



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

### VIA ELECTRONIC MAIL

November 25, 2019

Katie Benson  
Smartlink, LLC  
85 Rangeway Road, Building 3, Suite 102  
North Billerica, MA 01862

RE: **EM-AT&T-063-191107** – AT&T Mobility, LLC notice of intent to modify an existing telecommunications facility located at 185 West Fisk Road, Hampton, Connecticut.

Dear Ms. Benson:

The Connecticut Siting Council (Council) is in receipt of your correspondence of November 20, 2019 submitted in response to the Council's November 13, 2019 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

Melanie A. Bachman  
Executive Director

MAB/IN/emr



## Robidoux, Evan

---

**From:** Katherine Benson <katherine.benson@smartlinkllc.com>  
**Sent:** Monday, November 25, 2019 11:46 AM  
**To:** Robidoux, Evan  
**Cc:** CSC-DL Siting Council  
**Subject:** RE: Council Incomplete Letter for EM-AT&T-063-191107 (185 West Fisk Road, Hampton)  
**Attachments:** CSC decisions.pdf; 10071068\_DE125\_190920\_CTL05707.pdf

Hello Evan,

Please see attached. Is this what you need?

Thank you!

**Katie Benson**  
**Smartlink**

**From:** Robidoux, Evan <Evan.Robidoux@ct.gov>  
**Sent:** Monday, November 25, 2019 11:32 AM  
**To:** Katherine Benson <katherine.benson@smartlinkllc.com>  
**Cc:** CSC-DL Siting Council <Siting.Council@ct.gov>; Kristina Cottone <kristina.cottone@smartlinkllc.com>  
**Subject:** FW: Council Incomplete Letter for EM-AT&T-063-191107 (185 West Fisk Road, Hampton)

**Warning:**This message was sent from outside the company and could contain attachments. Please do not open unless you recognize the source of this email and know the content is safe.

Good morning Ms. Benson,

We are in receipt of your response to this incomplete. Please also send a PDF of the response to incomplete for our records.

Thank you and have a good day!

Sincerely,

Evan Robidoux  
Clerk Typist  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

**From:** Robidoux, Evan  
**Sent:** Wednesday, November 13, 2019 10:03 AM  
**To:** 'Katherine Benson' <katherine.benson@smartlinkllc.com>  
**Cc:** CSC-DL Siting Council <Siting.Council@ct.gov>; 'Kristina Cottone' <kristina.cottone@smartlinkllc.com>  
**Subject:** Council Incomplete Letter for EM-AT&T-063-191107 (185 West Fisk Road, Hampton)

Please see the attached correspondence.

Evan Robidoux  
Clerk Typist  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051



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CONNECTICUT SITING COUNCIL

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

6:00  
T T S  
9-12

June 26, 2000

Sandy M. Carter  
Manager-Regulatory  
Verizon Wireless  
20 Alexander Drive  
P.O. Box 5029  
Wallingford, CT 06492-2430

RE: TS-BAM-063-000607 - Cellco Partnership d/b/a Verizon Wireless request for an order to approve tower sharing at an existing telecommunications facility located at 185 Fisk Road in Hampton, Connecticut.

Dear Ms. Carter:

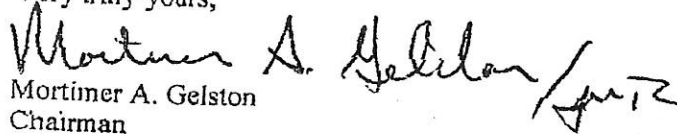
At a public meeting held June 20, 2000, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the 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 § 16-50b 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 June 6, 2000.

Thank you for your attention and cooperation.

Very truly yours,

  
Mortimer A. Gelston  
Chairman

MAG/PMA/grg

c: Honorable Walter A. Stone, First Selectman, Town of Hampton



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Web Site: [www.state.ct.us/csc/index.htm](http://www.state.ct.us/csc/index.htm)

June 27, 2002

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

RE: **EM-AT&T-063-020529** - AT&T Wireless notice of intent to modify an existing telecommunications facility located 185 Fisk Road, Hampton, Connecticut.

Dear Attorney Fisher:


At a public meeting held on June 25, 2002, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice received May 29, 2002. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. 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 will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of 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.

Thank you for your attention and cooperation.

Very truly yours,

  
Mortimer A. Gelston  
Chairman

MAG/laf

- c: Honorable Margaret S. Haraghey, First Selectman, Town of Hampton  
Martha Fraenkel, Zoning Enforcement Officer, Town of Hampton  
Jeremy McDavitt, American Tower Corporation  
Thomas F. Flynn III, Nextel Communications  
Sandy M. Carter, Verizon Wireless  
Julie M. Donaldson, Esq., Hurwitz & Sagarin LLC

CT11-510A



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Christine Farrell
T-Mobile Real Estate and Zoning
100 Filley Street
Bloomfield, CT 06002

RE: TS-T-MOBILE-063-040426 - Omnipoint Communications, Inc. (T-Mobile) request for an order to approve tower sharing at an existing telecommunications facility at 185 Fisk Road, Hampton, Connecticut.

Dear Mrs. Farrell: [Signature]

At a public meeting held May 19, 2004, 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 with the condition that foundation modifications specified in the report dated April 14, 2004 and sealed by Jamie Reyes, P.E. be performed prior to the antenna installation. 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 of 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 April 23, 2004.

Thank you for your attention and cooperation.

Very truly yours.

[Signature of Pamela B. Katz]

Pamela B. Katz, P.E.
Chairman

PBK/laf

- c: Honorable Margaret S. Haraghey, First Selectman, Town of Hampton
Martha Fraenkel, Zoning Enforcement Officer, Town of Hampton
Jeremy McDavitt, Co-Location Manager, American Tower Corporation
Thomas F. Flynn III, Nextel Communications, Inc.
Christopher B. Fisher, Esq., Cuddy & Feder LLP
Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LLP
Sandy M. Carter, Verizon Wireless





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Internet: [ct.gov/csc](http://ct.gov/csc)

Daniel F. Caruso  
Chairman

May 7, 2008

Steven L. Levine  
Real Estate Consultant  
New Cingular Wireless PCS, LLC  
500 Enterprise Drive  
Rocky Hill, CT 06067-3900

RE: **EM-CING-063-080408** – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 185 Fisk Road, Hampton, Connecticut.

Dear Mr. Levine:

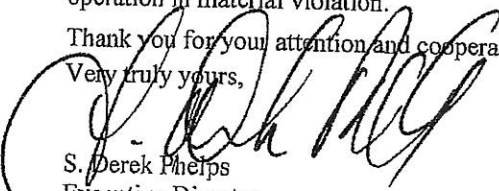
The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated April 8, 2008, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. 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. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of 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.

Thank you for your attention and cooperation.

Very truly yours,

  
S. Derek Phelps  
Executive Director

SDP/MP

c: Honorable Maurice Y. Bisson, First Selectman, Town of Hampton  
Martha Fraenkel, Zoning Enforcement Officer, Town of Hampton  
American Tower



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May 11, 2012

Kenneth C. Baldwin, Esq.  
Robinson & Cole LLP  
280 Trumbull Street  
Hartford, CT 06103

RE: **EM-VER-063-120423**- Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 185 Fiske Road, Hampton, Connecticut.

Dear Attorney Baldwin:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Not less than 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated April 20, 2012. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. 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. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,

Linda Roberts  
Executive Director

LR/CDM/laf

c: The Honorable Allan Cahill, First Selectman, Town of Hampton  
Martha Fraenkel, Zoning Enforcement Officer, Town of Hampton  
American Tower Corporation





5707  
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[www.ct.gov/csc](http://www.ct.gov/csc)

March 1, 2013

John Lawrence  
New Cingular Wireless PCS, LLC  
95 Ryan Drive, Suite #1  
Raynham, MA 02767

RE: **EM-CING-063-130214** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 185 Fisk Road, Hampton, Connecticut.

Dear Mr. Lawrence:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated February 11, 2013. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. 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. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the



closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,



Linda Roberts  
Executive Director

LR/CDM/cm

c: The Honorable Allan Cahill, First Selectman, Town of Hampton  
Martha Fraenkel, Zoning Enforcement Officer, Town of Hampton



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[www.ct.gov/csc](http://www.ct.gov/csc)

July 23, 2018

Arthur Perkowski  
 Airosmith Development, Inc.  
 32 Clinton Street  
 Saratoga Springs, NY 12866

**RE: EM-SPRINT-063-180702** - Sprint Spectrum, LP notice of intent to modify an existing telecommunications facility located at 253 Fisk Road, Hampton, Connecticut.

Dear Mr. Perkowski:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

1. Prior to Sprint's antenna installation, the antenna mount modifications shall be installed in accordance with the Antenna Mount Structural Analysis prepared by Infinigy Solutions dated April 15, 2018 and stamped and signed by Joseph R Johnston;
2. Within 45 days following completion of equipment installations, Sprint shall provide documentation certified by a professional engineer that its installation complied with the recommendations of the Mount Analysis Report;
3. Any deviation from the proposed modification as specified in this notice and supporting materials with the Council shall render this acknowledgement invalid;
4. Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
5. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
6. Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by Sprint shall be removed within 60 days of the date the antenna ceased to function;
7. The validity of this action shall expire one year from the date of this letter; and
8. The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated June 15, 2018. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site by any dimension, increase noise levels at the tower site boundary by six decibels or more, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standards adopted by the Federal Communications Commission pursuant to Section 704 of the Telecommunications Act of 1996 and by the state Department of Energy and

Environmental Protection pursuant to Connecticut General Statutes § 22a-162. 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. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Sincerely,



Melanie A. Bachman  
Executive Director

MAB/FOC/jmb

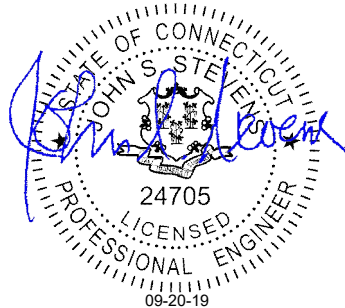
- c: The Honorable Allan Cahill, First Selectman, Town of Hampton  
John Guskowski, Town Planner, Town of Hampton  
American Tower Corporation, Tower Owner

## Post Mod Mount Analysis Report

September 20, 2019

Site Name	Hampton S Central
FA Number	10071068
Smartlink Site Number	CTL05707
PACE Number	MRCTB041543 / MRCTB041376 / MRCTB041380 MRCTB041777 / MRCTB041613
PTN Number	2051A0QAVC / 2051A0Q91L / 2051A0QA5W 2051A0Q8VJ / 2051A0Q7RT
Infinigy Job Number	1106-A0001-B
Client	Smartlink
Carrier	AT&T Mobility
Site Location	185 Fisk Rd. Hampton, CT 6247 Windham County 41.76989 N NAD83 72.07034 W NAD83
Mount Centerline EL.	130.0 ft
Mount Type	Sector Frame
Structural Usage Ratio	<b>81.4%</b>
<b>Overall Result</b>	<b>Pass</b>
Note	<b>See appended documents for mount modifications.</b>

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



Thomas Marr  
Project Engineer I

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Mount Connections.....	4
Assumptions and Limitations.....	5
Calculations.....	Appended

**Introduction**

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

**Supporting Documentation**

Previous Mount Analysis	Infinigy Engineering Job #1106-A0001-B, dated September 4, 2019
RFDS	RFDS ID #3117583, dated May 24, 2019
Construction Drawings	Infinigy Engineering Job #. 499-006, dated August 29, 2019
Structural Report	ATC Eng No. 50581823, dated January 25, 2013
Site Photos	Smartlink Provided, dated June 26, 2019

**Analysis Code Requirements**

Wind Speed	129 mph (3-Second Gust)
Wind Speed w/ Ice	50 mph (3 Second Gust) w/ 1.275" Ice
TIA Revision	ANSI/TIA-222-H
Adopted IBC	2015 IBC / 2018 Connecticut State Building Code
Structure Class	II
Exposure Category	C
Topographic Category	1
Spectral Response	$S_s = 0.172 g, S_1 = 0.062 g$
Site Class	D - Stiff Soil
HMSL	612 ft.

**Conclusion**

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

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

Thomas Marr  
 Project Engineer I | **INFINIGY**  
 1033 Watervliet Shaker Road, Albany, NY 12205  
 (O) (518) 690-0790  
 Structural@infinigy.com | [www.infinigy.com](http://www.infinigy.com)  
 10071068\_CTL5707

**Final Configuration Loading**

Mount CL (ft)	Vert. O/S (ft)	Rad. HT (ft)	Horiz. O/S (ft) <sup>(1)</sup>	Qty	Appurtenance <sup>(2)</sup>	Carrier
130.0	0.0	130.0	12.3	3	POWERWAVE 7770.00	AT&T
			12.3	6	POWERWAVE LGP 17201	
			4.3	3	CCI HPA-65R-BU8AA	
			4.3	3	ERICSSON RADIO 8843	
			0.3	3	CCI DMP65R-BU8D	
			0.3	3	ERICSSON RADIO 4449	
			--	2	RAYCAP DC6-48-60-18-8F	

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

(2) Raycap assumed to be installed directly on tower

**Mount Usages**

Horizontals	60.3%	Pass
Standoff	81.4%	Pass
Mount Pipes	54.3%	Pass
Tieback	6.6%	Pass
Bracing	68.9%	Pass
Bolts	60.7%	Pass
<b>Max Usage</b>	<b>81.4%</b>	<b>Pass</b>

**Mount Connection Usages**

Reaction Data	Design Capacity*	Analysis Reactions	Results
Max Tension (lbs.)	6385.0	3873.37	60.7%
Max Shear (lbs.)	3976.0	828.47	20.8%
Unity Check	-	-	41.1%
*Assumed (4) 0.500" A307 Bolts. Contractor to field verify prior to proposed installation.			

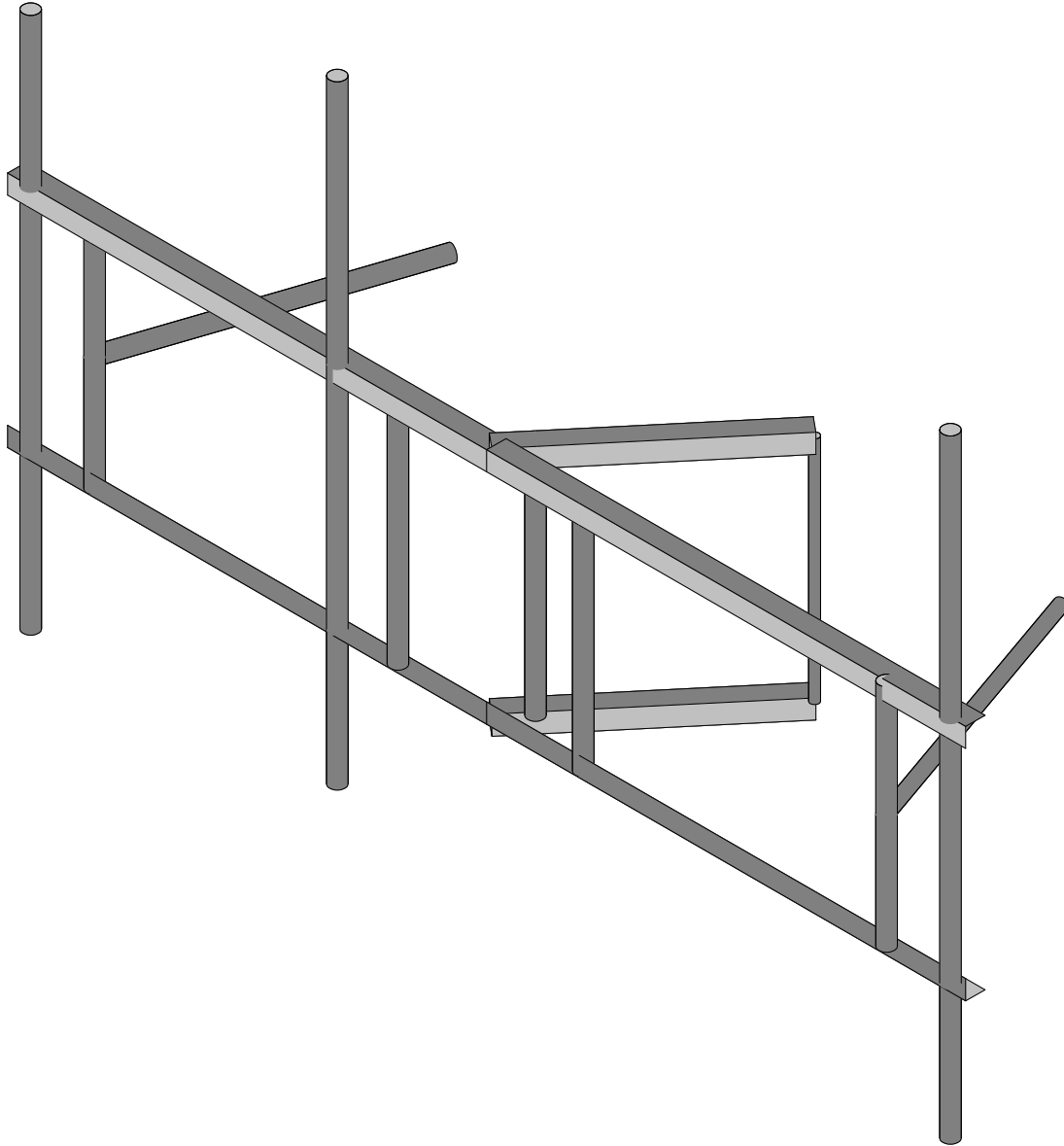
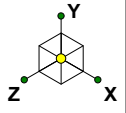


## **Assumptions and Limitations**

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

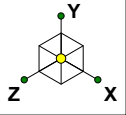
Our evaluation is completed using standard TIA, AISC, ACI, and ASCE methods and procedures. Our structural results are proprietary and should not be used by others as their own. Infinigy Engineering is not responsible for decisions made by others that are or are not based on our supplied assumptions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

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

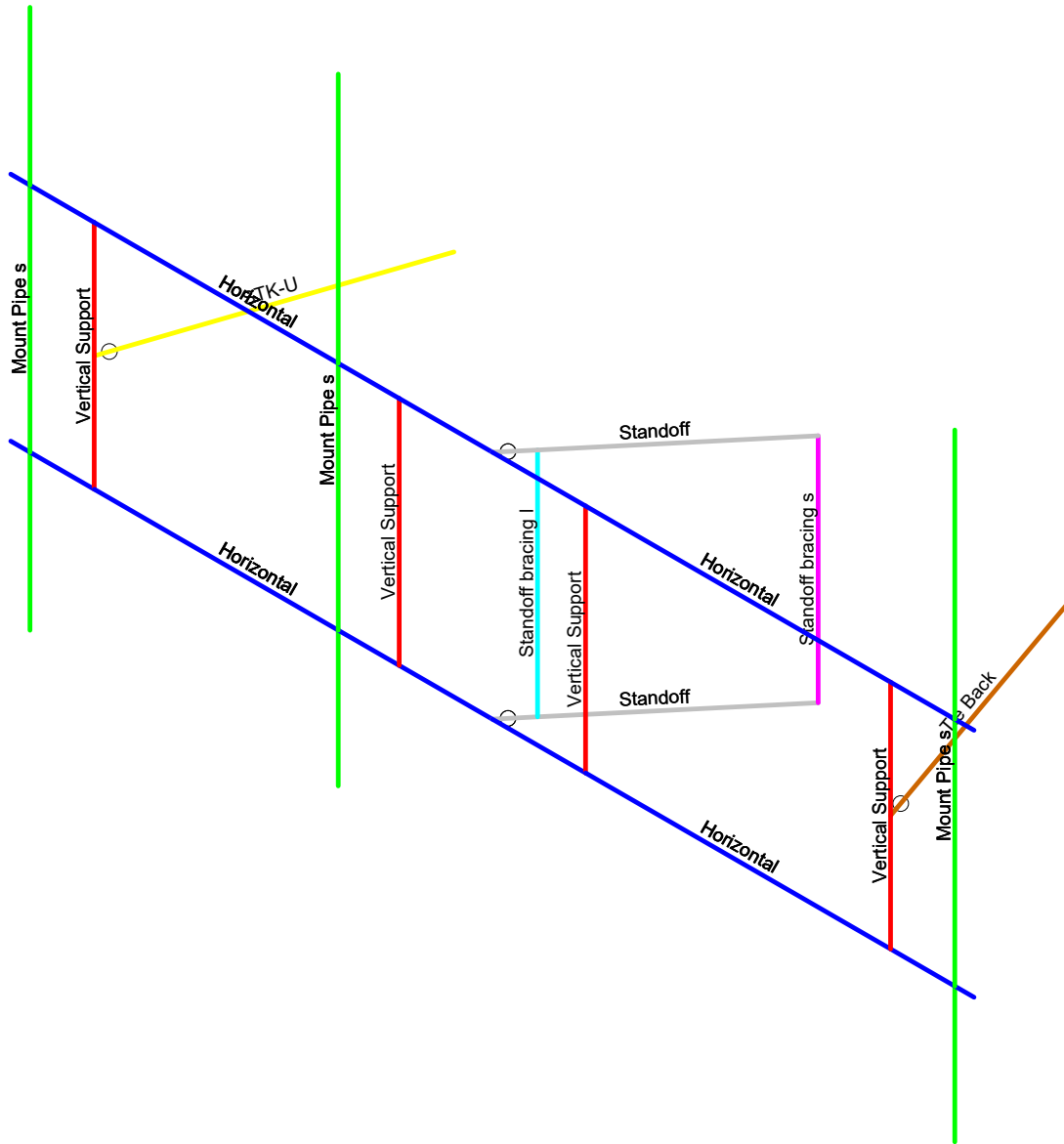


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Infinigy Engineering PLLC	CTL05707	Final Configuration
TM		Sept 17, 2019 at 9:54 AM
1106-A0001-B		CTL05707_MOD_loaded.r3d

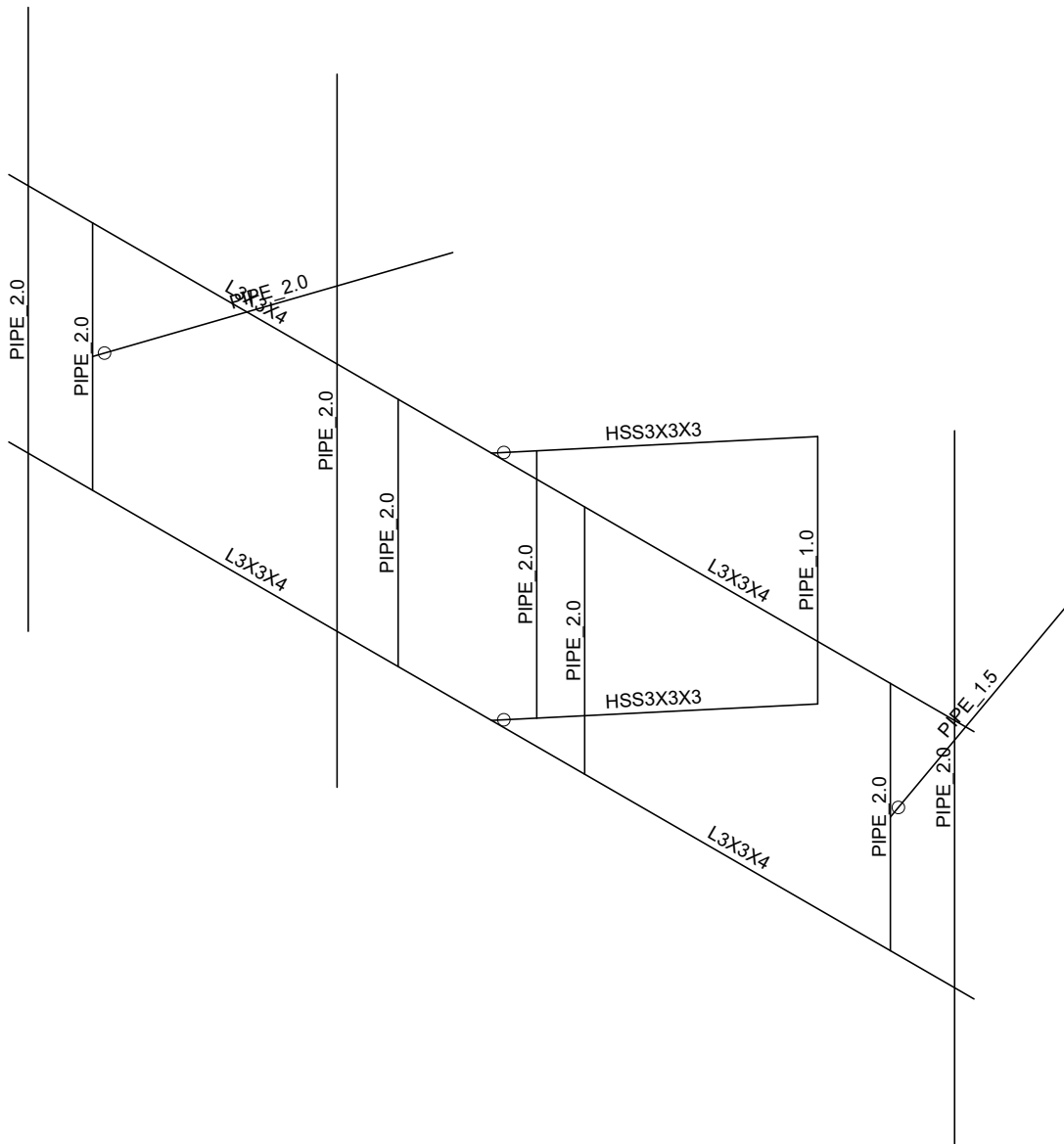
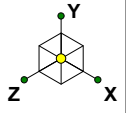


Section Sets	
<span style="color: blue;">█</span>	Horizontal
<span style="color: green;">█</span>	Mount Pipe s
<span style="color: red;">█</span>	Vertical Support
<span style="color: gray;">█</span>	Standoff
<span style="color: cyan;">█</span>	Standoff bracing I
<span style="color: magenta;">█</span>	Standoff bracing s
<span style="color: brown;">█</span>	Tie Back
<span style="color: yellow;">█</span>	STK-U



Envelope Only Solution

Infinigy Engineering PLLC	CTL05707	Section Sets
TM		Sept 17, 2019 at 9:55 AM
1106-A0001-B		CTL05707_MOD_loaded.r3d



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Infinigy Engineering PLLC

TM

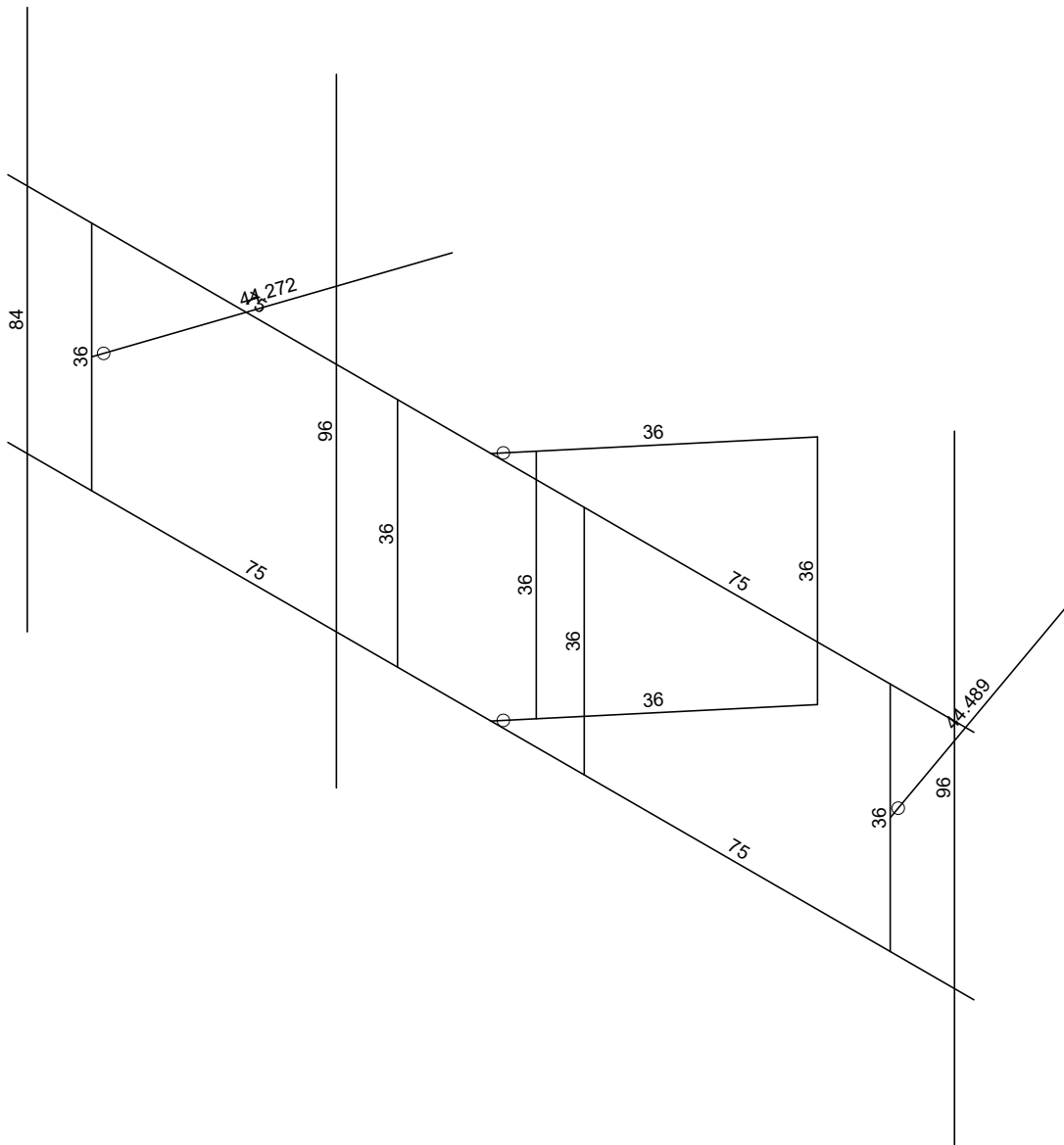
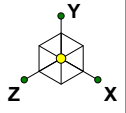
1106-A0001-B

CTL05707

Member Shape

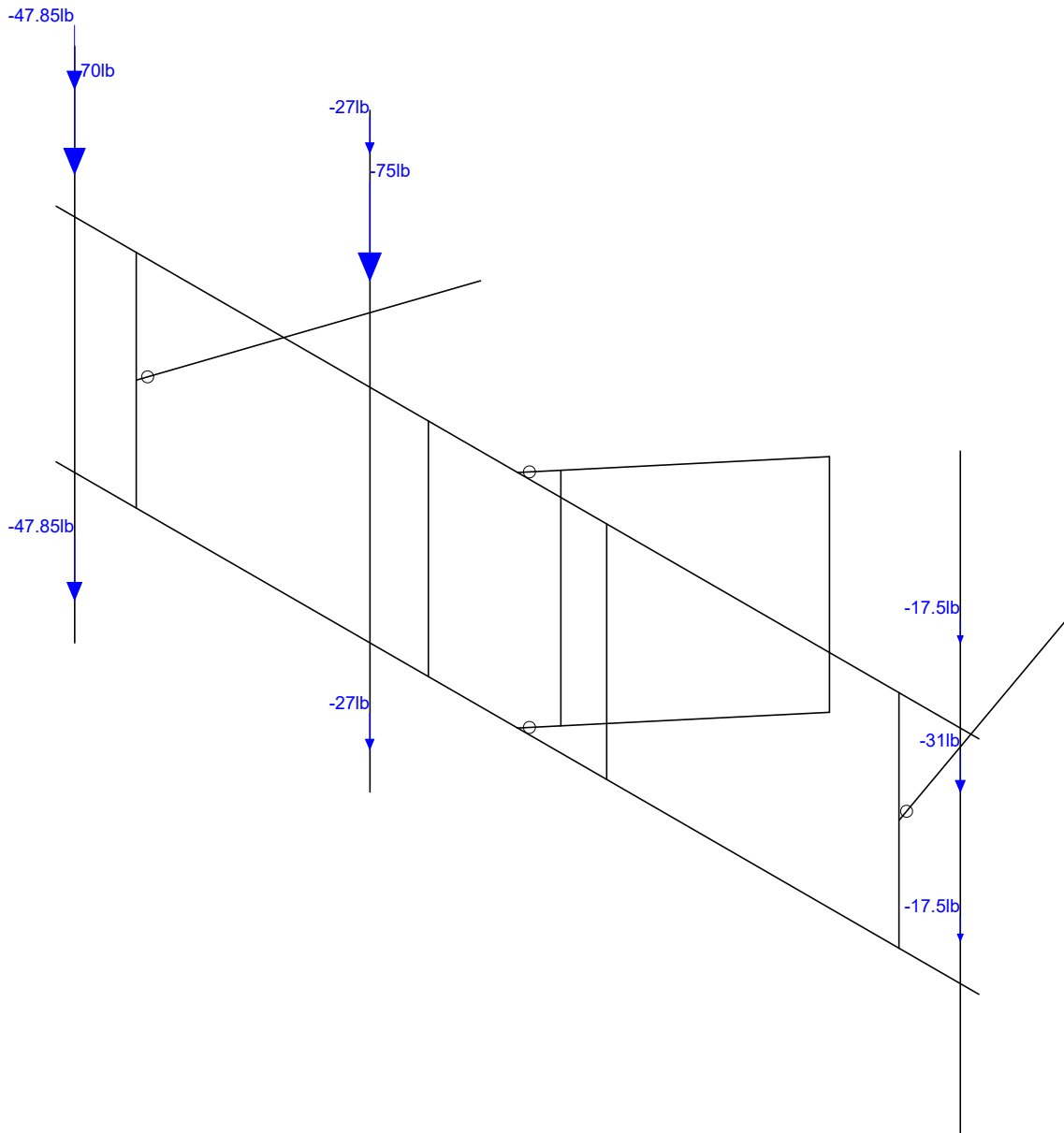
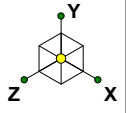
Sept 17, 2019 at 9:55 AM

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Member Length (in) Displayed  
Envelope Only Solution

Infinigy Engineering PLLC	CTL05707	Member Length
TM		Sept 17, 2019 at 9:55 AM
1106-A0001-B		CTL05707_MOD_loaded.r3d

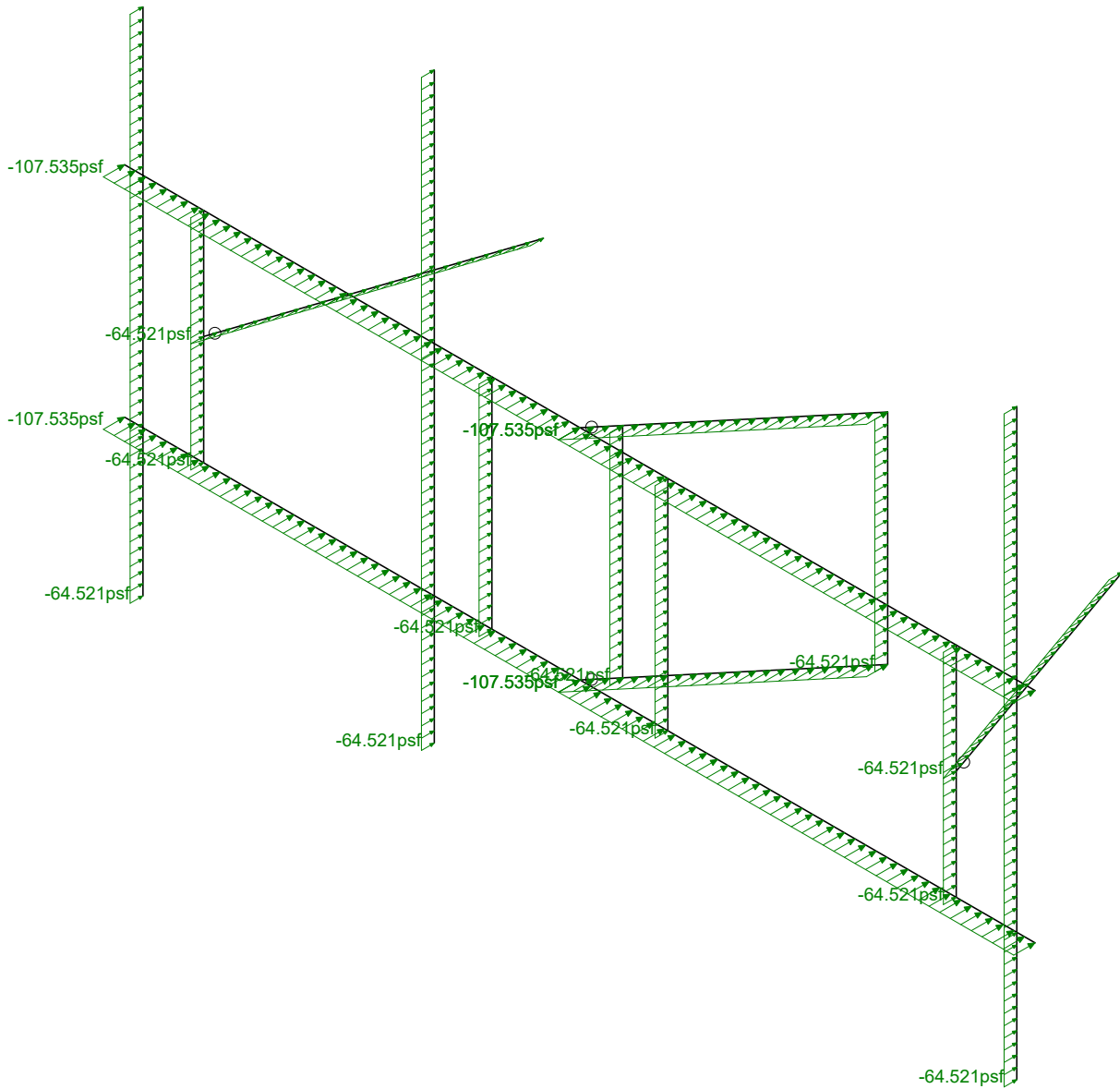
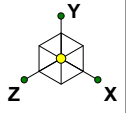


Loads: BLC 1, Self Weight  
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TM  
1106-A0001-B

CTL05707

Self Weight  
Sept 17, 2019 at 9:55 AM  
CTL05707\_MOD\_loaded.r3d



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

Infinigy Engineering PLLC

TM

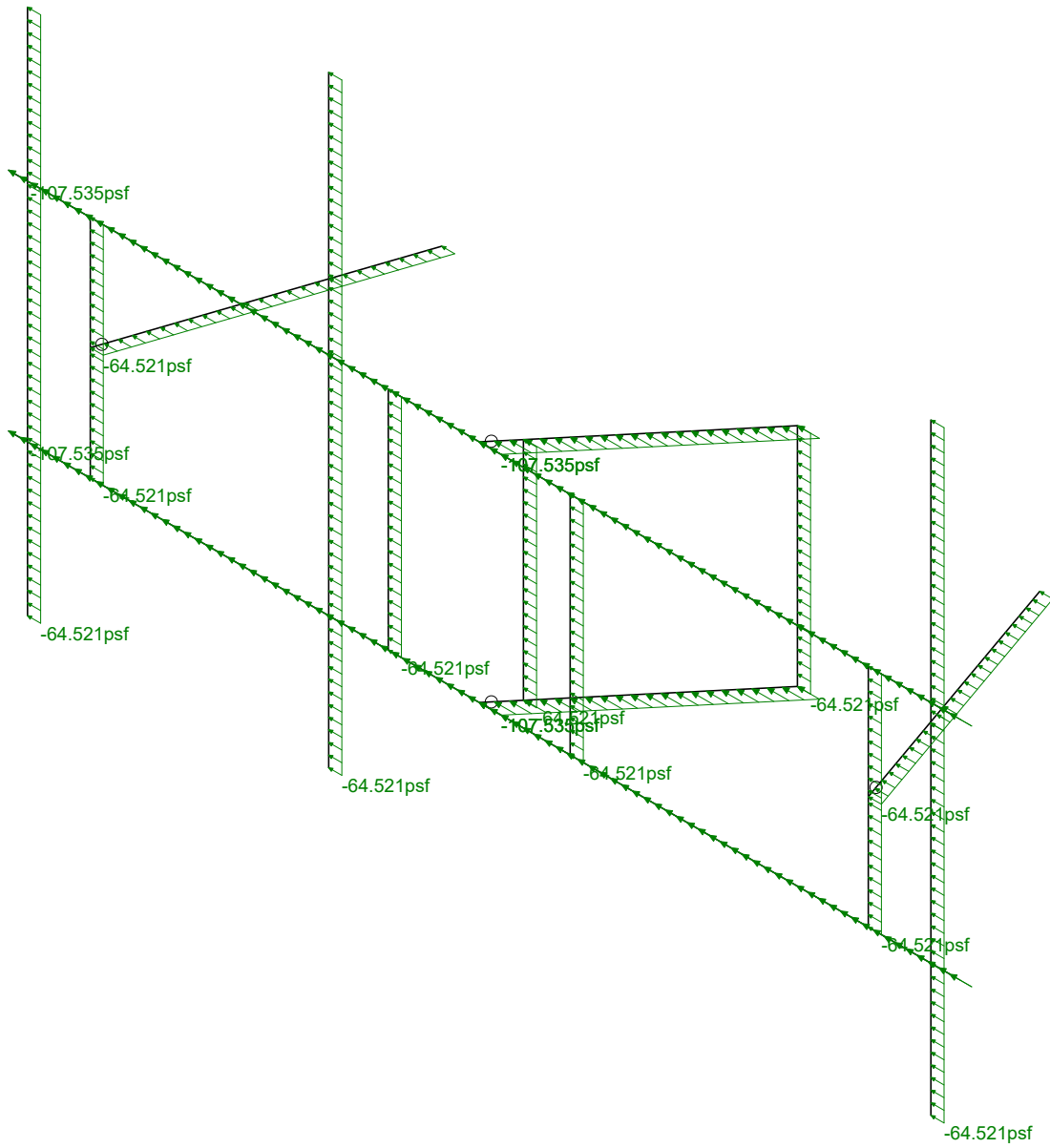
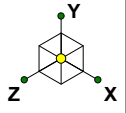
1106-A0001-B

CTL05707

Wind Load AZI 000

Sept 17, 2019 at 9:56 AM

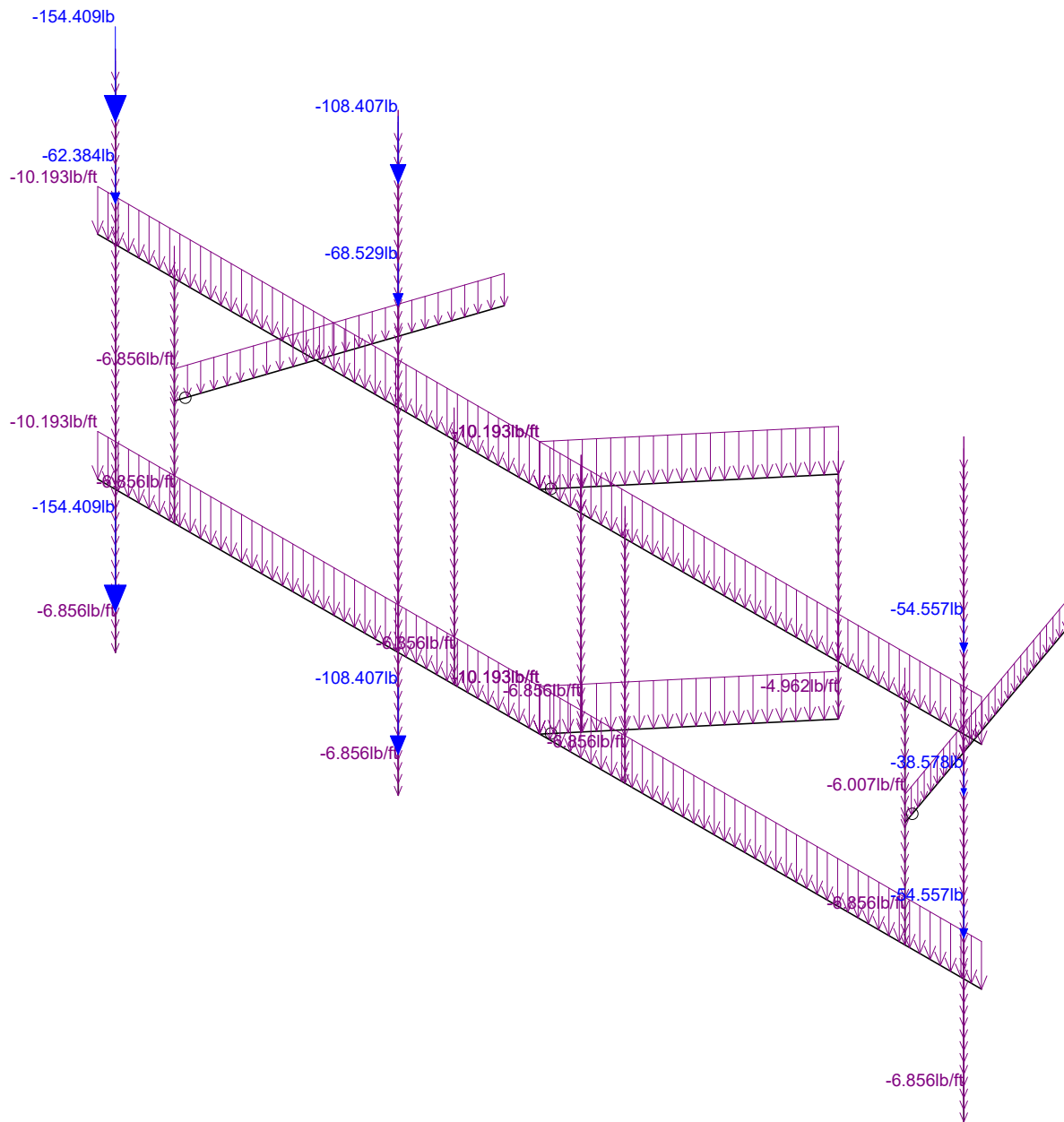
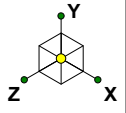
CTL05707\_MOD\_loaded.r3d



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

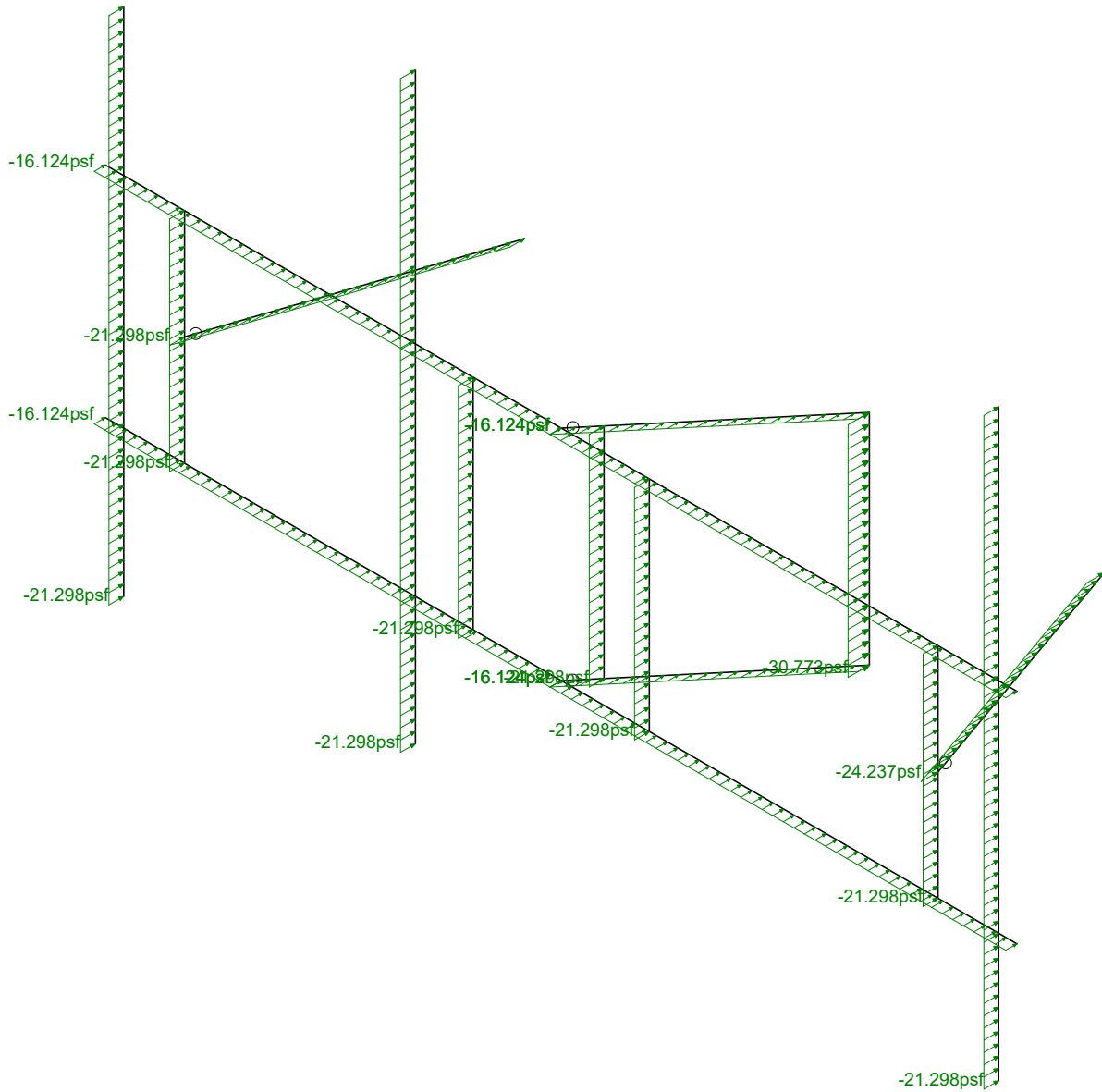
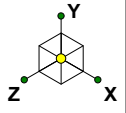
Infinigy Engineering PLLC	CTL05707	Wind Load AZI 090
TM		Sept 17, 2019 at 9:56 AM
1106-A0001-B		CTL05707_MOD_loaded.r3d





Loads: BLC 16, Ice Weight  
Envelope Only Solution

Infinigy Engineering PLLC	CTL05707	Ice Weight
TM		Sept 17, 2019 at 9:56 AM
1106-A0001-B		CTL05707_MOD_loaded.r3d



Loads: BLC 29, Distr. Ice Wind Load Z  
Envelope Only Solution

Infinigy Engineering PLLC

TM

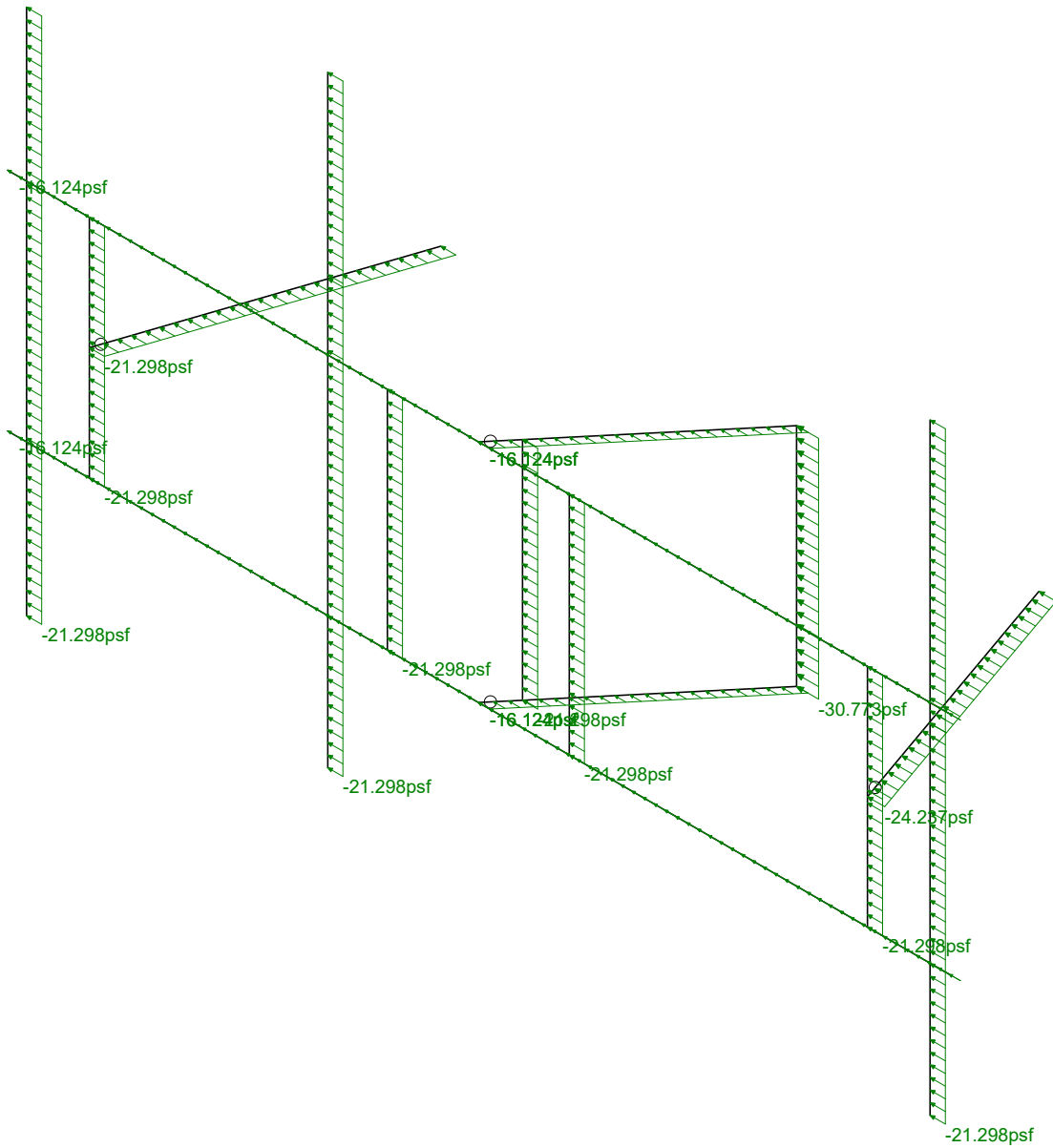
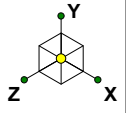
1106-A0001-B

CTL05707

Wind + Ice Load AZI 000

Sept 17, 2019 at 9:56 AM

CTL05707\_MOD\_loaded.r3d



Loads: BLC 30, Distr. Ice Wind Load X  
Envelope Only Solution

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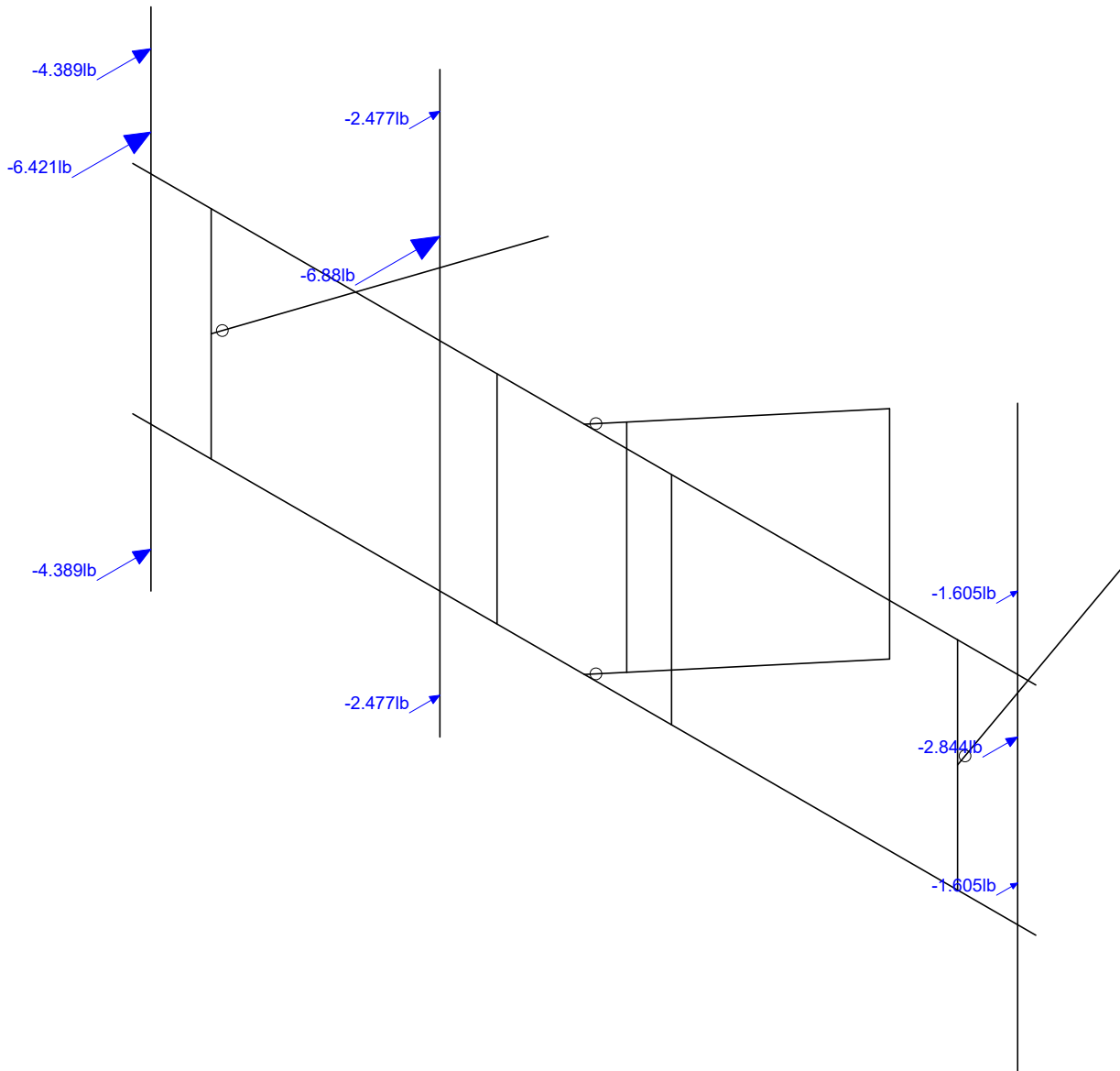
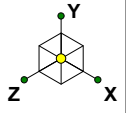
1106-A0001-B

CTL05707

Wind + Ice Load AZI 090

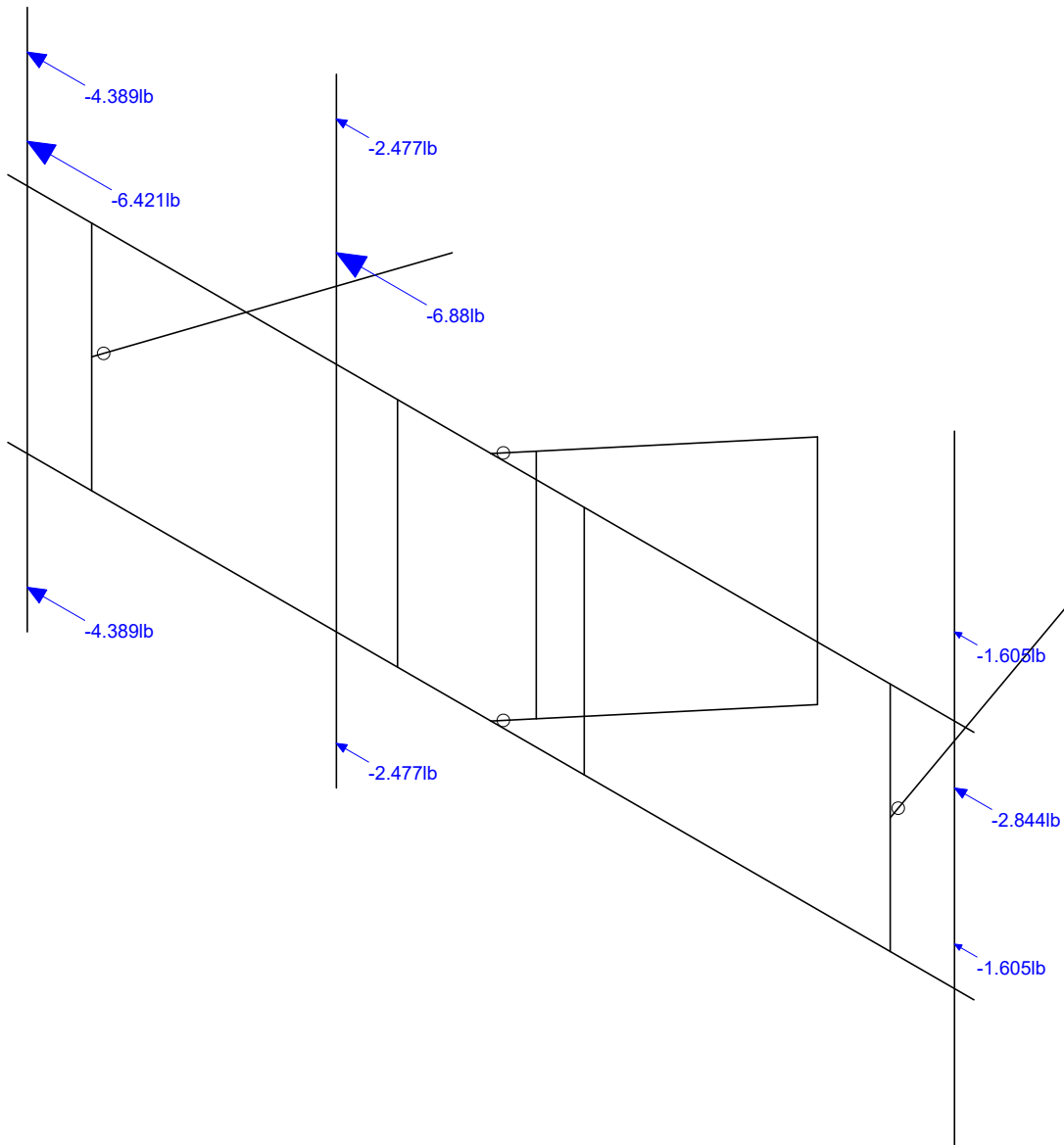
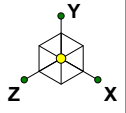
Sept 17, 2019 at 9:57 AM

CTL05707\_MOD\_loaded.r3d



Loads: BLC 31, Seismic Load Z  
Envelope Only Solution

Infinigy Engineering PLLC	CTL05707	Seismic Load AZI 000
TM		Sept 17, 2019 at 9:57 AM
1106-A0001-B		CTL05707_MOD_loaded.r3d



Loads: BLC 32, Seismic Load X  
Envelope Only Solution

Infinigy Engineering PLLC

TM

1106-A0001-B

CTL05707

Seismic Load AZI 090

Sept 17, 2019 at 9:57 AM

CTL05707\_MOD\_loaded.r3d



### Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N23		270	Horizontal	Beam	None	A36 Gr.36	Typical
2	M2	N3	N22		180	Horizontal	Beam	None	A36 Gr.36	Typical
3	M3	N11	N12			Vertical Supp...	Beam	None	A53 Gr.B	Typical
4	M4	N13	N14			Vertical Supp...	Beam	None	A53 Gr.B	Typical
5	M5	N15	N16			Vertical Supp...	Beam	None	A53 Gr.B	Typical
6	M6	N17	N18			Vertical Supp...	Beam	None	A53 Gr.B	Typical
7	M7	N22	N4		180	Horizontal	Beam	None	A36 Gr.36	Typical
8	M8	N23	N2		270	Horizontal	Beam	None	A36 Gr.36	Typical
9	M9	N22	N24			Standoff	Beam	None	A53 Gr.B	Typical
10	M10	N23	N25			Standoff	Beam	None	A53 Gr.B	Typical
11	M11	N27	N26			Standoff brac...	Beam	None	A53 Gr.B	Typical
12	M12	N25	N24			Standoff brac...	Beam	None	A53 Gr.B	Typical
13	M13	N31	N28			Tie Back	Beam	None	A53 Gr.B	Typical
14	MP1	N5	N6			Mount Pipe s	Beam	None	A53 Gr.B	Typical
15	MP2	N7	N8			Mount Pipe s	Beam	None	A53 Gr.B	Typical
16	MP3	N9	N10			Mount Pipe s	Beam	None	A53 Gr.B	Typical
17	M17	N34	N33			STK-U	Beam	None	A53 Gr.B	Typical

### Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[in]	Lbzz[in]	Lcomp top[...]	Lcomp bot[...]	L-torque[ft]	Kyy	Kzz	Cb	Funci...
1	M1	Horizontal	75			Lbyy						Lateral
2	M2	Horizontal	75			Lbyy						Lateral
3	M3	Vertical Support	36			Lbyy						Lateral
4	M4	Vertical Support	36			Lbyy						Lateral
5	M5	Vertical Support	36			Lbyy						Lateral
6	M6	Vertical Support	36			Lbyy						Lateral
7	M7	Horizontal	75			Lbyy						Lateral
8	M8	Horizontal	75			Lbyy						Lateral
9	M9	Standoff	36			Lbyy						Lateral
10	M10	Standoff	36			Lbyy						Lateral
11	M11	Standoff bracing l	36			Lbyy						Lateral
12	M12	Standoff bracing s	36			Lbyy						Lateral
13	M13	Tie Back	44.489			Lbyy						Lateral
14	MP1	Mount Pipe s	96			Lbyy						Lateral
15	MP2	Mount Pipe s	96			Lbyy						Lateral
16	MP3	Mount Pipe s	84			Lbyy						Lateral
17	M17	STK-U	44.272			Lbyy						Lateral

### Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M2						Yes	Default			None
3	M3						Yes				None
4	M4						Yes				None
5	M5						Yes				None
6	M6						Yes				None
7	M7						Yes				None
8	M8						Yes				None
9	M9	BenPIN					Yes	Default			None
10	M10	BenPIN					Yes	Default			None
11	M11						Yes				None
12	M12						Yes				None
13	M13	BenPIN					Yes	Default			None



Company : Infinigy Engineering PLLC  
 Designer : TM  
 Job Number : 1106-A0001-B  
 Model Name : CTL05707

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### Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
14	MP1						Yes				None
15	MP2						Yes				None
16	MP3						Yes				None
17	M17	BenPIN					Yes	Default			None

### Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Horizontal	L3X3X4	Beam	None	A36 Gr.36	Typical	1.44	1.23	1.23	.031
2	Mount Pipe s	PIPE_2.0	Beam	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
3	Vertical Supp...	PIPE_2.0	Beam	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
4	Mount Pipe L	PIPE_3.0	Beam	None	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
5	Standoff	HSS3X3X3	Beam	None	A53 Gr.B	Typical	1.89	2.46	2.46	4.03
6	Standoff braci...	PIPE_1.0	Beam	None	A53 Gr.B	Typical	.469	.083	.083	.166
7	Standoff braci...	PIPE_2.0	Beam	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
8	Handrial reinf...	L2x2x4	Beam	None	A36 Gr.36	Typical	.944	.346	.346	.021
9	Tie Back	PIPE_1.5	Beam	None	A53 Gr.B	Typical	.749	.293	.293	.586
10	STK-U	PIPE_2.0	Beam	None	A53 Gr.B	Typical	1.02	.627	.627	1.25

### Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(...
1	Self Weight	DL		-1			9		
2	Wind Load AZI 0	WLZ					18		
3	Wind Load AZI 30	None					18		
4	Wind Load AZI 60	None					18		
5	Wind Load AZI 90	WLX					18		
6	Wind Load AZI 120	None					18		
7	Wind Load AZI 150	None					18		
8	Wind Load AZI 180	None					18		
9	Wind Load AZI 210	None					18		
10	Wind Load AZI 240	None					18		
11	Wind Load AZI 270	None					18		
12	Wind Load AZI 300	None					18		
13	Wind Load AZI 330	None					18		
14	Distr. Wind Load Z	WLZ						17	
15	Distr. Wind Load X	WLX						17	
16	Ice Weight	OL1					9	17	
17	Ice Wind Load AZI 0	OL2					18		
18	Ice Wind Load AZI 30	None					18		
19	Ice Wind Load AZI 60	None					18		
20	Ice Wind Load AZI 90	OL3					18		
21	Ice Wind Load AZI 120	None					18		
22	Ice Wind Load AZI 150	None					18		
23	Ice Wind Load AZI 180	None					18		
24	Ice Wind Load AZI 210	None					18		
25	Ice Wind Load AZI 240	None					18		
26	Ice Wind Load AZI 270	None					18		
27	Ice Wind Load AZI 300	None					18		
28	Ice Wind Load AZI 330	None					18		
29	Distr. Ice Wind Load Z	OL2						17	
30	Distr. Ice Wind Load X	OL3						17	
31	Seismic Load Z	ELZ			-.092		9		
32	Seismic Load X	ELX	-.092				9		
33	Service Live Loads	LL							
34	Maintenance Load 1	LL				1			





Company : Infinigy Engineering PLLC  
 Designer : TM  
 Job Number : 1106-A0001-B  
 Model Name : CTL05707

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**Basic Load Cases (Continued)**

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me... Surface(...
35 Maintenance Load 2	LL				1		
36 Maintenance Load 3	LL				1		

**Load Combinations**

Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1 1.4DL	Yes	Y		1	1.4																		
2 1.2DL + 1WL AZI 0	Yes	Y		1	1.2	2	1	14	1	15													
3 1.2DL + 1WL AZI 30	Yes	Y		1	1.2	3	1	14	.866	15	.5												
4 1.2DL + 1WL AZI 60	Yes	Y		1	1.2	4	1	14	.5	15	.866												
5 1.2DL + 1WL AZI 90	Yes	Y		1	1.2	5	1	14		15	1												
6 1.2DL + 1WL AZI 120	Yes	Y		1	1.2	6	1	14	-.5	15	.866												
7 1.2DL + 1WL AZI 150	Yes	Y		1	1.2	7	1	14	-.866	15	.5												
8 1.2DL + 1WL AZI 180	Yes	Y		1	1.2	8	1	14	-1	15													
9 1.2DL + 1WL AZI 210	Yes	Y		1	1.2	9	1	14	-.866	15	-.5												
10 1.2DL + 1WL AZI 240	Yes	Y		1	1.2	10	1	14	-.5	15	-.866												
11 1.2DL + 1WL AZI 270	Yes	Y		1	1.2	11	1	14		15	-1												
12 1.2DL + 1WL AZI 300	Yes	Y		1	1.2	12	1	14	.5	15	-.866												
13 1.2DL + 1WL AZI 330	Yes	Y		1	1.2	13	1	14	.866	15	-.5												
14 0.9DL + 1WL AZI 0	Yes	Y		1	.9	2	1	14	1	15													
15 0.9DL + 1WL AZI 30	Yes	Y		1	.9	3	1	14	.866	15	.5												
16 0.9DL + 1WL AZI 60	Yes	Y		1	.9	4	1	14	.5	15	.866												
17 0.9DL + 1WL AZI 90	Yes	Y		1	.9	5	1	14		15	1												
18 0.9DL + 1WL AZI 120	Yes	Y		1	.9	6	1	14	-.5	15	.866												
19 0.9DL + 1WL AZI 150	Yes	Y		1	.9	7	1	14	-.866	15	.5												
20 0.9DL + 1WL AZI 180	Yes	Y		1	.9	8	1	14	-1	15													
21 0.9DL + 1WL AZI 210	Yes	Y		1	.9	9	1	14	-.866	15	-.5												
22 0.9DL + 1WL AZI 240	Yes	Y		1	.9	10	1	14	-.5	15	-.866												
23 0.9DL + 1WL AZI 270	Yes	Y		1	.9	11	1	14		15	-1												
24 0.9DL + 1WL AZI 300	Yes	Y		1	.9	12	1	14	.5	15	-.866												
25 0.9DL + 1WL AZI 330	Yes	Y		1	.9	13	1	14	.866	15	-.5												
26 1.2D + 1.0Di	Yes	Y		1	1.2	16	1																
27 1.2D + 1.0Di + 1.0Wi AZI 0	Yes	Y		1	1.2	16	1	17	1	29	1	30											
28 1.2D + 1.0Di + 1.0Wi AZI 30	Yes	Y		1	1.2	16	1	18	1	29	.866	30	.5										
29 1.2D + 1.0Di + 1.0Wi AZI 60	Yes	Y		1	1.2	16	1	19	1	29	.5	30	.866										
30 1.2D + 1.0Di + 1.0Wi AZI 90	Yes	Y		1	1.2	16	1	20	1	29		30	1										
31 1.2D + 1.0Di + 1.0Wi AZI 120	Yes	Y		1	1.2	16	1	21	1	29	-.5	30	.866										
32 1.2D + 1.0Di + 1.0Wi AZI 150	Yes	Y		1	1.2	16	1	22	1	29	-.866	30	.5										
33 1.2D + 1.0Di + 1.0Wi AZI 180	Yes	Y		1	1.2	16	1	23	1	29	-1	30											
34 1.2D + 1.0Di + 1.0Wi AZI 210	Yes	Y		1	1.2	16	1	24	1	29	-.866	30	-.5										
35 1.2D + 1.0Di + 1.0Wi AZI 240	Yes	Y		1	1.2	16	1	25	1	29	-.5	30	-.866										
36 1.2D + 1.0Di + 1.0Wi AZI 270	Yes	Y		1	1.2	16	1	26	1	29		30	-1										
37 1.2D + 1.0Di + 1.0Wi AZI 300	Yes	Y		1	1.2	16	1	27	1	29	.5	30	-.866										
38 1.2D + 1.0Di + 1.0Wi AZI 330	Yes	Y		1	1.2	16	1	28	1	29	.866	30	-.5										
39 (1.2 + 0.2Sds)DL + 1.0E A...	Yes	Y		1	1.2...	31	1	32															
40 (1.2 + 0.2Sds)DL + 1.0E A...	Yes	Y		1	1.2...	31	.866	32	.5														
41 (1.2 + 0.2Sds)DL + 1.0E A...	Yes	Y		1	1.2...	31	.5	32	.866														
42 (1.2 + 0.2Sds)DL + 1.0E A...	Yes	Y		1	1.2...	31		32	1														
43 (1.2 + 0.2Sds)DL + 1.0E A...	Yes	Y		1	1.2...	31	-.5	32	.866														
44 (1.2 + 0.2Sds)DL + 1.0E A...	Yes	Y		1	1.2...	31	-.866	32	.5														
45 (1.2 + 0.2Sds)DL + 1.0E A...	Yes	Y		1	1.2...	31	-1	32															
46 (1.2 + 0.2Sds)DL + 1.0E A...	Yes	Y		1	1.2...	31	-.866	32	-.5														
47 (1.2 + 0.2Sds)DL + 1.0E A...	Yes	Y		1	1.2...	31	-.5	32	-.866														
48 (1.2 + 0.2Sds)DL + 1.0E A...	Yes	Y		1	1.2...	31		32	-1														
49 (1.2 + 0.2Sds)DL + 1.0E A...	Yes	Y		1	1.2...	31	.5	32	-.866														
50 (1.2 + 0.2Sds)DL + 1.0E A...	Yes	Y		1	1.2...	31	.866	32	-.5														



Company : Infinigy Engineering PLLC  
 Designer : TM  
 Job Number : 1106-A0001-B  
 Model Name : CTL05707

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**Load Combinations (Continued)**

Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
51 (0.9 - 0.2Sds)DL + 1.0E AZ...Yes Y 1 .863 31 1 32																							
52 (0.9 - 0.2Sds)DL + 1.0E AZ...Yes Y 1 .863 31 .866 32 .5																							
53 (0.9 - 0.2Sds)DL + 1.0E AZ...Yes Y 1 .863 31 .5 32 .866																							
54 (0.9 - 0.2Sds)DL + 1.0E AZ...Yes Y 1 .863 31 32 1																							
55 (0.9 - 0.2Sds)DL + 1.0E AZ...Yes Y 1 .863 31 -.5 32 .866																							
56 (0.9 - 0.2Sds)DL + 1.0E AZ...Yes Y 1 .863 31 -.866 32 .5																							
57 (0.9 - 0.2Sds)DL + 1.0E AZ...Yes Y 1 .863 31 -1 32																							
58 (0.9 - 0.2Sds)DL + 1.0E AZ...Yes Y 1 .863 31 -.866 32 -.5																							
59 (0.9 - 0.2Sds)DL + 1.0E AZ...Yes Y 1 .863 31 -.5 32 -.866																							
60 (0.9 - 0.2Sds)DL + 1.0E AZ...Yes Y 1 .863 31 32 -1																							
61 (0.9 - 0.2Sds)DL + 1.0E AZ...Yes Y 1 .863 31 .5 32 -.866																							
62 (0.9 - 0.2Sds)DL + 1.0E AZ...Yes Y 1 .863 31 .866 32 -.5																							
63 1.0DL + 1.5LL + 1.0SWL (6...Yes Y 1 1 2 .216 14 .216 15 33 1.5																							
64 1.0DL + 1.5LL + 1.0SWL (6...Yes Y 1 1 3 .216 14 .187 15 .108 33 1.5																							
65 1.0DL + 1.5LL + 1.0SWL (6...Yes Y 1 1 4 .216 14 .108 15 .187 33 1.5																							
66 1.0DL + 1.5LL + 1.0SWL (6...Yes Y 1 1 5 .216 14 15 .216 33 1.5																							
67 1.0DL + 1.5LL + 1.0SWL (6...Yes Y 1 1 6 .216 14 -.108 15 .187 33 1.5																							
68 1.0DL + 1.5LL + 1.0SWL (6...Yes Y 1 1 7 .216 14 -.187 15 .108 33 1.5																							
69 1.0DL + 1.5LL + 1.0SWL (6...Yes Y 1 1 8 .216 14 -.216 15 33 1.5																							
70 1.0DL + 1.5LL + 1.0SWL (6...Yes Y 1 1 9 .216 14 -.187 15 -.108 33 1.5																							
71 1.0DL + 1.5LL + 1.0SWL (6...Yes Y 1 1 10 .216 14 -.108 15 -.187 33 1.5																							
72 1.0DL + 1.5LL + 1.0SWL (6...Yes Y 1 1 11 .216 14 15 -.216 33 1.5																							
73 1.0DL + 1.5LL + 1.0SWL (6...Yes Y 1 1 12 .216 14 .108 15 -.187 33 1.5																							
74 1.0DL + 1.5LL + 1.0SWL (6...Yes Y 1 1 13 .216 14 .187 15 -.108 33 1.5																							
75 1.2DL + 1.5LL Yes Y 1 1.2 33 1.5																							
76 1.2DL + 1.5LM-MP1 + 1S... Yes Y 1 1.2 34 1.5 2 .054 14 .054 15																							
77 1.2DL + 1.5LM-MP1 + 1S... Yes Y 1 1.2 34 1.5 3 .054 14 .047 15 .027																							
78 1.2DL + 1.5LM-MP1 + 1S... Yes Y 1 1.2 34 1.5 4 .054 14 .027 15 .047																							
79 1.2DL + 1.5LM-MP1 + 1S... Yes Y 1 1.2 34 1.5 5 .054 14 15 .054																							
80 1.2DL + 1.5LM-MP1 + 1S... Yes Y 1 1.2 34 1.5 6 .054 14 -.027 15 .047																							
81 1.2DL + 1.5LM-MP1 + 1S... Yes Y 1 1.2 34 1.5 7 .054 14 -.047 15 .027																							
82 1.2DL + 1.5LM-MP1 + 1S... Yes Y 1 1.2 34 1.5 8 .054 14 -.054 15																							
83 1.2DL + 1.5LM-MP1 + 1S... Yes Y 1 1.2 34 1.5 9 .054 14 -.047 15 -.027																							
84 1.2DL + 1.5LM-MP1 + 1S... Yes Y 1 1.2 34 1.5 10 .054 14 -.027 15 -.047																							
85 1.2DL + 1.5LM-MP1 + 1S... Yes Y 1 1.2 34 1.5 11 .054 14 15 -.054																							
86 1.2DL + 1.5LM-MP1 + 1S... Yes Y 1 1.2 34 1.5 12 .054 14 .027 15 -.047																							
87 1.2DL + 1.5LM-MP1 + 1S... Yes Y 1 1.2 34 1.5 13 .054 14 .047 15 -.027																							
88 1.2DL + 1.5LM-MP2 + 1S... Yes Y 1 1.2 35 1.5 2 .054 14 .054 15																							
89 1.2DL + 1.5LM-MP2 + 1S... Yes Y 1 1.2 35 1.5 3 .054 14 .047 15 .027																							
90 1.2DL + 1.5LM-MP2 + 1S... Yes Y 1 1.2 35 1.5 4 .054 14 .027 15 .047																							
91 1.2DL + 1.5LM-MP2 + 1S... Yes Y 1 1.2 35 1.5 5 .054 14 15 .054																							
92 1.2DL + 1.5LM-MP2 + 1S... Yes Y 1 1.2 35 1.5 6 .054 14 -.027 15 .047																							
93 1.2DL + 1.5LM-MP2 + 1S... Yes Y 1 1.2 35 1.5 7 .054 14 -.047 15 .027																							
94 1.2DL + 1.5LM-MP2 + 1S... Yes Y 1 1.2 35 1.5 8 .054 14 -.054 15																							
95 1.2DL + 1.5LM-MP2 + 1S... Yes Y 1 1.2 35 1.5 9 .054 14 -.047 15 -.027																							
96 1.2DL + 1.5LM-MP2 + 1S... Yes Y 1 1.2 35 1.5 10 .054 14 -.027 15 -.047																							
97 1.2DL + 1.5LM-MP2 + 1S... Yes Y 1 1.2 35 1.5 11 .054 14 15 -.054																							
98 1.2DL + 1.5LM-MP2 + 1S... Yes Y 1 1.2 35 1.5 12 .054 14 .027 15 -.047																							
99 1.2DL + 1.5LM-MP2 + 1S... Yes Y 1 1.2 35 1.5 13 .054 14 .047 15 -.027																							
100 1.2DL + 1.5LM-MP3 + 1S... Yes Y 1 1.2 36 1.5 2 .054 14 .054 15																							
101 1.2DL + 1.5LM-MP3 + 1S... Yes Y 1 1.2 36 1.5 3 .054 14 .047 15 .027																							
102 1.2DL + 1.5LM-MP3 + 1S... Yes Y 1 1.2 36 1.5 4 .054 14 .027 15 .047																							
103 1.2DL + 1.5LM-MP3 + 1S... Yes Y 1 1.2 36 1.5 5 .054 14 15 .054																							
104 1.2DL + 1.5LM-MP3 + 1S... Yes Y 1 1.2 36 1.5 6 .054 14 -.027 15 .047																							
105 1.2DL + 1.5LM-MP3 + 1S... Yes Y 1 1.2 36 1.5 7 .054 14 -.047 15 .027																							
106 1.2DL + 1.5LM-MP3 + 1S... Yes Y 1 1.2 36 1.5 8 .054 14 -.054 15																							
107 1.2DL + 1.5LM-MP3 + 1S... Yes Y 1 1.2 36 1.5 9 .054 14 -.047 15 -.027																							



**Load Combinations (Continued)**

Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
108 1.2DL + 1.5LM-MP3 + 1S...	Yes	Y		1	1.2	36	1.5	10	.054	14	-.027	15	-.047						
109 1.2DL + 1.5LM-MP3 + 1S...	Yes	Y		1	1.2	36	1.5	11	.054	14		15	-.054						
110 1.2DL + 1.5LM-MP3 + 1S...	Yes	Y		1	1.2	36	1.5	12	.054	14	.027	15	-.047						

**Joint Boundary Conditions**

Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1 N24	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2 N25	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3 N28	Reaction	Reaction	Reaction			
4 N33	Reaction	Reaction	Reaction			

**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 N24 max	1851.2	102	1121.305	27	553.663	14	-292.62	15	3213.044	4	-324.753	21
2 min	-772.852	23	272.824	19	-992.7	8	-1486.2...	84	-2385.7...	22	-1744.6...	28
3 N25 max	634.816	78	1108.332	32	726.16	27	-258.406	15	1600.391	78	-327.758	21
4 min	-1829.737	108	278.259	25	87.369	19	-1490.2...	83	-2563.4...	108	-1748.4...	28
5 N28 max	244.73	14	16.929	34	710.315	14	0	110	0	110	0	110
6 min	-246.956	8	3.893	24	-709.418	8	0	1	0	1	0	1
7 N33 max	553.997	20	23.849	33	1679.998	14	0	110	0	110	0	110
8 min	-561.514	14	-8.852	2	-1681.042	20	0	1	0	1	0	1
9 Totals: max	1779.659	17	2260.044	38	3207.019	14						
10 min	-1779.659	11	587.671	51	-3207.019	8						

**Member Point Loads (BLC 1 : Self Weight)**

Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1 MP1	Y	-17.5	27
2 MP1	Y	-17.5	69
3 MP1	Y	-31	36
4 MP2	Y	-27	6
5 MP2	Y	-27	90
6 MP2	Y	-75	72
7 MP3	Y	-47.85	6
8 MP3	Y	-47.85	78
9 MP3	Y	-70	66

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

Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1 MP1	X	0	27
2 MP1	Z	-131.24	27
3 MP1	X	0	69
4 MP1	Z	-131.24	69
5 MP1	X	0	36
6 MP1	Z	-79.48	36
7 MP2	X	0	6
8 MP2	Z	-267.63	6
9 MP2	X	0	90
10 MP2	Z	-267.63	90
11 MP2	X	0	72
12 MP2	Z	-94.35	72
13 MP3	X	0	6
14 MP3	Z	-425.77	6



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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
15	MP3	X	0	78
16	MP3	Z	-425.77	78
17	MP3	X	0	66
18	MP3	Z	-94.35	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-57.93	27
2	MP1	Z	-100.35	27
3	MP1	X	-57.93	69
4	MP1	Z	-100.35	69
5	MP1	X	-32.59	36
6	MP1	Z	-56.44	36
7	MP2	X	-124.32	6
8	MP2	Z	-215.32	6
9	MP2	X	-124.32	90
10	MP2	Z	-215.32	90
11	MP2	X	-45.48	72
12	MP2	Z	-78.77	72
13	MP3	X	-183.85	6
14	MP3	Z	-318.44	6
15	MP3	X	-183.85	78
16	MP3	Z	-318.44	78
17	MP3	X	-43.78	66
18	MP3	Z	-75.83	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-73.73	27
2	MP1	Z	-42.57	27
3	MP1	X	-73.73	69
4	MP1	Z	-42.57	69
5	MP1	X	-31.66	36
6	MP1	Z	-18.28	36
7	MP2	X	-182.43	6
8	MP2	Z	-105.32	6
9	MP2	X	-182.43	90
10	MP2	Z	-105.32	90
11	MP2	X	-72.88	72
12	MP2	Z	-42.08	72
13	MP3	X	-217.87	6
14	MP3	Z	-125.79	6
15	MP3	X	-217.87	78
16	MP3	Z	-125.79	78
17	MP3	X	-64.06	66
18	MP3	Z	-36.99	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-69.76	27
2	MP1	Z	0	27
3	MP1	X	-69.76	69
4	MP1	Z	0	69
5	MP1	X	-22.25	36
6	MP1	Z	0	36



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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
7	MP2	X	-191.66	6
8	MP2	Z	0	6
9	MP2	X	-191.66	90
10	MP2	Z	0	90
11	MP2	X	-80.77	72
12	MP2	Z	0	72
13	MP3	X	-193.51	6
14	MP3	Z	0	6
15	MP3	X	-193.51	78
16	MP3	Z	0	78
17	MP3	X	-67.19	66
18	MP3	Z	0	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-73.73	27
2	MP1	Z	42.57	27
3	MP1	X	-73.73	69
4	MP1	Z	42.57	69
5	MP1	X	-31.66	36
6	MP1	Z	18.28	36
7	MP2	X	-182.43	6
8	MP2	Z	105.32	6
9	MP2	X	-182.43	90
10	MP2	Z	105.32	90
11	MP2	X	-72.88	72
12	MP2	Z	42.08	72
13	MP3	X	-217.87	6
14	MP3	Z	125.79	6
15	MP3	X	-217.87	78
16	MP3	Z	125.79	78
17	MP3	X	-64.06	66
18	MP3	Z	36.99	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-57.93	27
2	MP1	Z	100.35	27
3	MP1	X	-57.93	69
4	MP1	Z	100.35	69
5	MP1	X	-32.59	36
6	MP1	Z	56.44	36
7	MP2	X	-124.32	6
8	MP2	Z	215.32	6
9	MP2	X	-124.32	90
10	MP2	Z	215.32	90
11	MP2	X	-45.48	72
12	MP2	Z	78.77	72
13	MP3	X	-183.85	6
14	MP3	Z	318.44	6
15	MP3	X	-183.85	78
16	MP3	Z	318.44	78
17	MP3	X	-43.78	66
18	MP3	Z	75.83	66



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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	0	27
2	MP1	Z	131.24	27
3	MP1	X	0	69
4	MP1	Z	131.24	69
5	MP1	X	0	36
6	MP1	Z	79.48	36
7	MP2	X	0	6
8	MP2	Z	267.63	6
9	MP2	X	0	90
10	MP2	Z	267.63	90
11	MP2	X	0	72
12	MP2	Z	94.35	72
13	MP3	X	0	6
14	MP3	Z	425.77	6
15	MP3	X	0	78
16	MP3	Z	425.77	78
17	MP3	X	0	66
18	MP3	Z	94.35	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	57.93	27
2	MP1	Z	100.35	27
3	MP1	X	57.93	69
4	MP1	Z	100.35	69
5	MP1	X	32.59	36
6	MP1	Z	56.44	36
7	MP2	X	124.32	6
8	MP2	Z	215.32	6
9	MP2	X	124.32	90
10	MP2	Z	215.32	90
11	MP2	X	45.48	72
12	MP2	Z	78.77	72
13	MP3	X	183.85	6
14	MP3	Z	318.44	6
15	MP3	X	183.85	78
16	MP3	Z	318.44	78
17	MP3	X	43.78	66
18	MP3	Z	75.83	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	73.73	27
2	MP1	Z	42.57	27
3	MP1	X	73.73	69
4	MP1	Z	42.57	69
5	MP1	X	31.66	36
6	MP1	Z	18.28	36
7	MP2	X	182.43	6
8	MP2	Z	105.32	6
9	MP2	X	182.43	90
10	MP2	Z	105.32	90
11	MP2	X	72.88	72
12	MP2	Z	42.08	72
13	MP3	X	217.87	6
14	MP3	Z	125.79	6



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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
15	MP3	X	217.87	78
16	MP3	Z	125.79	78
17	MP3	X	64.06	66
18	MP3	Z	36.99	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	69.76	27
2	MP1	Z	0	27
3	MP1	X	69.76	69
4	MP1	Z	0	69
5	MP1	X	22.25	36
6	MP1	Z	0	36
7	MP2	X	191.66	6
8	MP2	Z	0	6
9	MP2	X	191.66	90
10	MP2	Z	0	90
11	MP2	X	80.77	72
12	MP2	Z	0	72
13	MP3	X	193.51	6
14	MP3	Z	0	6
15	MP3	X	193.51	78
16	MP3	Z	0	78
17	MP3	X	67.19	66
18	MP3	Z	0	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	73.73	27
2	MP1	Z	-42.57	27
3	MP1	X	73.73	69
4	MP1	Z	-42.57	69
5	MP1	X	31.66	36
6	MP1	Z	-18.28	36
7	MP2	X	182.43	6
8	MP2	Z	-105.32	6
9	MP2	X	182.43	90
10	MP2	Z	-105.32	90
11	MP2	X	72.88	72
12	MP2	Z	-42.08	72
13	MP3	X	217.87	6
14	MP3	Z	-125.79	6
15	MP3	X	217.87	78
16	MP3	Z	-125.79	78
17	MP3	X	64.06	66
18	MP3	Z	-36.99	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	57.93	27
2	MP1	Z	-100.35	27
3	MP1	X	57.93	69
4	MP1	Z	-100.35	69
5	MP1	X	32.59	36
6	MP1	Z	-56.44	36



Company : Infinigy Engineering PLLC  
 Designer : TM  
 Job Number : 1106-A0001-B  
 Model Name : CTL05707

Sept 17, 2019  
 10:03 AM  
 Checked By: \_\_\_\_\_

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
7	MP2	X	124.32	6
8	MP2	Z	-215.32	6
9	MP2	X	124.32	90
10	MP2	Z	-215.32	90
11	MP2	X	45.48	72
12	MP2	Z	-78.77	72
13	MP3	X	183.85	6
14	MP3	Z	-318.44	6
15	MP3	X	183.85	78
16	MP3	Z	-318.44	78
17	MP3	X	43.78	66
18	MP3	Z	-75.83	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	Y	-54.557	27
2	MP1	Y	-54.557	69
3	MP1	Y	-38.578	36
4	MP2	Y	-108.407	6
5	MP2	Y	-108.407	90
6	MP2	Y	-68.529	72
7	MP3	Y	-154.409	6
8	MP3	Y	-154.409	78
9	MP3	Y	-62.384	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	0	27
2	MP1	Z	-11.59	27
3	MP1	X	0	69
4	MP1	Z	-11.59	69
5	MP1	X	0	36
6	MP1	Z	-7.24	36
7	MP2	X	0	6
8	MP2	Z	-22.42	6
9	MP2	X	0	90
10	MP2	Z	-22.42	90
11	MP2	X	0	72
12	MP2	Z	-8.45	72
13	MP3	X	0	6
14	MP3	Z	-31.22	6
15	MP3	X	0	78
16	MP3	Z	-31.22	78
17	MP3	X	0	66
18	MP3	Z	-8.45	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-5.5	27
2	MP1	Z	-9.52	27
3	MP1	X	-5.5	69
4	MP1	Z	-9.52	69
5	MP1	X	-3.22	36
6	MP1	Z	-5.57	36
7	MP2	X	-10.83	6





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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
8	MP2	Z	-18.76	6
9	MP2	X	-10.83	90
10	MP2	Z	-18.76	90
11	MP2	X	-4.16	72
12	MP2	Z	-7.21	72
13	MP3	X	-14.14	6
14	MP3	Z	-24.49	6
15	MP3	X	-14.14	78
16	MP3	Z	-24.49	78
17	MP3	X	-4.09	66
18	MP3	Z	-7.09	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-8.49	27
2	MP1	Z	-4.9	27
3	MP1	X	-8.49	69
4	MP1	Z	-4.9	69
5	MP1	X	-4.17	36
6	MP1	Z	-2.41	36
7	MP2	X	-17.45	6
8	MP2	Z	-10.07	6
9	MP2	X	-17.45	90
10	MP2	Z	-10.07	90
11	MP2	X	-6.98	72
12	MP2	Z	-4.03	72
13	MP3	X	-19.39	6
14	MP3	Z	-11.2	6
15	MP3	X	-19.39	78
16	MP3	Z	-11.2	78
17	MP3	X	-6.61	66
18	MP3	Z	-3.82	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-9.21	27
2	MP1	Z	0	27
3	MP1	X	-9.21	69
4	MP1	Z	0	69
5	MP1	X	-4.01	36
6	MP1	Z	0	36
7	MP2	X	-19.39	6
8	MP2	Z	0	6
9	MP2	X	-19.39	90
10	MP2	Z	0	90
11	MP2	X	-7.93	72
12	MP2	Z	0	72
13	MP3	X	-19.45	6
14	MP3	Z	0	6
15	MP3	X	-19.45	78
16	MP3	Z	0	78
17	MP3	X	-7.36	66
18	MP3	Z	0	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
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**Member Point Loads (BLC 21 : Ice Wind Load AZI 120) (Continued)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-8.49	27
2	MP1	Z	4.9	27
3	MP1	X	-8.49	69
4	MP1	Z	4.9	69
5	MP1	X	-4.17	36
6	MP1	Z	2.41	36
7	MP2	X	-17.45	6
8	MP2	Z	10.07	6
9	MP2	X	-17.45	90
10	MP2	Z	10.07	90
11	MP2	X	-6.98	72
12	MP2	Z	4.03	72
13	MP3	X	-19.39	6
14	MP3	Z	11.2	6
15	MP3	X	-19.39	78
16	MP3	Z	11.2	78
17	MP3	X	-6.61	66
18	MP3	Z	3.82	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-5.5	27
2	MP1	Z	9.52	27
3	MP1	X	-5.5	69
4	MP1	Z	9.52	69
5	MP1	X	-3.22	36
6	MP1	Z	5.57	36
7	MP2	X	-10.83	6
8	MP2	Z	18.76	6
9	MP2	X	-10.83	90
10	MP2	Z	18.76	90
11	MP2	X	-4.16	72
12	MP2	Z	7.21	72
13	MP3	X	-14.14	6
14	MP3	Z	24.49	6
15	MP3	X	-14.14	78
16	MP3	Z	24.49	78
17	MP3	X	-4.09	66
18	MP3	Z	7.09	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	0	27
2	MP1	Z	11.59	27
3	MP1	X	0	69
4	MP1	Z	11.59	69
5	MP1	X	0	36
6	MP1	Z	7.24	36
7	MP2	X	0	6
8	MP2	Z	22.42	6
9	MP2	X	0	90
10	MP2	Z	22.42	90
11	MP2	X	0	72
12	MP2	Z	8.45	72
13	MP3	X	0	6
14	MP3	Z	31.22	6



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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
15	MP3	X	0	78
16	MP3	Z	31.22	78
17	MP3	X	0	66
18	MP3	Z	8.45	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	5.5	27
2	MP1	Z	9.52	27
3	MP1	X	5.5	69
4	MP1	Z	9.52	69
5	MP1	X	3.22	36
6	MP1	Z	5.57	36
7	MP2	X	10.83	6
8	MP2	Z	18.76	6
9	MP2	X	10.83	90
10	MP2	Z	18.76	90
11	MP2	X	4.16	72
12	MP2	Z	7.21	72
13	MP3	X	14.14	6
14	MP3	Z	24.49	6
15	MP3	X	14.14	78
16	MP3	Z	24.49	78
17	MP3	X	4.09	66
18	MP3	Z	7.09	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	8.49	27
2	MP1	Z	4.9	27
3	MP1	X	8.49	69
4	MP1	Z	4.9	69
5	MP1	X	4.17	36
6	MP1	Z	2.41	36
7	MP2	X	17.45	6
8	MP2	Z	10.07	6
9	MP2	X	17.45	90
10	MP2	Z	10.07	90
11	MP2	X	6.98	72
12	MP2	Z	4.03	72
13	MP3	X	19.39	6
14	MP3	Z	11.2	6
15	MP3	X	19.39	78
16	MP3	Z	11.2	78
17	MP3	X	6.61	66
18	MP3	Z	3.82	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	9.21	27
2	MP1	Z	0	27
3	MP1	X	9.21	69
4	MP1	Z	0	69
5	MP1	X	4.01	36
6	MP1	Z	0	36



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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
7	MP2	X	19.39	6
8	MP2	Z	0	6
9	MP2	X	19.39	90
10	MP2	Z	0	90
11	MP2	X	7.93	72
12	MP2	Z	0	72
13	MP3	X	19.45	6
14	MP3	Z	0	6
15	MP3	X	19.45	78
16	MP3	Z	0	78
17	MP3	X	7.36	66
18	MP3	Z	0	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	8.49	27
2	MP1	Z	-4.9	27
3	MP1	X	8.49	69
4	MP1	Z	-4.9	69
5	MP1	X	4.17	36
6	MP1	Z	-2.41	36
7	MP2	X	17.45	6
8	MP2	Z	-10.07	6
9	MP2	X	17.45	90
10	MP2	Z	-10.07	90
11	MP2	X	6.98	72
12	MP2	Z	-4.03	72
13	MP3	X	19.39	6
14	MP3	Z	-11.2	6
15	MP3	X	19.39	78
16	MP3	Z	-11.2	78
17	MP3	X	6.61	66
18	MP3	Z	-3.82	66

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	5.5	27
2	MP1	Z	-9.52	27
3	MP1	X	5.5	69
4	MP1	Z	-9.52	69
5	MP1	X	3.22	36
6	MP1	Z	-5.57	36
7	MP2	X	10.83	6
8	MP2	Z	-18.76	6
9	MP2	X	10.83	90
10	MP2	Z	-18.76	90
11	MP2	X	4.16	72
12	MP2	Z	-7.21	72
13	MP3	X	14.14	6
14	MP3	Z	-24.49	6
15	MP3	X	14.14	78
16	MP3	Z	-24.49	78
17	MP3	X	4.09	66
18	MP3	Z	-7.09	66



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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	Z	-1.605	27
2	MP1	Z	-1.605	69
3	MP1	Z	-2.844	36
4	MP2	Z	-2.477	6
5	MP2	Z	-2.477	90
6	MP2	Z	-6.88	72
7	MP3	Z	-4.389	6
8	MP3	Z	-4.389	78
9	MP3	Z	-6.421	66

**Member Point Loads (BLC 32 : Seismic Load X)**

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	MP1	X	-1.605	27
2	MP1	X	-1.605	69
3	MP1	X	-2.844	36
4	MP2	X	-2.477	6
5	MP2	X	-2.477	90
6	MP2	X	-6.88	72
7	MP3	X	-4.389	6
8	MP3	X	-4.389	78
9	MP3	X	-6.421	66

**Joint Loads and Enforced Displacements (BLC 34 : Maintenance Load 1)**

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	N30	L	Y	-500

**Joint Loads and Enforced Displacements (BLC 35 : Maintenance Load 2)**

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	N29	L	Y	-500

**Joint Loads and Enforced Displacements (BLC 36 : Maintenance Load 3)**

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
1	N32	L	Y	-500

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,...	Start Location[in, %]	End Location[in, %]
1	M1	SZ	-105.887	-105.887	0	%100
2	M2	SZ	-105.887	-105.887	0	%100
3	M3	SZ	-63.532	-63.532	0	%100
4	M4	SZ	-63.532	-63.532	0	%100
5	M5	SZ	-63.532	-63.532	0	%100
6	M6	SZ	-63.532	-63.532	0	%100
7	M7	SZ	-105.887	-105.887	0	%100
8	M8	SZ	-105.887	-105.887	0	%100
9	M9	SZ	-105.887	-105.887	0	%100
10	M10	SZ	-105.887	-105.887	0	%100
11	M11	SZ	-63.532	-63.532	0	%100
12	M12	SZ	-63.532	-63.532	0	%100
13	M13	SZ	-63.532	-63.532	0	%100
14	MP1	SZ	-63.532	-63.532	0	%100
15	MP2	SZ	-63.532	-63.532	0	%100
16	MP3	SZ	-63.532	-63.532	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
17	M17	SZ	-63.532	-63.532	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	M1	SX	-105.887	-105.887	0	%100
2	M2	SX	-105.887	-105.887	0	%100
3	M3	SX	-63.532	-63.532	0	%100
4	M4	SX	-63.532	-63.532	0	%100
5	M5	SX	-63.532	-63.532	0	%100
6	M6	SX	-63.532	-63.532	0	%100
7	M7	SX	-105.887	-105.887	0	%100
8	M8	SX	-105.887	-105.887	0	%100
9	M9	SX	-105.887	-105.887	0	%100
10	M10	SX	-105.887	-105.887	0	%100
11	M11	SX	-63.532	-63.532	0	%100
12	M12	SX	-63.532	-63.532	0	%100
13	M13	SX	-63.532	-63.532	0	%100
14	MP1	SX	-63.532	-63.532	0	%100
15	MP2	SX	-63.532	-63.532	0	%100
16	MP3	SX	-63.532	-63.532	0	%100
17	M17	SX	-63.532	-63.532	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	M1	Y	-10.193	-10.193	0	%100
2	M2	Y	-10.193	-10.193	0	%100
3	M3	Y	-6.856	-6.856	0	%100
4	M4	Y	-6.856	-6.856	0	%100
5	M5	Y	-6.856	-6.856	0	%100
6	M6	Y	-6.856	-6.856	0	%100
7	M7	Y	-10.193	-10.193	0	%100
8	M8	Y	-10.193	-10.193	0	%100
9	M9	Y	-10.193	-10.193	0	%100
10	M10	Y	-10.193	-10.193	0	%100
11	M11	Y	-6.856	-6.856	0	%100
12	M12	Y	-4.962	-4.962	0	%100
13	M13	Y	-6.007	-6.007	0	%100
14	MP1	Y	-6.856	-6.856	0	%100
15	MP2	Y	-6.856	-6.856	0	%100
16	MP3	Y	-6.856	-6.856	0	%100
17	M17	Y	-6.856	-6.856	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....	End Magnitude[lb/ft....	Start Location[in, %]	End Location[in, %]
1	M1	SZ	-16.124	-16.124	0	%100
2	M2	SZ	-16.124	-16.124	0	%100
3	M3	SZ	-21.298	-21.298	0	%100
4	M4	SZ	-21.298	-21.298	0	%100
5	M5	SZ	-21.298	-21.298	0	%100
6	M6	SZ	-21.298	-21.298	0	%100
7	M7	SZ	-16.124	-16.124	0	%100
8	M8	SZ	-16.124	-16.124	0	%100
9	M9	SZ	-16.124	-16.124	0	%100
10	M10	SZ	-16.124	-16.124	0	%100
11	M11	SZ	-21.298	-21.298	0	%100



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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in,%]	End Location[in,%]
12	M12	SZ	-30.773	-30.773	0	%100
13	M13	SZ	-24.237	-24.237	0	%100
14	MP1	SZ	-21.298	-21.298	0	%100
15	MP2	SZ	-21.298	-21.298	0	%100
16	MP3	SZ	-21.298	-21.298	0	%100
17	M17	SZ	-21.298	-21.298	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft....]	End Magnitude[lb/ft....]	Start Location[in,%]	End Location[in,%]
1	M1	SX	-16.124	-16.124	0	%100
2	M2	SX	-16.124	-16.124	0	%100
3	M3	SX	-21.298	-21.298	0	%100
4	M4	SX	-21.298	-21.298	0	%100
5	M5	SX	-21.298	-21.298	0	%100
6	M6	SX	-21.298	-21.298	0	%100
7	M7	SX	-16.124	-16.124	0	%100
8	M8	SX	-16.124	-16.124	0	%100
9	M9	SX	-16.124	-16.124	0	%100
10	M10	SX	-16.124	-16.124	0	%100
11	M11	SX	-21.298	-21.298	0	%100
12	M12	SX	-30.773	-30.773	0	%100
13	M13	SX	-24.237	-24.237	0	%100
14	MP1	SX	-21.298	-21.298	0	%100
15	MP2	SX	-21.298	-21.298	0	%100
16	MP3	SX	-21.298	-21.298	0	%100
17	M17	SX	-21.298	-21.298	0	%100

**Member Area Loads**

Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
No Data to Print ...						

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

	Member	Shape	Code Ch...	Loc[in]	LC	Shear C...	Loc.....	LC	phi*Pn...	phi*Pn...	phi*M....	phi*M.....	Eqn	
1	M9	HSS3X3X3	.814	36	101	.230	36	z	101	56576...	59535	5171.25	5171.25...	H1-1b
2	M10	HSS3X3X3	.813	36	108	.227	5.25	z	100	56576...	59535	5171.25	5171.25...	H1-1b
3	M6	PIPE 2.0	.678	18	20	.166	18		2	28843...	32130	1871....	1871....	H1-1b
4	M11	PIPE 2.0	.663	0	101	.388	0		101	28843...	32130	1871....	1871....	H3-6
5	M8	L3X3X4	.603	61.719	77	.111	0	z	101	19638...	46656	1688....	3450....	H2-1
6	M7	L3X3X4	.584	61.719	76	.111	0	y	101	19638...	46656	1688....	3446.66...	H2-1
7	M1	L3X3X4	.547	13.281	106	.153	75	z	100	19638...	46656	1688....	3520....	H2-1
8	MP2	PIPE 2.0	.535	57	2	.153	57		2	14916...	32130	1871....	1871....	H1-1b
9	M2	L3X3X4	.529	13.281	100	.183	60....	z	2	19638...	46656	1688....	3519....	H2-1
10	M4	PIPE 2.0	.497	36	76	.110	0		77	28843...	32130	1871....	1871....	H1-1b
11	M3	PIPE 2.0	.434	36	76	.105	18		2	28843...	32130	1871....	1871....	H1-1b
12	MP3	PIPE 2.0	.387	59.5	2	.069	59.5		8	17855...	32130	1871....	1871....	H1-1b
13	M5	PIPE 2.0	.380	36	101	.133	0		2	28843...	32130	1871....	1871....	H1-1b
14	MP1	PIPE 2.0	.254	57	86	.062	57		8	14916...	32130	1871....	1871....	H1-1b
15	M17	PIPE 2.0	.065	44.272	14	.002	0		11	27292...	32130	1871....	1871....	H1-1...
16	M13	PIPE 1.5	.041	44.489	14	.003	0		36	18210...	23593.5	1105....	1105....	H1-1...
17	M12	PIPE 1.0	.011	0	11	.002	0		23	10155...	14773.5	464.625	464.625...	H1-1b

Date:	9/20/2019
Client	Smartlink
Carrier	AT&T Mobility
Engineer:	TM
Site:	CTL5707
Job #:	1106-A0001-B
	130.0' RAD

<b>Code:</b>	LRFD
<b>Bolt Diameter</b>	0.500
<b>Bolt Grade:</b>	A307
<b>Threads Excluded?:</b>	N
<b>Axial (lbs):</b>	3873.37
<b>Shear (lbs):</b>	828.47

<b>Bolt Info:</b>	
Yield Strength ( $F_{yb}$ )	36.0 kips
Ultimate Strength ( $F_{ub}$ )	60.0 kips
Threads/in ( $n$ )	13
Gross Area ( $A_{gb}$ )	0.196 in <sup>2</sup>
Net Area ( $A_{nb}$ )	0.142 in <sup>2</sup>

Bolt Capacity (1/2" A307 Threaded rod), Total of (4) per Connection				
	Ult Load / Bolt	Factored Load ( $\phi=0.75$ )	# of Bolts	Factor Joint Capacity
Axial (lb)	8513.9	6385.4	1	6385
Shear(lb)	5301.4	3976.1	1	3976

Interaction Check	
$T / \phi T_n$	60.7%
$V / \phi V_n$	20.8%
$\leq 1.0$	41.1%
	OK



**GENERAL NOTES:**

1. THESE DOCUMENTS WERE DESIGNED IN ACCORDANCE WITH THE LATEST VERSION OF APPLICABLE LOCAL/STATE/COUNTY/CITY BUILDING CODES, AS WELL AS ANSI/TIA-222 STANDARD, AWWA-D100 STANDARD, NDS, NEC, MSJC, AND/OR THE LATEST VERSION OF THE INTERNATIONAL BUILDING CODE, UNLESS NOTED OTHERWISE IN THE CORRESPONDING STRUCTURAL REPORT.
2. ALL CONSTRUCTION METHODS SHOULD FOLLOW STANDARDS OF GOOD CONSTRUCTION PRACTICE.
3. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN SIMILAR CONSTRUCTION.
4. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. IF OBSTRUCTIONS ARE FOUND, CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD PRIOR TO CONTINUING WORK.
5. ANY CHANGES OR ADDITIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL CHANGES OR ADDITIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND/OR CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE DURING CONSTRUCTION. TIA-1019-A-2011 IS AN APPROPRIATE REFERENCE FOR THOSE DESIGNS MEETING TIA STANDARDS. THE ENGINEER OF RECORD MAY PROVIDE FORMAL RIGGING PLANS AT THE REQUEST AND EXPENSE OF THE CONTRACTOR.

7. INSTALLATION SHALL NOT INTERFERE NOR DENY ADEQUATE ACCESS TO OR FROM ANY EXISTING OR PROPOSED OPERATIONAL AND SAFETY EQUIPMENT.
8. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ANY FABRICATION. CONTACT INFINIGY ENGINEERING IF ANY DISCREPANCIES EXIST.

**STEEL CONSTRUCTION NOTES:**

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

**CONCRETE CONSTRUCTION NOTES:**

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

**FIBER REINFORCED POLYMER (FRP) NOTES:**

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

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

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

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

**WOOD CONSTRUCTION NOTES:**

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

**MASONRY CONSTRUCTION NOTES:**

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

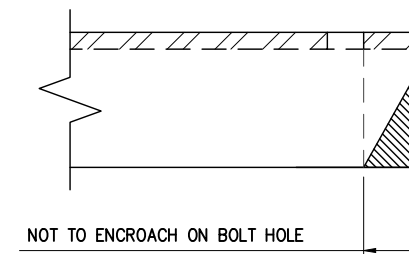
**TOWER PLUMB & TENSION NOTES:**


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

**SPECIAL INSPECTIONS NOTES:**


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

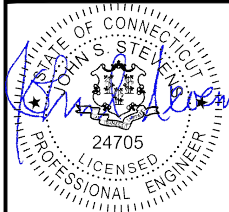
**MAXIMUM ALLOWABLE ANGLE CLIP**





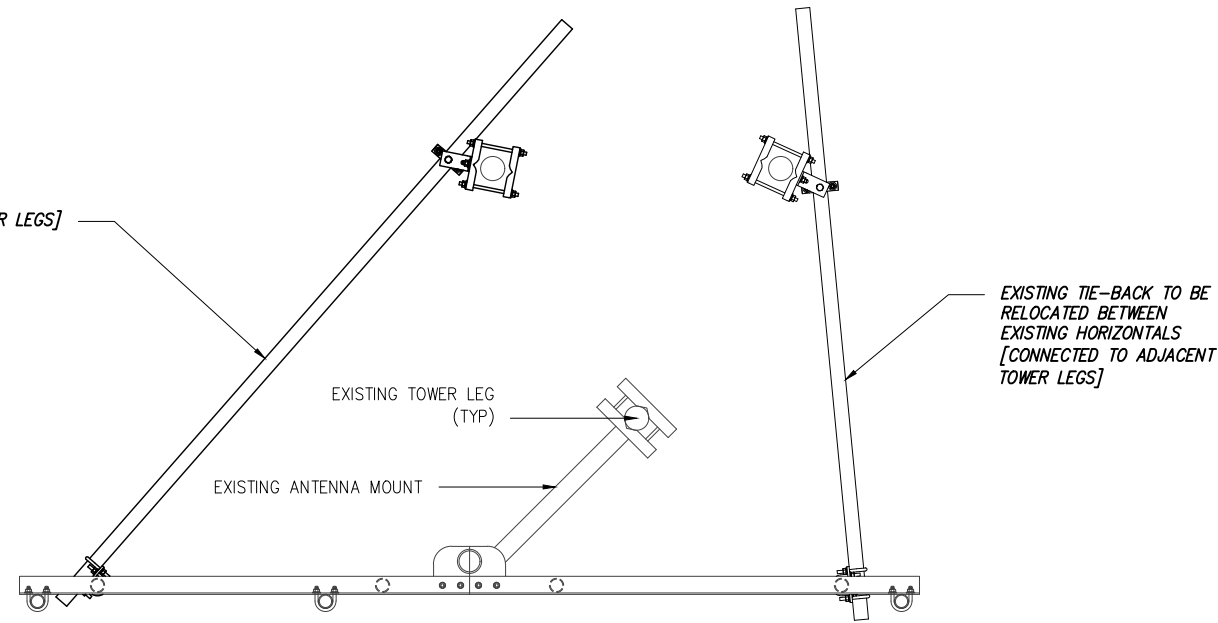
INFINIGY ENGINEERING, PLLC  
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Fax # (518) 690-0793



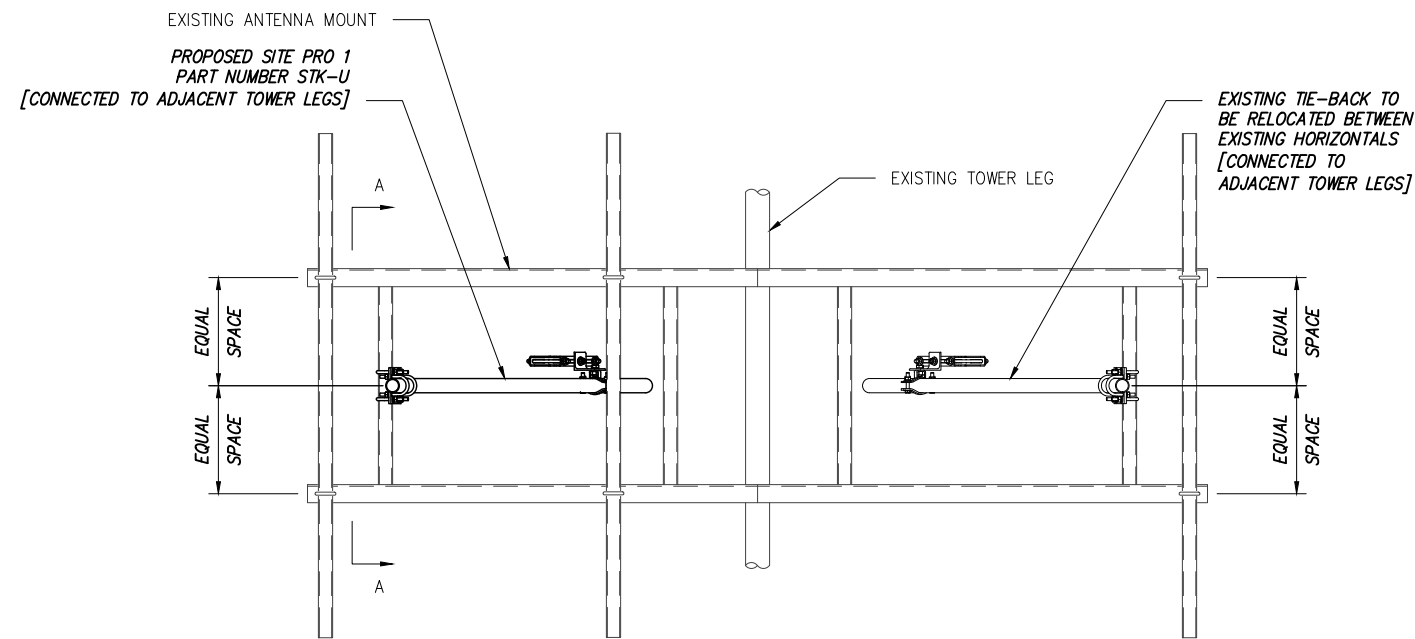


0	ISSUED FOR REVIEW	DMB	09/18/19	
No.	Submitted / Revision	App'd	Date	
Drawn: DMB Date: 09/18/19				
Designed: TM Date: 09/18/19				
Checked: GB Date: 09/18/19				
Project Number: 499-006				
Project Title: HAMPTON S CENTRAL				
CTL05707 FA# 10071068 185 FISK ROAD HAMPTON, CT 06247				
Prepared For: smartlink				
Drawing Scale: AS NOTED				SD
Date: 09/18/19				
Drawing Title: GENERAL NOTES				
Drawing Number: S1				

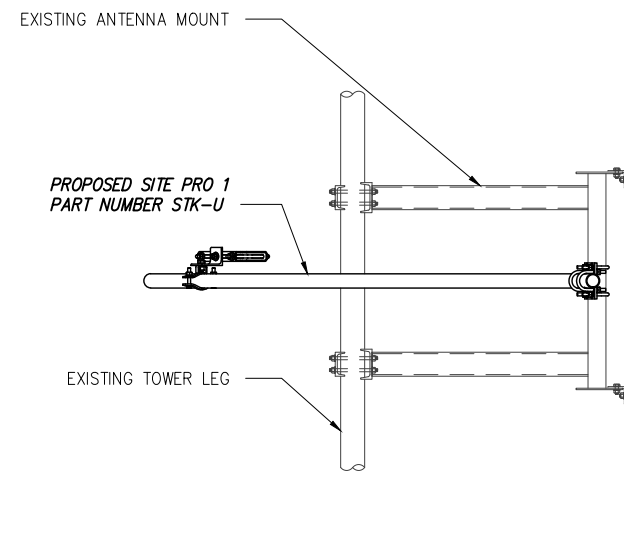
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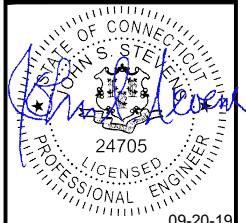
1 PLAN VIEW  
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2 ELEVATION VIEW  
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3 SECTION A-A  
SCALE: NOT TO SCALE



09-20-19  
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Checked: GB Date: 09/18/19

Project Number:  
499-006

Project Title:  
HAMPTON S CENTRAL  
CTL05707  
FA# 10071068  
185 FISK ROAD  
HAMPTON, CT 06247



Prepared For:  
Drawing Scale:  
AS NOTED  
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Drawing Title:  
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Drawing Number:  
**S2**