



Crown Castle  
3 Corporate Park Drive, Suite 101  
Clifton Park, NY 12065

July 17, 2019

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

RE: **Notice of Exempt Modification for T-Mobile:  
823631 - T-Mobile Site ID: CT11092J  
36 Sugar Hollow Road, Danbury, CT 06810  
Latitude: 41° 20' 59" / Longitude: -73° 28' 6"**

Dear Ms. Bachman:

T-Mobile currently maintains six (six) total antennas at the 105-foot mount on the existing 105-foot Monopole Tower, located at 36 Sugar Hollow Road, Danbury, CT. The tower is owned by Crown Castle and the property is owned by the Danbury Lodge #120. T-Mobile now intends to replace four (4) existing antennas with two (2) new 600/700 MHz antennas and two (2) new 1900/2100 MHz antennas on the 105-foot mount. T-Mobile also intends to replace two (2) existing remote radios and add two (2) hybrid lines.

**Planned Modifications:**

**Tower:**

Remove: NONE

Remove and Replace:

(2) AIR21 B2P\_B4A Antenna (**REMOVE**) - (2) AIR 32 B66A/B2A Antenna 1900/2100 MHz (**REPLACE**)

(2) LNX 6515DS-A1M Antenna (**REMOVE**) - (2) RFS-APXVAARR24\_43-U-NA20 Antenna 600/700 MHz (**REPLACE**)

(2) RRUS11 B12 (**REMOVE**) – (3) Radio 4449 B71+B12 (**REPLACE**)

Install New:

(2) 1-3/8" Hybrid

Existing to Remain:

(8) Coax

(1) 1-5/8" Hybrid

- (2) AIR21 KRC118023-1\_B2A\_B4P Antenna 1900/2100 MHz
- (2) TMA

**Ground:**

Internal upgrade to existing ground cabinet.

The facility was approved by the Connecticut Siting Council on June 7, 2000 without conditions.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to James M. Hayden, Mayor for the City of Danbury, Jennifer Emminger, Deputy Planning Director, Crown Castle, the tower owner, and Danbury Lodge #120, the property owner.

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

For the foregoing reasons, T-Mobile respectfully submits that the proposed modifications to the above-reference telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Please send approval/rejection letter to Attn: Anne Marie Zsamba.

Sincerely,

Anne Marie Zsamba  
Real Estate Specialist  
3 Corporate Park Drive, Suite 101  
Clifton Park, NY 12065  
(201) 236-9224  
AnneMarie.Zsamba@crowncastle.com

Melanie A. Bachman

Page 3

Attachments

cc:

Mark Boughton, Mayor  
City of Danbury  
City Hall – 1<sup>st</sup> Floor  
155 Deer Hill Avenue  
Danbury, CT 06810  
203.797.4511

Jennifer Emminger, AICP, Deputy Planning Director  
City of Danbury  
City Hall – 1<sup>st</sup> Floor  
155 Deer Hill Avenue  
Danbury, CT 06810  
203.797.4500

Benevolent & Protective Order of Elks, Property Owner  
D/B/A Danbury Lodge #120  
36 Sugar Hollow Road  
Danbury, CT 06810

Crown Castle, Tower Owner

ORIGIN ID:GFLA (518) 373-3523  
ANNIE MARIE ZSAMBRA  
CROMN CASTLE  
3 CORPORATE PARK DRIVE  
SUITE 101  
CLIFTON PARK, NY 12065  
UNITED STATES US

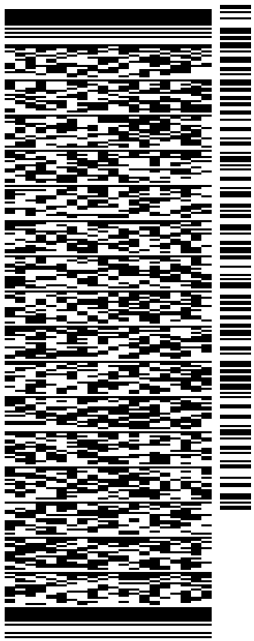
SHIP DATE: 13JUL19  
ACTWGT: 4.00 LB  
CAD: 104924194IN/ET4100

BILL SENDER

TO **MELANIE BACHMAN**  
**CONNECTICUT SITING COUNCIL**  
**10 FRANKLIN SQUARE**

**NEW BRITAIN CT 06051**

(860) 827-2951 REF: 1765 6880  
INV/ DEPT:  
PO:



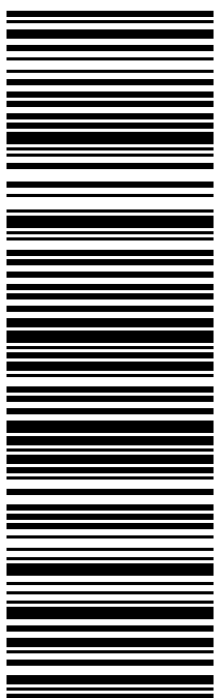
J191019010701uv

565.J2/A6F9/23AD

TRK# 7757 3210 8381  
0201

MON - 15 JUL 10:30A  
PRIORITY OVERNIGHT

**XE BDLA**  
06051  
CT-US BDL



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ORIGIN ID:GFLA (518) 373-3523  
ANNE MARIE ZSAMBA  
CROWN CASTLE  
3 CORPORATE PARK DRIVE  
SUITE 101  
CLIFTON PARK, NY 12065  
UNITED STATES US

SHIP DATE: 13JUL19  
ACTWGTY: 2.00 LB  
CAD: 104924194INNET4100

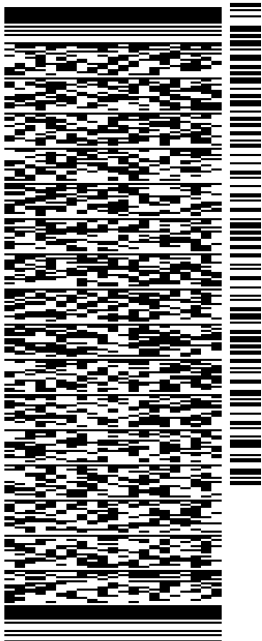
BILL SENDER

TO **MAYOR BOUGHTON**

**CITY OF DANBURY**  
**155 DEER HILL AVE**  
**CITY HALL - 1ST FLOOR**  
**DANBURY CT 06810**

REF: 1734 7890  
(203) 797-4500  
INV:  
PO: DEPT:

565J2/A6F9/23AD



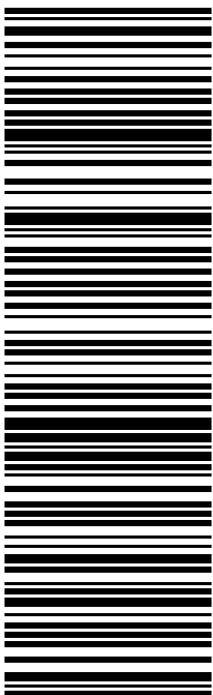
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TRK# 7757 3211 5821  
0201

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PRIORITY OVERNIGHT

**XH DXRA**

06810  
CT-US SWF



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SUITE 101  
CLIFTON PARK, NY 12065  
UNITED STATES US

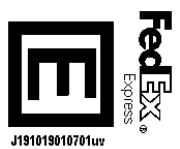
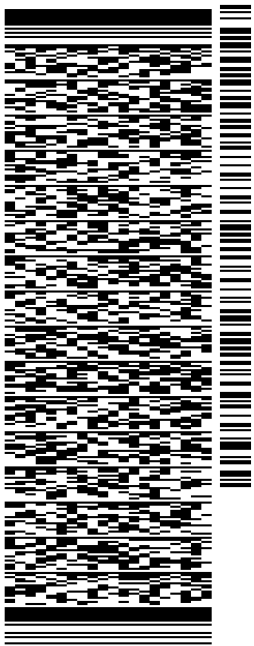
SHIP DATE: 13JUL19  
ACTWGTY: 2.00 LB  
CAD: 104924194INMET4100

BILL SENDER

TO JENNIFER EMMINGER, AICP, DEPUTY PLA  
CITY OF DANBURY  
155 DEER HILL AVE

DANBURY CT 06810

(203) 797-4500 REF: 1734 7890  
INV: DEPT:  
PO:



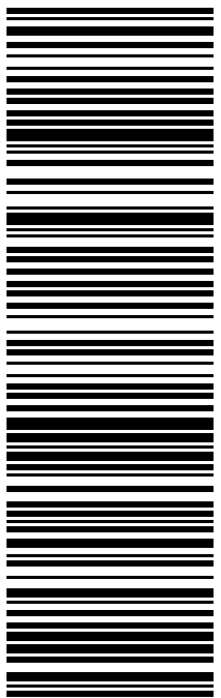
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TRK# 7757 3212 3624  
0201

MON - 15 JUL 10:30A  
PRIORITY OVERNIGHT

XH DXRA 06810  
CT-US SWF



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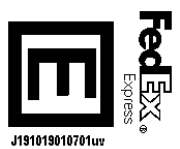
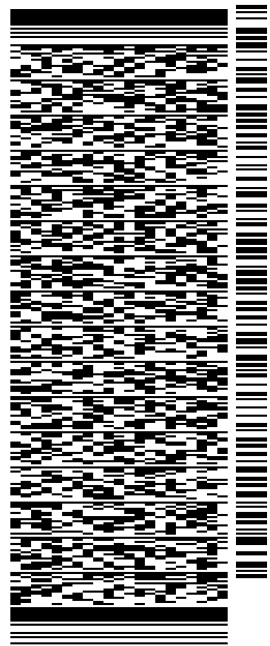
BILL SENDER

TO **BENEVOLENT & PROTECTIVE ORDER OF EL**

**C/O DANBURY LODGE 120  
36 SUGAR HOLLOW ROAD  
DANBURY CT 06810**

REF: 1734.7890  
(201) 236-9224  
INV:  
PO: DEPT:

565.J2/A6F9/23AD



J191019010701uv

TRK# 7757 3213 4930  
0201  
MON - 15 JUL 10:30A  
PRIORITY OVERNIGHT

**XH DXRA**  
06810  
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# Exhibit A

## **Original Facility Approval**





STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Ten Franklin Square  
New Britain, Connecticut 06051  
Phone: (860) 827-2935  
Fax: (860) 827-2950

June 12, 2000

Christopher B. Fisher, Esq.  
Cuddy & Feder & Worby LLP  
90 Maple Avenue  
White Plains, NY 10601-5196

RE: TS-AT&T-034-000518 - AT&T Wireless Services request for an order to approve tower sharing at an existing telecommunications facility located at 36 Sugar Hollow Road in Danbury, Connecticut.

Dear Mr. Fisher

At a public meeting held June 7, 2000, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Any additional change to this facility may require an explicit request to this agency pursuant to General Statutes § 16-50aa or notice pursuant to Regulations of Connecticut State Agencies Section 16-50j-73, as applicable. Such request or notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

This decision applies only to this request for tower sharing and is not applicable to any other request or construction.

The proposed shared use is to be implemented as specified in your letter dated May 17, 2000.

Thank you for your attention and cooperation.

Very truly yours,

Mortimer A. Gelston  
Chairman

MAG/RKE/jlh

c: Honorable Gene F. Eriquez, Mayor, City of Danbury  
Michael Murphy, AT&T Wireless  
Jennifer Young Gaudet, Pinnacle Site Development, Inc.  
J. Brendan Sharkey, VoiceStream Wireless

# Exhibit B

## **Property Card**

er  
ain  
ark  
serve

Wooster Mountain  
Shooting Rng



Danbury Elks  
Lodge No. 120



36 Sugar Hollow Road

Association

Post Rd

Danfre

Post Rd

Alan Rd

# 36 SUGAR HOLLOW RD

**Location** 36 SUGAR HOLLOW RD

**Mblu** G22/ / 3/ /

**Acct#**

**Owner** DANBURY LODGE NO 120 OF THE

**Assessment** \$1,234,200

**Appraisal** \$1,763,200

**PID** 10151

**Building Count** 1

## Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2017	\$830,700	\$932,500	\$1,763,200

Assessment			
Valuation Year	Improvements	Land	Total
2017	\$581,500	\$652,700	\$1,234,200

## Owner of Record

**Owner** DANBURY LODGE NO 120 OF THE  
**Co-Owner** BPOE OF ELKS INC  
**Address** 3 SUGAR HOLLOW RD  
DANBURY, CT 06810

**Sale Price** \$799,000  
**Book & Page** 2144/ 191  
**Sale Date** 08/01/2011  
**Instrument** 00

## Ownership History


Ownership History				
Owner	Sale Price	Book & Page	Instrument	Sale Date
DANBURY LODGE NO 120 OF THE	\$799,000	2144/ 191	00	08/01/2011
JACKSON BARBARA B & THOMAS H &	\$0	2089/ 979	01	05/19/2010
JACKSON BARBARA B & THOMAS H	\$0	0875/0703		02/29/1988

## Building Information

### Building 1 : Section 1

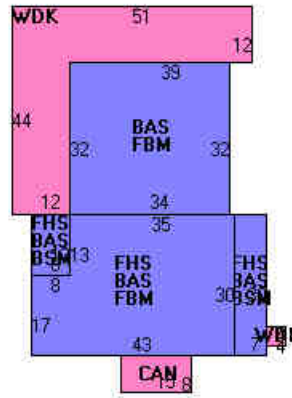
**Year Built:** 2014  
**Living Area:** 5,155  
**Replacement Cost:** \$538,561  
**Building Percent Good:** 97  
**Replacement Cost Less Depreciation:** \$522,400

### Building Photo

 Building Photo  
(<http://images.vgsi.com/photos2/DanburyCTPhotos/\00\02\97/>)

Building Attributes	
Field	Description
STYLE	Clubs/Lodges
MODEL	Commercial
Grade	Average
Stories:	1.5
Occupancy	1
Exterior Wall 1	Vinyl Siding
Exterior Wall 2	Stone/Masonry
Roof Structure	Gable/Hip
Roof Cover	Asphalt Shngl.
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Hardwood
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	Central
Bldg Use	Commercial MDL-94
Total Rooms	3
Total Bedrms	
Total Baths	
1st Floor Use:	
Heat/AC	HEAT/AC SPLIT
Frame Type	WOOD FRAME
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	LIGHT
Wall Height	12
% Comn Wall	

## Building Layout



(<http://images.vgsi.com/photos2/DanburyCTPhotos//Sketches/10>)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	2,588	2,588
FBM	Basement Finished	2,274	1,592
FHS	Finished Half Story	1,500	975
BSM	Basement	314	0
CAN	Canopy	120	0
WDK	Deck, Wood	1,012	0
		7,808	5,155

## Building 1 : Section 1

**Year Built:** 2014  
**Living Area:** 0  
**Replacement Cost:** \$538,561  
**Building Percent Good:** 97  
**Replacement Cost Less Depreciation:** \$522,400

Building Attributes	
Field	Description
Style	Vacant Land
Model	

Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Fireplaces	
Whirlpool	
Addn'l Kitchen	
Bsm Gar	
Fin Bsm Area	
Fin Bsm Qual	
Nhbd	
MH Park	

### Building Photo



(<http://images.vgsi.com/photos2/DanburyCTPhotos//default.jpg>)

### Building Layout

(<http://images.vgsi.com/photos2/DanburyCTPhotos//Sketches/10>)

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

### Building 1 : Section 1

**Year Built:** 2014  
**Living Area:** 0  
**Replacement Cost:** \$538,561  
**Building Percent Good:** 97  
**Replacement Cost Less Depreciation:** \$522,400

Building Attributes	
Field	Description
Style	Outbuildings
Model	


Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Fireplaces	
Whirlpool	
Addn'l Kitchen	
Bsm Gar	
Fin Bsm Area	
Fin Bsm Qual	
Nhbd	
MH Park	

### Building Photo



(<http://images.vgsi.com/photos2/DanburyCTPhotos//default.jpg>)

### Building Layout

 Building Layout

(<http://images.vgsi.com/photos2/DanburyCTPhotos//Sketches/10>)

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

### Extra Features

Extra Features	Legend
No Data for Extra Features	

### Land

#### Land Use

**Use Code** 200  
**Description** Commercial MDL-94

#### Land Line Valuation

**Size (Acres)** 12.93  
**Frontage** 0

**Zone** LCI4  
**Neighborhood** 5000  
**Alt Land Appr** No  
**Category**

**Depth** 0  
**Assessed Value** \$652,700  
**Appraised Value** \$932,500

**Outbuildings**

<b>Outbuildings</b>						<b><u>Legend</u></b>
<b>Code</b>	<b>Description</b>	<b>Sub Code</b>	<b>Sub Description</b>	<b>Size</b>	<b>Value</b>	<b>Bldg #</b>
CEL	Cell Tower			1 UNITS	\$300,000	1
FGR1	Garage-Avg			480 S.F.	\$7,000	1
SHD1	Shed-Avg			160 S.F.	\$1,300	1

**Valuation History**

<b>Appraisal</b>			
<b>Valuation Year</b>	<b>Improvements</b>	<b>Land</b>	<b>Total</b>
2017	\$750,000	\$932,500	\$1,682,500
2016	\$487,100	\$891,800	\$1,378,900
2015	\$487,100	\$891,800	\$1,378,900

<b>Assessment</b>			
<b>Valuation Year</b>	<b>Improvements</b>	<b>Land</b>	<b>Total</b>
2017	\$525,000	\$652,700	\$1,177,700
2016	\$341,000	\$624,200	\$965,200
2015	\$341,000	\$624,200	\$965,200



# Exhibit C

## **Construction Drawings**

**SCOPE OF WORK**

**ITEMS TO BE INSTALLED ON EXISTING TOWER:**

- REMOVE EXISTING ANTENNAS (TYP. OF 2 PER SECTOR, TOTAL OF 4)
- REMOVE EXISTING RADIO (TYP. OF 1 PER SECTOR, TOTAL OF 2)
  
- INSTALL T-MOBILE ANTENNA (APXVAARR24\_43-U-NA20) (TYP. OF 1 PER SECTOR, TOTAL OF 2).
- INSTALL T-MOBILE ANTENNA (AIR32 KRD901146-1\_B66A\_B2A) (TYP OF 1 PER SECTOR, TOTAL OF 2).
- INSTALL T-MOBILE RADIO (4449 B71+B12) (TYP. OF 1 PER SECTOR, TOTAL OF 2).
- INSTALL T-MOBILE COAX JUMPER CABLES (TYP. OF 4 PER SECTOR, TOTAL OF 8).
- INSTALL T-MOBILE FIBER JUMPER CABLES (TYP. OF 2 PER SECTOR, TOTAL OF 4.).
- INSTALL T-MOBILE 6x12 HCS HYBRID CABLE (TOTAL OF 2).

**ITEMS TO BE INSTALLED ON EXISTING EQUIPMENT PAD:**

- REMOVE XMU & DU
- REPLACE (1) DU WITH (1) BASE BAND 6630 FOR LTE
- INSTALL (1) ERICSSON BASEBAND 6630 FOR FUTURE 5G N600

**ITEMS TO REMAIN:**

- (2) ANTENNAS, (2) TMAS, (8) COAX CABLES, (1) HYBRID CABLE.

SITE ADDRESS: 36 SUGAR HOLLOW ROAD  
DANBURY, CT 06810

LATITUDE (NAD 83): N 41° 20' 59.00"

LONGITUDE (NAD 83): W 73° 28' 6.00"

COUNTY: FAIRFIELD

JURISDICTION: T.B.D.

LANDLORD: CROWN CASTLE INTERNATIONAL  
500 W. CUMMINGS PARK, STE 3600  
WOBURN, MA 01801

STRUCTURE TYPE: MONOPOLE

STRUCTURE HEIGHT: 105'

RAD CENTER: 105'

CURRENT USE: TELECOMMUNICATIONS FACILITY

PROPOSED USE: TELECOMMUNICATIONS FACILITY

**NOTE:**

ALL CONSTRUCTION ACTIVITIES ARE TO BE COMPLETED DIRECTLY THROUGH CROWN. CONTRACTOR MUST HAVE CONSTRUCTION PO AND NTP FROM CROWN DIRECT IN ORDER TO BEGIN. PRE-APPROVAL TO ENTER THE PROPERTY MUST BE OBTAINED. FOR ACCESS AUTHORIZATION, PLEASE CONTACT CROWN.



T-MOBILE NORTHEAST LLC  
103 MONARCH DRIVE  
LIVERPOOL, NY 13088



3 CORPORATE PARK DRIVE  
SUITE 101  
CLIFTON PARK, NY 12065



120 ST. JAMES AVENUE, 5TH FLOOR  
BOSTON, MA 02116



PROJECT NO: ERCC0004

DRAWN BY: JB

CHECKED BY: CAT

SUBMITTALS		
NO.	DATE	REVISIONS
2	07/15/19	REVISED PER COMMENTS
1	07/08/19	ISSUED FOR CONSTRUCTION
0	04/01/19	ISSUED FOR PERMITTING

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DANBURY/RT 7  
CT11092J  
DANBURY/RT 7  
823631  
36 SUGAR HOLLOW ROAD  
DANBURY, CT 06810

TITLE SHEET

T-1



**L600 PROJECT**

**SITE NUMBER: CT11092J**

SITE NAME: DANBURY/RT 7

CROWN SITE NAME: DANBURY/RT 7

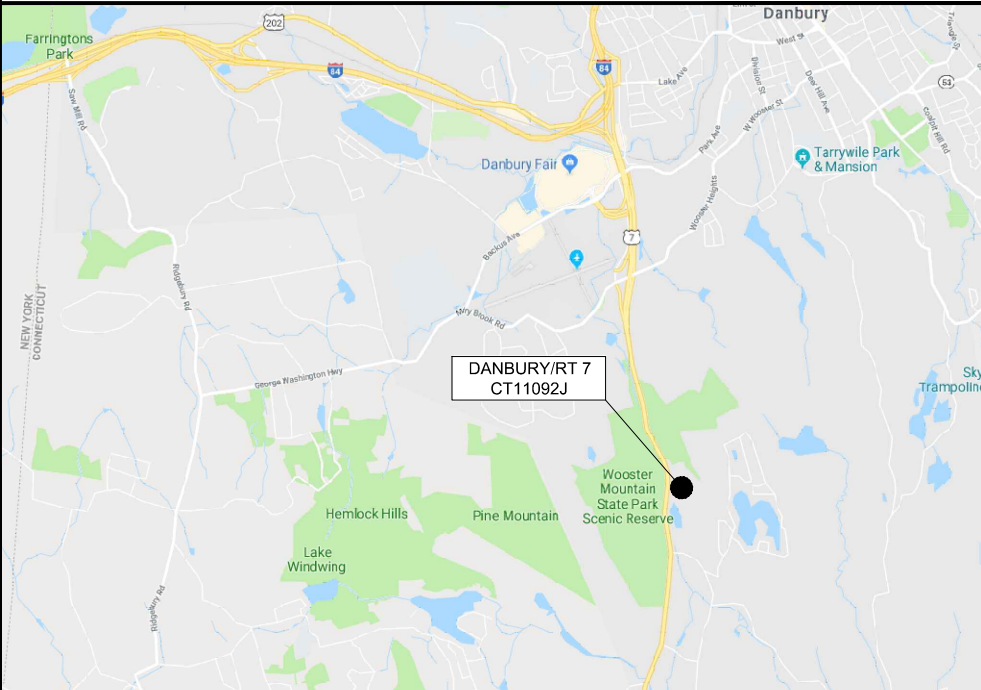
BU#: 823631

T-MOBILE RAN TEMPLATE: 67D92DB

**DRAWING INDEX**

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RF-2	RF EQUIPMENT SCHEMATIC
G-1	GROUNDING RISER DIAGRAM

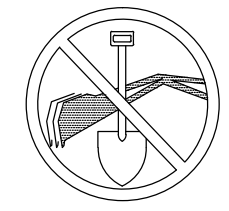
**VICINITY MAP**



DIRECTIONS MERGE ONTO I-87 S USE THE RIGHT LANE TO TAKE EXIT 1E-W TOWARD I-87 S/I-90 W KEEP RIGHT AT THE FORK TO CONTINUE ON EXIT 1W, FOLLOW SIGNS FOR I-87 S/I-90 W/NEW YORK/BUFFALO AND MERGE ONTO I-87 S/I-90 W TOLL ROAD. USE THE RIGHT 2 LANES TO TAKE EXIT 23 - 1 FOR I-87 S/NEW YORK TOLL ROAD MERGE ONTO I-87 S TOLL ROAD TAKE EXIT 17 TOWARD INTERSTATE 84/NY-300/NY-17K/SCRANTON/NEWBURGH PARTIAL TOLL ROAD KEEP RIGHT AT THE FORK, FOLLOW SIGNS FOR INTERSTATE 84 E/DANBURY AND MERGE ONTO I-84 E PARTIAL TOLL ROAD ENTERING CONNECTICUT TAKE EXIT 3 FOR US-7 S TOWARD NORWALK CONTINUE ONTO US-7 S DESTINATION WILL BE ON THE LEFT

**GENERAL NOTES**

1. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
2. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE T-MOBILE REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
3. HANDICAP REQUIREMENTS ARE NOT REQUIRED.
4. THIS FACILITY SHALL MEET OR EXCEED ALL FAA AND FCC REGULATORY REQUIREMENTS.
5. ALL NEW MATERIAL SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE. EQUIPMENT, ANTENNAS/RADIOS AND CABLES FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR.
6. NO COMMERCIAL SIGNAGE IS PROPOSED.



CALL CONNECTICUT ONE CALL  
(800) 922-4455  
CALL 3 WORKING DAYS  
BEFORE YOU DIG!



**CROWN CASTLE SITE ID #: 823631**  
**CROWN CASTLE SITE NAME: DANBURY/RT 7**

**ENGINEERING**

2018 CONNECTICUT STATE BUILDING CODE  
2018 AMENDMENT WITH 2015 INTERNATIONAL BUILDING CODE  
2009 ICC/ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES  
2015 INTERNATIONAL MECHANICAL CODE  
2015 INTERNATIONAL ENERGY CONSERVATION CODE  
2017 NATIONAL ELECTRICAL CODE (NFPA 70 2017)  
ANSI/TIA-222-G

**CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:**

- NOTICE TO PROCEED- NO WORK SHALL COMMENCE PRIOR TO CROWN CASTLE USA INC. WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN CASTLE USA INC. NOC AT 800-788-7011 & THE CROWN CASTLE USA INC. CONSTRUCTION MANAGER.
- "LOOK UP" - CROWN CASTLE USA INC. SAFETY CLIMB REQUIREMENT:  
THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
- PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ON-SITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
- ALL CONSTRUCTION MEANS AND METHODS, INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANS/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANS/ASSE A10.48 (LATEST EDITION) AND CROWN CASTLE USA INC. STANDARD CED-STD-10253, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANS/ITIA-322 (LATEST EDITION).
- ALL SITE WORK TO COMPLY WITH GAS-STD-10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE" AND LATEST VERSION OF ANS/ITIA-1019-A-2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
- IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY CROWN CASTLE USA INC. PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
- ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
- CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, TOWER OWNER, CROWN CASTLE USA INC., AND/OR LOCAL UTILITIES.
- THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
- CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
- CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

**GROUNDING NOTES:**

- ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
- THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
- THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
- METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
- EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.
- CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
- ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
- ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
- COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
- ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
- APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- BOND ALL METALLIC OBJECTS WITHIN 6 ft OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
- GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
- ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON-METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD-WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
- BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM. THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 20 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).

**GENERAL NOTES:**

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:  
CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION  
CARRIER: T-MOBILE  
TOWER OWNER: CROWN CASTLE USA INC.
- THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
- THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.
- NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
- SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CROWN CASTLE.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
- CONTRACTOR IS TO PERFORM A SITE INVESTIGATION AND IS TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF CROWN CASTLE USA INC.
- CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

**ELECTRICAL INSTALLATION NOTES:**

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
- CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
- WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
  - ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
  - ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 20,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.
- EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT IDS).
- PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
- ALL THE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING FOR IN CABLE TRAY SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
- ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANS/IEEE AND NEC.
- ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANS/IEEE AND THE NEC.
- WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECIMATE WIREWAY).
- SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
- CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER-ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE. MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
- EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3R (OR BETTER) FOR EXTERIOR LOCATIONS.
- METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
- NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
- THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR CROWN CASTLE USA INC. BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
- INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW " CT11092J".
- ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.



T-MOBILE NORTHEAST LLC  
103 MONARCH DRIVE  
LIVERPOOL, NY 13088



3 CORPORATE PARK DRIVE  
SUITE 101  
CLIFTON PARK, NY 12065



120 ST. JAMES AVENUE, 5TH FLOOR  
BOSTON, MA 02116



PROJECT NO: ERCC0004

DRAWN BY: JB

CHECKED BY: CAT

SUBMITTALS		
NO.	DATE	DESCRIPTION
2	07/15/19	REVISED PER COMMENTS
1	07/08/19	ISSUED FOR CONSTRUCTION
0	04/01/19	ISSUED FOR PERMITTING

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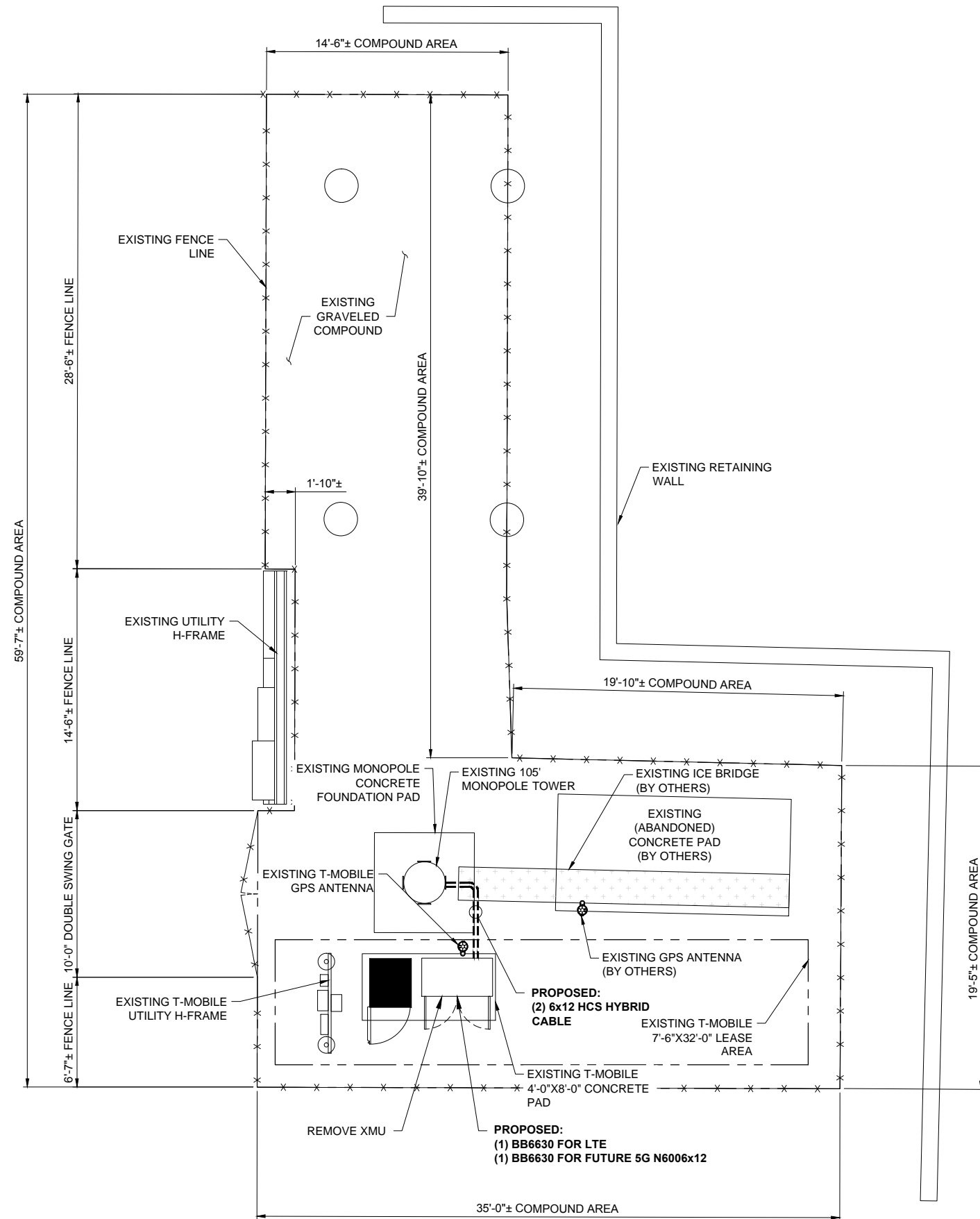
DANBURY/RT 7  
CT11092J  
DANBURY/RT 7  
823631  
36 SUGAR HOLLOW ROAD  
DANBURY, CT 06810

GENERAL NOTES I

GN-1

CONDUCTOR COLOR CODE		
SYSTEM	CONDUCTOR	COLOR
120/240V, 1 Ø	A PHASE	BLACK
	B PHASE	RED
	NEUTRAL	WHITE
	GROUND	GREEN
120/208V, 3 Ø	A PHASE	BLACK
	B PHASE	RED
	C PHASE	BLUE
	NEUTRAL	WHITE
277/480V, 3 Ø	GROUND	GREEN
	A PHASE	BROWN
	B PHASE	ORANGE OR PURPLE
	C PHASE	YELLOW
	NEUTRAL	GREY
DC VOLTAGE	GROUND	GREEN
	POS (+)	RED**
	NEG (-)	BLACK**

\* SEE NEC 210.5(C)(1) AND (2)  
\*\* POLARITY MARKED AT TERMINATION



**NOTES:**

1. PLAN BASED ON DRAWINGS ISSUED BY CROWN CASTLE ON 07/10/15. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND LOCATION/ORIENTATION OF EXISTING EQUIPMENT.



T-MOBILE NORTHEAST LLC  
103 MONARCH DRIVE  
LIVERPOOL, NY 13088



3 CORPORATE PARK DRIVE  
SUITE 101  
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120 ST. JAMES AVENUE, 5TH FLOOR  
BOSTON, MA 02116



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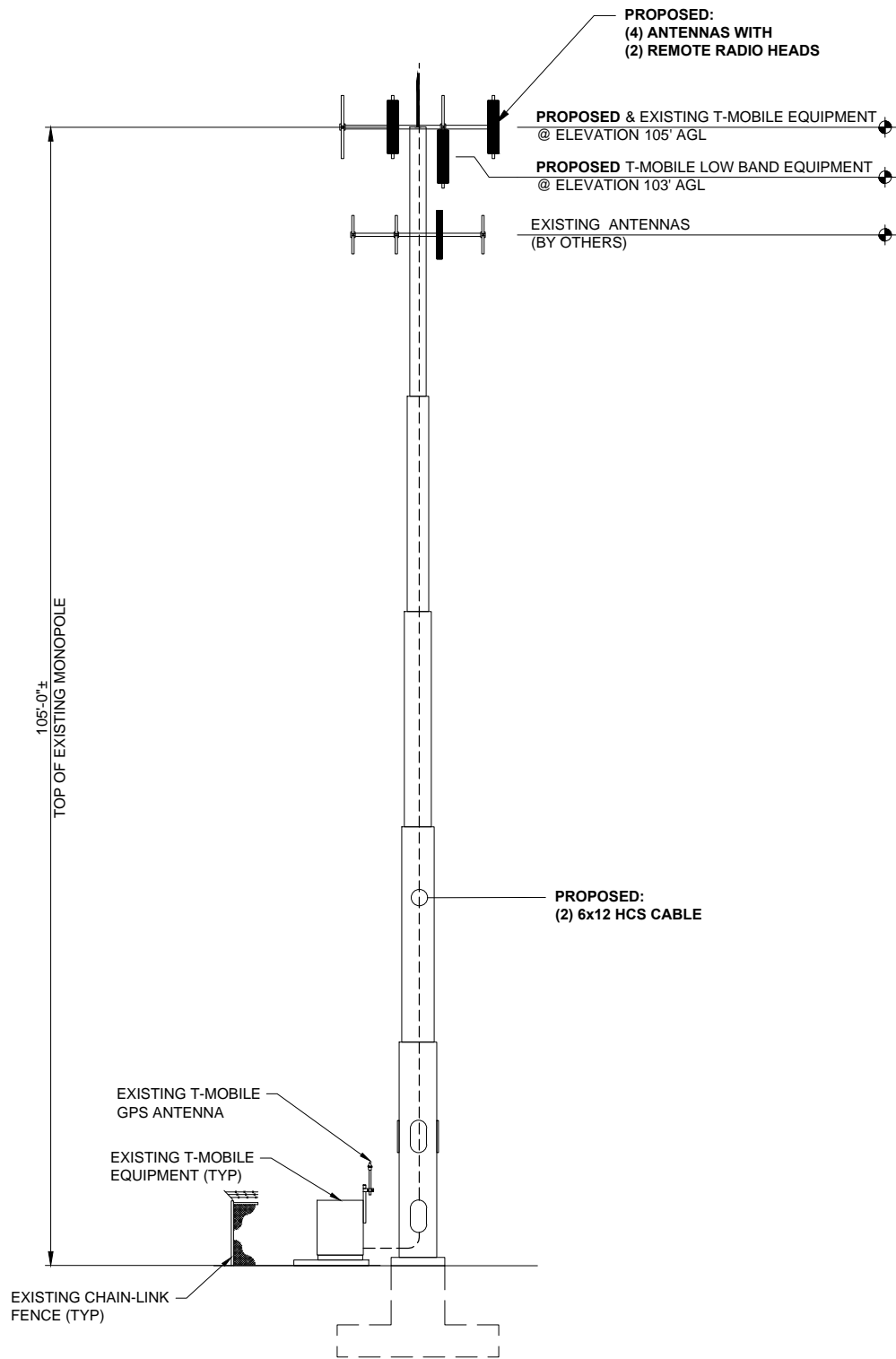
DANBURY/RT 7  
CT11092J  
DANBURY/RT 7  
823631  
36 SUGAR HOLLOW ROAD  
DANBURY, CT 06810

SITE PLAN

C-1

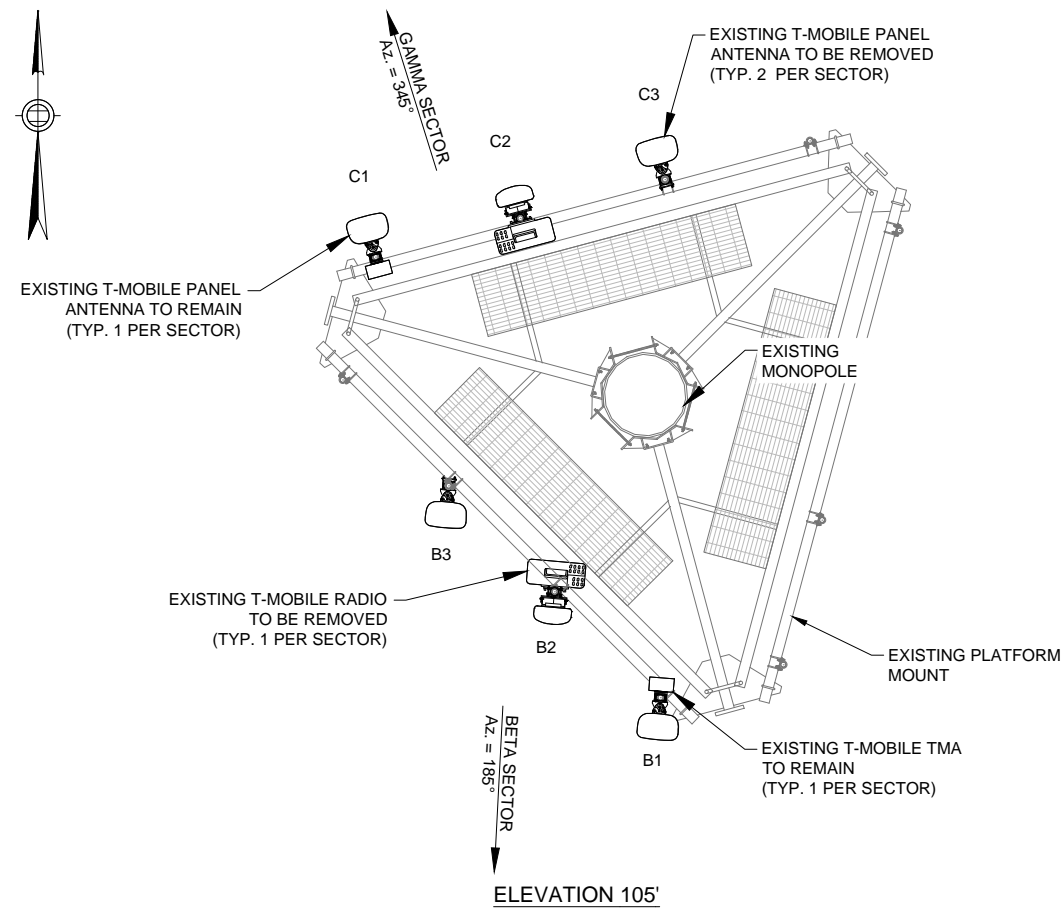
**NOTES:**

1. CONTRACTOR SHALL REFER TO THE STRUCTURAL ANALYSIS REPORT; SITE NUMBER: CT11092J; SITE NAME: DANBURY/RT 7; CROWN BU NUMBER: 823631; CROWN SITE NAME: DANBURY/RT 7; CROWN ORDER NUMBER: 479807; ISSUED BY TECTONIC ENGINEERING & SURVEYING CONSULTANTS P.C. DATED ON 05/08/19. PER THIS ANALYSIS NO MODIFICATIONS ARE REQUIRED. THE CONTRACTOR SHALL VERIFY ALL EXISTING MEMBERS AND HARDWARE ARE INSTALLED PROPERLY AS DESCRIBED IN THIS REPORT.



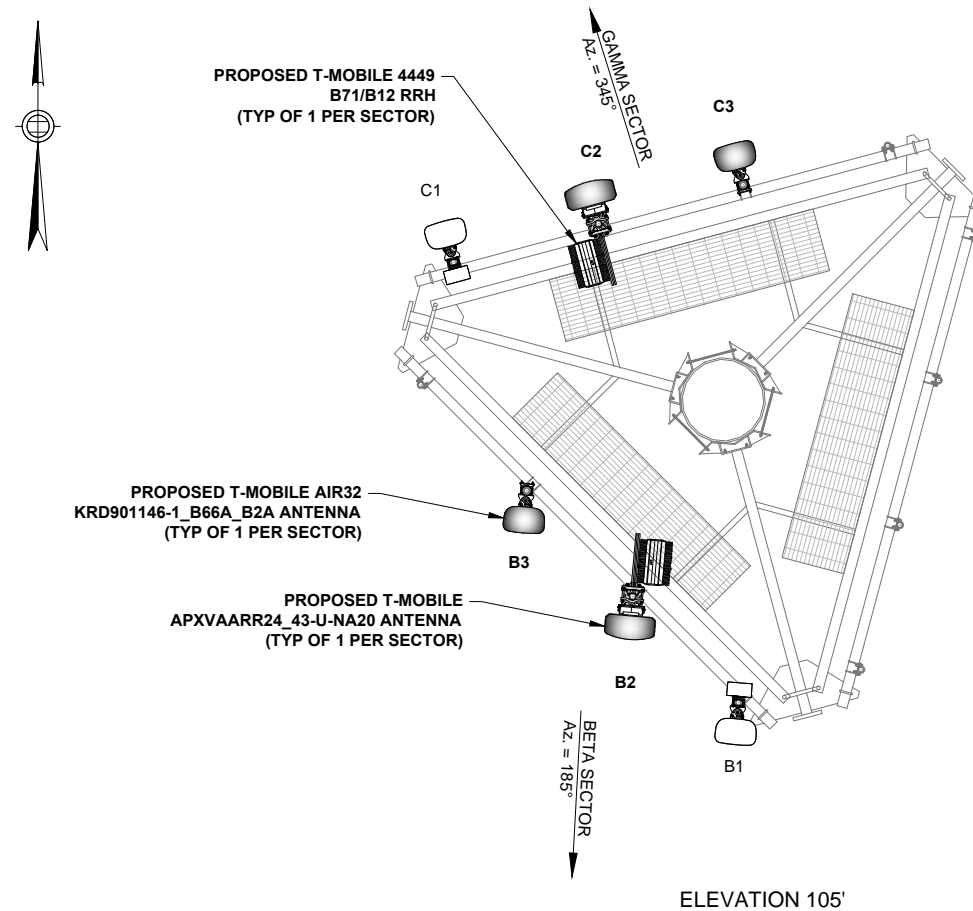
**1** TOWER ELEVATION

SCALE: 1/8" = 1'-0"



**2** EXISTING ANTENNA LAYOUT

SCALE: N.T.S.



**3** PROPOSED ANTENNA LAYOUT

SCALE: N.T.S.

**NOTES:**

1. CONTRACTOR SHALL REFER TO THE MOUNT ANALYSIS REPORT; SITE NUMBER: CT11092J; SITE NAME: DANBURY/RT 7; CROWN BU NUMBER: 823631; CROWN SITE NAME: DANBURY/RT 7; CROWN ORDER NUMBER: 479807; ISSUED BY ENGINEERED TOWER SOLUTIONS, PLLC., DATED ON 04/29/2019. PER THIS ANALYSIS NO MODIFICATIONS ARE REQUIRED FOR THE PROPOSED EQUIPMENT. CONTRACTOR SHALL CONFIRM ALL AT&T EXISTING AND PROPOSED EQUIPMENT ARE INSTALLED IN ACCORDANCE WITH THIS REPORT.
2. CONTRACTOR TO VERIFY FINAL RF CONFIGURATION AND NOTIFY CARRIER AND ENGINEER W/ ANY DISCREPANCIES PRIOR TO THE INSTALLATION.
3. CONTRACTOR SHALL NOT EXCEED MOUNTING MORE THAN (2) RRHS PER ANTENNA MOUNTING PIPE - RELOCATE TO AN ADJACENT ANTENNA MOUNTING PIPE AS NEEDED.



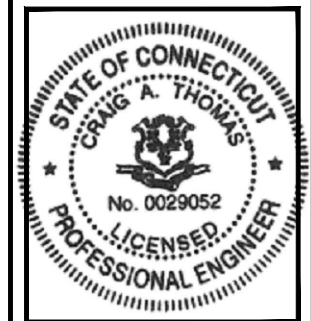
T-MOBILE NORTHEAST LLC  
103 MONARCH DRIVE  
LIVERPOOL, NY 13088



3 CORPORATE PARK DRIVE  
SUITE 101  
CLIFTON PARK, NY 12065



120 ST. JAMES AVENUE, 5TH FLOOR  
BOSTON, MA 02116



PROJECT NO: ERCC0004

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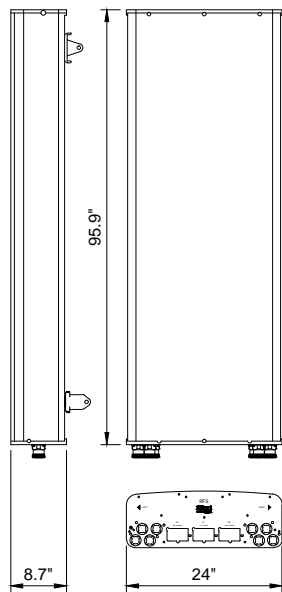
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DANBURY/RT 7  
CT11092J  
DANBURY/RT 7  
823631  
36 SUGAR HOLLOW ROAD  
DANBURY, CT 06810

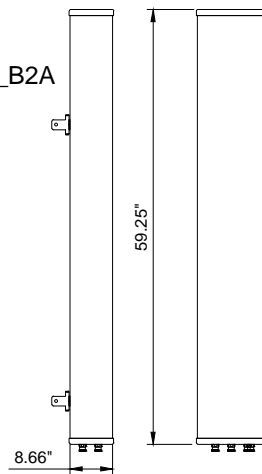
PROPOSED TOWER  
ELEVATION &  
ANTENNA LAYOUT  
PLAN

**S-1**

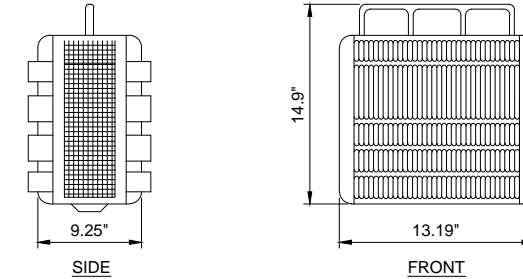
MANUFACTURER: RFS  
 MODEL NO.: APXVAARR24\_43-U-NA20  
 COLOR: LIGHT GRAY  
 DIMENSIONS (LxWxD): 95.9" x 24" x 8.7"  
 2436mm x 609mm x 222mm  
 WEIGHT (lbs): 58  
 CONNECTOR: 8 x 4.3-10 FEMALE AT BOTTOM +  
 6 AISG CONNECTORS (3 MALE/3 FEMALE)  
 SURVIVAL/RATED WIND VELOCITY (KM/H): 241 (150)



MANUFACTURER: ERICSSON  
 MODEL NO.: AIR32 KRD901146-1\_B66A\_B2A  
 COLOR: LIGHT GRAY  
 DIMENSIONS (LxWxD): 59.25" x 12.87" x 8.66"  
 1505mm x 327mm x 220mm  
 WEIGHT (lbs): 153  
 69.4kg  
 CONNECTOR: 7/16 IEC-169-4 INSERT TYPE  
 CABLE CONNECTOR: 7/16 INSERT-TYPE ON BOTH ENDS  
 MAX. WIND LOAD: @ 42m/s 900 N



MANUFACTURER: ERICSSON  
 MODEL NO.: 4449 B71+B12  
 COLOR: LIGHT GRAY  
 DIMENSIONS (LxWxD): 14.9" x 13.19" x 9.25"  
 378mm x 335mm x 235mm  
 WEIGHT (lbs): 74



**1 ANTENNA SPECIFICATIONS**

SCALE: N.T.S.

**2 CUE DEE PART # 5335/5336 ERICSSON RRU MOUNTING KIT**

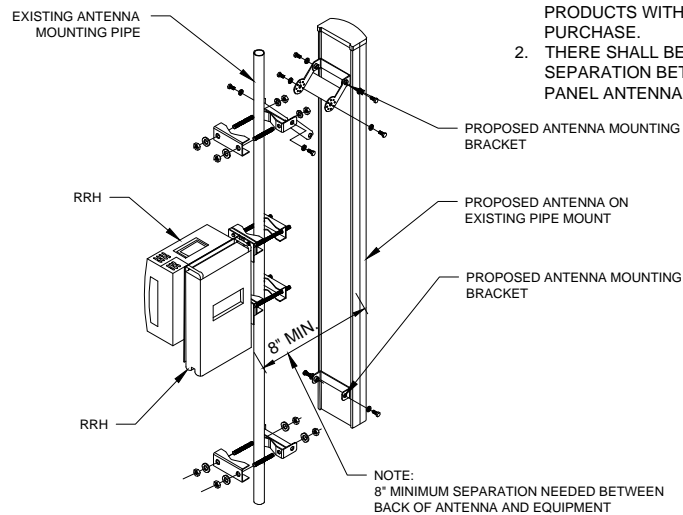
SCALE: N.T.S.

**3 RRUS SPECIFICATIONS**

SCALE: N.T.S.

**NOTES:**

1. MOUNTING OPTIONS ARE INCLUDED PRODUCTS WITH ANTENNA PURCHASE.
2. THERE SHALL BE A MINIMUM 3'-0" SEPARATION BETWEEN ALL LTE PANEL ANTENNAS.

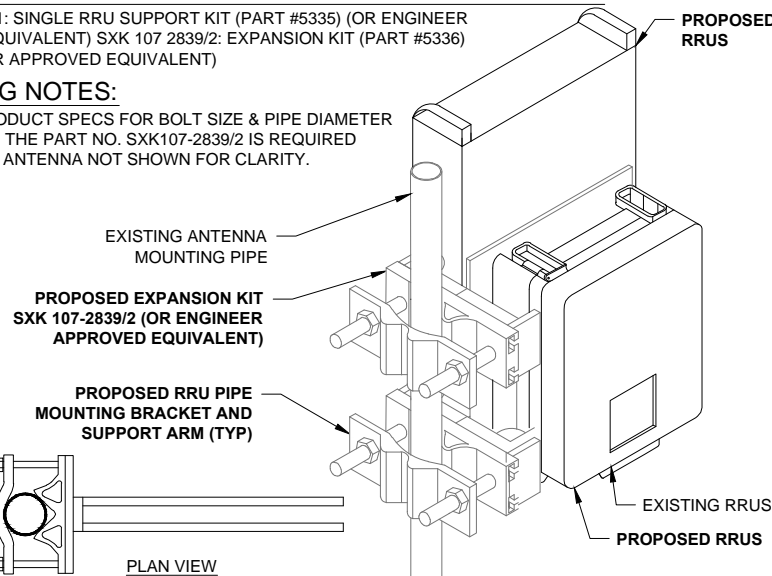


**CUE DEE PART # 5335/5336 ERICSSON RRU MOUNTING KIT**

SXK 107 2839/1: SINGLE RRU SUPPORT KIT (PART #5335) (OR ENGINEER APPROVED EQUIVALENT) SXK 107 2839/2: EXPANSION KIT (PART #5336) (OR ENGINEER APPROVED EQUIVALENT)

**MOUNTING NOTES:**

REFER TO PRODUCT SPECS FOR BOLT SIZE & PIPE DIAMETER TOLERANCES. THE PART NO. SXK107-2839/2 IS REQUIRED FOR (2) RRUS. ANTENNA NOT SHOWN FOR CLARITY.



**4 ANTENNA MOUNTING DETAIL**

SCALE: N.T.S.

**5 RRU MOUNTING DETAIL**

SCALE: N.T.S.

**6 DETAIL NOT USED**

SCALE: N.T.S.

**7 DETAIL NOT USED**

SCALE: N.T.S.

**8 DETAIL NOT USED**

SCALE: N.T.S.

**9 DETAIL NOT USED**

SCALE: N.T.S.

**T-Mobile**  
 T-MOBILE NORTHEAST LLC  
 103 MONARCH DRIVE  
 LIVERPOOL, NY 13088

**CROWN CASTLE**  
 3 CORPORATE PARK DRIVE  
 SUITE 101  
 CLIFTON PARK, NY 12065

**JACOBS**  
 JACOBS ENGINEERING GROUP, INC.  
 120 ST. JAMES AVENUE, 5TH FLOOR  
 BOSTON, MA 02116

STATE OF CONNECTICUT  
 CRAIG A. THOMAS  
 No. 0029052  
 LICENSED PROFESSIONAL ENGINEER

PROJECT NO: ERCC0004  
 DRAWN BY: JB  
 CHECKED BY: CAT

SUBMITTALS		
2	07/15/19	REVISED PER COMMENTS
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DANBURY/RT 7  
 CT11092J  
 DANBURY/RT 7  
 823631  
 36 SUGAR HOLLOW ROAD  
 DANBURY, CT 06810

EQUIPMENT DETAILS

**S-2**

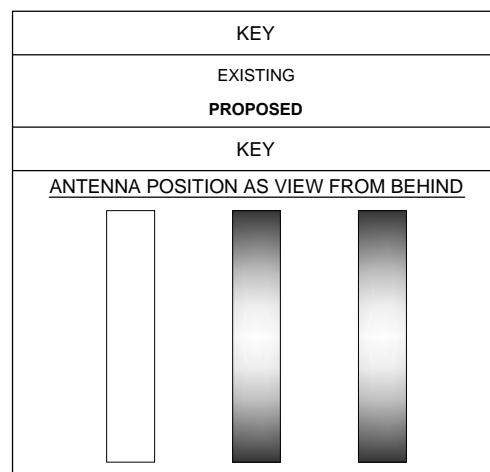
67D92DB - TOWER TOP EQUIPMENT SCHEDULE (RE: CT11092J_L600_6.1)													
ANTENNA NUMBER (FROM L TO R)	ANTENNA MODEL	ANTENNA AZIMUTH	MECH. TILT	ELEC. TILT	ANTENNA CENTERLINE FROM GROUND	TMA/RRUS MODEL	TMA/RRUS QUANTITY	COAX/HYBRID CABLE			JUMPERS		
								SIZE/TYPE	QUANTITY	LENGTH	TYPE	QTY	LENGTH
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
B1	AIR21 KRC118023-1_B2A_B4P	185°	0°	2°	105'	TWIN STYLE 1B-AWS TMA	1	7/8" COAX 1-1/4" COAX 9X18 HCS FIBER	2 2 1	115'	FIBER COAX	2 2	15' 15'
B2	APXVAARR24_43-U-NA20	185°	0°	2°	103'	RADIO 4449 B71+B12	1	6x12 HCS	1	115'	FIBER COAX	1 4	15' 15'
B3	AIR32 KRD901146-1_B66A_B2A	185°	0°	2°	105'	-	-	-	-	-	FIBER	2	15'
C1	AIR21 KRC118023-1_B2A_B4P	345°	0°	2°	105'	TWIN STYLE 1B-AWS TMA	1	7/8" COAX 1-1/4" COAX	2 2	115'	FIBER	2	15'
C2	APXVAARR24_43-U-NA20	345°	0°	2°	103'	RADIO 4449 B71+B12	1	6x12 HCS	1	-	FIBER COAX	1 4	15' 15'
C3	AIR32 KRD901146-1_B66A_B2A	345°	0°	2°	105'	-	-	-	-	-	FIBER	2	15'

NOTES:

- EQUIPMENT LISTED IN **BOLD**, DELINEATES THAT THE EQUIPMENT IS PROPOSED
- \* DENOTES THAT EQUIPMENT IS TO BE GROUND MOUNTED

**1** EQUIPMENT INFORMATION CHART

SCALE: NONE



EQUIPMENT NOTES:

- THE HYBRID CABLE LENGTH SHOW IS ONLY AN ESTIMATE AND SHOULD NOT BE USED FOR ORDERING MATERIALS. CONFIRM THE REQUIRED HYBRID CABLE LENGTH WITH T-MOBILE PRIOR TO ORDERING OR INSTALLATION.
- THE CONTRACTOR SHALL TEST THE OPTICAL FIBER AFTER INSTALLATION IN ACCORDANCE WITH T-MOBILE STANDARDS AND SUPPLY THE RESULTS TO T-MOBILE.
- THE CONTRACTOR SHALL CONFIRM THE TOWER TOP EQUIPMENT LIST ABOVE WITH THE FINAL T-MOBILE RFDS PRIOR TO INSTALLATION.
- ALL EXISTING AND PROPOSED ANTENNA CABLES SHALL BE COLOR CODED PER T-MOBILE STANDARDS.
- REFER TO EQUIPMENT INSTALLATION STANDARDS FOR ADDITIONAL INFORMATION.
- REFER TO EQUIPMENT MANUFACTURER'S SPECIFICATION SHEETS FOR ADDITIONAL INFORMATION NOT LISTED ABOVE.

**2** ANTENNA KEY

SCALE: NONE

**3** ANTENNA & CABLE SCHEDULE

SCALE: NONE

67D92DB - TOWER LOADING SUMMARY				
EQUIPMENT TYPE	EXISTING QUANTITY	QUANTITY REMOVED	QUANTITY ADDED	TOTAL QUANTITY
PANEL ANTENNA	6	4	4	6
COAX CABLE	8	0	0	8
HYBRID CABLE	1	0	2	3
FIBER JUMPER	12	0	4	16
COAX JUMPER	0	0	8	8
TMA	2	0	0	2
RADIO	2	2	2	2



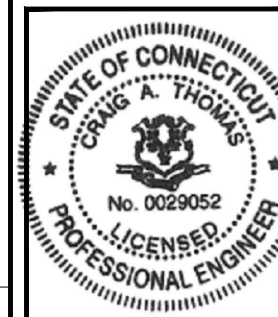
T-MOBILE NORTHEAST LLC  
103 MONARCH DRIVE  
LIVERPOOL, NY 13088



3 CORPORATE PARK DRIVE  
SUITE 101  
CLIFTON PARK, NY 12065



120 ST. JAMES AVENUE, 5TH FLOOR  
BOSTON, MA 02116



PROJECT NO: ERCC0004

DRAWN BY: JB

CHECKED BY: CAT

SUBMITTALS

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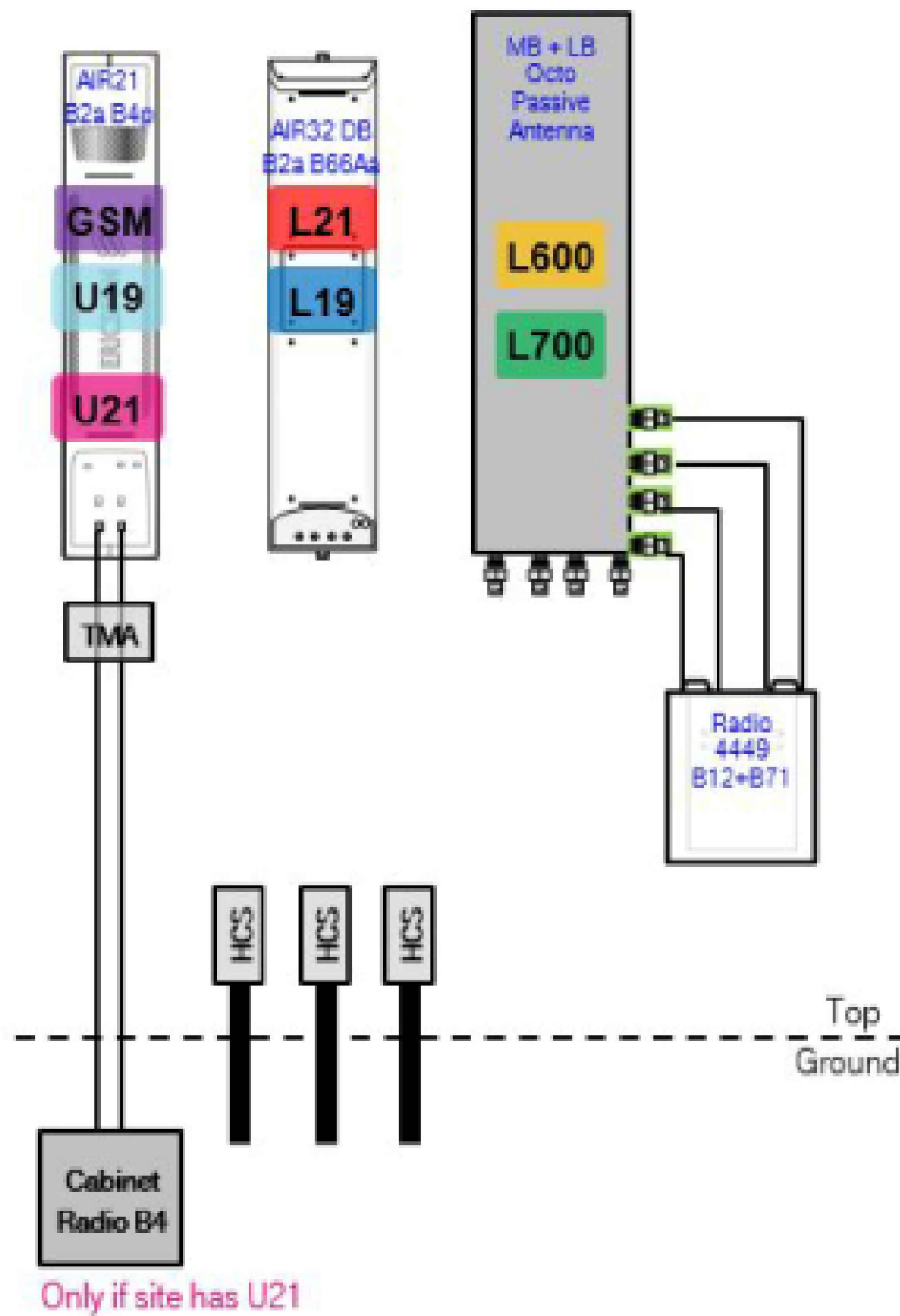
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DANBURY/RT 7  
CT11092J  
DANBURY/RT 7  
823631  
36 SUGAR HOLLOW ROAD  
DANBURY, CT 06810

ANTENNA  
INFORMATION CHART

RF-1

SITE CONFIGURATION: 67D92DB



T-MOBILE NORTHEAST LLC  
103 MONARCH DRIVE  
LIVERPOOL, NY 13088



3 CORPORATE PARK DRIVE  
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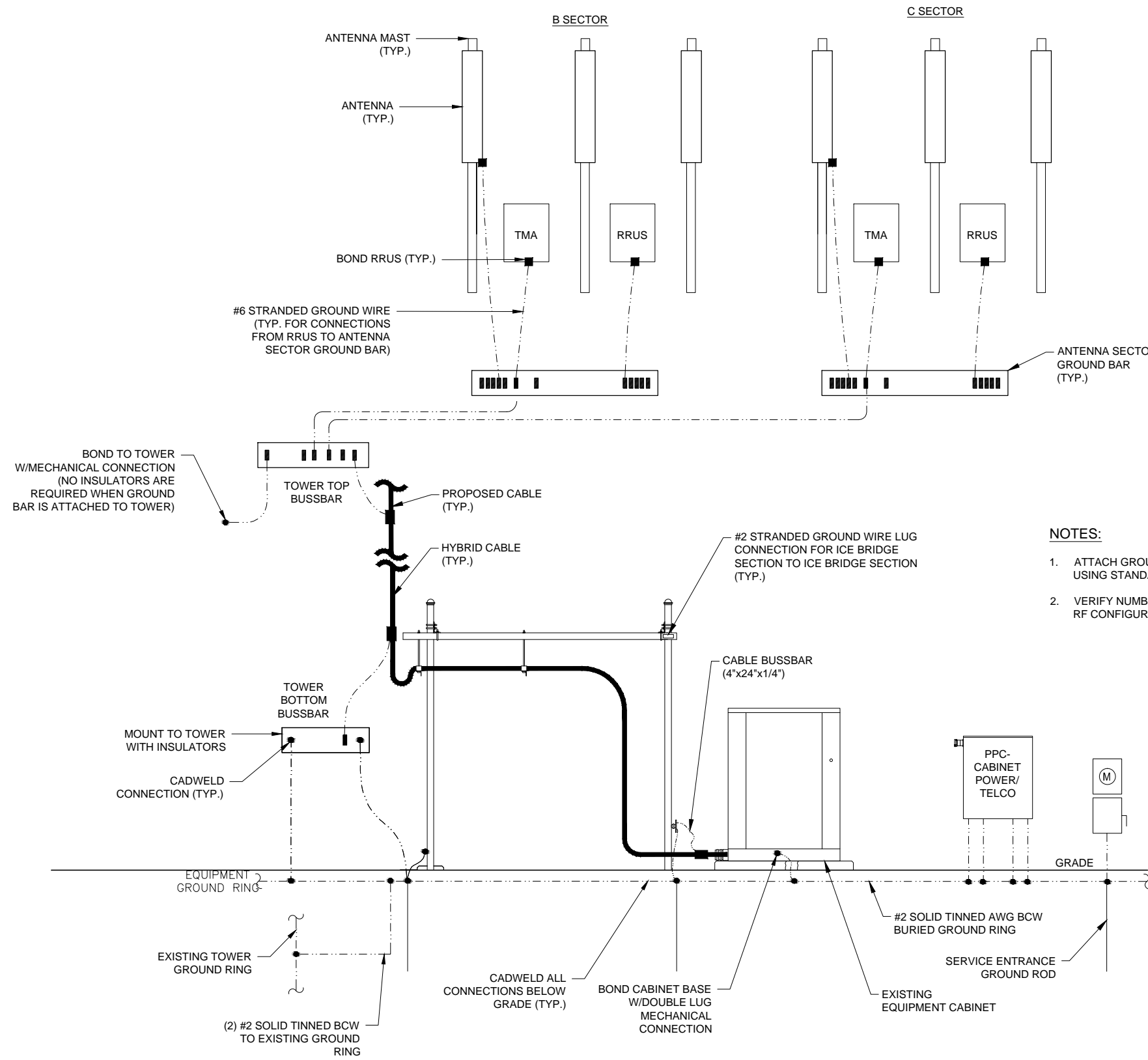
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DANBURY/RT 7  
CT11092J  
DANBURY/RT 7  
823631  
36 SUGAR HOLLOW ROAD  
DANBURY, CT 06810

RF EQUIPMENT SCHEMATIC

RF-2





- NOTES:**
1. ATTACH GROUND BAR DIRECTLY TO THE TOWER USING STANDARD ADAPTER.
  2. VERIFY NUMBER OF CABLES/TMAS PER T-MOBILE RF CONFIGURATION.

- GROUNDING NOTES:**
1. BELOW GROUND ALL GROUNDING CONDUCTORS TO BE #2 AWG SOLID TINNED BARE COPPER WIRE (BCW) U.O.N.
  2. ABOVE GROUND ALL GROUNDING CONDUCTORS TO BE #2 AWG STRANDED INSULATED COPPER WIRE U.O.N.
  3. PROVIDE BONDING AND GROUNDING CONDUCTORS WITH GREEN TYPE THWN INSULATION, U.O.N.
  4. LEAVE 4' EXCESS GROUND WIRE COILED UP ABOVE GRADE. SEAL/WEATHERPROOF CONDUIT.

**T-Mobile**  
 T-MOBILE NORTHEAST LLC  
 103 MONARCH DRIVE  
 LIVERPOOL, NY 13088

**CROWN CASTLE**  
 3 CORPORATE PARK DRIVE  
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 JACOBS ENGINEERING GROUP, INC.  
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DANBURY/RT 7  
 CT11092J  
 DANBURY/RT 7  
 823631  
 36 SUGAR HOLLOW ROAD  
 DANBURY, CT 06810

GROUNDING RISER  
 DIAGRAM

**G-1**

# Exhibit D

## **Structural Analysis Report**

# Tectonic

PRACTICAL SOLUTIONS. EXCEPTIONAL SERVICE.

Tectonic Engineering & Surveying Consultants P.C.  
1279 Route 300  
Newburgh, NY 12550  
(845) 567 - 6656

Date: **May 08, 2019**

Darcy Tarr  
Crown Castle  
3530 Toringdon Way Suite 300  
Charlotte, NC 28277

**Subject:** **Structural Analysis Report**

**Carrier Designation:** **T-Mobile Co-Locate**  
**Carrier Site Number:** CT11092J  
**Carrier Site Name:** Danbury/Rt 7

**Crown Castle Designation:** **Crown Castle BU Number:** 823631  
**Crown Castle Site Name:** Danbury/Rt 7  
**Crown Castle JDE Job Number:** 559235  
**Crown Castle Work Order Number:** 1737484  
**Crown Castle Order Number:** 479807 Rev. 2

**Engineering Firm Designation:** **Tectonic Project Number:** 9800.823631, Phase 2

**Site Data:** **36 Sugar Hollow Road, Danbury, Fairfield County, CT**  
**Latitude 41° 20' 59", Longitude -73° 28' 6"**  
**105 Foot - Monopole Tower**

Dear Darcy Tarr,

Tectonic Engineering & Surveying Consultants P.C. (Tectonic) is pleased to submit this "**Structural Analysis Report**" to determine the structural integrity of the above mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC5: Proposed Equipment Configuration

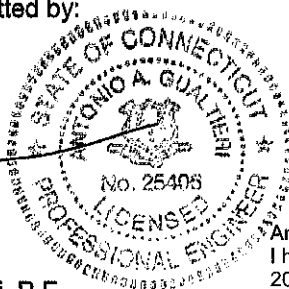
**Sufficient Capacity - 36.5%**

This analysis utilizes an ultimate 3-second gust wind speed of 120 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2- Analysis Criteria.

Structural analysis prepared by: Mahesh Chillarge / KZ

Respectfully submitted by:

**Tectonic**



Antonio A. Gualtieri, P.E.  
Executive Vice President

Antonio A. Gualtieri  
I have reviewed this document  
2019-05-08 14:02-04:00

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**1) INTRODUCTION**

This tower is a 105 ft Monopole tower designed by PiRod Inc.

**2) ANALYSIS CRITERIA**

**TIA-222 Revision:** TIA-222-H  
**Risk Category:** II  
**Wind Speed:** 120 mph  
**Exposure Category:** B  
**Topographic Factor:** 1  
**Ice Thickness:** 1.5 in  
**Wind Speed with Ice:** 50 mph  
**Service Wind Speed:** 60 mph

**Table 1 - Proposed Equipment Configuration**

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
105.0	105.0	1	crown mounts	LP 405-1	4 2 1 4	7/8 1-3/8 1-5/8 1-1/4
		2	ericsson	AIR 32 B2A/B66AA w/ Mount Pipe		
		2	ericsson	ERICSSON AIR 21 B2A B4P w/ Mount Pipe		
		2	ericsson	KRY 112 144/1		
	103.0	2	ericsson	RADIO 4449 B12/B71		
		2	rfs celwave	APXVAARR24_43-U-NA20 w/ Mount Pipe		

**Table 2 - Other Considered Equipment**

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
95.0	95.0	1	crown mounts	LP 304-1	6	1-5/8
		3	kathrein	800 10504 w/ Mount Pipe		
		1	maxrad	GPS-TMG-26NMS		

**3) ANALYSIS PROCEDURE**

**Table 3 - Documents Provided**

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	French & Parrello Associates, P.A.	3528937	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	PiRod, Inc.	3845210	CCISITES
4-TOWER MANUFACTURER DRAWINGS	PiRod, Inc.	3528938	CCISITES
4-MOUNT ANALYSIS REPORT	Engineered Tower Solutions, PLLC	8375754	CCISITES

### 3.1) Analysis Method

tnxTower (version 8.0.5.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

### 3.2) Assumptions

- 1) Tower and structures were built and maintained in accordance with the manufacturer's specifications.
- 2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
- 3) Tectonic did not analyze the antenna supporting mounts as a part of this analysis report and assumed they are structurally sufficient. It is the carrier's responsibility to ensure structural compliance of their existing and/or proposed antenna supporting mounts.
- 4) As provided by Crown Castle, effective projected area (EPA) for certain antennas are computed using Computational Fluid Dynamics.
- 5) Based on discussions with Crown Engineering it has been assumed that the monopole manufacturer has designed the base plate and flange plates to adequately develop the full capacity of the unreinforced shaft section using unpublished and/or proprietary methodologies.

This analysis may be affected if any assumptions are not valid or have been made in error. Tectonic should be notified to determine the effect on the structural integrity of the tower.

## 4) ANALYSIS RESULTS

**Table 4 - Section Capacity (Summary)**

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	105 - 92.5	Pole	P18x3/8	1	-6.45	824.12	12.1	Pass
L2	92.5 - 80	Pole	P18x3/8	2	-7.75	824.12	28.0	Pass
L3	80 - 60	Pole	P24x3/8	3	-10.43	1104.67	33.5	Pass
L4	60 - 40	Pole	P30x3/8	4	-13.69	1376.61	35.0	Pass
L5	40 - 20	Pole	P36x3/8	5	-17.53	1564.60	35.3	Pass
L6	20 - 0	Pole	P42x3/8	6	-21.95	1752.31	35.2	Pass
							Summary	
						Pole (L5)	35.3	Pass
						Rating* =	35.3	Pass

\* Rating per TIA-222-H Section 15.5

**Table 5 - Tower Component Stresses vs. Capacity – LC5**

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1,3	Anchor Rods	0	35.5	Pass
1,2,3	Base Plate	0	35.5	Pass
1,3	Base Foundation	0	36.5	Pass
1,3	Base Foundation Soil Interaction	0	32.0	Pass
1,3	Flange Bolt	20	35.7	Pass
1,2,3	Flange Plate	20	35.7	Pass
1,3	Flange Bolt	40	34.8	Pass
1,2,3	Flange Plate	40	35.0	Pass
1,3	Flange Bolt	60	32.1	Pass
1,2,3	Flange Plate	60	33.5	Pass
1,3	Flange Bolt	80	25.1	Pass
1,2,3	Flange Plate	80	28.0	Pass

<b>Structure Rating (max from all components) =</b>	<b>36.5%</b>
---	--------------

Notes:

- 1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.
- 2) Base and flange plates have been adequately designed to resist the full moment capacity of the respective unreinforced shaft or splice bolts.
- 3) Rating per TIA-222-H Section 15.5

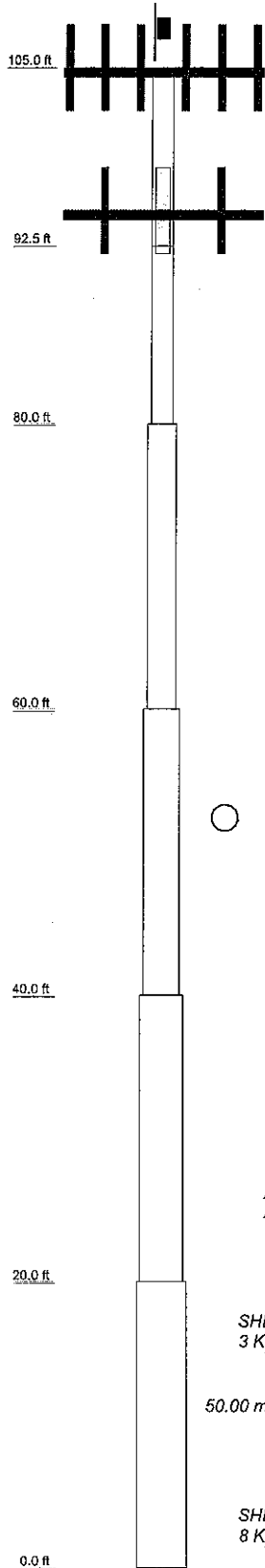
**4.1) Recommendations**

The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

**APPENDIX A**  
**TNXTOWER OUTPUT**



Section	1					
Size	P18x3/8					
Length (ft)	12.5000					
Grade	A53-B-42					
Weight (K)	0.9					
Section	2					
Size	P18x3/8					
Length (ft)	12.5000					
Grade	A53-B-42					
Weight (K)	0.9					
Section	3					
Size	P24x3/8					
Length (ft)	20.0000					
Grade	A53-B-42					
Weight (K)	1.9					
Section	4					
Size	P30x3/8					
Length (ft)	20.0000					
Grade	A53-B-42					
Weight (K)	2.4					
Section	5					
Size	P36x3/8					
Length (ft)	20.0000					
Grade	A53-B-42					
Weight (K)	2.9					
Section	6					
Size	P42x3/8					
Length (ft)	20.0000					
Grade	A53-B-42					
Weight (K)	3.3					
Section	7					
Size						
Length (ft)						
Grade	A53-B-42					
Weight (K)	12.2					



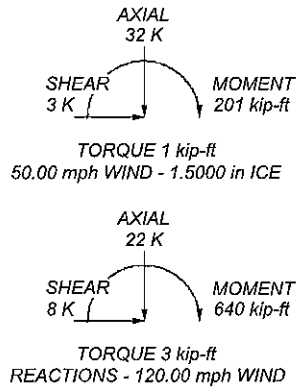
**MATERIAL STRENGTH**

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-42	42 ksi	63 ksi			

**TOWER DESIGN NOTES**

1. Tower is located in Fairfield County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 120.00 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50.00 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60.00 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.0000 ft
8. TIA-222-H Annex S
9. TOWER RATING: 35.3%

ALL REACTIONS  
ARE FACTORED



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Job: <b>9800.823631, Phase 2</b>	Project: <b>BU 823631- Danbury/Rt 7</b>	
Client: <b>Crown Castle</b>	Drawn by: <b>Neha Lomate</b>	App'd:
Code: <b>TIA-222-H</b>	Date: <b>05/07/19</b>	Scale: <b>NT</b>
Path:	Dwg No. <b>E</b>	

## Tower Input Data

The tower is a monopole.  
 This tower is designed using the TIA-222-H standard.  
 The following design criteria apply:

- 1) Tower is located in Fairfield County, Connecticut.
- 2) Tower base elevation above sea level: 496.0000 ft.
- 3) Basic wind speed of 120.00 mph.
- 4) Risk Category II.
- 5) Exposure Category B.
- 6) Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- 7) Topographic Category: 1.
- 8) Crest Height: 0.0000 ft.
- 9) Nominal ice thickness of 1.5000 in.
- 10) Ice thickness is considered to increase with height.
- 11) Ice density of 56.00 pcf.
- 12) A wind speed of 50.00 mph is used in combination with ice.
- 13) Temperature drop of 50.00 °F.
- 14) Deflections calculated using a wind speed of 60.00 mph.
- 15) TIA-222-H Annex S
- 16) A non-linear (P-delta) analysis was used.
- 17) Pressures are calculated at each section.
- 18) Stress ratio used in pole design is 1.05.
- 19) Tower analysis based on target reliabilities in accordance with Annex S.
- 20) Load Modification Factors used:  $K_{es}(F_w) = 0.95$ ,  $K_{es}(t_i) = 0.85$ .
- 21) Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

## Options

- |  |   |   |
|--|---|---|
| Consider Moments - Legs<br>Consider Moments - Horizontals<br>Consider Moments - Diagonals<br>Use Moment Magnification<br>Use Code Stress Ratios<br>Use Code Safety Factors - Guys<br>Escalate Ice<br>Always Use Max Kz<br>Use Special Wind Profile<br><br>Include Bolts In Member Capacity<br><br>Leg Bolts Are At Top Of Section<br>Secondary Horizontal Braces Leg<br>Use Diamond Inner Bracing (4 Sided)<br>SR Members Have Cut Ends<br>SR Members Are Concentric | Distribute Leg Loads As Uniform<br>Assume Legs Pinned<br>✓ Assume Rigid Index Plate<br>✓ Use Clear Spans For Wind Area<br>Use Clear Spans For KL/r<br>Retension Guys To Initial Tension<br>✓ Bypass Mast Stability Checks<br>✓ Use Azimuth Dish Coefficients<br>✓ Project Wind Area of Appurt.<br><br>Autocalc Torque Arm Areas<br><br>Add IBC .6D+W Combination<br>✓ Sort Capacity Reports By Component<br>Triangulate Diamond Inner Bracing<br>Treat Feed Line Bundles As Cylinder<br>Ignore KL/ry For 60 Deg. Angle Legs | Use ASCE 10 X-Brace Ly Rules<br>Calculate Redundant Bracing Forces<br>Ignore Redundant Members in FEA<br>SR Leg Bolts Resist Compression<br>All Leg Panels Have Same Allowable<br>Offset Girt At Foundation<br>✓ Consider Feed Line Torque<br>Include Angle Block Shear Check<br>Use TIA-222-H Bracing Resist.<br>Exemption<br>Use TIA-222-H Tension Splice<br>Exemption<br><br>Poles<br>✓ Include Shear-Torsion Interaction<br>Always Use Sub-Critical Flow<br>Use Top Mounted Sockets<br>Pole Without Linear Attachments<br>Pole With Shroud Or No<br>Appurtenances<br>Outside and Inside Corner Radii Are<br>Known |
|--|---|---|

## Pole Section Geometry

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade	Socket Length ft
L1	105.0000- 92.5000	12.5000	P18x3/8	A53-B-42 (42 ksi)	
L2	92.5000-80.0000	12.5000	P18x3/8	A53-B-42	

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade	Socket Length ft
L3	80.0000-60.0000	20.0000	P24x3/8	(42 ksi) A53-B-42	
L4	60.0000-40.0000	20.0000	P30x3/8	(42 ksi) A53-B-42	
L5	40.0000-20.0000	20.0000	P36x3/8	(42 ksi) A53-B-42	
L6	20.0000-0.0000	20.0000	P42x3/8	(42 ksi) A53-B-42	

Tower Elevation ft	Gusset Area (per face) ft <sup>2</sup>	Gusset Thickness in	Gusset Grade	Adjust. Factor A <sub>r</sub>	Adjust. Factor A <sub>r</sub>	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 105.0000-92.5000				1	1	1			
L2 92.5000-80.0000				1	1	1			
L3 80.0000-60.0000				1	1	1			
L4 60.0000-40.0000				1	1	1			
L5 40.0000-20.0000				1	1	1			
L6 20.0000-0.0000				1	1	1			

### Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
***										
Safety Line 5/8	C	No	Surface Ar (CaAa)	105.0000 - 0.0000	1	1	0.000 0.000	0.8800		0.40
Step Bolts	C	No	Surface Ar (CaAa)	105.0000 - 0.0000	1	1	0.150 0.250	0.3750		2.00
***										

### Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C <sub>A</sub> A <sub>A</sub> ft <sup>2</sup> /ft	Weight plf	
***									
LDF5-50A(7/8")	B	No	No	Inside Pole	105.0000 - 0.0000	4	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.33 0.33 0.33 0.33
LDF6-50A(1-1/4")	B	No	No	Inside Pole	105.0000 - 0.0000	4	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.66 0.66 0.66 0.66
MLE Hybrid 9Power/18Fiber RL 2( 1 5/8)	B	No	No	Inside Pole	105.0000 - 0.0000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	1.07 1.07 1.07 1.07
HCS 6X12	B	No	No	Inside Pole	105.0000 -	2	No Ice	0.0000	1.70

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C <sub>AA</sub> A <sub>A</sub> ft <sup>2</sup> /ft	Weight plf
6AWG(1-3/8)					0.0000		1/2" Ice	0.0000	1.70
							1" Ice	0.0000	1.70
							2" Ice	0.0000	1.70
***									
LDF7-50A(1-5/8")	C	No	No	Inside Pole	95.0000 - 0.0000	6	No Ice	0.0000	0.82
							1/2" Ice	0.0000	0.82
							1" Ice	0.0000	0.82
							2" Ice	0.0000	0.82
***									

### Feed Line/Linear Appurtenances Section Areas

Tower Section n	Tower Elevation ft	Face	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> A <sub>A</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> A <sub>A</sub> Out Face ft <sup>2</sup>	Weight K
L1	105.0000-92.5000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.11
		C	0.000	0.000	1.569	0.000	0.04
L2	92.5000-80.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.11
		C	0.000	0.000	1.569	0.000	0.09
L3	80.0000-60.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.17
		C	0.000	0.000	2.510	0.000	0.15
L4	60.0000-40.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.17
		C	0.000	0.000	2.510	0.000	0.15
L5	40.0000-20.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.17
		C	0.000	0.000	2.510	0.000	0.15
L6	20.0000-0.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.17
		C	0.000	0.000	2.510	0.000	0.15

### Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section n	Tower Elevation ft	Face or Leg	Ice Thickness in	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> A <sub>A</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> A <sub>A</sub> Out Face ft <sup>2</sup>	Weight K
L1	105.0000-92.5000	A	1.423	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.11
		C		0.000	0.000	8.682	0.000	0.13
L2	92.5000-80.0000	A	1.404	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.11
		C		0.000	0.000	8.587	0.000	0.18
L3	80.0000-60.0000	A	1.375	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.17
		C		0.000	0.000	13.507	0.000	0.28
L4	60.0000-40.0000	A	1.329	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.17
		C		0.000	0.000	13.143	0.000	0.27
L5	40.0000-20.0000	A	1.263	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.17
		C		0.000	0.000	12.613	0.000	0.26
L6	20.0000-0.0000	A	1.132	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.17
		C		0.000	0.000	11.562	0.000	0.24

### Feed Line Center of Pressure

Section	Elevation	CP <sub>x</sub>	CP <sub>z</sub>	CP <sub>x</sub>	CP <sub>z</sub>
	ft	in	in	Ice in	Ice in
L1	105.0000-92.5000	-0.1366	1.1170	-0.4330	2.2380
L2	92.5000-80.0000	-0.1366	1.1170	-0.4297	2.2226
L3	80.0000-60.0000	-0.1402	1.1409	-0.4623	2.3858
L4	60.0000-40.0000	-0.1425	1.1560	-0.4776	2.4653
L5	40.0000-20.0000	-0.1441	1.1663	-0.4786	2.4759
L6	20.0000-0.0000	-0.1452	1.1739	-0.4543	2.3669

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

### Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K <sub>a</sub> No Ice	K <sub>a</sub> Ice
L1	9	Safety Line 5/8	92.50 - 105.00	1.0000	1.0000
L1	10	Step Bolts	92.50 - 105.00	1.0000	1.0000
L2	9	Safety Line 5/8	80.00 - 92.50	1.0000	1.0000
L2	10	Step Bolts	80.00 - 92.50	1.0000	1.0000
L3	9	Safety Line 5/8	60.00 - 80.00	1.0000	1.0000
L3	10	Step Bolts	60.00 - 80.00	1.0000	1.0000
L4	9	Safety Line 5/8	40.00 - 60.00	1.0000	1.0000
L4	10	Step Bolts	40.00 - 60.00	1.0000	1.0000
L5	9	Safety Line 5/8	20.00 - 40.00	1.0000	1.0000
L5	10	Step Bolts	20.00 - 40.00	1.0000	1.0000
L6	9	Safety Line 5/8	0.00 - 20.00	1.0000	1.0000
L6	10	Step Bolts	0.00 - 20.00	1.0000	1.0000

### Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>A</sub> A <sub>Front</sub>	C <sub>A</sub> A <sub>Side</sub>	Weight
			Horz Lateral	Vert					
*****									
5' Lightning Rod	C	From Leg	0.0000	0.0000	105.0000	No Ice	0.3125	0.3125	0.01
						1/2" Ice	0.8260	0.8260	0.01
						1" Ice	1.3216	1.3216	0.02
						2" Ice	1.9568	1.9568	0.04
(2) Side Light	A	From Leg	4.0000	0.0000	105.0000	No Ice	0.3300	0.3300	0.01
						1/2" Ice	0.4700	0.4700	0.01

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment t	Placement ft		C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight K
			2.00			Ice	0.6000	0.6000	0.01
						1" Ice	0.8900	0.8900	0.01
						2" Ice			
*****									
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.0000	105.0000	No Ice	6.3292	5.6424	0.11
						1/2"	6.7751	6.4259	0.17
						Ice	7.2137	7.1313	0.23
						1" Ice	8.1168	8.5907	0.38
						2" Ice			
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	C	From Leg	4.0000 0.00 0.00	0.0000	105.0000	No Ice	6.3292	5.6424	0.11
						1/2"	6.7751	6.4259	0.17
						Ice	7.2137	7.1313	0.23
						1" Ice	8.1168	8.5907	0.38
						2" Ice			
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	4.0000 0.00 -2.00	0.0000	105.0000	No Ice	20.4801	11.0240	0.16
						1/2"	21.2306	12.5496	0.30
						Ice	21.9900	14.0992	0.44
						1" Ice	23.4441	16.4509	0.78
						2" Ice			
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Leg	4.0000 0.00 -2.00	0.0000	105.0000	No Ice	20.4801	11.0240	0.16
						1/2"	21.2306	12.5496	0.30
						Ice	21.9900	14.0992	0.44
						1" Ice	23.4441	16.4509	0.78
						2" Ice			
AIR 32 B2A/B66AA w/ Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.0000	105.0000	No Ice	6.7474	6.0700	0.15
						1/2"	7.2017	6.8671	0.21
						Ice	7.6475	7.5828	0.28
						1" Ice	8.5651	9.0629	0.44
						2" Ice			
AIR 32 B2A/B66AA w/ Mount Pipe	C	From Leg	4.0000 0.00 0.00	0.0000	105.0000	No Ice	6.7474	6.0700	0.15
						1/2"	7.2017	6.8671	0.21
						Ice	7.6475	7.5828	0.28
						1" Ice	8.5651	9.0629	0.44
						2" Ice			
KRY 112 144/1	B	From Leg	4.0000 0.00 0.00	0.0000	105.0000	No Ice	0.3508	0.1423	0.01
						1/2"	0.4267	0.1955	0.01
						Ice	0.5100	0.2560	0.02
						1" Ice	0.6989	0.3994	0.03
						2" Ice			
KRY 112 144/1	C	From Leg	4.0000 0.00 0.00	0.0000	105.0000	No Ice	0.3508	0.1423	0.01
						1/2"	0.4267	0.1955	0.01
						Ice	0.5100	0.2560	0.02
						1" Ice	0.6989	0.3994	0.03
						2" Ice			
RADIO 4449 B12/B71	B	From Leg	4.0000 0.00 -2.00	0.0000	105.0000	No Ice	1.6500	1.3000	0.08
						1/2"	1.8104	1.4448	0.09
						Ice	1.9781	1.5970	0.11
						1" Ice	2.3359	1.9237	0.16
						2" Ice			
RADIO 4449 B12/B71	C	From Leg	4.0000 0.00 -2.00	0.0000	105.0000	No Ice	1.6500	1.3000	0.08
						1/2"	1.8104	1.4448	0.09
						Ice	1.9781	1.5970	0.11
						1" Ice	2.3359	1.9237	0.16
						2" Ice			
(2) 6' x 2" STD Pipe	A	From Leg	4.0000 0.00 0.00	0.0000	105.0000	No Ice	1.4250	1.4250	0.02
						1/2"	1.9250	1.9250	0.03
						Ice	2.2939	2.2939	0.05
						1" Ice	3.0596	3.0596	0.09
						2" Ice			
6' x 2" STD Pipe	B	From Leg	4.0000 0.00 0.00	0.0000	105.0000	No Ice	1.4250	1.4250	0.02
						1/2"	1.9250	1.9250	0.03
						Ice	2.2939	2.2939	0.05
						1" Ice	3.0596	3.0596	0.09
						2" Ice			
6' x 2" STD Pipe	C	From Leg	4.0000 0.00	0.0000	105.0000	No Ice	1.4250	1.4250	0.02
						1/2"	1.9250	1.9250	0.03

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment t °	Placement ft	C <sub>A</sub> A <sub>A</sub> Front ft <sup>2</sup>	C <sub>A</sub> A <sub>A</sub> Side ft <sup>2</sup>	Weight K	
			0.00			Ice	2.2939	2.2939	0.05
						1" Ice	3.0596	3.0596	0.09
						2" Ice			
LP 405-1	C	None		0.0000	105.0000	No Ice	20.8000	20.8000	1.80
						1/2"	28.1000	28.1000	2.07
						Ice	35.4000	35.4000	2.33
						1" Ice	50.0000	50.0000	2.86
						2" Ice			
***									
GPS-TMG-26NMS	A	From Leg	4.0000	0.0000	95.0000	No Ice	0.1333	0.1333	0.00
			0.00			1/2"	0.1826	0.1826	0.00
			0.00			Ice	0.2393	0.2393	0.01
						1" Ice	0.3748	0.3748	0.01
						2" Ice			
800 10504 w/ Mount Pipe	A	From Leg	4.0000	0.0000	95.0000	No Ice	3.5887	3.1779	0.04
			0.00			1/2"	4.0069	3.9053	0.07
			0.00			Ice	4.4217	4.5808	0.11
						1" Ice	5.2585	5.9816	0.21
						2" Ice			
800 10504 w/ Mount Pipe	B	From Leg	4.0000	0.0000	95.0000	No Ice	3.5887	3.1779	0.04
			0.00			1/2"	4.0069	3.9053	0.07
			0.00			Ice	4.4217	4.5808	0.11
						1" Ice	5.2585	5.9816	0.21
						2" Ice			
800 10504 w/ Mount Pipe	C	From Leg	4.0000	0.0000	95.0000	No Ice	3.5887	3.1779	0.04
			0.00			1/2"	4.0069	3.9053	0.07
			0.00			Ice	4.4217	4.5808	0.11
						1" Ice	5.2585	5.9816	0.21
						2" Ice			
5' x 2" STD Pipe	A	From Leg	4.0000	0.0000	95.0000	No Ice	1.1875	1.1875	0.02
			0.00			1/2"	1.4956	1.4956	0.03
			0.00			Ice	1.8071	1.8071	0.04
						1" Ice	2.4580	2.4580	0.08
						2" Ice			
5' x 2" STD Pipe	B	From Leg	4.0000	0.0000	95.0000	No Ice	1.1875	1.1875	0.02
			0.00			1/2"	1.4956	1.4956	0.03
			0.00			Ice	1.8071	1.8071	0.04
						1" Ice	2.4580	2.4580	0.08
						2" Ice			
5' x 2" STD Pipe	C	From Leg	4.0000	0.0000	95.0000	No Ice	1.1875	1.1875	0.02
			0.00			1/2"	1.4956	1.4956	0.03
			0.00			Ice	1.8071	1.8071	0.04
						1" Ice	2.4580	2.4580	0.08
						2" Ice			
LP 304-1	C	None		0.0000	95.0000	No Ice	17.4600	17.4600	1.35
						1/2"	22.4400	22.4400	1.62
						Ice	27.4200	27.4200	1.90
						1" Ice	37.3800	37.3800	2.45
						2" Ice			
****									

### Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice

Comb. No.	Description
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

### Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	105 - 92.5	Pole	Max Tension	26	0.00	-0.00	0.00
			Max. Compression	26	-11.05	0.02	-6.86
			Max. Mx	20	-6.44	42.90	-2.66
			Max. My	14	-6.46	0.01	-41.55
			Max. Vy	20	-4.69	42.90	-2.66
			Max. Vx	14	4.31	0.01	-41.55
			Max. Torque	20			3.47
L2	92.5 - 80	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-12.85	0.02	-7.11
			Max. Mx	20	-7.75	103.95	-2.76
			Max. My	14	-7.77	0.01	-97.88
			Max. Vy	20	-5.07	103.95	-2.76
			Max. Vx	14	4.69	0.01	-97.88
			Max. Torque	8			-3.46
L3	80 - 60	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-16.49	0.02	-7.48
			Max. Mx	20	-10.43	213.08	-2.88



Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L4	60 - 40	Pole	Max. My	14	-10.44	0.01	-199.46
			Max. Vy	20	-5.83	213.08	-2.88
			Max. Vx	14	5.45	0.01	-199.46
			Max. Torque	8			-3.46
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-20.86	0.02	-7.82
			Max. Mx	20	-13.69	338.11	-3.00
			Max. My	14	-13.70	0.01	-317.01
			Max. Vy	20	-6.67	338.11	-3.00
			Max. Vx	14	6.29	0.01	-317.01
L5	40 - 20	Pole	Max. Torque	8			-3.45
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-25.93	0.02	-8.14
			Max. Mx	20	-17.53	479.93	-3.10
			Max. My	14	-17.53	0.01	-451.42
			Max. Vy	20	-7.51	479.93	-3.10
			Max. Vx	14	7.14	0.01	-451.42
			Max. Torque	8			-3.45
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-31.61	0.02	-8.42
L6	20 - 0	Pole	Max. Mx	20	-21.95	639.83	-3.21
			Max. My	14	-21.95	0.01	-604.02
			Max. Vy	20	-8.47	639.83	-3.21
			Max. Vx	14	8.11	0.01	-604.02
			Max. Torque	8			-3.45

### Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	26	31.61	0.00	-0.00
	Max. H <sub>x</sub>	21	16.46	8.47	0.00
	Max. H <sub>z</sub>	2	21.95	0.00	8.10
	Max. M <sub>x</sub>	2	597.59	0.00	8.10
	Max. M <sub>z</sub>	8	639.81	-8.47	0.00
	Max. Torsion	20	3.45	8.47	0.00
	Min. Vert	25	16.46	4.24	7.02
	Min. H <sub>x</sub>	8	21.95	-8.47	0.00
	Min. H <sub>z</sub>	14	21.95	0.00	-8.10
	Min. M <sub>x</sub>	14	-604.02	0.00	-8.10
	Min. M <sub>z</sub>	20	-639.83	8.47	0.00
	Min. Torsion	8	-3.45	-8.47	0.00

### Tower Mast Reaction Summary

Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
Dead Only	18.29	0.00	0.00	2.63	0.01	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	21.95	0.00	-8.10	-597.59	0.01	-0.01
0.9 Dead+1.0 Wind 0 deg - No Ice	16.46	0.00	-8.10	-594.61	0.01	-0.01
1.2 Dead+1.0 Wind 30 deg - No Ice	21.95	4.24	-7.02	-517.10	-319.90	1.71
0.9 Dead+1.0 Wind 30 deg - No Ice	16.46	4.24	-7.02	-514.63	-317.86	1.70
1.2 Dead+1.0 Wind 60 deg - No Ice	21.95	7.34	-4.05	-297.19	-554.09	2.98
0.9 Dead+1.0 Wind 60 deg - No Ice	16.46	7.34	-4.05	-296.11	-550.54	2.96
1.2 Dead+1.0 Wind 90 deg - No Ice	21.95	8.47	0.00	3.21	-639.81	3.45

Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
No Ice						
0.9 Dead+1.0 Wind 90 deg - No Ice	16.46	8.47	0.00	2.38	-635.71	3.43
1.2 Dead+1.0 Wind 120 deg - No Ice	21.95	7.34	4.05	303.61	-554.10	3.00
0.9 Dead+1.0 Wind 120 deg - No Ice	16.46	7.34	4.05	300.87	-550.55	2.98
1.2 Dead+1.0 Wind 150 deg - No Ice	21.95	4.24	7.02	523.52	-319.91	1.74
0.9 Dead+1.0 Wind 150 deg - No Ice	16.46	4.24	7.02	519.38	-317.86	1.73
1.2 Dead+1.0 Wind 180 deg - No Ice	21.95	0.00	8.10	604.02	0.01	0.01
0.9 Dead+1.0 Wind 180 deg - No Ice	16.46	0.00	8.10	599.37	0.01	0.01
1.2 Dead+1.0 Wind 210 deg - No Ice	21.95	-4.24	7.02	523.52	319.93	-1.73
0.9 Dead+1.0 Wind 210 deg - No Ice	16.46	-4.24	7.02	519.38	317.87	-1.71
1.2 Dead+1.0 Wind 240 deg - No Ice	21.95	-7.34	4.05	303.61	554.11	-2.99
0.9 Dead+1.0 Wind 240 deg - No Ice	16.46	-7.34	4.05	300.87	550.56	-2.97
1.2 Dead+1.0 Wind 270 deg - No Ice	21.95	-8.47	0.00	3.21	639.83	-3.45
0.9 Dead+1.0 Wind 270 deg - No Ice	16.46	-8.47	0.00	2.38	635.72	-3.43
1.2 Dead+1.0 Wind 300 deg - No Ice	21.95	-7.34	-4.05	-297.19	554.11	-2.99
0.9 Dead+1.0 Wind 300 deg - No Ice	16.46	-7.34	-4.05	-296.11	550.55	-2.97
1.2 Dead+1.0 Wind 330 deg - No Ice	21.95	-4.24	-7.02	-517.10	319.92	-1.73
0.9 Dead+1.0 Wind 330 deg - No Ice	16.46	-4.24	-7.02	-514.63	317.87	-1.72
1.2 Dead+1.0 Ice+1.0 Temp deg+1.0 Ice+1.0 Temp	31.61	-0.00	0.00	8.42	0.02	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	31.61	0.00	-2.70	-184.06	0.02	-0.01
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	31.61	1.37	-2.33	-158.27	-98.60	0.41
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	31.61	2.37	-1.35	-87.81	-170.80	0.72
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	31.61	2.74	0.00	8.45	-197.22	0.83
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	31.61	2.37	1.35	104.70	-170.80	0.73
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	31.61	1.37	2.33	175.17	-98.60	0.42
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	31.61	0.00	2.70	200.96	0.02	0.01
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	31.61	-1.37	2.33	175.17	98.65	-0.41
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	31.61	-2.37	1.35	104.70	170.84	-0.72
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	31.61	-2.74	0.00	8.45	197.27	-0.83
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	31.61	-2.37	-1.35	-87.81	170.84	-0.72
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	31.61	-1.37	-2.33	-158.27	98.65	-0.42
Dead+Wind 0 deg - Service	18.29	0.00	-1.91	-138.22	0.01	-0.00
Dead+Wind 30 deg - Service	18.29	1.00	-1.65	-119.35	-75.01	0.40
Dead+Wind 60 deg - Service	18.29	1.73	-0.95	-67.78	-129.92	0.70
Dead+Wind 90 deg - Service	18.29	1.99	0.00	2.66	-150.02	0.81
Dead+Wind 120 deg - Service	18.29	1.73	0.95	73.10	-129.92	0.70
Dead+Wind 150 deg - Service	18.29	1.00	1.65	124.66	-75.01	0.41
Dead+Wind 180 deg - Service	18.29	0.00	1.91	143.54	0.01	0.00

Load Combination	Vertical	Shear <sub>x</sub>	Shear <sub>z</sub>	Overturing Moment, M <sub>x</sub>	Overturing Moment, M <sub>z</sub>	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
Dead+Wind 210 deg - Service	18.29	-1.00	1.65	124.66	75.02	-0.40
Dead+Wind 240 deg - Service	18.29	-1.73	0.95	73.10	129.93	-0.70
Dead+Wind 270 deg - Service	18.29	-1.99	0.00	2.66	150.03	-0.81
Dead+Wind 300 deg - Service	18.29	-1.73	-0.95	-67.78	129.93	-0.70
Dead+Wind 330 deg - Service	18.29	-1.00	-1.65	-119.35	75.02	-0.41

### Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.00	-18.29	0.00	0.00	18.29	0.00	0.000%
2	0.00	-21.95	-8.10	0.00	21.95	8.10	0.000%
3	0.00	-16.46	-8.10	0.00	16.46	8.10	0.000%
4	4.24	-21.95	-7.02	-4.24	21.95	7.02	0.000%
5	4.24	-16.46	-7.02	-4.24	16.46	7.02	0.000%
6	7.34	-21.95	-4.05	-7.34	21.95	4.05	0.000%
7	7.34	-16.46	-4.05	-7.34	16.46	4.05	0.000%
8	8.47	-21.95	0.00	-8.47	21.95	0.00	0.000%
9	8.47	-16.46	0.00	-8.47	16.46	0.00	0.000%
10	7.34	-21.95	4.05	-7.34	21.95	-4.05	0.000%
11	7.34	-16.46	4.05	-7.34	16.46	-4.05	0.000%
12	4.24	-21.95	7.02	-4.24	21.95	-7.02	0.000%
13	4.24	-16.46	7.02	-4.24	16.46	-7.02	0.000%
14	0.00	-21.95	8.10	0.00	21.95	-8.10	0.000%
15	0.00	-16.46	8.10	0.00	16.46	-8.10	0.000%
16	-4.24	-21.95	7.02	4.24	21.95	-7.02	0.000%
17	-4.24	-16.46	7.02	4.24	16.46	-7.02	0.000%
18	-7.34	-21.95	4.05	7.34	21.95	-4.05	0.000%
19	-7.34	-16.46	4.05	7.34	16.46	-4.05	0.000%
20	-8.47	-21.95	0.00	8.47	21.95	0.00	0.000%
21	-8.47	-16.46	0.00	8.47	16.46	0.00	0.000%
22	-7.34	-21.95	-4.05	7.34	21.95	4.05	0.000%
23	-7.34	-16.46	-4.05	7.34	16.46	4.05	0.000%
24	-4.24	-21.95	-7.02	4.24	21.95	7.02	0.000%
25	-4.24	-16.46	-7.02	4.24	16.46	7.02	0.000%
26	0.00	-31.61	0.00	0.00	31.61	-0.00	0.000%
27	0.00	-31.61	-2.70	0.00	31.61	2.70	0.000%
28	1.37	-31.61	-2.33	-1.37	31.61	2.33	0.000%
29	2.37	-31.61	-1.35	-2.37	31.61	1.35	0.000%
30	2.74	-31.61	0.00	-2.74	31.61	-0.00	0.000%
31	2.37	-31.61	1.35	-2.37	31.61	-1.35	0.000%
32	1.37	-31.61	2.33	-1.37	31.61	-2.33	0.000%
33	0.00	-31.61	2.70	0.00	31.61	-2.70	0.000%
34	-1.37	-31.61	2.33	1.37	31.61	-2.33	0.000%
35	-2.37	-31.61	1.35	2.37	31.61	-1.35	0.000%
36	-2.74	-31.61	0.00	2.74	31.61	-0.00	0.000%
37	-2.37	-31.61	-1.35	2.37	31.61	1.35	0.000%
38	-1.37	-31.61	-2.33	1.37	31.61	2.33	0.000%
39	0.00	-18.29	-1.91	0.00	18.29	1.91	0.000%
40	1.00	-18.29	-1.65	-1.00	18.29	1.65	0.000%
41	1.73	-18.29	-0.95	-1.73	18.29	0.95	0.000%
42	1.99	-18.29	0.00	-1.99	18.29	0.00	0.000%
43	1.73	-18.29	0.95	-1.73	18.29	-0.95	0.000%
44	1.00	-18.29	1.65	-1.00	18.29	-1.65	0.000%
45	0.00	-18.29	1.91	0.00	18.29	-1.91	0.000%
46	-1.00	-18.29	1.65	1.00	18.29	-1.65	0.000%
47	-1.73	-18.29	0.95	1.73	18.29	-0.95	0.000%
48	-1.99	-18.29	0.00	1.99	18.29	0.00	0.000%
49	-1.73	-18.29	-0.95	1.73	18.29	0.95	0.000%
50	-1.00	-18.29	-1.65	1.00	18.29	1.65	0.000%

### Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00007390
3	Yes	4	0.00000001	0.00003924
4	Yes	5	0.00000001	0.00007342
5	Yes	5	0.00000001	0.00003848
6	Yes	5	0.00000001	0.00006416
7	Yes	5	0.00000001	0.00003385
8	Yes	5	0.00000001	0.00009015
9	Yes	5	0.00000001	0.00004696
10	Yes	5	0.00000001	0.00011165
11	Yes	5	0.00000001	0.00005813
12	Yes	5	0.00000001	0.00004912
13	Yes	4	0.00000001	0.00097034
14	Yes	4	0.00000001	0.00007582
15	Yes	4	0.00000001	0.00003998
16	Yes	5	0.00000001	0.00004897
17	Yes	4	0.00000001	0.00096718
18	Yes	5	0.00000001	0.00011148
19	Yes	5	0.00000001	0.00005804
20	Yes	5	0.00000001	0.00009015
21	Yes	5	0.00000001	0.00004696
22	Yes	5	0.00000001	0.00006431
23	Yes	5	0.00000001	0.00003393
24	Yes	5	0.00000001	0.00007369
25	Yes	5	0.00000001	0.00003863
26	Yes	4	0.00000001	0.00014896
27	Yes	5	0.00000001	0.00007062
28	Yes	5	0.00000001	0.00007537
29	Yes	5	0.00000001	0.00008005
30	Yes	5	0.00000001	0.00008468
31	Yes	5	0.00000001	0.00009119
32	Yes	5	0.00000001	0.00009066
33	Yes	5	0.00000001	0.00008783
34	Yes	5	0.00000001	0.00009066
35	Yes	5	0.00000001	0.00009120
36	Yes	5	0.00000001	0.00008473
37	Yes	5	0.00000001	0.00008013
38	Yes	5	0.00000001	0.00007543
39	Yes	4	0.00000001	0.00001283
40	Yes	4	0.00000001	0.00006850
41	Yes	4	0.00000001	0.00010219
42	Yes	4	0.00000001	0.00013269
43	Yes	4	0.00000001	0.00012498
44	Yes	4	0.00000001	0.00006207
45	Yes	4	0.00000001	0.00001404
46	Yes	4	0.00000001	0.00006164
47	Yes	4	0.00000001	0.00012473
48	Yes	4	0.00000001	0.00013273
49	Yes	4	0.00000001	0.00010248
50	Yes	4	0.00000001	0.00006893

### Maximum Tower Deflections - Service Wind

Section No.	Elevation  ft	Horz. Deflection in	Gov. Load Comb.	Tilt  °	Twist  °
L1	105 - 92.5	4.982	47	0.4581	0.0152
L2	92.5 - 80	3.808	48	0.4341	0.0106
L3	80 - 60	2.766	48	0.3553	0.0061
L4	60 - 40	1.479	48	0.2471	0.0030
L5	40 - 20	0.628	48	0.1517	0.0015

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L6	20 - 0	0.154	48	0.0701	0.0006

### Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
105.0000	5' Lightning Rod	47	4.982	0.4581	0.0152	30435
95.0000	GPS-TMG-26NMS	48	4.034	0.4432	0.0116	15334

### Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	105 - 92.5	21.213	20	1.9204	0.0648
L2	92.5 - 80	16.253	20	1.8377	0.0453
L3	80 - 60	11.805	20	1.5156	0.0258
L4	60 - 40	6.311	20	1.0548	0.0128
L5	40 - 20	2.681	20	0.6474	0.0062
L6	20 - 0	0.656	20	0.2991	0.0024

### Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
105.0000	5' Lightning Rod	20	21.213	1.9204	0.0648	8265
95.0000	GPS-TMG-26NMS	20	17.218	1.8729	0.0494	4156

### Compression Checks

### Pole Design Data

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	KI/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio P <sub>u</sub> / φP <sub>n</sub>
L1	105 - 92.5 (1)	P18x3/8	12.500	0.0000	0.0	20.764	-6.45	784.88	0.008
L2	92.5 - 80 (2)	P18x3/8	12.500	0.0000	0.0	20.764	-7.75	784.88	0.010
L3	80 - 60 (3)	P24x3/8	20.000	0.0000	0.0	27.832	-10.43	1052.07	0.010
L4	60 - 40 (4)	P30x3/8	20.000	0.0000	0.0	34.901	-13.69	1311.06	0.010
L5	40 - 20 (5)	P36x3/8	20.000	0.0000	0.0	41.969	-17.53	1490.10	0.012
L6	20 - 0 (6)	P42x3/8	20.000	0.0000	0.0	49.038	-21.95	1668.87	0.013

### Pole Bending Design Data

Section No.	Elevation ft	Size	$M_{ux}$	$\phi M_{nx}$	Ratio	$M_{uy}$	$\phi M_{ny}$	Ratio
			kip-ft	kip-ft	$\frac{M_{ux}}{\phi M_{nx}}$	kip-ft	kip-ft	$\frac{M_{uy}}{\phi M_{ny}}$
L1	105 - 92.5 (1)	P18x3/8	43.25	367.00	0.118	0.00	367.00	0.000
L2	92.5 - 80 (2)	P18x3/8	103.99	367.00	0.283	0.00	367.00	0.000
L3	80 - 60 (3)	P24x3/8	213.10	623.72	0.342	0.00	623.72	0.000
L4	60 - 40 (4)	P30x3/8	338.13	947.86	0.357	0.00	947.86	0.000
L5	40 - 20 (5)	P36x3/8	479.94	1338.81	0.358	0.00	1338.81	0.000
L6	20 - 0 (6)	P42x3/8	639.84	1796.56	0.356	0.00	1796.56	0.000

### Pole Shear Design Data

Section No.	Elevation ft	Size	Actual $V_u$	$\phi V_n$	Ratio	Actual $T_u$	$\phi T_n$	Ratio
			K	K	$\frac{V_u}{\phi V_n}$	kip-ft	kip-ft	$\frac{T_u}{\phi T_n}$
L1	105 - 92.5 (1)	P18x3/8	4.60	235.46	0.020	3.00	364.87	0.008
L2	92.5 - 80 (2)	P18x3/8	5.07	235.46	0.022	3.46	364.87	0.009
L3	80 - 60 (3)	P24x3/8	5.83	315.62	0.018	3.45	655.57	0.005
L4	60 - 40 (4)	P30x3/8	6.67	395.78	0.017	3.45	994.73	0.003
L5	40 - 20 (5)	P36x3/8	7.51	475.94	0.016	3.45	1186.90	0.003
L6	20 - 0 (6)	P42x3/8	8.47	513.08	0.017	3.45	1443.45	0.002

### Pole Interaction Design Data

Section No.	Elevation ft	Ratio $P_u$	Ratio $M_{ux}$	Ratio $M_{uy}$	Ratio $V_u$	Ratio $T_u$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
		$\phi P_n$	$\phi M_{nx}$	$\phi M_{ny}$	$\phi V_n$	$\phi T_n$			
L1	105 - 92.5 (1)	0.008	0.118	0.000	0.020	0.008	0.127	1.050	4.8.2
L2	92.5 - 80 (2)	0.010	0.283	0.000	0.022	0.009	0.294	1.050	4.8.2
L3	80 - 60 (3)	0.010	0.342	0.000	0.018	0.005	0.352	1.050	4.8.2
L4	60 - 40 (4)	0.010	0.357	0.000	0.017	0.003	0.368	1.050	4.8.2
L5	40 - 20 (5)	0.012	0.358	0.000	0.016	0.003	0.371	1.050	4.8.2
L6	20 - 0 (6)	0.013	0.356	0.000	0.017	0.002	0.370	1.050	4.8.2

### Section Capacity Table

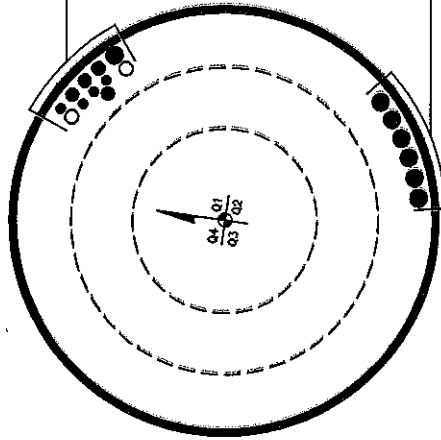
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$\phi P_{allow}$ K	% Capacity	Pass Fail
L1	105 - 92.5	Pole	P18x3/8	1	-6.45	824.12	12.1	Pass
L2	92.5 - 80	Pole	P18x3/8	2	-7.75	824.12	28.0	Pass
L3	80 - 60	Pole	P24x3/8	3	-10.43	1104.67	33.5	Pass
L4	60 - 40	Pole	P30x3/8	4	-13.69	1376.61	35.0	Pass
L5	40 - 20	Pole	P36x3/8	5	-17.53	1564.60	35.3	Pass
L6	20 - 0	Pole	P42x3/8	6	-21.95	1752.31	35.2	Pass
Summary								
Pole (L5)							35.3	Pass
<b>RATING =</b>							<b>35.3</b>	<b>Pass</b>

**APPENDIX B**  
**BASE LEVEL DRAWING**



(PROPOSED EQUIPMENT CONFIGURATION)

- (A) 7/8" TO 105 FT LEVEL
- (B) 1-1/4" TO 105 FT LEVEL
- (C) 1-3/8" TO 105 FT LEVEL
- (D) 1-5/8" TO 105 FT LEVEL



(OTHER CONSIDERED EQUIPMENT)

- (E) 1-5/8" TO 95 FT LEVEL

BUSINESS UNIT: 823531 TOWER ID: C\_BASELEVEL



**APPENDIX C**  
**ADDITIONAL CALCULATIONS**

# Monopole Base Plate Connection

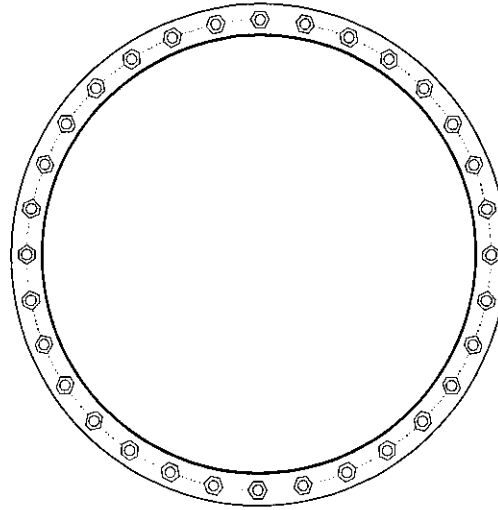


Site Info	
BU #	823631
Site Name	Danbury/Rt 7
Order #	479807 Rev 2

Analysis Considerations	
TJA-222 Revision	H
Grout Considered:	No
$l_{ar}$ (in)	1.625

Applied Loads	
Moment (kip-ft)	639.83
Axial Force (kips)	21.95
Shear Force (kips)	8.47

\*TJA-222-H Section 15.5 Applied



Connection Properties		Analysis Results		
<b>Anchor Rod Data</b>		<b>Anchor Rod Summary</b> <span style="float: right;">(units of kips, kip-in)</span>		
(32) 1" $\phi$ bolts (A687 N; $F_y=105$ ksi, $F_u=125$ ksi) on 45" BC		$Pu\_c = 22.01$	$\phi Pn\_c = 63.63$	<b>Stress Rating</b>
<b>Base Plate Data</b>		$Vu = 0.26$	$\phi Vn = 19.09$	<b>35.5%</b>
48" OD x 1.25" Plate (A36; $F_y=36$ ksi, $F_u=58$ ksi)		$Mu = 0.28$	$\phi Mn = 10.67$	<b>Pass</b>
<b>Stiffener Data</b>		<b>Base Plate Summary</b>		
N/A		Max Stress (ksi):	-	
<b>Pole Data</b>		Allowable Stress (ksi):	-	
42" x 0.375" round pole (A53-B-42; $F_y=42$ ksi, $F_u=63$ ksi)		Stress Rating:		<b>Pi rod OK</b>

# Monopole Flange Plate Connection

Elevation = 20 ft.

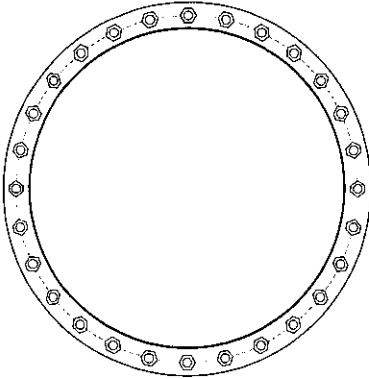


BU #	823631
Site Name	Danbury/Rt 7
Order #	479807 Rev 2
TIA-222 Revision	H

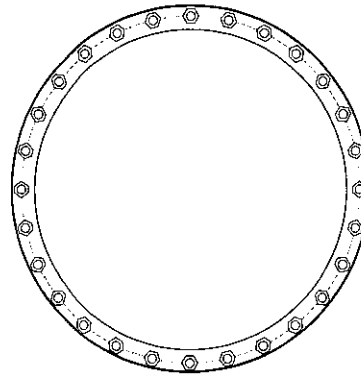
Applied Loads	
Moment (kip-ft)	479.94
Axial Force (kips)	17.53
Shear Force (kips)	7.51

\*TIA-222-H Section 15.5 Applied

Top Plate - External



Bottom Plate - Internal



### Connection Properties

#### Bolt Data

(28) 1"  $\phi$  bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 39" BC

#### Top Plate Data

42" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

#### Bottom Plate Data

36" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

#### Top Stiffener Data

N/A

#### Bottom Stiffener Data

N/A

#### Top Pole Data

36" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

#### Bottom Pole Data

42" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

### Analysis Results

#### Bolt Capacity

Max Load (kips)	20.46
Allowable (kips)	54.54
Stress Rating:	35.7% Pass

#### Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	Pirod OK
Tension Side Stress Rating:	Pirod OK

#### Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	Pirod OK
Tension Side Stress Rating:	Pirod OK

# Monopole Flange Plate Connection

Elevation = 40 ft.



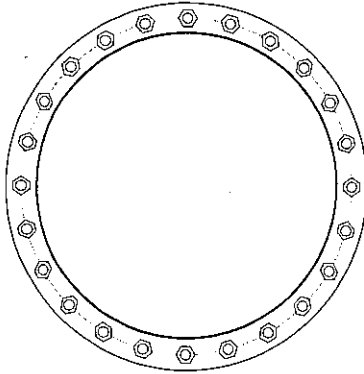
BU #	823631
Site Name	Danbury/Rt 7
Order #	479807 Rev 2

Applied Loads	
Moment (kip-ft)	338.13
Axial Force (kips)	13.69
Shear Force (kips)	6.67

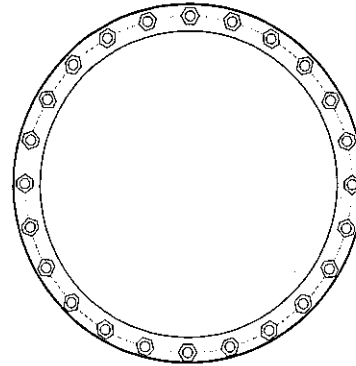
TIA-222 Revision	H
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\*TIA-222-H Section 15.5 Applied

Top Plate - External



Bottom Plate - Internal



### Connection Properties

#### Bolt Data

(24) 1"  $\phi$  bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 33" BC

#### Top Plate Data

36" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

#### Bottom Plate Data

30" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

#### Top Stiffener Data

N/A

#### Bottom Stiffener Data

N/A

#### Top Pole Data

30" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

#### Bottom Pole Data

36" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

### Analysis Results

#### Bolt Capacity

Max Load (kips)	19.91
Allowable (kips)	54.54
Stress Rating:	34.8% Pass

#### Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	Pirod OK
Tension Side Stress Rating:	Pirod OK

#### Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	Pirod OK
Tension Side Stress Rating:	Pirod OK

# Monopole Flange Plate Connection

Elevation = 60 ft.

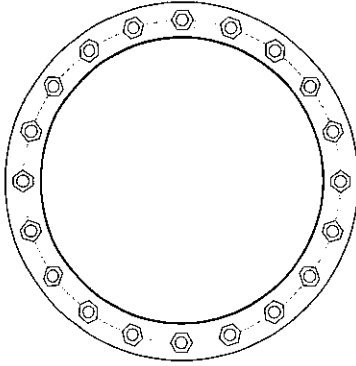


BU #	823631
Site Name	Danbury/Rt 7
Order #	479807 Rev 2
TIA-222 Revision	H

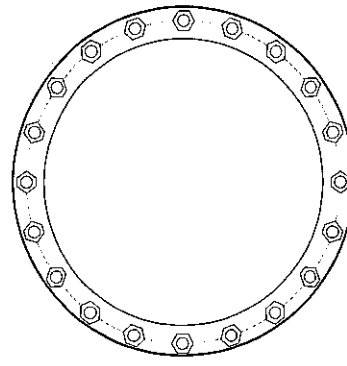
Applied Loads	
Moment (kip-ft)	213.10
Axial Force (kips)	10.43
Shear Force (kips)	5.83

\*TIA-222-H Section 15.5 Applied

Top Plate - External



Bottom Plate - Internal



### Connection Properties

#### Bolt Data

(20) 1"  $\phi$  bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 27" BC

#### Top Plate Data

30" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

#### Bottom Plate Data

24" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

#### Top Stiffener Data

N/A

#### Bottom Stiffener Data

N/A

#### Top Pole Data

24" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

#### Bottom Pole Data

30" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

### Analysis Results

#### Bolt Capacity

Max Load (kips)	18.41
Allowable (kips)	54.54
Stress Rating:	32.1% Pass

#### Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	Pirod OK
Tension Side Stress Rating:	Pirod OK

#### Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	Pirod OK
Tension Side Stress Rating:	Pirod OK

# Monopole Flange Plate Connection

Elevation = 80 ft.

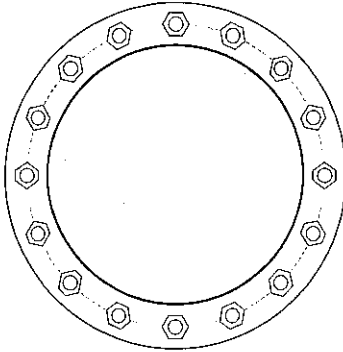


BU #	823631
Site Name	Danbury/Rt 7
Order #	479807 Rev 2
TIA-222 Revision	H

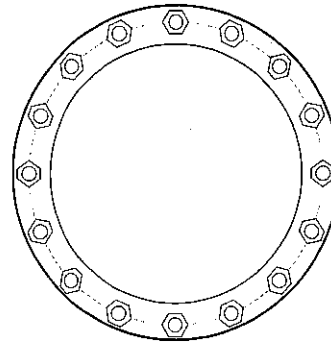
Applied Loads	
Moment (kip-ft)	103.99
Axial Force (kips)	7.75
Shear Force (kips)	5.07

\*TIA-222-H Section 15.5 Applied

Top Plate - External



Bottom Plate - Internal



### Connection Properties

#### Bolt Data

(16) 1"  $\emptyset$  bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 21" BC

#### Top Plate Data

24" OD x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

#### Bottom Plate Data

18" ID x 1.25" Plate (A36; Fy=36 ksi, Fu=58 ksi)

#### Top Stiffener Data

N/A

#### Bottom Stiffener Data

N/A

#### Top Pole Data

18" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

#### Bottom Pole Data

24" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

### Analysis Results

#### Bolt Capacity

Max Load (kips)	14.36
Allowable (kips)	54.54
Stress Rating:	25.1% Pass

#### Top Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	Pirod OK
Tension Side Stress Rating:	Pirod OK

#### Bottom Plate Capacity

Max Stress (ksi):	-
Allowable Stress (ksi):	-
Stress Rating:	Pirod OK
Tension Side Stress Rating:	Pirod OK

# Pier and Pad Foundation



BU # :	823631
Site Name:	DANBURY/Rt 7
App. Number:	479807 Rev 2

TIA-222 Revision:	H
Tower Type:	Monopole

Top & Bot. Pad Rein. Different?:	<input type="checkbox"/>
Block Foundation?:	<input type="checkbox"/>

Superstructure Analysis Reactions		
Compression, $P_{comp}$ :	22	kips
Base Shear, $V_u_{comp}$ :	8	kips
Moment, $M_u$ :	640	ft-kips
Tower Height, $H$ :	105	ft
BP Dist. Above Fdn, $bp_{dist}$ :	2.625	in

Foundation Analysis Checks				
	Capacity	Demand	Rating*	Check
Lateral (Sliding) (kips)	224.74	8.00	3.4%	Pass
Bearing Pressure (ksf)	12.00	2.35	18.6%	Pass
Overturning (kip*ft)	2231.97	713.75	32.0%	Pass
Pier Flexure (Comp.) (kip*ft)	1793.61	688.00	36.5%	Pass
Pier Compression (kip)	9372.94	43.21	0.4%	Pass
Pad Flexure (kip*ft)	933.88	207.55	21.2%	Pass
Pad Shear - 1-way (kips)	471.38	41.86	8.5%	Pass
Pad Shear - 2-way (Comp) (ksi)	0.164	0.013	7.8%	Pass
Flexural 2-way (Comp) (kip*ft)	1691.11	412.80	23.2%	Pass

Pier Properties		
Pier Shape:	Circular	
Pier Diameter, $d_{pier}$ :	5	ft
Ext. Above Grade, $E$ :	0.5	ft
Pier Rebar Size, $S_c$ :	9	
Pier Rebar Quantity, $m_c$ :	16	
Pier Tie/Spiral Size, $S_t$ :	4	
Pier Tie/Spiral Quantity, $m_t$ :	10	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, $cc_{pier}$ :	3	in

\*Rating per TIA-222-H Section 15.5

Soil Rating*:	32.0%
Structural Rating*:	36.5%

Pad Properties		
Depth, $D$ :	8.5	ft
Pad Width, $W$ :	15	ft
Pad Thickness, $T$ :	3	ft
Pad Rebar Size (Bottom), $S_p$ :	6	
Pad Rebar Quantity (Bottom), $m_p$ :	15	
Pad Clear Cover, $cc_{pad}$ :	3	in

Material Properties		
Rebar Grade, $F_y$ :	60	ksi
Concrete Compressive Strength, $F'_c$ :	3	ksi
Dry Concrete Density, $\delta_c$ :	150	pcf

Soil Properties		
Total Soil Unit Weight, $\gamma$ :	125	pcf
Ultimate Gross Bearing, $Q_{ult}$ :	16,000	ksf
Cohesion, $C_u$ :		ksf
Friction Angle, $\phi$ :	36	degrees
SPT Blow Count, $N_{blows}$ :	72	
Base Friction, $\mu$ :		
Neglected Depth, $N$ :		ft
Foundation Bearing on Rock?	No	
Groundwater Depth, $gw$ :	N/A	ft

<--Toggle between Gross and Net

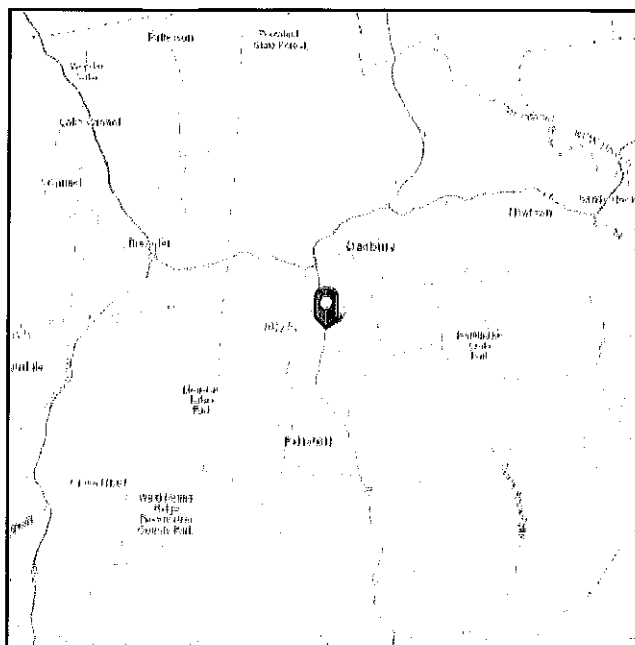


# ASCE 7 Hazards Report

**Address:**  
No Address at This  
Location

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

**Elevation:** 496.16 ft (NAVD 88)  
**Latitude:** 41.349722  
**Longitude:** -73.468333



## Wind

### Results:

<b>Wind Speed:</b>	<b>116 Vmph</b>
10-year MRI	76 Vmph
25-year MRI	85 Vmph
50-year MRI	90 Vmph
100-year MRI	96 Vmph

**120 MPH - 2018 CONNECTICUT STATE BUILDING CODE**

**Data Source:** ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, incorporating errata of March 12, 2014

**Date Accessed:** Wed Apr 24 2019

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

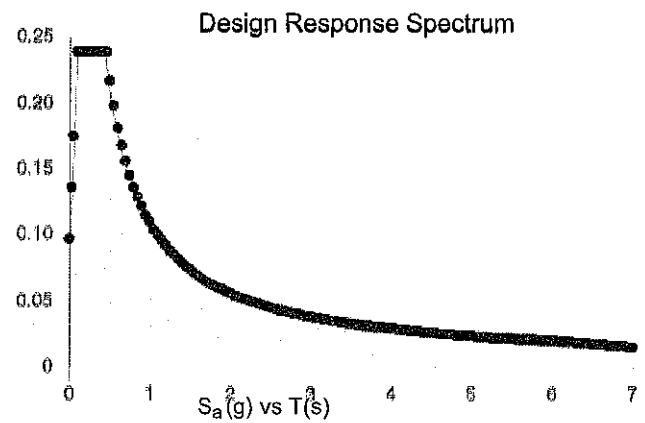
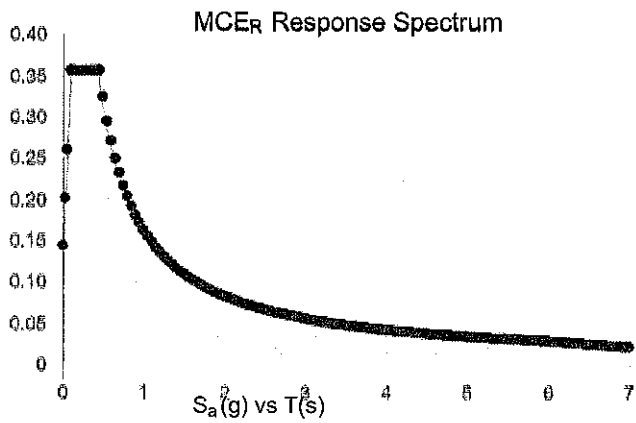


**Site Soil Class:** D - Stiff Soil

**Results:**

$S_s$ :	0.222	$S_{DS}$ :	0.237
$S_1$ :	0.067	$S_{D1}$ :	0.108
$F_a$ :	1.6	$T_L$ :	6
$F_v$ :	2.4	PGA :	0.122
$S_{MS}$ :	0.355	PGA <sub>M</sub> :	0.19
$S_{M1}$ :	0.161	$F_{PGA}$ :	1.555
		$I_e$ :	1

**Seismic Design Category B**



**Data Accessed:**

Wed Apr 24 2019

**Date Source:**

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

**Results:**

Ice Thickness:	0.75 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph

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

**Date Accessed:** Wed Apr 24 2019

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

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

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# Exhibit E

## **Mount Analysis**



Engineered Tower Solutions, PLLC  
 8120 Sheridan Blvd, Suite A-311  
 Westminster, CO 80003  
 (919) 782-2710  
[Helen.Tesfaye@ets-pllc.com](mailto:Helen.Tesfaye@ets-pllc.com)

Date: **April 29, 2019**

Charles McGuirt  
 Crown Castle  
 3530 Toringdon Way, Suite 300  
 Charlotte, NC 28277  
 (704) 405-6607

**Subject:** Mount Analysis Report

**Carrier Designation:** T-Mobile Equipment Change-Out  
**Carrier Site Number:** CT11092J  
**Carrier Site Name:** Danbury/Rt 7

**Crown Castle Designation:** Crown Castle BU Number: 823631  
**Crown Castle Site Name:** Danbury/Rt 7  
**Crown Castle JDE Job Number:** 559235  
**Crown Castle Order Number:** 479807 Rev. 0

**Engineering Firm Designation:** ETS, PLLC Report Designation: 192563.14

**Site Data:** 36 Sugar Hollow Road, Danbury, Fairfield County, CT 06810  
 Latitude: 41° 20' 59.00" Longitude: -73° 28' 6.00"

**Structure Information:** Tower Height & Type: 105.0 ft Monopole  
 Mount Elevation: 105.0 ft  
 Mount Type: 10.7 ft Platform Mount

Dear Charles McGuirt

ETS, PLLC is pleased to submit this **“Mount Analysis Report”** to determine the structural integrity of T-Mobile’s antenna mounting system with the proposed appurtenance and equipment addition on the above mentioned supporting tower structure. Analysis of the existing supporting tower structure is to be completed by others and therefore is not part of this analysis. Analysis of the antenna mounting system as a tie-off point for fall protection or rigging is not part of this document.

The purpose of the analysis is to determine acceptability of the mount stress level. Based on our analysis we have determined the mount stress level to be:

**Platform Mount**

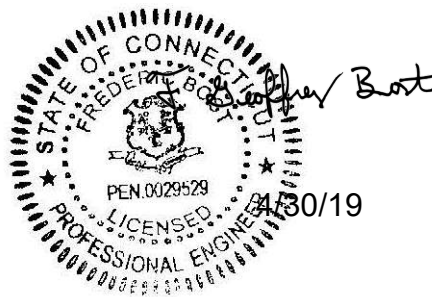
**Sufficient**

The analysis has been performed in accordance with the 2018 Connecticut State Building Code based upon an ultimate 3-second gust wind speed of 120 mph. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount analysis prepared by: Helen Tesfaye, EI

Respectfully Submitted by:

Frederic Bost, PE  
 Owner/ President  
 (919) 782-2710  
[Geoff.Bost@ets-pllc.com](mailto:Geoff.Bost@ets-pllc.com)



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### 2) ANALYSIS CRITERIA

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4.1) Recommendations

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### 6) APPENDIX B

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### 7) APPENDIX C

Software Analysis Output

### 8) APPENDIX D

Additional Calculations

**1) INTRODUCTION**

This mount is an existing 10.7 ft Platform Mount mapped by Pier Structural Engineering Corp. This mount is installed at the 105.0 ft elevation on 105.0 ft Monopole.

**2) ANALYSIS CRITERIA**

<b>Building Code:</b>	2015 IBC
<b>TIA-222 Revision:</b>	TIA-222-H
<b>Risk Category:</b>	II
<b>Ultimate Wind Speed:</b>	120 mph
<b>Exposure Category:</b>	B
<b>Topographic Factor at Base:</b>	1.00
<b>Topographic Factor at Mount:</b>	1.00
<b>Ice Thickness:</b>	1.5 in
<b>Wind Speed with Ice:</b>	50 mph
<b>Seismic S<sub>s</sub>:</b>	0.222
<b>Seismic S<sub>1</sub>:</b>	0.067
<b>Live Loading Wind Speed:</b>	30 mph
<b>Man Live Load at Mid/End-Points:</b>	250 lb
<b>Man Live Load at Mount Pipes:</b>	500 lb

**Table 1 - Proposed Equipment Configuration**

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
105.0	105.0	2	ERICSSON	AIR 32 B2A/B66AA	10.7 ft Platform Mount
		2	ERICSSON	AIR 21 B2A B4P	
		2	ERICSSON	KRY 112 144/1	
	103.0	2	RFS/CELWAVE	APXVAARR24 43-U-NA20	
		2	ERICSSON	RADIO 4449 B12/B71	

### 3) ANALYSIS PROCEDURE

**Table 2 - Documents Provided**

Document	Remarks	Reference	Source
Carrier Application	T-Mobile	04/18/2019	CCIsites
4-Structural Analysis Report	Paul J. Ford and Company	5602996	CCIsites
Structure Level Drawings (Proposed)	T-Mobile Northeast LLC	04/23/2019	CCIsites
4-Mount Mapping Report	Pier Structural Engineering Corp.	04/15/2019	CCIsites

#### 3.1) Analysis Method

RISA 3D (Version 17.0.2), a commercially available analysis software package, was used to create a three-dimensional model of the antenna mounting system and calculate member stresses for various loading cases.

A tool internally developed, using Microsoft Excel, by ETS, PLLC was used to calculate wind loading on all appurtenances, dishes, and mount members for various load cases. Selected output from the analysis is included in Appendix B.

This analysis was performed in accordance with Crown Castle's ENG-SOW-10208 Tower Mount Analysis (Revision C).

#### 3.2) Assumptions

- 1) The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design and manufacturer's specification.
- 2) The configuration of antennas, mounts and other appurtenances are as specified in Table 1 and the referenced drawings.
- 3) All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
- 4) This Structural Analysis is not a condition assessment of the mount and is an evaluation of the theoretical structural capacity.
- 5) This analysis is based from the information supplied, and therefore, this report's results are as accurate as the supplied data.
- 6) Engineered Tower Solutions, PLLC makes no warranties, expressed and/or implied, in connection with this report, and disclaims any liability associated with material, fabrication, or erection of the mount. Engineered Tower Solutions, PLLC will not be held responsible from any consequential or incidental damages sustained by any person, firm, or organization as a result of the contents of this report. The maximum liability of Engineered Tower Solutions, PLLC pursuant to this report will be limited to the total fee received for compilation of this report.
- 7) It is the tower owner's responsibility to verify that the mount modeled and analyzed is the correct structure modeled.
- 8) The use of this report shall be limited to the purpose for which it was commissioned and may not be used for any other purposes without the written consent of Engineered Tower Solutions, PLLC.
- 9) Steel grades have been assumed as follows:
 

a) Channel, Solid Round, Angle, Plate	ASTM A36 (GR 36)
b) HSS (Rectangular)	ASTM A500 (GR B-46)
c) HSS (Round)	ASTM A500 (GR B-42)
d) Pipe	ASTM A53 (GR 35)
e) Connection Bolts	ASTM A325
f) U-Bolts	SAE 429 Gr.2

This analysis may be affected if any assumptions are not valid or have been made in error. ETS, PLLC should be notified to determine the effect on the structural integrity of the antenna mounting system.

**4) ANALYSIS RESULTS**

**Table 3 - Mount Component Stresses vs. Capacity (Platform Mount)**

Notes	Component	Critical Member	Centerline (ft)	% Capacity	Pass / Fail
1	Face Mount Horizontal	FM-1	105.0	31.4	Pass
	Side Arm Horizontal	SA-1		25.9	Pass
	Mount Pipes	MP3		34.3	Pass
2	Mount to Tower Connections	N256		9.0	Pass

<b>Structure Rating (max from all components) =</b>	<b>34.3%</b>
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Notes:

- 1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
- 2) See additional documentation in "Appendix D – Additional Calculations" for calculations supporting the % capacity consumed.

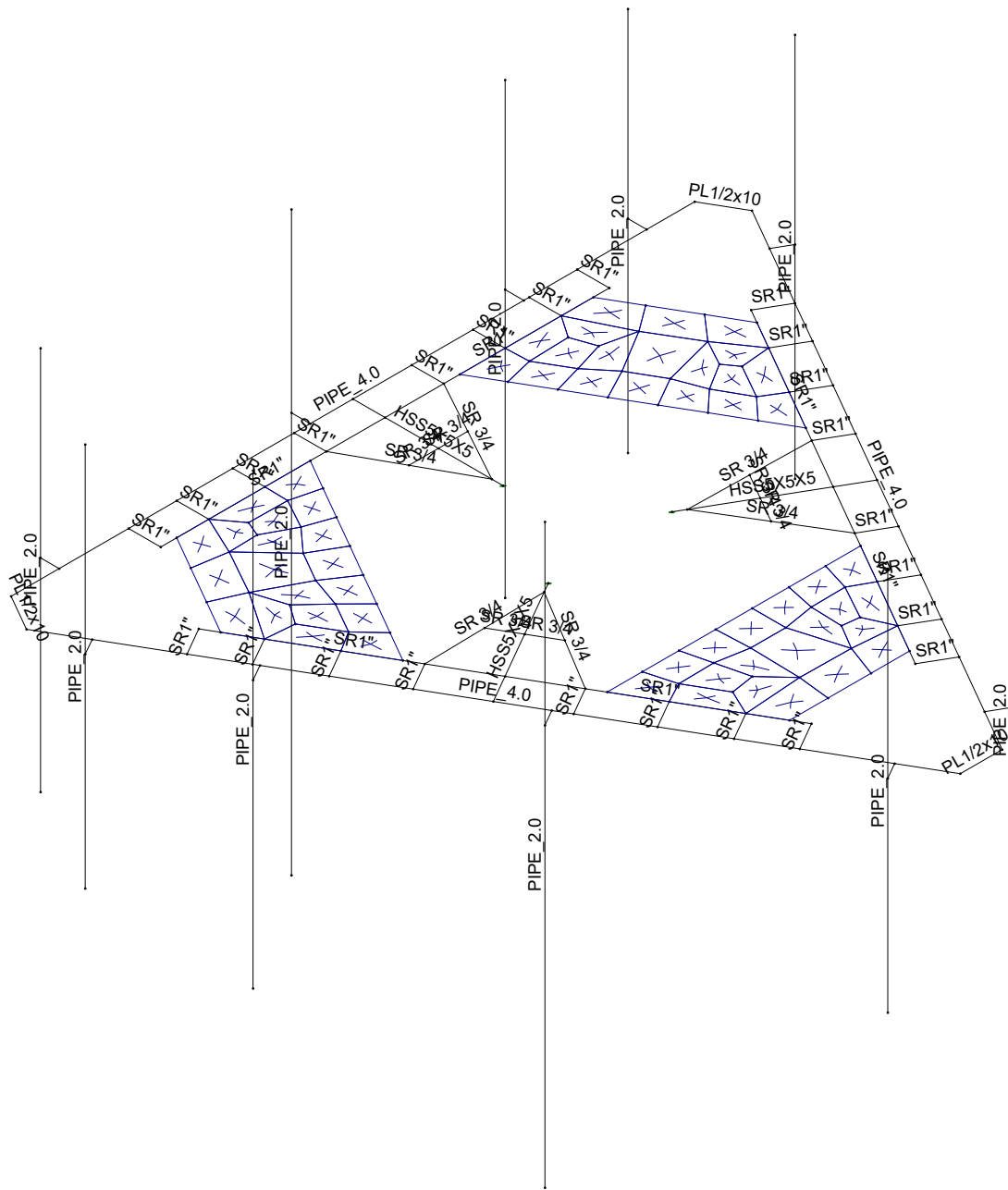
**4.1) Recommendations**

The mount has sufficient capacity to carry the proposed loading configuration. No modifications are required at this time.



**APPENDIX A**

**WIRE FRAME AND RENDERED MODELS**



Engineered Tower Solutio...

HHT

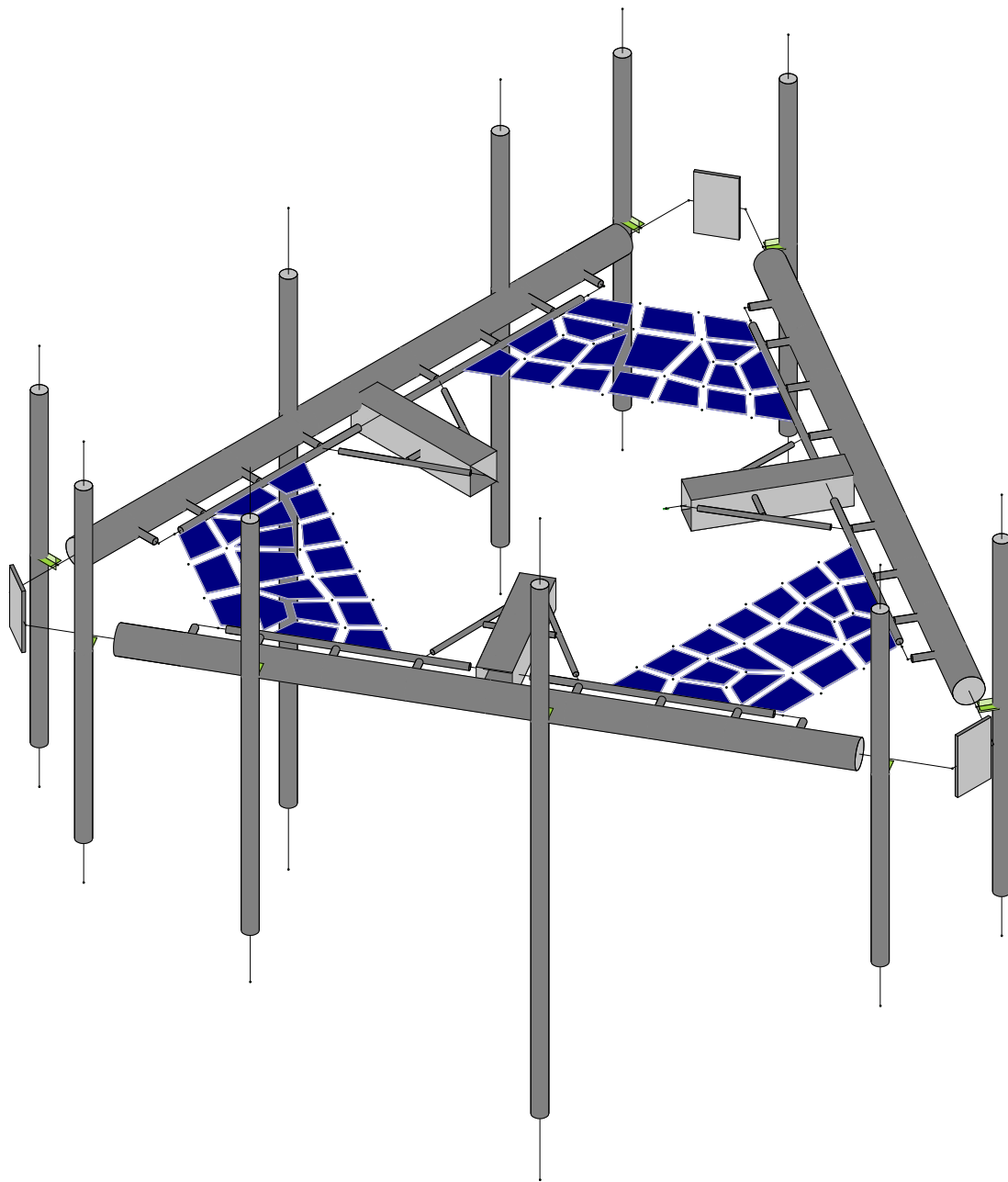
192563.14

Danbury/Rt 7

SK - 1

Apr 29, 2019 at 2:26 PM

Danbury Rt 7\_Loaded.r3d



Engineered Tower Solutio...

HHT

192563.14

Danbury/Rt 7

SK - 2

Apr 29, 2019 at 2:26 PM

Danbury Rt 7\_Loaded.r3d

**APPENDIX B**  
**SOFTWARE INPUT CALCULATIONS**

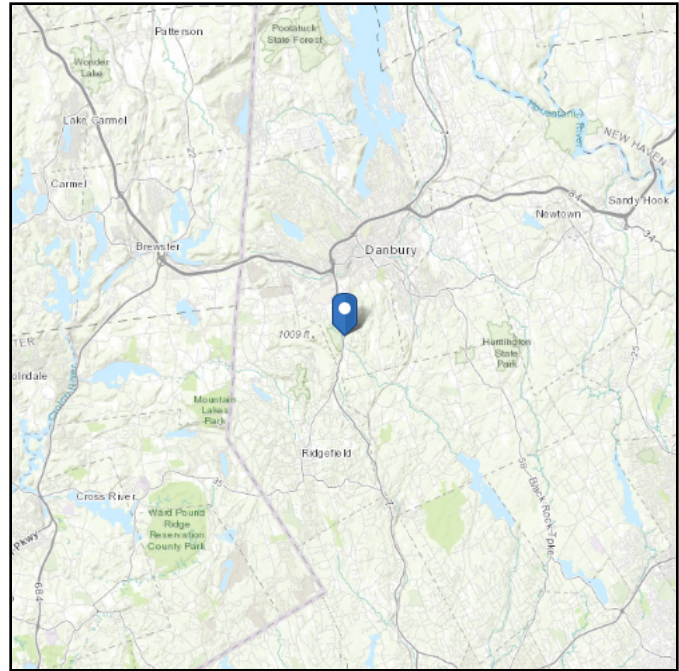


# ASCE 7 Hazards Report

**Address:**  
No Address at This  
Location

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

**Elevation:** 496.16 ft (NAVD 88)  
**Latitude:** 41.349722  
**Longitude:** -73.468333



## Wind

### Results:

Wind Speed:	116 Vmph
10-year MRI	76 Vmph
25-year MRI	85 Vmph
50-year MRI	90 Vmph
100-year MRI	96 Vmph

**Data Source:** ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, incorporating errata of March 12, 2014

**Date Accessed:** Fri Apr 26 2019

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

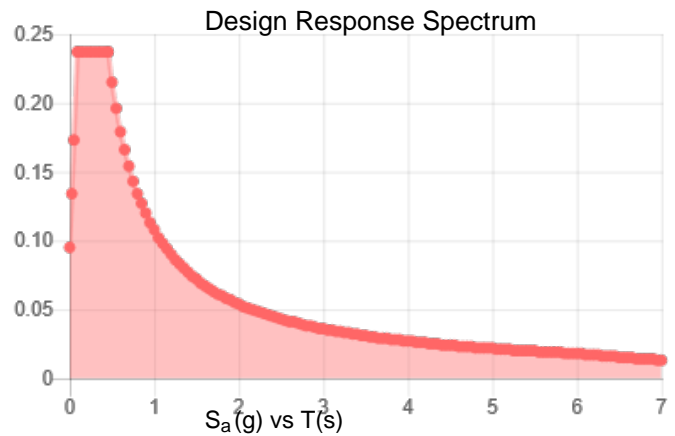
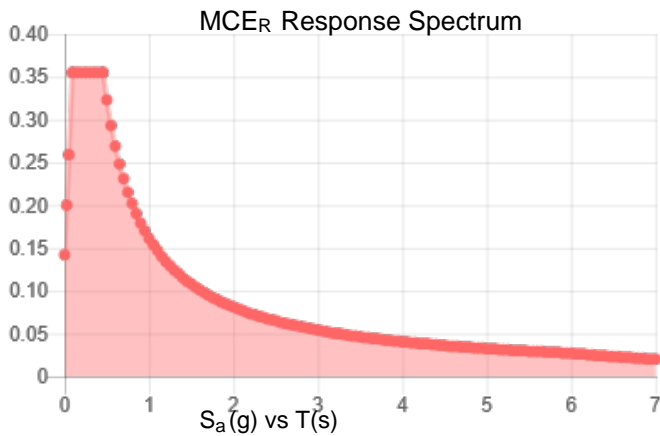
Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

**Site Soil Class:** D - Stiff Soil

**Results:**

$S_s$ :	0.222	$S_{DS}$ :	0.237
$S_1$ :	0.067	$S_{D1}$ :	0.108
$F_a$ :	1.6	$T_L$ :	6
$F_v$ :	2.4	PGA :	0.122
$S_{MS}$ :	0.355	PGA <sub>M</sub> :	0.19
$S_{M1}$ :	0.161	F <sub>PGA</sub> :	1.555
		$I_e$ :	1

**Seismic Design Category** B



**Data Accessed:**

Fri Apr 26 2019

**Date Source:**

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

## Ice

---

**Results:**

Ice Thickness: 0.75 in.  
Concurrent Temperature: 15 F  
Gust Speed: 50 mph

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

**Date Accessed:** Fri Apr 26 2019

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

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

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**APPENDIX C**  
**SOFTWARE ANALYSIS OUTPUT**



Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

Apr 29, 2019  
 2:25 PM  
 Checked By: JAA

**Member Primary Data**

	Label	I Joint	J Joint	K Joint	Rotate...	Section/Shape	Type	Design List	Material	Design ...
1	FM-1	N31	N3			PIPE 4.0	Beam	Pipe	A53 Gr.B	Typical
2	FM-2	N45	N16			PIPE 4.0	Beam	Pipe	A53 Gr.B	Typical
3	FM-3	N32	N46			PIPE 4.0	Beam	Pipe	A53 Gr.B	Typical
4	PL2	N3	N16			PL1/2x10	Beam	BAR	A36 Gr.36	Typical
5	PL3	N45	N46			PL1/2x10	Beam	BAR	A36 Gr.36	Typical
6	PL1	N32	N31			PL1/2x10	Beam	BAR	A36 Gr.36	Typical
7	SA-1	N254	N1			HSS5X5X5	Beam	Tube	A36 Gr.36	Typical
8	SA-3	N255	N33			HSS5X5X5	Beam	Tube	A36 Gr.36	Typical
9	SA-2	N256	N17			HSS5X5X5	Beam	Tube	A36 Gr.36	Typical
10	M10	N17A	N21			SR1"	Beam	BAR	A36 Gr.36	Typical
11	M11	N16A	N20			SR1"	Beam	BAR	A36 Gr.36	Typical
12	M12	N15	N19			SR1"	Beam	BAR	A36 Gr.36	Typical
13	M13	N14	N18			SR1"	Beam	BAR	A36 Gr.36	Typical
14	M14	N21	N22			SR1"	Beam	BAR	A36 Gr.36	Typical
15	M15	N18	N23			SR 3/4	Beam	BAR	A36 Gr.36	Typical
16	M16	N24	N25			SR 3/4	Beam	BAR	A36 Gr.36	Typical
17	M17	N29	N33A			SR1"	Beam	BAR	A36 Gr.36	Typical
18	M18	N28	N32A			SR1"	Beam	BAR	A36 Gr.36	Typical
19	M19	N27	N31A			SR1"	Beam	BAR	A36 Gr.36	Typical
20	M20	N13	N30			SR1"	Beam	BAR	A36 Gr.36	Typical
21	M21	N33A	N22			SR1"	Beam	BAR	A36 Gr.36	Typical
22	M22	N30	N23			SR 3/4	Beam	BAR	A36 Gr.36	Typical
23	M23	N24	N37			SR 3/4	Beam	BAR	A36 Gr.36	Typical
24	M24	N38	N42			SR1"	Beam	BAR	A36 Gr.36	Typical
25	M25	N37A	N41			SR1"	Beam	BAR	A36 Gr.36	Typical
26	M26	N36	N40			SR1"	Beam	BAR	A36 Gr.36	Typical
27	M27	N35	N39			SR1"	Beam	BAR	A36 Gr.36	Typical
28	M28	N42	N43			SR1"	Beam	BAR	A36 Gr.36	Typical
29	M29	N39	N44			SR 3/4	Beam	BAR	A36 Gr.36	Typical
30	M30	N45A	N46A			SR 3/4	Beam	BAR	A36 Gr.36	Typical
31	M31	N49	N53			SR1"	Beam	BAR	A36 Gr.36	Typical
32	M32	N48	N52			SR1"	Beam	BAR	A36 Gr.36	Typical
33	M33	N47	N51			SR1"	Beam	BAR	A36 Gr.36	Typical
34	M34	N34	N50			SR1"	Beam	BAR	A36 Gr.36	Typical
35	M35	N53	N43			SR1"	Beam	BAR	A36 Gr.36	Typical
36	M36	N50	N44			SR 3/4	Beam	BAR	A36 Gr.36	Typical
37	M37	N45A	N54			SR 3/4	Beam	BAR	A36 Gr.36	Typical
38	M38	N59	N63			SR1"	Beam	BAR	A36 Gr.36	Typical
39	M39	N58	N62			SR1"	Beam	BAR	A36 Gr.36	Typical
40	M40	N57	N61			SR1"	Beam	BAR	A36 Gr.36	Typical
41	M41	N56	N60			SR1"	Beam	BAR	A36 Gr.36	Typical
42	M42	N63	N64			SR1"	Beam	BAR	A36 Gr.36	Typical
43	M43	N60	N65			SR 3/4	Beam	BAR	A36 Gr.36	Typical
44	M44	N66	N67			SR 3/4	Beam	BAR	A36 Gr.36	Typical
45	M45	N70	N74			SR1"	Beam	BAR	A36 Gr.36	Typical
46	M46	N69	N73			SR1"	Beam	BAR	A36 Gr.36	Typical
47	M47	N68	N72			SR1"	Beam	BAR	A36 Gr.36	Typical
48	M48	N55	N71			SR1"	Beam	BAR	A36 Gr.36	Typical
49	M49	N74	N64			SR1"	Beam	BAR	A36 Gr.36	Typical
50	M50	N71	N65			SR 3/4	Beam	BAR	A36 Gr.36	Typical
51	M51	N66	N75			SR 3/4	Beam	BAR	A36 Gr.36	Typical
52	M52	N88	N92			RIGID	None	None	RIGID	Typical
53	M55	N89	N93			RIGID	None	None	RIGID	Typical
54	M56	N96	N97			RIGID	None	None	RIGID	Typical
55	M56A	N96A	N97A			RIGID	None	None	RIGID	Typical
56	MP1	N99	N96B			PIPE 2.0	Colu...	Pipe	A53 Gr.B	Typical

**Member Primary Data (Continued)**

	Label	I Joint	J Joint	K Joint	Rotate...	Section/Shape	Type	Design List	Material	Design ...
57	MP2	N102	N101			PIPE 2.0	Colu...	Pipe	A53 Gr.B	Typical
58	MP3	N103	N98			PIPE 2.0	Colu...	Pipe	A53 Gr.B	Typical
59	MP4	N100	N97B			PIPE 2.0	Colu...	Pipe	A53 Gr.B	Typical
60	M60	N104	N106			RIGID	None	None	RIGID	Typical
61	M61	N105	N107			RIGID	None	None	RIGID	Typical
62	MP5	N110	N108			PIPE 2.0	Colu...	Pipe	A53 Gr.B	Typical
63	MP6	N111	N109			PIPE 2.0	Colu...	Pipe	A53 Gr.B	Typical
64	M64	N112	N114			RIGID	None	None	RIGID	Typical
65	M65	N113	N115			RIGID	None	None	RIGID	Typical
66	M66	N116	N117			RIGID	None	None	RIGID	Typical
67	M67	N118	N119			RIGID	None	None	RIGID	Typical
68	MP7	N123	N120			PIPE 2.0	Colu...	Pipe	A53 Gr.B	Typical
69	MP8	N126	N125			PIPE 2.0	Colu...	Pipe	A53 Gr.B	Typical
70	MP9	N127	N122			PIPE 2.0	Colu...	Pipe	A53 Gr.B	Typical
71	MP10	N124	N121			PIPE 2.0	Colu...	Pipe	A53 Gr.B	Typical

**Material Takeoff**

	Material	Size	Pieces	Length[in]	Weight[K]
1	General				
2	RIGID		10	35	0
3	Total General		10	35	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	HSS5X5X5	3	84.4	.1
7	A36 Gr.36	PL1/2x10	3	23.5	0
8	A36 Gr.36	SR1"	30	396	0
9	A36 Gr.36	SR 3/4	12	170	0
10	A53 Gr.B	PIPE 2.0	10	816	.2
11	A53 Gr.B	PIPE 4.0	3	384	.3
12	Total HR Steel		61	1873.8	.8
13					
14	Plate Elements	Thickness (in)		Volume (yds^3)	
15	WorkPlatform	.1	57	0	0
16	Total Plates		57	0	0

**Member Point Loads (BLC 1 : Dead Load)**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	MP1	Y	0	%50
2	MP2	Y	-102.5	%69
3	MP3	Y	-203	%88
4	MP4	Y	-132.2	%50
5	MP5	Y	0	%50
6	MP6	Y	0	%50
7	MP7	Y	0	%50
8	MP8	Y	-102.5	%69
9	MP9	Y	-203	%88
10	MP10	Y	-132.2	%50

**Member Point Loads (BLC 2 : Wind Load (0 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	MP1	X	44.2	%50
2	MP2	X	37.8	%69
3	MP3	X	64.6	%88



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

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
4	MP4	X	7.9	%50
5	MP5	X	44.2	%50
6	MP6	X	44.2	%50
7	MP7	X	44.2	%50
8	MP8	X	63	%69
9	MP9	X	81.7	%88
10	MP10	X	35.1	%50
11	MP1	Z	0	%50
12	MP2	Z	0	%69
13	MP3	Z	0	%88
14	MP4	Z	0	%50
15	MP5	Z	0	%50
16	MP6	Z	0	%50
17	MP7	Z	0	%50
18	MP8	Z	0	%69
19	MP9	Z	0	%88
20	MP10	Z	0	%50

**Member Point Loads (BLC 3 : Wind Load (30 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	38.3	%50
2	MP2	X	40	%69
3	MP3	X	60.9	%88
4	MP4	X	14.7	%50
5	MP5	X	38.3	%50
6	MP6	X	38.3	%50
7	MP7	X	38.3	%50
8	MP8	X	40	%69
9	MP9	X	60.9	%88
10	MP10	X	14.7	%50
11	MP1	Z	22.1	%50
12	MP2	Z	23.1	%69
13	MP3	Z	35.1	%88
14	MP4	Z	8.5	%50
15	MP5	Z	22.1	%50
16	MP6	Z	22.1	%50
17	MP7	Z	22.1	%50
18	MP8	Z	23.1	%69
19	MP9	Z	35.1	%88
20	MP10	Z	8.5	%50

**Member Point Loads (BLC 4 : Wind Load (60 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	22.1	%50
2	MP2	X	31.5	%69
3	MP3	X	40.9	%88
4	MP4	X	17.6	%50
5	MP5	X	22.1	%50
6	MP6	X	22.1	%50
7	MP7	X	22.1	%50
8	MP8	X	18.9	%69
9	MP9	X	32.3	%88
10	MP10	X	3.9	%50
11	MP1	Z	38.3	%50
12	MP2	Z	54.6	%69
13	MP3	Z	70.8	%88



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

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
14	MP4	Z	30.4	%50
15	MP5	Z	38.3	%50
16	MP6	Z	38.3	%50
17	MP7	Z	38.3	%50
18	MP8	Z	32.8	%69
19	MP9	Z	55.9	%88
20	MP10	Z	6.8	%50

**Member Point Loads (BLC 5 : Wind Load (90 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	0	%50
2	MP2	X	0	%69
3	MP3	X	0	%88
4	MP4	X	0	%50
5	MP5	X	0	%50
6	MP6	X	0	%50
7	MP7	X	0	%50
8	MP8	X	0	%69
9	MP9	X	0	%88
10	MP10	X	0	%50
11	MP1	Z	44.2	%50
12	MP2	Z	71.4	%69
13	MP3	Z	87.4	%88
14	MP4	Z	44.2	%50
15	MP5	Z	44.2	%50
16	MP6	Z	44.2	%50
17	MP7	Z	44.2	%50
18	MP8	Z	46.2	%69
19	MP9	Z	70.3	%88
20	MP10	Z	17	%50

**Member Point Loads (BLC 6 : Wind Load (120 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	-22.1	%50
2	MP2	X	-31.5	%69
3	MP3	X	-40.9	%88
4	MP4	X	-17.6	%50
5	MP5	X	-22.1	%50
6	MP6	X	-22.1	%50
7	MP7	X	-22.1	%50
8	MP8	X	-31.5	%69
9	MP9	X	-40.9	%88
10	MP10	X	-17.6	%50
11	MP1	Z	38.3	%50
12	MP2	Z	54.6	%69
13	MP3	Z	70.8	%88
14	MP4	Z	30.4	%50
15	MP5	Z	38.3	%50
16	MP6	Z	38.3	%50
17	MP7	Z	38.3	%50
18	MP8	Z	54.6	%69
19	MP9	Z	70.8	%88
20	MP10	Z	30.4	%50

**Member Point Loads (BLC 7 : Wind Load (150 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
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**Member Point Loads (BLC 7 : Wind Load (150 deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in.-%]
1	MP1	X	-38.3	%50
2	MP2	X	-40	%69
3	MP3	X	-60.9	%88
4	MP4	X	-14.7	%50
5	MP5	X	-38.3	%50
6	MP6	X	-38.3	%50
7	MP7	X	-38.3	%50
8	MP8	X	-61.9	%69
9	MP9	X	-75.7	%88
10	MP10	X	-38.3	%50
11	MP1	Z	22.1	%50
12	MP2	Z	23.1	%69
13	MP3	Z	35.1	%88
14	MP4	Z	8.5	%50
15	MP5	Z	22.1	%50
16	MP6	Z	22.1	%50
17	MP7	Z	22.1	%50
18	MP8	Z	35.7	%69
19	MP9	Z	43.7	%88
20	MP10	Z	22.1	%50

**Member Point Loads (BLC 8 : Wind Load (180 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in.-%]
1	MP1	X	-44.2	%50
2	MP2	X	-37.8	%69
3	MP3	X	-64.6	%88
4	MP4	X	-7.9	%50
5	MP5	X	-44.2	%50
6	MP6	X	-44.2	%50
7	MP7	X	-44.2	%50
8	MP8	X	-63	%69
9	MP9	X	-81.7	%88
10	MP10	X	-35.1	%50
11	MP1	Z	0	%50
12	MP2	Z	0	%69
13	MP3	Z	0	%88
14	MP4	Z	0	%50
15	MP5	Z	0	%50
16	MP6	Z	0	%50
17	MP7	Z	0	%50
18	MP8	Z	0	%69
19	MP9	Z	0	%88
20	MP10	Z	0	%50

**Member Point Loads (BLC 9 : Wind Load (210 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in.-%]
1	MP1	X	-38.3	%50
2	MP2	X	-40	%69
3	MP3	X	-60.9	%88
4	MP4	X	-14.7	%50
5	MP5	X	-38.3	%50
6	MP6	X	-38.3	%50
7	MP7	X	-38.3	%50
8	MP8	X	-40	%69
9	MP9	X	-60.9	%88
10	MP10	X	-14.7	%50



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

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
11	MP1	Z	-22.1	%50
12	MP2	Z	-23.1	%69
13	MP3	Z	-35.1	%88
14	MP4	Z	-8.5	%50
15	MP5	Z	-22.1	%50
16	MP6	Z	-22.1	%50
17	MP7	Z	-22.1	%50
18	MP8	Z	-23.1	%69
19	MP9	Z	-35.1	%88
20	MP10	Z	-8.5	%50

**Member Point Loads (BLC 10 : Wind Load (240 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	-22.1	%50
2	MP2	X	-31.5	%69
3	MP3	X	-40.9	%88
4	MP4	X	-17.6	%50
5	MP5	X	-22.1	%50
6	MP6	X	-22.1	%50
7	MP7	X	-22.1	%50
8	MP8	X	-18.9	%69
9	MP9	X	-32.3	%88
10	MP10	X	-3.9	%50
11	MP1	Z	-38.3	%50
12	MP2	Z	-54.6	%69
13	MP3	Z	-70.8	%88
14	MP4	Z	-30.4	%50
15	MP5	Z	-38.3	%50
16	MP6	Z	-38.3	%50
17	MP7	Z	-38.3	%50
18	MP8	Z	-32.8	%69
19	MP9	Z	-55.9	%88
20	MP10	Z	-6.8	%50

**Member Point Loads (BLC 11 : Wind Load (270 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	0	%50
2	MP2	X	0	%69
3	MP3	X	0	%88
4	MP4	X	0	%50
5	MP5	X	0	%50
6	MP6	X	0	%50
7	MP7	X	0	%50
8	MP8	X	0	%69
9	MP9	X	0	%88
10	MP10	X	0	%50
11	MP1	Z	-44.2	%50
12	MP2	Z	-71.4	%69
13	MP3	Z	-87.4	%88
14	MP4	Z	-44.2	%50
15	MP5	Z	-44.2	%50
16	MP6	Z	-44.2	%50
17	MP7	Z	-44.2	%50
18	MP8	Z	-46.2	%69
19	MP9	Z	-70.3	%88
20	MP10	Z	-17	%50



**Member Point Loads (BLC 12 : Wind Load (300 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in.-%]
1	MP1	X	22.1	%50
2	MP2	X	31.5	%69
3	MP3	X	40.9	%88
4	MP4	X	17.6	%50
5	MP5	X	22.1	%50
6	MP6	X	22.1	%50
7	MP7	X	22.1	%50
8	MP8	X	31.5	%69
9	MP9	X	40.9	%88
10	MP10	X	17.6	%50
11	MP1	Z	-38.3	%50
12	MP2	Z	-54.6	%69
13	MP3	Z	-70.8	%88
14	MP4	Z	-30.4	%50
15	MP5	Z	-38.3	%50
16	MP6	Z	-38.3	%50
17	MP7	Z	-38.3	%50
18	MP8	Z	-54.6	%69
19	MP9	Z	-70.8	%88
20	MP10	Z	-30.4	%50

**Member Point Loads (BLC 13 : Wind Load (330 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in.-%]
1	MP1	X	38.3	%50
2	MP2	X	40	%69
3	MP3	X	60.9	%88
4	MP4	X	14.7	%50
5	MP5	X	38.3	%50
6	MP6	X	38.3	%50
7	MP7	X	38.3	%50
8	MP8	X	61.9	%69
9	MP9	X	75.7	%88
10	MP10	X	38.3	%50
11	MP1	Z	-22.1	%50
12	MP2	Z	-23.1	%69
13	MP3	Z	-35.1	%88
14	MP4	Z	-8.5	%50
15	MP5	Z	-22.1	%50
16	MP6	Z	-22.1	%50
17	MP7	Z	-22.1	%50
18	MP8	Z	-35.7	%69
19	MP9	Z	-43.7	%88
20	MP10	Z	-22.1	%50

**Member Point Loads (BLC 14 : Ice Load)**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in.-%]
1	MP1	Y	-50.1	%50
2	MP2	Y	-239.9	%69
3	MP3	Y	-552.5	%88
4	MP4	Y	-217.4	%50
5	MP5	Y	-50.1	%50
6	MP6	Y	-50.1	%50
7	MP7	Y	-50.1	%50
8	MP8	Y	-239.9	%69
9	MP9	Y	-552.5	%88
10	MP10	Y	-217.4	%50





**Member Point Loads (BLC 15 : Wind on Ice (0 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in.-%]
1	MP1	X	15.1	%50
2	MP2	X	14.8	%69
3	MP3	X	16.8	%88
4	MP4	X	4	%50
5	MP5	X	15.1	%50
6	MP6	X	15.1	%50
7	MP7	X	15.1	%50
8	MP8	X	24.5	%69
9	MP9	X	24.5	%88
10	MP10	X	12.4	%50
11	MP1	Z	0	%50
12	MP2	Z	0	%69
13	MP3	Z	0	%88
14	MP4	Z	0	%50
15	MP5	Z	0	%50
16	MP6	Z	0	%50
17	MP7	Z	0	%50
18	MP8	Z	0	%69
19	MP9	Z	0	%88
20	MP10	Z	0	%50

**Member Point Loads (BLC 16 : Wind on Ice (30 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in.-%]
1	MP1	X	13.1	%50
2	MP2	X	15.6	%69
3	MP3	X	16.8	%88
4	MP4	X	5.9	%50
5	MP5	X	13.1	%50
6	MP6	X	13.1	%50
7	MP7	X	13.1	%50
8	MP8	X	15.6	%69
9	MP9	X	16.8	%88
10	MP10	X	5.9	%50
11	MP1	Z	7.6	%50
12	MP2	Z	9	%69
13	MP3	Z	9.7	%88
14	MP4	Z	3.4	%50
15	MP5	Z	7.6	%50
16	MP6	Z	7.6	%50
17	MP7	Z	7.6	%50
18	MP8	Z	9	%69
19	MP9	Z	9.7	%88
20	MP10	Z	3.4	%50

**Member Point Loads (BLC 17 : Wind on Ice (60 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in.-%]
1	MP1	X	7.6	%50
2	MP2	X	12.2	%69
3	MP3	X	12.3	%88
4	MP4	X	6.2	%50
5	MP5	X	7.6	%50
6	MP6	X	7.6	%50
7	MP7	X	7.6	%50
8	MP8	X	7.4	%69
9	MP9	X	8.4	%88
10	MP10	X	2	%50



**Member Point Loads (BLC 17 : Wind on Ice (60 deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
11	MP1	Z	13.1	%50
12	MP2	Z	21.2	%69
13	MP3	Z	21.2	%88
14	MP4	Z	10.7	%50
15	MP5	Z	13.1	%50
16	MP6	Z	13.1	%50
17	MP7	Z	13.1	%50
18	MP8	Z	12.8	%69
19	MP9	Z	14.6	%88
20	MP10	Z	3.5	%50

**Member Point Loads (BLC 18 : Wind on Ice (90 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	0	%50
2	MP2	X	0	%69
3	MP3	X	0	%88
4	MP4	X	0	%50
5	MP5	X	0	%50
6	MP6	X	0	%50
7	MP7	X	0	%50
8	MP8	X	0	%69
9	MP9	X	0	%88
10	MP10	X	0	%50
11	MP1	Z	15.1	%50
12	MP2	Z	27.7	%69
13	MP3	Z	27.1	%88
14	MP4	Z	15.1	%50
15	MP5	Z	15.1	%50
16	MP6	Z	15.1	%50
17	MP7	Z	15.1	%50
18	MP8	Z	18.1	%69
19	MP9	Z	19.4	%88
20	MP10	Z	6.8	%50

**Member Point Loads (BLC 19 : Wind on Ice (120 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	-7.6	%50
2	MP2	X	-12.2	%69
3	MP3	X	-12.3	%88
4	MP4	X	-6.2	%50
5	MP5	X	-7.6	%50
6	MP6	X	-7.6	%50
7	MP7	X	-7.6	%50
8	MP8	X	-12.2	%69
9	MP9	X	-12.3	%88
10	MP10	X	-6.2	%50
11	MP1	Z	13.1	%50
12	MP2	Z	21.2	%69
13	MP3	Z	21.2	%88
14	MP4	Z	10.7	%50
15	MP5	Z	13.1	%50
16	MP6	Z	13.1	%50
17	MP7	Z	13.1	%50
18	MP8	Z	21.2	%69
19	MP9	Z	21.2	%88
20	MP10	Z	10.7	%50



**Member Point Loads (BLC 20 : Wind on Ice (150 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in.-%]
1	MP1	X	-13.1	%50
2	MP2	X	-15.6	%69
3	MP3	X	-16.8	%88
4	MP4	X	-5.9	%50
5	MP5	X	-13.1	%50
6	MP6	X	-13.1	%50
7	MP7	X	-13.1	%50
8	MP8	X	-24	%69
9	MP9	X	-23.5	%88
10	MP10	X	-13.1	%50
11	MP1	Z	7.6	%50
12	MP2	Z	9	%69
13	MP3	Z	9.7	%88
14	MP4	Z	3.4	%50
15	MP5	Z	7.6	%50
16	MP6	Z	7.6	%50
17	MP7	Z	7.6	%50
18	MP8	Z	13.9	%69
19	MP9	Z	13.5	%88
20	MP10	Z	7.6	%50

**Member Point Loads (BLC 21 : Wind on Ice (180 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in.-%]
1	MP1	X	-15.1	%50
2	MP2	X	-14.8	%69
3	MP3	X	-16.8	%88
4	MP4	X	-4	%50
5	MP5	X	-15.1	%50
6	MP6	X	-15.1	%50
7	MP7	X	-15.1	%50
8	MP8	X	-24.5	%69
9	MP9	X	-24.5	%88
10	MP10	X	-12.4	%50
11	MP1	Z	0	%50
12	MP2	Z	0	%69
13	MP3	Z	0	%88
14	MP4	Z	0	%50
15	MP5	Z	0	%50
16	MP6	Z	0	%50
17	MP7	Z	0	%50
18	MP8	Z	0	%69
19	MP9	Z	0	%88
20	MP10	Z	0	%50

**Member Point Loads (BLC 22 : Wind on Ice (210 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in.-%]
1	MP1	X	-13.1	%50
2	MP2	X	-15.6	%69
3	MP3	X	-16.8	%88
4	MP4	X	-5.9	%50
5	MP5	X	-13.1	%50
6	MP6	X	-13.1	%50
7	MP7	X	-13.1	%50
8	MP8	X	-15.6	%69
9	MP9	X	-16.8	%88
10	MP10	X	-5.9	%50



**Member Point Loads (BLC 22 : Wind on Ice (210 deg)) (Continued)**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in.-%]
11	MP1	Z	-7.6	%50
12	MP2	Z	-9	%69
13	MP3	Z	-9.7	%88
14	MP4	Z	-3.4	%50
15	MP5	Z	-7.6	%50
16	MP6	Z	-7.6	%50
17	MP7	Z	-7.6	%50
18	MP8	Z	-9	%69
19	MP9	Z	-9.7	%88
20	MP10	Z	-3.4	%50

**Member Point Loads (BLC 23 : Wind on Ice (240 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in.-%]
1	MP1	X	-7.6	%50
2	MP2	X	-12.2	%69
3	MP3	X	-12.3	%88
4	MP4	X	-6.2	%50
5	MP5	X	-7.6	%50
6	MP6	X	-7.6	%50
7	MP7	X	-7.6	%50
8	MP8	X	-7.4	%69
9	MP9	X	-8.4	%88
10	MP10	X	-2	%50
11	MP1	Z	-13.1	%50
12	MP2	Z	-21.2	%69
13	MP3	Z	-21.2	%88
14	MP4	Z	-10.7	%50
15	MP5	Z	-13.1	%50
16	MP6	Z	-13.1	%50
17	MP7	Z	-13.1	%50
18	MP8	Z	-12.8	%69
19	MP9	Z	-14.6	%88
20	MP10	Z	-3.5	%50

**Member Point Loads (BLC 24 : Wind on Ice (270 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in.-%]
1	MP1	X	0	%50
2	MP2	X	0	%69
3	MP3	X	0	%88
4	MP4	X	0	%50
5	MP5	X	0	%50
6	MP6	X	0	%50
7	MP7	X	0	%50
8	MP8	X	0	%69
9	MP9	X	0	%88
10	MP10	X	0	%50
11	MP1	Z	-15.1	%50
12	MP2	Z	-27.7	%69
13	MP3	Z	-27.1	%88
14	MP4	Z	-15.1	%50
15	MP5	Z	-15.1	%50
16	MP6	Z	-15.1	%50
17	MP7	Z	-15.1	%50
18	MP8	Z	-18.1	%69
19	MP9	Z	-19.4	%88
20	MP10	Z	-6.8	%50



**Member Point Loads (BLC 25 : Wind on Ice (300 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	7.6	%50
2	MP2	X	12.2	%69
3	MP3	X	12.3	%88
4	MP4	X	6.2	%50
5	MP5	X	7.6	%50
6	MP6	X	7.6	%50
7	MP7	X	7.6	%50
8	MP8	X	12.2	%69
9	MP9	X	12.3	%88
10	MP10	X	6.2	%50
11	MP1	Z	-13.1	%50
12	MP2	Z	-21.2	%69
13	MP3	Z	-21.2	%88
14	MP4	Z	-10.7	%50
15	MP5	Z	-13.1	%50
16	MP6	Z	-13.1	%50
17	MP7	Z	-13.1	%50
18	MP8	Z	-21.2	%69
19	MP9	Z	-21.2	%88
20	MP10	Z	-10.7	%50

**Member Point Loads (BLC 26 : Wind on Ice (330 deg))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	13.1	%50
2	MP2	X	15.6	%69
3	MP3	X	16.8	%88
4	MP4	X	5.9	%50
5	MP5	X	13.1	%50
6	MP6	X	13.1	%50
7	MP7	X	13.1	%50
8	MP8	X	24	%69
9	MP9	X	23.5	%88
10	MP10	X	13.1	%50
11	MP1	Z	-7.6	%50
12	MP2	Z	-9	%69
13	MP3	Z	-9.7	%88
14	MP4	Z	-3.4	%50
15	MP5	Z	-7.6	%50
16	MP6	Z	-7.6	%50
17	MP7	Z	-7.6	%50
18	MP8	Z	-13.9	%69
19	MP9	Z	-13.5	%88
20	MP10	Z	-7.6	%50

**Member Point Loads (BLC 27 : Horizontal Seismic, Eh (0))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	0	%50
2	MP2	X	102.5	%69
3	MP3	X	203	%88
4	MP4	X	132.2	%50
5	MP5	X	0	%50
6	MP6	X	0	%50
7	MP7	X	0	%50
8	MP8	X	102.5	%69
9	MP9	X	203	%88
10	MP10	X	132.2	%50



**Member Point Loads (BLC 27 : Horizontal Seismic, Eh (0)) (Continued)**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
11	MP1	Z	0	%50
12	MP2	Z	0	%69
13	MP3	Z	0	%88
14	MP4	Z	0	%50
15	MP5	Z	0	%50
16	MP6	Z	0	%50
17	MP7	Z	0	%50
18	MP8	Z	0	%69
19	MP9	Z	0	%88
20	MP10	Z	0	%50

**Member Point Loads (BLC 28 : Horizontal Seismic, Eh (30))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	0	%50
2	MP2	X	88.8	%69
3	MP3	X	175.8	%88
4	MP4	X	114.5	%50
5	MP5	X	0	%50
6	MP6	X	0	%50
7	MP7	X	0	%50
8	MP8	X	88.8	%69
9	MP9	X	175.8	%88
10	MP10	X	114.5	%50
11	MP1	Z	0	%50
12	MP2	Z	51.2	%69
13	MP3	Z	101.5	%88
14	MP4	Z	66.1	%50
15	MP5	Z	0	%50
16	MP6	Z	0	%50
17	MP7	Z	0	%50
18	MP8	Z	51.2	%69
19	MP9	Z	101.5	%88
20	MP10	Z	66.1	%50

**Member Point Loads (BLC 29 : Horizontal Seismic, Eh (60))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	0	%50
2	MP2	X	51.3	%69
3	MP3	X	101.5	%88
4	MP4	X	66.1	%50
5	MP5	X	0	%50
6	MP6	X	0	%50
7	MP7	X	0	%50
8	MP8	X	51.3	%69
9	MP9	X	101.5	%88
10	MP10	X	66.1	%50
11	MP1	Z	0	%50
12	MP2	Z	88.8	%69
13	MP3	Z	175.8	%88
14	MP4	Z	114.5	%50
15	MP5	Z	0	%50
16	MP6	Z	0	%50
17	MP7	Z	0	%50
18	MP8	Z	88.8	%69
19	MP9	Z	175.8	%88
20	MP10	Z	114.5	%50



**Member Point Loads (BLC 30 : Horizontal Seismic, Eh (90))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	0	%50
2	MP2	X	0	%69
3	MP3	X	0	%88
4	MP4	X	0	%50
5	MP5	X	0	%50
6	MP6	X	0	%50
7	MP7	X	0	%50
8	MP8	X	0	%69
9	MP9	X	0	%88
10	MP10	X	0	%50
11	MP1	Z	0	%50
12	MP2	Z	102.5	%69
13	MP3	Z	203	%88
14	MP4	Z	132.2	%50
15	MP5	Z	0	%50
16	MP6	Z	0	%50
17	MP7	Z	0	%50
18	MP8	Z	102.5	%69
19	MP9	Z	203	%88
20	MP10	Z	132.2	%50

**Member Point Loads (BLC 31 : Horizontal Seismic, Eh (120))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	0	%50
2	MP2	X	-51.2	%69
3	MP3	X	-101.5	%88
4	MP4	X	-66.1	%50
5	MP5	X	0	%50
6	MP6	X	0	%50
7	MP7	X	0	%50
8	MP8	X	-51.2	%69
9	MP9	X	-101.5	%88
10	MP10	X	-66.1	%50
11	MP1	Z	0	%50
12	MP2	Z	88.8	%69
13	MP3	Z	175.8	%88
14	MP4	Z	114.5	%50
15	MP5	Z	0	%50
16	MP6	Z	0	%50
17	MP7	Z	0	%50
18	MP8	Z	88.8	%69
19	MP9	Z	175.8	%88
20	MP10	Z	114.5	%50

**Member Point Loads (BLC 32 : Horizontal Seismic, Eh (150))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	0	%50
2	MP2	X	-88.8	%69
3	MP3	X	-175.8	%88
4	MP4	X	-114.5	%50
5	MP5	X	0	%50
6	MP6	X	0	%50
7	MP7	X	0	%50
8	MP8	X	-88.8	%69
9	MP9	X	-175.8	%88
10	MP10	X	-114.5	%50



**Member Point Loads (BLC 32 : Horizontal Seismic, Eh (150)) (Continued)**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
11	MP1	Z	0	%50
12	MP2	Z	51.2	%69
13	MP3	Z	101.5	%88
14	MP4	Z	66.1	%50
15	MP5	Z	0	%50
16	MP6	Z	0	%50
17	MP7	Z	0	%50
18	MP8	Z	51.2	%69
19	MP9	Z	101.5	%88
20	MP10	Z	66.1	%50

**Member Point Loads (BLC 33 : Horizontal Seismic, Eh (180))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	0	%50
2	MP2	X	-102.5	%69
3	MP3	X	-203	%88
4	MP4	X	-132.2	%50
5	MP5	X	0	%50
6	MP6	X	0	%50
7	MP7	X	0	%50
8	MP8	X	-102.5	%69
9	MP9	X	-203	%88
10	MP10	X	-132.2	%50
11	MP1	Z	0	%50
12	MP2	Z	0	%69
13	MP3	Z	0	%88
14	MP4	Z	0	%50
15	MP5	Z	0	%50
16	MP6	Z	0	%50
17	MP7	Z	0	%50
18	MP8	Z	0	%69
19	MP9	Z	0	%88
20	MP10	Z	0	%50

**Member Point Loads (BLC 34 : Horizontal Seismic, Eh (210))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	0	%50
2	MP2	X	-88.8	%69
3	MP3	X	-175.8	%88
4	MP4	X	-114.5	%50
5	MP5	X	0	%50
6	MP6	X	0	%50
7	MP7	X	0	%50
8	MP8	X	-88.8	%69
9	MP9	X	-175.8	%88
10	MP10	X	-114.5	%50
11	MP1	Z	0	%50
12	MP2	Z	-51.3	%69
13	MP3	Z	-101.5	%88
14	MP4	Z	-66.1	%50
15	MP5	Z	0	%50
16	MP6	Z	0	%50
17	MP7	Z	0	%50
18	MP8	Z	-51.3	%69
19	MP9	Z	-101.5	%88
20	MP10	Z	-66.1	%50





**Member Point Loads (BLC 35 : Horizontal Seismic, Eh (240))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	0	%50
2	MP2	X	-51.3	%69
3	MP3	X	-101.5	%88
4	MP4	X	-66.1	%50
5	MP5	X	0	%50
6	MP6	X	0	%50
7	MP7	X	0	%50
8	MP8	X	-51.3	%69
9	MP9	X	-101.5	%88
10	MP10	X	-66.1	%50
11	MP1	Z	0	%50
12	MP2	Z	-88.8	%69
13	MP3	Z	-175.8	%88
14	MP4	Z	-114.5	%50
15	MP5	Z	0	%50
16	MP6	Z	0	%50
17	MP7	Z	0	%50
18	MP8	Z	-88.8	%69
19	MP9	Z	-175.8	%88
20	MP10	Z	-114.5	%50

**Member Point Loads (BLC 36 : Horizontal Seismic, Eh (270))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	0	%50
2	MP2	X	0	%69
3	MP3	X	0	%88
4	MP4	X	0	%50
5	MP5	X	0	%50
6	MP6	X	0	%50
7	MP7	X	0	%50
8	MP8	X	0	%69
9	MP9	X	0	%88
10	MP10	X	0	%50
11	MP1	Z	0	%50
12	MP2	Z	-102.5	%69
13	MP3	Z	-203	%88
14	MP4	Z	-132.2	%50
15	MP5	Z	0	%50
16	MP6	Z	0	%50
17	MP7	Z	0	%50
18	MP8	Z	-102.5	%69
19	MP9	Z	-203	%88
20	MP10	Z	-132.2	%50

**Member Point Loads (BLC 37 : Horizontal Seismic, Eh (300))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP1	X	0	%50
2	MP2	X	51.3	%69
3	MP3	X	101.5	%88
4	MP4	X	66.1	%50
5	MP5	X	0	%50
6	MP6	X	0	%50
7	MP7	X	0	%50
8	MP8	X	51.3	%69
9	MP9	X	101.5	%88
10	MP10	X	66.1	%50

**Member Point Loads (BLC 37 : Horizontal Seismic, Eh (300)) (Continued)**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
11	MP1	Z	0	%50
12	MP2	Z	-88.8	%69
13	MP3	Z	-175.8	%88
14	MP4	Z	-114.5	%50
15	MP5	Z	0	%50
16	MP6	Z	0	%50
17	MP7	Z	0	%50
18	MP8	Z	-88.8	%69
19	MP9	Z	-175.8	%88
20	MP10	Z	-114.5	%50

**Member Point Loads (BLC 38 : Horizontal Seismic, Eh (330))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	MP1	X	0	%50
2	MP2	X	88.8	%69
3	MP3	X	175.8	%88
4	MP4	X	114.5	%50
5	MP5	X	0	%50
6	MP6	X	0	%50
7	MP7	X	0	%50
8	MP8	X	88.8	%69
9	MP9	X	175.8	%88
10	MP10	X	114.5	%50
11	MP1	Z	0	%50
12	MP2	Z	-51.3	%69
13	MP3	Z	-101.5	%88
14	MP4	Z	-66.1	%50
15	MP5	Z	0	%50
16	MP6	Z	0	%50
17	MP7	Z	0	%50
18	MP8	Z	-51.3	%69
19	MP9	Z	-101.5	%88
20	MP10	Z	-66.1	%50

**Member Point Loads (BLC 39 : Maintenance Load, Lm (MP1))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	MP1	Y	-500	%50

**Member Point Loads (BLC 40 : Maintenance Load, Lm (MP2))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	MP2	Y	-500	%50

**Member Point Loads (BLC 41 : Maintenance Load, Lm (MP3))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	MP3	Y	-500	%50

**Member Point Loads (BLC 42 : Maintenance Load, Lm (MP4))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	MP4	Y	-500	%50

**Member Point Loads (BLC 43 : Maintenance Load, Lm (MP5))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in,%]
1	MP5	Y	-500	%50



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**Member Point Loads (BLC 44 : Maintenance Load, Lm (MP6))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP6	Y	-500	%50

**Member Point Loads (BLC 45 : Maintenance Load, Lm (MP7))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP7	Y	-500	%50

**Member Point Loads (BLC 46 : Maintenance Load, Lm (MP8))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP8	Y	-500	%50

**Member Point Loads (BLC 47 : Maintenance Load, Lm (MP9))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP9	Y	-500	%50

**Member Point Loads (BLC 48 : Maintenance Load, Lm (MP10))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	MP10	Y	-500	%50

**Member Point Loads (BLC 75 : Maintenance Load, Lv (Pos. 1))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	FM-1	Y	-250	0

**Member Point Loads (BLC 76 : Maintenance Load, Lv (Pos. 2))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	FM-1	Y	-250	%50

**Member Point Loads (BLC 77 : Maintenance Load, Lv (Pos. 3))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	FM-1	Y	-250	%100

**Member Point Loads (BLC 78 : Maintenance Load, Lv (Pos. 4))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	FM-2	Y	-250	0

**Member Point Loads (BLC 79 : Maintenance Load, Lv (Pos. 5))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	FM-2	Y	-250	%50

**Member Point Loads (BLC 80 : Maintenance Load, Lv (Pos. 6))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	FM-2	Y	-250	%100

**Member Point Loads (BLC 81 : Maintenance Load, Lv (Pos. 7))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	FM-3	Y	-250	0

**Member Point Loads (BLC 82 : Maintenance Load, Lv (Pos. 8))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	FM-3	Y	-250	%50



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**Member Point Loads (BLC 83 : Maintenance Load, Lv (Pos. 9))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	FM-3	Y	-250	%100

**Member Point Loads (BLC 84 : Maintenance Load, Lv (Pos. 10))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	SA-1	Y	-250	%100

**Member Point Loads (BLC 85 : Maintenance Load, Lv (Pos. 11))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	SA-3	Y	-250	%100

**Member Point Loads (BLC 86 : Maintenance Load, Lv (Pos. 12))**

	Member Label	Direction	Magnitude[lb.lb-ft]	Location[in, %]
1	SA-2	Y	-250	%100

**Member Distributed Loads (BLC 2 : Wind Load (0 deg))**

	Member Label	Direction	Start Magnitude[lb/ft, ...]	End Magnitude[lb/ft, ...]	Start Location[in, %]	End Location[in, %]
1	FM-1	X	14	14	0	0
2	FM-2	X	14	14	0	0
3	FM-3	X	14	14	0	0
4	PL1	X	41.4	41.4	0	0
5	PL2	X	41.4	41.4	0	0
6	PL3	X	41.4	41.4	0	0
7	SA-1	X	0	0	0	0
8	SA-3	X	25.9	25.9	0	0
9	SA-2	X	25.9	25.9	0	0
10	M10	X	0	0	0	0
11	M11	X	0	0	0	0
12	M12	X	0	0	0	0
13	M13	X	0	0	0	0
14	M14	X	3.1	3.1	0	0
15	M15	X	2.3	2.3	0	0
16	M16	X	2.3	2.3	0	0
17	M17	X	0	0	0	0
18	M18	X	0	0	0	0
19	M19	X	0	0	0	0
20	M20	X	0	0	0	0
21	M21	X	3.1	3.1	0	0
22	M22	X	2.3	2.3	0	0
23	M23	X	2.3	2.3	0	0
24	M24	X	3.1	3.1	0	0
25	M25	X	3.1	3.1	0	0
26	M26	X	3.1	3.1	0	0
27	M27	X	3.1	3.1	0	0
28	M28	X	3.1	3.1	0	0
29	M29	X	2.3	2.3	0	0
30	M30	X	2.3	2.3	0	0
31	M31	X	3.1	3.1	0	0
32	M32	X	3.1	3.1	0	0
33	M33	X	3.1	3.1	0	0
34	M34	X	3.1	3.1	0	0
35	M35	X	3.1	3.1	0	0
36	M36	X	2.3	2.3	0	0
37	M37	X	2.3	2.3	0	0
38	M38	X	3.1	3.1	0	0



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**Member Distributed Loads (BLC 2 : Wind Load (0 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
39	M39	X	3.1	3.1	0	0
40	M40	X	3.1	3.1	0	0
41	M41	X	3.1	3.1	0	0
42	M42	X	3.1	3.1	0	0
43	M43	X	2.3	2.3	0	0
44	M44	X	2.3	2.3	0	0
45	M45	X	3.1	3.1	0	0
46	M46	X	3.1	3.1	0	0
47	M47	X	3.1	3.1	0	0
48	M48	X	3.1	3.1	0	0
49	M49	X	3.1	3.1	0	0
50	M50	X	2.3	2.3	0	0
51	M51	X	2.3	2.3	0	0
52	FM-1	Z	0	0	0	0
53	FM-2	Z	0	0	0	0
54	FM-3	Z	0	0	0	0
55	PL1	Z	0	0	0	0
56	PL2	Z	0	0	0	0
57	PL3	Z	0	0	0	0
58	SA-1	Z	0	0	0	0
59	SA-3	Z	0	0	0	0
60	SA-2	Z	0	0	0	0
61	M10	Z	0	0	0	0
62	M11	Z	0	0	0	0
63	M12	Z	0	0	0	0
64	M13	Z	0	0	0	0
65	M14	Z	0	0	0	0
66	M15	Z	0	0	0	0
67	M16	Z	0	0	0	0
68	M17	Z	0	0	0	0
69	M18	Z	0	0	0	0
70	M19	Z	0	0	0	0
71	M20	Z	0	0	0	0
72	M21	Z	0	0	0	0
73	M22	Z	0	0	0	0
74	M23	Z	0	0	0	0
75	M24	Z	0	0	0	0
76	M25	Z	0	0	0	0
77	M26	Z	0	0	0	0
78	M27	Z	0	0	0	0
79	M28	Z	0	0	0	0
80	M29	Z	0	0	0	0
81	M30	Z	0	0	0	0
82	M31	Z	0	0	0	0
83	M32	Z	0	0	0	0
84	M33	Z	0	0	0	0
85	M34	Z	0	0	0	0
86	M35	Z	0	0	0	0
87	M36	Z	0	0	0	0
88	M37	Z	0	0	0	0
89	M38	Z	0	0	0	0
90	M39	Z	0	0	0	0
91	M40	Z	0	0	0	0
92	M41	Z	0	0	0	0
93	M42	Z	0	0	0	0
94	M43	Z	0	0	0	0
95	M44	Z	0	0	0	0



**Member Distributed Loads (BLC 2 : Wind Load (0 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
96	M45	Z	0	0	0	0
97	M46	Z	0	0	0	0
98	M47	Z	0	0	0	0
99	M48	Z	0	0	0	0
100	M49	Z	0	0	0	0
101	M50	Z	0	0	0	0
102	M51	Z	0	0	0	0
103	MP1	X	0	0	0	0
104	MP2	X	41.3	41.3	%49.074	%100
105	MP3	X	130.7	130.7	%31.012	%100
106	MP4	X	42.8	42.8	%13.472	%92.083
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	32.2	32.2	%49.074	%100
111	MP9	X	75.7	75.7	%31.012	%100
112	MP10	X	34	34	%13.472	%92.083
113	MP1	Z	0	0	0	0
114	MP2	Z	0	0	0	0
115	MP3	Z	0	0	0	0
116	MP4	Z	0	0	0	0
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	0	0	0	0
121	MP9	Z	0	0	0	0
122	MP10	Z	0	0	0	0

**Member Distributed Loads (BLC 3 : Wind Load (30 deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
1	FM-1	X	12.1	12.1	0	0
2	FM-2	X	0	0	0	0
3	FM-3	X	12.1	12.1	0	0
4	PL1	X	0	0	0	0
5	PL2	X	35.8	35.8	0	0
6	PL3	X	35.8	35.8	0	0
7	SA-1	X	22.4	22.4	0	0
8	SA-3	X	22.4	22.4	0	0
9	SA-2	X	22.4	22.4	0	0
10	M10	X	2.7	2.7	0	0
11	M11	X	2.7	2.7	0	0
12	M12	X	2.7	2.7	0	0
13	M13	X	2.7	2.7	0	0
14	M14	X	2.7	2.7	0	0
15	M15	X	2	2	0	0
16	M16	X	2	2	0	0
17	M17	X	2.7	2.7	0	0
18	M18	X	2.7	2.7	0	0
19	M19	X	2.7	2.7	0	0
20	M20	X	2.7	2.7	0	0
21	M21	X	2.7	2.7	0	0
22	M22	X	2	2	0	0
23	M23	X	2	2	0	0
24	M24	X	2.7	2.7	0	0
25	M25	X	2.7	2.7	0	0
26	M26	X	2.7	2.7	0	0



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**Member Distributed Loads (BLC 3 : Wind Load (30 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
27	M27	X	2.7	2.7	0	0
28	M28	X	2.7	2.7	0	0
29	M29	X	2	2	0	0
30	M30	X	2	2	0	0
31	M31	X	2.7	2.7	0	0
32	M32	X	2.7	2.7	0	0
33	M33	X	2.7	2.7	0	0
34	M34	X	2.7	2.7	0	0
35	M35	X	2.7	2.7	0	0
36	M36	X	2	2	0	0
37	M37	X	2	2	0	0
38	M38	X	2.7	2.7	0	0
39	M39	X	2.7	2.7	0	0
40	M40	X	2.7	2.7	0	0
41	M41	X	2.7	2.7	0	0
42	M42	X	0	0	0	0
43	M43	X	2	2	0	0
44	M44	X	0	0	0	0
45	M45	X	2.7	2.7	0	0
46	M46	X	2.7	2.7	0	0
47	M47	X	2.7	2.7	0	0
48	M48	X	2.7	2.7	0	0
49	M49	X	0	0	0	0
50	M50	X	2	2	0	0
51	M51	X	0	0	0	0
52	FM-1	Z	7	7	0	0
53	FM-2	Z	0	0	0	0
54	FM-3	Z	7	7	0	0
55	PL1	Z	0	0	0	0
56	PL2	Z	20.7	20.7	0	0
57	PL3	Z	20.7	20.7	0	0
58	SA-1	Z	12.9	12.9	0	0
59	SA-3	Z	12.9	12.9	0	0
60	SA-2	Z	12.9	12.9	0	0
61	M10	Z	1.6	1.6	0	0
62	M11	Z	1.6	1.6	0	0
63	M12	Z	1.6	1.6	0	0
64	M13	Z	1.6	1.6	0	0
65	M14	Z	1.6	1.6	0	0
66	M15	Z	1.2	1.2	0	0
67	M16	Z	1.2	1.2	0	0
68	M17	Z	1.6	1.6	0	0
69	M18	Z	1.6	1.6	0	0
70	M19	Z	1.6	1.6	0	0
71	M20	Z	1.6	1.6	0	0
72	M21	Z	1.6	1.6	0	0
73	M22	Z	1.2	1.2	0	0
74	M23	Z	1.2	1.2	0	0
75	M24	Z	1.6	1.6	0	0
76	M25	Z	1.6	1.6	0	0
77	M26	Z	1.6	1.6	0	0
78	M27	Z	1.6	1.6	0	0
79	M28	Z	1.6	1.6	0	0
80	M29	Z	1.2	1.2	0	0
81	M30	Z	1.2	1.2	0	0
82	M31	Z	1.6	1.6	0	0
83	M32	Z	1.6	1.6	0	0



**Member Distributed Loads (BLC 3 : Wind Load (30 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...]	End Magnitude[lb/ft,...]	Start Location[in, %]	End Location[in, %]
84	M33	Z	1.6	1.6	0	0
85	M34	Z	1.6	1.6	0	0
86	M35	Z	1.6	1.6	0	0
87	M36	Z	1.2	1.2	0	0
88	M37	Z	1.2	1.2	0	0
89	M38	Z	1.6	1.6	0	0
90	M39	Z	1.6	1.6	0	0
91	M40	Z	1.6	1.6	0	0
92	M41	Z	1.6	1.6	0	0
93	M42	Z	0	0	0	0
94	M43	Z	1.2	1.2	0	0
95	M44	Z	0	0	0	0
96	M45	Z	1.6	1.6	0	0
97	M46	Z	1.6	1.6	0	0
98	M47	Z	1.6	1.6	0	0
99	M48	Z	1.6	1.6	0	0
100	M49	Z	0	0	0	0
101	M50	Z	1.2	1.2	0	0
102	M51	Z	0	0	0	0
103	MP1	X	0	0	0	0
104	MP2	X	33.1	33.1	%49.074	%100
105	MP3	X	97.3	97.3	%31.012	%100
106	MP4	X	34.5	34.5	%13.472	%92.083
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	33.1	33.1	%49.074	%100
111	MP9	X	97.3	97.3	%31.012	%100
112	MP10	X	34.5	34.5	%13.472	%92.083
113	MP1	Z	0	0	0	0
114	MP2	Z	19.1	19.1	%49.074	%100
115	MP3	Z	56.2	56.2	%31.012	%100
116	MP4	Z	19.9	19.9	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	19.1	19.1	%49.074	%100
121	MP9	Z	56.2	56.2	%31.012	%100
122	MP10	Z	19.9	19.9	%13.472	%92.083

**Member Distributed Loads (BLC 4 : Wind Load (60 deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...]	End Magnitude[lb/ft,...]	Start Location[in, %]	End Location[in, %]
1	FM-1	X	7	7	0	0
2	FM-2	X	7	7	0	0
3	FM-3	X	7	7	0	0
4	PL1	X	20.7	20.7	0	0
5	PL2	X	20.7	20.7	0	0
6	PL3	X	20.7	20.7	0	0
7	SA-1	X	12.9	12.9	0	0
8	SA-3	X	12.9	12.9	0	0
9	SA-2	X	0	0	0	0
10	M10	X	1.6	1.6	0	0
11	M11	X	1.6	1.6	0	0
12	M12	X	1.6	1.6	0	0
13	M13	X	1.6	1.6	0	0
14	M14	X	1.6	1.6	0	0





**Member Distributed Loads (BLC 4 : Wind Load (60 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]	
15	M15	X	1.2	1.2	0	0
16	M16	X	1.2	1.2	0	0
17	M17	X	1.6	1.6	0	0
18	M18	X	1.6	1.6	0	0
19	M19	X	1.6	1.6	0	0
20	M20	X	1.6	1.6	0	0
21	M21	X	1.6	1.6	0	0
22	M22	X	1.2	1.2	0	0
23	M23	X	1.2	1.2	0	0
24	M24	X	0	0	0	0
25	M25	X	0	0	0	0
26	M26	X	0	0	0	0
27	M27	X	0	0	0	0
28	M28	X	1.6	1.6	0	0
29	M29	X	1.2	1.2	0	0
30	M30	X	1.2	1.2	0	0
31	M31	X	0	0	0	0
32	M32	X	0	0	0	0
33	M33	X	0	0	0	0
34	M34	X	0	0	0	0
35	M35	X	1.6	1.6	0	0
36	M36	X	1.2	1.2	0	0
37	M37	X	1.2	1.2	0	0
38	M38	X	1.6	1.6	0	0
39	M39	X	1.6	1.6	0	0
40	M40	X	1.6	1.6	0	0
41	M41	X	1.6	1.6	0	0
42	M42	X	1.6	1.6	0	0
43	M43	X	1.2	1.2	0	0
44	M44	X	1.2	1.2	0	0
45	M45	X	1.6	1.6	0	0
46	M46	X	1.6	1.6	0	0
47	M47	X	1.6	1.6	0	0
48	M48	X	1.6	1.6	0	0
49	M49	X	1.6	1.6	0	0
50	M50	X	1.2	1.2	0	0
51	M51	X	1.2	1.2	0	0
52	FM-1	Z	12.1	12.1	0	0
53	FM-2	Z	12.1	12.1	0	0
54	FM-3	Z	12.1	12.1	0	0
55	PL1	Z	35.8	35.8	0	0
56	PL2	Z	35.8	35.8	0	0
57	PL3	Z	35.8	35.8	0	0
58	SA-1	Z	22.4	22.4	0	0
59	SA-3	Z	22.4	22.4	0	0
60	SA-2	Z	0	0	0	0
61	M10	Z	2.7	2.7	0	0
62	M11	Z	2.7	2.7	0	0
63	M12	Z	2.7	2.7	0	0
64	M13	Z	2.7	2.7	0	0
65	M14	Z	2.7	2.7	0	0
66	M15	Z	2	2	0	0
67	M16	Z	2	2	0	0
68	M17	Z	2.7	2.7	0	0
69	M18	Z	2.7	2.7	0	0
70	M19	Z	2.7	2.7	0	0
71	M20	Z	2.7	2.7	0	0



**Member Distributed Loads (BLC 4 : Wind Load (60 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
72	M21	Z	2.7	2.7	0	0
73	M22	Z	2	2	0	0
74	M23	Z	2	2	0	0
75	M24	Z	0	0	0	0
76	M25	Z	0	0	0	0
77	M26	Z	0	0	0	0
78	M27	Z	0	0	0	0
79	M28	Z	2.7	2.7	0	0
80	M29	Z	2	2	0	0
81	M30	Z	2	2	0	0
82	M31	Z	0	0	0	0
83	M32	Z	0	0	0	0
84	M33	Z	0	0	0	0
85	M34	Z	0	0	0	0
86	M35	Z	2.7	2.7	0	0
87	M36	Z	2	2	0	0
88	M37	Z	2	2	0	0
89	M38	Z	2.7	2.7	0	0
90	M39	Z	2.7	2.7	0	0
91	M40	Z	2.7	2.7	0	0
92	M41	Z	2.7	2.7	0	0
93	M42	Z	2.7	2.7	0	0
94	M43	Z	2	2	0	0
95	M44	Z	2	2	0	0
96	M45	Z	2.7	2.7	0	0
97	M46	Z	2.7	2.7	0	0
98	M47	Z	2.7	2.7	0	0
99	M48	Z	2.7	2.7	0	0
100	M49	Z	2.7	2.7	0	0
101	M50	Z	2	2	0	0
102	M51	Z	2	2	0	0
103	MP1	X	0	0	0	0
104	MP2	X	16.1	16.1	%49.074	%100
105	MP3	X	37.9	37.9	%31.012	%100
106	MP4	X	17	17	%13.472	%92.083
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	20.6	20.6	%49.074	%100
111	MP9	X	65.4	65.4	%31.012	%100
112	MP10	X	21.4	21.4	%13.472	%92.083
113	MP1	Z	0	0	0	0
114	MP2	Z	27.9	27.9	%49.074	%100
115	MP3	Z	65.6	65.6	%31.012	%100
116	MP4	Z	29.4	29.4	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	35.8	35.8	%49.074	%100
121	MP9	Z	113.2	113.2	%31.012	%100
122	MP10	Z	37.1	37.1	%13.472	%92.083

**Member Distributed Loads (BLC 5 : Wind Load (90 deg))**

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
1	FM-1	X	0	0	0	0
2	FM-2	X	0	0	0	0



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**Member Distributed Loads (BLC 5 : Wind Load (90 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
3	FM-3	X	0	0	0
4	PL1	X	0	0	0
5	PL2	X	0	0	0
6	PL3	X	0	0	0
7	SA-1	X	0	0	0
8	SA-3	X	0	0	0
9	SA-2	X	0	0	0
10	M10	X	0	0	0
11	M11	X	0	0	0
12	M12	X	0	0	0
13	M13	X	0	0	0
14	M14	X	0	0	0
15	M15	X	0	0	0
16	M16	X	0	0	0
17	M17	X	0	0	0
18	M18	X	0	0	0
19	M19	X	0	0	0
20	M20	X	0	0	0
21	M21	X	0	0	0
22	M22	X	0	0	0
23	M23	X	0	0	0
24	M24	X	0	0	0
25	M25	X	0	0	0
26	M26	X	0	0	0
27	M27	X	0	0	0
28	M28	X	0	0	0
29	M29	X	0	0	0
30	M30	X	0	0	0
31	M31	X	0	0	0
32	M32	X	0	0	0
33	M33	X	0	0	0
34	M34	X	0	0	0
35	M35	X	0	0	0
36	M36	X	0	0	0
37	M37	X	0	0	0
38	M38	X	0	0	0
39	M39	X	0	0	0
40	M40	X	0	0	0
41	M41	X	0	0	0
42	M42	X	0	0	0
43	M43	X	0	0	0
44	M44	X	0	0	0
45	M45	X	0	0	0
46	M46	X	0	0	0
47	M47	X	0	0	0
48	M48	X	0	0	0
49	M49	X	0	0	0
50	M50	X	0	0	0
51	M51	X	0	0	0
52	FM-1	Z	0	0	0
53	FM-2	Z	14	14	0
54	FM-3	Z	14	14	0
55	PL1	Z	41.4	41.4	0
56	PL2	Z	41.4	41.4	0
57	PL3	Z	0	0	0
58	SA-1	Z	25.9	25.9	0
59	SA-3	Z	25.9	25.9	0



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**Member Distributed Loads (BLC 5 : Wind Load (90 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in,%]	End Location[in,%]	
60	SA-2	Z	25.9	25.9	0	0
61	M10	Z	3.1	3.1	0	0
62	M11	Z	3.1	3.1	0	0
63	M12	Z	3.1	3.1	0	0
64	M13	Z	3.1	3.1	0	0
65	M14	Z	0	0	0	0
66	M15	Z	2.3	2.3	0	0
67	M16	Z	0	0	0	0
68	M17	Z	3.1	3.1	0	0
69	M18	Z	3.1	3.1	0	0
70	M19	Z	3.1	3.1	0	0
71	M20	Z	3.1	3.1	0	0
72	M21	Z	0	0	0	0
73	M22	Z	2.3	2.3	0	0
74	M23	Z	0	0	0	0
75	M24	Z	3.1	3.1	0	0
76	M25	Z	3.1	3.1	0	0
77	M26	Z	3.1	3.1	0	0
78	M27	Z	3.1	3.1	0	0
79	M28	Z	3.1	3.1	0	0
80	M29	Z	2.3	2.3	0	0
81	M30	Z	2.3	2.3	0	0
82	M31	Z	3.1	3.1	0	0
83	M32	Z	3.1	3.1	0	0
84	M33	Z	3.1	3.1	0	0
85	M34	Z	3.1	3.1	0	0
86	M35	Z	3.1	3.1	0	0
87	M36	Z	2.3	2.3	0	0
88	M37	Z	2.3	2.3	0	0
89	M38	Z	3.1	3.1	0	0
90	M39	Z	3.1	3.1	0	0
91	M40	Z	3.1	3.1	0	0
92	M41	Z	3.1	3.1	0	0
93	M42	Z	3.1	3.1	0	0
94	M43	Z	2.3	2.3	0	0
95	M44	Z	2.3	2.3	0	0
96	M45	Z	3.1	3.1	0	0
97	M46	Z	3.1	3.1	0	0
98	M47	Z	3.1	3.1	0	0
99	M48	Z	3.1	3.1	0	0
100	M49	Z	3.1	3.1	0	0
101	M50	Z	2.3	2.3	0	0
102	M51	Z	2.3	2.3	0	0
103	MP1	X	0	0	0	0
104	MP2	X	0	0	0	0
105	MP3	X	0	0	0	0
106	MP4	X	0	0	0	0
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	0	0	0	0
111	MP9	X	0	0	0	0
112	MP10	X	0	0	0	0
113	MP1	Z	0	0	0	0
114	MP2	Z	29.1	29.1	%49.074	%100
115	MP3	Z	57.4	57.4	%31.012	%100
116	MP4	Z	31	31	%13.472	%92.083



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**Member Distributed Loads (BLC 5 : Wind Load (90 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
117	MP5	Z	0	0	0
118	MP6	Z	0	0	0
119	MP7	Z	0	0	0
120	MP8	Z	38.2	38.2	%49.074
121	MP9	Z	112.4	112.4	%31.012
122	MP10	Z	39.9	39.9	%13.472

**Member Distributed Loads (BLC 6 : Wind Load (120 deg))**

Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
1	FM-1	X	-7	-7	0
2	FM-2	X	-7	-7	0
3	FM-3	X	-7	-7	0
4	PL1	X	-20.7	-20.7	0
5	PL2	X	-20.7	-20.7	0
6	PL3	X	-20.7	-20.7	0
7	SA-1	X	-12.9	-12.9	0
8	SA-3	X	0	0	0
9	SA-2	X	-12.9	-12.9	0
10	M10	X	-1.6	-1.6	0
11	M11	X	-1.6	-1.6	0
12	M12	X	-1.6	-1.6	0
13	M13	X	-1.6	-1.6	0
14	M14	X	-1.6	-1.6	0
15	M15	X	-1.2	-1.2	0
16	M16	X	-1.2	-1.2	0
17	M17	X	-1.6	-1.6	0
18	M18	X	-1.6	-1.6	0
19	M19	X	-1.6	-1.6	0
20	M20	X	-1.6	-1.6	0
21	M21	X	-1.6	-1.6	0
22	M22	X	-1.2	-1.2	0
23	M23	X	-1.2	-1.2	0
24	M24	X	-1.6	-1.6	0
25	M25	X	-1.6	-1.6	0
26	M26	X	-1.6	-1.6	0
27	M27	X	-1.6	-1.6	0
28	M28	X	-1.6	-1.6	0
29	M29	X	-1.2	-1.2	0
30	M30	X	-1.2	-1.2	0
31	M31	X	-1.6	-1.6	0
32	M32	X	-1.6	-1.6	0
33	M33	X	-1.6	-1.6	0
34	M34	X	-1.6	-1.6	0
35	M35	X	-1.6	-1.6	0
36	M36	X	-1.2	-1.2	0
37	M37	X	-1.2	-1.2	0
38	M38	X	0	0	0
39	M39	X	0	0	0
40	M40	X	0	0	0
41	M41	X	0	0	0
42	M42	X	-1.6	-1.6	0
43	M43	X	-1.2	-1.2	0
44	M44	X	-1.2	-1.2	0
45	M45	X	0	0	0
46	M46	X	0	0	0
47	M47	X	0	0	0



Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

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**Member Distributed Loads (BLC 6 : Wind Load (120 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
48	M48	X	0	0	0
49	M49	X	-1.6	-1.6	0
50	M50	X	-1.2	-1.2	0
51	M51	X	-1.2	-1.2	0
52	FM-1	Z	12.1	12.1	0
53	FM-2	Z	12.1	12.1	0
54	FM-3	Z	12.1	12.1	0
55	PL1	Z	35.8	35.8	0
56	PL2	Z	35.8	35.8	0
57	PL3	Z	35.8	35.8	0
58	SA-1	Z	22.4	22.4	0
59	SA-3	Z	0	0	0
60	SA-2	Z	22.4	22.4	0
61	M10	Z	2.7	2.7	0
62	M11	Z	2.7	2.7	0
63	M12	Z	2.7	2.7	0
64	M13	Z	2.7	2.7	0
65	M14	Z	2.7	2.7	0
66	M15	Z	2	2	0
67	M16	Z	2	2	0
68	M17	Z	2.7	2.7	0
69	M18	Z	2.7	2.7	0
70	M19	Z	2.7	2.7	0
71	M20	Z	2.7	2.7	0
72	M21	Z	2.7	2.7	0
73	M22	Z	2	2	0
74	M23	Z	2	2	0
75	M24	Z	2.7	2.7	0
76	M25	Z	2.7	2.7	0
77	M26	Z	2.7	2.7	0
78	M27	Z	2.7	2.7	0
79	M28	Z	2.7	2.7	0
80	M29	Z	2	2	0
81	M30	Z	2	2	0
82	M31	Z	2.7	2.7	0
83	M32	Z	2.7	2.7	0
84	M33	Z	2.7	2.7	0
85	M34	Z	2.7	2.7	0
86	M35	Z	2.7	2.7	0
87	M36	Z	2	2	0
88	M37	Z	2	2	0
89	M38	Z	0	0	0
90	M39	Z	0	0	0
91	M40	Z	0	0	0
92	M41	Z	0	0	0
93	M42	Z	2.7	2.7	0
94	M43	Z	2	2	0
95	M44	Z	2	2	0
96	M45	Z	0	0	0
97	M46	Z	0	0	0
98	M47	Z	0	0	0
99	M48	Z	0	0	0
100	M49	Z	2.7	2.7	0
101	M50	Z	2	2	0
102	M51	Z	2	2	0
103	MP1	X	0	0	0
104	MP2	X	-16.1	-16.1	%49.074 %100



**Member Distributed Loads (BLC 6 : Wind Load (120 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
105	MP3	X	-37.9	-37.9	%31.012	%100
106	MP4	X	-17	-17	%13.472	%92.083
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	-16.1	-16.1	%49.074	%100
111	MP9	X	-37.9	-37.9	%31.012	%100
112	MP10	X	-17	-17	%13.472	%92.083
113	MP1	Z	0	0	0	0
114	MP2	Z	27.9	27.9	%49.074	%100
115	MP3	Z	65.6	65.6	%31.012	%100
116	MP4	Z	29.4	29.4	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	27.9	27.9	%49.074	%100
121	MP9	Z	65.6	65.6	%31.012	%100
122	MP10	Z	29.4	29.4	%13.472	%92.083

**Member Distributed Loads (BLC 7 : Wind Load (150 deg))**

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
1	FM-1	X	-12.1	-12.1	0	0
2	FM-2	X	-12.1	-12.1	0	0
3	FM-3	X	0	0	0	0
4	PL1	X	-35.8	-35.8	0	0
5	PL2	X	0	0	0	0
6	PL3	X	-35.8	-35.8	0	0
7	SA-1	X	-22.4	-22.4	0	0
8	SA-3	X	-22.4	-22.4	0	0
9	SA-2	X	-22.4	-22.4	0	0
10	M10	X	-2.7	-2.7	0	0
11	M11	X	-2.7	-2.7	0	0
12	M12	X	-2.7	-2.7	0	0
13	M13	X	-2.7	-2.7	0	0
14	M14	X	-2.7	-2.7	0	0
15	M15	X	-2	-2	0	0
16	M16	X	-2	-2	0	0
17	M17	X	-2.7	-2.7	0	0
18	M18	X	-2.7	-2.7	0	0
19	M19	X	-2.7	-2.7	0	0
20	M20	X	-2.7	-2.7	0	0
21	M21	X	-2.7	-2.7	0	0
22	M22	X	-2	-2	0	0
23	M23	X	-2	-2	0	0
24	M24	X	-2.7	-2.7	0	0
25	M25	X	-2.7	-2.7	0	0
26	M26	X	-2.7	-2.7	0	0
27	M27	X	-2.7	-2.7	0	0
28	M28	X	0	0	0	0
29	M29	X	-2	-2	0	0
30	M30	X	0	0	0	0
31	M31	X	-2.7	-2.7	0	0
32	M32	X	-2.7	-2.7	0	0
33	M33	X	-2.7	-2.7	0	0
34	M34	X	-2.7	-2.7	0	0
35	M35	X	0	0	0	0



**Member Distributed Loads (BLC 7 : Wind Load (150 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft,...]	End Magnitude[lb/ft,...]	Start Location[in,%]	End Location[in,%]
36	M36	X	-2	-2	0 0
37	M37	X	0	0	0 0
38	M38	X	-2.7	-2.7	0 0
39	M39	X	-2.7	-2.7	0 0
40	M40	X	-2.7	-2.7	0 0
41	M41	X	-2.7	-2.7	0 0
42	M42	X	-2.7	-2.7	0 0
43	M43	X	-2	-2	0 0
44	M44	X	-2	-2	0 0
45	M45	X	-2.7	-2.7	0 0
46	M46	X	-2.7	-2.7	0 0
47	M47	X	-2.7	-2.7	0 0
48	M48	X	-2.7	-2.7	0 0
49	M49	X	-2.7	-2.7	0 0
50	M50	X	-2	-2	0 0
51	M51	X	-2	-2	0 0
52	FM-1	Z	7	7	0 0
53	FM-2	Z	7	7	0 0
54	FM-3	Z	0	0	0 0
55	PL1	Z	20.7	20.7	0 0
56	PL2	Z	0	0	0 0
57	PL3	Z	20.7	20.7	0 0
58	SA-1	Z	12.9	12.9	0 0
59	SA-3	Z	12.9	12.9	0 0
60	SA-2	Z	12.9	12.9	0 0
61	M10	Z	1.6	1.6	0 0
62	M11	Z	1.6	1.6	0 0
63	M12	Z	1.6	1.6	0 0
64	M13	Z	1.6	1.6	0 0
65	M14	Z	1.6	1.6	0 0
66	M15	Z	1.2	1.2	0 0
67	M16	Z	1.2	1.2	0 0
68	M17	Z	1.6	1.6	0 0
69	M18	Z	1.6	1.6	0 0
70	M19	Z	1.6	1.6	0 0
71	M20	Z	1.6	1.6	0 0
72	M21	Z	1.6	1.6	0 0
73	M22	Z	1.2	1.2	0 0
74	M23	Z	1.2	1.2	0 0
75	M24	Z	1.6	1.6	0 0
76	M25	Z	1.6	1.6	0 0
77	M26	Z	1.6	1.6	0 0
78	M27	Z	1.6	1.6	0 0
79	M28	Z	0	0	0 0
80	M29	Z	1.2	1.2	0 0
81	M30	Z	0	0	0 0
82	M31	Z	1.6	1.6	0 0
83	M32	Z	1.6	1.6	0 0
84	M33	Z	1.6	1.6	0 0
85	M34	Z	1.6	1.6	0 0
86	M35	Z	0	0	0 0
87	M36	Z	1.2	1.2	0 0
88	M37	Z	0	0	0 0
89	M38	Z	1.6	1.6	0 0
90	M39	Z	1.6	1.6	0 0
91	M40	Z	1.6	1.6	0 0
92	M41	Z	1.6	1.6	0 0





**Member Distributed Loads (BLC 7 : Wind Load (150 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
93	M42	Z	1.6	1.6	0	0
94	M43	Z	1.2	1.2	0	0
95	M44	Z	1.2	1.2	0	0
96	M45	Z	1.6	1.6	0	0
97	M46	Z	1.6	1.6	0	0
98	M47	Z	1.6	1.6	0	0
99	M48	Z	1.6	1.6	0	0
100	M49	Z	1.6	1.6	0	0
101	M50	Z	1.2	1.2	0	0
102	M51	Z	1.2	1.2	0	0
103	MP1	X	0	0	0	0
104	MP2	X	-33.1	-33.1	%49.074	%100
105	MP3	X	-97.3	-97.3	%31.012	%100
106	MP4	X	-34.5	-34.5	%13.472	%92.083
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	-25.2	-25.2	%49.074	%100
111	MP9	X	-49.7	-49.7	%31.012	%100
112	MP10	X	-26.8	-26.8	%13.472	%92.083
113	MP1	Z	0	0	0	0
114	MP2	Z	19.1	19.1	%49.074	%100
115	MP3	Z	56.2	56.2	%31.012	%100
116	MP4	Z	19.9	19.9	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	14.6	14.6	%49.074	%100
121	MP9	Z	28.7	28.7	%31.012	%100
122	MP10	Z	15.5	15.5	%13.472	%92.083

**Member Distributed Loads (BLC 8 : Wind Load (180 deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
1	FM-1	X	-14	-14	0	0
2	FM-2	X	-14	-14	0	0
3	FM-3	X	-14	-14	0	0
4	PL1	X	-41.4	-41.4	0	0
5	PL2	X	-41.4	-41.4	0	0
6	PL3	X	-41.4	-41.4	0	0
7	SA-1	X	0	0	0	0
8	SA-3	X	-25.9	-25.9	0	0
9	SA-2	X	-25.9	-25.9	0	0
10	M10	X	0	0	0	0
11	M11	X	0	0	0	0
12	M12	X	0	0	0	0
13	M13	X	0	0	0	0
14	M14	X	-3.1	-3.1	0	0
15	M15	X	-2.3	-2.3	0	0
16	M16	X	-2.3	-2.3	0	0
17	M17	X	0	0	0	0
18	M18	X	0	0	0	0
19	M19	X	0	0	0	0
20	M20	X	0	0	0	0
21	M21	X	-3.1	-3.1	0	0
22	M22	X	-2.3	-2.3	0	0
23	M23	X	-2.3	-2.3	0	0



Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

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**Member Distributed Loads (BLC 8 : Wind Load (180 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
24	M24	X	-3.1	-3.1	0	0
25	M25	X	-3.1	-3.1	0	0
26	M26	X	-3.1	-3.1	0	0
27	M27	X	-3.1	-3.1	0	0
28	M28	X	-3.1	-3.1	0	0
29	M29	X	-2.3	-2.3	0	0
30	M30	X	-2.3	-2.3	0	0
31	M31	X	-3.1	-3.1	0	0
32	M32	X	-3.1	-3.1	0	0
33	M33	X	-3.1	-3.1	0	0
34	M34	X	-3.1	-3.1	0	0
35	M35	X	-3.1	-3.1	0	0
36	M36	X	-2.3	-2.3	0	0
37	M37	X	-2.3	-2.3	0	0
38	M38	X	-3.1	-3.1	0	0
39	M39	X	-3.1	-3.1	0	0
40	M40	X	-3.1	-3.1	0	0
41	M41	X	-3.1	-3.1	0	0
42	M42	X	-3.1	-3.1	0	0
43	M43	X	-2.3	-2.3	0	0
44	M44	X	-2.3	-2.3	0	0
45	M45	X	-3.1	-3.1	0	0
46	M46	X	-3.1	-3.1	0	0
47	M47	X	-3.1	-3.1	0	0
48	M48	X	-3.1	-3.1	0	0
49	M49	X	-3.1	-3.1	0	0
50	M50	X	-2.3	-2.3	0	0
51	M51	X	-2.3	-2.3	0	0
52	FM-1	Z	0	0	0	0
53	FM-2	Z	0	0	0	0
54	FM-3	Z	0	0	0	0
55	PL1	Z	0	0	0	0
56	PL2	Z	0	0	0	0
57	PL3	Z	0	0	0	0
58	SA-1	Z	0	0	0	0
59	SA-3	Z	0	0	0	0
60	SA-2	Z	0	0	0	0
61	M10	Z	0	0	0	0
62	M11	Z	0	0	0	0
63	M12	Z	0	0	0	0
64	M13	Z	0	0	0	0
65	M14	Z	0	0	0	0
66	M15	Z	0	0	0	0
67	M16	Z	0	0	0	0
68	M17	Z	0	0	0	0
69	M18	Z	0	0	0	0
70	M19	Z	0	0	0	0
71	M20	Z	0	0	0	0
72	M21	Z	0	0	0	0
73	M22	Z	0	0	0	0
74	M23	Z	0	0	0	0
75	M24	Z	0	0	0	0
76	M25	Z	0	0	0	0
77	M26	Z	0	0	0	0
78	M27	Z	0	0	0	0
79	M28	Z	0	0	0	0
80	M29	Z	0	0	0	0



**Member Distributed Loads (BLC 8 : Wind Load (180 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
81	M30	Z	0	0	0	0
82	M31	Z	0	0	0	0
83	M32	Z	0	0	0	0
84	M33	Z	0	0	0	0
85	M34	Z	0	0	0	0
86	M35	Z	0	0	0	0
87	M36	Z	0	0	0	0
88	M37	Z	0	0	0	0
89	M38	Z	0	0	0	0
90	M39	Z	0	0	0	0
91	M40	Z	0	0	0	0
92	M41	Z	0	0	0	0
93	M42	Z	0	0	0	0
94	M43	Z	0	0	0	0
95	M44	Z	0	0	0	0
96	M45	Z	0	0	0	0
97	M46	Z	0	0	0	0
98	M47	Z	0	0	0	0
99	M48	Z	0	0	0	0
100	M49	Z	0	0	0	0
101	M50	Z	0	0	0	0
102	M51	Z	0	0	0	0
103	MP1	X	0	0	0	0
104	MP2	X	-41.3	-41.3	%49.074	%100
105	MP3	X	-130.7	-130.7	%31.012	%100
106	MP4	X	-42.8	-42.8	%13.472	%92.083
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	-32.2	-32.2	%49.074	%100
111	MP9	X	-75.7	-75.7	%31.012	%100
112	MP10	X	-34	-34	%13.472	%92.083
113	MP1	Z	0	0	0	0
114	MP2	Z	0	0	0	0
115	MP3	Z	0	0	0	0
116	MP4	Z	0	0	0	0
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	0	0	0	0
121	MP9	Z	0	0	0	0
122	MP10	Z	0	0	0	0

**Member Distributed Loads (BLC 9 : Wind Load (210 deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
1	FM-1	X	-12.1	-12.1	0	0
2	FM-2	X	0	0	0	0
3	FM-3	X	-12.1	-12.1	0	0
4	PL1	X	0	0	0	0
5	PL2	X	-35.8	-35.8	0	0
6	PL3	X	-35.8	-35.8	0	0
7	SA-1	X	-22.4	-22.4	0	0
8	SA-3	X	-22.4	-22.4	0	0
9	SA-2	X	-22.4	-22.4	0	0
10	M10	X	-2.7	-2.7	0	0
11	M11	X	-2.7	-2.7	0	0



Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

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**Member Distributed Loads (BLC 9 : Wind Load (210 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in,%]	End Location[in,%]
12	M12	X	-2.7	-2.7	0	0
13	M13	X	-2.7	-2.7	0	0
14	M14	X	-2.7	-2.7	0	0
15	M15	X	-2	-2	0	0
16	M16	X	-2	-2	0	0
17	M17	X	-2.7	-2.7	0	0
18	M18	X	-2.7	-2.7	0	0
19	M19	X	-2.7	-2.7	0	0
20	M20	X	-2.7	-2.7	0	0
21	M21	X	-2.7	-2.7	0	0
22	M22	X	-2	-2	0	0
23	M23	X	-2	-2	0	0
24	M24	X	-2.7	-2.7	0	0
25	M25	X	-2.7	-2.7	0	0
26	M26	X	-2.7	-2.7	0	0
27	M27	X	-2.7	-2.7	0	0
28	M28	X	-2.7	-2.7	0	0
29	M29	X	-2	-2	0	0
30	M30	X	-2	-2	0	0
31	M31	X	-2.7	-2.7	0	0
32	M32	X	-2.7	-2.7	0	0
33	M33	X	-2.7	-2.7	0	0
34	M34	X	-2.7	-2.7	0	0
35	M35	X	-2.7	-2.7	0	0
36	M36	X	-2	-2	0	0
37	M37	X	-2	-2	0	0
38	M38	X	-2.7	-2.7	0	0
39	M39	X	-2.7	-2.7	0	0
40	M40	X	-2.7	-2.7	0	0
41	M41	X	-2.7	-2.7	0	0
42	M42	X	0	0	0	0
43	M43	X	-2	-2	0	0
44	M44	X	0	0	0	0
45	M45	X	-2.7	-2.7	0	0
46	M46	X	-2.7	-2.7	0	0
47	M47	X	-2.7	-2.7	0	0
48	M48	X	-2.7	-2.7	0	0
49	M49	X	0	0	0	0
50	M50	X	-2	-2	0	0
51	M51	X	0	0	0	0
52	FM-1	Z	-7	-7	0	0
53	FM-2	Z	0	0	0	0
54	FM-3	Z	-7	-7	0	0
55	PL1	Z	0	0	0	0
56	PL2	Z	-20.7	-20.7	0	0
57	PL3	Z	-20.7	-20.7	0	0
58	SA-1	Z	-12.9	-12.9	0	0
59	SA-3	Z	-12.9	-12.9	0	0
60	SA-2	Z	-12.9	-12.9	0	0
61	M10	Z	-1.6	-1.6	0	0
62	M11	Z	-1.6	-1.6	0	0
63	M12	Z	-1.6	-1.6	0	0
64	M13	Z	-1.6	-1.6	0	0
65	M14	Z	-1.6	-1.6	0	0
66	M15	Z	-1.2	-1.2	0	0
67	M16	Z	-1.2	-1.2	0	0
68	M17	Z	-1.6	-1.6	0	0



**Member Distributed Loads (BLC 9 : Wind Load (210 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]	
69	M18	Z	-1.6	-1.6	0	0
70	M19	Z	-1.6	-1.6	0	0
71	M20	Z	-1.6	-1.6	0	0
72	M21	Z	-1.6	-1.6	0	0
73	M22	Z	-1.2	-1.2	0	0
74	M23	Z	-1.2	-1.2	0	0
75	M24	Z	-1.6	-1.6	0	0
76	M25	Z	-1.6	-1.6	0	0
77	M26	Z	-1.6	-1.6	0	0
78	M27	Z	-1.6	-1.6	0	0
79	M28	Z	-1.6	-1.6	0	0
80	M29	Z	-1.2	-1.2	0	0
81	M30	Z	-1.2	-1.2	0	0
82	M31	Z	-1.6	-1.6	0	0
83	M32	Z	-1.6	-1.6	0	0
84	M33	Z	-1.6	-1.6	0	0
85	M34	Z	-1.6	-1.6	0	0
86	M35	Z	-1.6	-1.6	0	0
87	M36	Z	-1.2	-1.2	0	0
88	M37	Z	-1.2	-1.2	0	0
89	M38	Z	-1.6	-1.6	0	0
90	M39	Z	-1.6	-1.6	0	0
91	M40	Z	-1.6	-1.6	0	0
92	M41	Z	-1.6	-1.6	0	0
93	M42	Z	0	0	0	0
94	M43	Z	-1.2	-1.2	0	0
95	M44	Z	0	0	0	0
96	M45	Z	-1.6	-1.6	0	0
97	M46	Z	-1.6	-1.6	0	0
98	M47	Z	-1.6	-1.6	0	0
99	M48	Z	-1.6	-1.6	0	0
100	M49	Z	0	0	0	0
101	M50	Z	-1.2	-1.2	0	0
102	M51	Z	0	0	0	0
103	MP1	X	0	0	0	0
104	MP2	X	-33.1	-33.1	%49.074	%100
105	MP3	X	-97.3	-97.3	%31.012	%100
106	MP4	X	-34.5	-34.5	%13.472	%92.083
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	-33.1	-33.1	%49.074	%100
111	MP9	X	-97.3	-97.3	%31.012	%100
112	MP10	X	-34.5	-34.5	%13.472	%92.083
113	MP1	Z	0	0	0	0
114	MP2	Z	-19.1	-19.1	%49.074	%100
115	MP3	Z	-56.2	-56.2	%31.012	%100
116	MP4	Z	-19.9	-19.9	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	-19.1	-19.1	%49.074	%100
121	MP9	Z	-56.2	-56.2	%31.012	%100
122	MP10	Z	-19.9	-19.9	%13.472	%92.083

**Member Distributed Loads (BLC 10 : Wind Load (240 deg))**

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
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 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

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**Member Distributed Loads (BLC 10 : Wind Load (240 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]	
1	FM-1	X	-7	-7	0	0
2	FM-2	X	-7	-7	0	0
3	FM-3	X	-7	-7	0	0
4	PL1	X	-20.7	-20.7	0	0
5	PL2	X	-20.7	-20.7	0	0
6	PL3	X	-20.7	-20.7	0	0
7	SA-1	X	-12.9	-12.9	0	0
8	SA-3	X	-12.9	-12.9	0	0
9	SA-2	X	0	0	0	0
10	M10	X	-1.6	-1.6	0	0
11	M11	X	-1.6	-1.6	0	0
12	M12	X	-1.6	-1.6	0	0
13	M13	X	-1.6	-1.6	0	0
14	M14	X	-1.6	-1.6	0	0
15	M15	X	-1.2	-1.2	0	0
16	M16	X	-1.2	-1.2	0	0
17	M17	X	-1.6	-1.6	0	0
18	M18	X	-1.6	-1.6	0	0
19	M19	X	-1.6	-1.6	0	0
20	M20	X	-1.6	-1.6	0	0
21	M21	X	-1.6	-1.6	0	0
22	M22	X	-1.2	-1.2	0	0
23	M23	X	-1.2	-1.2	0	0
24	M24	X	0	0	0	0
25	M25	X	0	0	0	0
26	M26	X	0	0	0	0
27	M27	X	0	0	0	0
28	M28	X	-1.6	-1.6	0	0
29	M29	X	-1.2	-1.2	0	0
30	M30	X	-1.2	-1.2	0	0
31	M31	X	0	0	0	0
32	M32	X	0	0	0	0
33	M33	X	0	0	0	0
34	M34	X	0	0	0	0
35	M35	X	-1.6	-1.6	0	0
36	M36	X	-1.2	-1.2	0	0
37	M37	X	-1.2	-1.2	0	0
38	M38	X	-1.6	-1.6	0	0
39	M39	X	-1.6	-1.6	0	0
40	M40	X	-1.6	-1.6	0	0
41	M41	X	-1.6	-1.6	0	0
42	M42	X	-1.6	-1.6	0	0
43	M43	X	-1.2	-1.2	0	0
44	M44	X	-1.2	-1.2	0	0
45	M45	X	-1.6	-1.6	0	0
46	M46	X	-1.6	-1.6	0	0
47	M47	X	-1.6	-1.6	0	0
48	M48	X	-1.6	-1.6	0	0
49	M49	X	-1.6	-1.6	0	0
50	M50	X	-1.2	-1.2	0	0
51	M51	X	-1.2	-1.2	0	0
52	FM-1	Z	-12.1	-12.1	0	0
53	FM-2	Z	-12.1	-12.1	0	0
54	FM-3	Z	-12.1	-12.1	0	0
55	PL1	Z	-35.8	-35.8	0	0
56	PL2	Z	-35.8	-35.8	0	0
57	PL3	Z	-35.8	-35.8	0	0



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**Member Distributed Loads (BLC 10 : Wind Load (240 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in,%]	End Location[in,%]
58	SA-1	Z	-22.4	-22.4	0 0
59	SA-3	Z	-22.4	-22.4	0 0
60	SA-2	Z	0	0	0 0
61	M10	Z	-2.7	-2.7	0 0
62	M11	Z	-2.7	-2.7	0 0
63	M12	Z	-2.7	-2.7	0 0
64	M13	Z	-2.7	-2.7	0 0
65	M14	Z	-2.7	-2.7	0 0
66	M15	Z	-2	-2	0 0
67	M16	Z	-2	-2	0 0
68	M17	Z	-2.7	-2.7	0 0
69	M18	Z	-2.7	-2.7	0 0
70	M19	Z	-2.7	-2.7	0 0
71	M20	Z	-2.7	-2.7	0 0
72	M21	Z	-2.7	-2.7	0 0
73	M22	Z	-2	-2	0 0
74	M23	Z	-2	-2	0 0
75	M24	Z	0	0	0 0
76	M25	Z	0	0	0 0
77	M26	Z	0	0	0 0
78	M27	Z	0	0	0 0
79	M28	Z	-2.7	-2.7	0 0
80	M29	Z	-2	-2	0 0
81	M30	Z	-2	-2	0 0
82	M31	Z	0	0	0 0
83	M32	Z	0	0	0 0
84	M33	Z	0	0	0 0
85	M34	Z	0	0	0 0
86	M35	Z	-2.7	-2.7	0 0
87	M36	Z	-2	-2	0 0
88	M37	Z	-2	-2	0 0
89	M38	Z	-2.7	-2.7	0 0
90	M39	Z	-2.7	-2.7	0 0
91	M40	Z	-2.7	-2.7	0 0
92	M41	Z	-2.7	-2.7	0 0
93	M42	Z	-2.7	-2.7	0 0
94	M43	Z	-2	-2	0 0
95	M44	Z	-2	-2	0 0
96	M45	Z	-2.7	-2.7	0 0
97	M46	Z	-2.7	-2.7	0 0
98	M47	Z	-2.7	-2.7	0 0
99	M48	Z	-2.7	-2.7	0 0
100	M49	Z	-2.7	-2.7	0 0
101	M50	Z	-2	-2	0 0
102	M51	Z	-2	-2	0 0
103	MP1	X	0	0	0 0
104	MP2	X	-16.1	-16.1	%49.074 %100
105	MP3	X	-37.9	-37.9	%31.012 %100
106	MP4	X	-17	-17	%13.472 %92.083
107	MP5	X	0	0	0 0
108	MP6	X	0	0	0 0
109	MP7	X	0	0	0 0
110	MP8	X	-20.6	-20.6	%49.074 %100
111	MP9	X	-65.4	-65.4	%31.012 %100
112	MP10	X	-21.4	-21.4	%13.472 %92.083
113	MP1	Z	0	0	0 0
114	MP2	Z	-27.9	-27.9	%49.074 %100



**Member Distributed Loads (BLC 10 : Wind Load (240 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
115	MP3	Z	-65.6	-65.6	%31.012	%100
116	MP4	Z	-29.4	-29.4	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	-35.8	-35.8	%49.074	%100
121	MP9	Z	-113.2	-113.2	%31.012	%100
122	MP10	Z	-37.1	-37.1	%13.472	%92.083

**Member Distributed Loads (BLC 11 : Wind Load (270 deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FM-1	X	0	0	0	0
2	FM-2	X	0	0	0	0
3	FM-3	X	0	0	0	0
4	PL1	X	0	0	0	0
5	PL2	X	0	0	0	0
6	PL3	X	0	0	0	0
7	SA-1	X	0	0	0	0
8	SA-3	X	0	0	0	0
9	SA-2	X	0	0	0	0
10	M10	X	0	0	0	0
11	M11	X	0	0	0	0
12	M12	X	0	0	0	0
13	M13	X	0	0	0	0
14	M14	X	0	0	0	0
15	M15	X	0	0	0	0
16	M16	X	0	0	0	0
17	M17	X	0	0	0	0
18	M18	X	0	0	0	0
19	M19	X	0	0	0	0
20	M20	X	0	0	0	0
21	M21	X	0	0	0	0
22	M22	X	0	0	0	0
23	M23	X	0	0	0	0
24	M24	X	0	0	0	0
25	M25	X	0	0	0	0
26	M26	X	0	0	0	0
27	M27	X	0	0	0	0
28	M28	X	0	0	0	0
29	M29	X	0	0	0	0
30	M30	X	0	0	0	0
31	M31	X	0	0	0	0
32	M32	X	0	0	0	0
33	M33	X	0	0	0	0
34	M34	X	0	0	0	0
35	M35	X	0	0	0	0
36	M36	X	0	0	0	0
37	M37	X	0	0	0	0
38	M38	X	0	0	0	0
39	M39	X	0	0	0	0
40	M40	X	0	0	0	0
41	M41	X	0	0	0	0
42	M42	X	0	0	0	0
43	M43	X	0	0	0	0
44	M44	X	0	0	0	0
45	M45	X	0	0	0	0





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 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

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**Member Distributed Loads (BLC 11 : Wind Load (270 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
46	M46	X	0	0	0
47	M47	X	0	0	0
48	M48	X	0	0	0
49	M49	X	0	0	0
50	M50	X	0	0	0
51	M51	X	0	0	0
52	FM-1	Z	0	0	0
53	FM-2	Z	-14	-14	0
54	FM-3	Z	-14	-14	0
55	PL1	Z	-41.4	-41.4	0
56	PL2	Z	-41.4	-41.4	0
57	PL3	Z	0	0	0
58	SA-1	Z	-25.9	-25.9	0
59	SA-3	Z	-25.9	-25.9	0
60	SA-2	Z	-25.9	-25.9	0
61	M10	Z	-3.1	-3.1	0
62	M11	Z	-3.1	-3.1	0
63	M12	Z	-3.1	-3.1	0
64	M13	Z	-3.1	-3.1	0
65	M14	Z	0	0	0
66	M15	Z	-2.3	-2.3	0
67	M16	Z	0	0	0
68	M17	Z	-3.1	-3.1	0
69	M18	Z	-3.1	-3.1	0
70	M19	Z	-3.1	-3.1	0
71	M20	Z	-3.1	-3.1	0
72	M21	Z	0	0	0
73	M22	Z	-2.3	-2.3	0
74	M23	Z	0	0	0
75	M24	Z	-3.1	-3.1	0
76	M25	Z	-3.1	-3.1	0
77	M26	Z	-3.1	-3.1	0
78	M27	Z	-3.1	-3.1	0
79	M28	Z	-3.1	-3.1	0
80	M29	Z	-2.3	-2.3	0
81	M30	Z	-2.3	-2.3	0
82	M31	Z	-3.1	-3.1	0
83	M32	Z	-3.1	-3.1	0
84	M33	Z	-3.1	-3.1	0
85	M34	Z	-3.1	-3.1	0
86	M35	Z	-3.1	-3.1	0
87	M36	Z	-2.3	-2.3	0
88	M37	Z	-2.3	-2.3	0
89	M38	Z	-3.1	-3.1	0
90	M39	Z	-3.1	-3.1	0
91	M40	Z	-3.1	-3.1	0
92	M41	Z	-3.1	-3.1	0
93	M42	Z	-3.1	-3.1	0
94	M43	Z	-2.3	-2.3	0
95	M44	Z	-2.3	-2.3	0
96	M45	Z	-3.1	-3.1	0
97	M46	Z	-3.1	-3.1	0
98	M47	Z	-3.1	-3.1	0
99	M48	Z	-3.1	-3.1	0
100	M49	Z	-3.1	-3.1	0
101	M50	Z	-2.3	-2.3	0
102	M51	Z	-2.3	-2.3	0



**Member Distributed Loads (BLC 11 : Wind Load (270 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
103	MP1	X	0	0	0	0
104	MP2	X	0	0	0	0
105	MP3	X	0	0	0	0
106	MP4	X	0	0	0	0
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	0	0	0	0
111	MP9	X	0	0	0	0
112	MP10	X	0	0	0	0
113	MP1	Z	0	0	0	0
114	MP2	Z	-29.1	-29.1	%49.074	%100
115	MP3	Z	-57.4	-57.4	%31.012	%100
116	MP4	Z	-31	-31	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	-38.2	-38.2	%49.074	%100
121	MP9	Z	-112.4	-112.4	%31.012	%100
122	MP10	Z	-39.9	-39.9	%13.472	%92.083

**Member Distributed Loads (BLC 12 : Wind Load (300 deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
1	FM-1	X	7	7	0	0
2	FM-2	X	7	7	0	0
3	FM-3	X	7	7	0	0
4	PL1	X	20.7	20.7	0	0
5	PL2	X	20.7	20.7	0	0
6	PL3	X	20.7	20.7	0	0
7	SA-1	X	12.9	12.9	0	0
8	SA-3	X	0	0	0	0
9	SA-2	X	12.9	12.9	0	0
10	M10	X	1.6	1.6	0	0
11	M11	X	1.6	1.6	0	0
12	M12	X	1.6	1.6	0	0
13	M13	X	1.6	1.6	0	0
14	M14	X	1.6	1.6	0	0
15	M15	X	1.2	1.2	0	0
16	M16	X	1.2	1.2	0	0
17	M17	X	1.6	1.6	0	0
18	M18	X	1.6	1.6	0	0
19	M19	X	1.6	1.6	0	0
20	M20	X	1.6	1.6	0	0
21	M21	X	1.6	1.6	0	0
22	M22	X	1.2	1.2	0	0
23	M23	X	1.2	1.2	0	0
24	M24	X	1.6	1.6	0	0
25	M25	X	1.6	1.6	0	0
26	M26	X	1.6	1.6	0	0
27	M27	X	1.6	1.6	0	0
28	M28	X	1.6	1.6	0	0
29	M29	X	1.2	1.2	0	0
30	M30	X	1.2	1.2	0	0
31	M31	X	1.6	1.6	0	0
32	M32	X	1.6	1.6	0	0
33	M33	X	1.6	1.6	0	0



Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

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**Member Distributed Loads (BLC 12 : Wind Load (300 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]	
34	M34	X	1.6	1.6	0	0
35	M35	X	1.6	1.6	0	0
36	M36	X	1.2	1.2	0	0
37	M37	X	1.2	1.2	0	0
38	M38	X	0	0	0	0
39	M39	X	0	0	0	0
40	M40	X	0	0	0	0
41	M41	X	0	0	0	0
42	M42	X	1.6	1.6	0	0
43	M43	X	1.2	1.2	0	0
44	M44	X	1.2	1.2	0	0
45	M45	X	0	0	0	0
46	M46	X	0	0	0	0
47	M47	X	0	0	0	0
48	M48	X	0	0	0	0
49	M49	X	1.6	1.6	0	0
50	M50	X	1.2	1.2	0	0
51	M51	X	1.2	1.2	0	0
52	FM-1	Z	-12.1	-12.1	0	0
53	FM-2	Z	-12.1	-12.1	0	0
54	FM-3	Z	-12.1	-12.1	0	0
55	PL1	Z	-35.8	-35.8	0	0
56	PL2	Z	-35.8	-35.8	0	0
57	PL3	Z	-35.8	-35.8	0	0
58	SA-1	Z	-22.4	-22.4	0	0
59	SA-3	Z	0	0	0	0
60	SA-2	Z	-22.4	-22.4	0	0
61	M10	Z	-2.7	-2.7	0	0
62	M11	Z	-2.7	-2.7	0	0
63	M12	Z	-2.7	-2.7	0	0
64	M13	Z	-2.7	-2.7	0	0
65	M14	Z	-2.7	-2.7	0	0
66	M15	Z	-2	-2	0	0
67	M16	Z	-2	-2	0	0
68	M17	Z	-2.7	-2.7	0	0
69	M18	Z	-2.7	-2.7	0	0
70	M19	Z	-2.7	-2.7	0	0
71	M20	Z	-2.7	-2.7	0	0
72	M21	Z	-2.7	-2.7	0	0
73	M22	Z	-2	-2	0	0
74	M23	Z	-2	-2	0	0
75	M24	Z	-2.7	-2.7	0	0
76	M25	Z	-2.7	-2.7	0	0
77	M26	Z	-2.7	-2.7	0	0
78	M27	Z	-2.7	-2.7	0	0
79	M28	Z	-2.7	-2.7	0	0
80	M29	Z	-2	-2	0	0
81	M30	Z	-2	-2	0	0
82	M31	Z	-2.7	-2.7	0	0
83	M32	Z	-2.7	-2.7	0	0
84	M33	Z	-2.7	-2.7	0	0
85	M34	Z	-2.7	-2.7	0	0
86	M35	Z	-2.7	-2.7	0	0
87	M36	Z	-2	-2	0	0
88	M37	Z	-2	-2	0	0
89	M38	Z	0	0	0	0
90	M39	Z	0	0	0	0



**Member Distributed Loads (BLC 12 : Wind Load (300 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
91	M40	Z	0	0	0	0
92	M41	Z	0	0	0	0
93	M42	Z	-2.7	-2.7	0	0
94	M43	Z	-2	-2	0	0
95	M44	Z	-2	-2	0	0
96	M45	Z	0	0	0	0
97	M46	Z	0	0	0	0
98	M47	Z	0	0	0	0
99	M48	Z	0	0	0	0
100	M49	Z	-2.7	-2.7	0	0
101	M50	Z	-2	-2	0	0
102	M51	Z	-2	-2	0	0
103	MP1	X	0	0	0	0
104	MP2	X	16.1	16.1	%49.074	%100
105	MP3	X	37.9	37.9	%31.012	%100
106	MP4	X	17	17	%13.472	%92.083
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	16.1	16.1	%49.074	%100
111	MP9	X	37.9	37.9	%31.012	%100
112	MP10	X	17	17	%13.472	%92.083
113	MP1	Z	0	0	0	0
114	MP2	Z	-27.9	-27.9	%49.074	%100
115	MP3	Z	-65.6	-65.6	%31.012	%100
116	MP4	Z	-29.4	-29.4	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	-27.9	-27.9	%49.074	%100
121	MP9	Z	-65.6	-65.6	%31.012	%100
122	MP10	Z	-29.4	-29.4	%13.472	%92.083

**Member Distributed Loads (BLC 13 : Wind Load (330 deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FM-1	X	12.1	12.1	0	0
2	FM-2	X	12.1	12.1	0	0
3	FM-3	X	0	0	0	0
4	PL1	X	35.8	35.8	0	0
5	PL2	X	0	0	0	0
6	PL3	X	35.8	35.8	0	0
7	SA-1	X	22.4	22.4	0	0
8	SA-3	X	22.4	22.4	0	0
9	SA-2	X	22.4	22.4	0	0
10	M10	X	2.7	2.7	0	0
11	M11	X	2.7	2.7	0	0
12	M12	X	2.7	2.7	0	0
13	M13	X	2.7	2.7	0	0
14	M14	X	2.7	2.7	0	0
15	M15	X	2	2	0	0
16	M16	X	2	2	0	0
17	M17	X	2.7	2.7	0	0
18	M18	X	2.7	2.7	0	0
19	M19	X	2.7	2.7	0	0
20	M20	X	2.7	2.7	0	0
21	M21	X	2.7	2.7	0	0



Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

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**Member Distributed Loads (BLC 13 : Wind Load (330 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in,%]	End Location[in,%]	
22	M22	X	2	2	0	0
23	M23	X	2	2	0	0
24	M24	X	2.7	2.7	0	0
25	M25	X	2.7	2.7	0	0
26	M26	X	2.7	2.7	0	0
27	M27	X	2.7	2.7	0	0
28	M28	X	0	0	0	0
29	M29	X	2	2	0	0
30	M30	X	0	0	0	0
31	M31	X	2.7	2.7	0	0
32	M32	X	2.7	2.7	0	0
33	M33	X	2.7	2.7	0	0
34	M34	X	2.7	2.7	0	0
35	M35	X	0	0	0	0
36	M36	X	2	2	0	0
37	M37	X	0	0	0	0
38	M38	X	2.7	2.7	0	0
39	M39	X	2.7	2.7	0	0
40	M40	X	2.7	2.7	0	0
41	M41	X	2.7	2.7	0	0
42	M42	X	2.7	2.7	0	0
43	M43	X	2	2	0	0
44	M44	X	2	2	0	0
45	M45	X	2.7	2.7	0	0
46	M46	X	2.7	2.7	0	0
47	M47	X	2.7	2.7	0	0
48	M48	X	2.7	2.7	0	0
49	M49	X	2.7	2.7	0	0
50	M50	X	2	2	0	0
51	M51	X	2	2	0	0
52	FM-1	Z	-7	-7	0	0
53	FM-2	Z	-7	-7	0	0
54	FM-3	Z	0	0	0	0
55	PL1	Z	-20.7	-20.7	0	0
56	PL2	Z	0	0	0	0
57	PL3	Z	-20.7	-20.7	0	0
58	SA-1	Z	-12.9	-12.9	0	0
59	SA-3	Z	-12.9	-12.9	0	0
60	SA-2	Z	-12.9	-12.9	0	0
61	M10	Z	-1.6	-1.6	0	0
62	M11	Z	-1.6	-1.6	0	0
63	M12	Z	-1.6	-1.6	0	0
64	M13	Z	-1.6	-1.6	0	0
65	M14	Z	-1.6	-1.6	0	0
66	M15	Z	-1.2	-1.2	0	0
67	M16	Z	-1.2	-1.2	0	0
68	M17	Z	-1.6	-1.6	0	0
69	M18	Z	-1.6	-1.6	0	0
70	M19	Z	-1.6	-1.6	0	0
71	M20	Z	-1.6	-1.6	0	0
72	M21	Z	-1.6	-1.6	0	0
73	M22	Z	-1.2	-1.2	0	0
74	M23	Z	-1.2	-1.2	0	0
75	M24	Z	-1.6	-1.6	0	0
76	M25	Z	-1.6	-1.6	0	0
77	M26	Z	-1.6	-1.6	0	0
78	M27	Z	-1.6	-1.6	0	0



**Member Distributed Loads (BLC 13 : Wind Load (330 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
79	M28	Z	0	0	0	0
80	M29	Z	-1.2	-1.2	0	0
81	M30	Z	0	0	0	0
82	M31	Z	-1.6	-1.6	0	0
83	M32	Z	-1.6	-1.6	0	0
84	M33	Z	-1.6	-1.6	0	0
85	M34	Z	-1.6	-1.6	0	0
86	M35	Z	0	0	0	0
87	M36	Z	-1.2	-1.2	0	0
88	M37	Z	0	0	0	0
89	M38	Z	-1.6	-1.6	0	0
90	M39	Z	-1.6	-1.6	0	0
91	M40	Z	-1.6	-1.6	0	0
92	M41	Z	-1.6	-1.6	0	0
93	M42	Z	-1.6	-1.6	0	0
94	M43	Z	-1.2	-1.2	0	0
95	M44	Z	-1.2	-1.2	0	0
96	M45	Z	-1.6	-1.6	0	0
97	M46	Z	-1.6	-1.6	0	0
98	M47	Z	-1.6	-1.6	0	0
99	M48	Z	-1.6	-1.6	0	0
100	M49	Z	-1.6	-1.6	0	0
101	M50	Z	-1.2	-1.2	0	0
102	M51	Z	-1.2	-1.2	0	0
103	MP1	X	0	0	0	0
104	MP2	X	33.1	33.1	%49.074	%100
105	MP3	X	97.3	97.3	%31.012	%100
106	MP4	X	34.5	34.5	%13.472	%92.083
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	25.2	25.2	%49.074	%100
111	MP9	X	49.7	49.7	%31.012	%100
112	MP10	X	26.8	26.8	%13.472	%92.083
113	MP1	Z	0	0	0	0
114	MP2	Z	-19.1	-19.1	%49.074	%100
115	MP3	Z	-56.2	-56.2	%31.012	%100
116	MP4	Z	-19.9	-19.9	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	-14.6	-14.6	%49.074	%100
121	MP9	Z	-28.7	-28.7	%31.012	%100
122	MP10	Z	-15.5	-15.5	%13.472	%92.083

**Member Distributed Loads (BLC 14 : Ice Load)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FM-1	Y	-12.7	-12.7	0	0
2	FM-2	Y	-12.7	-12.7	0	0
3	FM-3	Y	-12.7	-12.7	0	0
4	PL1	Y	-20	-20	0	0
5	PL2	Y	-20	-20	0	0
6	PL3	Y	-20	-20	0	0
7	SA-1	Y	-18	-18	0	0
8	SA-3	Y	-18	-18	0	0
9	SA-2	Y	-18	-18	0	0



**Member Distributed Loads (BLC 14 : Ice Load) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
10	M10	Y	-5.5	-5.5	0	0
11	M11	Y	-5.5	-5.5	0	0
12	M12	Y	-5.5	-5.5	0	0
13	M13	Y	-5.5	-5.5	0	0
14	M14	Y	-5.5	-5.5	0	0
15	M15	Y	-5	-5	0	0
16	M16	Y	-5	-5	0	0
17	M17	Y	-5.5	-5.5	0	0
18	M18	Y	-5.5	-5.5	0	0
19	M19	Y	-5.5	-5.5	0	0
20	M20	Y	-5.5	-5.5	0	0
21	M21	Y	-5.5	-5.5	0	0
22	M22	Y	-5	-5	0	0
23	M23	Y	-5	-5	0	0
24	M24	Y	-5.5	-5.5	0	0
25	M25	Y	-5.5	-5.5	0	0
26	M26	Y	-5.5	-5.5	0	0
27	M27	Y	-5.5	-5.5	0	0
28	M28	Y	-5.5	-5.5	0	0
29	M29	Y	-5	-5	0	0
30	M30	Y	-5	-5	0	0
31	M31	Y	-5.5	-5.5	0	0
32	M32	Y	-5.5	-5.5	0	0
33	M33	Y	-5.5	-5.5	0	0
34	M34	Y	-5.5	-5.5	0	0
35	M35	Y	-5.5	-5.5	0	0
36	M36	Y	-5	-5	0	0
37	M37	Y	-5	-5	0	0
38	M38	Y	-5.5	-5.5	0	0
39	M39	Y	-5.5	-5.5	0	0
40	M40	Y	-5.5	-5.5	0	0
41	M41	Y	-5.5	-5.5	0	0
42	M42	Y	-5.5	-5.5	0	0
43	M43	Y	-5	-5	0	0
44	M44	Y	-5	-5	0	0
45	M45	Y	-5.5	-5.5	0	0
46	M46	Y	-5.5	-5.5	0	0
47	M47	Y	-5.5	-5.5	0	0
48	M48	Y	-5.5	-5.5	0	0
49	M49	Y	-5.5	-5.5	0	0
50	M50	Y	-5	-5	0	0
51	M51	Y	-5	-5	0	0

**Member Distributed Loads (BLC 15 : Wind on Ice (0 deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FM-1	X	4.2	4.2	0	0
2	FM-2	X	4.2	4.2	0	0
3	FM-3	X	4.2	4.2	0	0
4	PL1	X	9	9	0	0
5	PL2	X	9	9	0	0
6	PL3	X	9	9	0	0
7	SA-1	X	0	0	0	0
8	SA-3	X	6.3	6.3	0	0
9	SA-2	X	6.3	6.3	0	0
10	M10	X	0	0	0	0
11	M11	X	0	0	0	0



Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

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**Member Distributed Loads (BLC 15 : Wind on Ice (0 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...]	End Magnitude[lb/ft,...]	Start Location[in,%]	End Location[in,%]
12	M12	X	0	0	0	0
13	M13	X	0	0	0	0
14	M14	X	2.4	2.4	0	0
15	M15	X	2.2	2.2	0	0
16	M16	X	2.2	2.2	0	0
17	M17	X	0	0	0	0
18	M18	X	0	0	0	0
19	M19	X	0	0	0	0
20	M20	X	0	0	0	0
21	M21	X	2.4	2.4	0	0
22	M22	X	2.2	2.2	0	0
23	M23	X	2.2	2.2	0	0
24	M24	X	2.4	2.4	0	0
25	M25	X	2.4	2.4	0	0
26	M26	X	2.4	2.4	0	0
27	M27	X	2.4	2.4	0	0
28	M28	X	2.4	2.4	0	0
29	M29	X	2.2	2.2	0	0
30	M30	X	2.2	2.2	0	0
31	M31	X	2.4	2.4	0	0
32	M32	X	2.4	2.4	0	0
33	M33	X	2.4	2.4	0	0
34	M34	X	2.4	2.4	0	0
35	M35	X	2.4	2.4	0	0
36	M36	X	2.2	2.2	0	0
37	M37	X	2.2	2.2	0	0
38	M38	X	2.4	2.4	0	0
39	M39	X	2.4	2.4	0	0
40	M40	X	2.4	2.4	0	0
41	M41	X	2.4	2.4	0	0
42	M42	X	2.4	2.4	0	0
43	M43	X	2.2	2.2	0	0
44	M44	X	2.2	2.2	0	0
45	M45	X	2.4	2.4	0	0
46	M46	X	2.4	2.4	0	0
47	M47	X	2.4	2.4	0	0
48	M48	X	2.4	2.4	0	0
49	M49	X	2.4	2.4	0	0
50	M50	X	2.2	2.2	0	0
51	M51	X	2.2	2.2	0	0
52	FM-1	Z	0	0	0	0
53	FM-2	Z	0	0	0	0
54	FM-3	Z	0	0	0	0
55	PL1	Z	0	0	0	0
56	PL2	Z	0	0	0	0
57	PL3	Z	0	0	0	0
58	SA-1	Z	0	0	0	0
59	SA-3	Z	0	0	0	0
60	SA-2	Z	0	0	0	0
61	M10	Z	0	0	0	0
62	M11	Z	0	0	0	0
63	M12	Z	0	0	0	0
64	M13	Z	0	0	0	0
65	M14	Z	0	0	0	0
66	M15	Z	0	0	0	0
67	M16	Z	0	0	0	0
68	M17	Z	0	0	0	0





**Member Distributed Loads (BLC 15 : Wind on Ice (0 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in,%]	End Location[in,%]
69	M18	Z	0	0	0
70	M19	Z	0	0	0
71	M20	Z	0	0	0
72	M21	Z	0	0	0
73	M22	Z	0	0	0
74	M23	Z	0	0	0
75	M24	Z	0	0	0
76	M25	Z	0	0	0
77	M26	Z	0	0	0
78	M27	Z	0	0	0
79	M28	Z	0	0	0
80	M29	Z	0	0	0
81	M30	Z	0	0	0
82	M31	Z	0	0	0
83	M32	Z	0	0	0
84	M33	Z	0	0	0
85	M34	Z	0	0	0
86	M35	Z	0	0	0
87	M36	Z	0	0	0
88	M37	Z	0	0	0
89	M38	Z	0	0	0
90	M39	Z	0	0	0
91	M40	Z	0	0	0
92	M41	Z	0	0	0
93	M42	Z	0	0	0
94	M43	Z	0	0	0
95	M44	Z	0	0	0
96	M45	Z	0	0	0
97	M46	Z	0	0	0
98	M47	Z	0	0	0
99	M48	Z	0	0	0
100	M49	Z	0	0	0
101	M50	Z	0	0	0
102	M51	Z	0	0	0
103	MP1	X	0	0	0
104	MP2	X	8.2	8.2	%49.074 %100
105	MP3	X	24.3	24.3	%31.012 %100
106	MP4	X	8.4	8.4	%13.472 %92.083
107	MP5	X	0	0	0 0
108	MP6	X	0	0	0 0
109	MP7	X	0	0	0 0
110	MP8	X	6.7	6.7	%49.074 %100
111	MP9	X	14.9	14.9	%31.012 %100
112	MP10	X	7	7	%13.472 %92.083
113	MP1	Z	0	0	0 0
114	MP2	Z	0	0	0 0
115	MP3	Z	0	0	0 0
116	MP4	Z	0	0	0 0
117	MP5	Z	0	0	0 0
118	MP6	Z	0	0	0 0
119	MP7	Z	0	0	0 0
120	MP8	Z	0	0	0 0
121	MP9	Z	0	0	0 0
122	MP10	Z	0	0	0 0

**Member Distributed Loads (BLC 16 : Wind on Ice (30 deg))**

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in,%]	End Location[in,%]
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Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

Apr 29, 2019  
 2:25 PM  
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**Member Distributed Loads (BLC 16 : Wind on Ice (30 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FM-1	X	3.7	3.7	0	0
2	FM-2	X	0	0	0	0
3	FM-3	X	3.7	3.7	0	0
4	PL1	X	0	0	0	0
5	PL2	X	7.8	7.8	0	0
6	PL3	X	7.8	7.8	0	0
7	SA-1	X	5.5	5.5	0	0
8	SA-3	X	5.5	5.5	0	0
9	SA-2	X	5.5	5.5	0	0
10	M10	X	2	2	0	0
11	M11	X	2	2	0	0
12	M12	X	2	2	0	0
13	M13	X	2	2	0	0
14	M14	X	2	2	0	0
15	M15	X	1.9	1.9	0	0
16	M16	X	1.9	1.9	0	0
17	M17	X	2	2	0	0
18	M18	X	2	2	0	0
19	M19	X	2	2	0	0
20	M20	X	2	2	0	0
21	M21	X	2	2	0	0
22	M22	X	1.9	1.9	0	0
23	M23	X	1.9	1.9	0	0
24	M24	X	2	2	0	0
25	M25	X	2	2	0	0
26	M26	X	2	2	0	0
27	M27	X	2	2	0	0
28	M28	X	2	2	0	0
29	M29	X	1.9	1.9	0	0
30	M30	X	1.9	1.9	0	0
31	M31	X	2	2	0	0
32	M32	X	2	2	0	0
33	M33	X	2	2	0	0
34	M34	X	2	2	0	0
35	M35	X	2	2	0	0
36	M36	X	1.9	1.9	0	0
37	M37	X	1.9	1.9	0	0
38	M38	X	2	2	0	0
39	M39	X	2	2	0	0
40	M40	X	2	2	0	0
41	M41	X	2	2	0	0
42	M42	X	0	0	0	0
43	M43	X	1.9	1.9	0	0
44	M44	X	0	0	0	0
45	M45	X	2	2	0	0
46	M46	X	2	2	0	0
47	M47	X	2	2	0	0
48	M48	X	2	2	0	0
49	M49	X	0	0	0	0
50	M50	X	1.9	1.9	0	0
51	M51	X	0	0	0	0
52	FM-1	Z	2.1	2.1	0	0
53	FM-2	Z	0	0	0	0
54	FM-3	Z	2.1	2.1	0	0
55	PL1	Z	0	0	0	0
56	PL2	Z	4.5	4.5	0	0
57	PL3	Z	4.5	4.5	0	0



**Member Distributed Loads (BLC 16 : Wind on Ice (30 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in,%]	End Location[in,%]	
58	SA-1	Z	3.2	3.2	0	0
59	SA-3	Z	3.2	3.2	0	0
60	SA-2	Z	3.2	3.2	0	0
61	M10	Z	1.2	1.2	0	0
62	M11	Z	1.2	1.2	0	0
63	M12	Z	1.2	1.2	0	0
64	M13	Z	1.2	1.2	0	0
65	M14	Z	1.2	1.2	0	0
66	M15	Z	1.1	1.1	0	0
67	M16	Z	1.1	1.1	0	0
68	M17	Z	1.2	1.2	0	0
69	M18	Z	1.2	1.2	0	0
70	M19	Z	1.2	1.2	0	0
71	M20	Z	1.2	1.2	0	0
72	M21	Z	1.2	1.2	0	0
73	M22	Z	1.1	1.1	0	0
74	M23	Z	1.1	1.1	0	0
75	M24	Z	1.2	1.2	0	0
76	M25	Z	1.2	1.2	0	0
77	M26	Z	1.2	1.2	0	0
78	M27	Z	1.2	1.2	0	0
79	M28	Z	1.2	1.2	0	0
80	M29	Z	1.1	1.1	0	0
81	M30	Z	1.1	1.1	0	0
82	M31	Z	1.2	1.2	0	0
83	M32	Z	1.2	1.2	0	0
84	M33	Z	1.2	1.2	0	0
85	M34	Z	1.2	1.2	0	0
86	M35	Z	1.2	1.2	0	0
87	M36	Z	1.1	1.1	0	0
88	M37	Z	1.1	1.1	0	0
89	M38	Z	1.2	1.2	0	0
90	M39	Z	1.2	1.2	0	0
91	M40	Z	1.2	1.2	0	0
92	M41	Z	1.2	1.2	0	0
93	M42	Z	0	0	0	0
94	M43	Z	1.1	1.1	0	0
95	M44	Z	0	0	0	0
96	M45	Z	1.2	1.2	0	0
97	M46	Z	1.2	1.2	0	0
98	M47	Z	1.2	1.2	0	0
99	M48	Z	1.2	1.2	0	0
100	M49	Z	0	0	0	0
101	M50	Z	1.1	1.1	0	0
102	M51	Z	0	0	0	0
103	MP1	X	0	0	0	0
104	MP2	X	6.6	6.6	%49.074	%100
105	MP3	X	18.3	18.3	%31.012	%100
106	MP4	X	6.9	6.9	%13.472	%92.083
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	6.6	6.6	%49.074	%100
111	MP9	X	18.3	18.3	%31.012	%100
112	MP10	X	6.9	6.9	%13.472	%92.083
113	MP1	Z	0	0	0	0
114	MP2	Z	3.8	3.8	%49.074	%100



**Member Distributed Loads (BLC 16 : Wind on Ice (30 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in,%]	End Location[in,%]
115	MP3	Z	10.6	10.6	%31.012	%100
116	MP4	Z	4	4	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	3.8	3.8	%49.074	%100
121	MP9	Z	10.6	10.6	%31.012	%100
122	MP10	Z	4	4	%13.472	%92.083

**Member Distributed Loads (BLC 17 : Wind on Ice (60 deg))**

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in,%]	End Location[in,%]
1	FM-1	X	2.1	2.1	0	0
2	FM-2	X	2.1	2.1	0	0
3	FM-3	X	2.1	2.1	0	0
4	PL1	X	4.5	4.5	0	0
5	PL2	X	4.5	4.5	0	0
6	PL3	X	4.5	4.5	0	0
7	SA-1	X	3.2	3.2	0	0
8	SA-3	X	3.2	3.2	0	0
9	SA-2	X	0	0	0	0
10	M10	X	1.2	1.2	0	0
11	M11	X	1.2	1.2	0	0
12	M12	X	1.2	1.2	0	0
13	M13	X	1.2	1.2	0	0
14	M14	X	1.2	1.2	0	0
15	M15	X	1.1	1.1	0	0
16	M16	X	1.1	1.1	0	0
17	M17	X	1.2	1.2	0	0
18	M18	X	1.2	1.2	0	0
19	M19	X	1.2	1.2	0	0
20	M20	X	1.2	1.2	0	0
21	M21	X	1.2	1.2	0	0
22	M22	X	1.1	1.1	0	0
23	M23	X	1.1	1.1	0	0
24	M24	X	0	0	0	0
25	M25	X	0	0	0	0
26	M26	X	0	0	0	0
27	M27	X	0	0	0	0
28	M28	X	1.2	1.2	0	0
29	M29	X	1.1	1.1	0	0
30	M30	X	1.1	1.1	0	0
31	M31	X	0	0	0	0
32	M32	X	0	0	0	0
33	M33	X	0	0	0	0
34	M34	X	0	0	0	0
35	M35	X	1.2	1.2	0	0
36	M36	X	1.1	1.1	0	0
37	M37	X	1.1	1.1	0	0
38	M38	X	1.2	1.2	0	0
39	M39	X	1.2	1.2	0	0
40	M40	X	1.2	1.2	0	0
41	M41	X	1.2	1.2	0	0
42	M42	X	1.2	1.2	0	0
43	M43	X	1.1	1.1	0	0
44	M44	X	1.1	1.1	0	0
45	M45	X	1.2	1.2	0	0



Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

Apr 29, 2019  
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**Member Distributed Loads (BLC 17 : Wind on Ice (60 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]	
46	M46	X	1.2	1.2	0	0
47	M47	X	1.2	1.2	0	0
48	M48	X	1.2	1.2	0	0
49	M49	X	1.2	1.2	0	0
50	M50	X	1.1	1.1	0	0
51	M51	X	1.1	1.1	0	0
52	FM-1	Z	3.7	3.7	0	0
53	FM-2	Z	3.7	3.7	0	0
54	FM-3	Z	3.7	3.7	0	0
55	PL1	Z	7.8	7.8	0	0
56	PL2	Z	7.8	7.8	0	0
57	PL3	Z	7.8	7.8	0	0
58	SA-1	Z	5.5	5.5	0	0
59	SA-3	Z	5.5	5.5	0	0
60	SA-2	Z	0	0	0	0
61	M10	Z	2	2	0	0
62	M11	Z	2	2	0	0
63	M12	Z	2	2	0	0
64	M13	Z	2	2	0	0
65	M14	Z	2	2	0	0
66	M15	Z	1.9	1.9	0	0
67	M16	Z	1.9	1.9	0	0
68	M17	Z	2	2	0	0
69	M18	Z	2	2	0	0
70	M19	Z	2	2	0	0
71	M20	Z	2	2	0	0
72	M21	Z	2	2	0	0
73	M22	Z	1.9	1.9	0	0
74	M23	Z	1.9	1.9	0	0
75	M24	Z	0	0	0	0
76	M25	Z	0	0	0	0
77	M26	Z	0	0	0	0
78	M27	Z	0	0	0	0
79	M28	Z	2	2	0	0
80	M29	Z	1.9	1.9	0	0
81	M30	Z	1.9	1.9	0	0
82	M31	Z	0	0	0	0
83	M32	Z	0	0	0	0
84	M33	Z	0	0	0	0
85	M34	Z	0	0	0	0
86	M35	Z	2	2	0	0
87	M36	Z	1.9	1.9	0	0
88	M37	Z	1.9	1.9	0	0
89	M38	Z	2	2	0	0
90	M39	Z	2	2	0	0
91	M40	Z	2	2	0	0
92	M41	Z	2	2	0	0
93	M42	Z	2	2	0	0
94	M43	Z	1.9	1.9	0	0
95	M44	Z	1.9	1.9	0	0
96	M45	Z	2	2	0	0
97	M46	Z	2	2	0	0
98	M47	Z	2	2	0	0
99	M48	Z	2	2	0	0
100	M49	Z	2	2	0	0
101	M50	Z	1.9	1.9	0	0
102	M51	Z	1.9	1.9	0	0



**Member Distributed Loads (BLC 17 : Wind on Ice (60 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
103	MP1	X	0	0	0	0
104	MP2	X	3.3	3.3	%49.074	%100
105	MP3	X	7.4	7.4	%31.012	%100
106	MP4	X	3.5	3.5	%13.472	%92.083
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	4.1	4.1	%49.074	%100
111	MP9	X	12.1	12.1	%31.012	%100
112	MP10	X	4.2	4.2	%13.472	%92.083
113	MP1	Z	0	0	0	0
114	MP2	Z	5.8	5.8	%49.074	%100
115	MP3	Z	12.9	12.9	%31.012	%100
116	MP4	Z	6	6	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	7.1	7.1	%49.074	%100
121	MP9	Z	21	21	%31.012	%100
122	MP10	Z	7.3	7.3	%13.472	%92.083

**Member Distributed Loads (BLC 18 : Wind on Ice (90 deg))**

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in, %]	End Location[in, %]
1	FM-1	X	0	0	0	0
2	FM-2	X	0	0	0	0
3	FM-3	X	0	0	0	0
4	PL1	X	0	0	0	0
5	PL2	X	0	0	0	0
6	PL3	X	0	0	0	0
7	SA-1	X	0	0	0	0
8	SA-3	X	0	0	0	0
9	SA-2	X	0	0	0	0
10	M10	X	0	0	0	0
11	M11	X	0	0	0	0
12	M12	X	0	0	0	0
13	M13	X	0	0	0	0
14	M14	X	0	0	0	0
15	M15	X	0	0	0	0
16	M16	X	0	0	0	0
17	M17	X	0	0	0	0
18	M18	X	0	0	0	0
19	M19	X	0	0	0	0
20	M20	X	0	0	0	0
21	M21	X	0	0	0	0
22	M22	X	0	0	0	0
23	M23	X	0	0	0	0
24	M24	X	0	0	0	0
25	M25	X	0	0	0	0
26	M26	X	0	0	0	0
27	M27	X	0	0	0	0
28	M28	X	0	0	0	0
29	M29	X	0	0	0	0
30	M30	X	0	0	0	0
31	M31	X	0	0	0	0
32	M32	X	0	0	0	0
33	M33	X	0	0	0	0



**Member Distributed Loads (BLC 18 : Wind on Ice (90 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft,...]	End Magnitude[lb/ft,...]	Start Location[in,%]	End Location[in,%]
34	M34	X	0	0	0
35	M35	X	0	0	0
36	M36	X	0	0	0
37	M37	X	0	0	0
38	M38	X	0	0	0
39	M39	X	0	0	0
40	M40	X	0	0	0
41	M41	X	0	0	0
42	M42	X	0	0	0
43	M43	X	0	0	0
44	M44	X	0	0	0
45	M45	X	0	0	0
46	M46	X	0	0	0
47	M47	X	0	0	0
48	M48	X	0	0	0
49	M49	X	0	0	0
50	M50	X	0	0	0
51	M51	X	0	0	0
52	FM-1	Z	0	0	0
53	FM-2	Z	4.2	4.2	0
54	FM-3	Z	4.2	4.2	0
55	PL1	Z	9	9	0
56	PL2	Z	9	9	0
57	PL3	Z	0	0	0
58	SA-1	Z	6.3	6.3	0
59	SA-3	Z	6.3	6.3	0
60	SA-2	Z	6.3	6.3	0
61	M10	Z	2.4	2.4	0
62	M11	Z	2.4	2.4	0
63	M12	Z	2.4	2.4	0
64	M13	Z	2.4	2.4	0
65	M14	Z	0	0	0
66	M15	Z	2.2	2.2	0
67	M16	Z	0	0	0
68	M17	Z	2.4	2.4	0
69	M18	Z	2.4	2.4	0
70	M19	Z	2.4	2.4	0
71	M20	Z	2.4	2.4	0
72	M21	Z	0	0	0
73	M22	Z	2.2	2.2	0
74	M23	Z	0	0	0
75	M24	Z	2.4	2.4	0
76	M25	Z	2.4	2.4	0
77	M26	Z	2.4	2.4	0
78	M27	Z	2.4	2.4	0
79	M28	Z	2.4	2.4	0
80	M29	Z	2.2	2.2	0
81	M30	Z	2.2	2.2	0
82	M31	Z	2.4	2.4	0
83	M32	Z	2.4	2.4	0
84	M33	Z	2.4	2.4	0
85	M34	Z	2.4	2.4	0
86	M35	Z	2.4	2.4	0
87	M36	Z	2.2	2.2	0
88	M37	Z	2.2	2.2	0
89	M38	Z	2.4	2.4	0
90	M39	Z	2.4	2.4	0



**Member Distributed Loads (BLC 18 : Wind on Ice (90 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
91	M40	Z	2.4	2.4	0	0
92	M41	Z	2.4	2.4	0	0
93	M42	Z	2.4	2.4	0	0
94	M43	Z	2.2	2.2	0	0
95	M44	Z	2.2	2.2	0	0
96	M45	Z	2.4	2.4	0	0
97	M46	Z	2.4	2.4	0	0
98	M47	Z	2.4	2.4	0	0
99	M48	Z	2.4	2.4	0	0
100	M49	Z	2.4	2.4	0	0
101	M50	Z	2.2	2.2	0	0
102	M51	Z	2.2	2.2	0	0
103	MP1	X	0	0	0	0
104	MP2	X	0	0	0	0
105	MP3	X	0	0	0	0
106	MP4	X	0	0	0	0
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	0	0	0	0
111	MP9	X	0	0	0	0
112	MP10	X	0	0	0	0
113	MP1	Z	0	0	0	0
114	MP2	Z	6.2	6.2	%49.074	%100
115	MP3	Z	11.7	11.7	%31.012	%100
116	MP4	Z	6.5	6.5	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	7.7	7.7	%49.074	%100
121	MP9	Z	21.1	21.1	%31.012	%100
122	MP10	Z	7.9	7.9	%13.472	%92.083

**Member Distributed Loads (BLC 19 : Wind on Ice (120 deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
1	FM-1	X	-2.1	-2.1	0	0
2	FM-2	X	-2.1	-2.1	0	0
3	FM-3	X	-2.1	-2.1	0	0
4	PL1	X	-4.5	-4.5	0	0
5	PL2	X	-4.5	-4.5	0	0
6	PL3	X	-4.5	-4.5	0	0
7	SA-1	X	-3.2	-3.2	0	0
8	SA-3	X	0	0	0	0
9	SA-2	X	-3.2	-3.2	0	0
10	M10	X	-1.2	-1.2	0	0
11	M11	X	-1.2	-1.2	0	0
12	M12	X	-1.2	-1.2	0	0
13	M13	X	-1.2	-1.2	0	0
14	M14	X	-1.2	-1.2	0	0
15	M15	X	-1.1	-1.1	0	0
16	M16	X	-1.1	-1.1	0	0
17	M17	X	-1.2	-1.2	0	0
18	M18	X	-1.2	-1.2	0	0
19	M19	X	-1.2	-1.2	0	0
20	M20	X	-1.2	-1.2	0	0
21	M21	X	-1.2	-1.2	0	0





Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

Apr 29, 2019  
 2:25 PM  
 Checked By: JAA

**Member Distributed Loads (BLC 19 : Wind on Ice (120 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]	
22	M22	X	-1.1	-1.1	0	0
23	M23	X	-1.1	-1.1	0	0
24	M24	X	-1.2	-1.2	0	0
25	M25	X	-1.2	-1.2	0	0
26	M26	X	-1.2	-1.2	0	0
27	M27	X	-1.2	-1.2	0	0
28	M28	X	-1.2	-1.2	0	0
29	M29	X	-1.1	-1.1	0	0
30	M30	X	-1.1	-1.1	0	0
31	M31	X	-1.2	-1.2	0	0
32	M32	X	-1.2	-1.2	0	0
33	M33	X	-1.2	-1.2	0	0
34	M34	X	-1.2	-1.2	0	0
35	M35	X	-1.2	-1.2	0	0
36	M36	X	-1.1	-1.1	0	0
37	M37	X	-1.1	-1.1	0	0
38	M38	X	0	0	0	0
39	M39	X	0	0	0	0
40	M40	X	0	0	0	0
41	M41	X	0	0	0	0
42	M42	X	-1.2	-1.2	0	0
43	M43	X	-1.1	-1.1	0	0
44	M44	X	-1.1	-1.1	0	0
45	M45	X	0	0	0	0
46	M46	X	0	0	0	0
47	M47	X	0	0	0	0
48	M48	X	0	0	0	0
49	M49	X	-1.2	-1.2	0	0
50	M50	X	-1.1	-1.1	0	0
51	M51	X	-1.1	-1.1	0	0
52	FM-1	Z	3.7	3.7	0	0
53	FM-2	Z	3.7	3.7	0	0
54	FM-3	Z	3.7	3.7	0	0
55	PL1	Z	7.8	7.8	0	0
56	PL2	Z	7.8	7.8	0	0
57	PL3	Z	7.8	7.8	0	0
58	SA-1	Z	5.5	5.5	0	0
59	SA-3	Z	0	0	0	0
60	SA-2	Z	5.5	5.5	0	0
61	M10	Z	2	2	0	0
62	M11	Z	2	2	0	0
63	M12	Z	2	2	0	0
64	M13	Z	2	2	0	0
65	M14	Z	2	2	0	0
66	M15	Z	1.9	1.9	0	0
67	M16	Z	1.9	1.9	0	0
68	M17	Z	2	2	0	0
69	M18	Z	2	2	0	0
70	M19	Z	2	2	0	0
71	M20	Z	2	2	0	0
72	M21	Z	2	2	0	0
73	M22	Z	1.9	1.9	0	0
74	M23	Z	1.9	1.9	0	0
75	M24	Z	2	2	0	0
76	M25	Z	2	2	0	0
77	M26	Z	2	2	0	0
78	M27	Z	2	2	0	0



**Member Distributed Loads (BLC 19 : Wind on Ice (120 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
79	M28	Z	2	2	0	0
80	M29	Z	1.9	1.9	0	0
81	M30	Z	1.9	1.9	0	0
82	M31	Z	2	2	0	0
83	M32	Z	2	2	0	0
84	M33	Z	2	2	0	0
85	M34	Z	2	2	0	0
86	M35	Z	2	2	0	0
87	M36	Z	1.9	1.9	0	0
88	M37	Z	1.9	1.9	0	0
89	M38	Z	0	0	0	0
90	M39	Z	0	0	0	0
91	M40	Z	0	0	0	0
92	M41	Z	0	0	0	0
93	M42	Z	2	2	0	0
94	M43	Z	1.9	1.9	0	0
95	M44	Z	1.9	1.9	0	0
96	M45	Z	0	0	0	0
97	M46	Z	0	0	0	0
98	M47	Z	0	0	0	0
99	M48	Z	0	0	0	0
100	M49	Z	2	2	0	0
101	M50	Z	1.9	1.9	0	0
102	M51	Z	1.9	1.9	0	0
103	MP1	X	0	0	0	0
104	MP2	X	-3.3	-3.3	%49.074	%100
105	MP3	X	-7.4	-7.4	%31.012	%100
106	MP4	X	-3.5	-3.5	%13.472	%92.083
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	-3.3	-3.3	%49.074	%100
111	MP9	X	-7.4	-7.4	%31.012	%100
112	MP10	X	-3.5	-3.5	%13.472	%92.083
113	MP1	Z	0	0	0	0
114	MP2	Z	5.8	5.8	%49.074	%100
115	MP3	Z	12.9	12.9	%31.012	%100
116	MP4	Z	6	6	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	5.8	5.8	%49.074	%100
121	MP9	Z	12.9	12.9	%31.012	%100
122	MP10	Z	6	6	%13.472	%92.083

**Member Distributed Loads (BLC 20 : Wind on Ice (150 deg))**

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
1	FM-1	X	-3.7	-3.7	0	0
2	FM-2	X	-3.7	-3.7	0	0
3	FM-3	X	0	0	0	0
4	PL1	X	-7.8	-7.8	0	0
5	PL2	X	0	0	0	0
6	PL3	X	-7.8	-7.8	0	0
7	SA-1	X	-5.5	-5.5	0	0
8	SA-3	X	-5.5	-5.5	0	0
9	SA-2	X	-5.5	-5.5	0	0



Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

Apr 29, 2019  
 2:25 PM  
 Checked By: JAA

**Member Distributed Loads (BLC 20 : Wind on Ice (150 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in,%]	End Location[in,%]
10	M10	X	-2	-2	0	0
11	M11	X	-2	-2	0	0
12	M12	X	-2	-2	0	0
13	M13	X	-2	-2	0	0
14	M14	X	-2	-2	0	0
15	M15	X	-1.9	-1.9	0	0
16	M16	X	-1.9	-1.9	0	0
17	M17	X	-2	-2	0	0
18	M18	X	-2	-2	0	0
19	M19	X	-2	-2	0	0
20	M20	X	-2	-2	0	0
21	M21	X	-2	-2	0	0
22	M22	X	-1.9	-1.9	0	0
23	M23	X	-1.9	-1.9	0	0
24	M24	X	-2	-2	0	0
25	M25	X	-2	-2	0	0
26	M26	X	-2	-2	0	0
27	M27	X	-2	-2	0	0
28	M28	X	0	0	0	0
29	M29	X	-1.9	-1.9	0	0
30	M30	X	0	0	0	0
31	M31	X	-2	-2	0	0
32	M32	X	-2	-2	0	0
33	M33	X	-2	-2	0	0
34	M34	X	-2	-2	0	0
35	M35	X	0	0	0	0
36	M36	X	-1.9	-1.9	0	0
37	M37	X	0	0	0	0
38	M38	X	-2	-2	0	0
39	M39	X	-2	-2	0	0
40	M40	X	-2	-2	0	0
41	M41	X	-2	-2	0	0
42	M42	X	-2	-2	0	0
43	M43	X	-1.9	-1.9	0	0
44	M44	X	-1.9	-1.9	0	0
45	M45	X	-2	-2	0	0
46	M46	X	-2	-2	0	0
47	M47	X	-2	-2	0	0
48	M48	X	-2	-2	0	0
49	M49	X	-2	-2	0	0
50	M50	X	-1.9	-1.9	0	0
51	M51	X	-1.9	-1.9	0	0
52	FM-1	Z	2.1	2.1	0	0
53	FM-2	Z	2.1	2.1	0	0
54	FM-3	Z	0	0	0	0
55	PL1	Z	4.5	4.5	0	0
56	PL2	Z	0	0	0	0
57	PL3	Z	4.5	4.5	0	0
58	SA-1	Z	3.2	3.2	0	0
59	SA-3	Z	3.2	3.2	0	0
60	SA-2	Z	3.2	3.2	0	0
61	M10	Z	1.2	1.2	0	0
62	M11	Z	1.2	1.2	0	0
63	M12	Z	1.2	1.2	0	0
64	M13	Z	1.2	1.2	0	0
65	M14	Z	1.2	1.2	0	0
66	M15	Z	1.1	1.1	0	0



**Member Distributed Loads (BLC 20 : Wind on Ice (150 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]	
67	M16	Z	1.1	1.1	0	0
68	M17	Z	1.2	1.2	0	0
69	M18	Z	1.2	1.2	0	0
70	M19	Z	1.2	1.2	0	0
71	M20	Z	1.2	1.2	0	0
72	M21	Z	1.2	1.2	0	0
73	M22	Z	1.1	1.1	0	0
74	M23	Z	1.1	1.1	0	0
75	M24	Z	1.2	1.2	0	0
76	M25	Z	1.2	1.2	0	0
77	M26	Z	1.2	1.2	0	0
78	M27	Z	1.2	1.2	0	0
79	M28	Z	0	0	0	0
80	M29	Z	1.1	1.1	0	0
81	M30	Z	0	0	0	0
82	M31	Z	1.2	1.2	0	0
83	M32	Z	1.2	1.2	0	0
84	M33	Z	1.2	1.2	0	0
85	M34	Z	1.2	1.2	0	0
86	M35	Z	0	0	0	0
87	M36	Z	1.1	1.1	0	0
88	M37	Z	0	0	0	0
89	M38	Z	1.2	1.2	0	0
90	M39	Z	1.2	1.2	0	0
91	M40	Z	1.2	1.2	0	0
92	M41	Z	1.2	1.2	0	0
93	M42	Z	1.2	1.2	0	0
94	M43	Z	1.1	1.1	0	0
95	M44	Z	1.1	1.1	0	0
96	M45	Z	1.2	1.2	0	0
97	M46	Z	1.2	1.2	0	0
98	M47	Z	1.2	1.2	0	0
99	M48	Z	1.2	1.2	0	0
100	M49	Z	1.2	1.2	0	0
101	M50	Z	1.1	1.1	0	0
102	M51	Z	1.1	1.1	0	0
103	MP1	X	0	0	0	0
104	MP2	X	-6.6	-6.6	%49.074	%100
105	MP3	X	-18.3	-18.3	%31.012	%100
106	MP4	X	-6.9	-6.9	%13.472	%92.083
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	-5.3	-5.3	%49.074	%100
111	MP9	X	-10.1	-10.1	%31.012	%100
112	MP10	X	-5.6	-5.6	%13.472	%92.083
113	MP1	Z	0	0	0	0
114	MP2	Z	3.8	3.8	%49.074	%100
115	MP3	Z	10.6	10.6	%31.012	%100
116	MP4	Z	4	4	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	3.1	3.1	%49.074	%100
121	MP9	Z	5.9	5.9	%31.012	%100
122	MP10	Z	3.2	3.2	%13.472	%92.083



**Member Distributed Loads (BLC 21 : Wind on Ice (180 deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FM-1	X	-4.2	-4.2	0	0
2	FM-2	X	-4.2	-4.2	0	0
3	FM-3	X	-4.2	-4.2	0	0
4	PL1	X	-9	-9	0	0
5	PL2	X	-9	-9	0	0
6	PL3	X	-9	-9	0	0
7	SA-1	X	0	0	0	0
8	SA-3	X	-6.3	-6.3	0	0
9	SA-2	X	-6.3	-6.3	0	0
10	M10	X	0	0	0	0
11	M11	X	0	0	0	0
12	M12	X	0	0	0	0
13	M13	X	0	0	0	0
14	M14	X	-2.4	-2.4	0	0
15	M15	X	-2.2	-2.2	0	0
16	M16	X	-2.2	-2.2	0	0
17	M17	X	0	0	0	0
18	M18	X	0	0	0	0
19	M19	X	0	0	0	0
20	M20	X	0	0	0	0
21	M21	X	-2.4	-2.4	0	0
22	M22	X	-2.2	-2.2	0	0
23	M23	X	-2.2	-2.2	0	0
24	M24	X	-2.4	-2.4	0	0
25	M25	X	-2.4	-2.4	0	0
26	M26	X	-2.4	-2.4	0	0
27	M27	X	-2.4	-2.4	0	0
28	M28	X	-2.4	-2.4	0	0
29	M29	X	-2.2	-2.2	0	0
30	M30	X	-2.2	-2.2	0	0
31	M31	X	-2.4	-2.4	0	0
32	M32	X	-2.4	-2.4	0	0
33	M33	X	-2.4	-2.4	0	0
34	M34	X	-2.4	-2.4	0	0
35	M35	X	-2.4	-2.4	0	0
36	M36	X	-2.2	-2.2	0	0
37	M37	X	-2.2	-2.2	0	0
38	M38	X	-2.4	-2.4	0	0
39	M39	X	-2.4	-2.4	0	0
40	M40	X	-2.4	-2.4	0	0
41	M41	X	-2.4	-2.4	0	0
42	M42	X	-2.4	-2.4	0	0
43	M43	X	-2.2	-2.2	0	0
44	M44	X	-2.2	-2.2	0	0
45	M45	X	-2.4	-2.4	0	0
46	M46	X	-2.4	-2.4	0	0
47	M47	X	-2.4	-2.4	0	0
48	M48	X	-2.4	-2.4	0	0
49	M49	X	-2.4	-2.4	0	0
50	M50	X	-2.2	-2.2	0	0
51	M51	X	-2.2	-2.2	0	0
52	FM-1	Z	0	0	0	0
53	FM-2	Z	0	0	0	0
54	FM-3	Z	0	0	0	0
55	PL1	Z	0	0	0	0
56	PL2	Z	0	0	0	0
57	PL3	Z	0	0	0	0



**Member Distributed Loads (BLC 21 : Wind on Ice (180 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in,%]	End Location[in,%]
58	SA-1	Z	0	0	0
59	SA-3	Z	0	0	0
60	SA-2	Z	0	0	0
61	M10	Z	0	0	0
62	M11	Z	0	0	0
63	M12	Z	0	0	0
64	M13	Z	0	0	0
65	M14	Z	0	0	0
66	M15	Z	0	0	0
67	M16	Z	0	0	0
68	M17	Z	0	0	0
69	M18	Z	0	0	0
70	M19	Z	0	0	0
71	M20	Z	0	0	0
72	M21	Z	0	0	0
73	M22	Z	0	0	0
74	M23	Z	0	0	0
75	M24	Z	0	0	0
76	M25	Z	0	0	0
77	M26	Z	0	0	0
78	M27	Z	0	0	0
79	M28	Z	0	0	0
80	M29	Z	0	0	0
81	M30	Z	0	0	0
82	M31	Z	0	0	0
83	M32	Z	0	0	0
84	M33	Z	0	0	0
85	M34	Z	0	0	0
86	M35	Z	0	0	0
87	M36	Z	0	0	0
88	M37	Z	0	0	0
89	M38	Z	0	0	0
90	M39	Z	0	0	0
91	M40	Z	0	0	0
92	M41	Z	0	0	0
93	M42	Z	0	0	0
94	M43	Z	0	0	0
95	M44	Z	0	0	0
96	M45	Z	0	0	0
97	M46	Z	0	0	0
98	M47	Z	0	0	0
99	M48	Z	0	0	0
100	M49	Z	0	0	0
101	M50	Z	0	0	0
102	M51	Z	0	0	0
103	MP1	X	0	0	0
104	MP2	X	-8.2	-8.2	%49.074 %100
105	MP3	X	-24.3	-24.3	%31.012 %100
106	MP4	X	-8.4	-8.4	%13.472 %92.083
107	MP5	X	0	0	0 0
108	MP6	X	0	0	0 0
109	MP7	X	0	0	0 0
110	MP8	X	-6.7	-6.7	%49.074 %100
111	MP9	X	-14.9	-14.9	%31.012 %100
112	MP10	X	-7	-7	%13.472 %92.083
113	MP1	Z	0	0	0 0
114	MP2	Z	0	0	0 0



**Member Distributed Loads (BLC 21 : Wind on Ice (180 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
115	MP3	Z	0	0	0
116	MP4	Z	0	0	0
117	MP5	Z	0	0	0
118	MP6	Z	0	0	0
119	MP7	Z	0	0	0
120	MP8	Z	0	0	0
121	MP9	Z	0	0	0
122	MP10	Z	0	0	0

**Member Distributed Loads (BLC 22 : Wind on Ice (210 deg))**

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FM-1	X	-3.7	-3.7	0
2	FM-2	X	0	0	0
3	FM-3	X	-3.7	-3.7	0
4	PL1	X	0	0	0
5	PL2	X	-7.8	-7.8	0
6	PL3	X	-7.8	-7.8	0
7	SA-1	X	-5.5	-5.5	0
8	SA-3	X	-5.5	-5.5	0
9	SA-2	X	-5.5	-5.5	0
10	M10	X	-2	-2	0
11	M11	X	-2	-2	0
12	M12	X	-2	-2	0
13	M13	X	-2	-2	0
14	M14	X	-2	-2	0
15	M15	X	-1.9	-1.9	0
16	M16	X	-1.9	-1.9	0
17	M17	X	-2	-2	0
18	M18	X	-2	-2	0
19	M19	X	-2	-2	0
20	M20	X	-2	-2	0
21	M21	X	-2	-2	0
22	M22	X	-1.9	-1.9	0
23	M23	X	-1.9	-1.9	0
24	M24	X	-2	-2	0
25	M25	X	-2	-2	0
26	M26	X	-2	-2	0
27	M27	X	-2	-2	0
28	M28	X	-2	-2	0
29	M29	X	-1.9	-1.9	0
30	M30	X	-1.9	-1.9	0
31	M31	X	-2	-2	0
32	M32	X	-2	-2	0
33	M33	X	-2	-2	0
34	M34	X	-2	-2	0
35	M35	X	-2	-2	0
36	M36	X	-1.9	-1.9	0
37	M37	X	-1.9	-1.9	0
38	M38	X	-2	-2	0
39	M39	X	-2	-2	0
40	M40	X	-2	-2	0
41	M41	X	-2	-2	0
42	M42	X	0	0	0
43	M43	X	-1.9	-1.9	0
44	M44	X	0	0	0
45	M45	X	-2	-2	0



**Member Distributed Loads (BLC 22 : Wind on Ice (210 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]	
46	M46	X	-2	-2	0	0
47	M47	X	-2	-2	0	0
48	M48	X	-2	-2	0	0
49	M49	X	0	0	0	0
50	M50	X	-1.9	-1.9	0	0
51	M51	X	0	0	0	0
52	FM-1	Z	-2.1	-2.1	0	0
53	FM-2	Z	0	0	0	0
54	FM-3	Z	-2.1	-2.1	0	0
55	PL1	Z	0	0	0	0
56	PL2	Z	-4.5	-4.5	0	0
57	PL3	Z	-4.5	-4.5	0	0
58	SA-1	Z	-3.2	-3.2	0	0
59	SA-3	Z	-3.2	-3.2	0	0
60	SA-2	Z	-3.2	-3.2	0	0
61	M10	Z	-1.2	-1.2	0	0
62	M11	Z	-1.2	-1.2	0	0
63	M12	Z	-1.2	-1.2	0	0
64	M13	Z	-1.2	-1.2	0	0
65	M14	Z	-1.2	-1.2	0	0
66	M15	Z	-1.1	-1.1	0	0
67	M16	Z	-1.1	-1.1	0	0
68	M17	Z	-1.2	-1.2	0	0
69	M18	Z	-1.2	-1.2	0	0
70	M19	Z	-1.2	-1.2	0	0
71	M20	Z	-1.2	-1.2	0	0
72	M21	Z	-1.2	-1.2	0	0
73	M22	Z	-1.1	-1.1	0	0
74	M23	Z	-1.1	-1.1	0	0
75	M24	Z	-1.2	-1.2	0	0
76	M25	Z	-1.2	-1.2	0	0
77	M26	Z	-1.2	-1.2	0	0
78	M27	Z	-1.2	-1.2	0	0
79	M28	Z	-1.2	-1.2	0	0
80	M29	Z	-1.1	-1.1	0	0
81	M30	Z	-1.1	-1.1	0	0
82	M31	Z	-1.2	-1.2	0	0
83	M32	Z	-1.2	-1.2	0	0
84	M33	Z	-1.2	-1.2	0	0
85	M34	Z	-1.2	-1.2	0	0
86	M35	Z	-1.2	-1.2	0	0
87	M36	Z	-1.1	-1.1	0	0
88	M37	Z	-1.1	-1.1	0	0
89	M38	Z	-1.2	-1.2	0	0
90	M39	Z	-1.2	-1.2	0	0
91	M40	Z	-1.2	-1.2	0	0
92	M41	Z	-1.2	-1.2	0	0
93	M42	Z	0	0	0	0
94	M43	Z	-1.1	-1.1	0	0
95	M44	Z	0	0	0	0
96	M45	Z	-1.2	-1.2	0	0
97	M46	Z	-1.2	-1.2	0	0
98	M47	Z	-1.2	-1.2	0	0
99	M48	Z	-1.2	-1.2	0	0
100	M49	Z	0	0	0	0
101	M50	Z	-1.1	-1.1	0	0
102	M51	Z	0	0	0	0





**Member Distributed Loads (BLC 22 : Wind on Ice (210 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in,%]	End Location[in,%]
103	MP1	X	0	0	0	0
104	MP2	X	-6.6	-6.6	%49.074	%100
105	MP3	X	-18.3	-18.3	%31.012	%100
106	MP4	X	-6.9	-6.9	%13.472	%92.083
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	-6.6	-6.6	%49.074	%100
111	MP9	X	-18.3	-18.3	%31.012	%100
112	MP10	X	-6.9	-6.9	%13.472	%92.083
113	MP1	Z	0	0	0	0
114	MP2	Z	-3.8	-3.8	%49.074	%100
115	MP3	Z	-10.6	-10.6	%31.012	%100
116	MP4	Z	-4	-4	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	-3.8	-3.8	%49.074	%100
121	MP9	Z	-10.6	-10.6	%31.012	%100
122	MP10	Z	-4	-4	%13.472	%92.083

**Member Distributed Loads (BLC 23 : Wind on Ice (240 deg))**

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in,%]	End Location[in,%]
1	FM-1	X	-2.1	-2.1	0	0
2	FM-2	X	-2.1	-2.1	0	0
3	FM-3	X	-2.1	-2.1	0	0
4	PL1	X	-4.5	-4.5	0	0
5	PL2	X	-4.5	-4.5	0	0
6	PL3	X	-4.5	-4.5	0	0
7	SA-1	X	-3.2	-3.2	0	0
8	SA-3	X	-3.2	-3.2	0	0
9	SA-2	X	0	0	0	0
10	M10	X	-1.2	-1.2	0	0
11	M11	X	-1.2	-1.2	0	0
12	M12	X	-1.2	-1.2	0	0
13	M13	X	-1.2	-1.2	0	0
14	M14	X	-1.2	-1.2	0	0
15	M15	X	-1.1	-1.1	0	0
16	M16	X	-1.1	-1.1	0	0
17	M17	X	-1.2	-1.2	0	0
18	M18	X	-1.2	-1.2	0	0
19	M19	X	-1.2	-1.2	0	0
20	M20	X	-1.2	-1.2	0	0
21	M21	X	-1.2	-1.2	0	0
22	M22	X	-1.1	-1.1	0	0
23	M23	X	-1.1	-1.1	0	0
24	M24	X	0	0	0	0
25	M25	X	0	0	0	0
26	M26	X	0	0	0	0
27	M27	X	0	0	0	0
28	M28	X	-1.2	-1.2	0	0
29	M29	X	-1.1	-1.1	0	0
30	M30	X	-1.1	-1.1	0	0
31	M31	X	0	0	0	0
32	M32	X	0	0	0	0
33	M33	X	0	0	0	0



Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

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**Member Distributed Loads (BLC 23 : Wind on Ice (240 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in,%]	End Location[in,%]
34	M34	X	0	0	0
35	M35	X	-1.2	-1.2	0
36	M36	X	-1.1	-1.1	0
37	M37	X	-1.1	-1.1	0
38	M38	X	-1.2	-1.2	0
39	M39	X	-1.2	-1.2	0
40	M40	X	-1.2	-1.2	0
41	M41	X	-1.2	-1.2	0
42	M42	X	-1.2	-1.2	0
43	M43	X	-1.1	-1.1	0
44	M44	X	-1.1	-1.1	0
45	M45	X	-1.2	-1.2	0
46	M46	X	-1.2	-1.2	0
47	M47	X	-1.2	-1.2	0
48	M48	X	-1.2	-1.2	0
49	M49	X	-1.2	-1.2	0
50	M50	X	-1.1	-1.1	0
51	M51	X	-1.1	-1.1	0
52	FM-1	Z	-3.7	-3.7	0
53	FM-2	Z	-3.7	-3.7	0
54	FM-3	Z	-3.7	-3.7	0
55	PL1	Z	-7.8	-7.8	0
56	PL2	Z	-7.8	-7.8	0
57	PL3	Z	-7.8	-7.8	0
58	SA-1	Z	-5.5	-5.5	0
59	SA-3	Z	-5.5	-5.5	0
60	SA-2	Z	0	0	0
61	M10	Z	-2	-2	0
62	M11	Z	-2	-2	0
63	M12	Z	-2	-2	0
64	M13	Z	-2	-2	0
65	M14	Z	-2	-2	0
66	M15	Z	-1.9	-1.9	0
67	M16	Z	-1.9	-1.9	0
68	M17	Z	-2	-2	0
69	M18	Z	-2	-2	0
70	M19	Z	-2	-2	0
71	M20	Z	-2	-2	0
72	M21	Z	-2	-2	0
73	M22	Z	-1.9	-1.9	0
74	M23	Z	-1.9	-1.9	0
75	M24	Z	0	0	0
76	M25	Z	0	0	0
77	M26	Z	0	0	0
78	M27	Z	0	0	0
79	M28	Z	-2	-2	0
80	M29	Z	-1.9	-1.9	0
81	M30	Z	-1.9	-1.9	0
82	M31	Z	0	0	0
83	M32	Z	0	0	0
84	M33	Z	0	0	0
85	M34	Z	0	0	0
86	M35	Z	-2	-2	0
87	M36	Z	-1.9	-1.9	0
88	M37	Z	-1.9	-1.9	0
89	M38	Z	-2	-2	0
90	M39	Z	-2	-2	0



**Member Distributed Loads (BLC 23 : Wind on Ice (240 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
91	M40	Z	-2	-2	0	0
92	M41	Z	-2	-2	0	0
93	M42	Z	-2	-2	0	0
94	M43	Z	-1.9	-1.9	0	0
95	M44	Z	-1.9	-1.9	0	0
96	M45	Z	-2	-2	0	0
97	M46	Z	-2	-2	0	0
98	M47	Z	-2	-2	0	0
99	M48	Z	-2	-2	0	0
100	M49	Z	-2	-2	0	0
101	M50	Z	-1.9	-1.9	0	0
102	M51	Z	-1.9	-1.9	0	0
103	MP1	X	0	0	0	0
104	MP2	X	-3.3	-3.3	%49.074	%100
105	MP3	X	-7.4	-7.4	%31.012	%100
106	MP4	X	-3.5	-3.5	%13.472	%92.083
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	-4.1	-4.1	%49.074	%100
111	MP9	X	-12.1	-12.1	%31.012	%100
112	MP10	X	-4.2	-4.2	%13.472	%92.083
113	MP1	Z	0	0	0	0
114	MP2	Z	-5.8	-5.8	%49.074	%100
115	MP3	Z	-12.9	-12.9	%31.012	%100
116	MP4	Z	-6	-6	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	-7.1	-7.1	%49.074	%100
121	MP9	Z	-21	-21	%31.012	%100
122	MP10	Z	-7.3	-7.3	%13.472	%92.083

**Member Distributed Loads (BLC 24 : Wind on Ice (270 deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FM-1	X	0	0	0	0
2	FM-2	X	0	0	0	0
3	FM-3	X	0	0	0	0
4	PL1	X	0	0	0	0
5	PL2	X	0	0	0	0
6	PL3	X	0	0	0	0
7	SA-1	X	0	0	0	0
8	SA-3	X	0	0	0	0
9	SA-2	X	0	0	0	0
10	M10	X	0	0	0	0
11	M11	X	0	0	0	0
12	M12	X	0	0	0	0
13	M13	X	0	0	0	0
14	M14	X	0	0	0	0
15	M15	X	0	0	0	0
16	M16	X	0	0	0	0
17	M17	X	0	0	0	0
18	M18	X	0	0	0	0
19	M19	X	0	0	0	0
20	M20	X	0	0	0	0
21	M21	X	0	0	0	0



Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

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**Member Distributed Loads (BLC 24 : Wind on Ice (270 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in,%]	End Location[in,%]
22	M22	X	0	0	0
23	M23	X	0	0	0
24	M24	X	0	0	0
25	M25	X	0	0	0
26	M26	X	0	0	0
27	M27	X	0	0	0
28	M28	X	0	0	0
29	M29	X	0	0	0
30	M30	X	0	0	0
31	M31	X	0	0	0
32	M32	X	0	0	0
33	M33	X	0	0	0
34	M34	X	0	0	0
35	M35	X	0	0	0
36	M36	X	0	0	0
37	M37	X	0	0	0
38	M38	X	0	0	0
39	M39	X	0	0	0
40	M40	X	0	0	0
41	M41	X	0	0	0
42	M42	X	0	0	0
43	M43	X	0	0	0
44	M44	X	0	0	0
45	M45	X	0	0	0
46	M46	X	0	0	0
47	M47	X	0	0	0
48	M48	X	0	0	0
49	M49	X	0	0	0
50	M50	X	0	0	0
51	M51	X	0	0	0
52	FM-1	Z	0	0	0
53	FM-2	Z	-4.2	-4.2	0
54	FM-3	Z	-4.2	-4.2	0
55	PL1	Z	-9	-9	0
56	PL2	Z	-9	-9	0
57	PL3	Z	0	0	0
58	SA-1	Z	-6.3	-6.3	0
59	SA-3	Z	-6.3	-6.3	0
60	SA-2	Z	-6.3	-6.3	0
61	M10	Z	-2.4	-2.4	0
62	M11	Z	-2.4	-2.4	0
63	M12	Z	-2.4	-2.4	0
64	M13	Z	-2.4	-2.4	0
65	M14	Z	0	0	0
66	M15	Z	-2.2	-2.2	0
67	M16	Z	0	0	0
68	M17	Z	-2.4	-2.4	0
69	M18	Z	-2.4	-2.4	0
70	M19	Z	-2.4	-2.4	0
71	M20	Z	-2.4	-2.4	0
72	M21	Z	0	0	0
73	M22	Z	-2.2	-2.2	0
74	M23	Z	0	0	0
75	M24	Z	-2.4	-2.4	0
76	M25	Z	-2.4	-2.4	0
77	M26	Z	-2.4	-2.4	0
78	M27	Z	-2.4	-2.4	0



**Member Distributed Loads (BLC 24 : Wind on Ice (270 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
79	M28	Z	-2.4	-2.4	0	0
80	M29	Z	-2.2	-2.2	0	0
81	M30	Z	-2.2	-2.2	0	0
82	M31	Z	-2.4	-2.4	0	0
83	M32	Z	-2.4	-2.4	0	0
84	M33	Z	-2.4	-2.4	0	0
85	M34	Z	-2.4	-2.4	0	0
86	M35	Z	-2.4	-2.4	0	0
87	M36	Z	-2.2	-2.2	0	0
88	M37	Z	-2.2	-2.2	0	0
89	M38	Z	-2.4	-2.4	0	0
90	M39	Z	-2.4	-2.4	0	0
91	M40	Z	-2.4	-2.4	0	0
92	M41	Z	-2.4	-2.4	0	0
93	M42	Z	-2.4	-2.4	0	0
94	M43	Z	-2.2	-2.2	0	0
95	M44	Z	-2.2	-2.2	0	0
96	M45	Z	-2.4	-2.4	0	0
97	M46	Z	-2.4	-2.4	0	0
98	M47	Z	-2.4	-2.4	0	0
99	M48	Z	-2.4	-2.4	0	0
100	M49	Z	-2.4	-2.4	0	0
101	M50	Z	-2.2	-2.2	0	0
102	M51	Z	-2.2	-2.2	0	0
103	MP1	X	0	0	0	0
104	MP2	X	0	0	0	0
105	MP3	X	0	0	0	0
106	MP4	X	0	0	0	0
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	0	0	0	0
111	MP9	X	0	0	0	0
112	MP10	X	0	0	0	0
113	MP1	Z	0	0	0	0
114	MP2	Z	-6.2	-6.2	%49.074	%100
115	MP3	Z	-11.7	-11.7	%31.012	%100
116	MP4	Z	-6.5	-6.5	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	-7.7	-7.7	%49.074	%100
121	MP9	Z	-21.1	-21.1	%31.012	%100
122	MP10	Z	-7.9	-7.9	%13.472	%92.083

**Member Distributed Loads (BLC 25 : Wind on Ice (300 deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FM-1	X	2.1	2.1	0	0
2	FM-2	X	2.1	2.1	0	0
3	FM-3	X	2.1	2.1	0	0
4	PL1	X	4.5	4.5	0	0
5	PL2	X	4.5	4.5	0	0
6	PL3	X	4.5	4.5	0	0
7	SA-1	X	3.2	3.2	0	0
8	SA-3	X	0	0	0	0
9	SA-2	X	3.2	3.2	0	0



Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

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**Member Distributed Loads (BLC 25 : Wind on Ice (300 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in,%]	End Location[in,%]	
10	M10	X	1.2	1.2	0	0
11	M11	X	1.2	1.2	0	0
12	M12	X	1.2	1.2	0	0
13	M13	X	1.2	1.2	0	0
14	M14	X	1.2	1.2	0	0
15	M15	X	1.1	1.1	0	0
16	M16	X	1.1	1.1	0	0
17	M17	X	1.2	1.2	0	0
18	M18	X	1.2	1.2	0	0
19	M19	X	1.2	1.2	0	0
20	M20	X	1.2	1.2	0	0
21	M21	X	1.2	1.2	0	0
22	M22	X	1.1	1.1	0	0
23	M23	X	1.1	1.1	0	0
24	M24	X	1.2	1.2	0	0
25	M25	X	1.2	1.2	0	0
26	M26	X	1.2	1.2	0	0
27	M27	X	1.2	1.2	0	0
28	M28	X	1.2	1.2	0	0
29	M29	X	1.1	1.1	0	0
30	M30	X	1.1	1.1	0	0
31	M31	X	1.2	1.2	0	0
32	M32	X	1.2	1.2	0	0
33	M33	X	1.2	1.2	0	0
34	M34	X	1.2	1.2	0	0
35	M35	X	1.2	1.2	0	0
36	M36	X	1.1	1.1	0	0
37	M37	X	1.1	1.1	0	0
38	M38	X	0	0	0	0
39	M39	X	0	0	0	0
40	M40	X	0	0	0	0
41	M41	X	0	0	0	0
42	M42	X	1.2	1.2	0	0
43	M43	X	1.1	1.1	0	0
44	M44	X	1.1	1.1	0	0
45	M45	X	0	0	0	0
46	M46	X	0	0	0	0
47	M47	X	0	0	0	0
48	M48	X	0	0	0	0
49	M49	X	1.2	1.2	0	0
50	M50	X	1.1	1.1	0	0
51	M51	X	1.1	1.1	0	0
52	FM-1	Z	-3.7	-3.7	0	0
53	FM-2	Z	-3.7	-3.7	0	0
54	FM-3	Z	-3.7	-3.7	0	0
55	PL1	Z	-7.8	-7.8	0	0
56	PL2	Z	-7.8	-7.8	0	0
57	PL3	Z	-7.8	-7.8	0	0
58	SA-1	Z	-5.5	-5.5	0	0
59	SA-3	Z	0	0	0	0
60	SA-2	Z	-5.5	-5.5	0	0
61	M10	Z	-2	-2	0	0
62	M11	Z	-2	-2	0	0
63	M12	Z	-2	-2	0	0
64	M13	Z	-2	-2	0	0
65	M14	Z	-2	-2	0	0
66	M15	Z	-1.9	-1.9	0	0



**Member Distributed Loads (BLC 25 : Wind on Ice (300 deg)) (Continued)**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
67	M16	Z	-1.9	-1.9	0	0
68	M17	Z	-2	-2	0	0
69	M18	Z	-2	-2	0	0
70	M19	Z	-2	-2	0	0
71	M20	Z	-2	-2	0	0
72	M21	Z	-2	-2	0	0
73	M22	Z	-1.9	-1.9	0	0
74	M23	Z	-1.9	-1.9	0	0
75	M24	Z	-2	-2	0	0
76	M25	Z	-2	-2	0	0
77	M26	Z	-2	-2	0	0
78	M27	Z	-2	-2	0	0
79	M28	Z	-2	-2	0	0
80	M29	Z	-1.9	-1.9	0	0
81	M30	Z	-1.9	-1.9	0	0
82	M31	Z	-2	-2	0	0
83	M32	Z	-2	-2	0	0
84	M33	Z	-2	-2	0	0
85	M34	Z	-2	-2	0	0
86	M35	Z	-2	-2	0	0
87	M36	Z	-1.9	-1.9	0	0
88	M37	Z	-1.9	-1.9	0	0
89	M38	Z	0	0	0	0
90	M39	Z	0	0	0	0
91	M40	Z	0	0	0	0
92	M41	Z	0	0	0	0
93	M42	Z	-2	-2	0	0
94	M43	Z	-1.9	-1.9	0	0
95	M44	Z	-1.9	-1.9	0	0
96	M45	Z	0	0	0	0
97	M46	Z	0	0	0	0
98	M47	Z	0	0	0	0
99	M48	Z	0	0	0	0
100	M49	Z	-2	-2	0	0
101	M50	Z	-1.9	-1.9	0	0
102	M51	Z	-1.9	-1.9	0	0
103	MP1	X	0	0	0	0
104	MP2	X	3.3	3.3	%49.074	%100
105	MP3	X	7.4	7.4	%31.012	%100
106	MP4	X	3.5	3.5	%13.472	%92.083
107	MP5	X	0	0	0	0
108	MP6	X	0	0	0	0
109	MP7	X	0	0	0	0
110	MP8	X	3.3	3.3	%49.074	%100
111	MP9	X	7.4	7.4	%31.012	%100
112	MP10	X	3.5	3.5	%13.472	%92.083
113	MP1	Z	0	0	0	0
114	MP2	Z	-5.8	-5.8	%49.074	%100
115	MP3	Z	-12.9	-12.9	%31.012	%100
116	MP4	Z	-6	-6	%13.472	%92.083
117	MP5	Z	0	0	0	0
118	MP6	Z	0	0	0	0
119	MP7	Z	0	0	0	0
120	MP8	Z	-5.8	-5.8	%49.074	%100
121	MP9	Z	-12.9	-12.9	%31.012	%100
122	MP10	Z	-6	-6	%13.472	%92.083



Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

Apr 29, 2019  
 2:25 PM  
 Checked By: JAA

**Member Distributed Loads (BLC 26 : Wind on Ice (330 deg))**

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	FM-1	X	3.7	3.7	0	0
2	FM-2	X	3.7	3.7	0	0
3	FM-3	X	0	0	0	0
4	PL1	X	7.8	7.8	0	0
5	PL2	X	0	0	0	0
6	PL3	X	7.8	7.8	0	0
7	SA-1	X	5.5	5.5	0	0
8	SA-3	X	5.5	5.5	0	0
9	SA-2	X	5.5	5.5	0	0
10	M10	X	2	2	0	0
11	M11	X	2	2	0	0
12	M12	X	2	2	0	0
13	M13	X	2	2	0	0
14	M14	X	2	2	0	0
15	M15	X	1.9	1.9	0	0
16	M16	X	1.9	1.9	0	0
17	M17	X	2	2	0	0
18	M18	X	2	2	0	0
19	M19	X	2	2	0	0
20	M20	X	2	2	0	0
21	M21	X	2	2	0	0
22	M22	X	1.9	1.9	0	0
23	M23	X	1.9	1.9	0	0
24	M24	X	2	2	0	0
25	M25	X	2	2	0	0
26	M26	X	2	2	0	0
27	M27	X	2	2	0	0
28	M28	X	0	0	0	0
29	M29	X	1.9	1.9	0	0
30	M30	X	0	0	0	0
31	M31	X	2	2	0	0
32	M32	X	2	2	0	0
33	M33	X	2	2	0	0
34	M34	X	2	2	0	0
35	M35	X	0	0	0	0
36	M36	X	1.9	1.9	0	0
37	M37	X	0	0	0	0
38	M38	X	2	2	0	0
39	M39	X	2	2	0	0
40	M40	X	2	2	0	0
41	M41	X	2	2	0	0
42	M42	X	2	2	0	0
43	M43	X	1.9	1.9	0	0
44	M44	X	1.9	1.9	0	0
45	M45	X	2	2	0	0
46	M46	X	2	2	0	0
47	M47	X	2	2	0	0
48	M48	X	2	2	0	0
49	M49	X	2	2	0	0
50	M50	X	1.9	1.9	0	0
51	M51	X	1.9	1.9	0	0
52	FM-1	Z	-2.1	-2.1	0	0
53	FM-2	Z	-2.1	-2.1	0	0
54	FM-3	Z	0	0	0	0
55	PL1	Z	-4.5	-4.5	0	0
56	PL2	Z	0	0	0	0
57	PL3	Z	-4.5	-4.5	0	0





**Member Distributed Loads (BLC 26 : Wind on Ice (330 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in,%]	End Location[in,%]
58	SA-1	Z	-3.2	-3.2	0 0
59	SA-3	Z	-3.2	-3.2	0 0
60	SA-2	Z	-3.2	-3.2	0 0
61	M10	Z	-1.2	-1.2	0 0
62	M11	Z	-1.2	-1.2	0 0
63	M12	Z	-1.2	-1.2	0 0
64	M13	Z	-1.2	-1.2	0 0
65	M14	Z	-1.2	-1.2	0 0
66	M15	Z	-1.1	-1.1	0 0
67	M16	Z	-1.1	-1.1	0 0
68	M17	Z	-1.2	-1.2	0 0
69	M18	Z	-1.2	-1.2	0 0
70	M19	Z	-1.2	-1.2	0 0
71	M20	Z	-1.2	-1.2	0 0
72	M21	Z	-1.2	-1.2	0 0
73	M22	Z	-1.1	-1.1	0 0
74	M23	Z	-1.1	-1.1	0 0
75	M24	Z	-1.2	-1.2	0 0
76	M25	Z	-1.2	-1.2	0 0
77	M26	Z	-1.2	-1.2	0 0
78	M27	Z	-1.2	-1.2	0 0
79	M28	Z	0	0	0 0
80	M29	Z	-1.1	-1.1	0 0
81	M30	Z	0	0	0 0
82	M31	Z	-1.2	-1.2	0 0
83	M32	Z	-1.2	-1.2	0 0
84	M33	Z	-1.2	-1.2	0 0
85	M34	Z	-1.2	-1.2	0 0
86	M35	Z	0	0	0 0
87	M36	Z	-1.1	-1.1	0 0
88	M37	Z	0	0	0 0
89	M38	Z	-1.2	-1.2	0 0
90	M39	Z	-1.2	-1.2	0 0
91	M40	Z	-1.2	-1.2	0 0
92	M41	Z	-1.2	-1.2	0 0
93	M42	Z	-1.2	-1.2	0 0
94	M43	Z	-1.1	-1.1	0 0
95	M44	Z	-1.1	-1.1	0 0
96	M45	Z	-1.2	-1.2	0 0
97	M46	Z	-1.2	-1.2	0 0
98	M47	Z	-1.2	-1.2	0 0
99	M48	Z	-1.2	-1.2	0 0
100	M49	Z	-1.2	-1.2	0 0
101	M50	Z	-1.1	-1.1	0 0
102	M51	Z	-1.1	-1.1	0 0
103	MP1	X	0	0	0 0
104	MP2	X	6.6	6.6	%49.074 %100
105	MP3	X	18.3	18.3	%31.012 %100
106	MP4	X	6.9	6.9	%13.472 %92.083
107	MP5	X	0	0	0 0
108	MP6	X	0	0	0 0
109	MP7	X	0	0	0 0
110	MP8	X	5.3	5.3	%49.074 %100
111	MP9	X	10.1	10.1	%31.012 %100
112	MP10	X	5.6	5.6	%13.472 %92.083
113	MP1	Z	0	0	0 0
114	MP2	Z	-3.8	-3.8	%49.074 %100



**Member Distributed Loads (BLC 26 : Wind on Ice (330 deg)) (Continued)**

Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
115	MP3	Z	-10.6	-10.6	%31.012 %100
116	MP4	Z	-4	-4	%13.472 %92.083
117	MP5	Z	0	0	0 0
118	MP6	Z	0	0	0 0
119	MP7	Z	0	0	0 0
120	MP8	Z	-3.1	-3.1	%49.074 %100
121	MP9	Z	-5.9	-5.9	%31.012 %100
122	MP10	Z	-3.2	-3.2	%13.472 %92.083

**Load Combinations**

Description	Solve	PDelta	S...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...
1 1.4D	Yes	Y		1	1.4								
2 1.2D + 1.0W (0 deg)	Yes	Y		1	1.2	2	1						
3 1.2D + 1.0W (30 d...	Yes	Y		1	1.2	3	1						
4 1.2D + 1.0W (60 d...	Yes	Y		1	1.2	4	1						
5 1.2D + 1.0W (90 d...	Yes	Y		1	1.2	5	1						
6 1.2D + 1.0W (120 ...	Yes	Y		1	1.2	6	1						
7 1.2D + 1.0W (150 ...	Yes	Y		1	1.2	7	1						
8 1.2D + 1.0W (180 ...	Yes	Y		1	1.2	8	1						
9 1.2D + 1.0W (210 ...	Yes	Y		1	1.2	9	1						
10 1.2D + 1.0W (240 ...	Yes	Y		1	1.2	10	1						
11 1.2D + 1.0W (270 ...	Yes	Y		1	1.2	11	1						
12 1.2D + 1.0W (300 ...	Yes	Y		1	1.2	12	1						
13 1.2D + 1.0W (330 ...	Yes	Y		1	1.2	13	1						
14 1.2D + Di + Wi (0 d...	Yes	Y		1	1.2	14	1	15	1				
15 1.2D + Di + Wi (30 ...	Yes	Y		1	1.2	14	1	16	1				
16 1.2D + Di + Wi (60 ...	Yes	Y		1	1.2	14	1	17	1				
17 1.2D + Di + Wi (90 ...	Yes	Y		1	1.2	14	1	18	1				
18 1.2D + Di + Wi (12...	Yes	Y		1	1.2	14	1	19	1				
19 1.2D + Di + Wi (15...	Yes	Y		1	1.2	14	1	20	1				
20 1.2D + Di + Wi (18...	Yes	Y		1	1.2	14	1	21	1				
21 1.2D + Di + Wi (21...	Yes	Y		1	1.2	14	1	22	1				
22 1.2D + Di + Wi (24...	Yes	Y		1	1.2	14	1	23	1				
23 1.2D + Di + Wi (27...	Yes	Y		1	1.2	14	1	24	1				
24 1.2D + Di + Wi (30...	Yes	Y		1	1.2	14	1	25	1				
25 1.2D + Di + Wi (33...	Yes	Y		1	1.2	14	1	26	1				
26 1.2D + 1.0 Ev + 1.0...	Yes	Y		1	1.2	1	.047	27	.118				
27 1.2D + 1.0 Ev + 1.0...	Yes	Y		1	1.2	1	.047	28	.118				
28 1.2D + 1.0 Ev + 1.0...	Yes	Y		1	1.2	1	.047	29	.118				
29 1.2D + 1.0 Ev + 1.0...	Yes	Y		1	1.2	1	.047	30	.118				
30 1.2D + 1.0 Ev + 1.0...	Yes	Y		1	1.2	1	.047	31	.118				
31 1.2D + 1.0 Ev + 1.0...	Yes	Y		1	1.2	1	.047	32	.118				
32 1.2D + 1.0 Ev + 1.0...	Yes	Y		1	1.2	1	.047	33	.118				
33 1.2D + 1.0 Ev + 1.0...	Yes	Y		1	1.2	1	.047	34	.118				
34 1.2D + 1.0 Ev + 1.0...	Yes	Y		1	1.2	1	.047	35	.118				
35 1.2D + 1.0 Ev + 1.0...	Yes	Y		1	1.2	1	.047	36	.118				
36 1.2D + 1.0 Ev + 1.0...	Yes	Y		1	1.2	1	.047	37	.118				
37 1.2D + 1.0 Ev + 1.0...	Yes	Y		1	1.2	1	.047	38	.118				
38 1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.5	2	.063				
39 1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.5	3	.063				
40 1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.5	4	.063				
41 1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.5	5	.063				
42 1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.5	6	.063				
43 1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.5	7	.063				
44 1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.5	8	.063				



**Load Combinations (Continued)**

	Description	Solve	PDelta	S...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...
45	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.5	9	.063			
46	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.5	10	.063			
47	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.5	11	.063			
48	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.5	12	.063			
49	1.2D + 1.5Lm1 + 1...	Yes	Y		1	1.2	39	1.5	13	.063			
50	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	40	1.5	2	.063			
51	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	40	1.5	3	.063			
52	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	40	1.5	4	.063			
53	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	40	1.5	5	.063			
54	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	40	1.5	6	.063			
55	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	40	1.5	7	.063			
56	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	40	1.5	8	.063			
57	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	40	1.5	9	.063			
58	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	40	1.5	10	.063			
59	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	40	1.5	11	.063			
60	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	40	1.5	12	.063			
61	1.2D + 1.5Lm2 + 1...	Yes	Y		1	1.2	40	1.5	13	.063			
62	1.2D + 1.5Lm3 + 1...	Yes	Y		1	1.2	41	1.5	2	.063			
63	1.2D + 1.5Lm3 + 1...	Yes	Y		1	1.2	41	1.5	3	.063			
64	1.2D + 1.5Lm3 + 1...	Yes	Y		1	1.2	41	1.5	4	.063			
65	1.2D + 1.5Lm3 + 1...	Yes	Y		1	1.2	41	1.5	5	.063			
66	1.2D + 1.5Lm3 + 1...	Yes	Y		1	1.2	41	1.5	6	.063			
67	1.2D + 1.5Lm3 + 1...	Yes	Y		1	1.2	41	1.5	7	.063			
68	1.2D + 1.5Lm3 + 1...	Yes	Y		1	1.2	41	1.5	8	.063			
69	1.2D + 1.5Lm3 + 1...	Yes	Y		1	1.2	41	1.5	9	.063			
70	1.2D + 1.5Lm3 + 1...	Yes	Y		1	1.2	41	1.5	10	.063			
71	1.2D + 1.5Lm3 + 1...	Yes	Y		1	1.2	41	1.5	11	.063			
72	1.2D + 1.5Lm3 + 1...	Yes	Y		1	1.2	41	1.5	12	.063			
73	1.2D + 1.5Lm3 + 1...	Yes	Y		1	1.2	41	1.5	13	.063			
74	1.2D + 1.5Lm4 + 1...	Yes	Y		1	1.2	42	1.5	2	.063			
75	1.2D + 1.5Lm4 + 1...	Yes	Y		1	1.2	42	1.5	3	.063			
76	1.2D + 1.5Lm4 + 1...	Yes	Y		1	1.2	42	1.5	4	.063			
77	1.2D + 1.5Lm4 + 1...	Yes	Y		1	1.2	42	1.5	5	.063			
78	1.2D + 1.5Lm4 + 1...	Yes	Y		1	1.2	42	1.5	6	.063			
79	1.2D + 1.5Lm4 + 1...	Yes	Y		1	1.2	42	1.5	7	.063			
80	1.2D + 1.5Lm4 + 1...	Yes	Y		1	1.2	42	1.5	8	.063			
81	1.2D + 1.5Lm4 + 1...	Yes	Y		1	1.2	42	1.5	9	.063			
82	1.2D + 1.5Lm4 + 1...	Yes	Y		1	1.2	42	1.5	10	.063			
83	1.2D + 1.5Lm4 + 1...	Yes	Y		1	1.2	42	1.5	11	.063			
84	1.2D + 1.5Lm4 + 1...	Yes	Y		1	1.2	42	1.5	12	.063			
85	1.2D + 1.5Lm4 + 1...	Yes	Y		1	1.2	42	1.5	13	.063			
86	1.2D + 1.5Lm5 + 1...	Yes	Y		1	1.2	43	1.5	2	.063			
87	1.2D + 1.5Lm5 + 1...	Yes	Y		1	1.2	43	1.5	3	.063			
88	1.2D + 1.5Lm5 + 1...	Yes	Y		1	1.2	43	1.5	4	.063			
89	1.2D + 1.5Lm5 + 1...	Yes	Y		1	1.2	43	1.5	5	.063			
90	1.2D + 1.5Lm5 + 1...	Yes	Y		1	1.2	43	1.5	6	.063			
91	1.2D + 1.5Lm5 + 1...	Yes	Y		1	1.2	43	1.5	7	.063			
92	1.2D + 1.5Lm5 + 1...	Yes	Y		1	1.2	43	1.5	8	.063			
93	1.2D + 1.5Lm5 + 1...	Yes	Y		1	1.2	43	1.5	9	.063			
94	1.2D + 1.5Lm5 + 1...	Yes	Y		1	1.2	43	1.5	10	.063			
95	1.2D + 1.5Lm5 + 1...	Yes	Y		1	1.2	43	1.5	11	.063			
96	1.2D + 1.5Lm5 + 1...	Yes	Y		1	1.2	43	1.5	12	.063			
97	1.2D + 1.5Lm5 + 1...	Yes	Y		1	1.2	43	1.5	13	.063			
98	1.2D + 1.5Lm6 + 1...	Yes	Y		1	1.2	44	1.5	2	.063			
99	1.2D + 1.5Lm6 + 1...	Yes	Y		1	1.2	44	1.5	3	.063			
100	1.2D + 1.5Lm6 + 1...	Yes	Y		1	1.2	44	1.5	4	.063			
101	1.2D + 1.5Lm6 + 1...	Yes	Y		1	1.2	44	1.5	5	.063			



**Load Combinations (Continued)**

Description	Solve	PDelta	S...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...
102 1.2D + 1.5Lm6 + 1...	Yes	Y		1	1.2	44	1.5	6	.063				
103 1.2D + 1.5Lm6 + 1...	Yes	Y		1	1.2	44	1.5	7	.063				
104 1.2D + 1.5Lm6 + 1...	Yes	Y		1	1.2	44	1.5	8	.063				
105 1.2D + 1.5Lm6 + 1...	Yes	Y		1	1.2	44	1.5	9	.063				
106 1.2D + 1.5Lm6 + 1...	Yes	Y		1	1.2	44	1.5	10	.063				
107 1.2D + 1.5Lm6 + 1...	Yes	Y		1	1.2	44	1.5	11	.063				
108 1.2D + 1.5Lm6 + 1...	Yes	Y		1	1.2	44	1.5	12	.063				
109 1.2D + 1.5Lm6 + 1...	Yes	Y		1	1.2	44	1.5	13	.063				
110 1.2D + 1.5Lm7 + 1...	Yes	Y		1	1.2	45	1.5	2	.063				
111 1.2D + 1.5Lm7 + 1...	Yes	Y		1	1.2	45	1.5	3	.063				
112 1.2D + 1.5Lm7 + 1...	Yes	Y		1	1.2	45	1.5	4	.063				
113 1.2D + 1.5Lm7 + 1...	Yes	Y		1	1.2	45	1.5	5	.063				
114 1.2D + 1.5Lm7 + 1...	Yes	Y		1	1.2	45	1.5	6	.063				
115 1.2D + 1.5Lm7 + 1...	Yes	Y		1	1.2	45	1.5	7	.063				
116 1.2D + 1.5Lm7 + 1...	Yes	Y		1	1.2	45	1.5	8	.063				
117 1.2D + 1.5Lm7 + 1...	Yes	Y		1	1.2	45	1.5	9	.063				
118 1.2D + 1.5Lm7 + 1...	Yes	Y		1	1.2	45	1.5	10	.063				
119 1.2D + 1.5Lm7 + 1...	Yes	Y		1	1.2	45	1.5	11	.063				
120 1.2D + 1.5Lm7 + 1...	Yes	Y		1	1.2	45	1.5	12	.063				
121 1.2D + 1.5Lm7 + 1...	Yes	Y		1	1.2	45	1.5	13	.063				
122 1.2D + 1.5Lm8 + 1...	Yes	Y		1	1.2	46	1.5	2	.063				
123 1.2D + 1.5Lm8 + 1...	Yes	Y		1	1.2	46	1.5	3	.063				
124 1.2D + 1.5Lm8 + 1...	Yes	Y		1	1.2	46	1.5	4	.063				
125 1.2D + 1.5Lm8 + 1...	Yes	Y		1	1.2	46	1.5	5	.063				
126 1.2D + 1.5Lm8 + 1...	Yes	Y		1	1.2	46	1.5	6	.063				
127 1.2D + 1.5Lm8 + 1...	Yes	Y		1	1.2	46	1.5	7	.063				
128 1.2D + 1.5Lm8 + 1...	Yes	Y		1	1.2	46	1.5	8	.063				
129 1.2D + 1.5Lm8 + 1...	Yes	Y		1	1.2	46	1.5	9	.063				
130 1.2D + 1.5Lm8 + 1...	Yes	Y		1	1.2	46	1.5	10	.063				
131 1.2D + 1.5Lm8 + 1...	Yes	Y		1	1.2	46	1.5	11	.063				
132 1.2D + 1.5Lm8 + 1...	Yes	Y		1	1.2	46	1.5	12	.063				
133 1.2D + 1.5Lm8 + 1...	Yes	Y		1	1.2	46	1.5	13	.063				
134 1.2D + 1.5Lm9 + 1...	Yes	Y		1	1.2	47	1.5	2	.063				
135 1.2D + 1.5Lm9 + 1...	Yes	Y		1	1.2	47	1.5	3	.063				
136 1.2D + 1.5Lm9 + 1...	Yes	Y		1	1.2	47	1.5	4	.063				
137 1.2D + 1.5Lm9 + 1...	Yes	Y		1	1.2	47	1.5	5	.063				
138 1.2D + 1.5Lm9 + 1...	Yes	Y		1	1.2	47	1.5	6	.063				
139 1.2D + 1.5Lm9 + 1...	Yes	Y		1	1.2	47	1.5	7	.063				
140 1.2D + 1.5Lm9 + 1...	Yes	Y		1	1.2	47	1.5	8	.063				
141 1.2D + 1.5Lm9 + 1...	Yes	Y		1	1.2	47	1.5	9	.063				
142 1.2D + 1.5Lm9 + 1...	Yes	Y		1	1.2	47	1.5	10	.063				
143 1.2D + 1.5Lm9 + 1...	Yes	Y		1	1.2	47	1.5	11	.063				
144 1.2D + 1.5Lm9 + 1...	Yes	Y		1	1.2	47	1.5	12	.063				
145 1.2D + 1.5Lm9 + 1...	Yes	Y		1	1.2	47	1.5	13	.063				
146 1.2D + 1.5Lm10 + ...	Yes	Y		1	1.2	48	1.5	2	.063				
147 1.2D + 1.5Lm10 + ...	Yes	Y		1	1.2	48	1.5	3	.063				
148 1.2D + 1.5Lm10 + ...	Yes	Y		1	1.2	48	1.5	4	.063				
149 1.2D + 1.5Lm10 + ...	Yes	Y		1	1.2	48	1.5	5	.063				
150 1.2D + 1.5Lm10 + ...	Yes	Y		1	1.2	48	1.5	6	.063				
151 1.2D + 1.5Lm10 + ...	Yes	Y		1	1.2	48	1.5	7	.063				
152 1.2D + 1.5Lm10 + ...	Yes	Y		1	1.2	48	1.5	8	.063				
153 1.2D + 1.5Lm10 + ...	Yes	Y		1	1.2	48	1.5	9	.063				
154 1.2D + 1.5Lm10 + ...	Yes	Y		1	1.2	48	1.5	10	.063				
155 1.2D + 1.5Lm10 + ...	Yes	Y		1	1.2	48	1.5	11	.063				
156 1.2D + 1.5Lm10 + ...	Yes	Y		1	1.2	48	1.5	12	.063				
157 1.2D + 1.5Lm10 + ...	Yes	Y		1	1.2	48	1.5	13	.063				
158 1.2D + 1.5Lm11 + ...		Y		1	1.2	49	1.5	2	.063				



Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

Apr 29, 2019  
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 Checked By: JAA

**Load Combinations (Continued)**

	Description	Solve	PDelta	S...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...
159	1.2D + 1.5Lm11 + ...		Y		1	1.2	49	1.5	3	.063			
160	1.2D + 1.5Lm11 + ...		Y		1	1.2	49	1.5	4	.063			
161	1.2D + 1.5Lm11 + ...		Y		1	1.2	49	1.5	5	.063			
162	1.2D + 1.5Lm11 + ...		Y		1	1.2	49	1.5	6	.063			
163	1.2D + 1.5Lm11 + ...		Y		1	1.2	49	1.5	7	.063			
164	1.2D + 1.5Lm11 + ...		Y		1	1.2	49	1.5	8	.063			
165	1.2D + 1.5Lm11 + ...		Y		1	1.2	49	1.5	9	.063			
166	1.2D + 1.5Lm11 + ...		Y		1	1.2	49	1.5	10	.063			
167	1.2D + 1.5Lm11 + ...		Y		1	1.2	49	1.5	11	.063			
168	1.2D + 1.5Lm11 + ...		Y		1	1.2	49	1.5	12	.063			
169	1.2D + 1.5Lm11 + ...		Y		1	1.2	49	1.5	13	.063			
170	1.2D + 1.5Lm12 + ...		Y		1	1.2	50	1.5	2	.063			
171	1.2D + 1.5Lm12 + ...		Y		1	1.2	50	1.5	3	.063			
172	1.2D + 1.5Lm12 + ...		Y		1	1.2	50	1.5	4	.063			
173	1.2D + 1.5Lm12 + ...		Y		1	1.2	50	1.5	5	.063			
174	1.2D + 1.5Lm12 + ...		Y		1	1.2	50	1.5	6	.063			
175	1.2D + 1.5Lm12 + ...		Y		1	1.2	50	1.5	7	.063			
176	1.2D + 1.5Lm12 + ...		Y		1	1.2	50	1.5	8	.063			
177	1.2D + 1.5Lm12 + ...		Y		1	1.2	50	1.5	9	.063			
178	1.2D + 1.5Lm12 + ...		Y		1	1.2	50	1.5	10	.063			
179	1.2D + 1.5Lm12 + ...		Y		1	1.2	50	1.5	11	.063			
180	1.2D + 1.5Lm12 + ...		Y		1	1.2	50	1.5	12	.063			
181	1.2D + 1.5Lm12 + ...		Y		1	1.2	50	1.5	13	.063			
182	1.2D + 1.5Lm13 + ...		Y		1	1.2	51	1.5	2	.063			
183	1.2D + 1.5Lm13 + ...		Y		1	1.2	51	1.5	3	.063			
184	1.2D + 1.5Lm13 + ...		Y		1	1.2	51	1.5	4	.063			
185	1.2D + 1.5Lm13 + ...		Y		1	1.2	51	1.5	5	.063			
186	1.2D + 1.5Lm13 + ...		Y		1	1.2	51	1.5	6	.063			
187	1.2D + 1.5Lm13 + ...		Y		1	1.2	51	1.5	7	.063			
188	1.2D + 1.5Lm13 + ...		Y		1	1.2	51	1.5	8	.063			
189	1.2D + 1.5Lm13 + ...		Y		1	1.2	51	1.5	9	.063			
190	1.2D + 1.5Lm13 + ...		Y		1	1.2	51	1.5	10	.063			
191	1.2D + 1.5Lm13 + ...		Y		1	1.2	51	1.5	11	.063			
192	1.2D + 1.5Lm13 + ...		Y		1	1.2	51	1.5	12	.063			
193	1.2D + 1.5Lm13 + ...		Y		1	1.2	51	1.5	13	.063			
194	1.2D + 1.5Lm14 + ...		Y		1	1.2	52	1.5	2	.063			
195	1.2D + 1.5Lm14 + ...		Y		1	1.2	52	1.5	3	.063			
196	1.2D + 1.5Lm14 + ...		Y		1	1.2	52	1.5	4	.063			
197	1.2D + 1.5Lm14 + ...		Y		1	1.2	52	1.5	5	.063			
198	1.2D + 1.5Lm14 + ...		Y		1	1.2	52	1.5	6	.063			
199	1.2D + 1.5Lm14 + ...		Y		1	1.2	52	1.5	7	.063			
200	1.2D + 1.5Lm14 + ...		Y		1	1.2	52	1.5	8	.063			
201	1.2D + 1.5Lm14 + ...		Y		1	1.2	52	1.5	9	.063			
202	1.2D + 1.5Lm14 + ...		Y		1	1.2	52	1.5	10	.063			
203	1.2D + 1.5Lm14 + ...		Y		1	1.2	52	1.5	11	.063			
204	1.2D + 1.5Lm14 + ...		Y		1	1.2	52	1.5	12	.063			
205	1.2D + 1.5Lm14 + ...		Y		1	1.2	52	1.5	13	.063			
206	1.2D + 1.5Lm15 + ...		Y		1	1.2	53	1.5	2	.063			
207	1.2D + 1.5Lm15 + ...		Y		1	1.2	53	1.5	3	.063			
208	1.2D + 1.5Lm15 + ...		Y		1	1.2	53	1.5	4	.063			
209	1.2D + 1.5Lm15 + ...		Y		1	1.2	53	1.5	5	.063			
210	1.2D + 1.5Lm15 + ...		Y		1	1.2	53	1.5	6	.063			
211	1.2D + 1.5Lm15 + ...		Y		1	1.2	53	1.5	7	.063			
212	1.2D + 1.5Lm15 + ...		Y		1	1.2	53	1.5	8	.063			
213	1.2D + 1.5Lm15 + ...		Y		1	1.2	53	1.5	9	.063			
214	1.2D + 1.5Lm15 + ...		Y		1	1.2	53	1.5	10	.063			
215	1.2D + 1.5Lm15 + ...		Y		1	1.2	53	1.5	11	.063			



Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

Apr 29, 2019  
 2:25 PM  
 Checked By: JAA

**Load Combinations (Continued)**

Description	Solve	PDelta	S...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...
216 1.2D + 1.5Lm15 + ...	Y			1	1.2	53	1.5	12	.063			
217 1.2D + 1.5Lm15 + ...	Y			1	1.2	53	1.5	13	.063			
218 1.2D + 1.5Lm16 + ...	Y			1	1.2	54	1.5	2	.063			
219 1.2D + 1.5Lm16 + ...	Y			1	1.2	54	1.5	3	.063			
220 1.2D + 1.5Lm16 + ...	Y			1	1.2	54	1.5	4	.063			
221 1.2D + 1.5Lm16 + ...	Y			1	1.2	54	1.5	5	.063			
222 1.2D + 1.5Lm16 + ...	Y			1	1.2	54	1.5	6	.063			
223 1.2D + 1.5Lm16 + ...	Y			1	1.2	54	1.5	7	.063			
224 1.2D + 1.5Lm16 + ...	Y			1	1.2	54	1.5	8	.063			
225 1.2D + 1.5Lm16 + ...	Y			1	1.2	54	1.5	9	.063			
226 1.2D + 1.5Lm16 + ...	Y			1	1.2	54	1.5	10	.063			
227 1.2D + 1.5Lm16 + ...	Y			1	1.2	54	1.5	11	.063			
228 1.2D + 1.5Lm16 + ...	Y			1	1.2	54	1.5	12	.063			
229 1.2D + 1.5Lm16 + ...	Y			1	1.2	54	1.5	13	.063			
230 1.2D + 1.5Lm17 + ...	Y			1	1.2	55	1.5	2	.063			
231 1.2D + 1.5Lm17 + ...	Y			1	1.2	55	1.5	3	.063			
232 1.2D + 1.5Lm17 + ...	Y			1	1.2	55	1.5	4	.063			
233 1.2D + 1.5Lm17 + ...	Y			1	1.2	55	1.5	5	.063			
234 1.2D + 1.5Lm17 + ...	Y			1	1.2	55	1.5	6	.063			
235 1.2D + 1.5Lm17 + ...	Y			1	1.2	55	1.5	7	.063			
236 1.2D + 1.5Lm17 + ...	Y			1	1.2	55	1.5	8	.063			
237 1.2D + 1.5Lm17 + ...	Y			1	1.2	55	1.5	9	.063			
238 1.2D + 1.5Lm17 + ...	Y			1	1.2	55	1.5	10	.063			
239 1.2D + 1.5Lm17 + ...	Y			1	1.2	55	1.5	11	.063			
240 1.2D + 1.5Lm17 + ...	Y			1	1.2	55	1.5	12	.063			
241 1.2D + 1.5Lm17 + ...	Y			1	1.2	55	1.5	13	.063			
242 1.2D + 1.5Lm18 + ...	Y			1	1.2	56	1.5	2	.063			
243 1.2D + 1.5Lm18 + ...	Y			1	1.2	56	1.5	3	.063			
244 1.2D + 1.5Lm18 + ...	Y			1	1.2	56	1.5	4	.063			
245 1.2D + 1.5Lm18 + ...	Y			1	1.2	56	1.5	5	.063			
246 1.2D + 1.5Lm18 + ...	Y			1	1.2	56	1.5	6	.063			
247 1.2D + 1.5Lm18 + ...	Y			1	1.2	56	1.5	7	.063			
248 1.2D + 1.5Lm18 + ...	Y			1	1.2	56	1.5	8	.063			
249 1.2D + 1.5Lm18 + ...	Y			1	1.2	56	1.5	9	.063			
250 1.2D + 1.5Lm18 + ...	Y			1	1.2	56	1.5	10	.063			
251 1.2D + 1.5Lm18 + ...	Y			1	1.2	56	1.5	11	.063			
252 1.2D + 1.5Lm18 + ...	Y			1	1.2	56	1.5	12	.063			
253 1.2D + 1.5Lm18 + ...	Y			1	1.2	56	1.5	13	.063			
254 1.2D + 1.5Lm19 + ...	Y			1	1.2	57	1.5	2	.063			
255 1.2D + 1.5Lm19 + ...	Y			1	1.2	57	1.5	3	.063			
256 1.2D + 1.5Lm19 + ...	Y			1	1.2	57	1.5	4	.063			
257 1.2D + 1.5Lm19 + ...	Y			1	1.2	57	1.5	5	.063			
258 1.2D + 1.5Lm19 + ...	Y			1	1.2	57	1.5	6	.063			
259 1.2D + 1.5Lm19 + ...	Y			1	1.2	57	1.5	7	.063			
260 1.2D + 1.5Lm19 + ...	Y			1	1.2	57	1.5	8	.063			
261 1.2D + 1.5Lm19 + ...	Y			1	1.2	57	1.5	9	.063			
262 1.2D + 1.5Lm19 + ...	Y			1	1.2	57	1.5	10	.063			
263 1.2D + 1.5Lm19 + ...	Y			1	1.2	57	1.5	11	.063			
264 1.2D + 1.5Lm19 + ...	Y			1	1.2	57	1.5	12	.063			
265 1.2D + 1.5Lm19 + ...	Y			1	1.2	57	1.5	13	.063			
266 1.2D + 1.5Lm20 + ...	Y			1	1.2	58	1.5	2	.063			
267 1.2D + 1.5Lm20 + ...	Y			1	1.2	58	1.5	3	.063			
268 1.2D + 1.5Lm20 + ...	Y			1	1.2	58	1.5	4	.063			
269 1.2D + 1.5Lm20 + ...	Y			1	1.2	58	1.5	5	.063			
270 1.2D + 1.5Lm20 + ...	Y			1	1.2	58	1.5	6	.063			
271 1.2D + 1.5Lm20 + ...	Y			1	1.2	58	1.5	7	.063			
272 1.2D + 1.5Lm20 + ...	Y			1	1.2	58	1.5	8	.063			



**Load Combinations (Continued)**

Description	Solve	PDelta	S...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...
273 1.2D + 1.5Lm20 + ...		Y		1	1.2	58	1.5	9	.063			
274 1.2D + 1.5Lm20 + ...		Y		1	1.2	58	1.5	10	.063			
275 1.2D + 1.5Lm20 + ...		Y		1	1.2	58	1.5	11	.063			
276 1.2D + 1.5Lm20 + ...		Y		1	1.2	58	1.5	12	.063			
277 1.2D + 1.5Lm20 + ...		Y		1	1.2	58	1.5	13	.063			
278 1.2D + 1.5Lm21 + ...		Y		1	1.2	59	1.5	2	.063			
279 1.2D + 1.5Lm21 + ...		Y		1	1.2	59	1.5	3	.063			
280 1.2D + 1.5Lm21 + ...		Y		1	1.2	59	1.5	4	.063			
281 1.2D + 1.5Lm21 + ...		Y		1	1.2	59	1.5	5	.063			
282 1.2D + 1.5Lm21 + ...		Y		1	1.2	59	1.5	6	.063			
283 1.2D + 1.5Lm21 + ...		Y		1	1.2	59	1.5	7	.063			
284 1.2D + 1.5Lm21 + ...		Y		1	1.2	59	1.5	8	.063			
285 1.2D + 1.5Lm21 + ...		Y		1	1.2	59	1.5	9	.063			
286 1.2D + 1.5Lm21 + ...		Y		1	1.2	59	1.5	10	.063			
287 1.2D + 1.5Lm21 + ...		Y		1	1.2	59	1.5	11	.063			
288 1.2D + 1.5Lm21 + ...		Y		1	1.2	59	1.5	12	.063			
289 1.2D + 1.5Lm21 + ...		Y		1	1.2	59	1.5	13	.063			
290 1.2D + 1.5Lm22 + ...		Y		1	1.2	60	1.5	2	.063			
291 1.2D + 1.5Lm22 + ...		Y		1	1.2	60	1.5	3	.063			
292 1.2D + 1.5Lm22 + ...		Y		1	1.2	60	1.5	4	.063			
293 1.2D + 1.5Lm22 + ...		Y		1	1.2	60	1.5	5	.063			
294 1.2D + 1.5Lm22 + ...		Y		1	1.2	60	1.5	6	.063			
295 1.2D + 1.5Lm22 + ...		Y		1	1.2	60	1.5	7	.063			
296 1.2D + 1.5Lm22 + ...		Y		1	1.2	60	1.5	8	.063			
297 1.2D + 1.5Lm22 + ...		Y		1	1.2	60	1.5	9	.063			
298 1.2D + 1.5Lm22 + ...		Y		1	1.2	60	1.5	10	.063			
299 1.2D + 1.5Lm22 + ...		Y		1	1.2	60	1.5	11	.063			
300 1.2D + 1.5Lm22 + ...		Y		1	1.2	60	1.5	12	.063			
301 1.2D + 1.5Lm22 + ...		Y		1	1.2	60	1.5	13	.063			
302 1.2D + 1.5Lm23 + ...		Y		1	1.2	61	1.5	2	.063			
303 1.2D + 1.5Lm23 + ...		Y		1	1.2	61	1.5	3	.063			
304 1.2D + 1.5Lm23 + ...		Y		1	1.2	61	1.5	4	.063			
305 1.2D + 1.5Lm23 + ...		Y		1	1.2	61	1.5	5	.063			
306 1.2D + 1.5Lm23 + ...		Y		1	1.2	61	1.5	6	.063			
307 1.2D + 1.5Lm23 + ...		Y		1	1.2	61	1.5	7	.063			
308 1.2D + 1.5Lm23 + ...		Y		1	1.2	61	1.5	8	.063			
309 1.2D + 1.5Lm23 + ...		Y		1	1.2	61	1.5	9	.063			
310 1.2D + 1.5Lm23 + ...		Y		1	1.2	61	1.5	10	.063			
311 1.2D + 1.5Lm23 + ...		Y		1	1.2	61	1.5	11	.063			
312 1.2D + 1.5Lm23 + ...		Y		1	1.2	61	1.5	12	.063			
313 1.2D + 1.5Lm23 + ...		Y		1	1.2	61	1.5	13	.063			
314 1.2D + 1.5Lm24 + ...		Y		1	1.2	62	1.5	2	.063			
315 1.2D + 1.5Lm24 + ...		Y		1	1.2	62	1.5	3	.063			
316 1.2D + 1.5Lm24 + ...		Y		1	1.2	62	1.5	4	.063			
317 1.2D + 1.5Lm24 + ...		Y		1	1.2	62	1.5	5	.063			
318 1.2D + 1.5Lm24 + ...		Y		1	1.2	62	1.5	6	.063			
319 1.2D + 1.5Lm24 + ...		Y		1	1.2	62	1.5	7	.063			
320 1.2D + 1.5Lm24 + ...		Y		1	1.2	62	1.5	8	.063			
321 1.2D + 1.5Lm24 + ...		Y		1	1.2	62	1.5	9	.063			
322 1.2D + 1.5Lm24 + ...		Y		1	1.2	62	1.5	10	.063			
323 1.2D + 1.5Lm24 + ...		Y		1	1.2	62	1.5	11	.063			
324 1.2D + 1.5Lm24 + ...		Y		1	1.2	62	1.5	12	.063			
325 1.2D + 1.5Lm24 + ...		Y		1	1.2	62	1.5	13	.063			
326 1.2D + 1.5Lm25 + ...		Y		1	1.2	63	1.5	2	.063			
327 1.2D + 1.5Lm25 + ...		Y		1	1.2	63	1.5	3	.063			
328 1.2D + 1.5Lm25 + ...		Y		1	1.2	63	1.5	4	.063			
329 1.2D + 1.5Lm25 + ...		Y		1	1.2	63	1.5	5	.063			



**Load Combinations (Continued)**

Description	Solve	P	Delta	S...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...
330 1.2D + 1.5Lm25 + ...		Y			1	1.2	63	1.5	6	.063			
331 1.2D + 1.5Lm25 + ...		Y			1	1.2	63	1.5	7	.063			
332 1.2D + 1.5Lm25 + ...		Y			1	1.2	63	1.5	8	.063			
333 1.2D + 1.5Lm25 + ...		Y			1	1.2	63	1.5	9	.063			
334 1.2D + 1.5Lm25 + ...		Y			1	1.2	63	1.5	10	.063			
335 1.2D + 1.5Lm25 + ...		Y			1	1.2	63	1.5	11	.063			
336 1.2D + 1.5Lm25 + ...		Y			1	1.2	63	1.5	12	.063			
337 1.2D + 1.5Lm25 + ...		Y			1	1.2	63	1.5	13	.063			
338 1.2D + 1.5Lm26 + ...		Y			1	1.2	64	1.5	2	.063			
339 1.2D + 1.5Lm26 + ...		Y			1	1.2	64	1.5	3	.063			
340 1.2D + 1.5Lm26 + ...		Y			1	1.2	64	1.5	4	.063			
341 1.2D + 1.5Lm26 + ...		Y			1	1.2	64	1.5	5	.063			
342 1.2D + 1.5Lm26 + ...		Y			1	1.2	64	1.5	6	.063			
343 1.2D + 1.5Lm26 + ...		Y			1	1.2	64	1.5	7	.063			
344 1.2D + 1.5Lm26 + ...		Y			1	1.2	64	1.5	8	.063			
345 1.2D + 1.5Lm26 + ...		Y			1	1.2	64	1.5	9	.063			
346 1.2D + 1.5Lm26 + ...		Y			1	1.2	64	1.5	10	.063			
347 1.2D + 1.5Lm26 + ...		Y			1	1.2	64	1.5	11	.063			
348 1.2D + 1.5Lm26 + ...		Y			1	1.2	64	1.5	12	.063			
349 1.2D + 1.5Lm26 + ...		Y			1	1.2	64	1.5	13	.063			
350 1.2D + 1.5Lm27 + ...		Y			1	1.2	65	1.5	2	.063			
351 1.2D + 1.5Lm27 + ...		Y			1	1.2	65	1.5	3	.063			
352 1.2D + 1.5Lm27 + ...		Y			1	1.2	65	1.5	4	.063			
353 1.2D + 1.5Lm27 + ...		Y			1	1.2	65	1.5	5	.063			
354 1.2D + 1.5Lm27 + ...		Y			1	1.2	65	1.5	6	.063			
355 1.2D + 1.5Lm27 + ...		Y			1	1.2	65	1.5	7	.063			
356 1.2D + 1.5Lm27 + ...		Y			1	1.2	65	1.5	8	.063			
357 1.2D + 1.5Lm27 + ...		Y			1	1.2	65	1.5	9	.063			
358 1.2D + 1.5Lm27 + ...		Y			1	1.2	65	1.5	10	.063			
359 1.2D + 1.5Lm27 + ...		Y			1	1.2	65	1.5	11	.063			
360 1.2D + 1.5Lm27 + ...		Y			1	1.2	65	1.5	12	.063			
361 1.2D + 1.5Lm27 + ...		Y			1	1.2	65	1.5	13	.063			
362 1.2D + 1.5Lm28 + ...		Y			1	1.2	66	1.5	2	.063			
363 1.2D + 1.5Lm28 + ...		Y			1	1.2	66	1.5	3	.063			
364 1.2D + 1.5Lm28 + ...		Y			1	1.2	66	1.5	4	.063			
365 1.2D + 1.5Lm28 + ...		Y			1	1.2	66	1.5	5	.063			
366 1.2D + 1.5Lm28 + ...		Y			1	1.2	66	1.5	6	.063			
367 1.2D + 1.5Lm28 + ...		Y			1	1.2	66	1.5	7	.063			
368 1.2D + 1.5Lm28 + ...		Y			1	1.2	66	1.5	8	.063			
369 1.2D + 1.5Lm28 + ...		Y			1	1.2	66	1.5	9	.063			
370 1.2D + 1.5Lm28 + ...		Y			1	1.2	66	1.5	10	.063			
371 1.2D + 1.5Lm28 + ...		Y			1	1.2	66	1.5	11	.063			
372 1.2D + 1.5Lm28 + ...		Y			1	1.2	66	1.5	12	.063			
373 1.2D + 1.5Lm28 + ...		Y			1	1.2	66	1.5	13	.063			
374 1.2D + 1.5Lm29 + ...		Y			1	1.2	67	1.5	2	.063			
375 1.2D + 1.5Lm29 + ...		Y			1	1.2	67	1.5	3	.063			
376 1.2D + 1.5Lm29 + ...		Y			1	1.2	67	1.5	4	.063			
377 1.2D + 1.5Lm29 + ...		Y			1	1.2	67	1.5	5	.063			
378 1.2D + 1.5Lm29 + ...		Y			1	1.2	67	1.5	6	.063			
379 1.2D + 1.5Lm29 + ...		Y			1	1.2	67	1.5	7	.063			
380 1.2D + 1.5Lm29 + ...		Y			1	1.2	67	1.5	8	.063			
381 1.2D + 1.5Lm29 + ...		Y			1	1.2	67	1.5	9	.063			
382 1.2D + 1.5Lm29 + ...		Y			1	1.2	67	1.5	10	.063			
383 1.2D + 1.5Lm29 + ...		Y			1	1.2	67	1.5	11	.063			
384 1.2D + 1.5Lm29 + ...		Y			1	1.2	67	1.5	12	.063			
385 1.2D + 1.5Lm29 + ...		Y			1	1.2	67	1.5	13	.063			
386 1.2D + 1.5Lm30 + ...		Y			1	1.2	68	1.5	2	.063			





**Load Combinations (Continued)**

Description	Solve	PDelta	S...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...
387 1.2D + 1.5Lm30 + ...		Y		1	1.2	68	1.5	3	.063			
388 1.2D + 1.5Lm30 + ...		Y		1	1.2	68	1.5	4	.063			
389 1.2D + 1.5Lm30 + ...		Y		1	1.2	68	1.5	5	.063			
390 1.2D + 1.5Lm30 + ...		Y		1	1.2	68	1.5	6	.063			
391 1.2D + 1.5Lm30 + ...		Y		1	1.2	68	1.5	7	.063			
392 1.2D + 1.5Lm30 + ...		Y		1	1.2	68	1.5	8	.063			
393 1.2D + 1.5Lm30 + ...		Y		1	1.2	68	1.5	9	.063			
394 1.2D + 1.5Lm30 + ...		Y		1	1.2	68	1.5	10	.063			
395 1.2D + 1.5Lm30 + ...		Y		1	1.2	68	1.5	11	.063			
396 1.2D + 1.5Lm30 + ...		Y		1	1.2	68	1.5	12	.063			
397 1.2D + 1.5Lm30 + ...		Y		1	1.2	68	1.5	13	.063			
398 1.2D + 1.5Lm31 + ...		Y		1	1.2	69	1.5	2	.063			
399 1.2D + 1.5Lm31 + ...		Y		1	1.2	69	1.5	3	.063			
400 1.2D + 1.5Lm31 + ...		Y		1	1.2	69	1.5	4	.063			
401 1.2D + 1.5Lm31 + ...		Y		1	1.2	69	1.5	5	.063			
402 1.2D + 1.5Lm31 + ...		Y		1	1.2	69	1.5	6	.063			
403 1.2D + 1.5Lm31 + ...		Y		1	1.2	69	1.5	7	.063			
404 1.2D + 1.5Lm31 + ...		Y		1	1.2	69	1.5	8	.063			
405 1.2D + 1.5Lm31 + ...		Y		1	1.2	69	1.5	9	.063			
406 1.2D + 1.5Lm31 + ...		Y		1	1.2	69	1.5	10	.063			
407 1.2D + 1.5Lm31 + ...		Y		1	1.2	69	1.5	11	.063			
408 1.2D + 1.5Lm31 + ...		Y		1	1.2	69	1.5	12	.063			
409 1.2D + 1.5Lm31 + ...		Y		1	1.2	69	1.5	13	.063			
410 1.2D + 1.5Lm32 + ...		Y		1	1.2	70	1.5	2	.063			
411 1.2D + 1.5Lm32 + ...		Y		1	1.2	70	1.5	3	.063			
412 1.2D + 1.5Lm32 + ...		Y		1	1.2	70	1.5	4	.063			
413 1.2D + 1.5Lm32 + ...		Y		1	1.2	70	1.5	5	.063			
414 1.2D + 1.5Lm32 + ...		Y		1	1.2	70	1.5	6	.063			
415 1.2D + 1.5Lm32 + ...		Y		1	1.2	70	1.5	7	.063			
416 1.2D + 1.5Lm32 + ...		Y		1	1.2	70	1.5	8	.063			
417 1.2D + 1.5Lm32 + ...		Y		1	1.2	70	1.5	9	.063			
418 1.2D + 1.5Lm32 + ...		Y		1	1.2	70	1.5	10	.063			
419 1.2D + 1.5Lm32 + ...		Y		1	1.2	70	1.5	11	.063			
420 1.2D + 1.5Lm32 + ...		Y		1	1.2	70	1.5	12	.063			
421 1.2D + 1.5Lm32 + ...		Y		1	1.2	70	1.5	13	.063			
422 1.2D + 1.5Lm33 + ...		Y		1	1.2	71	1.5	2	.063			
423 1.2D + 1.5Lm33 + ...		Y		1	1.2	71	1.5	3	.063			
424 1.2D + 1.5Lm33 + ...		Y		1	1.2	71	1.5	4	.063			
425 1.2D + 1.5Lm33 + ...		Y		1	1.2	71	1.5	5	.063			
426 1.2D + 1.5Lm33 + ...		Y		1	1.2	71	1.5	6	.063			
427 1.2D + 1.5Lm33 + ...		Y		1	1.2	71	1.5	7	.063			
428 1.2D + 1.5Lm33 + ...		Y		1	1.2	71	1.5	8	.063			
429 1.2D + 1.5Lm33 + ...		Y		1	1.2	71	1.5	9	.063			
430 1.2D + 1.5Lm33 + ...		Y		1	1.2	71	1.5	10	.063			
431 1.2D + 1.5Lm33 + ...		Y		1	1.2	71	1.5	11	.063			
432 1.2D + 1.5Lm33 + ...		Y		1	1.2	71	1.5	12	.063			
433 1.2D + 1.5Lm33 + ...		Y		1	1.2	71	1.5	13	.063			
434 1.2D + 1.5Lm34 + ...		Y		1	1.2	72	1.5	2	.063			
435 1.2D + 1.5Lm34 + ...		Y		1	1.2	72	1.5	3	.063			
436 1.2D + 1.5Lm34 + ...		Y		1	1.2	72	1.5	4	.063			
437 1.2D + 1.5Lm34 + ...		Y		1	1.2	72	1.5	5	.063			
438 1.2D + 1.5Lm34 + ...		Y		1	1.2	72	1.5	6	.063			
439 1.2D + 1.5Lm34 + ...		Y		1	1.2	72	1.5	7	.063			
440 1.2D + 1.5Lm34 + ...		Y		1	1.2	72	1.5	8	.063			
441 1.2D + 1.5Lm34 + ...		Y		1	1.2	72	1.5	9	.063			
442 1.2D + 1.5Lm34 + ...		Y		1	1.2	72	1.5	10	.063			
443 1.2D + 1.5Lm34 + ...		Y		1	1.2	72	1.5	11	.063			



**Load Combinations (Continued)**

Description	Solve	P	Delta	S...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...
444 1.2D + 1.5Lm34 + ...		Y			1	1.2	72	1.5	12	.063			
445 1.2D + 1.5Lm34 + ...		Y			1	1.2	72	1.5	13	.063			
446 1.2D + 1.5Lm35 + ...		Y			1	1.2	73	1.5	2	.063			
447 1.2D + 1.5Lm35 + ...		Y			1	1.2	73	1.5	3	.063			
448 1.2D + 1.5Lm35 + ...		Y			1	1.2	73	1.5	4	.063			
449 1.2D + 1.5Lm35 + ...		Y			1	1.2	73	1.5	5	.063			
450 1.2D + 1.5Lm35 + ...		Y			1	1.2	73	1.5	6	.063			
451 1.2D + 1.5Lm35 + ...		Y			1	1.2	73	1.5	7	.063			
452 1.2D + 1.5Lm35 + ...		Y			1	1.2	73	1.5	8	.063			
453 1.2D + 1.5Lm35 + ...		Y			1	1.2	73	1.5	9	.063			
454 1.2D + 1.5Lm35 + ...		Y			1	1.2	73	1.5	10	.063			
455 1.2D + 1.5Lm35 + ...		Y			1	1.2	73	1.5	11	.063			
456 1.2D + 1.5Lm35 + ...		Y			1	1.2	73	1.5	12	.063			
457 1.2D + 1.5Lm35 + ...		Y			1	1.2	73	1.5	13	.063			
458 1.2D + 1.5Lm36 + ...		Y			1	1.2	74	1.5	2	.063			
459 1.2D + 1.5Lm36 + ...		Y			1	1.2	74	1.5	3	.063			
460 1.2D + 1.5Lm36 + ...		Y			1	1.2	74	1.5	4	.063			
461 1.2D + 1.5Lm36 + ...		Y			1	1.2	74	1.5	5	.063			
462 1.2D + 1.5Lm36 + ...		Y			1	1.2	74	1.5	6	.063			
463 1.2D + 1.5Lm36 + ...		Y			1	1.2	74	1.5	7	.063			
464 1.2D + 1.5Lm36 + ...		Y			1	1.2	74	1.5	8	.063			
465 1.2D + 1.5Lm36 + ...		Y			1	1.2	74	1.5	9	.063			
466 1.2D + 1.5Lm36 + ...		Y			1	1.2	74	1.5	10	.063			
467 1.2D + 1.5Lm36 + ...		Y			1	1.2	74	1.5	11	.063			
468 1.2D + 1.5Lm36 + ...		Y			1	1.2	74	1.5	12	.063			
469 1.2D + 1.5Lm36 + ...		Y			1	1.2	74	1.5	13	.063			
470 1.2D + 1.5Lv (Posit...	Yes	Y			1	1.2	75	1.5					
471 1.2D + 1.5Lv (Posit...	Yes	Y			1	1.2	76	1.5					
472 1.2D + 1.5Lv (Posit...	Yes	Y			1	1.2	77	1.5					
473 1.2D + 1.5Lv (Posit...	Yes	Y			1	1.2	78	1.5					
474 1.2D + 1.5Lv (Posit...	Yes	Y			1	1.2	79	1.5					
475 1.2D + 1.5Lv (Posit...	Yes	Y			1	1.2	80	1.5					
476 1.2D + 1.5Lv (Posit...	Yes	Y			1	1.2	81	1.5					
477 1.2D + 1.5Lv (Posit...	Yes	Y			1	1.2	82	1.5					
478 1.2D + 1.5Lv (Posit...	Yes	Y			1	1.2	83	1.5					
479 1.2D + 1.5Lv (Posit...	Yes	Y			1	1.2	84	1.5					
480 1.2D + 1.5Lv (Posit...	Yes	Y			1	1.2	85	1.5					
481 1.2D + 1.5Lv (Posit...	Yes	Y			1	1.2	86	1.5					
482 1.2D + 1.5Lv (Posit...		Y			1	1.2	87	1.5					
483 1.2D + 1.5Lv (Posit...		Y			1	1.2	88	1.5					
484 1.2D + 1.5Lv (Posit...		Y			1	1.2	89	1.5					
485 1.2D + 1.5Lv (Posit...		Y			1	1.2	90	1.5					
486 1.2D + 1.5Lv (Posit...		Y			1	1.2	91	1.5					
487 1.2D + 1.5Lv (Posit...		Y			1	1.2	92	1.5					
488 1.2D + 1.5Lv (Posit...		Y			1	1.2	93	1.5					
489 1.2D + 1.5Lv (Posit...		Y			1	1.2	94	1.5					
490 1.2D + 1.5Lv (Posit...		Y			1	1.2	95	1.5					
491 1.2D + 1.5Lv (Posit...		Y			1	1.2	96	1.5					
492 1.2D + 1.5Lv (Posit...		Y			1	1.2	97	1.5					
493 1.2D + 1.5Lv (Posit...		Y			1	1.2	98	1.5					
494 1.2D + 1.5Lv (Posit...		Y			1	1.2	99	1.5					
495 1.2D + 1.5Lv (Posit...		Y			1	1.2	100	1.5					
496 1.2D + 1.5Lv (Posit...		Y			1	1.2	101	1.5					
497 1.2D + 1.5Lv (Posit...		Y			1	1.2	102	1.5					
498 1.2D + 1.5Lv (Posit...		Y			1	1.2	103	1.5					
499 1.2D + 1.5Lv (Posit...		Y			1	1.2	104	1.5					
500 1.2D + 1.5Lv (Posit...		Y			1	1.2	105	1.5					



**Load Combinations (Continued)**

Description	Solve	PDelta	S...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...
501 1.2D + 1.5Lv (Posit...		Y		1	1.2	106	1.5					
502 1.2D + 1.5Lv (Posit...		Y		1	1.2	107	1.5					
503 1.2D + 1.5Lv (Posit...		Y		1	1.2	108	1.5					
504 1.2D + 1.5Lv (Posit...		Y		1	1.2	109	1.5					
505 1.2D + 1.5Lv (Posit...		Y		1	1.2	110	1.5					
506 1.2D + 1.5Lv (Posit...		Y		1	1.2	111	1.5					
507 1.2D + 1.5Lv (Posit...		Y		1	1.2	112	1.5					
508 1.2D + 1.5Lv (Posit...		Y		1	1.2	113	1.5					
509 1.2D + 1.5Lv (Posit...		Y		1	1.2	114	1.5					
510 1.2D + 1.5Lv (Posit...		Y		1	1.2	115	1.5					
511 1.2D + 1.5Lv (Posit...		Y		1	1.2	116	1.5					
512 1.2D + 1.5Lv (Posit...		Y		1	1.2	117	1.5					
513 1.2D + 1.5Lv (Posit...		Y		1	1.2	118	1.5					
514 1.2D + 1.5Lv (Posit...		Y		1	1.2	119	1.5					
515 1.2D + 1.5Lv (Posit...		Y		1	1.2	120	1.5					
516 1.2D + 1.5Lv (Posit...		Y		1	1.2	121	1.5					
517 1.2D + 1.5Lv (Posit...		Y		1	1.2	122	1.5					
518 1.2D + 1.5Lv (Posit...		Y		1	1.2	123	1.5					
519 1.2D + 1.5Lv (Posit...		Y		1	1.2	124	1.5					
520 1.2D + 1.5Lv (Posit...		Y		1	1.2	125	1.5					
521 1.2D + 1.5Lv (Posit...		Y		1	1.2	126	1.5					
522 1.2D + 1.5Lv (Posit...		Y		1	1.2	127	1.5					
523 1.2D + 1.5Lv (Posit...		Y		1	1.2	128	1.5					
524 1.2D + 1.5Lv (Posit...		Y		1	1.2	129	1.5					
525 1.2D + 1.5Lv (Posit...		Y		1	1.2	130	1.5					
526 1.2D + 1.5Lv (Posit...		Y		1	1.2	131	1.5					
527 1.2D + 1.5Lv (Posit...		Y		1	1.2	132	1.5					
528 1.2D + 1.5Lv (Posit...		Y		1	1.2	133	1.5					
529 1.2D + 1.5Lv (Posit...		Y		1	1.2	134	1.5					
530 1.2D + 1.5Lv (Posit...		Y		1	1.2	135	1.5					
531 1.2D + 1.5Lv (Posit...		Y		1	1.2	136	1.5					
532 1.2D + 1.5Lv (Posit...		Y		1	1.2	137	1.5					
533 1.2D + 1.5Lv (Posit...		Y		1	1.2	138	1.5					
534 1.2D + 1.5Lv (Posit...		Y		1	1.2	139	1.5					
535 1.2D + 1.5Lv (Posit...		Y		1	1.2	140	1.5					
536 1.2D + 1.5Lv (Posit...		Y		1	1.2	141	1.5					
537 1.2D + 1.5Lv (Posit...		Y		1	1.2	142	1.5					
538 1.2D + 1.5Lv (Posit...		Y		1	1.2	143	1.5					
539 1.2D + 1.5Lv (Posit...		Y		1	1.2	144	1.5					
540 1.2D + 1.5Lv (Posit...		Y		1	1.2	145	1.5					
541 1.2D + 1.5Lv (Posit...		Y		1	1.2	146	1.5					
542 1.2D + 1.5Lv (Posit...		Y		1	1.2	147	1.5					
543 1.2D + 1.5Lv (Posit...		Y		1	1.2	148	1.5					
544 1.2D + 1.5Lv (Posit...		Y		1	1.2	149	1.5					
545 1.2D + 1.5Lv (Posit...		Y		1	1.2	150	1.5					
546 1.2D + 1.5Lv (Posit...		Y		1	1.2	151	1.5					
547 1.2D + 1.5Lv (Posit...		Y		1	1.2	152	1.5					
548 1.2D + 1.5Lv (Posit...		Y		1	1.2	153	1.5					
549 1.2D + 1.5Lv (Posit...		Y		1	1.2	154	1.5					
550 1.2D + 1.5Lv (Posit...		Y		1	1.2	155	1.5					
551 1.2D + 1.5Lv (Posit...		Y		1	1.2	156	1.5					
552 1.2D + 1.5Lv (Posit...		Y		1	1.2	157	1.5					
553 1.2D + 1.5Lv (Posit...		Y		1	1.2	158	1.5					
554 1.2D + 1.5Lv (Posit...		Y		1	1.2	159	1.5					
555 1.2D + 1.5Lv (Posit...		Y		1	1.2	160	1.5					
556 1.2D + 1.5Lv (Posit...		Y		1	1.2	161	1.5					
557 1.2D + 1.5Lv (Posit...		Y		1	1.2	162	1.5					



### Load Combinations (Continued)

Description	Solve	PDelta	S...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...	BLCFa...
558	1.2D + 1.5Lv (Posit..	Y		1	1.2	163	1.5						
559	1.2D + 1.5Lv (Posit..	Y		1	1.2	164	1.5						
560	1.2D + 1.5Lv (Posit..	Y		1	1.2	165	1.5						
561	1.2D + 1.5Lv (Posit..	Y		1	1.2	166	1.5						
562	1.2D + 1.5Lv (Posit..	Y		1	1.2	167	1.5						
563	1.2D + 1.5Lv (Posit..	Y		1	1.2	168	1.5						
564	1.2D + 1.5Lv (Posit..	Y		1	1.2	169	1.5						
565	1.2D + 1.5Lv (Posit..	Y		1	1.2	170	1.5						
566	1.2D + 1.5Lv (Posit..	Y		1	1.2	171	1.5						
567	1.2D + 1.5Lv (Posit..	Y		1	1.2	172	1.5						
568	1.2D + 1.5Lv (Posit..	Y		1	1.2	173	1.5						
569	1.2D + 1.5Lv (Posit..	Y		1	1.2	174	1.5						

### 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	N254	max	1126.549	8	2412.915	18	1364.085	10	1441.014	83	1648.629	10	-1888.252	2
2		min	-1126.765	2	831.699	108	-1364.079	4	-1212.844	41	-1648.961	4	-6067.474	20
3	N255	max	1138.712	9	1966.668	14	952.831	11	-1564.855	10	1110.326	9	2417.622	111
4		min	-1138.607	3	658.614	93	-952.794	5	-4975.482	16	-1110.145	3	-89.633	45
5	N256	max	857.913	7	956.084	24	566.798	12	3018.004	96	660.174	13	2008.757	99
6		min	-857.792	13	281.183	150	-566.918	6	588.449	42	-660.231	7	-485.011	81
7	Totals:	max	2935.734	8	5305.732	25	2622.06	11						
8		min	-2935.734	2	2137.425	6	-2622.06	5						

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

Member	Shape	Code Che...	Loc[in]	LC	Shear Ch...	Loc[in]	Dir	LC	phi*Pnc...	phi*Pnt...	phi*Mn...	phi*Mn...	Cb	Eqn	
1	MP3	PIPE 2.0	.343	50.75	8	.044	50.75	8	17855.0...	32130	1871.625	1871.625	2...	H1-1b	
2	MP9	PIPE 2.0	.343	50.75	4	.044	50.75	4	17855.0...	32130	1871.625	1871.625	2...	H1-1b	
3	FM-1	PIPE 4.0	.314	64	22	.111	64	80	85130.7...	93240	10631.25	10631.25	1...	H1-1b	
4	FM-3	PIPE 4.0	.266	64	18	.108	64	1...	85130.7...	93240	10631.25	10631.25	1...	H1-1b	
5	SA-1	HSS5X5X5	.259	0	22	.101	0	y	83	168470...	170424	24732	24732	1...	H1-1b
6	FM-2	PIPE 4.0	.237	64	95	.084	64	97	85130.7...	93240	10631.25	10631.25	1...	H1-1b	
7	SA-3	HSS5X5X5	.208	0	15	.119	0	y	1...	168470...	170424	24732	24732	1...	H1-1b
8	M28	SR1"	.110	30.625	4	.034	30.625	10	6286.562	25446.9	424.115	424.115	1...	H1-1b	
9	SA-2	HSS5X5X5	.102	0	109	.104	0	y	94	168470...	170424	24732	24732	1...	H1-1b
10	M21	SR1"	.091	30.625	10	.021	30.625	2	6286.586	25446.9	424.115	424.115	1...	H1-1b*	
11	M27	SR1"	.089	6	5	.018	6	5	24686.8...	25446.9	424.115	424.115	1...	H1-1b	
12	M13	SR1"	.085	6	3	.019	6	9	24686.8...	25446.9	424.115	424.115	1...	H1-1b	
13	M14	SR1"	.084	30.625	9	.028	28	9	6286.532	25446.9	424.115	424.115	1...	H1-1b	
14	MP8	PIPE 2.0	.082	75.375	4	.012	75.375	4	12143.9...	32130	1871.625	1871.625	2...	H1-1b	
15	MP2	PIPE 2.0	.082	75.375	8	.012	75.375	8	12143.9...	32130	1871.625	1871.625	2...	H1-1b	
16	M49	SR1"	.079	42	13	.021	30.625	6	6286.552	25446.9	424.115	424.115	1...	H1-1b*	
17	M12	SR1"	.076	0	10	.012	6	9	24686.8...	25446.9	424.115	424.115	1...	H1-1b	
18	M42	SR1"	.072	30.625	2	.023	30.625	2	6286.566	25446.9	424.115	424.115	1...	H1-1b	
19	M34	SR1"	.066	6	8	.012	6	8	24686.8...	25446.9	424.115	424.115	1...	H1-1b	
20	M35	SR1"	.065	30.625	2	.021	30.625	2	6286.556	25446.9	424.115	424.115	2...	H1-1b	
21	MP10	PIPE 2.0	.065	37.5	4	.012	37.5	7	20866.7...	32130	1871.625	1871.625	1...	H1-1b	
22	MP4	PIPE 2.0	.065	37.5	8	.012	37.5	11	20866.7...	32130	1871.625	1871.625	1...	H1-1b	
23	M11	SR1"	.063	0	10	.013	6	10	24686.8...	25446.9	424.115	424.115	1...	H1-1b	
24	M15	SR 3/4	.063	11.413	4	.026	11.413	97	9766.5	14313.8...	178.929	178.929	1...	H1-1b*	
25	M41	SR1"	.062	6	8	.012	6	2	24686.8...	25446.9	424.115	424.115	1...	H1-1b	
26	M29	SR 3/4	.062	11.413	11	.028	11.413	45	9766.507	14313.8...	178.929	178.929	1...	H1-1b*	
27	M20	SR1"	.059	6	12	.012	6	13	24686.8...	25446.9	424.115	424.115	1...	H1-1b	
28	M19	SR1"	.058	0	12	.011	0	18	24686.8...	25446.9	424.115	424.115	1...	H1-1b	



Company : Engineered Tower Solutions, PLLC  
 Designer : HHT  
 Job Number : 192563.14  
 Model Name : Danbury/Rt 7

Apr 29, 2019  
 2:25 PM  
 Checked By: JAA

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

Member	Shape	Code Che...	Loc[in]	LC	Shear Ch...	Loc[in]	Dir	LC	phi*Pnc...	phi*Pnt...	phi*Mn...	phi*Mn...	Cb	Eqn
29	M10	SR1"	.057	0	10	.012	0	76	24686.8...	25446.9	424.115	424.115	1...	H1-1b
30	M33	SR1"	.056	0	2	.010	0	15	24686.8...	25446.9	424.115	424.115	1...	H1-1b
31	M26	SR1"	.054	0	6	.010	0	1...	24686.8...	25446.9	424.115	424.115	1...	H1-1b
32	M30	SR 3/4	.051	0	20	.019	0	20	13679.9...	14313.8...	178.929	178.929	1...	H1-1b
33	M36	SR 3/4	.051	11.413	8	.017	11.413	1...	9766.532	14313.8...	178.929	178.929	2...	H1-1b*
34	M22	SR 3/4	.050	11.413	12	.025	11.413	1...	9766.5	14313.8...	178.929	178.929	1...	H1-1b*
35	M48	SR1"	.049	6	4	.009	0	6	24686.8...	25446.9	424.115	424.115	1...	H1-1b
36	M51	SR 3/4	.049	0	22	.017	0	94	13679.9...	14313.8...	178.929	178.929	1...	H1-1b
37	M43	SR 3/4	.049	11.413	8	.019	11.413	1...	9766.508	14313.8...	178.929	178.929	1...	H1-1b*
38	M25	SR1"	.047	0	3	.012	0	1...	24686.8...	25446.9	424.115	424.115	1...	H1-1b
39	M18	SR1"	.046	0	12	.009	0	46	24686.8...	25446.9	424.115	424.115	1...	H1-1b
40	M40	SR1"	.045	0	2	.009	0	25	24686.8...	25446.9	424.115	424.115	1...	H1-1b
41	M32	SR1"	.045	0	3	.009	0	1...	24686.8...	25446.9	424.115	424.115	1...	H1-1b
42	M23	SR 3/4	.045	0	18	.014	0	41	13679.9...	14313.8...	178.929	178.929	1...	H1-1b
43	M24	SR1"	.044	6	5	.011	0	1...	24686.8...	25446.9	424.115	424.115	1...	H1-1b
44	M16	SR 3/4	.043	0	24	.015	0	85	13679.9...	14313.8...	178.929	178.929	1...	H1-1b
45	M31	SR1"	.041	0	9	.010	0	1...	24686.8...	25446.9	424.115	424.115	1...	H1-1b
46	M17	SR1"	.041	0	12	.012	0	43	24686.8...	25446.9	424.115	424.115	1...	H1-1b
47	M50	SR 3/4	.040	11.413	4	.028	11.413	81	9766.532	14313.8...	178.929	178.929	1...	H1-1b*
48	M46	SR1"	.038	0	24	.011	0	86	24686.8...	25446.9	424.115	424.115	1...	H1-1b
49	M39	SR1"	.037	0	25	.009	0	1...	24686.8...	25446.9	424.115	424.115	1...	H1-1b
50	M47	SR1"	.036	0	16	.007	0	86	24686.8...	25446.9	424.115	424.115	1...	H1-1b
51	M38	SR1"	.034	0	7	.010	0	1...	24686.8...	25446.9	424.115	424.115	1...	H1-1b
52	M44	SR 3/4	.028	0	110	.010	0	1...	13679.98	14313.8...	178.929	178.929	1...	H1-1b
53	PL2	PL1/2x10	.028	7.837	2	.031	7.837	y 80	138713...	162000	1687.5	33750	1...	H1-1b
54	M45	SR1"	.028	6	12	.012	0	96	24686.8...	25446.9	424.115	424.115	1...	H1-1b
55	M37	SR 3/4	.027	0	98	.010	5.5	1...	13679.9...	14313.8...	178.929	178.929	1...	H1-1b
56	PL1	PL1/2x10	.025	7.837	4	.030	7.837	y 10	138713...	162000	1687.5	33750	1...	H1-1b
57	MP1	PIPE 2.0	.017	37.5	42	.005	36.75	6	20866.7...	32130	1871.625	1871.625	1...	H1-1b
58	MP5	PIPE 2.0	.016	37.5	94	.005	36.75	9	20866.7...	32130	1871.625	1871.625	1...	H1-1b
59	MP7	PIPE 2.0	.016	37.5	110	.005	36.75	3	20866.7...	32130	1871.625	1871.625	1...	H1-1b
60	MP6	PIPE 2.0	.015	37.5	98	.005	36.75	3	20866.7...	32130	1871.625	1871.625	1...	H1-1b
61	PL3	PL1/2x10	.014	0	4	.025	7.837	y 1...	138713...	162000	1687.5	32760.3...	1...	H1-1b

**APPENDIX D**  
**ADDITIONAL CALCULATIONS**

## Connection Check

Max Reactions	
$F_x =$	-51.5 lb
$F_y =$	930.1 lb
$F_z =$	12.3 lb
$M_x =$	1,696.9 lb-ft
$M_y =$	31.5 lb-ft
$M_z =$	2,008.1 lb-ft

Connection Details		
$\phi_{bolt} =$	0.75 in	Nominal Bolt Diameter
# of Bolts =	4	Bolt Quantity
# of Threads/Inch, n =	10	Number of threads per inch (per AISC Table 7-17)
$F_{ub} =$	120 ksi	Specified Minimum Tensile Strength of the Bolt (A325 Assumed)
$F_y =$	36 ksi	Yield Strength of the Plate (A36 Assumed)
Plate Width =	9.50 in	Connection Plate Width
Plate Thickness =	0.750 in	Connection Plate Thickness
HSS Member Width =	5.00 in	HSS Supporting Member Width
Bolt Spacing, $y_1 =$	6.50 in	Horizontal Distance of Bolts along Vertical Flange

CONNECTION RESISTANCE		
$\phi =$	0.75	Connection Resistance Factor
$\phi_b =$	0.90	Plate Bending Resistance Factor
$A_n =$	0.334 in <sup>2</sup>	Net Area, $A_n$ , through the threaded portion of the bolt
$A_b =$	0.442 in <sup>2</sup>	Nominal untreated area of bolt or threaded part
$\phi R_{nt} =$	30.10 kip	Design Tensile Strength of a Single Bolt or threaded part
$\phi R_{nv} =$	19.88 kip	Design Shear Strength of a Single Bolt. Heads assumed included in the shear plane

4.9.6.4 "COMBINED SHEAR AND TENSION"		
$V_{ub} =$	1.80 kip	Total Shear Force
$T_{ub} =$	1.87 kip	Total Tension Force
% Capacity =	9.0% OK	$(V_{ub}/\phi R_{nv})^2 + (T_{ub}/\phi R_{nt})^2$

CONNECTION PLATE CAPACITY		
$M_{MAX} =$	2,800.17 lb-in	Moment across the plate
Yield Line =	7.7136 in	Yield Line across the plate
Plate Stress, $f_b =$	2,581.4 psi	Bending Plate Stress across the yield line
Plate Capacity, $F_b =$	32,400. psi	Bending Capacity of the Plate
% Capacity =	8.0% OK	

# Exhibit F

## **Power Density/RF Emissions Report**



# Transcom Engineering, Inc.

Wireless Network Design and Deployment

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## Radio Frequency Emissions Analysis Report

**T-MOBILE** Existing Facility

**Site ID: CT11092J**

Danbury/Rt 7  
36 Sugar Hollow Lake Road  
Danbury, CT 06810

**July 16, 2019**

**Transcom Engineering Project Number: 737001-0011**

Site Compliance Summary	
Compliance Status:	<b>COMPLIANT</b>
Site total MPE% of FCC general population allowable limit:	<b>8.30 %</b>

# Transcom Engineering, Inc.

Wireless Network Design and Deployment

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July 16, 2019

T-MOBILE

Attn: Jason Overbey, RF Manager  
35 Griffin Road South  
Bloomfield, CT 6009

## Emissions Analysis for Site: **CT11092J – Danbury/Rt 7**

Transcom Engineering, Inc (“Transcom”) was directed to analyze the proposed upgrades to the T-MOBILE facility located at **36 Sugar Hollow Lake Road, Danbury, CT**, for the purpose of determining whether the emissions from the Proposed T-MOBILE Antenna Installation located on this property are within specified federal limits.

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

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

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

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

# Transcom Engineering, Inc.

Wireless Network Design and Deployment

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

Additional details can be found in FCC OET 65.

# Transcom Engineering, Inc.

Wireless Network Design and Deployment

## CALCULATIONS

Calculations were performed for the proposed upgrades to the T-MOBILE antenna facility located at **36 Sugar Hollow Lake Road, Danbury, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-MOBILE is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB for directional panel antennas, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

All emissions values for additional carriers were taken from the Connecticut Siting Council (CSC) active MPE database. Values in this database are provided by the individual carriers themselves

For each sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
GSM	1900 MHz (PCS)	1	15
UMTS	2100 MHz (AWS)	1	40
LTE	1900 MHz (PCS)	4	40
LTE	2100 MHz (AWS)	2	60
LTE / 5G NR	600 MHz	2	40
LTE	700 MHz	2	20

*Table 1: Channel Data Table*

# Transcom Engineering, Inc.

Wireless Network Design and Deployment

The following antennas listed in *Table 2* were used in the modeling for transmission in the 600, 700 MHz, 1900 MHz (PCS) and 2100 MHz (AWS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB for directional panel antennas, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
B	1	Ericsson AIR21 B2A/B4P	105
B	2	Ericsson AIR32 B66A / B2A	105
B	3	RFS APXVAARR24_43-U-NA20	103
C	1	Ericsson AIR21 B2A/B4P	105
C	2	Ericsson AIR32 B66A / B2A	105
C	3	RFS APXVAARR24_43-U-NA20	103

*Table 2: Antenna Data*

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

Cable losses were factored in the calculations for this site. Since all **2100 MHz (AWS) UMTS** radios are ground mounted the following cable loss values were used. For each ground mounted **2100 MHz (AWS) UMTS** radio there was **1.48 dB** of cable loss calculated into the system gains / losses for this site. These values were calculated based upon the manufacturers specifications for **115** feet of **1-1/4"** coax

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## RESULTS

Per the calculations completed for the proposed T-MOBILE configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna B1	Ericsson AIR21 B2A/B4P	1900 MHz (PCS) / 2100 MHz (AWS)	15.9	2	55	1,690.34	0.62
Antenna B2	Ericsson AIR32 B66A / B2A	1900 MHz (PCS) / 2100 MHz (AWS)	15.85	6	280	10,768.57	3.95
Antenna B3	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	2.22
Sector B Composite MPE%							<b>6.79</b>
Antenna C1	Ericsson AIR21 B2A/B4P	1900 MHz (PCS) / 2100 MHz (AWS)	15.9	2	55	1,690.34	0.62
Antenna C2	Ericsson AIR32 B66A / B2A	1900 MHz (PCS) / 2100 MHz (AWS)	15.85	6	280	10,768.57	3.95
Antenna C3	RFS APXVAARR24_43-U-NA20	600 MHz / 700 MHz	12.95 / 13.35	4	120	2,443.03	2.22
Sector C Composite MPE%							<b>6.79</b>

*Table 3: T-MOBILE Emissions Levels*

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The Following table (*table 4*) shows all additional carriers on site and their MPE% as recorded in the CSC active MPE database for this facility along with the newly calculated maximum T-MOBILE MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, both sectors have the same configuration yielding the same results on both sectors. *Table 5* below shows a summary for each T-MOBILE Sector as well as the composite MPE value for the site.

Site Composite MPE%	
Carrier	MPE%
T-MOBILE – Max Per Sector Value	<b>6.79 %</b>
MetroPCS	0.60 %
Nextel	0.91 %
<b>Site Total MPE %:</b>	<b>8.30 %</b>

*Table 4: All Carrier MPE Contributions*

T-MOBILE Sector B Total:	6.79 %
T-MOBILE Sector C Total:	6.79 %
Site Total:	8.30 %

*Table 5: Site MPE Summary*

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FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. *Table 6* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated T-MOBILE sector(s). For this site, both sectors have the same configuration yielding the same results on both sectors.

T-MOBILE _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ( $\mu\text{W}/\text{cm}^2$ )	Frequency (MHz)	Allowable MPE ( $\mu\text{W}/\text{cm}^2$ )	Calculated % MPE
T-Mobile 1900 MHz (PCS) GSM	1	583.57	105	2.14	1900 MHz (PCS)	1000	0.21%
T-Mobile 2100 MHz (AWS) UMTS	1	1,106.78	105	4.06	2100 MHz (AWS)	1000	0.41%
T-Mobile 1900 MHz (PCS) LTE	4	1,538.37	105	22.57	1900 MHz (PCS)	1000	2.26%
T-Mobile 2100 MHz (AWS) LTE	2	2,307.55	105	16.93	2100 MHz (AWS)	1000	1.69%
T-Mobile 600 MHz LTE / 5G NR	2	788.97	103	6.03	600 MHz	400	1.51%
T-Mobile 700 MHz LTE	2	432.54	103	3.31	700 MHz	467	0.71%
						<b>Total:</b>	<b>6.79%</b>

*Table 6: T-MOBILE Maximum Sector MPE Power Values*



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## Summary

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

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

T-MOBILE Sector	Power Density Value (%)
Sector B:	6.79 %
Sector C:	6.79 %
T-MOBILE Maximum Total (per sector):	6.79 %
Site Total:	8.30 %
Site Compliance Status:	<b>COMPLIANT</b>

The anticipated composite MPE value for this site assuming all carriers present is **8.30 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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



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