Robinson+Cole

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

Also admitted in Massachusetts and New York

June 19, 2020

Via Electronic Mail

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

Re: **Notice of Exempt Modification – Facility Modification**
599 Greenwoods Road, Norfolk, Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains twelve (12) antennas at the 160-foot level of the existing 180-foot tower at 599 Greenwoods Road in Norfolk, Connecticut (the "Property"). The tower is owned by MCM Acquisition 2017, LLC. The underlying property is owned by the Town of Norfolk. The existing tower and Cellco's use of the tower were approved by the Siting Council ("Council") in 2007 (Docket No 320). A copy of the Council's Decision and Order for Docket No. 320 is included in Attachment 1.

Cellco now intends to modify its facility by replacing two (2) of its existing antennas with two (2) new antennas. The existing antenna mounts will be reinforced as part of these proposed facility modifications. A set of project plans showing the proposed facility modifications and the specifications for Cellco's new antennas are included in Attachment 2.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Norfolk's First Selectman, Matthew T. Riiska; Michael Halloran, Norfolk's Zoning Enforcement Officer; and MCM Acquisition 2017, LLC, the tower owner.

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 tower. Cellco's replacement antennas will be installed at the 160-foot level on the 180-foot tower.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, 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 installation of new antennas and RRHs will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A General Power Density table for the modified facility is included in Attachment 3.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The tower, its foundation and antenna mounts, with certain modifications, can support Cellco's proposed facility modifications. (*See* Structural Analysis Report included in Attachment 4 and Mount Structural Analysis Report included in Attachment 5).

A copy of the parcel map and Property owner information is included in Attachment 6. A Certificate of Mailing verifying that a copy of this filing was sent to municipal officials is included in Attachment 7.

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Matthew T. Riiska, Norfolk First Selectman
Michael Halloran, Norfolk Zoning Enforcement Officer
MCM Acquisition 2017, LLC
Tim Parks

ATTACHMENT 1

DOCKET NO. 320 - Message Center Management, Inc. and New Cingular Wireless PCS, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located off Greenwoods Road East (U.S. Route 44), Norfolk, Connecticut.	}	Connecticut Siting Council March 13, 2007

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Message Center Management, Inc., hereinafter referred to as the Certificate Holder, for a telecommunications facility at the Town of Norfolk Town Farm parcel located off Greenwoods Road East (Route 44), Norfolk, Connecticut.

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

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of New Cingular Wireless PCS, LLC, Cellco Partnership d/b/a Verizon Wireless and other entities, both public and private, but such tower shall not exceed a height of 180 feet above ground level. Antennas mounted on the tower shall not exceed a height of 183 feet above ground level.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Norfolk for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:

    a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment building, access road, utility line, and landscaping; and
    b) construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of electromagnetic radio frequency power density is submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Norfolk public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.

7. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed and providing wireless services within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline.

8. Any request for extension of the time period referred to in Condition 7 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Norfolk. Any proposed modifications to this Decision and Order shall likewise be so served.

9. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

10. The Certificate Holder shall remove any nonfunctioning antenna, and associated antenna mounting equipment, within 60 days of the date the antenna ceased to function.

11. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction and the commencement of site operation.

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

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

The parties and intervenors to this proceeding are:

Certificate Holder Message Center Management, Inc.	**Its Representative** Christopher B. Fisher, Esq. Cuddy & Feder LLP 445 Hamilton Avenue, 14th Floor White Plains, NY 10601
Co-Applicant New Cingular Wireless PCS, LLC	**Its Representative** Christopher B. Fisher, Esq. Cuddy & Feder LLP 445 Hamilton Avenue, 14th Floor White Plains, NY 10601
Intervenor Cellco partnership d/b/a Verizon Wireless	**Its Representative** Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597

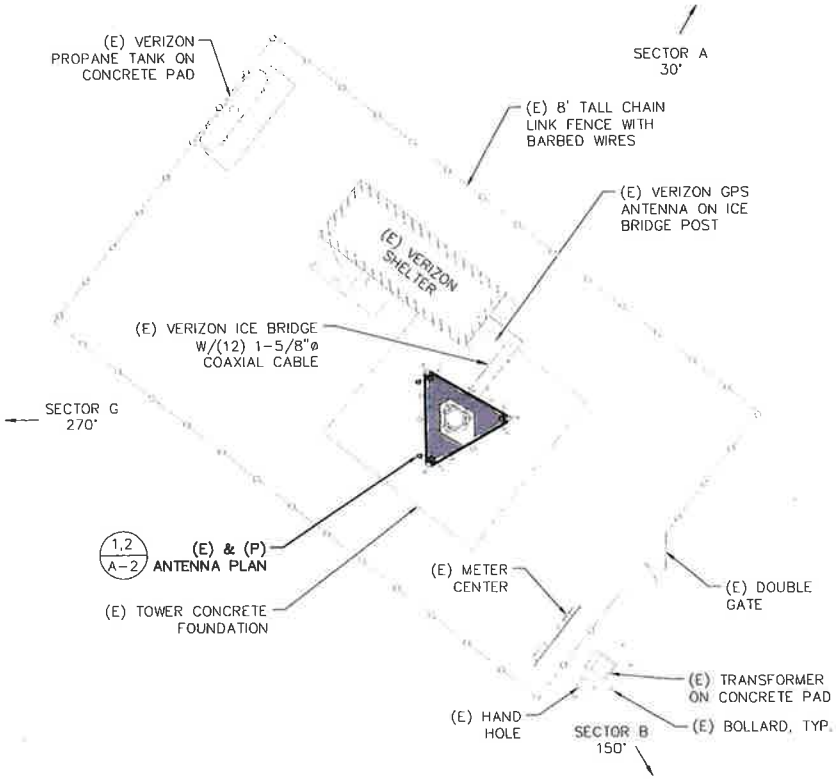
CERTIFICATION

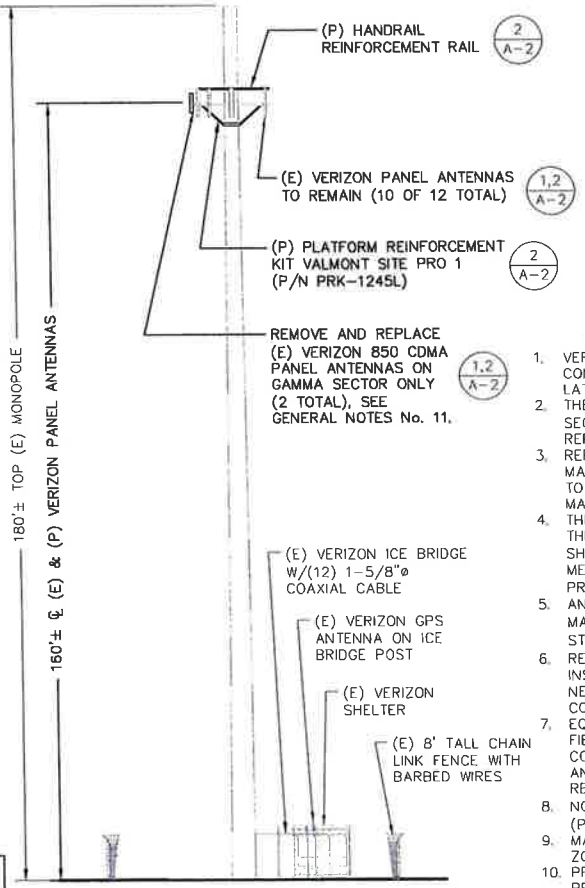
The undersigned members of the Connecticut Siting Council (Council) hereby certify that they have heard this case, or read the record thereof, in **DOCKET NO. 320** - Message Center Management, Inc. and New Cingular Wireless PCS, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located off Greenwoods Road East (U.S. Route 44), Norfolk, Connecticut, and voted as follows to approve the proposed site:

Council Members	Vote Cast
Daniel F. Caruso, Chairman	Yes
Colin C. Tait, Vice Chairman	Abstain
Commissioner Donald W. Downes Designee: Gerald J. Heffernan	Yes
Commissioner Gina McCarthy Designee: Brian J. Emerick	Yes
Philip T. Ashton	Absent
Daniel P. Lynch, Jr.	Yes
James J. Murphy, Jr.	Absent
Dr. Barbara Currier Bell	Yes
Edward S. Wilensky	Yes

Dated at New Britain, Connecticut, March 13, 2007.

ATTACHMENT 2





GENERAL NOTES

1. VERIFY COAX CONFIGURATION, ANTENNA CONFIGURATION, AND ANTENNA HEIGHT WITH LATEST RF DATA SHEET PRIOR TO INSTALLATION.
2. THE CONTRACTOR SHALL SCHEDULE AND SEQUENCE ALL REQUIRED WORK WITH THE OWNER'S REPRESENTATIVE AND CONSTRUCTION MANAGER.
3. REPAIR ANY DAMAGE DURING CONSTRUCTION TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CONSTRUCTION MANAGER
4. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES FOR THE WORK.
5. ANTENNAS & EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS & GLOBAL STRUCTURAL ANALYSIS OF TOWER (BY OTHERS)
6. REPLACE AND/OR REUSE (E) MOUNTING HARDWARE, INSPECT FOR DAMAGE, AND REPLACE AS NECESSARY TO THE SATISFACTION OF THE CONSTRUCTION MANAGER AND ENGINEER.
7. EQUIPMENT LOCATIONS AND CONDITIONS TO BE FIELD VERIFIED PRIOR TO COMMENCEMENT OF CONSTRUCTION. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAME.
8. NORTH SHOWN IS APPROXIMATE. NOT ALL (E) OR (P) IMPROVEMENTS ARE SHOWN FOR CLARITY.
9. MATCH EXISTING ANTENNA TIP ELEVATIONS AS ZONING OR FAA APPROVALS DICTATE.
10. PROTERRA HAS NOT BEEN CONTRACTED TO PERFORM A GLOBAL TOWER STRUCTURAL ANALYSIS AND/OR AN ASSESSMENT OF THE STRUCTURE AND THEREFORE ASSUMES NO RESPONSIBILITY FOR THE STRUCTURAL CAPACITY OR MODIFICATIONS REQUIRED AS A RESULT THEREIN.
11. THIS PLAN SHOWS THE INSTALLATION OF PROPOSED ANTENNAS THAT HAVE BEEN PREVIOUSLY INSTALLED UNDER EMERGENCY REPAIR/ REPLACEMENT WORK.

N

COMPOUND PLAN

1 / A-1

SCALE: 1"=20' (11x17)

20 10 0 20

A PASSING GLOBAL TOWER STRUCTURAL ANALYSIS HAS BEEN COMPLETED BY SBA COMMUNICATIONS CORPORATION DATED JUNE 10, 2020 TO CONFIRM CAPACITY.

REQUIRED MOUNT MODIFICATIONS SHALL BE COMPLETED AS SHOWN HEREON AND ON SHEET S-1 WITHIN LOCAL ANTENNA MOUNT ANALYSIS PROVIDED BY PROTERRA DESIGN GROUP, LLC / EFI GLOBAL, INC. DATED APRIL 24, 2020.

SOUTHEAST ELEVATION

2 / A-1

SCALE: 1"=25' (11x17)

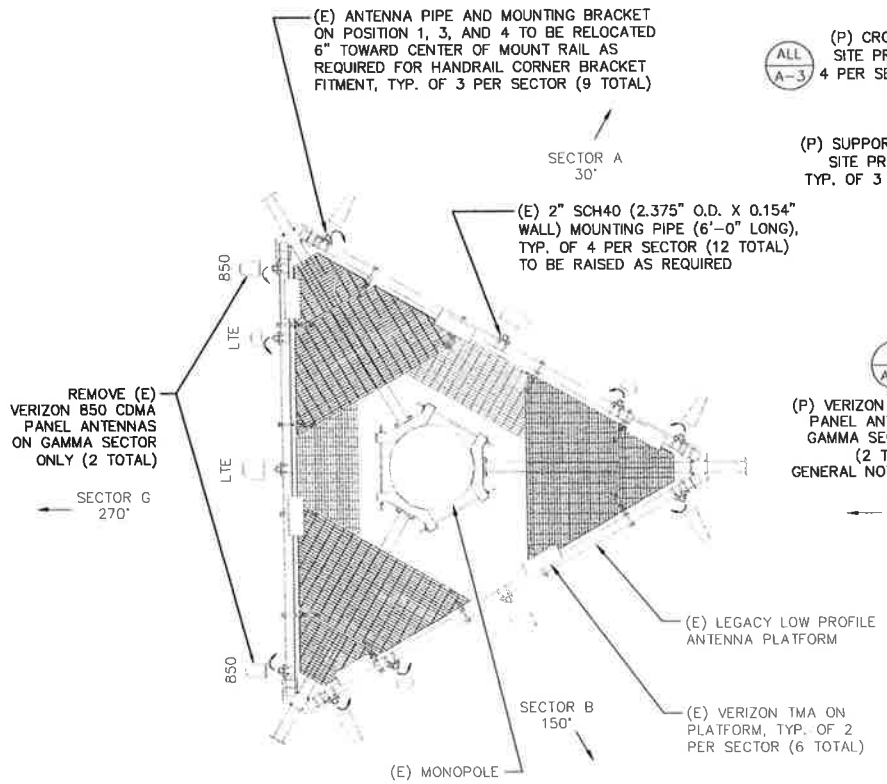
25 12.5 0 25

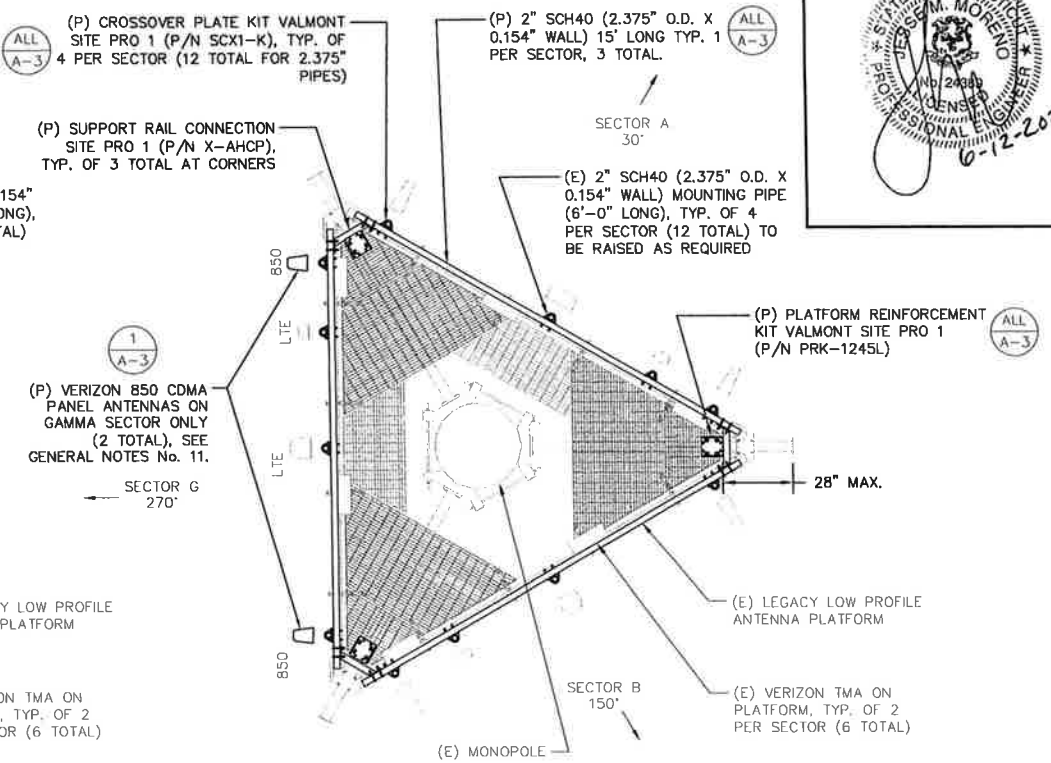
ProTerra DESIGN GROUP, LLC
4 Bay Road
Building A, Suite 200
Hadley, MA 01035
(413)320-4918

verizon
118 FLANDERS ROAD
THIRD FLOOR
WESTBOROUGH, MA 01581

NORFOLK EAST CT
2020 UPGRADE
LOCATION CODE 469051
SBA SITE I.D.#: CT22102
599 GREENWOODS ROAD
NORFOLK, CT 06058

REVISIONS		DESIGNED BY: JWG/JMM	JOB #: 17-017
0	PER RFDS REV1 DATED FEBRUARY 6, 2020	DRAWN BY: TBD	REV. #: 1
1	PASSING STRUCTURAL ANALYSIS	DATE: 06/12/20	A-1
		SHEET: 1 OF 3	





N

(E) ANTENNA PLAN

1 A-2

SCALE: 1"=4'

4 2 0 4

REQUIRED MOUNT MODIFICATIONS SHALL BE COMPLETED AS SHOWN HEREON AND ON SHEET S-1 WITHIN LOCAL ANTENNA MOUNT ANALYSIS PROVIDED BY PROTERRA DESIGN GROUP, LLC / EFI GLOBAL, INC. DATED APRIL 24, 2020.

(P) ANTENNA ELEVATION

2 A-2

SCALE: 1"=4'

4 2 0 4

STATE OF CONNECTICUT
JOSEPH M. MORENO
No. 24389
LICENSED PROFESSIONAL ENGINEER
6-12-2020

ProTerra DESIGN GROUP, LLC
4 Bay Road
Building A, Suite 200
Hadley, MA 01035
(413)320-4918

verizon
118 FLANDERS ROAD
THIRD FLOOR
WESTBOROUGH, MA 01581

NORFOLK EAST CT
2020 UPGRADE
LOCATION CODE 469051
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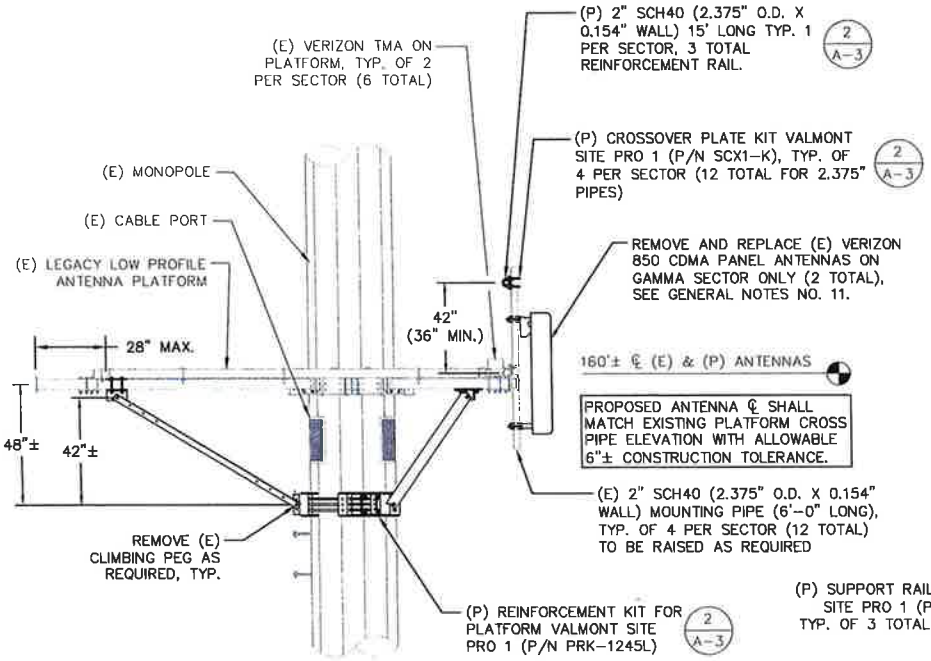
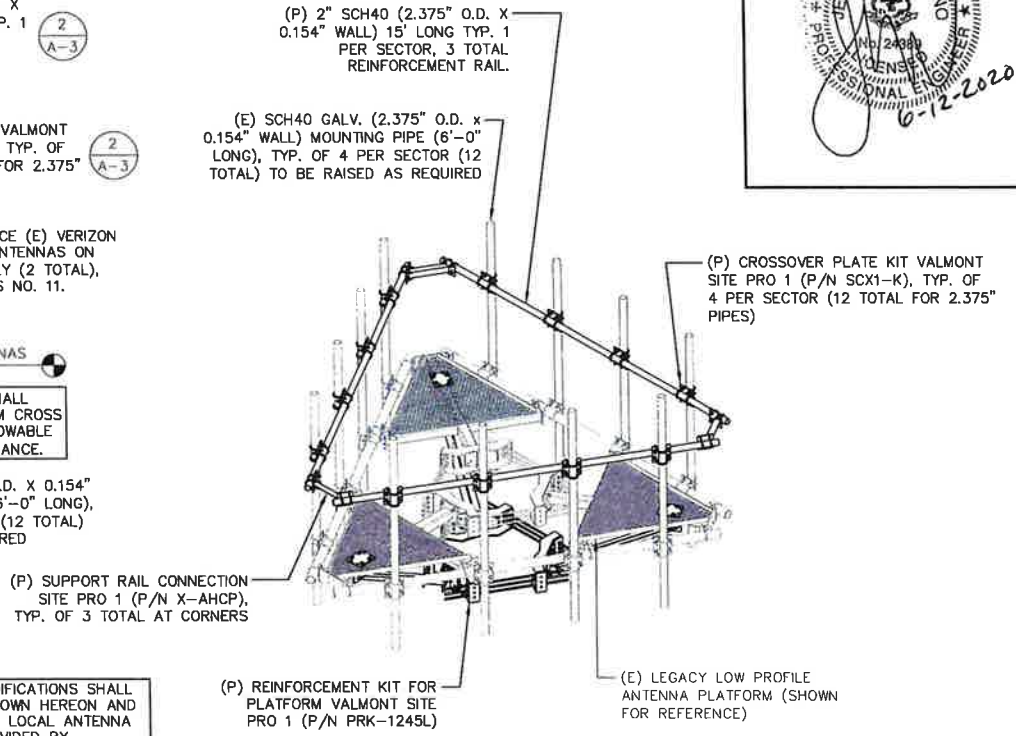
599 GREENWOODS ROAD
NORFOLK, CT 06058

REVISIONS		DESIGNED BY: JWG/JMM	JOB #: 17-017
0	PER RFDS REV1 DATED FEBRUARY 6, 2020	DRAWN BY: TBD	REV. #: 1
1	PASSING STRUCTURAL ANALYSIS	DATE: 06/12/20	A-2
		SHEET: 2 OF 3	





REQUIRED MOUNT MODIFICATIONS SHALL BE COMPLETED AS SHOWN HEREON AND ON SHEET S-1 WITHIN LOCAL ANTENNA MOUNT ANALYSIS PROVIDED BY PROTERRA DESIGN GROUP, LLC / EFI GLOBAL, INC. DATED APRIL 24, 2020.

(P) ANTENNA ELEVATION

1 A-3

SCALE: 1"=4'

4 2 0 4

PLATFORM REINFORCEMENT ISOMETRIC

2 A-3

SCALE: N.T.S.

STATE OF CONNECTICUT
JOSEPH M. MORENO
No. 24389
LICENSED PROFESSIONAL ENGINEER
6-12-2020

ProTerra DESIGN GROUP, LLC
4 Bay Road
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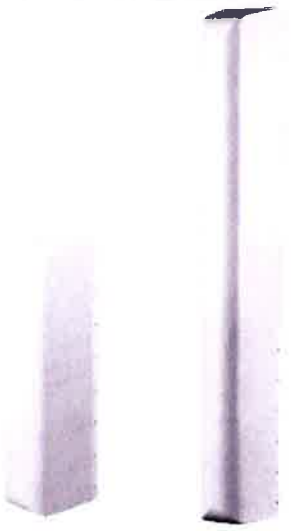
REVISIONS		DESIGNED BY:	JWG/JMM	JOB #:	17-017
0	PER RFDS REV1 DATED FEBRUARY 6, 2020	DRAWN BY:	TBD	REV. #:	1
1	PASSING STRUCTURAL ANALYSIS	DATE:	06/12/20		
		SHEET:	3 OF 3		A-3

Technical Data Sheet APL868013-42T0

Maximizer® Directional Panel Antenna

Product Description

The Celwave® Maximizer series is a log periodic dipole array which uses a patented design to achieve a front-to-back ratio of 45 dB, the highest front-to-back ratio in the industry. Maximizers are available to cover ESMR, AMPS, PCS and DCS frequency ranges. They use RFS' patented monolithic CELlite® technology, which eliminates cable and soldered joints to reduce the possibility of inter-modulation products. The CELlite technology assures high reliability and excellent repeatability of electrical characteristics. The cellular Maximizers are available in 65°, 80° and 90° horizontal beamwidths and the PCS/DCS Maximizers are available in 65° and 90° horizontal beamwidths. Patent number 6,133,889.



Features/Benefits

- 45 dB front-to-back ratio reduces co-channel interference.
- Monolithic construction reduces IM.
- No solder joints, high reliability.
- Surface treated components prevent galvanic corrosion.
- UV stabilized radome assures long life without radome deterioration due to UV exposure.

Technical Features

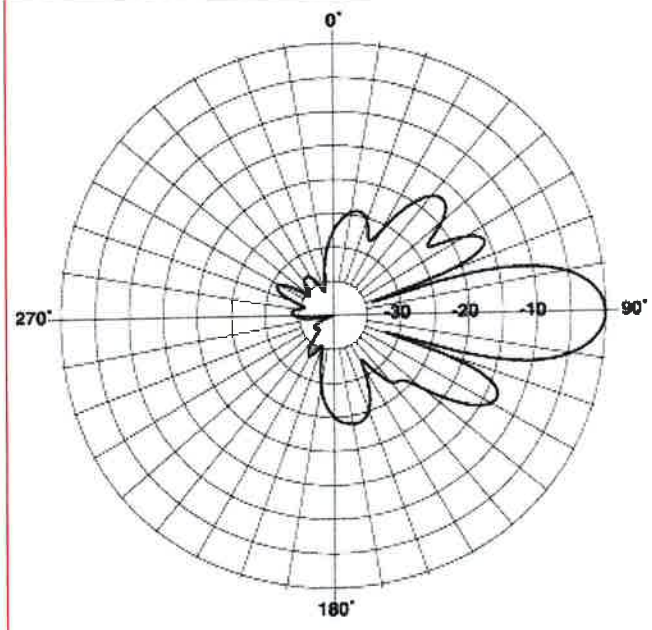
Frequency Band	Trunking/SMR (806-824, 851-869 MHz), Cellular (824-849, 869-894 MHz)
Horizontal Pattern	Directional
Antenna Type	Panel Log Periodic
Electrical Down Tilt Option	Fixed
Gain, dBi (dBd)	14.1 (12)
Frequency Range, MHz	806-894
Connector Type	7-16 DIN Female
Connector Location	Back
Mount Type	Downtilt
Electrical Downtilt, deg	0
Horizontal Beamwidth, deg	80
Mounting Hardware	APM21-3
Rated Wind Speed, km/h (mph)	200 (125)
VSWR	< 1.5:1
Vertical Beamwidth, deg	15
Polarization	Vertical
Front-To-Back Ratio, dB	45
Maximum Power Input, W	500
Lightning Protection	Direct Ground

Technical Data Sheet **APL868013-42T0**

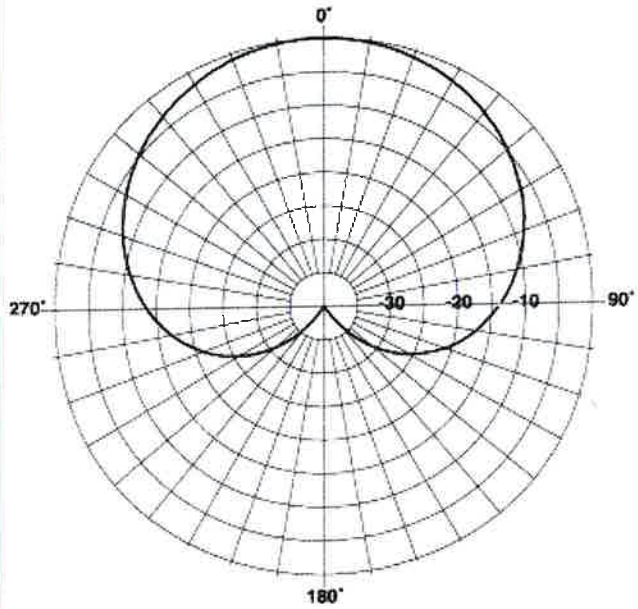
Maximizer® Directional Panel Antenna

3rd Order IMP @ 2 x 43 dBm, dBm	< -100
Overall Length, m (ft)	1.2 (4.0)
Dimensions - HxWxD, mm (in)	1219 x 152 x 203 (48 x 6 x 8)
Weight w/o Mtg Hardware, kg (lb)	2.8 (6.32)
Weight w/ Mtg Hardware, kg (lb)	3.7 (8.2)
Radiating Element Material	Aluminum Alloy
Radome Material	UV Stabilized High Impact ABS
Reflector Material	5052-H32 Aluminum
Max Wind Loading Area, m^2 (ft^2)	0.307 (3.3)
Survival Wind Speed, km/h (mph)	200 (125)
Maximum Thrust @ Rated Wind, N (lbf)	916 (206)
Side Wind Loading Area, m^2 (ft^2)	0.248 (2.67)
Side Thrust @ Rated Wind, N (lbf)	743 (167)
Shipping Weight, kg (lb)	7.9 (17.5)
Packing Dimensions, HxWxD, mm (in)	1270 x 305 x 203 (50 x 12 x 8)
Shipping Dimensions of Accessory - HxWxD, m (ft)	Packed w/antenna
Shipping Mode	UPS

Notes



Maximizer® Directional Panel Antenna



ATTACHMENT 3

Site Name: NORFOLK EAST CT
Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissible Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
5G 28GHz	28000	0	610	0	160	0.0000	1.0	0.00%
VZW CBRS	3600	0	50	0	160	0.0000	1.0	0.00%
VZW PCS	1970	0	2312	0	160	0.0000	1.0	0.00%
VZW Cellular LTE	869	1	499	499	160	0.0070	0.579333333	1.21%
VZW Cellular	869	0	499	0	160	0.0000	0.579333333	0.00%
VZW AWS	2145	0	2570	0	160	0.0000	1.0	0.00%
VZW 700	746	1	1165	1165	160	0.0164	0.497333333	3.29%

Total Percentage of Maximum Permissible Exposure 4.50%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Section 1.13101 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

MHz = Megahertz
mW/cm^2 = milliwatts per square centimeter
ERP = Effective Radiated Power

Absolute worst case maximum values used, including the following assumptions:
1. closest accessible point is distance from antenna to base of pole;
2. continuous transmission from all available channels at full power for indefinite time period; and,
3. all RF energy is assumed to be directed solely to the base of the pole.

ATTACHMENT 4

SBA Communications Corporation
8051 Congress Avenue
Boca Raton, FL 33487-1307

T + 561 995 7670
F + 561 995 7626

sbasite.com

Structural Analysis Report

Client: Verizon

Client Site ID / Name: 469051 / NORFOLK EAST CT
Application #: 130275, v3

SBA Site ID / Name: CT22102-A / Town of Norfolk DPW site

180 ft Monopole

Greenwoods Road East
Norfolk, Connecticut 06058
Lat: 41.983189, Long: 73.153808

Project number: CT22102-VZW-061020

Analysis Results

Tower	37.3%	Pass
Foundation	26.0%	Pass

Change in tower stress due to mount modification / replacement	2.8%

Prepared by:

Serge Berthomieux
Structural Analyst
561-226-9365
SBerthomieux@sbasite.com

Reviewed by:

Nitesh Ahuja, P.E.
Director of Engineering
561-226-9452
nahuja@sbasite.com

STATE OF CONNECTICUT NITESH AHUJA No. 27942 LICENSED PROFESSIONAL ENGINEER

06/10/2020

June 10, 2020

SBA Communications Corporation
8051 Congress Avenue
Boca Raton, FL 33487-1307

T + 561 995 7670
F + 561 995 7626

sbasite.com

Structural Analysis Report

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Prepared by:

Serge Berthomieux
Structural Analyst
561-226-9365
SBerthomieux@sbasite.com

Reviewed by:

Nitesh Ahuja, P.E.
Director of Engineering
561-226-9452
nahuja@sbasite.com

June 10, 2020

Table of Contents

Introduction

The purpose of this report is to summarize the analysis results on the 180 ft Monopole to support the proposed antennas and transmissions lines in addition to those currently installed.

Table 1 List of Documents Used

Item	Document
Tower design/drawings	Valmont, Project No. 24166R3, dated 07-20-2007
Foundation drawings	Valmont, Drawing No. 211665, dated 07-20-2007
Geotechnical report	Clarence Welti assoc. Inc, dated 03-04-2007
Modification drawings	N/A
Latest SA	SBA, Project number: CT22102-VZW-040120, dated 04-07-2020

Analysis Criteria

Table 2 Code Related Data

Jurisdiction (State/County/City)	Connecticut/LITCHFIELD/Norfolk
Governing Codes	ANSI/TIA/EIA 222-G, 2015 IBC, 2018 CBC
Basic Wind Speed (3-Sec gust)	89.0 mph (Ultimate Wind Speed: 109 mph)
Wind Speed with Ice (3-Sec gust)	40 mph
Service Wind Speed (3-Sec gust)	60 mph
Ice Thickness	1.00"
Structural Class*	II
Exposure Category	C
Topographic Category	1
Crest Height	0 ft
Seismic Parameter S_s**	0.175
Seismic Parameter S_1	0.065

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

**Earthquake effects were ignored as per section 2.7.3 of the TIA-222-G code provisions for Ss < 1.0.

Appurtenance Loading

Existing Loading:

Table 3 Existing Appurtenances

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	160.0	2	Antel LPA-80080-8CF-EDIN-X Panel	(1) Low Profile Platform	(12) 1 5/8" (1) Unknown Conduit	Verizon
2		2	RFS APL868013 Panel			
3		4	Antel LPA-80080-6CF-EDIN-X Panel			
4		3	Antel BXA-171085-12BF Panel			
5		1	Antel BXA-70063-6CF-EDIN-5 Panel			
6		2	Antel BXA-70080-6CF-EDIN-X Panel			
7		6	Kaelus TMA2071F00V1-1 TMA			
8		6	RFS FD9R6004/2C-3L Diplexer			

Proposed Loading:

Information pertaining to proposed antennas and transmission lines were based upon the Application #: 130275, v3 from Verizon and is listed in Table 4.

Table 4 Proposed Appurtenances

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
2	160.0	2	RFS APL868013 Panel	(1) Low Profile Platform, (1) Handrail Kit SitePro: HRK14, (1) Reinforcement Kit SitePro: PRK-1245L, (12) Crossover plates SitePro SCX1-K	(12) 1 5/8" (1) Unknown Conduit	Verizon
3		4	Antel LPA-80080-6CF-EDIN-X Panel			
4		3	Antel BXA-171085-12BF Panel			
5		1	Antel BXA-70063-6CF-EDIN-5 Panel			
6		2	Antel BXA-70080-6CF-EDIN-X Panel			
7		6	Kaelus TMA2071F00V1-1 TMA			
8		6	RFS FD9R6004/2C-3L Diplexer			

Analysis Results

Tower

The results of the structural analysis are shown below in table 5. Additional information for the tower analysis is provided within the Appendix.

Table 5 Tower Analysis Summary

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	35.3%	37.3%	28.0%
Pass/Fail	Pass	Pass	Pass

Foundation

The results of the foundation analysis are shown below in table 6. Additional information for the foundation analysis is provided within the Appendix.

Table 6 Foundation Analysis Summary

Structural Component	Max Usage (%)	Analysis Result
Foundation	26.0%	Pass

Conclusions

Based on the analysis results, the existing tower and foundation were found to be sufficient to safely support the equipment listed in this analysis. No modification to the tower and foundation is needed at this time.

Installation Requirements

This analysis was performed under the assumption that the carrier will place the proposed equipment and feed lines at the installation height listed in Table 4 and in accordance with the coax layout shown. TMAs and RRUs are to be installed on existing mounts behind tenant's antennas unless otherwise noted. No equipment is to be installed directly in the climbing path. All equipment is to be installed per mount manufacturer specifications. In case site conditions do not allow for the required installation parameters to be met the carrier must notify SBA Communications Corporation engineers for approval of an alternative placement.

Assumptions and Limitations

Assumptions

This analysis was completed based on the following assumptions:

- Tower and foundation were built in accordance to manufacturer specifications.
- Tower and foundation has been properly maintained in accordance with the manufacturer's specifications
- All existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion
- Welds and bolts are assumed able to carry their intended original design loads.
- The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Table 3 and 4.
- This analysis may be affected if any assumptions are not valid or have been made in error. SBA should be notified to determine the effect on the structural integrity of the tower.

Limitations

The computer generated analysis performed by the tower software is limited to theoretical capacities of the towers structural members and does not account for any missing or damaged members or connections. The tower and foundation are assumed to have been properly designed, fabricated, installed and maintained, barring any conflicting findings from the most recent inspection.

SBA Communications Corporation has used its due diligence to verify the information provided to perform this analysis. It is unreasonable to perform a more detailed inspection of a tower and its components. This report is not a condition assessment of the tower or foundation.

Appendix

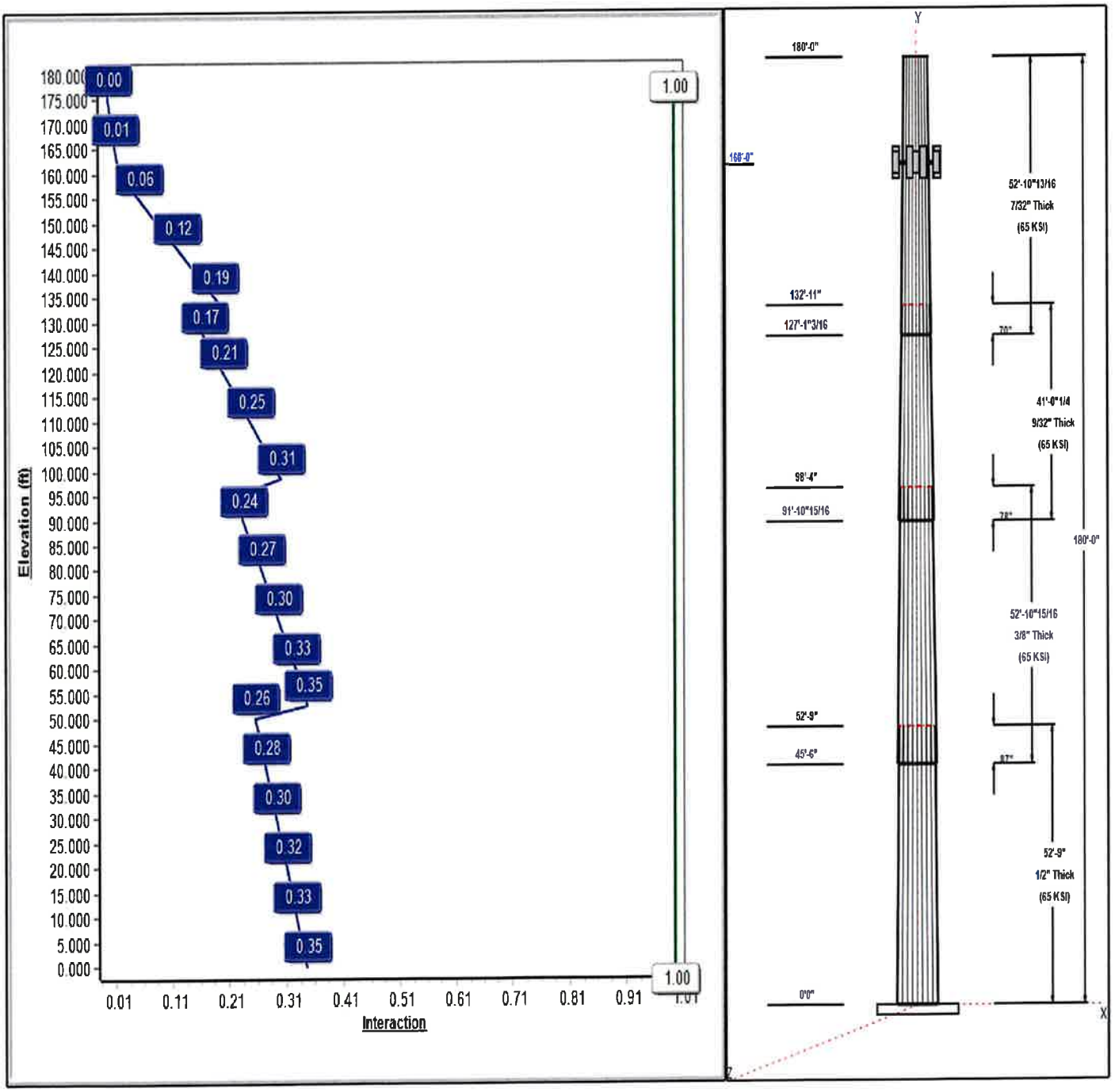
Usage Diagram - Max Ratio 35.26% at 52.8ft

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020
Site Name:	Town of Norfolk DPW site	**Exposure:**	C	
Height:	180.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

SBA

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

Load Case : 1.2D + 1.6W 89 mph Wind



Structure: CT22102-A

Type: Tapered
Site Name: Town of Norfolk DPW site
Height: 180.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.14000

6/8/2020

Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	52.75	47.12	54.50	0.500		0.14000	65
2	52.91	41.47	48.88	0.375	Slip	0.14000	65
3	41.02	37.20	42.95	0.281	Slip	0.14000	65
4	52.90	31.05	38.46	0.219	Slip	0.14000	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
160.00	160.00	2	RFS APL868013 Panel	Verizon
160.00	160.00	4	Antel	Verizon
160.00	160.00	3	Antel BXA-171085-12BF	Verizon
160.00	160.00	1	Antel	Verizon
160.00	160.00	2	Antel	Verizon
160.00	160.00	6	Kaelus TMA2071F00V1-1	Verizon
160.00	160.00	1	Low Profile Platform	Verizon
160.00	160.00	6	RFS FD9R6004/2C-3L	Verizon
160.00	160.00	1	(1) Handrail Kit Site Pro	Verizon
160.00	160.00	1	(1) Reinforcement Kit Site	Verizon

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	160.00	Inside	1 5/8" Coax	Verizon
0.00	160.00	Inside	Unknown Conduit	Verizon

Anchor Bolts

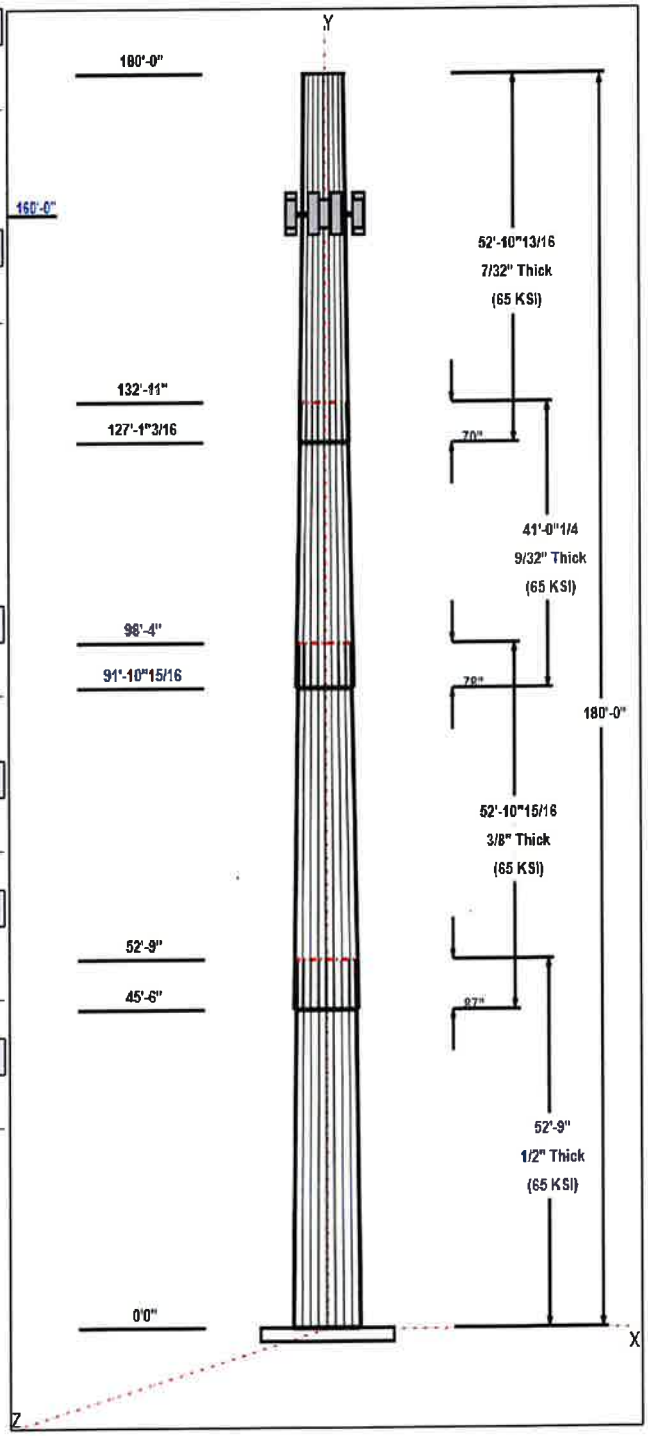
Qty	Specifications	Grade (ksi)	Arrangement
20	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.7500	68.9	60.0	Round

Reactions

Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 89 mph Wind	2357.3	21.6	45.7
0.9D + 1.6W 89 mph Wind	2340.2	21.6	34.3
1.2D + 1.0Di + 1.0Wi 40 mph Wind	598.2	5.4	68.9
1.2D + 1.0E	129.7	1.2	45.8
0.9D + 1.0E	128.7	1.2	34.3
1.0D + 1.0W 60 mph Wind	666.5	6.1	38.1



Structure: CT22102-A - Coax Line Placement

Type:
Site Name: Town of Norfolk DPW site
Height: 180.00 (ft)

6/8/2020

Shaft Properties

Structure:	CT22102-A		**Code:**	EIA/TIA-222-G	6/8/2020
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 4

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	52.750	0.5000	65		0.00	14,330
2	18	52.910	0.3750	65	Slip	87.00	9,600
3	18	41.020	0.2813	65	Slip	78.00	4,958
4	18	52.903	0.2188	65	Slip	70.00	4,316
					Total Shaft Weight:		**33,205**

	Bottom						Top						
Sec. No.	**Dia (in)**	**Elev (ft)**	**Area (sqin)**	**Ix (in^4)**	**W/t Ratio**	**D/t Ratio**	**Dia (in)**	**Elev (ft)**	**Area (sqin)**	**Ix (in^4)**	**W/t Ratio**	**D/t Ratio**	**Taper**
1	54.50	0.00	85.69	31571.53	17.81	109.00	47.12	52.75	73.98	20309.1	15.20	94.23	0.140000
2	48.88	45.50	57.73	17160.71	21.57	130.35	41.47	98.41	48.91	10438.1	18.09	110.5	0.140000
3	42.95	91.91	38.08	8758.24	25.51	152.69	37.20	132.93	32.96	5676.22	21.91	132.2	0.140000
4	38.46	127.1	26.55	4904.20	29.59	175.80	31.05	180.00	21.41	2570.79	23.62	141.9	0.140000

Load Summary

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 5	

Discrete Appurtenances

				No Ice			Ice				
No.	**Elev (ft)**	**Description**	**Qty**	**Weight (lb)**	**CaAa (sf)**	**CaAa Factor**	**Weight (lb)**	**CaAa (sf)**	**CaAa Factor**	**Hor. Ecc. (ft)**	**Vert Ecc (ft)**
1	160.00	RFS APL868013 Panel	2	7.00	3.61	0.90	163.71	4.055	0.90	0.00	0.00
2	160.00	Antel LPA-80080-6CF-EDIN-X Panel	4	21.00	8.63	0.76	236.97	12.616	0.76	0.00	0.00
3	160.00	Antel BXA-171085-12BF Panel	3	15.00	4.73	0.88	144.29	8.337	0.88	0.00	0.00
4	160.00	Antel BXA-70063-6CF-EDIN-5 Panel	1	17.00	7.57	0.78	176.61	11.719	0.78	0.00	0.00
5	160.00	Antel BXA-70080-6CF-EDIN-X Panel	2	18.00	5.77	0.90	188.01	8.959	0.90	0.00	0.00
6	160.00	Kaelus TMA2071F00V1-1 TMA	6	37.80	0.96	0.82	97.24	1.555	0.82	0.00	0.00
7	160.00	Low Profile Platform	1	1500.00	22.00	1.00	3256.51	45.701	1.00	0.00	0.00
8	160.00	RFS FD9R6004/2C-3L Diplexer	6	3.00	0.37	0.62	15.43	0.981	0.63	0.00	0.00
9	160.00	(1) Handrail Kit Site Pro HRK14	1	436.00	9.02	1.00	946.56	18.738	1.00	0.00	0.00
10	160.00	(1) Reinforcement Kit Site Pro	1	302.00	11.87	1.00	655.64	24.658	1.00	0.00	0.00
		Totals:	**27**	**2,678.80**			**7,795.53**				

Linear Appurtenances

Bottom Elev. (ft)	**Top Elev. (ft)**	**Description**	**Exposed Width**	**Exposed**
0.00	160.00	(12) 1 5/8" Coax	0.00	Inside
0.00	160.00	(1) Unknown Conduit	0.00	Inside

Shaft Section Properties

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

Increment Length: 5 (ft)

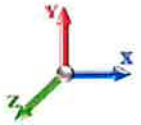
Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.5000	54.500	85.695	31571.5	17.81	109.00	80.5	1141.	0.0
5.00		0.5000	53.800	84.584	30359.6	17.56	107.60	80.7	1111.	1448.6
10.00		0.5000	53.100	83.473	29179.1	17.32	106.20	81.0	1082.	1429.7
15.00		0.5000	52.400	82.362	28029.6	17.07	104.80	81.3	1053.	1410.8
20.00		0.5000	51.700	81.251	26910.7	16.82	103.40	81.6	1025.	1391.9
25.00		0.5000	51.000	80.141	25821.9	16.57	102.00	81.9	997.2	1373.0
30.00		0.5000	50.300	79.030	24763.0	16.33	100.60	82.2	969.7	1354.1
35.00		0.5000	49.600	77.919	23733.3	16.08	99.20	82.5	942.5	1335.2
40.00		0.5000	48.900	76.808	22732.7	15.83	97.80	82.5	915.6	1316.3
45.00		0.5000	48.200	75.697	21760.5	15.59	96.40	82.5	889.2	1297.4
45.50	Bot - Section 2	0.5000	48.130	75.586	21664.9	15.56	96.26	82.5	886.6	128.7
50.00		0.5000	47.500	74.586	20816.5	15.34	95.00	82.5	863.2	2028.0
52.75	Top - Section 1	0.3750	47.865	56.523	16105.8	21.10	127.64	0.0	0.0	1226.2
55.00		0.3750	47.550	56.148	15787.4	20.95	126.80	76.8	653.9	431.3
60.00		0.3750	46.850	55.315	15095.0	20.62	124.93	77.1	634.6	948.2
65.00		0.3750	46.150	54.482	14423.2	20.29	123.07	77.5	615.6	934.0
70.00		0.3750	45.450	53.649	13771.6	19.96	121.20	77.9	596.8	919.9
75.00		0.3750	44.750	52.815	13139.9	19.63	119.33	78.3	578.3	905.7
80.00		0.3750	44.050	51.982	12527.8	19.30	117.47	78.7	560.2	891.5
85.00		0.3750	43.350	51.149	11935.0	18.97	115.60	79.1	542.3	877.3
90.00		0.3750	42.650	50.316	11361.3	18.64	113.73	79.5	524.7	863.2
91.91	Bot - Section 3	0.3750	42.383	49.998	11147.0	18.52	113.02	79.6	518.0	326.0
95.00		0.3750	41.950	49.483	10806.2	18.31	111.87	79.9	507.4	921.4
98.41	Top - Section 2	0.2813	42.035	37.272	8209.7	24.94	149.46	0.0	0.0	1005.8
100.00		0.2813	41.812	37.073	8079.1	24.80	148.67	72.2	380.6	201.1
105.00		0.2813	41.112	36.448	7677.4	24.36	146.18	72.7	367.8	625.4
110.00		0.2813	40.412	35.823	7289.3	23.93	143.69	73.3	355.3	614.8
115.00		0.2813	39.712	35.199	6914.5	23.49	141.20	73.8	342.9	604.2
120.00		0.2813	39.012	34.574	6552.7	23.05	138.71	74.3	330.8	593.5
125.00		0.2813	38.312	33.949	6203.8	22.61	136.22	74.8	318.9	582.9
127.10	Bot - Section 4	0.2813	38.019	33.687	6061.3	22.43	135.18	75.0	314.0	241.3
130.00		0.2813	37.612	33.324	5867.5	22.17	133.73	75.3	307.3	591.9
132.93	Top - Section 3	0.2188	37.640	25.981	4596.6	28.93	172.07	0.0	0.0	590.9
135.00		0.2188	37.350	25.780	4490.7	28.70	170.74	67.6	236.8	182.3
140.00		0.2188	36.650	25.294	4241.5	28.13	167.54	68.3	227.9	434.5
145.00		0.2188	35.950	24.808	4001.6	27.57	164.34	69.0	219.2	426.2
150.00		0.2188	35.250	24.322	3771.0	27.00	161.14	69.6	210.7	417.9
155.00		0.2188	34.550	23.836	3549.5	26.44	157.94	70.3	202.3	409.7
160.00		0.2188	33.850	23.350	3336.7	25.87	154.74	71.0	194.2	401.4
165.00		0.2188	33.150	22.864	3132.7	25.31	151.54	71.6	186.1	393.1
170.00		0.2188	32.450	22.378	2937.1	24.75	148.34	72.3	178.3	384.9
175.00		0.2188	31.750	21.892	2749.9	24.18	145.14	73.0	170.6	376.6
180.00		0.2188	31.050	21.406	2570.8	23.62	141.94	73.6	163.1	368.3
										33204.8

Wind Loading - Shaft

Structure: CT22102-A
Site Name: Town of Norfolk DPW site
Height: 180.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1 **Topography:** 1

Code: EIA/TIA-222-G 6/8/2020
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

Load Case: 1.2D + 1.6W 89 mph Wind
Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	16.374	18.01	378.41	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	16.374	18.01	373.55	0.650	0.000	5.00	22.911	14.89	429.2	0.0	1738.3
10.00		1.00	0.85	16.374	18.01	368.69	0.650	0.000	5.00	22.614	14.70	423.6	0.0	1715.6
15.00		1.00	0.85	16.374	18.01	363.83	0.650	0.000	5.00	22.318	14.51	418.1	0.0	1692.9
20.00		1.00	0.90	17.374	19.11	369.76	0.650	0.000	5.00	22.022	14.31	437.7	0.0	1670.2
25.00		1.00	0.95	18.209	20.03	373.43	0.650	0.000	5.00	21.726	14.12	452.6	0.0	1647.5
30.00		1.00	0.98	18.922	20.81	375.44	0.650	0.000	5.00	21.430	13.93	463.9	0.0	1624.9
35.00		1.00	1.01	19.546	21.50	376.27	0.650	0.000	5.00	21.134	13.74	472.6	0.0	1602.2
40.00		1.00	1.04	20.103	22.11	376.21	0.650	0.000	5.00	20.837	13.54	479.2	0.0	1579.5
45.00		1.00	1.07	20.608	22.67	375.45	0.650	0.000	5.00	20.541	13.35	484.3	0.0	1556.8
45.50	Bot - Section 2	1.00	1.07	20.656	22.72	375.34	0.650	0.000	0.50	2.038	1.32	48.2	0.0	154.4
50.00		1.00	1.09	21.070	23.18	374.12	0.650	0.000	4.50	18.493	12.02	445.8	0.0	2433.6
52.75	Top - Section 1	1.00	1.11	21.309	23.44	373.19	0.650	0.000	2.75	11.183	7.27	272.6	0.0	1471.4
55.00		1.00	1.12	21.497	23.65	378.29	0.650	0.000	2.25	9.083	5.90	223.4	0.0	517.6
60.00		1.00	1.14	21.895	24.08	376.15	0.650	0.000	5.00	19.970	12.98	500.2	0.0	1137.9
65.00		1.00	1.16	22.267	24.49	373.67	0.650	0.000	5.00	19.674	12.79	501.2	0.0	1120.8
70.00		1.00	1.17	22.617	24.88	370.88	0.650	0.000	5.00	19.378	12.60	501.4	0.0	1103.8
75.00		1.00	1.19	22.948	25.24	367.83	0.650	0.000	5.00	19.082	12.40	500.9	0.0	1086.8
80.00		1.00	1.21	23.262	25.59	364.55	0.650	0.000	5.00	18.785	12.21	499.9	0.0	1069.8
85.00		1.00	1.22	23.561	25.92	361.05	0.650	0.000	5.00	18.489	12.02	498.3	0.0	1052.8
90.00		1.00	1.24	23.846	26.23	357.36	0.650	0.000	5.00	18.193	11.83	496.3	0.0	1035.8
91.91	Bot - Section 3	1.00	1.24	23.952	26.35	355.91	0.650	0.000	1.91	6.872	4.47	188.3	0.0	391.2
95.00		1.00	1.25	24.119	26.53	353.51	0.650	0.000	3.09	11.172	7.26	308.3	0.0	1105.7
98.41	Top - Section 2	1.00	1.26	24.299	26.73	350.78	0.650	0.000	3.41	12.198	7.93	339.1	0.0	1207.0
100.00		1.00	1.27	24.381	26.82	354.25	0.650	0.000	1.59	5.641	3.67	157.3	0.0	241.3
105.00		1.00	1.28	24.632	27.10	350.12	0.650	0.000	5.00	17.543	11.40	494.3	0.0	750.5
110.00		1.00	1.29	24.875	27.36	345.85	0.650	0.000	5.00	17.246	11.21	490.8	0.0	737.8
115.00		1.00	1.30	25.109	27.62	341.45	0.650	0.000	5.00	16.950	11.02	486.9	0.0	725.0
120.00		1.00	1.32	25.335	27.87	336.94	0.650	0.000	5.00	16.654	10.83	482.7	0.0	712.3
125.00		1.00	1.33	25.553	28.11	332.32	0.650	0.000	5.00	16.358	10.63	478.2	0.0	699.5
127.10	Bot - Section 4	1.00	1.33	25.643	28.21	330.35	0.650	0.000	2.10	6.771	4.40	198.6	0.0	289.5
130.00		1.00	1.34	25.765	28.34	327.59	0.650	0.000	2.90	9.398	6.11	277.0	0.0	710.3
132.93	Top - Section 3	1.00	1.34	25.886	28.48	324.78	0.650	0.000	2.93	9.383	6.10	277.9	0.0	709.0
135.00		1.00	1.35	25.971	28.57	326.60	0.650	0.000	2.07	6.568	4.27	195.1	0.0	218.8
140.00		1.00	1.36	26.170	28.79	321.71	0.650	0.000	5.00	15.654	10.18	468.7	0.0	521.4
145.00		1.00	1.37	26.364	29.00	316.73	0.650	0.000	5.00	15.358	9.98	463.2	0.0	511.5
150.00		1.00	1.38	26.553	29.21	311.68	0.650	0.000	5.00	15.062	9.79	457.5	0.0	501.5
155.00		1.00	1.39	26.737	29.41	306.54	0.650	0.000	5.00	14.766	9.60	451.7	0.0	491.6
160.00	Appurtenance(s)	1.00	1.40	26.917	29.61	301.34	0.650	0.000	5.00	14.470	9.41	445.6	0.0	481.7
165.00		1.00	1.41	27.091	29.80	296.06	0.650	0.000	5.00	14.174	9.21	439.3	0.0	471.8
170.00		1.00	1.42	27.262	29.99	290.72	0.650	0.000	5.00	13.877	9.02	432.8	0.0	461.8
175.00		1.00	1.42	27.429	30.17	285.32	0.650	0.000	5.00	13.581	8.83	426.2	0.0	451.9
180.00		1.00	1.43	27.592	30.35	279.86	0.650	0.000	5.00	13.285	8.64	419.4	0.0	442.0
								Totals:	**180.00**			**16,928.0**		**39,845.7**

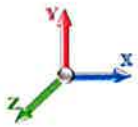
Discrete Appurtenance Forces

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Load Case: 1.2D + 1.6W 89 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	160.00	RFS APL868013 Panel	2	26.917	29.608	0.72	0.80	5.20	16.80	0.000	0.000	246.26	0.00	0.00
2	160.00	Antel	4	26.917	29.608	0.61	0.80	20.99	100.80	0.000	0.000	994.27	0.00	0.00
3	160.00	Antel BXA-171085-12BF	3	26.917	29.608	0.70	0.80	9.99	54.00	0.000	0.000	473.25	0.00	0.00
4	160.00	Antel	1	26.917	29.608	0.62	0.80	4.72	20.40	0.000	0.000	223.78	0.00	0.00
5	160.00	Antel	2	26.917	29.608	0.72	0.80	8.31	43.20	0.000	0.000	393.61	0.00	0.00
6	160.00	Kaelus TMA2071F00V1-1	6	26.917	29.608	0.66	0.80	3.78	272.16	0.000	0.000	179.00	0.00	0.00
7	160.00	Low Profile Platform	1	26.917	29.608	1.00	1.00	22.00	1800.00	0.000	0.000	1042.21	0.00	0.00
8	160.00	RFS FD9R6004/2C-3L	6	26.917	29.608	0.50	0.80	1.10	21.60	0.000	0.000	52.16	0.00	0.00
9	160.00	(1) Handrail Kit Site Pro	1	26.917	29.608	1.00	1.00	9.02	523.20	0.000	0.000	427.31	0.00	0.00
10	160.00	(1) Reinforcement Kit Site	1	26.917	29.608	1.00	1.00	11.87	362.40	0.000	0.000	562.32	0.00	0.00
							Totals:		**3,214.56**			**4,594.17**		

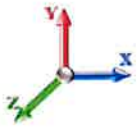
Total Applied Force Summary

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Load Case: 1.2D + 1.6W 89 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		429.16	1822.80	0.00	0.00
10.00		423.62	1800.12	0.00	0.00
15.00		418.07	1777.44	0.00	0.00
20.00		437.70	1754.76	0.00	0.00
25.00		452.59	1732.08	0.00	0.00
30.00		463.88	1709.40	0.00	0.00
35.00		472.56	1686.72	0.00	0.00
40.00		479.22	1664.04	0.00	0.00
45.00		484.27	1641.36	0.00	0.00
45.50		48.16	162.89	0.00	0.00
50.00		445.76	2509.71	0.00	0.00
52.75		272.62	1517.89	0.00	0.00
55.00		223.38	555.63	0.00	0.00
60.00		500.20	1222.39	0.00	0.00
65.00		501.16	1205.38	0.00	0.00
70.00		501.38	1188.37	0.00	0.00
75.00		500.94	1171.36	0.00	0.00
80.00		499.91	1154.35	0.00	0.00
85.00		498.35	1137.34	0.00	0.00
90.00		496.30	1120.33	0.00	0.00
91.91		188.28	423.48	0.00	0.00
95.00		308.27	1157.93	0.00	0.00
98.41		339.08	1264.65	0.00	0.00
100.00		157.32	268.23	0.00	0.00
105.00		494.34	835.07	0.00	0.00
110.00		490.78	822.31	0.00	0.00
115.00		486.88	809.56	0.00	0.00
120.00		482.68	796.80	0.00	0.00
125.00		478.19	784.04	0.00	0.00
127.10		198.64	324.98	0.00	0.00
130.00		277.01	759.37	0.00	0.00
132.93		277.87	758.59	0.00	0.00
135.00		195.13	253.75	0.00	0.00
140.00		468.68	605.92	0.00	0.00
145.00		463.22	595.99	0.00	0.00
150.00		457.54	586.07	0.00	0.00
155.00		451.65	576.15	0.00	0.00
160.00	(27) attachments	5039.73	3780.79	0.00	0.00
165.00		439.28	471.76	0.00	0.00
170.00		432.81	461.84	0.00	0.00
175.00		426.17	451.92	0.00	0.00
180.00		419.35	442.00	0.00	0.00
	Totals:	**21,522.16**	**45,765.57**	**0.00**	**0.00**

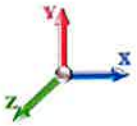
Calculated Forces

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 10	

Load Case: 1.2D + 1.6W 89 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 24

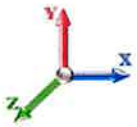
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-45.75	-21.56	0.00	-2357.3	0.00	2357.34	6205.05	3102.52	13749.1	6884.77	0.00	0.000	0.000	0.350
5.00	-43.88	-21.21	0.00	-2249.5	0.00	2249.52	6146.71	3073.36	13441.6	6730.83	0.06	-0.104	0.000	0.341
10.00	-42.05	-20.86	0.00	-2143.4	0.00	2143.46	6087.80	3043.90	13136.3	6577.95	0.22	-0.207	0.000	0.333
15.00	-40.24	-20.50	0.00	-2039.1	0.00	2039.17	6028.30	3014.15	12833.2	6426.17	0.49	-0.309	0.000	0.324
20.00	-38.45	-20.12	0.00	-1936.6	0.00	1936.65	5968.23	2984.11	12532.3	6275.50	0.87	-0.410	0.000	0.315
25.00	-36.69	-19.72	0.00	-1836.0	0.00	1836.04	5907.57	2953.79	12233.7	6125.97	1.35	-0.509	0.000	0.306
30.00	-34.95	-19.30	0.00	-1737.4	0.00	1737.45	5846.34	2923.17	11937.4	5977.61	1.94	-0.608	0.000	0.297
35.00	-33.24	-18.86	0.00	-1640.9	0.00	1640.95	5784.52	2892.26	11643.5	5830.45	2.63	-0.705	0.000	0.287
40.00	-31.55	-18.41	0.00	-1546.6	0.00	1546.64	5706.45	2853.23	11321.0	5668.93	3.42	-0.800	0.000	0.278
45.00	-29.90	-17.93	0.00	-1454.5	0.00	1454.58	5623.92	2811.96	10994.2	5505.32	4.30	-0.894	0.000	0.270
45.50	-29.72	-17.91	0.00	-1445.6	0.00	1445.61	5615.67	2807.83	10961.8	5489.09	4.40	-0.904	0.000	0.269
50.00	-27.20	-17.45	0.00	-1365.0	0.00	1365.04	5541.39	2770.70	10672.3	5344.09	5.29	-0.987	0.000	0.260
52.75	-25.67	-17.17	0.00	-1317.0	0.00	1317.05	3896.09	1948.05	7602.46	3806.88	5.87	-1.037	0.000	0.353
55.00	-25.10	-16.97	0.00	-1278.4	0.00	1278.42	3879.06	1939.53	7518.61	3764.89	6.37	-1.078	0.000	0.346
60.00	-23.86	-16.49	0.00	-1193.5	0.00	1193.56	3840.77	1920.38	7333.07	3671.98	7.56	-1.189	0.000	0.331
65.00	-22.63	-16.01	0.00	-1111.1	0.00	1111.10	3801.90	1900.95	7148.65	3579.64	8.87	-1.298	0.000	0.316
70.00	-21.43	-15.52	0.00	-1031.0	0.00	1031.06	3762.45	1881.23	6965.41	3487.88	10.28	-1.404	0.000	0.301
75.00	-20.24	-15.02	0.00	-953.48	0.00	953.48	3722.43	1861.21	6783.41	3396.75	11.81	-1.506	0.000	0.286
80.00	-19.08	-14.52	0.00	-878.37	0.00	878.37	3681.82	1840.91	6602.68	3306.25	13.44	-1.605	0.000	0.271
85.00	-17.93	-14.02	0.00	-805.75	0.00	805.75	3640.63	1820.31	6423.28	3216.42	15.17	-1.701	0.000	0.255
90.00	-16.81	-13.51	0.00	-735.64	0.00	735.64	3598.86	1799.43	6245.27	3127.28	17.00	-1.793	0.000	0.240
91.91	-16.38	-13.32	0.00	-709.84	0.00	709.84	3582.75	1791.37	6177.64	3093.41	17.73	-1.827	0.000	0.234
95.00	-15.22	-12.99	0.00	-668.67	0.00	668.67	3556.51	1778.25	6068.68	3038.85	18.93	-1.882	0.000	0.224
98.41	-13.96	-12.62	0.00	-624.38	0.00	624.38	2417.34	1208.67	4152.00	2079.09	20.29	-1.940	0.000	0.306
100.00	-13.69	-12.47	0.00	-604.31	0.00	604.31	2409.93	1204.97	4117.06	2061.59	20.94	-1.966	0.000	0.299
105.00	-12.85	-11.97	0.00	-541.97	0.00	541.97	2386.24	1193.12	4007.42	2006.69	23.06	-2.067	0.000	0.276
110.00	-12.03	-11.47	0.00	-482.13	0.00	482.13	2361.98	1180.99	3898.19	1951.99	25.27	-2.162	0.000	0.252
115.00	-11.22	-10.97	0.00	-424.80	0.00	424.80	2337.13	1168.56	3789.44	1897.54	27.58	-2.251	0.000	0.229
120.00	-10.43	-10.47	0.00	-369.97	0.00	369.97	2311.70	1155.85	3681.20	1843.33	29.99	-2.332	0.000	0.205
125.00	-9.66	-9.96	0.00	-317.65	0.00	317.65	2285.69	1142.85	3573.52	1789.42	32.47	-2.407	0.000	0.182
127.10	-9.33	-9.76	0.00	-296.76	0.00	296.76	2274.61	1137.31	3528.55	1766.90	33.53	-2.437	0.000	0.172
130.00	-8.58	-9.45	0.00	-268.43	0.00	268.43	2259.10	1129.55	3466.46	1735.81	35.03	-2.475	0.000	0.159
132.93	-7.83	-9.15	0.00	-240.73	0.00	240.73	1575.41	787.71	2427.26	1215.44	36.56	-2.511	0.000	0.203
135.00	-7.58	-8.95	0.00	-221.80	0.00	221.80	1569.59	784.79	2399.45	1201.51	37.65	-2.535	0.000	0.190
140.00	-6.99	-8.46	0.00	-177.06	0.00	177.06	1555.10	777.55	2332.23	1167.85	40.34	-2.598	0.000	0.156
145.00	-6.41	-7.97	0.00	-134.77	0.00	134.77	1540.04	770.02	2265.00	1134.18	43.09	-2.651	0.000	0.123
150.00	-5.84	-7.49	0.00	-94.91	0.00	94.91	1524.40	762.20	2197.80	1100.53	45.89	-2.691	0.000	0.090
155.00	-5.28	-7.02	0.00	-57.44	0.00	57.44	1508.17	754.09	2130.69	1066.93	48.72	-2.720	0.000	0.057
160.00	-1.74	-1.80	0.00	-22.36	0.00	22.36	1491.37	745.68	2063.72	1033.39	51.58	-2.736	0.000	0.023
165.00	-1.29	-1.34	0.00	-13.34	0.00	13.34	1473.98	736.99	1996.93	999.95	54.45	-2.744	0.000	0.014
170.00	-0.85	-0.89	0.00	-6.64	0.00	6.64	1456.02	728.01	1930.38	966.63	57.33	-2.748	0.000	0.007
175.00	-0.42	-0.44	0.00	-2.20	0.00	2.20	1437.47	718.73	1864.13	933.45	60.21	-2.750	0.000	0.003
180.00	0.00	-0.42	0.00	0.00	0.00	0.00	1418.34	709.17	1798.21	900.44	63.08	-2.751	0.000	0.000

Wind Loading - Shaft

Structure: CT22102-A
Site Name: Town of Norfolk DPW site
Height: 180.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1 **Topography:** 1

Code: EIA/TIA-222-G 6/8/2020
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

Load Case: 0.9D + 1.6W 89 mph Wind
Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 24

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	16.374	18.01	378.41	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	16.374	18.01	373.55	0.650	0.000	5.00	22.911	14.89	429.2	0.0	1303.7
10.00		1.00	0.85	16.374	18.01	368.69	0.650	0.000	5.00	22.614	14.70	423.6	0.0	1286.7
15.00		1.00	0.85	16.374	18.01	363.83	0.650	0.000	5.00	22.318	14.51	418.1	0.0	1269.7
20.00		1.00	0.90	17.374	19.11	369.76	0.650	0.000	5.00	22.022	14.31	437.7	0.0	1252.7
25.00		1.00	0.95	18.209	20.03	373.43	0.650	0.000	5.00	21.726	14.12	452.6	0.0	1235.7
30.00		1.00	0.98	18.922	20.81	375.44	0.650	0.000	5.00	21.430	13.93	463.9	0.0	1218.6
35.00		1.00	1.01	19.546	21.50	376.27	0.650	0.000	5.00	21.134	13.74	472.6	0.0	1201.6
40.00		1.00	1.04	20.103	22.11	376.21	0.650	0.000	5.00	20.837	13.54	479.2	0.0	1184.6
45.00		1.00	1.07	20.608	22.67	375.45	0.650	0.000	5.00	20.541	13.35	484.3	0.0	1167.6
45.50	Bot - Section 2	1.00	1.07	20.656	22.72	375.34	0.650	0.000	0.50	2.038	1.32	48.2	0.0	115.8
50.00		1.00	1.09	21.070	23.18	374.12	0.650	0.000	4.50	18.493	12.02	445.8	0.0	1825.2
52.75	Top - Section 1	1.00	1.11	21.309	23.44	373.19	0.650	0.000	2.75	11.183	7.27	272.6	0.0	1103.5
55.00		1.00	1.12	21.497	23.65	378.29	0.650	0.000	2.25	9.083	5.90	223.4	0.0	388.2
60.00		1.00	1.14	21.895	24.08	376.15	0.650	0.000	5.00	19.970	12.98	500.2	0.0	853.4
65.00		1.00	1.16	22.267	24.49	373.67	0.650	0.000	5.00	19.674	12.79	501.2	0.0	840.6
70.00		1.00	1.17	22.617	24.88	370.88	0.650	0.000	5.00	19.378	12.60	501.4	0.0	827.9
75.00		1.00	1.19	22.948	25.24	367.83	0.650	0.000	5.00	19.082	12.40	500.9	0.0	815.1
80.00		1.00	1.21	23.262	25.59	364.55	0.650	0.000	5.00	18.785	12.21	499.9	0.0	802.4
85.00		1.00	1.22	23.561	25.92	361.05	0.650	0.000	5.00	18.489	12.02	498.3	0.0	789.6
90.00		1.00	1.24	23.846	26.23	357.36	0.650	0.000	5.00	18.193	11.83	496.3	0.0	776.8
91.91	Bot - Section 3	1.00	1.24	23.952	26.35	355.91	0.650	0.000	1.91	6.872	4.47	188.3	0.0	293.4
95.00		1.00	1.25	24.119	26.53	353.51	0.650	0.000	3.09	11.172	7.26	308.3	0.0	829.3
98.41	Top - Section 2	1.00	1.26	24.299	26.73	350.78	0.650	0.000	3.41	12.198	7.93	339.1	0.0	905.2
100.00		1.00	1.27	24.381	26.82	354.25	0.650	0.000	1.59	5.641	3.67	157.3	0.0	181.0
105.00		1.00	1.28	24.632	27.10	350.12	0.650	0.000	5.00	17.543	11.40	494.3	0.0	562.9
110.00		1.00	1.29	24.875	27.36	345.85	0.650	0.000	5.00	17.246	11.21	490.8	0.0	553.3
115.00		1.00	1.30	25.109	27.62	341.45	0.650	0.000	5.00	16.950	11.02	486.9	0.0	543.8
120.00		1.00	1.32	25.335	27.87	336.94	0.650	0.000	5.00	16.654	10.83	482.7	0.0	534.2
125.00		1.00	1.33	25.553	28.11	332.32	0.650	0.000	5.00	16.358	10.63	478.2	0.0	524.6
127.10	Bot - Section 4	1.00	1.33	25.643	28.21	330.35	0.650	0.000	2.10	6.771	4.40	198.6	0.0	217.1
130.00		1.00	1.34	25.765	28.34	327.59	0.650	0.000	2.90	9.398	6.11	277.0	0.0	532.7
132.93	Top - Section 3	1.00	1.34	25.886	28.48	324.78	0.650	0.000	2.93	9.383	6.10	277.9	0.0	531.8
135.00		1.00	1.35	25.971	28.57	326.60	0.650	0.000	2.07	6.568	4.27	195.1	0.0	164.1
140.00		1.00	1.36	26.170	28.79	321.71	0.650	0.000	5.00	15.654	10.18	468.7	0.0	391.0
145.00		1.00	1.37	26.364	29.00	316.73	0.650	0.000	5.00	15.358	9.98	463.2	0.0	383.6
150.00		1.00	1.38	26.553	29.21	311.68	0.650	0.000	5.00	15.062	9.79	457.5	0.0	376.1
155.00		1.00	1.39	26.737	29.41	306.54	0.650	0.000	5.00	14.766	9.60	451.7	0.0	368.7
160.00	Appurtenance(s)	1.00	1.40	26.917	29.61	301.34	0.650	0.000	5.00	14.470	9.41	445.6	0.0	361.3
165.00		1.00	1.41	27.091	29.80	296.06	0.650	0.000	5.00	14.174	9.21	439.3	0.0	353.8
170.00		1.00	1.42	27.262	29.99	290.72	0.650	0.000	5.00	13.877	9.02	432.8	0.0	346.4
175.00		1.00	1.42	27.429	30.17	285.32	0.650	0.000	5.00	13.581	8.83	426.2	0.0	338.9
180.00		1.00	1.43	27.592	30.35	279.86	0.650	0.000	5.00	13.285	8.64	419.4	0.0	331.5
								Totals:	**180.00**			**16,928.0**		**29,884.3**

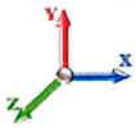
Discrete Appurtenance Forces

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Load Case: 0.9D + 1.6W 89 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	160.00	RFS APL868013 Panel	2	26.917	29.608	0.72	0.80	5.20	12.60	0.000	0.000	246.26	0.00	0.00
2	160.00	Antel	4	26.917	29.608	0.61	0.80	20.99	75.60	0.000	0.000	994.27	0.00	0.00
3	160.00	Antel BXA-171085-12BF	3	26.917	29.608	0.70	0.80	9.99	40.50	0.000	0.000	473.25	0.00	0.00
4	160.00	Antel	1	26.917	29.608	0.62	0.80	4.72	15.30	0.000	0.000	223.78	0.00	0.00
5	160.00	Antel	2	26.917	29.608	0.72	0.80	8.31	32.40	0.000	0.000	393.61	0.00	0.00
6	160.00	Kaelus TMA2071F00V1-1	6	26.917	29.608	0.66	0.80	3.78	204.12	0.000	0.000	179.00	0.00	0.00
7	160.00	Low Profile Platform	1	26.917	29.608	1.00	1.00	22.00	1350.00	0.000	0.000	1042.21	0.00	0.00
8	160.00	RFS FD9R6004/2C-3L	6	26.917	29.608	0.50	0.80	1.10	16.20	0.000	0.000	52.16	0.00	0.00
9	160.00	(1) Handrail Kit Site Pro	1	26.917	29.608	1.00	1.00	9.02	392.40	0.000	0.000	427.31	0.00	0.00
10	160.00	(1) Reinforcement Kit Site	1	26.917	29.608	1.00	1.00	11.87	271.80	0.000	0.000	562.32	0.00	0.00
							Totals:		**2,410.92**			**4,594.17**		

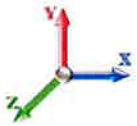
Total Applied Force Summary

Structure:	CT22102-A		**Code:**	EIA/TIA-222-G	6/8/2020
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 13

Load Case: 0.9D + 1.6W 89 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		429.16	1367.10	0.00	0.00
10.00		423.62	1350.09	0.00	0.00
15.00		418.07	1333.08	0.00	0.00
20.00		437.70	1316.07	0.00	0.00
25.00		452.59	1299.06	0.00	0.00
30.00		463.88	1282.05	0.00	0.00
35.00		472.56	1265.04	0.00	0.00
40.00		479.22	1248.03	0.00	0.00
45.00		484.27	1231.02	0.00	0.00
45.50		48.16	122.17	0.00	0.00
50.00		445.76	1882.28	0.00	0.00
52.75		272.62	1138.42	0.00	0.00
55.00		223.38	416.72	0.00	0.00
60.00		500.20	916.79	0.00	0.00
65.00		501.16	904.04	0.00	0.00
70.00		501.38	891.28	0.00	0.00
75.00		500.94	878.52	0.00	0.00
80.00		499.91	865.76	0.00	0.00
85.00		498.35	853.01	0.00	0.00
90.00		496.30	840.25	0.00	0.00
91.91		188.28	317.61	0.00	0.00
95.00		308.27	868.45	0.00	0.00
98.41		339.08	948.49	0.00	0.00
100.00		157.32	201.17	0.00	0.00
105.00		494.34	626.30	0.00	0.00
110.00		490.78	616.73	0.00	0.00
115.00		486.88	607.17	0.00	0.00
120.00		482.68	597.60	0.00	0.00
125.00		478.19	588.03	0.00	0.00
127.10		198.64	243.73	0.00	0.00
130.00		277.01	569.52	0.00	0.00
132.93		277.87	568.94	0.00	0.00
135.00		195.13	190.32	0.00	0.00
140.00		468.68	454.44	0.00	0.00
145.00		463.22	446.99	0.00	0.00
150.00		457.54	439.55	0.00	0.00
155.00		451.65	432.11	0.00	0.00
160.00	(27) attachments	5039.73	2835.59	0.00	0.00
165.00		439.28	353.82	0.00	0.00
170.00		432.81	346.38	0.00	0.00
175.00		426.17	338.94	0.00	0.00
180.00		419.35	331.50	0.00	0.00
	Totals:	**21,522.16**	**34,324.18**	**0.00**	**0.00**

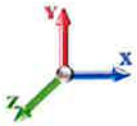
Calculated Forces

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 14	

Load Case: 0.9D + 1.6W 89 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 24

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-34.30	-21.55	0.00	-2340.1	0.00	2340.15	6205.05	3102.52	13749.1	6884.77	0.00	0.000	0.000	0.345
5.00	-32.90	-21.18	0.00	-2232.3	0.00	2232.39	6146.71	3073.36	13441.6	6730.83	0.06	-0.103	0.000	0.337
10.00	-31.51	-20.81	0.00	-2126.4	0.00	2126.48	6087.80	3043.90	13136.3	6577.95	0.22	-0.205	0.000	0.328
15.00	-30.15	-20.44	0.00	-2022.4	0.00	2022.43	6028.30	3014.15	12833.2	6426.17	0.49	-0.306	0.000	0.320
20.00	-28.80	-20.04	0.00	-1920.2	0.00	1920.24	5968.23	2984.11	12532.3	6275.50	0.86	-0.406	0.000	0.311
25.00	-27.47	-19.63	0.00	-1820.0	0.00	1820.03	5907.57	2953.79	12233.7	6125.97	1.34	-0.505	0.000	0.302
30.00	-26.16	-19.20	0.00	-1721.8	0.00	1721.89	5846.34	2923.17	11937.4	5977.61	1.92	-0.603	0.000	0.293
35.00	-24.87	-18.75	0.00	-1625.9	0.00	1625.91	5784.52	2892.26	11643.5	5830.45	2.61	-0.699	0.000	0.283
40.00	-23.60	-18.29	0.00	-1532.1	0.00	1532.17	5706.45	2853.23	11321.0	5668.93	3.39	-0.794	0.000	0.274
45.00	-22.36	-17.81	0.00	-1440.7	0.00	1440.70	5623.92	2811.96	10994.2	5505.32	4.27	-0.887	0.000	0.266
45.50	-22.22	-17.78	0.00	-1431.8	0.00	1431.80	5615.67	2807.83	10961.8	5489.09	4.36	-0.896	0.000	0.265
50.00	-20.33	-17.33	0.00	-1351.8	0.00	1351.80	5541.39	2770.70	10672.3	5344.09	5.25	-0.978	0.000	0.257
52.75	-19.18	-17.05	0.00	-1304.1	0.00	1304.15	3896.09	1948.05	7602.46	3806.88	5.83	-1.028	0.000	0.348
55.00	-18.75	-16.84	0.00	-1265.7	0.00	1265.79	3879.06	1939.53	7518.61	3764.89	6.32	-1.069	0.000	0.341
60.00	-17.81	-16.36	0.00	-1181.5	0.00	1181.59	3840.77	1920.38	7333.07	3671.98	7.50	-1.179	0.000	0.326
65.00	-16.89	-15.87	0.00	-1099.8	0.00	1099.80	3801.90	1900.95	7148.65	3579.64	8.79	-1.286	0.000	0.312
70.00	-15.98	-15.37	0.00	-1020.4	0.00	1020.46	3762.45	1881.23	6965.41	3487.88	10.19	-1.391	0.000	0.297
75.00	-15.09	-14.88	0.00	-943.58	0.00	943.58	3722.43	1861.21	6783.41	3396.75	11.71	-1.492	0.000	0.282
80.00	-14.21	-14.38	0.00	-869.19	0.00	869.19	3681.82	1840.91	6602.68	3306.25	13.32	-1.590	0.000	0.267
85.00	-13.35	-13.88	0.00	-797.30	0.00	797.30	3640.63	1820.31	6423.28	3216.42	15.04	-1.685	0.000	0.252
90.00	-12.51	-13.37	0.00	-727.91	0.00	727.91	3598.86	1799.43	6245.27	3127.28	16.85	-1.776	0.000	0.236
91.91	-12.19	-13.18	0.00	-702.37	0.00	702.37	3582.75	1791.37	6177.64	3093.41	17.57	-1.810	0.000	0.231
95.00	-11.32	-12.86	0.00	-661.64	0.00	661.64	3556.51	1778.25	6068.68	3038.85	18.76	-1.864	0.000	0.221
98.41	-10.37	-12.49	0.00	-617.80	0.00	617.80	2417.34	1208.67	4152.00	2079.09	20.11	-1.921	0.000	0.302
100.00	-10.16	-12.34	0.00	-597.93	0.00	597.93	2409.93	1204.97	4117.06	2061.59	20.76	-1.948	0.000	0.294
105.00	-9.53	-11.84	0.00	-536.23	0.00	536.23	2386.24	1193.12	4007.42	2006.69	22.85	-2.048	0.000	0.271
110.00	-8.92	-11.34	0.00	-477.02	0.00	477.02	2361.98	1180.99	3898.19	1951.99	25.05	-2.141	0.000	0.248
115.00	-8.31	-10.85	0.00	-420.30	0.00	420.30	2337.13	1168.56	3789.44	1897.54	27.34	-2.229	0.000	0.225
120.00	-7.72	-10.35	0.00	-366.08	0.00	366.08	2311.70	1155.85	3681.20	1843.33	29.71	-2.310	0.000	0.202
125.00	-7.15	-9.85	0.00	-314.33	0.00	314.33	2285.69	1142.85	3573.52	1789.42	32.17	-2.384	0.000	0.179
127.10	-6.90	-9.65	0.00	-293.67	0.00	293.67	2274.61	1137.31	3528.55	1766.90	33.23	-2.413	0.000	0.169
130.00	-6.34	-9.35	0.00	-265.65	0.00	265.65	2259.10	1129.55	3466.46	1735.81	34.71	-2.451	0.000	0.156
132.93	-5.78	-9.05	0.00	-238.25	0.00	238.25	1575.41	787.71	2427.26	1215.44	36.22	-2.487	0.000	0.200
135.00	-5.59	-8.85	0.00	-219.51	0.00	219.51	1569.59	784.79	2399.45	1201.51	37.30	-2.511	0.000	0.186
140.00	-5.15	-8.37	0.00	-175.23	0.00	175.23	1555.10	777.55	2332.23	1167.85	39.97	-2.573	0.000	0.153
145.00	-4.72	-7.89	0.00	-133.37	0.00	133.37	1540.04	770.02	2265.00	1134.18	42.69	-2.625	0.000	0.121
150.00	-4.30	-7.42	0.00	-93.91	0.00	93.91	1524.40	762.20	2197.80	1100.53	45.46	-2.665	0.000	0.088
155.00	-3.88	-6.95	0.00	-56.82	0.00	56.82	1508.17	754.09	2130.69	1066.93	48.27	-2.694	0.000	0.056
160.00	-1.29	-1.78	0.00	-22.08	0.00	22.08	1491.37	745.68	2063.72	1033.39	51.10	-2.710	0.000	0.022
165.00	-0.96	-1.32	0.00	-13.18	0.00	13.18	1473.98	736.99	1996.93	999.95	53.94	-2.717	0.000	0.014
170.00	-0.63	-0.88	0.00	-6.55	0.00	6.55	1456.02	728.01	1930.38	966.63	56.79	-2.722	0.000	0.007
175.00	-0.31	-0.43	0.00	-2.17	0.00	2.17	1437.47	718.73	1864.13	933.45	59.64	-2.724	0.000	0.003
180.00	0.00	-0.42	0.00	0.00	0.00	0.00	1418.34	709.17	1798.21	900.44	62.49	-2.724	0.000	0.000

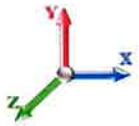
Wind Loading - Shaft

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 15	

Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	3.308	3.64	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	3.308	3.64	0.00	1.200	1.656	5.00	24.291	29.15	106.1	575.3	2313.5
10.00		1.00	0.85	3.308	3.64	0.00	1.200	1.775	5.00	24.093	28.91	105.2	610.1	2325.6
15.00		1.00	0.85	3.308	3.64	0.00	1.200	1.848	5.00	23.859	28.63	104.2	628.0	2320.9
20.00		1.00	0.90	3.509	3.86	0.00	1.200	1.902	5.00	23.607	28.33	109.4	638.7	2308.9
25.00		1.00	0.95	3.678	4.05	0.00	1.200	1.945	5.00	23.347	28.02	113.4	645.0	2292.6
30.00		1.00	0.98	3.822	4.20	0.00	1.200	1.981	5.00	23.081	27.70	116.4	648.7	2273.5
35.00		1.00	1.01	3.948	4.34	0.00	1.200	2.012	5.00	22.810	27.37	118.9	650.3	2252.5
40.00		1.00	1.04	4.061	4.47	0.00	1.200	2.039	5.00	22.536	27.04	120.8	650.4	2229.9
45.00		1.00	1.07	4.163	4.58	0.00	1.200	2.063	5.00	22.260	26.71	122.3	649.4	2206.2
45.50	Bot - Section 2	1.00	1.07	4.172	4.59	0.00	1.200	2.065	0.50	2.210	2.65	12.2	64.9	219.4
50.00		1.00	1.09	4.256	4.68	0.00	1.200	2.085	4.50	20.056	24.07	112.7	591.5	3025.1
52.75	Top - Section 1	1.00	1.11	4.304	4.73	0.00	1.200	2.096	2.75	12.144	14.57	69.0	360.7	1832.1
55.00		1.00	1.12	4.342	4.78	0.00	1.200	2.105	2.25	9.872	11.85	56.6	294.5	812.1
60.00		1.00	1.14	4.423	4.86	0.00	1.200	2.123	5.00	21.739	26.09	126.9	651.2	1789.0
65.00		1.00	1.16	4.498	4.95	0.00	1.200	2.140	5.00	21.457	25.75	127.4	647.3	1768.1
70.00		1.00	1.17	4.569	5.03	0.00	1.200	2.156	5.00	21.175	25.41	127.7	642.8	1746.6
75.00		1.00	1.19	4.635	5.10	0.00	1.200	2.171	5.00	20.891	25.07	127.8	637.9	1724.8
80.00		1.00	1.21	4.699	5.17	0.00	1.200	2.185	5.00	20.606	24.73	127.8	632.7	1702.5
85.00		1.00	1.22	4.759	5.24	0.00	1.200	2.198	5.00	20.321	24.39	127.7	627.1	1679.9
90.00		1.00	1.24	4.817	5.30	0.00	1.200	2.211	5.00	20.036	24.04	127.4	621.1	1656.9
91.91	Bot - Section 3	1.00	1.24	4.838	5.32	0.00	1.200	2.216	1.91	7.577	9.09	48.4	236.4	627.6
95.00		1.00	1.25	4.872	5.36	0.00	1.200	2.223	3.09	12.317	14.78	79.2	384.9	1490.5
98.41	Top - Section 2	1.00	1.26	4.908	5.40	0.00	1.200	2.231	3.41	13.466	16.16	87.2	421.7	1628.7
100.00		1.00	1.27	4.925	5.42	0.00	1.200	2.234	1.59	6.233	7.48	40.5	196.0	437.3
105.00		1.00	1.28	4.976	5.47	0.00	1.200	2.245	5.00	19.414	23.30	127.5	609.6	1360.2
110.00		1.00	1.29	5.025	5.53	0.00	1.200	2.256	5.00	19.126	22.95	126.9	602.7	1340.5
115.00		1.00	1.30	5.072	5.58	0.00	1.200	2.266	5.00	18.839	22.61	126.1	595.6	1320.6
120.00		1.00	1.32	5.117	5.63	0.00	1.200	2.276	5.00	18.550	22.26	125.3	588.3	1300.5
125.00		1.00	1.33	5.162	5.68	0.00	1.200	2.285	5.00	18.262	21.91	124.4	580.8	1280.3
127.10	Bot - Section 4	1.00	1.33	5.180	5.70	0.00	1.200	2.289	2.10	7.571	9.09	51.8	242.2	531.7
130.00		1.00	1.34	5.204	5.72	0.00	1.200	2.294	2.90	10.508	12.61	72.2	336.5	1046.7
132.93	Top - Section 3	1.00	1.34	5.229	5.75	0.00	1.200	2.299	2.93	10.506	12.61	72.5	336.9	1045.9
135.00		1.00	1.35	5.246	5.77	0.00	1.200	2.303	2.07	7.362	8.83	51.0	236.7	455.4
140.00		1.00	1.36	5.286	5.81	0.00	1.200	2.311	5.00	17.580	21.10	122.7	563.7	1085.1
145.00		1.00	1.37	5.325	5.86	0.00	1.200	2.319	5.00	17.291	20.75	121.5	555.6	1067.1
150.00		1.00	1.38	5.364	5.90	0.00	1.200	2.327	5.00	17.001	20.40	120.4	547.4	1049.0
155.00		1.00	1.39	5.401	5.94	0.00	1.200	2.335	5.00	16.711	20.05	119.1	539.1	1030.7
160.00	Appurtenance(s)	1.00	1.40	5.437	5.98	0.00	1.200	2.342	5.00	16.422	19.71	117.9	530.7	1012.3
165.00		1.00	1.41	5.472	6.02	0.00	1.200	2.349	5.00	16.131	19.36	116.5	522.1	993.9
170.00		1.00	1.42	5.507	6.06	0.00	1.200	2.356	5.00	15.841	19.01	115.1	513.4	975.3
175.00		1.00	1.42	5.541	6.09	0.00	1.200	2.363	5.00	15.551	18.66	113.7	504.6	956.6
180.00		1.00	1.43	5.574	6.13	0.00	1.200	2.370	5.00	15.260	18.31	112.3	495.8	937.8
								Totals:	**180.00**			**4,352.0**		**61,454.0**

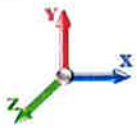
Discrete Appurtenance Forces

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	160.00	RFS APL868013 Panel	2	5.437	5.981	0.72	0.80	5.84	330.22	0.000	0.000	34.93	0.00	0.00
2	160.00	Antel	4	5.437	5.981	0.61	0.80	30.68	716.68	0.000	0.000	183.50	0.00	0.00
3	160.00	Antel BXA-171085-12BF	3	5.437	5.981	0.70	0.80	17.61	397.48	0.000	0.000	105.31	0.00	0.00
4	160.00	Antel	1	5.437	5.981	0.62	0.80	7.31	143.01	0.000	0.000	43.73	0.00	0.00
5	160.00	Antel	2	5.437	5.981	0.72	0.80	12.90	310.62	0.000	0.000	77.16	0.00	0.00
6	160.00	Kaelus TMA2071F00V1-1	6	5.437	5.981	0.66	0.80	6.12	628.80	0.000	0.000	36.62	0.00	0.00
7	160.00	Low Profile Platform	1	5.437	5.981	1.00	1.00	45.70	3256.52	0.000	0.000	273.33	0.00	0.00
8	160.00	RFS FD9R6004/2C-3L	6	5.437	5.981	0.50	0.80	2.97	84.77	0.000	0.000	17.75	0.00	0.00
9	160.00	(1) Handrail Kit Site Pro	1	5.437	5.981	1.00	1.00	18.74	-330.24	0.000	0.000	112.06	0.00	0.00
10	160.00	(1) Reinforcement Kit Site	1	5.437	5.981	1.00	1.00	24.66	-781.95	0.000	0.000	147.47	0.00	0.00
							Totals:		**4,755.89**			**1,031.85**		

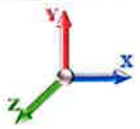
Total Applied Force Summary

Structure:	CT22102-A		**Code:**	EIA/TIA-222-G	6/8/2020
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 17

Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		106.05	2398.06	0.00	0.00
10.00		105.19	2410.19	0.00	0.00
15.00		104.16	2405.48	0.00	0.00
20.00		109.36	2393.42	0.00	0.00
25.00		113.36	2377.13	0.00	0.00
30.00		116.45	2358.07	0.00	0.00
35.00		118.88	2337.02	0.00	0.00
40.00		120.80	2314.48	0.00	0.00
45.00		122.32	2290.76	0.00	0.00
45.50		12.17	227.81	0.00	0.00
50.00		112.68	3101.20	0.00	0.00
52.75		69.00	1878.59	0.00	0.00
55.00		56.59	850.17	0.00	0.00
60.00		126.91	1873.57	0.00	0.00
65.00		127.39	1852.63	0.00	0.00
70.00		127.69	1831.19	0.00	0.00
75.00		127.82	1809.31	0.00	0.00
80.00		127.81	1787.03	0.00	0.00
85.00		127.66	1764.40	0.00	0.00
90.00		127.39	1741.46	0.00	0.00
91.91		48.39	659.85	0.00	0.00
95.00		79.21	1542.79	0.00	0.00
98.41		87.24	1686.39	0.00	0.00
100.00		40.52	464.21	0.00	0.00
105.00		127.51	1444.69	0.00	0.00
110.00		126.85	1425.03	0.00	0.00
115.00		126.12	1405.15	0.00	0.00
120.00		125.31	1385.09	0.00	0.00
125.00		124.43	1364.85	0.00	0.00
127.10		51.77	567.19	0.00	0.00
130.00		72.19	1095.83	0.00	0.00
132.93		72.51	1095.48	0.00	0.00
135.00		50.98	490.42	0.00	0.00
140.00		122.67	1169.64	0.00	0.00
145.00		121.55	1151.64	0.00	0.00
150.00		120.37	1133.51	0.00	0.00
155.00		119.14	1115.25	0.00	0.00
160.00	(27) attachments	1149.70	5852.77	0.00	0.00
165.00		116.52	993.85	0.00	0.00
170.00		115.15	975.26	0.00	0.00
175.00		113.73	956.56	0.00	0.00
180.00		112.27	937.76	0.00	0.00
	Totals:	**5,383.80**	**68,915.19**	**0.00**	**0.00**

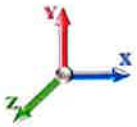
Calculated Forces

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 23

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-68.91	-5.40	0.00	-598.18	0.00	598.18	6205.05	3102.52	13749.1	6884.77	0.00	0.000	0.000	0.098
5.00	-66.51	-5.32	0.00	-571.18	0.00	571.18	6146.71	3073.36	13441.6	6730.83	0.01	-0.026	0.000	0.096
10.00	-64.10	-5.25	0.00	-544.57	0.00	544.57	6087.80	3043.90	13136.3	6577.95	0.06	-0.052	0.000	0.093
15.00	-61.69	-5.17	0.00	-518.34	0.00	518.34	6028.30	3014.15	12833.2	6426.17	0.12	-0.078	0.000	0.091
20.00	-59.30	-5.08	0.00	-492.51	0.00	492.51	5968.23	2984.11	12532.3	6275.50	0.22	-0.104	0.000	0.088
25.00	-56.92	-4.99	0.00	-467.12	0.00	467.12	5907.57	2953.79	12233.7	6125.97	0.34	-0.129	0.000	0.086
30.00	-54.56	-4.89	0.00	-442.19	0.00	442.19	5846.34	2923.17	11937.4	5977.61	0.49	-0.154	0.000	0.083
35.00	-52.22	-4.78	0.00	-417.75	0.00	417.75	5784.52	2892.26	11643.5	5830.45	0.67	-0.179	0.000	0.081
40.00	-49.90	-4.68	0.00	-393.83	0.00	393.83	5706.45	2853.23	11321.0	5668.93	0.87	-0.203	0.000	0.078
45.00	-47.61	-4.56	0.00	-370.45	0.00	370.45	5623.92	2811.96	10994.2	5505.32	1.09	-0.227	0.000	0.076
45.50	-47.38	-4.55	0.00	-368.17	0.00	368.17	5615.67	2807.83	10961.8	5489.09	1.12	-0.230	0.000	0.076
50.00	-44.28	-4.44	0.00	-347.68	0.00	347.68	5541.39	2770.70	10672.3	5344.09	1.34	-0.251	0.000	0.073
52.75	-42.40	-4.37	0.00	-335.47	0.00	335.47	3896.09	1948.05	7602.46	3806.88	1.49	-0.264	0.000	0.099
55.00	-41.55	-4.33	0.00	-325.63	0.00	325.63	3879.06	1939.53	7518.61	3764.89	1.62	-0.274	0.000	0.097
60.00	-39.68	-4.21	0.00	-304.01	0.00	304.01	3840.77	1920.38	7333.07	3671.98	1.92	-0.303	0.000	0.093
65.00	-37.82	-4.09	0.00	-282.96	0.00	282.96	3801.90	1900.95	7148.65	3579.64	2.25	-0.330	0.000	0.089
70.00	-35.99	-3.97	0.00	-262.52	0.00	262.52	3762.45	1881.23	6965.41	3487.88	2.61	-0.357	0.000	0.085
75.00	-34.18	-3.84	0.00	-242.69	0.00	242.69	3722.43	1861.21	6783.41	3396.75	3.00	-0.383	0.000	0.081
80.00	-32.39	-3.72	0.00	-223.47	0.00	223.47	3681.82	1840.91	6602.68	3306.25	3.42	-0.408	0.000	0.076
85.00	-30.63	-3.59	0.00	-204.89	0.00	204.89	3640.63	1820.31	6423.28	3216.42	3.86	-0.433	0.000	0.072
90.00	-28.89	-3.46	0.00	-186.95	0.00	186.95	3598.86	1799.43	6245.27	3127.28	4.32	-0.456	0.000	0.068
91.91	-28.23	-3.41	0.00	-180.35	0.00	180.35	3582.75	1791.37	6177.64	3093.41	4.51	-0.465	0.000	0.066
95.00	-26.68	-3.32	0.00	-169.82	0.00	169.82	3556.51	1778.25	6068.68	3038.85	4.81	-0.479	0.000	0.063
98.41	-25.00	-3.23	0.00	-158.49	0.00	158.49	2417.34	1208.67	4152.00	2079.09	5.16	-0.493	0.000	0.087
100.00	-24.53	-3.19	0.00	-153.36	0.00	153.36	2409.93	1204.97	4117.06	2061.59	5.33	-0.500	0.000	0.085
105.00	-23.09	-3.06	0.00	-137.42	0.00	137.42	2386.24	1193.12	4007.42	2006.69	5.87	-0.526	0.000	0.078
110.00	-21.66	-2.93	0.00	-122.13	0.00	122.13	2361.98	1180.99	3898.19	1951.99	6.43	-0.550	0.000	0.072
115.00	-20.26	-2.79	0.00	-107.50	0.00	107.50	2337.13	1168.56	3789.44	1897.54	7.02	-0.572	0.000	0.065
120.00	-18.87	-2.66	0.00	-93.53	0.00	93.53	2311.70	1155.85	3681.20	1843.33	7.63	-0.593	0.000	0.059
125.00	-17.51	-2.53	0.00	-80.23	0.00	80.23	2285.69	1142.85	3573.52	1789.42	8.26	-0.612	0.000	0.052
127.10	-16.94	-2.47	0.00	-74.93	0.00	74.93	2274.61	1137.31	3528.55	1766.90	8.53	-0.619	0.000	0.050
130.00	-15.85	-2.39	0.00	-67.75	0.00	67.75	2259.10	1129.55	3466.46	1735.81	8.91	-0.629	0.000	0.046
132.93	-14.75	-2.31	0.00	-60.75	0.00	60.75	1575.41	787.71	2427.26	1215.44	9.30	-0.638	0.000	0.059
135.00	-14.26	-2.25	0.00	-55.98	0.00	55.98	1569.59	784.79	2399.45	1201.51	9.58	-0.644	0.000	0.056
140.00	-13.09	-2.12	0.00	-44.71	0.00	44.71	1555.10	777.55	2332.23	1167.85	10.26	-0.660	0.000	0.047
145.00	-11.94	-1.99	0.00	-34.11	0.00	34.11	1540.04	770.02	2265.00	1134.18	10.96	-0.673	0.000	0.038
150.00	-10.81	-1.86	0.00	-24.17	0.00	24.17	1524.40	762.20	2197.80	1100.53	11.67	-0.684	0.000	0.029
155.00	-9.70	-1.72	0.00	-14.89	0.00	14.89	1508.17	754.09	2130.69	1066.93	12.39	-0.691	0.000	0.020
160.00	-3.86	-0.50	0.00	-6.26	0.00	6.26	1491.37	745.68	2063.72	1033.39	13.12	-0.695	0.000	0.009
165.00	-2.87	-0.38	0.00	-3.74	0.00	3.74	1473.98	736.99	1996.93	999.95	13.85	-0.697	0.000	0.006
170.00	-1.89	-0.25	0.00	-1.86	0.00	1.86	1456.02	728.01	1930.38	966.63	14.58	-0.699	0.000	0.003
175.00	-0.94	-0.12	0.00	-0.62	0.00	0.62	1437.47	718.73	1864.13	933.45	15.31	-0.699	0.000	0.001
180.00	0.00	-0.11	0.00	0.00	0.00	0.00	1418.34	709.17	1798.21	900.44	16.04	-0.699	0.000	0.000

Seismic Segment Forces (Factored)

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

Load Case:	1.2D + 1.0E							**Iterations**	22
Gust Response Factor	1.10				**Sds**	0.19		**Ss**	0.17
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.37		**SA**	0.04	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1448.5	0.00	0.03	0.02	21.17	
10.00		1429.6	0.01	0.05	0.03	31.93	
15.00		1410.7	0.01	0.06	0.03	37.60	
20.00		1391.8	0.02	0.07	0.04	40.54	
25.00		1372.9	0.04	0.07	0.04	42.01	
30.00		1354.0	0.05	0.07	0.04	42.74	
35.00		1335.1	0.07	0.07	0.04	43.14	
40.00		1316.2	0.09	0.07	0.04	43.44	
45.00		1297.3	0.12	0.07	0.03	43.68	
45.50	Bot - Section 2	128.70	0.12	0.07	0.03	4.34	
50.00		2028.0	0.15	0.07	0.03	69.48	
52.75	Top - Section 1	1226.1	0.16	0.07	0.03	42.30	
55.00		431.32	0.18	0.07	0.03	14.94	
60.00		948.21	0.21	0.06	0.02	32.77	
65.00		934.03	0.25	0.06	0.02	31.52	
70.00		919.86	0.29	0.05	0.01	29.31	
75.00		905.68	0.33	0.04	0.01	25.83	
80.00		891.51	0.37	0.03	0.01	20.87	
85.00		877.33	0.42	0.01	0.01	14.41	
90.00		863.16	0.47	-0.01	0.01	6.70	
91.91	Bot - Section 3	325.98	0.49	-0.01	0.01	1.34	
95.00		921.41	0.53	-0.03	0.01	-1.81	
98.41	Top - Section 2	1005.8	0.56	-0.04	0.01	-8.76	
100.00		201.12	0.58	-0.05	0.01	-2.36	
105.00		625.44	0.64	-0.07	0.02	-12.79	
110.00		614.81	0.71	-0.09	0.03	-16.61	
115.00		604.18	0.77	-0.11	0.05	-18.57	
120.00		593.55	0.84	-0.12	0.07	-18.51	
125.00		582.92	0.91	-0.12	0.09	-16.45	
127.10	Bot - Section 4	241.27	0.94	-0.12	0.10	-6.26	
130.00		591.90	0.99	-0.11	0.12	-12.88	
132.93	Top - Section 3	590.87	1.03	-0.10	0.15	-9.68	
135.00		182.29	1.06	-0.09	0.17	-2.16	
140.00		434.48	1.14	-0.04	0.21	0.66	
145.00		426.21	1.23	0.03	0.27	7.81	
150.00		417.94	1.31	0.14	0.35	16.14	
155.00		409.67	1.40	0.29	0.43	25.57	
160.00	Appurtenance(s)	3080.2	1.49	0.48	0.53	276.48	
165.00		393.14	1.59	0.74	0.65	47.45	
170.00		384.87	1.69	1.07	0.79	59.77	
175.00		376.60	1.79	1.48	0.95	72.92	
180.00		368.33	1.89	1.98	1.14	86.84	
	Totals:	**35,883.6**				**1,106.9**	**Total Wind:** **21,522.2**

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

Calculated Forces

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 20	

Load Case:	1.2D + 1.0E							**Iterations**	22
Gust Response Factor	1.10			**Sds**	0.19			**Ss**	0.17
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.37	**SA**	0.04	**Seismic Importance Factor**			1.00

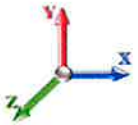
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-45.77	-1.24	0.00	-129.67	0.00	129.67	6205.05	3102.52	13749.1	6884.77		0.00	0.00	0.026
5.00	-43.94	-1.22	0.00	-123.49	0.00	123.49	6146.71	3073.36	13441.6	6730.83		0.00	-0.01	0.025
10.00	-42.14	-1.19	0.00	-117.40	0.00	117.40	6087.80	3043.90	13136.3	6577.95		0.01	-0.01	0.025
15.00	-40.36	-1.16	0.00	-111.45	0.00	111.45	6028.30	3014.15	12833.2	6426.17		0.03	-0.02	0.024
20.00	-38.61	-1.12	0.00	-105.67	0.00	105.67	5968.23	2984.11	12532.3	6275.50		0.05	-0.02	0.023
25.00	-36.88	-1.08	0.00	-100.07	0.00	100.07	5907.57	2953.79	12233.7	6125.97		0.07	-0.03	0.023
30.00	-35.17	-1.04	0.00	-94.68	0.00	94.68	5846.34	2923.17	11937.4	5977.61		0.11	-0.03	0.022
35.00	-33.48	-1.00	0.00	-89.48	0.00	89.48	5784.52	2892.26	11643.5	5830.45		0.14	-0.04	0.021
40.00	-31.82	-0.96	0.00	-84.49	0.00	84.49	5706.45	2853.23	11321.0	5668.93		0.19	-0.04	0.020
45.00	-30.18	-0.91	0.00	-79.71	0.00	79.71	5623.92	2811.96	10994.2	5505.32		0.24	-0.05	0.020
45.50	-30.01	-0.91	0.00	-79.25	0.00	79.25	5615.67	2807.83	10961.8	5489.09		0.24	-0.05	0.020
50.00	-27.50	-0.84	0.00	-75.16	0.00	75.16	5541.39	2770.70	10672.3	5344.09		0.29	-0.05	0.019
52.75	-25.99	-0.80	0.00	-72.85	0.00	72.85	3896.09	1948.05	7602.46	3806.88		0.32	-0.06	0.026
55.00	-25.43	-0.78	0.00	-71.06	0.00	71.06	3879.06	1939.53	7518.61	3764.89		0.35	-0.06	0.025
60.00	-24.21	-0.75	0.00	-67.14	0.00	67.14	3840.77	1920.38	7333.07	3671.98		0.41	-0.07	0.025
65.00	-23.00	-0.72	0.00	-63.38	0.00	63.38	3801.90	1900.95	7148.65	3579.64		0.49	-0.07	0.024
70.00	-21.81	-0.69	0.00	-59.77	0.00	59.77	3762.45	1881.23	6965.41	3487.88		0.56	-0.08	0.023
75.00	-20.64	-0.67	0.00	-56.31	0.00	56.31	3722.43	1861.21	6783.41	3396.75		0.65	-0.08	0.022
80.00	-19.49	-0.65	0.00	-52.97	0.00	52.97	3681.82	1840.91	6602.68	3306.25		0.74	-0.09	0.021
85.00	-18.35	-0.63	0.00	-49.73	0.00	49.73	3640.63	1820.31	6423.28	3216.42		0.84	-0.10	0.021
90.00	-17.23	-0.63	0.00	-46.57	0.00	46.57	3598.86	1799.43	6245.27	3127.28		0.94	-0.10	0.020
91.91	-16.81	-0.62	0.00	-45.38	0.00	45.38	3582.75	1791.37	6177.64	3093.41		0.98	-0.10	0.019
95.00	-15.65	-0.62	0.00	-43.45	0.00	43.45	3556.51	1778.25	6068.68	3038.85		1.05	-0.11	0.019
98.41	-14.38	-0.62	0.00	-41.32	0.00	41.32	2417.34	1208.67	4152.00	2079.09		1.12	-0.11	0.026
100.00	-14.12	-0.62	0.00	-40.34	0.00	40.34	2409.93	1204.97	4117.06	2061.59		1.16	-0.11	0.025
105.00	-13.28	-0.62	0.00	-37.23	0.00	37.23	2386.24	1193.12	4007.42	2006.69		1.28	-0.12	0.024
110.00	-12.46	-0.62	0.00	-34.12	0.00	34.12	2361.98	1180.99	3898.19	1951.99		1.41	-0.13	0.023
115.00	-11.65	-0.62	0.00	-31.01	0.00	31.01	2337.13	1168.56	3789.44	1897.54		1.55	-0.13	0.021
120.00	-10.85	-0.62	0.00	-27.91	0.00	27.91	2311.70	1155.85	3681.20	1843.33		1.69	-0.14	0.020
125.00	-10.07	-0.62	0.00	-24.81	0.00	24.81	2285.69	1142.85	3573.52	1789.42		1.83	-0.14	0.018
127.10	-9.74	-0.62	0.00	-23.51	0.00	23.51	2274.61	1137.31	3528.55	1766.90		1.90	-0.15	0.018
130.00	-8.98	-0.62	0.00	-21.72	0.00	21.72	2259.10	1129.55	3466.46	1735.81		1.99	-0.15	0.016
132.93	-8.22	-0.62	0.00	-19.91	0.00	19.91	1575.41	787.71	2427.26	1215.44		2.08	-0.15	0.022
135.00	-7.97	-0.62	0.00	-18.64	0.00	18.64	1569.59	784.79	2399.45	1201.51		2.15	-0.15	0.021
140.00	-7.36	-0.61	0.00	-15.56	0.00	15.56	1555.10	777.55	2332.23	1167.85		2.31	-0.16	0.018
145.00	-6.77	-0.60	0.00	-12.49	0.00	12.49	1540.04	770.02	2265.00	1134.18		2.48	-0.16	0.015
150.00	-6.18	-0.59	0.00	-9.47	0.00	9.47	1524.40	762.20	2197.80	1100.53		2.66	-0.17	0.013
155.00	-5.61	-0.56	0.00	-6.53	0.00	6.53	1508.17	754.09	2130.69	1066.93		2.83	-0.17	0.010
160.00	-1.83	-0.27	0.00	-3.73	0.00	3.73	1491.37	745.68	2063.72	1033.39		3.01	-0.17	0.005
165.00	-1.36	-0.22	0.00	-2.37	0.00	2.37	1473.98	736.99	1996.93	999.95		3.20	-0.17	0.003
170.00	-0.89	-0.16	0.00	-1.25	0.00	1.25	1456.02	728.01	1930.38	966.63		3.38	-0.18	0.002
175.00	-0.44	-0.09	0.00	-0.44	0.00	0.44	1437.47	718.73	1864.13	933.45		3.56	-0.18	0.001
180.00	0.00	-0.09	0.00	0.00	0.00	0.00	1418.34	709.17	1798.21	900.44		3.75	-0.18	0.000

Seismic Segment Forces (Factored)

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

SBA

Load Case: 0.9D + 1.0E



Gust Response Factor	1.10			**Sds**	0.19	**Iterations**	22
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10	**Ss**	0.17
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.37	**SA**	0.04	**S1**	0.07
						Seismic Importance Factor	1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1448.5	0.00	0.03	0.02	21.17	
10.00		1429.6	0.01	0.05	0.03	31.93	
15.00		1410.7	0.01	0.06	0.03	37.60	
20.00		1391.8	0.02	0.07	0.04	40.54	
25.00		1372.9	0.04	0.07	0.04	42.01	
30.00		1354.0	0.05	0.07	0.04	42.74	
35.00		1335.1	0.07	0.07	0.04	43.14	
40.00		1316.2	0.09	0.07	0.04	43.44	
45.00		1297.3	0.12	0.07	0.03	43.68	
45.50	Bot - Section 2	128.70	0.12	0.07	0.03	4.34	
50.00		2028.0	0.15	0.07	0.03	69.48	
52.75	Top - Section 1	1226.1	0.16	0.07	0.03	42.30	
55.00		431.32	0.18	0.07	0.03	14.94	
60.00		948.21	0.21	0.06	0.02	32.77	
65.00		934.03	0.25	0.06	0.02	31.52	
70.00		919.86	0.29	0.05	0.01	29.31	
75.00		905.68	0.33	0.04	0.01	25.83	
80.00		891.51	0.37	0.03	0.01	20.87	
85.00		877.33	0.42	0.01	0.01	14.41	
90.00		863.16	0.47	-0.01	0.01	6.70	
91.91	Bot - Section 3	325.98	0.49	-0.01	0.01	1.34	
95.00		921.41	0.53	-0.03	0.01	-1.81	
98.41	Top - Section 2	1005.8	0.56	-0.04	0.01	-8.76	
100.00		201.12	0.58	-0.05	0.01	-2.36	
105.00		625.44	0.64	-0.07	0.02	-12.79	
110.00		614.81	0.71	-0.09	0.03	-16.61	
115.00		604.18	0.77	-0.11	0.05	-18.57	
120.00		593.55	0.84	-0.12	0.07	-18.51	
125.00		582.92	0.91	-0.12	0.09	-16.45	
127.10	Bot - Section 4	241.27	0.94	-0.12	0.10	-6.26	
130.00		591.90	0.99	-0.11	0.12	-12.88	
132.93	Top - Section 3	590.87	1.03	-0.10	0.15	-9.68	
135.00		182.29	1.06	-0.09	0.17	-2.16	
140.00		434.48	1.14	-0.04	0.21	0.66	
145.00		426.21	1.23	0.03	0.27	7.81	
150.00		417.94	1.31	0.14	0.35	16.14	
155.00		409.67	1.40	0.29	0.43	25.57	
160.00	Appurtenance(s)	3080.2	1.49	0.48	0.53	276.48	
165.00		393.14	1.59	0.74	0.65	47.45	
170.00		384.87	1.69	1.07	0.79	59.77	
175.00		376.60	1.79	1.48	0.95	72.92	
180.00		368.33	1.89	1.98	1.14	86.84	
	Totals:	**35,883.6**				**1,106.9**	**Total Wind:** **21,522.2**

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

Calculated Forces

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 22	

Load Case: 0.9D + 1.0E

Gust Response Factor	1.10			**Sds**	0.19			**Iterations**	22
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10			**Ss**	0.17
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.37	**SA**	0.04			**S1**	0.07
								Seismic Importance Factor	1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-34.32	-1.23	0.00	-128.69	0.00	128.69	6205.05	3102.52	13749.1	6884.77		0.00	0.00	0.024
5.00	-32.96	-1.22	0.00	-122.52	0.00	122.52	6146.71	3073.36	13441.6	6730.83		0.00	-0.01	0.024
10.00	-31.61	-1.19	0.00	-116.43	0.00	116.43	6087.80	3043.90	13136.3	6577.95		0.01	-0.01	0.023
15.00	-30.27	-1.15	0.00	-110.50	0.00	110.50	6028.30	3014.15	12833.2	6426.17		0.03	-0.02	0.022
20.00	-28.96	-1.11	0.00	-104.73	0.00	104.73	5968.23	2984.11	12532.3	6275.50		0.05	-0.02	0.022
25.00	-27.66	-1.07	0.00	-99.16	0.00	99.16	5907.57	2953.79	12233.7	6125.97		0.07	-0.03	0.021
30.00	-26.38	-1.03	0.00	-93.79	0.00	93.79	5846.34	2923.17	11937.4	5977.61		0.11	-0.03	0.020
35.00	-25.11	-0.99	0.00	-88.62	0.00	88.62	5784.52	2892.26	11643.5	5830.45		0.14	-0.04	0.020
40.00	-23.86	-0.95	0.00	-83.66	0.00	83.66	5706.45	2853.23	11321.0	5668.93		0.19	-0.04	0.019
45.00	-22.63	-0.91	0.00	-78.91	0.00	78.91	5623.92	2811.96	10994.2	5505.32		0.23	-0.05	0.018
45.50	-22.51	-0.90	0.00	-78.46	0.00	78.46	5615.67	2807.83	10961.8	5489.09		0.24	-0.05	0.018
50.00	-20.63	-0.83	0.00	-74.39	0.00	74.39	5541.39	2770.70	10672.3	5344.09		0.29	-0.05	0.018
52.75	-19.49	-0.79	0.00	-72.10	0.00	72.10	3896.09	1948.05	7602.46	3806.88		0.32	-0.06	0.024
55.00	-19.07	-0.78	0.00	-70.33	0.00	70.33	3879.06	1939.53	7518.61	3764.89		0.35	-0.06	0.024
60.00	-18.16	-0.74	0.00	-66.44	0.00	66.44	3840.77	1920.38	7333.07	3671.98		0.41	-0.06	0.023
65.00	-17.25	-0.71	0.00	-62.72	0.00	62.72	3801.90	1900.95	7148.65	3579.64		0.48	-0.07	0.022
70.00	-16.36	-0.69	0.00	-59.15	0.00	59.15	3762.45	1881.23	6965.41	3487.88		0.56	-0.08	0.021
75.00	-15.48	-0.66	0.00	-55.73	0.00	55.73	3722.43	1861.21	6783.41	3396.75		0.64	-0.08	0.021
80.00	-14.62	-0.64	0.00	-52.43	0.00	52.43	3681.82	1840.91	6602.68	3306.25		0.73	-0.09	0.020
85.00	-13.76	-0.62	0.00	-49.23	0.00	49.23	3640.63	1820.31	6423.28	3216.42		0.83	-0.09	0.019
90.00	-12.92	-0.62	0.00	-46.11	0.00	46.11	3598.86	1799.43	6245.27	3127.28		0.93	-0.10	0.018
91.91	-12.60	-0.62	0.00	-44.93	0.00	44.93	3582.75	1791.37	6177.64	3093.41		0.97	-0.10	0.018
95.00	-11.74	-0.62	0.00	-43.03	0.00	43.03	3556.51	1778.25	6068.68	3038.85		1.04	-0.11	0.017
98.41	-10.79	-0.61	0.00	-40.93	0.00	40.93	2417.34	1208.67	4152.00	2079.09		1.11	-0.11	0.024
100.00	-10.59	-0.61	0.00	-39.95	0.00	39.95	2409.93	1204.97	4117.06	2061.59		1.15	-0.11	0.024
105.00	-9.96	-0.61	0.00	-36.88	0.00	36.88	2386.24	1193.12	4007.42	2006.69		1.27	-0.12	0.023
110.00	-9.34	-0.61	0.00	-33.81	0.00	33.81	2361.98	1180.99	3898.19	1951.99		1.40	-0.12	0.021
115.00	-8.74	-0.61	0.00	-30.74	0.00	30.74	2337.13	1168.56	3789.44	1897.54		1.53	-0.13	0.020
120.00	-8.14	-0.61	0.00	-27.67	0.00	27.67	2311.70	1155.85	3681.20	1843.33		1.67	-0.14	0.019
125.00	-7.55	-0.61	0.00	-24.61	0.00	24.61	2285.69	1142.85	3573.52	1789.42		1.82	-0.14	0.017
127.10	-7.31	-0.61	0.00	-23.32	0.00	23.32	2274.61	1137.31	3528.55	1766.90		1.88	-0.14	0.016
130.00	-6.74	-0.61	0.00	-21.55	0.00	21.55	2259.10	1129.55	3466.46	1735.81		1.97	-0.15	0.015
132.93	-6.17	-0.61	0.00	-19.76	0.00	19.76	1575.41	787.71	2427.26	1215.44		2.06	-0.15	0.020
135.00	-5.98	-0.61	0.00	-18.49	0.00	18.49	1569.59	784.79	2399.45	1201.51		2.13	-0.15	0.019
140.00	-5.52	-0.61	0.00	-15.45	0.00	15.45	1555.10	777.55	2332.23	1167.85		2.29	-0.16	0.017
145.00	-5.08	-0.60	0.00	-12.40	0.00	12.40	1540.04	770.02	2265.00	1134.18		2.46	-0.16	0.014
150.00	-4.64	-0.58	0.00	-9.41	0.00	9.41	1524.40	762.20	2197.80	1100.53		2.63	-0.17	0.012
155.00	-4.20	-0.56	0.00	-6.49	0.00	6.49	1508.17	754.09	2130.69	1066.93		2.81	-0.17	0.009
160.00	-1.37	-0.27	0.00	-3.72	0.00	3.72	1491.37	745.68	2063.72	1033.39		2.99	-0.17	0.005
165.00	-1.02	-0.22	0.00	-2.36	0.00	2.36	1473.98	736.99	1996.93	999.95		3.17	-0.17	0.003
170.00	-0.67	-0.16	0.00	-1.25	0.00	1.25	1456.02	728.01	1930.38	966.63		3.35	-0.17	0.002
175.00	-0.33	-0.09	0.00	-0.44	0.00	0.44	1437.47	718.73	1864.13	933.45		3.53	-0.17	0.001
180.00	0.00	-0.09	0.00	0.00	0.00	0.00	1418.34	709.17	1798.21	900.44		3.71	-0.17	0.000

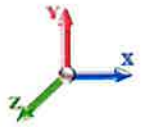
Wind Loading - Shaft

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 23	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	255.11	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	251.83	0.650	0.000	5.00	22.911	14.89	121.9	0.0	1448.6
10.00		1.00	0.85	7.442	8.19	248.56	0.650	0.000	5.00	22.614	14.70	120.3	0.0	1429.7
15.00		1.00	0.85	7.442	8.19	245.28	0.650	0.000	5.00	22.318	14.51	118.8	0.0	1410.8
20.00		1.00	0.90	7.896	8.69	249.28	0.650	0.000	5.00	22.022	14.31	124.3	0.0	1391.9
25.00		1.00	0.95	8.276	9.10	251.75	0.650	0.000	5.00	21.726	14.12	128.6	0.0	1373.0
30.00		1.00	0.98	8.600	9.46	253.10	0.650	0.000	5.00	21.430	13.93	131.8	0.0	1354.1
35.00		1.00	1.01	8.883	9.77	253.66	0.650	0.000	5.00	21.134	13.74	134.2	0.0	1335.2
40.00		1.00	1.04	9.137	10.05	253.62	0.650	0.000	5.00	20.837	13.54	136.1	0.0	1316.3
45.00		1.00	1.07	9.366	10.30	253.11	0.650	0.000	5.00	20.541	13.35	137.6	0.0	1297.4
45.50	Bot - Section 2	1.00	1.07	9.388	10.33	253.04	0.650	0.000	0.50	2.038	1.32	13.7	0.0	128.7
50.00		1.00	1.09	9.576	10.53	252.22	0.650	0.000	4.50	18.493	12.02	126.6	0.0	2028.0
52.75	Top - Section 1	1.00	1.11	9.685	10.65	251.59	0.650	0.000	2.75	11.183	7.27	77.4	0.0	1226.2
55.00		1.00	1.12	9.770	10.75	255.03	0.650	0.000	2.25	9.083	5.90	63.5	0.0	431.3
60.00		1.00	1.14	9.951	10.95	253.59	0.650	0.000	5.00	19.970	12.98	142.1	0.0	948.2
65.00		1.00	1.16	10.120	11.13	251.91	0.650	0.000	5.00	19.674	12.79	142.4	0.0	934.0
70.00		1.00	1.17	10.279	11.31	250.03	0.650	0.000	5.00	19.378	12.60	142.4	0.0	919.9
75.00		1.00	1.19	10.430	11.47	247.98	0.650	0.000	5.00	19.082	12.40	142.3	0.0	905.7
80.00		1.00	1.21	10.572	11.63	245.76	0.650	0.000	5.00	18.785	12.21	142.0	0.0	891.5
85.00		1.00	1.22	10.708	11.78	243.41	0.650	0.000	5.00	18.489	12.02	141.6	0.0	877.3
90.00		1.00	1.24	10.838	11.92	240.92	0.650	0.000	5.00	18.193	11.83	141.0	0.0	863.2
91.91	Bot - Section 3	1.00	1.24	10.886	11.97	239.94	0.650	0.000	1.91	6.872	4.47	53.5	0.0	326.0
95.00		1.00	1.25	10.962	12.06	238.32	0.650	0.000	3.09	11.172	7.26	87.6	0.0	921.4
98.41	Top - Section 2	1.00	1.26	11.043	12.15	236.48	0.650	0.000	3.41	12.198	7.93	96.3	0.0	1005.8
100.00		1.00	1.27	11.081	12.19	238.82	0.650	0.000	1.59	5.641	3.67	44.7	0.0	201.1
105.00		1.00	1.28	11.195	12.31	236.03	0.650	0.000	5.00	17.543	11.40	140.4	0.0	625.4
110.00		1.00	1.29	11.305	12.44	233.15	0.650	0.000	5.00	17.246	11.21	139.4	0.0	614.8
115.00		1.00	1.30	11.412	12.55	230.19	0.650	0.000	5.00	16.950	11.02	138.3	0.0	604.2
120.00		1.00	1.32	11.514	12.67	227.15	0.650	0.000	5.00	16.654	10.83	137.1	0.0	593.5
125.00		1.00	1.33	11.614	12.78	224.03	0.650	0.000	5.00	16.358	10.63	135.8	0.0	582.9
127.10	Bot - Section 4	1.00	1.33	11.654	12.82	222.71	0.650	0.000	2.10	6.771	4.40	56.4	0.0	241.3
130.00		1.00	1.34	11.710	12.88	220.85	0.650	0.000	2.90	9.398	6.11	78.7	0.0	591.9
132.93	Top - Section 3	1.00	1.34	11.765	12.94	218.95	0.650	0.000	2.93	9.383	6.10	78.9	0.0	590.9
135.00		1.00	1.35	11.803	12.98	220.18	0.650	0.000	2.07	6.568	4.27	55.4	0.0	182.3
140.00		1.00	1.36	11.894	13.08	216.88	0.650	0.000	5.00	15.654	10.18	133.1	0.0	434.5
145.00		1.00	1.37	11.982	13.18	213.53	0.650	0.000	5.00	15.358	9.98	131.6	0.0	426.2
150.00		1.00	1.38	12.068	13.27	210.12	0.650	0.000	5.00	15.062	9.79	130.0	0.0	417.9
155.00		1.00	1.39	12.152	13.37	206.66	0.650	0.000	5.00	14.766	9.60	128.3	0.0	409.7
160.00	Appurtenance(s)	1.00	1.40	12.233	13.46	203.15	0.650	0.000	5.00	14.470	9.41	126.6	0.0	401.4
165.00		1.00	1.41	12.313	13.54	199.59	0.650	0.000	5.00	14.174	9.21	124.8	0.0	393.1
170.00		1.00	1.42	12.390	13.63	195.99	0.650	0.000	5.00	13.877	9.02	122.9	0.0	384.9
175.00		1.00	1.42	12.466	13.71	192.35	0.650	0.000	5.00	13.581	8.83	121.1	0.0	376.6
180.00		1.00	1.43	12.540	13.79	188.67	0.650	0.000	5.00	13.285	8.64	119.1	0.0	368.3
								Totals:	**180.00**			**4,808.5**		**33,204.8**

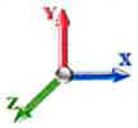
Discrete Appurtenance Forces

Structure:	CT22102-A	**Code:**	EIA/TIA-222-G	6/8/2020	
Site Name:	Town of Norfolk DPW site	**Exposure:**	C		
Height:	180.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	160.00	RFS APL868013 Panel	2	12.233	13.457	0.72	0.80	5.20	14.00	0.000	0.000	69.95	0.00	0.00
2	160.00	Antel	4	12.233	13.457	0.61	0.80	20.99	84.00	0.000	0.000	282.43	0.00	0.00
3	160.00	Antel BXA-171085-12BF	3	12.233	13.457	0.70	0.80	9.99	45.00	0.000	0.000	134.43	0.00	0.00
4	160.00	Antel	1	12.233	13.457	0.62	0.80	4.72	17.00	0.000	0.000	63.56	0.00	0.00
5	160.00	Antel	2	12.233	13.457	0.72	0.80	8.31	36.00	0.000	0.000	111.81	0.00	0.00
6	160.00	Kaelus TMA2071F00V1-1	6	12.233	13.457	0.66	0.80	3.78	226.80	0.000	0.000	50.85	0.00	0.00
7	160.00	Low Profile Platform	1	12.233	13.457	1.00	1.00	22.00	1500.00	0.000	0.000	296.04	0.00	0.00
8	160.00	RFS FD9R6004/2C-3L	6	12.233	13.457	0.50	0.80	1.10	18.00	0.000	0.000	14.82	0.00	0.00
9	160.00	(1) Handrail Kit Site Pro	1	12.233	13.457	1.00	1.00	9.02	436.00	0.000	0.000	121.38	0.00	0.00
10	160.00	(1) Reinforcement Kit Site	1	12.233	13.457	1.00	1.00	11.87	302.00	0.000	0.000	159.73	0.00	0.00
							Totals:		**2,678.80**			**1,305.00**		

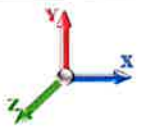
Total Applied Force Summary

Structure:	CT22102-A		**Code:**	EIA/TIA-222-G	6/8/2020
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 25

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 23

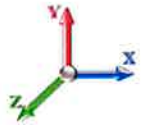
Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		121.91	1519.00	0.00	0.00
10.00		120.33	1500.10	0.00	0.00
15.00		118.75	1481.20	0.00	0.00
20.00		124.33	1462.30	0.00	0.00
25.00		128.56	1443.40	0.00	0.00
30.00		131.77	1424.50	0.00	0.00
35.00		134.23	1405.60	0.00	0.00
40.00		136.13	1386.70	0.00	0.00
45.00		137.56	1367.80	0.00	0.00
45.50		13.68	135.74	0.00	0.00
50.00		126.62	2091.43	0.00	0.00
52.75		77.44	1264.91	0.00	0.00
55.00		63.45	463.02	0.00	0.00
60.00		142.09	1018.66	0.00	0.00
65.00		142.36	1004.48	0.00	0.00
70.00		142.42	990.31	0.00	0.00
75.00		142.29	976.13	0.00	0.00
80.00		142.00	961.96	0.00	0.00
85.00		141.56	947.78	0.00	0.00
90.00		140.98	933.61	0.00	0.00
91.91		53.48	352.90	0.00	0.00
95.00		87.57	964.95	0.00	0.00
98.41		96.32	1053.88	0.00	0.00
100.00		44.69	223.52	0.00	0.00
105.00		140.42	695.89	0.00	0.00
110.00		139.41	685.26	0.00	0.00
115.00		138.30	674.63	0.00	0.00
120.00		137.11	664.00	0.00	0.00
125.00		135.83	653.37	0.00	0.00
127.10		56.42	270.81	0.00	0.00
130.00		78.69	632.80	0.00	0.00
132.93		78.93	632.16	0.00	0.00
135.00		55.43	211.46	0.00	0.00
140.00		133.13	504.93	0.00	0.00
145.00		131.58	496.66	0.00	0.00
150.00		129.97	488.39	0.00	0.00
155.00		128.29	480.12	0.00	0.00
160.00	(27) attachments	1431.56	3150.65	0.00	0.00
165.00		124.78	393.14	0.00	0.00
170.00		122.94	384.87	0.00	0.00
175.00		121.06	376.60	0.00	0.00
180.00		119.12	368.33	0.00	0.00
	Totals:	**6,113.48**	**38,137.98**	**0.00**	**0.00**

Calculated Forces

Structure: CT22102-A
Site Name: Town of Norfolk DPW site
Height: 180.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1 **Topography:** 1

Code: EIA/TIA-222-G 6/8/2020
Exposure: C
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

Load Case: 1.0D + 1.0W 60 mph Wind
Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 23

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-38.14	-6.12	0.00	-666.49	0.00	666.49	6205.05	3102.52	13749.1	6884.77	0.00	0.000	0.000	0.103
5.00	-36.61	-6.02	0.00	-635.88	0.00	635.88	6146.71	3073.36	13441.6	6730.83	0.02	-0.029	0.000	0.100
10.00	-35.11	-5.92	0.00	-605.78	0.00	605.78	6087.80	3043.90	13136.3	6577.95	0.06	-0.058	0.000	0.098
15.00	-33.63	-5.81	0.00	-576.21	0.00	576.21	6028.30	3014.15	12833.2	6426.17	0.14	-0.087	0.000	0.095
20.00	-32.16	-5.70	0.00	-547.15	0.00	547.15	5968.23	2984.11	12532.3	6275.50	0.25	-0.116	0.000	0.093
25.00	-30.72	-5.58	0.00	-518.65	0.00	518.65	5907.57	2953.79	12233.7	6125.97	0.38	-0.144	0.000	0.090
30.00	-29.29	-5.46	0.00	-490.73	0.00	490.73	5846.34	2923.17	11937.4	5977.61	0.55	-0.172	0.000	0.087
35.00	-27.88	-5.34	0.00	-463.42	0.00	463.42	5784.52	2892.26	11643.5	5830.45	0.74	-0.199	0.000	0.084
40.00	-26.49	-5.21	0.00	-436.74	0.00	436.74	5706.45	2853.23	11321.0	5668.93	0.97	-0.226	0.000	0.082
45.00	-25.13	-5.07	0.00	-410.70	0.00	410.70	5623.92	2811.96	10994.2	5505.32	1.22	-0.253	0.000	0.079
45.50	-24.99	-5.06	0.00	-408.17	0.00	408.17	5615.67	2807.83	10961.8	5489.09	1.24	-0.255	0.000	0.079
50.00	-22.90	-4.93	0.00	-385.39	0.00	385.39	5541.39	2770.70	10672.3	5344.09	1.49	-0.279	0.000	0.076
52.75	-21.63	-4.85	0.00	-371.82	0.00	371.82	3896.09	1948.05	7602.46	3806.88	1.66	-0.293	0.000	0.103
55.00	-21.17	-4.80	0.00	-360.90	0.00	360.90	3879.06	1939.53	7518.61	3764.89	1.80	-0.305	0.000	0.101
60.00	-20.15	-4.66	0.00	-336.92	0.00	336.92	3840.77	1920.38	7333.07	3671.98	2.14	-0.336	0.000	0.097
65.00	-19.14	-4.52	0.00	-313.62	0.00	313.62	3801.90	1900.95	7148.65	3579.64	2.50	-0.367	0.000	0.093
70.00	-18.15	-4.38	0.00	-291.01	0.00	291.01	3762.45	1881.23	6965.41	3487.88	2.91	-0.396	0.000	0.088
75.00	-17.17	-4.24	0.00	-269.11	0.00	269.11	3722.43	1861.21	6783.41	3396.75	3.34	-0.425	0.000	0.084
80.00	-16.21	-4.10	0.00	-247.90	0.00	247.90	3681.82	1840.91	6602.68	3306.25	3.80	-0.453	0.000	0.079
85.00	-15.26	-3.96	0.00	-227.41	0.00	227.41	3640.63	1820.31	6423.28	3216.42	4.29	-0.480	0.000	0.075
90.00	-14.33	-3.81	0.00	-207.62	0.00	207.62	3598.86	1799.43	6245.27	3127.28	4.80	-0.506	0.000	0.070
91.91	-13.97	-3.76	0.00	-200.34	0.00	200.34	3582.75	1791.37	6177.64	3093.41	5.01	-0.516	0.000	0.069
95.00	-13.01	-3.67	0.00	-188.73	0.00	188.73	3556.51	1778.25	6068.68	3038.85	5.35	-0.531	0.000	0.066
98.41	-11.95	-3.56	0.00	-176.23	0.00	176.23	2417.34	1208.67	4152.00	2079.09	5.73	-0.548	0.000	0.090
100.00	-11.73	-3.52	0.00	-170.56	0.00	170.56	2409.93	1204.97	4117.06	2061.59	5.92	-0.555	0.000	0.088
105.00	-11.03	-3.38	0.00	-152.97	0.00	152.97	2386.24	1193.12	4007.42	2006.69	6.51	-0.584	0.000	0.081
110.00	-10.35	-3.24	0.00	-136.08	0.00	136.08	2361.98	1180.99	3898.19	1951.99	7.14	-0.611	0.000	0.074
115.00	-9.67	-3.09	0.00	-119.90	0.00	119.90	2337.13	1168.56	3789.44	1897.54	7.79	-0.635	0.000	0.067
120.00	-9.01	-2.95	0.00	-104.43	0.00	104.43	2311.70	1155.85	3681.20	1843.33	8.47	-0.659	0.000	0.061
125.00	-8.36	-2.81	0.00	-89.67	0.00	89.67	2285.69	1142.85	3573.52	1789.42	9.17	-0.680	0.000	0.054
127.10	-8.09	-2.75	0.00	-83.78	0.00	83.78	2274.61	1137.31	3528.55	1766.90	9.47	-0.688	0.000	0.051
130.00	-7.46	-2.67	0.00	-75.78	0.00	75.78	2259.10	1129.55	3466.46	1735.81	9.89	-0.699	0.000	0.047
132.93	-6.82	-2.58	0.00	-67.97	0.00	67.97	1575.41	787.71	2427.26	1215.44	10.33	-0.709	0.000	0.060
135.00	-6.61	-2.53	0.00	-62.62	0.00	62.62	1569.59	784.79	2399.45	1201.51	10.63	-0.716	0.000	0.056
140.00	-6.11	-2.39	0.00	-49.99	0.00	49.99	1555.10	777.55	2332.23	1167.85	11.39	-0.734	0.000	0.047
145.00	-5.61	-2.25	0.00	-38.05	0.00	38.05	1540.04	770.02	2265.00	1134.18	12.17	-0.748	0.000	0.037
150.00	-5.13	-2.12	0.00	-26.79	0.00	26.79	1524.40	762.20	2197.80	1100.53	12.96	-0.760	0.000	0.028
155.00	-4.65	-1.98	0.00	-16.21	0.00	16.21	1508.17	754.09	2130.69	1066.93	13.76	-0.768	0.000	0.018
160.00	-1.52	-0.51	0.00	-6.30	0.00	6.30	1491.37	745.68	2063.72	1033.39	14.57	-0.773	0.000	0.007
165.00	-1.12	-0.38	0.00	-3.76	0.00	3.76	1473.98	736.99	1996.93	999.95	15.38	-0.775	0.000	0.005
170.00	-0.74	-0.25	0.00	-1.87	0.00	1.87	1456.02	728.01	1930.38	966.63	16.19	-0.776	0.000	0.002
175.00	-0.37	-0.12	0.00	-0.62	0.00	0.62	1437.47	718.73	1864.13	933.45	17.01	-0.777	0.000	0.001
180.00	0.00	-0.12	0.00	0.00	0.00	0.00	1418.34	709.17	1798.21	900.44	17.82	-0.777	0.000	0.000

Final Analysis Summary

Structure:	CT22102-A		**Code:**	EIA/TIA-222-G	6/8/2020
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 27

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 89 mph Wind	21.6	0.00	45.75	0.00	0.00	2357.34
0.9D + 1.6W 89 mph Wind	21.6	0.00	34.30	0.00	0.00	2340.15
1.2D + 1.0Di + 1.0Wi 40 mph Wind	5.4	0.00	68.91	0.00	0.00	598.18
1.2D + 1.0E	1.2	0.00	45.77	0.00	0.00	129.67
0.9D + 1.0E	1.2	0.00	34.32	0.00	0.00	128.69
1.0D + 1.0W 60 mph Wind	6.1	0.00	38.14	0.00	0.00	666.49

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 89 mph Wind	-25.67	-17.17	0.00	-1317.0	0.00	-1317.0	3896.09	1948.0	7602.46	3806.88	52.75	0.353
0.9D + 1.6W 89 mph Wind	-19.18	-17.05	0.00	-1304.1	0.00	-1304.1	3896.09	1948.0	7602.46	3806.88	52.75	0.348
1.2D + 1.0Di + 1.0Wi 40 mph Wind	-42.40	-4.37	0.00	-335.47	0.00	-335.47	3896.09	1948.0	7602.46	3806.88	52.75	0.099
1.2D + 1.0E	-45.77	-1.24	0.00	-129.67	0.00	-129.67	6205.05	3102.5	13749.1	6884.77	0.00	0.026
0.9D + 1.0E	-34.32	-1.23	0.00	-128.69	0.00	-128.69	6205.05	3102.5	13749.1	6884.77	0.00	0.024
1.0D + 1.0W 60 mph Wind	-21.63	-4.85	0.00	-371.82	0.00	-371.82	3896.09	1948.0	7602.46	3806.88	52.75	0.103

Base Plate Summary

Structure:	CT22102-A		**Code:**	EIA/TIA-222-G	6/8/2020
Site Name:	Town of Norfolk DPW site		**Exposure:**	C	
Height:	180.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 28

SBA

Reactions		Base Plate		Anchor Bolts	
Original Design		**Yield (ksi):**	60.00	**Bolt Circle:**	61.84
Moment (kip-ft):	4527.00	**Width (in):**	68.89	**Number Bolts:**	20.00
Axial (kip):	45.94	**Style:**	Round	**Bolt Type:**	2.25" 18J
Shear (kip):	33.44	**Polygon Sides:**	0.00	**Bolt Diameter (in):**	2.25
		Clip Length (in):	0.00	**Yield (ksi):**	75.00
Analysis				**Ultimate (ksi):**	100.00
Moment (kip-ft):	2357.34	**Effective Len (in):**	12.18	**Arrangement:**	Radial
Axial (kip):	68.91	**Moment (kip-in):**	348.41	**Cluster Dist (in):**	6.00
Shear (kip):	21.56	**Allow Stress (ksi):**	81.00	**Start Angle (deg):**	0.00
		Applied Stress (ksi):	0.00	Compression	
Moment Design %:	52.07	**Stress Ratio:**	0.28	**Force (kip):**	94.93
				Allowable (kip):	260.00
				Ratio:	0.37
				Tension	
				Force (kip):	88.04
				Allowable (kip):	260.00
				Ratio:	0.35

Monopole Mat Foundation Design

			Date: 6/8/2020
Customer Name:	SBA Communcations Corp	EIA/TIA Standard:	EIA-222-G
Site Name:	Town of Norfolk DPW site	Structure Height (Ft.):	180
Site Number:	CT22102-A	Engineer Name:	S. Berthomieu
Engr. Number:		Engineer Login ID:	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

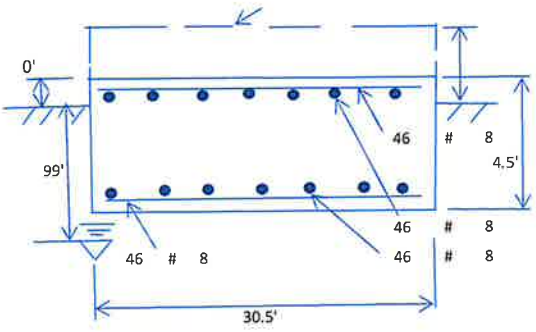
Analysis or Design? Analysis

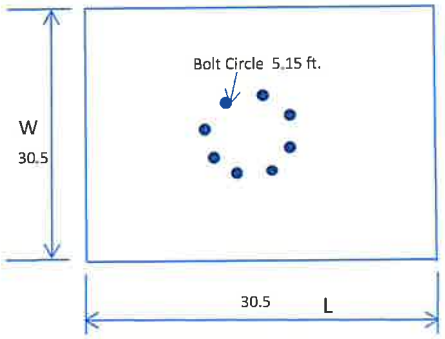
Base Reactions (Factored):

Axial Load (Kips):	45.8	Shear Force (Kips):	21.6
Uplift Force (Kips):	0.0	Moment (Kips-ft):	2357.3

Foundation Geometries:

		Mods required -Yes/No ?:	No
Anchor Bolt Circle (ft.):	5.15	Depth of Base BG (ft.):	4.50
Thickness of Pad (ft):	4.50		
Length of Pad (ft.):	30.5	Width of Pad (ft.):	30.5
Final Length of pad (ft)	30.5	Final width of pad (ft):	30.5





Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Pad Rebar Yield (Ksi):	60	Tie Spacing (in):	12.0	
Pad Steel Rebar Size (#):	8			
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	46	Qty. of Rebar in Pad (W):	46	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	46	Qty. of Rebar in Pad (W):	46	

Soil Design Parameters:

Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	12000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00			

Foundation Analysis and Design: Uplift Strength Reduction Factor: 0.75 — Compression Strength Reduction Factor: 0.75

Total Dry Soil Volume (cu. Ft.):	0.00	Total Dry Soil Weight (Kips):	0.00
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	0.00	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	4186.13	Total Dry Concrete Weight (Kips):	627.92
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	627.92	Total Vertical Load on Base (Kips):	673.67

Check Soil Capacities:

				Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	1456	<	Allowable Factored Soil Bearing (psf): 9000	0.16	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	9315.9	>	Design Factored Momont (kips-ft): 2456	0.26	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	3.79	OK!			

Check the capacities of Reinforceing Concrete:

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

Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	1518.5	>	One-Way Factored Shear (L-D. Kips):	262.8	0.17	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1518.5	>	One-Way Factored Shear (W-D., Kips)	262.8	0.17	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	1866.2	>	One-Way Factored Shear (C-C, Kips):	405.5	0.22	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0020	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0020		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	8067.2	>	Moment at Bottom (L-Direct. K-Ft):	1079.5	0.13	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	8067.2	>	Moment at Bottom (W-Direct. K-Ft):	1079.5	0.13	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	11368.1	>	Moment at Bottom (C-C Dir. K-Ft):	1526.6	0.13	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0020	OK!	Upper Steel Reinf. Ratio (W-Direct.):	0.0020		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	8067.2	>	Moment at the top (L-Dir Kips-Ft):	257.2	0.03	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	8067.2	>	Moment at the top (W-Dir Kips-Ft):	257.2	0.03	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	11368.1	>	Moment at the top (C-C Direc. K-Ft):	390.6	0.03	OK!

ATTACHMENT 5

ProTerra
DESIGN GROUP, LLC

Date: 4/24/2020

verizon

Submitted To: Verizon Wireless
118 Flanders Road – Third Floor
Westborough, MA 01581

Subject: **Mount Structural Analysis Report - Upgrade**

Verizon Wireless Designation: **Site Name:** Norfolk East CT

Site Data: **599 Greenwoods Road, Norfolk, CT 06058**
Latitude 41° 58' 59.48", Longitude -73° 09' 13.71"

We are pleased to submit this **"Mount Structural Analysis Report - Upgrade"** to determine the structural capacity of the antenna mount utilized by Verizon Wireless at the above referenced site.

The purpose of the analysis is to determine acceptability of the mount stress level for the changes proposed by Verizon Wireless. Under the following load case we have determined the mount to have:

Existing + Proposed Equipment **Adequate Capacity (50.3%)**
Note: See Analysis Criteria for loading configuration

The analysis has been performed in accordance with TIA-222-G Standard and the 2018 Connecticut State Building Code (2015 IBC).

We appreciate the opportunity of providing our continuing professional services to you. If you have any questions or need further assistance on this or any other projects, please give us a call.

Prepared by Consulting Engineer:

STATE OF CONNECTICUT AHMET COLAKOGLU PEN. 27057 LICENSED PROFESSIONAL ENGINEER

4/24/2020

Ahmet Colakoglu, PE
Connecticut Professional Engineer
License No: 27057
EFI GLOBAL, INC.
PEC 0001245
1117 Perimeter Center West, Suite E500,
Atlanta, GA 30338
Tel: (770) 693-0835

Reviewed By:

Proterra Design Group, LLC

1) ANALYSIS CRITERIA

The analysis was performed for the existing and proposed appurtenances as specified in the loading information referenced below, and per the following loading criteria of Table 1.

Table 1 – Loading and Analysis Criteria

Rad Center	160'
Structure Type	Monopole
Exposure Category	C
Wind Speed	115 mph *√0.6 = 89 mph (ASD)
Ice Loading	0.75" with 40 mph Wind
Risk Category	II
Topographic Factor	Kzt = 1.0

Table 1.1 – Existing and Final Appurtenance Configuration for Verizon

Qty	Model
4	Amphenol LPA-80080-6CF – Antennas
2	RFS APL868013 – Antennas
3	Amphenol BXA 1850 – Antennas
2	Amphenol BXA 70080-6CF – Antennas
1	Amphenol BXA 70063-6CF – Antennas
6	RFS FD9R6004 – Diplexers*
6	TMAs (Unknown) 14"x6"x3" *

***To be mounted behind antennas.**

Table 1.3 – Assumed Material Properties

Member Type	ASTM Material Designation	Fy (ksi)	Fu (ksi)
Pipes	A53 Gr. B	35	60
Angles/Channels	A36	36	58
Rectangular HSS	A500 Gr. B – 46	46	58
Round HSS	A500 Gr. B – 42	42	58
Others (UNO)	A572 Gr. 50	50	65

2) ANALYSIS PROCEDURE

The analysis is based on the following information:

Table 2 – Documents

Document	Provided By	Date
Email	ProTerra Design Group, LLC	04/06/2020
Equipment Loading	ProTerra Design Group, LLC	04/06/2020
Mount Photos	ProTerra Design Group, LLC	03/11/2020

2.1) Analysis Method

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

2.2) Analysis Conditions and Assumptions

1) The mount was built and installed in accordance with the manufacturer's specifications.
2) The mount has been maintained and will be maintained in accordance with the manufacturer's specifications. All structural members and connections of the mount are in good condition and can achieve theoretical strength.
3) The configuration of antennas is as specified in "1) Analysis Criteria".
4) The analysis was performed for the subject mount only. It does not include an evaluation of the other mounts or the tower, which should be analyzed by others.
5) The evaluation does not include any antenna rigging loads. The equipment should not be rigged using the subject antenna mount as the support.
6) The analysis includes a minimum 250 lbf maintenance point load at the worst-case location on the mount, as well as a minimum 250 lbf maintenance point load at each antenna location in conjunction with a 30 mph wind load.
7) Any steel grating represented in this model is for loading purposes only and it is not considered to provide any structural restraint or support.
8) Member sizes per available photos and assumed based on our experience with similar structures. Please refer to calculation output in the appendix of this report for sizes and lengths assumed.
9) All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.

ProTerra Design Group, LLC must be notified immediately if any of these assumptions are discovered to be incorrect. The results of this analysis may be affected if any of the assumptions are not valid or have been made in error.

3) ANALYSIS RESULTS AND CONCLUSION

The analysis results are shown on the table below.

Table 3.1 – Mount Component Stresses vs. Capacity

Component	% Capacity	Pass / Fail
Support Rail Pipe	31.3	Pass
Base Perimeter Pipe	25.4	Pass
Antenna Mount Pipe	50.3	Pass
Main Support Tube	< 20.0	Pass
Support Rail Corner Angle	29.2	Pass
Platform Base Corner Plate	48.4	Pass
Kicker Angle	26.1	Pass

Platform Mount: The existing platform mount **will have adequate** capacity for the proposed changes by Verizon, **once the mount is modified as per Upgrade drawings prepared by EFI Global, Inc, dated 04/24/2020**. For the code specified load combinations and as a maximum, the mount members are stressed to **50.3%** of their structural capacity.

APPENDIX

INPUT LOADS
ANALYSIS OUTPUT
UPGRADE DRAWINGS

CLIENT: Verizon

PROJECT: Norfolk East CT

SUBJECT: Antenna Loads -TIA 222 G Standard (chapter 16 revisions)

Tower Height	190.00	ft	Type of Mount: Platform
Basic Wind Speed, V	89	mph (=Ultimate Speed*Sqrt(0.6))	
Basic Wind Speed with Ice, V_i	40	mph	
Maintanence Load Factor, L_{FM}	0.1130	Load Factor for Maint. Load Cases (Basic Wind Speed=30 mph)	
Design Ice Thickness, t	0.75	inches	

Table 2-3 Importance Factors

Structure Classification	Wind Load Without Ice	Wind Load With Ice	Ice Thickness	Earthquake
II	1	1	1	1

I

Table 2-4 Exposure Category Coefficients

Exposure Category	Zg	α	Kzmin	Ke	m
C	900	9.5	0.85	1	0.8

Table 2-5 Topographic Categories

Kzt 1.000

Table 2-2 Wind Directionality Factor, Kd

Structure Type	Kd	
3	0.95	DOES NOT CHANGE
Monopole		

Gust Effect Factor Gh

Structure Type	Gh	
2	1.00	DOES NOT CHANGE
Monopole		

Shielding Factor, Ka

Structure Type	Ka	
	0.90	DOES NOT CHANGE
Monopole		

Seismic Factors

Ss	0.175
S1	0.065
Fa	1.6
Fv	2.4
R	2

Truss or Pole

CLIENT: Verizon

PROJECT: Norfolk East CT

SUBJECT: Antenna Loads -TIA 222 G Standard (chapter 16 revisions)

Rad Center 160.00 ft

Antenna AND Mount Without Ice

Mounting Pole	Height (ft)	Model Number	#	Weight (lbs)	H (in)	*W (in)	D (in)	Ka	**A_R (ft2)	***A_T (ft2)	Aspect (FRONT)	Aspect (SIDE)	Ca (FRONT)	Ca (SIDE)	K_z	q_s (psf)	Pounds: Wind Load (Front)	Wind Load (Side)	Dead Load	Total Wind Load (Front)	Total Wind Load (Side)	Total Dead Load	Lateral Load (Seismic)	Vertical Load (Seismic)
Pos. 1 & 4 al gamma	160.00	RFS APL868013	1	11.6	48.0	8.0	8.0	0.90	2.00	2.67	5.00	6.00	1.45	1.36	1.397	26.9	69.4	67.6	11.6	69	89	31	2	1
	160.00	RFS - FD9R6004	1	2.8	5.8	N/A	1.5	0.90	-	0.06	-	3.87	-	1.26	1.397	26.9	0.0	1.8	2.8					
	160.00	TMA(unknown)	1	17.0	14.0	N/A	3.0	0.90	-	0.29	-	4.67	-	1.30	1.397	26.9	0.0	9.2	17					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
																				35	50	16	1	1
Pos. 1	160.00	Antel LPA-80080-6CF	1	21.0	70.9	5.5	13.2	0.90	2.71	8.49	12.87	5.37	1.60	1.33	1.397	26.9	104.8	208.8	21	105	220	41	2	2
	160.00	RFS - FD9R6004	1	2.8	5.8	N/A	1.5	0.90	-	0.06	-	3.87	-	1.26	1.397	26.9	0.0	1.8	2.8					
	160.00	TMA(unknown)	1	17.0	14.0	N/A	3.0	0.90	-	0.29	-	4.67	-	1.30	1.397	26.9	0.0	9.2	17					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
																				53	110	21	1	1
Pos.2 al alpha	160.00	Antel BXA-70063-6CF	1	17.0	71.1	11.2	4.5	0.90	5.53	2.22	6.35	15.80	1.37	1.68	1.397	26.9	183.8	91.1	17	184	91	17	1	1
		Empty		0.0	-	N/A	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	N/A	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
																				92	46	9	0	0
Pos 2	160.00	Antel BXA-70080-6CF	1	33.2	71.0	8.0	5.9	0.90	3.94	2.91	8.88	12.03	1.48	1.57	1.397	26.9	139.7	110.5	33.2	140	110	33	2	1
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
																				70	56	17	1	1
Pos 3	160.00	Amphenol BXA-185085-12CF	1	13.0	72.0	6.1	4.1	0.90	3.05	2.05	11.80	17.56	1.56	1.75	1.397	26.9	115.3	87.0	13	115	87	13	1	0
		Empty		0.0	-	N/A	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
																				58	44	7	0	0
Pos.4	160.00	Antel LPA-80080-6CF	1	21.0	70.9	5.5	13.2	0.90	2.71	8.49	12.88	5.37	1.60	1.33	1.397	26.9	104.7	208.8	21	105	220	41	2	2
	160.00	RFS - FD9R6004	1	2.8	5.8	N/A	1.5	0.90	-	0.06	-	3.87	-	1.26	1.397	26.9	0.0	1.8	2.8					
	160.00	TMA(unknown)	1	17.0	14.0	N/A	3.0	0.90	-	0.29	-	4.67	-	1.30	1.397	26.9	0.0	9.2	17					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
		Empty		0.0	-	-	-	0.90	-	-	-	-	-	-	-	-	0.0	0.0	0					
																				53	110	21	1	1

* Enter N/A in the W column for front shielded apurtanances.
** A_R is the product of H and W
*** A_T is the product of H and D

Mount	Height (ft)	Member	*L (in)	**W (in)	D (in)	Weight (lb/ft)	*** Ca	K_z	q_z (psf)	Wind Load (PLF)	Lateral Load (Seismic)	Vertical Load (Seismic)
	160.00	3.0 STD Pipe	12.00	3.50	0.00		1.20	1.397	24.2	8	-	-
	160.00	2.5 STD Pipe	0.00	2.88	0.00		-	-	-	-	-	-
	160.00	2.0 STD Pipe	12.00	2.38	0.00		1.20	1.397	24.2	8	-	-
	160.00	L2x2x3	0.00	2.00	3.00		-	-	-	-	-	-
	160.00	L2.5x2.5x4	12.00	2.50	3.50		2.00	1.397	24.2	10	-	-
	160.00	Angle (Diagonal)	0.00	0.00	0.00		-	-	-	-	-	-
	160.00	HSS 4x4x4	12.00	4.00	4.00		2.00	1.397	24.2	16	-	-
	160.00	PL 6 x 1/2"	12.00	0.50	6.00		2.00	1.397	24.2	2	-	-
	160.00	Tube Radial (4x4)	0.00	4.00	4.00		-	-	-	-	-	-
	160.00	Double Angle (L2.5x2.5x3x0)	12.00	5.00	2.50		2.00	1.397	24.2	20	-	-
	160.00	Double Angle (L3x3x4x0)	0.00	3.00	3.00		-	-	-	-	-	-
	160.00	Channel (Weak Axis Bending)	0.00	0.00	0.00		-	-	-	-	-	-
	160.00	Invert U 5.375x3.625x.375	0.00	3.63	5.38		-	-	-	-	-	-

* The dimension L is the longest dimension of the member
** The dimension W is the height or width of the member that resists wind load
*** Ca will equal 1.2 for round members and 2.0 for flat members

CLIENT: Verizon

PROJECT: Nodolk East CT

SUBJECT: Antenna Loads -TIA 222 G Standard (chapter 16 revisions)

ti (in) 1.756515 Kiz 1.17101 reduction 0.20199

Antenna AND Mount With Ice

Mounting Pole	Height (ft)	Model Number	#	H (in)	W (in)	D (in)	Ka	*A_e (ft2)	*A_r (ft2)	*Volume Ice (ft3)	*Weight Ice (lbs)	**Ca (FRONT)	**Ca (SIDE)	Kz	q_z (psf)	Pounds: Ice Wind Load (Front)	Ice Wind Load (Side)	Combined Wind Load (Front)	Combined Wind Load (Side)	Ice Dead Load	**Total Wind Load (Front)	**Total Wind Load (Side)	Total Ice Load
Pos. 1 & 4 at gamma	160.00	RFS APL868013	1	48.0	6.0	6.0	0.90	1.40	1.45	1.83	106.17	0.76	0.74	1.397	5.4	5.3	5.3	19.3	23.0	108	19	28	148
	160.00	RFS - FD9R6004	1	5.8	6.5	1.5	0.90	-	0.26	0.24	13.32	0.70	0.70	1.397	5.4	0.0	0.9	0.0	1.3	13			
	160.00	TMA(unknown)	1	14.0	8.0	3.0	0.90	-	0.50	0.48	27.00	0.70	0.70	1.397	5.4	0.0	1.7	0.0	3.6	27			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
																					10	14	75
Pos. 1	160.00	Antel LPA-80080-6CF	1	70.9	5.5	13.2	0.90	1.95	2.14	3.51	196.43	0.83	0.74	1.397	5.4	7.9	7.8	29.1	50.0	196	29	55	237
	160.00	RFS - FD9R6004	1	5.8	6.5	1.5	0.90	-	0.26	0.24	13.32	0.70	0.70	1.397	5.4	0.0	0.9	0.0	1.3	13			
	160.00	TMA(unknown)	1	14.0	6.0	3.0	0.90	-	0.50	0.48	27.00	0.70	0.70	1.397	5.4	0.0	1.7	0.0	3.6	27			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
																					15	28	119
Pos.2 at alpha	160.00	Antel BXA-70063-6CF	1	71.1	11.2	4.5	0.90	2.09	1.83	3.02	168.94	0.76	0.85	1.397	5.4	7.8	8.0	44.9	26.4	169	45	28	169
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
																					23	14	85
Pos.2	160.00	Antel BXA-70080-6CF	1	71.0	8.0	5.9	0.90	2.01	1.96	2.73	153.09	0.79	0.82	1.397	5.4	7.8	7.9	38.0	30.2	153	36	30	153
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
																					18	16	77
Pos.3	160.00	Amphenol BXA-185065-12CF	1	72.0	6.1	4.1	0.90	1.99	1.94	2.16	120.74	0.82	0.85	1.397	5.4	8.0	8.2	31.3	25.8	121	31	26	121
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
																					16	13	61
Pos 4	160.00	Antel LPA-80080-6CF	1	70.9	5.5	13.2	0.90	1.95	2.14	3.51	196.43	0.83	0.74	1.397	5.4	7.9	7.8	29.0	50.0	196	29	55	237
	160.00	RFS - FD9R6004	1	5.8	6.5	1.5	0.90	-	0.26	0.24	13.32	0.70	0.70	1.397	5.4	0.0	0.9	0.0	1.3	13			
	160.00	TMA(unknown)	1	14.0	8.0	3.0	0.90	-	0.50	0.48	27.00	0.70	0.70	1.397	5.4	0.0	1.7	0.0	3.6	27			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
		Empty		-	-	-	0.90	-	-	-	0.00	-	-	-	-	0.0	0.0	0.0	0.0	0			
																					15	28	119

* A_e, A_r, Volume Ice and Weight Ice are calculated per unit

** Ca will equal 1.2 for all ice load calculations

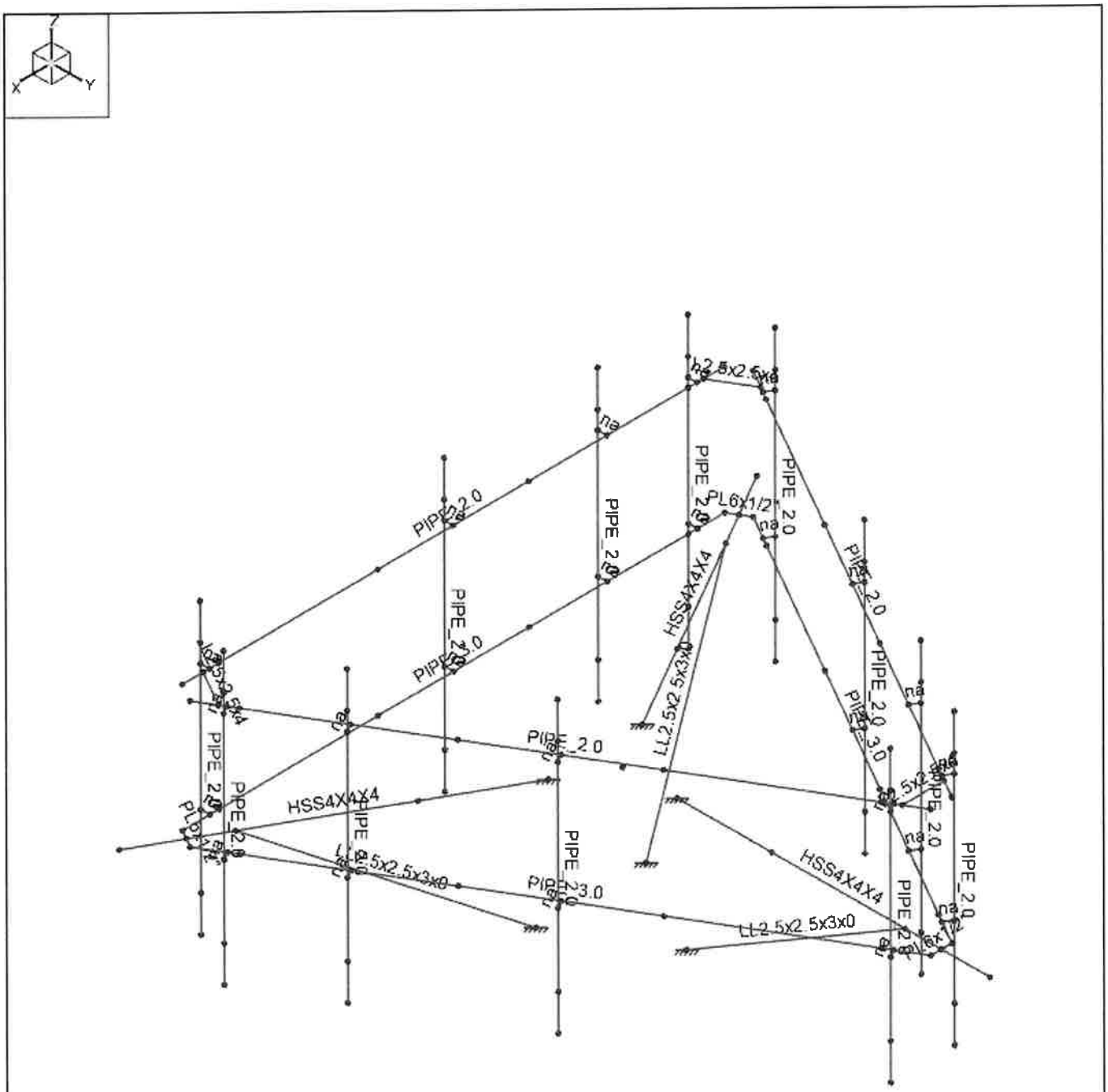
Mount	Height (ft)	Member	*L (in)	**W (in)	D (in)	***A_e (ft2)	Volume Ice (ft3)	Weight Ice (lbs)	****Ca (FRONT)	Kz	q_z (psf)	PLF: Ice Wind Load (Front)	Combined Wind Load (Front)	Ice Dead Load
	160.00	3.0 STD Pipe	12.00	3.50	0.00	0.46	0.20	11.28	1.20	1.397	4.9	2.7	4.4	11
	160.00	2.5 STD Pipe	0.00	2.88	0.00	-	-	-	-	-	-	-	-	-
	160.00	2.0 STD Pipe	12.00	2.38	0.00	0.44	0.16	8.88	1.20	1.397	4.9	2.6	3.7	9
	160.00	L2x2x3	0.00	2.00	3.00	-	-	-	-	-	-	-	-	-
	160.00	L2.5x2.5x4	12.00	2.50	3.00	0.44	0.12	6.83	1.20	1.397	4.9	2.8	4.6	7
	160.00	Angle Diagonal	0.00	0.00	0.00	-	-	-	-	-	-	-	-	-
	160.00	HSS 4x4x4	12.00	4.00	4.00	0.48	0.40	22.18	1.20	1.397	4.9	2.8	6.1	22
	160.00	PL 6 x 1/2"	12.00	0.50	6.00	0.39	0.32	18.03	1.20	1.397	4.9	2.3	2.7	18
	160.00	Tube Radial (4x4)	0.00	4.00	4.00	-	-	-	-	-	-	-	-	-
	160.00	Double Angle (LL2.5x2.5x3x0)	12.00	5.00	2.50	0.50	0.30	17.08	1.20	1.397	4.9	2.9	7.0	17
	160.00	Double Angle (LL3x3x4x0)	0.00	3.00	3.00	-	-	-	-	-	-	-	-	-
	160.00	Channel (Weak Axis Bending)	0.00	0.00	0.00	-	-	-	-	-	-	-	-	-
	160.00	Invert U 5.375x3.625x.375	0.00	3.63	5.38	-	-	-	-	-	-	-	-	-

* The dimension L is the longest dimension of the member

** The dimension W is the height or width of the member that resists wind load

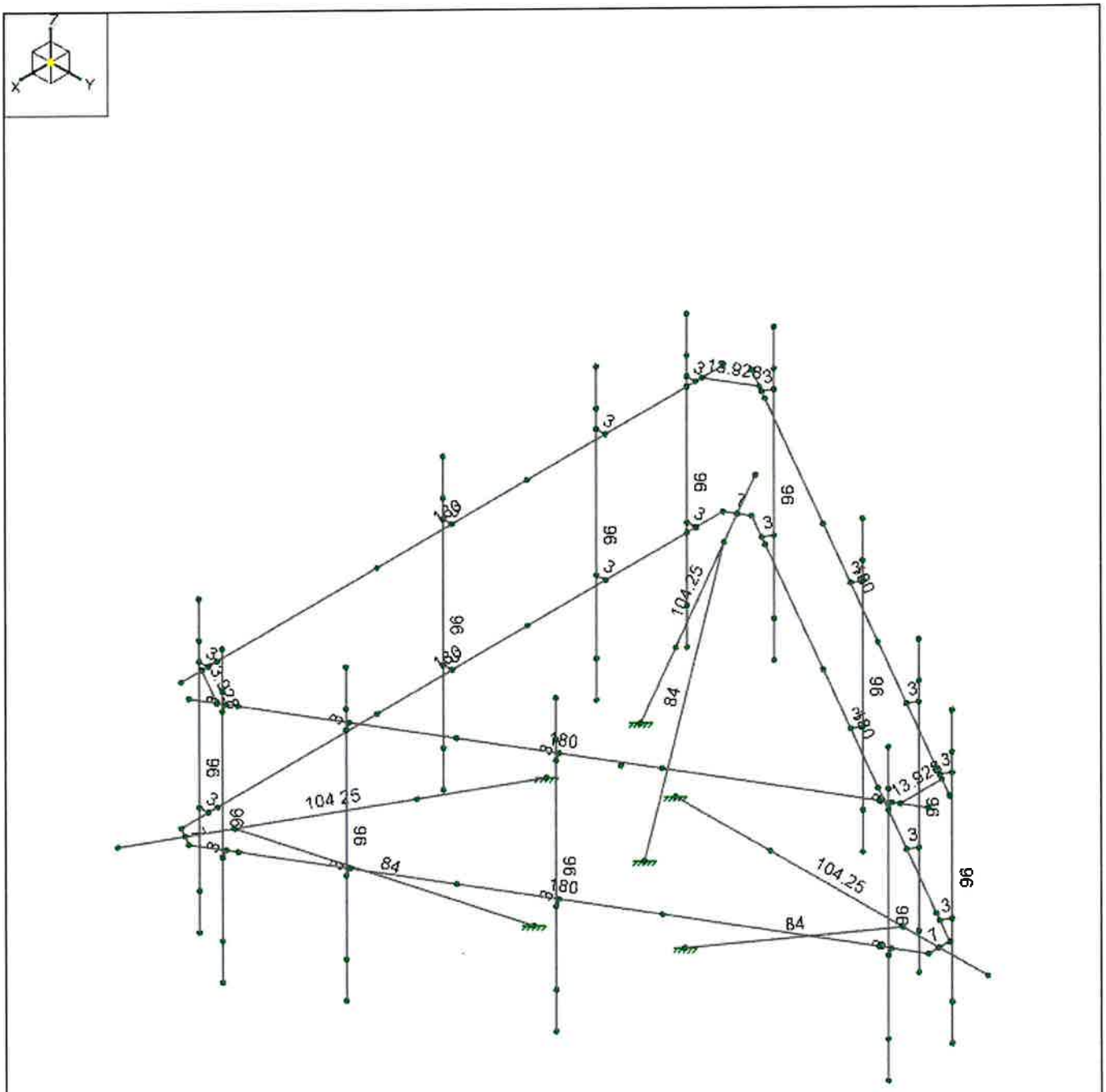
*** A_e is the area of ice built up on the LW plane

**** Ca will equal 1.2 for all ice load calculations



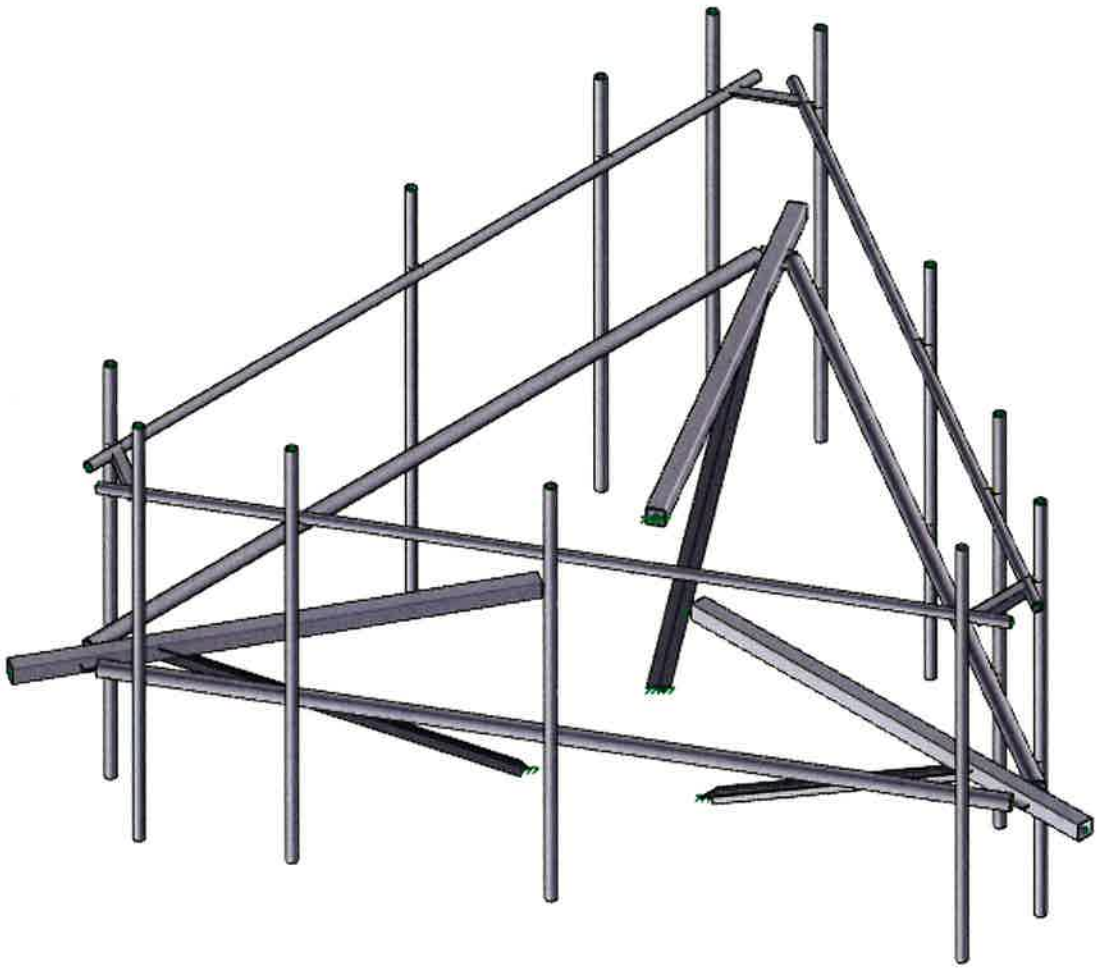
Envelope Only Solution

EFI/ProTerra	Norfolk East CT - Upgrade	SK-9
SA		Apr 24, 2020
049.00293 - 2078007		Norfolk East CT - Upgrade.r3d



Member Length (in) Displayed
Envelope Only Solution

EFI/ProTerra	Norfolk East CT - Upgrade	SK-10
SA		Apr 24, 2020
049.00293 - 2078007		Norfolk East CT - Upgrade.r3d



Envelope Only Solution

EFI/ProTerra	Norfolk East CT - Upgrade	SK-11
SA		Apr 24, 2020
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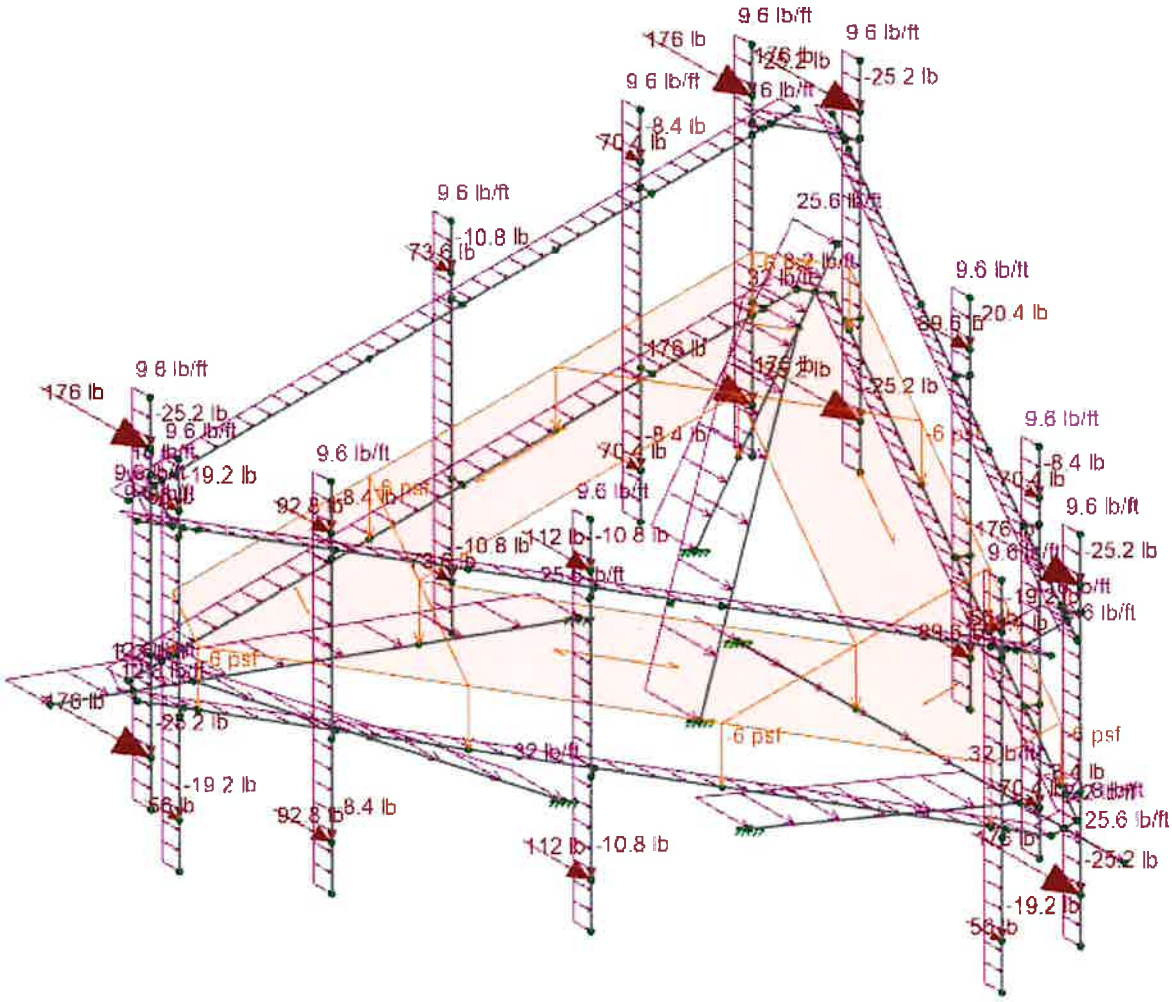
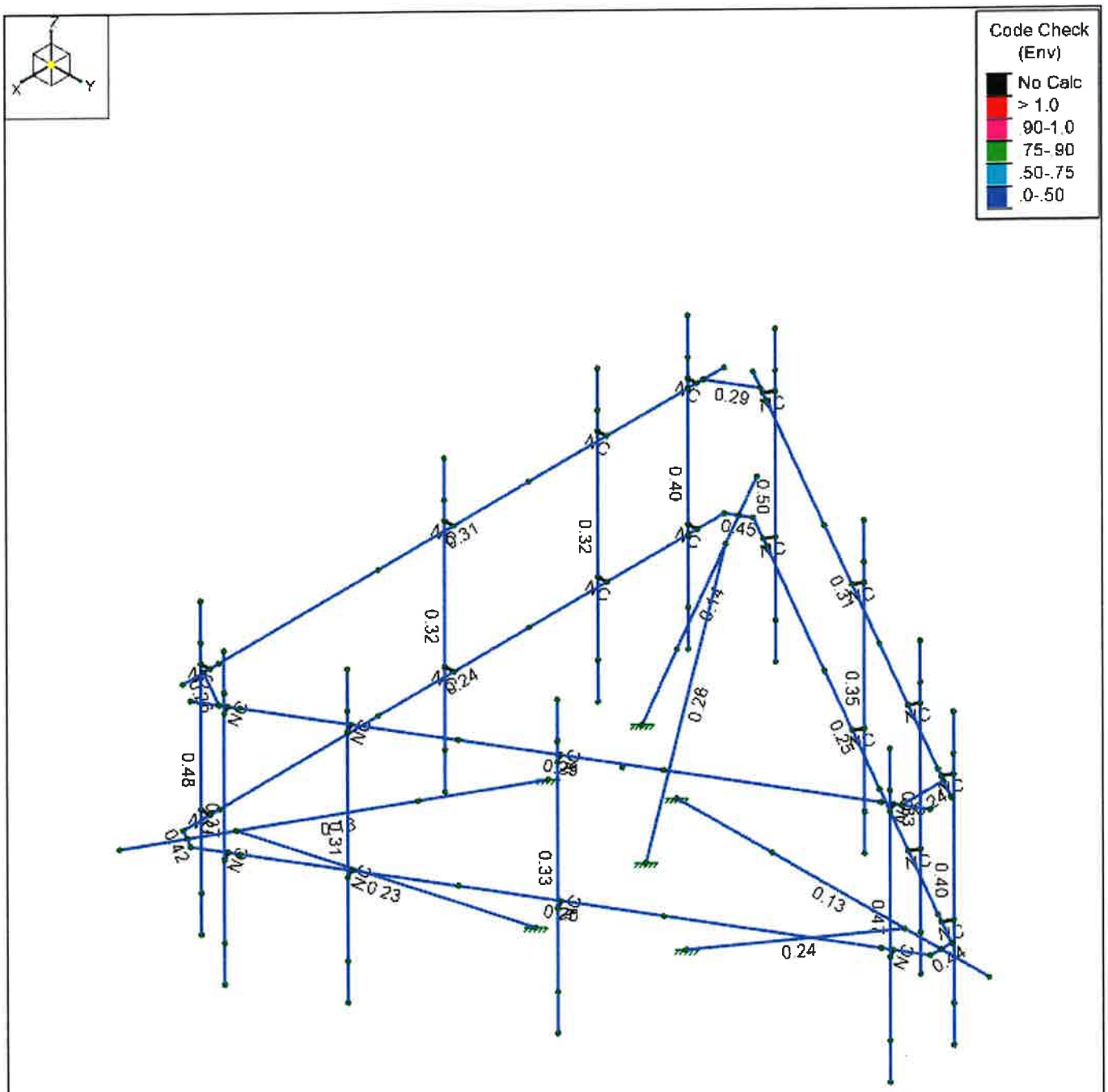


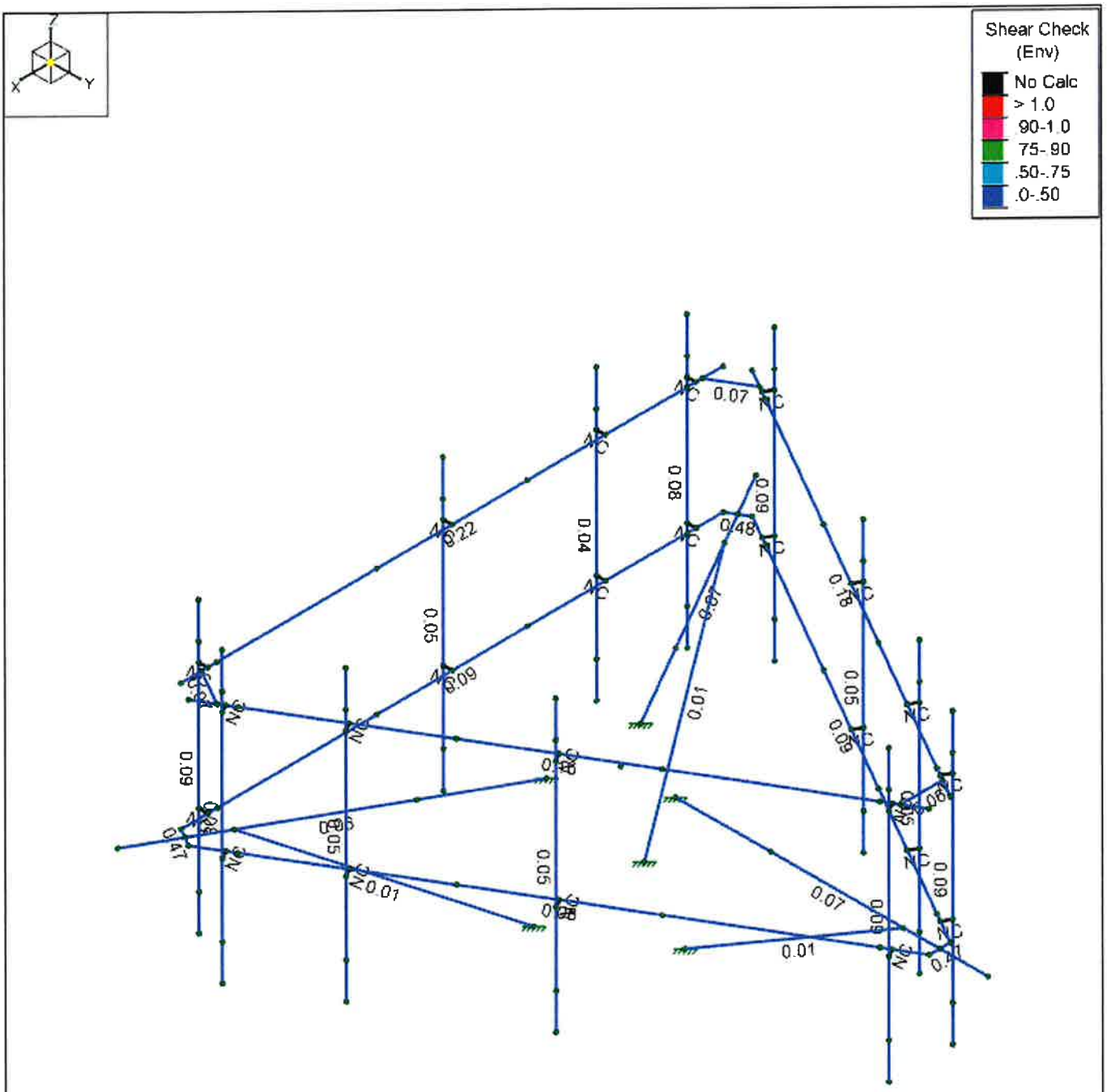
Loads: LC 1, DL + WL (NO ICE) 0 Degree
Envelope Only Solution

EFI/ProTerra	Norfolk East CT - Upgrade	SK-12
SA		Apr 24, 2020
049.00293 - 2078007		Norfolk East CT - Upgrade.r3d



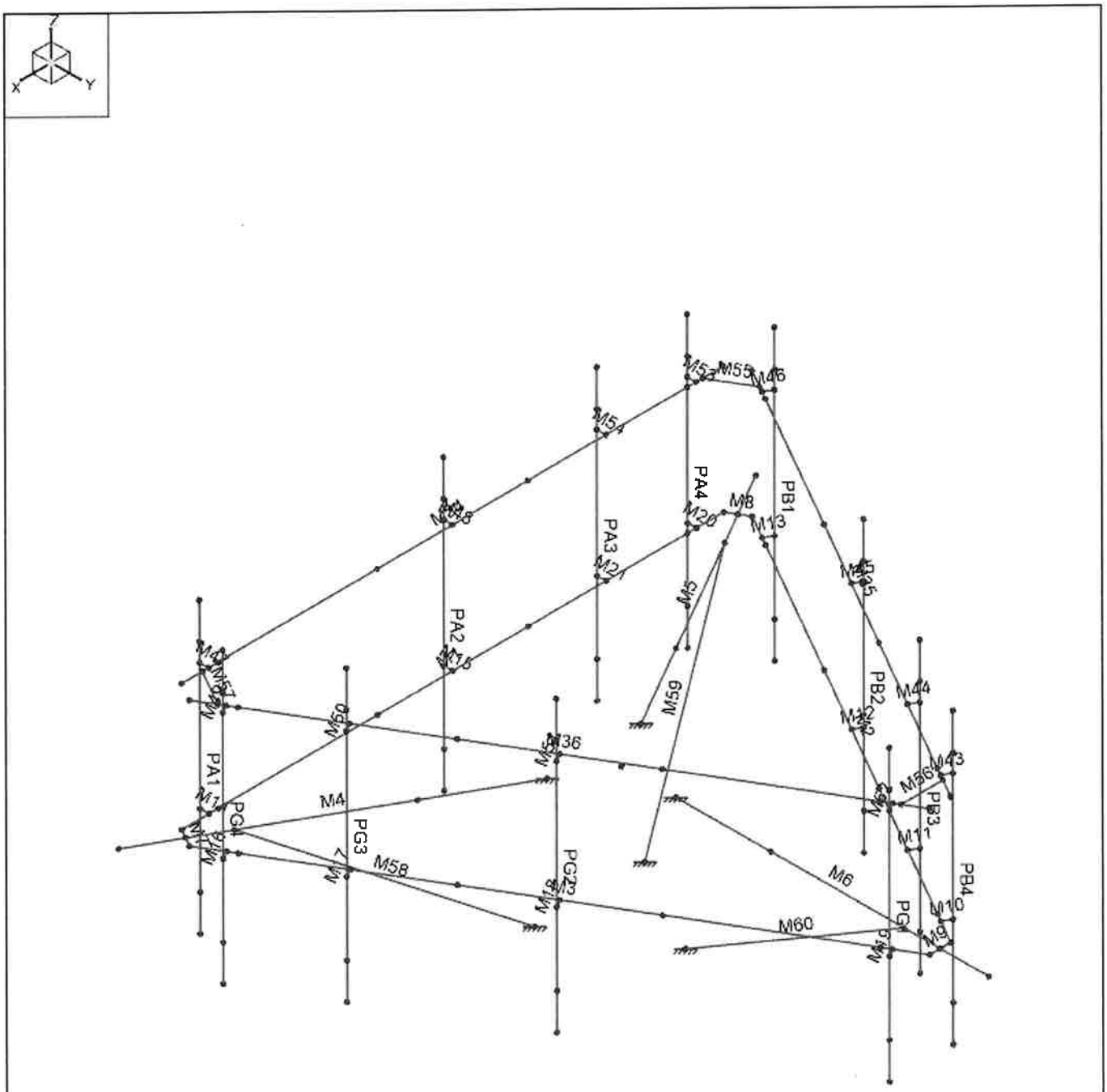
Member Code Checks Displayed (Enveloped)
Envelope Only Solution

EFI/ProTerra	Norfolk East CT - Upgrade	SK-13
SA		Apr 24, 2020
049.00293 - 2078007		Norfolk East CT - Upgrade.r3d



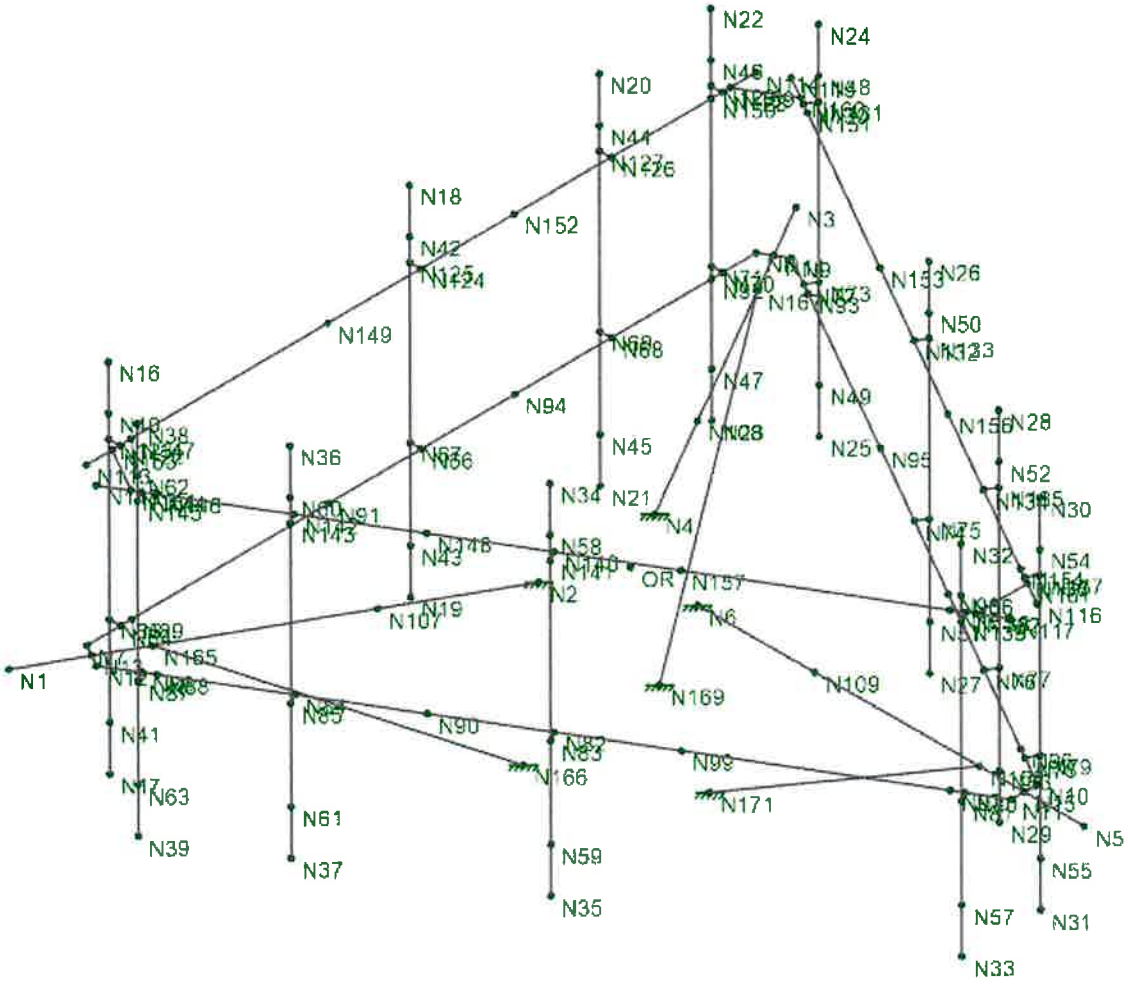
Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

EFI/ProTerra	Norfolk East CT - Upgrade	SK-14
SA		Apr 24, 2020
049.00293 - 2078007		Norfolk East CT - Upgrade.r3d



Envelope Only Solution

EFI/ProTerra	Norfolk East CT - Upgrade	SK-15
SA		Apr 24, 2020
049.00293 - 2078007		Norfolk East CT - Upgrade.r3d



Envelope Only Solution

EFI/ProTerra	Norfolk East CT - Upgrade	SK-16
SA		Apr 24, 2020
049.00293 - 2078007		Norfolk East CT - Upgrade.r3d

Model Settings

Number of Reported Sections	5
Number of Internal Sections	97
Member Area Load Mesh Size (in²)	144
Consider Shear Deformation	Yes
Consider Torsional Warping	Yes

Approximate Mesh Size (in)	12
Transfer Forces Between Intersecting Wood Walls	No
Increase Wood Wall Nailing Capacity for Wind Loads	Yes
Include P-Delta for Walls	Yes
Optimize Masonry and Wood Walls	Yes
Maximum Number of Iterations	3

Single	No
Multiple (Optimum)	Yes
Maximum	No

Global Axis corresponding to vertical direction	Z
Convert Existing Data	Yes

Default Global Plane for z-axis	XZ

Plate Local Axis Orientation	Nodal

Hot Rolled Steel	AISC 14th (360-10): LRFD
Stiffness Adjustment	Yes (Iterative)
Notional Annex	None
Connections	AISC 14th (360-10): LRFD
Cold Formed Steel	None
Stiffness Adjustment	Yes (Iterative)
Wood	AWC NDS-18: LRFD
Temperature	< 100F
Concrete	ACI 318-14
Masonry	TMS 402-16: Strength
Aluminum	AA ADM1-15: LRFD
Structure Type	Building
Stiffness Adjustment	Yes (Iterative)
Stainless	AISC 14th (360-10): LRFD
Stiffness Adjustment	Yes (Iterative)

Analysis Methodology	Exact Integration Method
Parme Beta Factor	0.65
Compression Stress Block	Rectangular Stress Block
Analyze using Cracked Sections	Yes
Leave room for horizontal rebar splices (2*d bar spacing)	No
List forces which were ignored for design in the Detail Report	Yes

Column Min Steel	1
Column Max Steel	8
Rebar Material Spec	ASTM A615
Warn if beam-column framing arrangement is not understood	No
Number of Shear Regions	4
Region 2 & 3 Spacing Increase Increment (in)	4

Code	ASCE 7-10

Model Settings (Continued)

Risk Category	I
Drift Cat	Other
Base Elevation (ft)	-999999
Include the weight of the structure in base shear calcs	Yes

S_1(g)	1
SD_1(g)	1
SD_S(g)	1
T_L(sec)	-1

T (sec)	
T (sec)	
C_t	0.035
C_t	0.035
C_t Exp.	0.75
C_t Exp.	0.75
R	8.5
R	8.5
Ω_0	1
Ω_0	1
C_d	4
C_d	4
ρ	1
ρ	1

Line Project Grid

No Data to Print...

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. C...	Density [l...	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	490	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	490	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	490	50	1.1	65	1.1
4	A500 Gr....	29000	11154	0.3	0.65	527	42	1.4	58	1.3
5	A500 Gr...	29000	11154	0.3	0.65	527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	490	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	490	50	1.25	65	1.15
8	A913 Gr.65	29000	11154	0.3	0.65	490	65	1.1	80	1.1

Cold Formed Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff...	Density [lb/ft³]	Yield [ksi]	Fu [ksi]
1	A653 SS Gr33	29500	11346	0.3	0.65	490	33	45
2	A653 SS Gr...	29500	11346	0.3	0.65	490	50	65

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	HR1	W10X33	Beam	Wide Flan...	A992	Typical	9.71	36.6	171	0.583

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	CF1	8CU1.25...	Beam	CU	A653 SS...	Typical	0.581	0.057	4.41	0.00063

Primary Member Properties

	Label	I Node	J Node	K Node	Rotate(deg)	Section/S...	Type	Design List	Material	Design Rule
1	M1	N7	N8		180	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
2	M2	N10	N9		180	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
3	M3	N12	N11		180	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical
4	M4	N2	N1		180	HSS4X4X4	Beam	Tube	A500 Gr....	Typical
5	M5	N3	N4		180	HSS4X4X4	Beam	Tube	A500 Gr...	Typical
6	M6	N5	N6		180	HSS4X4X4	Beam	Tube	A500 Gr....	Typical
7	M7	N7	N12		180	PL6x1/2"	Beam	RECT	A36 Gr.36	Typical
8	M8	N8	N9		180	PL6x1/2"	Beam	RECT	A36 Gr.36	Typical
9	M9	N10	N11		180	PL6x1/2"	Beam	RECT	A36 Gr.36	Typical
10	M10	N78	N79		180	RIGID	None	None	RIGID	Typical
11	M11	N76	N77		180	RIGID	None	None	RIGID	Typical
12	M12	N74	N75		180	RIGID	None	None	RIGID	Typical
13	M13	N72	N73		180	RIGID	None	None	RIGID	Typical
14	M14	N64	N65		180	RIGID	None	None	RIGID	Typical
15	M15	N66	N67		180	RIGID	None	None	RIGID	Typical
16	M16	N86	N87		180	RIGID	None	None	RIGID	Typical
17	M17	N84	N85		180	RIGID	None	None	RIGID	Typical
18	M18	N82	N83		180	RIGID	None	None	RIGID	Typical
19	M19	N80	N81		180	RIGID	None	None	RIGID	Typical
20	M20	N70	N71		180	RIGID	None	None	RIGID	Typical
21	M21	N68	N69		180	RIGID	None	None	RIGID	Typical
22	PA1	N16	N17		120	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
23	PA2	N18	N19		120	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
24	PA3	N20	N21		120	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
25	PA4	N22	N23		120	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
26	PB1	N24	N25		120	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
27	PB2	N26	N27		120	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
28	PB3	N28	N29		120	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
29	PB4	N30	N31		120	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical

Primary Member Properties (Continued)

	Label	I Node	J Node	K Node	Rotate(deg)	Section/S...	Type	Design List	Material	Design Rule
30	PG1	N32	N33		120	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
31	PG2	N34	N35		120	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
32	PG3	N36	N37		120	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
33	PG4	N38	N39		120	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
34	M34	N113	N114		180	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
35	M35	N116	N115		180	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
36	M36	N118	N117		180	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical
37	M43	N136	N137		180	RIGID	None	None	RIGID	Typical
38	M44	N134	N135		180	RIGID	None	None	RIGID	Typical
39	M45	N132	N133		180	RIGID	None	None	RIGID	Typical
40	M46	N130	N131		180	RIGID	None	None	RIGID	Typical
41	M47	N122	N123		180	RIGID	None	None	RIGID	Typical
42	M48	N124	N125		180	RIGID	None	None	RIGID	Typical
43	M49	N144	N145		180	RIGID	None	None	RIGID	Typical
44	M50	N142	N143		180	RIGID	None	None	RIGID	Typical
45	M51	N140	N141		180	RIGID	None	None	RIGID	Typical
46	M52	N138	N139		180	RIGID	None	None	RIGID	Typical
47	M53	N128	N129		180	RIGID	None	None	RIGID	Typical
48	M54	N126	N127		180	RIGID	None	None	RIGID	Typical
49	M55	N159	N160			L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical
50	M56	N161	N162		180	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical
51	M57	N163	N164		270	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical
52	M58	N166	N165		90	LL2.5x2.5...	Beam	Double A...	A36 Gr.36	Typical
53	M59	N167	N169		90	LL2.5x2.5...	Beam	Double A...	A36 Gr.36	Typical
54	M60	N168	N171		180	LL2.5x2.5...	Beam	Double A...	A36 Gr.36	Typical

Advanced Member Properties

	Label	I Release	J Release	I Offset [in]	J Offset [in]	T/C Only	Physical	Deflectio...	Analysis...	Activation	Seismic...
1	M1						Yes	Default			None
2	M2						Yes	Default			None
3	M3						Yes	Default			None
4	M4						Yes	Default			None
5	M5						Yes	Default			None
6	M6						Yes	Default			None
7	M7						Yes	Default			None
8	M8						Yes	Default			None
9	M9						Yes	Default			None
10	M10						Yes	** NA **			None
11	M11						Yes	** NA **			None
12	M12						Yes	** NA **			None
13	M13						Yes	** NA **			None
14	M14						Yes	** NA **			None
15	M15						Yes	** NA **			None
16	M16						Yes	** NA **			None
17	M17						Yes	** NA **			None
18	M18						Yes	** NA **			None
19	M19						Yes	** NA **			None
20	M20						Yes	** NA **			None
21	M21						Yes	** NA **			None
22	PA1						Yes	Default			None
23	PA2						Yes	Default			None
24	PA3						Yes	Default			None
25	PA4						Yes	Default			None
26	PB1						Yes	Default			None
27	PB2						Yes	Default			None
28	PB3						Yes	Default			None
29	PB4						Yes	Default			None
30	PG1						Yes	Default			None

Advanced Member Properties (Continued)

	Label	I Release	J Release	I Offset [in]	J Offset [in]	T/C Only	Physical	Deflectio...	Analysis...	Activation	Seismic...
31	PG2						Yes	Default			None
32	PG3						Yes	Default			None
33	PG4						Yes	Default			None
34	M34						Yes	Default			None
35	M35						Yes	Default			None
36	M36						Yes	Default			None
37	M43						Yes	** NA **			None
38	M44						Yes	** NA **			None
39	M45						Yes	** NA **			None
40	M46						Yes	** NA **			None
41	M47						Yes	** NA **			None
42	M48						Yes	** NA **			None
43	M49						Yes	** NA **			None
44	M50						Yes	** NA **			None
45	M51						Yes	** NA **			None
46	M52						Yes	** NA **			None
47	M53						Yes	** NA **			None
48	M54						Yes	** NA **			None
49	M55						Yes	Default			None
50	M56						Yes	Default			None
51	M57						Yes	Default			None
52	M58						Yes	Default			None
53	M59						Yes	Default			None
54	M60						Yes	Default			None

Hot Rolled Member Properties

	Label	Shape	Length [in]	Lb y-y [in]	Lb z-z [in]	Lcomp t...	Lcomp...	L-Torqu...	K y-y	K z-z	Cb	Function
1	M1	PIPE_3.0	180			Lbyy						Lateral
2	M2	PIPE_3.0	180			Lbyy						Lateral
3	M3	PIPE_3.0	180			Lbyy						Lateral
4	M4	HSS4X...	104.25			Lbyy						Lateral
5	M5	HSS4X...	104.25			Lbyy						Lateral
6	M6	HSS4X...	104.25			Lbyy						Lateral
7	M7	PL6x1/2"	7			Lbyy						Lateral
8	M8	PL6x1/2"	7			Lbyy						Lateral
9	M9	PL6x1/2"	7			Lbyy						Lateral
10	PA1	PIPE_2.0	96			Lbyy						Lateral
11	PA2	PIPE_2.0	96			Lbyy						Lateral
12	PA3	PIPE_2.0	96			Lbyy						Lateral
13	PA4	PIPE_2.0	96			Lbyy						Lateral
14	PB1	PIPE_2.0	96			Lbyy						Lateral
15	PB2	PIPE_2.0	96			Lbyy						Lateral
16	PB3	PIPE_2.0	96			Lbyy						Lateral
17	PB4	PIPE_2.0	96			Lbyy						Lateral
18	PG1	PIPE_2.0	96			Lbyy						Lateral
19	PG2	PIPE_2.0	96			Lbyy						Lateral
20	PG3	PIPE_2.0	96			Lbyy						Lateral
21	PG4	PIPE_2.0	96			Lbyy						Lateral
22	M34	PIPE_2.0	180			Lbyy						Lateral
23	M35	PIPE_2.0	180			Lbyy						Lateral
24	M36	PIPE_2.0	180			Lbyy						Lateral
25	M55	L2.5x2...	13.928			Lbyy						Lateral
26	M56	L2.5x2...	13.928			Lbyy						Lateral
27	M57	L2.5x2...	13.928			Lbyy						Lateral
28	M58	LL2.5x2...	84			Lbyy						Lateral
29	M59	LL2.5x2...	84			Lbyy						Lateral
30	M60	LL2.5x2...	84			Lbyy						Lateral

Nodes

	Label	X [in]	Y [in]	Z [in]	Temp [deg F]	Detach From Dia...
1	N1	105.871564	-61.124976	0		
2	N2	15.588457	-9	0		
3	N3	-105.871564	-61.124976	0		
4	N4	-15.588457	-9	0		
5	N5	0	122.249953	0		
6	N6	0	18	0		
7	N7	90.	-56.002976	0		
8	N8	-90.	-56.002976	0		
9	N9	-93.5	-49.940798	0		
10	N10	-3.5	105.943775	0		
11	N11	3.5	105.943775	0		
12	N12	93.5	-49.940798	0		
13	N13	91.75	-52.971887	0		
14	N14	-91.75	-52.971887	0		
15	N15	0	105.943775	0		
16	N16	81	-59.002976	60		
17	N17	81	-59.002976	-36		
18	N18	0	-59.002976	60		
19	N19	0	-59.002976	-36		
20	N20	-51	-59.002976	60		
21	N21	-51	-59.002976	-36		
22	N22	-81	-59.002976	60		
23	N23	-81	-59.002976	-36		
24	N24	-91.598076	-40.64657	60		
25	N25	-91.598076	-40.64657	-36		
26	N26	-51.098076	29.501488	60		
27	N27	-51.098076	29.501488	-36		
28	N28	-25.598076	73.668784	60		
29	N29	-25.598076	73.668784	-36		
30	N30	-10.598076	99.649546	60		
31	N31	-10.598076	99.649546	-36		
32	N32	10.598076	99.649546	60		
33	N33	10.598076	99.649546	-36		
34	N34	51.098076	29.501488	60		
35	N35	51.098076	29.501488	-36		
36	N36	76.598076	-14.665807	60		
37	N37	76.598076	-14.665807	-36		
38	N38	91.598076	-40.64657	60		
39	N39	91.598076	-40.64657	-36		
40	N40	81	-59.002976	48		
41	N41	81	-59.002976	-24		
42	N42	0	-59.002976	48		
43	N43	0	-59.002976	-24		
44	N44	-51	-59.002976	48		
45	N45	-51	-59.002976	-24		
46	N46	-81	-59.002976	48		
47	N47	-81	-59.002976	-24		
48	N48	-91.598076	-40.64657	48		
49	N49	-91.598076	-40.64657	-24		
50	N50	-51.098076	29.501488	48		
51	N51	-51.098076	29.501488	-24		
52	N52	-25.598076	73.668784	48		
53	N53	-25.598076	73.668784	-24		
54	N54	-10.598076	99.649546	48		
55	N55	-10.598076	99.649546	-24		
56	N56	10.598076	99.649546	48		
57	N57	10.598076	99.649546	-24		
58	N58	51.098076	29.501488	48		

Nodes (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [deg F]	Detach From Dia...
59	N59	51.098076	29.501488	-24		
60	N60	76.598076	-14.665807	48		
61	N61	76.598076	-14.665807	-24		
62	N62	91.598076	-40.64657	48		
63	N63	91.598076	-40.64657	-24		
64	N64	81	-56.002976	0		
65	N65	81	-59.002976	0		
66	N66	0	-56.002976	0		
67	N67	0	-59.002976	0		
68	N68	-51	-56.002976	0		
69	N69	-51	-59.002976	0		
70	N70	-81	-56.002976	0		
71	N71	-81	-59.002976	0		
72	N72	-89.	-42.14657	0		
73	N73	-91.598076	-40.64657	0		
74	N74	-48.5	28.001488	0		
75	N75	-51.098076	29.501488	0		
76	N76	-23	72.168784	0		
77	N77	-25.598076	73.668784	0		
78	N78	-8.	98.149546	0		
79	N79	-10.598076	99.649546	0		
80	N80	8.	98.149546	0		
81	N81	10.598076	99.649546	0		
82	N82	48.5	28.001488	0		
83	N83	51.098076	29.501488	0		
84	N84	74.	-16.165807	0		
85	N85	76.598076	-14.665807	0		
86	N86	89.	-42.14657	0		
87	N87	91.598076	-40.64657	0		
88	N88	87.5	-39.548493	0		
89	N89	78.	-56.002976	0		
90	N90	61	6.350853	0		
91	N91	25	-56.002976	0		
92	N92	-78.	-56.002976	0		
93	N93	-87.5	-39.548493	0		
94	N94	-25	-56.002976	0		
95	N95	-61	6.350853	0		
96	N96	-9.5	95.55147	0		
97	N97	9.5	95.55147	0		
98	N98	-36	49.652124	0		
99	N99	36	49.652124	0		
100	OR	0	0	0		
101	N107	43.	-24.826061	0		
102	N108	-43.	-24.826061	0		
103	N109	0	49.652124	0		
104	N113	90.	-56.002976	42		
105	N114	-90.	-56.002976	42		
106	N115	-93.5	-49.940798	42		
107	N116	-3.5	105.943775	42		
108	N117	3.5	105.943775	42		
109	N118	93.5	-49.940798	42		
110	N122	81	-56.002976	42		
111	N123	81	-59.002976	42		
112	N124	0	-56.002976	42		
113	N125	0	-59.002976	42		
114	N126	-51	-56.002976	42		
115	N127	-51	-59.002976	42		
116	N128	-81	-56.002976	42		

Nodes (Continued)

	Label	X [in]	Y [in]	Z [in]	Temp [deg F]	Detach From Dia...
117	N129	-81	-59.002976	42		
118	N130	-89.	-42.14657	42		
119	N131	-91.598076	-40.64657	42		
120	N132	-48.5	28.001488	42		
121	N133	-51.098076	29.501488	42		
122	N134	-23	72.168784	42		
123	N135	-25.598076	73.668784	42		
124	N136	-8.	98.149546	42		
125	N137	-10.598076	99.649546	42		
126	N138	8.	98.149546	42		
127	N139	10.598076	99.649546	42		
128	N140	48.5	28.001488	42		
129	N141	51.098076	29.501488	42		
130	N142	74.	-16.165807	42		
131	N143	76.598076	-14.665807	42		
132	N144	89.	-42.14657	42		
133	N145	91.598076	-40.64657	42		
134	N146	87.5	-39.548493	42		
135	N147	78.	-56.002976	42		
136	N148	61	6.350853	42		
137	N149	25	-56.002976	42		
138	N150	-78.	-56.002976	42		
139	N151	-87.5	-39.548493	42		
140	N152	-25	-56.002976	42		
141	N153	-61	6.350853	42		
142	N154	-9.5	95.55147	42		
143	N155	9.5	95.55147	42		
144	N156	-36	49.652124	42		
145	N157	36	49.652124	42		
146	N159	-83.071797	-56.002976	42		
147	N160	-90.035898	-43.940798	42		
148	N161	-6.964102	99.943775	42		
149	N162	6.964102	99.943775	42		
150	N163	83.071797	-56.002976	42		
151	N164	90.035898	-43.940798	42		
152	N165	81.357695	-46.971887	0		
153	N166	18.358007	-10.599	-42		
154	N167	-81.357695	-46.971887	0		
155	N169	-18.358007	-10.599	-42		
156	N168	0	93.943775	0		
157	N171	0	21.198	-42		

Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1	N4	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N2	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N6	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
4	N166	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
5	N169	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
6	N171	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Basic Load Cases

	BLC Desc...	Category	X Gravity	Y Gravity	Z Gravity	Nodal	Point	Distributed	Area(Me...	Surface(P...
1	DEAD LO...	None			-1	24			6	
2	DEAD LO...	None				24		30	6	
3	WIND LO...	None				24		30		
4	WIND LO...	None				24		30		

Basic Load Cases (Continued)

	BLC Desc...	Category	X Gravity	Y Gravity	Z Gravity	Nodal	Point	Distributed	Area(Me...	Surface(P...
5	WIND LO...	None				24		30		
6	WIND LO...	None				24		30		
7	LIVE LOA...	None				1				
8	LIVE LOA...	None				1				
9	LIVE LOA...	None				1				
10	MAINTEN...	None				1				
11	MAINTEN...	None				1				
12	MAINTEN...	None				1				
13	MAINTEN...	None				1				
14	BLC 1 Tra...	None						48		
15	BLC 2 Tra...	None						48		

Node Loads and Enforced Displacements (BLC 1 : DEAD LOAD)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft),...	Inactive [(lb, k-ft), (in,...
1	N40	L	Z	-21	Active
2	N41	L	Z	-21	Active
3	N42	L	Z	-9	Active
4	N43	L	Z	-9	Active
5	N44	L	Z	-7	Active
6	N45	L	Z	-7	Active
7	N46	L	Z	-21	Active
8	N47	L	Z	-21	Active
9	N48	L	Z	-21	Active
10	N49	L	Z	-21	Active
11	N50	L	Z	-17	Active
12	N51	L	Z	-17	Active
13	N52	L	Z	-7	Active
14	N53	L	Z	-7	Active
15	N54	L	Z	-21	Active
16	N55	L	Z	-21	Active
17	N56	L	Z	-16	Active
18	N57	L	Z	-16	Active
19	N58	L	Z	-9	Active
20	N59	L	Z	-9	Active
21	N60	L	Z	-7	Active
22	N61	L	Z	-7	Active
23	N62	L	Z	-16	Active
24	N63	L	Z	-16	Active

Node Loads and Enforced Displacements (BLC 2 : DEAD LOAD ICE)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft),...	Inactive [(lb, k-ft), (in,...
1	N40	L	Z	-119	Active
2	N41	L	Z	-119	Active
3	N42	L	Z	-85	Active
4	N43	L	Z	-85	Active
5	N44	L	Z	-61	Active
6	N45	L	Z	-61	Active
7	N46	L	Z	-119	Active
8	N47	L	Z	-119	Active
9	N48	L	Z	-119	Active
10	N49	L	Z	-119	Active
11	N50	L	Z	-77	Active
12	N51	L	Z	-77	Active
13	N52	L	Z	-61	Active
14	N53	L	Z	-61	Active
15	N54	L	Z	-119	Active
16	N55	L	Z	-119	Active

Node Loads and Enforced Displacements (BLC 2 : DEAD LOAD ICE) (Continued)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft),...	Inactive [(lb, k-ft), (in,...
17	N56	L	Z	-75	Active
18	N57	L	Z	-75	Active
19	N58	L	Z	-77	Active
20	N59	L	Z	-77	Active
21	N60	L	Z	-61	Active
22	N61	L	Z	-61	Active
23	N62	L	Z	-75	Active
24	N63	L	Z	-75	Active

Node Loads and Enforced Displacements (BLC 3 : WIND LOAD (NO ICE) FRONT)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft),...	Inactive [(lb, k-ft), (in,...
1	N40	L	Y	110	Active
2	N41	L	Y	110	Active
3	N42	L	Y	46	Active
4	N43	L	Y	46	Active
5	N44	L	Y	44	Active
6	N45	L	Y	44	Active
7	N46	L	Y	110	Active
8	N47	L	Y	110	Active
9	N48	L	Y	110	Active
10	N49	L	Y	110	Active
11	N50	L	Y	56	Active
12	N51	L	Y	56	Active
13	N52	L	Y	44	Active
14	N53	L	Y	44	Active
15	N54	L	Y	110	Active
16	N55	L	Y	110	Active
17	N56	L	Y	35	Active
18	N57	L	Y	35	Active
19	N58	L	Y	70	Active
20	N59	L	Y	70	Active
21	N60	L	Y	58	Active
22	N61	L	Y	58	Active
23	N62	L	Y	35	Active
24	N63	L	Y	35	Active

Node Loads and Enforced Displacements (BLC 4 : WIND LOAD (NO ICE) SIDE)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft),...	Inactive [(lb, k-ft), (in,...
1	N40	L	X	53	Active
2	N41	L	X	53	Active
3	N42	L	X	92	Active
4	N43	L	X	92	Active
5	N44	L	X	58	Active
6	N45	L	X	58	Active
7	N46	L	X	53	Active
8	N47	L	X	53	Active
9	N48	L	X	53	Active
10	N49	L	X	53	Active
11	N50	L	X	70	Active
12	N51	L	X	70	Active
13	N52	L	X	58	Active
14	N53	L	X	58	Active
15	N54	L	X	53	Active
16	N55	L	X	53	Active
17	N56	L	X	50	Active
18	N57	L	X	50	Active
19	N58	L	X	56	Active

Node Loads and Enforced Displacements (BLC 4 : WIND LOAD (NO ICE) SIDE) (Continued)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft),...	Inactive [(lb, k-ft), (in,...
20	N59	L	X	56	Active
21	N60	L	X	44	Active
22	N61	L	X	44	Active
23	N62	L	X	50	Active
24	N63	L	X	50	Active

Node Loads and Enforced Displacements (BLC 5 : WIND LOAD (ICE) FRONT)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft),...	Inactive [(lb, k-ft), (in,...
1	N40	L	Y	28	Active
2	N41	L	Y	28	Active
3	N42	L	Y	14	Active
4	N43	L	Y	14	Active
5	N44	L	Y	13	Active
6	N45	L	Y	13	Active
7	N46	L	Y	28	Active
8	N47	L	Y	28	Active
9	N48	L	Y	28	Active
10	N49	L	Y	28	Active
11	N50	L	Y	16	Active
12	N51	L	Y	16	Active
13	N52	L	Y	13	Active
14	N53	L	Y	13	Active
15	N54	L	Y	28	Active
16	N55	L	Y	28	Active
17	N56	L	Y	10	Active
18	N57	L	Y	10	Active
19	N58	L	Y	18	Active
20	N59	L	Y	18	Active
21	N60	L	Y	16	Active
22	N61	L	Y	16	Active
23	N62	L	Y	10	Active
24	N63	L	Y	10	Active

Node Loads and Enforced Displacements (BLC 6 : WIND LOAD (ICE) SIDE)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft),...	Inactive [(lb, k-ft), (in,...
1	N40	L	X	15	Active
2	N41	L	X	15	Active
3	N42	L	X	23	Active
4	N43	L	X	23	Active
5	N44	L	X	16	Active
6	N45	L	X	16	Active
7	N46	L	X	15	Active
8	N47	L	X	15	Active
9	N48	L	X	15	Active
10	N49	L	X	15	Active
11	N50	L	X	18	Active
12	N51	L	X	18	Active
13	N52	L	X	16	Active
14	N53	L	X	16	Active
15	N54	L	X	15	Active
16	N55	L	X	15	Active
17	N56	L	X	14	Active
18	N57	L	X	14	Active
19	N58	L	X	16	Active
20	N59	L	X	16	Active
21	N60	L	X	13	Active
22	N61	L	X	13	Active

Node Loads and Enforced Displacements (BLC 6 : WIND LOAD (ICE) SIDE) (Continued)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft),...	Inactive [(lb, k-ft), (in,...
23	N62	L	X	14	Active
24	N63	L	X	14	Active

Node Loads and Enforced Displacements (BLC 7 : LIVE LOAD1)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft),...	Inactive [(lb, k-ft), (in,...
1	N13	L	Z	-250	Active

Node Loads and Enforced Displacements (BLC 8 : LIVE LOAD2)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft),...	Inactive [(lb, k-ft), (in,...
1	N14	L	Z	-250	Active

Node Loads and Enforced Displacements (BLC 9 : LIVE LOAD3)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft),...	Inactive [(lb, k-ft), (in,...
1	N15	L	Z	-250	Active

Node Loads and Enforced Displacements (BLC 10 : MAINTENANCE LOAD 1)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft),...	Inactive [(lb, k-ft), (in,...
1	N25	L	Z	-500	Active

Node Loads and Enforced Displacements (BLC 11 : MAINTENANCE LOAD 2)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft),...	Inactive [(lb, k-ft), (in,...
1	N27	L	Z	-500	Active

Node Loads and Enforced Displacements (BLC 12 : MAINTENANCE LOAD 3)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft),...	Inactive [(lb, k-ft), (in,...
1	N29	L	Z	-500	Active

Node Loads and Enforced Displacements (BLC 13 : MAINTENANCE LOAD 4)

	Node Label	L, D, M	Direction	Magnitude [(lb, k-ft),...	Inactive [(lb, k-ft), (in,...
1	N31	L	Z	-500	Active

Member Distributed Loads (BLC 2 : DEAD LOAD ICE)

	Member Label	Direction	Start Magnitud...	End Magnitude...	Start Location [...	End Location [(...	Inactive [(lb, k-...
1	M1	Z	-11	-11	0	%100	Active
2	M2	Z	-11	-11	0	%100	Active
3	M3	Z	-11	-11	0	%100	Active
4	PA1	Z	-9	-9	0	%100	Active
5	PA2	Z	-9	-9	0	%100	Active
6	PA3	Z	-9	-9	0	%100	Active
7	PA4	Z	-9	-9	0	%100	Active
8	PB1	Z	-9	-9	0	%100	Active
9	PB2	Z	-9	-9	0	%100	Active
10	PB3	Z	-9	-9	0	%100	Active
11	PB4	Z	-9	-9	0	%100	Active
12	PG1	Z	-9	-9	0	%100	Active
13	PG2	Z	-9	-9	0	%100	Active
14	PG3	Z	-9	-9	0	%100	Active
15	PG4	Z	-9	-9	0	%100	Active
16	M4	Z	-22	-22	0	%100	Active
17	M5	Z	-22	-22	0	%100	Active
18	M6	Z	-22	-22	0	%100	Active
19	M7	Z	-18	-18	0	%100	Active
20	M9	Z	-18	-18	0	%100	Active
21	M8	Z	-18	-18	0	%100	Active

Member Distributed Loads (BLC 2 : DEAD LOAD ICE) (Continued)

	Member Label	Direction	Start Magnitud...	End Magnitude...	Start Location [...	End Location [(...	Inactive [(lb, k-...
22	M35	Z	-9	-9	0	%100	Active
23	M34	Z	-9	-9	0	%100	Active
24	M36	Z	-9	-9	0	%100	Active
25	M55	Z	-7	-7	0	%100	Active
26	M58	Z	-7	-7	0	%100	Active
27	M57	Z	-7	-7	0	%100	Active
28	M60	Z	-17	-17	0	%100	Active
29	M58	Z	-17	-17	0	%100	Active
30	M59	Z	-17	-17	0	%100	Active

Member Distributed Loads (BLC 3 : WIND LOAD (NO ICE) FRONT)

	Member Label	Direction	Start Magnitud...	End Magnitude...	Start Location [...	End Location [(...	Inactive [(lb, k-...
1	M1	PY	8	8	0	%100	Active
2	M2	PY	8	8	0	%100	Active
3	M3	PY	8	8	0	%100	Active
4	PA1	PY	6	6	0	%100	Active
5	PA2	PY	6	6	0	%100	Active
6	PA3	PY	6	6	0	%100	Active
7	PA4	PY	6	6	0	%100	Active
8	PB1	PY	6	6	0	%100	Active
9	PB2	PY	6	6	0	%100	Active
10	PB3	PY	6	6	0	%100	Active
11	PB4	PY	6	6	0	%100	Active
12	PG1	PY	6	6	0	%100	Active
13	PG2	PY	6	6	0	%100	Active
14	PG3	PY	6	6	0	%100	Active
15	PG4	PY	6	6	0	%100	Active
16	M4	PY	16	16	0	%100	Active
17	M5	PY	16	16	0	%100	Active
18	M6	PY	16	16	0	%100	Active
19	M7	PY	2	2	0	%100	Active
20	M9	PY	2	2	0	%100	Active
21	M8	PY	2	2	0	%100	Active
22	M36	PY	6	6	0	%100	Active
23	M35	PY	6	6	0	%100	Active
24	M34	PY	6	6	0	%100	Active
25	M55	PY	10	10	0	%100	Active
26	M57	PY	10	10	0	%100	Active
27	M56	PY	10	10	0	%100	Active
28	M58	PY	20	20	0	%100	Active
29	M59	PY	20	20	0	%100	Active
30	M60	PY	20	20	0	%100	Active

Member Distributed Loads (BLC 4 : WIND LOAD (NO ICE) SIDE)

	Member Label	Direction	Start Magnitud...	End Magnitude...	Start Location [...	End Location [(...	Inactive [(lb, k-...
1	M1	PX	8	8	0	%100	Active
2	M2	PX	8	8	0	%100	Active
3	M3	PX	8	8	0	%100	Active
4	PA1	PX	6	6	0	%100	Active
5	PA2	PX	6	6	0	%100	Active
6	PA3	PX	6	6	0	%100	Active
7	PA4	PX	6	6	0	%100	Active
8	PB1	PX	6	6	0	%100	Active
9	PB2	PX	6	6	0	%100	Active
10	PB3	PX	6	6	0	%100	Active
11	PB4	PX	6	6	0	%100	Active
12	PG1	PX	6	6	0	%100	Active

Member Distributed Loads (BLC 4 : WIND LOAD (NO ICE) SIDE) (Continued)

	Member Label	Direction	Start Magnitud...	End Magnitude...	Start Location [...	End Location [(...	Inactive [(lb, k-...
13	PG2	PX	6	6	0	%100	Active
14	PG3	PX	6	6	0	%100	Active
15	PG4	PX	6	6	0	%100	Active
16	M4	PX	16	16	0	%100	Active
17	M5	PX	16	16	0	%100	Active
18	M6	PX	16	16	0	%100	Active
19	M7	PX	2	2	0	%100	Active
20	M9	PX	2	2	0	%100	Active
21	M8	PX	2	2	0	%100	Active
22	M35	PX	6	6	0	%100	Active
23	M36	PX	6	6	0	%100	Active
24	M34	PX	6	6	0	%100	Active
25	M55	PX	10	10	0	%100	Active
26	M56	PX	10	10	0	%100	Active
27	M57	PX	10	10	0	%100	Active
28	M58	PX	20	20	0	%100	Active
29	M60	PX	20	20	0	%100	Active
30	M59	PX	20	20	0	%100	Active

Member Distributed Loads (BLC 5 : WIND LOAD (ICE) FRONT)

	Member Label	Direction	Start Magnitud...	End Magnitude...	Start Location [...	End Location [(...	Inactive [(lb, k-...
1	M1	PY	4.4	4.4	0	%100	Active
2	M2	PY	4.4	4.4	0	%100	Active
3	M3	PY	4.4	4.4	0	%100	Active
4	PA1	PY	3.7	3.7	0	%100	Active
5	PA2	PY	3.7	3.7	0	%100	Active
6	PA3	PY	3.7	3.7	0	%100	Active
7	PA4	PY	3.7	3.7	0	%100	Active
8	PB1	PY	3.7	3.7	0	%100	Active
9	PB2	PY	3.7	3.7	0	%100	Active
10	PB3	PY	3.7	3.7	0	%100	Active
11	PB4	PY	3.7	3.7	0	%100	Active
12	PG1	PY	3.7	3.7	0	%100	Active
13	PG2	PY	3.7	3.7	0	%100	Active
14	PG3	PY	3.7	3.7	0	%100	Active
15	PG4	PY	3.7	3.7	0	%100	Active
16	M4	PY	6.1	6.1	0	%100	Active
17	M5	PY	6.1	6.1	0	%100	Active
18	M6	PY	6.1	6.1	0	%100	Active
19	M7	PY	2.7	2.7	0	%100	Active
20	M9	PY	2.7	2.7	0	%100	Active
21	M8	PY	2.7	2.7	0	%100	Active
22	M35	PY	3.7	3.7	0	%100	Active
23	M36	PY	3.7	3.7	0	%100	Active
24	M34	PY	3.7	3.7	0	%100	Active
25	M57	PY	4.6	4.6	0	%100	Active
26	M55	PY	4.6	4.6	0	%100	Active
27	M56	PY	4.6	4.6	0	%100	Active
28	M60	PY	7	7	0	%100	Active
29	M59	PY	7	7	0	%100	Active
30	M58	PY	7	7	0	%100	Active

Member Distributed Loads (BLC 6 : WIND LOAD (ICE) SIDE)

	Member Label	Direction	Start Magnitud...	End Magnitude...	Start Location [...	End Location [(...	Inactive [(lb, k-...
1	M1	PX	4.4	4.4	0	%100	Active
2	M2	PX	4.4	4.4	0	%100	Active
3	M3	PX	4.4	4.4	0	%100	Active

Member Distributed Loads (BLC 6 : WIND LOAD (ICE) SIDE) (Continued)

	Member Label	Direction	Start Magnitud...	End Magnitude...	Start Location [...	End Location [(...	Inactive [(lb, k-...
4	PA1	PX	3.7	3.7	0	%100	Active
5	PA2	PX	3.7	3.7	0	%100	Active
6	PA3	PX	3.7	3.7	0	%100	Active
7	PA4	PX	3.7	3.7	0	%100	Active
8	PB1	PX	3.7	3.7	0	%100	Active
9	PB2	PX	3.7	3.7	0	%100	Active
10	PB3	PX	3.7	3.7	0	%100	Active
11	PB4	PX	3.7	3.7	0	%100	Active
12	PG1	PX	3.7	3.7	0	%100	Active
13	PG2	PX	3.7	3.7	0	%100	Active
14	PG3	PX	3.7	3.7	0	%100	Active
15	PG4	PX	3.7	3.7	0	%100	Active
16	M4	PX	6.1	6.1	0	%100	Active
17	M5	PX	6.1	6.1	0	%100	Active
18	M6	PX	6.1	6.1	0	%100	Active
19	M7	PX	2.7	2.7	0	%100	Active
20	M9	PX	2.7	2.7	0	%100	Active
21	M8	PX	2.7	2.7	0	%100	Active
22	M35	PX	3.7	3.7	0	%100	Active
23	M34	PX	3.7	3.7	0	%100	Active
24	M36	PX	3.7	3.7	0	%100	Active
25	M55	PX	4.6	4.6	0	%100	Active
26	M57	PX	4.6	4.6	0	%100	Active
27	M56	PX	4.6	4.6	0	%100	Active
28	M58	PX	7	7	0	%100	Active
29	M59	PX	7	7	0	%100	Active
30	M60	PX	7	7	0	%100	Active

Member Distributed Loads (BLC 14 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitud...	End Magnitude...	Start Location [...	End Location [(...	Inactive [(lb, k-...
1	M1	Z	-0.349	-3.369	0	24	Active
2	M1	Z	-3.369	-4.298	24	48	Active
3	M1	Z	-4.298	-2.481	48	72	Active
4	M3	Z	-0.344	-2.072	0	24	Active
5	M3	Z	-2.072	-3.671	24	48	Active
6	M3	Z	-3.671	-5.141	48	72	Active
7	M4	Z	-0.186	-8.419	20.85	33.36	Active
8	M4	Z	-8.419	-13.765	33.36	45.87	Active
9	M4	Z	-13.765	-8.95	45.87	58.38	Active
10	M4	Z	-8.95	-4.534	58.38	70.89	Active
11	M4	Z	-4.534	-0.186	70.89	83.4	Active
12	M1	Z	-2.481	-4.298	108	132	Active
13	M1	Z	-4.298	-3.369	132	156	Active
14	M1	Z	-3.369	-0.349	156	180	Active
15	M2	Z	-5.14	-3.671	108	132	Active
16	M2	Z	-3.671	-2.073	132	156	Active
17	M2	Z	-2.073	-0.345	156	180	Active
18	M5	Z	-0.186	-4.534	20.85	33.36	Active
19	M5	Z	-4.534	-8.951	33.36	45.87	Active
20	M5	Z	-8.951	-13.764	45.87	58.38	Active
21	M5	Z	-13.764	-8.418	58.38	70.89	Active
22	M5	Z	-8.418	-0.186	70.89	83.4	Active
23	M2	Z	-0.349	-3.369	0	24	Active
24	M2	Z	-3.369	-4.298	24	48	Active
25	M2	Z	-4.298	-2.481	48	72	Active
26	M3	Z	-2.481	-4.298	108	132	Active
27	M3	Z	-4.298	-3.369	132	156	Active
28	M3	Z	-3.369	-0.349	156	180	Active

Member Distributed Loads (BLC 14 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitud...	End Magnitude...	Start Location [...	End Location [(...	Inactive [(lb, k-...
29	M6	Z	-3.876	-7.336	20.85	41.7	Active
30	M6	Z	-7.336	-8.248	41.7	62.55	Active
31	M6	Z	-8.248	-6.609	62.55	83.4	Active
32	M5	Z	-13.171	-6.485	10.425	26.062	Active
33	M5	Z	-6.485	-4.885	26.062	41.7	Active
34	M5	Z	-4.885	-6.67	41.7	57.337	Active
35	M5	Z	-6.67	-6.754	57.337	72.975	Active
36	M6	Z	-18.753	-8.282	10.425	31.275	Active
37	M6	Z	-8.282	-11.246	31.275	52.125	Active
38	M6	Z	-11.246	-27.647	52.125	72.975	Active
39	M4	Z	-6.754	-6.67	31.275	46.912	Active
40	M4	Z	-6.67	-4.886	46.912	62.55	Active
41	M4	Z	-4.886	-6.485	62.55	78.187	Active
42	M4	Z	-6.485	-13.17	78.187	93.825	Active
43	M4	Z	-14.4	-6.575	31.275	48.65	Active
44	M4	Z	-6.575	-5.723	48.65	66.025	Active
45	M4	Z	-5.723	-11.843	66.025	83.4	Active
46	M5	Z	-11.843	-5.723	20.85	38.225	Active
47	M5	Z	-5.723	-6.575	38.225	55.6	Active
48	M5	Z	-6.575	-14.399	55.6	72.975	Active

Member Distributed Loads (BLC 15 : BLC 2 Transient Area Loads)

	Member Label	Direction	Start Magnitud...	End Magnitude...	Start Location [...	End Location [(...	Inactive [(lb, k-...
1	M1	Z	-0.572	-5.526	0	24	Active
2	M1	Z	-5.526	-7.048	24	48	Active
3	M1	Z	-7.048	-4.07	48	72	Active
4	M3	Z	-0.565	-3.399	0	24	Active
5	M3	Z	-3.399	-6.021	24	48	Active
6	M3	Z	-6.021	-8.431	48	72	Active
7	M4	Z	-0.305	-13.808	20.85	33.36	Active
8	M4	Z	-13.808	-22.575	33.36	45.87	Active
9	M4	Z	-22.575	-14.678	45.87	58.38	Active
10	M4	Z	-14.678	-7.435	58.38	70.89	Active
11	M4	Z	-7.435	-0.305	70.89	83.4	Active
12	M1	Z	-4.07	-7.048	108	132	Active
13	M1	Z	-7.048	-5.526	132	156	Active
14	M1	Z	-5.526	-0.572	156	180	Active
15	M2	Z	-8.43	-6.021	108	132	Active
16	M2	Z	-6.021	-3.4	132	156	Active
17	M2	Z	-3.4	-0.565	156	180	Active
18	M5	Z	-0.305	-7.436	20.85	33.36	Active
19	M5	Z	-7.436	-14.679	33.36	45.87	Active
20	M5	Z	-14.679	-22.573	45.87	58.38	Active
21	M5	Z	-22.573	-13.806	58.38	70.89	Active
22	M5	Z	-13.806	-0.305	70.89	83.4	Active
23	M2	Z	-0.572	-5.526	0	24	Active
24	M2	Z	-5.526	-7.048	24	48	Active
25	M2	Z	-7.048	-4.07	48	72	Active
26	M3	Z	-4.07	-7.048	108	132	Active
27	M3	Z	-7.048	-5.526	132	156	Active
28	M3	Z	-5.526	-0.572	156	180	Active
29	M6	Z	-6.356	-12.032	20.85	41.7	Active
30	M6	Z	-12.032	-13.526	41.7	62.55	Active
31	M6	Z	-13.526	-10.839	62.55	83.4	Active
32	M5	Z	-21.601	-10.636	10.425	26.062	Active
33	M5	Z	-10.636	-8.012	26.062	41.7	Active
34	M5	Z	-8.012	-10.939	41.7	57.337	Active
35	M5	Z	-10.939	-11.077	57.337	72.975	Active

Member Distributed Loads (BLC 15 : BLC 2 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitud...	End Magnitude...	Start Location [...	End Location [(...	Inactive [(lb, k-...
36	M6	Z	-30.756	-13.582	10.425	31.275	Active
37	M6	Z	-13.582	-18.444	31.275	52.125	Active
38	M6	Z	-18.444	-45.342	52.125	72.975	Active
39	M4	Z	-11.076	-10.939	31.275	46.912	Active
40	M4	Z	-10.939	-8.012	46.912	62.55	Active
41	M4	Z	-8.012	-10.636	62.55	78.187	Active
42	M4	Z	-10.636	-21.599	78.187	93.825	Active
43	M4	Z	-23.617	-10.784	31.275	48.65	Active
44	M4	Z	-10.784	-9.386	48.65	66.025	Active
45	M4	Z	-9.386	-19.422	66.025	83.4	Active
46	M5	Z	-19.423	-9.386	20.85	38.225	Active
47	M5	Z	-9.386	-10.784	38.225	55.6	Active
48	M5	Z	-10.784	-23.615	55.6	72.975	Active

Member Area Loads (BLC 1 : DEAD LOAD)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [psf]	Inactive [(lb,...
1	N88	N89	N91	N90	Z	A-B	-5	Active
2	N92	N93	N95	N94	Z	A-B	-5	Active
3	N96	N97	N99	N98	Z	A-B	-5	Active
4	N95	N98	N109	N108	Z	A-B	-5	Active
5	N99	N90	N107	N109	Z	A-B	-5	Active
6	N91	N94	N108	N107	Z	A-B	-5	Active

Member Area Loads (BLC 2 : DEAD LOAD ICE)

	Node A	Node B	Node C	Node D	Direction	Load Direction	Magnitude [psf]	Inactive [(lb,...
1	N88	N89	N91	N90	Z	A-B	-8.2	Active
2	N92	N93	N95	N94	Z	A-B	-8.2	Active
3	N96	N97	N99	N98	Z	A-B	-8.2	Active
4	N95	N98	N109	N108	Z	A-B	-8.2	Active
5	N99	N90	N107	N109	Z	A-B	-8.2	Active
6	N91	N94	N108	N107	Z	A-B	-8.2	Active

Load Combinations

	De...	So...	PD...	SR...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...
1	DL...	Yes	Y		1	1.2			3	1.6														
2	DL...	Yes	Y		1	1.2			3	1.3...	4	0.8												
3	DL...	Yes	Y		1	1.2			3	0.8	4	1.3...												
4	DL...	Yes	Y		1	1.2					4	1.6												
5	DL...	Yes	Y		1	1.2			3	-0.8	4	1.3...												
6	DL...	Yes	Y		1	1.2			3	-1....	4	0.8												
7	DL...	Yes	Y		1	1.2			3	-1.6														
8	DL...	Yes	Y		1	1.2			3	-1....	4	-0.8												
9	DL...	Yes	Y		1	1.2			3	-0.8	4	-1....												
10	DL...	Yes	Y		1	1.2					4	-1.6												
11	DL...	Yes	Y		1	1.2			3	0.8	4	-1....												
12	DL...	Yes	Y		1	1.2			3	1.3...	4	-0.8												
13	DL...	Yes	Y		1	1.2	2	1	5	1														
14	DL...	Yes	Y		1	1.2	2	1	5	0.8...	6	0.5												
15	DL...	Yes	Y		1	1.2	2	1	5	0.5	6	0.8...												
16	DL...	Yes	Y		1	1.2	2	1			6	1												
17	DL...	Yes	Y		1	1.2	2	1	5	-0.5	6	0.8...												
18	DL...	Yes	Y		1	1.2	2	1	5	-0....	6	0.5												
19	DL...	Yes	Y		1	1.2	2	1	5	-1														
20	DL...	Yes	Y		1	1.2	2	1	5	-0....	6	-0.5												
21	DL...	Yes	Y		1	1.2	2	1	5	-0.5	6	-0....												
22	DL...	Yes	Y		1	1.2	2	1			6	-1												
23	DL...	Yes	Y		1	1.2	2	1	5	0.5	6	-0....												

Load Combinations (Continued)

	De...	So...	PD...	SR...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...	BLC	Fa...
24	DL...	Yes	Y		1	1.2	2	1	5	0.8...	6	-0.5												
25	DE...	Yes	Y		1	1.2					7	1.5												
26	DE...	Yes	Y		1	1.2					8	1.5												
27	DE...	Yes	Y		1	1.2					9	1.5												
28	DL...	Yes	Y		1	1.2	10	1.5	3	0.1...														
29	DL...	Yes	Y		1	1.2	11	1.5	3	0.1...														
30	DL...	Yes	Y		1	1.2	12	1.5	3	0.1...														
31	DL...	Yes	Y		1	1.2	13	1.5	3	0.1...														
32	DL...	Yes	Y		1	1.2	10	1.5	4	0.1...														
33	DL...	Yes	Y		1	1.2	11	1.5	4	0.1...														
34	DL...	Yes	Y		1	1.2	12	1.5	4	0.1...														
35	DL...	Yes	Y		1	1.2	13	1.5	4	0.1...														
36	DL...	Yes	Y		1	1.2	10	1.5	3	-0....														
37	DL...	Yes	Y		1	1.2	11	1.5	3	-0....														
38	DL...	Yes	Y		1	1.2	12	1.5	3	-0....														
39	DL...	Yes	Y		1	1.2	13	1.5	3	-0....														
40	DL...	Yes	Y		1	1.2	10	1.5	4	-0....														
41	DL...	Yes	Y		1	1.2	11	1.5	4	-0....														
42	DL...	Yes	Y		1	1.2	12	1.5	4	-0....														
43	DL...	Yes	Y		1	1.2	13	1.5	4	-0....														

Node Reactions

No Data to Print...

Node Reactions (Continued)

	Node...		X [lbs]	LC	Y [lbs]	LC	Z [lbs]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N4	max	3423.5...	9	2214.9...	8	84.24	3	0.196	12	0.184	1	1.53	1
2		min	-1850....	3	-1289....	2	-78.493	40	-0.289	6	-0.108	7	-1.549	7
3	N2	max	1928.5...	11	2024.7...	6	87.633	11	0.209	2	0.075	7	0.778	8
4		min	-3425....	5	-1162....	12	-22.279	25	-0.23	8	-0.203	1	-0.782	2
5	N6	max	593.63	10	2414.8...	7	96.901	7	0.131	7	0.29	10	1.6	4
6		min	-587.725	4	-4191....	1	-75.526	31	-0.133	31	-0.235	4	-1.612	10
7	N166	max	3960.5...	17	-389.177	10	2704.8...	17	0.077	1	0.027	9	0.154	8
8		min	678.03	11	-2280....	16	435.78	11	-0.1	7	-0.057	3	-0.147	2
9	N169	max	-715.005	3	-420.777	4	2842.0...	21	0.16	1	0.066	11	0.283	1
10		min	-4166....	21	-2416....	22	463.64	3	-0.172	7	-0.034	5	-0.274	7
11	N171	max	168.928	10	4602.2...	13	2720.2...	13	0.053	13	0.18	10	0.321	4
12		min	-174.427	4	711.578	7	405.751	7	-0.01	39	-0.186	4	-0.31	10
13	Totals:	max	4712.2...	10	5185.2...	7	8050.08	23						
14		min	-4712.27	4	-5185....	1	2484.9...	5						

Node Displacements

	Node...		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rota...	LC	Y Rota...	LC	Z Rota...	LC
1	N1	max	0.054	8	0.092	8	0.003	11	1.752e...	8	2.216e...	15	3.675e...	8
2		min	-0.054	2	-0.094	2	-0.086	17	-1.552...	2	-5.492...	9	-3.707...	2
3	N2	max	0	5	0	12	0	25	0	8	0	1	0	2
4		min	0	11	0	6	0	11	0	2	0	7	0	8
5	N3	max	0.039	9	0.076	3	0.002	3	2.141e...	7	7.205e...	5	2.421e...	11
6		min	-0.041	3	-0.075	9	-0.092	21	-1.327...	12	-1.736...	23	-2.442...	5
7	N4	max	0	3	0	2	0	40	0	6	0	7	0	7
8		min	0	9	0	8	0	3	0	12	0	1	0	1
9	N5	max	0.084	2	0.004	1	0.005	7	1.703e...	7	1.698e...	4	2.185e...	5
10		min	-0.083	8	-0.003	7	-0.088	13	-2.1e-03	13	-2.116...	10	-2.238...	11
11	N6	max	0	4	0	1	0	31	0	31	0	4	0	10
12		min	0	10	0	7	0	7	0	7	0	10	0	4
13	N7	max	0.036	8	0.036	9	0.004	12	3.807e...	8	-1.296...	2	3.833e...	8
14		min	-0.035	2	-0.037	3	-0.062	18	-3.117...	2	-4.859...	20	-3.876...	2

Node Displacements (Continued)

	Node...		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rota...	LC	Y Rota...	LC	Z Rota...	LC
15	N8	max	0.038	8	0.078	2	0.003	2	5.455e...	19	6.37e-03	17	2.555e...	12
16		min	-0.04	2	-0.079	8	-0.074	20	-3.259...	1	-1.485...	11	-2.585...	6
17	N9	max	0.042	7	0.076	2	0.003	4	1.475e...	5	3.367e...	6	2.637e...	11
18		min	-0.044	1	-0.077	8	-0.065	22	-5.489...	24	-2.638...	12	-2.667...	5
19	N10	max	0.091	3	0.011	12	0.003	6	3.62e-03	18	2.515e...	4	2.478e...	5
20		min	-0.091	9	-0.01	6	-0.071	24	-4.438...	12	-7.789...	22	-2.521...	11
21	N11	max	0.091	3	0.008	4	0.007	8	3.556e...	21	5.204e...	3	2.239e...	5
22		min	-0.091	9	-0.006	10	-0.061	14	-3.967...	3	-3.436...	9	-2.307...	11
23	N12	max	0.013	9	0.048	9	0.003	10	1.833e...	8	3.447e...	3	3.861e...	8
24		min	-0.012	2	-0.049	3	-0.069	16	-7.719...	14	-3.336...	9	-3.881...	2
25	N13	max	0.024	8	0.042	9	0.001	11	1.75e-03	8	2.205e...	15	3.681e...	8
26		min	-0.023	2	-0.043	3	-0.053	17	-1.555...	2	-5.537...	9	-3.714...	2
27	N14	max	0.04	8	0.077	2	0	3	2.138e...	7	7.25e-04	5	2.426e...	11
28		min	-0.042	2	-0.077	8	-0.056	21	-1.329...	12	-1.725...	23	-2.447...	5
29	N15	max	0.091	3	0.004	1	0.002	7	1.756e...	7	1.698e...	4	2.192e...	5
30		min	-0.091	9	-0.003	7	-0.054	13	-2.086...	13	-2.116...	10	-2.246...	11
31	N16	max	0.204	5	0.377	1	0.01	1	5.246e...	7	3.184e...	5	8.73e-03	8
32		min	-0.181	11	-0.324	7	-0.114	19	-6.31e...	1	-3.279...	11	-8.161...	2
33	N17	max	0.183	19	0.065	21	0.01	1	1.751e...	20	7.903e...	11	4.648e...	8
34		min	-0.03	12	-0.039	4	-0.114	19	-7.86e...	5	-5.05e...	17	-4.624...	2
35	N18	max	0.191	4	0.857	1	-0.032	12	9.878e...	7	2.337e...	4	1.854e...	5
36		min	-0.163	10	-0.884	7	-0.443	18	-9.712...	1	-2.168...	10	-1.588...	11
37	N19	max	0.082	5	0.227	1	-0.032	12	3.616e...	7	3.564e...	10	1.07e-03	6
38		min	-0.086	11	-0.2	7	-0.443	18	-2.7e-03	1	-3.452...	4	-1.041...	12
39	N20	max	0.198	4	0.684	1	-0.007	12	8.852e...	7	4.004e...	16	5.774e...	1
40		min	-0.138	10	-0.723	7	-0.307	18	-8.465...	1	-1.008...	10	-5.583...	7
41	N21	max	-0.029	7	0.13	1	-0.007	12	3.854e...	19	4.373e...	22	4.377e...	1
42		min	-0.158	16	-0.085	7	-0.307	18	-2.345...	1	9.11e-06	4	-4.499...	7
43	N22	max	0.201	4	0.433	1	0.008	1	5.387e...	7	3.759e...	3	7.408e...	12
44		min	-0.148	10	-0.467	7	-0.148	19	-5.611...	1	-2.276...	9	-6.911...	6
45	N23	max	-0.036	11	0.154	17	0.007	1	4.533e...	19	5.942e...	20	3.718e...	12
46		min	-0.219	17	-0.025	8	-0.146	19	3.113e...	11	3.671e...	2	-3.76e...	6
47	N24	max	0.348	5	0.321	1	0.008	5	3.912e...	7	5.399e...	5	7.53e-03	11
48		min	-0.317	11	-0.374	7	-0.117	23	-3.422...	1	-4.478...	11	-6.905...	5
49	N25	max	0.026	28	0.103	2	0.008	5	1.46e-03	2	2.819e...	7	3.865e...	11
50		min	-0.058	18	-0.203	21	-0.116	23	-5.165...	21	-1.956...	1	-3.817...	5
51	N26	max	0.745	5	0.495	12	-0.04	3	5.529e...	6	8.386e...	5	2.599e...	8
52		min	-0.79	11	-0.51	6	-0.471	41	-5.454...	12	-8.739...	11	-2.324...	2
53	N27	max	0.234	5	0.138	12	-0.041	3	2.044e...	3	1.875e...	6	1.646e...	9
54		min	-0.204	11	-0.15	6	-0.472	41	-2.412...	9	-2.818...	12	-1.618...	3
55	N28	max	0.584	4	0.371	12	-0.017	4	5.096e...	6	6.728e...	5	6.736e...	5
56		min	-0.655	10	-0.41	6	-0.307	22	-3.487...	12	-8.219...	11	-6.554...	11
57	N29	max	0.189	16	0.129	29	-0.017	4	3.562e...	33	7.855e...	5	4.945e...	5
58		min	-0.066	10	-0.035	6	-0.307	22	-8.575...	10	-5.37e...	23	-5.057...	11
59	N30	max	0.361	4	0.276	12	0.004	5	5.204e...	6	4.073e...	4	7.811e...	5
60		min	-0.425	10	-0.311	6	-0.145	23	-3.678...	12	-4.839...	10	-7.426...	11
61	N31	max	0.241	13	0.126	29	0.004	5	3.585e...	2	6.18e-04	5	4.057e...	5
62		min	-0.012	7	-0.049	7	-0.143	23	-1.734...	8	-7.057...	23	-4.124...	11
63	N32	max	0.354	4	0.262	2	0.014	9	4.751e...	8	3.672e...	4	7.178e...	4
64		min	-0.423	10	-0.271	8	-0.11	15	-4.099...	2	-4.78e...	10	-6.674...	10
65	N33	max	-0.003	37	0.131	23	0.013	9	3.765e...	23	3.757e...	15	2.969e...	4
66		min	-0.112	13	0.007	5	-0.109	15	-6.562...	5	-1.756...	9	-2.955...	10
67	N34	max	0.763	3	0.453	2	-0.027	7	5.089e...	8	8.479e...	3	2.074e...	12
68		min	-0.763	9	-0.418	8	-0.427	13	-5.298...	2	-8.554...	9	-1.782...	6
69	N35	max	0.189	3	0.081	2	-0.027	7	2.428e...	11	3.145e...	2	1.003e...	12
70		min	-0.207	9	-0.098	8	-0.427	13	-2.926...	5	-2.523...	8	-9.7e-04	6
71	N36	max	0.56	3	0.379	2	-0.004	8	4.049e...	8	6.559e...	3	7.284e...	9
72		min	-0.564	9	-0.309	8	-0.293	14	-5.903...	2	-7.286...	9	-7.064...	3

Node Displacements (Continued)

	Node...		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rota...	LC	Y Rota...	LC	Z Rota...	LC
73	N37	max	0.073	3	-0.025	10	-0.004	8	2.165e...	10	2.706e...	2	5.432e...	9
74		min	-0.065	9	-0.185	16	-0.294	14	-5.247...	15	-2.823...	8	-5.531...	3
75	N38	max	0.306	3	0.259	1	0.007	9	2.844e...	7	4.043e...	3	8.788e...	8
76		min	-0.309	9	-0.196	7	-0.138	15	-4.051...	1	-5.044...	9	-8.304...	2
77	N39	max	0.053	8	0.068	8	0.007	9	5.422e...	9	2.118e...	2	4.902e...	9
78		min	-0.054	2	-0.272	15	-0.137	15	-7.119...	15	-2.066...	8	-4.962...	3
79	N40	max	0.166	5	0.302	1	0.01	1	5.23e-03	7	3.17e-03	5	8.73e-03	8
80		min	-0.141	11	-0.261	7	-0.114	19	-6.294...	1	-3.266...	11	-8.161...	2
81	N41	max	0.125	20	0.045	21	0.01	1	1.757e...	20	7.766e...	11	4.648e...	8
82		min	-0.033	1	-0.03	4	-0.114	19	-7.781...	5	-5.045...	17	-4.624...	2
83	N42	max	0.163	4	0.74	1	-0.032	12	9.862e...	7	2.321e...	4	1.854e...	5
84		min	-0.137	10	-0.765	7	-0.443	18	-9.697...	1	-2.152...	10	-1.588...	11
85	N43	max	0.047	5	0.26	1	-0.032	12	3.632e...	7	3.548e...	10	1.07e-03	6
86		min	-0.05	11	-0.244	7	-0.443	18	-2.716...	1	-3.436...	4	-1.041...	12
87	N44	max	0.162	4	0.583	1	-0.007	12	8.836e...	7	3.998e...	16	5.774e...	1
88		min	-0.126	10	-0.617	7	-0.307	18	-8.449...	1	-9.917...	10	-5.583...	7
89	N45	max	-0.009	8	0.158	1	-0.007	12	3.86e-03	19	4.367e...	22	4.377e...	1
90		min	-0.11	16	-0.129	7	-0.307	18	-2.361...	1	2.495e...	4	-4.499...	7
91	N46	max	0.158	4	0.366	1	0.008	1	5.371e...	7	3.745e...	3	7.408e...	12
92		min	-0.123	10	-0.402	7	-0.148	19	-5.595...	1	-2.262...	9	-6.911...	6
93	N47	max	-0.013	10	0.104	16	0.007	1	4.54e-03	19	5.939e...	20	3.718e...	12
94		min	-0.15	17	-0.039	8	-0.146	19	3.034e...	11	3.75e-04	2	-3.76e...	6
95	N48	max	0.283	5	0.28	1	0.008	5	3.896e...	7	5.385e...	5	7.53e-03	11
96		min	-0.263	11	-0.327	7	-0.117	23	-3.406...	1	-4.464...	11	-6.905...	5
97	N49	max	0.016	36	0.086	2	0.008	5	1.446e...	2	2.819e...	7	3.865e...	11
98		min	-0.037	17	-0.151	8	-0.116	23	-5.162...	21	-1.956...	1	-3.817...	5
99	N50	max	0.644	5	0.43	12	-0.04	3	5.515e...	6	8.372e...	5	2.599e...	8
100		min	-0.685	11	-0.444	6	-0.471	41	-5.44e...	12	-8.725...	11	-2.324...	2
101	N51	max	0.252	5	0.143	12	-0.041	3	2.037e...	3	1.883e...	6	1.646e...	9
102		min	-0.234	11	-0.15	6	-0.472	41	-2.404...	9	-2.826...	12	-1.618...	3
103	N52	max	0.504	4	0.33	12	-0.017	4	5.082e...	6	6.715e...	5	6.736e...	5
104		min	-0.557	10	-0.349	6	-0.307	22	-3.473...	12	-8.205...	11	-6.554...	11
105	N53	max	0.163	4	0.093	11	-0.017	4	3.562e...	33	7.992e...	5	4.945e...	5
106		min	-0.104	10	-0.054	6	-0.307	22	-8.575...	10	-5.375...	23	-5.057...	11
107	N54	max	0.312	4	0.232	12	0.004	5	5.19e-03	6	4.057e...	4	7.811e...	5
108		min	-0.367	10	-0.248	6	-0.145	23	-3.664...	12	-4.823...	10	-7.426...	11
109	N55	max	0.164	14	0.084	29	0.004	5	3.571e...	2	6.317e...	5	4.057e...	5
110		min	-0.024	8	-0.029	7	-0.143	23	-1.721...	8	-7.062...	23	-4.124...	11
111	N56	max	0.31	4	0.213	2	0.014	9	4.737e...	8	3.656e...	4	7.178e...	4
112		min	-0.366	10	-0.214	8	-0.11	15	-4.085...	2	-4.764...	10	-6.674...	10
113	N57	max	0.007	3	0.085	23	0.013	9	3.762e...	23	3.762e...	15	2.969e...	4
114		min	-0.077	22	0.015	5	-0.109	15	-6.483...	5	-1.77e...	9	-2.955...	10
115	N58	max	0.661	3	0.389	2	-0.027	7	5.075e...	8	8.465e...	3	2.074e...	12
116		min	-0.66	9	-0.357	8	-0.427	13	-5.284...	2	-8.54e...	9	-1.782...	6
117	N59	max	0.224	3	0.084	2	-0.027	7	2.42e-03	11	3.153e...	2	1.003e...	12
118		min	-0.234	9	-0.095	8	-0.427	13	-2.918...	5	-2.531...	8	-9.7e-04	6
119	N60	max	0.481	3	0.308	2	-0.004	8	4.035e...	8	6.545e...	3	7.284e...	9
120		min	-0.476	9	-0.26	8	-0.293	14	-5.889...	2	-7.273...	9	-7.064...	3
121	N61	max	0.103	3	-0.027	9	-0.004	8	2.166e...	10	2.714e...	2	5.432e...	9
122		min	-0.097	9	-0.122	16	-0.294	14	-5.25e...	15	-2.831...	8	-5.531...	3
123	N62	max	0.257	3	0.21	1	0.007	9	2.829e...	7	4.03e-03	3	8.788e...	8
124		min	-0.249	9	-0.162	7	-0.138	15	-4.035...	1	-5.03e...	9	-8.304...	2
125	N63	max	0.03	9	0.062	8	0.007	9	5.501e...	9	2.126e...	2	4.902e...	9
126		min	-0.03	3	-0.187	15	-0.137	15	-7.122...	15	-2.074...	8	-4.962...	3
127	N64	max	0.036	8	0.017	11	0	1	3.807e...	8	-3.471...	1	4.648e...	8
128		min	-0.035	2	-0.018	6	-0.106	19	-3.245...	2	-4.831...	19	-4.624...	2
129	N65	max	0.05	8	0.017	11	0.01	1	3.807e...	8	-3.471...	1	4.648e...	8
130		min	-0.049	2	-0.018	6	-0.113	19	-3.245...	2	-4.831...	19	-4.624...	2

Node Displacements (Continued)

	Node...		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rota...	LC	Y Rota...	LC	Z Rota...	LC
131	N66	max	0.037	8	0.339	1	-0.041	11	5.502e...	7	2.642e...	9	1.07e-03	6
132		min	-0.037	2	-0.346	7	-0.433	17	-4.586...	1	-1.51e...	3	-1.041...	12
133	N67	max	0.038	8	0.339	1	-0.032	12	5.502e...	7	2.642e...	9	1.07e-03	6
134		min	-0.038	2	-0.346	7	-0.443	18	-4.586...	1	-1.51e...	3	-1.041...	12
135	N68	max	0.037	8	0.229	1	-0.019	12	5.528e...	7	4.478e...	16	4.377e...	1
136		min	-0.039	2	-0.233	7	-0.294	18	-4.168...	1	3.72e-05	10	-4.499...	7
137	N69	max	0.027	9	0.229	1	-0.007	12	5.528e...	7	4.478e...	16	4.377e...	1
138		min	-0.029	3	-0.233	7	-0.307	18	-4.168...	1	3.72e-05	10	-4.499...	7
139	N70	max	0.038	8	0.098	1	-0.003	1	5.421e...	7	6.128e...	17	3.718e...	12
140		min	-0.04	2	-0.099	7	-0.13	19	-3.402...	1	-1.213...	11	-3.76e...	6
141	N71	max	0.032	9	0.098	1	0.007	1	5.421e...	7	6.128e...	17	3.718e...	12
142		min	-0.034	3	-0.099	7	-0.146	19	-3.402...	1	-1.213...	11	-3.76e...	6
143	N72	max	0.057	7	0.078	2	-0.003	4	1.351e...	5	3.654e...	6	3.865e...	11
144		min	-0.058	1	-0.078	8	-0.109	23	-5.367...	23	-2.793...	12	-3.817...	5
145	N73	max	0.06	7	0.078	2	0.008	5	1.351e...	5	3.654e...	6	3.865e...	11
146		min	-0.061	12	-0.078	8	-0.116	23	-5.367...	23	-2.793...	12	-3.817...	5
147	N74	max	0.305	5	0.17	11	-0.046	3	2.238e...	5	3.797e...	5	1.646e...	9
148		min	-0.31	11	-0.167	5	-0.463	41	-2.608...	11	-4.744...	11	-1.618...	3
149	N75	max	0.306	5	0.169	12	-0.04	3	2.238e...	5	3.797e...	5	1.646e...	9
150		min	-0.311	11	-0.167	6	-0.471	41	-2.608...	11	-4.744...	11	-1.618...	3
151	N76	max	0.202	4	0.103	11	-0.025	3	3.58e-03	37	2.88e-03	4	4.945e...	5
152		min	-0.203	10	-0.1	5	-0.295	21	-1.657...	12	-5.806...	22	-5.057...	11
153	N77	max	0.196	4	0.116	11	-0.017	4	3.58e-03	37	2.88e-03	4	4.945e...	5
154		min	-0.197	10	-0.113	5	-0.307	22	-1.657...	12	-5.806...	22	-5.057...	11
155	N78	max	0.104	3	0.027	11	-0.006	5	3.622e...	18	2.603e...	4	4.057e...	5
156		min	-0.103	9	-0.025	5	-0.128	23	-7.108...	12	-7.501...	22	-4.124...	11
157	N79	max	0.101	3	0.037	11	0.004	5	3.622e...	18	2.603e...	4	4.057e...	5
158		min	-0.1	9	-0.035	5	-0.143	23	-7.108...	12	-7.501...	22	-4.124...	11
159	N80	max	0.107	3	0.019	4	0	8	3.784e...	21	5.17e-03	3	2.969e...	4
160		min	-0.106	9	-0.018	10	-0.102	15	-5.889...	3	-3.5e-03	9	-2.955...	10
161	N81	max	0.103	3	0.027	4	0.013	9	3.784e...	21	5.17e-03	3	2.969e...	4
162		min	-0.103	9	-0.026	10	-0.109	15	-5.889...	3	-3.5e-03	9	-2.955...	10
163	N82	max	0.308	3	0.134	3	-0.034	7	2.449e...	9	4.79e-03	3	1.003e...	12
164		min	-0.304	9	-0.132	9	-0.419	13	-2.95e...	3	-4.176...	9	-9.7e-04	6
165	N83	max	0.308	3	0.134	3	-0.027	7	2.449e...	9	4.79e-03	3	1.003e...	12
166		min	-0.304	9	-0.131	9	-0.427	13	-2.95e...	3	-4.176...	9	-9.7e-04	6
167	N84	max	0.169	3	0.054	3	-0.014	7	1.641e...	8	4.145e...	3	5.432e...	9
168		min	-0.166	9	-0.054	9	-0.283	13	-5.586...	14	-4.265...	9	-5.531...	3
169	N85	max	0.178	3	0.04	3	-0.004	8	1.641e...	8	4.145e...	3	5.432e...	9
170		min	-0.175	9	-0.04	9	-0.294	14	-5.586...	14	-4.265...	9	-5.531...	3
171	N86	max	0.023	2	0.029	9	-0.005	9	1.82e-03	8	3.655e...	3	4.902e...	9
172		min	-0.022	8	-0.03	3	-0.122	15	-7.44e...	14	-3.602...	9	-4.962...	3
173	N87	max	0.03	2	0.042	9	0.007	9	1.82e-03	8	3.655e...	3	4.902e...	9
174		min	-0.029	8	-0.043	3	-0.137	15	-7.44e...	14	-3.602...	9	-4.962...	3
175	N88	max	0.036	3	0.021	9	-0.006	8	1.73e-03	8	3.704e...	3	5.162e...	9
176		min	-0.035	8	-0.022	3	-0.139	14	-7.379...	14	-3.712...	9	-5.22e...	3
177	N89	max	0.036	8	0.026	12	0	1	3.846e...	8	-4.865...	1	4.762e...	8
178		min	-0.035	2	-0.028	6	-0.121	19	-3.271...	2	-5.042...	19	-4.737...	2
179	N90	max	0.271	3	0.112	3	-0.025	7	1.706e...	9	4.376e...	3	3.2e-03	9
180		min	-0.266	9	-0.111	9	-0.381	13	-4.176...	15	-4.317...	9	-3.239...	3
181	N91	max	0.036	8	0.28	1	-0.039	12	4.97e-03	7	9.493e...	10	3.742e...	7
182		min	-0.037	2	-0.285	7	-0.388	18	-4.163...	1	-3.526...	16	-3.688...	1
183	N92	max	0.038	8	0.109	1	-0.005	1	5.432e...	7	6.107e...	17	3.929e...	12
184		min	-0.04	2	-0.11	7	-0.148	19	-3.479...	1	-3.441...	11	-3.966...	6
185	N93	max	0.064	6	0.078	1	-0.006	4	1.236e...	5	3.762e...	6	4.106e...	11
186		min	-0.065	12	-0.078	7	-0.124	23	-5.58e...	23	-2.838...	12	-4.056...	5
187	N94	max	0.037	8	0.319	1	-0.031	11	5.515e...	7	2.896e...	17	2.284e...	1
188		min	-0.038	2	-0.325	7	-0.393	17	-4.381...	1	5.555e...	11	-2.34e...	7

Node Displacements (Continued)

	Node...		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rota...	LC	Y Rota...	LC	Z Rota...	LC
189	N95	max	0.257	5	0.153	12	-0.045	3	1.257e...	4	4.158e...	5	3.735e...	10
190		min	-0.261	11	-0.152	6	-0.407	41	-4.971...	41	-3.956...	11	-3.722...	4
191	N96	max	0.109	3	0.033	11	-0.009	5	3.706e...	18	2.592e...	4	4.375e...	5
192		min	-0.108	9	-0.031	5	-0.145	23	-8.119...	12	-7.403...	22	-4.44e...	11
193	N97	max	0.114	3	0.024	4	-0.001	9	3.991e...	21	5.203e...	3	3.134e...	4
194		min	-0.113	9	-0.023	10	-0.116	15	-5.945...	3	-3.453...	9	-3.12e...	10
195	N98	max	0.28	5	0.155	11	-0.037	3	2.926e...	33	3.193e...	5	2.958e...	6
196		min	-0.285	11	-0.152	5	-0.398	21	-1.858...	11	-5.132...	11	-2.974...	12
197	N99	max	0.276	3	0.115	3	-0.036	7	3.203e...	10	5.091e...	3	2.755e...	3
198		min	-0.272	9	-0.113	9	-0.375	13	-2.041...	4	-3.636...	9	-2.714...	9
199	OR	max	0	43	0	43	0	43	0	43	0	43	0	43
200		min	0	1	0	1	0	1	0	1	0	1	0	1
201	N107	max	0.007	2	0.012	2	0	25	5.667e...	8	4.22e-04	2	4.901e...	1
202		min	-0.007	8	-0.013	8	-0.002	11	-6.196...	2	-2.712...	8	-4.956...	7
203	N108	max	0.017	7	0.032	1	0.002	40	7.164e...	6	3.455e...	6	1.784e...	7
204		min	-0.018	1	-0.032	7	-0.002	3	-5.672...	12	-3.766...	12	-1.769...	1
205	N109	max	0.037	4	0.002	1	0.002	31	3.438e...	35	6.249e...	4	1.805e...	10
206		min	-0.038	10	0	7	-0.002	7	-7.83e...	21	-7.706...	10	-1.8e-03	3
207	N113	max	0.144	4	0.197	1	0.018	12	4.665e...	7	3.084e...	5	8.987e...	8
208		min	-0.121	10	-0.157	7	-0.119	18	-5.647...	1	-3.232...	11	-8.358...	2
209	N114	max	0.144	5	0.27	1	0.017	2	4.619e...	7	3.762e...	3	7.632e...	12
210		min	-0.12	10	-0.313	7	-0.124	20	-4.872...	1	-2.314...	9	-7.104...	6
211	N115	max	0.187	5	0.248	1	0.016	4	3.277e...	7	5.062e...	5	7.726e...	12
212		min	-0.166	11	-0.293	7	-0.125	22	-2.879...	1	-4.19e...	11	-7.075...	6
213	N116	max	0.241	4	0.181	1	0.018	6	4.976e...	6	3.527e...	4	7.819e...	5
214		min	-0.293	10	-0.186	7	-0.119	24	-3.464...	12	-4.269...	10	-7.417...	11
215	N117	max	0.242	4	0.17	1	0.021	8	4.65e-03	8	3.244e...	4	7.42e-03	4
216		min	-0.294	10	-0.171	7	-0.118	14	-3.995...	2	-4.266...	10	-6.863...	10
217	N118	max	0.17	4	0.173	1	0.014	10	2.541e...	7	3.716e...	3	9.02e-03	8
218		min	-0.15	10	-0.131	7	-0.116	16	-3.709...	1	-4.721...	9	-8.508...	2
219	N122	max	0.144	4	0.264	1	-0.008	1	4.974e...	7	3.047e...	5	8.73e-03	8
220		min	-0.121	10	-0.23	7	-0.115	19	-6.039...	1	-3.142...	11	-8.161...	2
221	N123	max	0.147	5	0.264	1	0.01	1	4.974e...	7	3.047e...	5	8.73e-03	8
222		min	-0.122	11	-0.23	7	-0.114	19	-6.039...	1	-3.142...	11	-8.161...	2
223	N124	max	0.144	4	0.682	1	-0.049	11	9.733e...	7	2.101e...	4	1.854e...	5
224		min	-0.12	10	-0.706	7	-0.436	17	-9.568...	1	-1.933...	10	-1.588...	11
225	N125	max	0.149	5	0.682	1	-0.032	12	9.733e...	7	2.101e...	4	1.854e...	5
226		min	-0.125	11	-0.706	7	-0.443	18	-9.568...	1	-1.933...	10	-1.588...	11
227	N126	max	0.144	5	0.532	1	-0.027	11	8.711e...	7	3.963e...	16	5.774e...	1
228		min	-0.12	10	-0.564	7	-0.298	17	-8.324...	1	-8.392...	10	-5.583...	7
229	N127	max	0.145	4	0.532	1	-0.007	12	8.711e...	7	3.963e...	16	5.774e...	1
230		min	-0.12	10	-0.564	7	-0.307	18	-8.324...	1	-8.392...	10	-5.583...	7
231	N128	max	0.144	5	0.332	1	-0.008	1	5.116e...	7	3.621e...	3	7.408e...	12
232		min	-0.12	10	-0.371	7	-0.144	19	-5.34e...	1	-2.139...	9	-6.911...	6
233	N129	max	0.137	4	0.332	1	0.008	1	5.116e...	7	3.621e...	3	7.408e...	12
234		min	-0.111	10	-0.371	7	-0.148	19	-5.34e...	1	-2.139...	9	-6.911...	6
235	N130	max	0.241	5	0.274	1	-0.008	5	3.641e...	7	5.261e...	5	7.53e-03	11
236		min	-0.225	11	-0.317	7	-0.119	23	-3.15e...	1	-4.34e...	11	-6.905...	5
237	N131	max	0.251	5	0.26	1	0.008	5	3.641e...	7	5.261e...	5	7.53e-03	11
238		min	-0.236	11	-0.304	7	-0.117	23	-3.15e...	1	-4.34e...	11	-6.905...	5
239	N132	max	0.594	5	0.395	12	-0.055	3	5.387e...	6	8.219e...	5	2.599e...	8
240		min	-0.632	11	-0.408	6	-0.463	41	-5.311...	12	-8.572...	11	-2.324...	2
241	N133	max	0.594	5	0.397	12	-0.04	3	5.387e...	6	8.219e...	5	2.599e...	8
242		min	-0.633	11	-0.411	6	-0.471	41	-5.311...	12	-8.572...	11	-2.324...	2
243	N134	max	0.472	4	0.293	12	-0.033	3	4.974e...	6	6.582e...	5	6.736e...	5
244		min	-0.516	10	-0.302	6	-0.299	21	-3.365...	12	-8.073...	11	-6.554...	11
245	N135	max	0.464	4	0.309	12	-0.017	4	4.974e...	6	6.582e...	5	6.736e...	5
246		min	-0.509	10	-0.318	6	-0.307	22	-3.365...	12	-8.073...	11	-6.554...	11

Node Displacements (Continued)

	Node...		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rota...	LC	Y Rota...	LC	Z Rota...	LC
247	N136	max	0.299	4	0.195	12	-0.011	5	4.969e...	6	3.915e...	4	7.811e...	5
248		min	-0.348	10	-0.201	6	-0.141	23	-3.443...	12	-4.681...	10	-7.426...	11
249	N137	max	0.288	4	0.21	12	0.004	5	4.969e...	6	3.915e...	4	7.811e...	5
250		min	-0.338	10	-0.217	6	-0.145	23	-3.443...	12	-4.681...	10	-7.426...	11
251	N138	max	0.299	4	0.18	2	-0.003	9	4.644e...	8	3.519e...	4	7.178e...	4
252		min	-0.348	10	-0.178	8	-0.113	15	-3.992...	2	-4.627...	10	-6.674...	10
253	N139	max	0.288	4	0.189	2	0.014	9	4.644e...	8	3.519e...	4	7.178e...	4
254		min	-0.338	10	-0.185	8	-0.109	15	-3.992...	2	-4.627...	10	-6.674...	10
255	N140	max	0.61	3	0.355	2	-0.042	7	4.923e...	8	8.336e...	3	2.074e...	12
256		min	-0.608	9	-0.325	8	-0.423	13	-5.131...	2	-8.411...	9	-1.782...	6
257	N141	max	0.611	3	0.358	2	-0.027	7	4.923e...	8	8.336e...	3	2.074e...	12
258		min	-0.609	9	-0.326	8	-0.427	13	-5.131...	2	-8.411...	9	-1.782...	6
259	N142	max	0.432	3	0.288	2	-0.021	7	3.903e...	8	6.437e...	3	7.284e...	9
260		min	-0.422	9	-0.252	8	-0.287	13	-5.757...	2	-7.164...	9	-7.064...	3
261	N143	max	0.442	3	0.273	2	-0.004	8	3.903e...	8	6.437e...	3	7.284e...	9
262		min	-0.433	9	-0.236	8	-0.293	14	-5.757...	2	-7.164...	9	-7.064...	3
263	N144	max	0.221	3	0.202	1	-0.007	9	2.722e...	7	3.911e...	3	8.788e...	8
264		min	-0.206	9	-0.163	7	-0.136	15	-3.928...	1	-4.912...	9	-8.304...	2
265	N145	max	0.233	3	0.186	1	0.007	9	2.722e...	7	3.911e...	3	8.788e...	8
266		min	-0.219	9	-0.146	7	-0.138	15	-3.928...	1	-4.912...	9	-8.304...	2
267	N146	max	0.243	3	0.211	1	-0.01	8	2.255e...	7	3.937e...	3	8.634e...	9
268		min	-0.228	9	-0.173	7	-0.145	14	-3.978...	1	-5.171...	9	-8.263...	3
269	N147	max	0.144	4	0.287	1	-0.013	1	5.15e-03	7	2.094e...	5	8.624e...	8
270		min	-0.121	10	-0.255	7	-0.116	19	-6.169...	1	-2.707...	11	-8.005...	2
271	N148	max	0.562	3	0.344	2	-0.037	7	3.665e...	9	7.291e...	3	4.699e...	10
272		min	-0.556	9	-0.311	8	-0.377	13	-5.198...	3	-7.99e...	9	-4.517...	4
273	N149	max	0.144	4	0.625	1	-0.041	11	8.264e...	7	5.022e...	11	4.849e...	6
274		min	-0.12	10	-0.636	7	-0.375	17	-8.478...	1	-4.971...	17	-4.147...	12
275	N150	max	0.144	5	0.353	1	-0.013	12	5.475e...	7	4.354e...	15	7.24e-03	12
276		min	-0.12	10	-0.39	7	-0.154	19	-5.638...	1	-1.145...	9	-6.839...	6
277	N151	max	0.259	5	0.282	1	-0.011	5	2.908e...	7	5.469e...	5	7.707e...	11
278		min	-0.245	11	-0.324	7	-0.12	23	-2.933...	1	-4.305...	11	-7.026...	5
279	N152	max	0.144	4	0.65	1	-0.044	11	9.232e...	7	3.022e...	22	3.39e-03	2
280		min	-0.12	10	-0.678	7	-0.391	17	-8.958...	1	3.782e...	4	-3.246...	8
281	N153	max	0.545	5	0.383	12	-0.045	2	3.529e...	4	7.745e...	5	5.651e...	10
282		min	-0.572	11	-0.402	6	-0.387	41	-6.172...	41	-6.262...	11	-4.908...	4
283	N154	max	0.319	4	0.204	12	-0.016	4	4.743e...	6	3.991e...	4	7.933e...	5
284		min	-0.366	10	-0.211	6	-0.151	22	-2.73e...	12	-5.108...	10	-7.634...	11
285	N155	max	0.318	4	0.185	2	-0.008	9	4.482e...	8	3.706e...	4	7.113e...	4
286		min	-0.365	10	-0.182	8	-0.113	15	-3.397...	2	-4.51e...	10	-6.554...	10
287	N156	max	0.56	4	0.363	12	-0.051	3	5.284e...	5	7.276e...	5	4.355e...	6
288		min	-0.6	10	-0.373	6	-0.394	21	-3.85e...	11	-8.536...	11	-4.223...	12
289	N157	max	0.569	3	0.321	2	-0.035	7	5.174e...	22	7.847e...	3	4.295e...	2
290		min	-0.578	9	-0.297	8	-0.363	13	-2.716...	4	-6.93e...	9	-3.58e...	8
291	N159	max	0.144	5	0.318	1	-0.004	1	4.619e...	7	3.763e...	3	7.635e...	12
292		min	-0.12	10	-0.357	7	-0.139	19	-4.872...	1	-2.313...	9	-7.106...	6
293	N160	max	0.228	5	0.268	1	-0.002	4	3.276e...	7	5.063e...	5	7.728e...	12
294		min	-0.212	11	-0.311	7	-0.121	22	-2.881...	1	-4.19e...	11	-7.077...	6
295	N161	max	0.286	4	0.19	1	-0.006	5	4.977e...	6	3.527e...	4	7.821e...	5
296		min	-0.336	10	-0.195	7	-0.135	23	-3.463...	12	-4.269...	10	-7.419...	11
297	N162	max	0.286	4	0.176	2	0.002	8	4.651e...	8	3.244e...	4	7.422e...	4
298		min	-0.336	10	-0.175	8	-0.114	14	-3.994...	2	-4.266...	10	-6.866...	10
299	N163	max	0.144	4	0.249	1	-0.003	12	4.665e...	7	3.083e...	5	8.989e...	8
300		min	-0.121	10	-0.213	7	-0.116	18	-5.647...	1	-3.233...	11	-8.361...	2
301	N164	max	0.207	3	0.196	1	-0.003	9	2.54e-03	7	3.716e...	3	9.022e...	8
302		min	-0.191	9	-0.156	7	-0.131	15	-3.711...	1	-4.722...	9	-8.509...	2
303	N165	max	0.007	9	0.015	10	0	11	1.524e...	8	1.862e...	15	2.302e...	8
304		min	-0.006	3	-0.015	4	-0.027	17	-1.371...	2	-4.819...	9	-2.33e...	2

Node Displacements (Continued)

	Node...		X [in]	LC	Y [in]	LC	Z [in]	LC	X Rota...	LC	Y Rota...	LC	Z Rota...	LC
305	N166	max	0	11	0	16	0	11	0	7	0	3	0	2
306		min	0	17	0	10	0	17	0	1	0	9	0	8
307	N167	max	0.043	7	0.078	1	0	3	1.866e...	6	6.127e...	5	1.256e...	10
308		min	-0.044	1	-0.079	7	-0.029	21	-1.201...	12	-1.452...	23	-1.285...	4
309	N169	max	0	21	0	22	0	3	0	7	0	5	0	7
310		min	0	3	0	4	0	21	0	1	0	11	0	1
311	N168	max	0.097	3	0.004	1	0.001	7	1.111e...	7	1.499e...	4	1.062e...	6
312		min	-0.096	9	-0.002	7	-0.028	13	-1.744...	13	-1.849...	10	-1.103...	12
313	N171	max	0	4	0	7	0	7	0	39	0	4	0	10
314		min	0	10	0	13	0	13	0	13	0	10	0	4

LRFD

	Member	Shape	Code...	Loc [in]	LC	Shear...	Loc [in]	Dir	LC	phi*P...	phi*P...	phi*M...	phi*M...	Cb	Eqn
1	M1	PIPE...	0.241	180	7	0.086	180		23	19871...	65205	5.749	5.749	1.934	H1-1b
2	M2	PIPE...	0.254	90	37	0.086	0		15	19871...	65205	5.749	5.749	1.645	H1-1b
3	M3	PIPE...	0.202	0	4	0.081	0		20	19871...	65205	5.749	5.749	1.822	H1-1b
4	M4	HSS4...	0.126	76.016	8	0.063	76.016	z	15	10173...	139518	16.181	16.181	1.689	H1-1b
5	M5	HSS4...	0.138	17.375	6	0.069	28.234	z	19	10173...	139518	16.181	16.181	1.776	H1-1b
6	M6	HSS4...	0.135	17.375	10	0.067	28.234	z	23	10173...	139518	16.181	16.181	1.755	H1-1b
7	M7	PL6x...	0.415	3.5	14	0.467	0	y	14	85880...	97200	1.013	12.15	1.38	H1-1b
8	M8	PL6x...	0.445	3.5	18	0.484	3.573	y	18	85880...	97200	1.013	12.15	1.335	H1-1b
9	M9	PL6x...	0.436	3.5	22	0.468	7	y	22	85880...	97200	1.013	12.15	1.326	H1-1b
10	PA1	PIPE...	0.480	60	16	0.087	60		8	14916...	32130	1.872	1.872	2.079	H1-1b
11	PA2	PIPE...	0.316	60	4	0.049	60		4	14916...	32130	1.872	1.872	1.825	H1-1b
12	PA3	PIPE...	0.320	60	22	0.043	60		24	14916...	32130	1.872	1.872	2.023	H1-1b
13	PA4	PIPE...	0.395	60	22	0.082	60		12	14916...	32130	1.872	1.872	2.159	H1-1b
14	PB1	PIPE...	0.503	60	20	0.088	60		6	14916...	32130	1.872	1.872	2.249	H1-1b
15	PB2	PIPE...	0.346	60	8	0.053	60		8	14916...	32130	1.872	1.872	2.086	H1-1b
16	PB3	PIPE...	0.326	60	2	0.048	60		12	14916...	32130	1.872	1.872	2.048	H1-1b
17	PB4	PIPE...	0.397	60	14	0.085	60		4	14916...	32130	1.872	1.872	1.581	H1-1b
18	PG1	PIPE...	0.465	60	24	0.087	60		11	14916...	32130	1.872	1.872	2.148	H1-1b
19	PG2	PIPE...	0.333	60	12	0.052	60		12	14916...	32130	1.872	1.872	1.911	H1-1b
20	PG3	PIPE...	0.312	60	18	0.046	60		4	14916...	32130	1.872	1.872	1.944	H1-1b
21	PG4	PIPE...	0.373	60	18	0.085	60		8	14916...	32130	1.872	1.872	1.977	H1-1b
22	M34	PIPE...	0.309	170.625	21	0.219	172.5		7	4371...	32130	1.872	1.872	2.04	H1-1b
23	M35	PIPE...	0.313	90	37	0.178	172.5		6	4371...	32130	1.872	1.872	2.105	H1-1b
24	M36	PIPE...	0.295	9.375	17	0.164	7.5		3	4371...	32130	1.872	1.872	2.103	H1-1b
25	M55	L2.5x...	0.292	0	7	0.070	13.928	z	12	36897...	38556	1.114	2.537	1.5	H2-1
26	M56	L2.5x...	0.236	13.928	5	0.064	13.928	z	4	36897...	38556	1.114	2.537	1.234	H2-1
27	M57	L2.5x...	0.257	0	2	0.067	0	y	8	36897...	38556	1.114	2.537	1.5	H2-1
28	M58	LL2.5...	0.235	84	17	0.010	0	z	8	31220...	58320	3.3	1.593	2.847	H1-1b
29	M59	LL2.5...	0.261	0	22	0.010	84	z	6	31220...	58320	3.3	1.593	2.333	H1-1b
30	M60	LL2.5...	0.237	0	14	0.011	84	z	10	31220...	58320	3.3	1.593	2.238	H1-1b

Cold Formed Steel Code Checks

No Data to Print...

1.0 DESIGN INFORMATION AND GENERAL REQUIREMENTS

1.0 GENERAL
ALL DIMENSIONS ARE APPROXIMATE, CONTRACTOR SHOULD VERIFY ALL DIMENSIONS BEFORE FABRICATION OF STEEL AND COMMENCEMENT OF WORK.

1.1 CODES
a. 2018 CONNECTICUT STATE BUILDING CODE (2015 IBC)
b. MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE/SEI 7-10, AMERICAN SOCIETY OF CIVIL ENGINEERS
c. STEEL CONSTRUCTION MANUAL, 14TH EDITION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION
d. STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND SUPPORTING STRUCTURES, ANSI/TIA-222-G, TELECOMMUNICATIONS INDUSTRY ASSOCIATION

1.2 LOADS AND DESIGN CRITERIA
a. WIND LOADING: V: 115 MPH, EXPOSURE C, RISK CATEGORY II
b. EQUIPMENT AS LISTED IN MOUNT STRUCTURAL ANALYSIS REPORT – UPGRADE PREPARED BY EFI GLOBAL, INC, DATED 04/24/2020.

1.3 NOTES
a. PRIOR TO PURCHASE OR FABRICATION OF MATERIAL, THE CONTRACTOR SHALL PERFORM AN INSPECTION VERIFYING MEMBER AND BOLT SIZES. SHOULD THE CONTRACTOR DISCOVER ANY DAMAGED OR MISSING MEMBERS OR THE MEMBER OR BOLT SIZES DO NOT MATCH THOSE LISTED, DESTEK SHALL BE NOTIFIED IMMEDIATELY.
b. CONTRACTOR TO REPLACE ALL BOLTS REMOVED WITH NEW BOLTS OF SAME TYPE, UNLESS NOTED OTHERWISE.

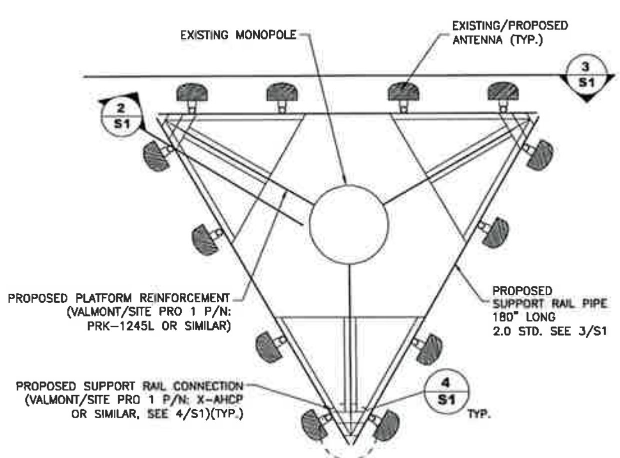
2.0 STRUCTURAL STEEL

2.1 MATERIALS
a. STRUCTURAL STEEL . . . . ASTM A992
MISC ANGLE & PLATE . . . . ASTM A36
PIPE . . . . ASTM A53 GR. B
RODS . . . . ASTM A572-50 (MINIMUM)
HSS. . . . . ASTM A500, GR. B, Fy=46 KSI
b. BOLTS . . . . ASTM A325 U.N.O.
c. WELDING ELECTRODES . . . . AWS A5.1 (E70XX)
d. STEEL CONSTRUCTION SHALL CONFORM TO "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, ANSI/AISC 360-16"
e. WELDING SHALL CONFORM TO AWS D1.1/D1.3/D1.7 AS APPLICABLE.
f. THE FABRICATOR SHALL FURNISH CHECKED SHOP AND ERECTION DRAWINGS TO THE ENGINEER, AND OBTAIN APPROVAL PRIOR TO FABRICATING ANY STRUCTURAL STEEL. SHOP DRAWINGS SHALL CONFORM TO "DETAILING FOR STEEL CONSTRUCTION, 2ND EDITION"
g. POOR MATCHING OF HOLES SHALL BE CORRECTED BY DRILLING TO THE NEXT LARGER SIZE. WELDING FOR REDRILLING WILL NOT BE PERMITTED.

2.2 CONNECTIONS
a. SHOP CONNECTIONS MAY BE BOLTED OR WELDED
b. CONNECTIONS WHERE THE BEAM SHEAR (V) IS NOT NOTED ON THE DRAWINGS, SIMPLE SHEAR CONNECTIONS SHALL BE DESIGNED TO DEVELOP 1/2 OF THE MAXIMUM TOTAL UNIFORM LOAD CAPACITY OF THE BEAM.
c. FIELD CONNECTIONS SHALL BE MADE WITH A325 BOLTS AND HARDENED WASHERS EXCEPT AS INDICATED ON THE DESIGN DRAWINGS
d. CONNECTIONS NOT SHOWN ON DRAWINGS SHALL BE DESIGNED BY THE STEEL FABRICATOR. CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" AND "AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
e. DO NOT FIELD CUT OR ALTER STRUCTURAL MEMBERS WITHOUT PRIOR WRITTEN APPROVAL OF ENGINEER.
f. BOLT HOLES SHALL BE CUT, DRILLED OR PUNCHED AT RIGHT ANGLES TO THE SURFACE OF THE METAL AND SHALL NOT BE MADE OR ENLARGED BY BURNING. HOLES SHALL BE CLEAN CUT WITHOUT TORN OR RAGGED EDGES. OUTSIDE BURRS RESULTING FROM DRILLING OR REAMING OPERATION SHALL BE REMOVED WITH A TOOL MAKING A 1/16 INCH BEVEL. BOLT HOLES SHALL BE 1/16 INCH OVERSIZE.

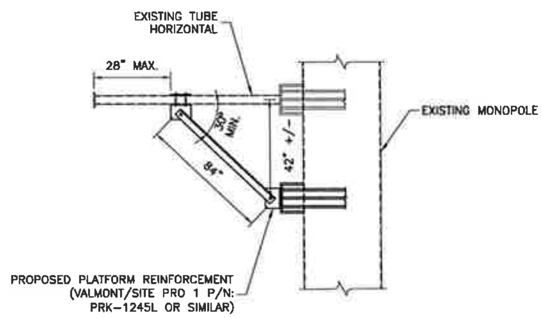
2.3 FINISHES
a. STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED AFTER FABRICATION PER ASTM A123
b. BOLTS AND NUTS SHALL BE HOT DIP GALVANIZED PER ASTM A153.
c. ALL SURFACES DAMAGED BY FIELD WELDING OR CUTTING SHALL BE PAINTED WITH COLD GALVANIZING COMPOUND TWICE. THE PAINT SHOULD BE AT LEAST 93% PURE ZINC. RUST-OLEUM PROFESSIONAL. (MODEL# 7585838) OR SIMILAR.

2.4 WELDING
a. CONTRACTOR TO TAKE ALL NECESSARY PRECAUTIONS FOR FIRE PREVENTION DURING WELDING, SUCH AS; INSTALLING 3000 (NFPA 701) FIRE BLANKET AROUND COAX. MORE SPLATTER AND SPARKS SHOULD BE ANTICIPATED WHILE WELDING ON GALVANIZED SURFACE. COAX IS FLAMMABLE AND SHALL CATCH FIRE IF NOT PROTECTED. WATER SHALL BE ON SITE OF ADEQUATE AMOUNT AND AVAILABLE AT SHORT NOTICE AT ALL TIMES DURING WELDING ACTIVITY. CONTRACTOR SHOULD BE ABLE TO TRANSPORT THE WATER TO THE HEIGHT WELDING BEING PERFORMED.
b. WELDING ON GALVANIZED SURFACE SHOULD BE DONE WITH EXTREME CAUTION. IF THE WELD MATERIAL IS CONTAMINATED WITH ZINC, IT DOES NOT PROVIDE A STRUCTURAL WELD. GROUND GALVANIZING BEFORE WELDING.
c. WELDING CERTIFICATE MUST BE PROVIDED PRIOR TO WELDING. ALL WELDING SHALL BE PERFORMED BY AWS QUALIFIED WELDER WHO HAS EXPERIENCE WITH GALVANIZED SURFACES.



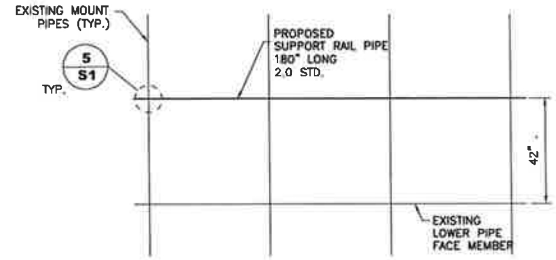
1 S1 **PLATFORM MOUNT PLAN**
N.T.S

NOTE:
– ADDITIONAL EQUIPMENT AND MOUNTING HARDWARE NOT SHOWN FOR CLARITY

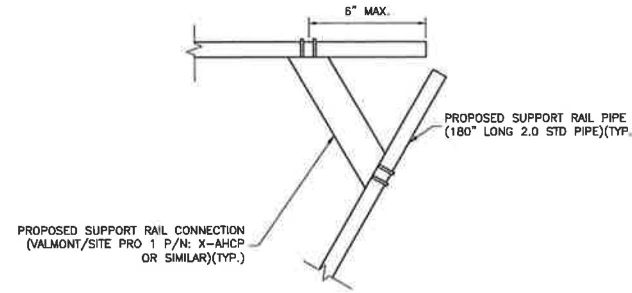


2 S1 **PLATFORM MOUNT ELEVATION**
N.T.S

NOTE:
– ADDITIONAL EQUIPMENT AND MOUNTING HARDWARE NOT SHOWN FOR CLARITY



3 S1 **PLATFORM ELEVATION VIEW**
N.T.S



4 S1 **CORNER CONNECTION DETAIL - PLAN VIEW**
N.T.S

NOTE:
– ADDITIONAL EQUIPMENT AND MOUNTING HARDWARE NOT SHOWN FOR CLARITY
– INSTALL NEW SUPPORT RAIL CORNER CONNECTIONS

5 S1 **CROSSOVER CLAMP**
N.T.S

NOTE:
–SUPPORT RAIL PIPE TO BE CONNECTED TO PIPE MOUNTS WITH CROSSOVER PLATE VALMONT/SITE PRO1 P/N SCX1-K OR SIMILAR
–TOTAL (12) SCX1-K

DRAWINGS PLOTTED TO SCALE ON 11x17 SHEETS

PREPARED BY
efi global
EFI GLOBAL, INC
1117 PERIMETER CENTER WEST SUITE E500
ATLANTA, GA 30338
TEL NO: 770-693-0835
TELECOM@EFIGLOBAL.COM

PREPARED FOR:
verizon
118 Flanders Road-Third Floor
Westborough, MA 01581

NUM	DATE	DESCRIPTION:
A	4/24/20	ISSUED FOR CONSTRUCTION

Norfolk East CT

ADDRESS
599 Greenwoods Road,
Norfolk, CT 06058

STATE OF CONNECTICUT — AHMET COLAKOGLU — LICENSED PROFESSIONAL ENGINEER — 04/24/2020

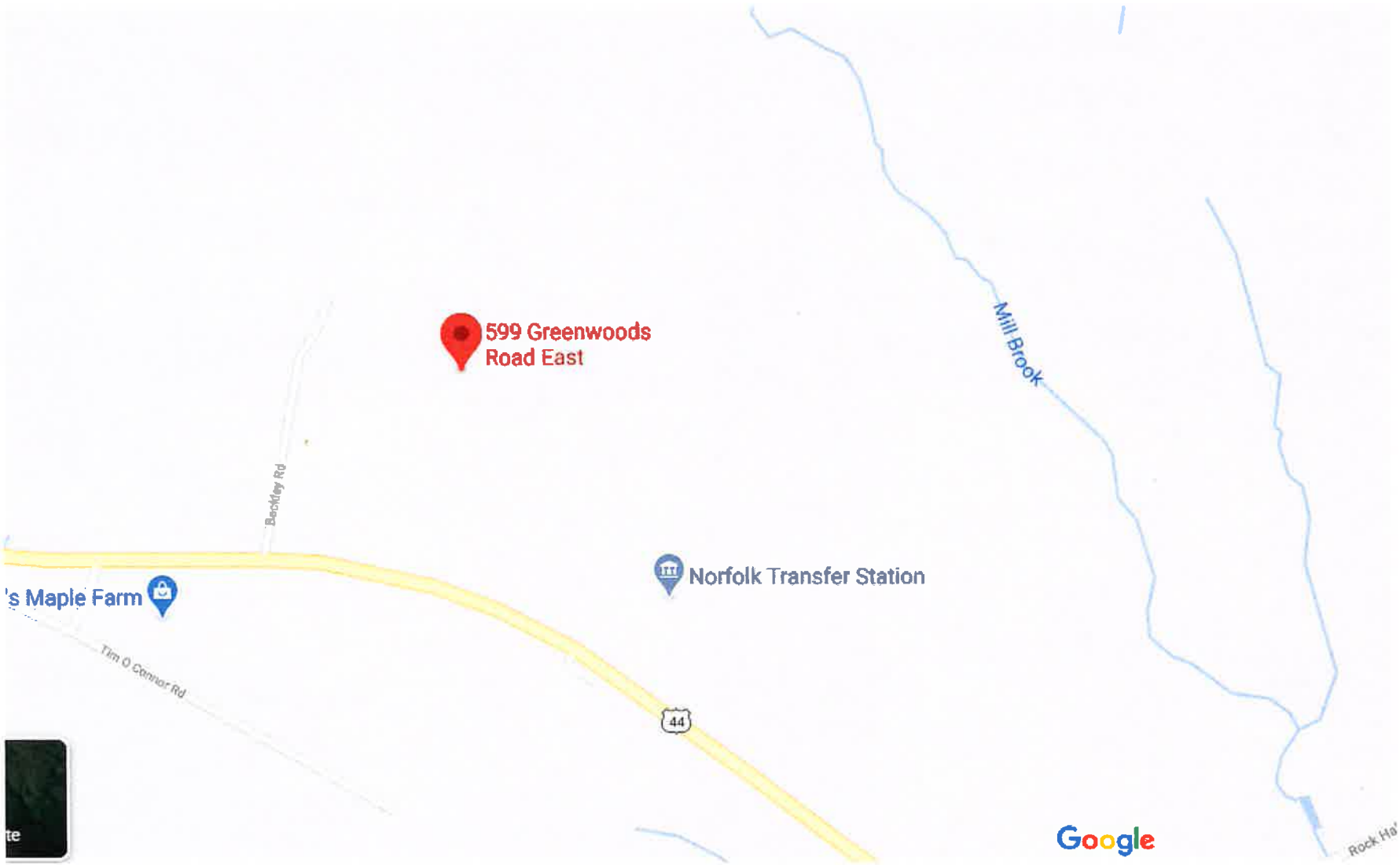
Ahmet Colakoglu, PE
Connecticut License No: 27057

DESIGNED: SA
DRAWN: SA
CHECKED: AC

JOB #: 048.00293-2078007

S1
NOTES & UPGRADE DETAIL

ATTACHMENT 6


599 Greenwoods Road East
Mill Brook
Beckley Rd
Norfolk Transfer Station
's Maple Farm
Tim O Connor Rd
44
Google

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Town of Norfolk, CT

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Town of Norfolk, CT

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Summary

Property Photo

ParcelId	44
Account Number	001666
Location Address	599 GREENWOODS RD E
Map-Block-Lot	4-10 /4 /
Use Class/Description	9-2 EXEMPT COM/IND
Assessing Neighborhood	3A
Census Tract	3081
Acreage	149
Utilities	

Owner

NORFOLK TOWN OF
PO BOX 592
NORFOLK, CT 06058-0592

Current Appraised Value

Columns

Current Appraised Value

	2018	2017	2016	2015
+ **Building Value**	$0	$0	$0	$0
+ **XF Value**	$0	$0	$0	$0
+ **OB Value**	$48,050	$41,640	$41,640	$41,640
+ **Land Value**	$888,200	$1,154,000	$1,154,000	$1,154,000
+ **Special Land Value**				
+ **Total Appraised Value**	$936,250	$1,195,640	$1,195,640	$1,195,640
+ **Net Appraised Value**	$936,250	$1,195,640	$1,195,640	$1,195,640
+ **Current Assessment**	$655,370	$836,950	$836,950	$836,950

Assessment History

Columns

Assessment History

	2018	2017	2016	2015
+ **Building Value**	$0	$0	$0	$0
+ **OB/Misc**	$33,630	$29,150	$29,150	$29,150
+ **Land**	$621,740	$807,800	$807,800	$807,800
+ **Total Assessment**	$655,370	$836,950	$836,950	$836,950

Land

Land

Use	Class	Zoning	Area	Value
9-2 EXEMPT COM/IND	E	C	2 AC	$65,000
9-2 EXEMPT COM/IND	E	C	147 AC	$823,200

Commercial Building

Building #	1
Style	Commercial
Actual Year Built	0
Gross Area	0
Stories	1
Grade	C
Exterior Wall	Average
Interior Wall	None/Minumum
Wall Height	1
Units	0
Roof Cover	Metal/Tin
Roof Structure	Irregular
Floor Type	Dirt/None
Heat Type	None
Heat Fuel	None
AC Type	NONE
Sprinkler	01
Construction	STEEL
Plumbing	NONE
Comm Walls	0

Building Sub Areas

Out Buildings\Extra Features

Out Buildings\Extra Features

Description	Sub Description	Area	Year Built	Value
SHED AVER		256S.F.	0	$1,920
SHED AVER		350S.F.	0	$2,630
WORK SHOP AVER		400S.F	0	$6,000
SHED AVER		5000S.F.	0	$37,500

Sales History

Columns

Sales History

Sales Date	Type of Document	Grantee	Vacant/Improved	Book/Page	Amount
		NORFOLK TOWN OF	Improved	19/ 524	$0

Permit Information

Permit Information

Permit ID	Issue Date	Type	Description	Amount	Inspection Date	% Complete	Date Complete	Comments
279-E	09-27-2012	RE	Remodel	$12,000		100		NEW ANTENNAS

Photos

Property Photo

No data available for the following modules: Building Data, Sketch.

Contact Information

Information

Norfolk
CONNECTICUT

Town of Norfolk, CT
19 Maple Avenue
PO Box 552
Norfolk, CT 06058
Website opens in a new tab

Announcements

Announcements

- How to use the qPublic.net site – view Demo Videos
- Search across multiple counties with Guidepost!

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ATTACHMENT 7

UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here ***Postmark with Date of Receipt.***
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	2		neopost 06/19/2020 US POSTAGE $002.84⁰ ZIP 06103 041L12203937
	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Matthew T. Riiska, First Selectman Town of Norfolk P.O. Box 592 Norfolk, CT 06058-0592				
2.	Michael Halloran, Zoning Enforcement Officer Town of Norfolk 19 Maple Avenue Norfolk, CT 06058				
3.					
4.					
5.					
6.					

OLD STATE HOUSE STATION 06103 USPS JUN 19 2020

OLD STATE HOUSE STATION JUN 19 2020

See Reverse for Instructions