February 7, 2020

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

Re:	**Notice of Exempt Modification – Antenna and RRU Add**
Property Address:	**113 Brush Hill Road, Goshen, CT 06756**
Applicant:	**AT&T Mobility, LLC**

Dear Ms. Bachman:

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

AT&T currently maintains a wireless telecommunications facility consisting of nine (9) wireless telecommunication antennas at an antenna center line height of 172.5 -feet on an existing 195-foot monopole, owned by SBA at 8051 Congress Ave., Boca Raton, FL 33487. AT&T now intends to remove three (3) 4' Kathrein 7770 Panel Antennas, each currently installed in position [4] and remove three (3) 6' KMW AM-X-CD-16-65-00T-RET Panel Antennas, each currently installed in position [3]. AT&T will swap these for six (6) 6' CCI DMP65R-BU6DA Panel Antennas, each to be installed in position [3 + 4], all sectors. In addition, AT&T intends to remove six (6) existing RRUS-11 and add one (1) RRUS-4478 B14, one (1) RRUS-8843 B2/B66A, and (1) RRUS-4449 B5-B12 in position [3 + 4], all sectors, for a total of nine (9) new RRUs. AT&T is also proposing to add (2) Raycap Squid, as well as one (1) fiber line and (4) DC Power Cables to their equipment configuration. All of the changes will take place on the existing antenna mount.

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

Please accept this letter pursuant to Regulation of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-5I0j-72(b) (2). In accordance with R.C.S.A., a copy of this letter is being sent to Christopher Zibell – Building Code Official, Town of Goshen, CT at 42A North Street, Goshen, CT 06756 and Robert P. Valentine – First Selectman, Town of Goshen, CT at 42A North Street, Goshen, CT 06756. A copy of this letter is being sent to the property owner, Woodridge Lake Sewer District at 113 Brush Hill Road, Goshen, CT 06756 and to the tower company, SBA at 8051 Congress Ave., Boca Raton, FL 33487.

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

- **EM-CING-055-080509** – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 113 Brush Hill Road, Goshen, Connecticut.
- **EM-CING-055-121205** – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 113 Brush Hill Road, Goshen, Connecticut.

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

1. The proposed modifications will not result in an increase in the height of the existing tower. AT&T's replacement antennas will be installed at the 172.5-foot level of the 195-foot monopole tower.
2. The proposed modifications will not involve any changes to ground-mounted equipment and, therefore, will not require and extension of the site boundary.
3. The proposed modifications will not increase the noise levels at the facility by six decibels or more, or to

levels that exceed state and local criteria.

4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative worst-case RF emissions calculation for AT&T's modified facility is provided in the RF Emissions Compliance Report, included in Tab 2.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The tower and its foundation can support AT&T's proposed modifications. (See Structural Analysis Report included in Tab 3).

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

Sincerely,

Kristina Cottone

CC w/enclosures:
Christopher Zibell – Building Code Official, Town of Goshen, CT
Robert P. Valentine – First Selectman, Town of Goshen, CT
Woodridge Lake Sewer District – Property Owner
SBA – Tower Company

Connecticut Siting Council
Decisions

DOCKET NO. 260 – Bay Communications Inc. application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility in Goshen, Connecticut.	}	Connecticut
	}	Siting
	}	Council

November 20, 2003

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 Sprint Spectrum, L.P. (Sprint) for the construction, maintenance and operation of a wireless telecommunications facility at a site located at 113 Brush Hill Road, Goshen, Connecticut. The Council denies certification of the site located at 416 Old Middle Street, Goshen, 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 not to exceed a height of 195 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 submitted to and approved by the Council prior to the commencement of facility construction and shall include:

   a) a detailed site development plan that depicts the location of the access road, compound, tower, and utility line;
   b) specifications for the tower, tower foundation, antennas, equipment building, and security fence;
   c) 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 densities 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 provide a recalculated report of electromagnetic radio frequency power density 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. Upon request, the Certificate Holder shall provide space on its tower for Town of Goshen antennas at no cost to the Town.

6. If the facility does not initially provide wireless services within one year of completion of construction or 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.

7. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function.

8. Unless otherwise approved by the Council, this Decision and Order shall be void if the facility authorized herein is not operational within one year of the effective date of this Decision and Order or within one year after all appeals to this Decision and Order have been resolved.

Pursuant to General Statutes § 16-50p, we hereby direct 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 Waterbury Republican and in the Torrington Register Citizen.

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:

Applicant
Sprint Spectrum, L.P.
d/b/a Sprint PCS

Its Representative
Thomas J. Regan, Esquire
Brown Rudnick Berlack Israels LLP
CityPlace I, 38th Floor
185 Asylum Street
Hartford, CT 06103-3402

Content Last Modified on 6/14/2005 9:26:19 AM

Town of Goshen, CT

Property Listing Report

Map Block Lot **04-006-007-0B** Account **00023401**

Property Information

Property Location	113 BRUSH HILL ROAD
Owner	WOODRIDGE SEWER DIST
Co-Owner	
Mailing Address	113 BRUSH HILL RD GOSHEN CT 06756
Land Use	435 Cell Site Vac Lnd
Land Class	I
Zoning Code	RA5
Town Clerk Map #	
Subdiv. Lot #	

Neighborhood	
Acreage	0
Utilities	
Lot Setting/Desc	
Survey Map	
Additional Info	

Photo

Sketch

Primary Construction Details

Year Built		Bedrooms		Exterior Walls	
Stories		Full Bathrooms		Interior Walls	
Building Style		Half Bathrooms		Heating Type	
Building Use		Bath Style		Heating Fuel	
Building Grade		Kitchen Style		AC Type	
Floors		Roof Style		Gross Bldg Area	
Total Rooms		Roof Cover		Total Living Area	

Report Created On **2/19/2020**

Town of Goshen, CT

Property Listing Report | Map Block Lot **04-006-007-0B** | Account **00023401**

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings		
Extras	0	
Outbuildings	125000	87500
Land	200000	140000
Total	325000	227500

Outbuilding and Extra Items

Type	Description
Cell Tower	1.00 Units
Cell Tower	1.00 Units

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area		0

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
WOODRIDGE SEWER DIST	55/ 117		0
WOODRIDGE SEWER DIST	55/ 117		0

Report Created On 2/19/2020

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

Structural Analysis Report

Existing 194 ft EEI Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT12210-A

Customer Site Name: Goshen 3, CT

Carrier Name: AT&T (App#: 123080, V2)

Carrier Site ID / Name: CTL01238 / Goshen CT Brush Hill

Site Location: 113 Brush Hill Road

Goshen, Connecticut

Litchfield County

Latitude: 41.797172

Longitude: -73.221674

Analysis Result:

Max Structural Usage: 78.4% [Pass]

Max Foundation Usage: 59.0% [Pass]

Additional Usage Caused by New Mount: +2.0%

Report Prepared By: younus.alkarawi

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Max Foundation Usage: 59.0% [Pass]

Additional Usage Caused by New Mount: +2.0%

Report Prepared By: younus.alkarawi

Introduction

The purpose of this report is to summarize the analysis results on the 194 ft EEI Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Engineered Endeavors Incorporated Project #12782, Drawing #GS55363, Dated 07/28/04
Foundation Drawing	Engineered Endeavors Incorporated Project #12782, Drawing #12782-195, Dated 07/28/04
Geotechnical Report	Dr. Clarence Welti, PE, PC Geotechnical Report, Dated 12/18/03
Modification Drawings	N/A

Analysis Criteria

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

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed V_{ult} = 115.0 mph (3-Sec. Gust)/ Nominal Design Wind Speed V_{asd} = 89.0 mph (3-Sec. Gust)
Wind Speed with Ice:	40 mph (3-Sec. Gust) with 1" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-G / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	S_S = 0.182, S_1 = 0.065

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

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft.)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	196.0	3	RFS - APXVTM14-C-120 - Panel	Low Profile Platform	(4) 1-1/4" Hybrid	Sprint
2		3	RFS - APXVSPP18-C-A20 - Panel			
3		4	RFS - ACU-A20-N - RET			
4		3	ALU - TD-RRH8x20-25 - RRU			
5		3	ALU - 1900MHz RRH – RRU			
6		3	ALU - 800 MHz RRH – RRU			
7		3	ALU - 800 MHz Filter			
8	185.0	4	Amphenol - LPA-80080/6CF - Panel	Low Profile Platform	(18) 1 5/8" (2) 1/2"	Verizon
9		3	Amphenol - BXA-70063-6-CF - Panel			
10		3	Amphenol - BXA-171063-12BF - Panel			
11		2	Antel - LPA-80063-6 CF - Panel			
12		1	Andrew - FPA5250 - Dish			
13		1	GPS			
-	172.5	6	Powerwave - 7770.00 - Panel	12.5' LP Platform	(12) 1 5/8" (2) 3/4" DC and (1) 7/16" Fiber inside (1) 3" Innerduct	AT&T
-		3	KMW - AM-X-CD-16-65-00T-RET - Panel			
-		12	Powerwave - LGP21401 - TMA			
-		6	Powerwave - LGP13519 - TMA			
-		6	Ericsson - RRUS 11 - RRU			
-		1	Raycap - DC6-48-60-18-8F - SP			
-		1	Commscope - ABT-DFDM-ADBH – Bias-T			
21	160.0	3	RFS - APX16DWV-16DWVS-E-A20 - Panel	(3) T-Arm	(2) 1 5/8" Hybrid	T-Mobile
22		3	Commscope - LNX-6515DS-A1M - Panel			
23		3	96”x15.6”x9” Panel (180 lb) - Panel			
24		3	15”x14”x7.5” RRU (70 lb) – RRU			
25		3	Ericsson - RRUS 11 - RRU			
26		3	Ericsson - RRUS 11 (Band 12) - RRU			
27		3	Ericsson - RRUS 11 (Band 4) - RRU			
28	50.0	1	Symmetricom - 58532A - GPS	Direct	(1) 1/2"	

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

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
14	172.5	6	Cci DMP65R-BU6DA - Panel	14.5' Platform W/ Site Pro 1 # HRK14	(1) 7/16" Fiber (6) 1 5/8" (1) 3" Innerduct* (4) 3/4" DC	AT&T
15		3	Powerwave 7770- Panel			
16		3	Ericsson RRUS 4478 B14			
17		3	Ericsson RRUS 8843 B2 B66A			
18		3	Ericsson RRUS 4449 B5/B12			
19		3	Raycap DC6-48-60-18-8F			
20		1	Commscope ABT-DFM-ADBH			

*(Housing (2) 3/4" DC power & (1) 7/16" Fiber cables)

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

Analysis Results

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

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	**69.1%**	**59.8%**	**78.4%**
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	4893.4	34.0	103.8

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

Operational Condition (Rigidity):

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

Elevation (ft)	Antenna / Dish	Carrier	Twist (deg)	Sway (deg)
185.0	Andrew - FPA5250 - Dish	Verizon	0.000	2.294

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

Conclusions

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

Standard Conditions

1. This analysis was performed based on the information supplied to **(TES) Tower Engineering Solutions, LLC.** Verification of the information provided was not included in the Scope of Work for **TES**. The accuracy of the analysis is dependent on the accuracy of the information provided.

2. The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.

3. The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of **TES**. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the EIA/TIA-222 standard or other codes, **TES** should be notified in writing and the applicable minimum values provided by the client.

4. The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. **TES** has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, **TES** should be notified immediately to evaluate the effect of the discrepancy on the analysis results.

5. The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.

6. If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

Usage Diagram - Max Ratio 69.08% at 53.3ft

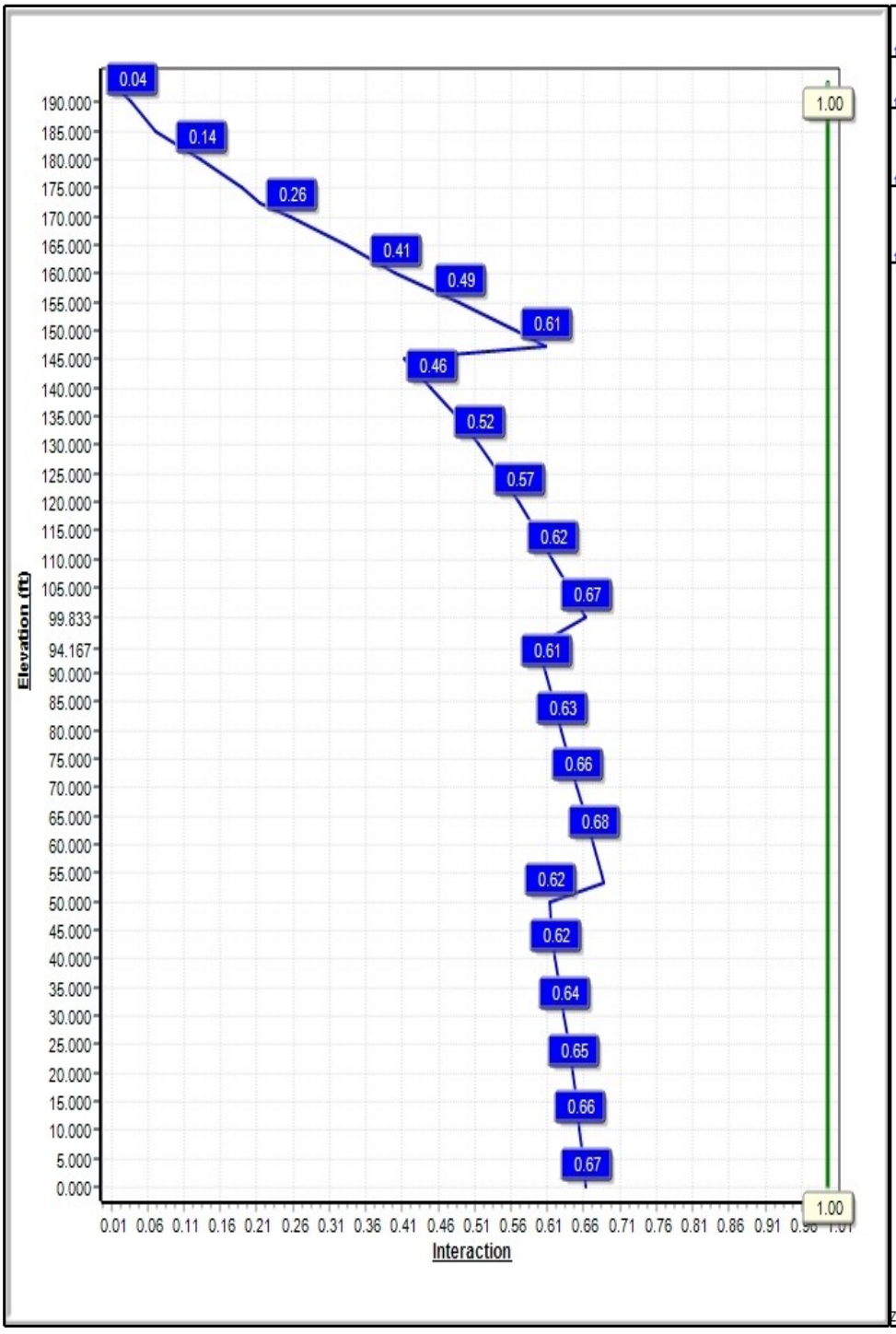
Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT	**Exposure:**	C	
Height:	193.50 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

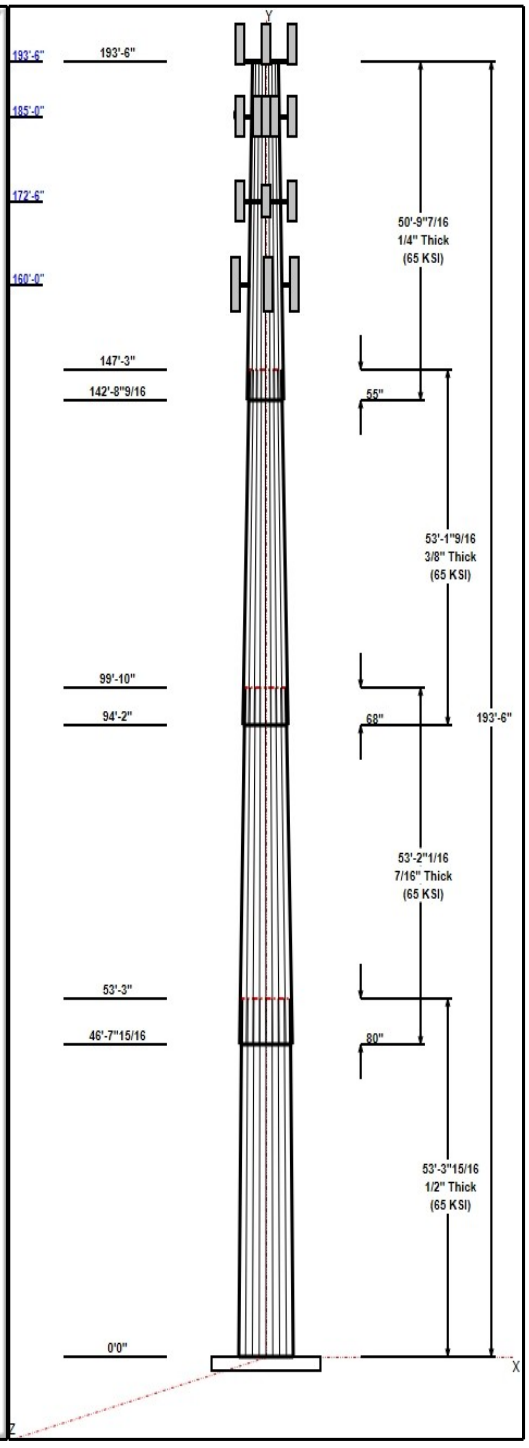
Tower Engineering Solutions

Dead Load Factor:	1.20
Wind Load Factor:	1.60

Load Case : 1.2D + 1.6W 89 mph Wind

Iterations: 27





Structure: CT12210-A-SBA

Type: Tapered
Site Name: Goshen 3, CT
Height: 193.50 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.18928

1/30/2020

Tower Engineering Solutions

Shaft Properties

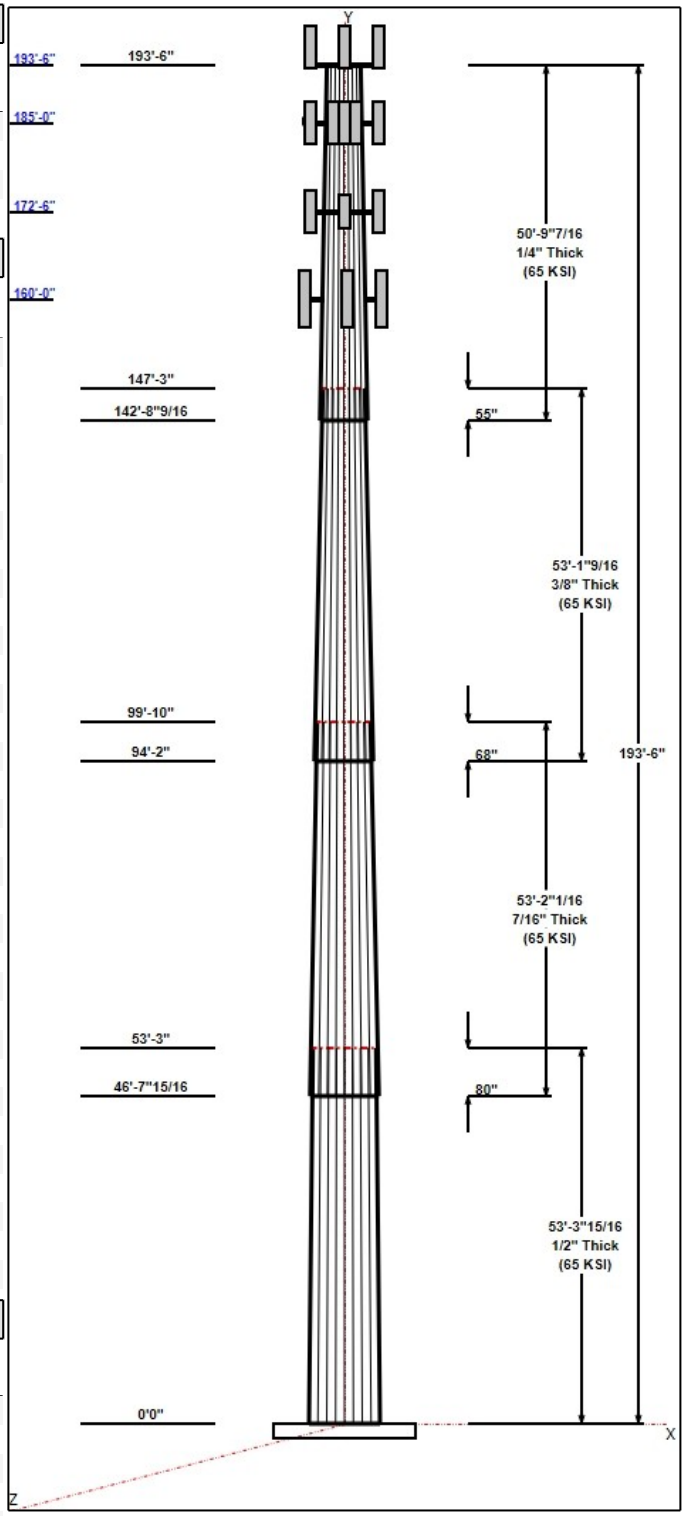
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	53.33	46.91	57.00	0.500		0.18928	65
2	53.17	38.98	49.04	0.438	Slip	0.18928	65
3	53.13	30.75	40.80	0.375	Slip	0.18928	65
4	50.79	22.50	32.11	0.250	Slip	0.18928	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
193.50	195.00	1	Low Profile Platform	Sprint
193.50	196.00	3	APXVSPP18-C-A20	Sprint
193.50	196.00	3	APXVTM14-C-120	Sprint
193.50	196.00	3	1900MHz RRH	Sprint
193.50	196.00	3	800 MHz RRH	Sprint
193.50	196.00	3	TD-RRH8x20-25	Sprint
193.50	195.00	3	800 MHz Filter	Sprint
193.50	195.00	4	ACU-A20-N	Sprint
185.00	185.00	1	Low Profile	Verizon
185.00	185.00	4	LPA-80080/6CF	Verizon
185.00	185.00	3	BXA-70063-6-CF	Verizon
185.00	185.00	3	BXA-171063-12BF	Verizon
185.00	185.00	2	LPA-800636-6 CF	Verizon
185.00	185.00	1	FPA5250	Verizon
185.00	185.00	1	GPS	Verizon
172.50	172.50	3	7770.00	AT&T
172.50	172.50	3	DC6-48-60-18-8F	AT&T
172.50	172.50	1	ABT-DMDF-ADBH	AT&T
172.50	172.50	6	DMP65R-BU6DA	AT&T
172.50	172.50	1	HRK14	AT&T
172.50	172.50	1	14.5' Platform	AT&T
172.50	172.50	3	RRUS 4478 B14	AT&T
172.50	172.50	3	RRUS 8843 B2 B66A	AT&T
172.50	172.50	3	RRUS 4449 B5/B12	AT&T
160.00	160.00	3	RRUS 11	T-Mobile
160.00	160.00	3	96" x 15.6" x 9"	T-Mobile
160.00	160.00	3	15" x 14" x 7.5" RRU (70	T-Mobile
160.00	160.00	3	T-Arms	T-Mobile
160.00	160.00	3	LNX-6515DS-A1M	T-Mobile
160.00	160.00	3	APX16DWV-16DWVS-E-A	T-Mobile
160.00	160.00	3	RRUS 11 (Band 4)	T-Mobile
160.00	160.00	3	RRUS 11 (Band 12)	T-Mobile
50.00	50.00	1	58532A GPS	T-Mobile

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	193.50	Inside	1-1/4" Hybrid	Sprint
0.00	185.00	Inside	1 5/8"	Verizon
0.00	185.00	Inside	1/2"	Verizon
0.00	172.50	Inside	1 5/8"	AT&T
0.00	172.50	Inside	3" Innerduct	AT&T
0.00	172.50	Inside	3/4" DC	AT&T
0.00	172.50	Inside	7/16" Fiber	AT&T
0.00	160.00	Inside	1 5/8" Hybrid	T-Mobile
0.00	50.00	Inside	1/2"	T-Mobile



Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
24	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.2500	72.0	60.0	Round

Reactions

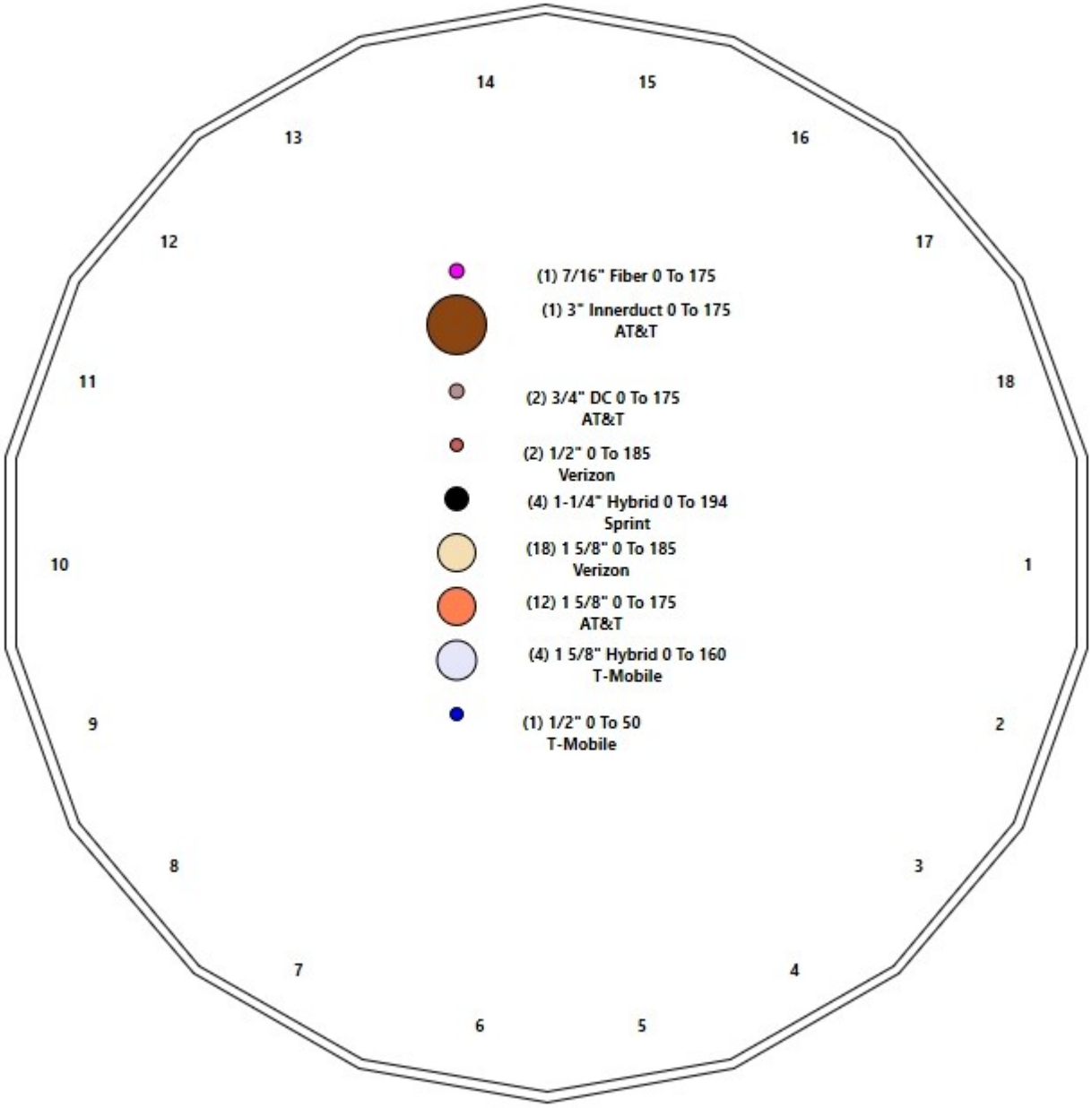
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 89 mph Wind	4893.4	34.0	63.6
0.9D + 1.6W 89 mph Wind	4811.6	33.9	47.7
1.2D + 1.0Di + 1.0Wi 40 mph Wind	1142.6	7.7	103.8
1.2D + 1.0E	343.3	2.4	63.6
0.9D + 1.0E	337.3	2.4	47.7
1.0D + 1.0W 60 mph Wind	1378.0	9.6	53.0

Structure: CT12210-A-SBA - Coax Line Placement

Type: Monopole
Site Name: Goshen 3, CT
Height: 193.50 (ft)

1/30/2020

Tower Engineering Solutions



Shaft Properties

Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (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

Tower Engineering Solutions

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	53.330	0.5000	65		0.00	14,818
2	18	53.170	0.4375	65	Slip	80.00	10,947
3	18	53.130	0.3750	65	Slip	68.00	7,617
4	18	50.787	0.2500	65	Slip	55.00	3,710
					Total Shaft Weight:		**37,091**

	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	57.00	0.00	89.66	36162.61	18.69	114.00	46.91	53.33	73.64	20037.0	15.13	93.81	0.189276
2	49.04	46.66	67.49	20145.19	18.36	112.10	38.98	99.83	53.52	10043.9	14.30	89.09	0.189276
3	40.80	94.17	48.12	9935.12	17.77	108.80	30.75	147.30	36.15	4212.30	13.05	81.99	0.189276
4	32.11	142.7	25.28	3242.90	21.24	128.45	22.50	193.50	17.65	1104.27	14.46	90.00	0.189276

Load Summary

Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

Tower Engineering Solutions

Discrete Appurtenances

				No Ice			Ice				
No.	Elev (ft)	Description	Qty	Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
1	193.50	Low Profile Platform	1	1200.00	25.00	1.00	2632.18	53.644	1.00	0.00	1.50
2	193.50	APXVSPP18-C-A20	3	55.00	8.02	0.83	283.12	11.841	0.86	0.00	2.50
3	193.50	APXVTM14-C-120	3	57.00	6.34	0.79	286.45	7.896	0.82	0.00	2.50
4	193.50	1900MHz RRH	3	60.00	3.80	0.67	263.60	5.701	0.67	0.00	2.50
5	193.50	800 MHz RRH	3	53.00	2.49	0.67	154.16	4.054	0.67	0.00	2.50
6	193.50	TD-RRH8x20-25	3	70.00	4.05	0.67	210.55	5.199	0.67	0.00	2.50
7	193.50	800 MHz Filter	3	8.80	0.42	1.00	26.76	0.891	1.00	0.00	1.50
8	193.50	ACU-A20-N	4	1.00	0.14	0.67	6.88	0.546	0.67	0.00	1.50
9	185.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	3282.20	46.048	1.00	0.00	0.00
10	185.00	LPA-80080/6CF	4	21.00	4.33	1.70	307.04	6.001	1.70	0.00	0.00
11	185.00	BXA-70063-6-CF	3	17.00	7.57	0.70	209.95	11.333	0.70	0.00	0.00
12	185.00	BXA-171063-12BF	3	15.00	4.74	0.84	144.26	7.939	0.84	0.00	0.00
13	185.00	LPA-800636-6 CF	2	27.00	9.60	0.94	409.36	11.489	0.95	0.00	0.00
14	185.00	FPA5250	1	10.00	1.20	1.00	39.88	2.190	1.00	0.00	0.00
15	185.00	GPS	1	10.00	1.00	1.00	49.92	1.970	1.00	0.00	0.00
16	172.50	7770.00	3	35.00	5.50	0.73	226.05	6.964	0.73	0.00	0.00
17	172.50	DC6-48-60-18-8F	3	31.80	0.92	1.00	115.39	1.512	1.00	0.00	0.00
18	172.50	ABT-DMDF-ADBH	1	1.10	0.05	0.98	4.12	0.310	0.98	0.00	0.00
19	172.50	DMP65R-BU6DA	6	63.30	12.71	0.73	472.24	14.754	0.73	0.00	0.00
20	172.50	HRK14	1	302.36	8.13	1.00	787.53	18.873	1.00	0.00	0.00
21	172.50	14.5' Platform	1	2000.00	24.80	1.00	4359.70	31.407	1.00	0.00	0.00
22	172.50	RRUS 4478 B14	3	59.40	1.65	0.67	115.47	2.351	0.67	0.00	0.00
23	172.50	RRUS 8843 B2 B66A	3	70.00	1.64	0.67	132.17	2.338	0.67	0.00	0.00
24	172.50	RRUS 4449 B5/B12	3	71.00	1.97	0.67	143.18	2.710	0.67	0.00	0.00
25	160.00	RRUS 11	3	51.00	2.52	0.67	147.99	3.370	0.67	0.00	0.00
26	160.00	96" x 15.6" x 9"	3	180.00	14.17	0.82	648.88	16.474	0.82	0.00	0.00
27	160.00	15" x 14" x 7.5" RRU (70 lb)	3	70.00	1.75	0.67	164.18	2.517	0.67	0.00	0.00
28	160.00	T-Arms	3	350.00	8.00	0.75	677.88	17.368	0.75	0.00	0.00
29	160.00	LNX-6515DS-A1M	3	49.80	11.47	0.80	357.85	15.854	0.80	0.00	0.00
30	160.00	APX16DWV-16DWVS-E-A20	3	40.70	6.61	0.62	197.79	9.533	0.62	0.00	0.00
31	160.00	RRUS 11 (Band 4)	3	44.00	2.52	0.67	127.68	3.370	0.67	0.00	0.00
32	160.00	RRUS 11 (Band 12)	3	44.00	2.52	0.67	127.68	3.370	0.67	0.00	0.00
33	50.00	58532A GPS	1	0.40	0.22	1.00	9.96	0.662	1.00	0.00	0.00
		Totals:	**87**	**9,843.16**			**30,356.34**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	193.50	(4) 1-1/4" Hybrid	0.00	Inside
0.00	185.00	(18) 1 5/8"	0.00	Inside
0.00	185.00	(2) 1/2"	0.00	Inside
0.00	172.50	(6) 1 5/8"	0.00	Inside
0.00	172.50	(1) 3" Innerduct	0.00	Inside
0.00	172.50	(4) 3/4" DC	0.00	Inside
0.00	172.50	(1) 7/16" Fiber	0.00	Inside
0.00	160.00	(2) 1 5/8" Hybrid	0.00	Inside

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
0.00	50.00	(1) 1/2"			0.00	Inside					

Shaft Section Properties

Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (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	

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	57.000	89.662	36162.6	18.69	114.00	79.4	1249.	0.0
5.00		0.5000	56.054	88.160	34375.7	18.36	112.11	79.8	1207.	1512.7
10.00		0.5000	55.107	86.659	32648.6	18.02	110.21	80.2	1166.	1487.2
15.00		0.5000	54.161	85.157	30980.4	17.69	108.32	80.6	1126.	1461.6
20.00		0.5000	53.214	83.655	29370.0	17.36	106.43	81.0	1087.	1436.1
25.00		0.5000	52.268	82.153	27816.4	17.02	104.54	81.4	1048.	1410.5
30.00		0.5000	51.322	80.651	26318.6	16.69	102.64	81.8	1010.	1385.0
35.00		0.5000	50.375	79.149	24875.5	16.35	100.75	82.2	972.6	1359.4
40.00		0.5000	49.429	77.647	23486.1	16.02	98.86	82.6	935.9	1333.9
45.00		0.5000	48.483	76.146	22149.5	15.69	96.97	82.6	899.8	1308.3
46.66	Bot - Section 2	0.5000	48.168	75.646	21716.4	15.58	96.34	82.6	888.0	429.6
50.00		0.5000	47.536	74.644	20864.6	15.35	95.07	82.6	864.5	1614.5
53.33	Top - Section 1	0.4375	47.781	65.740	18616.6	17.85	109.21	0.0	0.0	1590.0
55.00		0.4375	47.465	65.301	18246.2	17.72	108.49	80.6	757.2	372.3
60.00		0.4375	46.518	63.987	17166.7	17.34	106.33	81.0	726.8	1099.8
65.00		0.4375	45.572	62.673	16130.5	16.96	104.16	81.5	697.2	1077.5
70.00		0.4375	44.626	61.359	15137.0	16.57	102.00	81.9	668.1	1055.1
75.00		0.4375	43.679	60.044	14185.1	16.19	99.84	82.4	639.6	1032.8
80.00		0.4375	42.733	58.730	13274.0	15.81	97.68	82.6	611.8	1010.4
85.00		0.4375	41.786	57.416	12402.7	15.43	95.51	82.6	584.6	988.1
90.00		0.4375	40.840	56.102	11570.5	15.05	93.35	82.6	558.0	965.7
94.17	Bot - Section 3	0.4375	40.051	55.007	10906.0	14.73	91.55	82.6	536.3	787.7
95.00		0.4375	39.894	54.788	10776.3	14.67	91.19	82.6	532.0	291.8
99.83	Top - Section 2	0.3750	39.729	46.839	9165.1	17.27	105.94	0.0	0.0	1669.9
100.00		0.3750	39.697	46.802	9143.1	17.26	105.86	81.1	453.6	26.6
105.00		0.3750	38.751	45.675	8498.7	16.81	103.34	81.6	432.0	786.7
110.00		0.3750	37.805	44.549	7885.3	16.37	100.81	82.2	410.8	767.5
115.00		0.3750	36.858	43.423	7302.2	15.92	98.29	82.6	390.2	748.4
120.00		0.3750	35.912	42.296	6748.6	15.48	95.76	82.6	370.1	729.2
125.00		0.3750	34.965	41.170	6223.6	15.03	93.24	82.6	350.6	710.0
130.00		0.3750	34.019	40.043	5726.7	14.59	90.72	82.6	331.6	690.9
135.00		0.3750	33.073	38.917	5256.9	14.14	88.19	82.6	313.1	671.7
140.00		0.3750	32.126	37.791	4813.5	13.70	85.67	82.6	295.1	652.5
142.71	Bot - Section 4	0.3750	31.613	37.179	4583.7	13.45	84.30	82.6	285.6	346.1
145.00		0.3750	31.180	36.664	4395.8	13.25	83.15	82.6	277.7	482.7
147.30	Top - Section 3	0.2500	31.245	24.594	2985.2	20.63	124.98	0.0	0.0	478.1
150.00		0.2500	30.734	24.188	2839.7	20.27	122.93	77.6	182.0	224.4
155.00		0.2500	29.787	23.437	2583.4	19.60	119.15	78.3	170.8	405.1
160.00		0.2500	28.841	22.686	2342.9	18.93	115.36	79.1	160.0	392.4
165.00		0.2500	27.894	21.935	2117.9	18.26	111.58	79.9	149.5	379.6
170.00		0.2500	26.948	21.184	1907.7	17.60	107.79	80.7	139.4	366.8
172.50		0.2500	26.475	20.809	1808.1	17.26	105.90	81.1	134.5	178.6
175.00		0.2500	26.002	20.433	1712.0	16.93	104.01	81.5	129.7	175.4
180.00		0.2500	25.055	19.682	1530.1	16.26	100.22	82.3	120.3	341.3
185.00		0.2500	24.109	18.931	1361.5	15.59	96.44	82.6	111.2	328.5
190.00		0.2500	23.162	18.180	1205.9	14.93	92.65	82.6	102.5	315.7
193.50		0.2500	22.500	17.655	1104.3	14.46	90.00	82.6	96.7	213.4
										37091.4

Wind Loading - Shaft

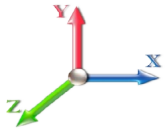
Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 89 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 27

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	16.374	18.01	395.77	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	389.20	0.650	0.000	5.00	23.916	15.55	448.0	0.0	1815.3
10.00		1.00	0.85	16.374	18.01	382.63	0.650	0.000	5.00	23.516	15.29	440.5	0.0	1784.6
15.00		1.00	0.85	16.374	18.01	376.06	0.650	0.000	5.00	23.115	15.02	433.0	0.0	1753.9
20.00		1.00	0.90	17.374	19.11	380.59	0.650	0.000	5.00	22.715	14.76	451.5	0.0	1723.3
25.00		1.00	0.95	18.209	20.03	382.71	0.650	0.000	5.00	22.315	14.50	464.8	0.0	1692.6
30.00		1.00	0.98	18.922	20.81	383.06	0.650	0.000	5.00	21.914	14.24	474.4	0.0	1662.0
35.00		1.00	1.01	19.546	21.50	382.15	0.650	0.000	5.00	21.514	13.98	481.1	0.0	1631.3
40.00		1.00	1.04	20.103	22.11	380.28	0.650	0.000	5.00	21.113	13.72	485.6	0.0	1600.6
45.00		1.00	1.07	20.608	22.67	377.65	0.650	0.000	5.00	20.713	13.46	488.3	0.0	1570.0
46.66	Bot - Section 2	1.00	1.08	20.766	22.84	376.63	0.650	0.000	1.66	6.802	4.42	161.6	0.0	515.5
50.00	Appurtenance(s)	1.00	1.09	21.070	23.18	374.41	0.650	0.000	3.34	13.758	8.94	331.6	0.0	1937.4
53.33	Top - Section 1	1.00	1.11	21.358	23.49	371.96	0.650	0.000	3.33	13.553	8.81	331.1	0.0	1908.0
55.00		1.00	1.12	21.497	23.65	377.62	0.650	0.000	1.67	6.730	4.37	165.5	0.0	446.8
60.00		1.00	1.14	21.895	24.08	373.49	0.650	0.000	5.00	19.882	12.92	498.0	0.0	1319.8
65.00		1.00	1.16	22.267	24.49	368.99	0.650	0.000	5.00	19.481	12.66	496.3	0.0	1293.0
70.00		1.00	1.17	22.617	24.88	364.16	0.650	0.000	5.00	19.081	12.40	493.7	0.0	1266.2
75.00		1.00	1.19	22.948	25.24	359.03	0.650	0.000	5.00	18.681	12.14	490.4	0.0	1239.3
80.00		1.00	1.21	23.262	25.59	353.65	0.650	0.000	5.00	18.280	11.88	486.5	0.0	1212.5
85.00		1.00	1.22	23.561	25.92	348.03	0.650	0.000	5.00	17.880	11.62	481.9	0.0	1185.7
90.00		1.00	1.24	23.846	26.23	342.20	0.650	0.000	5.00	17.479	11.36	476.8	0.0	1158.8
94.17	Bot - Section 3	1.00	1.25	24.074	26.48	337.19	0.650	0.000	4.17	14.260	9.27	392.7	0.0	945.2
95.00		1.00	1.25	24.119	26.53	336.18	0.650	0.000	0.83	2.872	1.87	79.2	0.0	350.2
99.83	Top - Section 2	1.00	1.27	24.372	26.81	330.19	0.650	0.000	4.83	16.436	10.68	458.3	0.0	2003.9
100.00		1.00	1.27	24.381	26.82	336.33	0.650	0.000	0.17	0.560	0.36	15.6	0.0	31.9
105.00		1.00	1.28	24.632	27.10	330.01	0.650	0.000	5.00	16.596	10.79	467.7	0.0	944.0
110.00		1.00	1.29	24.875	27.36	323.53	0.650	0.000	5.00	16.195	10.53	460.9	0.0	921.0
115.00		1.00	1.30	25.109	27.62	316.91	0.650	0.000	5.00	15.795	10.27	453.7	0.0	898.0
120.00		1.00	1.32	25.335	27.87	310.16	0.650	0.000	5.00	15.394	10.01	446.2	0.0	875.0
125.00		1.00	1.33	25.553	28.11	303.28	0.650	0.000	5.00	14.994	9.75	438.3	0.0	852.0
130.00		1.00	1.34	25.765	28.34	296.30	0.650	0.000	5.00	14.593	9.49	430.1	0.0	829.1
135.00		1.00	1.35	25.971	28.57	289.20	0.650	0.000	5.00	14.193	9.23	421.7	0.0	806.1
140.00		1.00	1.36	26.170	28.79	282.00	0.650	0.000	5.00	13.793	8.97	412.9	0.0	783.1
142.71	Bot - Section 4	1.00	1.36	26.276	28.90	278.05	0.650	0.000	2.71	7.317	4.76	220.0	0.0	415.3
145.00		1.00	1.37	26.364	29.00	274.71	0.650	0.000	2.29	6.172	4.01	186.1	0.0	579.2
147.30	Top - Section 3	1.00	1.37	26.452	29.10	271.33	0.650	0.000	2.30	6.114	3.97	185.0	0.0	573.7
150.00		1.00	1.38	26.553	29.21	271.74	0.650	0.000	2.70	7.089	4.61	215.3	0.0	269.2
155.00		1.00	1.39	26.737	29.41	264.29	0.650	0.000	5.00	12.803	8.32	391.6	0.0	486.2
160.00	Appurtenance(s)	1.00	1.40	26.917	29.61	256.74	0.650	0.000	5.00	12.403	8.06	381.9	0.0	470.8
165.00		1.00	1.41	27.091	29.80	249.13	0.650	0.000	5.00	12.002	7.80	372.0	0.0	455.5
170.00		1.00	1.42	27.262	29.99	241.43	0.650	0.000	5.00	11.602	7.54	361.8	0.0	440.2
172.50	Appurtenance(s)	1.00	1.42	27.346	30.08	237.56	0.650	0.000	2.50	5.651	3.67	176.8	0.0	214.3
175.00		1.00	1.42	27.429	30.17	233.66	0.650	0.000	2.50	5.551	3.61	174.2	0.0	210.5
180.00		1.00	1.43	27.592	30.35	225.83	0.650	0.000	5.00	10.801	7.02	340.9	0.0	409.5
185.00	Appurtenance(s)	1.00	1.44	27.752	30.53	217.93	0.650	0.000	5.00	10.401	6.76	330.2	0.0	394.2
190.00		1.00	1.45	27.908	30.70	209.96	0.650	0.000	5.00	10.000	6.50	319.3	0.0	378.8
193.50	Appurtenance(s)	1.00	1.45	28.016	30.82	204.35	0.650	0.000	3.50	6.762	4.40	216.7	0.0	256.1

Wind Loading - Shaft

Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (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	

Totals:	**193.50**	**16,929.8**	**44,509.7**

Discrete Appurtenance Forces

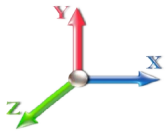
Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 11	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 89 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 27

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	193.50	1900MHz RRH	3	28.091	30.901	0.67	1.00	7.64	216.00	0.000	2.500	377.63	0.00	944.07
2	193.50	Low Profile Platform	1	28.061	30.867	1.00	1.00	25.00	1440.00	0.000	1.500	1234.69	0.00	1852.04
3	193.50	APXVSPP18-C-A20	3	28.091	30.901	0.83	1.00	19.97	198.00	0.000	2.500	987.33	0.00	2468.31
4	193.50	APXVTM14-C-120	3	28.091	30.901	0.79	1.00	15.03	205.20	0.000	2.500	742.89	0.00	1857.22
5	193.50	ACU-A20-N	4	28.061	30.867	0.67	1.00	0.38	4.80	0.000	1.500	18.53	0.00	27.80
6	193.50	TD-RRH8x20-25	3	28.091	30.901	0.67	1.00	8.14	252.00	0.000	2.500	402.47	0.00	1006.18
7	193.50	800 MHz Filter	3	28.061	30.867	1.00	1.00	1.26	31.68	0.000	1.500	62.23	0.00	93.34
8	193.50	800 MHz RRH	3	28.091	30.901	0.67	1.00	5.00	190.80	0.000	2.500	247.45	0.00	618.62
9	185.00	BXA-70063-6-CF	3	27.752	30.527	0.56	0.80	12.72	61.20	0.000	0.000	621.17	0.00	0.00
10	185.00	Low Profile	1	27.752	30.527	1.00	1.00	22.00	1800.00	0.000	0.000	1074.55	0.00	0.00
11	185.00	LPA-80080/6CF	4	27.752	30.527	1.36	0.80	23.56	100.80	0.000	0.000	1150.52	0.00	0.00
12	185.00	LPA-800636-6 CF	2	27.752	30.527	0.75	0.80	14.44	64.80	0.000	0.000	705.22	0.00	0.00
13	185.00	BXA-171063-12BF	3	27.752	30.527	0.67	0.80	9.56	54.00	0.000	0.000	466.74	0.00	0.00
14	185.00	FPA5250	1	27.752	30.527	1.00	1.00	1.20	12.00	0.000	0.000	58.61	0.00	0.00
15	185.00	GPS	1	27.752	30.527	0.80	0.80	0.80	12.00	0.000	0.000	39.07	0.00	0.00
16	172.50	RRUS 4449 B5/B12	3	27.346	30.081	0.50	0.75	2.97	255.60	0.000	0.000	142.93	0.00	0.00
17	172.50	RRUS 8843 B2 B66A	3	27.346	30.081	0.50	0.75	2.47	252.00	0.000	0.000	118.99	0.00	0.00
18	172.50	14.5' Platform	1	27.346	30.081	1.00	1.00	24.80	2400.00	0.000	0.000	1193.61	0.00	0.00
19	172.50	HRK14	1	27.346	30.081	1.00	1.00	8.13	362.83	0.000	0.000	391.29	0.00	0.00
20	172.50	DMP65R-BU6DA	6	27.346	30.081	0.55	0.75	41.75	455.76	0.000	0.000	2009.51	0.00	0.00
21	172.50	ABT-DMDF-ADBH	1	27.346	30.081	0.74	0.75	0.04	1.32	0.000	0.000	1.77	0.00	0.00
22	172.50	DC6-48-60-18-8F	3	27.346	30.081	1.00	1.00	2.76	114.48	0.000	0.000	132.84	0.00	0.00
23	172.50	7770.00	3	27.346	30.081	0.55	0.75	9.03	126.00	0.000	0.000	434.79	0.00	0.00
24	172.50	RRUS 4478 B14	3	27.346	30.081	0.50	0.75	2.49	213.84	0.000	0.000	119.72	0.00	0.00
25	160.00	15" x 14" x 7.5" RRU (70	3	26.917	29.608	0.54	0.80	2.81	252.00	0.000	0.000	133.31	0.00	0.00
26	160.00	T-Arms	3	26.917	29.608	0.56	0.75	13.50	1260.00	0.000	0.000	639.54	0.00	0.00
27	160.00	LNX-6515DS-A1M	3	26.917	29.608	0.64	0.80	22.02	179.28	0.000	0.000	1043.27	0.00	0.00
28	160.00	96" x 15.6" x 9"	3	26.917	29.608	0.66	0.80	27.89	648.00	0.000	0.000	1321.07	0.00	0.00
29	160.00	RRUS 11	3	26.917	29.608	0.54	0.80	4.05	183.60	0.000	0.000	191.96	0.00	0.00
30	160.00	APX16DWV-16DWVS-E-A	3	26.917	29.608	0.50	0.80	9.84	146.52	0.000	0.000	465.95	0.00	0.00
31	160.00	RRUS 11 (Band 4)	3	26.917	29.608	0.54	0.80	4.05	158.40	0.000	0.000	191.96	0.00	0.00
32	160.00	RRUS 11 (Band 12)	3	26.917	29.608	0.54	0.80	4.05	158.40	0.000	0.000	191.96	0.00	0.00
33	50.00	58532A GPS	1	21.070	23.177	1.00	1.00	0.22	0.48	0.000	0.000	8.16	0.00	0.00
							Totals:		**11,811.79**			**16,921.73**		

Total Applied Force Summary

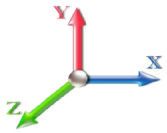
Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 12

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 89 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 27

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		448.00	2018.11	0.00	0.00
10.00		440.50	1987.45	0.00	0.00
15.00		433.00	1956.78	0.00	0.00
20.00		451.47	1926.12	0.00	0.00
25.00		464.85	1895.46	0.00	0.00
30.00		474.37	1864.79	0.00	0.00
35.00		481.06	1834.13	0.00	0.00
40.00		485.57	1803.47	0.00	0.00
45.00		488.32	1772.81	0.00	0.00
46.66		161.59	582.96	0.00	0.00
50.00	(1) attachments	339.78	2073.25	0.00	0.00
53.33		331.14	2042.46	0.00	0.00
55.00		165.50	514.22	0.00	0.00
60.00		498.00	1521.69	0.00	0.00
65.00		496.26	1494.86	0.00	0.00
70.00		493.70	1468.03	0.00	0.00
75.00		490.41	1441.20	0.00	0.00
80.00		486.47	1414.37	0.00	0.00
85.00		481.92	1387.54	0.00	0.00
90.00		476.83	1360.71	0.00	0.00
94.17		392.74	1113.43	0.00	0.00
95.00		79.23	383.86	0.00	0.00
99.83		458.26	2199.08	0.00	0.00
100.00		15.62	38.59	0.00	0.00
105.00		467.65	1145.91	0.00	0.00
110.00		460.86	1122.92	0.00	0.00
115.00		453.69	1099.92	0.00	0.00
120.00		446.17	1076.92	0.00	0.00
125.00		438.32	1053.92	0.00	0.00
130.00		430.15	1030.93	0.00	0.00
135.00		421.68	1007.93	0.00	0.00
140.00		412.94	984.93	0.00	0.00
142.71		219.96	524.86	0.00	0.00
145.00		186.15	671.53	0.00	0.00
147.30		185.03	666.40	0.00	0.00
150.00		215.34	378.39	0.00	0.00
155.00		391.61	688.04	0.00	0.00
160.00	(24) attachments	4560.93	3658.91	0.00	0.00
165.00		371.98	644.18	0.00	0.00
170.00		361.84	628.85	0.00	0.00
172.50	(24) attachments	4722.22	4490.51	0.00	0.00
175.00		174.17	279.07	0.00	0.00
180.00		340.94	546.65	0.00	0.00
185.00	(15) attachments	4446.09	2636.12	0.00	0.00
190.00		319.27	401.74	0.00	0.00
193.50	(23) attachments	4289.93	2810.58	0.00	8867.59

Total Applied Force Summary

Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (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

Tower Engineering Solutions

Totals:	**33,851.53**	**63,644.59**	**0.00**	**8,867.59**

Calculated Forces

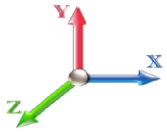
Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 14	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 89 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 27

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	-63.59	-33.96	0.00	-4893.3	0.00	4893.39	6408.64	3204.32	14863.6	7442.88	0.00	0.000	0.000	0.667
5.00	-61.46	-33.71	0.00	-4723.6	0.00	4723.61	6332.44	3166.22	14438.7	7230.12	0.10	-0.189	0.000	0.663
10.00	-59.36	-33.46	0.00	-4555.0	0.00	4555.06	6255.18	3127.59	14017.4	7019.15	0.40	-0.381	0.000	0.659
15.00	-57.29	-33.21	0.00	-4387.7	0.00	4387.75	6176.86	3088.43	13599.8	6810.05	0.91	-0.576	0.000	0.654
20.00	-55.26	-32.93	0.00	-4221.7	0.00	4221.72	6097.47	3048.74	13186.1	6602.88	1.61	-0.774	0.000	0.649
25.00	-53.26	-32.62	0.00	-4057.0	0.00	4057.09	6017.03	3008.51	12776.3	6397.69	2.53	-0.974	0.000	0.643
30.00	-51.29	-32.29	0.00	-3893.9	0.00	3893.99	5935.52	2967.76	12370.7	6194.55	3.66	-1.177	0.000	0.637
35.00	-49.35	-31.95	0.00	-3732.5	0.00	3732.52	5852.95	2926.48	11969.2	5993.52	5.00	-1.384	0.000	0.631
40.00	-47.44	-31.59	0.00	-3572.7	0.00	3572.76	5768.82	2884.41	11571.1	5794.16	6.56	-1.592	0.000	0.625
45.00	-45.61	-31.17	0.00	-3414.8	0.00	3414.80	5657.24	2828.62	11125.6	5571.07	8.34	-1.804	0.000	0.621
46.66	-44.97	-31.07	0.00	-3362.9	0.00	3362.96	5620.12	2810.06	10979.3	5497.83	8.99	-1.876	0.000	0.620
50.00	-42.83	-30.77	0.00	-3259.2	0.00	3259.29	5545.66	2772.83	10688.8	5352.37	10.35	-2.021	0.000	0.617
53.33	-40.75	-30.44	0.00	-3156.8	0.00	3156.83	4757.51	2378.75	9242.35	4628.04	11.81	-2.167	0.000	0.691
55.00	-40.16	-30.37	0.00	-3105.9	0.00	3105.99	4734.55	2367.28	9135.77	4574.68	12.58	-2.241	0.000	0.688
60.00	-38.53	-29.97	0.00	-2954.1	0.00	2954.17	4665.11	2332.55	8818.95	4416.03	15.05	-2.477	0.000	0.677
65.00	-36.94	-29.56	0.00	-2804.3	0.00	2804.34	4594.60	2297.30	8505.61	4259.13	17.78	-2.716	0.000	0.667
70.00	-35.37	-29.14	0.00	-2656.5	0.00	2656.56	4523.04	2261.52	8195.87	4104.03	20.75	-2.957	0.000	0.655
75.00	-33.84	-28.72	0.00	-2510.8	0.00	2510.85	4450.41	2225.20	7889.86	3950.80	23.97	-3.199	0.000	0.643
80.00	-32.33	-28.29	0.00	-2367.2	0.00	2367.27	4363.37	2181.68	7564.56	3787.90	27.45	-3.444	0.000	0.633
85.00	-30.86	-27.85	0.00	-2225.8	0.00	2225.82	4265.74	2132.87	7228.13	3619.44	31.19	-3.690	0.000	0.622
90.00	-29.42	-27.41	0.00	-2086.5	0.00	2086.55	4168.10	2084.05	6899.36	3454.81	35.18	-3.937	0.000	0.611
94.17	-28.28	-27.00	0.00	-1972.3	0.00	1972.36	4086.74	2043.37	6631.22	3320.54	38.71	-4.145	0.000	0.601
95.00	-27.84	-26.96	0.00	-1949.8	0.00	1949.87	4070.47	2035.23	6578.23	3294.01	39.44	-4.188	0.000	0.599
99.83	-25.62	-26.39	0.00	-1819.5	0.00	1819.57	3418.29	1709.14	5518.43	2763.32	43.80	-4.429	0.000	0.666
100.00	-25.52	-26.44	0.00	-1815.1	0.00	1815.17	3416.28	1708.14	5510.73	2759.46	43.95	-4.437	0.000	0.666
105.00	-24.29	-25.99	0.00	-1682.9	0.00	1682.98	3355.57	1677.79	5281.30	2644.58	48.74	-4.709	0.000	0.644
110.00	-23.09	-25.55	0.00	-1553.0	0.00	1553.01	3293.81	1646.90	5055.01	2531.26	53.81	-4.980	0.000	0.621
115.00	-21.92	-25.10	0.00	-1425.2	0.00	1425.26	3226.08	1613.04	4824.64	2415.91	59.16	-5.249	0.000	0.597
120.00	-20.78	-24.65	0.00	-1299.7	0.00	1299.75	3142.39	1571.20	4576.34	2291.57	64.80	-5.514	0.000	0.574
125.00	-19.66	-24.20	0.00	-1176.4	0.00	1176.49	3058.71	1529.35	4334.61	2170.52	70.70	-5.775	0.000	0.549
130.00	-18.58	-23.75	0.00	-1055.4	0.00	1055.49	2975.02	1487.51	4099.43	2052.76	76.88	-6.030	0.000	0.521
135.00	-17.52	-23.30	0.00	-936.74	0.00	936.74	2891.34	1445.67	3870.81	1938.28	83.31	-6.278	0.000	0.490
140.00	-16.52	-22.83	0.00	-820.26	0.00	820.26	2807.65	1403.83	3648.75	1827.09	90.00	-6.515	0.000	0.455
142.71	-15.98	-22.58	0.00	-758.32	0.00	758.32	2762.24	1381.12	3530.99	1768.12	93.73	-6.642	0.000	0.435
145.00	-15.29	-22.35	0.00	-706.68	0.00	706.68	2723.97	1361.98	3433.25	1719.18	96.93	-6.746	0.000	0.417
147.30	-14.61	-22.11	0.00	-655.36	0.00	655.36	1707.44	853.72	2174.15	1088.69	100.20	-6.847	0.000	0.611
150.00	-14.18	-21.90	0.00	-595.58	0.00	595.58	1688.50	844.25	2114.25	1058.70	104.10	-6.961	0.000	0.572
155.00	-13.45	-21.49	0.00	-486.08	0.00	486.08	1652.64	826.32	2004.58	1003.78	111.52	-7.232	0.000	0.493
160.00	-10.35	-16.54	0.00	-378.64	0.00	378.64	1615.71	807.86	1896.48	949.65	119.21	-7.470	0.000	0.406
165.00	-9.70	-16.11	0.00	-295.97	0.00	295.97	1577.73	788.87	1790.06	896.36	127.12	-7.675	0.000	0.337
170.00	-9.10	-15.69	0.00	-215.40	0.00	215.40	1538.69	769.34	1685.46	843.98	135.23	-7.847	0.000	0.262
172.50	-5.29	-10.40	0.00	-176.18	0.00	176.18	1518.77	759.38	1633.88	818.16	139.35	-7.920	0.000	0.219
175.00	-5.02	-10.20	0.00	-150.17	0.00	150.17	1498.58	749.29	1582.80	792.58	143.50	-7.984	0.000	0.193
180.00	-4.51	-9.79	0.00	-99.18	0.00	99.18	1457.41	728.71	1482.21	742.21	151.89	-8.088	0.000	0.137
185.00	-2.52	-5.02	0.00	-50.23	0.00	50.23	1406.50	703.25	1375.31	688.68	160.38	-8.157	0.000	0.075
190.00	-2.17	-4.65	0.00	-25.13	0.00	25.13	1350.71	675.36	1267.83	634.86	168.91	-8.196	0.000	0.041
193.50	0.00	-4.29	0.00	-8.87	0.00	8.87	1311.66	655.83	1195.19	598.48	174.91	-8.211	0.000	0.015

Calculated Forces

Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (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

Tower Engineering Solutions

Wind Loading - Shaft

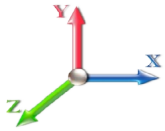
Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 89 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 27

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	16.374	18.01	395.77	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	389.20	0.650	0.000	5.00	23.916	15.55	448.0	0.0	1361.5
10.00		1.00	0.85	16.374	18.01	382.63	0.650	0.000	5.00	23.516	15.29	440.5	0.0	1338.5
15.00		1.00	0.85	16.374	18.01	376.06	0.650	0.000	5.00	23.115	15.02	433.0	0.0	1315.5
20.00		1.00	0.90	17.374	19.11	380.59	0.650	0.000	5.00	22.715	14.76	451.5	0.0	1292.5
25.00		1.00	0.95	18.209	20.03	382.71	0.650	0.000	5.00	22.315	14.50	464.8	0.0	1269.5
30.00		1.00	0.98	18.922	20.81	383.06	0.650	0.000	5.00	21.914	14.24	474.4	0.0	1246.5
35.00		1.00	1.01	19.546	21.50	382.15	0.650	0.000	5.00	21.514	13.98	481.1	0.0	1223.5
40.00		1.00	1.04	20.103	22.11	380.28	0.650	0.000	5.00	21.113	13.72	485.6	0.0	1200.5
45.00		1.00	1.07	20.608	22.67	377.65	0.650	0.000	5.00	20.713	13.46	488.3	0.0	1177.5
46.66	Bot - Section 2	1.00	1.08	20.766	22.84	376.63	0.650	0.000	1.66	6.802	4.42	161.6	0.0	386.6
50.00	Appurtenance(s)	1.00	1.09	21.070	23.18	374.41	0.650	0.000	3.34	13.758	8.94	331.6	0.0	1453.1
53.33	Top - Section 1	1.00	1.11	21.358	23.49	371.96	0.650	0.000	3.33	13.553	8.81	331.1	0.0	1431.0
55.00		1.00	1.12	21.497	23.65	377.62	0.650	0.000	1.67	6.730	4.37	165.5	0.0	335.1
60.00		1.00	1.14	21.895	24.08	373.49	0.650	0.000	5.00	19.882	12.92	498.0	0.0	989.9
65.00		1.00	1.16	22.267	24.49	368.99	0.650	0.000	5.00	19.481	12.66	496.3	0.0	969.7
70.00		1.00	1.17	22.617	24.88	364.16	0.650	0.000	5.00	19.081	12.40	493.7	0.0	949.6
75.00		1.00	1.19	22.948	25.24	359.03	0.650	0.000	5.00	18.681	12.14	490.4	0.0	929.5
80.00		1.00	1.21	23.262	25.59	353.65	0.650	0.000	5.00	18.280	11.88	486.5	0.0	909.4
85.00		1.00	1.22	23.561	25.92	348.03	0.650	0.000	5.00	17.880	11.62	481.9	0.0	889.2
90.00		1.00	1.24	23.846	26.23	342.20	0.650	0.000	5.00	17.479	11.36	476.8	0.0	869.1
94.17	Bot - Section 3	1.00	1.25	24.074	26.48	337.19	0.650	0.000	4.17	14.260	9.27	392.7	0.0	708.9
95.00		1.00	1.25	24.119	26.53	336.18	0.650	0.000	0.83	2.872	1.87	79.2	0.0	262.7
99.83	Top - Section 2	1.00	1.27	24.372	26.81	330.19	0.650	0.000	4.83	16.436	10.68	458.3	0.0	1503.0
100.00		1.00	1.27	24.381	26.82	336.33	0.650	0.000	0.17	0.560	0.36	15.6	0.0	23.9
105.00		1.00	1.28	24.632	27.10	330.01	0.650	0.000	5.00	16.596	10.79	467.7	0.0	708.0
110.00		1.00	1.29	24.875	27.36	323.53	0.650	0.000	5.00	16.195	10.53	460.9	0.0	690.8
115.00		1.00	1.30	25.109	27.62	316.91	0.650	0.000	5.00	15.795	10.27	453.7	0.0	673.5
120.00		1.00	1.32	25.335	27.87	310.16	0.650	0.000	5.00	15.394	10.01	446.2	0.0	656.3
125.00		1.00	1.33	25.553	28.11	303.28	0.650	0.000	5.00	14.994	9.75	438.3	0.0	639.0
130.00		1.00	1.34	25.765	28.34	296.30	0.650	0.000	5.00	14.593	9.49	430.1	0.0	621.8
135.00		1.00	1.35	25.971	28.57	289.20	0.650	0.000	5.00	14.193	9.23	421.7	0.0	604.5
140.00		1.00	1.36	26.170	28.79	282.00	0.650	0.000	5.00	13.793	8.97	412.9	0.0	587.3
142.71	Bot - Section 4	1.00	1.36	26.276	28.90	278.05	0.650	0.000	2.71	7.317	4.76	220.0	0.0	311.5
145.00		1.00	1.37	26.364	29.00	274.71	0.650	0.000	2.29	6.172	4.01	186.1	0.0	434.4
147.30	Top - Section 3	1.00	1.37	26.452	29.10	271.33	0.650	0.000	2.30	6.114	3.97	185.0	0.0	430.3
150.00		1.00	1.38	26.553	29.21	271.74	0.650	0.000	2.70	7.089	4.61	215.3	0.0	201.9
155.00		1.00	1.39	26.737	29.41	264.29	0.650	0.000	5.00	12.803	8.32	391.6	0.0	364.6
160.00	Appurtenance(s)	1.00	1.40	26.917	29.61	256.74	0.650	0.000	5.00	12.403	8.06	381.9	0.0	353.1
165.00		1.00	1.41	27.091	29.80	249.13	0.650	0.000	5.00	12.002	7.80	372.0	0.0	341.6
170.00		1.00	1.42	27.262	29.99	241.43	0.650	0.000	5.00	11.602	7.54	361.8	0.0	330.1
172.50	Appurtenance(s)	1.00	1.42	27.346	30.08	237.56	0.650	0.000	2.50	5.651	3.67	176.8	0.0	160.8
175.00		1.00	1.42	27.429	30.17	233.66	0.650	0.000	2.50	5.551	3.61	174.2	0.0	157.9
180.00		1.00	1.43	27.592	30.35	225.83	0.650	0.000	5.00	10.801	7.02	340.9	0.0	307.1
185.00	Appurtenance(s)	1.00	1.44	27.752	30.53	217.93	0.650	0.000	5.00	10.401	6.76	330.2	0.0	295.6
190.00		1.00	1.45	27.908	30.70	209.96	0.650	0.000	5.00	10.000	6.50	319.3	0.0	284.1
193.50	Appurtenance(s)	1.00	1.45	28.016	30.82	204.35	0.650	0.000	3.50	6.762	4.40	216.7	0.0	192.1

Wind Loading - Shaft

Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (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	

Totals:	**193.50**	**16,929.8**	**33,382.3**

Discrete Appurtenance Forces

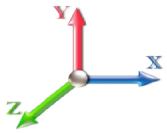
Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 89 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 27

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	193.50	1900MHz RRH	3	28.091	30.901	0.67	1.00	7.64	162.00	0.000	2.500	377.63	0.00	944.07
2	193.50	Low Profile Platform	1	28.061	30.867	1.00	1.00	25.00	1080.00	0.000	1.500	1234.69	0.00	1852.04
3	193.50	APXVSPP18-C-A20	3	28.091	30.901	0.83	1.00	19.97	148.50	0.000	2.500	987.33	0.00	2468.31
4	193.50	APXVTM14-C-120	3	28.091	30.901	0.79	1.00	15.03	153.90	0.000	2.500	742.89	0.00	1857.22
5	193.50	ACU-A20-N	4	28.061	30.867	0.67	1.00	0.38	3.60	0.000	1.500	18.53	0.00	27.80
6	193.50	TD-RRH8x20-25	3	28.091	30.901	0.67	1.00	8.14	189.00	0.000	2.500	402.47	0.00	1006.18
7	193.50	800 MHz Filter	3	28.061	30.867	1.00	1.00	1.26	23.76	0.000	1.500	62.23	0.00	93.34
8	193.50	800 MHz RRH	3	28.091	30.901	0.67	1.00	5.00	143.10	0.000	2.500	247.45	0.00	618.62
9	185.00	BXA-70063-6-CF	3	27.752	30.527	0.56	0.80	12.72	45.90	0.000	0.000	621.17	0.00	0.00
10	185.00	Low Profile	1	27.752	30.527	1.00	1.00	22.00	1350.00	0.000	0.000	1074.55	0.00	0.00
11	185.00	LPA-80080/6CF	4	27.752	30.527	1.36	0.80	23.56	75.60	0.000	0.000	1150.52	0.00	0.00
12	185.00	LPA-800636-6 CF	2	27.752	30.527	0.75	0.80	14.44	48.60	0.000	0.000	705.22	0.00	0.00
13	185.00	BXA-171063-12BF	3	27.752	30.527	0.67	0.80	9.56	40.50	0.000	0.000	466.74	0.00	0.00
14	185.00	FPA5250	1	27.752	30.527	1.00	1.00	1.20	9.00	0.000	0.000	58.61	0.00	0.00
15	185.00	GPS	1	27.752	30.527	0.80	0.80	0.80	9.00	0.000	0.000	39.07	0.00	0.00
16	172.50	RRUS 4449 B5/B12	3	27.346	30.081	0.50	0.75	2.97	191.70	0.000	0.000	142.93	0.00	0.00
17	172.50	RRUS 8843 B2 B66A	3	27.346	30.081	0.50	0.75	2.47	189.00	0.000	0.000	118.99	0.00	0.00
18	172.50	14.5' Platform	1	27.346	30.081	1.00	1.00	24.80	1800.00	0.000	0.000	1193.61	0.00	0.00
19	172.50	HRK14	1	27.346	30.081	1.00	1.00	8.13	272.12	0.000	0.000	391.29	0.00	0.00
20	172.50	DMP65R-BU6DA	6	27.346	30.081	0.55	0.75	41.75	341.82	0.000	0.000	2009.51	0.00	0.00
21	172.50	ABT-DMDF-ADBH	1	27.346	30.081	0.74	0.75	0.04	0.99	0.000	0.000	1.77	0.00	0.00
22	172.50	DC6-48-60-18-8F	3	27.346	30.081	1.00	1.00	2.76	85.86	0.000	0.000	132.84	0.00	0.00
23	172.50	7770.00	3	27.346	30.081	0.55	0.75	9.03	94.50	0.000	0.000	434.79	0.00	0.00
24	172.50	RRUS 4478 B14	3	27.346	30.081	0.50	0.75	2.49	160.38	0.000	0.000	119.72	0.00	0.00
25	160.00	15" x 14" x 7.5" RRU (70	3	26.917	29.608	0.54	0.80	2.81	189.00	0.000	0.000	133.31	0.00	0.00
26	160.00	T-Arms	3	26.917	29.608	0.56	0.75	13.50	945.00	0.000	0.000	639.54	0.00	0.00
27	160.00	LNX-6515DS-A1M	3	26.917	29.608	0.64	0.80	22.02	134.46	0.000	0.000	1043.27	0.00	0.00
28	160.00	96" x 15.6" x 9"	3	26.917	29.608	0.66	0.80	27.89	486.00	0.000	0.000	1321.07	0.00	0.00
29	160.00	RRUS 11	3	26.917	29.608	0.54	0.80	4.05	137.70	0.000	0.000	191.96	0.00	0.00
30	160.00	APX16DWV-16DWVS-E-A	3	26.917	29.608	0.50	0.80	9.84	109.89	0.000	0.000	465.95	0.00	0.00
31	160.00	RRUS 11 (Band 4)	3	26.917	29.608	0.54	0.80	4.05	118.80	0.000	0.000	191.96	0.00	0.00
32	160.00	RRUS 11 (Band 12)	3	26.917	29.608	0.54	0.80	4.05	118.80	0.000	0.000	191.96	0.00	0.00
33	50.00	58532A GPS	1	21.070	23.177	1.00	1.00	0.22	0.36	0.000	0.000	8.16	0.00	0.00
							Totals:		**8,858.84**			**16,921.73**		

Total Applied Force Summary

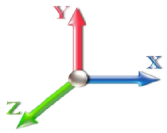
Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 19

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 89 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 27

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		448.00	1513.58	0.00	0.00
10.00		440.50	1490.58	0.00	0.00
15.00		433.00	1467.59	0.00	0.00
20.00		451.47	1444.59	0.00	0.00
25.00		464.85	1421.59	0.00	0.00
30.00		474.37	1398.60	0.00	0.00
35.00		481.06	1375.60	0.00	0.00
40.00		485.57	1352.60	0.00	0.00
45.00		488.32	1329.60	0.00	0.00
46.66		161.59	437.22	0.00	0.00
50.00	(1) attachments	339.78	1554.94	0.00	0.00
53.33		331.14	1531.85	0.00	0.00
55.00		165.50	385.67	0.00	0.00
60.00		498.00	1141.27	0.00	0.00
65.00		496.26	1121.14	0.00	0.00
70.00		493.70	1101.02	0.00	0.00
75.00		490.41	1080.90	0.00	0.00
80.00		486.47	1060.78	0.00	0.00
85.00		481.92	1040.65	0.00	0.00
90.00		476.83	1020.53	0.00	0.00
94.17		392.74	835.07	0.00	0.00
95.00		79.23	287.89	0.00	0.00
99.83		458.26	1649.31	0.00	0.00
100.00		15.62	28.94	0.00	0.00
105.00		467.65	859.43	0.00	0.00
110.00		460.86	842.19	0.00	0.00
115.00		453.69	824.94	0.00	0.00
120.00		446.17	807.69	0.00	0.00
125.00		438.32	790.44	0.00	0.00
130.00		430.15	773.20	0.00	0.00
135.00		421.68	755.95	0.00	0.00
140.00		412.94	738.70	0.00	0.00
142.71		219.96	393.65	0.00	0.00
145.00		186.15	503.65	0.00	0.00
147.30		185.03	499.80	0.00	0.00
150.00		215.34	283.79	0.00	0.00
155.00		391.61	516.03	0.00	0.00
160.00	(24) attachments	4560.93	2744.18	0.00	0.00
165.00		371.98	483.14	0.00	0.00
170.00		361.84	471.64	0.00	0.00
172.50	(24) attachments	4722.22	3367.88	0.00	0.00
175.00		174.17	209.30	0.00	0.00
180.00		340.94	409.99	0.00	0.00
185.00	(15) attachments	4446.09	1977.09	0.00	0.00
190.00		319.27	301.31	0.00	0.00
193.50	(23) attachments	4289.93	2107.93	0.00	8867.59

Total Applied Force Summary

Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 20

Tower Engineering Solutions

Totals:	**33,851.53**	**47,733.44**	**0.00**	**8,867.59**

Calculated Forces

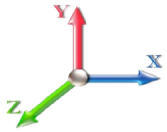
Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 89 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 27

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	-47.68	-33.93	0.00	-4811.5	0.00	4811.59	6408.64	3204.32	14863.6	7442.88	0.00	0.000	0.000	0.654
5.00	-46.05	-33.63	0.00	-4641.9	0.00	4641.95	6332.44	3166.22	14438.7	7230.12	0.10	-0.186	0.000	0.649
10.00	-44.46	-33.33	0.00	-4473.8	0.00	4473.80	6255.18	3127.59	14017.4	7019.15	0.40	-0.375	0.000	0.645
15.00	-42.88	-33.03	0.00	-4307.1	0.00	4307.15	6176.86	3088.43	13599.8	6810.05	0.89	-0.566	0.000	0.640
20.00	-41.33	-32.70	0.00	-4142.0	0.00	4142.01	6097.47	3048.74	13186.1	6602.88	1.59	-0.760	0.000	0.634
25.00	-39.80	-32.35	0.00	-3978.5	0.00	3978.50	6017.03	3008.51	12776.3	6397.69	2.49	-0.956	0.000	0.629
30.00	-38.30	-31.99	0.00	-3816.7	0.00	3816.73	5935.52	2967.76	12370.7	6194.55	3.60	-1.156	0.000	0.623
35.00	-36.83	-31.61	0.00	-3656.8	0.00	3656.80	5852.95	2926.48	11969.2	5993.52	4.91	-1.358	0.000	0.617
40.00	-35.37	-31.22	0.00	-3498.7	0.00	3498.76	5768.82	2884.41	11571.1	5794.16	6.44	-1.562	0.000	0.610
45.00	-33.99	-30.77	0.00	-3342.6	0.00	3342.69	5657.24	2828.62	11125.6	5571.07	8.19	-1.770	0.000	0.606
46.66	-33.50	-30.66	0.00	-3291.5	0.00	3291.51	5620.12	2810.06	10979.3	5497.83	8.82	-1.840	0.000	0.605
50.00	-31.88	-30.35	0.00	-3189.2	0.00	3189.22	5545.66	2772.83	10688.8	5352.37	10.16	-1.982	0.000	0.602
53.33	-30.30	-30.02	0.00	-3088.1	0.00	3088.17	4757.51	2378.75	9242.35	4628.04	11.59	-2.125	0.000	0.674
55.00	-29.85	-29.92	0.00	-3038.0	0.00	3038.04	4734.55	2367.28	9135.77	4574.68	12.35	-2.197	0.000	0.671
60.00	-28.61	-29.49	0.00	-2888.4	0.00	2888.46	4665.11	2332.55	8818.95	4416.03	14.77	-2.428	0.000	0.660
65.00	-27.39	-29.06	0.00	-2741.0	0.00	2741.03	4594.60	2297.30	8505.61	4259.13	17.44	-2.661	0.000	0.650
70.00	-26.20	-28.62	0.00	-2595.7	0.00	2595.75	4523.04	2261.52	8195.87	4104.03	20.35	-2.897	0.000	0.638
75.00	-25.03	-28.17	0.00	-2452.6	0.00	2452.67	4450.41	2225.20	7889.86	3950.80	23.51	-3.134	0.000	0.627
80.00	-23.88	-27.73	0.00	-2311.8	0.00	2311.80	4363.37	2181.68	7564.56	3787.90	26.92	-3.373	0.000	0.616
85.00	-22.75	-27.28	0.00	-2173.1	0.00	2173.16	4265.74	2132.87	7228.13	3619.44	30.58	-3.613	0.000	0.606
90.00	-21.66	-26.82	0.00	-2036.7	0.00	2036.76	4168.10	2084.05	6899.36	3454.81	34.49	-3.855	0.000	0.595
94.17	-20.80	-26.42	0.00	-1925.0	0.00	1925.01	4086.74	2043.37	6631.22	3320.54	37.94	-4.058	0.000	0.585
95.00	-20.46	-26.37	0.00	-1902.9	0.00	1902.99	4070.47	2035.23	6578.23	3294.01	38.65	-4.099	0.000	0.583
99.83	-18.79	-25.83	0.00	-1775.5	0.00	1775.55	3418.29	1709.14	5518.43	2763.32	42.92	-4.334	0.000	0.648
100.00	-18.70	-25.86	0.00	-1771.2	0.00	1771.25	3416.28	1708.14	5510.73	2759.46	43.07	-4.342	0.000	0.648
105.00	-17.76	-25.40	0.00	-1641.9	0.00	1641.97	3355.57	1677.79	5281.30	2644.58	47.76	-4.608	0.000	0.626
110.00	-16.85	-24.95	0.00	-1514.9	0.00	1514.95	3293.81	1646.90	5055.01	2531.26	52.72	-4.872	0.000	0.604
115.00	-15.95	-24.50	0.00	-1390.1	0.00	1390.19	3226.08	1613.04	4824.64	2415.91	57.95	-5.134	0.000	0.581
120.00	-15.08	-24.05	0.00	-1267.6	0.00	1267.68	3142.39	1571.20	4576.34	2291.57	63.46	-5.393	0.000	0.558
125.00	-14.23	-23.60	0.00	-1147.4	0.00	1147.42	3058.71	1529.35	4334.61	2170.52	69.24	-5.647	0.000	0.534
130.00	-13.41	-23.15	0.00	-1029.4	0.00	1029.41	2975.02	1487.51	4099.43	2052.76	75.28	-5.896	0.000	0.506
135.00	-12.61	-22.71	0.00	-913.64	0.00	913.64	2891.34	1445.67	3870.81	1938.28	81.57	-6.138	0.000	0.476
140.00	-11.85	-22.25	0.00	-800.10	0.00	800.10	2807.65	1403.83	3648.75	1827.09	88.11	-6.369	0.000	0.442
142.71	-11.44	-22.01	0.00	-739.72	0.00	739.72	2762.24	1381.12	3530.99	1768.12	91.76	-6.493	0.000	0.423
145.00	-10.92	-21.79	0.00	-689.39	0.00	689.39	2723.97	1361.98	3433.25	1719.18	94.89	-6.594	0.000	0.405
147.30	-10.41	-21.57	0.00	-639.35	0.00	639.35	1707.44	853.72	2174.15	1088.69	98.08	-6.693	0.000	0.594
150.00	-10.08	-21.35	0.00	-581.04	0.00	581.04	1688.50	844.25	2114.25	1058.70	101.89	-6.805	0.000	0.555
155.00	-9.52	-20.94	0.00	-474.27	0.00	474.27	1652.64	826.32	2004.58	1003.78	109.15	-7.069	0.000	0.479
160.00	-7.31	-16.10	0.00	-369.55	0.00	369.55	1615.71	807.86	1896.48	949.65	116.66	-7.301	0.000	0.394
165.00	-6.83	-15.69	0.00	-289.04	0.00	289.04	1577.73	788.87	1790.06	896.36	124.40	-7.501	0.000	0.327
170.00	-6.38	-15.29	0.00	-210.57	0.00	210.57	1538.69	769.34	1685.46	843.98	132.32	-7.669	0.000	0.254
172.50	-3.67	-10.16	0.00	-172.35	0.00	172.35	1518.77	759.38	1633.88	818.16	136.35	-7.740	0.000	0.213
175.00	-3.47	-9.96	0.00	-146.95	0.00	146.95	1498.58	749.29	1582.80	792.58	140.41	-7.803	0.000	0.188
180.00	-3.09	-9.57	0.00	-97.13	0.00	97.13	1457.41	728.71	1482.21	742.21	148.61	-7.904	0.000	0.133
185.00	-1.74	-4.90	0.00	-49.26	0.00	49.26	1406.50	703.25	1375.31	688.68	156.90	-7.973	0.000	0.073
190.00	-1.49	-4.54	0.00	-24.76	0.00	24.76	1350.71	675.36	1267.83	634.86	165.25	-8.011	0.000	0.040
193.50	0.00	-4.29	0.00	-8.87	0.00	8.87	1311.66	655.83	1195.19	598.48	171.11	-8.025	0.000	0.015

Calculated Forces

Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (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

Wind Loading - Shaft

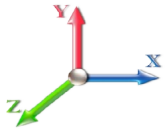
Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 23	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 27

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		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	25.296	30.36	110.4	598.6	2413.9
10.00		1.00	0.85	3.308	3.64	0.00	1.200	1.775	5.00	24.995	29.99	109.1	632.4	2417.0
15.00		1.00	0.85	3.308	3.64	0.00	1.200	1.848	5.00	24.656	29.59	107.6	648.4	2402.4
20.00		1.00	0.90	3.509	3.86	0.00	1.200	1.902	5.00	24.300	29.16	112.6	656.7	2380.0
25.00		1.00	0.95	3.678	4.05	0.00	1.200	1.945	5.00	23.936	28.72	116.2	660.5	2353.1
30.00		1.00	0.98	3.822	4.20	0.00	1.200	1.981	5.00	23.565	28.28	118.9	661.3	2323.3
35.00		1.00	1.01	3.948	4.34	0.00	1.200	2.012	5.00	23.190	27.83	120.9	660.1	2291.4
40.00		1.00	1.04	4.061	4.47	0.00	1.200	2.039	5.00	22.812	27.37	122.3	657.2	2257.8
45.00		1.00	1.07	4.163	4.58	0.00	1.200	2.063	5.00	22.432	26.92	123.3	653.1	2223.0
46.66	Bot - Section 2	1.00	1.08	4.195	4.61	0.00	1.200	2.071	1.66	7.376	8.85	40.8	216.7	732.2
50.00	Appurtenance(s)	1.00	1.09	4.256	4.68	0.00	1.200	2.085	3.34	14.917	17.90	83.8	440.0	2377.4
53.33	Top - Section 1	1.00	1.11	4.314	4.75	0.00	1.200	2.098	3.33	14.717	17.66	83.8	436.5	2344.6
55.00		1.00	1.12	4.342	4.78	0.00	1.200	2.105	1.67	7.316	8.78	41.9	218.2	665.0
60.00		1.00	1.14	4.423	4.86	0.00	1.200	2.123	5.00	21.651	25.98	126.4	646.8	1966.6
65.00		1.00	1.16	4.498	4.95	0.00	1.200	2.140	5.00	21.265	25.52	126.3	639.5	1932.5
70.00		1.00	1.17	4.569	5.03	0.00	1.200	2.156	5.00	20.878	25.05	125.9	631.7	1897.8
75.00		1.00	1.19	4.635	5.10	0.00	1.200	2.171	5.00	20.490	24.59	125.4	623.4	1862.7
80.00		1.00	1.21	4.699	5.17	0.00	1.200	2.185	5.00	20.101	24.12	124.7	614.6	1827.1
85.00		1.00	1.22	4.759	5.24	0.00	1.200	2.198	5.00	19.712	23.65	123.8	605.5	1791.2
90.00		1.00	1.24	4.817	5.30	0.00	1.200	2.211	5.00	19.322	23.19	122.9	596.1	1754.9
94.17	Bot - Section 3	1.00	1.25	4.863	5.35	0.00	1.200	2.221	4.17	15.803	18.96	101.4	489.9	1435.1
95.00		1.00	1.25	4.872	5.36	0.00	1.200	2.223	0.83	3.180	3.82	20.5	99.5	449.7
99.83	Top - Section 2	1.00	1.27	4.923	5.42	0.00	1.200	2.234	4.83	18.236	21.88	118.5	567.5	2571.4
100.00		1.00	1.27	4.925	5.42	0.00	1.200	2.234	0.17	0.622	0.75	4.0	19.6	51.4
105.00		1.00	1.28	4.976	5.47	0.00	1.200	2.245	5.00	18.467	22.16	121.3	576.4	1520.4
110.00		1.00	1.29	5.025	5.53	0.00	1.200	2.256	5.00	18.075	21.69	119.9	565.8	1486.9
115.00		1.00	1.30	5.072	5.58	0.00	1.200	2.266	5.00	17.683	21.22	118.4	555.1	1453.1
120.00		1.00	1.32	5.117	5.63	0.00	1.200	2.276	5.00	17.291	20.75	116.8	544.1	1419.1
125.00		1.00	1.33	5.162	5.68	0.00	1.200	2.285	5.00	16.898	20.28	115.1	532.9	1384.9
130.00		1.00	1.34	5.204	5.72	0.00	1.200	2.294	5.00	16.505	19.81	113.4	521.5	1350.5
135.00		1.00	1.35	5.246	5.77	0.00	1.200	2.303	5.00	16.112	19.33	111.6	509.9	1316.0
140.00		1.00	1.36	5.286	5.81	0.00	1.200	2.311	5.00	15.718	18.86	109.7	498.2	1281.3
142.71	Bot - Section 4	1.00	1.36	5.308	5.84	0.00	1.200	2.315	2.71	8.364	10.04	58.6	266.9	682.2
145.00		1.00	1.37	5.325	5.86	0.00	1.200	2.319	2.29	7.056	8.47	49.6	225.7	804.9
147.30	Top - Section 3	1.00	1.37	5.343	5.88	0.00	1.200	2.323	2.30	7.004	8.40	49.4	224.2	797.9
150.00		1.00	1.38	5.364	5.90	0.00	1.200	2.327	2.70	8.137	9.76	57.6	260.4	529.6
155.00		1.00	1.39	5.401	5.94	0.00	1.200	2.335	5.00	14.748	17.70	105.1	469.4	955.6
160.00	Appurtenance(s)	1.00	1.40	5.437	5.98	0.00	1.200	2.342	5.00	14.354	17.23	103.0	457.1	928.0
165.00		1.00	1.41	5.472	6.02	0.00	1.200	2.349	5.00	13.960	16.75	100.8	444.7	900.2
170.00		1.00	1.42	5.507	6.06	0.00	1.200	2.356	5.00	13.565	16.28	98.6	432.2	872.3
172.50	Appurtenance(s)	1.00	1.42	5.524	6.08	0.00	1.200	2.360	2.50	6.634	7.96	48.4	212.9	427.3
175.00		1.00	1.42	5.541	6.09	0.00	1.200	2.363	2.50	6.535	7.84	47.8	209.8	420.3
180.00		1.00	1.43	5.574	6.13	0.00	1.200	2.370	5.00	12.776	15.33	94.0	406.7	816.3
185.00	Appurtenance(s)	1.00	1.44	5.606	6.17	0.00	1.200	2.376	5.00	12.381	14.86	91.6	393.9	788.0
190.00		1.00	1.45	5.637	6.20	0.00	1.200	2.383	5.00	11.986	14.38	89.2	380.9	759.7
193.50	Appurtenance(s)	1.00	1.45	5.659	6.22	0.00	1.200	2.387	3.50	8.154	9.79	60.9	260.2	516.3

Wind Loading - Shaft

Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (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	

Totals:	**193.50**	**4,392.2**	**66,132.4**

Discrete Appurtenance Forces

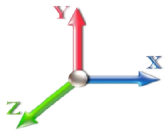
Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 25	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 27

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	193.50	1900MHz RRH	3	5.674	6.242	0.67	1.00	11.46	781.20	0.000	2.500	71.53	0.00	178.82
2	193.50	Low Profile Platform	1	5.668	6.235	1.00	1.00	53.64	2572.18	0.000	1.500	334.47	0.00	501.70
3	193.50	APXVSPP18-C-A20	3	5.674	6.242	0.86	1.00	30.55	727.85	0.000	2.500	190.68	0.00	476.71
4	193.50	APXVTM14-C-120	3	5.674	6.242	0.82	1.00	19.42	788.84	0.000	2.500	121.24	0.00	303.09
5	193.50	ACU-A20-N	4	5.668	6.235	0.67	1.00	1.46	23.10	0.000	1.500	9.12	0.00	13.68
6	193.50	TD-RRH8x20-25	3	5.674	6.242	0.67	1.00	10.45	607.66	0.000	2.500	65.22	0.00	163.05
7	193.50	800 MHz Filter	3	5.668	6.235	1.00	1.00	2.67	71.45	0.000	1.500	16.67	0.00	25.00
8	193.50	800 MHz RRH	3	5.674	6.242	0.67	1.00	8.15	430.97	0.000	2.500	50.87	0.00	127.16
9	185.00	BXA-70063-6-CF	3	5.606	6.166	0.56	0.80	19.04	518.25	0.000	0.000	117.40	0.00	0.00
10	185.00	Low Profile	1	5.606	6.166	1.00	1.00	46.05	3282.20	0.000	0.000	283.95	0.00	0.00
11	185.00	LPA-80080/6CF	4	5.606	6.166	1.36	0.80	32.65	1328.95	0.000	0.000	201.30	0.00	0.00
12	185.00	LPA-800636-6 CF	2	5.606	6.166	0.76	0.80	17.46	883.53	0.000	0.000	107.68	0.00	0.00
13	185.00	BXA-171063-12BF	3	5.606	6.166	0.67	0.80	16.00	360.18	0.000	0.000	98.69	0.00	0.00
14	185.00	FPA5250	1	5.606	6.166	1.00	1.00	2.19	35.68	0.000	0.000	13.50	0.00	0.00
15	185.00	GPS	1	5.606	6.166	0.80	0.80	1.58	43.92	0.000	0.000	9.72	0.00	0.00
16	172.50	RRUS 4449 B5/B12	3	5.524	6.076	0.50	0.75	4.09	431.33	0.000	0.000	24.82	0.00	0.00
17	172.50	RRUS 8843 B2 B66A	3	5.524	6.076	0.50	0.75	3.52	404.62	0.000	0.000	21.42	0.00	0.00
18	172.50	14.5' Platform	1	5.524	6.076	1.00	1.00	31.41	4259.70	0.000	0.000	190.83	0.00	0.00
19	172.50	HRK14	1	5.524	6.076	1.00	1.00	18.87	1150.36	0.000	0.000	114.68	0.00	0.00
20	172.50	DMP65R-BU6DA	6	5.524	6.076	0.55	0.75	48.47	2909.40	0.000	0.000	294.50	0.00	0.00
21	172.50	ABT-DMDF-ADBH	1	5.524	6.076	0.74	0.75	0.23	3.64	0.000	0.000	1.39	0.00	0.00
22	172.50	DC6-48-60-18-8F	3	5.524	6.076	1.00	1.00	4.54	312.16	0.000	0.000	27.57	0.00	0.00
23	172.50	7770.00	3	5.524	6.076	0.55	0.75	11.44	804.14	0.000	0.000	69.50	0.00	0.00
24	172.50	RRUS 4478 B14	3	5.524	6.076	0.50	0.75	3.54	353.84	0.000	0.000	21.53	0.00	0.00
25	160.00	15" x 14" x 7.5" RRU (70	3	5.437	5.981	0.54	0.80	4.05	534.53	0.000	0.000	24.21	0.00	0.00
26	160.00	T-Arms	3	5.437	5.981	0.56	0.75	29.31	2033.65	0.000	0.000	175.29	0.00	0.00
27	160.00	LNX-6515DS-A1M	3	5.437	5.981	0.64	0.80	30.44	906.03	0.000	0.000	182.05	0.00	0.00
28	160.00	96" x 15.6" x 9"	3	5.437	5.981	0.66	0.80	32.42	2054.63	0.000	0.000	193.89	0.00	0.00
29	160.00	RRUS 11	3	5.437	5.981	0.54	0.80	5.42	426.56	0.000	0.000	32.41	0.00	0.00
30	160.00	APX16DWV-16DWVS-E-A	3	5.437	5.981	0.50	0.80	14.18	517.28	0.000	0.000	84.83	0.00	0.00
31	160.00	RRUS 11 (Band 4)	3	5.437	5.981	0.54	0.80	5.42	366.23	0.000	0.000	32.41	0.00	0.00
32	160.00	RRUS 11 (Band 12)	3	5.437	5.981	0.54	0.80	5.42	366.23	0.000	0.000	32.41	0.00	0.00
33	50.00	58532A GPS	1	4.256	4.682	1.00	1.00	0.66	7.64	0.000	0.000	3.10	0.00	0.00
							Totals:		**30,297.93**			**3,218.87**		

Total Applied Force Summary

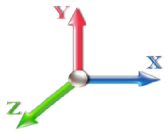
Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 26

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 27

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		110.44	2616.76	0.00	0.00
10.00		109.13	2619.84	0.00	0.00
15.00		107.64	2605.22	0.00	0.00
20.00		112.57	2582.83	0.00	0.00
25.00		116.21	2555.96	0.00	0.00
30.00		118.89	2526.14	0.00	0.00
35.00		120.86	2494.20	0.00	0.00
40.00		122.28	2460.66	0.00	0.00
45.00		123.26	2425.86	0.00	0.00
46.66		40.84	799.67	0.00	0.00
50.00	(1) attachments	86.91	2520.39	0.00	0.00
53.33		83.81	2479.01	0.00	0.00
55.00		41.93	732.46	0.00	0.00
60.00		126.40	2168.46	0.00	0.00
65.00		126.25	2134.36	0.00	0.00
70.00		125.90	2099.71	0.00	0.00
75.00		125.37	2064.57	0.00	0.00
80.00		124.68	2029.01	0.00	0.00
85.00		123.83	1993.06	0.00	0.00
90.00		122.85	1956.76	0.00	0.00
94.17		101.44	1603.36	0.00	0.00
95.00		20.45	483.31	0.00	0.00
99.83		118.50	2766.54	0.00	0.00
100.00		4.04	58.15	0.00	0.00
105.00		121.29	1722.30	0.00	0.00
110.00		119.88	1688.76	0.00	0.00
115.00		118.38	1654.99	0.00	0.00
120.00		116.80	1621.00	0.00	0.00
125.00		115.13	1586.81	0.00	0.00
130.00		113.39	1552.43	0.00	0.00
135.00		111.57	1517.87	0.00	0.00
140.00		109.68	1483.14	0.00	0.00
142.71		58.60	791.74	0.00	0.00
145.00		49.60	897.27	0.00	0.00
147.30		49.40	890.60	0.00	0.00
150.00		57.61	638.76	0.00	0.00
155.00		105.14	1157.47	0.00	0.00
160.00	(24) attachments	860.51	8334.99	0.00	0.00
165.00		100.84	1088.90	0.00	0.00
170.00		98.61	1061.02	0.00	0.00
172.50	(24) attachments	814.60	11150.79	0.00	0.00
175.00		47.80	488.83	0.00	0.00
180.00		93.99	953.39	0.00	0.00
185.00	(15) attachments	923.86	7377.89	0.00	0.00
190.00		89.19	782.62	0.00	0.00
193.50	(23) attachments	920.70	6535.56	0.00	1789.22

Total Applied Force Summary

Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (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

Totals:	**7,611.06**	**103,753.40**	**0.00**	**1,789.22**

Calculated Forces

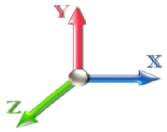
Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

Tower Engineering Solutions

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

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 27

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	-103.7	-7.65	0.00	-1142.6	0.00	1142.65	6408.64	3204.32	14863.6	7442.88	0.00	0.000	0.000	0.170
5.00	-101.1	-7.62	0.00	-1104.3	0.00	1104.39	6332.44	3166.22	14438.7	7230.12	0.02	-0.044	0.000	0.169
10.00	-98.50	-7.58	0.00	-1066.3	0.00	1066.30	6255.18	3127.59	14017.4	7019.15	0.09	-0.089	0.000	0.168
15.00	-95.89	-7.55	0.00	-1028.3	0.00	1028.38	6176.86	3088.43	13599.8	6810.05	0.21	-0.135	0.000	0.167
20.00	-93.30	-7.51	0.00	-990.64	0.00	990.64	6097.47	3048.74	13186.1	6602.88	0.38	-0.181	0.000	0.165
25.00	-90.74	-7.45	0.00	-953.12	0.00	953.12	6017.03	3008.51	12776.3	6397.69	0.59	-0.228	0.000	0.164
30.00	-88.21	-7.40	0.00	-915.84	0.00	915.84	5935.52	2967.76	12370.7	6194.55	0.86	-0.276	0.000	0.163
35.00	-85.71	-7.34	0.00	-878.85	0.00	878.85	5852.95	2926.48	11969.2	5993.52	1.17	-0.324	0.000	0.161
40.00	-83.24	-7.27	0.00	-842.16	0.00	842.16	5768.82	2884.41	11571.1	5794.16	1.54	-0.374	0.000	0.160
45.00	-80.81	-7.18	0.00	-805.80	0.00	805.80	5657.24	2828.62	11125.6	5571.07	1.96	-0.424	0.000	0.159
46.66	-80.01	-7.17	0.00	-793.86	0.00	793.86	5620.12	2810.06	10979.3	5497.83	2.11	-0.441	0.000	0.159
50.00	-77.49	-7.11	0.00	-769.94	0.00	769.94	5545.66	2772.83	10688.8	5352.37	2.43	-0.475	0.000	0.158
53.33	-75.01	-7.04	0.00	-746.27	0.00	746.27	4757.51	2378.75	9242.35	4628.04	2.77	-0.509	0.000	0.177
55.00	-74.27	-7.04	0.00	-734.52	0.00	734.52	4734.55	2367.28	9135.77	4574.68	2.95	-0.527	0.000	0.176
60.00	-72.10	-6.96	0.00	-699.34	0.00	699.34	4665.11	2332.55	8818.95	4416.03	3.53	-0.583	0.000	0.174
65.00	-69.96	-6.88	0.00	-664.54	0.00	664.54	4594.60	2297.30	8505.61	4259.13	4.17	-0.639	0.000	0.171
70.00	-67.85	-6.80	0.00	-630.14	0.00	630.14	4523.04	2261.52	8195.87	4104.03	4.87	-0.696	0.000	0.169
75.00	-65.78	-6.71	0.00	-596.16	0.00	596.16	4450.41	2225.20	7889.86	3950.80	5.63	-0.754	0.000	0.166
80.00	-63.75	-6.62	0.00	-562.60	0.00	562.60	4363.37	2181.68	7564.56	3787.90	6.45	-0.812	0.000	0.163
85.00	-61.75	-6.54	0.00	-529.47	0.00	529.47	4265.74	2132.87	7228.13	3619.44	7.34	-0.871	0.000	0.161
90.00	-59.79	-6.44	0.00	-496.80	0.00	496.80	4168.10	2084.05	6899.36	3454.81	8.28	-0.929	0.000	0.158
94.17	-58.18	-6.34	0.00	-469.97	0.00	469.97	4086.74	2043.37	6631.22	3320.54	9.11	-0.979	0.000	0.156
95.00	-57.70	-6.35	0.00	-464.69	0.00	464.69	4070.47	2035.23	6578.23	3294.01	9.28	-0.989	0.000	0.155
99.83	-54.93	-6.21	0.00	-434.02	0.00	434.02	3418.29	1709.14	5518.43	2763.32	10.32	-1.046	0.000	0.173
100.00	-54.87	-6.23	0.00	-432.99	0.00	432.99	3416.28	1708.14	5510.73	2759.46	10.35	-1.048	0.000	0.173
105.00	-53.14	-6.14	0.00	-401.82	0.00	401.82	3355.57	1677.79	5281.30	2644.58	11.48	-1.113	0.000	0.168
110.00	-51.45	-6.04	0.00	-371.13	0.00	371.13	3293.81	1646.90	5055.01	2531.26	12.69	-1.178	0.000	0.162
115.00	-49.79	-5.95	0.00	-340.91	0.00	340.91	3226.08	1613.04	4824.64	2415.91	13.95	-1.242	0.000	0.157
120.00	-48.17	-5.85	0.00	-311.18	0.00	311.18	3142.39	1571.20	4576.34	2291.57	15.29	-1.306	0.000	0.151
125.00	-46.58	-5.74	0.00	-281.95	0.00	281.95	3058.71	1529.35	4334.61	2170.52	16.69	-1.368	0.000	0.145
130.00	-45.02	-5.64	0.00	-253.22	0.00	253.22	2975.02	1487.51	4099.43	2052.76	18.16	-1.430	0.000	0.139
135.00	-43.50	-5.53	0.00	-225.02	0.00	225.02	2891.34	1445.67	3870.81	1938.28	19.68	-1.489	0.000	0.131
140.00	-42.02	-5.42	0.00	-197.35	0.00	197.35	2807.65	1403.83	3648.75	1827.09	21.27	-1.546	0.000	0.123
142.71	-41.23	-5.36	0.00	-182.65	0.00	182.65	2762.24	1381.12	3530.99	1768.12	22.16	-1.577	0.000	0.118
145.00	-40.33	-5.30	0.00	-170.40	0.00	170.40	2723.97	1361.98	3433.25	1719.18	22.92	-1.602	0.000	0.114
147.30	-39.44	-5.24	0.00	-158.23	0.00	158.23	1707.44	853.72	2174.15	1088.69	23.70	-1.626	0.000	0.168
150.00	-38.80	-5.20	0.00	-144.05	0.00	144.05	1688.50	844.25	2114.25	1058.70	24.63	-1.654	0.000	0.159
155.00	-37.64	-5.10	0.00	-118.05	0.00	118.05	1652.64	826.32	2004.58	1003.78	26.40	-1.719	0.000	0.140
160.00	-29.33	-4.01	0.00	-92.54	0.00	92.54	1615.71	807.86	1896.48	949.65	28.23	-1.777	0.000	0.116
165.00	-28.24	-3.90	0.00	-72.47	0.00	72.47	1577.73	788.87	1790.06	896.36	30.12	-1.827	0.000	0.099
170.00	-27.18	-3.78	0.00	-52.96	0.00	52.96	1538.69	769.34	1685.46	843.98	32.05	-1.869	0.000	0.080
172.50	-16.06	-2.61	0.00	-43.50	0.00	43.50	1518.77	759.38	1633.88	818.16	33.04	-1.887	0.000	0.064
175.00	-15.57	-2.55	0.00	-36.98	0.00	36.98	1498.58	749.29	1582.80	792.58	34.03	-1.903	0.000	0.057
180.00	-14.62	-2.43	0.00	-24.23	0.00	24.23	1457.41	728.71	1482.21	742.21	36.04	-1.929	0.000	0.043
185.00	-7.28	-1.26	0.00	-12.08	0.00	12.08	1406.50	703.25	1375.31	688.68	38.07	-1.946	0.000	0.023
190.00	-6.50	-1.14	0.00	-5.79	0.00	5.79	1350.71	675.36	1267.83	634.86	40.11	-1.955	0.000	0.014
193.50	0.00	-0.92	0.00	-1.79	0.00	1.79	1311.66	655.83	1195.19	598.48	41.55	-1.958	0.000	0.003

Calculated Forces

Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 29

Seismic Segment Forces (Factored)

Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 30	

IES Tower Engineering Solutions

Load Case:	1.2D + 1.0E							**Iterations**	24
Gust Response Factor	1.10				**Sds**	0.19		**Ss**	0.18
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.26		**SA**	0.03	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1512.7	0.00	0.03	0.01	28.23	
10.00		1487.1	0.01	0.04	0.03	40.80	
15.00		1461.6	0.01	0.06	0.03	47.05	
20.00		1436.0	0.02	0.06	0.04	50.10	
25.00		1410.5	0.03	0.07	0.04	51.44	
30.00		1384.9	0.05	0.07	0.04	51.92	
35.00		1359.4	0.06	0.07	0.04	52.02	
40.00		1333.8	0.08	0.07	0.04	52.00	
45.00		1308.3	0.10	0.07	0.04	51.99	
46.66	Bot - Section 2	429.57	0.11	0.07	0.04	17.18	
50.00	Appurtenance(s)	1614.9	0.13	0.07	0.03	65.43	
53.33	Top - Section 1	1590.0	0.14	0.07	0.03	65.20	
55.00		372.33	0.15	0.07	0.03	15.35	
60.00		1099.8	0.18	0.06	0.03	45.88	
65.00		1077.4	0.21	0.06	0.02	44.94	
70.00		1055.1	0.25	0.06	0.02	43.08	
75.00		1032.7	0.28	0.05	0.01	39.89	
80.00		1010.4	0.32	0.04	0.01	34.89	
85.00		988.05	0.36	0.03	0.01	27.68	
90.00		965.69	0.41	0.02	0.01	18.10	
94.17	Bot - Section 3	787.67	0.45	0.00	0.01	7.12	
95.00		291.84	0.46	0.00	0.01	2.02	
99.83	Top - Section 2	1669.9	0.50	-0.02	0.01	-9.91	
100.00		26.55	0.50	-0.02	0.01	-0.17	
105.00		786.70	0.56	-0.04	0.01	-15.41	
110.00		767.53	0.61	-0.06	0.02	-23.80	
115.00		748.37	0.67	-0.08	0.02	-29.55	
120.00		729.20	0.73	-0.09	0.04	-32.49	
125.00		710.04	0.79	-0.11	0.05	-32.77	
130.00		690.88	0.85	-0.12	0.07	-30.69	
135.00		671.71	0.92	-0.12	0.10	-26.55	
140.00		652.55	0.99	-0.11	0.13	-20.62	
142.71	Bot - Section 4	346.09	1.03	-0.10	0.15	-9.02	
145.00		482.67	1.06	-0.09	0.16	-10.00	
147.30	Top - Section 3	478.06	1.10	-0.07	0.18	-7.04	
150.00		224.37	1.14	-0.05	0.21	-1.55	
155.00		405.14	1.21	0.02	0.26	4.00	
160.00	Appurtenance(s)	2880.8	1.29	0.11	0.33	85.24	
165.00		379.59	1.37	0.24	0.41	19.86	
170.00		366.81	1.46	0.40	0.50	28.66	
172.50	Appurtenance(s)	3663.4	1.50	0.51	0.55	337.76	
175.00		175.42	1.55	0.62	0.60	18.78	
180.00		341.26	1.64	0.89	0.72	47.50	
185.00	Appurtenance(s)	2082.4	1.73	1.23	0.86	363.54	
190.00		315.71	1.82	1.64	1.02	67.34	

Seismic Segment Forces (Factored)

Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 31

193.50	Appurtenance(s)	2328.7	1.89	1.98	1.14	564.50		
	Totals:	**46,934.6**				**2,139.9**	**Total Wind:**	**33,851.5**

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

Calculated Forces

Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 32	

Tower Engineering Solutions

Load Case:	1.2D + 1.0E							**Iterations**	24
Gust Response Factor	1.10			**Sds**	0.19			**Ss**	0.18
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.26	**SA**	0.03	**Seismic Importance Factor**			1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-63.64	-2.40	0.00	-343.33	0.00	343.33	6408.64	3204.32	14863.6	7442.88		0.00	0.00	0.056
5.00	-61.63	-2.38	0.00	-331.36	0.00	331.36	6332.44	3166.22	14438.7	7230.12		0.01	-0.01	0.056
10.00	-59.64	-2.35	0.00	-319.45	0.00	319.45	6255.18	3127.59	14017.4	7019.15		0.03	-0.03	0.055
15.00	-57.68	-2.32	0.00	-307.68	0.00	307.68	6176.86	3088.43	13599.8	6810.05		0.06	-0.04	0.055
20.00	-55.75	-2.28	0.00	-296.08	0.00	296.08	6097.47	3048.74	13186.1	6602.88		0.11	-0.05	0.054
25.00	-53.86	-2.24	0.00	-284.68	0.00	284.68	6017.03	3008.51	12776.3	6397.69		0.18	-0.07	0.053
30.00	-51.99	-2.20	0.00	-273.47	0.00	273.47	5935.52	2967.76	12370.7	6194.55		0.26	-0.08	0.053
35.00	-50.16	-2.16	0.00	-262.47	0.00	262.47	5852.95	2926.48	11969.2	5993.52		0.35	-0.10	0.052
40.00	-48.35	-2.12	0.00	-251.68	0.00	251.68	5768.82	2884.41	11571.1	5794.16		0.46	-0.11	0.052
45.00	-46.58	-2.07	0.00	-241.11	0.00	241.11	5657.24	2828.62	11125.6	5571.07		0.59	-0.13	0.052
46.66	-46.00	-2.06	0.00	-237.67	0.00	237.67	5620.12	2810.06	10979.3	5497.83		0.63	-0.13	0.051
50.00	-43.92	-1.99	0.00	-230.81	0.00	230.81	5545.66	2772.83	10688.8	5352.37		0.73	-0.14	0.051
53.33	-41.88	-1.93	0.00	-224.17	0.00	224.17	4757.51	2378.75	9242.35	4628.04		0.83	-0.15	0.057
55.00	-41.37	-1.92	0.00	-220.95	0.00	220.95	4734.55	2367.28	9135.77	4574.68		0.88	-0.16	0.057
60.00	-39.85	-1.88	0.00	-211.36	0.00	211.36	4665.11	2332.55	8818.95	4416.03		1.06	-0.17	0.056
65.00	-38.35	-1.84	0.00	-201.95	0.00	201.95	4594.60	2297.30	8505.61	4259.13		1.25	-0.19	0.056
70.00	-36.88	-1.81	0.00	-192.74	0.00	192.74	4523.04	2261.52	8195.87	4104.03		1.46	-0.21	0.055
75.00	-35.44	-1.77	0.00	-183.71	0.00	183.71	4450.41	2225.20	7889.86	3950.80		1.69	-0.23	0.054
80.00	-34.02	-1.74	0.00	-174.85	0.00	174.85	4363.37	2181.68	7564.56	3787.90		1.93	-0.24	0.054
85.00	-32.64	-1.72	0.00	-166.15	0.00	166.15	4265.74	2132.87	7228.13	3619.44		2.20	-0.26	0.054
90.00	-31.28	-1.70	0.00	-157.56	0.00	157.56	4168.10	2084.05	6899.36	3454.81		2.49	-0.28	0.053
94.17	-30.16	-1.70	0.00	-150.46	0.00	150.46	4086.74	2043.37	6631.22	3320.54		2.74	-0.30	0.053
95.00	-29.78	-1.70	0.00	-149.05	0.00	149.05	4070.47	2035.23	6578.23	3294.01		2.79	-0.30	0.053
99.83	-27.58	-1.69	0.00	-140.85	0.00	140.85	3418.29	1709.14	5518.43	2763.32		3.10	-0.32	0.059
100.00	-27.54	-1.69	0.00	-140.57	0.00	140.57	3416.28	1708.14	5510.73	2759.46		3.12	-0.32	0.059
105.00	-26.39	-1.70	0.00	-132.09	0.00	132.09	3355.57	1677.79	5281.30	2644.58		3.46	-0.34	0.058
110.00	-25.27	-1.70	0.00	-123.60	0.00	123.60	3293.81	1646.90	5055.01	2531.26		3.83	-0.36	0.057
115.00	-24.17	-1.70	0.00	-115.10	0.00	115.10	3226.08	1613.04	4824.64	2415.91		4.22	-0.38	0.055
120.00	-23.09	-1.70	0.00	-106.59	0.00	106.59	3142.39	1571.20	4576.34	2291.57		4.64	-0.41	0.054
125.00	-22.04	-1.70	0.00	-98.07	0.00	98.07	3058.71	1529.35	4334.61	2170.52		5.07	-0.43	0.052
130.00	-21.01	-1.70	0.00	-89.54	0.00	89.54	2975.02	1487.51	4099.43	2052.76		5.53	-0.45	0.051
135.00	-20.00	-1.70	0.00	-81.02	0.00	81.02	2891.34	1445.67	3870.81	1938.28		6.01	-0.47	0.049
140.00	-19.01	-1.70	0.00	-72.50	0.00	72.50	2807.65	1403.83	3648.75	1827.09		6.51	-0.49	0.046
142.71	-18.49	-1.70	0.00	-67.89	0.00	67.89	2762.24	1381.12	3530.99	1768.12		6.80	-0.50	0.045
145.00	-17.81	-1.70	0.00	-64.00	0.00	64.00	2723.97	1361.98	3433.25	1719.18		7.04	-0.51	0.044
147.30	-17.15	-1.69	0.00	-60.10	0.00	60.10	1707.44	853.72	2174.15	1088.69		7.29	-0.52	0.065
150.00	-16.77	-1.70	0.00	-55.53	0.00	55.53	1688.50	844.25	2114.25	1058.70		7.59	-0.53	0.062
155.00	-16.08	-1.69	0.00	-47.05	0.00	47.05	1652.64	826.32	2004.58	1003.78		8.16	-0.56	0.057
160.00	-12.42	-1.58	0.00	-38.59	0.00	38.59	1615.71	807.86	1896.48	949.65		8.75	-0.58	0.048
165.00	-11.78	-1.55	0.00	-30.71	0.00	30.71	1577.73	788.87	1790.06	896.36		9.37	-0.60	0.042
170.00	-11.15	-1.52	0.00	-22.94	0.00	22.94	1538.69	769.34	1685.46	843.98		10.01	-0.62	0.034
172.50	-6.66	-1.13	0.00	-19.14	0.00	19.14	1518.77	759.38	1633.88	818.16		10.34	-0.63	0.028
175.00	-6.38	-1.11	0.00	-16.31	0.00	16.31	1498.58	749.29	1582.80	792.58		10.67	-0.63	0.025
180.00	-5.84	-1.06	0.00	-10.74	0.00	10.74	1457.41	728.71	1482.21	742.21		11.34	-0.65	0.018
185.00	-3.20	-0.67	0.00	-5.43	0.00	5.43	1406.50	703.25	1375.31	688.68		12.02	-0.65	0.010
190.00	-2.80	-0.60	0.00	-2.09	0.00	2.09	1350.71	675.36	1267.83	634.86		12.70	-0.66	0.005
193.50	0.00	-0.56	0.00	0.00	0.00	0.00	1311.66	655.83	1195.19	598.48		13.18	-0.66	0.000

Calculated Forces

Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 33

Seismic Segment Forces (Factored)

Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 34	

IES Tower Engineering Solutions

Load Case:	0.9D + 1.0E					**Iterations**	24
Gust Response Factor	1.10			**Sds**	0.19	**Ss**	0.18
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10	**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.26	**SA**	0.03	**Seismic Importance Factor**	1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1512.7	0.00	0.03	0.01	28.23	
10.00		1487.1	0.01	0.04	0.03	40.80	
15.00		1461.6	0.01	0.06	0.03	47.05	
20.00		1436.0	0.02	0.06	0.04	50.10	
25.00		1410.5	0.03	0.07	0.04	51.44	
30.00		1384.9	0.05	0.07	0.04	51.92	
35.00		1359.4	0.06	0.07	0.04	52.02	
40.00		1333.8	0.08	0.07	0.04	52.00	
45.00		1308.3	0.10	0.07	0.04	51.99	
46.66	Bot - Section 2	429.57	0.11	0.07	0.04	17.18	
50.00	Appurtenance(s)	1614.9	0.13	0.07	0.03	65.43	
53.33	Top - Section 1	1590.0	0.14	0.07	0.03	65.20	
55.00		372.33	0.15	0.07	0.03	15.35	
60.00		1099.8	0.18	0.06	0.03	45.88	
65.00		1077.4	0.21	0.06	0.02	44.94	
70.00		1055.1	0.25	0.06	0.02	43.08	
75.00		1032.7	0.28	0.05	0.01	39.89	
80.00		1010.4	0.32	0.04	0.01	34.89	
85.00		988.05	0.36	0.03	0.01	27.68	
90.00		965.69	0.41	0.02	0.01	18.10	
94.17	Bot - Section 3	787.67	0.45	0.00	0.01	7.12	
95.00		291.84	0.46	0.00	0.01	2.02	
99.83	Top - Section 2	1669.9	0.50	-0.02	0.01	-9.91	
100.00		26.55	0.50	-0.02	0.01	-0.17	
105.00		786.70	0.56	-0.04	0.01	-15.41	
110.00		767.53	0.61	-0.06	0.02	-23.80	
115.00		748.37	0.67	-0.08	0.02	-29.55	
120.00		729.20	0.73	-0.09	0.04	-32.49	
125.00		710.04	0.79	-0.11	0.05	-32.77	
130.00		690.88	0.85	-0.12	0.07	-30.69	
135.00		671.71	0.92	-0.12	0.10	-26.55	
140.00		652.55	0.99	-0.11	0.13	-20.62	
142.71	Bot - Section 4	346.09	1.03	-0.10	0.15	-9.02	
145.00		482.67	1.06	-0.09	0.16	-10.00	
147.30	Top - Section 3	478.06	1.10	-0.07	0.18	-7.04	
150.00		224.37	1.14	-0.05	0.21	-1.55	
155.00		405.14	1.21	0.02	0.26	4.00	
160.00	Appurtenance(s)	2880.8	1.29	0.11	0.33	85.24	
165.00		379.59	1.37	0.24	0.41	19.86	
170.00		366.81	1.46	0.40	0.50	28.66	
172.50	Appurtenance(s)	3663.4	1.50	0.51	0.55	337.76	
175.00		175.42	1.55	0.62	0.60	18.78	
180.00		341.26	1.64	0.89	0.72	47.50	
185.00	Appurtenance(s)	2082.4	1.73	1.23	0.86	363.54	
190.00		315.71	1.82	1.64	1.02	67.34	

Seismic Segment Forces (Factored)

Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 35

193.50	Appurtenance(s)	2328.7	1.89	1.98	1.14	564.50		
	Totals:	**46,934.6**				**2,139.9**	**Total Wind:**	**33,851.5**

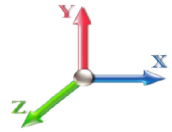
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 36	

Tower Engineering Solutions

Load Case:	0.9D + 1.0E							**Iterations**	24
Gust Response Factor	1.10			**Sds**	0.19			**Ss**	0.18
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.07
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.26	**SA**	0.03	**Seismic Importance Factor**			1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-47.73	-2.39	0.00	-337.31	0.00	337.31	6408.64	3204.32	14863.6	7442.88		0.00	0.00	0.053
5.00	-46.22	-2.38	0.00	-325.34	0.00	325.34	6332.44	3166.22	14438.7	7230.12		0.01	-0.01	0.052
10.00	-44.73	-2.34	0.00	-313.46	0.00	313.46	6255.18	3127.59	14017.4	7019.15		0.03	-0.03	0.052
15.00	-43.26	-2.31	0.00	-301.74	0.00	301.74	6176.86	3088.43	13599.8	6810.05		0.06	-0.04	0.051
20.00	-41.81	-2.27	0.00	-290.20	0.00	290.20	6097.47	3048.74	13186.1	6602.88		0.11	-0.05	0.051
25.00	-40.39	-2.22	0.00	-278.87	0.00	278.87	6017.03	3008.51	12776.3	6397.69		0.17	-0.07	0.050
30.00	-38.99	-2.18	0.00	-267.76	0.00	267.76	5935.52	2967.76	12370.7	6194.55		0.25	-0.08	0.050
35.00	-37.62	-2.13	0.00	-256.87	0.00	256.87	5852.95	2926.48	11969.2	5993.52		0.34	-0.10	0.049
40.00	-36.26	-2.09	0.00	-246.20	0.00	246.20	5768.82	2884.41	11571.1	5794.16		0.45	-0.11	0.049
45.00	-34.93	-2.04	0.00	-235.75	0.00	235.75	5657.24	2828.62	11125.6	5571.07		0.57	-0.12	0.048
46.66	-34.50	-2.03	0.00	-232.36	0.00	232.36	5620.12	2810.06	10979.3	5497.83		0.62	-0.13	0.048
50.00	-32.94	-1.96	0.00	-225.60	0.00	225.60	5545.66	2772.83	10688.8	5352.37		0.71	-0.14	0.048
53.33	-31.41	-1.90	0.00	-219.06	0.00	219.06	4757.51	2378.75	9242.35	4628.04		0.81	-0.15	0.054
55.00	-31.02	-1.89	0.00	-215.89	0.00	215.89	4734.55	2367.28	9135.77	4574.68		0.87	-0.15	0.054
60.00	-29.88	-1.85	0.00	-206.46	0.00	206.46	4665.11	2332.55	8818.95	4416.03		1.04	-0.17	0.053
65.00	-28.76	-1.81	0.00	-197.22	0.00	197.22	4594.60	2297.30	8505.61	4259.13		1.22	-0.19	0.053
70.00	-27.66	-1.77	0.00	-188.19	0.00	188.19	4523.04	2261.52	8195.87	4104.03		1.43	-0.20	0.052
75.00	-26.58	-1.73	0.00	-179.34	0.00	179.34	4450.41	2225.20	7889.86	3950.80		1.65	-0.22	0.051
80.00	-25.52	-1.70	0.00	-170.68	0.00	170.68	4363.37	2181.68	7564.56	3787.90		1.90	-0.24	0.051
85.00	-24.48	-1.68	0.00	-162.17	0.00	162.17	4265.74	2132.87	7228.13	3619.44		2.16	-0.26	0.051
90.00	-23.46	-1.66	0.00	-153.79	0.00	153.79	4168.10	2084.05	6899.36	3454.81		2.43	-0.28	0.050
94.17	-22.62	-1.65	0.00	-146.87	0.00	146.87	4086.74	2043.37	6631.22	3320.54		2.68	-0.29	0.050
95.00	-22.33	-1.65	0.00	-145.49	0.00	145.49	4070.47	2035.23	6578.23	3294.01		2.73	-0.29	0.050
99.83	-20.68	-1.65	0.00	-137.49	0.00	137.49	3418.29	1709.14	5518.43	2763.32		3.04	-0.31	0.056
100.00	-20.65	-1.65	0.00	-137.22	0.00	137.22	3416.28	1708.14	5510.73	2759.46		3.05	-0.31	0.056
105.00	-19.79	-1.65	0.00	-128.96	0.00	128.96	3355.57	1677.79	5281.30	2644.58		3.39	-0.33	0.055
110.00	-18.95	-1.66	0.00	-120.68	0.00	120.68	3293.81	1646.90	5055.01	2531.26		3.75	-0.35	0.053
115.00	-18.12	-1.66	0.00	-112.40	0.00	112.40	3226.08	1613.04	4824.64	2415.91		4.13	-0.38	0.052
120.00	-17.32	-1.66	0.00	-104.11	0.00	104.11	3142.39	1571.20	4576.34	2291.57		4.54	-0.40	0.051
125.00	-16.53	-1.66	0.00	-95.81	0.00	95.81	3058.71	1529.35	4334.61	2170.52		4.96	-0.42	0.050
130.00	-15.75	-1.66	0.00	-87.51	0.00	87.51	2975.02	1487.51	4099.43	2052.76		5.41	-0.44	0.048
135.00	-14.99	-1.66	0.00	-79.21	0.00	79.21	2891.34	1445.67	3870.81	1938.28		5.88	-0.46	0.046
140.00	-14.26	-1.66	0.00	-70.92	0.00	70.92	2807.65	1403.83	3648.75	1827.09		6.37	-0.48	0.044
142.71	-13.86	-1.66	0.00	-66.42	0.00	66.42	2762.24	1381.12	3530.99	1768.12		6.65	-0.49	0.043
145.00	-13.36	-1.65	0.00	-62.64	0.00	62.64	2723.97	1361.98	3433.25	1719.18		6.89	-0.50	0.041
147.30	-12.86	-1.65	0.00	-58.84	0.00	58.84	1707.44	853.72	2174.15	1088.69		7.13	-0.51	0.062
150.00	-12.57	-1.65	0.00	-54.37	0.00	54.37	1688.50	844.25	2114.25	1058.70		7.42	-0.52	0.059
155.00	-12.06	-1.65	0.00	-46.11	0.00	46.11	1652.64	826.32	2004.58	1003.78		7.98	-0.54	0.053
160.00	-9.31	-1.54	0.00	-37.86	0.00	37.86	1615.71	807.86	1896.48	949.65		8.56	-0.57	0.046
165.00	-8.83	-1.52	0.00	-30.15	0.00	30.15	1577.73	788.87	1790.06	896.36		9.16	-0.59	0.039
170.00	-8.36	-1.49	0.00	-22.55	0.00	22.55	1538.69	769.34	1685.46	843.98		9.79	-0.61	0.032
172.50	-4.99	-1.12	0.00	-18.83	0.00	18.83	1518.77	759.38	1633.88	818.16		10.11	-0.61	0.026
175.00	-4.78	-1.09	0.00	-16.04	0.00	16.04	1498.58	749.29	1582.80	792.58		10.43	-0.62	0.023
180.00	-4.38	-1.04	0.00	-10.57	0.00	10.57	1457.41	728.71	1482.21	742.21		11.09	-0.63	0.017
185.00	-2.40	-0.66	0.00	-5.35	0.00	5.35	1406.50	703.25	1375.31	688.68		11.75	-0.64	0.009
190.00	-2.10	-0.59	0.00	-2.06	0.00	2.06	1350.71	675.36	1267.83	634.86		12.43	-0.64	0.005
193.50	0.00	-0.56	0.00	0.00	0.00	0.00	1311.66	655.83	1195.19	598.48		12.90	-0.64	0.000

Calculated Forces

Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 37

Tower Engineering Solutions

Wind Loading - Shaft

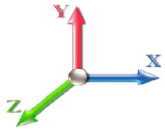
Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 38	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 26

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	266.81	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	262.38	0.650	0.000	5.00	23.916	15.55	127.3	0.0	1512.7
10.00		1.00	0.85	7.442	8.19	257.95	0.650	0.000	5.00	23.516	15.29	125.1	0.0	1487.2
15.00		1.00	0.85	7.442	8.19	253.52	0.650	0.000	5.00	23.115	15.02	123.0	0.0	1461.6
20.00		1.00	0.90	7.896	8.69	256.58	0.650	0.000	5.00	22.715	14.76	128.2	0.0	1436.1
25.00		1.00	0.95	8.276	9.10	258.01	0.650	0.000	5.00	22.315	14.50	132.0	0.0	1410.5
30.00		1.00	0.98	8.600	9.46	258.24	0.650	0.000	5.00	21.914	14.24	134.7	0.0	1385.0
35.00		1.00	1.01	8.883	9.77	257.63	0.650	0.000	5.00	21.514	13.98	136.6	0.0	1359.4
40.00		1.00	1.04	9.137	10.05	256.37	0.650	0.000	5.00	21.113	13.72	137.9	0.0	1333.9
45.00		1.00	1.07	9.366	10.30	254.60	0.650	0.000	5.00	20.713	13.46	138.7	0.0	1308.3
46.66	Bot - Section 2	1.00	1.08	9.438	10.38	253.91	0.650	0.000	1.66	6.802	4.42	45.9	0.0	429.6
50.00	Appurtenance(s)	1.00	1.09	9.576	10.53	252.41	0.650	0.000	3.34	13.758	8.94	94.2	0.0	1614.5
53.33	Top - Section 1	1.00	1.11	9.707	10.68	250.76	0.650	0.000	3.33	13.553	8.81	94.1	0.0	1590.0
55.00		1.00	1.12	9.770	10.75	254.57	0.650	0.000	1.67	6.730	4.37	47.0	0.0	372.3
60.00		1.00	1.14	9.951	10.95	251.79	0.650	0.000	5.00	19.882	12.92	141.5	0.0	1099.8
65.00		1.00	1.16	10.120	11.13	248.76	0.650	0.000	5.00	19.481	12.66	141.0	0.0	1077.5
70.00		1.00	1.17	10.279	11.31	245.50	0.650	0.000	5.00	19.081	12.40	140.2	0.0	1055.1
75.00		1.00	1.19	10.430	11.47	242.04	0.650	0.000	5.00	18.681	12.14	139.3	0.0	1032.8
80.00		1.00	1.21	10.572	11.63	238.41	0.650	0.000	5.00	18.280	11.88	138.2	0.0	1010.4
85.00		1.00	1.22	10.708	11.78	234.63	0.650	0.000	5.00	17.880	11.62	136.9	0.0	988.1
90.00		1.00	1.24	10.838	11.92	230.70	0.650	0.000	5.00	17.479	11.36	135.4	0.0	965.7
94.17	Bot - Section 3	1.00	1.25	10.941	12.04	227.32	0.650	0.000	4.17	14.260	9.27	111.6	0.0	787.7
95.00		1.00	1.25	10.962	12.06	226.64	0.650	0.000	0.83	2.872	1.87	22.5	0.0	291.8
99.83	Top - Section 2	1.00	1.27	11.077	12.18	222.60	0.650	0.000	4.83	16.436	10.68	130.2	0.0	1669.9
100.00		1.00	1.27	11.081	12.19	226.74	0.650	0.000	0.17	0.560	0.36	4.4	0.0	26.6
105.00		1.00	1.28	11.195	12.31	222.48	0.650	0.000	5.00	16.596	10.79	132.8	0.0	786.7
110.00		1.00	1.29	11.305	12.44	218.11	0.650	0.000	5.00	16.195	10.53	130.9	0.0	767.5
115.00		1.00	1.30	11.412	12.55	213.65	0.650	0.000	5.00	15.795	10.27	128.9	0.0	748.4
120.00		1.00	1.32	11.514	12.67	209.09	0.650	0.000	5.00	15.394	10.01	126.7	0.0	729.2
125.00		1.00	1.33	11.614	12.78	204.46	0.650	0.000	5.00	14.994	9.75	124.5	0.0	710.0
130.00		1.00	1.34	11.710	12.88	199.75	0.650	0.000	5.00	14.593	9.49	122.2	0.0	690.9
135.00		1.00	1.35	11.803	12.98	194.97	0.650	0.000	5.00	14.193	9.23	119.8	0.0	671.7
140.00		1.00	1.36	11.894	13.08	190.11	0.650	0.000	5.00	13.793	8.97	117.3	0.0	652.5
142.71	Bot - Section 4	1.00	1.36	11.942	13.14	187.45	0.650	0.000	2.71	7.317	4.76	62.5	0.0	346.1
145.00		1.00	1.37	11.982	13.18	185.20	0.650	0.000	2.29	6.172	4.01	52.9	0.0	482.7
147.30	Top - Section 3	1.00	1.37	12.022	13.22	182.92	0.650	0.000	2.30	6.114	3.97	52.6	0.0	478.1
150.00		1.00	1.38	12.068	13.27	183.20	0.650	0.000	2.70	7.089	4.61	61.2	0.0	224.4
155.00		1.00	1.39	12.152	13.37	178.17	0.650	0.000	5.00	12.803	8.32	111.2	0.0	405.1
160.00	Appurtenance(s)	1.00	1.40	12.233	13.46	173.09	0.650	0.000	5.00	12.403	8.06	108.5	0.0	392.4
165.00		1.00	1.41	12.313	13.54	167.95	0.650	0.000	5.00	12.002	7.80	105.7	0.0	379.6
170.00		1.00	1.42	12.390	13.63	162.76	0.650	0.000	5.00	11.602	7.54	102.8	0.0	366.8
172.50	Appurtenance(s)	1.00	1.42	12.429	13.67	160.15	0.650	0.000	2.50	5.651	3.67	50.2	0.0	178.6
175.00		1.00	1.42	12.466	13.71	157.53	0.650	0.000	2.50	5.551	3.61	49.5	0.0	175.4
180.00		1.00	1.43	12.540	13.79	152.24	0.650	0.000	5.00	10.801	7.02	96.8	0.0	341.3
185.00	Appurtenance(s)	1.00	1.44	12.613	13.87	146.92	0.650	0.000	5.00	10.401	6.76	93.8	0.0	328.5
190.00		1.00	1.45	12.684	13.95	141.55	0.650	0.000	5.00	10.000	6.50	90.7	0.0	315.7
193.50	Appurtenance(s)	1.00	1.45	12.733	14.01	137.76	0.650	0.000	3.50	6.762	4.40	61.6	0.0	213.4

Wind Loading - Shaft

Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 39	

Totals:	**193.50**	**4,809.0**	**37,091.4**

Discrete Appurtenance Forces

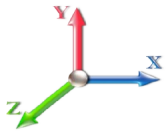
Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 40	

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 26

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	193.50	1900MHz RRH	3	12.767	14.044	0.67	1.00	7.64	180.00	0.000	2.500	107.27	0.00	268.17
2	193.50	Low Profile Platform	1	12.753	14.029	1.00	1.00	25.00	1200.00	0.000	1.500	350.72	0.00	526.08
3	193.50	APXVSPP18-C-A20	3	12.767	14.044	0.83	1.00	19.97	165.00	0.000	2.500	280.45	0.00	701.14
4	193.50	APXVTM14-C-120	3	12.767	14.044	0.79	1.00	15.03	171.00	0.000	2.500	211.02	0.00	527.55
5	193.50	ACU-A20-N	4	12.753	14.029	0.67	1.00	0.38	4.00	0.000	1.500	5.26	0.00	7.90
6	193.50	TD-RRH8x20-25	3	12.767	14.044	0.67	1.00	8.14	210.00	0.000	2.500	114.32	0.00	285.81
7	193.50	800 MHz Filter	3	12.753	14.029	1.00	1.00	1.26	26.40	0.000	1.500	17.68	0.00	26.51
8	193.50	800 MHz RRH	3	12.767	14.044	0.67	1.00	5.00	159.00	0.000	2.500	70.29	0.00	175.72
9	185.00	BXA-70063-6-CF	3	12.613	13.874	0.56	0.80	12.72	51.00	0.000	0.000	176.45	0.00	0.00
10	185.00	Low Profile	1	12.613	13.874	1.00	1.00	22.00	1500.00	0.000	0.000	305.23	0.00	0.00
11	185.00	LPA-80080/6CF	4	12.613	13.874	1.36	0.80	23.56	84.00	0.000	0.000	326.81	0.00	0.00
12	185.00	LPA-800636-6 CF	2	12.613	13.874	0.75	0.80	14.44	54.00	0.000	0.000	200.32	0.00	0.00
13	185.00	BXA-171063-12BF	3	12.613	13.874	0.67	0.80	9.56	45.00	0.000	0.000	132.58	0.00	0.00
14	185.00	FPA5250	1	12.613	13.874	1.00	1.00	1.20	10.00	0.000	0.000	16.65	0.00	0.00
15	185.00	GPS	1	12.613	13.874	0.80	0.80	0.80	10.00	0.000	0.000	11.10	0.00	0.00
16	172.50	RRUS 4449 B5/B12	3	12.429	13.671	0.50	0.75	2.97	213.00	0.000	0.000	40.60	0.00	0.00
17	172.50	RRUS 8843 B2 B66A	3	12.429	13.671	0.50	0.75	2.47	210.00	0.000	0.000	33.80	0.00	0.00
18	172.50	14.5' Platform	1	12.429	13.671	1.00	1.00	24.80	2000.00	0.000	0.000	339.05	0.00	0.00
19	172.50	HRK14	1	12.429	13.671	1.00	1.00	8.13	302.36	0.000	0.000	111.15	0.00	0.00
20	172.50	DMP65R-BU6DA	6	12.429	13.671	0.55	0.75	41.75	379.80	0.000	0.000	570.81	0.00	0.00
21	172.50	ABT-DMDF-ADBH	1	12.429	13.671	0.74	0.75	0.04	1.10	0.000	0.000	0.50	0.00	0.00
22	172.50	DC6-48-60-18-8F	3	12.429	13.671	1.00	1.00	2.76	95.40	0.000	0.000	37.73	0.00	0.00
23	172.50	7770.00	3	12.429	13.671	0.55	0.75	9.03	105.00	0.000	0.000	123.50	0.00	0.00
24	172.50	RRUS 4478 B14	3	12.429	13.671	0.50	0.75	2.49	178.20	0.000	0.000	34.01	0.00	0.00
25	160.00	15" x 14" x 7.5" RRU (70	3	12.233	13.457	0.54	0.80	2.81	210.00	0.000	0.000	37.87	0.00	0.00
26	160.00	T-Arms	3	12.233	13.457	0.56	0.75	13.50	1050.00	0.000	0.000	181.66	0.00	0.00
27	160.00	LNX-6515DS-A1M	3	12.233	13.457	0.64	0.80	22.02	149.40	0.000	0.000	296.35	0.00	0.00
28	160.00	96" x 15.6" x 9"	3	12.233	13.457	0.66	0.80	27.89	540.00	0.000	0.000	375.26	0.00	0.00
29	160.00	RRUS 11	3	12.233	13.457	0.54	0.80	4.05	153.00	0.000	0.000	54.53	0.00	0.00
30	160.00	APX16DWV-16DWVS-E-A	3	12.233	13.457	0.50	0.80	9.84	122.10	0.000	0.000	132.35	0.00	0.00
31	160.00	RRUS 11 (Band 4)	3	12.233	13.457	0.54	0.80	4.05	132.00	0.000	0.000	54.53	0.00	0.00
32	160.00	RRUS 11 (Band 12)	3	12.233	13.457	0.54	0.80	4.05	132.00	0.000	0.000	54.53	0.00	0.00
33	50.00	58532A GPS	1	9.576	10.534	1.00	1.00	0.22	0.40	0.000	0.000	2.32	0.00	0.00
							Totals:		**9,843.16**			**4,806.70**		

Total Applied Force Summary

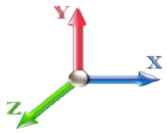
Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 41

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 26

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		127.26	1681.76	0.00	0.00
10.00		125.13	1656.21	0.00	0.00
15.00		123.00	1630.65	0.00	0.00
20.00		128.24	1605.10	0.00	0.00
25.00		132.04	1579.55	0.00	0.00
30.00		134.75	1554.00	0.00	0.00
35.00		136.65	1528.44	0.00	0.00
40.00		137.93	1502.89	0.00	0.00
45.00		138.71	1477.34	0.00	0.00
46.66		45.90	485.80	0.00	0.00
50.00	(1) attachments	96.52	1727.71	0.00	0.00
53.33		94.06	1702.05	0.00	0.00
55.00		47.01	428.52	0.00	0.00
60.00		141.46	1268.07	0.00	0.00
65.00		140.96	1245.72	0.00	0.00
70.00		140.24	1223.36	0.00	0.00
75.00		139.30	1201.00	0.00	0.00
80.00		138.18	1178.64	0.00	0.00
85.00		136.89	1156.28	0.00	0.00
90.00		135.45	1133.92	0.00	0.00
94.17		111.56	927.86	0.00	0.00
95.00		22.51	319.88	0.00	0.00
99.83		130.17	1832.57	0.00	0.00
100.00		4.44	32.16	0.00	0.00
105.00		132.84	954.93	0.00	0.00
110.00		130.91	935.76	0.00	0.00
115.00		128.87	916.60	0.00	0.00
120.00		126.74	897.43	0.00	0.00
125.00		124.51	878.27	0.00	0.00
130.00		122.19	859.11	0.00	0.00
135.00		119.78	839.94	0.00	0.00
140.00		117.30	820.78	0.00	0.00
142.71		62.48	437.39	0.00	0.00
145.00		52.88	559.61	0.00	0.00
147.30		52.56	555.33	0.00	0.00
150.00		61.17	315.32	0.00	0.00
155.00		111.24	573.37	0.00	0.00
160.00	(24) attachments	1295.56	3049.09	0.00	0.00
165.00		105.66	536.82	0.00	0.00
170.00		102.78	524.04	0.00	0.00
172.50	(24) attachments	1341.37	3742.09	0.00	0.00
175.00		49.47	232.56	0.00	0.00
180.00		96.85	455.54	0.00	0.00
185.00	(15) attachments	1262.93	2196.76	0.00	0.00
190.00		90.69	334.79	0.00	0.00
193.50	(23) attachments	1218.58	2342.15	0.00	2518.88

Total Applied Force Summary

Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 42

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Totals:	**9,615.70**	**53,037.16**	**0.00**	**2,518.88**

Calculated Forces

Structure:	CT12210-A-SBA	**Code:**	EIA/TIA-222-G	1/30/2020	
Site Name:	Goshen 3, CT	**Exposure:**	C		
Height:	193.50 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 43	

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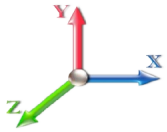
Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 26

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	-53.03	-9.64	0.00	-1377.9	0.00	1377.98	6408.64	3204.32	14863.6	7442.88	0.00	0.000	0.000	0.193
5.00	-51.34	-9.56	0.00	-1329.7	0.00	1329.78	6332.44	3166.22	14438.7	7230.12	0.03	-0.053	0.000	0.192
10.00	-49.68	-9.48	0.00	-1281.9	0.00	1281.98	6255.18	3127.59	14017.4	7019.15	0.11	-0.107	0.000	0.191
15.00	-48.04	-9.40	0.00	-1234.5	0.00	1234.58	6176.86	3088.43	13599.8	6810.05	0.25	-0.162	0.000	0.189
20.00	-46.42	-9.31	0.00	-1187.5	0.00	1187.58	6097.47	3048.74	13186.1	6602.88	0.45	-0.218	0.000	0.187
25.00	-44.84	-9.22	0.00	-1141.0	0.00	1141.02	6017.03	3008.51	12776.3	6397.69	0.71	-0.274	0.000	0.186
30.00	-43.27	-9.12	0.00	-1094.9	0.00	1094.94	5935.52	2967.76	12370.7	6194.55	1.03	-0.331	0.000	0.184
35.00	-41.74	-9.01	0.00	-1049.3	0.00	1049.35	5852.95	2926.48	11969.2	5993.52	1.41	-0.389	0.000	0.182
40.00	-40.23	-8.91	0.00	-1004.2	0.00	1004.29	5768.82	2884.41	11571.1	5794.16	1.85	-0.448	0.000	0.180
45.00	-38.74	-8.78	0.00	-959.76	0.00	959.76	5657.24	2828.62	11125.6	5571.07	2.35	-0.507	0.000	0.179
46.66	-38.25	-8.75	0.00	-945.15	0.00	945.15	5620.12	2810.06	10979.3	5497.83	2.53	-0.528	0.000	0.179
50.00	-36.52	-8.67	0.00	-915.95	0.00	915.95	5545.66	2772.83	10688.8	5352.37	2.91	-0.568	0.000	0.178
53.33	-34.81	-8.57	0.00	-887.09	0.00	887.09	4757.51	2378.75	9242.35	4628.04	3.32	-0.609	0.000	0.199
55.00	-34.38	-8.55	0.00	-872.78	0.00	872.78	4734.55	2367.28	9135.77	4574.68	3.54	-0.630	0.000	0.198
60.00	-33.10	-8.43	0.00	-830.04	0.00	830.04	4665.11	2332.55	8818.95	4416.03	4.24	-0.697	0.000	0.195
65.00	-31.85	-8.31	0.00	-787.90	0.00	787.90	4594.60	2297.30	8505.61	4259.13	5.00	-0.764	0.000	0.192
70.00	-30.62	-8.19	0.00	-746.35	0.00	746.35	4523.04	2261.52	8195.87	4104.03	5.84	-0.831	0.000	0.189
75.00	-29.41	-8.07	0.00	-705.40	0.00	705.40	4450.41	2225.20	7889.86	3950.80	6.74	-0.900	0.000	0.185
80.00	-28.23	-7.94	0.00	-665.07	0.00	665.07	4363.37	2181.68	7564.56	3787.90	7.72	-0.968	0.000	0.182
85.00	-27.06	-7.82	0.00	-625.35	0.00	625.35	4265.74	2132.87	7228.13	3619.44	8.77	-1.037	0.000	0.179
90.00	-25.92	-7.69	0.00	-586.26	0.00	586.26	4168.10	2084.05	6899.36	3454.81	9.90	-1.107	0.000	0.176
94.17	-24.99	-7.58	0.00	-554.21	0.00	554.21	4086.74	2043.37	6631.22	3320.54	10.89	-1.165	0.000	0.173
95.00	-24.67	-7.56	0.00	-547.90	0.00	547.90	4070.47	2035.23	6578.23	3294.01	11.09	-1.177	0.000	0.172
99.83	-22.83	-7.41	0.00	-511.33	0.00	511.33	3418.29	1709.14	5518.43	2763.32	12.32	-1.245	0.000	0.192
100.00	-22.80	-7.42	0.00	-510.10	0.00	510.10	3416.28	1708.14	5510.73	2759.46	12.36	-1.247	0.000	0.192
105.00	-21.84	-7.30	0.00	-473.00	0.00	473.00	3355.57	1677.79	5281.30	2644.58	13.71	-1.324	0.000	0.185
110.00	-20.89	-7.17	0.00	-436.52	0.00	436.52	3293.81	1646.90	5055.01	2531.26	15.14	-1.400	0.000	0.179
115.00	-19.97	-7.04	0.00	-400.67	0.00	400.67	3226.08	1613.04	4824.64	2415.91	16.65	-1.475	0.000	0.172
120.00	-19.07	-6.92	0.00	-365.45	0.00	365.45	3142.39	1571.20	4576.34	2291.57	18.23	-1.550	0.000	0.166
125.00	-18.19	-6.79	0.00	-330.86	0.00	330.86	3058.71	1529.35	4334.61	2170.52	19.89	-1.623	0.000	0.158
130.00	-17.32	-6.67	0.00	-296.89	0.00	296.89	2975.02	1487.51	4099.43	2052.76	21.63	-1.695	0.000	0.150
135.00	-16.48	-6.54	0.00	-263.56	0.00	263.56	2891.34	1445.67	3870.81	1938.28	23.44	-1.765	0.000	0.142
140.00	-15.66	-6.41	0.00	-230.85	0.00	230.85	2807.65	1403.83	3648.75	1827.09	25.33	-1.832	0.000	0.132
142.71	-15.22	-6.34	0.00	-213.45	0.00	213.45	2762.24	1381.12	3530.99	1768.12	26.38	-1.867	0.000	0.126
145.00	-14.66	-6.28	0.00	-198.94	0.00	198.94	2723.97	1361.98	3433.25	1719.18	27.28	-1.897	0.000	0.121
147.30	-14.10	-6.22	0.00	-184.52	0.00	184.52	1707.44	853.72	2174.15	1088.69	28.20	-1.925	0.000	0.178
150.00	-13.78	-6.16	0.00	-167.71	0.00	167.71	1688.50	844.25	2114.25	1058.70	29.30	-1.957	0.000	0.167
155.00	-13.20	-6.04	0.00	-136.91	0.00	136.91	1652.64	826.32	2004.58	1003.78	31.39	-2.033	0.000	0.144
160.00	-10.20	-4.65	0.00	-106.69	0.00	106.69	1615.71	807.86	1896.48	949.65	33.56	-2.101	0.000	0.119
165.00	-9.66	-4.53	0.00	-83.44	0.00	83.44	1577.73	788.87	1790.06	896.36	35.79	-2.158	0.000	0.099
170.00	-9.14	-4.42	0.00	-60.77	0.00	60.77	1538.69	769.34	1685.46	843.98	38.08	-2.207	0.000	0.078
172.50	-5.45	-2.93	0.00	-49.73	0.00	49.73	1518.77	759.38	1633.88	818.16	39.24	-2.227	0.000	0.064
175.00	-5.22	-2.88	0.00	-42.40	0.00	42.40	1498.58	749.29	1582.80	792.58	40.41	-2.245	0.000	0.057
180.00	-4.77	-2.76	0.00	-28.01	0.00	28.01	1457.41	728.71	1482.21	742.21	42.78	-2.275	0.000	0.041
185.00	-2.62	-1.42	0.00	-14.19	0.00	14.19	1406.50	703.25	1375.31	688.68	45.17	-2.294	0.000	0.022
190.00	-2.29	-1.31	0.00	-7.11	0.00	7.11	1350.71	675.36	1267.83	634.86	47.58	-2.305	0.000	0.013
193.50	0.00	-1.22	0.00	-2.52	0.00	2.52	1311.66	655.83	1195.19	598.48	49.27	-2.309	0.000	0.004

Calculated Forces

Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 44

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Final Analysis Summary

Structure:	CT12210-A-SBA		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 45

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Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 89 mph Wind	34.0	0.00	63.59	0.00	0.00	4893.39
0.9D + 1.6W 89 mph Wind	33.9	0.00	47.68	0.00	0.00	4811.59
1.2D + 1.0Di + 1.0Wi 40 mph Wind	7.7	0.00	103.75	0.00	0.00	1142.65
1.2D + 1.0E	2.4	0.00	63.64	0.00	0.00	343.33
0.9D + 1.0E	2.4	0.00	47.73	0.00	0.00	337.31
1.0D + 1.0W 60 mph Wind	9.6	0.00	53.03	0.00	0.00	1377.98

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	-40.75	-30.44	0.00	-3156.8	0.00	-3156.8	4757.51	2378.7	9242.35	4628.04	53.33	0.691
0.9D + 1.6W 89 mph Wind	-30.30	-30.02	0.00	-3088.1	0.00	-3088.1	4757.51	2378.7	9242.35	4628.04	53.33	0.674
1.2D + 1.0Di + 1.0Wi 40 mph Wind	-75.01	-7.04	0.00	-746.27	0.00	-746.27	4757.51	2378.7	9242.35	4628.04	53.33	0.177
1.2D + 1.0E	-17.15	-1.69	0.00	-60.10	0.00	-60.10	1707.44	853.72	2174.15	1088.69	147.30	0.065
0.9D + 1.0E	-12.86	-1.65	0.00	-58.84	0.00	-58.84	1707.44	853.72	2174.15	1088.69	147.30	0.062
1.0D + 1.0W 60 mph Wind	-34.81	-8.57	0.00	-887.09	0.00	-887.09	4757.51	2378.7	9242.35	4628.04	53.33	0.199

Base Plate Summary

Structure:	CT12210-A-SB		**Code:**	EIA/TIA-222-G	1/30/2020
Site Name:	Goshen 3, CT		**Exposure:**	C	
Height:	193.50 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 46

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Reactions		Base Plate		Anchor Bolts	
Original Design		**Yield (ksi):**	60.00	**Bolt Circle:**	66.00
Moment (kip-ft):	4719.00	**Width (in):**	72.00	**Number Bolts:**	24.00
Axial (kip):	33.60	**Style:**	Round	**Bolt Type:**	2.25" 18J
Shear (kip):	51.50	**Polygon Sides:**	0.00	**Bolt Diameter (in):**	2.25
Analysis		**Clip Length (in):**	0.00	**Yield (ksi):**	75.00
Moment (kip-ft):	4893.39	**Effective Len (in):**	12.82	**Ultimate (ksi):**	100.00
Axial (kip):	103.75	**Moment (kip-in):**	686.73	**Arrangement:**	Radial
Shear (kip):	33.96	**Allow Stress (ksi):**	81.00	**Cluster Dist (in):**	0.00
		Applied Stress (ksi):	0.00	**Start Angle (deg):**	0.00
Moment Design %:	103.70	**Stress Ratio:**	0.78	Compression	
				Force (kip):	152.61
				Allowable (kip):	260.00
				Ratio:	0.60
				Tension	
				Force (kip):	143.96
				Allowable (kip):	260.00
				Ratio:	0.56

Monopole Mat Foundation Design

			Date: 1/30/2020
Customer Name:	AT&T	**EIA/TIA Standard:**	EIA-222-G
Site Name:		**Structure Height (Ft.):**	193.5
Site Number:	CT12210-A-SBA	**Engineer Name:**	T. Alajaj
Engr. Number:	91694	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

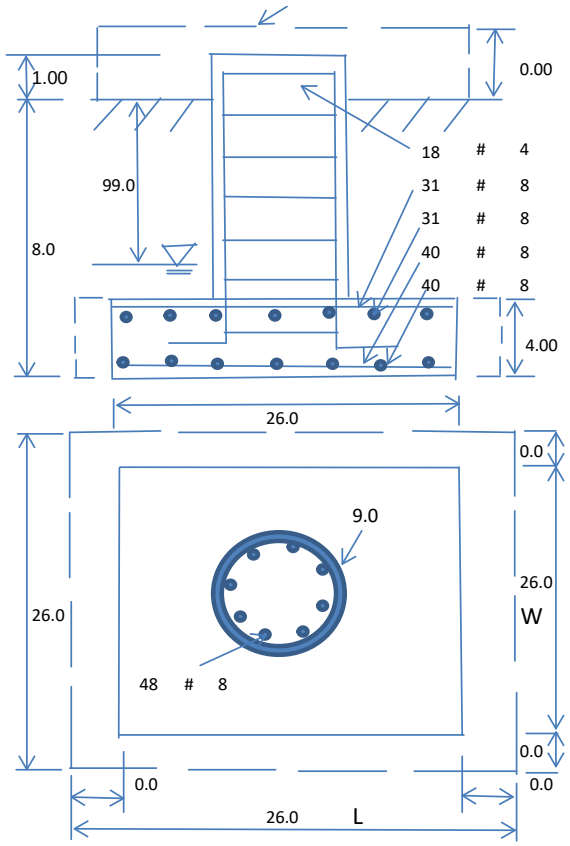
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	103.8	Shear Force (Kips):	34.0
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4893.4
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	9.0	Depth of Base BG (ft.):	8.0
Pier Height A. G. (ft.):	1.00	Thickness of Pad (ft):	4.00
Length of Pad (ft.):	26	Width of Pad (ft.):	26
Final Length of pad (ft)	26.0	Final width of pad (ft):	26.0



Material Properties and Reabr Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	48	Tie Spacing (in):	6.0	
Pad Rebar Yield (Ksi):	60	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):	40	Qty. of Rebar in Pad (W):	40	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	31	Qty. of Rebar in Pad (W):	31	
Apply 1.35 factor for e/w Per G:	1.35			

Soil Design Parameters:

Soil Unit Weight (pcf):	125.0	Soil Buoyant Weight:	50.0	Pcf		
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:	175	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.):	2449.53	Total Dry Soil Weight (Kips):	306.19
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	306.19	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	3022.09	Total Dry Concrete Weight (Kips):	453.31
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	453.31	Total Vertical Load on Base (Kips):	863.30

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	3276	<	Allowable Factored Soil Bearing (psf):	9000	0.36	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	10235.6	>	Design Factored Momont (kips-ft):	5199	0.51	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.97	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		
					Load/ Capacity Ratio	
(1) Concrete Pier:						
Vertical Steel Rebar Area (sq. in./each):	0.79		Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	8510.3	>	Design Factored Moment (Mu, Kips-F	5063.4	0.59	OK!
Calculated Shear Capacity (Kips):	1214.7	>	Design Factored Shear (Kips):	34.0	0.03	OK!
Calculated Tension Capacity (Tn, Kips):	2047.7	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	16129.4	>	Design Factored Axial Load (Pu Kips):	103.8	0.01	OK!
Moment & Axial Strength Combination:	0.59	OK!	Check Tie Spacing (Design/Required):		0.5	OK!
Pier Reinforcement Ratio:	0.004		Reinforcement Ratio is too small			
(2).Concrete Pad:						
One-Way Design Shear Capacity (L-Direction, Kips):	1317.2	>	One-Way Factored Shear (L-D. Kips):	254.6	0.19	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1317.2	>	One-Way Factored Shear (W-D., Kips)	254.6	0.19	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	1031.1	>	One-Way Factored Shear (C-C, Kips):	241.0	0.23	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0023	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0023		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	6200.8	>	Moment at Bottom (L-Dir. K-Ft):	1601.9	0.26	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	6200.8	>	Moment at Bottom (W-Dir. K-Ft):	1601.9	0.26	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	8711.0	>	Moment at Bottom (C-C Dir. K-Ft):	2265.5	0.26	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0018	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0018		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	4827.8	>	Moment at the top (L-Dir K-Ft):	629.8	0.13	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	4827.8	>	Moment at the top (W-Dir K-Ft):	629.8	0.13	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	6792.6	>	Moment at the top (C-C Dir. K-Ft):	598.3	0.09	OK!
(3).Check Punching Shear Capacity due to Moment in the Pier:						
Moment transferred by punching shear:	1957.4	k-ft.	Max. factored shear stress v_{u_CD}:		0.4	Psi
Max. factored shear stress v_{u_AB}:	8.0	Psi	Factored shear Strength ϕv_n:		189.7	Psi
Max. factored shear stress v_u:	8.0	Psi	Check Usage of Punching Shear Capacity:		0.04	OK!

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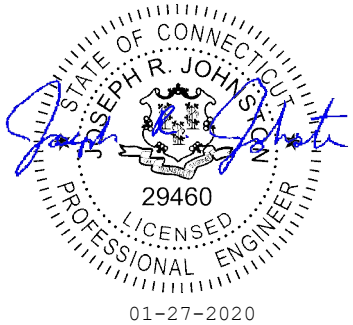
1033 WATERVLIET SHAKER RD, ALBANY, NY 12205

Post Mod Mount Analysis Report

January 27, 2020

Site Name	Goshen CT Brush Hill
Site Number	CTL01238
FA Number	10126665
PACE Number	MRCTB041482 / MRCTB041377 / MRCTB041509 MRCTB041732 / MRCTB041570
PTN Number	2051A0QAF9 / 2051A0Q91R / 2051A0QA5T 2051A0Q90S / 2051A0Q7XC
Infinigy Job Number	1106-A0001-B
Client	Smartlink
Carrier	AT&T Mobility
Site Location	113 Brush Hill Road Goshen, CT 06756 Litchfield County 41.7971694 N NAD83 73.2216750 W NAD83
Mount Centerline EL.	172.5 ft
Mount Type	Platform
Structural Usage Ratio	**83.2%**
Overall Result	**Pass**

Upon reviewing the results of this analysis, it is our opinion that the post modification mount meets the specified TIA code requirements. The mount and connections are therefore deemed adequate to support the existing and proposed loading as listed in this report.



Thomas Marr
Project Engineer I

Contents

Introduction

Infinigy Engineering has been requested to perform a post modification mount analysis on the existing AT&T Mobility mounts. All referenced supporting documents have been obtained from the client and are assumed to be accurate and applicable to this site. The mount was analyzed using RISA-3D Version 17.0.4 analysis software.

Supporting Documentation

RFDS	RFDS ID #3084507, dated December 13, 2019
Construction Drawings	Infinigy Engineering, PLLC. Job #499-006, dated December 30, 2019
Site Photos	Smartlink Provided, dated June 28, 2019
Mount Spec Sheet	SitePro1 P/N: RMQLP-372, dated July 8, 2015

Analysis Code Requirements

Wind Speed	115 mph (3-Second Gust)
Wind Speed w/ Ice	50 mph (3 Second Gust) w/ 1" Ice
TIA Revision	ANSI/TIA-222-H
Adopted IBC	2018 IBC / 2018 Connecticut State Building Code
Structure Class	II
Exposure Category	B
Topographic Category	1
Spectral Response	S_s = 0.181 g, S_1 = 0.065 g
Site Class	D - Stiff Soil
HMSL	1235 ft.

Conclusion

Upon reviewing the results of this analysis, it is our opinion that the post modification mount meets the specified TIA code requirements. The mount and connections are therefore deemed adequate to support the existing and proposed loading as listed in this report.

If you have any questions, require additional information, or actual conditions differ from those as detailed in this report please contact me via the information below:

Thomas Marr
Project Engineer I | **INFINIGY**
1033 Watervilet Shaker Road, Albany, NY 12205
(O) (518) 690-0802
tmarr@infinigy.com | www.infinigy.com

Final Configuration Loading

Mount CL (ft)	Vert. O/S (ft)	Rad. HT (ft)	Horiz. O/S (ft) (1)	Qty	Appurtenance	Carrier
172.5	0.0	172.5	13.2	3	POWERWAVE 7770	AT&T
			1.5, 7.3	6	CCI DMP65R-BU6DA	
			1.5	3	ERICSSON 4449 B5/B12	
			7.3	3	ERICSSON B14 4478	
			7.3	3	ERICSSON 8843 B2/B66A	
			--	3	RAYCAP DC6-48-60-18-8F	

(1) Horizontal Offset is defined as the distance from the left most edge of the mount face horizontal when viewed facing the tower

Mount Usages

Horizontals	22.3%	Pass
Standoffs	53.8%	Pass
Mount Pipes	83.2%	Pass
Bracing	27.8%	Pass
Support Rail	30.9%	Pass
Bolts	33.4%	Pass
Max Usage	**83.2%**	**Pass**

Mount Connection Usages

Reaction Data	Design Capacity*	Analysis Reactions	Results
Max Tension (lbs.)	20340.15	6787.58	33.4%
Max Shear (lbs.)	12425.24	599.25	4.8%
Unity Check	-	-	11.4%

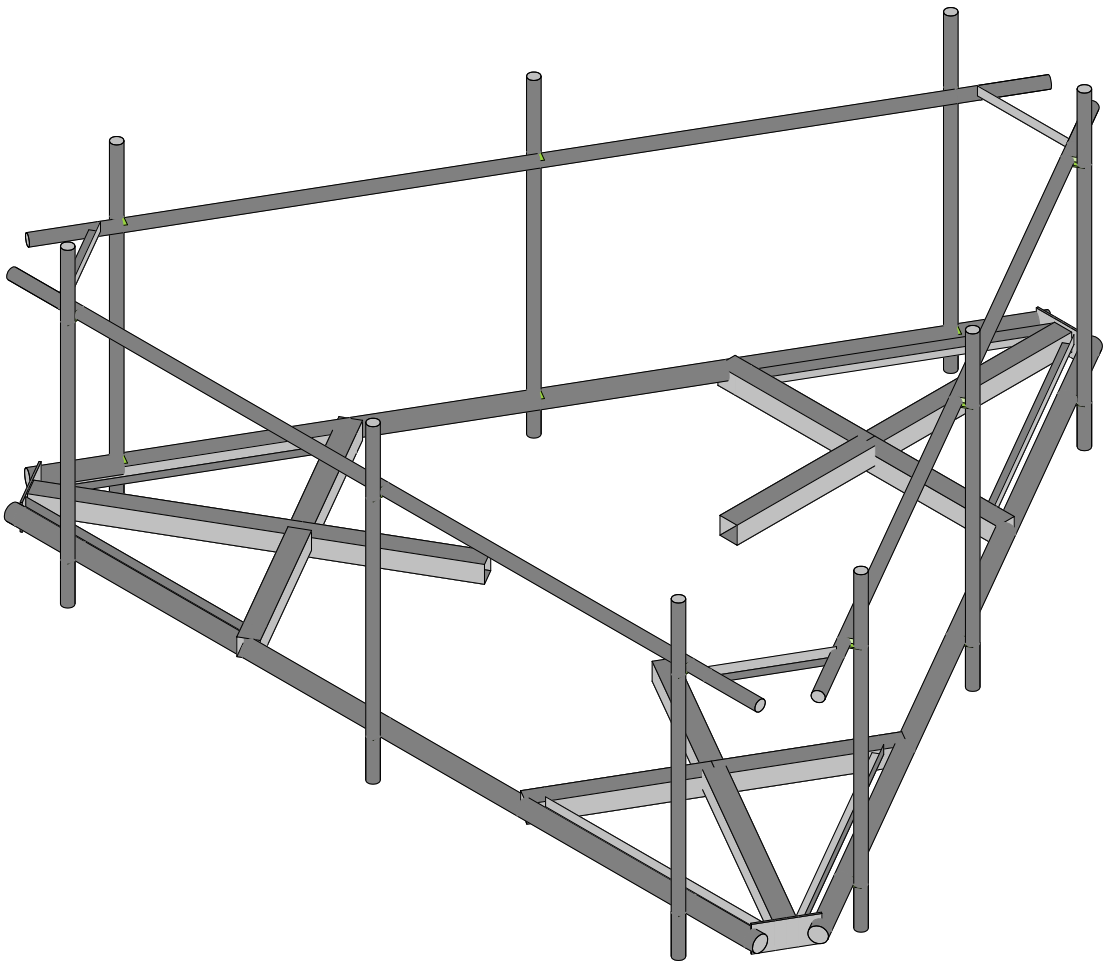
***Assumed (1) 0.625" A325 Bolts, Total (4) per Connection. Contractor to field verify prior to proposed installation.**

Assumptions and Limitations

Our structural calculations are completed assuming all information provided to Infinigy Engineering is accurate and applicable to this site. For the purposes of calculations, we assume an overall structure condition of "like new" and all members and connections to be free of corrosion and/or structural defects. The structure owner and/or contractor shall verify the structure's condition prior to installation of any proposed equipment. If actual conditions differ from those described in this report Infinigy Engineering should be notified immediately to complete a revised evaluation.

Our evaluation is completed using standard TIA, AISC, ACI, and ASCE methods and procedures. Our structural results are proprietary and should not be used by others as their own. Infinigy Engineering is not responsible for decisions made by others that are or are not based on our supplied assumptions and conclusions.

This report is an evaluation of the proposed carriers mount structure only and does not reflect adequacy of the existing tower, other mounts, or coax mounting attachments. These elements are assumed to be adequate for the purposes of this analysis and are assumed to have been installed per their manufacturer requirements.



Envelope Only Solution

Infinigy Engineering, PLLC.	Goshen CT Brush Hill	Final Configuration
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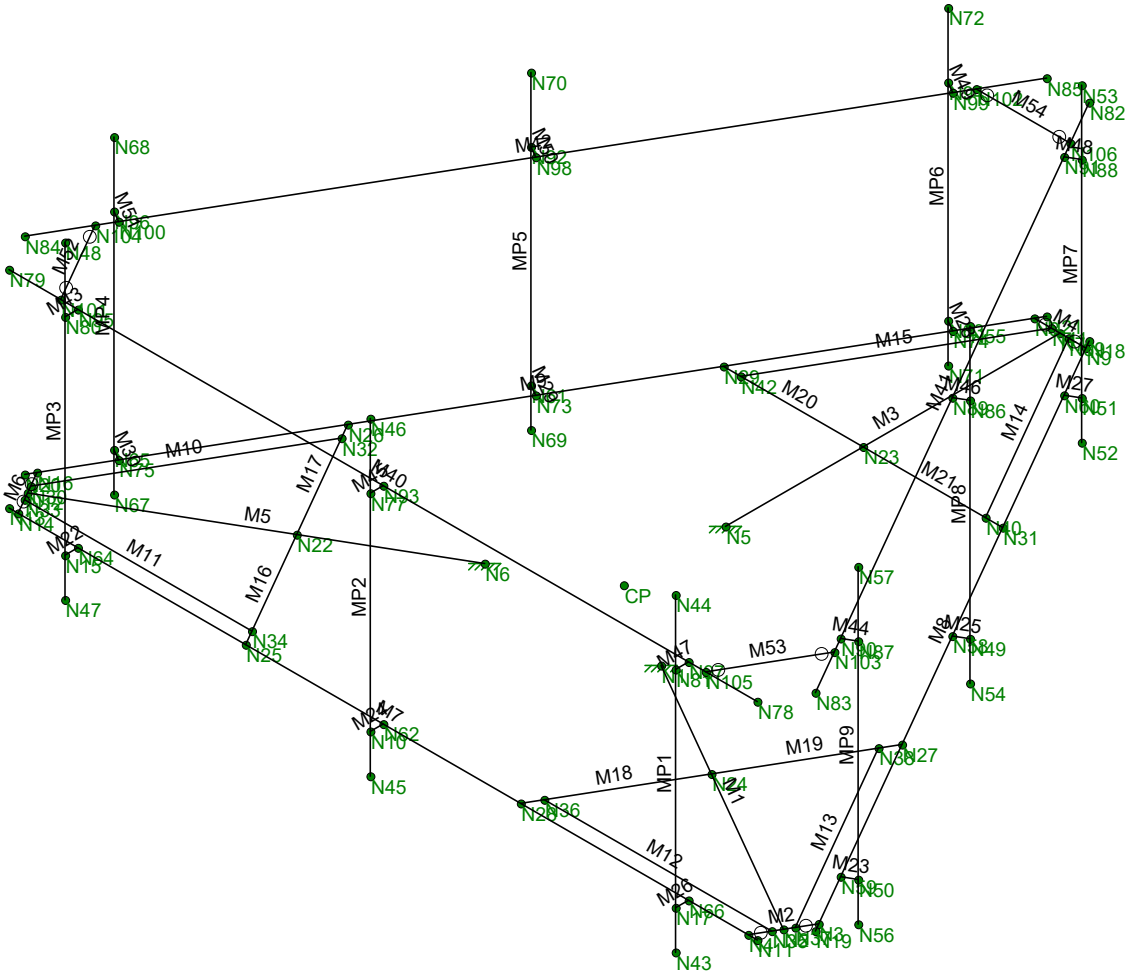

Envelope Only Solution

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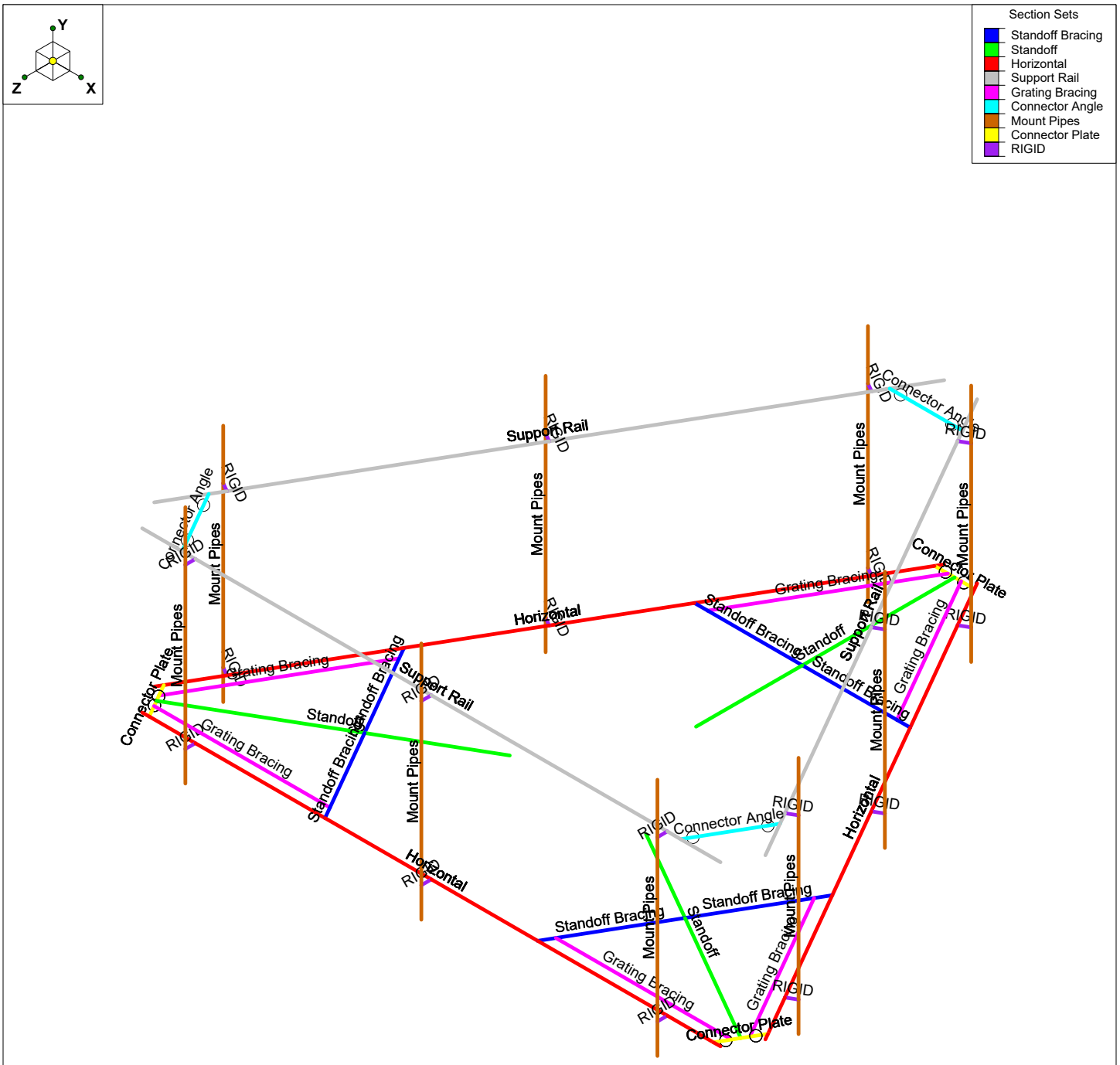

Envelope Only Solution

Infinigy Engineering, PLLC.	Goshen CT Brush Hill	Section Sets
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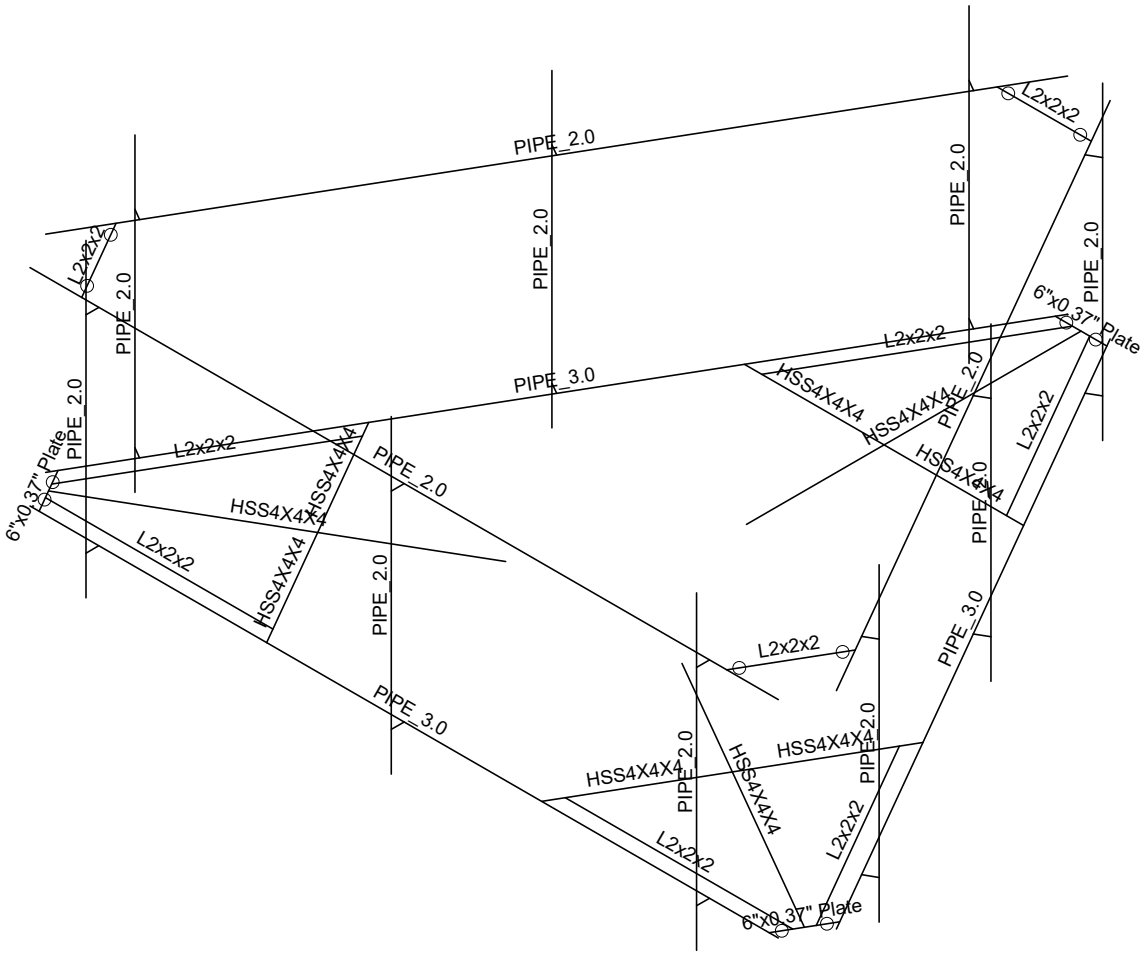

Envelope Only Solution

Infinigy Engineering, PLLC.	Goshen CT Brush Hill	Member Shape
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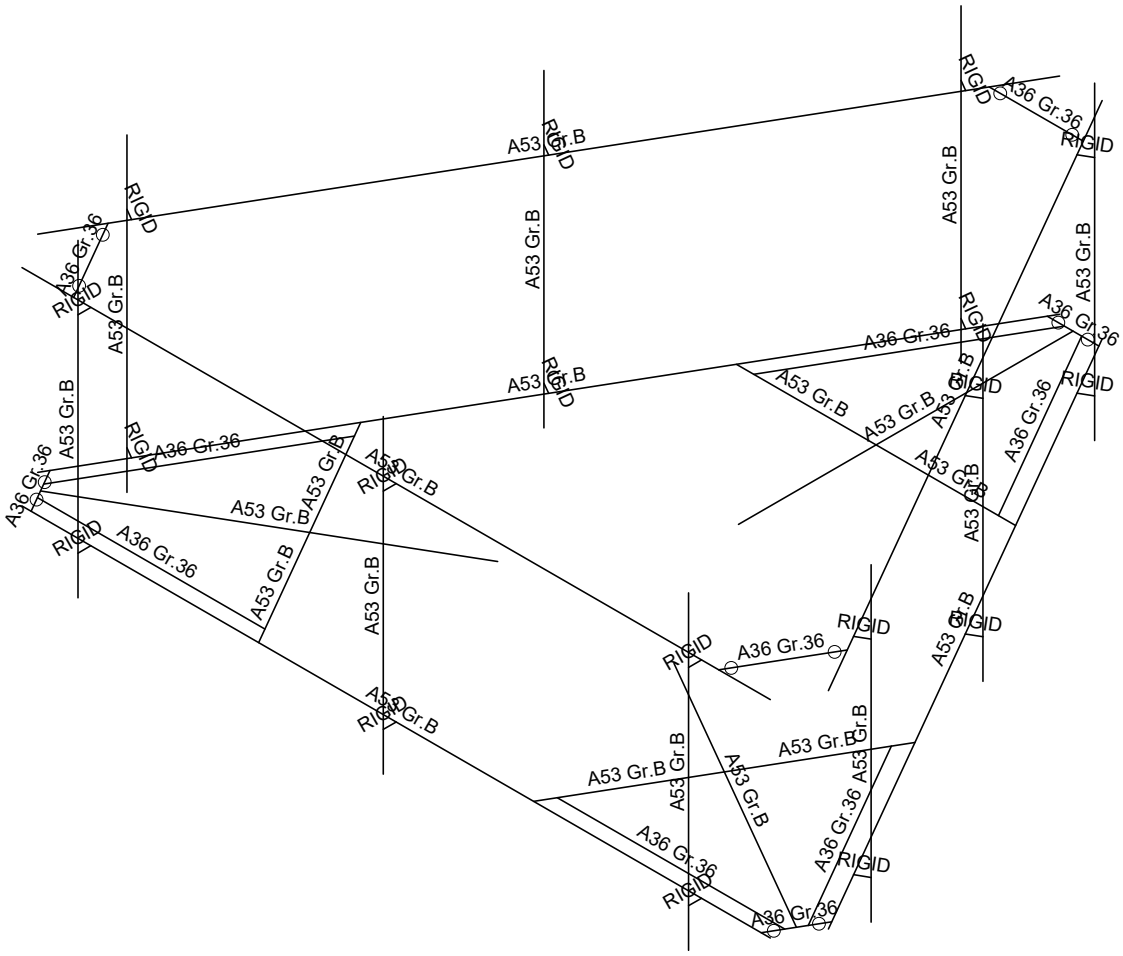

Envelope Only Solution

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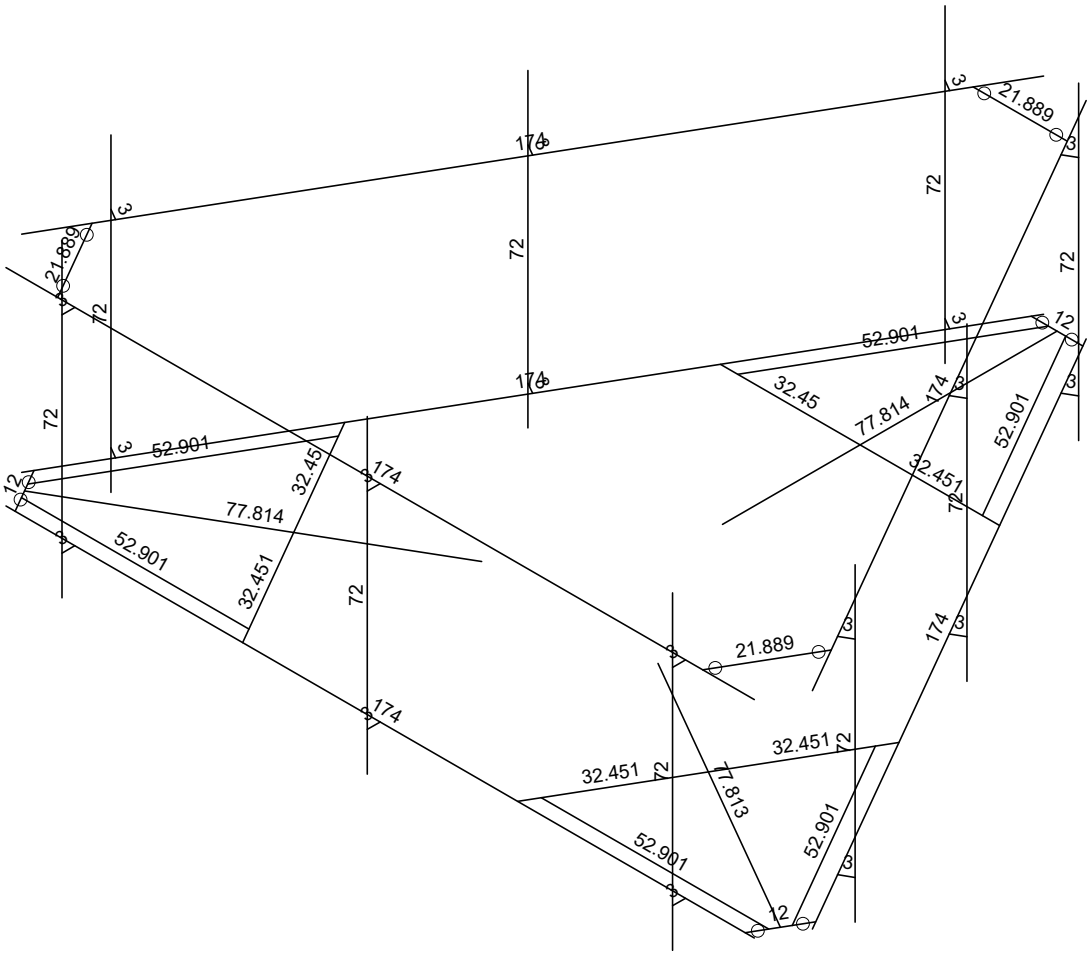

Member Length (in) Displayed
Envelope Only Solution

Infinigy Engineering, PLLC.	Goshen CT Brush Hill	Member Length
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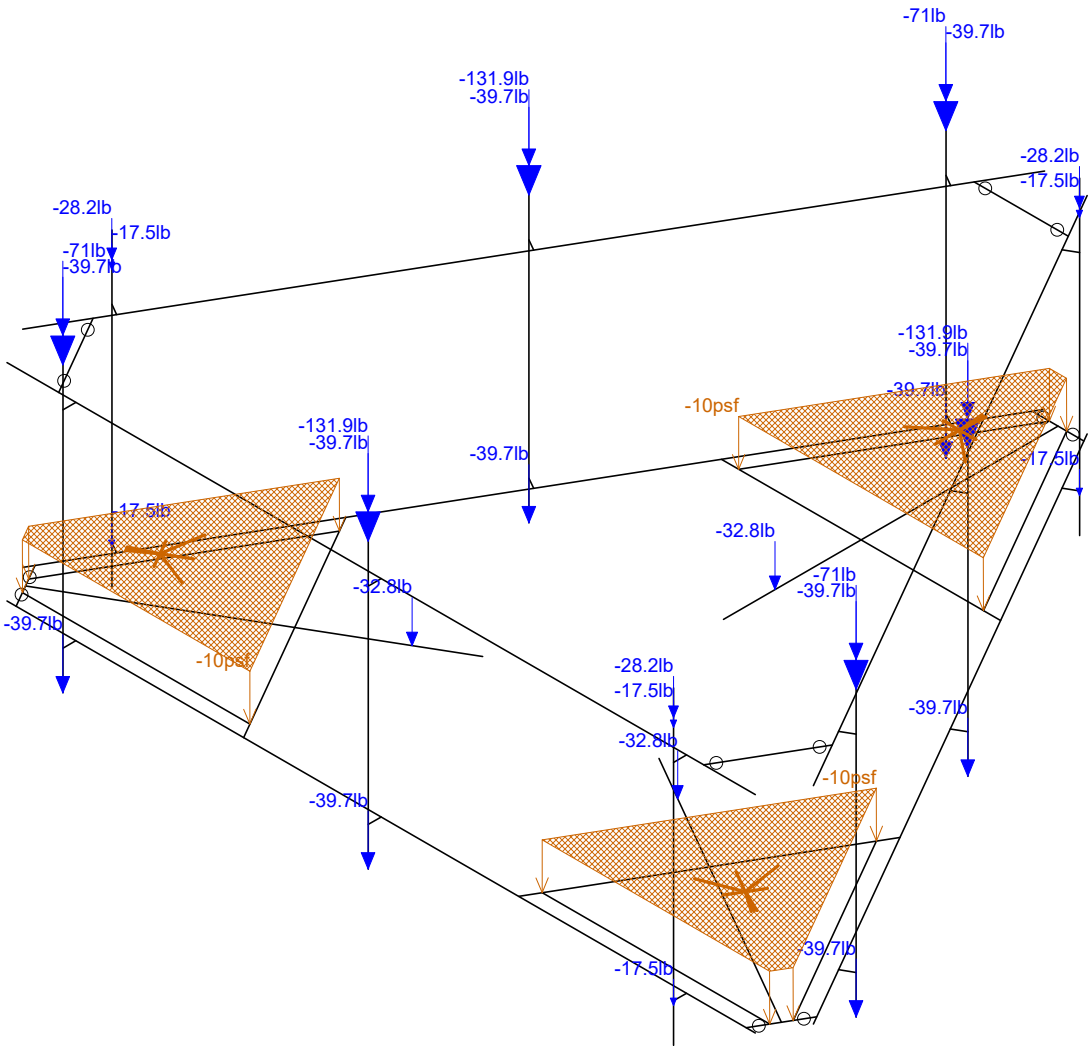

Loads: BLC 1, Self Weight
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Infinigy Engineering, PLLC.	Goshen CT Brush Hill	Self Weight
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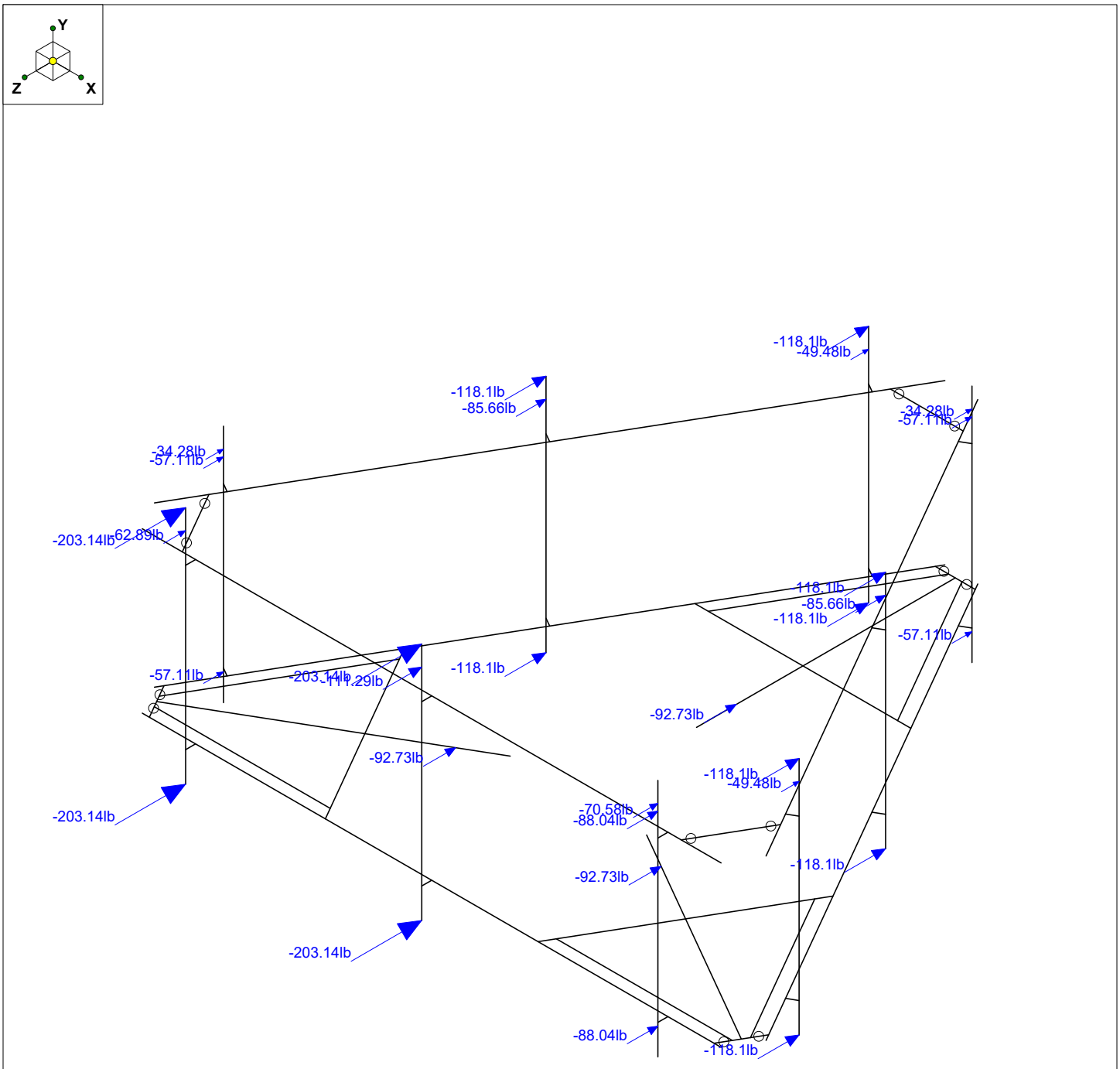

Loads: BLC 2, Wind Load AZI 0
Envelope Only Solution

Infinigy Engineering, PLLC.	Goshen CT Brush Hill	Wind Load AZI 000
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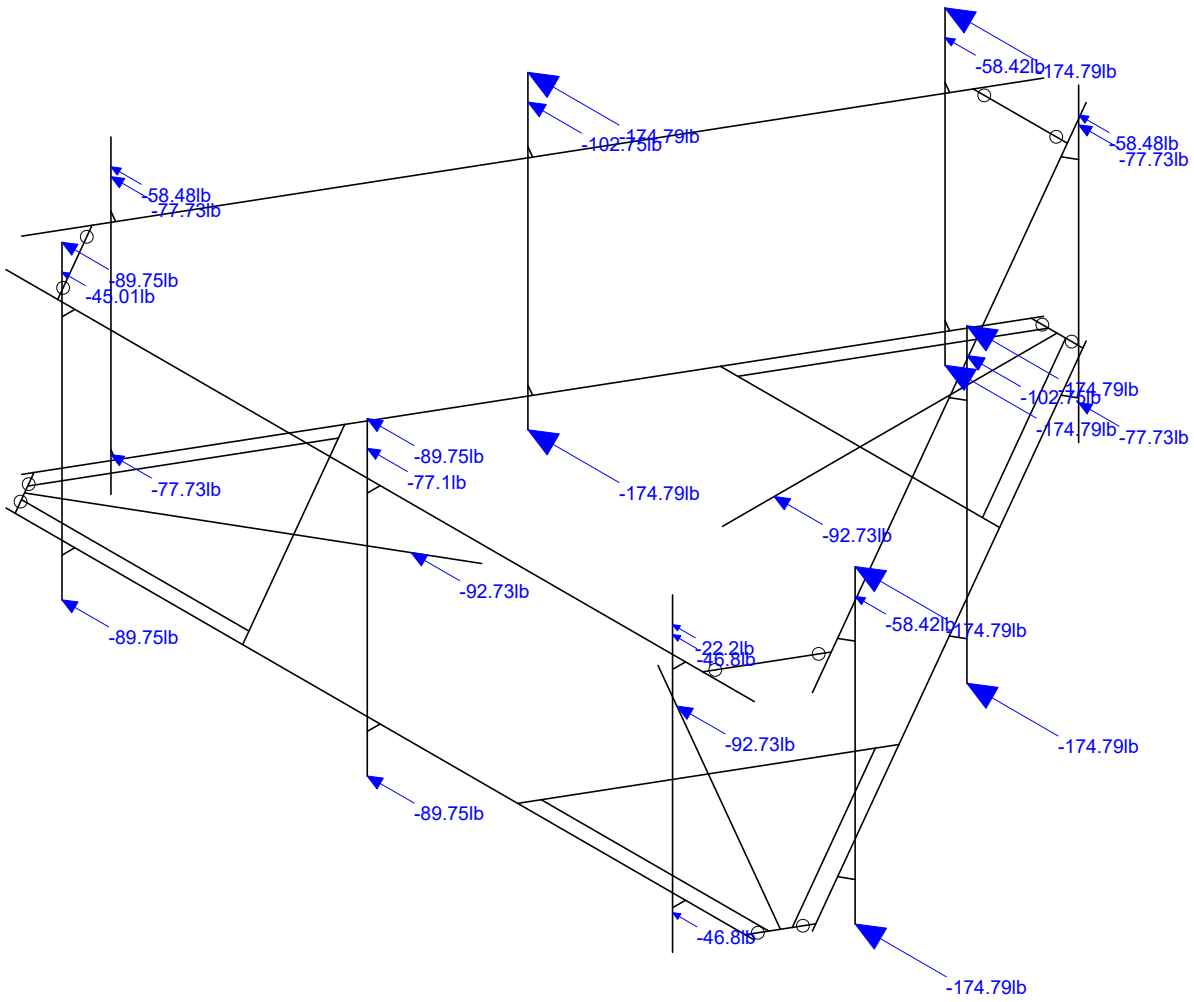

Loads: BLC 5, Wind Load AZI 90
Envelope Only Solution

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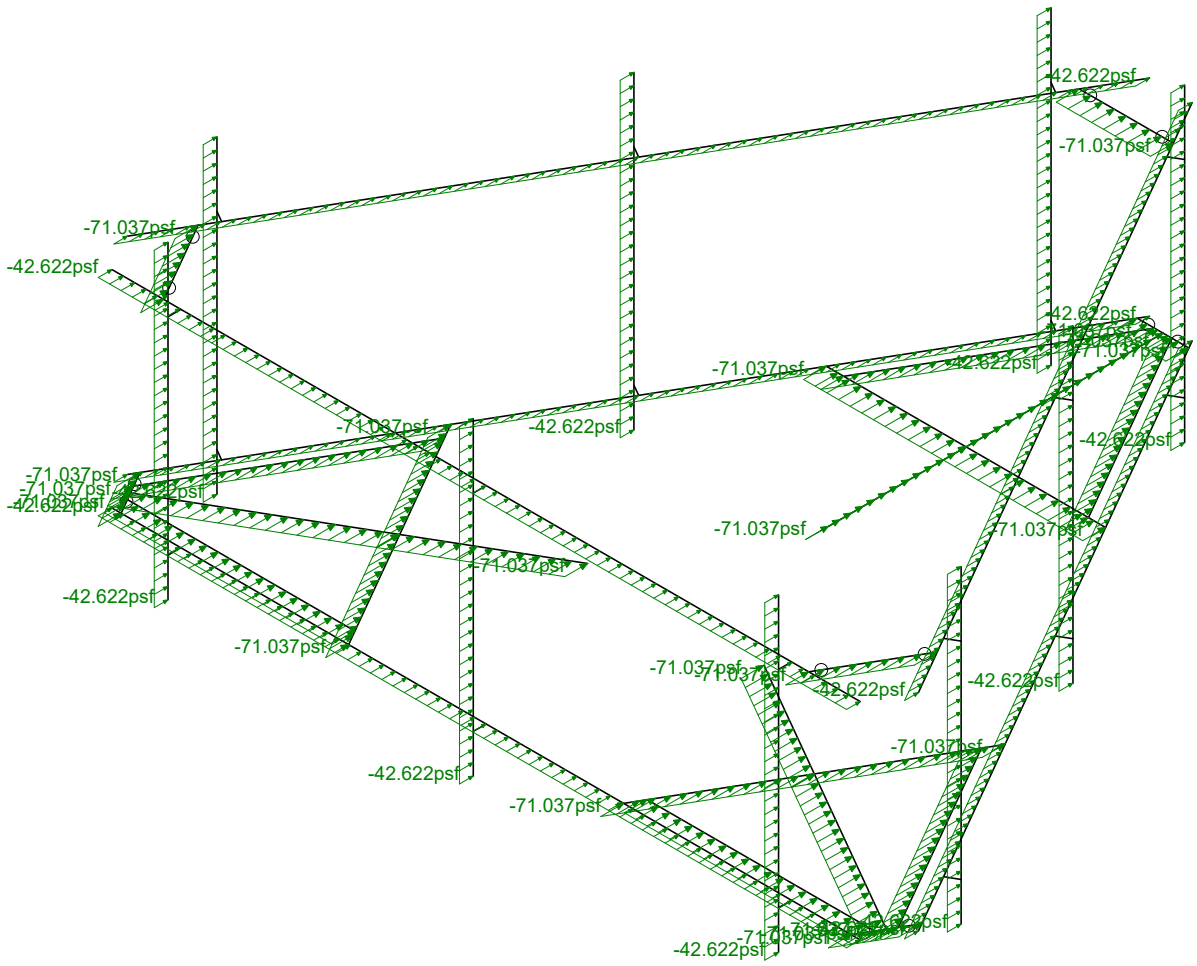

Loads: BLC 14, Distr. Wind Load Z
Envelope Only Solution

Infinigy Engineering, PLLC.	Goshen CT Brush Hill	Distr Wind Load AZI 000
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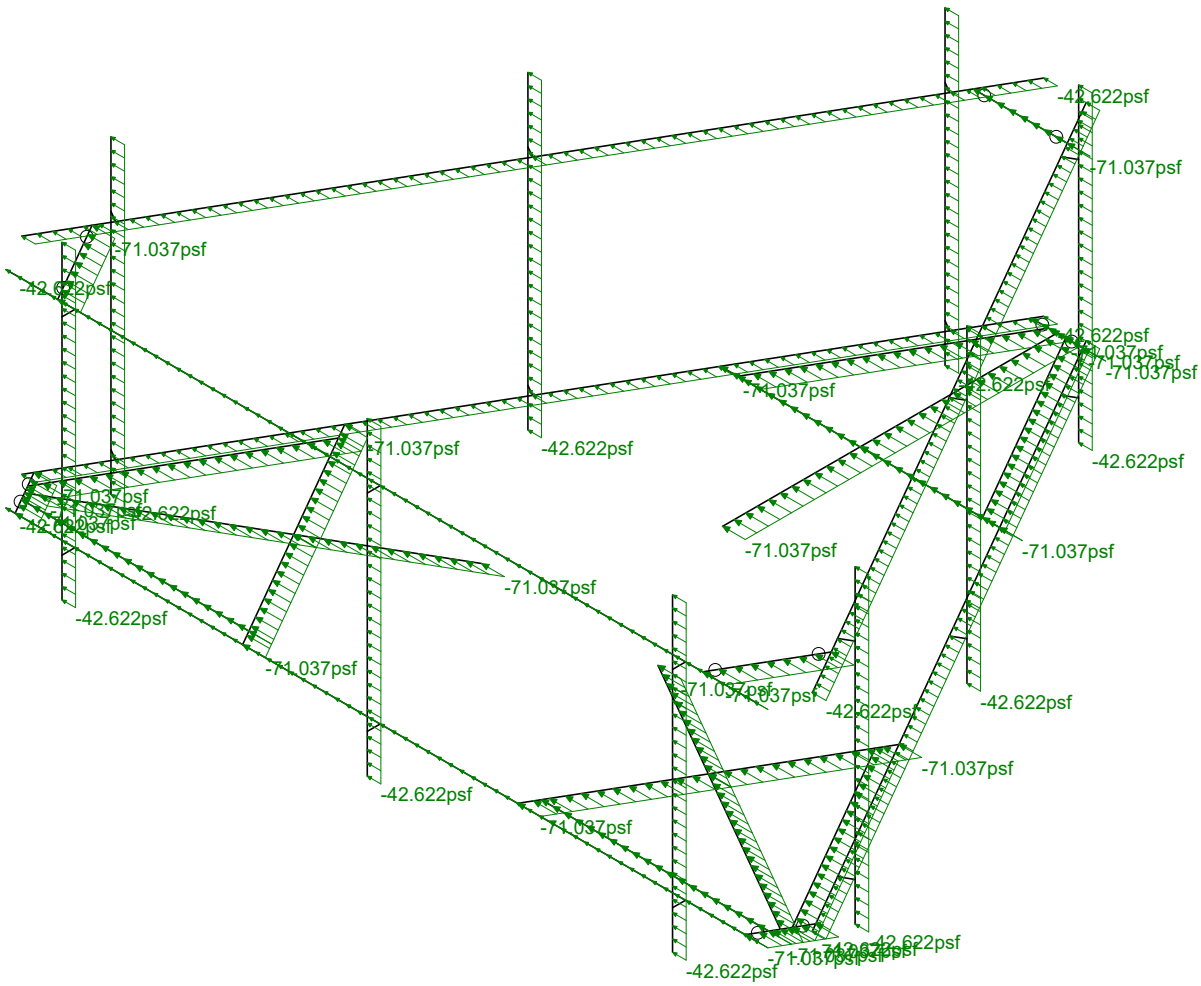

Loads: BLC 15, Distr. Wind Load X
Envelope Only Solution

Infinigy Engineering, PLLC.	Goshen CT Brush Hill	Distr Wind Load AZI 090
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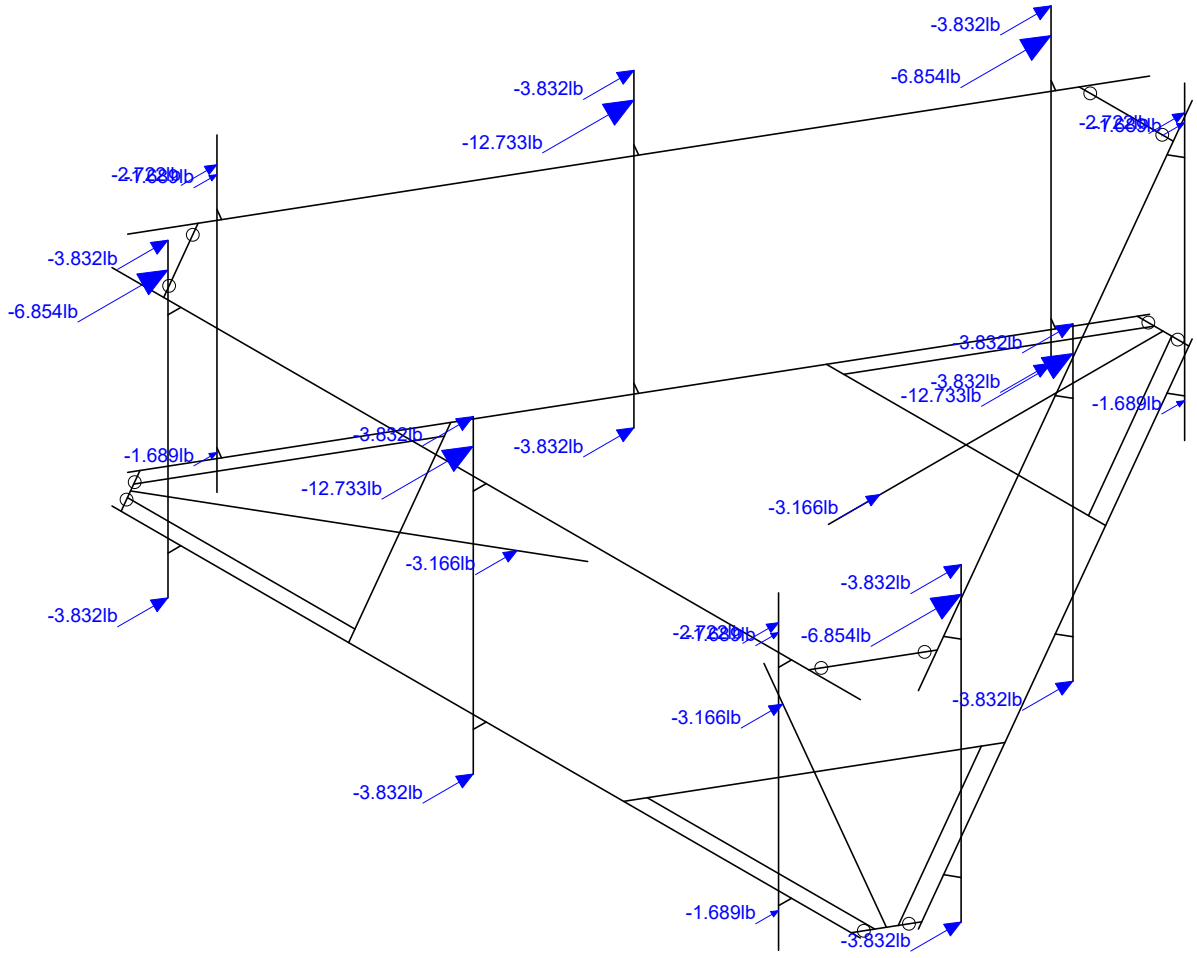

Loads: BLC 31, Seismic Load Z
Envelope Only Solution

Infinigy Engineering, PLLC.	Goshen CT Brush Hill	Seismic Load AZI 000
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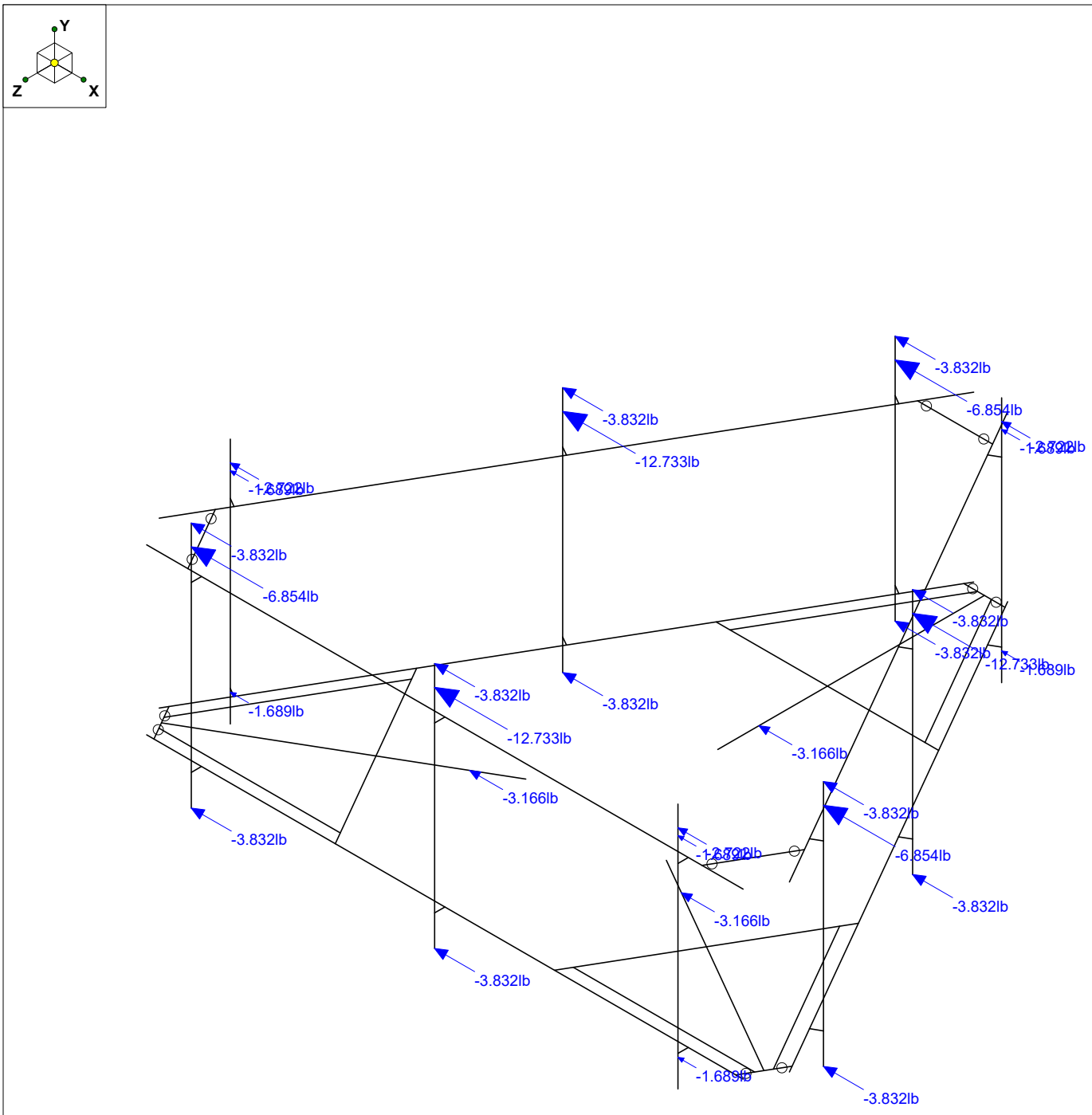

Loads: BLC 32, Seismic Load X
Envelope Only Solution

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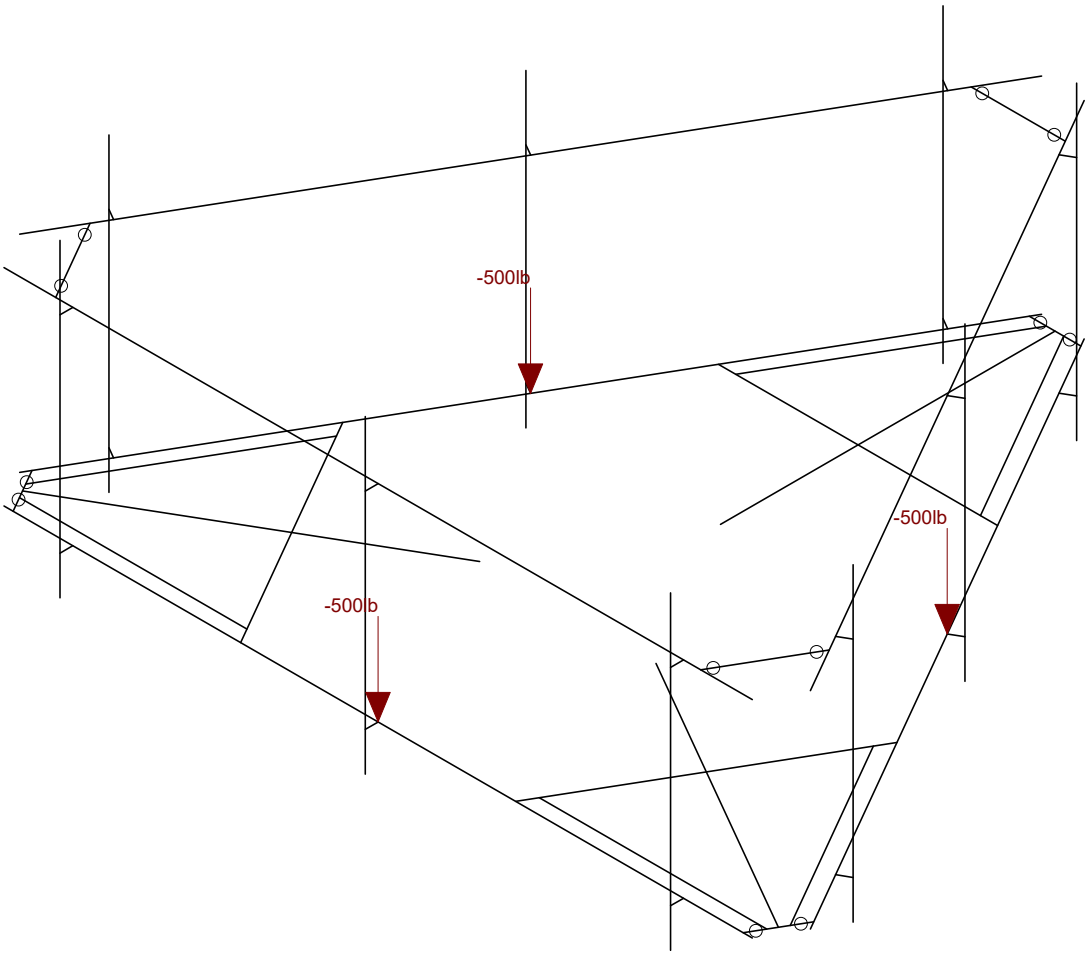

Loads: BLC 33, Service Live Loads
Envelope Only Solution

Infinigy Engineering, PLLC.	Goshen CT Brush Hill	Service Load
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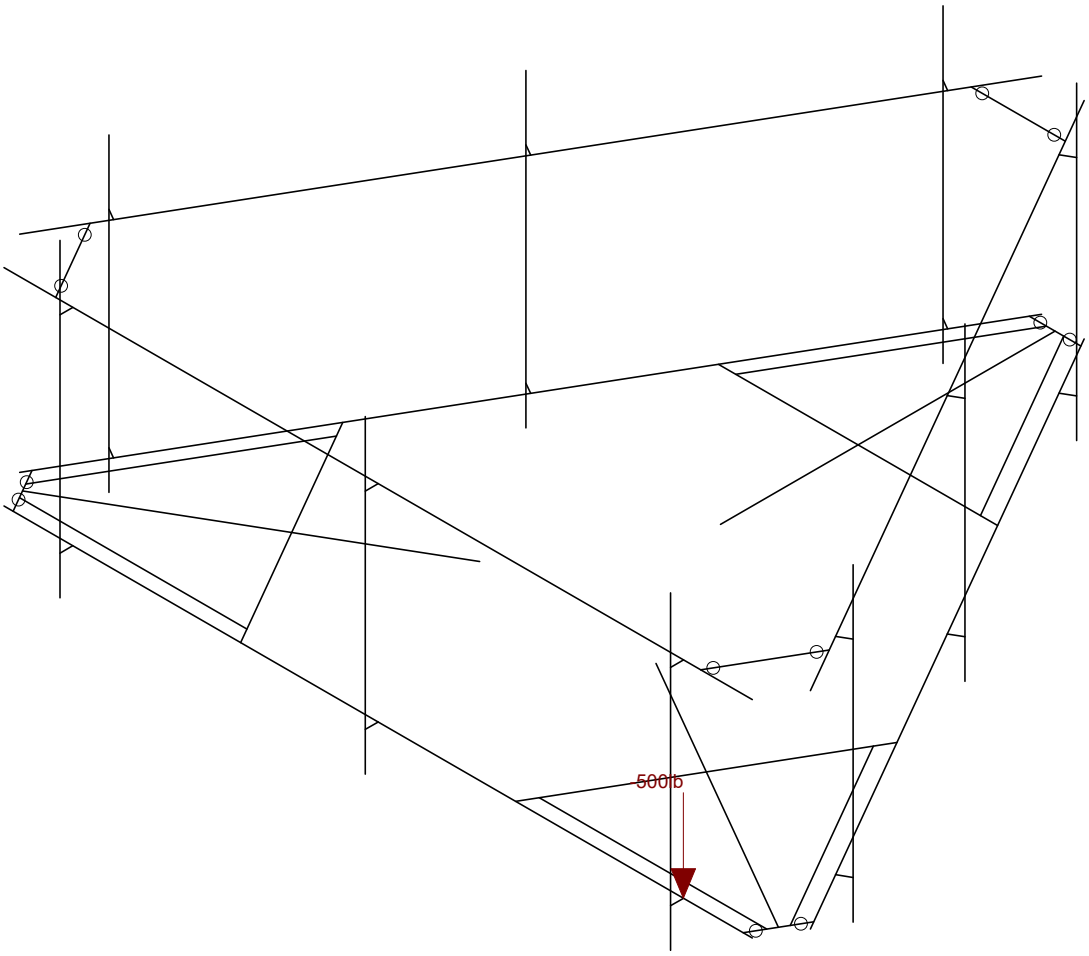

Loads: BLC 34, Maintenance Load 1
Envelope Only Solution

Infinigy Engineering, PLLC.	Goshen CT Brush Hill	Maintenance Load 1
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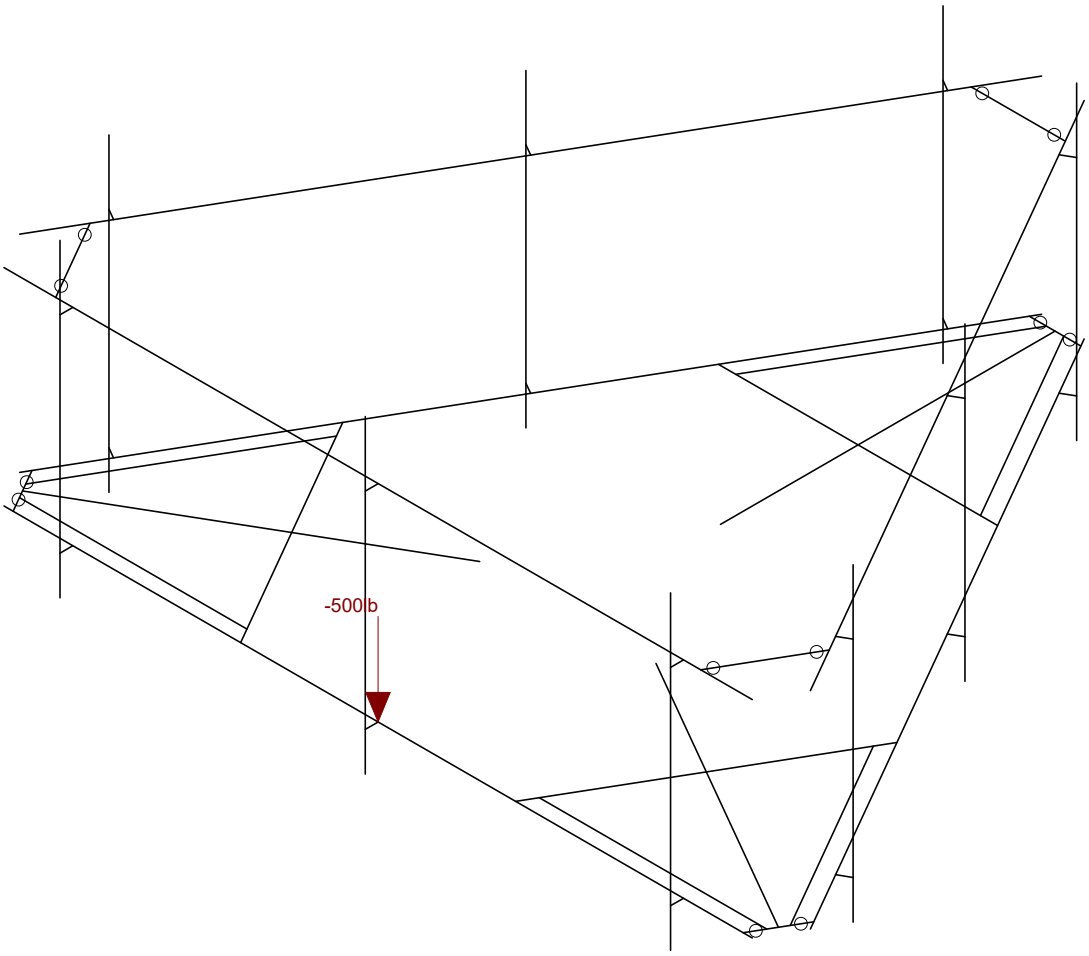

Loads: BLC 35, Maintenance Load 2
Envelope Only Solution

Infinigy Engineering, PLLC.	Goshen CT Brush Hill	Maintenance Load 2
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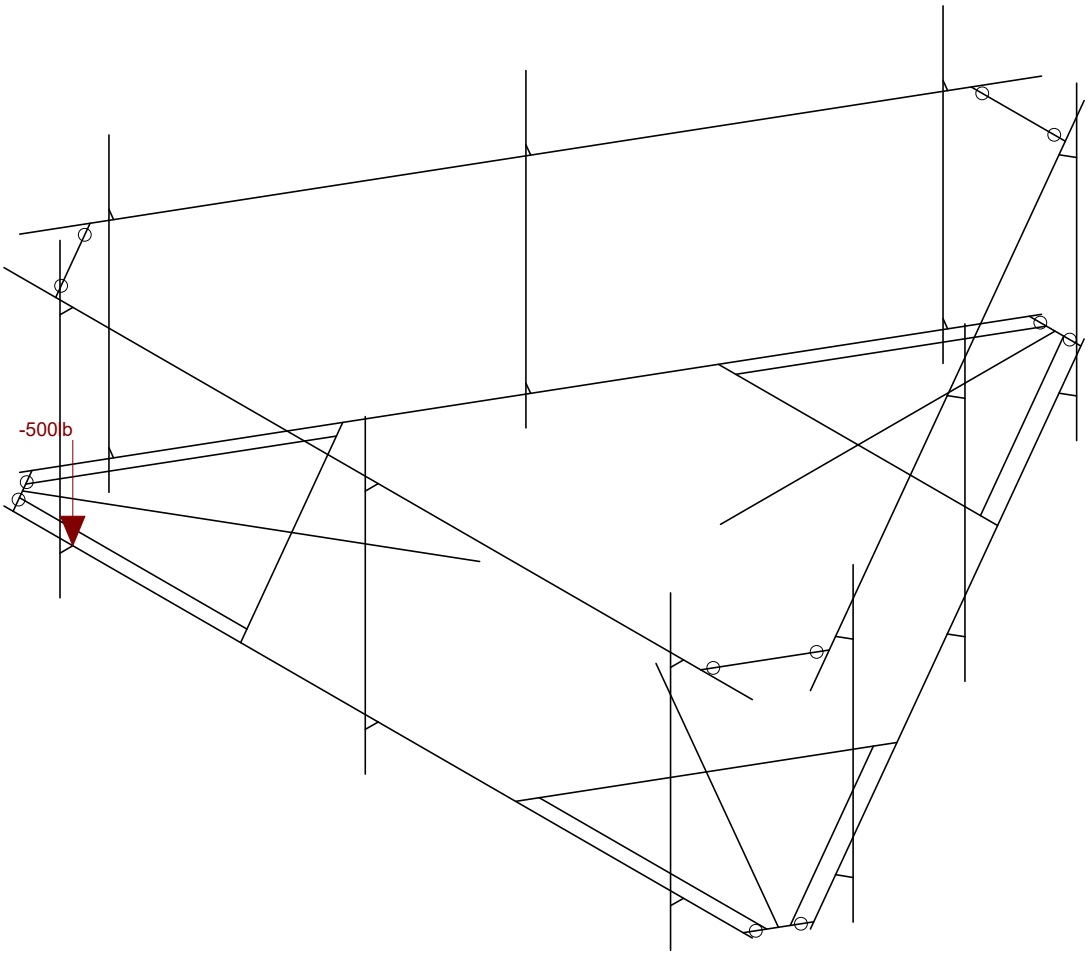

Loads: BLC 36, Maintenance Load 3
Envelope Only Solution

Infinigy Engineering, PLLC.	Goshen CT Brush Hill	Maintenance Load 3
TM		Jan 9, 2020 at 2:24 PM
1106-A0001-B		CTL01238_HRK14_loaded.r3d

Program Inputs

PROJECT INFORMATION	
Client:	Smartlink
Carrier:	AT&T Mobility
Engineer:	Thomas Marr

SITE INFORMATION		
Risk Category:	II	
Exposure Category:	B	
Topo Category:	1	
Site Class:	D - Stiff Soil	
Ground Elevation:	1235	ft *Rev H

MOUNT INFORMATION		
Mount Type:	Platform	
Num Sectors:	3	
Centerline AGL:	172.5	ft
Tower Height AGL:	193.5	ft

TOPOGRAPHIC DATA		
Topo Feature:	N/A	
Crest Height:	N/A	ft
Slope Distance:	N/A	ft
Crest Distance:	N/A	ft

FACTORS		
Directionality Fact. (K_d):	0.95	
Ground Ele. Factor (K_e):	0.96	*Rev H Only
Rooftop Speed-Up (K_s):	1.00	*Rev H Only
Topographic Factor (K_{zt}):	1.00	
Gust Effect Factor (G_h):	1.0	

CODE STANDARDS		
Building Code:	2018 IBC	
TIA Standard:	TIA-222-H	
ASCE Standard:	ASCE 7-16	

WIND AND ICE DATA		
Ultimate Wind (V_{ult}):	115	mph
Design Wind (V):	N/A	mph
Ice Wind (V_{ice}):	50	mph
Base Ice Thickness (t_i):	1	in
Flat Pressure:	71.04	psf
Round Pressure:	42.62	psf
Ice Wind Pressure:	8.06	psf

SEISMIC DATA		
Short-Period Accel. (S_s):	0.18	g
1-Second Accel. (S_1):	0.07	g
Short-Period Design (S_{DS}):	0.19	
1-Second Design (S_{D1}):	0.10	
Short-Period Coeff. (F_a):	1.60	
1-Second Coeff. (F_v):	2.40	
Amplification Factor (a_p):	1.00	
Response Mod. (R_p):	2.50	
Overstrength (Ω_o):	1.00	

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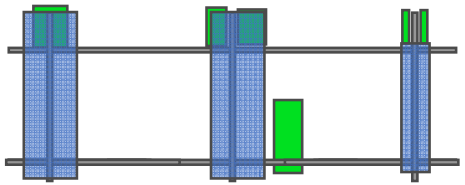
Infinigy Load Calculator V2.1.3

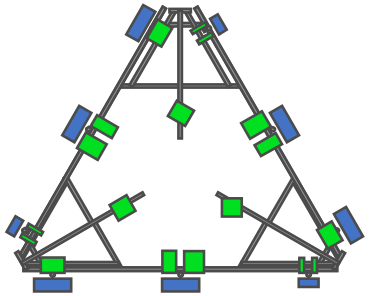
Program Inputs

ELEVATION VIEW



MP3 MP2 MP1

PLAN VIEW



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FROM ZERO TO INFINIGY

the solutions are endless

Infinigy Wind Load Calculator V2.1.3

APPURTENANCE INFORMATION

Appurtenance Name	Elevation	Qty.	K_a	q_z (psf)	EPA_N (ft^2)	EPA_T (ft^2)	Wind F_z (lbs)	Wind F_x (lbs)	Weight (lbs)	Seismic F (lbs)	Member (α sector)
POWERWAVE TECHNOLOGIES 7770	172.5	3	0.90	35.52	5.51	2.93	176.09	93.61	35.00	3.38	MP1
CCI ANTENNAS DMP65R-BU6DA	172.5	3	0.90	35.52	12.71	5.62	406.28	179.50	79.40	7.66	MP2
CCI ANTENNAS DMP65R-BU6DA	172.5	3	0.90	35.52	12.71	5.62	406.28	179.50	79.40	7.66	MP3
RAYCAP DC6-48-60-18-8F	172.5	3	0.90	35.52	2.90	2.90	92.73	92.73	32.80	3.17	M1
ERICSSON 4449 B5/B12	172.5	3	0.90	35.52	1.97	1.41	62.89	45.01	71.00	6.85	MP3
ERICSSON B14 4478	172.5	3	0.90	35.52	1.84	1.06	58.90	33.84	59.90	5.78	MP2
ERICSSON 8843 B2/B66A	172.5	3	0.90	35.52	1.64	1.35	52.39	43.26	72.00	6.95	MP2

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2			Standoff	Beam	None	A53 Gr.B	Typical
2	M2	N4	N3			Connector Plate	Beam	None	A36 Gr.36	Typical
3	M3	N5	N7			Standoff	Beam	None	A53 Gr.B	Typical
4	M4	N9	N8			Connector Plate	Beam	None	A36 Gr.36	Typical
5	M5	N6	N12			Standoff	Beam	None	A53 Gr.B	Typical
6	M6	N16	N14			Connector Plate	Beam	None	A36 Gr.36	Typical
7	M7	N13	N11			Horizontal	Beam	None	A53 Gr.B	Typical
8	M8	N19	N18			Horizontal	Beam	None	A53 Gr.B	Typical
9	M9	N21	N20			Horizontal	Beam	None	A53 Gr.B	Typical
10	M10	N30	N32			Grating Bracing	Beam	None	A36 Gr.36	Typical
11	M11	N33	N34		270	Grating Bracing	Beam	None	A36 Gr.36	Typical
12	M12	N35	N36			Grating Bracing	Beam	None	A36 Gr.36	Typical
13	M13	N37	N38		270	Grating Bracing	Beam	None	A36 Gr.36	Typical
14	M14	N39	N40			Grating Bracing	Beam	None	A36 Gr.36	Typical
15	M15	N41	N42		270	Grating Bracing	Beam	None	A36 Gr.36	Typical
16	M16	N25	N22			Standoff Bracing	Beam	None	A53 Gr.B	Typical
17	M17	N26	N22			Standoff Bracing	Beam	None	A53 Gr.B	Typical
18	M18	N28	N24			Standoff Bracing	Beam	None	A53 Gr.B	Typical
19	M19	N27	N24			Standoff Bracing	Beam	None	A53 Gr.B	Typical
20	M20	N29	N23			Standoff Bracing	Beam	None	A53 Gr.B	Typical
21	M21	N31	N23			Standoff Bracing	Beam	None	A53 Gr.B	Typical
22	M22	N64	N15			RIGID	None	None	RIGID	Typical
23	M23	N59	N50			RIGID	None	None	RIGID	Typical
24	M24	N62	N10			RIGID	None	None	RIGID	Typical
25	M25	N58	N49			RIGID	None	None	RIGID	Typical
26	M26	N66	N17			RIGID	None	None	RIGID	Typical
27	M27	N60	N51			RIGID	None	None	RIGID	Typical
28	M28	N74	N63			RIGID	None	None	RIGID	Typical
29	M29	N73	N61			RIGID	None	None	RIGID	Typical
30	M30	N75	N65			RIGID	None	None	RIGID	Typical
31	MP1	N43	N44			Mount Pipes	Beam	None	A53 Gr.B	Typical
32	MP2	N45	N46			Mount Pipes	Beam	None	A53 Gr.B	Typical
33	MP3	N47	N48			Mount Pipes	Beam	None	A53 Gr.B	Typical
34	MP4	N67	N68			Mount Pipes	Beam	None	A53 Gr.B	Typical
35	MP5	N69	N70			Mount Pipes	Beam	None	A53 Gr.B	Typical
36	MP6	N71	N72			Mount Pipes	Beam	None	A53 Gr.B	Typical
37	MP7	N52	N53			Mount Pipes	Beam	None	A53 Gr.B	Typical
38	MP8	N54	N55			Mount Pipes	Beam	None	A53 Gr.B	Typical
39	MP9	N56	N57			Mount Pipes	Beam	None	A53 Gr.B	Typical
40	M40	N79	N78			Support Rail	Beam	None	A53 Gr.B	Typical
41	M41	N83	N82			Support Rail	Beam	None	A53 Gr.B	Typical
42	M42	N85	N84			Support Rail	Beam	None	A53 Gr.B	Typical
43	M43	N95	N80			RIGID	None	None	RIGID	Typical
44	M44	N90	N87			RIGID	None	None	RIGID	Typical
45	M45	N93	N77			RIGID	None	None	RIGID	Typical
46	M46	N89	N86			RIGID	None	None	RIGID	Typical
47	M47	N97	N81			RIGID	None	None	RIGID	Typical
48	M48	N91	N88			RIGID	None	None	RIGID	Typical
49	M49	N99	N94			RIGID	None	None	RIGID	Typical
50	M50	N98	N92			RIGID	None	None	RIGID	Typical
51	M51	N100	N96			RIGID	None	None	RIGID	Typical
52	M52	N104	N101			Connector Angle	Beam	None	A36 Gr.36	Typical
53	M53	N105	N103			Connector Angle	Beam	None	A36 Gr.36	Typical
54	M54	N106	N102			Connector Angle	Beam	None	A36 Gr.36	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[LB]
1	General				
2	RIGID		18	54	0
3	Total General		18	54	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	6"x0.37" Plate	3	36	22.662
7	A36 Gr.36	L2x2x2	9	383.1	53.336
8	A53 Gr.B	HSS4X4X4	9	428.1	409.141
9	A53 Gr.B	PIPE_2.0	12	1170	338.406
10	A53 Gr.B	PIPE_3.0	3	522	306.403
11	Total HR Steel		36	2539.2	1129.949

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
1	Self Weight	DL		-1			36		3	
2	Wind Load AZI 0	WLZ					72			
3	Wind Load AZI 30	None					72			
4	Wind Load AZI 60	None					72			
5	Wind Load AZI 90	WLX					72			
6	Wind Load AZI 120	None					72			
7	Wind Load AZI 150	None					72			
8	Wind Load AZI 180	None					72			
9	Wind Load AZI 210	None					72			
10	Wind Load AZI 240	None					72			
11	Wind Load AZI 270	None					72			
12	Wind Load AZI 300	None					72			
13	Wind Load AZI 330	None					72			
14	Distr. Wind Load Z	WLZ						54		
15	Distr. Wind Load X	WLX						54		
16	Ice Weight	OL1					36	54	3	
17	Ice Wind Load AZI 0	OL2					72			
18	Ice Wind Load AZI 30	None					72			
19	Ice Wind Load AZI 60	None					72			
20	Ice Wind Load AZI 90	OL3					72			
21	Ice Wind Load AZI 120	None					72			
22	Ice Wind Load AZI 150	None					72			
23	Ice Wind Load AZI 180	None					72			
24	Ice Wind Load AZI 210	None					72			
25	Ice Wind Load AZI 240	None					72			
26	Ice Wind Load AZI 270	None					72			
27	Ice Wind Load AZI 300	None					72			
28	Ice Wind Load AZI 330	None					72			
29	Distr. Ice Wind Load Z	OL2						54		
30	Distr. Ice Wind Load X	OL3						54		
31	Seismic Load Z	ELZ			-.097		36			
32	Seismic Load X	ELX	-.097				36			
33	Service Live Loads	LL				3				
34	Maintenance Load 1	LL				1				
35	Maintenance Load 2	LL				1				
36	Maintenance Load 3	LL				1				
37	Maintenance Load 4	LL				1				
38	Maintenance Load 5	LL				1				
39	Maintenance Load 6	LL				1				
40	Maintenance Load 7	LL				1				

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
41	Maintenance Load 8	LL				1				
42	Maintenance Load 9	LL				1				
43	BLC 1 Transient Area Loads	None						51		
44	BLC 16 Transient Area Loads	None						51		

Load Combinations

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	1.4DL	Yes	Y		1	1.4																		
2	1.2DL + 1WL AZI 0	Yes	Y		1	1.2	2	1	14	1	15													
3	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	3	1	14	.866	15	.5												
4	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	4	1	14	.5	15	.866												
5	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	5	1	14		15	1												
6	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	6	1	14	-.5	15	.866												
7	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	7	1	14	-.866	15	.5												
8	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	8	1	14	-1	15													
9	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	9	1	14	-.866	15	-.5												
10	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	10	1	14	-.5	15	-.866												
11	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	11	1	14		15	-1												
12	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	12	1	14	.5	15	-.866												
13	1.2DL + 1WL AZI ...	Yes	Y		1	1.2	13	1	14	.866	15	-.5												
14	0.9DL + 1WL AZI 0	Yes	Y		1	.9	2	1	14	1	15													
15	0.9DL + 1WL AZI ...	Yes	Y		1	.9	3	1	14	.866	15	.5												
16	0.9DL + 1WL AZI ...	Yes	Y		1	.9	4	1	14	.5	15	.866												
17	0.9DL + 1WL AZI ...	Yes	Y		1	.9	5	1	14		15	1												
18	0.9DL + 1WL AZI ...	Yes	Y		1	.9	6	1	14	-.5	15	.866												
19	0.9DL + 1WL AZI ...	Yes	Y		1	.9	7	1	14	-.866	15	.5												
20	0.9DL + 1WL AZI ...	Yes	Y		1	.9	8	1	14	-1	15													
21	0.9DL + 1WL AZI ...	Yes	Y		1	.9	9	1	14	-.866	15	-.5												
22	0.9DL + 1WL AZI ...	Yes	Y		1	.9	10	1	14	-.5	15	-.866												
23	0.9DL + 1WL AZI ...	Yes	Y		1	.9	11	1	14		15	-1												
24	0.9DL + 1WL AZI ...	Yes	Y		1	.9	12	1	14	.5	15	-.866												
25	0.9DL + 1WL AZI ...	Yes	Y		1	.9	13	1	14	.866	15	-.5												
26	1.2D + 1.0Di	Yes	Y		1	1.2	16	1																
27	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	17	1	29	1	30											
28	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	18	1	29	.866	30	.5										
29	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	19	1	29	.5	30	.866										
30	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	20	1	29		30	1										
31	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	21	1	29	-.5	30	.866										
32	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	22	1	29	-.866	30	.5										
33	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	23	1	29	-1	30											
34	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	24	1	29	-.866	30	-.5										
35	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	25	1	29	-.5	30	-.866										
36	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	26	1	29		30	-1										
37	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	27	1	29	.5	30	-.866										
38	1.2D + 1.0Di +1.0...	Yes	Y		1	1.2	16	1	28	1	29	.866	30	-.5										
39	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.239	31	1	32															
40	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.239	31	.866	32	.5														
41	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.239	31	.5	32	.866														
42	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.239	31		32	1														
43	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.239	31	-.5	32	.866														
44	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.239	31	-.866	32	.5														
45	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.239	31	-1	32															
46	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.239	31	-.866	32	-.5														
47	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.239	31	-.5	32	-.866														
48	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.239	31		32	-1														

Load Combinations (Continued)

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
49	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.239	31	.5	32	-.866																
50	(1.2 + 0.2Sds)DL ...	Yes	Y		1	1.239	31	.866	32	-.5																
51	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.861	31	1	32																	
52	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.861	31	.866	32	.5																
53	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.861	31	.5	32	.866																
54	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.861	31		32	1																
55	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.861	31	-.5	32	.866																
56	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.861	31	-.866	32	.5																
57	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.861	31	-1	32																	
58	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.861	31	-.866	32	-.5																
59	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.861	31	-.5	32	-.866																
60	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.861	31		32	-1																
61	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.861	31	.5	32	-.866																
62	(0.9 - 0.2Sds)DL ...	Yes	Y		1	.861	31	.866	32	-.5																
63	1.0DL + 1.5LL + 1...	Yes	Y		1	1	2	.272	14	.272	15		33	1.5												
64	1.0DL + 1.5LL + 1...	Yes	Y		1	1	3	.272	14	.236	15	.136	33	1.5												
65	1.0DL + 1.5LL + 1...	Yes	Y		1	1	4	.272	14	.136	15	.236	33	1.5												
66	1.0DL + 1.5LL + 1...	Yes	Y		1	1	5	.272	14		15	.272	33	1.5												
67	1.0DL + 1.5LL + 1...	Yes	Y		1	1	6	.272	14	-.136	15	.236	33	1.5												
68	1.0DL + 1.5LL + 1...	Yes	Y		1	1	7	.272	14	-.236	15	.136	33	1.5												
69	1.0DL + 1.5LL + 1...	Yes	Y		1	1	8	.272	14	-.272	15		33	1.5												
70	1.0DL + 1.5LL + 1...	Yes	Y		1	1	9	.272	14	-.236	15	-.136	33	1.5												
71	1.0DL + 1.5LL + 1...	Yes	Y		1	1	10	.272	14	-.136	15	-.236	33	1.5												
72	1.0DL + 1.5LL + 1...	Yes	Y		1	1	11	.272	14		15	-.272	33	1.5												
73	1.0DL + 1.5LL + 1...	Yes	Y		1	1	12	.272	14	.136	15	-.236	33	1.5												
74	1.0DL + 1.5LL + 1...	Yes	Y		1	1	13	.272	14	.236	15	-.136	33	1.5												
75	1.2DL + 1.5LL	Yes	Y		1	1.2	33	1.5																		
76	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	2	.068	14	.068	15													
77	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	3	.068	14	.059	15	.034												
78	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	4	.068	14	.034	15	.059												
79	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	5	.068	14		15	.068												
80	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	6	.068	14	-.034	15	.059												
81	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	7	.068	14	-.059	15	.034												
82	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	8	.068	14	-.068	15													
83	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	9	.068	14	-.059	15	-.034												
84	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	10	.068	14	-.034	15	-.059												
85	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	11	.068	14		15	-.068												
86	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	12	.068	14	.034	15	-.059												
87	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	34	1.5	13	.068	14	.059	15	-.034												
88	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	2	.068	14	.068	15													
89	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	3	.068	14	.059	15	.034												
90	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	4	.068	14	.034	15	.059												
91	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	5	.068	14		15	.068												
92	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	6	.068	14	-.034	15	.059												
93	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	7	.068	14	-.059	15	.034												
94	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	8	.068	14	-.068	15													
95	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	9	.068	14	-.059	15	-.034												
96	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	10	.068	14	-.034	15	-.059												
97	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	11	.068	14		15	-.068												
98	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	12	.068	14	.034	15	-.059												
99	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	35	1.5	13	.068	14	.059	15	-.034												
100	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	2	.068	14	.068	15													
101	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	3	.068	14	.059	15	.034												
102	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	4	.068	14	.034	15	.059												
103	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	5	.068	14		15	.068												
104	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	6	.068	14	-.034	15	.059												
105	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	7	.068	14	-.059	15	.034												

Load Combinations (Continued)

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
106	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	8	.068	14	-.068	15											
107	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	9	.068	14	-.059	15	-.034										
108	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	10	.068	14	-.034	15	-.059										
109	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	11	.068	14		15	-.068										
110	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	12	.068	14	.034	15	-.059										
111	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	36	1.5	13	.068	14	.059	15	-.034										
112	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	2	.068	14	.068	15											
113	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	3	.068	14	.059	15	.034										
114	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	4	.068	14	.034	15	.059										
115	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	5	.068	14		15	.068										
116	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	6	.068	14	-.034	15	.059										
117	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	7	.068	14	-.059	15	.034										
118	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	8	.068	14	-.068	15											
119	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	9	.068	14	-.059	15	-.034										
120	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	10	.068	14	-.034	15	-.059										
121	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	11	.068	14		15	-.068										
122	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	12	.068	14	.034	15	-.059										
123	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	37	1.5	13	.068	14	.059	15	-.034										
124	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	2	.068	14	.068	15											
125	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	3	.068	14	.059	15	.034										
126	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	4	.068	14	.034	15	.059										
127	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	5	.068	14		15	.068										
128	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	6	.068	14	-.034	15	.059										
129	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	7	.068	14	-.059	15	.034										
130	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	8	.068	14	-.068	15											
131	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	9	.068	14	-.059	15	-.034										
132	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	10	.068	14	-.034	15	-.059										
133	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	11	.068	14		15	-.068										
134	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	12	.068	14	.034	15	-.059										
135	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	38	1.5	13	.068	14	.059	15	-.034										
136	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	2	.068	14	.068	15											
137	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	3	.068	14	.059	15	.034										
138	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	4	.068	14	.034	15	.059										
139	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	5	.068	14		15	.068										
140	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	6	.068	14	-.034	15	.059										
141	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	7	.068	14	-.059	15	.034										
142	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	8	.068	14	-.068	15											
143	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	9	.068	14	-.059	15	-.034										
144	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	10	.068	14	-.034	15	-.059										
145	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	11	.068	14		15	-.068										
146	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	12	.068	14	.034	15	-.059										
147	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	39	1.5	13	.068	14	.059	15	-.034										
148	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	2	.068	14	.068	15											
149	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	3	.068	14	.059	15	.034										
150	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	4	.068	14	.034	15	.059										
151	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	5	.068	14		15	.068										
152	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	6	.068	14	-.034	15	.059										
153	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	7	.068	14	-.059	15	.034										
154	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	8	.068	14	-.068	15											
155	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	9	.068	14	-.059	15	-.034										
156	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	10	.068	14	-.034	15	-.059										
157	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	11	.068	14		15	-.068										
158	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	12	.068	14	.034	15	-.059										
159	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	40	1.5	13	.068	14	.059	15	-.034										
160	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	2	.068	14	.068	15											
161	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	3	.068	14	.059	15	.034										
162	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	4	.068	14	.034	15	.059										

Load Combinations (Continued)

	Description	So...	P...	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
163	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	5	.068	14		15	.068										
164	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	6	.068	14	-.034	15	.059										
165	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	7	.068	14	-.059	15	.034										
166	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	8	.068	14	-.068	15											
167	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	9	.068	14	-.059	15	-.034										
168	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	10	.068	14	-.034	15	-.059										
169	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	11	.068	14		15	-.068										
170	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	12	.068	14	.034	15	-.059										
171	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	41	1.5	13	.068	14	.059	15	-.034										
172	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	2	.068	14	.068	15											
173	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	3	.068	14	.059	15	.034										
174	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	4	.068	14	.034	15	.059										
175	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	5	.068	14		15	.068										
176	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	6	.068	14	-.034	15	.059										
177	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	7	.068	14	-.059	15	.034										
178	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	8	.068	14	-.068	15											
179	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	9	.068	14	-.059	15	-.034										
180	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	10	.068	14	-.034	15	-.059										
181	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	11	.068	14		15	-.068										
182	1.2DL + 1.5LM-M...	Yes	Y		1	1.2	42	1.5	12	.068	14	.034	15	-.059										

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N1	max	1825.757	4	2560.208	35	1351.919	2	874.496	15	1905.988	19	5678.651	35
2		min	-1771.971	22	-194.848	16	-1319.678	20	-3309.84	83	-1910.9...	25	-1104.2...	16
3	N5	max	1381.789	17	2564.994	27	2100.805	14	6533.406	27	2192.577	23	1136.505	23
4		min	-1380.298	23	-208.189	20	-2164.426	8	-1280.0...	20	-2197.1...	17	-1188.4...	5
5	N6	max	1772.276	18	2560.16	31	1484.553	2	990.226	25	1906.753	15	1044.903	24
6		min	-1828.524	12	-194.819	24	-1454.003	20	-3432.4...	7	-1910.6...	21	-5613.5...	31
7	Totals:	max	4811.465	17	7148.647	35	4929.392	14						
8		min	-4811.465	23	2406.447	53	-4929.392	20						

Envelope AISC 15th(360-16): LRFD Steel Code Checks

	Member	Shape	Code Ch...	Loc[in]	LC	Shear C...	Loc.....		LC	phi*Pn...	phi*Pn...	phi*M...	phi*M...	...	Eqn
1	MP2	PIPE_2.0	.832	9	2	.110	9		11	20866...	32130	1871....	1871....	...	H1-1b
2	MP8	PIPE_2.0	.820	9	6	.113	9		3	20866...	32130	1871....	1871....	...	H1-1b
3	MP5	PIPE_2.0	.819	9	10	.113	9		7	20866...	32130	1871....	1871....	...	H1-1b
4	MP3	PIPE_2.0	.651	9	3	.116	9		5	20866...	32130	1871....	1871....	...	H1-1b
5	MP9	PIPE_2.0	.650	9	7	.116	9		9	20866...	32130	1871....	1871....	...	H1-1b
6	MP6	PIPE_2.0	.645	9	11	.109	9		13	20866...	32130	1871....	1871....	...	H1-1b
7	MP1	PIPE_2.0	.625	9	13	.129	9		11	20866...	32130	1871....	1871....	...	H1-1b
8	MP4	PIPE_2.0	.625	9	9	.129	9		7	20866...	32130	1871....	1871....	...	H1-1b
9	MP7	PIPE_2.0	.620	9	5	.122	9		3	20866...	32130	1871....	1871....	...	H1-1b
10	M3	HSS4X4X4	.538	0	28	.162	0	z	5	10130...	106155	12311...	12311...	1	H1-1b
11	M5	HSS4X4X4	.537	0	32	.161	0	y	8	10130...	106155	12311...	12311...	1	H1-1b
12	M1	HSS4X4X4	.537	0	34	.161	0	y	12	10130...	106155	12311...	12311...	1	H1-1b
13	M41	PIPE_2.0	.309	16.313	4	.135	87		2	22845...	32130	1871....	1871....	1	H1-1b
14	M42	PIPE_2.0	.305	87	7	.138	87		6	22845...	32130	1871....	1871....	1	H1-1b
15	M40	PIPE_2.0	.292	16.313	12	.139	87		10	22845...	32130	1871....	1871....	1	H1-1b
16	M16	HSS4X4X4	.278	32.451	7	.109	3.7...	y	4	10371...	106155	12311...	12311...	...	H1-1b
17	M20	HSS4X4X4	.278	32.45	3	.109	3.7...	y	12	10371...	106155	12311...	12311...	...	H1-1b
18	M19	HSS4X4X4	.276	32.451	11	.109	3.7...	y	8	10371...	106155	12311...	12311...	...	H1-1b
19	M18	HSS4X4X4	.274	32.451	9	.123	3.7...	y	12	10371...	106155	12311...	12311...	...	H1-1b
20	M21	HSS4X4X4	.273	32.451	13	.123	3.7...	y	4	10371...	106155	12311...	12311...	...	H1-1b

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

	Member	Shape	Code Ch...	Loc[in]	LC	Shear C...	Loc.....		LC	phi*Pn...	phi*Pn...	phi*M...	phi*M...	...	Eqn
21	M17	HSS4X4X4	.272	32.45	5	.123	3.7...	y	8	10371...	106155	12311...	12311...	...	H1-1b
22	M11	L2x2x2	.259	52.901	20	.016	52....	y	8	10404...	15908.4	402.563	757.415	...	H2-1
23	M4	6"x0.37" Plate	.244	6	3	.181	3.8...	y	5	37008...	71928	554.445	8991	...	H1-1b
24	M12	L2x2x2	.242	52.901	20	.016	52....	z	8	10404...	15908.4	402.563	756.378	...	H2-1
25	M6	6"x0.37" Plate	.241	6	7	.182	3.8...	y	9	37008...	71928	554.445	8991	...	H1-1b
26	M2	6"x0.37" Plate	.241	6	11	.183	3.8...	y	13	37008...	71928	554.445	8991	...	H1-1b
27	M15	L2x2x2	.241	52.901	16	.014	52....	y	4	10404...	15908.4	402.563	766.106	...	H2-1
28	M13	L2x2x2	.237	0	12	.014	52....	y	12	10404...	15908.4	402.563	769.818	...	H2-1
29	M14	L2x2x2	.233	0	12	.014	52....	z	12	10404...	15908.4	402.563	769.517	...	H2-1
30	M10	L2x2x2	.232	0	4	.014	52....	z	4	10404...	15908.4	402.563	769.149	...	H2-1
31	M7	PIPE_3.0	.223	117.813	11	.221	119...		13	55995...	65205	5748.75	5748.75	1	H1-1b
32	M8	PIPE_3.0	.222	117.813	3	.218	119...		5	55995...	65205	5748.75	5748.75	1	H1-1b
33	M9	PIPE_3.0	.221	117.813	7	.220	119...		9	55995...	65205	5748.75	5748.75	1	H1-1b
34	M54	L2x2x2	.034	10.945	21	.077	21....	z	10	11900...	15908.4	402.563	815.704	...	H2-1
35	M53	L2x2x2	.033	10.717	17	.080	0	z	6	11900...	15908.4	402.563	815.704	...	H2-1
36	M52	L2x2x2	.030	10.945	25	.079	21....	z	9	11900...	15908.4	402.563	815.704	...	H2-1

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Standoff Bracing	HSS4X4X4	Beam	None	A53 Gr.B	Typical	3.37	7.8	7.8	12.8
2	Standoff	HSS4X4X4	Beam	None	A53 Gr.B	Typical	3.37	7.8	7.8	12.8
3	Horizontal	PIPE_3.0	Beam	None	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
4	Support Rail	PIPE_2.0	Beam	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
5	Grating Bracing	L2x2x2	Beam	None	A36 Gr.36	Typical	.491	.189	.189	.003
6	Connector Angle	L2x2x2	Beam	None	A36 Gr.36	Typical	.491	.189	.189	.003
7	Mount Pipes	PIPE_2.0	Beam	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
8	Connector Plate	6"x0.37" Plate	Beam	None	A36 Gr.36	Typical	2.22	.025	6.66	.097

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M2	BenPIN	BenPIN				Yes				None
3	M3						Yes				None
4	M4	BenPIN	BenPIN				Yes				None
5	M5						Yes				None
6	M6	BenPIN	BenPIN				Yes				None
7	M7						Yes				None
8	M8						Yes				None
9	M9						Yes				None
10	M10						Yes				None
11	M11						Yes				None
12	M12						Yes				None
13	M13						Yes				None
14	M14						Yes				None
15	M15						Yes				None
16	M16						Yes				None
17	M17						Yes				None
18	M18						Yes				None
19	M19						Yes				None
20	M20						Yes				None
21	M21						Yes				None
22	M22						Yes	** NA **			None
23	M23						Yes	** NA **			None
24	M24						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
25	M25						Yes	** NA **			None
26	M26						Yes	** NA **			None
27	M27						Yes	** NA **			None
28	M28						Yes	** NA **			None
29	M29						Yes	** NA **			None
30	M30						Yes	** NA **			None
31	MP1						Yes				None
32	MP2						Yes				None
33	MP3						Yes				None
34	MP4						Yes				None
35	MP5						Yes				None
36	MP6						Yes				None
37	MP7						Yes				None
38	MP8						Yes				None
39	MP9						Yes				None
40	M40						Yes				None
41	M41						Yes				None
42	M42						Yes				None
43	M43						Yes	** NA **			None
44	M44						Yes	** NA **			None
45	M45						Yes	** NA **			None
46	M46						Yes	** NA **			None
47	M47						Yes	** NA **			None
48	M48						Yes	** NA **			None
49	M49						Yes	** NA **			None
50	M50						Yes	** NA **			None
51	M51						Yes	** NA **			None
52	M52	BenPIN	BenPIN				Yes	Default			None
53	M53	BenPIN	BenPIN				Yes	Default			None
54	M54	BenPIN	BenPIN				Yes	Default			None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[i...	Lbyy[in]	Lbzz[in]	Lcomp top[...	Lcomp bot[...	L-torque[i...	Kyy	Kzz	Cb	Functi...
1	M1	Standoff	77.813	46	46	46	46	46				Lateral
2	M2	Connector Plate	12									Lateral
3	M3	Standoff	77.814	46	46	46	46	46				Lateral
4	M4	Connector Plate	12									Lateral
5	M5	Standoff	77.814	46	46	46	46	46				Lateral
6	M6	Connector Plate	12									Lateral
7	M7	Horizontal	174	64	64	64	64	64				Lateral
8	M8	Horizontal	174	64	64	64	64	64				Lateral
9	M9	Horizontal	174	64	64	64	64	64				Lateral
10	M10	Grating Bracing	52.901			Lbyy			.65	.65		Lateral
11	M11	Grating Bracing	52.901			Lbyy			.65	.65		Lateral
12	M12	Grating Bracing	52.901			Lbyy			.65	.65		Lateral
13	M13	Grating Bracing	52.901			Lbyy			.65	.65		Lateral
14	M14	Grating Bracing	52.901			Lbyy			.65	.65		Lateral
15	M15	Grating Bracing	52.901			Lbyy			.65	.65		Lateral
16	M16	Standoff Bracing	32.451			Lbyy						Lateral
17	M17	Standoff Bracing	32.45			Lbyy						Lateral
18	M18	Standoff Bracing	32.451			Lbyy						Lateral
19	M19	Standoff Bracing	32.451			Lbyy						Lateral
20	M20	Standoff Bracing	32.45			Lbyy						Lateral
21	M21	Standoff Bracing	32.451			Lbyy						Lateral
22	MP1	Mount Pipes	72			Lbyy						Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[i...	Lbyy[in]	Lbzz[in]	Lcomp top[...	Lcomp bot[...	L-torque[i...	Kyy	Kzz	Cb	Functi...
23	MP2	Mount Pipes	72			Lbyy						Lateral
24	MP3	Mount Pipes	72			Lbyy						Lateral
25	MP4	Mount Pipes	72			Lbyy						Lateral
26	MP5	Mount Pipes	72			Lbyy						Lateral
27	MP6	Mount Pipes	72			Lbyy						Lateral
28	MP7	Mount Pipes	72			Lbyy						Lateral
29	MP8	Mount Pipes	72			Lbyy						Lateral
30	MP9	Mount Pipes	72			Lbyy						Lateral
31	M40	Support Rail	174	64	64	64	64	64				Lateral
32	M41	Support Rail	174	64	64	64	64	64				Lateral
33	M42	Support Rail	174	64	64	64	64	64				Lateral
34	M52	Connector Angle	21.889			Lbyy						Lateral
35	M53	Connector Angle	21.889			Lbyy						Lateral
36	M54	Connector Angle	21.889			Lbyy						Lateral

Member Point Loads (BLC 1 : Self Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-17.5	8
2	MP1	Y	-17.5	64
3	MP2	Y	-39.7	0
4	MP2	Y	-39.7	72
5	MP3	Y	-39.7	0
6	MP3	Y	-39.7	72
7	M1	Y	-32.8	12
8	MP3	Y	-71	66
9	MP2	Y	-59.9	66
10	MP2	Y	-72	66
11	MP1	Y	-14.1	66
12	MP1	Y	-14.1	66
13	MP4	Y	-17.5	8
14	MP4	Y	-17.5	64
15	MP5	Y	-39.7	0
16	MP5	Y	-39.7	72
17	MP6	Y	-39.7	0
18	MP6	Y	-39.7	72
19	M3	Y	-32.8	12
20	MP6	Y	-71	66
21	MP5	Y	-59.9	66
22	MP5	Y	-72	66
23	MP4	Y	-14.1	66
24	MP4	Y	-14.1	66
25	MP7	Y	-17.5	8
26	MP7	Y	-17.5	64
27	MP8	Y	-39.7	0
28	MP8	Y	-39.7	72
29	MP9	Y	-39.7	0
30	MP9	Y	-39.7	72
31	M5	Y	-32.8	12
32	MP9	Y	-71	66
33	MP8	Y	-59.9	66
34	MP8	Y	-72	66
35	MP7	Y	-14.1	66
36	MP7	Y	-14.1	66

Member Point Loads (BLC 2 : Wind Load AZI 0)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	8
2	MP1	Z	-88.04	8
3	MP1	X	0	64
4	MP1	Z	-88.04	64
5	MP2	X	0	0
6	MP2	Z	-203.14	0
7	MP2	X	0	72
8	MP2	Z	-203.14	72
9	MP3	X	0	0
10	MP3	Z	-203.14	0
11	MP3	X	0	72
12	MP3	Z	-203.14	72
13	M1	X	0	12
14	M1	Z	-92.73	12
15	MP3	X	0	66
16	MP3	Z	-62.89	66
17	MP2	X	0	66
18	MP2	Z	-58.9	66
19	MP2	X	0	66
20	MP2	Z	-52.39	66
21	MP1	X	0	66
22	MP1	Z	-35.29	66
23	MP1	X	0	66
24	MP1	Z	-35.29	66
25	MP4	X	0	8
26	MP4	Z	-57.11	8
27	MP4	X	0	64
28	MP4	Z	-57.11	64
29	MP5	X	0	0
30	MP5	Z	-118.1	0
31	MP5	X	0	72
32	MP5	Z	-118.1	72
33	MP6	X	0	0
34	MP6	Z	-118.1	0
35	MP6	X	0	72
36	MP6	Z	-118.1	72
37	M3	X	0	12
38	M3	Z	-92.73	12
39	MP6	X	0	66
40	MP6	Z	-49.48	66
41	MP5	X	0	66
42	MP5	Z	-40.11	66
43	MP5	X	0	66
44	MP5	Z	-45.55	66
45	MP4	X	0	66
46	MP4	Z	-17.14	66
47	MP4	X	0	66
48	MP4	Z	-17.14	66
49	MP7	X	0	8
50	MP7	Z	-57.11	8
51	MP7	X	0	64
52	MP7	Z	-57.11	64
53	MP8	X	0	0
54	MP8	Z	-118.1	0
55	MP8	X	0	72
56	MP8	Z	-118.1	72
57	MP9	X	0	0

Member Point Loads (BLC 2 : Wind Load AZI 0) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
58	MP9	Z	-118.1	0
59	MP9	X	0	72
60	MP9	Z	-118.1	72
61	M5	X	0	12
62	M5	Z	-92.73	12
63	MP9	X	0	66
64	MP9	Z	-49.48	66
65	MP8	X	0	66
66	MP8	Z	-40.11	66
67	MP8	X	0	66
68	MP8	Z	-45.55	66
69	MP7	X	0	66
70	MP7	Z	-17.14	66
71	MP7	X	0	66
72	MP7	Z	-17.14	66

Member Point Loads (BLC 3 : Wind Load AZI 30)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-38.87	8
2	MP1	Z	-67.32	8
3	MP1	X	-38.87	64
4	MP1	Z	-67.32	64
5	MP2	X	-87.4	0
6	MP2	Z	-151.37	0
7	MP2	X	-87.4	72
8	MP2	Z	-151.37	72
9	MP3	X	-87.4	0
10	MP3	Z	-151.37	0
11	MP3	X	-87.4	72
12	MP3	Z	-151.37	72
13	M1	X	-46.36	12
14	M1	Z	-80.3	12
15	MP3	X	-29.21	66
16	MP3	Z	-50.6	66
17	MP2	X	-26.32	66
18	MP2	Z	-45.58	66
19	MP2	X	-25.06	66
20	MP2	Z	-43.4	66
21	MP1	X	-14.62	66
22	MP1	Z	-25.32	66
23	MP1	X	-14.62	66
24	MP1	Z	-25.32	66
25	MP4	X	-38.87	8
26	MP4	Z	-67.32	8
27	MP4	X	-38.87	64
28	MP4	Z	-67.32	64
29	MP5	X	-87.4	0
30	MP5	Z	-151.37	0
31	MP5	X	-87.4	72
32	MP5	Z	-151.37	72
33	MP6	X	-87.4	0
34	MP6	Z	-151.37	0
35	MP6	X	-87.4	72
36	MP6	Z	-151.37	72
37	M3	X	-46.36	12
38	M3	Z	-80.3	12

Member Point Loads (BLC 3 : Wind Load AZI 30) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
39	MP6	X	-29.21	66
40	MP6	Z	-50.6	66
41	MP5	X	-26.32	66
42	MP5	Z	-45.58	66
43	MP5	X	-25.06	66
44	MP5	Z	-43.4	66
45	MP4	X	-14.62	66
46	MP4	Z	-25.32	66
47	MP4	X	-14.62	66
48	MP4	Z	-25.32	66
49	MP7	X	-23.4	8
50	MP7	Z	-40.53	8
51	MP7	X	-23.4	64
52	MP7	Z	-40.53	64
53	MP8	X	-44.88	0
54	MP8	Z	-77.73	0
55	MP8	X	-44.88	72
56	MP8	Z	-77.73	72
57	MP9	X	-44.88	0
58	MP9	Z	-77.73	0
59	MP9	X	-44.88	72
60	MP9	Z	-77.73	72
61	M5	X	-46.36	12
62	M5	Z	-80.3	12
63	MP9	X	-22.51	66
64	MP9	Z	-38.98	66
65	MP8	X	-16.92	66
66	MP8	Z	-29.31	66
67	MP8	X	-21.63	66
68	MP8	Z	-37.47	66
69	MP7	X	-5.55	66
70	MP7	Z	-9.61	66
71	MP7	X	-5.55	66
72	MP7	Z	-9.61	66

Member Point Loads (BLC 4 : Wind Load AZI 60)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-49.46	8
2	MP1	Z	-28.56	8
3	MP1	X	-49.46	64
4	MP1	Z	-28.56	64
5	MP2	X	-102.28	0
6	MP2	Z	-59.05	0
7	MP2	X	-102.28	72
8	MP2	Z	-59.05	72
9	MP3	X	-102.28	0
10	MP3	Z	-59.05	0
11	MP3	X	-102.28	72
12	MP3	Z	-59.05	72
13	M1	X	-80.3	12
14	M1	Z	-46.36	12
15	MP3	X	-42.85	66
16	MP3	Z	-24.74	66
17	MP2	X	-34.73	66
18	MP2	Z	-20.05	66
19	MP2	X	-39.44	66

Member Point Loads (BLC 4 : Wind Load AZI 60) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
20	MP2	Z	-22.77	66
21	MP1	X	-14.85	66
22	MP1	Z	-8.57	66
23	MP1	X	-14.85	66
24	MP1	Z	-8.57	66
25	MP4	X	-76.25	8
26	MP4	Z	-44.02	8
27	MP4	X	-76.25	64
28	MP4	Z	-44.02	64
29	MP5	X	-175.92	0
30	MP5	Z	-101.57	0
31	MP5	X	-175.92	72
32	MP5	Z	-101.57	72
33	MP6	X	-175.92	0
34	MP6	Z	-101.57	0
35	MP6	X	-175.92	72
36	MP6	Z	-101.57	72
37	M3	X	-80.3	12
38	M3	Z	-46.36	12
39	MP6	X	-54.47	66
40	MP6	Z	-31.45	66
41	MP5	X	-51.01	66
42	MP5	Z	-29.45	66
43	MP5	X	-45.37	66
44	MP5	Z	-26.2	66
45	MP4	X	-30.56	66
46	MP4	Z	-17.65	66
47	MP4	X	-30.56	66
48	MP4	Z	-17.65	66
49	MP7	X	-49.46	8
50	MP7	Z	-28.56	8
51	MP7	X	-49.46	64
52	MP7	Z	-28.56	64
53	MP8	X	-102.28	0
54	MP8	Z	-59.05	0
55	MP8	X	-102.28	72
56	MP8	Z	-59.05	72
57	MP9	X	-102.28	0
58	MP9	Z	-59.05	0
59	MP9	X	-102.28	72
60	MP9	Z	-59.05	72
61	M5	X	-80.3	12
62	M5	Z	-46.36	12
63	MP9	X	-42.85	66
64	MP9	Z	-24.74	66
65	MP8	X	-34.73	66
66	MP8	Z	-20.05	66
67	MP8	X	-39.44	66
68	MP8	Z	-22.77	66
69	MP7	X	-14.85	66
70	MP7	Z	-8.57	66
71	MP7	X	-14.85	66
72	MP7	Z	-8.57	66

Member Point Loads (BLC 5 : Wind Load AZI 90)

Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]

Member Point Loads (BLC 5 : Wind Load AZI 90) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-46.8	8
2	MP1	Z	0	8
3	MP1	X	-46.8	64
4	MP1	Z	0	64
5	MP2	X	-89.75	0
6	MP2	Z	0	0
7	MP2	X	-89.75	72
8	MP2	Z	0	72
9	MP3	X	-89.75	0
10	MP3	Z	0	0
11	MP3	X	-89.75	72
12	MP3	Z	0	72
13	M1	X	-92.73	12
14	M1	Z	0	12
15	MP3	X	-45.01	66
16	MP3	Z	0	66
17	MP2	X	-33.84	66
18	MP2	Z	0	66
19	MP2	X	-43.26	66
20	MP2	Z	0	66
21	MP1	X	-11.1	66
22	MP1	Z	0	66
23	MP1	X	-11.1	66
24	MP1	Z	0	66
25	MP4	X	-77.73	8
26	MP4	Z	0	8
27	MP4	X	-77.73	64
28	MP4	Z	0	64
29	MP5	X	-174.79	0
30	MP5	Z	0	0
31	MP5	X	-174.79	72
32	MP5	Z	0	72
33	MP6	X	-174.79	0
34	MP6	Z	0	0
35	MP6	X	-174.79	72
36	MP6	Z	0	72
37	M3	X	-92.73	12
38	M3	Z	0	12
39	MP6	X	-58.42	66
40	MP6	Z	0	66
41	MP5	X	-52.64	66
42	MP5	Z	0	66
43	MP5	X	-50.11	66
44	MP5	Z	0	66
45	MP4	X	-29.24	66
46	MP4	Z	0	66
47	MP4	X	-29.24	66
48	MP4	Z	0	66
49	MP7	X	-77.73	8
50	MP7	Z	0	8
51	MP7	X	-77.73	64
52	MP7	Z	0	64
53	MP8	X	-174.79	0
54	MP8	Z	0	0
55	MP8	X	-174.79	72
56	MP8	Z	0	72
57	MP9	X	-174.79	0

Member Point Loads (BLC 5 : Wind Load AZI 90) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
58	MP9	Z	0	0
59	MP9	X	-174.79	72
60	MP9	Z	0	72
61	M5	X	-92.73	12
62	M5	Z	0	12
63	MP9	X	-58.42	66
64	MP9	Z	0	66
65	MP8	X	-52.64	66
66	MP8	Z	0	66
67	MP8	X	-50.11	66
68	MP8	Z	0	66
69	MP7	X	-29.24	66
70	MP7	Z	0	66
71	MP7	X	-29.24	66
72	MP7	Z	0	66

Member Point Loads (BLC 6 : Wind Load AZI 120)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-49.46	8
2	MP1	Z	28.56	8
3	MP1	X	-49.46	64
4	MP1	Z	28.56	64
5	MP2	X	-102.28	0
6	MP2	Z	59.05	0
7	MP2	X	-102.28	72
8	MP2	Z	59.05	72
9	MP3	X	-102.28	0
10	MP3	Z	59.05	0
11	MP3	X	-102.28	72
12	MP3	Z	59.05	72
13	M1	X	-80.3	12
14	M1	Z	46.36	12
15	MP3	X	-42.85	66
16	MP3	Z	24.74	66
17	MP2	X	-34.73	66
18	MP2	Z	20.05	66
19	MP2	X	-39.44	66
20	MP2	Z	22.77	66
21	MP1	X	-14.85	66
22	MP1	Z	8.57	66
23	MP1	X	-14.85	66
24	MP1	Z	8.57	66
25	MP4	X	-49.46	8
26	MP4	Z	28.56	8
27	MP4	X	-49.46	64
28	MP4	Z	28.56	64
29	MP5	X	-102.28	0
30	MP5	Z	59.05	0
31	MP5	X	-102.28	72
32	MP5	Z	59.05	72
33	MP6	X	-102.28	0
34	MP6	Z	59.05	0
35	MP6	X	-102.28	72
36	MP6	Z	59.05	72
37	M3	X	-80.3	12
38	M3	Z	46.36	12

Member Point Loads (BLC 6 : Wind Load AZI 120) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
39	MP6	X	-42.85	66
40	MP6	Z	24.74	66
41	MP5	X	-34.73	66
42	MP5	Z	20.05	66
43	MP5	X	-39.44	66
44	MP5	Z	22.77	66
45	MP4	X	-14.85	66
46	MP4	Z	8.57	66
47	MP4	X	-14.85	66
48	MP4	Z	8.57	66
49	MP7	X	-76.25	8
50	MP7	Z	44.02	8
51	MP7	X	-76.25	64
52	MP7	Z	44.02	64
53	MP8	X	-175.92	0
54	MP8	Z	101.57	0
55	MP8	X	-175.92	72
56	MP8	Z	101.57	72
57	MP9	X	-175.92	0
58	MP9	Z	101.57	0
59	MP9	X	-175.92	72
60	MP9	Z	101.57	72
61	M5	X	-80.3	12
62	M5	Z	46.36	12
63	MP9	X	-54.47	66
64	MP9	Z	31.45	66
65	MP8	X	-51.01	66
66	MP8	Z	29.45	66
67	MP8	X	-45.37	66
68	MP8	Z	26.2	66
69	MP7	X	-30.56	66
70	MP7	Z	17.65	66
71	MP7	X	-30.56	66
72	MP7	Z	17.65	66

Member Point Loads (BLC 7 : Wind Load AZI 150)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-38.87	8
2	MP1	Z	67.32	8
3	MP1	X	-38.87	64
4	MP1	Z	67.32	64
5	MP2	X	-87.4	0
6	MP2	Z	151.37	0
7	MP2	X	-87.4	72
8	MP2	Z	151.37	72
9	MP3	X	-87.4	0
10	MP3	Z	151.37	0
11	MP3	X	-87.4	72
12	MP3	Z	151.37	72
13	M1	X	-46.36	12
14	M1	Z	80.3	12
15	MP3	X	-29.21	66
16	MP3	Z	50.6	66
17	MP2	X	-26.32	66
18	MP2	Z	45.58	66
19	MP2	X	-25.06	66

Member Point Loads (BLC 7 : Wind Load AZI 150) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
20	MP2	Z	43.4	66
21	MP1	X	-14.62	66
22	MP1	Z	25.32	66
23	MP1	X	-14.62	66
24	MP1	Z	25.32	66
25	MP4	X	-23.4	8
26	MP4	Z	40.53	8
27	MP4	X	-23.4	64
28	MP4	Z	40.53	64
29	MP5	X	-44.88	0
30	MP5	Z	77.73	0
31	MP5	X	-44.88	72
32	MP5	Z	77.73	72
33	MP6	X	-44.88	0
34	MP6	Z	77.73	0
35	MP6	X	-44.88	72
36	MP6	Z	77.73	72
37	M3	X	-46.36	12
38	M3	Z	80.3	12
39	MP6	X	-22.51	66
40	MP6	Z	38.98	66
41	MP5	X	-16.92	66
42	MP5	Z	29.31	66
43	MP5	X	-21.63	66
44	MP5	Z	37.47	66
45	MP4	X	-5.55	66
46	MP4	Z	9.61	66
47	MP4	X	-5.55	66
48	MP4	Z	9.61	66
49	MP7	X	-38.87	8
50	MP7	Z	67.32	8
51	MP7	X	-38.87	64
52	MP7	Z	67.32	64
53	MP8	X	-87.4	0
54	MP8	Z	151.37	0
55	MP8	X	-87.4	72
56	MP8	Z	151.37	72
57	MP9	X	-87.4	0
58	MP9	Z	151.37	0
59	MP9	X	-87.4	72
60	MP9	Z	151.37	72
61	M5	X	-46.36	12
62	M5	Z	80.3	12
63	MP9	X	-29.21	66
64	MP9	Z	50.6	66
65	MP8	X	-26.32	66
66	MP8	Z	45.58	66
67	MP8	X	-25.06	66
68	MP8	Z	43.4	66
69	MP7	X	-14.62	66
70	MP7	Z	25.32	66
71	MP7	X	-14.62	66
72	MP7	Z	25.32	66

Member Point Loads (BLC 8 : Wind Load AZI 180)

Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]

Member Point Loads (BLC 8 : Wind Load AZI 180) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	8
2	MP1	Z	88.04	8
3	MP1	X	0	64
4	MP1	Z	88.04	64
5	MP2	X	0	0
6	MP2	Z	203.14	0
7	MP2	X	0	72
8	MP2	Z	203.14	72
9	MP3	X	0	0
10	MP3	Z	203.14	0
11	MP3	X	0	72
12	MP3	Z	203.14	72
13	M1	X	0	12
14	M1	Z	92.73	12
15	MP3	X	0	66
16	MP3	Z	62.89	66
17	MP2	X	0	66
18	MP2	Z	58.9	66
19	MP2	X	0	66
20	MP2	Z	52.39	66
21	MP1	X	0	66
22	MP1	Z	35.29	66
23	MP1	X	0	66
24	MP1	Z	35.29	66
25	MP4	X	0	8
26	MP4	Z	57.11	8
27	MP4	X	0	64
28	MP4	Z	57.11	64
29	MP5	X	0	0
30	MP5	Z	118.1	0
31	MP5	X	0	72
32	MP5	Z	118.1	72
33	MP6	X	0	0
34	MP6	Z	118.1	0
35	MP6	X	0	72
36	MP6	Z	118.1	72
37	M3	X	0	12
38	M3	Z	92.73	12
39	MP6	X	0	66
40	MP6	Z	49.48	66
41	MP5	X	0	66
42	MP5	Z	40.11	66
43	MP5	X	0	66
44	MP5	Z	45.55	66
45	MP4	X	0	66
46	MP4	Z	17.14	66
47	MP4	X	0	66
48	MP4	Z	17.14	66
49	MP7	X	0	8
50	MP7	Z	57.11	8
51	MP7	X	0	64
52	MP7	Z	57.11	64
53	MP8	X	0	0
54	MP8	Z	118.1	0
55	MP8	X	0	72
56	MP8	Z	118.1	72
57	MP9	X	0	0

Member Point Loads (BLC 8 : Wind Load AZI 180) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
58	MP9	Z	118.1	0
59	MP9	X	0	72
60	MP9	Z	118.1	72
61	M5	X	0	12
62	M5	Z	92.73	12
63	MP9	X	0	66
64	MP9	Z	49.48	66
65	MP8	X	0	66
66	MP8	Z	40.11	66
67	MP8	X	0	66
68	MP8	Z	45.55	66
69	MP7	X	0	66
70	MP7	Z	17.14	66
71	MP7	X	0	66
72	MP7	Z	17.14	66

Member Point Loads (BLC 9 : Wind Load AZI 210)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	38.87	8
2	MP1	Z	67.32	8
3	MP1	X	38.87	64
4	MP1	Z	67.32	64
5	MP2	X	87.4	0
6	MP2	Z	151.37	0
7	MP2	X	87.4	72
8	MP2	Z	151.37	72
9	MP3	X	87.4	0
10	MP3	Z	151.37	0
11	MP3	X	87.4	72
12	MP3	Z	151.37	72
13	M1	X	46.36	12
14	M1	Z	80.3	12
15	MP3	X	29.21	66
16	MP3	Z	50.6	66
17	MP2	X	26.32	66
18	MP2	Z	45.58	66
19	MP2	X	25.06	66
20	MP2	Z	43.4	66
21	MP1	X	14.62	66
22	MP1	Z	25.32	66
23	MP1	X	14.62	66
24	MP1	Z	25.32	66
25	MP4	X	38.87	8
26	MP4	Z	67.32	8
27	MP4	X	38.87	64
28	MP4	Z	67.32	64
29	MP5	X	87.4	0
30	MP5	Z	151.37	0
31	MP5	X	87.4	72
32	MP5	Z	151.37	72
33	MP6	X	87.4	0
34	MP6	Z	151.37	0
35	MP6	X	87.4	72
36	MP6	Z	151.37	72
37	M3	X	46.36	12
38	M3	Z	80.3	12

Member Point Loads (BLC 9 : Wind Load AZI 210) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
39	MP6	X	29.21	66
40	MP6	Z	50.6	66
41	MP5	X	26.32	66
42	MP5	Z	45.58	66
43	MP5	X	25.06	66
44	MP5	Z	43.4	66
45	MP4	X	14.62	66
46	MP4	Z	25.32	66
47	MP4	X	14.62	66
48	MP4	Z	25.32	66
49	MP7	X	23.4	8
50	MP7	Z	40.53	8
51	MP7	X	23.4	64
52	MP7	Z	40.53	64
53	MP8	X	44.88	0
54	MP8	Z	77.73	0
55	MP8	X	44.88	72
56	MP8	Z	77.73	72
57	MP9	X	44.88	0
58	MP9	Z	77.73	0
59	MP9	X	44.88	72
60	MP9	Z	77.73	72
61	M5	X	46.36	12
62	M5	Z	80.3	12
63	MP9	X	22.51	66
64	MP9	Z	38.98	66
65	MP8	X	16.92	66
66	MP8	Z	29.31	66
67	MP8	X	21.63	66
68	MP8	Z	37.47	66
69	MP7	X	5.55	66
70	MP7	Z	9.61	66
71	MP7	X	5.55	66
72	MP7	Z	9.61	66

Member Point Loads (BLC 10 : Wind Load AZI 240)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	49.46	8
2	MP1	Z	28.56	8
3	MP1	X	49.46	64
4	MP1	Z	28.56	64
5	MP2	X	102.28	0
6	MP2	Z	59.05	0
7	MP2	X	102.28	72
8	MP2	Z	59.05	72
9	MP3	X	102.28	0
10	MP3	Z	59.05	0
11	MP3	X	102.28	72
12	MP3	Z	59.05	72
13	M1	X	80.3	12
14	M1	Z	46.36	12
15	MP3	X	42.85	66
16	MP3	Z	24.74	66
17	MP2	X	34.73	66
18	MP2	Z	20.05	66
19	MP2	X	39.44	66

Member Point Loads (BLC 10 : Wind Load AZI 240) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
20	MP2	Z	22.77	66
21	MP1	X	14.85	66
22	MP1	Z	8.57	66
23	MP1	X	14.85	66
24	MP1	Z	8.57	66
25	MP4	X	76.25	8
26	MP4	Z	44.02	8
27	MP4	X	76.25	64
28	MP4	Z	44.02	64
29	MP5	X	175.92	0
30	MP5	Z	101.57	0
31	MP5	X	175.92	72
32	MP5	Z	101.57	72
33	MP6	X	175.92	0
34	MP6	Z	101.57	0
35	MP6	X	175.92	72
36	MP6	Z	101.57	72
37	M3	X	80.3	12
38	M3	Z	46.36	12
39	MP6	X	54.47	66
40	MP6	Z	31.45	66
41	MP5	X	51.01	66
42	MP5	Z	29.45	66
43	MP5	X	45.37	66
44	MP5	Z	26.2	66
45	MP4	X	30.56	66
46	MP4	Z	17.65	66
47	MP4	X	30.56	66
48	MP4	Z	17.65	66
49	MP7	X	49.46	8
50	MP7	Z	28.56	8
51	MP7	X	49.46	64
52	MP7	Z	28.56	64
53	MP8	X	102.28	0
54	MP8	Z	59.05	0
55	MP8	X	102.28	72
56	MP8	Z	59.05	72
57	MP9	X	102.28	0
58	MP9	Z	59.05	0
59	MP9	X	102.28	72
60	MP9	Z	59.05	72
61	M5	X	80.3	12
62	M5	Z	46.36	12
63	MP9	X	42.85	66
64	MP9	Z	24.74	66
65	MP8	X	34.73	66
66	MP8	Z	20.05	66
67	MP8	X	39.44	66
68	MP8	Z	22.77	66
69	MP7	X	14.85	66
70	MP7	Z	8.57	66
71	MP7	X	14.85	66
72	MP7	Z	8.57	66

Member Point Loads (BLC 11 : Wind Load AZI 270)

Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]

Member Point Loads (BLC 11 : Wind Load AZI 270) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	46.8	8
2	MP1	Z	0	8
3	MP1	X	46.8	64
4	MP1	Z	0	64
5	MP2	X	89.75	0
6	MP2	Z	0	0
7	MP2	X	89.75	72
8	MP2	Z	0	72
9	MP3	X	89.75	0
10	MP3	Z	0	0
11	MP3	X	89.75	72
12	MP3	Z	0	72
13	M1	X	92.73	12
14	M1	Z	0	12
15	MP3	X	45.01	66
16	MP3	Z	0	66
17	MP2	X	33.84	66
18	MP2	Z	0	66
19	MP2	X	43.26	66
20	MP2	Z	0	66
21	MP1	X	11.1	66
22	MP1	Z	0	66
23	MP1	X	11.1	66
24	MP1	Z	0	66
25	MP4	X	77.73	8
26	MP4	Z	0	8
27	MP4	X	77.73	64
28	MP4	Z	0	64
29	MP5	X	174.79	0
30	MP5	Z	0	0
31	MP5	X	174.79	72
32	MP5	Z	0	72
33	MP6	X	174.79	0
34	MP6	Z	0	0
35	MP6	X	174.79	72
36	MP6	Z	0	72
37	M3	X	92.73	12
38	M3	Z	0	12
39	MP6	X	58.42	66
40	MP6	Z	0	66
41	MP5	X	52.64	66
42	MP5	Z	0	66
43	MP5	X	50.11	66
44	MP5	Z	0	66
45	MP4	X	29.24	66
46	MP4	Z	0	66
47	MP4	X	29.24	66
48	MP4	Z	0	66
49	MP7	X	77.73	8
50	MP7	Z	0	8
51	MP7	X	77.73	64
52	MP7	Z	0	64
53	MP8	X	174.79	0
54	MP8	Z	0	0
55	MP8	X	174.79	72
56	MP8	Z	0	72
57	MP9	X	174.79	0

Member Point Loads (BLC 11 : Wind Load AZI 270) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
58	MP9	Z	0	0
59	MP9	X	174.79	72
60	MP9	Z	0	72
61	M5	X	92.73	12
62	M5	Z	0	12
63	MP9	X	58.42	66
64	MP9	Z	0	66
65	MP8	X	52.64	66
66	MP8	Z	0	66
67	MP8	X	50.11	66
68	MP8	Z	0	66
69	MP7	X	29.24	66
70	MP7	Z	0	66
71	MP7	X	29.24	66
72	MP7	Z	0	66

Member Point Loads (BLC 12 : Wind Load AZI 300)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	49.46	8
2	MP1	Z	-28.56	8
3	MP1	X	49.46	64
4	MP1	Z	-28.56	64
5	MP2	X	102.28	0
6	MP2	Z	-59.05	0
7	MP2	X	102.28	72
8	MP2	Z	-59.05	72
9	MP3	X	102.28	0
10	MP3	Z	-59.05	0
11	MP3	X	102.28	72
12	MP3	Z	-59.05	72
13	M1	X	80.3	12
14	M1	Z	-46.36	12
15	MP3	X	42.85	66
16	MP3	Z	-24.74	66
17	MP2	X	34.73	66
18	MP2	Z	-20.05	66
19	MP2	X	39.44	66
20	MP2	Z	-22.77	66
21	MP1	X	14.85	66
22	MP1	Z	-8.57	66
23	MP1	X	14.85	66
24	MP1	Z	-8.57	66
25	MP4	X	49.46	8
26	MP4	Z	-28.56	8
27	MP4	X	49.46	64
28	MP4	Z	-28.56	64
29	MP5	X	102.28	0
30	MP5	Z	-59.05	0
31	MP5	X	102.28	72
32	MP5	Z	-59.05	72
33	MP6	X	102.28	0
34	MP6	Z	-59.05	0
35	MP6	X	102.28	72
36	MP6	Z	-59.05	72
37	M3	X	80.3	12
38	M3	Z	-46.36	12

Member Point Loads (BLC 12 : Wind Load AZI 300) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
39	MP6	X	42.85	66
40	MP6	Z	-24.74	66
41	MP5	X	34.73	66
42	MP5	Z	-20.05	66
43	MP5	X	39.44	66
44	MP5	Z	-22.77	66
45	MP4	X	14.85	66
46	MP4	Z	-8.57	66
47	MP4	X	14.85	66
48	MP4	Z	-8.57	66
49	MP7	X	76.25	8
50	MP7	Z	-44.02	8
51	MP7	X	76.25	64
52	MP7	Z	-44.02	64
53	MP8	X	175.92	0
54	MP8	Z	-101.57	0
55	MP8	X	175.92	72
56	MP8	Z	-101.57	72
57	MP9	X	175.92	0
58	MP9	Z	-101.57	0
59	MP9	X	175.92	72
60	MP9	Z	-101.57	72
61	M5	X	80.3	12
62	M5	Z	-46.36	12
63	MP9	X	54.47	66
64	MP9	Z	-31.45	66
65	MP8	X	51.01	66
66	MP8	Z	-29.45	66
67	MP8	X	45.37	66
68	MP8	Z	-26.2	66
69	MP7	X	30.56	66
70	MP7	Z	-17.65	66
71	MP7	X	30.56	66
72	MP7	Z	-17.65	66

Member Point Loads (BLC 13 : Wind Load AZI 330)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	38.87	8
2	MP1	Z	-67.32	8
3	MP1	X	38.87	64
4	MP1	Z	-67.32	64
5	MP2	X	87.4	0
6	MP2	Z	-151.37	0
7	MP2	X	87.4	72
8	MP2	Z	-151.37	72
9	MP3	X	87.4	0
10	MP3	Z	-151.37	0
11	MP3	X	87.4	72
12	MP3	Z	-151.37	72
13	M1	X	46.36	12
14	M1	Z	-80.3	12
15	MP3	X	29.21	66
16	MP3	Z	-50.6	66
17	MP2	X	26.32	66
18	MP2	Z	-45.58	66
19	MP2	X	25.06	66

Member Point Loads (BLC 13 : Wind Load AZI 330) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
20	MP2	Z	-43.4	66
21	MP1	X	14.62	66
22	MP1	Z	-25.32	66
23	MP1	X	14.62	66
24	MP1	Z	-25.32	66
25	MP4	X	23.4	8
26	MP4	Z	-40.53	8
27	MP4	X	23.4	64
28	MP4	Z	-40.53	64
29	MP5	X	44.88	0
30	MP5	Z	-77.73	0
31	MP5	X	44.88	72
32	MP5	Z	-77.73	72
33	MP6	X	44.88	0
34	MP6	Z	-77.73	0
35	MP6	X	44.88	72
36	MP6	Z	-77.73	72
37	M3	X	46.36	12
38	M3	Z	-80.3	12
39	MP6	X	22.51	66
40	MP6	Z	-38.98	66
41	MP5	X	16.92	66
42	MP5	Z	-29.31	66
43	MP5	X	21.63	66
44	MP5	Z	-37.47	66
45	MP4	X	5.55	66
46	MP4	Z	-9.61	66
47	MP4	X	5.55	66
48	MP4	Z	-9.61	66
49	MP7	X	38.87	8
50	MP7	Z	-67.32	8
51	MP7	X	38.87	64
52	MP7	Z	-67.32	64
53	MP8	X	87.4	0
54	MP8	Z	-151.37	0
55	MP8	X	87.4	72
56	MP8	Z	-151.37	72
57	MP9	X	87.4	0
58	MP9	Z	-151.37	0
59	MP9	X	87.4	72
60	MP9	Z	-151.37	72
61	M5	X	46.36	12
62	M5	Z	-80.3	12
63	MP9	X	29.21	66
64	MP9	Z	-50.6	66
65	MP8	X	26.32	66
66	MP8	Z	-45.58	66
67	MP8	X	25.06	66
68	MP8	Z	-43.4	66
69	MP7	X	14.62	66
70	MP7	Z	-25.32	66
71	MP7	X	14.62	66
72	MP7	Z	-25.32	66

Member Point Loads (BLC 16 : Ice Weight)

Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]

Member Point Loads (BLC 16 : Ice Weight) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Y	-42.37	8
2	MP1	Y	-42.37	64
3	MP2	Y	-92.61	0
4	MP2	Y	-92.61	72
5	MP3	Y	-92.61	0
6	MP3	Y	-92.61	72
7	M1	Y	-71.862	12
8	MP3	Y	-48.238	66
9	MP2	Y	-41.725	66
10	MP2	Y	-45.926	66
11	MP1	Y	-19.977	66
12	MP1	Y	-19.977	66
13	MP4	Y	-42.37	8
14	MP4	Y	-42.37	64
15	MP5	Y	-92.61	0
16	MP5	Y	-92.61	72
17	MP6	Y	-92.61	0
18	MP6	Y	-92.61	72
19	M3	Y	-71.862	12
20	MP6	Y	-48.238	66
21	MP5	Y	-41.725	66
22	MP5	Y	-45.926	66
23	MP4	Y	-19.977	66
24	MP4	Y	-19.977	66
25	MP7	Y	-42.37	8
26	MP7	Y	-42.37	64
27	MP8	Y	-92.61	0
28	MP8	Y	-92.61	72
29	MP9	Y	-92.61	0
30	MP9	Y	-92.61	72
31	M5	Y	-71.862	12
32	MP9	Y	-48.238	66
33	MP8	Y	-41.725	66
34	MP8	Y	-45.926	66
35	MP7	Y	-19.977	66
36	MP7	Y	-19.977	66

Member Point Loads (BLC 17 : Ice Wind Load AZI 0)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	8
2	MP1	Z	-9.9	8
3	MP1	X	0	64
4	MP1	Z	-9.9	64
5	MP2	X	0	0
6	MP2	Z	-18.34	0
7	MP2	X	0	72
8	MP2	Z	-18.34	72
9	MP3	X	0	0
10	MP3	Z	-18.34	0
11	MP3	X	0	72
12	MP3	Z	-18.34	72
13	M1	X	0	12
14	M1	Z	-10.85	12
15	MP3	X	0	66
16	MP3	Z	-7.07	66
17	MP2	X	0	66

Member Point Loads (BLC 17 : Ice Wind Load AZI 0) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
18	MP2	Z	-6.62	66
19	MP2	X	0	66
20	MP2	Z	-6.02	66
21	MP1	X	0	66
22	MP1	Z	-5.02	66
23	MP1	X	0	66
24	MP1	Z	-5.02	66
25	MP4	X	0	8
26	MP4	Z	-7.91	8
27	MP4	X	0	64
28	MP4	Z	-7.91	64
29	MP5	X	0	0
30	MP5	Z	-13.51	0
31	MP5	X	0	72
32	MP5	Z	-13.51	72
33	MP6	X	0	0
34	MP6	Z	-13.51	0
35	MP6	X	0	72
36	MP6	Z	-13.51	72
37	M3	X	0	12
38	M3	Z	-10.85	12
39	MP6	X	0	66
40	MP6	Z	-6.36	66
41	MP5	X	0	66
42	MP5	Z	-5.6	66
43	MP5	X	0	66
44	MP5	Z	-5.66	66
45	MP4	X	0	66
46	MP4	Z	-3.14	66
47	MP4	X	0	66
48	MP4	Z	-3.14	66
49	MP7	X	0	8
50	MP7	Z	-7.91	8
51	MP7	X	0	64
52	MP7	Z	-7.91	64
53	MP8	X	0	0
54	MP8	Z	-13.51	0
55	MP8	X	0	72
56	MP8	Z	-13.51	72
57	MP9	X	0	0
58	MP9	Z	-13.51	0
59	MP9	X	0	72
60	MP9	Z	-13.51	72
61	M5	X	0	12
62	M5	Z	-10.85	12
63	MP9	X	0	66
64	MP9	Z	-6.36	66
65	MP8	X	0	66
66	MP8	Z	-5.6	66
67	MP8	X	0	66
68	MP8	Z	-5.66	66
69	MP7	X	0	66
70	MP7	Z	-3.14	66
71	MP7	X	0	66
72	MP7	Z	-3.14	66

Member Point Loads (BLC 18 : Ice Wind Load AZI 30)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-4.62	8
2	MP1	Z	-8	8
3	MP1	X	-4.62	64
4	MP1	Z	-8	64
5	MP2	X	-8.36	0
6	MP2	Z	-14.49	0
7	MP2	X	-8.36	72
8	MP2	Z	-14.49	72
9	MP3	X	-8.36	0
10	MP3	Z	-14.49	0
11	MP3	X	-8.36	72
12	MP3	Z	-14.49	72
13	M1	X	-5.42	12
14	M1	Z	-9.39	12
15	MP3	X	-3.42	66
16	MP3	Z	-5.92	66
17	MP2	X	-3.14	66
18	MP2	Z	-5.44	66
19	MP2	X	-2.95	66
20	MP2	Z	-5.11	66
21	MP1	X	-2.2	66
22	MP1	Z	-3.8	66
23	MP1	X	-2.2	66
24	MP1	Z	-3.8	66
25	MP4	X	-4.62	8
26	MP4	Z	-8	8
27	MP4	X	-4.62	64
28	MP4	Z	-8	64
29	MP5	X	-8.36	0
30	MP5	Z	-14.49	0
31	MP5	X	-8.36	72
32	MP5	Z	-14.49	72
33	MP6	X	-8.36	0
34	MP6	Z	-14.49	0
35	MP6	X	-8.36	72
36	MP6	Z	-14.49	72
37	M3	X	-5.42	12
38	M3	Z	-9.39	12
39	MP6	X	-3.42	66
40	MP6	Z	-5.92	66
41	MP5	X	-3.14	66
42	MP5	Z	-5.44	66
43	MP5	X	-2.95	66
44	MP5	Z	-5.11	66
45	MP4	X	-2.2	66
46	MP4	Z	-3.8	66
47	MP4	X	-2.2	66
48	MP4	Z	-3.8	66
49	MP7	X	-3.62	8
50	MP7	Z	-6.27	8
51	MP7	X	-3.62	64
52	MP7	Z	-6.27	64
53	MP8	X	-5.95	0
54	MP8	Z	-10.3	0
55	MP8	X	-5.95	72
56	MP8	Z	-10.3	72
57	MP9	X	-5.95	0

Member Point Loads (BLC 18 : Ice Wind Load AZI 30) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
58	MP9	Z	-10.3	0
59	MP9	X	-5.95	72
60	MP9	Z	-10.3	72
61	M5	X	-5.42	12
62	M5	Z	-9.39	12
63	MP9	X	-3.07	66
64	MP9	Z	-5.31	66
65	MP8	X	-2.63	66
66	MP8	Z	-4.55	66
67	MP8	X	-2.77	66
68	MP8	Z	-4.8	66
69	MP7	X	-1.25	66
70	MP7	Z	-2.17	66
71	MP7	X	-1.25	66
72	MP7	Z	-2.17	66

Member Point Loads (BLC 19 : Ice Wind Load AZI 60)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-6.85	8
2	MP1	Z	-3.95	8
3	MP1	X	-6.85	64
4	MP1	Z	-3.95	64
5	MP2	X	-11.7	0
6	MP2	Z	-6.75	0
7	MP2	X	-11.7	72
8	MP2	Z	-6.75	72
9	MP3	X	-11.7	0
10	MP3	Z	-6.75	0
11	MP3	X	-11.7	72
12	MP3	Z	-6.75	72
13	M1	X	-9.39	12
14	M1	Z	-5.42	12
15	MP3	X	-5.51	66
16	MP3	Z	-3.18	66
17	MP2	X	-4.85	66
18	MP2	Z	-2.8	66
19	MP2	X	-4.91	66
20	MP2	Z	-2.83	66
21	MP1	X	-2.72	66
22	MP1	Z	-1.57	66
23	MP1	X	-2.72	66
24	MP1	Z	-1.57	66
25	MP4	X	-8.57	8
26	MP4	Z	-4.95	8
27	MP4	X	-8.57	64
28	MP4	Z	-4.95	64
29	MP5	X	-15.88	0
30	MP5	Z	-9.17	0
31	MP5	X	-15.88	72
32	MP5	Z	-9.17	72
33	MP6	X	-15.88	0
34	MP6	Z	-9.17	0
35	MP6	X	-15.88	72
36	MP6	Z	-9.17	72
37	M3	X	-9.39	12
38	M3	Z	-5.42	12

Member Point Loads (BLC 19 : Ice Wind Load AZI 60) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
39	MP6	X	-6.12	66
40	MP6	Z	-3.53	66
41	MP5	X	-5.74	66
42	MP5	Z	-3.31	66
43	MP5	X	-5.22	66
44	MP5	Z	-3.01	66
45	MP4	X	-4.35	66
46	MP4	Z	-2.51	66
47	MP4	X	-4.35	66
48	MP4	Z	-2.51	66
49	MP7	X	-6.85	8
50	MP7	Z	-3.95	8
51	MP7	X	-6.85	64
52	MP7	Z	-3.95	64
53	MP8	X	-11.7	0
54	MP8	Z	-6.75	0
55	MP8	X	-11.7	72
56	MP8	Z	-6.75	72
57	MP9	X	-11.7	0
58	MP9	Z	-6.75	0
59	MP9	X	-11.7	72
60	MP9	Z	-6.75	72
61	M5	X	-9.39	12
62	M5	Z	-5.42	12
63	MP9	X	-5.51	66
64	MP9	Z	-3.18	66
65	MP8	X	-4.85	66
66	MP8	Z	-2.8	66
67	MP8	X	-4.91	66
68	MP8	Z	-2.83	66
69	MP7	X	-2.72	66
70	MP7	Z	-1.57	66
71	MP7	X	-2.72	66
72	MP7	Z	-1.57	66

Member Point Loads (BLC 20 : Ice Wind Load AZI 90)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-7.24	8
2	MP1	Z	0	8
3	MP1	X	-7.24	64
4	MP1	Z	0	64
5	MP2	X	-11.89	0
6	MP2	Z	0	0
7	MP2	X	-11.89	72
8	MP2	Z	0	72
9	MP3	X	-11.89	0
10	MP3	Z	0	0
11	MP3	X	-11.89	72
12	MP3	Z	0	72
13	M1	X	-10.85	12
14	M1	Z	0	12
15	MP3	X	-6.13	66
16	MP3	Z	0	66
17	MP2	X	-5.26	66
18	MP2	Z	0	66
19	MP2	X	-5.55	66

Member Point Loads (BLC 20 : Ice Wind Load AZI 90) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
20	MP2	Z	0	66
21	MP1	X	-2.51	66
22	MP1	Z	0	66
23	MP1	X	-2.51	66
24	MP1	Z	0	66
25	MP4	X	-9.23	8
26	MP4	Z	0	8
27	MP4	X	-9.23	64
28	MP4	Z	0	64
29	MP5	X	-16.73	0
30	MP5	Z	0	0
31	MP5	X	-16.73	72
32	MP5	Z	0	72
33	MP6	X	-16.73	0
34	MP6	Z	0	0
35	MP6	X	-16.73	72
36	MP6	Z	0	72
37	M3	X	-10.85	12
38	M3	Z	0	12
39	MP6	X	-6.83	66
40	MP6	Z	0	66
41	MP5	X	-6.28	66
42	MP5	Z	0	66
43	MP5	X	-5.9	66
44	MP5	Z	0	66
45	MP4	X	-4.39	66
46	MP4	Z	0	66
47	MP4	X	-4.39	66
48	MP4	Z	0	66
49	MP7	X	-9.23	8
50	MP7	Z	0	8
51	MP7	X	-9.23	64
52	MP7	Z	0	64
53	MP8	X	-16.73	0
54	MP8	Z	0	0
55	MP8	X	-16.73	72
56	MP8	Z	0	72
57	MP9	X	-16.73	0
58	MP9	Z	0	0
59	MP9	X	-16.73	72
60	MP9	Z	0	72
61	M5	X	-10.85	12
62	M5	Z	0	12
63	MP9	X	-6.83	66
64	MP9	Z	0	66
65	MP8	X	-6.28	66
66	MP8	Z	0	66
67	MP8	X	-5.9	66
68	MP8	Z	0	66
69	MP7	X	-4.39	66
70	MP7	Z	0	66
71	MP7	X	-4.39	66
72	MP7	Z	0	66

Member Point Loads (BLC 21 : Ice Wind Load AZI 120)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]

Member Point Loads (BLC 21 : Ice Wind Load AZI 120) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-6.85	8
2	MP1	Z	3.95	8
3	MP1	X	-6.85	64
4	MP1	Z	3.95	64
5	MP2	X	-11.7	0
6	MP2	Z	6.75	0
7	MP2	X	-11.7	72
8	MP2	Z	6.75	72
9	MP3	X	-11.7	0
10	MP3	Z	6.75	0
11	MP3	X	-11.7	72
12	MP3	Z	6.75	72
13	M1	X	-9.39	12
14	M1	Z	5.42	12
15	MP3	X	-5.51	66
16	MP3	Z	3.18	66
17	MP2	X	-4.85	66
18	MP2	Z	2.8	66
19	MP2	X	-4.91	66
20	MP2	Z	2.83	66
21	MP1	X	-2.72	66
22	MP1	Z	1.57	66
23	MP1	X	-2.72	66
24	MP1	Z	1.57	66
25	MP4	X	-6.85	8
26	MP4	Z	3.95	8
27	MP4	X	-6.85	64
28	MP4	Z	3.95	64
29	MP5	X	-11.7	0
30	MP5	Z	6.75	0
31	MP5	X	-11.7	72
32	MP5	Z	6.75	72
33	MP6	X	-11.7	0
34	MP6	Z	6.75	0
35	MP6	X	-11.7	72
36	MP6	Z	6.75	72
37	M3	X	-9.39	12
38	M3	Z	5.42	12
39	MP6	X	-5.51	66
40	MP6	Z	3.18	66
41	MP5	X	-4.85	66
42	MP5	Z	2.8	66
43	MP5	X	-4.91	66
44	MP5	Z	2.83	66
45	MP4	X	-2.72	66
46	MP4	Z	1.57	66
47	MP4	X	-2.72	66
48	MP4	Z	1.57	66
49	MP7	X	-8.57	8
50	MP7	Z	4.95	8
51	MP7	X	-8.57	64
52	MP7	Z	4.95	64
53	MP8	X	-15.88	0
54	MP8	Z	9.17	0
55	MP8	X	-15.88	72
56	MP8	Z	9.17	72
57	MP9	X	-15.88	0

Member Point Loads (BLC 21 : Ice Wind Load AZI 120) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
58	MP9	Z	9.17	0
59	MP9	X	-15.88	72
60	MP9	Z	9.17	72
61	M5	X	-9.39	12
62	M5	Z	5.42	12
63	MP9	X	-6.12	66
64	MP9	Z	3.53	66
65	MP8	X	-5.74	66
66	MP8	Z	3.31	66
67	MP8	X	-5.22	66
68	MP8	Z	3.01	66
69	MP7	X	-4.35	66
70	MP7	Z	2.51	66
71	MP7	X	-4.35	66
72	MP7	Z	2.51	66

Member Point Loads (BLC 22 : Ice Wind Load AZI 150)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-4.62	8
2	MP1	Z	8	8
3	MP1	X	-4.62	64
4	MP1	Z	8	64
5	MP2	X	-8.36	0
6	MP2	Z	14.49	0
7	MP2	X	-8.36	72
8	MP2	Z	14.49	72
9	MP3	X	-8.36	0
10	MP3	Z	14.49	0
11	MP3	X	-8.36	72
12	MP3	Z	14.49	72
13	M1	X	-5.42	12
14	M1	Z	9.39	12
15	MP3	X	-3.42	66
16	MP3	Z	5.92	66
17	MP2	X	-3.14	66
18	MP2	Z	5.44	66
19	MP2	X	-2.95	66
20	MP2	Z	5.11	66
21	MP1	X	-2.2	66
22	MP1	Z	3.8	66
23	MP1	X	-2.2	66
24	MP1	Z	3.8	66
25	MP4	X	-3.62	8
26	MP4	Z	6.27	8
27	MP4	X	-3.62	64
28	MP4	Z	6.27	64
29	MP5	X	-5.95	0
30	MP5	Z	10.3	0
31	MP5	X	-5.95	72
32	MP5	Z	10.3	72
33	MP6	X	-5.95	0
34	MP6	Z	10.3	0
35	MP6	X	-5.95	72
36	MP6	Z	10.3	72
37	M3	X	-5.42	12
38	M3	Z	9.39	12

Member Point Loads (BLC 22 : Ice Wind Load AZI 150) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
39	MP6	X	-3.07	66
40	MP6	Z	5.31	66
41	MP5	X	-2.63	66
42	MP5	Z	4.55	66
43	MP5	X	-2.77	66
44	MP5	Z	4.8	66
45	MP4	X	-1.25	66
46	MP4	Z	2.17	66
47	MP4	X	-1.25	66
48	MP4	Z	2.17	66
49	MP7	X	-4.62	8
50	MP7	Z	8	8
51	MP7	X	-4.62	64
52	MP7	Z	8	64
53	MP8	X	-8.36	0
54	MP8	Z	14.49	0
55	MP8	X	-8.36	72
56	MP8	Z	14.49	72
57	MP9	X	-8.36	0
58	MP9	Z	14.49	0
59	MP9	X	-8.36	72
60	MP9	Z	14.49	72
61	M5	X	-5.42	12
62	M5	Z	9.39	12
63	MP9	X	-3.42	66
64	MP9	Z	5.92	66
65	MP8	X	-3.14	66
66	MP8	Z	5.44	66
67	MP8	X	-2.95	66
68	MP8	Z	5.11	66
69	MP7	X	-2.2	66
70	MP7	Z	3.8	66
71	MP7	X	-2.2	66
72	MP7	Z	3.8	66

Member Point Loads (BLC 23 : Ice Wind Load AZI 180)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	0	8
2	MP1	Z	9.9	8
3	MP1	X	0	64
4	MP1	Z	9.9	64
5	MP2	X	0	0
6	MP2	Z	18.34	0
7	MP2	X	0	72
8	MP2	Z	18.34	72
9	MP3	X	0	0
10	MP3	Z	18.34	0
11	MP3	X	0	72
12	MP3	Z	18.34	72
13	M1	X	0	12
14	M1	Z	10.85	12
15	MP3	X	0	66
16	MP3	Z	7.07	66
17	MP2	X	0	66
18	MP2	Z	6.62	66
19	MP2	X	0	66

Member Point Loads (BLC 23 : Ice Wind Load AZI 180) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
20	MP2	Z	6.02	66
21	MP1	X	0	66
22	MP1	Z	5.02	66
23	MP1	X	0	66
24	MP1	Z	5.02	66
25	MP4	X	0	8
26	MP4	Z	7.91	8
27	MP4	X	0	64
28	MP4	Z	7.91	64
29	MP5	X	0	0
30	MP5	Z	13.51	0
31	MP5	X	0	72
32	MP5	Z	13.51	72
33	MP6	X	0	0
34	MP6	Z	13.51	0
35	MP6	X	0	72
36	MP6	Z	13.51	72
37	M3	X	0	12
38	M3	Z	10.85	12
39	MP6	X	0	66
40	MP6	Z	6.36	66
41	MP5	X	0	66
42	MP5	Z	5.6	66
43	MP5	X	0	66
44	MP5	Z	5.66	66
45	MP4	X	0	66
46	MP4	Z	3.14	66
47	MP4	X	0	66
48	MP4	Z	3.14	66
49	MP7	X	0	8
50	MP7	Z	7.91	8
51	MP7	X	0	64
52	MP7	Z	7.91	64
53	MP8	X	0	0
54	MP8	Z	13.51	0
55	MP8	X	0	72
56	MP8	Z	13.51	72
57	MP9	X	0	0
58	MP9	Z	13.51	0
59	MP9	X	0	72
60	MP9	Z	13.51	72
61	M5	X	0	12
62	M5	Z	10.85	12
63	MP9	X	0	66
64	MP9	Z	6.36	66
65	MP8	X	0	66
66	MP8	Z	5.6	66
67	MP8	X	0	66
68	MP8	Z	5.66	66
69	MP7	X	0	66
70	MP7	Z	3.14	66
71	MP7	X	0	66
72	MP7	Z	3.14	66

Member Point Loads (BLC 24 : Ice Wind Load AZI 210)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]

Member Point Loads (BLC 24 : Ice Wind Load AZI 210) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	4.62	8
2	MP1	Z	8	8
3	MP1	X	4.62	64
4	MP1	Z	8	64
5	MP2	X	8.36	0
6	MP2	Z	14.49	0
7	MP2	X	8.36	72
8	MP2	Z	14.49	72
9	MP3	X	8.36	0
10	MP3	Z	14.49	0
11	MP3	X	8.36	72
12	MP3	Z	14.49	72
13	M1	X	5.42	12
14	M1	Z	9.39	12
15	MP3	X	3.42	66
16	MP3	Z	5.92	66
17	MP2	X	3.14	66
18	MP2	Z	5.44	66
19	MP2	X	2.95	66
20	MP2	Z	5.11	66
21	MP1	X	2.2	66
22	MP1	Z	3.8	66
23	MP1	X	2.2	66
24	MP1	Z	3.8	66
25	MP4	X	4.62	8
26	MP4	Z	8	8
27	MP4	X	4.62	64
28	MP4	Z	8	64
29	MP5	X	8.36	0
30	MP5	Z	14.49	0
31	MP5	X	8.36	72
32	MP5	Z	14.49	72
33	MP6	X	8.36	0
34	MP6	Z	14.49	0
35	MP6	X	8.36	72
36	MP6	Z	14.49	72
37	M3	X	5.42	12
38	M3	Z	9.39	12
39	MP6	X	3.42	66
40	MP6	Z	5.92	66
41	MP5	X	3.14	66
42	MP5	Z	5.44	66
43	MP5	X	2.95	66
44	MP5	Z	5.11	66
45	MP4	X	2.2	66
46	MP4	Z	3.8	66
47	MP4	X	2.2	66
48	MP4	Z	3.8	66
49	MP7	X	3.62	8
50	MP7	Z	6.27	8
51	MP7	X	3.62	64
52	MP7	Z	6.27	64
53	MP8	X	5.95	0
54	MP8	Z	10.3	0
55	MP8	X	5.95	72
56	MP8	Z	10.3	72
57	MP9	X	5.95	0

Member Point Loads (BLC 24 : Ice Wind Load AZI 210) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
58	MP9	Z	10.3	0
59	MP9	X	5.95	72
60	MP9	Z	10.3	72
61	M5	X	5.42	12
62	M5	Z	9.39	12
63	MP9	X	3.07	66
64	MP9	Z	5.31	66
65	MP8	X	2.63	66
66	MP8	Z	4.55	66
67	MP8	X	2.77	66
68	MP8	Z	4.8	66
69	MP7	X	1.25	66
70	MP7	Z	2.17	66
71	MP7	X	1.25	66
72	MP7	Z	2.17	66

Member Point Loads (BLC 25 : Ice Wind Load AZI 240)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	6.85	8
2	MP1	Z	3.95	8
3	MP1	X	6.85	64
4	MP1	Z	3.95	64
5	MP2	X	11.7	0
6	MP2	Z	6.75	0
7	MP2	X	11.7	72
8	MP2	Z	6.75	72
9	MP3	X	11.7	0
10	MP3	Z	6.75	0
11	MP3	X	11.7	72
12	MP3	Z	6.75	72
13	M1	X	9.39	12
14	M1	Z	5.42	12
15	MP3	X	5.51	66
16	MP3	Z	3.18	66
17	MP2	X	4.85	66
18	MP2	Z	2.8	66
19	MP2	X	4.91	66
20	MP2	Z	2.83	66
21	MP1	X	2.72	66
22	MP1	Z	1.57	66
23	MP1	X	2.72	66
24	MP1	Z	1.57	66
25	MP4	X	8.57	8
26	MP4	Z	4.95	8
27	MP4	X	8.57	64
28	MP4	Z	4.95	64
29	MP5	X	15.88	0
30	MP5	Z	9.17	0
31	MP5	X	15.88	72
32	MP5	Z	9.17	72
33	MP6	X	15.88	0
34	MP6	Z	9.17	0
35	MP6	X	15.88	72
36	MP6	Z	9.17	72
37	M3	X	9.39	12
38	M3	Z	5.42	12

Member Point Loads (BLC 25 : Ice Wind Load AZI 240) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
39	MP6	X	6.12	66
40	MP6	Z	3.53	66
41	MP5	X	5.74	66
42	MP5	Z	3.31	66
43	MP5	X	5.22	66
44	MP5	Z	3.01	66
45	MP4	X	4.35	66
46	MP4	Z	2.51	66
47	MP4	X	4.35	66
48	MP4	Z	2.51	66
49	MP7	X	6.85	8
50	MP7	Z	3.95	8
51	MP7	X	6.85	64
52	MP7	Z	3.95	64
53	MP8	X	11.7	0
54	MP8	Z	6.75	0
55	MP8	X	11.7	72
56	MP8	Z	6.75	72
57	MP9	X	11.7	0
58	MP9	Z	6.75	0
59	MP9	X	11.7	72
60	MP9	Z	6.75	72
61	M5	X	9.39	12
62	M5	Z	5.42	12
63	MP9	X	5.51	66
64	MP9	Z	3.18	66
65	MP8	X	4.85	66
66	MP8	Z	2.8	66
67	MP8	X	4.91	66
68	MP8	Z	2.83	66
69	MP7	X	2.72	66
70	MP7	Z	1.57	66
71	MP7	X	2.72	66
72	MP7	Z	1.57	66

Member Point Loads (BLC 26 : Ice Wind Load AZI 270)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	7.24	8
2	MP1	Z	0	8
3	MP1	X	7.24	64
4	MP1	Z	0	64
5	MP2	X	11.89	0
6	MP2	Z	0	0
7	MP2	X	11.89	72
8	MP2	Z	0	72
9	MP3	X	11.89	0
10	MP3	Z	0	0
11	MP3	X	11.89	72
12	MP3	Z	0	72
13	M1	X	10.85	12
14	M1	Z	0	12
15	MP3	X	6.13	66
16	MP3	Z	0	66
17	MP2	X	5.26	66
18	MP2	Z	0	66
19	MP2	X	5.55	66

Member Point Loads (BLC 26 : Ice Wind Load AZI 270) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
20	MP2	Z	0	66
21	MP1	X	2.51	66
22	MP1	Z	0	66
23	MP1	X	2.51	66
24	MP1	Z	0	66
25	MP4	X	9.23	8
26	MP4	Z	0	8
27	MP4	X	9.23	64
28	MP4	Z	0	64
29	MP5	X	16.73	0
30	MP5	Z	0	0
31	MP5	X	16.73	72
32	MP5	Z	0	72
33	MP6	X	16.73	0
34	MP6	Z	0	0
35	MP6	X	16.73	72
36	MP6	Z	0	72
37	M3	X	10.85	12
38	M3	Z	0	12
39	MP6	X	6.83	66
40	MP6	Z	0	66
41	MP5	X	6.28	66
42	MP5	Z	0	66
43	MP5	X	5.9	66
44	MP5	Z	0	66
45	MP4	X	4.39	66
46	MP4	Z	0	66
47	MP4	X	4.39	66
48	MP4	Z	0	66
49	MP7	X	9.23	8
50	MP7	Z	0	8
51	MP7	X	9.23	64
52	MP7	Z	0	64
53	MP8	X	16.73	0
54	MP8	Z	0	0
55	MP8	X	16.73	72
56	MP8	Z	0	72
57	MP9	X	16.73	0
58	MP9	Z	0	0
59	MP9	X	16.73	72
60	MP9	Z	0	72
61	M5	X	10.85	12
62	M5	Z	0	12
63	MP9	X	6.83	66
64	MP9	Z	0	66
65	MP8	X	6.28	66
66	MP8	Z	0	66
67	MP8	X	5.9	66
68	MP8	Z	0	66
69	MP7	X	4.39	66
70	MP7	Z	0	66
71	MP7	X	4.39	66
72	MP7	Z	0	66

Member Point Loads (BLC 27 : Ice Wind Load AZI 300)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]

Member Point Loads (BLC 27 : Ice Wind Load AZI 300) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	6.85	8
2	MP1	Z	-3.95	8
3	MP1	X	6.85	64
4	MP1	Z	-3.95	64
5	MP2	X	11.7	0
6	MP2	Z	-6.75	0
7	MP2	X	11.7	72
8	MP2	Z	-6.75	72
9	MP3	X	11.7	0
10	MP3	Z	-6.75	0
11	MP3	X	11.7	72
12	MP3	Z	-6.75	72
13	M1	X	9.39	12
14	M1	Z	-5.42	12
15	MP3	X	5.51	66
16	MP3	Z	-3.18	66
17	MP2	X	4.85	66
18	MP2	Z	-2.8	66
19	MP2	X	4.91	66
20	MP2	Z	-2.83	66
21	MP1	X	2.72	66
22	MP1	Z	-1.57	66
23	MP1	X	2.72	66
24	MP1	Z	-1.57	66
25	MP4	X	6.85	8
26	MP4	Z	-3.95	8
27	MP4	X	6.85	64
28	MP4	Z	-3.95	64
29	MP5	X	11.7	0
30	MP5	Z	-6.75	0
31	MP5	X	11.7	72
32	MP5	Z	-6.75	72
33	MP6	X	11.7	0
34	MP6	Z	-6.75	0
35	MP6	X	11.7	72
36	MP6	Z	-6.75	72
37	M3	X	9.39	12
38	M3	Z	-5.42	12
39	MP6	X	5.51	66
40	MP6	Z	-3.18	66
41	MP5	X	4.85	66
42	MP5	Z	-2.8	66
43	MP5	X	4.91	66
44	MP5	Z	-2.83	66
45	MP4	X	2.72	66
46	MP4	Z	-1.57	66
47	MP4	X	2.72	66
48	MP4	Z	-1.57	66
49	MP7	X	8.57	8
50	MP7	Z	-4.95	8
51	MP7	X	8.57	64
52	MP7	Z	-4.95	64
53	MP8	X	15.88	0
54	MP8	Z	-9.17	0
55	MP8	X	15.88	72
56	MP8	Z	-9.17	72
57	MP9	X	15.88	0

Member Point Loads (BLC 27 : Ice Wind Load AZI 300) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
58	MP9	Z	-9.17	0
59	MP9	X	15.88	72
60	MP9	Z	-9.17	72
61	M5	X	9.39	12
62	M5	Z	-5.42	12
63	MP9	X	6.12	66
64	MP9	Z	-3.53	66
65	MP8	X	5.74	66
66	MP8	Z	-3.31	66
67	MP8	X	5.22	66
68	MP8	Z	-3.01	66
69	MP7	X	4.35	66
70	MP7	Z	-2.51	66
71	MP7	X	4.35	66
72	MP7	Z	-2.51	66

Member Point Loads (BLC 28 : Ice Wind Load AZI 330)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	4.62	8
2	MP1	Z	-8	8
3	MP1	X	4.62	64
4	MP1	Z	-8	64
5	MP2	X	8.36	0
6	MP2	Z	-14.49	0
7	MP2	X	8.36	72
8	MP2	Z	-14.49	72
9	MP3	X	8.36	0
10	MP3	Z	-14.49	0
11	MP3	X	8.36	72
12	MP3	Z	-14.49	72
13	M1	X	5.42	12
14	M1	Z	-9.39	12
15	MP3	X	3.42	66
16	MP3	Z	-5.92	66
17	MP2	X	3.14	66
18	MP2	Z	-5.44	66
19	MP2	X	2.95	66
20	MP2	Z	-5.11	66
21	MP1	X	2.2	66
22	MP1	Z	-3.8	66
23	MP1	X	2.2	66
24	MP1	Z	-3.8	66
25	MP4	X	3.62	8
26	MP4	Z	-6.27	8
27	MP4	X	3.62	64
28	MP4	Z	-6.27	64
29	MP5	X	5.95	0
30	MP5	Z	-10.3	0
31	MP5	X	5.95	72
32	MP5	Z	-10.3	72
33	MP6	X	5.95	0
34	MP6	Z	-10.3	0
35	MP6	X	5.95	72
36	MP6	Z	-10.3	72
37	M3	X	5.42	12
38	M3	Z	-9.39	12

Member Point Loads (BLC 28 : Ice Wind Load AZI 330) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
39	MP6	X	3.07	66
40	MP6	Z	-5.31	66
41	MP5	X	2.63	66
42	MP5	Z	-4.55	66
43	MP5	X	2.77	66
44	MP5	Z	-4.8	66
45	MP4	X	1.25	66
46	MP4	Z	-2.17	66
47	MP4	X	1.25	66
48	MP4	Z	-2.17	66
49	MP7	X	4.62	8
50	MP7	Z	-8	8
51	MP7	X	4.62	64
52	MP7	Z	-8	64
53	MP8	X	8.36	0
54	MP8	Z	-14.49	0
55	MP8	X	8.36	72
56	MP8	Z	-14.49	72
57	MP9	X	8.36	0
58	MP9	Z	-14.49	0
59	MP9	X	8.36	72
60	MP9	Z	-14.49	72
61	M5	X	5.42	12
62	M5	Z	-9.39	12
63	MP9	X	3.42	66
64	MP9	Z	-5.92	66
65	MP8	X	3.14	66
66	MP8	Z	-5.44	66
67	MP8	X	2.95	66
68	MP8	Z	-5.11	66
69	MP7	X	2.2	66
70	MP7	Z	-3.8	66
71	MP7	X	2.2	66
72	MP7	Z	-3.8	66

Member Point Loads (BLC 31 : Seismic Load Z)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-1.689	8
2	MP1	Z	-1.689	64
3	MP2	Z	-3.832	0
4	MP2	Z	-3.832	72
5	MP3	Z	-3.832	0
6	MP3	Z	-3.832	72
7	M1	Z	-3.166	12
8	MP3	Z	-6.854	66
9	MP2	Z	-5.782	66
10	MP2	Z	-6.95	66
11	MP1	Z	-1.361	66
12	MP1	Z	-1.361	66
13	MP4	Z	-1.689	8
14	MP4	Z	-1.689	64
15	MP5	Z	-3.832	0
16	MP5	Z	-3.832	72
17	MP6	Z	-3.832	0
18	MP6	Z	-3.832	72
19	M3	Z	-3.166	12

Member Point Loads (BLC 31 : Seismic Load Z) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
20	MP6	Z	-6.854	66
21	MP5	Z	-5.782	66
22	MP5	Z	-6.95	66
23	MP4	Z	-1.361	66
24	MP4	Z	-1.361	66
25	MP7	Z	-1.689	8
26	MP7	Z	-1.689	64
27	MP8	Z	-3.832	0
28	MP8	Z	-3.832	72
29	MP9	Z	-3.832	0
30	MP9	Z	-3.832	72
31	M5	Z	-3.166	12
32	MP9	Z	-6.854	66
33	MP8	Z	-5.782	66
34	MP8	Z	-6.95	66
35	MP7	Z	-1.361	66
36	MP7	Z	-1.361	66

Member Point Loads (BLC 32 : Seismic Load X)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	X	-1.689	8
2	MP1	X	-1.689	64
3	MP2	X	-3.832	0
4	MP2	X	-3.832	72
5	MP3	X	-3.832	0
6	MP3	X	-3.832	72
7	M1	X	-3.166	12
8	MP3	X	-6.854	66
9	MP2	X	-5.782	66
10	MP2	X	-6.95	66
11	MP1	X	-1.361	66
12	MP1	X	-1.361	66
13	MP4	X	-1.689	8
14	MP4	X	-1.689	64
15	MP5	X	-3.832	0
16	MP5	X	-3.832	72
17	MP6	X	-3.832	0
18	MP6	X	-3.832	72
19	M3	X	-3.166	12
20	MP6	X	-6.854	66
21	MP5	X	-5.782	66
22	MP5	X	-6.95	66
23	MP4	X	-1.361	66
24	MP4	X	-1.361	66
25	MP7	X	-1.689	8
26	MP7	X	-1.689	64
27	MP8	X	-3.832	0
28	MP8	X	-3.832	72
29	MP9	X	-3.832	0
30	MP9	X	-3.832	72
31	M5	X	-3.166	12
32	MP9	X	-6.854	66
33	MP8	X	-5.782	66
34	MP8	X	-6.95	66
35	MP7	X	-1.361	66
36	MP7	X	-1.361	66

Member Distributed Loads (BLC 14 : Distr. Wind Load Z)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
1	M1	SZ	-71.037	-71.037	0	%100
2	M2	SZ	-71.037	-71.037	0	%100
3	M3	SZ	-71.037	-71.037	0	%100
4	M4	SZ	-71.037	-71.037	0	%100
5	M5	SZ	-71.037	-71.037	0	%100
6	M6	SZ	-71.037	-71.037	0	%100
7	M7	SZ	-42.622	-42.622	0	%100
8	M8	SZ	-42.622	-42.622	0	%100
9	M9	SZ	-42.622	-42.622	0	%100
10	M10	SZ	-71.037	-71.037	0	%100
11	M11	SZ	-71.037	-71.037	0	%100
12	M12	SZ	-71.037	-71.037	0	%100
13	M13	SZ	-71.037	-71.037	0	%100
14	M14	SZ	-71.037	-71.037	0	%100
15	M15	SZ	-71.037	-71.037	0	%100
16	M16	SZ	-71.037	-71.037	0	%100
17	M17	SZ	-71.037	-71.037	0	%100
18	M18	SZ	-71.037	-71.037	0	%100
19	M19	SZ	-71.037	-71.037	0	%100
20	M20	SZ	-71.037	-71.037	0	%100
21	M21	SZ	-71.037	-71.037	0	%100
22	M22	SZ	0	0	0	%100
23	M23	SZ	0	0	0	%100
24	M24	SZ	0	0	0	%100
25	M25	SZ	0	0	0	%100
26	M26	SZ	0	0	0	%100
27	M27	SZ	0	0	0	%100
28	M28	SZ	0	0	0	%100
29	M29	SZ	0	0	0	%100
30	M30	SZ	0	0	0	%100
31	MP1	SZ	-42.622	-42.622	0	%100
32	MP2	SZ	-42.622	-42.622	0	%100
33	MP3	SZ	-42.622	-42.622	0	%100
34	MP4	SZ	-42.622	-42.622	0	%100
35	MP5	SZ	-42.622	-42.622	0	%100
36	MP6	SZ	-42.622	-42.622	0	%100
37	MP7	SZ	-42.622	-42.622	0	%100
38	MP8	SZ	-42.622	-42.622	0	%100
39	MP9	SZ	-42.622	-42.622	0	%100
40	M40	SZ	-42.622	-42.622	0	%100
41	M41	SZ	-42.622	-42.622	0	%100
42	M42	SZ	-42.622	-42.622	0	%100
43	M43	SZ	0	0	0	%100
44	M44	SZ	0	0	0	%100
45	M45	SZ	0	0	0	%100
46	M46	SZ	0	0	0	%100
47	M47	SZ	0	0	0	%100
48	M48	SZ	0	0	0	%100
49	M49	SZ	0	0	0	%100
50	M50	SZ	0	0	0	%100
51	M51	SZ	0	0	0	%100
52	M52	SZ	-71.037	-71.037	0	%100
53	M53	SZ	-71.037	-71.037	0	%100
54	M54	SZ	-71.037	-71.037	0	%100

Member Distributed Loads (BLC 15 : Distr. Wind Load X)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
1	M1	SX	-71.037	-71.037	0	%100
2	M2	SX	-71.037	-71.037	0	%100
3	M3	SX	-71.037	-71.037	0	%100
4	M4	SX	-71.037	-71.037	0	%100
5	M5	SX	-71.037	-71.037	0	%100
6	M6	SX	-71.037	-71.037	0	%100
7	M7	SX	-42.622	-42.622	0	%100
8	M8	SX	-42.622	-42.622	0	%100
9	M9	SX	-42.622	-42.622	0	%100
10	M10	SX	-71.037	-71.037	0	%100
11	M11	SX	-71.037	-71.037	0	%100
12	M12	SX	-71.037	-71.037	0	%100
13	M13	SX	-71.037	-71.037	0	%100
14	M14	SX	-71.037	-71.037	0	%100
15	M15	SX	-71.037	-71.037	0	%100
16	M16	SX	-71.037	-71.037	0	%100
17	M17	SX	-71.037	-71.037	0	%100
18	M18	SX	-71.037	-71.037	0	%100
19	M19	SX	-71.037	-71.037	0	%100
20	M20	SX	-71.037	-71.037	0	%100
21	M21	SX	-71.037	-71.037	0	%100
22	M22	SX	0	0	0	%100
23	M23	SX	0	0	0	%100
24	M24	SX	0	0	0	%100
25	M25	SX	0	0	0	%100
26	M26	SX	0	0	0	%100
27	M27	SX	0	0	0	%100
28	M28	SX	0	0	0	%100
29	M29	SX	0	0	0	%100
30	M30	SX	0	0	0	%100
31	MP1	SX	-42.622	-42.622	0	%100
32	MP2	SX	-42.622	-42.622	0	%100
33	MP3	SX	-42.622	-42.622	0	%100
34	MP4	SX	-42.622	-42.622	0	%100
35	MP5	SX	-42.622	-42.622	0	%100
36	MP6	SX	-42.622	-42.622	0	%100
37	MP7	SX	-42.622	-42.622	0	%100
38	MP8	SX	-42.622	-42.622	0	%100
39	MP9	SX	-42.622	-42.622	0	%100
40	M40	SX	-42.622	-42.622	0	%100
41	M41	SX	-42.622	-42.622	0	%100
42	M42	SX	-42.622	-42.622	0	%100
43	M43	SX	0	0	0	%100
44	M44	SX	0	0	0	%100
45	M45	SX	0	0	0	%100
46	M46	SX	0	0	0	%100
47	M47	SX	0	0	0	%100
48	M48	SX	0	0	0	%100
49	M49	SX	0	0	0	%100
50	M50	SX	0	0	0	%100
51	M51	SX	0	0	0	%100
52	M52	SX	-71.037	-71.037	0	%100
53	M53	SX	-71.037	-71.037	0	%100
54	M54	SX	-71.037	-71.037	0	%100

Member Distributed Loads (BLC 16 : Ice Weight)

Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...

Member Distributed Loads (BLC 16 : Ice Weight) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
1	M1	Y	-9.855	-9.855	0	%100
2	M2	Y	-10.366	-10.366	0	%100
3	M3	Y	-9.855	-9.855	0	%100
4	M4	Y	-10.366	-10.366	0	%100
5	M5	Y	-9.855	-9.855	0	%100
6	M6	Y	-10.366	-10.366	0	%100
7	M7	Y	-6.746	-6.746	0	%100
8	M8	Y	-6.746	-6.746	0	%100
9	M9	Y	-6.746	-6.746	0	%100
10	M10	Y	-5.778	-5.778	0	%100
11	M11	Y	-5.778	-5.778	0	%100
12	M12	Y	-5.778	-5.778	0	%100
13	M13	Y	-5.778	-5.778	0	%100
14	M14	Y	-5.778	-5.778	0	%100
15	M15	Y	-5.778	-5.778	0	%100
16	M16	Y	-9.855	-9.855	0	%100
17	M17	Y	-9.855	-9.855	0	%100
18	M18	Y	-9.855	-9.855	0	%100
19	M19	Y	-9.855	-9.855	0	%100
20	M20	Y	-9.855	-9.855	0	%100
21	M21	Y	-9.855	-9.855	0	%100
22	M22	Y	-1.701	-1.701	0	%100
23	M23	Y	-1.701	-1.701	0	%100
24	M24	Y	-1.701	-1.701	0	%100
25	M25	Y	-1.701	-1.701	0	%100
26	M26	Y	-1.701	-1.701	0	%100
27	M27	Y	-1.701	-1.701	0	%100
28	M28	Y	-1.701	-1.701	0	%100
29	M29	Y	-1.701	-1.701	0	%100
30	M30	Y	-1.701	-1.701	0	%100
31	MP1	Y	-5.124	-5.124	0	%100
32	MP2	Y	-5.124	-5.124	0	%100
33	MP3	Y	-5.124	-5.124	0	%100
34	MP4	Y	-5.124	-5.124	0	%100
35	MP5	Y	-5.124	-5.124	0	%100
36	MP6	Y	-5.124	-5.124	0	%100
37	MP7	Y	-5.124	-5.124	0	%100
38	MP8	Y	-5.124	-5.124	0	%100
39	MP9	Y	-5.124	-5.124	0	%100
40	M40	Y	-5.124	-5.124	0	%100
41	M41	Y	-5.124	-5.124	0	%100
42	M42	Y	-5.124	-5.124	0	%100
43	M43	Y	-1.701	-1.701	0	%100
44	M44	Y	-1.701	-1.701	0	%100
45	M45	Y	-1.701	-1.701	0	%100
46	M46	Y	-1.701	-1.701	0	%100
47	M47	Y	-1.701	-1.701	0	%100
48	M48	Y	-1.701	-1.701	0	%100
49	M49	Y	-1.701	-1.701	0	%100
50	M50	Y	-1.701	-1.701	0	%100
51	M51	Y	-1.701	-1.701	0	%100
52	M52	Y	-5.778	-5.778	0	%100
53	M53	Y	-5.778	-5.778	0	%100
54	M54	Y	-5.778	-5.778	0	%100

Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z)

Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...

Member Distributed Loads (BLC 29 : Distr. Ice Wind Load Z) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
1	M1	SZ	-11.418	-11.418	0	%100
2	M2	SZ	-11.22	-11.22	0	%100
3	M3	SZ	-11.418	-11.418	0	%100
4	M4	SZ	-11.22	-11.22	0	%100
5	M5	SZ	-11.418	-11.418	0	%100
6	M6	SZ	-11.22	-11.22	0	%100
7	M7	SZ	-13.489	-13.489	0	%100
8	M8	SZ	-13.489	-13.489	0	%100
9	M9	SZ	-13.489	-13.489	0	%100
10	M10	SZ	-14.779	-14.779	0	%100
11	M11	SZ	-14.779	-14.779	0	%100
12	M12	SZ	-14.779	-14.779	0	%100
13	M13	SZ	-14.779	-14.779	0	%100
14	M14	SZ	-14.779	-14.779	0	%100
15	M15	SZ	-14.779	-14.779	0	%100
16	M16	SZ	-11.418	-11.418	0	%100
17	M17	SZ	-11.418	-11.418	0	%100
18	M18	SZ	-11.418	-11.418	0	%100
19	M19	SZ	-11.418	-11.418	0	%100
20	M20	SZ	-11.418	-11.418	0	%100
21	M21	SZ	-11.418	-11.418	0	%100
22	M22	SZ	0	0	0	%100
23	M23	SZ	0	0	0	%100
24	M24	SZ	0	0	0	%100
25	M25	SZ	0	0	0	%100
26	M26	SZ	0	0	0	%100
27	M27	SZ	0	0	0	%100
28	M28	SZ	0	0	0	%100
29	M29	SZ	0	0	0	%100
30	M30	SZ	0	0	0	%100
31	MP1	SZ	-16.062	-16.062	0	%100
32	MP2	SZ	-16.062	-16.062	0	%100
33	MP3	SZ	-16.062	-16.062	0	%100
34	MP4	SZ	-16.062	-16.062	0	%100
35	MP5	SZ	-16.062	-16.062	0	%100
36	MP6	SZ	-16.062	-16.062	0	%100
37	MP7	SZ	-16.062	-16.062	0	%100
38	MP8	SZ	-16.062	-16.062	0	%100
39	MP9	SZ	-16.062	-16.062	0	%100
40	M40	SZ	-16.062	-16.062	0	%100
41	M41	SZ	-16.062	-16.062	0	%100
42	M42	SZ	-16.062	-16.062	0	%100
43	M43	SZ	0	0	0	%100
44	M44	SZ	0	0	0	%100
45	M45	SZ	0	0	0	%100
46	M46	SZ	0	0	0	%100
47	M47	SZ	0	0	0	%100
48	M48	SZ	0	0	0	%100
49	M49	SZ	0	0	0	%100
50	M50	SZ	0	0	0	%100
51	M51	SZ	0	0	0	%100
52	M52	SZ	-14.779	-14.779	0	%100
53	M53	SZ	-14.779	-14.779	0	%100
54	M54	SZ	-14.779	-14.779	0	%100

Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X)

Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...

Member Distributed Loads (BLC 30 : Distr. Ice Wind Load X) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
1	M1	SX	-11.418	-11.418	0	%100
2	M2	SX	-11.22	-11.22	0	%100
3	M3	SX	-11.418	-11.418	0	%100
4	M4	SX	-11.22	-11.22	0	%100
5	M5	SX	-11.418	-11.418	0	%100
6	M6	SX	-11.22	-11.22	0	%100
7	M7	SX	-13.489	-13.489	0	%100
8	M8	SX	-13.489	-13.489	0	%100
9	M9	SX	-13.489	-13.489	0	%100
10	M10	SX	-14.779	-14.779	0	%100
11	M11	SX	-14.779	-14.779	0	%100
12	M12	SX	-14.779	-14.779	0	%100
13	M13	SX	-14.779	-14.779	0	%100
14	M14	SX	-14.779	-14.779	0	%100
15	M15	SX	-14.779	-14.779	0	%100
16	M16	SX	-11.418	-11.418	0	%100
17	M17	SX	-11.418	-11.418	0	%100
18	M18	SX	-11.418	-11.418	0	%100
19	M19	SX	-11.418	-11.418	0	%100
20	M20	SX	-11.418	-11.418	0	%100
21	M21	SX	-11.418	-11.418	0	%100
22	M22	SX	0	0	0	%100
23	M23	SX	0	0	0	%100
24	M24	SX	0	0	0	%100
25	M25	SX	0	0	0	%100
26	M26	SX	0	0	0	%100
27	M27	SX	0	0	0	%100
28	M28	SX	0	0	0	%100
29	M29	SX	0	0	0	%100
30	M30	SX	0	0	0	%100
31	MP1	SX	-16.062	-16.062	0	%100
32	MP2	SX	-16.062	-16.062	0	%100
33	MP3	SX	-16.062	-16.062	0	%100
34	MP4	SX	-16.062	-16.062	0	%100
35	MP5	SX	-16.062	-16.062	0	%100
36	MP6	SX	-16.062	-16.062	0	%100
37	MP7	SX	-16.062	-16.062	0	%100
38	MP8	SX	-16.062	-16.062	0	%100
39	MP9	SX	-16.062	-16.062	0	%100
40	M40	SX	-16.062	-16.062	0	%100
41	M41	SX	-16.062	-16.062	0	%100
42	M42	SX	-16.062	-16.062	0	%100
43	M43	SX	0	0	0	%100
44	M44	SX	0	0	0	%100
45	M45	SX	0	0	0	%100
46	M46	SX	0	0	0	%100
47	M47	SX	0	0	0	%100
48	M48	SX	0	0	0	%100
49	M49	SX	0	0	0	%100
50	M50	SX	0	0	0	%100
51	M51	SX	0	0	0	%100
52	M52	SX	-14.779	-14.779	0	%100
53	M53	SX	-14.779	-14.779	0	%100
54	M54	SX	-14.779	-14.779	0	%100

Member Distributed Loads (BLC 43 : BLC 1 Transient Area Loads)

Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...

Member Distributed Loads (BLC 43 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
1	M3	Y	-.265	-6.217	31.126	40.463
2	M3	Y	-6.217	-13.036	40.463	49.801
3	M3	Y	-13.036	-11.23	49.801	59.139
4	M3	Y	-11.23	-5.91	59.139	68.476
5	M3	Y	-5.91	-.616	68.476	77.814
6	M14	Y	-1.732	-2.605	0	9.522
7	M14	Y	-2.605	-4.955	9.522	19.045
8	M14	Y	-4.955	-8.842	19.045	28.567
9	M14	Y	-8.842	-5.429	28.567	38.089
10	M14	Y	-5.429	-.044	38.089	47.611
11	M15	Y	-1.732	-2.604	0	9.522
12	M15	Y	-2.604	-4.952	9.522	19.045
13	M15	Y	-4.952	-8.834	19.045	28.567
14	M15	Y	-8.834	-5.424	28.567	38.089
15	M15	Y	-5.424	-.044	38.089	47.611
16	M20	Y	-7.434	-7.434	6.479	32.45
17	M21	Y	-7.432	-7.432	6.478	32.451
18	M1	Y	-.265	-6.217	31.125	40.462
19	M1	Y	-6.217	-13.037	40.462	49.8
20	M1	Y	-13.037	-11.23	49.8	59.138
21	M1	Y	-11.23	-5.91	59.138	68.475
22	M1	Y	-5.91	-.616	68.475	77.813
23	M12	Y	-1.732	-2.605	0	9.522
24	M12	Y	-2.605	-4.955	9.522	19.045
25	M12	Y	-4.955	-8.842	19.045	28.567
26	M12	Y	-8.842	-5.429	28.567	38.089
27	M12	Y	-5.429	-.044	38.089	47.611
28	M13	Y	-1.732	-2.604	0	9.522
29	M13	Y	-2.604	-4.952	9.522	19.045
30	M13	Y	-4.952	-8.834	19.045	28.567
31	M13	Y	-8.834	-5.424	28.567	38.089
32	M13	Y	-5.424	-.044	38.089	47.611
33	M18	Y	-7.432	-7.432	6.478	32.451
34	M19	Y	-7.434	-7.434	6.479	32.451
35	M5	Y	-.265	-6.217	31.126	40.463
36	M5	Y	-6.217	-13.037	40.463	49.801
37	M5	Y	-13.037	-11.23	49.801	59.139
38	M5	Y	-11.23	-5.91	59.139	68.476
39	M5	Y	-5.91	-.616	68.476	77.814
40	M10	Y	-1.731	-2.604	0	9.522
41	M10	Y	-2.604	-4.954	9.522	19.045
42	M10	Y	-4.954	-8.841	19.045	28.567
43	M10	Y	-8.841	-5.429	28.567	38.089
44	M10	Y	-5.429	-.044	38.089	47.611
45	M11	Y	-1.733	-2.604	0	9.522
46	M11	Y	-2.604	-4.952	9.522	19.045
47	M11	Y	-4.952	-8.834	19.045	28.567
48	M11	Y	-8.834	-5.424	28.567	38.089
49	M11	Y	-5.424	-.044	38.089	47.611
50	M16	Y	-7.434	-7.434	6.479	32.451
51	M17	Y	-7.433	-7.433	6.478	32.45

Member Distributed Loads (BLC 44 : BLC 16 Transient Area Loads)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
1	M3	Y	-.291	-6.839	31.126	40.463
2	M3	Y	-6.839	-14.34	40.463	49.801

Member Distributed Loads (BLC 44 : BLC 16 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[l...	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[in,...
3	M3	Y	-14.34	-12.353	49.801	59.139
4	M3	Y	-12.353	-6.501	59.139	68.476
5	M3	Y	-6.501	-.678	68.476	77.814
6	M14	Y	-1.905	-2.865	0	9.522
7	M14	Y	-2.865	-5.45	9.522	19.045
8	M14	Y	-5.45	-9.726	19.045	28.567
9	M14	Y	-9.726	-5.972	28.567	38.089
10	M14	Y	-5.972	-.048	38.089	47.611
11	M15	Y	-1.906	-2.864	0	9.522
12	M15	Y	-2.864	-5.447	9.522	19.045
13	M15	Y	-5.447	-9.717	19.045	28.567
14	M15	Y	-9.717	-5.966	28.567	38.089
15	M15	Y	-5.966	-.048	38.089	47.611
16	M20	Y	-8.178	-8.178	6.479	32.45
17	M21	Y	-8.175	-8.175	6.478	32.451
18	M1	Y	-.291	-6.839	31.125	40.462
19	M1	Y	-6.839	-14.34	40.462	49.8
20	M1	Y	-14.34	-12.353	49.8	59.138
21	M1	Y	-12.353	-6.501	59.138	68.475
22	M1	Y	-6.501	-.678	68.475	77.813
23	M12	Y	-1.905	-2.865	0	9.522
24	M12	Y	-2.865	-5.45	9.522	19.045
25	M12	Y	-5.45	-9.726	19.045	28.567
26	M12	Y	-9.726	-5.972	28.567	38.089
27	M12	Y	-5.972	-.048	38.089	47.611
28	M13	Y	-1.906	-2.864	0	9.522
29	M13	Y	-2.864	-5.447	9.522	19.045
30	M13	Y	-5.447	-9.717	19.045	28.567
31	M13	Y	-9.717	-5.966	28.567	38.089
32	M13	Y	-5.966	-.048	38.089	47.611
33	M18	Y	-8.175	-8.175	6.478	32.451
34	M19	Y	-8.178	-8.178	6.479	32.451
35	M5	Y	-.291	-6.839	31.126	40.463
36	M5	Y	-6.839	-14.34	40.463	49.801
37	M5	Y	-14.34	-12.353	49.801	59.139
38	M5	Y	-12.353	-6.501	59.139	68.476
39	M5	Y	-6.501	-.678	68.476	77.814
40	M10	Y	-1.904	-2.864	0	9.522
41	M10	Y	-2.864	-5.449	9.522	19.045
42	M10	Y	-5.449	-9.725	19.045	28.567
43	M10	Y	-9.725	-5.972	28.567	38.089
44	M10	Y	-5.972	-.048	38.089	47.611
45	M11	Y	-1.906	-2.865	0	9.522
46	M11	Y	-2.865	-5.447	9.522	19.045
47	M11	Y	-5.447	-9.717	19.045	28.567
48	M11	Y	-9.717	-5.966	28.567	38.089
49	M11	Y	-5.966	-.048	38.089	47.611
50	M16	Y	-8.178	-8.178	6.479	32.451
51	M17	Y	-8.176	-8.176	6.478	32.45

Member Area Loads (BLC 1 : Self Weight)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N42	N41	N39	N40	Y	Two Way	-10
2	N38	N37	N35	N36	Y	Two Way	-10
3	N34	N33	N30	N32	Y	Two Way	-10

Member Area Loads (BLC 16 : Ice Weight)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N42	N41	N39	N40	Y	Two Way	-11
2	N38	N37	N35	N36	Y	Two Way	-11
3	N34	N33	N30	N32	Y	Two Way	-11

Plate Surface Loads

Plate Label	Direction	Magnitude[psf,F]
No Data to Print ...		

INFINIGY

FROM ZERO TO INFINIGY

the solutions are endless

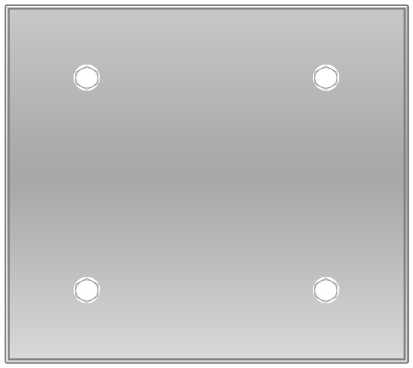
Bolt Calculation Tool, V1.1

PROJECT DATA	
Site Name:	Goshen CT Brush Hill
Site Number:	CTL01238
Job Code:	1106-A0001-B

APPLIED LOADS		
Bolt Tension:	6787.58	lbs
Bolt Shear:	599.25	lbs

BOLT PROPERTIES		
Bolt Type:	Bolt	-
Bolt Diameter:	0.625	in
Bolt Grade:	A325	-
# of Bolts:	4	-
Threads Excluded?	No	-

BOLT CHECK	
Tensile Strength	20340.15
Shear Strength	12425.24
Tensile Usage	33.4%
Shear Usage	4.8%
Interaction Check	11.4%
Result	Pass



Mount Analysis and Mapping Checklist

Mount Detail	Both
Mount Type	Platform
Mount Model Number	(N/A)
If RT, then how is it attached	
If WT, then how is it attached	
Result of previous mount analysis or PE opinion letter	Fail

Inspector (Mapping)
(Vendor name)
(Inspector name)
(Contact phone)
(Contact email)

Mount Mapping Detail	Both
Material condition (discoloration, cracks, pitting)	Good
Mfg. drawing, cutsheet, spec. available?	No
Date of previous mount mapping	
Searched prior OEM for material?	Yes
Photos of installation available?	Yes
Original tower drawings show mounts?	No
Searched for previous mapping?	Yes
Is latest mod design (dwgs) available?	No
Is the latest structural analysis available?	No

Project Detail	Both
Market	Litchfield
PACE Project ID	MRCTB041482 / MRCTB041377 MRCTB041509 / MRCTB041732 MRCTB041570
Site Name	Goshen CT Brush Hill
City, State	Goshen, CT
RFDS Version Number	2
Initiative (list mult., if applicable)	
Tower Owner	Smartlink
SA Vendor	
A&E firm (for structural analysis)	Infinigy
A&E firm (for mapping, if different)	
Last amendment date or last site visit	

Site Information	Both
Original Lease Date	
FA Code	
Tower Type	Monopole
Tower Height (Ft)	193.5
AT&T Rad Center # 1	172.5
AT&T Rad Center # 2	

Note: For each table in this form, note whether the information applies to "Mapping" only, or "Both" mount analysis and mapping. Equipment detail is for "Mapping" but is not labeled. Sketches are only required for mapping.

Measurements and Deliverables on sketches	Mapping
Pipe / Angle dimenions and lengths	
bolt diameters and lengths	
U-Bolt diameters and lengths	
Steel Grade if indicated	
welds :length and sizes	
appurtenance relative locations	
Grounding Condition	

Equipment Detail Alpha Sector	Model Number for Ant, MW, RRU, TMA, Squid / Size of Coax, DC-Fiber Trunks & Jumpers	Height / COAX-DC-Fiber Trunk & Jumper Lengths in feet	Approx Az	mount position location
Antennas	0	0	0	0
MW	0	0	0	0
RRU	0	0	0	0
TMA	0	0	0	0
Coax	0	0	0	0
RET (not imbedded in antenna)	0	0	0	0
DC Cable	0	0	0	0
Fiber Cable	0	0	0	0
Squid	0	0	0	0
Equipment Detail Beta Sector				
Antennas	0	0	0	0
MW	0	0	0	0
RRU	0	0	0	0
TMA	0	0	0	0
Coax	0	0	0	0
RET (not imbedded in antenna)	0	0	0	0
DC Cable	0	0	0	0
Fiber Cable	0	0	0	0
Squid	0	0	0	0
Equipment Detail Gamma Sector				
Antennas	0	0	0	0
MW	0	0	0	0
RRU	0	0	0	0
TMA	0	0	0	0
Coax	0	0	0	0
RET (not imbedded in antenna)	0	0	0	0
DC Cable	0	0	0	0
Fiber Cable	0	0	0	0
Squid	0	0	0	0

Comments

GENERAL NOTES:

1. THESE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE LATEST VERSION OF APPLICABLE LOCAL/STATE/COUNTY/CITY BUILDING CODES, AS WELL AS ANSI/TIA–222 STANDARD, AWWA–D100 STANDARD, NDS, NEC, MSJC, AND/OR THE LATEST VERSION OF THE INTERNATIONAL BUILDING CODE, UNLESS NOTED OTHERWISE IN THE CORRESPONDING STRUCTURAL REPORT.
2. ALL CONSTRUCTION METHODS SHOULD FOLLOW STANDARDS OF GOOD CONSTRUCTION PRACTICE.
3. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN SIMILAR CONSTRUCTION.
4. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. IF OBSTRUCTIONS ARE FOUND, CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD PRIOR TO CONTINUING WORK.
5. ANY CHANGES OR ADDITIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL CHANGES OR ADDITIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND/OR CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE DURING CONSTRUCTION. TIA–1019–A–2011 IS AN APPROPRIATE REFERENCE FOR THOSE DESIGNS MEETING TIA STANDARDS. THE ENGINEER OF RECORD MAY PROVIDE FORMAL RIGGING PLANS AT THE REQUEST AND EXPENSE OF THE CONTRACTOR.
7. INSTALLATION SHALL NOT INTERFERE NOR DENY ADEQUATE ACCESS TO OR FROM ANY EXISTING OR PROPOSED OPERATIONAL AND SAFETY EQUIPMENT.
8. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION. CONTACT INFINIGY ENGINEERING IF ANY DISCREPANCIES EXIST.

STEEL CONSTRUCTION NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION 14TH EDITION, FOR THE DESIGN AND FABRICATION OF STEEL COMPONENTS.
2. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES, AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS' RECOMMENDATIONS.
3. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.
4. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
5. ALL STEEL MEMBERS AND CONNECTIONS SHALL MEET THE FOLLOWING GRADES:
   - ANGLES, CHANNELS, PLATES AND BARS TO BE A36. Fy=36 KSI, U.N.O.
   - W SHAPES TO BE A992. Fy=50 KSI, U.N.O.
   - RECTANGULAR HSS TO BE A500, GRADE B. FY=46 KSI, U.N.O.
   - ROUND HSS TO BE A500, GRADE B. FY=42 KSI, U.N.O.
   - STEEL PIPE TO BE A53, GRADE B. Fy=35 KSI, U.N.O.
   - BOLTS TO BE A325–X. Fu=120 KSI, U.N.O.
   - U–BOLTS AND LAG SCREWS TO BE A307 GR A. Fu=60 KSI, U.N.O.
6. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES, U.N.O.
7. ALL WELDING SHALL CONFORM TO AISC AND AWS D1.1 LATEST EDITION.
8. ALL HILTI ANCHORS TO BE CARBON STEEL, U.N.O.
   - MECHANICAL ANCHORS: KWIK BOLT–TZ, U.N.O.
   - CMU BLOCK ANCHORS: ADHESIVE – HY120, U.N.O.
   - CONCRETE ANCHORS: ADHESIVE – HY150, U.N.O.
   - CONCRETE REBAR: ADHESIVE – RE500, U.N.O.
9. ALL STUDS TO BE NELSON CAPACITOR DISCHARGE 1/4"–20 LOW CARBON STEEL COPPER–FLASH AT 55 KSI ULT/50 KSI YIELD, U.N.O.
10. BOLTS SHALL BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC.
11. MINIMUM EDGE DISTANCES SHALL CONFORM TO AISC TABLE J3.4.
12. REMOVAL/REPLACEMENT OF STRUCTURAL MEMBERS SHALL BE DONE ONE MEMBER AT A TIME. CONTRACTOR IS RESPONSIBLE FOR ENSURING THE STRUCTURAL INTEGRITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.

CONCRETE CONSTRUCTION NOTES:

1. CONCRETE TO BE 4000 PSI @ 28 DAYS. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI–318 BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR IS NOT PERMITTED.
2. EXISTING CONCRETE SURFACES THAT ARE TO BE IN CONTACT WITH NEW PROPOSED CONCRETE SHOULD BE WIRE BRUSHED CLEAN AND TREATED WITH APPROPRIATE MECHANICAL SCRATCH COAT AND REPAIR MATERIALS OR APPROPRIATE CHEMICAL METHODS SUCH AS THE APPLICATION OF A BONDING AGENT, EX. SAKRETE OR EQUIVALENT, TO ENSURE A QUALITY BOND BETWEEN EXISTING AND PROPOSED CONCRETE SURFACES.

FIBER REINFORCED POLYMER (FRP) NOTES:

1. FRP PLATES, SHAPES, BOLTS AND NUTS (STUD/NUT ASSEMBLIES) SHALL CONFORM TO ASTM D638, 695, 790. PLATES AND SHAPES TO BE FY = 5.35 KSI LW (SAFETY FACTOR OF 8), .945 KSI CW (SAFETY FACTOR OF 8) MIN.
2. IF FIELD FABRICATION IS REQUIRED, ALL CUT EDGES AND DRILLED HOLES TO BE SEALED USING VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
3. ALL FASTENERS TO BE 1/2" DIA FRP THREADED ROD WITH FIBER REINFORCED THERMOPLASTIC NUT, SPACED AT 12 INCHES ON CENTER MAXIMUM, U.N.O., FOR PANELS AND AS DESIGNED FOR STRUCTURAL MEMBERS.
4. THE COLOR AND SURFACE PATTERN OF EXPOSED FRP PANELS SHALL MATCH THE EXTERIOR OF THE EXISTING BUILDING, U.N.O.
5. STUD/NUT ASSEMBLIES SHOULD BE LUBRICATED FOR INSTALLATION
6. ENSURE BEARING SURFACES OF THE NUTS ARE PARALLEL TO THE SURFACES BEING FASTENED.
7. TORQUE BOLTS ACCORDING TO THE FOLLOWING TABLE:

INSTALLATION TORQUE TABLE		
SIZE	ULTIMATE TORQUE STRENGTH	RECOMMENDED MAXIMUM INSTALLATION TORQUE
3/8–16 UNC	8 FT–LBS	4 FT–LBS
1/2–13 UNC	18 FT–LBS	8 FT–LBS
5/8–11 UNC	35 FT–LBS	16 FT–LBS
3/4–10 UNC	50 FT–LBS	24 FT–LBS
1–8 UNC	110 FT–LBS	50 FT–LBS

8. WHEN TIGHTENING FRP STUD/NUT ASSEMBLIES, WRENCHES MUST MAKE FULL CONTACT WITH ALL NUT EDGES. A STANDARD SIX POINT SOCKET IS RECOMMENDED.
9. STUD/NUT ASSEMBLIES SHOULD BE BONDED BY APPLYING BONDING AGENT TO ENTIRE NUT AND EXPOSED STUD.
10. ALL FRP MATERIALS TO BE PROVIDED BY FIBERGRATE COMPOSITE STRUCTURES, DALLAS TX, OR APPROVED EQUAL.
11. ALL FRP SHAPES TO BE DYNAFORM PULTRUDED STRUCTURAL SHAPES.
12. ALL FRP PLATES TO BE FIBERPLATE MOLDED FRP PLATE.
13. ALL FRP PANELS TO BE FIBERPLATE CLADDING PANEL.
14. EACH FRP PANEL TO BE IDENTIFIED WITH LARR#25536 AND FIBERGRATE COMPOSITE STRUCTURAL LABEL.
15. FRP MATERIAL TO BE CLASSIFIED AS CC1 OR BETTER, AND HAVE MAXIMUM FLAME SPREAD OF 50.
16. ALL DESIGN AND CONSTRUCTION TO BE COMPLETED IN ACCORDANCE WITH LOS ANGELES RESEARCH REPORT RR25536, DATED FEBRUARY 1, 2016.
17. SPECIAL INSPECTIONS MUST BE PROVIDED FOR ALL FRP INSTALLMENTS. SEE SPECIAL INSPECTION SECTION, THIS SHEET.

RATIO OF EDGE DISTANCE TO FRP FASTENER DIAMETER		
	RANGE	RECOMMENDED
EDGE DISTANCE – CL* BOLT TO END	2.0–4.0	3.0
EDGE DISTANCE – CL* BOLT TO SIDE	1.5–3.5	2.5
BOLT PITCH – CL* TO CL*	4.0–5.0	5.0

WOOD CONSTRUCTION NOTES:

1. ALL EXISTING WOOD SHAPES ARE ASSUMED TO BE DOUGLAS FIR–LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN.
2. ALL PROPOSED WOOD SHAPES ARE TO BE DOUGLAS FIR–LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN. U.N.O.
3. ALL EXISTING AND PROPOSED GLUED LAMINATED TIMBERS ARE TO BE 24F–1.8C DOUGLAS FIR BALANCED WITH A REFERENCE DESIGN BENDING VALUE OF 2400 PSI MIN. U.N.O.

MASONRY CONSTRUCTION NOTES:

1. ALL BRICK TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
   - FOR INTERIOR/ABOVE GRADE APPLICATIONS TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 100 PSI SHALL BE USED. FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 133 PSI.
   - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
2. ALL CMU TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
   - FOR INTERIOR/ABOVE GRADE APPLICATIONS, TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 64 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 158 PSI FOR FULLY GROUTED BLOCKS.
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   - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.

TOWER PLUMB & TENSION NOTES:

1. PLUMB AND TENSION TOWER UPON COMPLETION OF STRUCTURAL MODIFICATIONS DETAILED IN THESE DRAWINGS.
2. RETENSIONING OF EXISTING GUY WIRES SHALL BE PERFORMED AT A TIME WHEN THE WIND VELOCITY IS LESS THAN 10 MPH AT GROUND LEVEL AND WITH NO ICE ON THE STRUCTURE AND GUY WIRES.
3. PLUMB THE TOWER WHILE RETENSIONING THE EXISTING GUY WIRES. THE HORIZONTAL DISTANCE BETWEEN THE VERTICAL CENTERLINES AT ANY TWO ELEVATIONS SHALL NOT EXCEED 0.25% OF THE VERTICAL DISTANCE BETWEEN TWO ELEVATIONS FOR LATTICED STRUCTURES.
4. THE TWIST BETWEEN ANY TWO ELEVATIONS THROUGHOUT THE HEIGHT OF A LATTICE STRUCTURE SHALL NOT EXCEED 0.5 DEGREES IN 10 FEET. THE MAXIMUM TWIST OVER THE LATTICE STRUCTURE HEIGHT SHALL NOT EXCEED 5 DEGREES.

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   a. STRUCTURAL WELDING (CONTINUOUS INSPECTION OF FIELD WELDS ONLY).
   b. HIGH STRENGTH BOLTS (PERIODIC INSPECTION OF A325 AND/OR A490 BOLTS) TO BE TIGHTENED PER "TURN–OF–THE–NUT" METHOD.
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   d. FIBER REINFORCED POLYMER.
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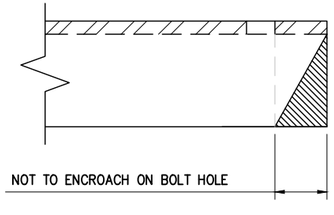
2. THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM WORK WITHOUT THE SPECIAL INSPECTIONS.

MAXIMUM ALLOWABLE ANGLE CLIP



INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

STATE OF CONNECTICUT
JOSEPH R. JOHNSON
29460
LICENSED PROFESSIONAL ENGINEER
01/27/2020

No.	Submittal / Revision	App'd	Date
0	ISSUED FOR REVIEW	WJD	01/13/20

Drawn: WJD Date: 01/13/20
Designed: TM Date: 01/09/20
Checked: BDA Date: 01/13/20

Project Number: 1106-A0001-B

Project Title:

GOSHEN CT BRUSH HILL

CTL01238
FA# 10126665
113 BRUSH HILL ROAD
GOSHEN, CT 06756

Prepared For: smartlink

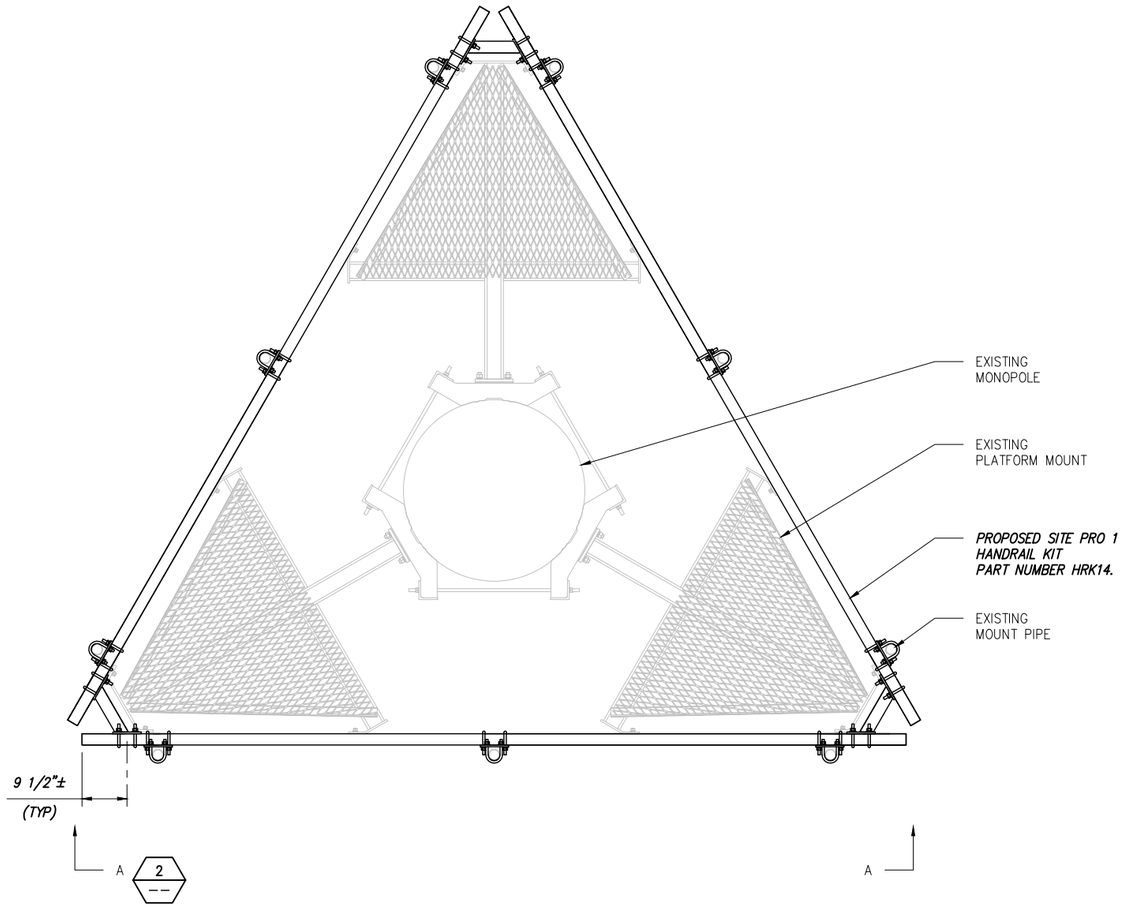
Drawing Scale: AS NOTED
Date: 01/17/20
0

Drawing Title

GENERAL NOTES

Drawing Number

S1



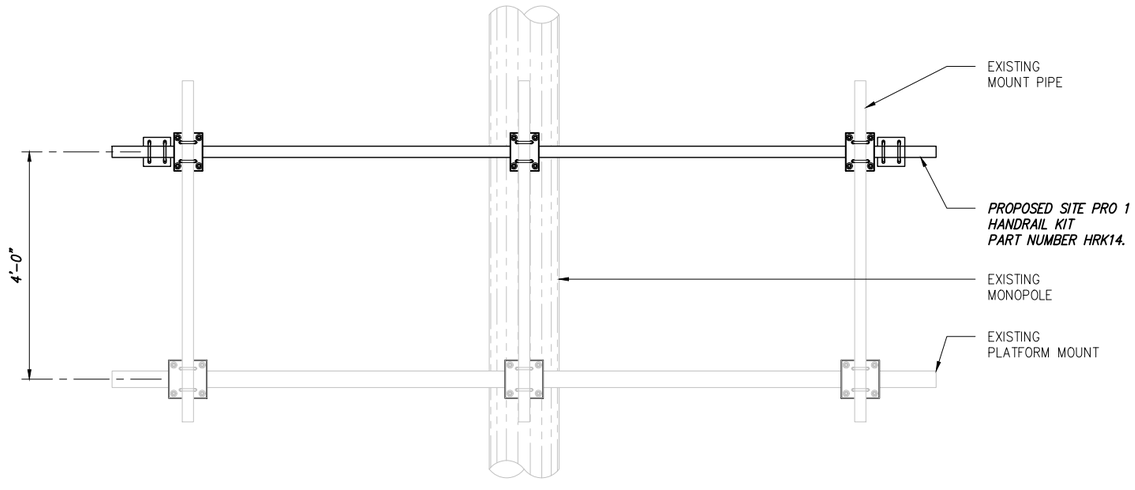
1 PLAN VIEW
SCALE: NOT TO SCALE

NOTES:

1. VARIOUS EXISITNG CONDITIONS AND PROPOSED MODIFICATIONS NOT SHOWN FOR CLARITY.

2. MODIFICATIONS SHOWN ARE FOR ENBTIR PLATFORM MOUNT.

3. SITE PRO 1 PARTS TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS.



2 SECTION A–A
SCALE: NOT TO SCALE

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

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Drawing Title
MOUNT MODIFICATION DETAILS

Drawing Number
S2

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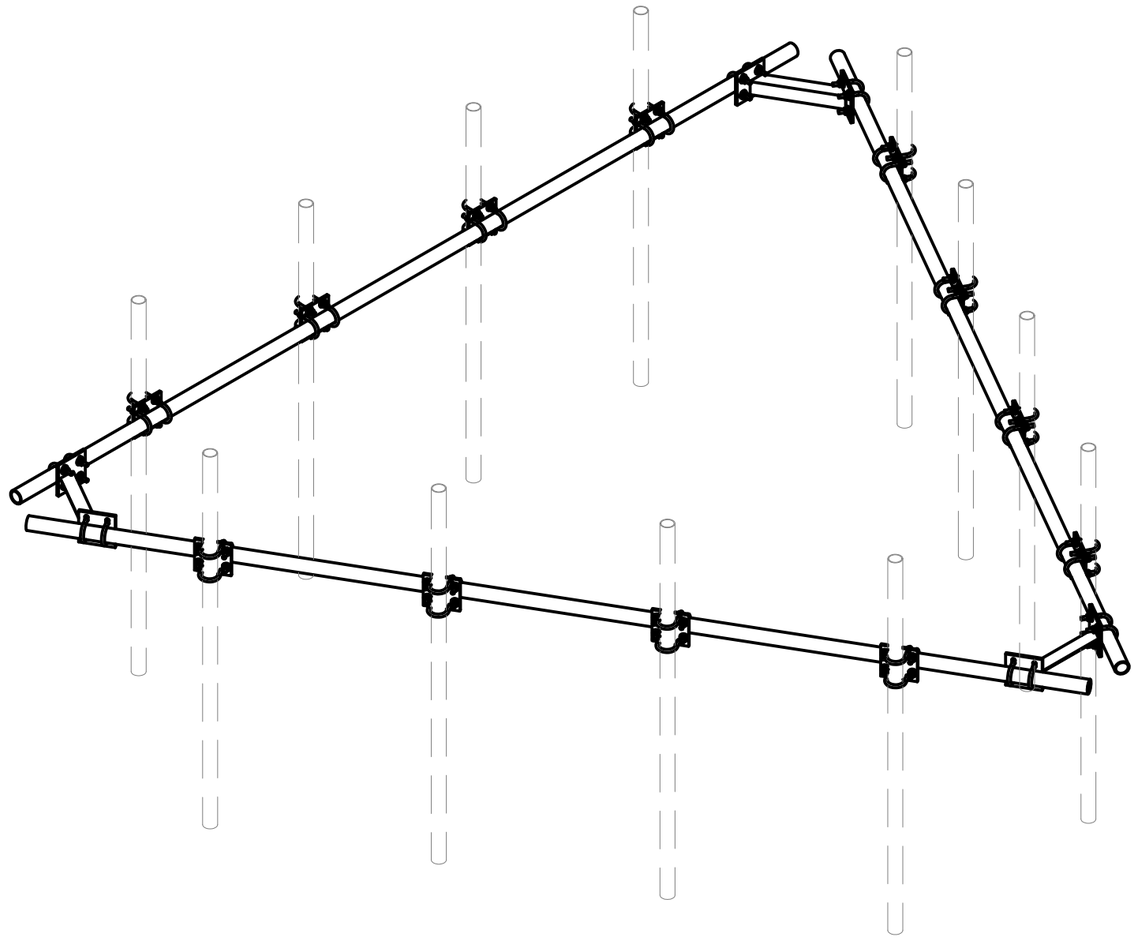

1 -- ISOMETRIC VIEW – SITE PRO 1 PART NO. HRK14

SCALE: NOT TO SCALE

INFINIGY

INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
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Drawing Title

NECESSARY PARTS

Drawing Number

S3

GENERAL NOTES:

1. THESE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE LATEST VERSION OF APPLICABLE LOCAL/STATE/COUNTY/CITY BUILDING CODES, AS WELL AS ANSI/TIA–222 STANDARD, AWWA–D100 STANDARD, NDS, NEC, MSJC, AND/OR THE LATEST VERSION OF THE INTERNATIONAL BUILDING CODE, UNLESS NOTED OTHERWISE IN THE CORRESPONDING STRUCTURAL REPORT.
2. ALL CONSTRUCTION METHODS SHOULD FOLLOW STANDARDS OF GOOD CONSTRUCTION PRACTICE.
3. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN SIMILAR CONSTRUCTION.
4. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. IF OBSTRUCTIONS ARE FOUND, CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD PRIOR TO CONTINUING WORK.
5. ANY CHANGES OR ADDITIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL CHANGES OR ADDITIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND/OR CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE DURING CONSTRUCTION. TIA–1019–A–2011 IS AN APPROPRIATE REFERENCE FOR THOSE DESIGNS MEETING TIA STANDARDS. THE ENGINEER OF RECORD MAY PROVIDE FORMAL RIGGING PLANS AT THE REQUEST AND EXPENSE OF THE CONTRACTOR.
7. INSTALLATION SHALL NOT INTERFERE NOR DENY ADEQUATE ACCESS TO OR FROM ANY EXISTING OR PROPOSED OPERATIONAL AND SAFETY EQUIPMENT.
8. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION. CONTACT INFINIGY ENGINEERING IF ANY DISCREPANCIES EXIST.

STEEL CONSTRUCTION NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION 14TH EDITION, FOR THE DESIGN AND FABRICATION OF STEEL COMPONENTS.
2. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES, AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS' RECOMMENDATIONS.
3. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.
4. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
5. ALL STEEL MEMBERS AND CONNECTIONS SHALL MEET THE FOLLOWING GRADES:
   - ANGLES, CHANNELS, PLATES AND BARS TO BE A36. Fy=36 KSI, U.N.O.
   - W SHAPES TO BE A992. Fy=50 KSI, U.N.O.
   - RECTANGULAR HSS TO BE A500, GRADE B. FY=46 KSI, U.N.O.
   - ROUND HSS TO BE A500, GRADE B. FY=42 KSI, U.N.O.
   - STEEL PIPE TO BE A53, GRADE B. Fy=35 KSI, U.N.O.
   - BOLTS TO BE A325–X. Fu=120 KSI, U.N.O.
   - U–BOLTS AND LAG SCREWS TO BE A307 GR A. Fu=60 KSI, U.N.O.
6. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES, U.N.O.
7. ALL WELDING SHALL CONFORM TO AISC AND AWS D1.1 LATEST EDITION.
8. ALL HILTI ANCHORS TO BE CARBON STEEL, U.N.O.
   - MECHANICAL ANCHORS: KWIK BOLT–TZ, U.N.O.
   - CMU BLOCK ANCHORS: ADHESIVE – HY120, U.N.O.
   - CONCRETE ANCHORS: ADHESIVE – HY150, U.N.O.
   - CONCRETE REBAR: ADHESIVE – RE500, U.N.O.
9. ALL STUDS TO BE NELSON CAPACITOR DISCHARGE 1/4"–20 LOW CARBON STEEL COPPER–FLASH AT 55 KSI ULT/50 KSI YIELD, U.N.O.
10. BOLTS SHALL BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC.
11. MINIMUM EDGE DISTANCES SHALL CONFORM TO AISC TABLE J3.4.
12. REMOVAL/REPLACEMENT OF STRUCTURAL MEMBERS SHALL BE DONE ONE MEMBER AT A TIME. CONTRACTOR IS RESPONSIBLE FOR ENSURING THE STRUCTURAL INTEGRITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.

CONCRETE CONSTRUCTION NOTES:

1. CONCRETE TO BE 4000 PSI @ 28 DAYS. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI–318 BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR IS NOT PERMITTED.
2. EXISTING CONCRETE SURFACES THAT ARE TO BE IN CONTACT WITH NEW PROPOSED CONCRETE SHOULD BE WIRE BRUSHED CLEAN AND TREATED WITH APPROPRIATE MECHANICAL SCRATCH COAT AND REPAIR MATERIALS OR APPROPRIATE CHEMICAL METHODS SUCH AS THE APPLICATION OF A BONDING AGENT, EX. SAKRETE OR EQUIVALENT, TO ENSURE A QUALITY BOND BETWEEN EXISTING AND PROPOSED CONCRETE SURFACES.

FIBER REINFORCED POLYMER (FRP) NOTES:

1. FRP PLATES, SHAPES, BOLTS AND NUTS (STUD/NUT ASSEMBLIES) SHALL CONFORM TO ASTM D638, 695, 790. PLATES AND SHAPES TO BE FY = 5.35 KSI LW (SAFETY FACTOR OF 8), .945 KSI CW (SAFETY FACTOR OF 8) MIN.
2. IF FIELD FABRICATION IS REQUIRED, ALL CUT EDGES AND DRILLED HOLES TO BE SEALED USING VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
3. ALL FASTENERS TO BE 1/2" DIA FRP THREADED ROD WITH FIBER REINFORCED THERMOPLASTIC NUT, SPACED AT 12 INCHES ON CENTER MAXIMUM, U.N.O., FOR PANELS AND AS DESIGNED FOR STRUCTURAL MEMBERS.
4. THE COLOR AND SURFACE PATTERN OF EXPOSED FRP PANELS SHALL MATCH THE EXTERIOR OF THE EXISTING BUILDING, U.N.O.
5. STUD/NUT ASSEMBLIES SHOULD BE LUBRICATED FOR INSTALLATION
6. ENSURE BEARING SURFACES OF THE NUTS ARE PARALLEL TO THE SURFACES BEING FASTENED.
7. TORQUE BOLTS ACCORDING TO THE FOLLOWING TABLE:

INSTALLATION TORQUE TABLE		
SIZE	ULTIMATE TORQUE STRENGTH	RECOMMENDED MAXIMUM INSTALLATION TORQUE
3/8–16 UNC	8 FT–LBS	4 FT–LBS
1/2–13 UNC	18 FT–LBS	8 FT–LBS
5/8–11 UNC	35 FT–LBS	16 FT–LBS
3/4–10 UNC	50 FT–LBS	24 FT–LBS
1–8 UNC	110 FT–LBS	50 FT–LBS

8. WHEN TIGHTENING FRP STUD/NUT ASSEMBLIES, WRENCHES MUST MAKE FULL CONTACT WITH ALL NUT EDGES. A STANDARD SIX POINT SOCKET IS RECOMMENDED.
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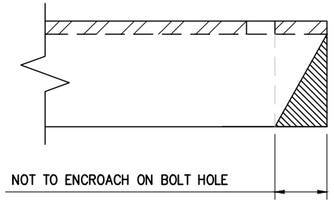

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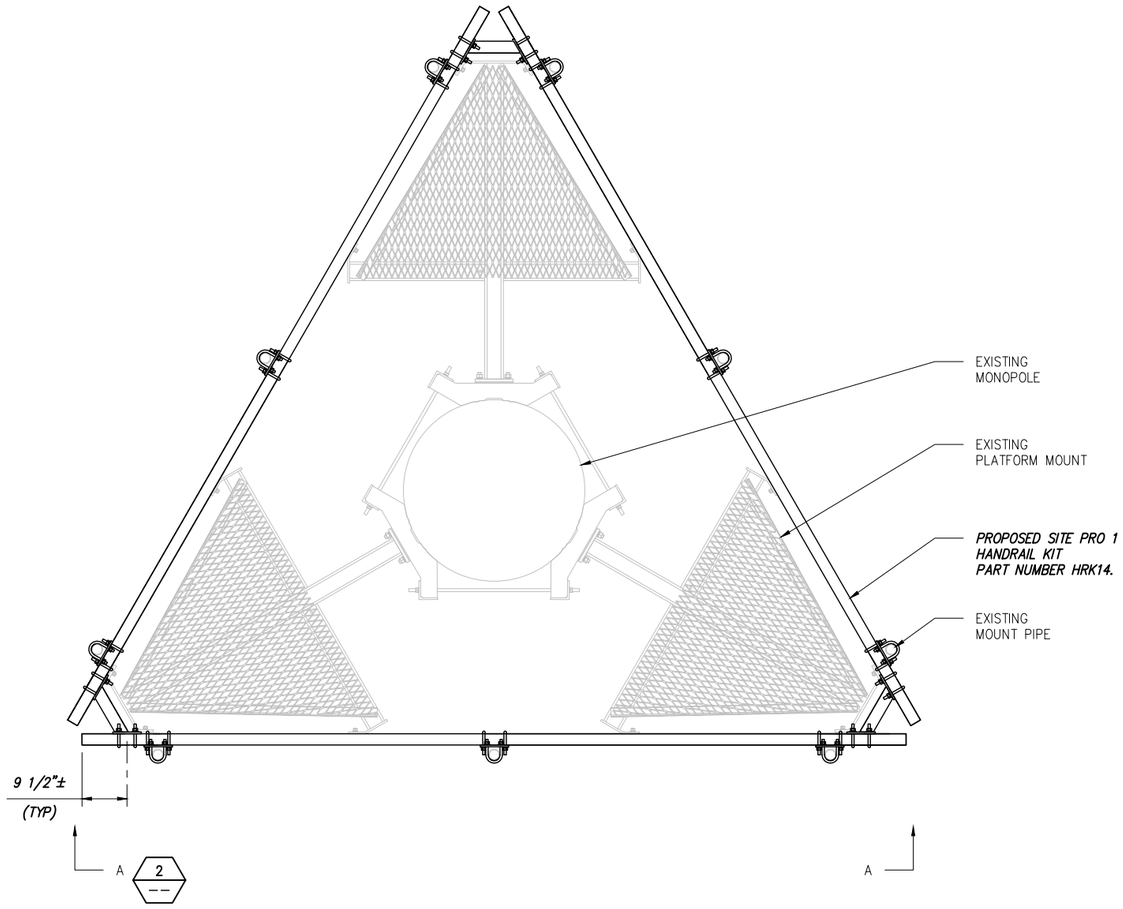

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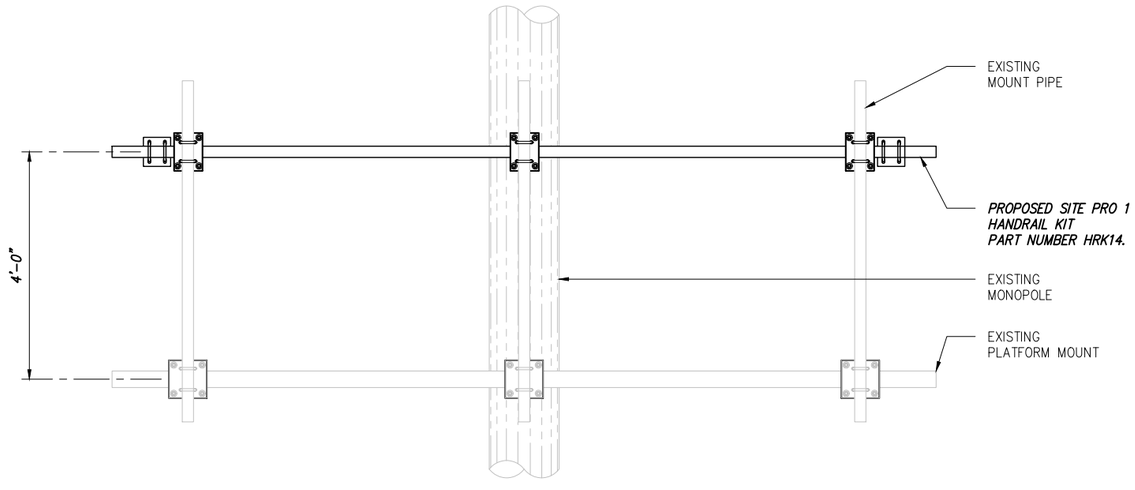

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1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

No.	Submittal / Revision	App'd	Date
0	ISSUED FOR REVIEW	WJD	01/13/20

Drawn: WJD Date: 01/13/20
Designed: TM Date: 01/09/20
Checked: BDA Date: 01/13/20

Project Number:
1106-A0001-B

Project Title:

GOSHEN CT BRUSH HILL

CTL01238
FA# 10126665
113 BRUSH HILL ROAD
GOSHEN, CT 06756

Prepared For:
smartlink

Drawing Scale: AS NOTED
Date: 01/17/20
0

Drawing Title
MOUNT MODIFICATION DETAILS

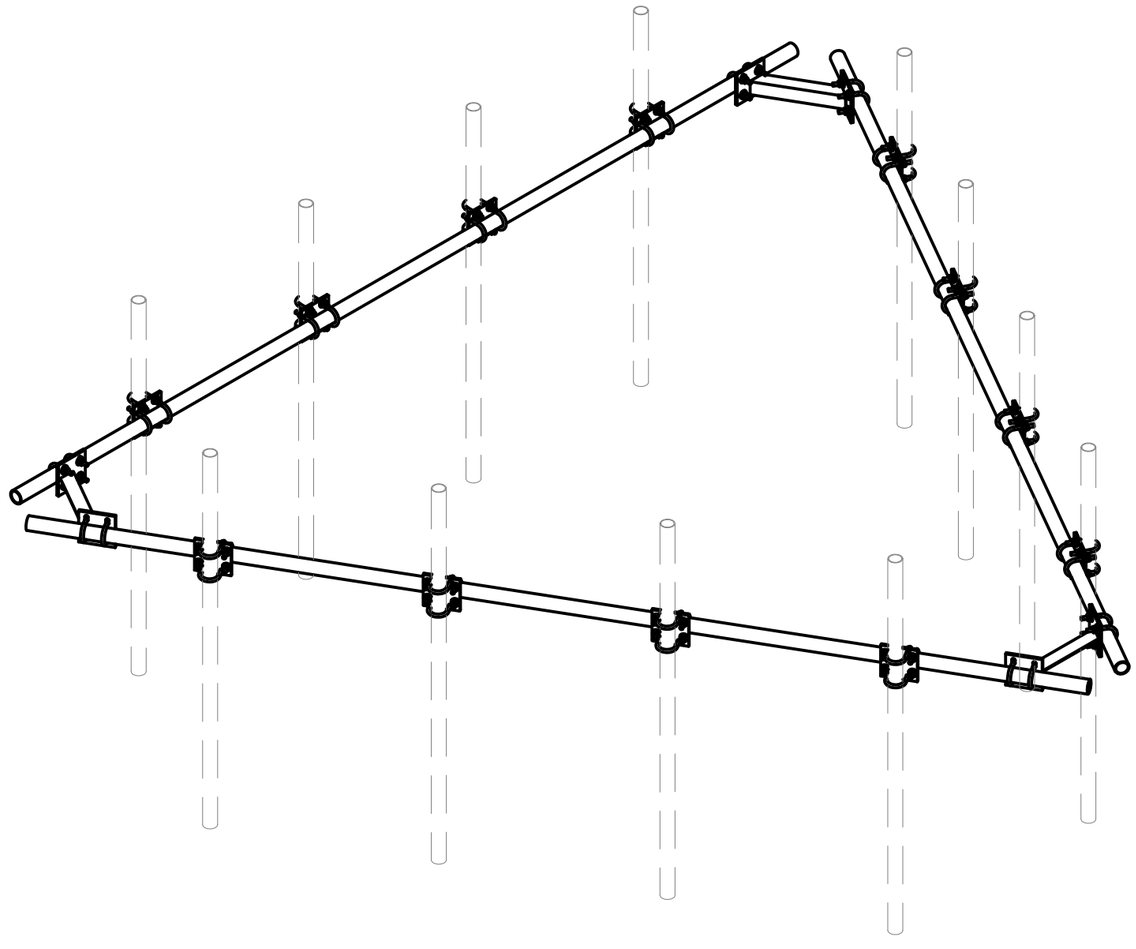
Drawing Number
S2

NOTES:

1. VARIOUS EXISITNG CONDITIONS AND PROPOSED MODIFICATIONS NOT SHOWN FOR CLARITY.

2. MODIFICATIONS SHOWN ARE FOR ENBTIR PLATFORM MOUNT.

3. SITE PRO 1 PARTS TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS.



1 -- ISOMETRIC VIEW – SITE PRO 1 PART NO. HRK14

SCALE: NOT TO SCALE

INFINIGY

INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

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CTL01238
FA# 10126665
113 BRUSH HILL ROAD
GOSHEN, CT 06756

Prepared For:

smartlink

Drawing Scale:
AS NOTED

Date:
01/17/20

0

Drawing Title

NECESSARY PARTS

Drawing Number

S3

INFINIGY

THE SOLUTIONS ARE ENDLESS

Non-Ionizing Radiation Report

Compiled For: Smartlink on behalf of AT&T

Site Name: Goshen CT Brush Hill

Site FA: 10126665

Site ID: CTL01238

113 Brush Hill Road, Goshen, CT 06756

Latitude: 41.7971694 Longitude: -73.2216750

Structure Type: Monopole

Report Date: January 9, 2020

Status: AT&T will be compliant with FCC rules on RF Exposure with the signage recommendation in section 4 of this report.

Table of Contents

1. Executive Summary:

Smartlink on behalf of AT&T has contracted Infinigy Solutions, LLC to determine whether the site Goshen Straits Turnpike located at 10 Straits Turnpike in Goshen, CT Will Be Compliant with all Federal Communications Commission (FCC) rules and regulations for radio frequency (RF) exposure as indicated in **47CFR§1.1310**.

The report incorporates a theoretical RF field analysis in accordance with the FCC Rules and Regulations for all individuals classified as "Occupational or Controlled" and "General Public or Uncontrolled" (see Appendix A and B).

This document and the conclusions herein are based on information provided by Smartlink on behalf of AT&T.

As a result of the analysis, **AT&T Will Be Compliant with FCC rules with the installation of signage recommended in section 4.**

Engineering assumptions were made regarding the collation operator(s). The assumptions were made based upon typical deployment configurations and practices of the operator(s).

All Carriers, All Bands Cumulative Exposure %		
Uncontrolled / General Population	Exposure values at the site (mW/cm^2)	0.0140
	% Exposure	1.93%
Controlled / Occupational	Exposure values at the site (mW/cm^2)	0.0140
	% Exposure	0.40%

2. Site Summary:

Site Information	
Site Name: Goshen Straits Turnpike	
Site Address: 113 Brush Hill Road Goshen, CT 06762	
Site Type: Monopole	
Compliance Status	Will Be Compliant
Mitigation Required	No
Signage Required	Yes
Barriers Required	No
Access Locked	No
Area Controlled or Uncontrolled	Uncontrolled

3. Site Compliance

This report also incorporates overview of the site information:

- Antenna Inventory Table
- Calculation Tables showing exposure for each carrier transmit frequency
- Total exposure for all carriers existing and proposed at ground level considering the centerline of all antennas and horizontal distance from the tower.
- Maximum Effective Radiated Power Assumed as Worst Case for Calculations used in this study
- Calculations based on flat ground around base of the structure

4. Site Compliance Recommendations

Infinigy recommends the following upon the installation of antennas at the site:

Base of tower

Caution 2 sign.

Note: The above signage recommendation is moot if there is an existing caution 2 sign at the base of the tower.

5. Antenna Inventory Table

Ant ID	Sector	Operator	Antenna manufacturer	Antenna Model	Operating Frequency	Rad Ctr (Ft)	Total ERP Power (Watts)
1	Alpha	AT&T	Powerwave	7770	850	172.5	1233
2a	Alpha	AT&T	CCI	DMP65R-BU6DA	700	172.5	2951
2b	Alpha	AT&T	CCI	DMP65R-BU6DA	1900	172.5	3664
3a	Alpha	AT&T	CCI	DMP65R-BU6DA	700	172.5	1476
3b	Alpha	AT&T	CCI	DMP65R-BU6DA	850	172.5	1000
3c	Alpha	AT&T	CCI	DMP65R-BU6DA	2100	172.5	3837
3d	Alpha	AT&T	CCI	DMP65R-BU6DA	850	172.5	1000
4	Beta	AT&T	Powerwave	7770	850	172.5	1233
5a	Beta	AT&T	CCI	DMP65R-BU6DA	700	172.5	2951
5b	Beta	AT&T	CCI	DMP65R-BU6DA	1900	172.5	3664
6a	Beta	AT&T	CCI	DMP65R-BU6DA	700	172.5	1476
6b	Beta	AT&T	CCI	DMP65R-BU6DA	850	172.5	1000
6c	Beta	AT&T	CCI	DMP65R-BU6DA	2100	172.5	3837
6d	Beta	AT&T	CCI	DMP65R-BU6DA	850	172.5	1000
7	Gamma	AT&T	Powerwave	7770	850	172.5	1233
8a	Gamma	AT&T	CCI	DMP65R-BU6DA	700	172.5	2951
8b	Gamma	AT&T	CCI	DMP65R-BU6DA	1900	172.5	3664
9a	Gamma	AT&T	CCI	DMP65R-BU6DA	700	172.5	1476
9b	Gamma	AT&T	CCI	DMP65R-BU6DA	850	172.5	1000
9c	Gamma	AT&T	CCI	DMP65R-BU6DA	2100	172.5	3837
9d	Gamma	AT&T	CCI	DMP65R-BU6DA	850	172.5	1000
10	Alpha	Verizon Wireless	Antel	BXA-70063/ 6CF	700	185	1658
11a	Alpha	Verizon Wireless	Antel	BXA-171063-12CF	1900	185	2863
11b	Alpha	Verizon Wireless	Antel	BXA-171063-12CF	2100	185	2745
12	Alpha	Verizon Wireless	Antel	LPA-80080/6CF	850	185	1402

Ant ID	Sector	Operator	Antenna manufacturer	Antenna Model	Operating Frequency	Rad Ctr (Ft)	Total ERP Power (Watts)
14	Beta	Verizon Wireless	Antel	BXA-70063/6CF	700	185	1658
15a	Beta	Verizon Wireless	Antel	BXA-171063-12CF	1900	185	2863
15b	Beta	Verizon Wireless	Antel	BXA-171063-12CF	2100	185	2745
16	Beta	Verizon Wireless	Antel	LPA-80080/6CF	850	185	1402
18	Gamma	Verizon Wireless	Antel	BXA-70063/6CF	700	185	1658
19a	Gamma	Verizon Wireless	Antel	BXA-171063-12CF	1900	185	2863
19b	Gamma	Verizon Wireless	Antel	BXA-171063-12CF	2100	185	2745
20	Gamma	Verizon Wireless	Antel	LPA-80080/6CF	850	185	1402
21	Gamma	Verizon Wireless	Antel	LPA-80080/6CF	850	185	1402
22	Microwave	Verizon Wireless	Commscope	FPA5250	5000	186.25	1
23	Alpha	Sprint	RFS	APXVSPP18-C-A20	850	195	1072
24	Alpha	Sprint	RFS	APXVSPP18-C-A20	1900	195	1535
25	Beta	Sprint	RFS	APXVSPP18-C-A20	850	195	1072
26	Beta	Sprint	RFS	APXVSPP18-C-A20	1900	195	1535
27	Gamma	Sprint	RFS	APXVSPP18-C-A20	850	195	1072
28	Gamma	Sprint	RFS	APXVSPP18-C-A20	1900	195	1535

6. RF Guidelines

To ensure safety of company workers, the following points need to be taken into consideration and implemented at wireless sites in accordance with the Carriers policies:

a) Worksite: Any employee at the site should avoid working directly in front of the antenna or in areas predicted to exceed general population exposure limits by 100%. Workers should insist that the transmitters be switched off during the work period.

b) RF Safety Training and Awareness: All employees working in areas exceeding the general population limits should have a basic awareness of RF safety measures. Videos, classroom lectures and online courses are all appropriate training methods on these topics.

c) Site Access: Restricting access to transmitting antenna locations is one of the most important elements of RF safety. This can be done with:
   - Locked doors/gates/ladder access
   - Alarmed doors
   - Restrictive barriers

d) Three-foot Buffer: There is an inverse relationship between the strength of the field and the distance from the antenna. The RF field diminishes with distance from the antenna. Workers should maintain a three-foot distance from the antennas.

e) Antennas: Workers should always assume that the antenna is transmitting and should never stop right in front of the antenna. If someone must pass by an antenna, he/she should move quickly, thus reducing RF exposure.

Attachment 1: AT&T Exposure Analysis

AT&T 700 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.5**
	Exposure values at the site (mW/cm^2)	**0.0025**
	% Exposure	**0.49%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.3**
	Exposure values at the site (mW/cm^2)	**0.0025**
	% Exposure	**0.11%**

AT&T 850 MHz UMTS		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.6**
	Exposure values at the site (mW/cm^2)	**0.0007**
	% Exposure	**0.11%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.8**
	Exposure values at the site (mW/cm^2)	**0.0007**
	% Exposure	**0.02%**

AT&T 850 MHz 5G		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.6**
	Exposure values at the site (mW/cm^2)	**0.0006**
	% Exposure	**0.09%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.8**
	Exposure values at the site (mW/cm^2)	**0.0006**
	% Exposure	**0.02%**

AT&T 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0020**
	% Exposure	**0.20%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0020**
	% Exposure	**0.04%**

AT&T 2100 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0021**
	% Exposure	**0.21%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0021**
	% Exposure	**0.04%**

Attachment 2: Verizon Wireless Exposure Analysis

Verizon Wireless 700 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.5**
	Exposure values at the site (mW/cm^2)	**0.0008**
	% Exposure	**0.16%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.3**
	Exposure values at the site (mW/cm^2)	**0.0008**
	% Exposure	**0.04%**

Verizon Wireless 850 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.6**
	Exposure values at the site (mW/cm^2)	**0.0014**
	% Exposure	**0.23%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.8**
	Exposure values at the site (mW/cm^2)	**0.0014**
	% Exposure	**0.05%**

Verizon Wireless 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0014**
	% Exposure	**0.14%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0014**
	% Exposure	**0.03%**

Verizon Wireless 2100 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0013**
	% Exposure	**0.13%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0013**
	% Exposure	**0.03%**

Verizon Wireless 5000 MHz Microwave		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0000**
	% Exposure	**0.00%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0000**
	% Exposure	**0.00%**

Attachment 3: Sprint Exposure Analysis

Sprint 862 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**0.6**
	Exposure values at the site (mW/cm^2)	**0.0005**
	% Exposure	**0.08%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**2.8**
	Exposure values at the site (mW/cm^2)	**0.0005**
	% Exposure	**0.0169%**

Sprint 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm^2)	**1.0**
	Exposure values at the site (mW/cm^2)	**0.0007**
	% Exposure	**0.07%**
Controlled / Occupational	FCC's Exposure limits(mW/cm^2)	**5.0**
	Exposure values at the site (mW/cm^2)	**0.0007**
	% Exposure	**0.0135%**

Attachment 4: Combined Exposure Analysis for each Carrier

AT&T All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm^2)	0.0079
	% Exposure	1.12%
Controlled / Occupational	Exposure values at the site (mW/cm^2)	0.0079
	% Exposure	0.24%

Verizon Wireless All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm^2)	0.0049
	% Exposure	0.66%
Controlled / Occupational	Exposure values at the site (mW/cm^2)	0.0049
	% Exposure	0.14%

Sprint All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm^2)	0.0012
	% Exposure	0.15%
Controlled / Occupational	Exposure values at the site (mW/cm^2)	0.0012
	% Exposure	0.03%

7. Appendix A: FCC Guidelines

FCC Policies

The Federal Communications Commission (FCC) in 1996 implemented regulations and policies for analysis of RF propagation to evaluate RF emissions. All the analysis and results of this report are compared with FCC's (Federal Communications Commission) rules to determine whether a site is compliant for Occupational/Controlled or General Public/Uncontrolled exposure. All the analysis of RF propagation is done in terms of a percentage. The limits primarily indicate the power density and are generally expressed in terms of milliwatts per centimeter square, mW/cm^2.

FCC guidelines incorporate two separate tiers of exposure limits that are dependent on the scenario/ situation in which that exposure takes place or the status of the individuals who are subjected to that exposure. The decision as to which tier is applied to a scenario is based on the following definitions:

Occupational / Controlled

These limits apply in situations when someone is exposed to RF energy through his/her occupation, is fully aware of the harmful effects of the RF exposure and has an ability to exercise control over this exposure. Occupational / controlled exposure limits also apply when exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means. limits for Occupational/Controlled exposure can be found on Table 1(A).

General Population / Uncontrolled

These limits apply to situations in which the general public may be exposed or in which persons who are exposed because of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure to RF. Therefore, members of the general public would always be considered under this category, for example, in the case of a telecommunications tower that exposes people in a nearby residential area. Exposure limits for General Population/Uncontrolled can be found on Table 1(B).

Table 1. LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(A) Limits for Occupational/Controlled Exposure

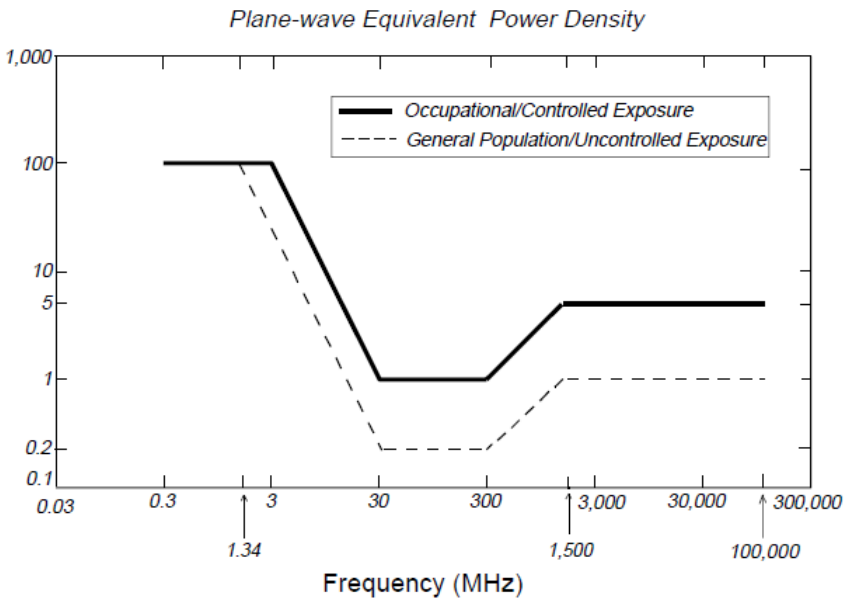
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

Figure 1. *FCC Limits for Maximum Permissible Exposure (MPE)*



OSHA Statement:

The objective of the OSHA Act is to ensure the safety and health of the working men and women by enforcing certain standards. The act also assists and encourages the states in their efforts to ensure safe and healthy working conditions through means of research, information, education and training in the field of occupational safety and health and for other purposes.

According to OSHA Act section 5, important duties to be considered are:

(a) Each employer

1) Shall furnish to each of his employees' employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious harm to his employees
2) Shall comply with occupational safety and health standards promulgated under this act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

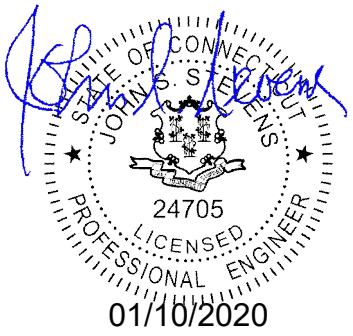
8. Appendix B: Preparer Certification

I, Tim Harris, preparer of this report, certify that I am fully trained and aware of the rules and regulations of both the Federal Communications Commission and the Occupational Safety and Heath Administration regarding Human Exposure to Radio Frequency Radiation. In addition, I have been trained in 1) RF safety and 2) RF modeling using RoofView modeling software.

I certify that the information contained in this report is true and correct to the best of my knowledge.

Timothy A. Harris *1/9/2020*

Signature Date



Delivered
Tuesday 2/11/2020 at 10:42 am

DELIVERED

Signature not required

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM

Smartlink LLC
Kristina Cottone
85 Rangeway Road
Building 3 Suite 102
NORTH BILLERICA, MA US 01862
978 551-8627

TO

Christopher Zibell Building Officia
Christopher Zibell Building Officia
42A NORTH ST
GOSHEN, CT US 06756154342
860 491-2308

Travel History | Shipment Facts

Local Scan Time

Tuesday , 2/11/2020

Showing 2 of 5

777487004112

Delivered
Tuesday 2/11/2020 at 10:42 am

DELIVERED

Signature not required

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FROM

Smartlink LLC
Kristina Cottone
85 Rangeway Road
Building 3 Suite 102
NORTH BILLERICA, MA US 01862
978 551-8627

TO

Robert P. Valentine-First Selectman
Robert P. Valentine-First Selectman
42A NORTH ST
GOSHEN, CT US 06756154342
860 491-2308

Travel History Shipment Facts

Kristina Cottone

From: TrackingUpdates@fedex.com
Sent: Tuesday, February 11, 2020 11:49 AM
To: Kristina Cottone
Subject: FedEx Shipment 777487093044 Delivered

Your package has been delivered

Tracking # 777487093044

Ship date:
Mon, 2/10/2020

Kristina Cottone
Smartlink LLC
NORTH BILLERICA, MA 01862
US

Delivered

Delivery date:
Tue, 2/11/2020 11:48 am

Woodridge Lake Sewer District
WOODRIDGE LAKE SEWER DISTRICT
113 BRUSH HILL RD
GOSHEN, CT 06756220813
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	777487093044
Status:	Delivered: 02/11/2020 11:48 AM Signed for By: Signature Not Req
Reference:	CTL01238 - Goshen
Signed for by:	Signature Not Req
Service type:	FedEx Ground
Packaging type:	Package
Number of pieces:	1
Weight:	1.00 lb.
Standard transit:	2/11/2020

Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 10:49 AM CST on 02/11/2020.

All weights are estimated.

Kristina Cottone

From: TrackingUpdates@fedex.com
Sent: Thursday, February 13, 2020 5:24 PM
To: Kristina Cottone
Subject: FedEx Shipment 777487149290 Delivered

Your package has been delivered

Tracking # 777487149290

Ship date:
Mon, 2/10/2020

Kristina Cottone
Smartlink LLC
NORTH BILLERICA, MA 01862
US

Delivered

Delivery date:
Thu, 2/13/2020 5:22 pm

Carla Shorter
SBA COMMUNICATIONS CORP.
8051 CONGRESS AVE
BOCA RATON, FL
33487131099
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	777487149290
Status:	Delivered: 02/13/2020 5:22 PM Signed for By: JMETZ
Reference:	CTL01238 Goshen
Signed for by:	JMETZ
Delivery location:	Boca Raton, FL
Service type:	FedEx Ground
Packaging type:	Package
Number of pieces:	1
Weight:	1.00 lb.
Standard transit:	2/13/2020

Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 4:23 PM CST on 02/13/2020.

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

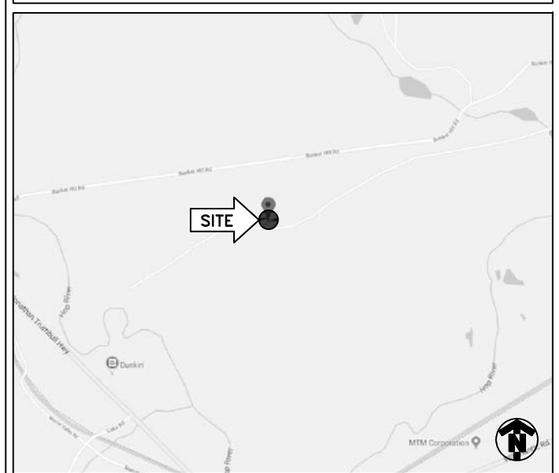
SHEET INDEX

DRIVING DIRECTIONS

FROM 550 COCHITUATE RD.:

GET ON I-90 W/MASSACHUSETTS TURNPIKE. HEAD NORTHWEST TOWARD LEGGATT MCCALL CONN. TURN LEFT ONTO LEGGATT MCCALL CONN. CONTINUE ONTO BURR ST. TURN LEFT ONTO COCHITUATE RD. USE THE RIGHT LANE TO TAKE THE RAMP TO I-90 E/MASSPIKE W/SPRINGFIELD/BOSTON. KEEP LEFT AT THE FORK, FOLLOW SIGNS FOR INTERSTATE 90 W/MASSACHUSETTS TURNPIKE/WORCESTER/SPRINGFIELD AND MERGE ONTO I-90 W/MASSACHUSETTS TURNPIKE. FOLLOW I-90 W/MASSACHUSETTS TURNPIKE AND I-84 TO STATE HWY 508 IN FARMINGTON. TAKE EXIT 39 FROM I-84. MERGE ONTO I-90 W/MASSACHUSETTS TURNPIKE. USE THE RIGHT 2 LANES TO TAKE EXIT 9 FOR I-84 TOWARD US-20/HARTFORD/NEW YORK CITY. CONTINUE ONTO I-84. KEEP RIGHT TO STAY ON I-84
KEEP LEFT TO STAY ON I-84. USE THE RIGHT 2 LANES TO TAKE EXIT 39 TOWARD FARMINGTON/CT-4. TAKE CT-4 W, CT-118 W/LITCHFIELD RD, EAST ST AND CT-63 N/GOSHEN RD TO BRUSH HILL RD IN GOSHEN. CONTINUE ONTO STATE HWY 508. STATE HWY 508 TURNS SLIGHTLY RIGHT AND BECOMES CT-4 W. CONTINUE STRAIGHT TO STAY ON CT-4 W. PASS BY BEST CLEANERS (ON THE RIGHT IN 3.3 MI). SLIGHT RIGHT TO STAY ON CT-4 W. TURN LEFT ONTO CT-4. CONTINUE ONTO CT-118 W/LITCHFIELD RD. CT-118 W/LITCHFIELD RD TURNS SLIGHTLY RIGHT AND BECOMES THOMASTON RD. TURN LEFT ONTO CT-118 W/EAST ST. SLIGHT RIGHT ONTO EAST ST. TURN RIGHT ONTO NORTH ST. CONTINUE ONTO CT-63 N/GOSHEN RD. TURN LEFT ONTO BRUSH HILL RD. DESTINATION WILL BE ON THE RIGHT.

LOCATION MAP



PROJECT

LTE 2C/3C/4C/5C/RETROFIT

SITE NAME

GOSHEN CT BRUSH HILL

CELL SITE ID

CTL01238

FA SITE NUMBER

10126665

PACE ID

MRCTB041482/MRCTB041377/MRCTB041509
MRCTB041732/MRCTB041570

SITE ADDRESS

113 BRUSH HILL ROAD
GOSHEN, CT 06756

STRUCTURE TYPE

MONOPOLE

PROJECT TEAM

smartlink

PROJECT MANAGER

INFINIGY

1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

ENGINEER

SCOPE OF WORK (PER LTE RFDS, DATED 1/22/20 V5.00):

- HANDICAP ACCESS REQUIREMENTS ARE NOT REQUIRED.
- FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
- FACILITY HAS NO PLUMBING OR REFRIGERANTS.
- THIS FACILITY SHALL MEET OR EXCEED ALL FAA AND FCC REGULATORY REQUIREMENTS.
- ALL NEW MATERIAL SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE. EQUIPMENT, ANTENNAS/RRU AND CABLES FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR.

TOWER
- REMOVE (6) PANEL ANTENNAS
- INSTALL (6) PANEL ANTENNAS
- REMOVE (3) RRUS-11 B12
- INSTALL (3) B14 4478
- INSTALL (3) 4449 B5/B12
- INSTALL (3) 8843 B2/B66A
- INSTALL (1) DC/FIBER SQUID & (1) DC SQUID W/ (1) FIBER AND (4) DC CABLES
- REMOVE (6) DIPLEXERS
- INSTALL HANDRAIL KIT
- REMOVE (6) TMA
- REMOVE (6) COAX

GROUND
- SWAP BB WITH (2) 6630
- ADD XMU
- ADD IDLe CABLE
- REMOVE (6) DIPLEXERS

PROJECT SUMMARY

SITE NAME:	GOSHEN CT BRUSH HILL	
CELL SITE ID:	CTL01238	
FA SITE #:	10126665	
SITE ADDRESS:	113 BRUSH HILL ROAD GOSHEN, CT 06756	
COUNTY:	LICTHFIELD	
SITE COORDINATES: LATITUDE: LONGITUDE:	 41.7971694° N 73.2216750° W	 (NAD 83) (NAD 83)
RAD CENTER	±172'	(AGL)
LANDLORD:	SBA	
APPLICANT:	AT&T MOBILITY 550 COCHITUATE RD. FRAMINGHAM, MA 01701	
CLIENT REPRESENTATIVE:	SMARTLINK, LLC 85 RANGEWAY RD., BUILDING 3, SUITE 102 NORTH BILLERICA, MA 01862	
CONTACT:	SHARON KEEFE (978) 930-3918	
ENGINEER:	INFINIGY 1033 WATERVLIET SHAKER ROAD ALBANY, NY 12205	
CONTACT:	ALEX WELLER (518) 690-0790	
BUILDING CODE:	2018 CT STATE BUILDING CODE 2015 INTERNATIONAL BUILDING CODE ANSI/TIA-222 G 2015 INTERNATIONAL PLUMBING CODE 2015 INTERNATIONAL MECHANICAL CODE 2015 INTERNATIONAL ENERGY CONSERVATION CODE 2017 NFPA 70	
ELECTRICAL CODE:	NATIONAL ELECTRICAL CODE (LATEST EDITION)	

811 Know what's below. Call before you dig.

TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN CONNECTICUT, CONTACT CALL BEFORE YOU DIG
TOLL FREE: 1-800-922-4455 OR www.cbyd.com
CONNECTICUT STATUTE REQUIRES MIN OF 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE

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Office # (518) 690-0790
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at&t

STATE OF CONNECTICUT · JOHN S. STEVENS · LICENSED PROFESSIONAL ENGINEER
01/27/2020

No.	Submittal / Revision	App'd	Date
2	REVISED RFDS	ASW	01/27/20
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0	ISSUED FOR REVIEW	ASW	12/30/19

Drawn: BMM Date: 12/30/19
Designed: ASW Date: 12/30/19
Checked: AJD Date: 12/30/19

Project Number: 499-006

Project Title:
GOSHEN CT BRUSH HILL
CTL01238
FA# 10126665
113 BRUSH HILL ROAD
GOSHEN, CT 06756

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 01/27/20

CD

Drawing Title
TITLE PAGE

Drawing Number
T1

GENERAL NOTES

PART 1 – GENERAL REQUIREMENTS

1.1 THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:
A. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION
B. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
C. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE – "NEC").
D. AND NFPA 101 (LIFE SAFETY CODE).
E. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM).
F. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE).

1.2 DEFINITIONS:
A: WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.
B: COMPANY: AT&T CORPORATION
C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.
D: CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.
E: THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.

1.3 POINT OF CONTACT: COMMUNICATION BETWEEN THE COMPANY AND THE CONTRACTOR SHALL FLOW THROUGH THE SINGLE COMPANY SITE DEVELOPMENT SPECIALIST OR OTHER PROJECT COORDINATOR APPOINTED TO MANAGE THE PROJECT FOR THE COMPANY.

1.4 ON-SITE SUPERVISION: THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.

1.5 DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE: THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS, STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES, AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.
A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE COMPANY OR COMPANY'S DESIGNATED REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS.

1.6 USE OF JOB SITE: THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION AND RELATED OPERATIONS INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS.

1.7 NOTICE TO PROCEED:
A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED.
B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE AT&T WITH AN OPERATIONAL WIRELESS FACILITY.

PART 2 – EXECUTION

2.1 TEMPORARY UTILITIES AND FACILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE, POTABLE WATER, HEAT, HVAC, ELECTRICITY, SANITARY FACILITIES, WASTE DISPOSAL FACILITIES, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT BECOMES AVAILABLE. USE OF THE LESSORS OR SITE OWNER'S UTILITIES OR FACILITIES IS EXPRESSLY FORBIDDEN EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.

2.2 ACCESS TO WORK: THE CONTRACTOR SHALL PROVIDE ACCESS TO THE JOB SITE FOR AUTHORIZED COMPANY PERSONNEL AND AUTHORIZED REPRESENTATIVES OF THE ARCHITECT/ENGINEER DURING ALL PHASES OF THE WORK.

2.3 TESTING: REQUIREMENTS FOR TESTING BY THIS CONTRACTOR SHALL BE AS INDICATED HEREWITH, ON THE CONSTRUCTION DRAWINGS, AND IN THE INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS. SHOULD COMPANY CHOOSE TO ENGAGE ANY THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR COMPANY'S TEST AGENCY.

2.4 COMPANY FURNISHED MATERIAL AND EQUIPMENT: ALL HANDLING, STORAGE AND INSTALLATION OF COMPANY FURNISHED MATERIAL AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
A. CONTRACTOR SHALL PROCURE ALL OTHER REQUIRED WORK RELATED MATERIALS NOT PROVIDED BY AT&T TO SUCCESSFULLY CONSTRUCT A WIRELESS FACILITY.

2.5 DIMENSIONS: VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD DIMENSIONS BEFORE FABRICATION OR ORDERING OF MATERIALS. DO NOT SCALE DRAWINGS.

2.6 EXISTING CONDITIONS: NOTIFY THE COMPANY REPRESENTATIVE OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS. DO NOT REMOVE OR ALTER STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND ENGINEER.

PART 3 – RECEIPT OF MATERIAL & EQUIPMENT

3.1 RECEIPT OF MATERIAL AND EQUIPMENT: CONTRACTOR IS RESPONSIBLE FOR AT&T PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:
A. ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.
B. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.
C. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.
D. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO AT&T OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.
E. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.
F. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.

PART 4 – GENERAL REQUIREMENTS FOR CONSTRUCTION

4.1 CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.

4.2 EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.

4.3 CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.
A. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY.
B. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD.

4.4 CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION.

4.5 CONDUCT TESTING AS REQUIRED HEREIN.

PART 5 – TESTS AND INSPECTIONS

5.1 TESTS AND INSPECTIONS:
A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.

B. CONTRACTOR SHALL COORDINATE TEST AND INSPECTION SCHEDULES WITH COMPANY'S REPRESENTATIVE WHO MUST BE ON SITE TO WITNESS SUCH TESTS AND INSPECTIONS.

C. WHEN THE USE OF A THIRD PARTY INDEPENDENT TESTING AGENCY IS REQUIRED, THE AGENCY THAT IS SELECTED MUST PERFORM SUCH WORK ON A REGULAR BASIS IN THE STATE WHERE THE PROJECT IS LOCATED AND HAVE A THOROUGH UNDERSTANDING OF LOCAL AVAILABLE MATERIALS, INCLUDING THE SOIL, ROCK, AND GROUNDWATER CONDITIONS.

D. THE THIRD PARTY TESTING AGENCY IS TO BE FAMILIAR WITH THE APPLICABLE REQUIREMENTS FOR THE TESTS TO BE DONE, EQUIPMENT TO BE USED, AND ASSOCIATED HEALTH AND SAFETY ISSUES.

E. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.

F. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.

G. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.

PART 6 – TRENCHING AND BACKFILLING

6.1 TRENCHING AND BACKFILLING: THE CONTRACTOR SHALL PERFORM ALL EXCAVATION OF EVERY DESCRIPTION AND OF WHATEVER SUBSTANCES ENCOUNTERED, TO THE DEPTHS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS OTHERWISE SPECIFIED.

A. PROTECTION OF EXISTING UTILITIES: THE CONTRACTOR SHALL CHECK WITH THE LOCAL UTILITIES AND THE RESPECTIVE UTILITY LOCATOR COMPANIES PRIOR TO STARTING EXCAVATION OPERATIONS IN EACH RESPECTIVE AREA TO ASCERTAIN THE LOCATIONS OF KNOWN UTILITY LINES. THE LOCATIONS, NUMBER AND TYPES OF EXISTING UTILITY LINES DETAILED ON THE CONSTRUCTION DRAWINGS ARE APPROXIMATE AND DO NOT REPRESENT EXACT INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL LINES DAMAGED DURING EXCAVATION AND ALL ASSOCIATED OPERATIONS. ALL UTILITY LINES UNCOVERED DURING THE EXCAVATION OPERATIONS, SHALL BE PROTECTED FROM DAMAGE DURING EXCAVATION AND ASSOCIATED OPERATIONS. ALL REPAIRS SHALL BE APPROVED BY THE UTILITY COMPANY.

B. HAND DIGGING: UNLESS APPROVED IN WRITING OTHERWISE, ALL DIGGING WITHIN AN EXISTING CELL SITE COMPOUND IS TO BE DONE BY HAND.

C. DURING EXCAVATION, MATERIAL SUITABLE FOR BACKFILLING SHALL BE STOCKPILED IN AN ORDERLY MANNER A SUFFICIENT DISTANCE FROM THE BANKS OF THE TRENCH TO AVOID OVERLOADING AND TO PREVENT SLIDES OR CAVE-INS. ALL EXCAVATED MATERIALS NOT REQUIRED OR SUITABLE FOR BACKFILL SHALL BE REMOVED AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.

D. GRADING SHALL BE DONE AS MAY BE NECESSARY TO PREVENT SURFACE WATER FROM FLOWING INTO TRENCHES OR OTHER EXCAVATIONS, AND ANY WATER ACCUMULATING THEREIN SHALL BE REMOVED BY PUMPING OR BY OTHER APPROVED METHOD.

E. SHEETING AND SHORING SHALL BE DONE AS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR THE SAFETY OF PERSONNEL. UNLESS OTHERWISE INDICATED, EXCAVATION SHALL BE BY OPEN CUT, EXCEPT THAT SHORT SECTIONS OF A TRENCH MAY BE TUNNELED IF, THE CONDUIT CAN BE SAFELY AND PROPERLY INSTALLED AND BACKFILL CAN BE PROPERLY TAMPED IN SUCH TUNNEL SECTIONS. EARTH EXCAVATION SHALL COMPRISE ALL MATERIALS AND SHALL INCLUDE CLAY, SILT, SAND, MUCK, GRAVEL, HARDPAN, LOOSE SHALE, AND LOOSE STONE.

F. TRENCHES SHALL BE OF NECESSARY WIDTH FOR THE PROPER LAYING OF THE CONDUIT OR CABLE, AND THE BANKS SHALL BE AS NEARLY VERTICAL AS PRACTICABLE. THE BOTTOM OF THE TRENCHES SHALL BE ACCURATELY GRADED TO PROVIDE UNIFORM BEARING AND SUPPORT FOR EACH SECTION OF THE CONDUIT OR CABLE ON UNDISTURBED SOIL AT EVERY POINT ALONG ITS ENTIRE LENGTH. EXCEPT WHERE ROCK IS ENCOUNTERED, CARE SHALL BE TAKEN NOT TO EXCAVATE BELOW THE DEPTHS INDICATED. WHERE ROCK EXCAVATIONS ARE NECESSARY, THE ROCK SHALL BE EXCAVATED TO A MINIMUM OVER DEPTH OF 6 INCHES BELOW THE TRENCH DEPTHS INDICATED ON THE CONSTRUCTION DRAWINGS OR SPECIFIED. OVER DEPTHS IN THE ROCK EXCAVATION AND UNAUTHORIZED OVER DEPTHS SHALL BE THOROUGHLY BACK FILLED AND TAMPED TO THE APPROPRIATE GRADE. WHENEVER WET OR OTHERWISE UNSTABLE SOIL THAT IS INCAPABLE OF PROPERLY SUPPORTING THE CONDUIT OR CABLE IS ENCOUNTERED IN THE BOTTOM OF THE TRENCH, SUCH SOLID SHALL BE REMOVED TO A MINIMUM OVER DEPTH OF 6 INCHES AND THE TRENCH BACKFILLED TO THE PROPER GRADE WITH EARTH OF OTHER SUITABLE MATERIAL, AS HEREINAFTER SPECIFIED.

G. BACKFILLING OF TRENCHES. TRENCHES SHALL NOT BE BACKFILLED UNTIL ALL SPECIFIED TESTS HAVE BEEN PERFORMED AND ACCEPTED. WHERE COMPACTED BACKFILL IS NOT INDICATED THE TRENCHES SHALL BE CAREFULLY BACKFILLED WITH SELECT MATERIAL SUCH AS EXCAVATED SOILS THAT ARE FREE OF ROOTS, SOD, RUBBISH OR STONES, DEPOSITED IN 6 INCH LAYERS AND THOROUGHLY AND CAREFULLY RAMMED UNTIL THE CONDUIT OR CABLE HAS A COVER OF NOT LESS THAN 1 FOOT. THE REMAINDER OF THE BACKFILL MATERIAL SHALL BE GRANULAR IN NATURE AND SHALL NOT CONTAIN ROOTS, SOD, RUBBING, OR STONES OF 2-1/2 INCH MAXIMUM DIMENSION. BACKFILL SHALL BE CAREFULLY PLACED IN THE TRENCH AND IN 1 FOOT LAYERS AND EACH LAYER TAMPED. SETTLING THE BACKFILL WITH WATER WILL BE PERMITTED. THE SURFACE SHALL BE GRADED TO A REASONABLE UNIFORMITY AND THE MOUNDING OVER THE TRENCHES LEFT IN A UNIFORM AND NEAT CONDITION.

SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	NON-FUSIBLE DISCONNECT SWITCH
F	FUSIBLE DISCONNECT SWITCH
	SURFACE MOUNTED PANEL BOARD
T	TRANSFORMER
M	KILOWATT HOUR METER
JB	JUNCTION BOX
PB	PULL BOX TO NEC/TELCO STANDARDS
----------	UNDERGROUND UTILITIES
	EXOTHERMIC WELD CONNECTION
	MECHANICAL CONNECTION
OR	GROUND ROD
OR	GROUND ROD WITH INSPECTION SLEEVE
	GROUND BAR
	120AC DUPLEX RECEPTACLE
G	GROUND CONDUCTOR
	DC POWER AND FIBER OPTIC TRUNK CABLES
	DC POWER CABLES
# / #	REPRESENTS DETAIL NUMBER / REF. DRAWING NUMBER

ABBREVIATIONS

CIGBE	COAX ISOLATED GROUND BAR EXTERNAL
MIGB	MASTER ISOLATED GROUND BAR
SST	SELF SUPPORTING TOWER
GPS	GLOBAL POSITIONING SYSTEM
TYP.	TYPICAL
DWG	DRAWING
BCW	BARE COPPER WIRE
BFG	BELOW FINISH GRADE
PVC	POLYVINYL CHLORIDE
CAB	CABINET
C	CONDUIT
SS	STAINLESS STEEL
G	GROUND
AWG	AMERICAN WIRE GAUGE
RGS	RIGID GALVANIZED STEEL
AHJ	AUTHORITY HAVING JURISDICTION
TTLNA	TOWER TOP LOW NOISE AMPLIFIER
UNO	UNLESS NOTED OTHERWISE
EMT	ELECTRICAL METALLIC TUBING
AGL	ABOVE GROUND LEVEL

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at&t

STATE OF CONNECTICUT
JOHN S. STEVENS
24705
LICENSED PROFESSIONAL ENGINEER
01/27/2020

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2	REVISED RFDS	ASW	01/27/20
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0	ISSUED FOR REVIEW	ASW	12/30/19

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Designed: ASW Date: 12/30/19
Checked: AJD Date: 12/30/19

Project Number: 499-006

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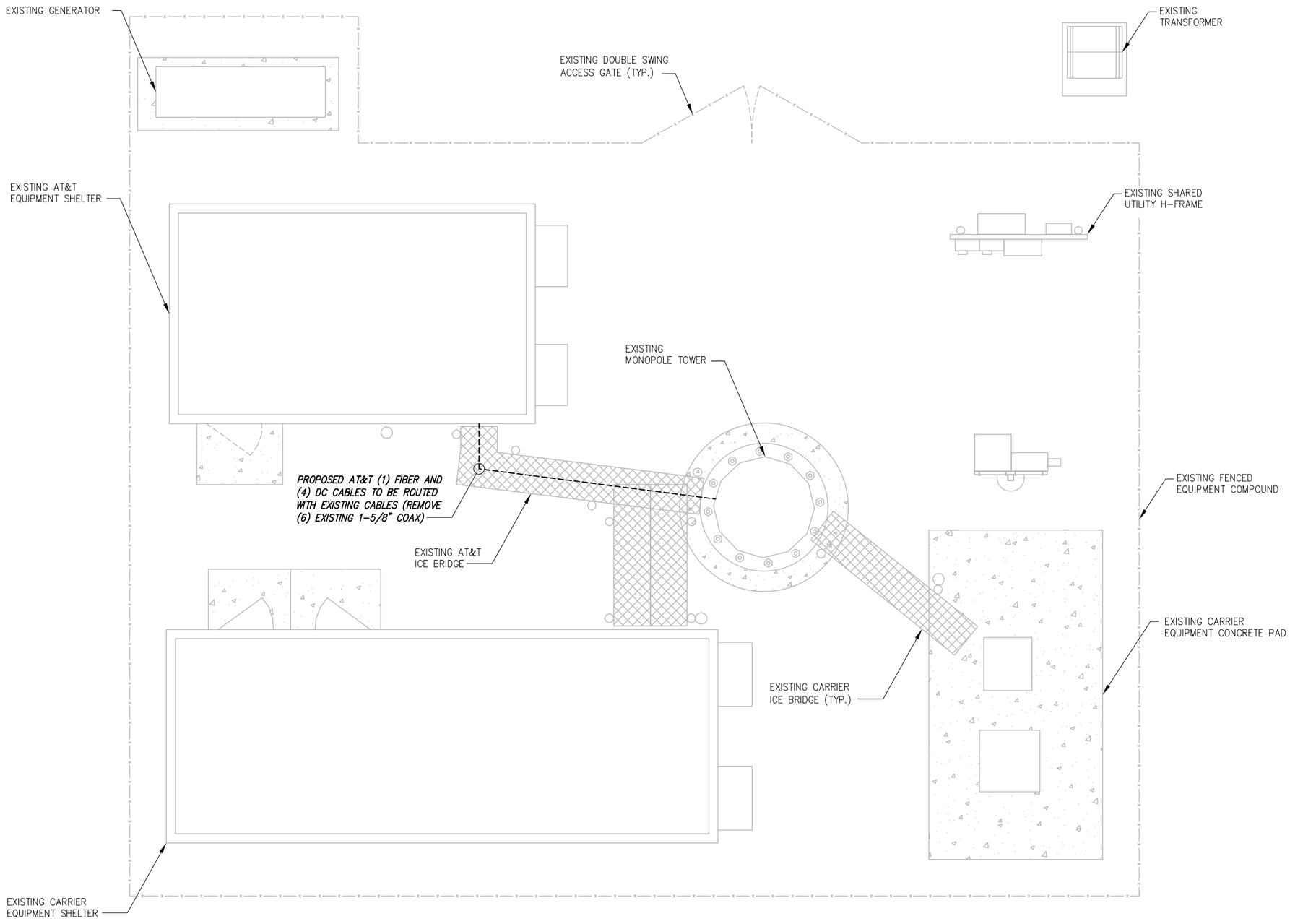
CTL01238
FA# 10126665
113 BRUSH HILL ROAD
GOSHEN, CT 06756

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 01/27/20
CD

Drawing Title
GENERAL NOTES

Drawing Number
C1



BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINIGY ENGINEERING AND PROVIDED INFORMATION, AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.

N

TRUE NORTH

1 — SITE PLAN
SCALE: AS NOTED

GRAPHIC SCALE:

6' 3' 0 3' 6'

SCALE (11x17): 1" = 6'-0"
SCALE (22x34): 1" = 3'-0"

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Prepared For:

smartlink

Drawing Scale: AS NOTED
Date: 01/27/20

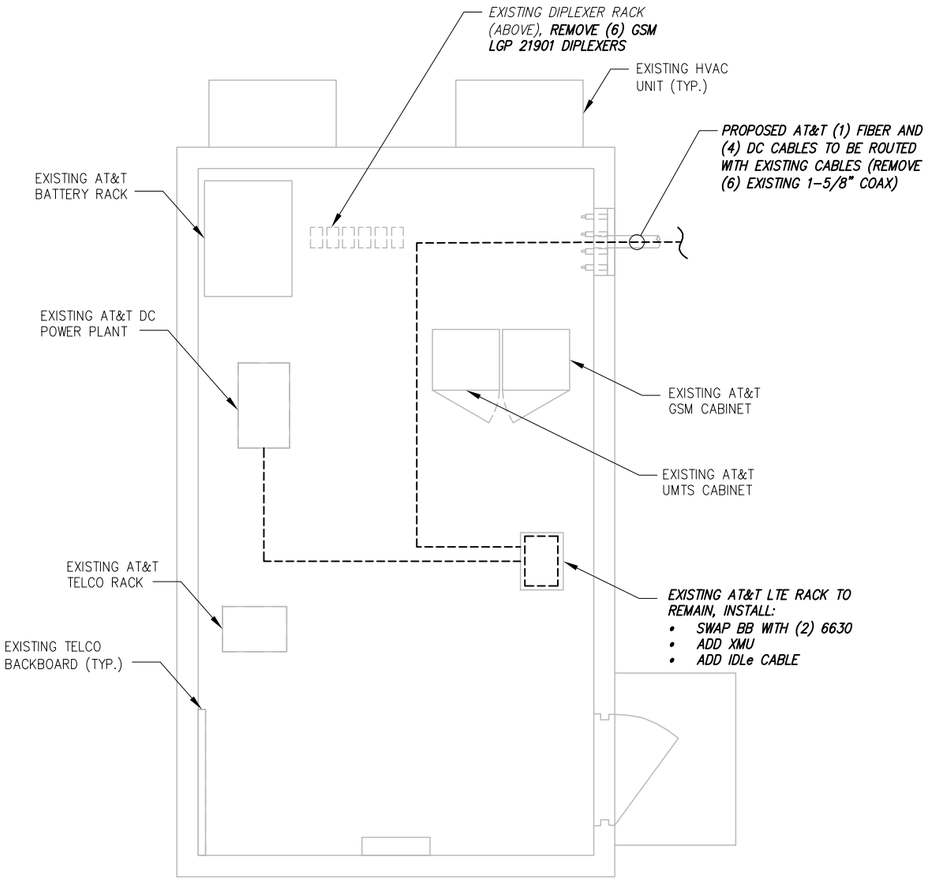
CD

Drawing Title

OVERALL SITE PLAN

Drawing Number

C2



TRUE NORTH

2 ENLARGED EQUIPMENT PLAN
SCALE: AS NOTED

GRAPHIC SCALE:

4' 2' 0 2' 4'

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

BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINIGY ENGINEERING AND PROVIDED INFORMATION, AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.

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1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

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12756
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GOSHEN, CT 06756

Prepared For: smartlink

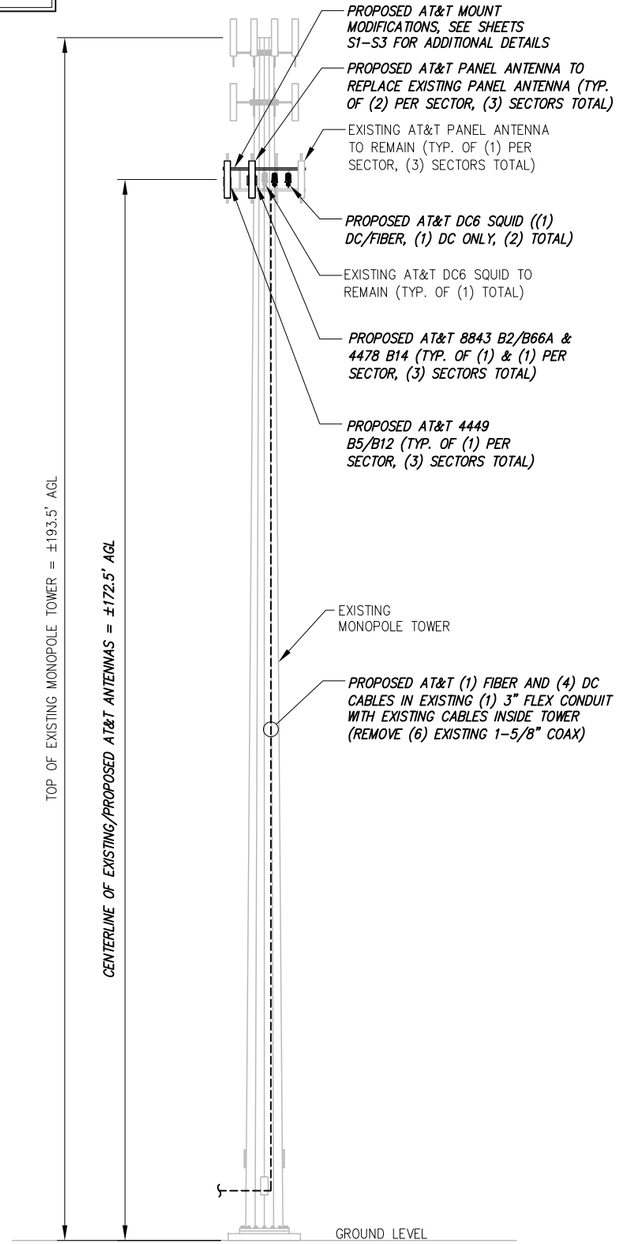
Drawing Scale: AS NOTED
Date: 01/27/20
CD

Drawing Title
ENLARGED SITE PLAN

Drawing Number
C2A

NOTE:
- *FOR ADDITIONAL STRUCTURAL INFORMATION PERTAINING TO THE ANTENNA MOUNT, SEE 'POST MOD MOUNT ANALYSIS REPORT' COMPLETED BY INFINIGY, DATED 01/27/20. SEE SHEETS S1-S3 FOR MODIFICATION DETAILS.*
- *INFINIGY ENGINEERING HAS NOT EVALUATED THE TOWER LOADING FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY REGARDING ITS EXISTING OR PROPOSED LOADING. FINAL INSTALLATION TO COMPLY STRUCTURAL ANALYSIS.*

NOTE:
- 3' MINIMUM SEPARATION BETWEEN ALL LTE ANTENNAS
- 6' MINIMUM SEPARATION BETWEEN 700 BC/700 DE ANTENNAS



1 ELEVATION VIEW
NOT TO SCALE

FINAL ANTENNA CONFIGURATION & CABLE SCHEDULE BASED ON LTE RFDS DATED 1/22/20 V5.00

SECTOR	ANTENNA POSITION	ANTENNA STATUS & TECHNOLOGY	ANTENNA MANF/MODEL	TMA/ DIPLEXER	RRUS	AZIMUTH	ANTENNA ℄ HEIGHT	CABLE FEEDER TYPE	CABLE FEEDER LENGTH	RAYCAP UNIT
ALPHA	A-1	(E) UMTS 850/1900	POWERWAVE 7770	--	--	30°	±172.5'	(2) (E) 1-5/8" COAX CABLES	±185'	(1) (E) DC/FIBER 'SQUID' (1) (P) DC/FIBER 'SQUID' (1) (P) DC 'SQUID'
	A-2	--	--	--	--	--	--	--	--	
	A-3	*(P) LTE 700 B14/1900*	*CCI DMP65R-BU6DA*	--	*(1) (P) B14 4478 (1) (P) 8843 B2/B66A*	*30°*	*±172.5'*	(1) (E) FIBER CABLE (2) (E) DC CABLES	--	
	A-4	*(P) LTE 700/850/ AWS/5G 850*	*CCI DMP65R-BU6DA*	--	*(1) (P) 4449 B5/B12*	*30°*	*±172.5'*	SEE A-3 FOR CABLE INFORMATION	--	
BETA	B-1	(E) UMTS 850/1900	POWERWAVE 7770	--	--	150°	±172.5'	(2) (E) 1-5/8" COAX CABLES	±185'	
	B-2	--	--	--	--	--	--	--	--	
	B-3	*(P) LTE 700 B14/1900*	*CCI DMP65R-BU6DA*	--	*(1) (P) B14 4478 (1) (P) 8843 B2/B66A*	*150°*	*±172.5'*	*(1) (P) FIBER CABLE (4) (P) DC CABLES*	--	
	B-4	*(P) LTE 700/850/ AWS/5G 850*	*CCI DMP65R-BU6DA*	--	*(1) (P) 4449 B5/B12*	*150°*	*±172.5'*	SEE A-3 FOR CABLE INFORMATION	--	
GAMMA	G-1	(E) UMTS 850/1900	POWERWAVE 7770	--	--	270°	±172.5'	(2) (E) 1-5/8" COAX CABLES	±185'	
	G-2	--	--	--	--	--	--	--	--	
	G-3	*(P) LTE 700 B14/1900*	*CCI DMP65R-BU6DA*	--	*(1) (P) B14 4478 (1) (P) 8843 B2/B66A*	*270°*	*±172.5'*	SEE A-3 FOR CABLE INFORMATION	--	
	G-4	*(P) LTE 700/850/ AWS/5G 850*	*CCI DMP65R-BU6DA*	--	*(1) (P) 4449 B5/B12*	*270°*	*±172.5'*	SEE A-3 FOR CABLE INFORMATION	--	

2 AT&T ANTENNA SCHEDULE
NOT TO SCALE

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

STATE OF CONNECTION
JOHN S. STEVENS
LICENSED PROFESSIONAL ENGINEER
01/27/2020

No.	Submittal / Revision	App'd	Date
2	REVISED RFDS	ASW	01/27/20
1	ISSUED FOR PERMIT	BMM	01/17/20
0	ISSUED FOR REVIEW	ASW	12/30/19

Drawn: BMM Date: 12/30/19
Designed: ASW Date: 12/30/19
Checked: AJD Date: 12/30/19

Project Number: 499-006

Project Title:

GOSHEN CT BRUSH HILL

CTL01238
FA# 10126665
113 BRUSH HILL ROAD
GOSHEN, CT 06756

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 01/27/20

CD

Drawing Title

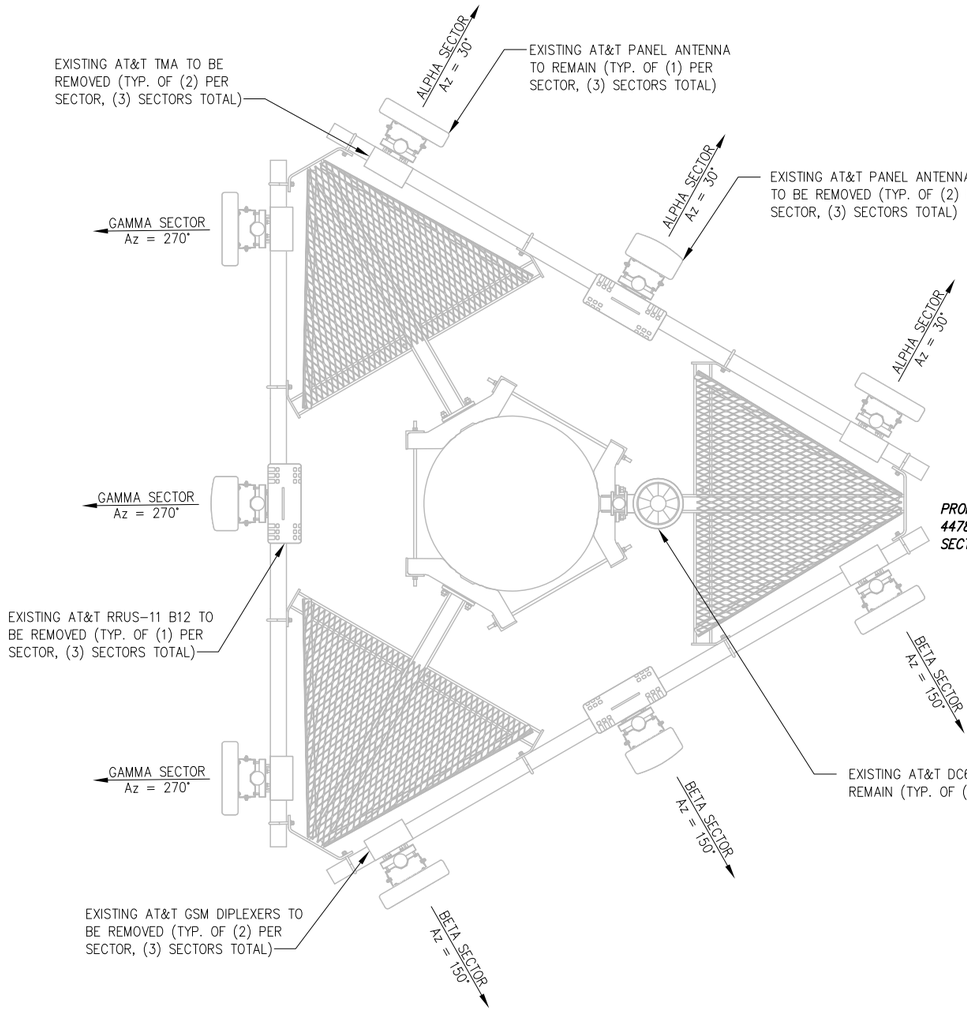
ELEVATION VIEW

Drawing Number

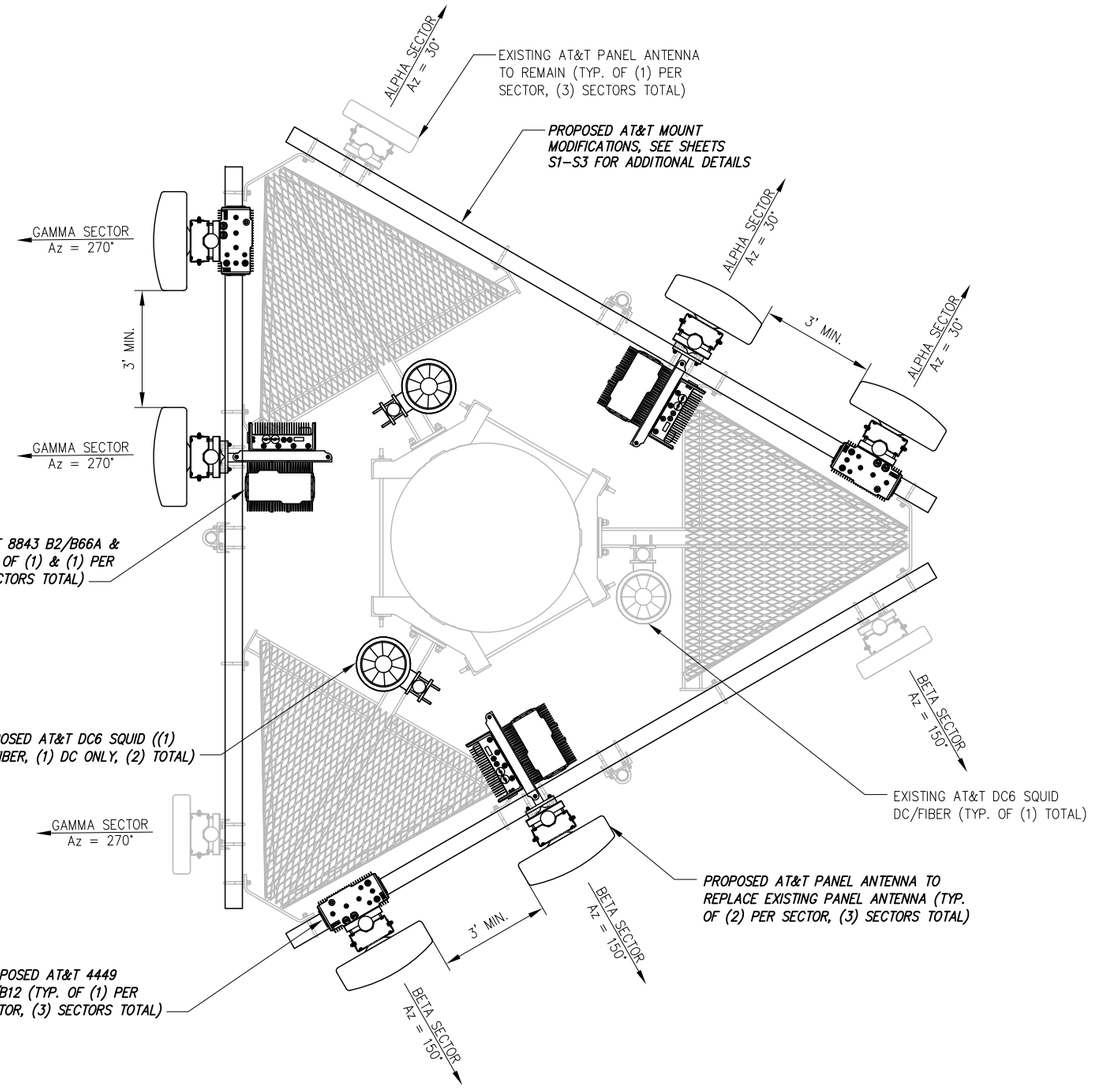
C3

NOTE:
- 3' MINIMUM SEPARATION BETWEEN ALL LTE ANTENNAS
- 6' MINIMUM SEPARATION BETWEEN 700 BC/700 DE ANTENNAS

NOTE:
- *FOR ADDITIONAL STRUCTURAL INFORMATION PERTAINING TO THE ANTENNA MOUNT, SEE 'POST MOD MOUNT ANALYSIS REPORT' COMPLETED BY INFINIGY, DATED 01/27/20. SEE SHEETS S1–S3 FOR MODIFICATION DETAILS.*
- *INFINIGY ENGINEERING HAS NOT EVALUATED THE TOWER LOADING FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY REGARDING ITS EXISTING OR PROPOSED LOADING. FINAL INSTALLATION TO COMPLY STRUCTURAL ANALYSIS.*



1 EXISTING ANTENNA ORIENTATION PLAN
NOT TO SCALE



2 PROPOSED ANTENNA ORIENTATION PLAN
NOT TO SCALE

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

STATE OF CONNECTICUT
JOHN S. STEVENS
24705
01/27/2020
LICENSED PROFESSIONAL ENGINEER

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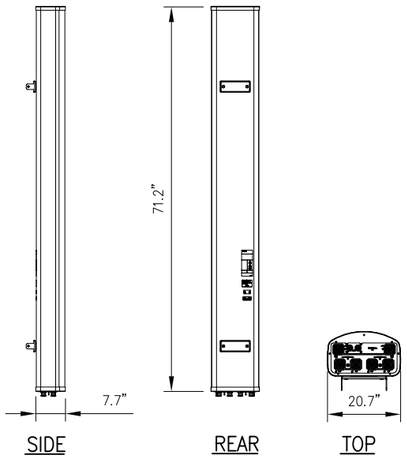
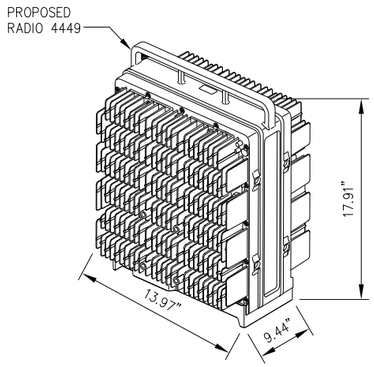
Drawing Title
ANTENNA ORIENTATION PLAN

Drawing Number
C4



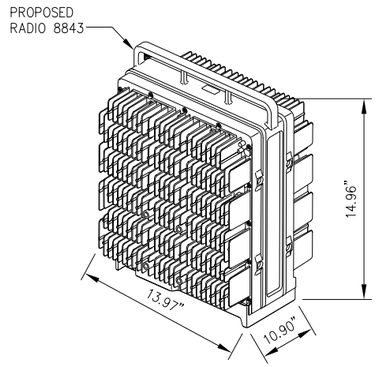
CCI MODEL NO.:	DMP65R-BU6DA
RADOME MATERIAL:	FIBERGLASS, UV RESISTANT
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	71.2"x20.7"x7.7"
WEIGHT, W/ PRE-MOUNTED BRACKETS:	79.4 LBS
CONNECTOR:	7-16 DIN FEMALE

1 ANTENNA DETAIL
NOT TO SCALE



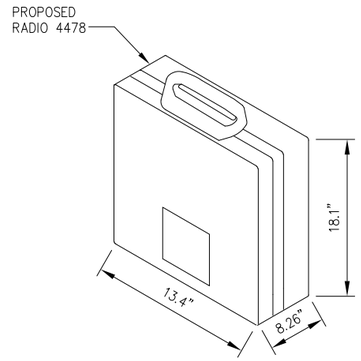
RADIO 4449 SPECIFICATIONS
- HxWxD, (INCHES) : 17.91"x13.97"x9.44"
- WEIGHT (LBS) : 70.54
- COLOR : GRAY

2 ERICSSON RADIO 4449 DETAIL
NOT TO SCALE



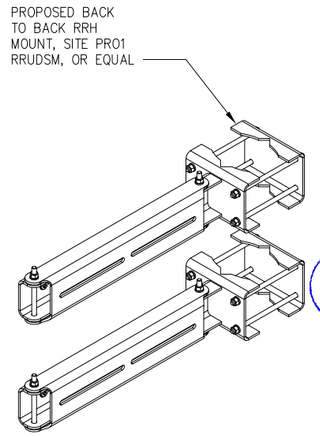
RADIO 8843 SPECIFICATIONS
- HxWxD, (INCHES) : 14.96"x13.97"x10.90"
- WEIGHT (LBS) : 71.87
- COLOR : GRAY

3 ERICSSON RADIO 8843 DETAIL
NOT TO SCALE

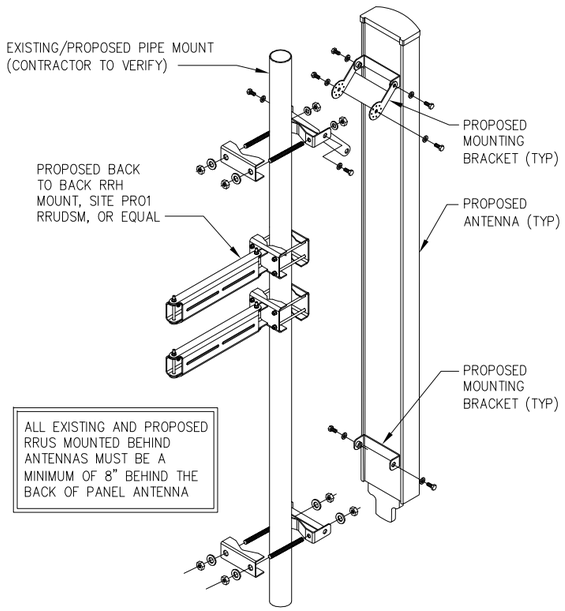


RADIO 4478-B14 SPECIFICATIONS
- HxWxD, (INCHES) : 18.1"x13.4"x8.26"
- WEIGHT (LBS) : 59.5
- COLOR : GRAY
- MOUNTING BRACKET: SXK1250244/1

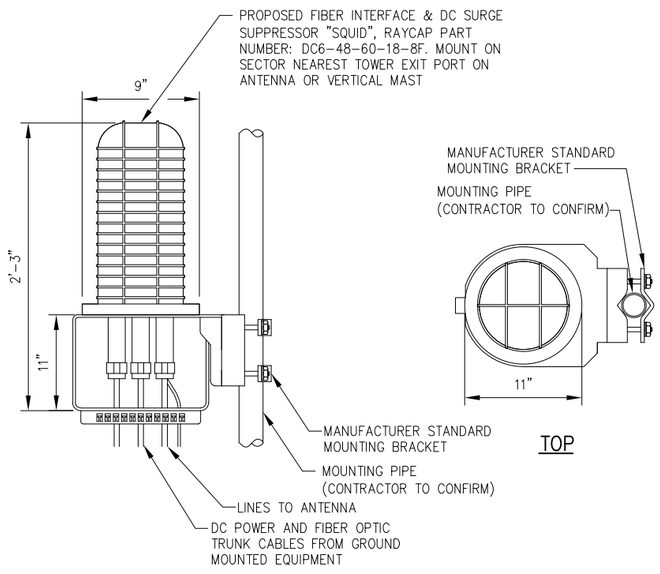
4 ERICSSON RADIO 4478-B14 DETAIL
NOT TO SCALE



5 BACK TO BACK PIPE MOUNT DETAIL
NOT TO SCALE



6 ANTENNA MOUNTING DETAIL
NOT TO SCALE



7 SQUID DETAIL
NOT TO SCALE

INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

STATE OF CONNECTION
JOHN S. STEVENS
24795
01/27/2020
PROFESSIONAL ENGINEER

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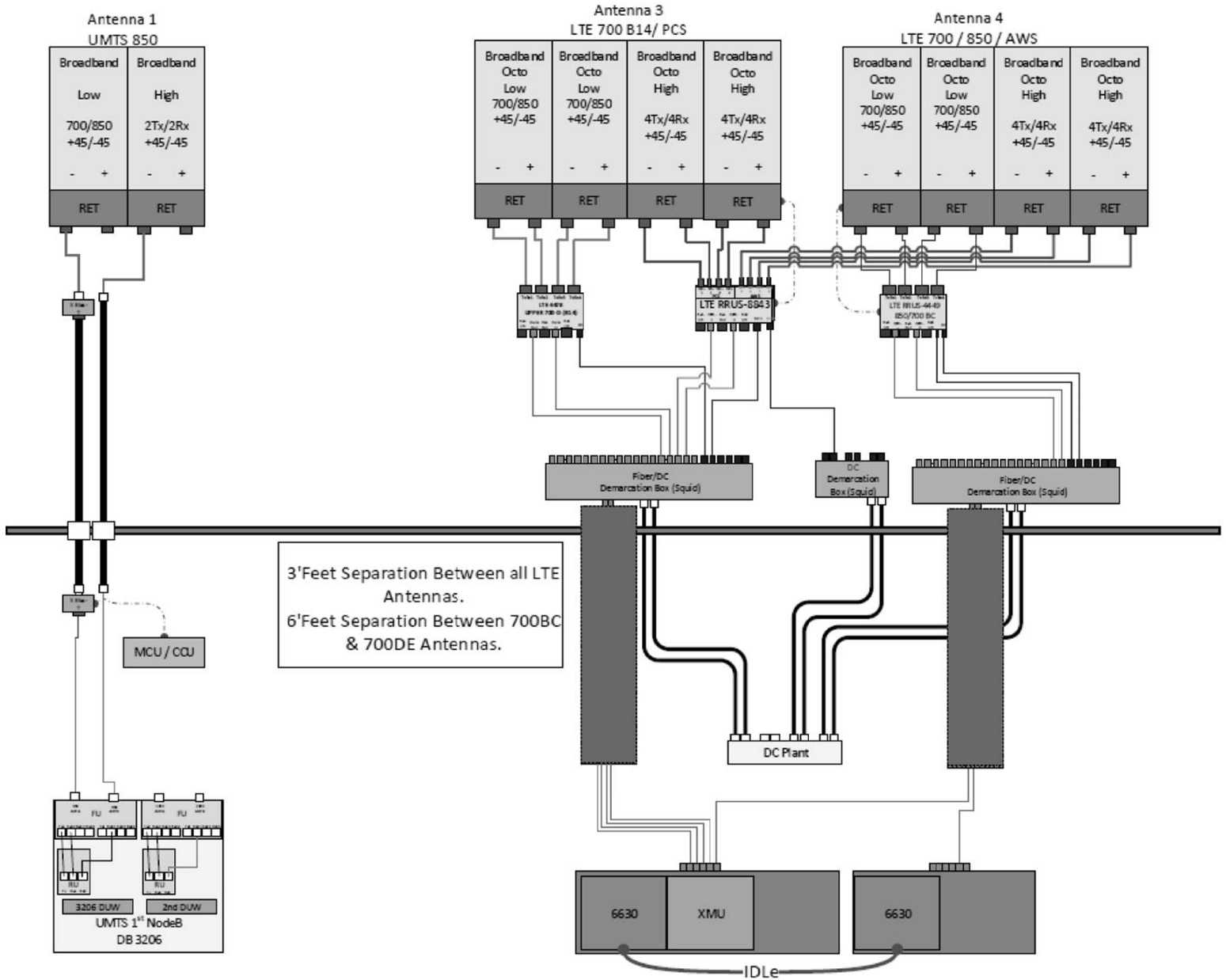
GOSHEN CT BRUSH HILL
CTL01238
FA# 10126665
113 BRUSH HILL ROAD
GOSHEN, CT 06756

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 01/27/20
CD

Drawing Title
EQUIPMENT DETAILS

Drawing Number
C5



ALPHA/BETA/GAMMA

1 PLUMBING DIAGRAM (FINAL CONFIGURATION)
NOT TO SCALE

*BASED ON LTE RFDS, DATED 1/22/20 V5.00

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 WaterVliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

STATE OF CONNECTICUT
JOHN S. STEVENS
24705
01/27/2020
PROFESSIONAL ENGINEER
LICENSED

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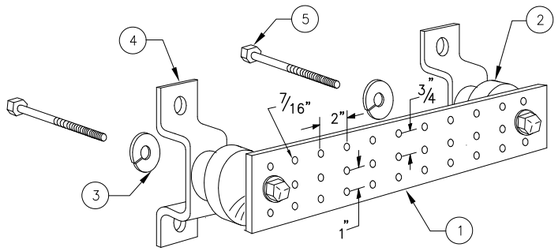
Drawing Title
PLUMBING DIAGRAM

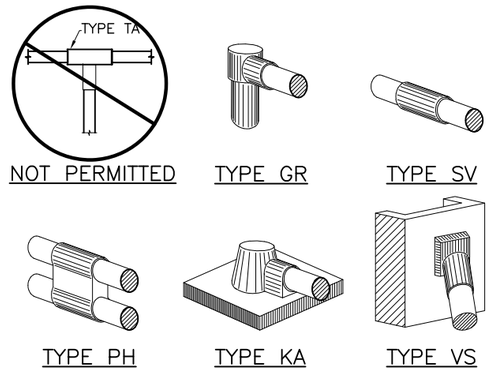
Drawing Number
C6



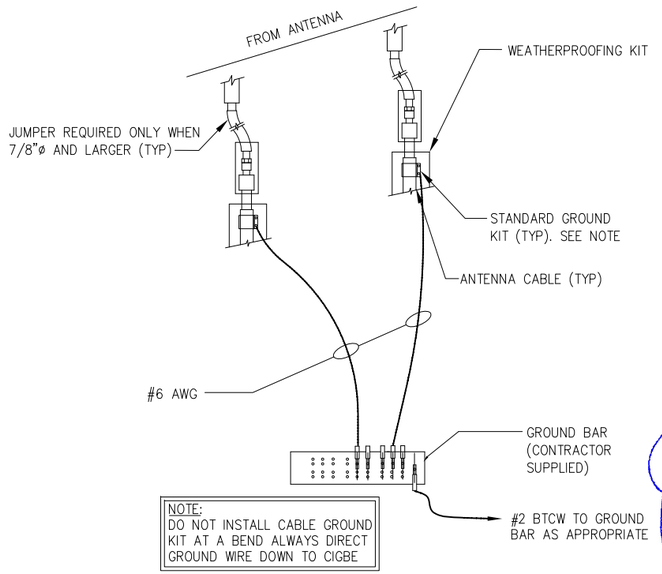
LEGEND

1 – SOLID TINNED COPPER GROUND BAR, 1/4"x 4"x 20" MIN., NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
2 – INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4
3 – 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8
4 – WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056
5 – 5/8-11 X 1" H.H.C.S. BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1
6 – GROUND BAR SHALL BE SIZED TO ACCOMODATE ALL GROUNDING CONNECTIONS REQUIRED PLUS PROVIDE 50% SPARE CAPACITY
7 – GROUND BARS SHALL NEITHER BE FIELD FABRICATED NOR NEW HOLES DRILLED
8 – GROUND LUGS SHALL MATCH THE HOLE SPACING ON THE BAR
9 – HARDWARE DIAMETER SHALL BE MINIMUM 3/8"

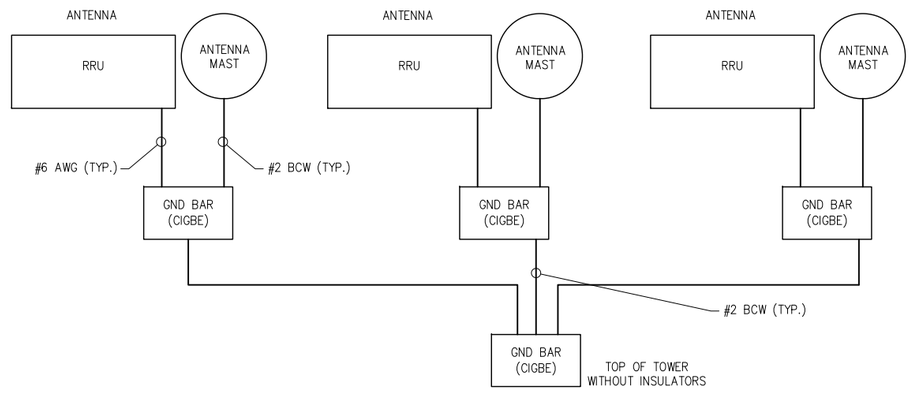
1 GROUND BAR
NOT TO SCALE



2 CADWELDS (TYPICAL)
NOT TO SCALE



3 CONNECTION OF GROUND WIRES TO GROUNDING BARS @ ANTENNAS
NOT TO SCALE



4 SCHEMATIC DIAGRAM GROUNDING SYSTEM
NOT TO SCALE

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

JOHN G. STEVENS
STATE OF CONNECTICUT
24705
PROFESSIONAL ENGINEER
01/27/2020

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GOSHEN CT BRUSH HILL
CTL01238
FA# 10126665
113 BRUSH HILL ROAD
GOSHEN, CT 06756

Prepared For: smartlink

Drawing Scale: AS NOTED
Date: 01/27/20
CD

Drawing Title
GROUNDING DETAILS

Drawing Number
C7

GENERAL NOTES:

1. THESE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE LATEST VERSION OF APPLICABLE LOCAL/STATE/COUNTY/CITY BUILDING CODES, AS WELL AS ANSI/TIA–222 STANDARD, AWWA–D100 STANDARD, NDS, NEC, MSJC, AND/OR THE LATEST VERSION OF THE INTERNATIONAL BUILDING CODE, UNLESS NOTED OTHERWISE IN THE CORRESPONDING STRUCTURAL REPORT.
2. ALL CONSTRUCTION METHODS SHOULD FOLLOW STANDARDS OF GOOD CONSTRUCTION PRACTICE.
3. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN SIMILAR CONSTRUCTION.
4. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. IF OBSTRUCTIONS ARE FOUND, CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD PRIOR TO CONTINUING WORK.
5. ANY CHANGES OR ADDITIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL CHANGES OR ADDITIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND/OR CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE DURING CONSTRUCTION. TIA–1019–A–2011 IS AN APPROPRIATE REFERENCE FOR THOSE DESIGNS MEETING TIA STANDARDS. THE ENGINEER OF RECORD MAY PROVIDE FORMAL RIGGING PLANS AT THE REQUEST AND EXPENSE OF THE CONTRACTOR.
7. INSTALLATION SHALL NOT INTERFERE NOR DENY ADEQUATE ACCESS TO OR FROM ANY EXISTING OR PROPOSED OPERATIONAL AND SAFETY EQUIPMENT.
8. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION. CONTACT INFINIGY ENGINEERING IF ANY DISCREPANCIES EXIST.

STEEL CONSTRUCTION NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE AISC MANUAL OF STEEL CONSTRUCTION 14TH EDITION, FOR THE DESIGN AND FABRICATION OF STEEL COMPONENTS.
2. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES, AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS' RECOMMENDATIONS.
3. ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.
4. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
5. ALL STEEL MEMBERS AND CONNECTIONS SHALL MEET THE FOLLOWING GRADES:
   - ANGLES, CHANNELS, PLATES AND BARS TO BE A36. Fy=36 KSI, U.N.O.
   - W SHAPES TO BE A992. Fy=50 KSI, U.N.O.
   - RECTANGULAR HSS TO BE A500, GRADE B. FY=46 KSI, U.N.O.
   - ROUND HSS TO BE A500, GRADE B. FY=42 KSI, U.N.O.
   - STEEL PIPE TO BE A53, GRADE B. Fy=35 KSI, U.N.O.
   - BOLTS TO BE A325–X. Fu=120 KSI, U.N.O.
   - U–BOLTS AND LAG SCREWS TO BE A307 GR A. Fu=60 KSI, U.N.O.
6. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES, U.N.O.
7. ALL WELDING SHALL CONFORM TO AISC AND AWS D1.1 LATEST EDITION.
8. ALL HILTI ANCHORS TO BE CARBON STEEL, U.N.O.
   - MECHANICAL ANCHORS: KWIK BOLT–TZ, U.N.O.
   - CMU BLOCK ANCHORS: ADHESIVE – HY120, U.N.O.
   - CONCRETE ANCHORS: ADHESIVE – HY150, U.N.O.
   - CONCRETE REBAR: ADHESIVE – RE500, U.N.O.
9. ALL STUDS TO BE NELSON CAPACITOR DISCHARGE 1/4"–20 LOW CARBON STEEL COPPER–FLASH AT 55 KSI ULT/50 KSI YIELD, U.N.O.
10. BOLTS SHALL BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC.
11. MINIMUM EDGE DISTANCES SHALL CONFORM TO AISC TABLE J3.4.
12. REMOVAL/REPLACEMENT OF STRUCTURAL MEMBERS SHALL BE DONE ONE MEMBER AT A TIME. CONTRACTOR IS RESPONSIBLE FOR ENSURING THE STRUCTURAL INTEGRITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.

CONCRETE CONSTRUCTION NOTES:

1. CONCRETE TO BE 4000 PSI @ 28 DAYS. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI–318 BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR IS NOT PERMITTED.
2. EXISTING CONCRETE SURFACES THAT ARE TO BE IN CONTACT WITH NEW PROPOSED CONCRETE SHOULD BE WIRE BRUSHED CLEAN AND TREATED WITH APPROPRIATE MECHANICAL SCRATCH COAT AND REPAIR MATERIALS OR APPROPRIATE CHEMICAL METHODS SUCH AS THE APPLICATION OF A BONDING AGENT, EX. SAKRETE OR EQUIVALENT, TO ENSURE A QUALITY BOND BETWEEN EXISTING AND PROPOSED CONCRETE SURFACES.

FIBER REINFORCED POLYMER (FRP) NOTES:

1. FRP PLATES, SHAPES, BOLTS AND NUTS (STUD/NUT ASSEMBLIES) SHALL CONFORM TO ASTM D638, 695, 790. PLATES AND SHAPES TO BE FY = 5.35 KSI LW (SAFETY FACTOR OF 8), .945 KSI CW (SAFETY FACTOR OF 8) MIN.
2. IF FIELD FABRICATION IS REQUIRED, ALL CUT EDGES AND DRILLED HOLES TO BE SEALED USING VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
3. ALL FASTENERS TO BE 1/2" DIA FRP THREADED ROD WITH FIBER REINFORCED THERMOPLASTIC NUT, SPACED AT 12 INCHES ON CENTER MAXIMUM, U.N.O., FOR PANELS AND AS DESIGNED FOR STRUCTURAL MEMBERS.
4. THE COLOR AND SURFACE PATTERN OF EXPOSED FRP PANELS SHALL MATCH THE EXTERIOR OF THE EXISTING BUILDING, U.N.O.
5. STUD/NUT ASSEMBLIES SHOULD BE LUBRICATED FOR INSTALLATION
6. ENSURE BEARING SURFACES OF THE NUTS ARE PARALLEL TO THE SURFACES BEING FASTENED.
7. TORQUE BOLTS ACCORDING TO THE FOLLOWING TABLE:

INSTALLATION TORQUE TABLE		
SIZE	ULTIMATE TORQUE STRENGTH	RECOMMENDED MAXIMUM INSTALLATION TORQUE
3/8–16 UNC	8 FT–LBS	4 FT–LBS
1/2–13 UNC	18 FT–LBS	8 FT–LBS
5/8–11 UNC	35 FT–LBS	16 FT–LBS
3/4–10 UNC	50 FT–LBS	24 FT–LBS
1–8 UNC	110 FT–LBS	50 FT–LBS

8. WHEN TIGHTENING FRP STUD/NUT ASSEMBLIES, WRENCHES MUST MAKE FULL CONTACT WITH ALL NUT EDGES. A STANDARD SIX POINT SOCKET IS RECOMMENDED.
9. STUD/NUT ASSEMBLIES SHOULD BE BONDED BY APPLYING BONDING AGENT TO ENTIRE NUT AND EXPOSED STUD.
10. ALL FRP MATERIALS TO BE PROVIDED BY FIBERGRATE COMPOSITE STRUCTURES, DALLAS TX, OR APPROVED EQUAL.
11. ALL FRP SHAPES TO BE DYNAFORM PULTRUDED STRUCTURAL SHAPES.
12. ALL FRP PLATES TO BE FIBERPLATE MOLDED FRP PLATE.
13. ALL FRP PANELS TO BE FIBERPLATE CLADDING PANEL.
14. EACH FRP PANEL TO BE IDENTIFIED WITH LARR#25536 AND FIBERGRATE COMPOSITE STRUCTURAL LABEL.
15. FRP MATERIAL TO BE CLASSIFIED AS CC1 OR BETTER, AND HAVE MAXIMUM FLAME SPREAD OF 50.
16. ALL DESIGN AND CONSTRUCTION TO BE COMPLETED IN ACCORDANCE WITH LOS ANGELES RESEARCH REPORT RR25536, DATED FEBRUARY 1, 2016.
17. SPECIAL INSPECTIONS MUST BE PROVIDED FOR ALL FRP INSTALLMENTS. SEE SPECIAL INSPECTION SECTION, THIS SHEET.

RATIO OF EDGE DISTANCE TO FRP FASTENER DIAMETER		
	RANGE	RECOMMENDED
EDGE DISTANCE – CL* BOLT TO END	2.0–4.0	3.0
EDGE DISTANCE – CL* BOLT TO SIDE	1.5–3.5	2.5
BOLT PITCH – CL* TO CL*	4.0–5.0	5.0

WOOD CONSTRUCTION NOTES:

1. ALL EXISTING WOOD SHAPES ARE ASSUMED TO BE DOUGLAS FIR–LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN.
2. ALL PROPOSED WOOD SHAPES ARE TO BE DOUGLAS FIR–LARCH WITH A REFERENCE DESIGN BENDING VALUE OF 1000 PSI MIN. U.N.O.
3. ALL EXISTING AND PROPOSED GLUED LAMINATED TIMBERS ARE TO BE 24F–1.8C DOUGLAS FIR BALANCED WITH A REFERENCE DESIGN BENDING VALUE OF 2400 PSI MIN. U.N.O.

MASONRY CONSTRUCTION NOTES:

1. ALL BRICK TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
   - FOR INTERIOR/ABOVE GRADE APPLICATIONS TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 100 PSI SHALL BE USED. FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 133 PSI.
   - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
2. ALL CMU TO BE 1500 PSI MIN. REINFORCING BAR (IF APPLICABLE) TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. ALL MORTAR TO BE 2000 PSI MIN.
   - FOR INTERIOR/ABOVE GRADE APPLICATIONS, TYPE N MORTAR HAVING MINIMUM MODULUS OF RUPTURE OF 64 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 158 PSI FOR FULLY GROUTED BLOCKS.
   - FOR EXTERIOR/BELOW GRADE APPLICATIONS TYPE M OR S MORTAR HAVING A MINIMUM MODULUS OF RUPTURE OF 84 PSI SHALL BE USED FOR UNGROUTED BLOCKS, AND 163 PSI FOR FULLY GROUTED BLOCKS.
   - BRICK AND MORTAR INSTALLATION TO CONFORM TO MSJC BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.

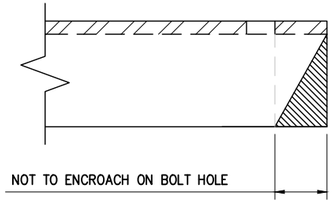
TOWER PLUMB & TENSION NOTES:

1. PLUMB AND TENSION TOWER UPON COMPLETION OF STRUCTURAL MODIFICATIONS DETAILED IN THESE DRAWINGS.
2. RETENSIONING OF EXISTING GUY WIRES SHALL BE PERFORMED AT A TIME WHEN THE WIND VELOCITY IS LESS THAN 10 MPH AT GROUND LEVEL AND WITH NO ICE ON THE STRUCTURE AND GUY WIRES.
3. PLUMB THE TOWER WHILE RETENSIONING THE EXISTING GUY WIRES. THE HORIZONTAL DISTANCE BETWEEN THE VERTICAL CENTERLINES AT ANY TWO ELEVATIONS SHALL NOT EXCEED 0.25% OF THE VERTICAL DISTANCE BETWEEN TWO ELEVATIONS FOR LATTICED STRUCTURES.
4. THE TWIST BETWEEN ANY TWO ELEVATIONS THROUGHOUT THE HEIGHT OF A LATTICE STRUCTURE SHALL NOT EXCEED 0.5 DEGREES IN 10 FEET. THE MAXIMUM TWIST OVER THE LATTICE STRUCTURE HEIGHT SHALL NOT EXCEED 5 DEGREES.

SPECIAL INSPECTIONS NOTES:

1. A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER AND APPROVED BY THE JURISDICTION, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH THE THE GOVERNING BUILDING CODE, APPLICABLE SECTION(S) AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK:
   a. STRUCTURAL WELDING (CONTINUOUS INSPECTION OF FIELD WELDS ONLY).
   b. HIGH STRENGTH BOLTS (PERIODIC INSPECTION OF A325 AND/OR A490 BOLTS) TO BE TIGHTENED PER "TURN–OF–THE–NUT" METHOD.
   c. MECHANICAL AND EPOXIED ANCHORAGES.
   d. FIBER REINFORCED POLYMER.
      - THE SPECIAL INSPECTOR MUST VERIFY THAT THE FRP MATERIAL SPECIFIED ON THE APPROVED DESIGN DOCUMENTS IS BEING INSTALLED.
      - THE SPECIAL INSPECTOR MUST VERIFY THAT ALL CUT EDGES AND DRILLED HOLES ARE PROPERLY SEALED USING A VINYL ESTER SEALING KIT SUPPLIED BY THE MANUFACTURER.
      - THE SPECIAL INSPECTOR MUST VERIFY THAT THE STRUCTURE IS BUILT IN ACCORDANCE WITH THE APPROVED DESIGN DOCUMENTS.
2. THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM WORK WITHOUT THE SPECIAL INSPECTIONS.

MAXIMUM ALLOWABLE ANGLE CLIP



INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

No.	Submittal / Revision	App'd	Date
0	ISSUED FOR REVIEW	WJD	01/13/20

Drawn: WJD Date: 01/13/20
Designed: TM Date: 01/09/20
Checked: BDA Date: 01/13/20

Project Number: 1106-A0001-B

Project Title:

GOSHEN CT BRUSH HILL

CTL01238
FA# 10126665
113 BRUSH HILL ROAD
GOSHEN, CT 06756

Prepared For: smartlink

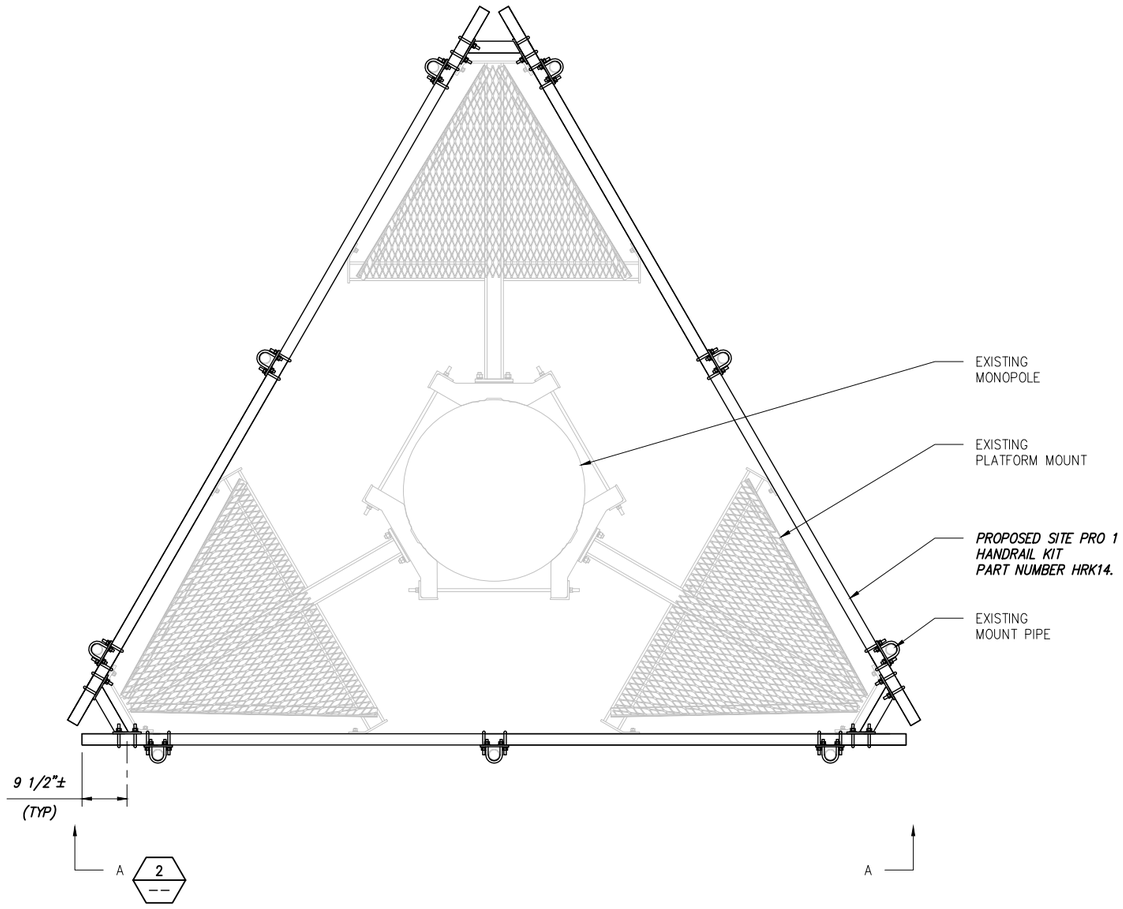
Drawing Scale: AS NOTED
Date: 01/17/20
0

Drawing Title

GENERAL NOTES

Drawing Number

S1



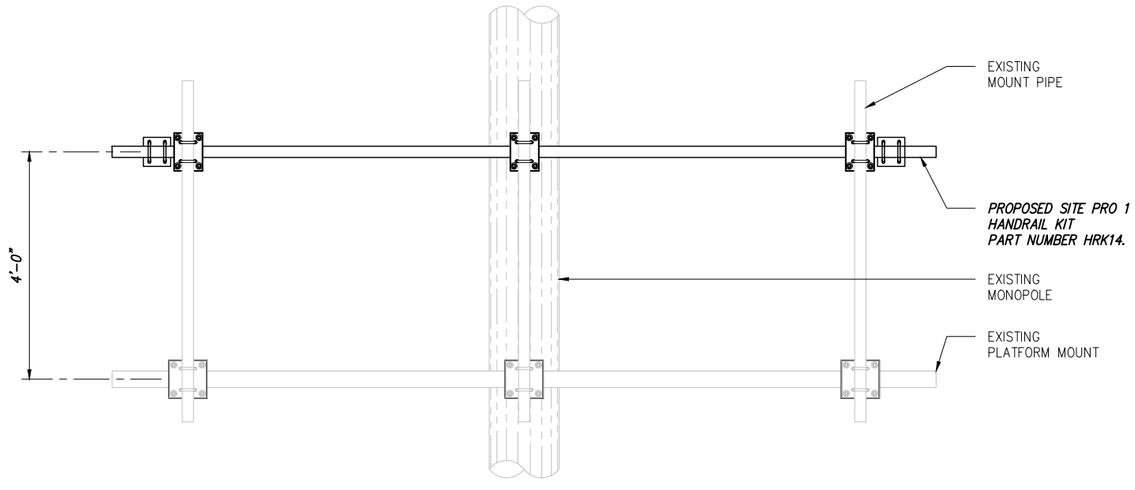
1 PLAN VIEW
SCALE: NOT TO SCALE

NOTES:

1. VARIOUS EXISITNG CONDITIONS AND PROPOSED MODIFICATIONS NOT SHOWN FOR CLARITY.

2. MODIFICATIONS SHOWN ARE FOR ENBTIR PLATFORM MOUNT.

3. SITE PRO 1 PARTS TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS.



2 SECTION A–A
SCALE: NOT TO SCALE

INFINIGY
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

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Project Number:
1106-A0001-B

Project Title:

GOSHEN CT BRUSH HILL

CTL01238
FA# 10126665
113 BRUSH HILL ROAD
GOSHEN, CT 06756

Prepared For:
smartlink

Drawing Scale: AS NOTED
Date: 01/17/20
0

Drawing Title
MOUNT MODIFICATION DETAILS

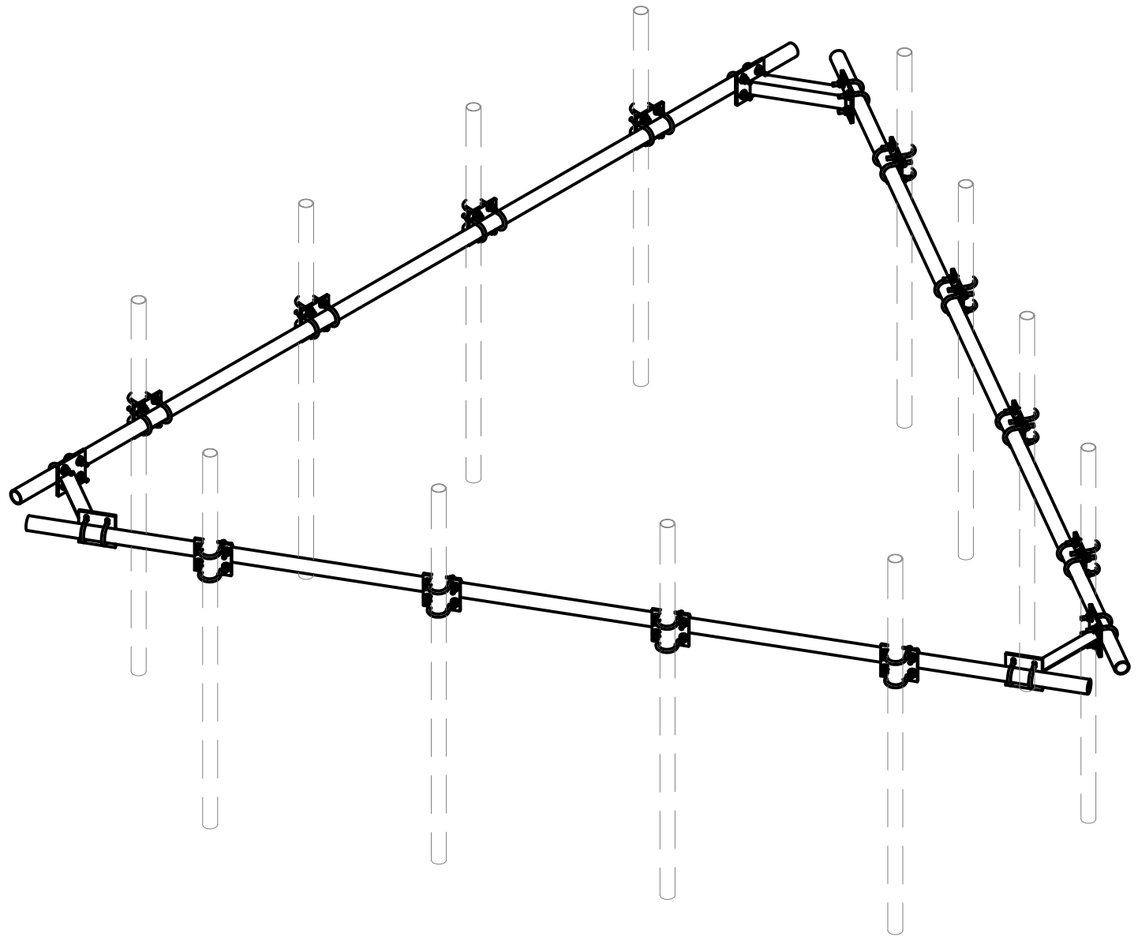
Drawing Number
S2

NOTES:

1. VARIOUS EXISITNG CONDITIONS AND PROPOSED MODIFICATIONS NOT SHOWN FOR CLARITY.

2. MODIFICATIONS SHOWN ARE FOR ENBTIR PLATFORM MOUNT.

3. SITE PRO 1 PARTS TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS.



1 -- ISOMETRIC VIEW – SITE PRO 1 PART NO. HRK14

SCALE: NOT TO SCALE

INFINIGY

INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

at&t

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Project Number:
1106-A0001-B

Project Title:

GOSHEN CT BRUSH HILL

CTL01238
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113 BRUSH HILL ROAD
GOSHEN, CT 06756

Prepared For:

smartlink

Drawing Scale:
AS NOTED

Date:
01/17/20

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Drawing Title

NECESSARY PARTS

Drawing Number

S3