632.78 | 0.00 | 0.00 |
| 18.50 | | 167.70 | 690.90 | 0.00 | 0.00 |
| 20.00 | | 136.64 | 439.94 | 0.00 | 0.00 |
| 25.00 | | 450.15 | 1453.73 | 0.00 | 0.00 |
| 30.00 | | 441.97 | 1434.16 | 0.00 | 0.00 |
| 34.67 | | 411.17 | 1321.82 | 0.00 | 0.00 |
| 35.00 | | 28.86 | 91.71 | 0.00 | 0.00 |
| 40.00 | | 449.65 | 1379.06 | 0.00 | 0.00 |
| 42.14 | | 192.35 | 583.35 | 0.00 | 0.00 |
| 45.00 | | 263.41 | 1151.95 | 0.00 | 0.00 |
| 47.57 | | 237.67 | 1023.92 | 0.00 | 0.00 |
| 50.00 | | 225.70 | 593.38 | 0.00 | 0.00 |
| 54.67 | | 438.70 | 1129.55 | 0.00 | 0.00 |
| 55.00 | | 30.74 | 77.17 | 0.00 | 0.00 |
| 60.00 | | 472.32 | 1160.62 | 0.00 | 0.00 |
| 65.00 | | 473.31 | 1144.30 | 0.00 | 0.00 |
| 70.00 | | 473.30 | 1127.99 | 0.00 | 0.00 |
| 74.67 | | 440.96 | 1038.81 | 0.00 | 0.00 |
| 75.00 | | 30.86 | 71.81 | 0.00 | 0.00 |
| 76.52 | | 142.05 | 329.12 | 0.00 | 0.00 |
| 80.00 | | 330.55 | 1058.17 | 0.00 | 0.00 |
| 81.00 | | 94.28 | 340.15 | 0.00 | 0.00 |
| 81.19 | | 17.56 | 63.36 | 0.00 | 0.00 |
| 85.00 | | 360.28 | 883.32 | 0.00 | 0.00 |
| 86.00 | | 93.76 | 230.38 | 0.00 | 0.00 |
| 90.00 | | 375.58 | 760.31 | 0.00 | 0.00 |
| 94.67 | | 435.92 | 877.10 | 0.00 | 0.00 |
| 95.00 | | 30.47 | 59.45 | 0.00 | 0.00 |
| 100.00 | | 462.48 | 893.80 | 0.00 | 0.00 |
| 102.00 | | 182.88 | 476.70 | 0.00 | 0.00 |
| 102.67 | | 60.97 | 159.23 | 0.00 | 0.00 |
| 105.00 | | 211.82 | 418.06 | 0.00 | 0.00 |
| 110.00 | | 452.16 | 886.65 | 0.00 | 0.00 |
| 110.91 | | 80.80 | 159.09 | 0.00 | 0.00 |
| 114.50 | (9) appurtenances | 963.44 | 1185.02 | 0.00 | 0.00 |
| 114.80 | | 26.44 | 67.21 | 0.00 | 0.00 |
| 115.00 | | 18.10 | 31.93 | 0.00 | 0.00 |
| 117.00 | (28) appurtenances | 4066.27 | 2128.60 | 0.00 | 0.00 |
| 118.00 | | 88.47 | 142.17 | 0.00 | 0.00 |
| 120.00 | | 176.37 | 160.67 | 0.00 | 0.00 |
| 125.00 | | 437.71 | 393.98 | 0.00 | 0.00 |
| 130.00 | | 430.53 | 384.19 | 0.00 | 0.00 |
| 135.00 | | 422.96 | 374.41 | 0.00 | 0.00 |
| 137.00 | (19) appurtenances | 3731.46 | 1624.32 | 0.00 | 0.00 |
| 140.00 | | 247.52 | 180.16 | 0.00 | 0.00 |

Total Applied Force Summary

Structure: CT02694-B-SB
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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| | | | | | |
|----------------|--------------------|------------------|------------------|-------------|-------------|
| 145.00 | | 406.70 | 292.43 | 0.00 | 0.00 |
| 147.00 | (24) appurtenances | 3691.51 | 2241.43 | 0.00 | 0.00 |
| 150.00 | | 237.32 | 159.83 | 0.00 | 0.00 |
| 155.00 | | 291.03 | 315.94 | 0.00 | 0.00 |
| 158.00 | (3) appurtenances | 1519.29 | 338.97 | 0.00 | 0.00 |
| 160.00 | (18) appurtenances | 2493.46 | 1377.08 | 0.00 | 0.00 |
| 162.00 | | 61.75 | 99.22 | 0.00 | 0.00 |
| Totals: | | 29,585.46 | 40,272.54 | 0.00 | 0.00 |

Resulting Forces and Deflections

Structure: CT02694-B-SB
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

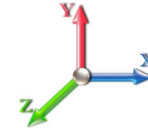
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
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Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 27

| Elev (ft) | Lateral FX (-) (kips) | Axial FY (-) (kips) | Lateral FZ (kips) | Moment MX (ft-kips) | Torsion MY (ft-kips) | Moment MZ (ft-kips) | Deflect X (in) | Deflect Z (in) | Deflect Resultant (in) | Rotation Sway (deg) | Rotation Twist (deg) |
|-----------|-----------------------|---------------------|-------------------|---------------------|----------------------|---------------------|----------------|----------------|------------------------|---------------------|----------------------|
| 0.00 | -29.666 | -40.213 | 0.000 | 0.000 | 0.000 | -3383.532 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5.00 | -29.333 | -38.533 | 0.000 | 0.000 | 0.000 | -3235.207 | -0.121 | 0.000 | 0.121 | -0.227 | 0.000 |
| 10.00 | -28.998 | -36.875 | 0.000 | 0.000 | 0.000 | -3088.543 | -0.482 | 0.000 | 0.482 | -0.456 | 0.000 |
| 15.00 | -28.612 | -35.278 | 0.000 | 0.000 | 0.000 | -2943.555 | -1.084 | 0.000 | 1.084 | -0.688 | 0.000 |
| 16.67 | -28.493 | -34.611 | 0.000 | 0.000 | 0.000 | -2895.774 | -1.339 | 0.000 | 1.339 | -0.768 | 0.000 |
| 18.50 | -28.351 | -33.893 | 0.000 | 0.000 | 0.000 | -2843.631 | -1.646 | 0.000 | 1.646 | -0.833 | 0.000 |
| 20.00 | -28.290 | -33.386 | 0.000 | 0.000 | 0.000 | -2801.105 | -1.917 | 0.000 | 1.917 | -0.887 | 0.000 |
| 25.00 | -27.940 | -31.831 | 0.000 | 0.000 | 0.000 | -2659.658 | -2.966 | 0.000 | 2.966 | -1.111 | 0.000 |
| 30.00 | -27.583 | -30.301 | 0.000 | 0.000 | 0.000 | -2519.962 | -4.251 | 0.000 | 4.251 | -1.337 | 0.000 |
| 34.67 | -27.196 | -28.937 | 0.000 | 0.000 | 0.000 | -2391.151 | -5.665 | 0.000 | 5.665 | -1.550 | 0.000 |
| 35.00 | -27.227 | -28.787 | 0.000 | 0.000 | 0.000 | -2382.176 | -5.772 | 0.000 | 5.772 | -1.565 | 0.000 |
| 40.00 | -26.817 | -27.344 | 0.000 | 0.000 | 0.000 | -2246.041 | -7.536 | 0.000 | 7.536 | -1.797 | 0.000 |
| 42.14 | -26.661 | -26.712 | 0.000 | 0.000 | 0.000 | -2188.743 | -8.364 | 0.000 | 8.364 | -1.899 | 0.000 |
| 45.00 | -26.415 | -25.511 | 0.000 | 0.000 | 0.000 | -2112.405 | -9.544 | 0.000 | 9.544 | -2.034 | 0.000 |
| 47.57 | -26.190 | -24.442 | 0.000 | 0.000 | 0.000 | -2044.519 | -10.672 | 0.000 | 10.672 | -2.155 | 0.000 |
| 50.00 | -26.015 | -23.779 | 0.000 | 0.000 | 0.000 | -1980.877 | -11.798 | 0.000 | 11.798 | -2.269 | 0.000 |
| 54.67 | -25.579 | -22.613 | 0.000 | 0.000 | 0.000 | -1859.388 | -14.135 | 0.000 | 14.135 | -2.504 | 0.000 |
| 55.00 | -25.600 | -22.475 | 0.000 | 0.000 | 0.000 | -1850.947 | -14.309 | 0.000 | 14.309 | -2.521 | 0.000 |
| 60.00 | -25.170 | -21.224 | 0.000 | 0.000 | 0.000 | -1722.950 | -17.088 | 0.000 | 17.088 | -2.781 | 0.000 |
| 65.00 | -24.729 | -19.994 | 0.000 | 0.000 | 0.000 | -1597.100 | -20.137 | 0.000 | 20.137 | -3.039 | 0.000 |
| 70.00 | -24.276 | -18.790 | 0.000 | 0.000 | 0.000 | -1473.455 | -23.455 | 0.000 | 23.455 | -3.295 | 0.000 |
| 74.67 | -23.813 | -17.727 | 0.000 | 0.000 | 0.000 | -1360.089 | -26.795 | 0.000 | 26.795 | -3.532 | 0.000 |
| 75.00 | -23.792 | -17.637 | 0.000 | 0.000 | 0.000 | -1352.231 | -27.040 | 0.000 | 27.040 | -3.550 | 0.000 |
| 76.52 | -23.669 | -17.263 | 0.000 | 0.000 | 0.000 | -1316.146 | -28.180 | 0.000 | 28.180 | -3.629 | 0.000 |
| 80.00 | -23.303 | -16.182 | 0.000 | 0.000 | 0.000 | -1233.699 | -30.893 | 0.000 | 30.893 | -3.808 | 0.000 |
| 81.00 | -23.194 | -15.838 | 0.000 | 0.000 | 0.000 | -1210.396 | -31.696 | 0.000 | 31.696 | -3.860 | 0.000 |
| 81.19 | -23.195 | -15.742 | 0.000 | 0.000 | 0.000 | -1206.067 | -31.847 | 0.000 | 31.847 | -3.868 | 0.000 |
| 85.00 | -22.801 | -14.847 | 0.000 | 0.000 | 0.000 | -1117.617 | -34.997 | 0.000 | 34.997 | -4.022 | 0.000 |
| 86.00 | -22.718 | -14.580 | 0.000 | 0.000 | 0.000 | -1094.816 | -35.844 | 0.000 | 35.844 | -4.067 | 0.000 |
| 90.00 | -22.339 | -13.769 | 0.000 | 0.000 | 0.000 | -1003.944 | -39.321 | 0.000 | 39.321 | -4.237 | 0.000 |
| 94.67 | -21.866 | -12.879 | 0.000 | 0.000 | 0.000 | -899.624 | -43.583 | 0.000 | 43.583 | -4.477 | 0.000 |
| 95.00 | -21.862 | -12.769 | 0.000 | 0.000 | 0.000 | -892.408 | -43.893 | 0.000 | 43.893 | -4.495 | 0.000 |
| 100.00 | -21.366 | -11.849 | 0.000 | 0.000 | 0.000 | -783.099 | -48.734 | 0.000 | 48.734 | -4.753 | 0.000 |
| 102.00 | -21.156 | -11.366 | 0.000 | 0.000 | 0.000 | -740.367 | -50.745 | 0.000 | 50.745 | -4.855 | 0.000 |
| 102.67 | -21.092 | -11.194 | 0.000 | 0.000 | 0.000 | -726.193 | -51.427 | 0.000 | 51.427 | -4.878 | 0.000 |
| 105.00 | -20.874 | -10.740 | 0.000 | 0.000 | 0.000 | -677.050 | -53.824 | 0.000 | 53.824 | -4.955 | 0.000 |
| 110.00 | -20.367 | -9.852 | 0.000 | 0.000 | 0.000 | -572.683 | -59.128 | 0.000 | 59.128 | -5.177 | 0.000 |
| 110.91 | -20.288 | -9.667 | 0.000 | 0.000 | 0.000 | -554.251 | -60.112 | 0.000 | 60.112 | -5.217 | 0.000 |
| 114.50 | -19.231 | -8.550 | 0.000 | 0.000 | 0.000 | -481.317 | -64.092 | 0.000 | 64.092 | -5.364 | 0.000 |
| 114.80 | -19.200 | -8.482 | 0.000 | 0.000 | 0.000 | -475.612 | -64.426 | 0.000 | 64.426 | -5.375 | 0.000 |
| 115.00 | -19.186 | -8.436 | 0.000 | 0.000 | 0.000 | -471.708 | -64.654 | 0.000 | 64.654 | -5.384 | 0.000 |
| 117.00 | -14.944 | -6.686 | 0.000 | 0.000 | 0.000 | -433.336 | -66.925 | 0.000 | 66.925 | -5.468 | 0.000 |
| 118.00 | -14.849 | -6.537 | 0.000 | 0.000 | 0.000 | -418.393 | -68.073 | 0.000 | 68.073 | -5.510 | 0.000 |
| 120.00 | -14.687 | -6.328 | 0.000 | 0.000 | 0.000 | -388.695 | -70.395 | 0.000 | 70.395 | -5.590 | 0.000 |
| 125.00 | -14.253 | -5.881 | 0.000 | 0.000 | 0.000 | -315.262 | -76.470 | 0.000 | 76.470 | -6.010 | 0.000 |
| 130.00 | -13.817 | -5.462 | 0.000 | 0.000 | 0.000 | -244.000 | -82.960 | 0.000 | 82.960 | -6.386 | 0.000 |
| 135.00 | -13.372 | -5.090 | 0.000 | 0.000 | 0.000 | -174.918 | -89.812 | 0.000 | 89.812 | -6.704 | 0.000 |
| 137.00 | -9.484 | -3.895 | 0.000 | 0.000 | 0.000 | -148.173 | -92.639 | 0.000 | 92.639 | -6.816 | 0.000 |
| 140.00 | -9.228 | -3.718 | 0.000 | 0.000 | 0.000 | -119.721 | -96.961 | 0.000 | 96.961 | -6.962 | 0.000 |

Resulting Forces and Deflections

Structure: CT02694-B-SB
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
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| | | | | | | | | | | | |
|--------|--------|--------|-------|-------|-------|---------|----------|-------|---------|--------|-------|
| 145.00 | -8.796 | -3.459 | 0.000 | 0.000 | 0.000 | -73.580 | -104.343 | 0.000 | 104.343 | -7.153 | 0.000 |
| 147.00 | -4.855 | -1.692 | 0.000 | 0.000 | 0.000 | -55.989 | -107.345 | 0.000 | 107.345 | -7.211 | 0.000 |
| 150.00 | -4.601 | -1.557 | 0.000 | 0.000 | 0.000 | -41.424 | -111.888 | 0.000 | 111.888 | -7.282 | 0.000 |
| 155.00 | -4.274 | -1.277 | 0.000 | 0.000 | 0.000 | -18.417 | -119.541 | 0.000 | 119.541 | -7.360 | 0.000 |
| 158.00 | -2.724 | -1.135 | 0.000 | 0.000 | 0.000 | -5.596 | -124.167 | 0.000 | 124.167 | -7.397 | 0.000 |
| 160.00 | -0.074 | -0.090 | 0.000 | 0.000 | 0.000 | -0.148 | -127.259 | 0.000 | 127.259 | -7.403 | 0.000 |
| 162.00 | -0.062 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 130.351 | -7.403 | 0.000 |

Resulting Stresses

Structure: CT02694-B-SBA
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

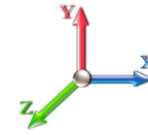
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
 Page: 17



Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 27

Applied Stresses

| Elev (ft) | fa Axial (Y) (ksi) | fvx Shear (X) (ksi) | fvz Shear (Z) (ksi) | fvT Torsion (ksi) | fbx Bending (X) (ksi) | fbz Bending (Z) (ksi) | fb Combined (ksi) | Fb Allow Stress (ksi) | f/Fb Stress Ratio |
|-----------|--------------------|---------------------|---------------------|-------------------|-----------------------|-----------------------|-------------------|-----------------------|-------------------|
| 0.00 | 0.72 | 1.08 | 0.00 | 0.00 | 0.00 | 47.69 | 48.41 | 52.0 | 0.931 |
| 5.00 | 0.71 | 1.09 | 0.00 | 0.00 | 0.00 | 47.28 | 47.28 | 52.0 | 0.910 |
| 10.00 | 0.69 | 1.10 | 0.00 | 0.00 | 0.00 | 46.84 | 46.84 | 52.0 | 0.901 |
| 15.00 | 0.68 | 1.11 | 0.00 | 0.00 | 0.00 | 46.36 | 46.36 | 52.0 | 0.892 |
| 16.67 | 0.67 | 1.11 | 0.00 | 0.00 | 0.00 | 34.37 | 34.37 | 52.0 | 0.661 |
| 18.50 | 0.66 | 1.12 | 0.00 | 0.00 | 0.00 | 34.18 | 34.18 | 52.0 | 0.657 |
| 20.00 | 0.66 | 1.12 | 0.00 | 0.00 | 0.00 | 42.31 | 42.31 | 52.0 | 0.814 |
| 25.00 | 0.64 | 1.13 | 0.00 | 0.00 | 0.00 | 41.73 | 41.73 | 52.0 | 0.803 |
| 30.00 | 0.62 | 1.14 | 0.00 | 0.00 | 0.00 | 41.09 | 41.09 | 52.0 | 0.791 |
| 34.67 | 0.61 | 1.15 | 0.00 | 0.00 | 0.00 | 40.45 | 41.06 | 52.0 | 0.790 |
| 35.00 | 0.61 | 1.16 | 0.00 | 0.00 | 0.00 | 40.99 | 40.99 | 52.0 | 0.789 |
| 40.00 | 0.59 | 1.17 | 0.00 | 0.00 | 0.00 | 40.24 | 40.24 | 52.0 | 0.774 |
| 42.14 | 0.58 | 1.17 | 0.00 | 0.00 | 0.00 | 39.91 | 39.91 | 52.0 | 0.768 |
| 45.00 | 0.57 | 1.18 | 0.00 | 0.00 | 0.00 | 39.02 | 39.02 | 52.0 | 0.751 |
| 47.57 | 0.65 | 1.40 | 0.00 | 0.00 | 0.00 | 38.58 | 38.58 | 52.0 | 0.742 |
| 50.00 | 0.64 | 1.40 | 0.00 | 0.00 | 0.00 | 42.02 | 42.02 | 52.0 | 0.808 |
| 54.67 | 0.62 | 1.41 | 0.00 | 0.00 | 0.00 | 40.99 | 41.61 | 52.0 | 0.801 |
| 55.00 | 0.62 | 1.42 | 0.00 | 0.00 | 0.00 | 42.38 | 42.38 | 52.0 | 0.815 |
| 60.00 | 0.60 | 1.43 | 0.00 | 0.00 | 0.00 | 41.17 | 41.17 | 52.0 | 0.792 |
| 65.00 | 0.58 | 1.45 | 0.00 | 0.00 | 0.00 | 39.86 | 39.86 | 52.0 | 0.767 |
| 70.00 | 0.56 | 1.46 | 0.00 | 0.00 | 0.00 | 38.46 | 38.46 | 52.0 | 0.740 |
| 74.67 | 0.54 | 1.47 | 0.00 | 0.00 | 0.00 | 37.05 | 37.59 | 52.0 | 0.723 |
| 75.00 | 0.54 | 1.47 | 0.00 | 0.00 | 0.00 | 37.67 | 37.67 | 52.0 | 0.725 |
| 76.52 | 0.54 | 1.48 | 0.00 | 0.00 | 0.00 | 37.19 | 37.19 | 52.0 | 0.715 |
| 80.00 | 0.51 | 1.49 | 0.00 | 0.00 | 0.00 | 35.61 | 35.61 | 52.0 | 0.685 |
| 81.00 | 0.50 | 1.49 | 0.00 | 0.00 | 0.00 | 29.24 | 29.24 | 52.0 | 0.563 |
| 81.19 | 0.62 | 1.83 | 0.00 | 0.00 | 0.00 | 29.18 | 29.18 | 52.0 | 0.561 |
| 85.00 | 0.60 | 1.84 | 0.00 | 0.00 | 0.00 | 30.73 | 30.73 | 52.0 | 0.591 |
| 86.00 | 0.59 | 1.85 | 0.00 | 0.00 | 0.00 | 30.36 | 30.36 | 52.0 | 0.584 |
| 90.00 | 0.57 | 1.86 | 0.00 | 0.00 | 0.00 | 35.63 | 35.63 | 52.0 | 0.685 |
| 94.67 | 0.55 | 1.88 | 0.00 | 0.00 | 0.00 | 33.39 | 33.94 | 52.0 | 0.653 |
| 95.00 | 0.55 | 1.88 | 0.00 | 0.00 | 0.00 | 34.89 | 34.89 | 52.0 | 0.671 |
| 100.00 | 0.52 | 1.90 | 0.00 | 0.00 | 0.00 | 32.20 | 32.20 | 52.0 | 0.619 |
| 102.00 | 0.51 | 1.91 | 0.00 | 0.00 | 0.00 | 20.99 | 20.99 | 52.0 | 0.404 |
| 102.67 | 0.50 | 1.91 | 0.00 | 0.00 | 0.00 | 20.71 | 20.71 | 52.0 | 0.398 |
| 105.00 | 0.49 | 1.92 | 0.00 | 0.00 | 0.00 | 28.59 | 28.59 | 52.0 | 0.550 |
| 110.00 | 0.47 | 1.94 | 0.00 | 0.00 | 0.00 | 25.49 | 25.49 | 52.0 | 0.490 |
| 110.91 | 0.46 | 1.95 | 0.00 | 0.00 | 0.00 | 24.91 | 24.91 | 52.0 | 0.479 |
| 114.50 | 0.42 | 1.90 | 0.00 | 0.00 | 0.00 | 22.19 | 22.19 | 52.0 | 0.427 |
| 114.80 | 0.55 | 2.49 | 0.00 | 0.00 | 0.00 | 21.99 | 21.99 | 52.0 | 0.423 |
| 115.00 | 0.54 | 2.49 | 0.00 | 0.00 | 0.00 | 24.78 | 24.78 | 52.0 | 0.477 |
| 117.00 | 0.44 | 1.97 | 0.00 | 0.00 | 0.00 | 23.24 | 23.24 | 52.0 | 0.447 |
| 118.00 | 0.43 | 1.97 | 0.00 | 0.00 | 0.00 | 22.67 | 23.11 | 52.0 | 0.444 |
| 120.00 | 0.42 | 1.98 | 0.00 | 0.00 | 0.00 | 50.32 | 50.86 | 52.0 | 0.978 |
| 125.00 | 0.41 | 2.00 | 0.00 | 0.00 | 0.00 | 44.16 | 44.70 | 52.0 | 0.860 |
| 130.00 | 0.40 | 2.02 | 0.00 | 0.00 | 0.00 | 37.10 | 37.66 | 52.0 | 0.724 |
| 135.00 | 0.39 | 2.04 | 0.00 | 0.00 | 0.00 | 28.97 | 29.57 | 52.0 | 0.569 |

Resulting Stresses

Structure: CT02694-B-SBA

Code: EIA/TIA-222-F

4/5/2016



Site Name: E-Prospect

Exposure: C

Height: 162.00 (ft)

Gh: 1.69

Base Elev: 0.000 (ft)

Struct Class: II

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Tower Engineering Solutions

| | | | | | | | | | | |
|--------|------|------|------|------|------|-------|-------|------|------|-------|
| 137.00 | 0.30 | 1.47 | 0.00 | 0.00 | 0.00 | 25.42 | 25.85 | 52.0 | | 0.497 |
| 140.00 | 0.29 | 1.47 | 0.00 | 0.00 | 0.00 | 21.68 | 22.12 | 52.0 | | 0.426 |
| 145.00 | 0.29 | 1.47 | 0.00 | 0.00 | 0.00 | 14.63 | 15.13 | 52.0 | | 0.291 |
| 147.00 | 0.14 | 0.83 | 0.00 | 0.00 | 0.00 | 11.57 | 11.80 | 52.0 | | 0.227 |
| 150.00 | 0.14 | 0.81 | 0.00 | 0.00 | 0.00 | 9.09 | 9.33 | 52.0 | | 0.179 |
| 150.00 | 0.14 | 0.81 | 0.00 | 0.00 | 0.00 | 9.09 | 9.33 | 52.0 | | 0.221 |
| 155.00 | 0.09 | 0.59 | 0.00 | 0.00 | 0.00 | 5.04 | 5.23 | 40.0 | 40.0 | 0.131 |
| 158.00 | 0.08 | 0.37 | 0.00 | 0.00 | 0.00 | 1.53 | 1.74 | 40.0 | 40.0 | 0.043 |
| 160.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.04 | 0.05 | 40.0 | 40.0 | 0.001 |
| 162.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 40.0 | 40.0 | 0.000 |

Wind Loading - Shaft

Structure: CT02694-B-SBA
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

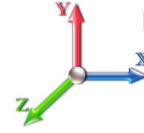
4/5/2016
 Page: 19



Load Case: 73.61 mph Wind with 0.5" Ice

Iterations: 27

Dead Load Factor 1.00
Wind Load Factor 1.00



| Elev (ft) | Description | Kzt | Kz | qz (psf) | qzGh (psf) | C (mph-ft) | Cf | Ice Thick (in) | Tributary (ft) | Aa (sf) | CfAa (sf) | Wind Force X (lb) | Dead Load Ice (lb) | Tot Dead Load (lb) |
|-----------|-----------------|------|------|----------|------------|------------|-------|----------------|----------------|---------|-----------|-------------------|--------------------|--------------------|
| 0.00 | RB1 | 0.00 | 1.00 | 13.871 | 23.44 | 288.31 | 0.650 | 0.500 | 0.00 | 0.000 | 0.00 | 0.0 | 0.0 | 0.0 |
| 5.00 | | 0.00 | 1.00 | 13.871 | 23.44 | 282.38 | 0.650 | 0.500 | 5.00 | 19.799 | 12.87 | 301.7 | 142.1 | 1905.9 |
| 10.00 | | 0.00 | 1.00 | 13.871 | 23.44 | 276.45 | 0.650 | 0.500 | 5.00 | 19.396 | 12.61 | 295.5 | 139.2 | 1883.4 |
| 15.00 | | 0.00 | 1.00 | 13.871 | 23.44 | 270.52 | 0.650 | 0.500 | 5.00 | 18.993 | 12.35 | 289.4 | 136.2 | 1860.9 |
| 16.67 | RB2 | 0.00 | 1.00 | 13.871 | 23.44 | 268.54 | 0.650 | 0.500 | 1.67 | 6.254 | 4.07 | 95.3 | 45.2 | 872.6 |
| 18.50 | RT1 | 0.00 | 1.00 | 13.871 | 23.44 | 266.37 | 0.650 | 0.500 | 1.83 | 6.802 | 4.42 | 103.6 | 49.1 | 953.3 |
| 20.00 | | 0.00 | 1.00 | 13.871 | 23.44 | 264.59 | 0.650 | 0.500 | 1.50 | 5.535 | 3.60 | 84.3 | 40.0 | 530.3 |
| 25.00 | | 0.00 | 1.00 | 13.871 | 23.44 | 258.66 | 0.650 | 0.500 | 5.00 | 18.188 | 11.82 | 277.1 | 130.3 | 1752.0 |
| 30.00 | | 0.00 | 1.00 | 13.871 | 23.44 | 252.73 | 0.650 | 0.500 | 5.00 | 17.785 | 11.56 | 271.0 | 127.4 | 1729.5 |
| 34.67 | RT2 | 0.00 | 1.01 | 14.068 | 23.78 | 248.94 | 0.650 | 0.500 | 4.67 | 16.247 | 10.56 | 251.1 | 116.4 | 1595.1 |
| 35.00 | | 0.00 | 1.02 | 14.106 | 23.84 | 248.88 | 0.650 | 0.500 | 0.33 | 1.135 | 0.74 | 17.6 | 8.2 | 109.9 |
| 40.00 | | 0.00 | 1.06 | 14.655 | 24.77 | 247.58 | 0.650 | 0.500 | 5.00 | 16.979 | 11.04 | 273.3 | 121.5 | 1652.5 |
| 42.14 | Bot - Section 2 | 0.00 | 1.07 | 14.874 | 25.14 | 246.80 | 0.650 | 0.500 | 2.14 | 7.133 | 4.64 | 116.5 | 51.4 | 699.7 |
| 45.00 | | 0.00 | 1.09 | 15.156 | 25.61 | 245.58 | 0.650 | 0.500 | 2.86 | 9.593 | 6.24 | 159.7 | 69.0 | 1308.0 |
| 47.57 | Top - Section 1 | 0.00 | 1.11 | 15.399 | 26.02 | 244.33 | 0.650 | 0.500 | 2.57 | 8.497 | 5.52 | 143.7 | 61.1 | 1163.2 |
| 50.00 | | 0.00 | 1.13 | 15.620 | 26.40 | 247.08 | 0.650 | 0.500 | 2.43 | 7.937 | 5.16 | 136.2 | 57.1 | 724.3 |
| 54.67 | RT3 | 0.00 | 1.16 | 16.023 | 27.08 | 244.30 | 0.650 | 0.500 | 4.67 | 14.986 | 9.74 | 263.8 | 107.1 | 1378.7 |
| 55.00 | | 0.00 | 1.16 | 16.051 | 27.13 | 244.09 | 0.650 | 0.500 | 0.33 | 1.046 | 0.68 | 18.4 | 7.6 | 92.7 |
| 60.00 | | 0.00 | 1.19 | 16.455 | 27.81 | 240.69 | 0.650 | 0.500 | 5.00 | 15.628 | 10.16 | 282.5 | 111.6 | 1392.3 |
| 65.00 | | 0.00 | 1.21 | 16.836 | 28.45 | 236.92 | 0.650 | 0.500 | 5.00 | 15.226 | 9.90 | 281.6 | 108.6 | 1373.0 |
| 70.00 | | 0.00 | 1.24 | 17.196 | 29.06 | 232.84 | 0.650 | 0.500 | 5.00 | 14.823 | 9.63 | 280.0 | 105.7 | 1353.7 |
| 74.67 | RT4 | 0.00 | 1.26 | 17.516 | 29.60 | 228.78 | 0.650 | 0.500 | 4.67 | 13.481 | 8.76 | 259.4 | 96.1 | 1247.1 |
| 75.00 | | 0.00 | 1.26 | 17.538 | 29.64 | 228.48 | 0.650 | 0.500 | 0.33 | 0.939 | 0.61 | 18.1 | 6.8 | 85.5 |
| 76.52 | Bot - Section 3 | 0.00 | 1.27 | 17.639 | 29.81 | 227.11 | 0.650 | 0.500 | 1.52 | 4.294 | 2.79 | 83.2 | 30.9 | 391.6 |
| 80.00 | | 0.00 | 1.29 | 17.865 | 30.19 | 223.87 | 0.650 | 0.500 | 3.48 | 9.868 | 6.41 | 193.7 | 70.6 | 1201.2 |
| 81.00 | RB6 | 0.00 | 1.29 | 17.928 | 30.30 | 222.92 | 0.650 | 0.500 | 1.00 | 2.797 | 1.82 | 55.1 | 20.1 | 420.1 |
| 81.19 | Top - Section 2 | 0.00 | 1.29 | 17.940 | 30.32 | 222.74 | 0.650 | 0.500 | 0.19 | 0.520 | 0.34 | 10.3 | 3.8 | 78.3 |
| 85.00 | | 0.00 | 1.31 | 18.177 | 30.72 | 222.54 | 0.650 | 0.500 | 3.81 | 10.506 | 6.83 | 209.8 | 75.0 | 1186.4 |
| 86.00 | RT6 | 0.00 | 1.31 | 18.238 | 30.82 | 221.55 | 0.650 | 0.500 | 1.00 | 2.716 | 1.77 | 54.4 | 19.5 | 309.7 |
| 90.00 | | 0.00 | 1.33 | 18.476 | 31.22 | 217.52 | 0.650 | 0.500 | 4.00 | 10.704 | 6.96 | 217.2 | 76.3 | 919.8 |
| 94.67 | RT5 | 0.00 | 1.35 | 18.745 | 31.68 | 212.66 | 0.650 | 0.500 | 4.67 | 12.171 | 7.91 | 250.6 | 86.5 | 1060.8 |
| 95.00 | | 0.00 | 1.35 | 18.764 | 31.71 | 212.31 | 0.650 | 0.500 | 0.33 | 0.847 | 0.55 | 17.5 | 6.1 | 70.3 |
| 100.00 | | 0.00 | 1.37 | 19.041 | 32.18 | 206.92 | 0.650 | 0.500 | 5.00 | 12.615 | 8.20 | 263.8 | 89.5 | 1055.5 |
| 102.00 | RB8 | 0.00 | 1.38 | 19.149 | 32.36 | 204.72 | 0.650 | 0.500 | 2.00 | 4.933 | 3.21 | 103.8 | 35.3 | 663.1 |
| 102.67 | RT7 | 0.00 | 1.38 | 19.185 | 32.42 | 203.98 | 0.650 | 0.500 | 0.67 | 1.638 | 1.06 | 34.5 | 11.8 | 221.6 |
| 105.00 | | 0.00 | 1.39 | 19.308 | 32.63 | 201.37 | 0.650 | 0.500 | 2.33 | 5.641 | 3.67 | 119.6 | 40.3 | 500.6 |
| 110.00 | | 0.00 | 1.41 | 19.566 | 33.07 | 195.67 | 0.650 | 0.500 | 5.00 | 11.809 | 7.68 | 253.8 | 83.6 | 1061.8 |
| 110.91 | Bot - Section 4 | 0.00 | 1.41 | 19.612 | 33.14 | 194.63 | 0.650 | 0.500 | 0.91 | 2.094 | 1.36 | 45.1 | 15.0 | 190.7 |
| 114.50 | Appurtenance(s) | 0.00 | 1.43 | 19.792 | 33.45 | 190.42 | 0.650 | 0.500 | 3.59 | 8.302 | 5.40 | 180.5 | 59.0 | 945.7 |
| 114.80 | Top - Section 3 | 0.00 | 1.43 | 19.806 | 33.47 | 190.07 | 0.650 | 0.500 | 0.30 | 0.676 | 0.44 | 14.7 | 4.9 | 77.5 |
| 115.00 | | 0.00 | 1.43 | 19.816 | 33.49 | 192.58 | 0.650 | 0.500 | 0.20 | 0.462 | 0.30 | 10.1 | 3.3 | 39.0 |
| 117.00 | Appurtenance(s) | 0.00 | 1.44 | 19.914 | 33.65 | 190.21 | 0.650 | 0.500 | 2.00 | 4.512 | 2.93 | 98.7 | 32.2 | 382.1 |
| 118.00 | RT8 | 0.00 | 1.44 | 19.963 | 33.74 | 189.02 | 0.650 | 0.500 | 1.00 | 2.232 | 1.45 | 48.9 | 16.0 | 190.3 |
| 120.00 | | 0.00 | 1.45 | 20.059 | 33.90 | 186.63 | 0.650 | 0.500 | 2.00 | 4.416 | 2.87 | 97.3 | 31.5 | 134.0 |
| 125.00 | | 0.00 | 1.46 | 20.294 | 34.30 | 180.54 | 0.650 | 0.500 | 5.00 | 10.757 | 6.99 | 239.8 | 75.8 | 325.2 |
| 130.00 | | 0.00 | 1.48 | 20.523 | 34.68 | 174.35 | 0.650 | 0.500 | 5.00 | 10.354 | 6.73 | 233.4 | 72.9 | 312.5 |
| 135.00 | | 0.00 | 1.50 | 20.745 | 35.06 | 168.04 | 0.650 | 0.500 | 5.00 | 9.951 | 6.47 | 226.8 | 69.9 | 299.7 |
| 137.00 | Appurtenance(s) | 0.00 | 1.50 | 20.833 | 35.21 | 165.48 | 0.650 | 0.500 | 2.00 | 3.868 | 2.51 | 88.5 | 27.5 | 116.7 |

Wind Loading - Shaft

Structure: CT02694-B-SBA

Code: EIA/TIA-222-F

4/5/2016



Site Name: E-Prospect

Exposure: C

Height: 162.00 (ft)

Gh: 1.69

Page: 20

Base Elev: 0.000 (ft)

Struct Class: II

| | | | | | | | | | | | | | |
|------------------------|------|------|--------|-------|--------|-------|-------|---------------|-------|------|----------------|------|-----------------|
| 140.00 | 0.00 | 1.51 | 20.962 | 35.43 | 161.62 | 0.650 | 0.500 | 3.00 | 5.681 | 3.69 | 130.8 | 40.2 | 171.0 |
| 145.00 | 0.00 | 1.53 | 21.173 | 35.78 | 155.11 | 0.650 | 0.500 | 5.00 | 9.146 | 5.94 | 212.7 | 64.0 | 274.3 |
| 147.00 Appurtenance(s) | 0.00 | 1.53 | 21.256 | 35.92 | 152.48 | 0.650 | 0.500 | 2.00 | 3.546 | 2.30 | 82.8 | 25.1 | 106.5 |
| 150.00 Top - Section 4 | 0.00 | 1.54 | 21.379 | 36.13 | 148.50 | 0.650 | 0.500 | 3.00 | 5.198 | 3.38 | 122.1 | 36.7 | 155.7 |
| 155.00 | 0.00 | 1.56 | 21.581 | 36.47 | 97.55 | 0.590 | 0.500 | 5.00 | 5.729 | 3.38 | 123.3 | 40.5 | 288.5 |
| 158.00 Appurtenance(s) | 0.00 | 1.56 | 21.699 | 36.67 | 97.82 | 0.590 | 0.500 | 3.00 | 3.438 | 2.03 | 74.4 | 24.3 | 173.1 |
| 160.00 Appurtenance(s) | 0.00 | 1.57 | 21.777 | 36.80 | 98.00 | 0.590 | 0.500 | 2.00 | 2.292 | 1.35 | 49.8 | 16.2 | 115.4 |
| 162.00 | 0.00 | 1.58 | 21.855 | 36.93 | 98.17 | 0.590 | 0.500 | 2.00 | 2.292 | 1.35 | 49.9 | 16.2 | 115.4 |
| Totals: | | | | | | | | 162.00 | | | 8,216.9 | | 39,217.4 |

Discrete Appurtenance Forces

Structure: CT02694-B-SB
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

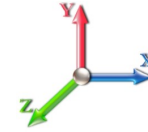
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
 Page: 21



Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 27

| No. | Elev (ft) | Description | Qty | qz (psf) | qzGh (psf) | CaAa Factor | Total CaAa (sf) | Dead Load (lb) | Horiz Ecc (ft) | Vert Ecc (ft) | Wind FX (lb) | Mom Y (lb-ft) | Mom Z (lb-ft) |
|----------------|-----------|-------------------------|-----|----------|------------|-------------|-----------------|------------------|----------------|---------------|------------------|---------------|---------------|
| 1 | 160.00 | RFS | 3 | 21.777 | 36.803 | 0.50 | 2.08 | 61.80 | 0.000 | 0.000 | 76.74 | 0.00 | 0.00 |
| 2 | 160.00 | Ericsson S11B12-RRU | 3 | 21.777 | 36.803 | 0.50 | 5.28 | 201.30 | 0.000 | 0.000 | 194.32 | 0.00 | 0.00 |
| 3 | 160.00 | Ericsson S11 B2-RRU | 3 | 21.777 | 36.803 | 0.50 | 5.28 | 201.30 | 0.000 | 0.000 | 194.32 | 0.00 | 0.00 |
| 4 | 160.00 | Ericsson Air 21 B4A/B2P | 3 | 21.777 | 36.803 | 0.86 | 17.98 | 384.30 | 0.000 | 0.000 | 661.82 | 0.00 | 0.00 |
| 5 | 160.00 | CommScope | 3 | 21.777 | 36.803 | 0.75 | 23.63 | 750.00 | 0.000 | 0.000 | 869.48 | 0.00 | 0.00 |
| 6 | 160.00 | RFS | 3 | 21.777 | 36.803 | 0.50 | 2.10 | 58.50 | 0.000 | 0.000 | 77.29 | 0.00 | 0.00 |
| 7 | 158.00 | Commscope | 3 | 21.699 | 36.671 | 0.80 | 29.71 | 347.10 | 0.000 | 0.000 | 1089.58 | 0.00 | 0.00 |
| 8 | 147.00 | ALU 800 MHz Filters | 4 | 21.256 | 35.923 | 0.50 | 1.92 | 55.20 | 0.000 | 0.000 | 68.97 | 0.00 | 0.00 |
| 9 | 147.00 | ALU 800 MHz RRUs | 3 | 21.256 | 35.923 | 0.50 | 4.23 | 222.30 | 0.000 | 0.000 | 151.95 | 0.00 | 0.00 |
| 10 | 147.00 | ALU TD-RRH8x20-25 RRUs | 3 | 21.256 | 35.923 | 0.50 | 7.46 | 276.00 | 0.000 | 0.000 | 267.81 | 0.00 | 0.00 |
| 11 | 147.00 | ALU 1900 MHz RRUs | 3 | 21.256 | 35.923 | 0.50 | 4.70 | 251.70 | 0.000 | 0.000 | 168.66 | 0.00 | 0.00 |
| 12 | 147.00 | RFS APXVTM14-C-120 | 3 | 21.256 | 35.923 | 0.79 | 17.28 | 275.70 | 0.000 | 0.000 | 620.65 | 0.00 | 0.00 |
| 13 | 147.00 | Low Profile Platform | 1 | 21.256 | 35.923 | 1.00 | 27.00 | 1800.00 | 0.000 | 0.000 | 969.92 | 0.00 | 0.00 |
| 14 | 147.00 | RFS ACU-A20-N RETs | 4 | 21.256 | 35.923 | 0.50 | 0.44 | 9.20 | 0.000 | 0.000 | 15.81 | 0.00 | 0.00 |
| 15 | 147.00 | RFS APXVSPP18-C-A20 | 3 | 21.256 | 35.923 | 0.83 | 22.61 | 319.50 | 0.000 | 0.000 | 812.19 | 0.00 | 0.00 |
| 16 | 137.00 | Swedcom SC-E 6014 rev2 | 4 | 20.833 | 35.207 | 0.97 | 15.75 | 168.40 | 0.000 | 0.000 | 554.61 | 0.00 | 0.00 |
| 17 | 137.00 | RFS FD9R6004/2C-3L | 6 | 20.833 | 35.207 | 0.50 | 1.50 | 32.40 | 0.000 | 0.000 | 52.81 | 0.00 | 0.00 |
| 18 | 137.00 | Low Profile Platform | 1 | 20.833 | 35.207 | 1.00 | 27.00 | 1800.00 | 0.000 | 0.000 | 950.59 | 0.00 | 0.00 |
| 19 | 137.00 | Antel LPA-80063/4CF | 2 | 20.833 | 35.207 | 0.93 | 14.17 | 0.00 | 0.000 | 0.000 | 499.00 | 0.00 | 0.00 |
| 20 | 137.00 | Andrew LNX-6514DS-T4M | 3 | 20.833 | 35.207 | 0.80 | 21.96 | 249.30 | 0.000 | 0.000 | 773.15 | 0.00 | 0.00 |
| 21 | 137.00 | Rymasa MG D3-800TV | 3 | 20.833 | 35.207 | 0.78 | 9.29 | 0.00 | 0.000 | 0.000 | 327.07 | 0.00 | 0.00 |
| 22 | 117.00 | Kathrein 800-10121 | 3 | 19.914 | 33.655 | 0.79 | 14.43 | 231.00 | 0.000 | 0.000 | 485.75 | 0.00 | 0.00 |
| 23 | 117.00 | Andrew SBNH-1D6565C | 4 | 19.914 | 33.655 | 0.80 | 39.58 | 528.00 | 0.000 | 0.000 | 1332.20 | 0.00 | 0.00 |
| 24 | 117.00 | CCI DTMAPB7819VG12A | 6 | 19.914 | 33.655 | 0.67 | 5.47 | 159.00 | 0.000 | 0.000 | 184.00 | 0.00 | 0.00 |
| 25 | 117.00 | CSS DBC-750 | 3 | 19.914 | 33.655 | 0.50 | 0.99 | 23.10 | 0.000 | 0.000 | 33.32 | 0.00 | 0.00 |
| 26 | 117.00 | KMW AM-X-CD-16-6500T | 2 | 19.914 | 33.655 | 0.81 | 11.78 | 149.00 | 0.000 | 0.000 | 396.37 | 0.00 | 0.00 |
| 27 | 117.00 | Kathrein 860 10025 RET | 6 | 19.914 | 33.655 | 0.50 | 0.84 | 16.80 | 0.000 | 0.000 | 28.27 | 0.00 | 0.00 |
| 28 | 117.00 | Low Profile Platform | 1 | 19.914 | 33.655 | 1.00 | 27.00 | 1800.00 | 0.000 | 0.000 | 908.68 | 0.00 | 0.00 |
| 29 | 117.00 | Powerwave LGP 13519 | 3 | 19.914 | 33.655 | 0.50 | 0.70 | 24.00 | 0.000 | 0.000 | 23.73 | 0.00 | 0.00 |
| 30 | 114.50 | Raycap DC6-48-60-18-8F | 3 | 19.792 | 33.448 | 0.67 | 2.93 | 105.30 | 0.000 | 0.000 | 98.16 | 0.00 | 0.00 |
| 31 | 114.50 | Ericsson RRUS 11 | 6 | 19.792 | 33.448 | 0.67 | 12.62 | 396.00 | 0.000 | 0.000 | 422.21 | 0.00 | 0.00 |
| Totals: | | | | | | | | 10,896.20 | | | 13,309.42 | | |

Total Applied Force Summary

Structure: CT02694-B-SB
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

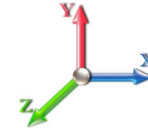
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
 Page: 22



Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 27

| Elev (ft) | Description | Lateral FX (-) (lb) | Axial FY (-) (lb) | Torsion MY (lb-ft) | Moment MZ (lb-ft) |
|-----------|--------------------|---------------------|-------------------|--------------------|-------------------|
| 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | | 395.45 | 1764.18 | 0.00 | 0.00 |
| 10.00 | | 389.31 | 1741.65 | 0.00 | 0.00 |
| 15.00 | | 383.18 | 1719.12 | 0.00 | 0.00 |
| 16.67 | | 126.61 | 697.35 | 0.00 | 0.00 |
| 18.50 | | 137.96 | 761.26 | 0.00 | 0.00 |
| 20.00 | | 112.47 | 497.35 | 0.00 | 0.00 |
| 25.00 | | 370.90 | 1642.15 | 0.00 | 0.00 |
| 30.00 | | 364.76 | 1619.62 | 0.00 | 0.00 |
| 34.67 | | 339.91 | 1492.47 | 0.00 | 0.00 |
| 35.00 | | 23.88 | 103.75 | 0.00 | 0.00 |
| 40.00 | | 372.41 | 1558.62 | 0.00 | 0.00 |
| 42.14 | | 159.52 | 659.54 | 0.00 | 0.00 |
| 45.00 | | 218.39 | 1254.18 | 0.00 | 0.00 |
| 47.57 | | 197.25 | 1114.90 | 0.00 | 0.00 |
| 50.00 | | 187.49 | 678.71 | 0.00 | 0.00 |
| 54.67 | | 364.94 | 1290.95 | 0.00 | 0.00 |
| 55.00 | | 25.60 | 88.57 | 0.00 | 0.00 |
| 60.00 | | 393.73 | 1330.28 | 0.00 | 0.00 |
| 65.00 | | 395.39 | 1311.01 | 0.00 | 0.00 |
| 70.00 | | 396.24 | 1291.75 | 0.00 | 0.00 |
| 74.67 | | 369.98 | 1189.18 | 0.00 | 0.00 |
| 75.00 | | 25.92 | 82.42 | 0.00 | 0.00 |
| 76.52 | | 119.38 | 377.62 | 0.00 | 0.00 |
| 80.00 | | 277.78 | 1169.20 | 0.00 | 0.00 |
| 81.00 | | 79.32 | 371.90 | 0.00 | 0.00 |
| 81.19 | | 14.78 | 69.29 | 0.00 | 0.00 |
| 85.00 | | 303.48 | 1002.62 | 0.00 | 0.00 |
| 86.00 | | 79.07 | 261.55 | 0.00 | 0.00 |
| 90.00 | | 317.16 | 883.09 | 0.00 | 0.00 |
| 94.67 | | 368.96 | 1017.87 | 0.00 | 0.00 |
| 95.00 | | 25.82 | 69.38 | 0.00 | 0.00 |
| 100.00 | | 392.56 | 1041.36 | 0.00 | 0.00 |
| 102.00 | | 155.54 | 535.46 | 0.00 | 0.00 |
| 102.67 | | 51.90 | 178.86 | 0.00 | 0.00 |
| 105.00 | | 180.46 | 485.65 | 0.00 | 0.00 |
| 110.00 | | 386.09 | 1028.31 | 0.00 | 0.00 |
| 110.91 | | 69.12 | 184.63 | 0.00 | 0.00 |
| 114.50 | (9) appurtenances | 797.05 | 1422.89 | 0.00 | 0.00 |
| 114.80 | | 22.65 | 75.51 | 0.00 | 0.00 |
| 115.00 | | 15.51 | 37.62 | 0.00 | 0.00 |
| 117.00 | (28) appurtenances | 3544.87 | 3299.57 | 0.00 | 0.00 |
| 118.00 | | 75.93 | 169.79 | 0.00 | 0.00 |
| 120.00 | | 151.53 | 215.43 | 0.00 | 0.00 |
| 125.00 | | 376.99 | 527.43 | 0.00 | 0.00 |
| 130.00 | | 372.16 | 514.69 | 0.00 | 0.00 |
| 135.00 | | 367.02 | 501.95 | 0.00 | 0.00 |
| 137.00 | (19) appurtenances | 3302.07 | 2447.67 | 0.00 | 0.00 |
| 140.00 | | 215.83 | 254.91 | 0.00 | 0.00 |

Total Applied Force Summary

Structure: CT02694-B-SB
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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| | | | | | |
|----------------|--------------------|------------------|------------------|-------------|-------------|
| 145.00 | | 355.85 | 414.07 | 0.00 | 0.00 |
| 147.00 | (24) appurtenances | 3216.23 | 3372.02 | 0.00 | 0.00 |
| 150.00 | | 208.78 | 231.04 | 0.00 | 0.00 |
| 155.00 | | 269.16 | 414.01 | 0.00 | 0.00 |
| 158.00 | (3) appurtenances | 1251.96 | 595.51 | 0.00 | 0.00 |
| 160.00 | (18) appurtenances | 2182.61 | 1822.81 | 0.00 | 0.00 |
| 162.00 | | 49.94 | 115.41 | 0.00 | 0.00 |
| Totals: | | 25,348.89 | 48,998.15 | 0.00 | 0.00 |

Resulting Forces and Deflections

Structure: CT02694-B-SB
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

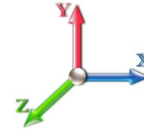
4/5/2016
 Page: 24



Load Case: 73.61 mph Wind with 0.5" Ice

Iterations: 27

Dead Load Factor 1.00
Wind Load Factor 1.00



| Elev (ft) | Lateral FX (-) (kips) | Axial FY (-) (kips) | Lateral FZ (kips) | Moment MX (ft-kips) | Torsion MY (ft-kips) | Moment MZ (ft-kips) | Deflect X (in) | Deflect Z (in) | Deflect Resultant (in) | Rotation Sway (deg) | Rotation Twist (deg) |
|-----------|-----------------------|---------------------|-------------------|---------------------|----------------------|---------------------|----------------|----------------|------------------------|---------------------|----------------------|
| 0.00 | -25.434 | -48.953 | 0.000 | 0.000 | 0.000 | -2964.914 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5.00 | -25.201 | -47.102 | 0.000 | 0.000 | 0.000 | -2837.744 | -0.106 | 0.000 | 0.106 | -0.199 | 0.000 |
| 10.00 | -24.962 | -45.274 | 0.000 | 0.000 | 0.000 | -2711.744 | -0.422 | 0.000 | 0.422 | -0.400 | 0.000 |
| 15.00 | -24.668 | -43.500 | 0.000 | 0.000 | 0.000 | -2586.934 | -0.950 | 0.000 | 0.950 | -0.604 | 0.000 |
| 16.67 | -24.581 | -42.777 | 0.000 | 0.000 | 0.000 | -2545.740 | -1.174 | 0.000 | 1.174 | -0.674 | 0.000 |
| 18.50 | -24.472 | -41.995 | 0.000 | 0.000 | 0.000 | -2500.759 | -1.444 | 0.000 | 1.444 | -0.732 | 0.000 |
| 20.00 | -24.442 | -41.447 | 0.000 | 0.000 | 0.000 | -2464.052 | -1.682 | 0.000 | 1.682 | -0.779 | 0.000 |
| 25.00 | -24.183 | -39.727 | 0.000 | 0.000 | 0.000 | -2341.844 | -2.603 | 0.000 | 2.603 | -0.976 | 0.000 |
| 30.00 | -23.917 | -38.034 | 0.000 | 0.000 | 0.000 | -2220.930 | -3.732 | 0.000 | 3.732 | -1.175 | 0.000 |
| 34.67 | -23.607 | -36.509 | 0.000 | 0.000 | 0.000 | -2109.241 | -4.975 | 0.000 | 4.975 | -1.363 | 0.000 |
| 35.00 | -23.651 | -36.360 | 0.000 | 0.000 | 0.000 | -2101.451 | -5.069 | 0.000 | 5.069 | -1.376 | 0.000 |
| 40.00 | -23.327 | -34.752 | 0.000 | 0.000 | 0.000 | -1983.198 | -6.620 | 0.000 | 6.620 | -1.581 | 0.000 |
| 42.14 | -23.211 | -34.055 | 0.000 | 0.000 | 0.000 | -1933.357 | -7.348 | 0.000 | 7.348 | -1.671 | 0.000 |
| 45.00 | -23.020 | -32.763 | 0.000 | 0.000 | 0.000 | -1866.896 | -8.387 | 0.000 | 8.387 | -1.790 | 0.000 |
| 47.57 | -22.844 | -31.613 | 0.000 | 0.000 | 0.000 | -1807.736 | -9.380 | 0.000 | 9.380 | -1.897 | 0.000 |
| 50.00 | -22.718 | -30.880 | 0.000 | 0.000 | 0.000 | -1752.225 | -10.372 | 0.000 | 10.372 | -1.998 | 0.000 |
| 54.67 | -22.363 | -29.560 | 0.000 | 0.000 | 0.000 | -1646.135 | -12.430 | 0.000 | 12.430 | -2.206 | 0.000 |
| 55.00 | -22.397 | -29.424 | 0.000 | 0.000 | 0.000 | -1638.756 | -12.583 | 0.000 | 12.583 | -2.221 | 0.000 |
| 60.00 | -22.062 | -28.023 | 0.000 | 0.000 | 0.000 | -1526.772 | -15.032 | 0.000 | 15.032 | -2.451 | 0.000 |
| 65.00 | -21.714 | -26.645 | 0.000 | 0.000 | 0.000 | -1416.465 | -17.720 | 0.000 | 17.720 | -2.680 | 0.000 |
| 70.00 | -21.352 | -25.293 | 0.000 | 0.000 | 0.000 | -1307.895 | -20.648 | 0.000 | 20.648 | -2.907 | 0.000 |
| 74.67 | -20.967 | -24.084 | 0.000 | 0.000 | 0.000 | -1208.181 | -23.595 | 0.000 | 23.595 | -3.118 | 0.000 |
| 75.00 | -20.955 | -23.987 | 0.000 | 0.000 | 0.000 | -1201.262 | -23.811 | 0.000 | 23.811 | -3.133 | 0.000 |
| 76.52 | -20.863 | -23.574 | 0.000 | 0.000 | 0.000 | -1169.480 | -24.818 | 0.000 | 24.818 | -3.204 | 0.000 |
| 80.00 | -20.558 | -22.387 | 0.000 | 0.000 | 0.000 | -1096.810 | -27.214 | 0.000 | 27.214 | -3.363 | 0.000 |
| 81.00 | -20.467 | -22.011 | 0.000 | 0.000 | 0.000 | -1076.252 | -27.923 | 0.000 | 27.923 | -3.409 | 0.000 |
| 81.19 | -20.476 | -21.916 | 0.000 | 0.000 | 0.000 | -1072.432 | -28.056 | 0.000 | 28.056 | -3.416 | 0.000 |
| 85.00 | -20.144 | -20.903 | 0.000 | 0.000 | 0.000 | -994.350 | -30.839 | 0.000 | 30.839 | -3.553 | 0.000 |
| 86.00 | -20.084 | -20.613 | 0.000 | 0.000 | 0.000 | -974.206 | -31.588 | 0.000 | 31.588 | -3.593 | 0.000 |
| 90.00 | -19.774 | -19.689 | 0.000 | 0.000 | 0.000 | -893.872 | -34.661 | 0.000 | 34.661 | -3.744 | 0.000 |
| 94.67 | -19.374 | -18.660 | 0.000 | 0.000 | 0.000 | -801.528 | -38.429 | 0.000 | 38.429 | -3.958 | 0.000 |
| 95.00 | -19.384 | -18.550 | 0.000 | 0.000 | 0.000 | -795.135 | -38.703 | 0.000 | 38.703 | -3.974 | 0.000 |
| 100.00 | -18.967 | -17.487 | 0.000 | 0.000 | 0.000 | -698.214 | -42.985 | 0.000 | 42.985 | -4.204 | 0.000 |
| 102.00 | -18.788 | -16.947 | 0.000 | 0.000 | 0.000 | -660.281 | -44.764 | 0.000 | 44.764 | -4.295 | 0.000 |
| 102.67 | -18.736 | -16.758 | 0.000 | 0.000 | 0.000 | -647.693 | -45.368 | 0.000 | 45.368 | -4.315 | 0.000 |
| 105.00 | -18.558 | -16.243 | 0.000 | 0.000 | 0.000 | -604.038 | -47.490 | 0.000 | 47.490 | -4.384 | 0.000 |
| 110.00 | -18.123 | -15.212 | 0.000 | 0.000 | 0.000 | -511.247 | -52.184 | 0.000 | 52.184 | -4.583 | 0.000 |
| 110.91 | -18.062 | -15.007 | 0.000 | 0.000 | 0.000 | -494.845 | -53.056 | 0.000 | 53.056 | -4.618 | 0.000 |
| 114.50 | -17.168 | -13.633 | 0.000 | 0.000 | 0.000 | -429.913 | -56.581 | 0.000 | 56.581 | -4.749 | 0.000 |
| 114.80 | -17.141 | -13.557 | 0.000 | 0.000 | 0.000 | -424.820 | -56.876 | 0.000 | 56.876 | -4.760 | 0.000 |
| 115.00 | -17.133 | -13.508 | 0.000 | 0.000 | 0.000 | -421.335 | -57.079 | 0.000 | 57.079 | -4.767 | 0.000 |
| 117.00 | -13.334 | -10.504 | 0.000 | 0.000 | 0.000 | -387.070 | -59.090 | 0.000 | 59.090 | -4.843 | 0.000 |
| 118.00 | -13.254 | -10.329 | 0.000 | 0.000 | 0.000 | -373.737 | -60.107 | 0.000 | 60.107 | -4.880 | 0.000 |
| 120.00 | -13.125 | -10.074 | 0.000 | 0.000 | 0.000 | -347.230 | -62.164 | 0.000 | 62.164 | -4.951 | 0.000 |
| 125.00 | -12.762 | -9.504 | 0.000 | 0.000 | 0.000 | -281.606 | -67.549 | 0.000 | 67.549 | -5.327 | 0.000 |
| 130.00 | -12.391 | -8.960 | 0.000 | 0.000 | 0.000 | -217.799 | -73.305 | 0.000 | 73.305 | -5.662 | 0.000 |
| 135.00 | -12.002 | -8.459 | 0.000 | 0.000 | 0.000 | -155.848 | -79.384 | 0.000 | 79.384 | -5.946 | 0.000 |
| 137.00 | -8.475 | -6.353 | 0.000 | 0.000 | 0.000 | -131.844 | -81.893 | 0.000 | 81.893 | -6.045 | 0.000 |
| 140.00 | -8.250 | -6.101 | 0.000 | 0.000 | 0.000 | -106.420 | -85.728 | 0.000 | 85.728 | -6.175 | 0.000 |

Resulting Forces and Deflections

Structure: CT02694-B-SB
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
 Page: 25



| | | | | | | | | | | | |
|--------|--------|--------|-------|-------|-------|---------|----------|-------|---------|--------|-------|
| 145.00 | -7.861 | -5.713 | 0.000 | 0.000 | 0.000 | -65.172 | -92.280 | 0.000 | 92.280 | -6.345 | 0.000 |
| 147.00 | -4.293 | -2.715 | 0.000 | 0.000 | 0.000 | -49.450 | -94.944 | 0.000 | 94.944 | -6.397 | 0.000 |
| 150.00 | -4.063 | -2.504 | 0.000 | 0.000 | 0.000 | -36.570 | -98.976 | 0.000 | 98.976 | -6.459 | 0.000 |
| 155.00 | -3.751 | -2.120 | 0.000 | 0.000 | 0.000 | -16.256 | -105.767 | 0.000 | 105.767 | -6.528 | 0.000 |
| 158.00 | -2.439 | -1.670 | 0.000 | 0.000 | 0.000 | -5.004 | -109.873 | 0.000 | 109.873 | -6.561 | 0.000 |
| 160.00 | -0.063 | -0.109 | 0.000 | 0.000 | 0.000 | -0.125 | -112.617 | 0.000 | 112.617 | -6.566 | 0.000 |
| 162.00 | -0.050 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 115.361 | -6.566 | 0.000 |

Resulting Stresses

Structure: CT02694-B-SBA
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

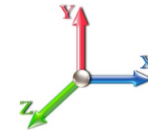
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
 Page: 26



Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 27

Applied Stresses

| Elev (ft) | fa Axial (Y) (ksi) | fvx Shear (X) (ksi) | fvz Shear (Z) (ksi) | fvT Torsion (ksi) | fbx Bending (X) (ksi) | fbz Bending (Z) (ksi) | fb Combined (ksi) | Fb Allow Stress (ksi) | f/Fb Stress Ratio |
|-----------|--------------------|---------------------|---------------------|-------------------|-----------------------|-----------------------|-------------------|-----------------------|-------------------|
| 0.00 | 0.88 | 0.92 | 0.00 | 0.00 | 0.00 | 41.79 | 42.67 | 52.0 | 0.821 |
| 5.00 | 0.87 | 0.93 | 0.00 | 0.00 | 0.00 | 41.48 | 41.48 | 52.0 | 0.798 |
| 10.00 | 0.85 | 0.95 | 0.00 | 0.00 | 0.00 | 41.13 | 41.13 | 52.0 | 0.791 |
| 15.00 | 0.84 | 0.96 | 0.00 | 0.00 | 0.00 | 40.75 | 40.75 | 52.0 | 0.784 |
| 16.67 | 0.83 | 0.96 | 0.00 | 0.00 | 0.00 | 30.22 | 30.22 | 52.0 | 0.581 |
| 18.50 | 0.82 | 0.96 | 0.00 | 0.00 | 0.00 | 30.06 | 30.06 | 52.0 | 0.578 |
| 20.00 | 0.81 | 0.97 | 0.00 | 0.00 | 0.00 | 37.22 | 37.22 | 52.0 | 0.716 |
| 25.00 | 0.80 | 0.98 | 0.00 | 0.00 | 0.00 | 36.74 | 36.74 | 52.0 | 0.707 |
| 30.00 | 0.78 | 0.99 | 0.00 | 0.00 | 0.00 | 36.21 | 36.21 | 52.0 | 0.697 |
| 34.67 | 0.77 | 1.00 | 0.00 | 0.00 | 0.00 | 35.68 | 36.45 | 52.0 | 0.701 |
| 35.00 | 0.77 | 1.00 | 0.00 | 0.00 | 0.00 | 36.16 | 36.16 | 52.0 | 0.696 |
| 40.00 | 0.75 | 1.02 | 0.00 | 0.00 | 0.00 | 35.53 | 35.53 | 52.0 | 0.684 |
| 42.14 | 0.74 | 1.02 | 0.00 | 0.00 | 0.00 | 35.25 | 35.25 | 52.0 | 0.678 |
| 45.00 | 0.73 | 1.03 | 0.00 | 0.00 | 0.00 | 34.49 | 34.49 | 52.0 | 0.663 |
| 47.57 | 0.84 | 1.22 | 0.00 | 0.00 | 0.00 | 34.11 | 34.11 | 52.0 | 0.656 |
| 50.00 | 0.83 | 1.23 | 0.00 | 0.00 | 0.00 | 37.17 | 37.17 | 52.0 | 0.715 |
| 54.67 | 0.81 | 1.24 | 0.00 | 0.00 | 0.00 | 36.29 | 37.10 | 52.0 | 0.714 |
| 55.00 | 0.81 | 1.24 | 0.00 | 0.00 | 0.00 | 37.52 | 37.52 | 52.0 | 0.722 |
| 60.00 | 0.79 | 1.26 | 0.00 | 0.00 | 0.00 | 36.48 | 36.48 | 52.0 | 0.702 |
| 65.00 | 0.77 | 1.27 | 0.00 | 0.00 | 0.00 | 35.36 | 35.36 | 52.0 | 0.680 |
| 70.00 | 0.75 | 1.28 | 0.00 | 0.00 | 0.00 | 34.14 | 34.14 | 52.0 | 0.657 |
| 74.67 | 0.74 | 1.30 | 0.00 | 0.00 | 0.00 | 32.91 | 33.65 | 52.0 | 0.647 |
| 75.00 | 0.74 | 1.30 | 0.00 | 0.00 | 0.00 | 33.46 | 33.46 | 52.0 | 0.644 |
| 76.52 | 0.73 | 1.30 | 0.00 | 0.00 | 0.00 | 33.04 | 33.04 | 52.0 | 0.636 |
| 80.00 | 0.71 | 1.31 | 0.00 | 0.00 | 0.00 | 31.66 | 31.66 | 52.0 | 0.609 |
| 81.00 | 0.70 | 1.31 | 0.00 | 0.00 | 0.00 | 26.00 | 26.00 | 52.0 | 0.500 |
| 81.19 | 0.86 | 1.62 | 0.00 | 0.00 | 0.00 | 25.95 | 25.95 | 52.0 | 0.499 |
| 85.00 | 0.84 | 1.63 | 0.00 | 0.00 | 0.00 | 27.34 | 27.34 | 52.0 | 0.526 |
| 86.00 | 0.83 | 1.63 | 0.00 | 0.00 | 0.00 | 27.02 | 27.02 | 52.0 | 0.520 |
| 90.00 | 0.81 | 1.65 | 0.00 | 0.00 | 0.00 | 31.72 | 31.72 | 52.0 | 0.610 |
| 94.67 | 0.80 | 1.66 | 0.00 | 0.00 | 0.00 | 29.75 | 30.55 | 52.0 | 0.588 |
| 95.00 | 0.79 | 1.67 | 0.00 | 0.00 | 0.00 | 31.09 | 31.09 | 52.0 | 0.598 |
| 100.00 | 0.77 | 1.69 | 0.00 | 0.00 | 0.00 | 28.71 | 28.71 | 52.0 | 0.552 |
| 102.00 | 0.76 | 1.69 | 0.00 | 0.00 | 0.00 | 18.72 | 18.72 | 52.0 | 0.360 |
| 102.67 | 0.75 | 1.70 | 0.00 | 0.00 | 0.00 | 18.47 | 18.47 | 52.0 | 0.355 |
| 105.00 | 0.74 | 1.71 | 0.00 | 0.00 | 0.00 | 25.51 | 25.51 | 52.0 | 0.491 |
| 110.00 | 0.72 | 1.73 | 0.00 | 0.00 | 0.00 | 22.75 | 22.75 | 52.0 | 0.438 |
| 110.91 | 0.72 | 1.74 | 0.00 | 0.00 | 0.00 | 22.24 | 22.24 | 52.0 | 0.428 |
| 114.50 | 0.67 | 1.69 | 0.00 | 0.00 | 0.00 | 19.82 | 19.82 | 52.0 | 0.381 |
| 114.80 | 0.87 | 2.22 | 0.00 | 0.00 | 0.00 | 19.65 | 19.65 | 52.0 | 0.378 |
| 115.00 | 0.87 | 2.22 | 0.00 | 0.00 | 0.00 | 22.14 | 22.14 | 52.0 | 0.426 |
| 117.00 | 0.69 | 1.76 | 0.00 | 0.00 | 0.00 | 20.76 | 20.76 | 52.0 | 0.399 |
| 118.00 | 0.68 | 1.76 | 0.00 | 0.00 | 0.00 | 20.25 | 20.93 | 52.0 | 0.403 |
| 120.00 | 0.67 | 1.77 | 0.00 | 0.00 | 0.00 | 44.95 | 45.73 | 52.0 | 0.880 |
| 125.00 | 0.66 | 1.79 | 0.00 | 0.00 | 0.00 | 39.44 | 40.22 | 52.0 | 0.774 |
| 130.00 | 0.65 | 1.81 | 0.00 | 0.00 | 0.00 | 33.11 | 33.91 | 52.0 | 0.652 |
| 135.00 | 0.64 | 1.83 | 0.00 | 0.00 | 0.00 | 25.81 | 26.64 | 52.0 | 0.513 |

Resulting Stresses

Structure: CT02694-B-SBA

Code: EIA/TIA-222-F

4/5/2016



Site Name: E-Prospect

Exposure: C

Height: 162.00 (ft)

Gh: 1.69

Base Elev: 0.000 (ft)

Struct Class: II

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Tower Engineering Solutions

| | | | | | | | | | | |
|--------|------|------|------|------|------|-------|-------|------|------|-------|
| 137.00 | 0.49 | 1.32 | 0.00 | 0.00 | 0.00 | 22.62 | 23.22 | 52.0 | | 0.447 |
| 140.00 | 0.48 | 1.32 | 0.00 | 0.00 | 0.00 | 19.27 | 19.89 | 52.0 | | 0.383 |
| 145.00 | 0.47 | 1.31 | 0.00 | 0.00 | 0.00 | 12.96 | 13.62 | 52.0 | | 0.262 |
| 147.00 | 0.23 | 0.73 | 0.00 | 0.00 | 0.00 | 10.22 | 10.53 | 52.0 | | 0.203 |
| 150.00 | 0.22 | 0.71 | 0.00 | 0.00 | 0.00 | 8.02 | 8.33 | 52.0 | | 0.160 |
| 150.00 | 0.22 | 0.71 | 0.00 | 0.00 | 0.00 | 8.02 | 8.33 | 52.0 | | 0.197 |
| 155.00 | 0.15 | 0.51 | 0.00 | 0.00 | 0.00 | 4.45 | 4.68 | 40.0 | 40.0 | 0.117 |
| 158.00 | 0.11 | 0.33 | 0.00 | 0.00 | 0.00 | 1.37 | 1.59 | 40.0 | 40.0 | 0.040 |
| 160.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.03 | 0.04 | 40.0 | 40.0 | 0.001 |
| 162.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 40.0 | 40.0 | 0.000 |

Wind Loading - Shaft

Structure: CT02694-B-SBA
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

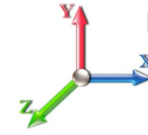
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
 Page: 28



Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 26

| Elev (ft) | Description | Kzt | Kz | qz (psf) | qzGh (psf) | C (mph-ft) | Cf | Ice Thick (in) | Tributary (ft) | Aa (sf) | CfAa (sf) | Wind Force X (lb) | Dead Load Ice (lb) | Tot Dead Load (lb) |
|-----------|-----------------|------|------|----------|------------|------------|-------|----------------|----------------|---------|-----------|-------------------|--------------------|--------------------|
| 0.00 | RB1 | 0.00 | 1.00 | 6.400 | 10.82 | 195.83 | 0.650 | 0.000 | 0.00 | 0.000 | 0.00 | 0.0 | 0.0 | 0.0 |
| 5.00 | | 0.00 | 1.00 | 6.400 | 10.82 | 191.81 | 0.650 | 0.000 | 5.00 | 19.382 | 12.60 | 136.3 | 0.0 | 1763.8 |
| 10.00 | | 0.00 | 1.00 | 6.400 | 10.82 | 187.78 | 0.650 | 0.000 | 5.00 | 18.979 | 12.34 | 133.4 | 0.0 | 1744.2 |
| 15.00 | | 0.00 | 1.00 | 6.400 | 10.82 | 183.75 | 0.650 | 0.000 | 5.00 | 18.576 | 12.07 | 130.6 | 0.0 | 1724.7 |
| 16.67 | RB2 | 0.00 | 1.00 | 6.400 | 10.82 | 182.40 | 0.650 | 0.000 | 1.67 | 6.115 | 3.97 | 43.0 | 0.0 | 827.4 |
| 18.50 | RT1 | 0.00 | 1.00 | 6.400 | 10.82 | 180.93 | 0.650 | 0.000 | 1.83 | 6.649 | 4.32 | 46.7 | 0.0 | 904.1 |
| 20.00 | | 0.00 | 1.00 | 6.400 | 10.82 | 179.72 | 0.650 | 0.000 | 1.50 | 5.410 | 3.52 | 38.0 | 0.0 | 490.3 |
| 25.00 | | 0.00 | 1.00 | 6.400 | 10.82 | 175.69 | 0.650 | 0.000 | 5.00 | 17.771 | 11.55 | 124.9 | 0.0 | 1621.7 |
| 30.00 | | 0.00 | 1.00 | 6.400 | 10.82 | 171.67 | 0.650 | 0.000 | 5.00 | 17.368 | 11.29 | 122.1 | 0.0 | 1602.1 |
| 34.67 | RT2 | 0.00 | 1.01 | 6.491 | 10.97 | 169.09 | 0.650 | 0.000 | 4.67 | 15.858 | 10.31 | 113.1 | 0.0 | 1478.7 |
| 35.00 | | 0.00 | 1.02 | 6.509 | 11.00 | 169.05 | 0.650 | 0.000 | 0.33 | 1.107 | 0.72 | 7.9 | 0.0 | 101.7 |
| 40.00 | | 0.00 | 1.06 | 6.762 | 11.43 | 168.17 | 0.650 | 0.000 | 5.00 | 16.563 | 10.77 | 123.0 | 0.0 | 1531.1 |
| 42.14 | Bot - Section 2 | 0.00 | 1.07 | 6.863 | 11.60 | 167.64 | 0.650 | 0.000 | 2.14 | 6.955 | 4.52 | 52.4 | 0.0 | 648.3 |
| 45.00 | | 0.00 | 1.09 | 6.993 | 11.82 | 166.81 | 0.650 | 0.000 | 2.86 | 9.354 | 6.08 | 71.9 | 0.0 | 1239.0 |
| 47.57 | Top - Section 1 | 0.00 | 1.11 | 7.105 | 12.01 | 165.96 | 0.650 | 0.000 | 2.57 | 8.283 | 5.38 | 64.6 | 0.0 | 1102.0 |
| 50.00 | | 0.00 | 1.13 | 7.207 | 12.18 | 167.83 | 0.650 | 0.000 | 2.43 | 7.734 | 5.03 | 61.2 | 0.0 | 667.3 |
| 54.67 | RT3 | 0.00 | 1.16 | 7.393 | 12.49 | 165.94 | 0.650 | 0.000 | 4.67 | 14.596 | 9.49 | 118.5 | 0.0 | 1271.5 |
| 55.00 | | 0.00 | 1.16 | 7.406 | 12.52 | 165.80 | 0.650 | 0.000 | 0.33 | 1.018 | 0.66 | 8.3 | 0.0 | 85.1 |
| 60.00 | | 0.00 | 1.19 | 7.592 | 12.83 | 163.49 | 0.650 | 0.000 | 5.00 | 15.212 | 9.89 | 126.9 | 0.0 | 1280.7 |
| 65.00 | | 0.00 | 1.21 | 7.768 | 13.13 | 160.93 | 0.650 | 0.000 | 5.00 | 14.809 | 9.63 | 126.4 | 0.0 | 1264.4 |
| 70.00 | | 0.00 | 1.24 | 7.934 | 13.41 | 158.16 | 0.650 | 0.000 | 5.00 | 14.406 | 9.36 | 125.6 | 0.0 | 1248.1 |
| 74.67 | RT4 | 0.00 | 1.26 | 8.082 | 13.66 | 155.40 | 0.650 | 0.000 | 4.67 | 13.092 | 8.51 | 116.2 | 0.0 | 1151.0 |
| 75.00 | | 0.00 | 1.26 | 8.092 | 13.68 | 155.20 | 0.650 | 0.000 | 0.33 | 0.912 | 0.59 | 8.1 | 0.0 | 78.7 |
| 76.52 | Bot - Section 3 | 0.00 | 1.27 | 8.138 | 13.75 | 154.26 | 0.650 | 0.000 | 1.52 | 4.168 | 2.71 | 37.3 | 0.0 | 360.7 |
| 80.00 | | 0.00 | 1.29 | 8.242 | 13.93 | 152.06 | 0.650 | 0.000 | 3.48 | 9.578 | 6.23 | 86.7 | 0.0 | 1130.6 |
| 81.00 | RB6 | 0.00 | 1.29 | 8.272 | 13.98 | 151.42 | 0.650 | 0.000 | 1.00 | 2.713 | 1.76 | 24.7 | 0.0 | 400.0 |
| 81.19 | Top - Section 2 | 0.00 | 1.29 | 8.277 | 13.99 | 151.30 | 0.650 | 0.000 | 0.19 | 0.505 | 0.33 | 4.6 | 0.0 | 74.5 |
| 85.00 | | 0.00 | 1.31 | 8.387 | 14.17 | 151.16 | 0.650 | 0.000 | 3.81 | 10.188 | 6.62 | 93.9 | 0.0 | 1111.4 |
| 86.00 | RT6 | 0.00 | 1.31 | 8.415 | 14.22 | 150.49 | 0.650 | 0.000 | 1.00 | 2.633 | 1.71 | 24.3 | 0.0 | 290.2 |
| 90.00 | | 0.00 | 1.33 | 8.525 | 14.41 | 147.75 | 0.650 | 0.000 | 4.00 | 10.371 | 6.74 | 97.1 | 0.0 | 843.5 |
| 94.67 | RT5 | 0.00 | 1.35 | 8.649 | 14.62 | 144.45 | 0.650 | 0.000 | 4.67 | 11.781 | 7.66 | 111.9 | 0.0 | 974.3 |
| 95.00 | | 0.00 | 1.35 | 8.657 | 14.63 | 144.21 | 0.650 | 0.000 | 0.33 | 0.819 | 0.53 | 7.8 | 0.0 | 64.2 |
| 100.00 | | 0.00 | 1.37 | 8.785 | 14.85 | 140.55 | 0.650 | 0.000 | 5.00 | 12.198 | 7.93 | 117.7 | 0.0 | 966.0 |
| 102.00 | RB8 | 0.00 | 1.38 | 8.835 | 14.93 | 139.06 | 0.650 | 0.000 | 2.00 | 4.766 | 3.10 | 46.3 | 0.0 | 627.8 |
| 102.67 | RT7 | 0.00 | 1.38 | 8.852 | 14.96 | 138.55 | 0.650 | 0.000 | 0.67 | 1.582 | 1.03 | 15.4 | 0.0 | 209.8 |
| 105.00 | | 0.00 | 1.39 | 8.908 | 15.06 | 136.78 | 0.650 | 0.000 | 2.33 | 5.446 | 3.54 | 53.3 | 0.0 | 460.3 |
| 110.00 | | 0.00 | 1.41 | 9.028 | 15.26 | 132.91 | 0.650 | 0.000 | 5.00 | 11.392 | 7.41 | 113.0 | 0.0 | 978.2 |
| 110.91 | Bot - Section 4 | 0.00 | 1.41 | 9.049 | 15.29 | 132.20 | 0.650 | 0.000 | 0.91 | 2.019 | 1.31 | 20.1 | 0.0 | 175.7 |
| 114.50 | Appurtenance(s) | 0.00 | 1.43 | 9.132 | 15.43 | 129.35 | 0.650 | 0.000 | 3.59 | 8.002 | 5.20 | 80.3 | 0.0 | 886.7 |
| 114.80 | Top - Section 3 | 0.00 | 1.43 | 9.138 | 15.44 | 129.11 | 0.650 | 0.000 | 0.30 | 0.651 | 0.42 | 6.5 | 0.0 | 72.6 |
| 115.00 | | 0.00 | 1.43 | 9.143 | 15.45 | 130.81 | 0.650 | 0.000 | 0.20 | 0.445 | 0.29 | 4.5 | 0.0 | 35.7 |
| 117.00 | Appurtenance(s) | 0.00 | 1.44 | 9.188 | 15.53 | 129.20 | 0.650 | 0.000 | 2.00 | 4.346 | 2.82 | 43.9 | 0.0 | 349.8 |
| 118.00 | RT8 | 0.00 | 1.44 | 9.211 | 15.57 | 128.40 | 0.650 | 0.000 | 1.00 | 2.149 | 1.40 | 21.7 | 0.0 | 174.3 |
| 120.00 | | 0.00 | 1.45 | 9.255 | 15.64 | 126.77 | 0.650 | 0.000 | 2.00 | 4.249 | 2.76 | 43.2 | 0.0 | 102.5 |
| 125.00 | | 0.00 | 1.46 | 9.363 | 15.82 | 122.64 | 0.650 | 0.000 | 5.00 | 10.340 | 6.72 | 106.4 | 0.0 | 249.4 |
| 130.00 | | 0.00 | 1.48 | 9.469 | 16.00 | 118.43 | 0.650 | 0.000 | 5.00 | 9.938 | 6.46 | 103.4 | 0.0 | 239.6 |
| 135.00 | | 0.00 | 1.50 | 9.572 | 16.18 | 114.14 | 0.650 | 0.000 | 5.00 | 9.535 | 6.20 | 100.3 | 0.0 | 229.8 |
| 137.00 | Appurtenance(s) | 0.00 | 1.50 | 9.612 | 16.24 | 112.41 | 0.650 | 0.000 | 2.00 | 3.701 | 2.41 | 39.1 | 0.0 | 89.2 |

Wind Loading - Shaft

Structure: CT02694-B-SBA

Code: EIA/TIA-222-F

4/5/2016



Site Name: E-Prospect

Exposure: C

Height: 162.00 (ft)

Gh: 1.69

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Base Elev: 0.000 (ft)

Struct Class: II

| | | | | | | | | | | | | | |
|------------------------|------|------|--------|-------|--------|-------|-------|---------------|-------|------|----------------|-----|-----------------|
| 140.00 | 0.00 | 1.51 | 9.672 | 16.35 | 109.78 | 0.650 | 0.000 | 3.00 | 5.431 | 3.53 | 57.7 | 0.0 | 130.8 |
| 145.00 | 0.00 | 1.53 | 9.769 | 16.51 | 105.36 | 0.650 | 0.000 | 5.00 | 8.729 | 5.67 | 93.7 | 0.0 | 210.2 |
| 147.00 Appurtenance(s) | 0.00 | 1.53 | 9.807 | 16.57 | 103.57 | 0.650 | 0.000 | 2.00 | 3.379 | 2.20 | 36.4 | 0.0 | 81.3 |
| 150.00 Top - Section 4 | 0.00 | 1.54 | 9.864 | 16.67 | 100.87 | 0.650 | 0.000 | 3.00 | 4.948 | 3.22 | 53.6 | 0.0 | 119.1 |
| 155.00 | 0.00 | 1.56 | 9.957 | 16.83 | 66.26 | 0.590 | 0.000 | 5.00 | 5.313 | 3.13 | 52.7 | 0.0 | 248.0 |
| 158.00 Appurtenance(s) | 0.00 | 1.56 | 10.012 | 16.92 | 66.44 | 0.590 | 0.000 | 3.00 | 3.188 | 1.88 | 31.8 | 0.0 | 148.8 |
| 160.00 Appurtenance(s) | 0.00 | 1.57 | 10.048 | 16.98 | 66.56 | 0.590 | 0.000 | 2.00 | 2.125 | 1.25 | 21.3 | 0.0 | 99.2 |
| 162.00 | 0.00 | 1.58 | 10.083 | 17.04 | 66.68 | 0.590 | 0.000 | 2.00 | 2.125 | 1.25 | 21.4 | 0.0 | 99.2 |
| Totals: | | | | | | | | 162.00 | | | 3,670.9 | | 36,059.5 |

Discrete Appurtenance Forces

Structure: CT02694-B-SB
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

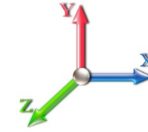
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
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Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 26

| No. | Elev (ft) | Description | Qty | qz (psf) | qzGh (psf) | CaAa Factor | Total CaAa (sf) | Dead Load (lb) | Horiz Ecc (ft) | Vert Ecc (ft) | Wind FX (lb) | Mom Y (lb-ft) | Mom Z (lb-ft) |
|----------------|-----------|-------------------------|-----|----------|------------|-------------|-----------------|-----------------|----------------|---------------|-----------------|---------------|---------------|
| 1 | 160.00 | RFS | 3 | 10.048 | 16.981 | 0.50 | 1.75 | 39.00 | 0.000 | 0.000 | 29.80 | 0.00 | 0.00 |
| 2 | 160.00 | Ericsson S11B12-RRU | 3 | 10.048 | 16.981 | 0.50 | 4.96 | 153.00 | 0.000 | 0.000 | 84.31 | 0.00 | 0.00 |
| 3 | 160.00 | Ericsson S11 B2-RRU | 3 | 10.048 | 16.981 | 0.50 | 4.96 | 150.00 | 0.000 | 0.000 | 84.31 | 0.00 | 0.00 |
| 4 | 160.00 | Ericsson Air 21 B4A/B2P | 3 | 10.048 | 16.981 | 0.86 | 16.98 | 271.20 | 0.000 | 0.000 | 288.27 | 0.00 | 0.00 |
| 5 | 160.00 | CommScope | 3 | 10.048 | 16.981 | 0.75 | 18.00 | 600.00 | 0.000 | 0.000 | 305.65 | 0.00 | 0.00 |
| 6 | 160.00 | RFS | 3 | 10.048 | 16.981 | 0.50 | 1.75 | 37.50 | 0.000 | 0.000 | 29.80 | 0.00 | 0.00 |
| 7 | 158.00 | Commscope | 3 | 10.012 | 16.920 | 0.80 | 27.48 | 149.40 | 0.000 | 0.000 | 464.95 | 0.00 | 0.00 |
| 8 | 147.00 | ALU 800 MHz Filters | 4 | 9.807 | 16.574 | 0.50 | 1.56 | 35.20 | 0.000 | 0.000 | 25.86 | 0.00 | 0.00 |
| 9 | 147.00 | ALU 800 MHz RRUs | 3 | 9.807 | 16.574 | 0.50 | 3.74 | 159.00 | 0.000 | 0.000 | 61.91 | 0.00 | 0.00 |
| 10 | 147.00 | ALU TD-RRH8x20-25 RRUs | 3 | 9.807 | 16.574 | 0.50 | 7.08 | 210.00 | 0.000 | 0.000 | 117.35 | 0.00 | 0.00 |
| 11 | 147.00 | ALU 1900 MHz RRUs | 3 | 9.807 | 16.574 | 0.50 | 4.16 | 180.00 | 0.000 | 0.000 | 68.87 | 0.00 | 0.00 |
| 12 | 147.00 | RFS APXVTM14-C-120 | 3 | 9.807 | 16.574 | 0.79 | 16.35 | 168.00 | 0.000 | 0.000 | 271.04 | 0.00 | 0.00 |
| 13 | 147.00 | Low Profile Platform | 1 | 9.807 | 16.574 | 1.00 | 20.00 | 1200.00 | 0.000 | 0.000 | 331.49 | 0.00 | 0.00 |
| 14 | 147.00 | RFS ACU-A20-N RETs | 4 | 9.807 | 16.574 | 0.50 | 0.28 | 4.00 | 0.000 | 0.000 | 4.64 | 0.00 | 0.00 |
| 15 | 147.00 | RFS APXVSP18-C-A20 | 3 | 9.807 | 16.574 | 0.83 | 20.57 | 171.00 | 0.000 | 0.000 | 340.89 | 0.00 | 0.00 |
| 16 | 137.00 | Swedcom SC-E 6014 rev2 | 4 | 9.612 | 16.244 | 0.97 | 13.77 | 60.00 | 0.000 | 0.000 | 223.75 | 0.00 | 0.00 |
| 17 | 137.00 | RFS FD9R6004/2C-3L | 6 | 9.612 | 16.244 | 0.50 | 1.08 | 18.60 | 0.000 | 0.000 | 17.54 | 0.00 | 0.00 |
| 18 | 137.00 | Low Profile Platform | 1 | 9.612 | 16.244 | 1.00 | 20.00 | 1200.00 | 0.000 | 0.000 | 324.88 | 0.00 | 0.00 |
| 19 | 137.00 | Antel LPA-80063/4CF | 2 | 9.612 | 16.244 | 0.93 | 13.02 | 40.00 | 0.000 | 0.000 | 211.50 | 0.00 | 0.00 |
| 20 | 137.00 | Andrew LNX-6514DS-T4M | 3 | 9.612 | 16.244 | 0.80 | 19.99 | 99.30 | 0.000 | 0.000 | 324.75 | 0.00 | 0.00 |
| 21 | 137.00 | Rymasa MG D3-800TV | 3 | 9.612 | 16.244 | 0.78 | 8.07 | 59.40 | 0.000 | 0.000 | 131.14 | 0.00 | 0.00 |
| 22 | 117.00 | Kathrein 800-10121 | 3 | 9.188 | 15.528 | 0.79 | 12.92 | 132.30 | 0.000 | 0.000 | 200.57 | 0.00 | 0.00 |
| 23 | 117.00 | Andrew SBNH-1D6565C | 4 | 9.188 | 15.528 | 0.80 | 36.61 | 264.40 | 0.000 | 0.000 | 568.45 | 0.00 | 0.00 |
| 24 | 117.00 | CCI DTMAPB7819VG12A | 6 | 9.188 | 15.528 | 0.67 | 4.58 | 115.20 | 0.000 | 0.000 | 71.16 | 0.00 | 0.00 |
| 25 | 117.00 | CSS DBC-750 | 3 | 9.188 | 15.528 | 0.50 | 0.77 | 14.40 | 0.000 | 0.000 | 11.88 | 0.00 | 0.00 |
| 26 | 117.00 | KMW AM-X-CD-16-6500T | 2 | 9.188 | 15.528 | 0.81 | 10.72 | 66.00 | 0.000 | 0.000 | 166.53 | 0.00 | 0.00 |
| 27 | 117.00 | Kathrein 860 10025 RET | 6 | 9.188 | 15.528 | 0.50 | 0.54 | 7.20 | 0.000 | 0.000 | 8.39 | 0.00 | 0.00 |
| 28 | 117.00 | Low Profile Platform | 1 | 9.188 | 15.528 | 1.00 | 20.00 | 1200.00 | 0.000 | 0.000 | 310.56 | 0.00 | 0.00 |
| 29 | 117.00 | Powerwave LGP 13519 | 3 | 9.188 | 15.528 | 0.50 | 0.51 | 15.90 | 0.000 | 0.000 | 7.92 | 0.00 | 0.00 |
| 30 | 114.50 | Raycap DC6-48-60-18-8F | 3 | 9.132 | 15.432 | 0.67 | 2.53 | 60.00 | 0.000 | 0.000 | 39.08 | 0.00 | 0.00 |
| 31 | 114.50 | Ericsson RRUS 11 | 6 | 9.132 | 15.432 | 0.67 | 11.82 | 304.20 | 0.000 | 0.000 | 182.39 | 0.00 | 0.00 |
| Totals: | | | | | | | | 7,184.20 | | | 5,309.63 | | |

Total Applied Force Summary

Structure: CT02694-B-SB
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

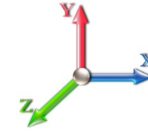
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 26

| Elev (ft) | Description | Lateral FX (-) (lb) | Axial FY (-) (lb) | Torsion MY (lb-ft) | Moment MZ (lb-ft) |
|-----------|--------------------|---------------------|-------------------|--------------------|-------------------|
| 0.00 | | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | | 167.09 | 1563.95 | 0.00 | 0.00 |
| 10.00 | | 164.26 | 1544.38 | 0.00 | 0.00 |
| 15.00 | | 161.43 | 1524.80 | 0.00 | 0.00 |
| 16.67 | | 53.29 | 632.78 | 0.00 | 0.00 |
| 18.50 | | 58.03 | 690.90 | 0.00 | 0.00 |
| 20.00 | | 47.28 | 439.94 | 0.00 | 0.00 |
| 25.00 | | 155.76 | 1453.73 | 0.00 | 0.00 |
| 30.00 | | 152.93 | 1434.16 | 0.00 | 0.00 |
| 34.67 | | 142.27 | 1321.82 | 0.00 | 0.00 |
| 35.00 | | 9.99 | 91.71 | 0.00 | 0.00 |
| 40.00 | | 155.59 | 1379.06 | 0.00 | 0.00 |
| 42.14 | | 66.56 | 583.35 | 0.00 | 0.00 |
| 45.00 | | 91.14 | 1151.95 | 0.00 | 0.00 |
| 47.57 | | 82.24 | 1023.92 | 0.00 | 0.00 |
| 50.00 | | 78.10 | 593.38 | 0.00 | 0.00 |
| 54.67 | | 151.80 | 1129.55 | 0.00 | 0.00 |
| 55.00 | | 10.64 | 77.17 | 0.00 | 0.00 |
| 60.00 | | 163.43 | 1160.62 | 0.00 | 0.00 |
| 65.00 | | 163.78 | 1144.30 | 0.00 | 0.00 |
| 70.00 | | 163.77 | 1127.99 | 0.00 | 0.00 |
| 74.67 | | 152.58 | 1038.81 | 0.00 | 0.00 |
| 75.00 | | 10.68 | 71.81 | 0.00 | 0.00 |
| 76.52 | | 49.15 | 329.12 | 0.00 | 0.00 |
| 80.00 | | 114.38 | 1058.17 | 0.00 | 0.00 |
| 81.00 | | 32.62 | 340.15 | 0.00 | 0.00 |
| 81.19 | | 6.08 | 63.36 | 0.00 | 0.00 |
| 85.00 | | 124.67 | 883.32 | 0.00 | 0.00 |
| 86.00 | | 32.44 | 230.38 | 0.00 | 0.00 |
| 90.00 | | 129.96 | 760.31 | 0.00 | 0.00 |
| 94.67 | | 150.84 | 877.10 | 0.00 | 0.00 |
| 95.00 | | 10.54 | 59.45 | 0.00 | 0.00 |
| 100.00 | | 160.03 | 893.80 | 0.00 | 0.00 |
| 102.00 | | 63.28 | 476.70 | 0.00 | 0.00 |
| 102.67 | | 21.10 | 159.23 | 0.00 | 0.00 |
| 105.00 | | 73.29 | 418.06 | 0.00 | 0.00 |
| 110.00 | | 156.46 | 886.65 | 0.00 | 0.00 |
| 110.91 | | 27.96 | 159.09 | 0.00 | 0.00 |
| 114.50 | (9) appurtenances | 333.37 | 1185.02 | 0.00 | 0.00 |
| 114.80 | | 9.15 | 67.21 | 0.00 | 0.00 |
| 115.00 | | 6.26 | 31.93 | 0.00 | 0.00 |
| 117.00 | (28) appurtenances | 1407.01 | 2128.60 | 0.00 | 0.00 |
| 118.00 | | 30.61 | 142.17 | 0.00 | 0.00 |
| 120.00 | | 61.03 | 160.67 | 0.00 | 0.00 |
| 125.00 | | 151.46 | 393.98 | 0.00 | 0.00 |
| 130.00 | | 148.97 | 384.19 | 0.00 | 0.00 |
| 135.00 | | 146.35 | 374.41 | 0.00 | 0.00 |
| 137.00 | (19) appurtenances | 1291.16 | 1624.32 | 0.00 | 0.00 |
| 140.00 | | 85.65 | 180.16 | 0.00 | 0.00 |

Total Applied Force Summary

Structure: CT02694-B-SB
Site Name: É-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

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| | | | | | |
|----------------|--------------------|------------------|------------------|-------------|-------------|
| 145.00 | | 140.73 | 292.43 | 0.00 | 0.00 |
| 147.00 | (24) appurtenances | 1277.34 | 2241.43 | 0.00 | 0.00 |
| 150.00 | | 82.12 | 159.83 | 0.00 | 0.00 |
| 155.00 | | 100.70 | 315.94 | 0.00 | 0.00 |
| 158.00 | (3) appurtenances | 525.71 | 338.97 | 0.00 | 0.00 |
| 160.00 | (18) appurtenances | 862.79 | 1377.08 | 0.00 | 0.00 |
| 162.00 | | 21.37 | 99.22 | 0.00 | 0.00 |
| Totals: | | 10,237.18 | 40,272.54 | 0.00 | 0.00 |

Resulting Forces and Deflections

Structure: CT02694-B-SB
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

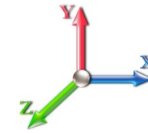
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
 Page: 33



Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 26

| Elev (ft) | Lateral FX (-) (kips) | Axial FY (-) (kips) | Lateral FZ (kips) | Moment MX (ft-kips) | Torsion MY (ft-kips) | Moment MZ (ft-kips) | Deflect X (in) | Deflect Z (in) | Deflect Resultant (in) | Rotation Sway (deg) | Rotation Twist (deg) |
|-----------|-----------------------|---------------------|-------------------|---------------------|----------------------|---------------------|----------------|----------------|------------------------|---------------------|----------------------|
| 0.00 | -10.264 | -40.265 | 0.000 | 0.000 | 0.000 | -1172.821 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5.00 | -10.149 | -38.687 | 0.000 | 0.000 | 0.000 | -1121.501 | -0.042 | 0.000 | 0.042 | -0.079 | 0.000 |
| 10.00 | -10.034 | -37.129 | 0.000 | 0.000 | 0.000 | -1070.755 | -0.167 | 0.000 | 0.167 | -0.158 | 0.000 |
| 15.00 | -9.901 | -35.596 | 0.000 | 0.000 | 0.000 | -1020.586 | -0.376 | 0.000 | 0.376 | -0.239 | 0.000 |
| 16.67 | -9.860 | -34.959 | 0.000 | 0.000 | 0.000 | -1004.053 | -0.464 | 0.000 | 0.464 | -0.266 | 0.000 |
| 18.50 | -9.811 | -34.265 | 0.000 | 0.000 | 0.000 | -986.010 | -0.571 | 0.000 | 0.571 | -0.289 | 0.000 |
| 20.00 | -9.790 | -33.817 | 0.000 | 0.000 | 0.000 | -971.294 | -0.665 | 0.000 | 0.665 | -0.308 | 0.000 |
| 25.00 | -9.669 | -32.351 | 0.000 | 0.000 | 0.000 | -922.346 | -1.028 | 0.000 | 1.028 | -0.385 | 0.000 |
| 30.00 | -9.547 | -30.906 | 0.000 | 0.000 | 0.000 | -874.000 | -1.474 | 0.000 | 1.474 | -0.464 | 0.000 |
| 34.67 | -9.413 | -29.579 | 0.000 | 0.000 | 0.000 | -829.417 | -1.964 | 0.000 | 1.964 | -0.537 | 0.000 |
| 35.00 | -9.425 | -29.480 | 0.000 | 0.000 | 0.000 | -826.311 | -2.001 | 0.000 | 2.001 | -0.543 | 0.000 |
| 40.00 | -9.283 | -28.093 | 0.000 | 0.000 | 0.000 | -779.188 | -2.613 | 0.000 | 2.613 | -0.623 | 0.000 |
| 42.14 | -9.230 | -27.504 | 0.000 | 0.000 | 0.000 | -759.353 | -2.900 | 0.000 | 2.900 | -0.658 | 0.000 |
| 45.00 | -9.145 | -26.346 | 0.000 | 0.000 | 0.000 | -732.926 | -3.309 | 0.000 | 3.309 | -0.705 | 0.000 |
| 47.57 | -9.068 | -25.317 | 0.000 | 0.000 | 0.000 | -709.422 | -3.701 | 0.000 | 3.701 | -0.747 | 0.000 |
| 50.00 | -9.009 | -24.715 | 0.000 | 0.000 | 0.000 | -687.387 | -4.091 | 0.000 | 4.091 | -0.787 | 0.000 |
| 54.67 | -8.858 | -23.581 | 0.000 | 0.000 | 0.000 | -645.317 | -4.902 | 0.000 | 4.902 | -0.869 | 0.000 |
| 55.00 | -8.866 | -23.497 | 0.000 | 0.000 | 0.000 | -642.394 | -4.962 | 0.000 | 4.962 | -0.874 | 0.000 |
| 60.00 | -8.719 | -22.325 | 0.000 | 0.000 | 0.000 | -598.063 | -5.926 | 0.000 | 5.926 | -0.964 | 0.000 |
| 65.00 | -8.568 | -21.170 | 0.000 | 0.000 | 0.000 | -554.467 | -6.984 | 0.000 | 6.984 | -1.054 | 0.000 |
| 70.00 | -8.413 | -20.033 | 0.000 | 0.000 | 0.000 | -511.626 | -8.136 | 0.000 | 8.136 | -1.143 | 0.000 |
| 74.67 | -8.253 | -18.992 | 0.000 | 0.000 | 0.000 | -472.338 | -9.295 | 0.000 | 9.295 | -1.225 | 0.000 |
| 75.00 | -8.247 | -18.918 | 0.000 | 0.000 | 0.000 | -469.615 | -9.380 | 0.000 | 9.380 | -1.231 | 0.000 |
| 76.52 | -8.205 | -18.583 | 0.000 | 0.000 | 0.000 | -457.107 | -9.776 | 0.000 | 9.776 | -1.259 | 0.000 |
| 80.00 | -8.079 | -17.522 | 0.000 | 0.000 | 0.000 | -428.526 | -10.718 | 0.000 | 10.718 | -1.321 | 0.000 |
| 81.00 | -8.042 | -17.181 | 0.000 | 0.000 | 0.000 | -420.447 | -10.997 | 0.000 | 10.997 | -1.339 | 0.000 |
| 81.19 | -8.043 | -17.114 | 0.000 | 0.000 | 0.000 | -418.946 | -11.049 | 0.000 | 11.049 | -1.342 | 0.000 |
| 85.00 | -7.907 | -16.229 | 0.000 | 0.000 | 0.000 | -388.277 | -12.143 | 0.000 | 12.143 | -1.396 | 0.000 |
| 86.00 | -7.879 | -15.995 | 0.000 | 0.000 | 0.000 | -380.371 | -12.437 | 0.000 | 12.437 | -1.411 | 0.000 |
| 90.00 | -7.749 | -15.228 | 0.000 | 0.000 | 0.000 | -348.854 | -13.644 | 0.000 | 13.644 | -1.470 | 0.000 |
| 94.67 | -7.586 | -14.350 | 0.000 | 0.000 | 0.000 | -312.666 | -15.124 | 0.000 | 15.124 | -1.554 | 0.000 |
| 95.00 | -7.586 | -14.284 | 0.000 | 0.000 | 0.000 | -310.163 | -15.232 | 0.000 | 15.232 | -1.560 | 0.000 |
| 100.00 | -7.416 | -13.387 | 0.000 | 0.000 | 0.000 | -272.232 | -16.914 | 0.000 | 16.914 | -1.649 | 0.000 |
| 102.00 | -7.344 | -12.910 | 0.000 | 0.000 | 0.000 | -257.400 | -17.613 | 0.000 | 17.613 | -1.685 | 0.000 |
| 102.67 | -7.322 | -12.749 | 0.000 | 0.000 | 0.000 | -252.480 | -17.850 | 0.000 | 17.850 | -1.693 | 0.000 |
| 105.00 | -7.247 | -12.326 | 0.000 | 0.000 | 0.000 | -235.421 | -18.682 | 0.000 | 18.682 | -1.720 | 0.000 |
| 110.00 | -7.073 | -11.440 | 0.000 | 0.000 | 0.000 | -199.184 | -20.525 | 0.000 | 20.525 | -1.797 | 0.000 |
| 110.91 | -7.046 | -11.277 | 0.000 | 0.000 | 0.000 | -192.784 | -20.867 | 0.000 | 20.867 | -1.811 | 0.000 |
| 114.50 | -6.680 | -10.101 | 0.000 | 0.000 | 0.000 | -167.453 | -22.251 | 0.000 | 22.251 | -1.862 | 0.000 |
| 114.80 | -6.669 | -10.033 | 0.000 | 0.000 | 0.000 | -165.471 | -22.367 | 0.000 | 22.367 | -1.866 | 0.000 |
| 115.00 | -6.665 | -10.000 | 0.000 | 0.000 | 0.000 | -164.115 | -22.446 | 0.000 | 22.446 | -1.869 | 0.000 |
| 117.00 | -5.192 | -7.916 | 0.000 | 0.000 | 0.000 | -150.786 | -23.235 | 0.000 | 23.235 | -1.898 | 0.000 |
| 118.00 | -5.159 | -7.773 | 0.000 | 0.000 | 0.000 | -145.594 | -23.635 | 0.000 | 23.635 | -1.913 | 0.000 |
| 120.00 | -5.105 | -7.607 | 0.000 | 0.000 | 0.000 | -135.276 | -24.442 | 0.000 | 24.442 | -1.941 | 0.000 |
| 125.00 | -4.957 | -7.207 | 0.000 | 0.000 | 0.000 | -109.753 | -26.554 | 0.000 | 26.554 | -2.087 | 0.000 |
| 130.00 | -4.808 | -6.818 | 0.000 | 0.000 | 0.000 | -84.968 | -28.812 | 0.000 | 28.812 | -2.218 | 0.000 |
| 135.00 | -4.655 | -6.444 | 0.000 | 0.000 | 0.000 | -60.928 | -31.196 | 0.000 | 31.196 | -2.329 | 0.000 |
| 137.00 | -3.302 | -4.871 | 0.000 | 0.000 | 0.000 | -51.618 | -32.180 | 0.000 | 32.180 | -2.367 | 0.000 |
| 140.00 | -3.214 | -4.692 | 0.000 | 0.000 | 0.000 | -41.711 | -33.685 | 0.000 | 33.685 | -2.418 | 0.000 |

Resulting Forces and Deflections

Structure: CT02694-B-SB
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
 Page: 34



| | | | | | | | | | | | |
|--------|--------|--------|-------|-------|-------|---------|---------|-------|--------|--------|-------|
| 145.00 | -3.064 | -4.403 | 0.000 | 0.000 | 0.000 | -25.639 | -36.255 | 0.000 | 36.255 | -2.485 | 0.000 |
| 147.00 | -1.692 | -2.219 | 0.000 | 0.000 | 0.000 | -19.511 | -37.300 | 0.000 | 37.300 | -2.505 | 0.000 |
| 150.00 | -1.604 | -2.062 | 0.000 | 0.000 | 0.000 | -14.436 | -38.882 | 0.000 | 38.882 | -2.530 | 0.000 |
| 155.00 | -1.490 | -1.750 | 0.000 | 0.000 | 0.000 | -6.419 | -41.547 | 0.000 | 41.547 | -2.557 | 0.000 |
| 158.00 | -0.949 | -1.435 | 0.000 | 0.000 | 0.000 | -1.950 | -43.159 | 0.000 | 43.159 | -2.570 | 0.000 |
| 160.00 | -0.026 | -0.098 | 0.000 | 0.000 | 0.000 | -0.051 | -44.235 | 0.000 | 44.235 | -2.572 | 0.000 |
| 162.00 | -0.021 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 45.312 | -2.572 | 0.000 |

Resulting Stresses

Structure: CT02694-B-SBA
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

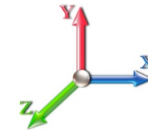
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
 Page: 35



Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 26

Applied Stresses

| Elev (ft) | fa Axial (Y) (ksi) | fvx Shear (X) (ksi) | fvz Shear (Z) (ksi) | fvT Torsion (ksi) | fbx Bending (X) (ksi) | fbz Bending (Z) (ksi) | fb Combined (ksi) | Fb Allow Stress (ksi) | f/Fb Stress Ratio |
|-----------|--------------------|---------------------|---------------------|-------------------|-----------------------|-----------------------|-------------------|-----------------------|-------------------|
| 0.00 | 0.73 | 0.37 | 0.00 | 0.00 | 0.00 | 16.53 | 17.25 | 52.0 | 0.332 |
| 5.00 | 0.71 | 0.38 | 0.00 | 0.00 | 0.00 | 16.39 | 16.39 | 52.0 | 0.315 |
| 10.00 | 0.70 | 0.38 | 0.00 | 0.00 | 0.00 | 16.24 | 16.24 | 52.0 | 0.312 |
| 15.00 | 0.68 | 0.38 | 0.00 | 0.00 | 0.00 | 16.07 | 16.07 | 52.0 | 0.309 |
| 16.67 | 0.68 | 0.38 | 0.00 | 0.00 | 0.00 | 11.92 | 11.92 | 52.0 | 0.229 |
| 18.50 | 0.67 | 0.39 | 0.00 | 0.00 | 0.00 | 11.85 | 11.85 | 52.0 | 0.228 |
| 20.00 | 0.66 | 0.39 | 0.00 | 0.00 | 0.00 | 14.67 | 14.67 | 52.0 | 0.282 |
| 25.00 | 0.65 | 0.39 | 0.00 | 0.00 | 0.00 | 14.47 | 14.47 | 52.0 | 0.278 |
| 30.00 | 0.64 | 0.40 | 0.00 | 0.00 | 0.00 | 14.25 | 14.25 | 52.0 | 0.274 |
| 34.67 | 0.62 | 0.40 | 0.00 | 0.00 | 0.00 | 14.03 | 14.65 | 52.0 | 0.282 |
| 35.00 | 0.62 | 0.40 | 0.00 | 0.00 | 0.00 | 14.22 | 14.22 | 52.0 | 0.274 |
| 40.00 | 0.61 | 0.40 | 0.00 | 0.00 | 0.00 | 13.96 | 13.96 | 52.0 | 0.269 |
| 42.14 | 0.60 | 0.41 | 0.00 | 0.00 | 0.00 | 13.85 | 13.85 | 52.0 | 0.266 |
| 45.00 | 0.58 | 0.41 | 0.00 | 0.00 | 0.00 | 13.54 | 13.54 | 52.0 | 0.260 |
| 47.57 | 0.67 | 0.48 | 0.00 | 0.00 | 0.00 | 13.39 | 13.39 | 52.0 | 0.258 |
| 50.00 | 0.66 | 0.49 | 0.00 | 0.00 | 0.00 | 14.58 | 14.58 | 52.0 | 0.281 |
| 54.67 | 0.65 | 0.49 | 0.00 | 0.00 | 0.00 | 14.23 | 14.87 | 52.0 | 0.286 |
| 55.00 | 0.65 | 0.49 | 0.00 | 0.00 | 0.00 | 14.71 | 14.71 | 52.0 | 0.283 |
| 60.00 | 0.63 | 0.50 | 0.00 | 0.00 | 0.00 | 14.29 | 14.29 | 52.0 | 0.275 |
| 65.00 | 0.61 | 0.50 | 0.00 | 0.00 | 0.00 | 13.84 | 13.84 | 52.0 | 0.266 |
| 70.00 | 0.60 | 0.51 | 0.00 | 0.00 | 0.00 | 13.35 | 13.35 | 52.0 | 0.257 |
| 74.67 | 0.58 | 0.51 | 0.00 | 0.00 | 0.00 | 12.87 | 13.45 | 52.0 | 0.259 |
| 75.00 | 0.58 | 0.51 | 0.00 | 0.00 | 0.00 | 13.08 | 13.08 | 52.0 | 0.252 |
| 76.52 | 0.58 | 0.51 | 0.00 | 0.00 | 0.00 | 12.92 | 12.92 | 52.0 | 0.248 |
| 80.00 | 0.55 | 0.52 | 0.00 | 0.00 | 0.00 | 12.37 | 12.37 | 52.0 | 0.238 |
| 81.00 | 0.55 | 0.52 | 0.00 | 0.00 | 0.00 | 10.16 | 10.16 | 52.0 | 0.195 |
| 81.19 | 0.67 | 0.63 | 0.00 | 0.00 | 0.00 | 10.14 | 10.14 | 52.0 | 0.195 |
| 85.00 | 0.65 | 0.64 | 0.00 | 0.00 | 0.00 | 10.68 | 10.68 | 52.0 | 0.205 |
| 86.00 | 0.65 | 0.64 | 0.00 | 0.00 | 0.00 | 10.55 | 10.55 | 52.0 | 0.203 |
| 90.00 | 0.63 | 0.65 | 0.00 | 0.00 | 0.00 | 12.38 | 12.38 | 52.0 | 0.238 |
| 94.67 | 0.61 | 0.65 | 0.00 | 0.00 | 0.00 | 11.61 | 12.22 | 52.0 | 0.235 |
| 95.00 | 0.61 | 0.65 | 0.00 | 0.00 | 0.00 | 12.13 | 12.13 | 52.0 | 0.233 |
| 100.00 | 0.59 | 0.66 | 0.00 | 0.00 | 0.00 | 11.19 | 11.19 | 52.0 | 0.215 |
| 102.00 | 0.58 | 0.66 | 0.00 | 0.00 | 0.00 | 7.30 | 7.30 | 52.0 | 0.140 |
| 102.67 | 0.57 | 0.66 | 0.00 | 0.00 | 0.00 | 7.20 | 7.20 | 52.0 | 0.139 |
| 105.00 | 0.56 | 0.67 | 0.00 | 0.00 | 0.00 | 9.94 | 9.94 | 52.0 | 0.191 |
| 110.00 | 0.54 | 0.68 | 0.00 | 0.00 | 0.00 | 8.87 | 8.87 | 52.0 | 0.171 |
| 110.91 | 0.54 | 0.68 | 0.00 | 0.00 | 0.00 | 8.66 | 8.66 | 52.0 | 0.167 |
| 114.50 | 0.49 | 0.66 | 0.00 | 0.00 | 0.00 | 7.72 | 7.72 | 52.0 | 0.148 |
| 114.80 | 0.65 | 0.86 | 0.00 | 0.00 | 0.00 | 7.65 | 7.65 | 52.0 | 0.147 |
| 115.00 | 0.64 | 0.87 | 0.00 | 0.00 | 0.00 | 8.62 | 8.62 | 52.0 | 0.166 |
| 117.00 | 0.52 | 0.68 | 0.00 | 0.00 | 0.00 | 8.09 | 8.09 | 52.0 | 0.156 |
| 118.00 | 0.51 | 0.69 | 0.00 | 0.00 | 0.00 | 7.89 | 8.40 | 52.0 | 0.162 |
| 120.00 | 0.51 | 0.69 | 0.00 | 0.00 | 0.00 | 17.51 | 18.06 | 52.0 | 0.347 |
| 125.00 | 0.50 | 0.70 | 0.00 | 0.00 | 0.00 | 15.37 | 15.92 | 52.0 | 0.306 |
| 130.00 | 0.49 | 0.70 | 0.00 | 0.00 | 0.00 | 12.92 | 13.47 | 52.0 | 0.259 |
| 135.00 | 0.49 | 0.71 | 0.00 | 0.00 | 0.00 | 10.09 | 10.65 | 52.0 | 0.205 |

Resulting Stresses

Structure: CT02694-B-SBA

Code: EIA/TIA-222-F

4/5/2016



Site Name: E-Prospect

Exposure: C

Height: 162.00 (ft)

Gh: 1.69

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Base Elev: 0.000 (ft)

Struct Class: II

| | | | | | | | | | | |
|--------|------|------|------|------|------|------|------|------|------|-------|
| 137.00 | 0.38 | 0.51 | 0.00 | 0.00 | 0.00 | 8.86 | 9.27 | 52.0 | | 0.178 |
| 140.00 | 0.37 | 0.51 | 0.00 | 0.00 | 0.00 | 7.55 | 7.97 | 52.0 | | 0.153 |
| 145.00 | 0.36 | 0.51 | 0.00 | 0.00 | 0.00 | 5.10 | 5.53 | 52.0 | | 0.106 |
| 147.00 | 0.19 | 0.29 | 0.00 | 0.00 | 0.00 | 4.03 | 4.25 | 52.0 | | 0.082 |
| 150.00 | 0.18 | 0.28 | 0.00 | 0.00 | 0.00 | 3.17 | 3.38 | 52.0 | | 0.065 |
| 150.00 | 0.18 | 0.28 | 0.00 | 0.00 | 0.00 | 3.17 | 3.38 | 52.0 | | 0.079 |
| 155.00 | 0.12 | 0.20 | 0.00 | 0.00 | 0.00 | 1.76 | 1.91 | 40.0 | 40.0 | 0.048 |
| 158.00 | 0.10 | 0.13 | 0.00 | 0.00 | 0.00 | 0.53 | 0.67 | 40.0 | 40.0 | 0.017 |
| 160.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 40.0 | 40.0 | 0.001 |
| 162.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 40.0 | 40.0 | 0.000 |

Final Analysis Summary

Structure: CT02694-B-SBA
Site Name: E-Prospect
Height: 162.00 (ft)
Base Elev: 0.000 (ft)

Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

4/5/2016
 Page: 37



Reactions

| Load Case | Shear FX (kips) | Shear FZ (kips) | Axial FY (kips) | Moment MX (ft-kips) | Moment MY (ft-kips) | Moment MZ (ft-kips) |
|------------------------------|-----------------|-----------------|-----------------|---------------------|---------------------|---------------------|
| 85 mph Wind with 0" Ice | 29.7 | 0.00 | 40.21 | 0.00 | 0.00 | 3383.53 |
| 73.61 mph Wind with 0.5" Ice | 25.4 | 0.00 | 48.95 | 0.00 | 0.00 | 2964.91 |
| 50 mph Wind with 0" Ice | 10.3 | 0.00 | 40.27 | 0.00 | 0.00 | 1172.82 |

Max Stresses

| Load Case | fa Axial (Y) (ksi) | fvx Shear (X) (ksi) | fvz Shear (Z) (ksi) | fvT Torsion (ksi) | fbx Bending (X) (ksi) | fbz Bending (Z) (ksi) | Combined Stress (ksi) | Allowable Stress (ksi) | Elev (ft) | Stress Ratio |
|------------------------------|--------------------|---------------------|---------------------|-------------------|-----------------------|-----------------------|-----------------------|------------------------|-----------|--------------|
| 85 mph Wind with 0" Ice | 0.42 | 1.98 | 0.00 | 0.00 | 0.00 | 50.32 | 50.86 | 52.0 | 120.00 | 0.978 |
| 73.61 mph Wind with 0.5" Ice | 0.67 | 1.77 | 0.00 | 0.00 | 0.00 | 44.95 | 45.73 | 52.0 | 120.00 | 0.880 |
| 50 mph Wind with 0" Ice | 0.51 | 0.69 | 0.00 | 0.00 | 0.00 | 17.51 | 18.06 | 52.0 | 120.00 | 0.347 |

Additional Steel Summary

└ Intermediate Connectors ┘
└ Upper Termination ┘
└ Lower Termination ┘
└ Max Member ┘

| Elev From (ft) | Elev To (ft) | Member | VQ/I (lb/in) | V (kips) | Shear Allow (kips) | MQ/I (kips) | Num Reqd | Num Actual | MQ/I (kips) | Num Reqd | Num Actual | MQ/I (kips) | Ta (kips) | Pa (kips) | Ratio |
|----------------|--------------|------------------------------|--------------|----------|--------------------|-------------|----------|------------|-------------|----------|------------|-------------|-----------|-----------|-------|
| 0.0 | 18.5 | (3) PLT-6.5x1.25(1.25 Hole) | -288.1 | -5.19 | 33.0 | 264.6 | 9 | 12 | 363.3 | 0 | 12 | 363.3 | 350.0 | 385.0 | 0.944 |
| 16.7 | 34.7 | (3) PLT-6"X1-1/4"(1.25" Hole | 293.1 | 5.28 | 33.0 | 309.2 | 0 | | 258.9 | 2 | 11 | 324.0 | 316.7 | 355.4 | 0.908 |
| 34.7 | 54.7 | (3) PLT-5.75x1.25(1.25 Hole) | 345.1 | 6.21 | 33.0 | 301.0 | 0 | | 0.0 | 0 | | 308.4 | 300.0 | 340.6 | 0.905 |
| 54.7 | 74.7 | (3) PLT-5.25"x1 1/4"(1.25"ho | 363.9 | 6.55 | 33.0 | 249.3 | 0 | | 0.0 | 0 | | 284.2 | 266.7 | 311.0 | 0.914 |
| 74.7 | 94.7 | (3) PLT-5"x1-1/4"(1.25"Hole) | 435.4 | 7.84 | 33.0 | 214.9 | 0 | | 0.0 | 0 | | 241.5 | 250.0 | 296.2 | 0.815 |
| 81.0 | 86.0 | (3) PLT-C6x13 (1.25" hole) | -213.8 | -5.13 | 22.5 | 123.6 | 6 | 8 | 121.2 | 2 | 8 | 125.1 | 142.3 | 142.9 | 0.875 |
| 94.7 | 102.7 | (3) PLT-4.5"x 1-1/4"(1.25"ho | 435.4 | 7.84 | 33.0 | 120.2 | 4 | 8 | 0.0 | 0 | | 202.2 | 216.7 | 266.5 | 0.758 |
| 102.0 | 118.0 | (3) LNP-LP6X100-G-20TT | 517.2 | 12.41 | 22.5 | 139.7 | 7 | 8 | 128.9 | 1 | 8 | 183.9 | 260.0 | 257.3 | 0.683 |

SITE NAME: EAST PROSPECT

229 CHESHIRE ROAD
PROSPECT, CT 06712
NEW HAVEN COUNTY

SITE NUMBER: CTNH303A

PROJECT: T-MOBILE L700

CONFIGURATION: 701D_WoutU21

SPECIAL CONSTRUCTION NOTE:

THE T-MOBILE TOWER TOP WORK IS CONTINGENT UPON COMPLETION OF ALL REQUIRED TOWER STRUCTURAL MODIFICATIONS, ENGINEERING CONSTRUCTION CONTROL INSPECTIONS, FINAL ENGINEERING AFFIDAVIT, AND ACCEPTANCE/APPROVAL BY SBA COMMUNICATIONS CORP.

T-MOBILE TECHNICIAN SITE SAFETY NOTES

| LOCATION | SPECIAL RESTRICTIONS |
|-------------------|--|
| ANTENNA/TMA/RRU | |
| SECTOR A: | ACCESS NOT PERMITTED |
| SECTOR B: | ACCESS NOT PERMITTED |
| SECTOR C: | ACCESS NOT PERMITTED |
| GPS/LMU: | UNRESTRICTED* |
| | (*CAUTION: OSHA-APPROVED PORTABLE 8' STEP-LADDER REQUIRED) |
| RADIO CABINETS: | UNRESTRICTED |
| PPC DISCONNECT: | UNRESTRICTED |
| MAIN CIRCUIT D/C: | UNRESTRICTED |
| NIU/T DEMARC: | UNRESTRICTED |
| OTHER/SPECIAL: | NONE |

GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF T-MOBILE NORTHEAST, LLC. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE T-MOBILE NORTHEAST, LLC REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SPECIAL CONSTRUCTION NOTES

1. TOWER OWNER SHALL PROVIDE GLOBAL STRUCTURAL STABILITY ANALYSIS OF EXISTING ANTENNA SUPPORT STRUCTURE. GENERAL CONTRACTOR SCOPE OF WORK SHALL INCLUDE ALL REQUIRED STRUCTURAL MODIFICATIONS, RE-BUNDLING OF COAXIAL CABLES OR OTHER SPECIAL MODIFICATIONS AS OUTLINED THEREIN.
2. ENGINEER OF RECORD HAS MADE A VISUAL ASSESSMENT ONLY AND DETERMINED THAT THE EXISTING ANTENNA MOUNT SHALL BE REPLACED OR MODIFIED TO ACCOMMODATE ANY ADDITIONAL EQUIPMENT LOADS. STRUCTURAL DESIGNS AND DETAILS AS SHOWN HEREIN FOR STRUCTURAL MODIFICATIONS OF THE EXISTING ANTENNA MOUNT ARE PRELIMINARY ONLY AND FINAL CONSTRUCTION DETAILS ARE SUBJECT TO CHANGE PENDING THE COMPLETION OF AN ANTENNA MOUNT STRUCTURAL ASSESSMENT.
3. PROTERRA DESIGN GROUP ASSUMES THAT THE TOWER IS PROPERLY CONSTRUCTED AND MAINTAINED. ALL STRUCTURAL MEMBERS AND THEIR CONNECTION ARE ASSUMED TO BE IN GOOD CONDITION AND ARE FREE FROM DEFECTS WITH NO DETERIORATION TO ITS MEMBER CAPACITIES



PROJECT INFORMATION

SCOPE OF WORK: UNMANNED TELECOMMUNICATIONS FACILITY T-MOBILE EQUIPMENT MODERNIZATION

ZONING JURISDICTION: BASED ON INFORMATION PROVIDED BY T-MOBILE, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS AN ELIGIBLE FACILITY UNDER THE TAX RELIEF ACT OF 2012, 47 USC 1455(A), AND IS SUBJECT TO AN EXPEDITED ELIGIBLE FACILITIES REQUEST/REVIEW AND ZONING PRE-EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW).

SITE ADDRESS: 229 CHESHIRE ROAD
PROSPECT, CT 06712

LATITUDE: 41.50790 (FROM T-MOBILE RFDS)

LONGITUDE: -72.95100 (FROM T-MOBILE RFDS)

JURISDICTION: TOWN OF PROSPECT

CURRENT USE: TELECOMMUNICATIONS FACILITY

PROPOSED USE: TELECOMMUNICATIONS FACILITY

TOWER OWNER: SBA TOWERS, LLC

SBA SITE ID: CT02694-B

SBA SITE NAME: E-PROSPECT

SBA REGIONAL SITE MANAGER: STEPHEN ROTH
(860) 539-4920

APPROVALS

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

DIG SAFE SYSTEM
(MA, ME, NH, RI, VT):
1-888-344-7233

CALL BEFORE YOU DIG
(CT): 1-800-922-4455

UNDERGROUND SERVICE ALERT

DRAWING INDEX

| SHEET NO. | DESCRIPTION | REV. |
|-----------|--------------------------------------|------|
| T-1 | TITLE SHEET | 0 |
| GN-1 | GENERAL NOTES | 0 |
| A-1 | COMPOUND & ELEVATION PLAN | 0 |
| A-2 | EXISTING & PROPOSED ANTENNA PLAN | 0 |
| A-3 | DETAILS | 0 |
| A-4 | DETAILS | 0 |
| E-1 | ONE-LINE DIAGRAM & GROUNDING DETAILS | 0 |



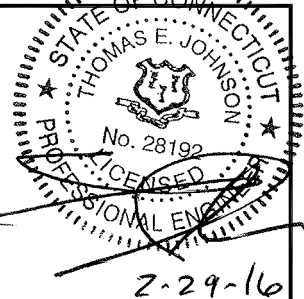
T-MOBILE NORTHEAST LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
OFFICE: (860) 648-1116



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



4 Bay Road, Building A
Suite 200
Hadley, MA 01031 TEL: (417) 320-4918



CHECKED BY: JMM/TEJ

APPROVED BY: JMM/TEJ

| SUBMITTALS | | | |
|------------|----------|-------------------------|-----|
| REV. | DATE | DESCRIPTION | BY |
| 0 | 02/29/16 | ISSUED FOR CONSTRUCTION | TBD |

SITE NUMBER:
CTNH303A
SITE NAME:
EAST PROSPECT

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712
NEW HAVEN COUNTY

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

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) LIGHTNING 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) 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 SURCIRTS 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 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 THE BRIDGE AND THE TOWER 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 AWS 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 – SBA COMMUNICATIONS CORP.
 SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
 OWNER – T-MOBILE
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 THE OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. 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 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 = 35 KSI). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH UMS SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF T-MOBILE 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: 2005 CONNECTICUT STATE BUILDING CODE WITH AMENDMENTS

 ELECTRICAL CODE: 2011 NATIONAL ELECTRICAL CODE AND AMENDMENTS

 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, NINTH EDITION;

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

 ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

 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 | G.C. | GENERAL CONTRACTOR | RF | RADIO FREQUENCY |
| BTCW | BARE TINNED SOLID COPPER WIRE | GRC | GALVANIZED RIGID CONDUIT | TBD | TO BE DETERMINED |
| BGR | BURIED GROUND RING | MGB | MASTER GROUND BAR | TBR | TO BE REMOVED |
| BTS | BASE TRANSCEIVER STATION | MIN | MINIMUM | TBRR | TO BE REMOVED AND REPLACED |
| EXISTING | EXISTING OR (E) | PROPOSED | NEW OR (P) | TYP | TYPICAL |
| EGB | EQUIPMENT GROUND BAR | N.T.S. | NOT TO SCALE | VIF | VERIFY IN FIELD |
| EGR | EQUIPMENT GROUND RING | RAD | RADIATION CENTERLINE (ANTENNA) | | |
| | | REF | REFERENCE | | |

T-Mobile

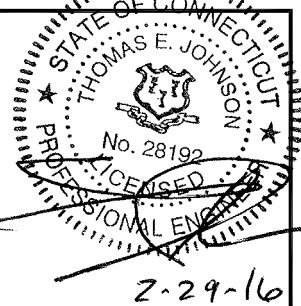
T-MOBILE NORTHEAST LLC
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SBA COMMUNICATIONS CORP.
 134 FLANDERS ROAD, SUITE 125
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CTNH303A

SITE NAME:

EAST PROSPECT

SITE ADDRESS:

229 CHESHIRE ROAD
 PROSPECT, CT 06712
 NEW HAVEN COUNTY

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-1



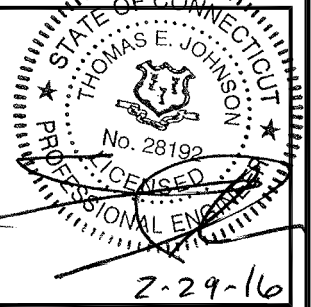
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 NEW HAVEN COUNTY

SHEET TITLE

**COMPOUND &
 ELEVATION PLAN**

SHEET NUMBER

A-1

ANTENNA MOUNT STRUCTURAL ASSESSMENT REQUIREMENT:

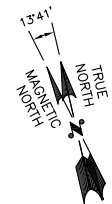
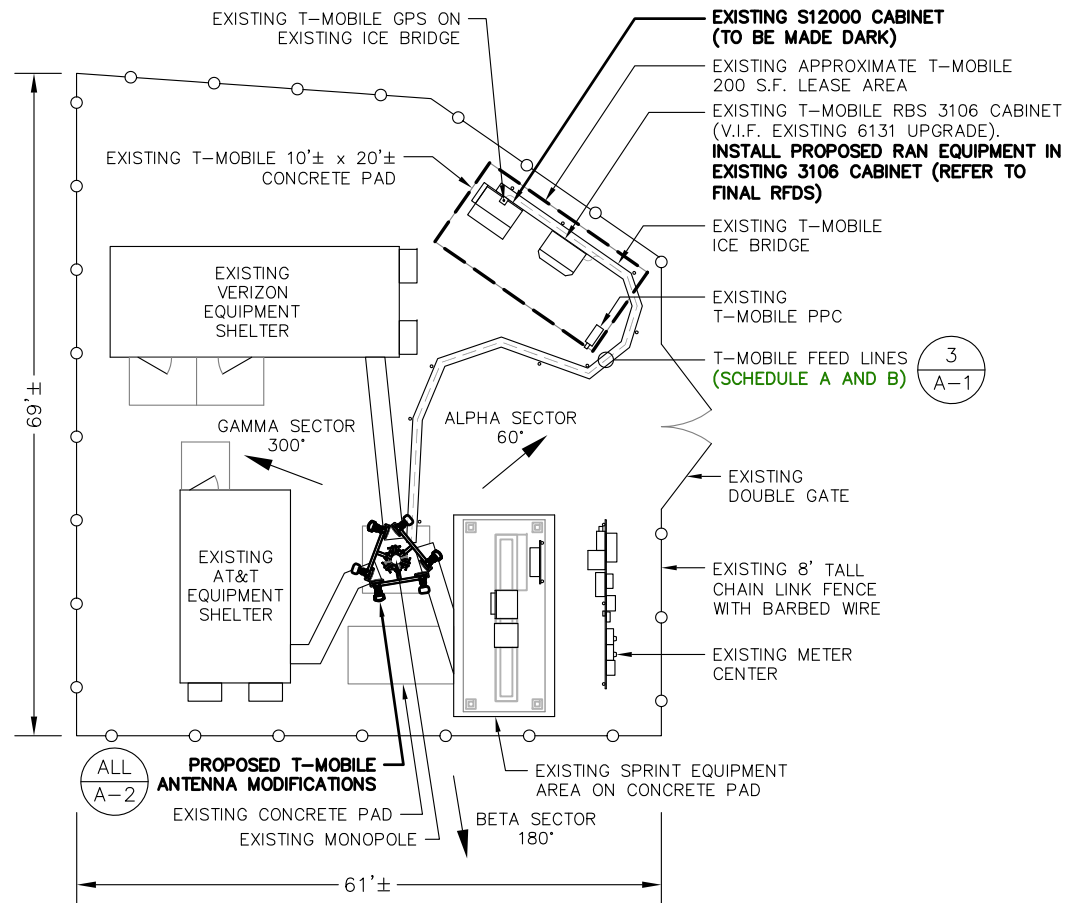
ENGINEER OF RECORD HAS MADE A VISUAL ASSESSMENT ONLY AND DETERMINED THAT THE EXISTING ANTENNA MOUNT SHALL BE REPLACED OR MODIFIED TO ACCOMMODATE ANY ADDITIONAL EQUIPMENT LOADS. STRUCTURAL DESIGNS AND DETAILS AS SHOWN HEREIN FOR STRUCTURAL MODIFICATIONS OF THE EXISTING ANTENNA MOUNT ARE PRELIMINARY ONLY AND FINAL CONSTRUCTION DETAILS ARE SUBJECT TO CHANGE PENDING THE COMPLETION OF AN ANTENNA MOUNT STRUCTURAL ASSESSMENT.

STRUCTURAL NOTES:

PRIOR TO COMMENCING CONSTRUCTION, GC SHALL REFER TO TOWER STRUCTURAL ANALYSIS PROVIDED BY SBA TO DETERMINE IF THERE ARE ANY SUPPLEMENTAL OR SPECIAL INSTALLATION REQUIREMENTS FOR TOWER TOP EQUIPMENT AND FOR CABLE BUNDLING, SHIELDING, MOUNTING, OR RELOCATION ARRANGEMENTS

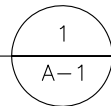
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COMPOUND PLAN

SCALE: 1"=20' (11"x17")
 1"=10' (22"x34")

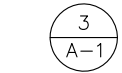


⊙ OF PROPOSED T-MOBILE ANTENNAS
 ELEV. = 160'± (159.7')± AGL (SBA DATABASE)



EXISTING MONOPOLE EXTENSION

T-MOBILE FEED LINES 3/A-1



EXISTING MONOPOLE

| FEEDLINE SCHEDULE | FEEDLINE DESCRIPTION | LOCATION |
|-------------------|--|---------------------|
| A | EXISTING: (12) 1-5/8" COAX TO 160' RAD TO BE REMOVED | UP OUTSIDE MONOPOLE |
| B | PROPOSED: (1) HCS HYBRID TRUNK TO 160' RAD | UP OUTSIDE MONOPOLE |

NOTE: EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER

SEE T-MOBILE FEEDLINE SCHEDULE (REFER TO SBA-PROVIDED STRUCTURAL ANALYSIS FOR SPECIAL FEEDLINE INSTALLATION REQUIREMENTS, STACKING, BUNDLING, SHIELDING, MOUNTING AND RELOCATION OF EXISTING OR PROPOSED FEEDLINES)

EXISTING T-MOBILE GPS ON EXISTING ICE BRIDGE
 EXISTING S12000 CABINET (TO BE MADE DARK)
 EXISTING T-MOBILE RBS 3106 CABINET (V.I.F. EXISTING 6131 UPGRADE). **INSTALL PROPOSED RAN EQUIPMENT IN EXISTING 3106 CABINET (REFER TO FINAL RFDS)**
 EXISTING T-MOBILE ICE BRIDGE
 T-MOBILE FEED LINES 3/A-1



IMAGE SOURCE: PROTERRA 02/12/16

EQUIPMENT PHOTO DETAIL

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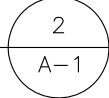


IMAGE SOURCE: PROTERRA 02/12/16

FEEDLINE PHOTO DETAIL AT TOWER BASE

SCALE: N.T.S.

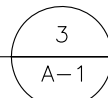
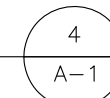


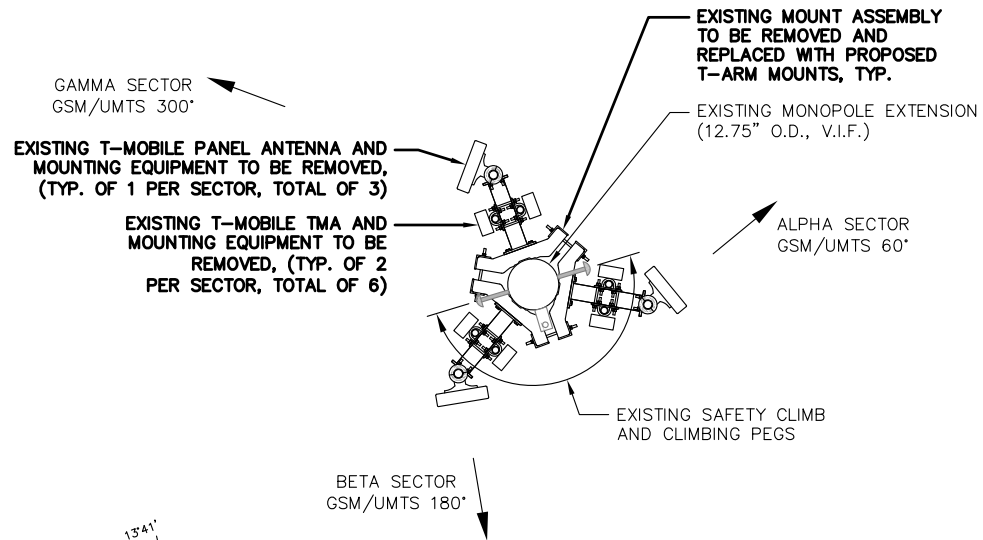
IMAGE SOURCE: PROTERRA 02/12/16

PARTIAL ELEVATION PHOTO DETAIL

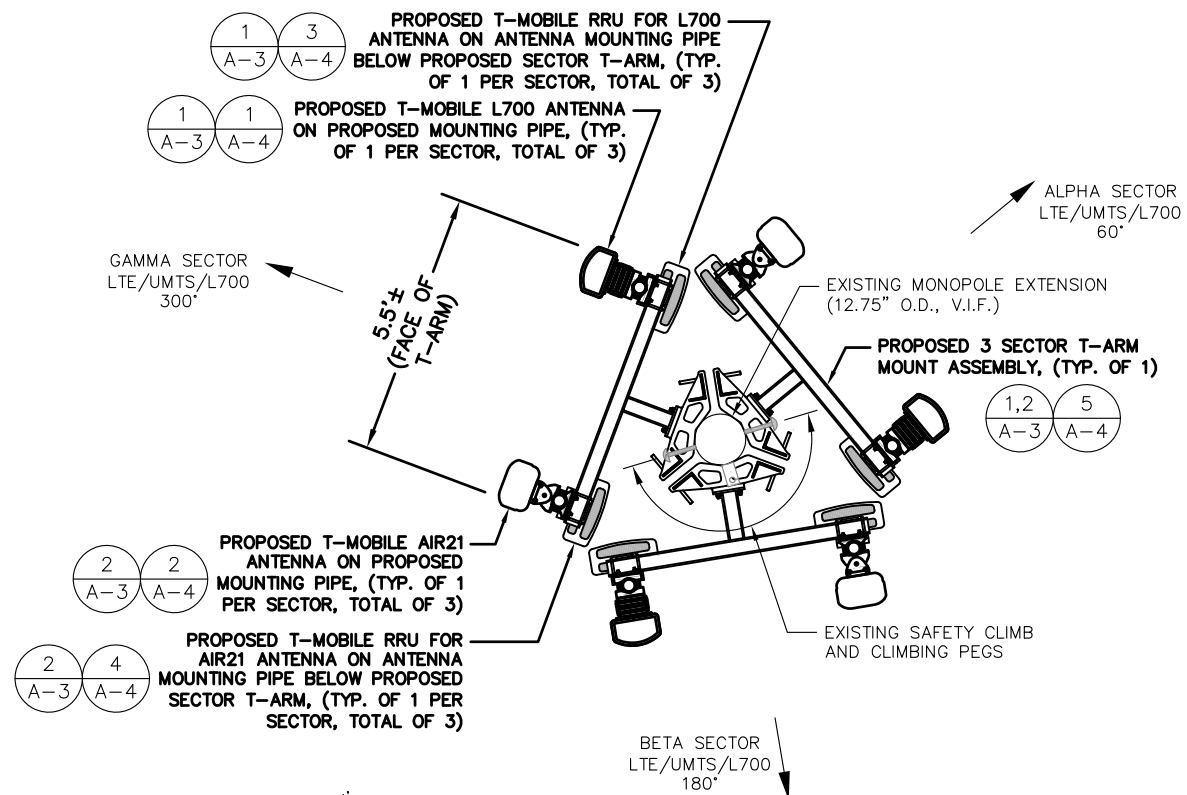
SCALE: N.T.S.



FEEDLINE SCHEDULE A
 FEEDLINE SCHEDULE B



EXISTING ANTENNA PLAN
SCALE: N.T.S. 1
A-2



PROPOSED ANTENNA PLAN
SCALE: N.T.S. 2
A-2

ANTENNA MOUNT STRUCTURAL ASSESSMENT REQUIREMENT:

ENGINEER OF RECORD HAS MADE A VISUAL ASSESSMENT ONLY AND DETERMINED THAT THE EXISTING ANTENNA MOUNT SHALL BE REPLACED OR MODIFIED TO ACCOMMODATE ANY ADDITIONAL EQUIPMENT LOADS. STRUCTURAL DESIGNS AND DETAILS AS SHOWN HEREIN FOR STRUCTURAL MODIFICATIONS OF THE EXISTING ANTENNA MOUNT ARE PRELIMINARY ONLY AND FINAL CONSTRUCTION DETAILS ARE SUBJECT TO CHANGE PENDING THE COMPLETION OF AN ANTENNA MOUNT STRUCTURAL ASSESSMENT.

STRUCTURAL NOTES:

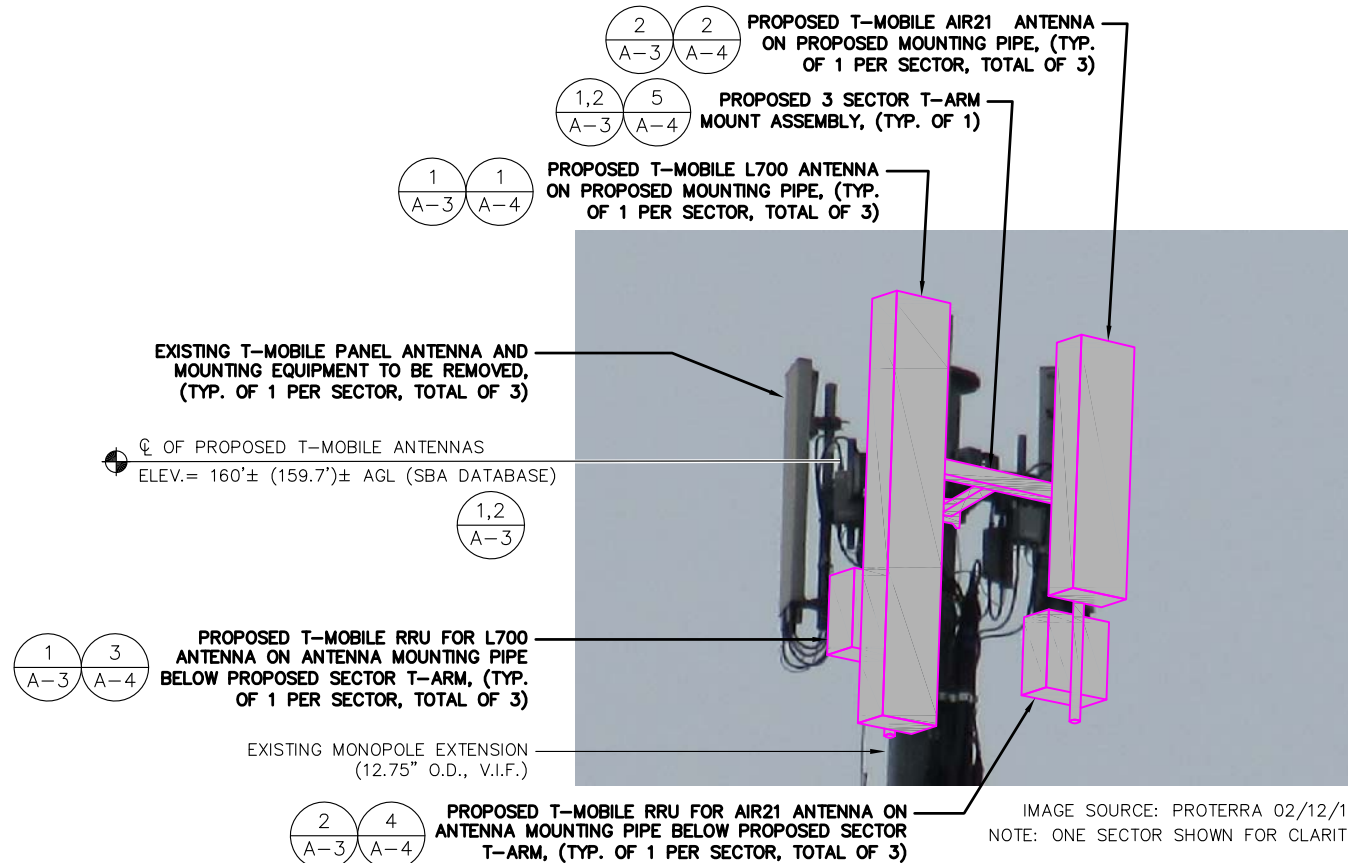
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SPECIAL CONSTRUCTION NOTE:

THE T-MOBILE TOWER TOP WORK IS CONTINGENT UPON COMPLETION OF ALL REQUIRED TOWER STRUCTURAL MODIFICATIONS, ENGINEERING CONSTRUCTION CONTROL INSPECTIONS, FINAL ENGINEERING AFFIDAVIT, AND ACCEPTANCE/APPROVAL BY SBA COMMUNICATIONS CORP.

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
AT TIME OF CONSTRUCTION, CONTRACTOR TO VERIFY AZIMUTHS OF EXISTING ANTENNAS. IF DIFFERENT FROM RFDS, PLEASE NOTIFY THE RF ENGINEER AND CONSTRUCTION MANAGER WITH ACTUAL AZIMUTH TO ENSURE T-MOBILE'S DATABASE IS ACCURATE AND UP-TO-DATE.



ANTENNA PHOTO DETAIL
SCALE: N.T.S. 3
A-2

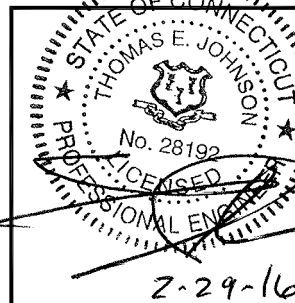
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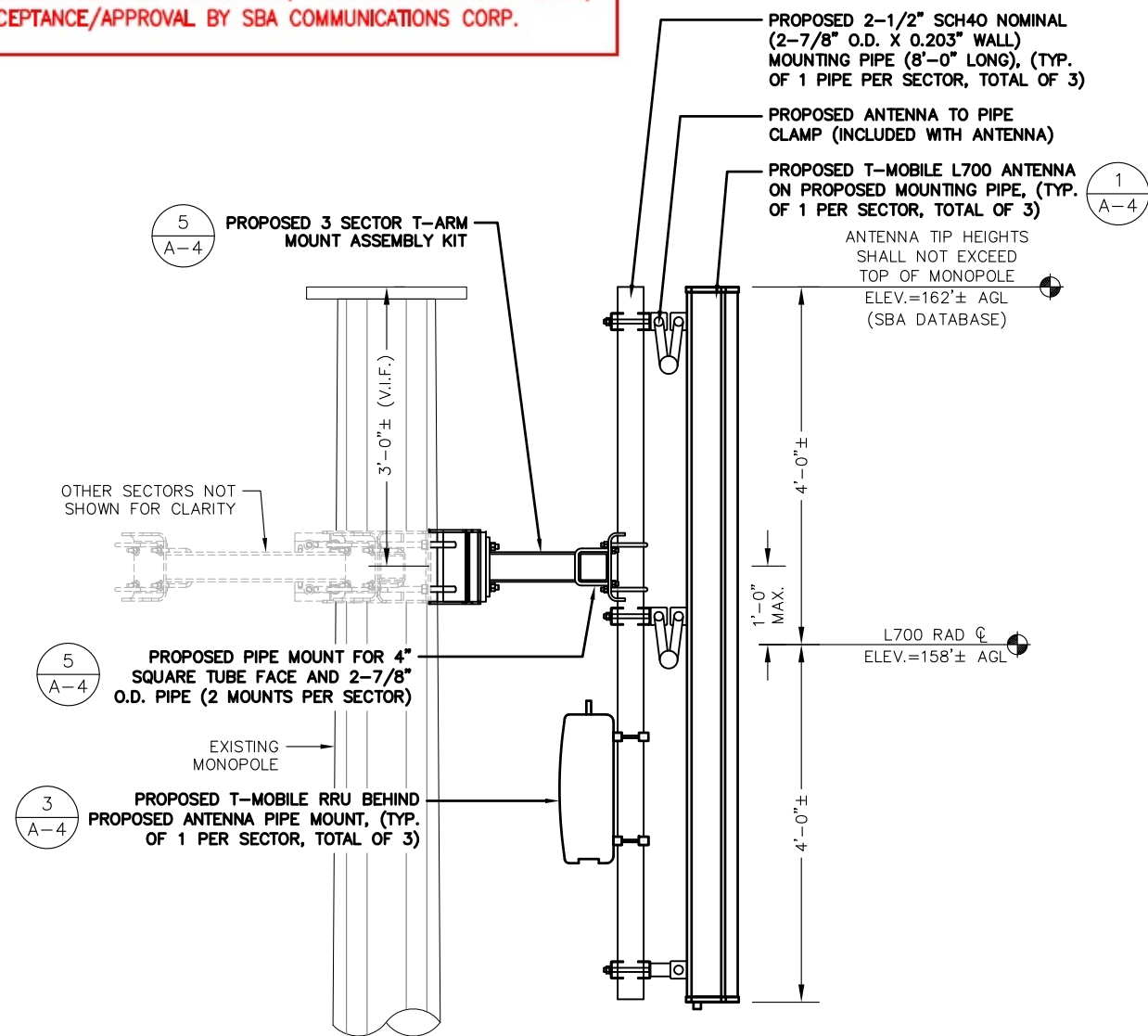
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PROSPECT, CT 06712
NEW HAVEN COUNTY

SHEET TITLE
EXISTING & PROPOSED
ANTENNA PLAN

SHEET NUMBER
A-2

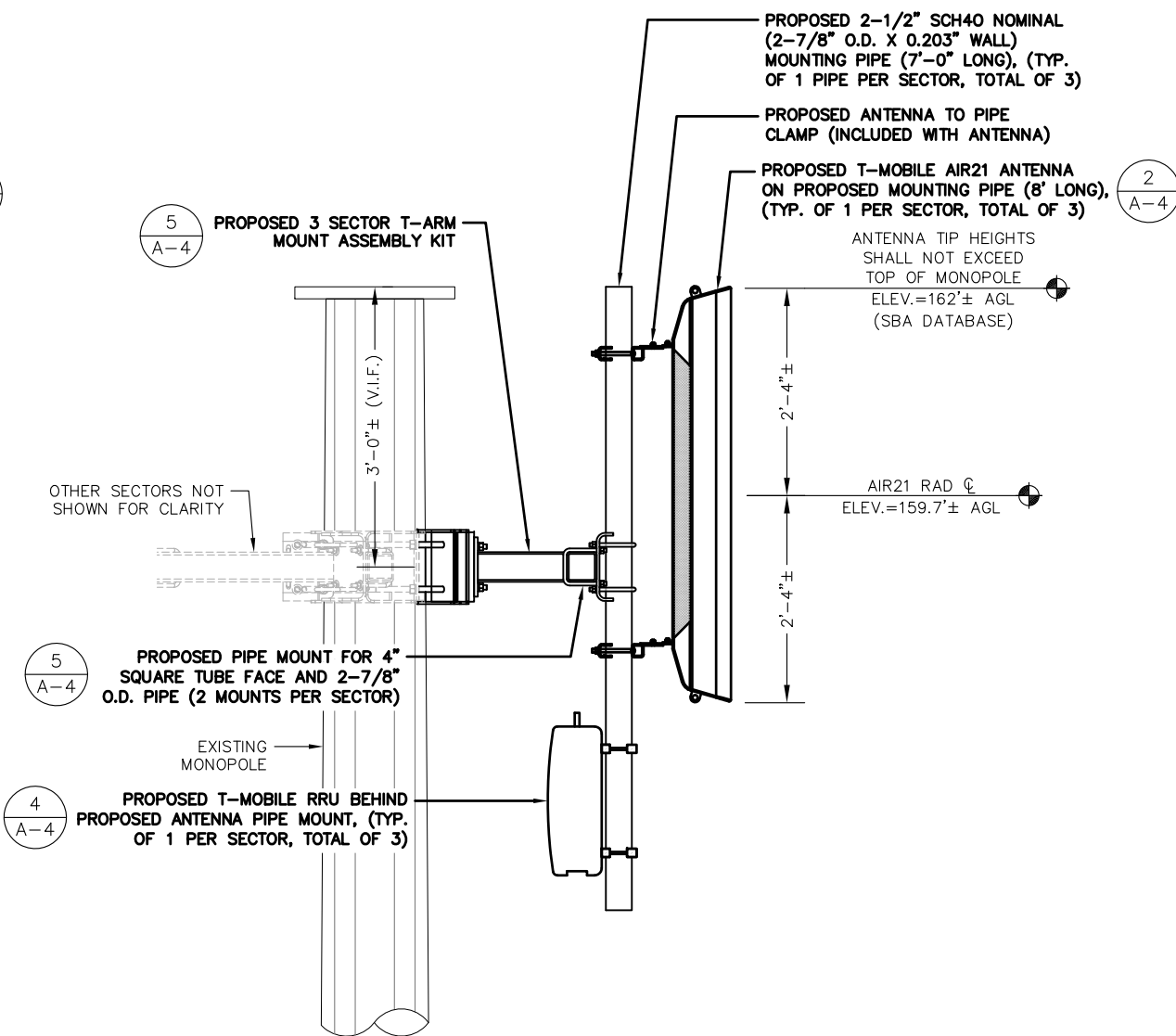
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PROPOSED L700 ANTENNA MOUNTING DETAIL

SCALE: N.T.S.

1
A-3



PROPOSED AIR21 ANTENNA MOUNTING DETAIL

SCALE: N.T.S.

2
A-3

ANTENNA MOUNT STRUCTURAL ASSESSMENT REQUIREMENT:

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NOTE:
 MATCH ANTENNA TIP HEIGHTS AT TOP OF MONOPOLE. ANTENNA TIP HEIGHT SHALL NOT EXCEED TOP OF MONOPOLE.

NOTE:
 ALL PIPE TO BE SCH40 GALVANIZED ASTM A53 GRADE B (35 KSI)

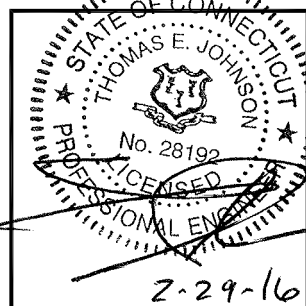
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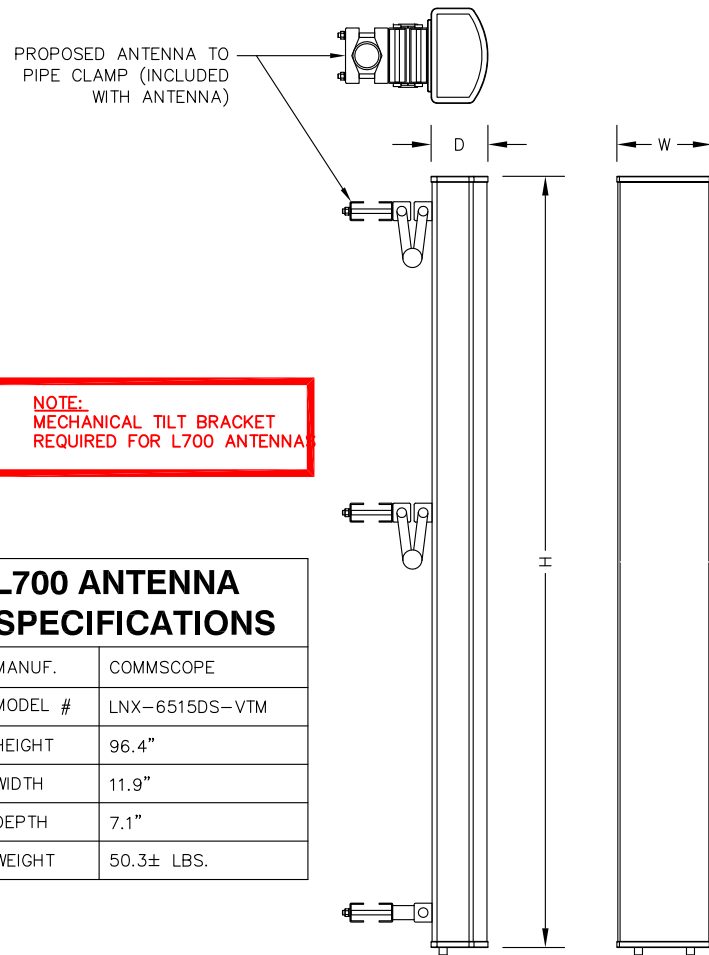
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| SUBMITTALS | | | |
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SHEET TITLE
 DETAILS

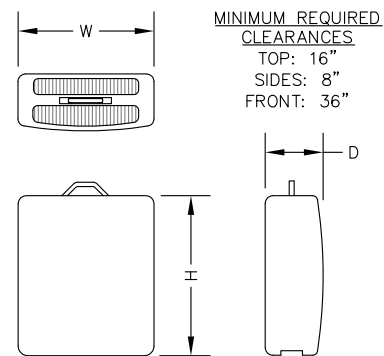
SHEET NUMBER
 A-3



NOTE:
MECHANICAL TILT BRACKET
REQUIRED FOR L700 ANTENNA

L700 ANTENNA SPECIFICATIONS

| | |
|---------|----------------|
| MANUF. | COMMSCOPE |
| MODEL # | LNX-6515DS-VTM |
| HEIGHT | 96.4" |
| WIDTH | 11.9" |
| DEPTH | 7.1" |
| WEIGHT | 50.3± LBS. |



MINIMUM REQUIRED CLEARANCES
TOP: 16"
SIDES: 8"
FRONT: 36"

RRU SPECIFICATIONS

| | |
|---------|------------|
| MANUF. | ERICSSON |
| MODEL # | RRUS11 B12 |
| HEIGHT | 20" |
| WIDTH | 17" |
| DEPTH | 7" |
| WEIGHT | 50.7 LBS. |

REMOTE RADIO UNIT (RRU)

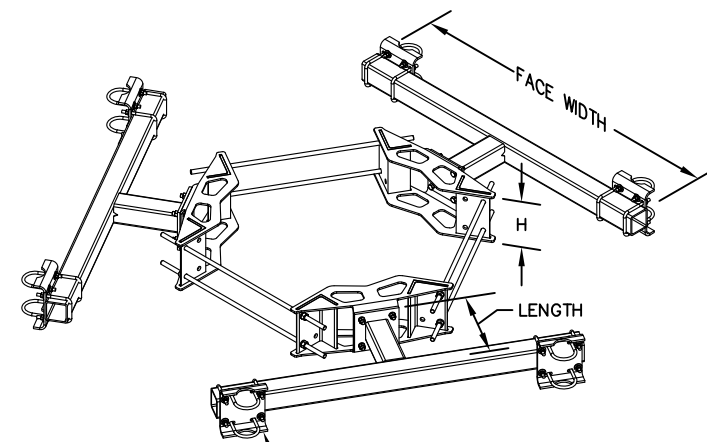
SCALE: N.T.S.

3
A-4

SPECIAL CONSTRUCTION NOTE:
THE T-MOBILE TOWER TOP WORK IS CONTINGENT UPON COMPLETION OF ALL REQUIRED TOWER STRUCTURAL MODIFICATIONS, ENGINEERING CONSTRUCTION CONTROL INSPECTIONS, FINAL ENGINEERING AFFIDAVIT, AND ACCEPTANCE/APPROVAL BY SBA COMMUNICATIONS CORP.

3 SECTOR T-FRAME SPECIFICATIONS

| | |
|------------|--------------|
| MANUF. | COMMSCOPE |
| MODEL # | MC-HPM1250-B |
| HEIGHT | 10.0" |
| FACE WIDTH | 66.0" |
| LENGTH | 14.0" |
| WEIGHT | 534.2± LBS. |



PROPOSED PIPE MOUNT FOR 4" SQUARE TUBE FACE AND 2-7/8" O.D. PIPE (COMMSCOPE PART # MTC3055PM3), (TYP. OF 2 MOUNTS PER SECTOR, TOTAL OF 6)

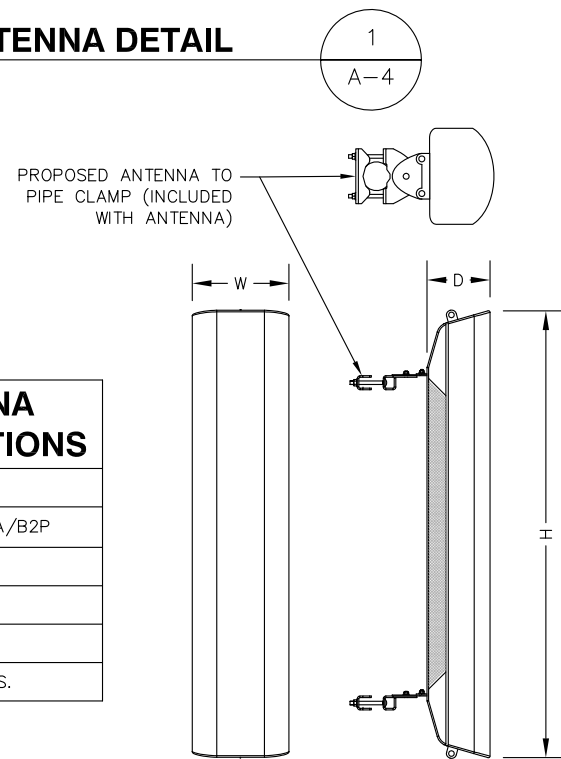
3 SECTOR T-FRAME MOUNT KIT

SCALE: N.T.S.

5
A-4

L700 ANTENNA DETAIL

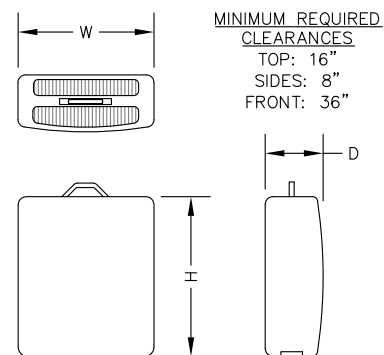
SCALE: N.T.S.



1
A-4

AIR ANTENNA SPECIFICATIONS

| | |
|---------|---------------|
| MANUF. | ERICSSON |
| MODEL # | AIR21 B4A/B2P |
| HEIGHT | 55.9" |
| WIDTH | 12" |
| DEPTH | 7.8" |
| WEIGHT | 90.3± LBS. |



MINIMUM REQUIRED CLEARANCES
TOP: 16"
SIDES: 8"
FRONT: 36"

RRU SPECIFICATIONS

| | |
|---------|-----------|
| MANUF. | ERICSSON |
| MODEL # | RRUS11 B2 |
| HEIGHT | 20" |
| WIDTH | 17" |
| DEPTH | 7" |
| WEIGHT | 50.7 LBS. |

REMOTE RADIO UNIT (RRU)

SCALE: N.T.S.

4
A-4

AIR ANTENNA DETAIL

SCALE: N.T.S.

2
A-4

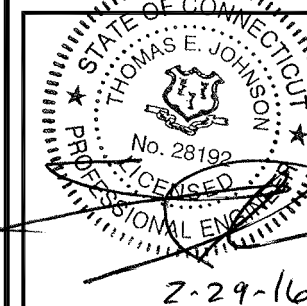
T-Mobile
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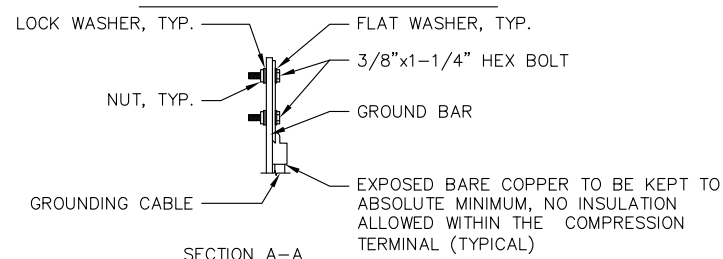
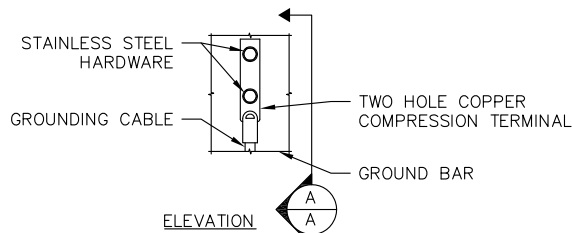
| SUBMITTALS | | | |
|------------|----------|-------------------------|-----|
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| 0 | 02/29/16 | ISSUED FOR CONSTRUCTION | TBD |

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SITE NAME:
EAST PROSPECT

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712
NEW HAVEN COUNTY

SHEET TITLE
DETAILS

SHEET NUMBER
A-4



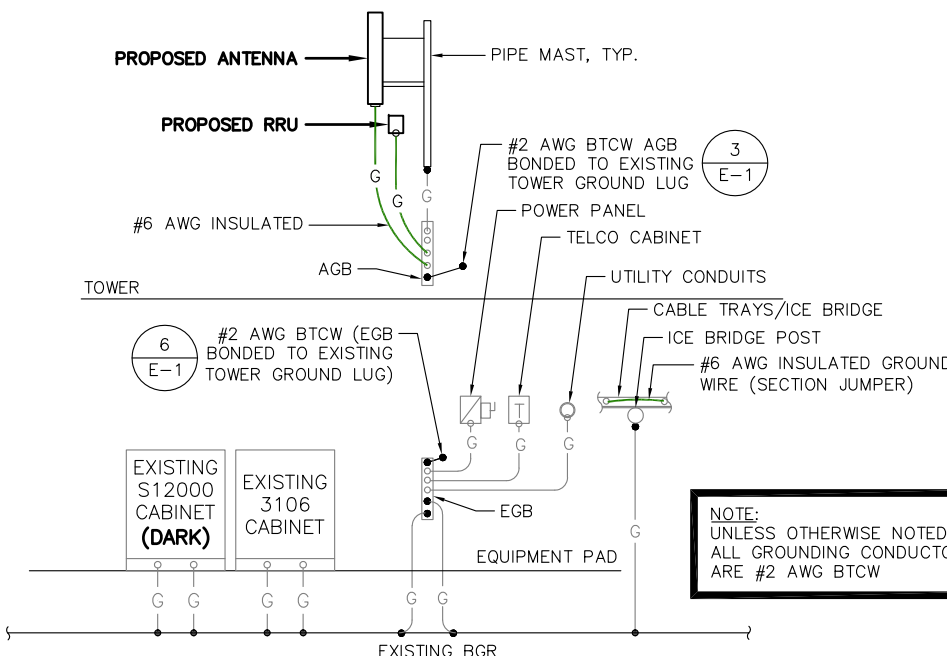
- NOTES:
1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB.

TYPICAL GROUND BAR CONNECTION DETAIL

SCALE: N.T.S.

1
E-1

NOTE:
BREAKERS TO (E) S12000 CABINET SHALL BE TURNED OFF

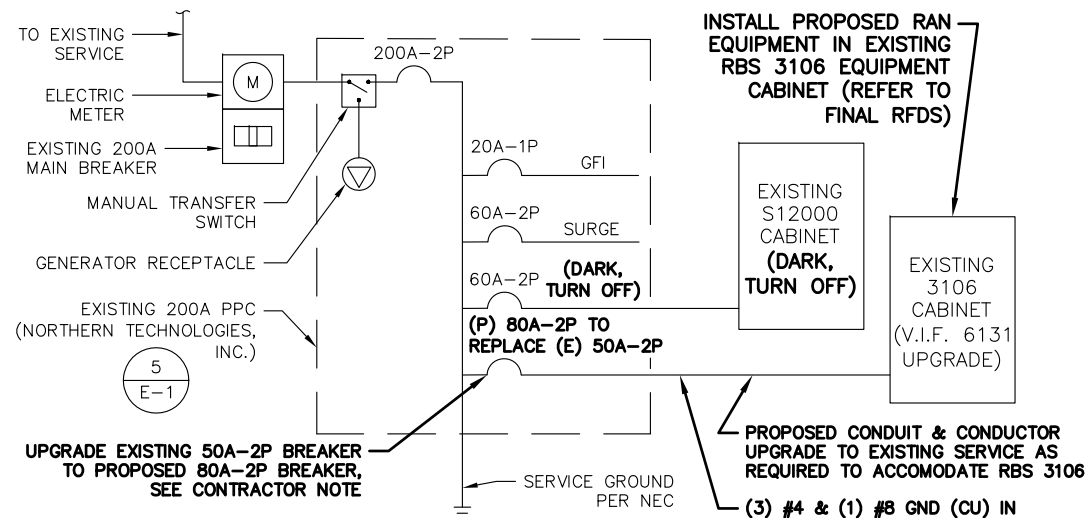


NOTE:
UNLESS OTHERWISE NOTED, ALL GROUNDING CONDUCTORS ARE #2 AWG BTCW

TYPICAL GROUNDING RISER DIAGRAM

SCALE: N.T.S.

2
E-1



ONE LINE POWER SCHEMATIC

SCALE: N.T.S.

4
E-1



IMAGE SOURCE: PROTERRA 02/12/16

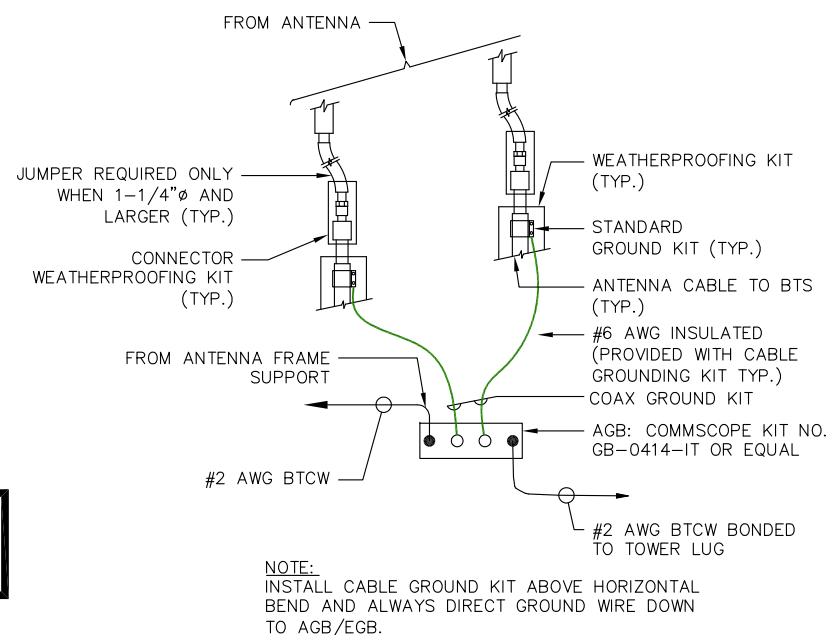


IMAGE SOURCE: PROTERRA 02/12/16

PHOTO DETAIL: PPC PANEL

SCALE: N.T.S.

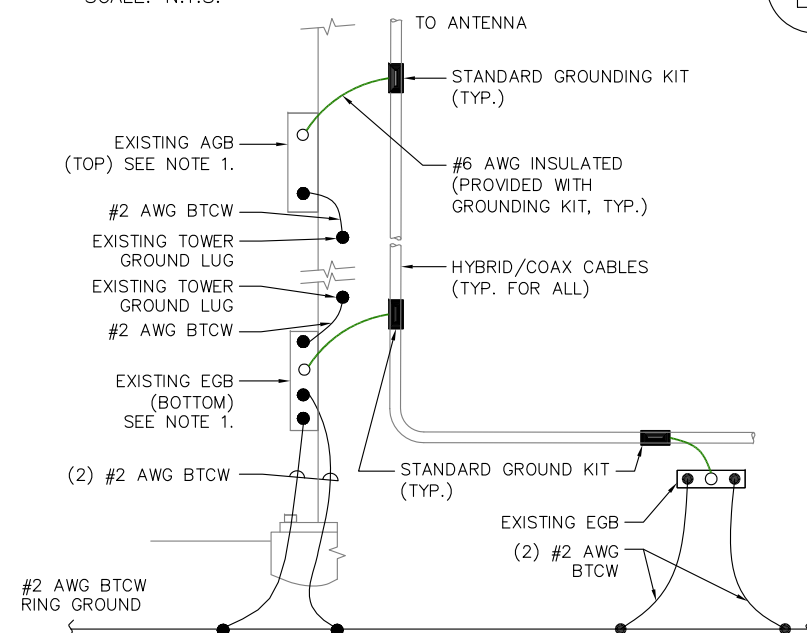
5
E-1



TOWER TOP CABLE GROUNDING DETAIL

SCALE: N.T.S.

3
E-1



TOWER BOTTOM CABLE GROUNDING DETAIL

SCALE: N.T.S.

6
E-1

ELECTRICAL LEGEND

| | |
|---------|---|
| A | AMPERE |
| V | VOLT |
| KWH | KILOWATT - HOUR |
| C | CONDUIT |
| GRC | GALVANIZED RIGID CONDUIT |
| BTCW | BARE TINNED (SOLID) COPPER WIRE (#2 AWG, UNLESS NOTES OTHERWISE) |
| G | GROUND |
| MGB | MASTER GROUND BAR |
| AGB/EGB | EQUIPMENT GROUND BAR/ANTENNA GROUND BAR |
| C | GROUND COPPER WIRE, SIZE AS NOTED |
| — | EXPOSED WIRING |
| — | INSULATED GROUNDING CONDUCTOR (#6 AWG STRANDED, UNLESS NOTED OTHERWISE) |
| — | 5/8"x10" COPPER CLAD STAINLESS STEEL GROUND ROD |
| — | EXOTHERMIC (CAD WELD) OR MECHANICAL (COMPRESSION TYPE) CONNECTION |
| PPC | POWER PROTECTION CABINET |
| ⊗ | OMNI-DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALL |
| ○ | MECHANICAL CONNECTION |
| ● | CADWELD CONNECTION |

CONTRACTOR NOTE:
G.C. TO VERIFY THAT THE EXISTING CONDUITS AND WIRE SIZES ARE ADEQUATE FOR THE PROPOSED LOADING IN ACCORDANCE WITH NEC AND INCLUDE ELECTRICAL UPGRADES IN THE SCOPE OF WORK AS REQUIRED.

ELECTRICAL & GROUNDING NOTES:

- ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) 2014 AS WELL AS APPLICABLE STATE AND LOCAL CODES.
- ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
- THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATIONS INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
- GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
- ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
- RIGID STEEL CONDUITS SHALL BE GROUNDED AT BOTH ENDS.
- ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THHN INSULATION AS REQUIRED BY NEC.
- RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL ROOM AND PROPOSED CELL SITE POWER PEDESTAL AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
- RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROPOSED CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON DRAWING A-1. PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
- ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
- GROUNDING SHALL COMPLY WITH NEC ART. 250.
- GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
- USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
- ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
- ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
- CONNECTIONS TO MGB SHALL BE ARRANGED IN THREE MAIN GROUPS: SURGE PRODUCERS (COAXIAL CABLE GROUND KITS, TELCO AND POWER PANEL GROUND); (GROUNDING ELECTRODE RING OR BUILDING STEEL); NON-SURGING OBJECTS (EGB GROUND IN BTS UNIT).
- CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LYGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
- APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
- BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, AND ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.
- BOND ANTENNA EGB'S AND MGB TO WATER MAIN/GROUND RING.
- TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION.
- BOND ANY METAL OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
- VERIFY PROPOSED SERVICE UPGRADE WITH LOCAL UTILITY COMPANY PRIOR TO CONSTRUCTION.

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STATE OF CONNECTICUT
THOMAS E. JOHNSON
No. 28192
PROFESSIONAL ENGINEER
FOR SCHEMATIC 2016

CHECKED BY: JMM/TEJ
APPROVED BY: JMM/TEJ

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PROSPECT, CT 06712
NEW HAVEN COUNTY

SHEET TITLE
ONE-LINE DIAGRAM & GROUNDING DETAILS

SHEET NUMBER
E-1

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MODIFICATION AND DESIGN DRAWINGS FOR AN EXISTING 162' EEI MONOPOLE

PROPOSED CARRIER: T-MOBILE

SBA SITE: CT02694-B / E-PROSPECT

COORDINATES (LATITUDE: 41.50788°, LONGITUDE: -72.95102°)

CONSTRUCTION CLASS

TES HAS DETERMINED THIS AS A
CLASS II CONSTRUCTION PROJECT
PER TIA-1019-A.

COMPLETE FABRICATION DRAWINGS FOR ALL MATERIALS REQUIRED FOR
THIS PROJECT ARE AVAILABLE FROM TOWER ENGINEERING SOLUTIONS
(TES). PLEASE CONTACT TES FOR MORE INFORMATION.

NOTE:

1. THE MODIFICATION DRAWINGS ARE BASED ON THE
TES PROJECT NO. 20866, DATED 3/2/16.

| SHEET | SHEET TITLE | REV |
|----------|--|-----|
| T-1 | TITLE SHEET | 0 |
| BOM | BILL OF MATERIALS | 0 |
| GN-1 | GENERAL NOTES | 0 |
| A-1 | TOWER PROFILE | 0 |
| A-1A | SITE PHOTOS | 0 |
| A-2 | ANCHOR BOLT REINFORCEMENT TYPE B2 (1 3/4" WILLIAMS ROD) | 0 |
| A-3 | REINFORCEMENT ASSEMBLY P6X100-G-20TT (18 SIDE 3 PIECES ON FLAT # 1, 7, AND 13) | 0 |
| LP-AT-PH | INSTALLATION AT HANDHOLE LOCATION | 0 |
| | | |
| | | |
| | | |
| | | |



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TES JOB NO:
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CUSTOMER SITE NO:
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CUSTOMER SITE NAME:
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| 1 | FIRST ISSUE | CH | 04/07/16 |
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TITLE SHEET

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GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE ANSI/TIA-222-F/2005 CONNECTICUT STATE BUILDING CODE, AND ANY OTHER GOVERNING BUILDING CODES AND OSHA SAFETY REGULATIONS.
2. ALL WORK INDICATED ON THE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TELECOMMUNICATIONS TOWER, POLE AND FOUNDATION CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND FABRICATION OF ALL MISCELLANEOUS PARTS (SUCH AS SHIMS), TEMPORARY SUPPORTS, AND GUYINGS, ETC., PER TIA-1019-A, TO COMPLETE THE ASSEMBLY AS SHOWN IN THE DRAWINGS.
4. CONTRACTOR SHALL PROCEED WITH THE INSTALLATION WORK CAREFULLY SO THE WORK WILL NOT DAMAGE ANY EXISTING CABLE, EQUIPMENT OR THE STRUCTURE.
5. THE USE OF GAS TORCH OR WELDER, ARE NOT ALLOWED ON ANY TOWER STRUCTURE WITHOUT THE CONSENT OF THE TOWER OWNER.
6. GENERALLY THE CONTRACTOR IS RESPONSIBLE TO CONDUCT AN ONSITE VISIT SURVEY OF THE JOB SITE AFTER AWARD, AND REPORT ANY ISSUES WITH THE SITE TO **TES** BEFORE PROCEEDING CONSTRUCTION.

FABRICATION

1. ALL STEEL SHALL MEET OR EXCEED THE MINIMUM STRENGTH AS SPECIFIED IN THE DRAWINGS. IF YIELD STRENGTH WAS NOT NOTED IN THE DRAWINGS, CONTRACTORS SHALL CONTACT TES FOR DIRECTION.
2. ALL FIELD CUT EDGES SHALL BE GROUND SMOOTH. ALL FIELD CUT AND DRILLED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATES OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

WELDING

1. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS AND IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNO. (E700XX UNLESS NOTED OTHERWISE).
2. PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING APPROX. 0.5" BEYOND THE PROPOSED FIELD WELD SURFACES.
3. ALL WELDS SHALL BE INSPECTED VISUALLY. A MINIMUM OF 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. 100% OF WELDS SHALL BE INSPECTED IF DEFECTS ARE FOUND.
4. WELD INSPECTIONS SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
5. AFTER INSPECTION, ALL FIELD WELDED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

BOLTED ASSEMBLIES AND TIGHTENING OF CONNECTIONS

1. ALL HIGH STRENGTH BOLTS SHALL CONFORM TO THE PROVISIONS OF THE SPECIFICATIONS FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS AS APPROVED BY THE RCSC.
2. FLANGE BOLTS SHALL BE TIGHTENED BY THE AISC "TURN-OF-THE-NUT" METHOD. THE FOLLOWING CHART SHOULD BE USED FOR THE "TURN-OF-THE-NUT" TIGHTENING.
3. SPLICE BOLTS AND ALL OTHER BOLTS IN BEARING TYPE CONNECTIONS SHALL BE TIGHTENED TO A SNUG-TIGHT CONDITION.
4. THE SNUG-TIGHT CONDITION IS DEFINED AS THE TIGHTNESS ATTAINED BY EITHER A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER WITH AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.

VERIFICATION AND INSPECTION

1. IF APPLICABLE, VERIFICATION INSPECTION TO BE PERFORMED SHALL BE IN ACCORDANCE TO IBC-2012 SECTION 1705 - TABLE 1705.2.2 AND 2005 CONNECTICUT STATE BUILDING CODE FOR STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL AND TABLE 1705.3 FOR CONCRETE CONSTRUCTION.

**TABLE 8.2 NUT ROTATION FROM SNUG-TIGHT
CONDITION FOR TURN-OF-NUT PRETENSIONING^{a,b}**

| BOLT LENGTH ^c | DISPOSITION OF OUTER FACE OF BOLTED PARTS | | |
|--|---|--|--|
| | BOTH FACES NORMAL TO BOLT AXIS | ONE FACE NORMAL TO BOLT AXIS, OTHER SLOPED NOT MORE THAN 1:20 ^d | BOTH FACES SLOPED NOT MORE THAN 1:20 FROM NORMAL TO BOLT AXIS ^d |
| NOT MORE THAN 4d _b | 1/3 TURN | 1/2 TURN | 2/3 TURN |
| MORE THAN 4d _b BUT NOT MORE THAN 8d _b | 1/2 TURN | 2/3 TURN | 5/6 TURN |
| MORE THAN 8d _b BUT NOT MORE THAN 12d _b | 2/3 TURN | 5/6 TURN | 1 TURN |

^a NUT ROTATION IS RELATIVE TO BOLT REGARDLESS OF THE ELEMENT (NUT OR BOLT) BEING TURNED. FOR REQUIRED NUT ROTATIONS OF 1/2 TURN AND LESS, THE TOLERANCE IS PLUS OR MINUS 30 DEGREES; FOR REQUIRED NUT ROTATIONS OF 2/3 TURN AND MORE, THE TOLERANCE IS PLUS OR MINUS 45 DEGREES.

^b APPLICATION ONLY TO JOINTS IN WHICH ALL MATERIAL WITHIN THE GRIP IS STEEL.

^c WHEN THE BOLT LENGTH EXCEEDS 12d_b, THE REQUIRED NUT ROTATION SHALL BE DETERMINED BY ACTUAL TESTING IN A SUITABLE TENSION CALIBRATOR THAT SIMULATES THE CONDITIONS OF SOLIDLY FITTING STEEL.

^d BEVELED WASHER NOT USED.

SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS, JUNE 30, 2004
RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS

INSTALLATION TORQUE REQUIRED FOR HOLLO BOLTS AND AJAX BOLTS:

1. HB12 HOLLO BOLT: 59 FT-LBS
2. HB16 HOLLO BOLT: 140 FT-LBS
3. HB20 HOLLO BOLT: 221 FT-LBS
4. M20 AJAX BOLT: 390 FT-LBS.



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TES JOB NO:
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CUSTOMER SITE NO:
CT02694-B

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GN-1

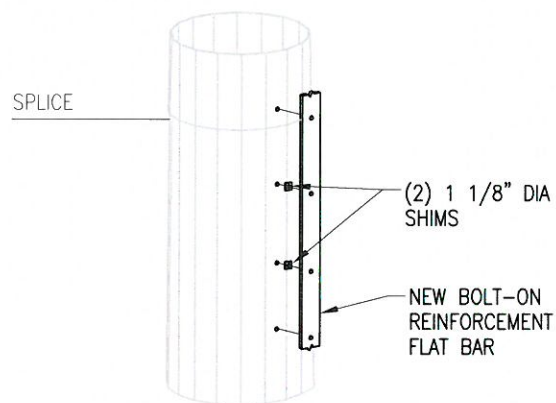
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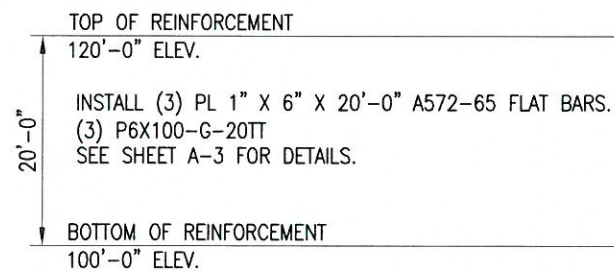
1. TEMPORARILY RELOCATE ANY EXISTING COAX ATTACHED TO THE MONOPOLE AND ANY OTHER MEMBERS WHERE OBSTRUCTION WITH THE PROPOSED MODIFICATION MAY OCCUR.
2. TEMPORARILY RELOCATE EXISTING EQUIPMENT AROUND THE FOUNDATION MAY BE REQUIRED DURING CONSTRUCTION.



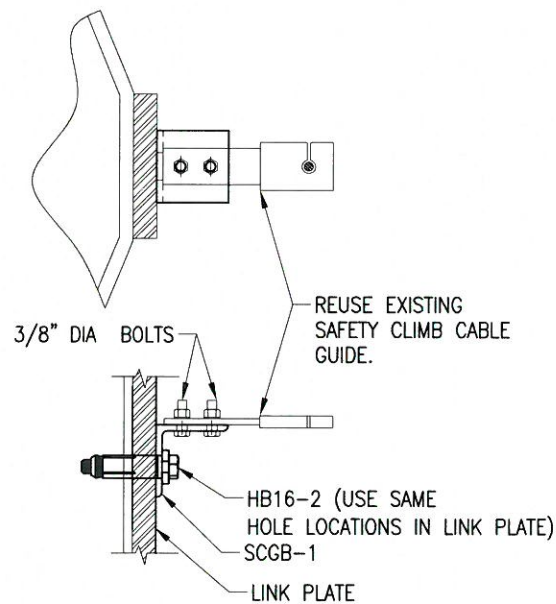
PHOTO 1



DETAIL 1
SHIMS INSTALLATION DETAIL

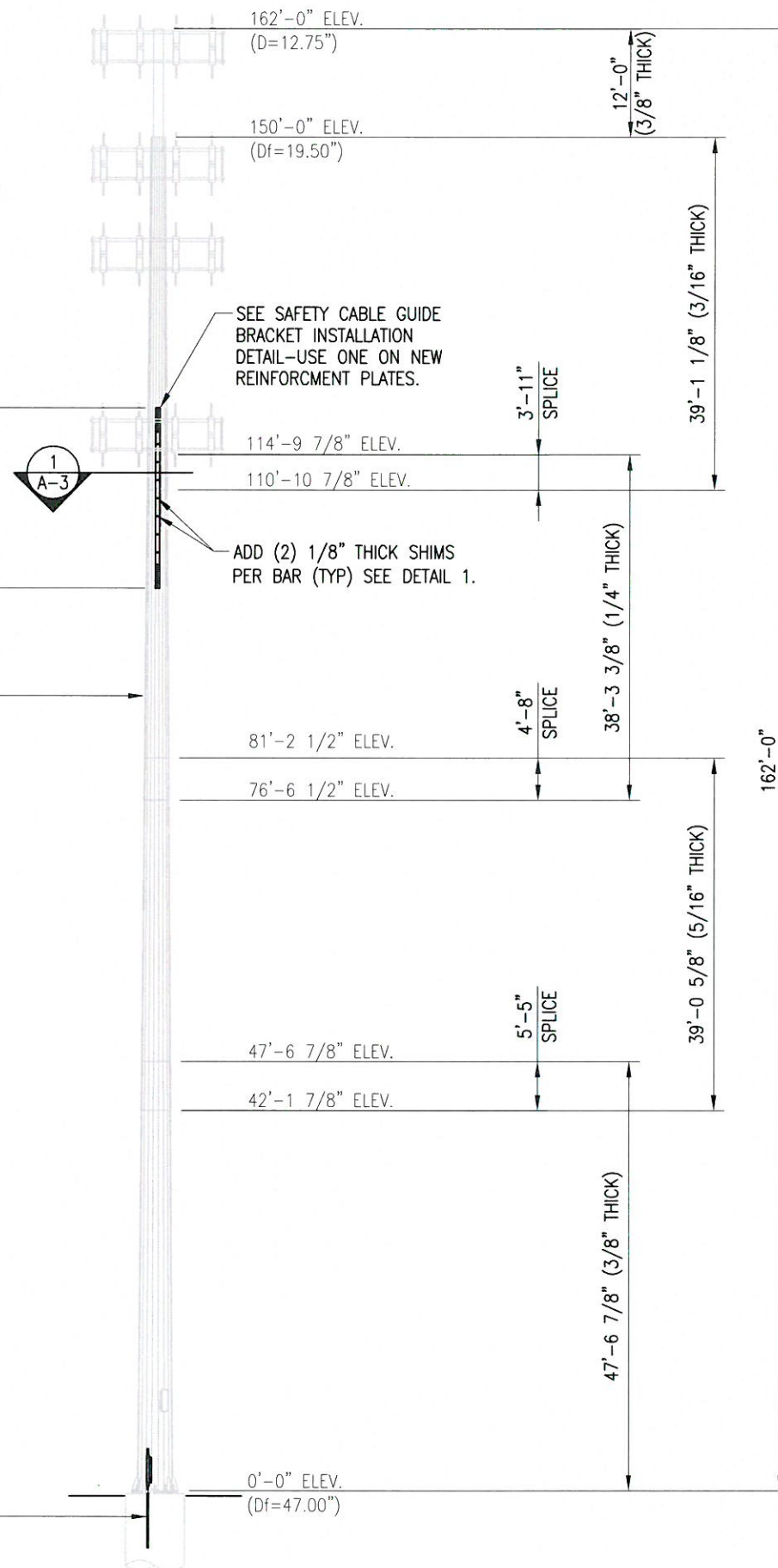


EXISTING 18 SIDES MONOPOLE. REFERENCE
EEI, JOB# 5816, DATED 10/15/99.



SAFETY CABLE GUIDE BRACKET
INSTALLATION DETAIL

FOUNDATION MODIFICATION.
SEE SHEET A-2 FOR DETAILS.



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A-1

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PHOTO 5



PHOTO 6



PHOTO 7



PHOTO 8



PHOTO 1



PHOTO 2



PHOTO 3



PHOTO 4



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SHEET TITLE:

SITE PHOTOS

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SHEET NUMBER: REV #:

A-1A

0



Tower Engineering Solutions

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TES JOB NO:

20927

CUSTOMER SITE NO:

CT02694-B

CUSTOMER SITE NAME:

E-PROSPECT

229 CHESHIRE ROAD
PROSPECT, CT 06712

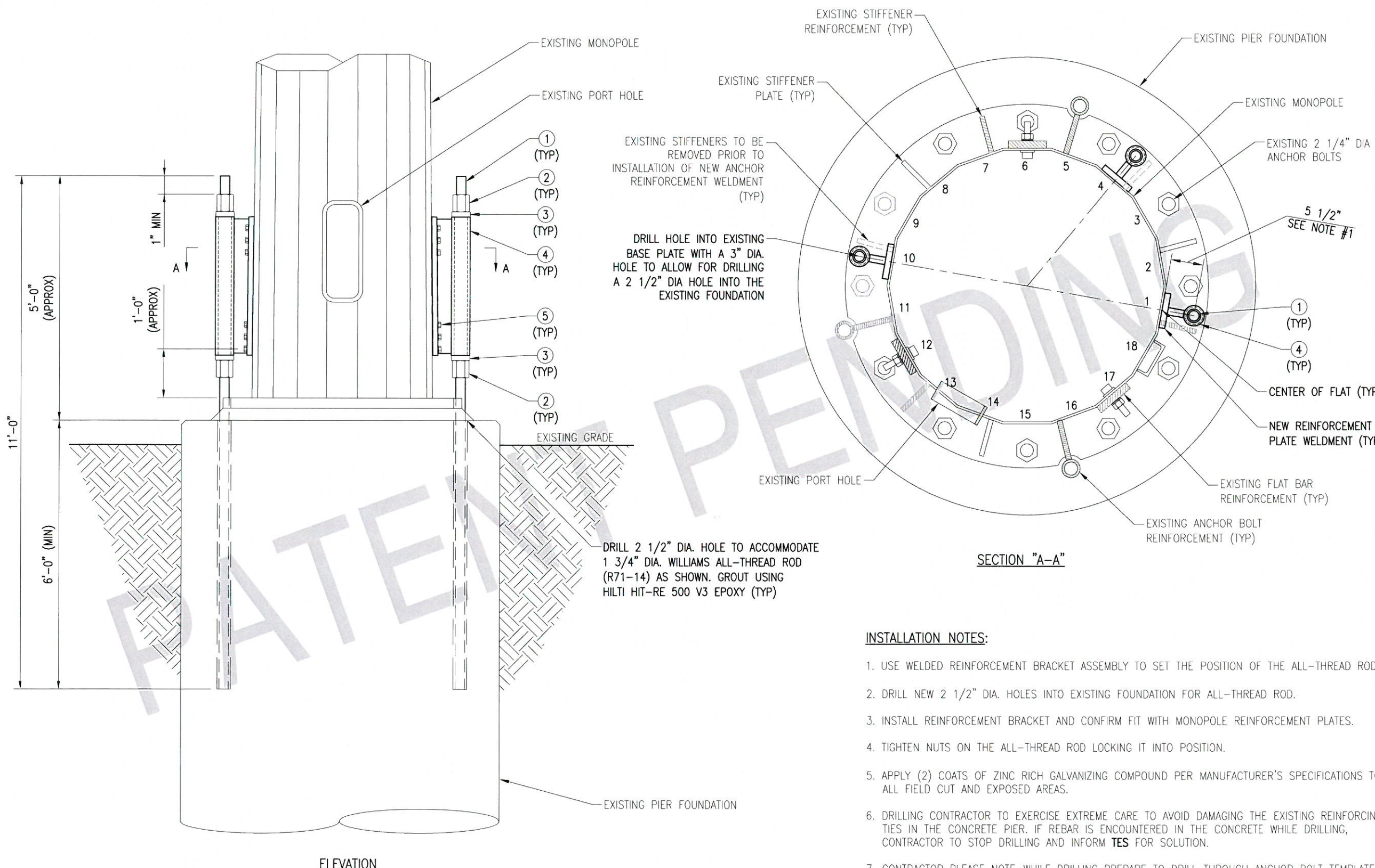
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| REV. | DESCRIPTION | BY | DATE |
|------|-------------|----|----------|
| △ 1 | FIRST ISSUE | CH | 04/07/16 |
| △ 2 | | | |
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SHEET TITLE:
**ANCHOR BOLT
REINFORCEMENT TYPE B2
(1 3/4" WILLIAMS ROD)**

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SHEET NUMBER: **A-2** REV #: **0**



INSTALLATION NOTES:

1. USE WELDED REINFORCEMENT BRACKET ASSEMBLY TO SET THE POSITION OF THE ALL-THREAD ROD.
2. DRILL NEW 2 1/2" DIA. HOLES INTO EXISTING FOUNDATION FOR ALL-THREAD ROD.
3. INSTALL REINFORCEMENT BRACKET AND CONFIRM FIT WITH MONOPOLE REINFORCEMENT PLATES.
4. TIGHTEN NUTS ON THE ALL-THREAD ROD LOCKING IT INTO POSITION.
5. APPLY (2) COATS OF ZINC RICH GALVANIZING COMPOUND PER MANUFACTURER'S SPECIFICATIONS TO ALL FIELD CUT AND EXPOSED AREAS.
6. DRILLING CONTRACTOR TO EXERCISE EXTREME CARE TO AVOID DAMAGING THE EXISTING REINFORCING TIES IN THE CONCRETE PIER. IF REBAR IS ENCOUNTERED IN THE CONCRETE WHILE DRILLING, CONTRACTOR TO STOP DRILLING AND INFORM TES FOR SOLUTION.
7. CONTRACTOR PLEASE NOTE-WHILE DRILLING PREPARE TO DRILL THROUGH ANCHOR BOLT TEMPLATE.

| ITEM NO. | QTY. | PART NO. | DESCRIPTION |
|----------|------|--------------|--|
| 1 | 3 | R71-14 | 11'-0" WILLIAMS 1 3/4" DIA. ALL-THREAD ROD (150 KSI) |
| 2 | 6 | R73-14 | 1 3/4" NUT (WILLIAMS R73-14) (TYP) |
| 3 | 6 | PLW-2 | PL 1 1/4" X 3 1/2" FLAT WASHER, A572-65 |
| 4 | 3 | APL-6X100-B2 | ANCHOR REINFORCEMENT WELDMENT |
| 5 | 36 | HB16-2 | LINDAPTER 5/8" TYPE HB HOLLO-BOLT (HCF) |



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CUSTOMER SITE NO:
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CUSTOMER SITE NAME:
 E-PROSPECT
 229 CHESHIRE ROAD
 PROSPECT, CT 06712

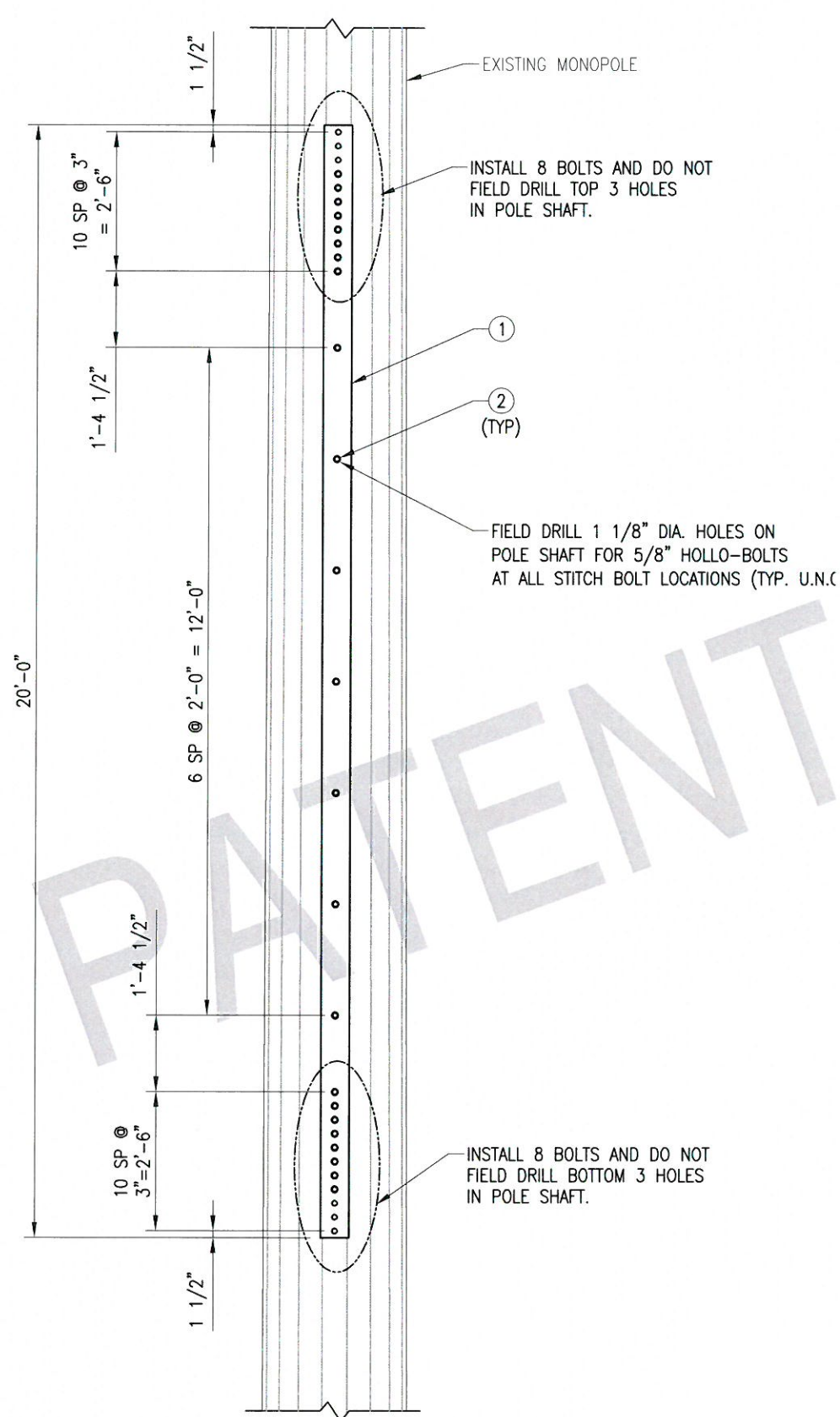
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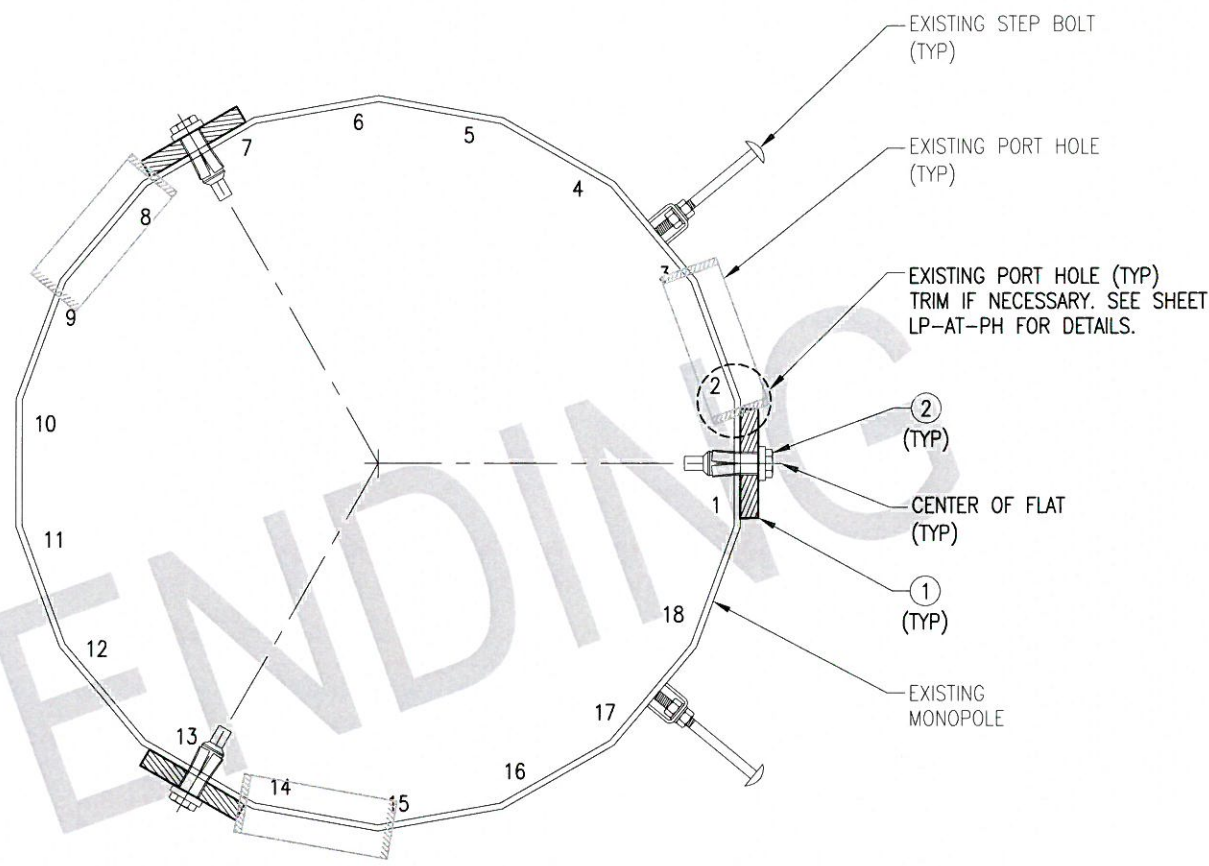
SHEET TITLE:
 REINFORCEMENT ASSEMBLY
 P6X100-G-20TT
 (18 SIDE 3 PIECES ON
 FLAT # 1, 7 AND 13)

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SHEET NUMBER: A-3 REV #: 0



ELEVATION VIEW
 REFER TO PLAN VIEW



1 PLAN VIEW
 A-3

- NOTES:
1. REFER TO SHEET A-1 FOR FLAT BAR ELEVATION.
 2. REFER TO SHEET A-1 FOR SHIM IF REQUIRED.
 3. INSTALLATION TORQUE FOR HOLLO-BOLTS:
 M16 HOLLO-BOLTS: 140 FT-LBS.

| ITEM NO. | QTY. | PART NO. | DESCRIPTION (PER SECTION) |
|----------|------|---------------|------------------------------------|
| 1 | 3 | P6X100-G-20TT | PL 1" X 6" X 20'-0" A572-65 |
| 2 | 69 | HB16-2 | LINDAPTER TYPE HB HOLLO-BOLT (HDG) |



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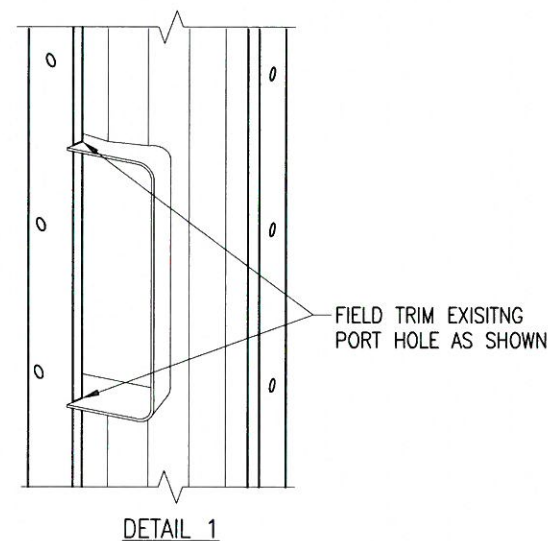
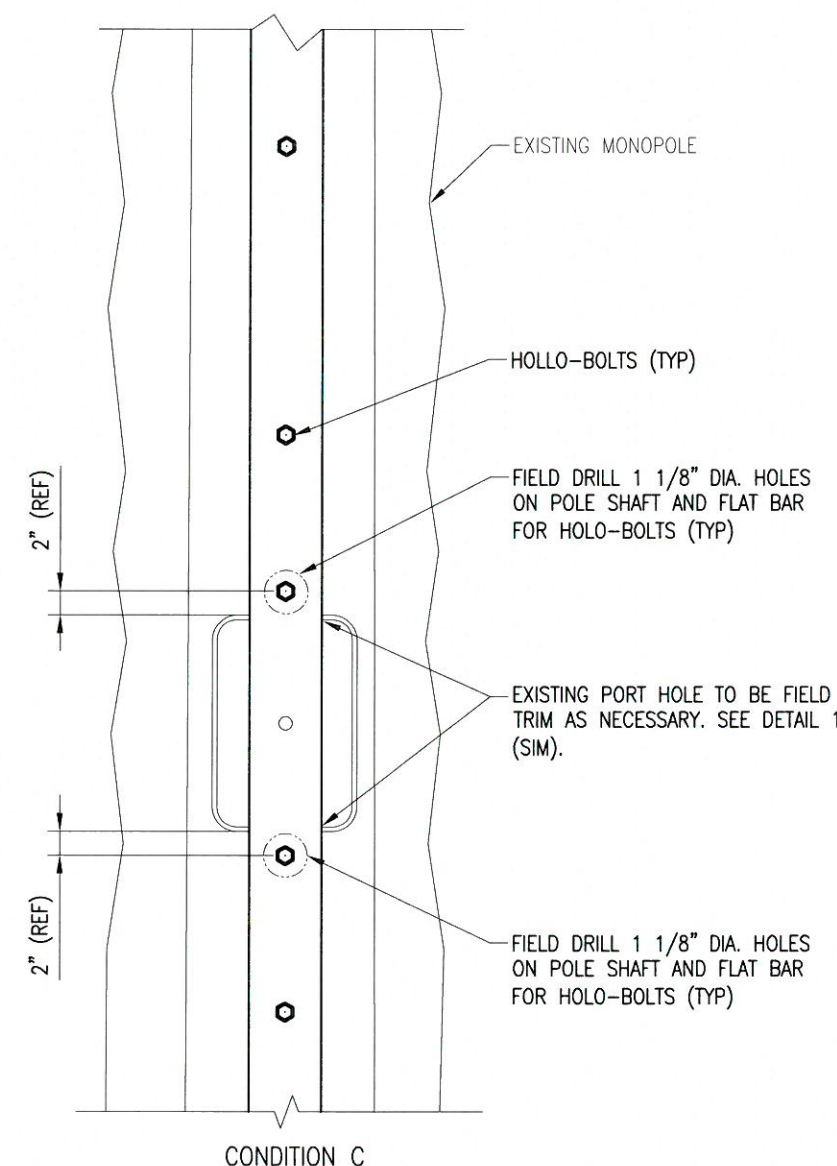
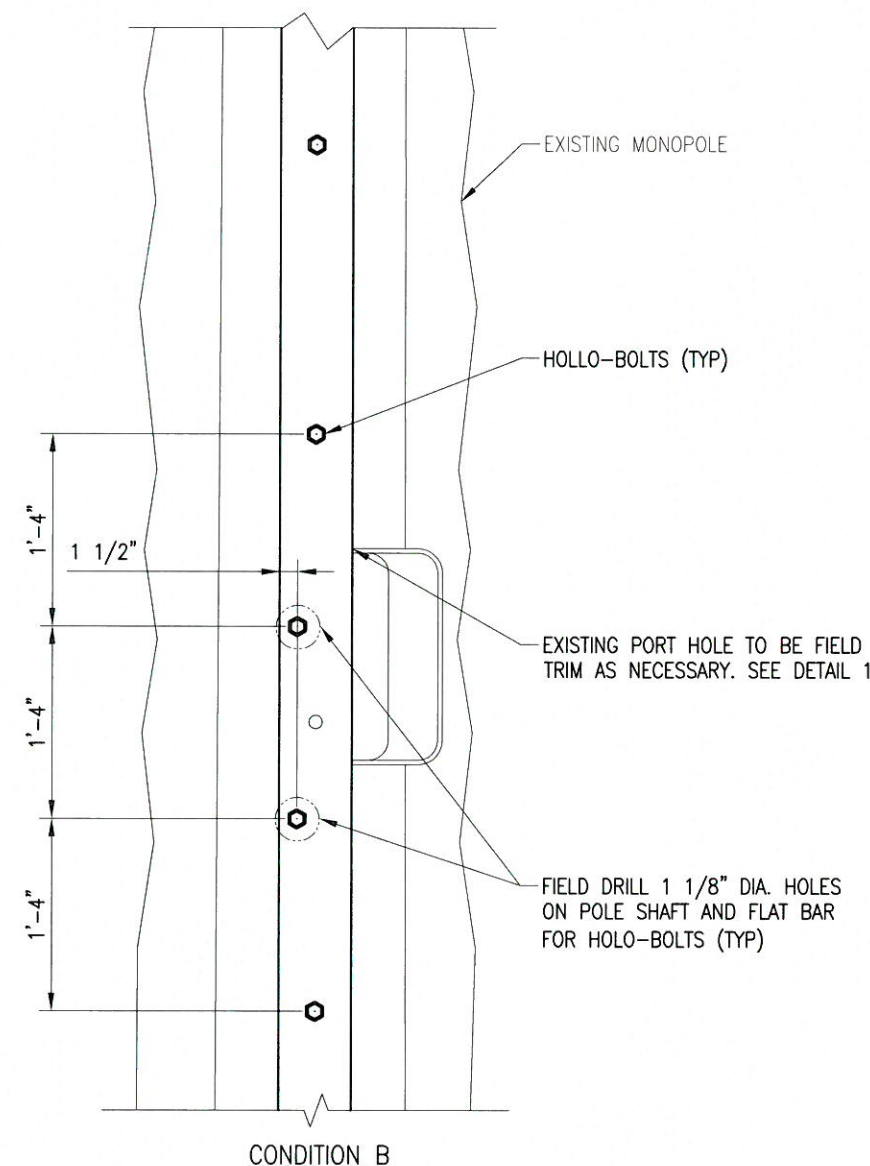
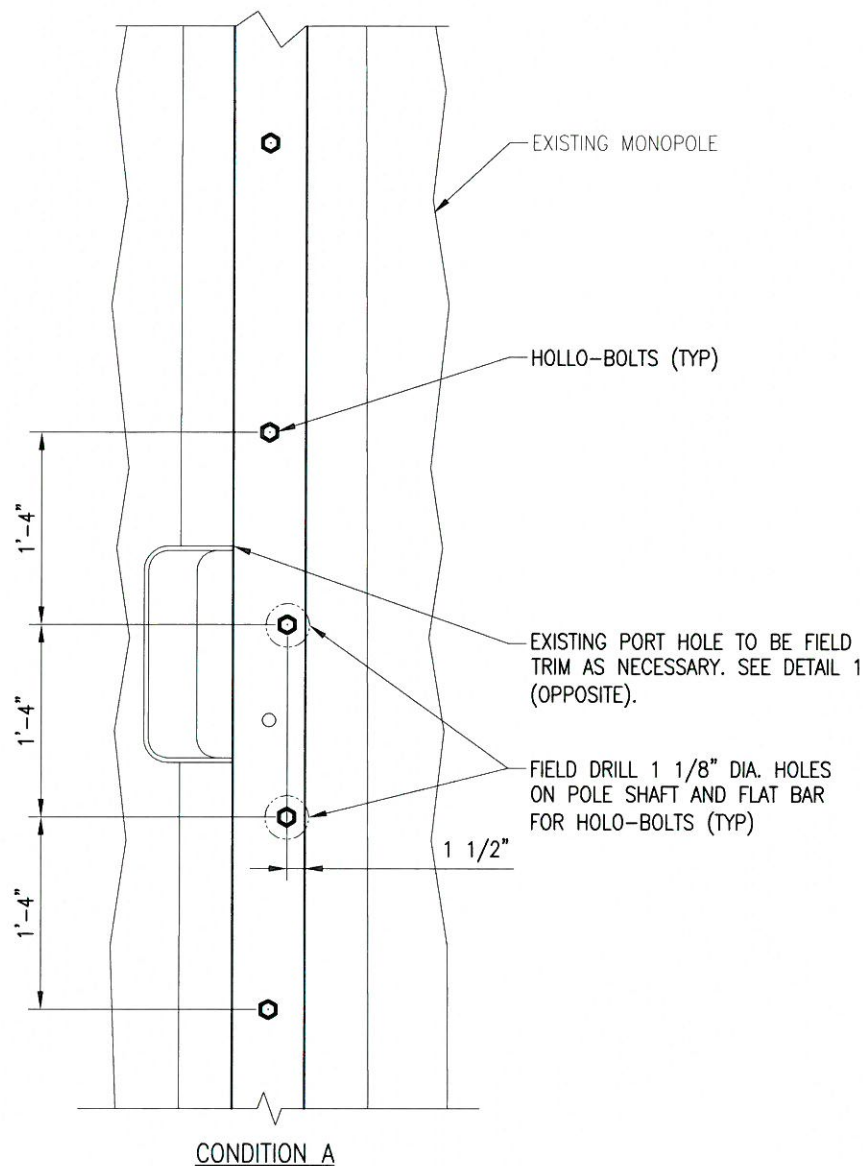
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SHEET TITLE:
**INSTALLATION AT
 HANDHOLE LOCATION
 DETAILS**

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NOTES:
 1. REFER TO SHEET A-1 FOR FLAT BAR LOCATION.