



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

February 6, 2019

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

RE: Notice of Exempt Modification for Crown Site BU: 801486
AT&T Site ID: CTL01138
44 Ff Tyler Place, Suffield, Hartford County, CT 06078
Latitude: 41° 58' 49.70" / Longitude: -72° 39' 26.20"

Dear Ms. Bachman:

AT&T currently maintains (9) antennas at the 111-foot level of the existing 115-foot monopole at 44 Ff Tyler Place, Suffield, Connecticut 06078. The tower is owned by Crown Castle. The property is owned by the Town of Suffield. AT&T intends to replace (3) of the existing antennas with (3) new antennas, add (3) additional antennas, replace (6) existing RRHS with (9) RRHs, add (1) DC6, and add (2) DC trunks.

The facility was approved by the Town of Suffield's Zoning and Planning Commission on May 1, 2000.

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.S.C.A. § 16-50j-73, a copy of this letter is being sent to Melissa Mack, Suffield's First Selectman; William Hawkins, Suffield's Town Planner; the property is owned by the Town of Suffield and the tower is owned by Crown Castle.

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.

Melanie A. Bachman

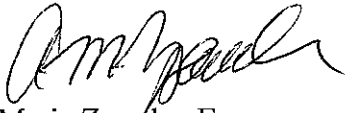
February 6, 2019

Page 2

6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, Sprint 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, Esq.

Real Estate Specialist

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

(201) 236-9224

annemarie.zsamba@crowncastle.com

Attachments:

Tab 1: Exhibit-A: Compound Plan and Elevation Depicting the Planned Changes

Tab 2: Exhibit-B: Structural Modification Report

Tab 3: Exhibit-C: General Power Density Table Report (RF Emissions Analysis Report)

cc: Melissa Mack, First Selectman

Town of Suffield

83 Mountain Road

Suffield, CT 06078

860-668-3838

William Hawkins, AICP, Town Planner

230C Mountain Road

Suffield, CT 06078

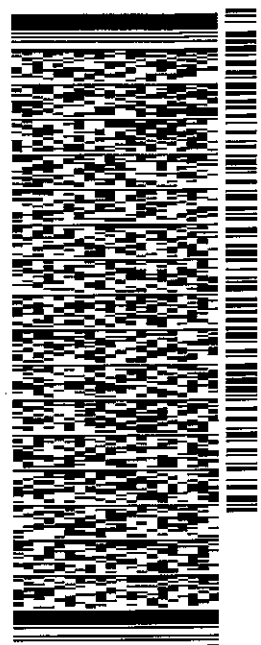
860-668-4964

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

SHIP DATE: 09FEB19
ACTW/GT: 3.50 LB
CAD: 104924194/NET4100
BILL SENDER

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

NEW BRITAIN CT 06051
(860) 827-2951 REF: 17658680
INV: DEPT:
PO:

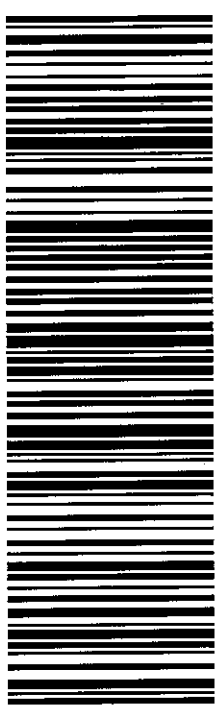


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565J20E3D/23AD

TRK# 7744 0408 2718
0201
THU - 07 FEB 10:30A
PRIORITY OVERNIGHT

EB BDLA
06051
CT-US BDL



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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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: 08FEB19
ACTWGT: 1.50 LB
CAD: 104924194/NET4100
BILL SENDER

TO WILLIAM HAWKINS, AICP, TOWN PLANNER

230C MOUNTAIN ROAD

SUFFERFIELD CT 06078

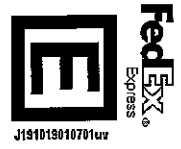
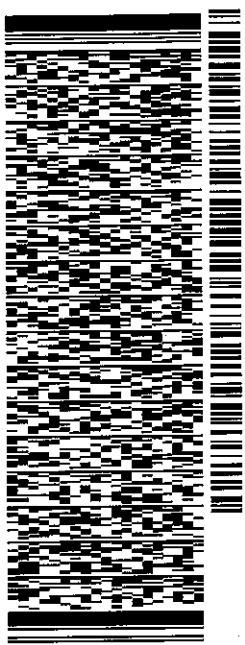
(860) 668-4964

REF: 1734,7680

PO:

DEPT:

565J20E3D/23AD



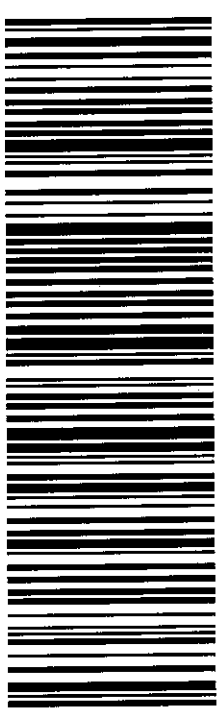
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PRIORITY OVERNIGHT

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06078
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UNITED STATES US

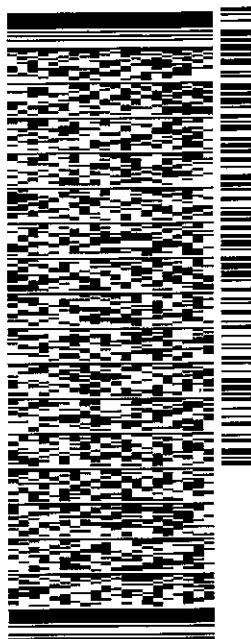
SHIP DATE: 06FEB19
ACTWGT: 1.50 LB
CAD: 104924194ANET4100
BILL SENDER

TO MELISSA MACK, FIRST SELECTMAN

TOWN OF SUFFIELD
83 MOUNTAIN ROAD
SUFFIELD CT 06078

REF: 17347690
(860) 666-3838
N.Y.
P.O. DEPT:

565J20E3D123AD

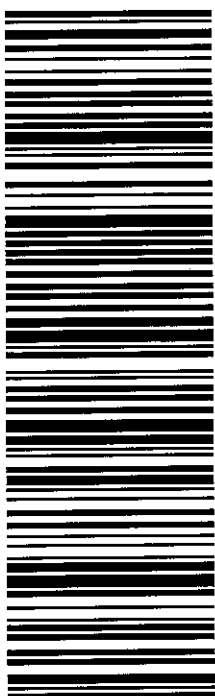


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PRIORITY OVERNIGHT

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CT-US BDL



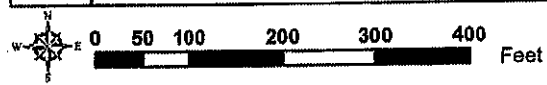
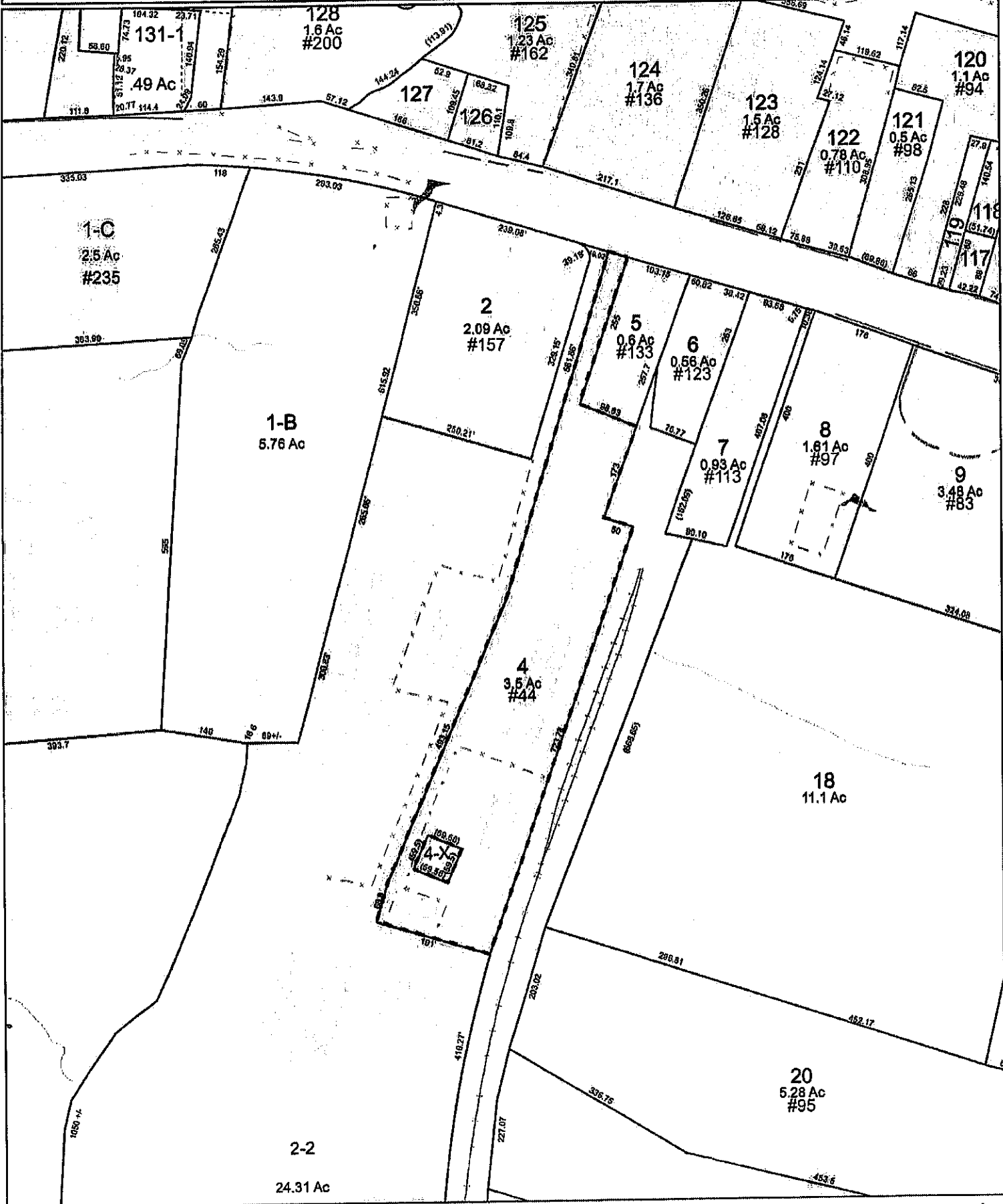
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Town of Suffield, Connecticut - Assessment Parcel Map
Parcel: 34H-32-4 Address: 44 FFYLER PL



Scale
1:2,400

Map Produced: May 2017
Grand List: October 2016

Disclaimer: This map is for informational purposes only. All information is subject to verification by any user. The Town of Suffield and its mapping contractors assume no legal responsibility for the information contained herein.



Town of Suffield, CT

Property Listing Report

Map Block Lot

34H-32-4

Account

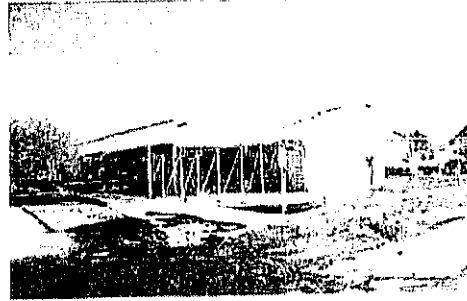
34522

Property Information

Property Location	44 FFYLER PL
Owner	SUFFIELD TOWN OF
Co-Owner	
Mailing Address	83 MOUNTAIN RD SUFFIELD CT 06078
Land Use	903I Municipal MDL-96
Land Class	E
Zoning Code	TCV
Census Tract	4771.01

Neighborhood	D
Acreage	3.5
Utilities	
Lot Setting/Desc	
Additional Info	

Photo



Sketch



Primary Construction Details

Year Built	2000
Stories	1
Building Style	Pre-Eng Garage
Building Use	Industrial
Building Condition	02
Floors	Concrete
Total Rooms	

Bedrooms	
Full Bathrooms	
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	Gable
Roof Cover	Asphalt

Exterior Walls	MASONRY
Interior Walls	Minimum
Heating Type	Hot Air-No Duc
Heating Fuel	Oil
AC Type	None
Gross Bldg Area	736
Total Living Area	736



Valuation Summary (Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	531800	372260
Extras	34200	23940
Improvements	619500	433650
Outbuildings	53500	37450
Land	229000	160300
Total	848500	593950

Outbuilding and Extra Items

Type	Description
Shed	1920 S.F.
Kennel - Ave	640 S.F.
Fence - 6' Chain	142 L.F.
Paving - Asphalt	14000 S.F.
Garage - Ave	2408 S.F.
Shed	360 S.F.
Paving - Asphalt	880 S.F.
Mezzanine Unfinished	837 S.F.
Canopy Ave	1600 S.F.

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
First Floor	736	736
Total Area	6000	6000

Sales History

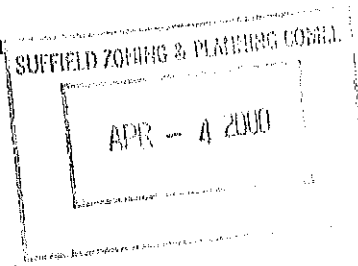
Owner of Record	Book/ Page	Sale Date	Sale Price
SUFFIELD TOWN OF	134/ 430	6/8/1973	0
SUFFIELD TOWN OF	53/ 210	12/22/1920	0
SUFFIELD TOWN OF	53/ 151	4/15/1920	0
SUFFIELD TOWN OF	53/ 141	3/11/1920	0



Suffield Conservation Commission
83 Mountain Road • Suffield, Connecticut 06078
(860) 668-3847

March 30, 2000

Elaine Sarsynski
Suffield Economic Development Commission
83 Mountain Road
Suffield, CT 06078



RE: PERMIT # 1264
Communications Towers
Phelps Road, Ff Tyler Place, & Ucar Street

Dear Elaine:

The Suffield Conservation Commission (SCC), at their March 28, 2000 meeting, approved the Town's application for the construction of three communications towers. The properties are located on Phelps Road, Ff Tyler Place, and Ucar Street, Assessor's Map Numbers 80, 34-H, and 9, Parcels 55, 70, 32,4, and 9, in Suffield, Connecticut.

This permit is granted as a Declaratory Ruling, as there are no wetland impacts proposed.

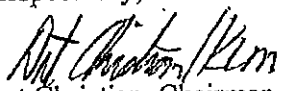
The following items shall be addressed in the final submittal for construction:

- 9) The SCC must be notified in writing prior to any work commencing on site, of the date work will start, and the name, address, and telephone number of the contractor responsible for the work. Failure to do so will render this permit null and void.
- 10) The contractor is responsible for using proper soil and erosion controls. The contractor is also responsible for any fees associated with soil and erosion control inspections by the Town's Consultant.
- 11) All the poles and antennas shall be tinted a dull gray color.
- 12) If the FAA or any other regulatory agency ever requires lights on top of the town landfill tower, the applicant must come back to the Commission for review and approval.

13) The foundation design and geotechnical data must be supplied to the Commission for each pole.

The fee has been waived.

Respectfully,


Art Christian, Chairman

AC/klm

Cc: Suffield Building Department



Zoning and Planning Commission

Town of Suffield

May 4, 2000

Ms. Elaine Sarsynski, Director
Suffield Economic Development Commission
83 Mountain Road
Suffield, Connecticut 06078

Re: File #740 -- Request of the Suffield Economic Development Commission for a special use permit for the approval of sites for telecommunication towers located on Town properties: WPCA, Highway Department, and Transfer Station.

Dear Ms. Sarsynski:

At a duly called Special Meeting of the Suffield Zoning and Planning Commission held on Monday, May 1, 2000, the Commission voted to approve the Town of Suffield's special use permit request for the for three (3) proposed telecommunication sites located as designated:

1. Town of Suffield Transfer Station site on the west side of Mountain Road (Route 168), on undeveloped land west of the Transfer Station operations (Site A);
2. Town of Suffield Public Works garage/maintenance facility off of Mountain Road, on land immediately adjacent to the Maintenance Facility Building (Site B); and
3. Town of Suffield Sewage Treatment Plant on the east side of East Street (Route 159), on undeveloped land along the north side of the Treatment's Plant's access driveway (Site C).

with the following conditions:

1. The heights of the respective mono-pole towers, including antennae, shall not exceed 199-feet (Site A); 120-feet (Site B); and 174-feet (Site C);
2. Each tower shall be certified as "self-collapsing" by a Connecticut registered professional engineer;
3. Details drawings are to be submitted with each request for building permits for both the towers and related facilities;
4. FCC licenses shall be produced prior to the issuance of the permits for company leasing space on the towers;
5. The Zoning Enforcement Officer shall review each proposal for zoning conformance prior to the issuance of the building permits;
6. All utilities are to be underground;
7. Site plans are to be revised.

A mylar and four (4) copies of site plans for each of the three approved sites must be submitted to this office as soon as possible for signatures.

Please remit a check in the amount of \$10.00 (payable to the Town of Suffield), *along with this original letter*, to the Office of the Town Clerk, 83 Mountain Road. This fee is required to cover the cost of recording the Special Use Permit in the Office of the Town Clerk.

Ms. Elaine Sarsynski, Director
Suffield Economic Development Commission
May 4, 2000

2

A copy of the legal notice that will appear in the Journal Inquirer on Saturday, May 6, 2000 is enclosed.

Sincerely,

Douglas H. Viets, M.D. /bgk

Douglas H. Viets, M.D.
Chairman

:bgk
Enclosure

cc:	Building Official	Zoning Enforcement Officer
	Planning Consultant	File
	Town Engineer	

LEGAL NOTICE
SUFFIELD PLANNING AND ZONING COMMISSION

At a duly called Special Meeting of the Suffield Zoning and Planning Commission held on Monday, May 1, 2000, the Commission took the following actions:

APPROVED WITH CONDITIONS: Special use permit request of Suffield Economic Development Commission for the approval of sites for communication towers located on Town properties: WPCA, Highway Department and Landfill.

Douglas H. Viets, M.D., Chairman

Stephen J. Martin, Secretary

Journal Inquirer
May 6, 2000

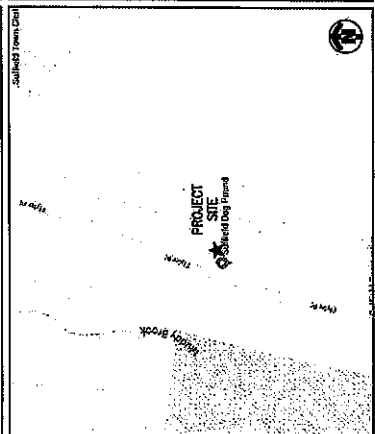
SHEET INDEX

NO.	DESCRIPTION
T1	TITLE PAGE
N1	GENERAL NOTES
C1	COMPOND PLAN
C2	EQUIPMENT LAYOUT
C3	ELEVATION NEW AND RE SCHEDULE
C4	ANTENNA ORIENTATION PLAN
C5	EQUIPMENT DETAILS
C6	RF FILLING DIAGRAM
C7	GROUNDING DETAILS

SCOPE OF WORK

- (1) 100-10000 (SWAP IN PGS. 4 ALPHA, BETA & GAMMA SECTORS)
- (2) 100-10000 (SWAP IN PGS. 3 ALPHA, BETA & GAMMA SECTORS)
- (3) 100-10000 (SWAP IN PGS. 2 ALPHA, BETA & GAMMA SECTORS)
- (4) 100-10000 (RELOCATED TO PGS. 2 ALPHA, BETA & GAMMA SECTORS)
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LOCATION MAP



SITE NAME
SUFFIELD FFYLER RD
CROWN BU
801486
FA SITE NUMBER
10035284
SITE ADDRESS
44 FFYLER PLACE
SUFFIELD, CT 06078
STRUCTURE TYPE
MONOPOLE

PROJECT SITE INFORMATION

SITE NAME: SUFFIELD FFYLER RD
CROWN BU: 801486
FA SITE #: 10035284
SITE ADDRESS: 44 FFYLER PLACE
 SUFFIELD, CT 06078
JURISDICTION: HARTFORD COUNTY
SITE COORDINATES: (NAD 83)
 N 41° 56' 46.7000"
LONGITUDE: (NAD 83)
 W -72° 30' 28.268"
APPLICANT: AIRT MOBILITY
 575 MORTONSDRIVE
 ATLANTA, GA 30324

STRUCTURAL ANALYSIS INFORMATION

TOWER ANALYSIS
 BASED ON THE STRUCTURAL ANALYSIS COMPLETED BY JACOBS ENGINEERING GROUP, INC. DATED 12/14/16, THE EXISTING TOWER IS CAPABLE OF SUPPORTING THE PROPOSED EQUIPMENT CONFIGURATION.

ANTENNA MOUNTS

AGENCY ENGINEERING HAS NOT EVALUATED THE EXISTING TOWER FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ANY DAMAGE TO THE TOWER OR TO STRUCTURAL ANALYSIS FROM ROBER OWNER PRIOR TO ANY CONSTRUCTION.

PROJECT TEAM INFORMATION

CLIENT REPRESENTATIVE: CROWN CASTLE
 3 CORPORATE PARK DRIVE, SUITE 101
 CRESTON PARK, NY 12065
CLIENT REP. CONTACT: ALISON SQUARES
 ALISON.SQUARES@CONTRACTORCROWNCASTLE.COM
ENGINEER: INTRINSY SOLUTIONS
 8845 RESERVATION ROAD, SUITE 152
 ELKROUSE, MD 21075
ENGINEER CONTACT: WATT BORTH
 WBS@INTRINSY.COM
 443-567-8781

CODE COMPLIANCE

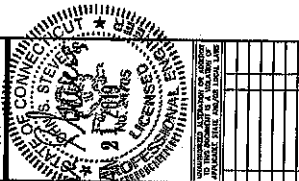
- ALL WIRE AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE FOLLOWING CODES AND REFERENCED TO THE FOLLOWING CODES WITH ANY LOCAL AMENDMENTS BY THE LOCAL GOVERNING JURISDICTIONS:
- INTERNATIONAL BUILDING CODE
 - NATIONAL ELECTRICAL CODE
 - NATIONAL FIRE PROTECTION ASSOCIATION 101
 - NATIONAL FIRE PROTECTION ASSOCIATION 1
 - LOCAL BUILDING CODES
 - CITY/TOWN ORDINANCES
 - AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATIONS (AISC)
 - AMERICAN LABORATORIES APPROVED ELECTRICAL PRODUCTS
 - NFPA 70E
 - INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS 81
 - IEEE C2 (LATEST EDITION)
 - TELEPHONE CR-1275
 - ANSI T1.511

GENERAL NOTES

- HANDICAP ACCESS REQUIREMENTS ARE NOT REQUIRED.
- FACILITY IS UNHABITED AND NOT FOR HUMAN HABITATION.
- THIS FACILITY SHALL MEET OR EXCEED ALL FAA AND FCC REGULATORY REQUIREMENTS.
- ALL NEW MATERIAL SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE. EQUIPMENT, ANTENNAS/PODS AND CABLES FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR.
- THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON STORMWATER DRAINAGE.
- NO SENSORY SOURCE, POTENTIAL NOISE, OR TRASH DISPOSAL SERVICE IS REQUIRED.
- NO COMMERCIAL SIGNAGE IS PROPOSED.



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 6666 Deerfield Road Suite 152
 Chicago, IL 60630
 www.infinigy.com



NO.	REVISION	DATE	BY	CHKD.
1	ISSUED FOR CONSTRUCTION	12/14/16	JAC	JAC
2	ISSUED FOR OWNER REVIEW	12/14/16	JAC	JAC

SUFFIELD FFYLER RD
CROWN BU: 801486
FA # 10035284
 AERIAL VIEW
 SUFFIELD, CT 06078



TITLE PAGE
 Drawing Number
T1



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 8888 E. Blenheim, Mt. View, CO 80030
 303.751.1111
 www.infinigy.com



1	DATE OF CONTRACT	08/01/02
2	DATE OF LAST REVISION	08/01/02
3	PROJECT NO.	08/01/02
4	PROJECT NAME	SULLFIELD FFYLER RD
5	CLIENT NAME	CROWN BU: 801486
6	CLIENT ADDRESS	FA # 10035284
7	CLIENT PHONE	
8	CLIENT FAX	
9	CLIENT E-MAIL	
10	CLIENT WEBSITE	
11	CLIENT URL	
12	CLIENT FOLDER	
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at&t
CROWN BU: 801486
 FA # 10035284
GENERAL NOTES
 N1

GENERAL NOTES

SYMBOL	DESCRIPTION
⊖	CIRCUIT BREAKER
⊖	NON-FUSIBLE DISCONNECT SWITCH
⊖	FUSIBLE DISCONNECT SWITCH
⊖	SURFACE MOUNTED PANEL BOARD
⊖	TRANSFORMER
⊖	KILOWATT HOUR METER
⊖	JUNCTION BOX
⊖	PULL BOX TO NEC/TELCO STANDARDS
⊖	UNDERGROUND UTILITIES
⊖	ELECTRIC WELD CONNECTION
⊖	MECHANICAL CONNECTION
⊖	GROUND ROD
⊖	GROUND ROD WITH INSPECTION SLEEVE
⊖	GROUND BAR
⊖	120/240 DUPLEX RECEPTACLE
⊖	GROUND CONDUCTOR
⊖	DC POWER AND FIBER OPTIC TRUNK CABLES
⊖	DC POWER CABLES
⊖	REPRESENTS DETAIL NUMBER
⊖	REF. DRAWING NUMBER

ABBREVIATIONS

COAX ISOLATED GROUND BAR EXTERNAL
 MASTER ISOLATED GROUND BAR
 SELF-SUPPORTING TOWER
 GLOBAL POSITIONING SYSTEM
 TYPICAL
 DRAWING
 RACE COPPER WIRE
 BELOW FINISH GRADE
 POLYVINYL CHLORIDE
 CABINET
 CONDUIT
 C
 S
 SS
 G
 AWG
 RIGID GALVANIZED STEEL
 AUTHORITY HAVING JURISDICTION
 TOWER TOP LOW NOISE AMPLIFIER
 UNLESS NOTED OTHERWISE
 ELECTRICAL METALLIC TUBING
 ABOVE GROUND LEVEL

PART 1 - GENERAL REQUIREMENTS

1.1 THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:
 A. 68-FC CODE REFS REQUIREMENTS
 B. AND MANUFACTURER'S RECOMMENDATIONS FOR DESIGN
 C. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE - "NEC"), AND NFPA 101 (LIFE SAFETY CODE).
 D. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM).
 E. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE).
 1.2 DEFINITIONS:
 A. WORK: THE SUM OF TASKS AND RESPONSIBILITIES DEFINED IN THE CONTRACT DOCUMENTS.
 B. DESIGN: CONSTRUCTION.
 C. DESIGNER: SANGHVI/SMITH WITH ARCHITECT & ENGINEER AND "A&E".
 D. ENGINEER: SANGHVI/SMITH WITH ARCHITECT & ENGINEER AND "A&E".
 E. THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.
 F. CONTRACTOR: CONSTRUCTION CONTRACTOR.
 G. VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.
 1.3 POINT OF CONTACT: COMMUNICATION BETWEEN THE COMPANY AND THE CONTRACTOR SHALL FLOW THROUGH THE SINGLE COMPANY SITE REPRESENTATIVE OR THROUGH THE COMPANY COORDINATOR APPOINTED TO MANAGE THE PROJECT FOR THE COMPANY.
 1.4 ON-SITE SUPERVISOR: THE CONTRACTOR SHALL SUPPLY AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN A FULL SET OF THE PROJECT'S CONSTRUCTION DOCUMENTS WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERVISOR WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.
 1.5 DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE: THE CONTRACTOR SHALL MAINTAIN A FULL SET OF THE PROJECT'S CONSTRUCTION DOCUMENTS, STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES, AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR CONSTRUCTION DOCUMENTS, AS SET FORTH IN THE CONSTRUCTION DOCUMENTS.
 A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN PENCIL, WITH ANY CHANGES IN CONSTRUCTION OTHER THAN IDENTIFIED IN THE DOCUMENTS. ALL CHANGES TO THE CONSTRUCTION DOCUMENTS SHALL BE FORWARDED TO THE COMPANY'S DESIGN REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS.
 1.6 USE OF BID SET: THE CONTRACTOR SHALL OBTAIN ALL CONSTRUCTION MATERIALS AND EQUIPMENT, INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS.
 1.7 NOTICE TO PROCEED:
 A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED.
 B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY DEMONSTRATE THE ABILITY TO PROVIDE AHEAD WITH AN OPERATIONAL, WIRELESS FACILITY.

PART 2 - EXECUTION

2.1 TEMPORARY UTILITIES AND FACILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE: FLOODING, WATER, SEWER, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT RECORDS AVAILABLE. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.
 2.2 ACCESS TO WORK: THE CONTRACTOR SHALL PROVIDE ACCESS TO THE JOB SITE FOR UNDEGRADED COMPANY PERSONNEL AND AUTHORIZED REPRESENTATIVES OF THE ARCHITECT/ENGINEER DURING ALL PHASES OF THE WORK.
 2.3 TESTING REQUIREMENTS FOR TESTING OF THE CONTRACTOR SHALL BE AS INDICATED HEREIN OR IN THE CONSTRUCTION DOCUMENTS. IN ALL INDIVIDUAL SETTINGS OF THESE SPECIFICATIONS, SHOULD COMPANY CHOOSE TO ENGAGE A THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR COMPANY'S TEST AGENCY.

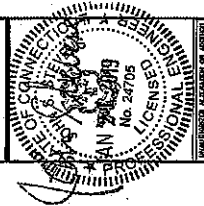
PART 3 - RECEIPT OF MATERIAL & EQUIPMENT

3.1 RECEIPT OF MATERIAL AND EQUIPMENT: CONTRACTOR IS RESPONSIBLE FOR ADEQUATE STORAGE AND PROTECTION OF ALL MATERIALS AND EQUIPMENT FROM THE TIME OF DELIVERY TO THE PROJECT SITE. CONTRACTOR SHALL MAINTAIN A FULL SET OF THE PROJECT'S CONSTRUCTION DOCUMENTS WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERVISOR WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.
 3.2 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.
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 3.27 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.



INFINIGYS

6885 DeSpain Road Suite 152
Baltimore, MD 21207
Tel: 410-528-1144
http://www.infinigy.com



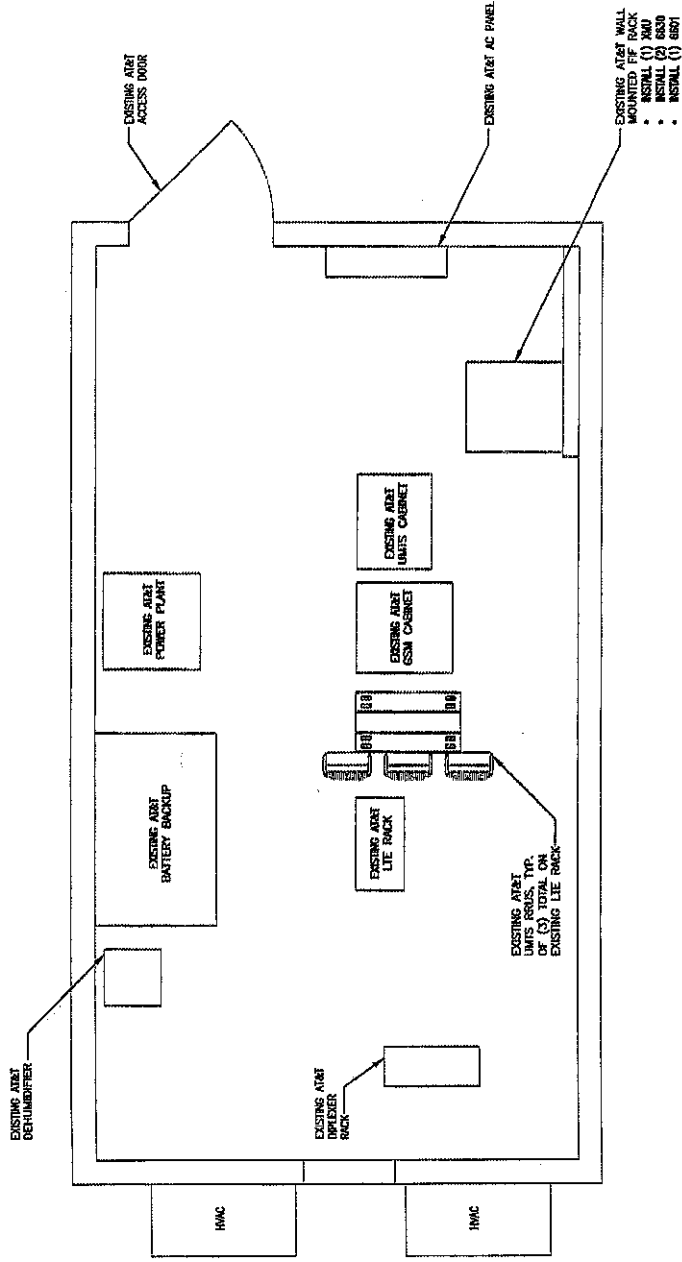
NO.	REVISION	DATE	BY	CHKD.
1	ISSUED FOR PERMITTING	08/27/2013		
2	ISSUED FOR CONSTRUCTION	08/27/2013		

Drawn: EJD
 Designed: JMS
 Checked: JMS
 Project Number: 094346
 Project Title: SUFFIELD HYLER RD
 CROWN BI: 801486

FA # 10095284
 CROWN BI: 801486
 Prepared For:



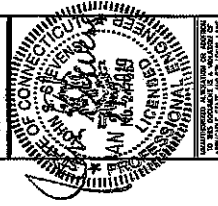
Drawing Title: **EQUIPMENT LAYOUT**
 Drawing Number: **C2**





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8655 Decapath Road Suite 102
Chapel Hill, NC 27514
www.infinigy.com
Office: (919) 850-8148
Fax: (919) 850-8149



PROJECT NUMBER: _____
DATE: _____
DRAWN BY: _____
CHECKED BY: _____
APPROVED BY: _____

Project Title: SUFFIELD FFYLER RD
CROWN BU: 801486
FA #: 10035284
SUFFIELD PLAZA
SUFFIELD, CT 06076



Drawn To: ELEVATION AND RF SCHEDULE
Drawing Number: C-3

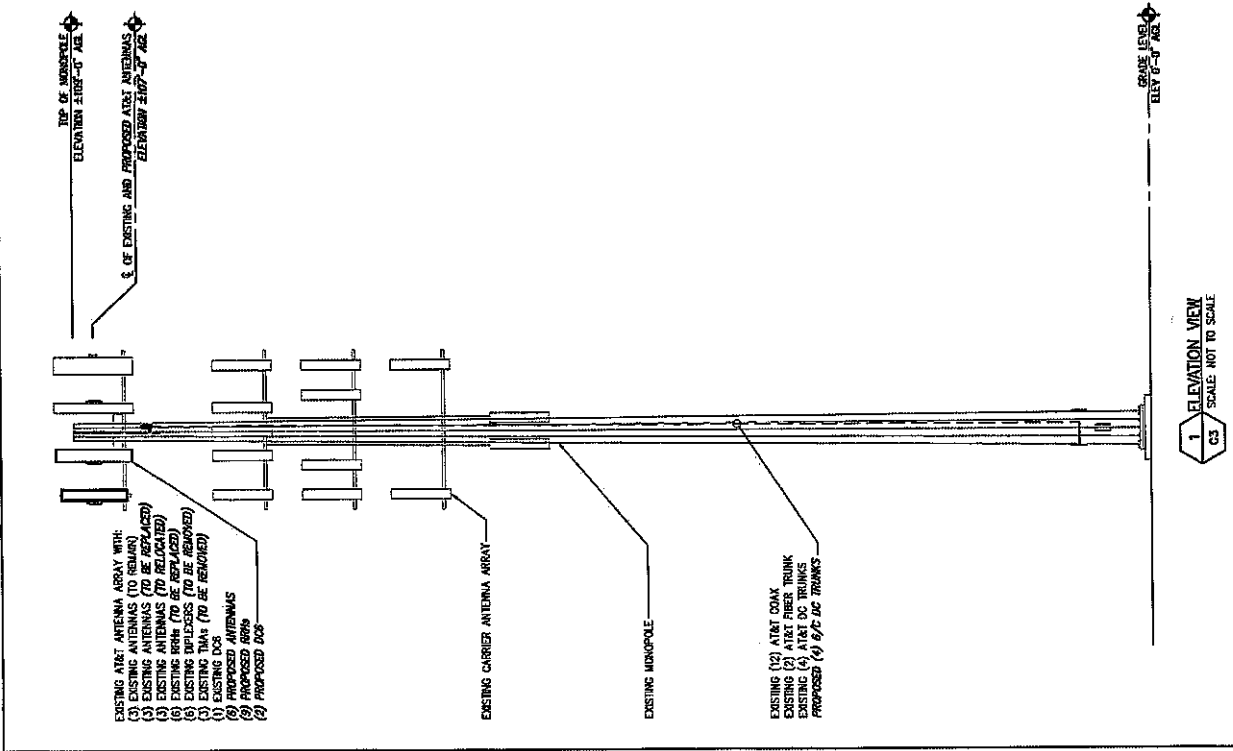
SECTOR	ANTENNA POSITION	ANTENNA MAKE	ANTENNA MODEL	RAD. CIR. FT. DIA.	ARRIBH	RRR/TUA QTY/MAKE/MODEL	FILEX/DUPLEXER QTY/MAKE/MODEL	E-TILT	M-TILT
A	F1	KRIBREN	800-10121	107'-0"	120	(1) T19-08P111-001 (2) LCP 21901 (GROUND)	-	0° (UNITS 850)	0°
	F2	CCI	HPA-CSR-804-16	107'-0"	10	(*) 88205-4418 B330	-	3° (LIE WCS)	0°
	F3	CCI	HPA-CSR-804-16	107'-0"	10	(*) 88205-4418 B330	-	4° (LIE 1900)	0°
	F4	MATHEWEN	800-10506	107'-0"	10	(*) 88205-4418 B330	-	4° (LIE 700) 4° (LIE 850) 4° (LIE 1900) 4° (LIE 850)	0°
B	F5	KRIBREN	800-10121	107'-0"	250	(1) T19-08P111-001 (2) LCP 21901 (GROUND)	-	0° (UNITS 850)	0°
	F6	CCI	HPA-CSR-833-16	107'-0"	120	(*) 88205-4418 B330	-	3° (LIE WCS)	0°
	F7	CCI	HPA-CSR-833-16	107'-0"	120	(*) 88205-4418 B330	-	3° (LIE 1900)	0°
	F8	MATHEWEN	800-10506	107'-0"	120	(*) 88205-4418 B330	-	4° (LIE 700) 4° (LIE 850) 4° (LIE 1900) 4° (LIE 850)	0°
C	F9	KRIBREN	800-10121	107'-0"	10	(1) T19-08P111-001 (2) LCP 21901 (GROUND)	-	0° (UNITS 850)	0°
	F10	CCI	HPA-CSR-833-16	107'-0"	250	(*) 88205-4418 B330	-	3° (LIE WCS)	0°
	F11	CCI	HPA-CSR-833-16	107'-0"	250	(*) 88205-4418 B330	-	3° (LIE 1900)	0°
	F12	MATHEWEN	800-10506	107'-0"	250	(*) 88205-4418 B330	-	3° (LIE 700) 3° (LIE 850) 3° (LIE 1900) 3° (LIE 850)	0°

NOT EXISTING UNLESS INDICATED

SYSTEM	TYPE	QTY	LENGTH
UNITS	1-5/8" COAX	5	161'±
LIE	1-5/8" COAX	5	161'±
LIE	DC TRUNK	4	161'±
LIE	FIBER TRUNK	2	161'±
LIE	60C DC TRUNK	4	161'±

TYPE	LOCATION	QTY
DCS	SECTION LEVEL	2
DCS	SECTOR LEVEL	2

RF DESIGN NOTE:
THIS ANTENNA AND CABLE SCHEDULE HAS BEEN CREATED USING THE FOLLOWING ARIE RDS
MATRIX: 11/20/08 REVISION: 3.00 ALL ANTENNA DESIGN, ZONING, SUBSTANTIAL ANALYSIS PERMITS
AND CHEMICAL SUBMISSIONS ARE COORDINATED WITH THE APPROPRIATED DOCUMENT.



1 ELEVATION VIEW
SCALE: NOT TO SCALE

2 RF SCHEDULE
NOT TO SCALE



INFINIGY8

6888 Deepch Road
Suite 102
Westborough, MA 01581
www.infinigy.com



PROJECT TITLE: SUPPLY FLYLER RD
CROWN BL: 801486
FA #: 10035284
4 PALMER PLACE
SUFFIELD, CT 06075



ANTENNA ORIENTATION PLAN

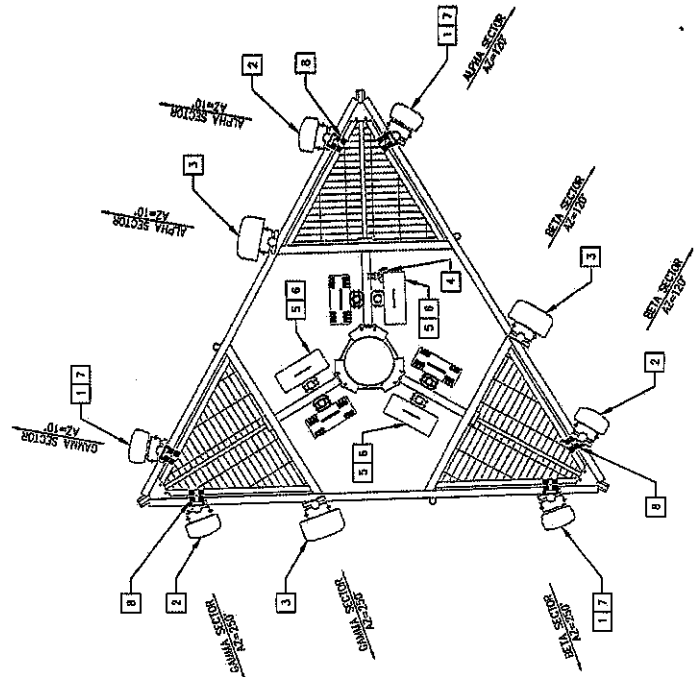
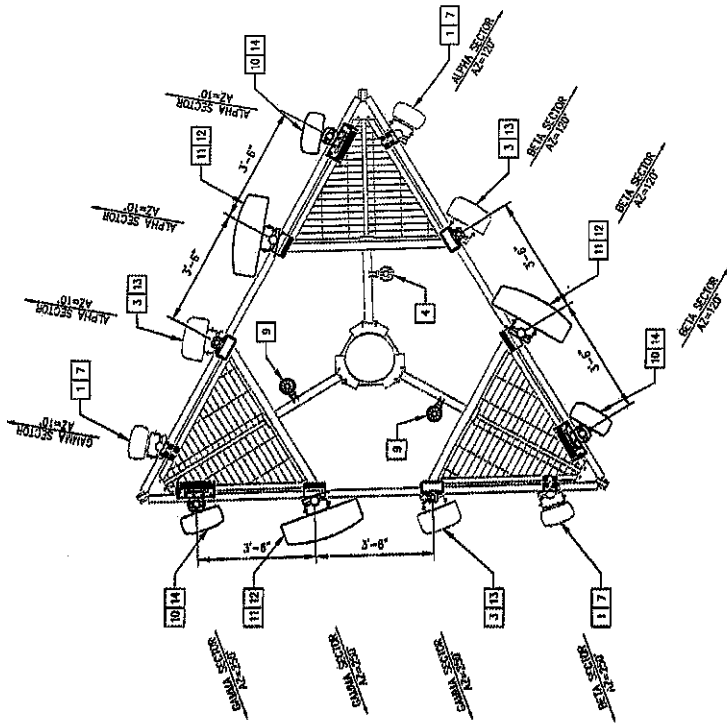
C-4

ORIENTATION PLAN KEY

SET	DESCRIPTION	TYPE	QTY	STATUS
1	800-781271	ANTENNA	3	REMAIN
2	800-781271-RR	ANTENNA	3	REMOVED
3	800-781271-RR	ANTENNA	3	RELOCATED
4	DCS	DC/FREER MOUNT	1	REMAIN
5	800-781271-12	800	3	REMOVED
6	800-781271-11	800	3	REMOVED
7	TT19-088P11-001	TIA	3	REMAIN
8	TT19-088P11-001	TIA	3	REMOVED
9	DCS	DC/FREER MOUNT	2	PROPOSED
10	800-781271	ANTENNA	3	PROPOSED
11	800-781271	ANTENNA	3	PROPOSED
12	800-781271-RR	800	3	PROPOSED
13	800-781271-RR	800	3	PROPOSED
14	800-781271-RR	800	3	PROPOSED

NOTE:

1. LAYOUT SHOWN BASED ON AVAILABLE INFORMATION FROM SUPPLIER. VERIFY ALL DIMENSIONS AND SPACING FOR ALL ANTENNAS AND SUPPORTS PRIOR TO CONSTRUCTION.
2. ANY EXISTING OR PROPOSED UNSTRUCTURED CABLES TO BE REMOVED OR REROUTED TO EXCEED A SPAN OF 4' BETWEEN SUPPORTS. REMOVE AND REPLACE EXISTING UNSTRUCTURED CABLES AND SLACK BUNDLES WITH STRUCTURED CABLES. VERIFY ALL SPAN WHEN UTILIZED FOR PROPOSED EQUIPMENT.
3. INCLUDING DETAILS.



2 ANTENNA ORIENTATION PLAN (PROPOSED)
CA NOT TO SCALE

1 ANTENNA ORIENTATION PLAN (EXISTING)
CA NOT TO SCALE



Date: December 13, 2018

Amanda D Brown
Crown Castle
3530 Toringdon Way, Suite 300
Charlotte, NC 28277

JACOBS

Jacobs Engineering Group, Inc.

5449 Bells Ferry Road
Acworth, GA 30102
770-701-2500

Subject: Structural Analysis Report

Carrier Designation: AT&T Mobility Co-Locate
Carrier Site Number: CTL01138
Carrier Site Name: SUFFIELD FFYLER RD

Crown Castle Designation: Crown Castle BU Number: 801486
Crown Castle Site Name: CT SUFFIELD 2 CAC 801486
Crown Castle JDE Job Number: 549069
Crown Castle Work Order Number: 1670004
Crown Castle Order Number: 472236 Rev. 0

Engineering Firm Designation: Jacobs Engineering Group, Inc. Project Number: 1670004

Site Data: 44 FFyler Place, Suffield, Hartford County, CT
Latitude 41° 58' 49.7", Longitude -72° 39' 26.2"
109 Foot - Monopole Tower

Dear Amanda D Brown,

Jacobs Engineering Group, Inc. 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:

LC7: Proposed Equipment Configuration **Sufficient Capacity**

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:

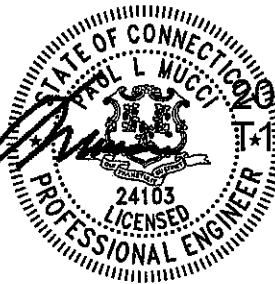


Jhon Michael Felismino
Structural Engineer

Respectfully submitted by:



Paul L. Mucci, P.E.
Senior Project Engineer



18-12-13
T 18:12:16-05:00

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1) INTRODUCTION

This tower is a 109 ft Monopole tower designed by FWT INC..

2) ANALYSIS CRITERIA

TIA-222 Revision: TIA-222-H
 Risk Category: II
 Wind Speed: 120 mph
 Exposure Category: C
 Topographic Factor: 1
 Ice Thickness: 2 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)	
109.0	111.0	3	cci antennas	HPA-65R-BUU-H8 w/ Mount Pipe	2 6 12 2	3/8 3/4 1-5/8 2 [Conduit]	
		3	cci antennas	HPA65R-BU8A w/ Mount Pipe			
		3	ericsson	RADIO 4415 B30			
		3	ericsson	RRUS 4449 B5/B12			
		3	ericsson	RRUS 8843 B2/B66A			
		3	kathrein	800 10121 w/ Mount Pipe			
		3	kathrein	80010966 w/ Mount Pipe			
	109.0		6	powerwave technologies			TT19-08BP111-001
			1	tower mounts			Platform Mount [LP 1201-1]

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)	
92.0	92.0	3	alcatel lucent	B13 RRH 4X30	12 2	1-1/4 1-1/2	
		3	alcatel lucent	PCS B25 RRH4x30			
		3	alcatel lucent	RRH2x60-AWS			
		2	commscope	RC2DC-3315-PF-48			
		1	tower mounts	Platform Mount [LP 1201-1]			
	91.0		2	antel			LPA-80080-4CF-EDIN-0 w/ Mount Pipe
			6	commscope			SBNHH-1D65B w/ Mount Pipe
			4	swedcom			SC 9012 REV2 w/ Mount Pipe

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
80.0	81.0	12	decibel	DB844H90-XY w/ Mount Pipe	12	7/8
	80.0	1	tower mounts	Platform Mount [LP 1201-1]		
74.0	74.0	1	tower mounts	Side Arm Mount [SO 102-3]	-	-
		3	alcatel lucent	800MHz 2X50W RRH W/FILTER		
		3	alcatel lucent	PCS 1900MHz 4x45W-65MHz		
69.0	71.0	2	rfs celwave	APXV9ERR18-C-A20 w/ Mount Pipe	3	5/8 1-1/4
		1	rfs celwave	APXVSPP18-C-A20 w/ Mount Pipe		
		3	rfs celwave	APXVTM14-C-120 w/ Mount Pipe		
	69.0	3	alcatel lucent	TD-RRH8x20-25		
		1	tower mounts	Platform Mount [LP 1201-1]		
62.0	62.0	3	rfs celwave	APX18-206516L	6	1-5/8
		1	tower mounts	Pipe Mount [PM 602-3]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	Clough, Harbour & Associates, LLP	2294830	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	FWT	821489	CCISITES
4-TOWER MANUFACTURER DRAWINGS	FWT	823124	CCISITES

3.1) Analysis Method

tnxTower (version 8.0.4.0), 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.

This analysis may be affected if any assumptions are not valid or have been made in error. Jacobs Engineering Group, Inc. 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	109 - 95	Pole	TP26.715x23.476x0.1875	1	-5.77	1088.20	23.9	Pass
L2	95 - 48.08	Pole	TP37.573x26.715x0.3125	2	-24.46	2651.09	49.7	Pass
L3	48.08 - 0	Pole	TP48.075x35.8094x0.375	3	-39.54	4072.07	61.2	Pass
							Summary	
						Pole (L3)	61.2	Pass
						Rating =	61.2	Pass

Table 5 - Tower Component Stresses vs. Capacity - LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	52.2	Pass
1	Base Plate	0	27.9	Pass
1	Base Foundation Structural	0	57.7	Pass
1	Base Foundation Soil Interaction	0	40.7	Pass
1	Flange Plate	95	6.1	Pass
1	Flange Bolts	95	17.1	Pass

Structure Rating (max from all components) =	61.2%
---	--------------

Notes:

- 1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity.

4.1) Recommendations

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

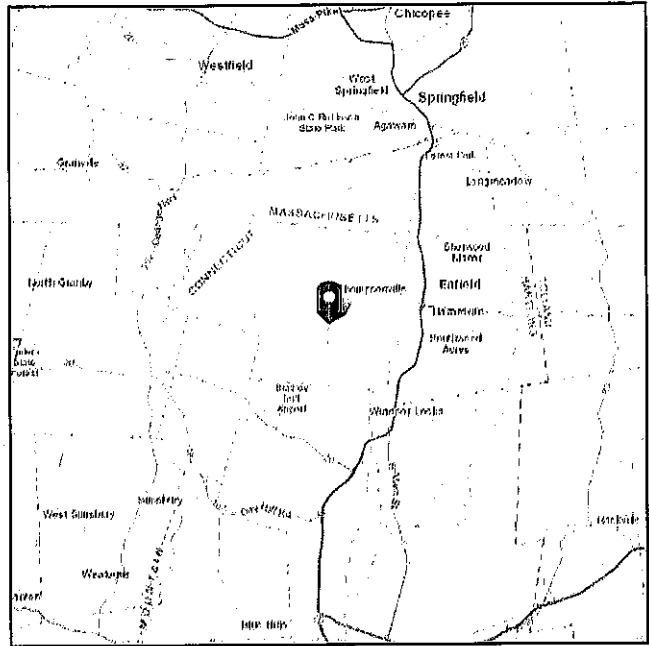
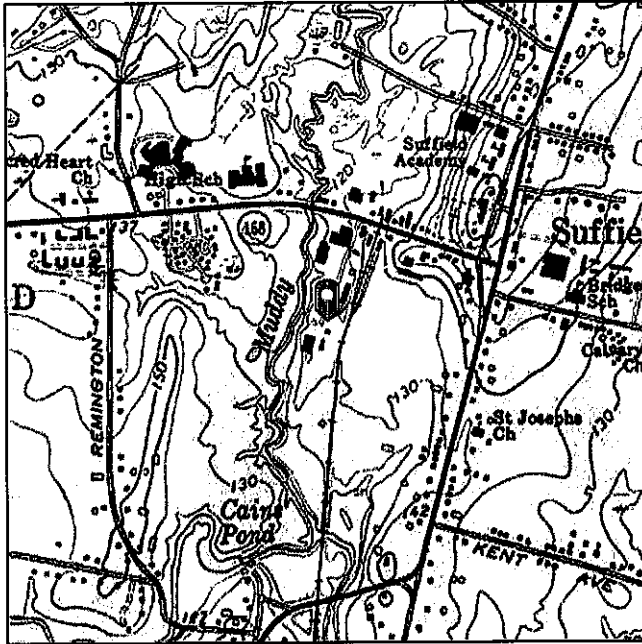
APPENDIX A
TNXTOWER OUTPUT

ASCE 7 Hazards Report

Address:
No Address at This
Location

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

Elevation: 132.2 ft (NAVD 88)
Latitude: 41.980472
Longitude: -72.657278



Wind

Results:

Wind Speed:	120 Vmph
10-year MRI	76 Vmph
25-year MRI	86 Vmph
50-year MRI	91 Vmph
100-year MRI	98 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: Thu Dec 13 2018

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.

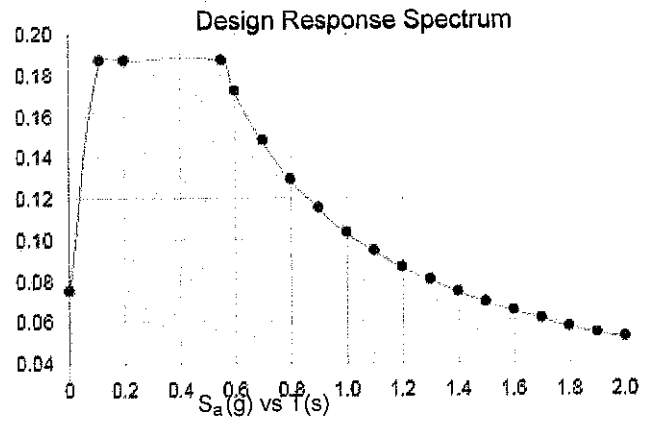
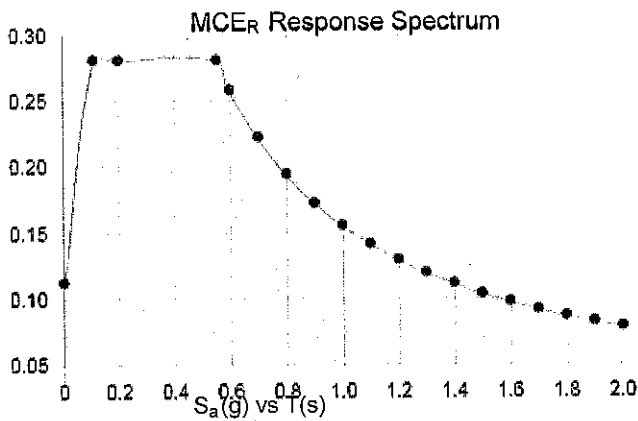
Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

Site Soil Class: D - Stiff Soil

Results:

S_s :	0.176	S_{DS} :	0.187
S_1 :	0.065	S_{D1} :	0.103
F_a :	1.600	T_L :	6.000
F_v :	2.400	PGA :	0.086
S_{MS} :	0.281	PGA _M :	0.138
S_{M1} :	0.155	F _{PGA} :	1.600
		I_e :	1

Seismic Design Category B



Data Accessed:

Thu Dec 13 2018

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: 1.00 in.
Concurrent Temperature: 5 F
Gust Speed: 50 mph

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

Date Accessed: Thu Dec 13 2018

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

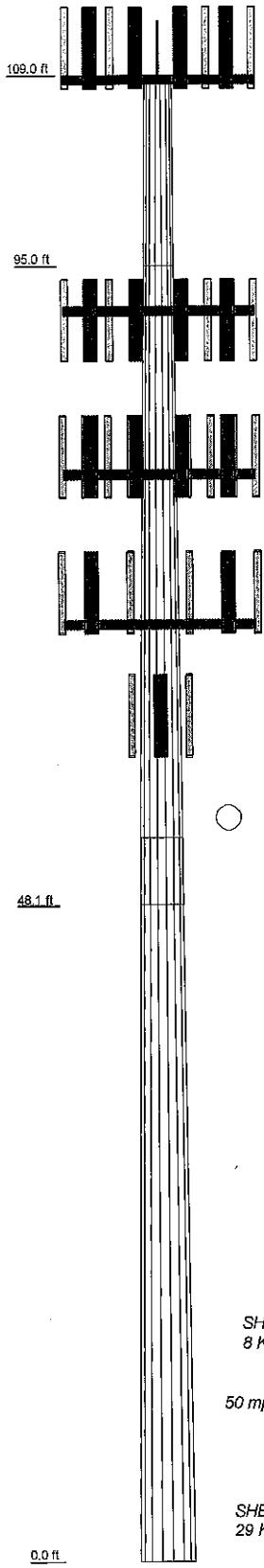
Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from 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.

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

Section	1	2	3
Length (ft)	14.00	46.92	53.00
Number of Sides	18	18	18
Thickness (in)	0.1875	0.3125	0.3750
Socket Length (ft)		4.92	
Top Dia (in)	23.4760	26.7150	35.8094
Bot Dia (in)	26.7150	37.5730	48.0750
Grade		A572-95	
Weight (K)	0.7	5.0	8.9



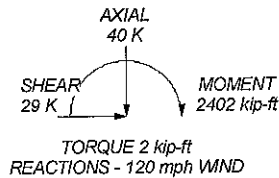
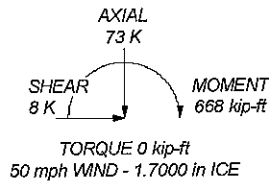
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 120 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.70 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TIA-222-H Annex S
9. TOWER RATING: 61.2%

ALL REACTIONS
ARE FACTORED



Jacobs Engineering Group, Inc.

5449 Bells Ferry Road
Acworth, GA 30102
Phone: 770-701-2500
FAX: 770-701-2501

Job: CT SUFFIELD 2 CAC 801486

Project: BU#801486 WO#1670004

Client: Crown Castle Drawn by: Jhon Michael Felismino App'd:

Code: TIA-222-H Date: 12/13/18 Scale: NT:

Path: Dwg No. E-

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 Hartford County, Connecticut.
- 2) Tower base elevation above sea level: 132.00 ft.
- 3) Basic wind speed of 120 mph.
- 4) Risk Category II.
- 5) Exposure Category C.
- 6) Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- 7) Topographic Category: 1.
- 8) Crest Height 0.00 ft.
- 9) Nominal ice thickness of 1.7000 in.
- 10) Ice thickness is considered to increase with height.
- 11) Ice density of 56 pcf.
- 12) A wind speed of 50 mph is used in combination with ice.
- 13) Temperature drop of 50 °F.
- 14) Deflections calculated using a wind speed of 60 mph.
- 15) A non-linear (P-delta) analysis was used.
- 16) Pressures are calculated at each section.
- 17) Stress ratio used in pole design is 1.05.
- 18) Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification Use Code Stress Ratios Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile Include Bolts In Member Capacity Leg Bolts Are At Top Of Section Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) SR Members Have Cut Ends SR Members Are Concentric	Distribute Leg Loads As Uniform Assume Legs Pinned ✓ Assume Rigid Index Plate ✓ Use Clear Spans For Wind Area Use Clear Spans For KL/r Retension Guys To Initial Tension ✓ Bypass Mast Stability Checks ✓ Use Azimuth Dish Coefficients ✓ Project Wind Area of Appurt. Autocalc Torque Arm Areas Add IBC .6D+W Combination Sort Capacity Reports By Component Triangulate Diamond Inner Bracing Treat Feed Line Bundles As Cylinder Ignore KL/ry For 60 Deg. Angle Legs	Use ASCE 10 X-Brace Ly Rules Calculate Redundant Bracing Forces Ignore Redundant Members in FEA SR Leg Bolts Resist Compression All Leg Panels Have Same Allowable Offset Girt At Foundation ✓ Consider Feed Line Torque Include Angle Block Shear Check Use TIA-222-H Bracing Resist. Exemption Use TIA-222-H Tension Splice Exemption <div style="background-color: #cccccc; padding: 2px; text-align: center; font-weight: bold;">Poles</div> ✓ Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets Pole Without Linear Attachments Pole With Shroud Or No Appurtenances Outside and Inside Corner Radii Are Known
--	---	---

Tapered Pole Section Geometry

Section	Elevation	Section Length	Splice Length	Number of Sides	Top Diameter	Bottom Diameter	Wall Thickness	Bend Radius	Pole Grade
	ft	ft	ft		in	in	in	in	
L1	109.00-95.00	14.00	0.00	18	23.4760	26.7150	0.1875	0.7500	A572-65 (65 ksi)
L2	95.00-48.08	46.92	4.92	18	26.7150	37.5730	0.3125	1.2500	A572-65 (65 ksi)

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L3	48.08-0.00	53.00		18	35.8094	48.0750	0.3750	1.5000	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	It/Q in ²	w in	w/t
L1	23.8092	13.8596	949.6645	8.2674	11.9258	79.6310	1900.5786	6.9311	3.8018	20.276
	27.0982	15.7872	1403.5717	9.4173	13.5712	103.4227	2808.9903	7.8951	4.3718	23.316
L2	27.0789	26.1880	2306.3730	9.3729	13.5712	169.9459	4615.7808	13.0965	4.1518	13.286
	38.1044	36.9578	6482.4687	13.2275	19.0871	339.6259	12973.467	18.4824	6.0628	19.401
L3	37.4602	42.1758	6690.4026	12.5792	18.1912	367.7825	13389.608	21.0919	5.6425	15.047
	48.7588	56.7749	16320.399	16.9335	24.4221	668.2635	32662.273	28.3929	7.8012	20.803

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _r	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 109.00-95.00				1	1	1			
L2 95.00-48.08				1	1	1			
L3 48.08-0.00				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 r in	Perimeter r in	Weight plf
LDF6-50A(1-1/4")	A	No	Surface Af (CaAa)	92.00 - 0.00	6	6	0.350 0.500	0.0000	3.1000	0.66

CR 50 1873(1-5/8")	C	No	Surface Af (CaAa)	62.00 - 0.00	6	6	-0.100 0.100	0.0000	3.9600	0.83

Safety Line 3/8	B	No	Surface Af (CaAa)	109.00 - 0.00	1	1	0.420 0.420	0.0000	0.7500	0.22

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C _A A _A ft ² /ft	Weight plf	
LDF7-50A(1-5/8")	B	No	No	Inside Pole	109.00 - 0.00	12	No Ice 1/2" Ice 1" Ice 2" Ice	0.00 0.00 0.00 0.00	0.82 0.82 0.82 0.82
FB-L98B-002-75000(3/8")	B	No	No	Inside Pole	109.00 - 0.00	2	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.06 0.06 0.06

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C _A A _A ft ² /ft	Weight plf
WR-VG86ST-BRD(3/4)	B	No	No	Inside Pole	109.00 - 0.00	6	2" Ice	0.00	0.06
							No Ice	0.00	0.58
							1/2" Ice	0.00	0.58
							1" Ice	0.00	0.58
							2" Ice	0.00	0.58
2" Rigid Conduit	B	No	No	Inside Pole	109.00 - 0.00	2	No Ice	0.00	2.80
							1/2" Ice	0.00	2.80
							1" Ice	0.00	2.80
							2" Ice	0.00	2.80

LDF6-50A(1-1/4")	A	No	No	Inside Pole	92.00 - 0.00	6	No Ice	0.00	0.66
							1/2" Ice	0.00	0.66
							1" Ice	0.00	0.66
							2" Ice	0.00	0.66

MLC HYBRID 6X12 LI(1-1/2)	A	No	No	Inside Pole	92.00 - 0.00	2	No Ice	0.00	1.85
							1/2" Ice	0.00	1.85
							1" Ice	0.00	1.85
							2" Ice	0.00	1.85

LDF5-50A(7/8")	A	No	No	Inside Pole	80.00 - 0.00	12	No Ice	0.00	0.33
							1/2" Ice	0.00	0.33
							1" Ice	0.00	0.33
							2" Ice	0.00	0.33

HB114-1-08U4-M5J(1 1/4")	B	No	No	Inside Pole	69.00 - 0.00	3	No Ice	0.00	1.08
							1/2" Ice	0.00	1.08
							1" Ice	0.00	1.08
							2" Ice	0.00	1.08

HB058-M12-XXXF(5/8")	B	No	No	Inside Pole	69.00 - 0.00	1	No Ice	0.00	0.24
							1/2" Ice	0.00	0.24
							1" Ice	0.00	0.24
							2" Ice	0.00	0.24

Feed Line/Linear Appurtenances Section Areas

Tower Section n	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
L1	109.00-95.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.27
		C	0.000	0.000	0.000	0.000	0.00
L2	95.00-48.08	A	0.000	0.000	0.000	0.000	0.64
		B	0.000	0.000	0.000	0.000	0.98
		C	0.000	0.000	0.000	0.000	0.07
L3	48.08-0.00	A	0.000	0.000	0.000	0.000	0.75
		B	0.000	0.000	0.000	0.000	1.09
		C	0.000	0.000	0.000	0.000	0.24

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section n	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
L1	109.00-95.00	A	1.903	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	5.328	0.000	0.35
		C		0.000	0.000	0.000	0.000	0.00
L2	95.00-48.08	A	1.834	0.000	0.000	0.000	0.000	0.95
		B		0.000	0.000	17.214	0.000	1.24
		C		0.000	0.000	0.000	0.000	0.18

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
L3	48.08-0.00	A	1.647	0.000	0.000	0.000	0.000	1.09
		B		0.000	0.000	17.640	0.000	1.36
		C		0.000	0.000	0.000	0.000	0.61

Feed Line Center of Pressure

Section	Elevation ft	CP _X in	CP _Z in	CP _X Ice in	CP _Z Ice in
L1	109.00-95.00	0.0000	0.0000	0.9510	1.6480
L2	95.00-48.08	0.0000	0.0000	0.8478	1.4746
L3	48.08-0.00	0.0000	0.0000	0.8538	1.4898

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 _a No Ice	K _a Ice
L1	17	Safety Line 3/8	95.00 - 109.00	1.0000	1.0000
L2	7	LDF6-50A(1-1/4")	48.08 - 92.00	1.0000	1.0000
L2	15	CR 50 1873(1-5/8")	48.08 - 62.00	1.0000	1.0000
L2	17	Safety Line 3/8	48.08 - 95.00	1.0000	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment t	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K	
Lighting Rod 3/4" x 4'	C	None		0.0000	111.00	No Ice	0.30	0.03	
						1/2" Ice	0.71	0.03	
						Ice	1.00	0.04	
						1" Ice	1.52	0.06	
						2" Ice			
level 109 800 10121 w/ Mount Pipe	A	From Face	4.00 0.00 2.00	0.0000	109.00	No Ice	5.39	4.60	0.07
						1/2" Ice	5.81	5.35	0.11
						Ice	6.23	6.05	0.17
						1" Ice	7.10	7.48	0.30
						2" Ice			
800 10121 w/ Mount Pipe	B	From Face	4.00 0.00	0.0000	109.00	No Ice	5.39	4.60	0.07
						Ice	5.81	5.35	0.11

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
			2.00			1/2" 6.23 Ice 7.10	6.05 7.48	0.17 0.30
800 10121 w/ Mount Pipe	C	From Face	4.00 0.00 2.00	0.0000	109.00	No Ice 5.39 1/2" 5.81 Ice 6.23 1" Ice 7.10 2" Ice	4.60 5.35 6.05 7.48	0.07 0.11 0.17 0.30
HPA-65R-BUU-H8 w/ Mount Pipe	A	From Face	4.00 0.00 2.00	0.0000	109.00	No Ice 13.59 1/2" 14.19 Ice 14.80 1" Ice 16.04 2" Ice	10.80 12.12 13.17 15.29	0.08 0.18 0.29 0.54
HPA-65R-BUU-H8 w/ Mount Pipe	B	From Face	4.00 0.00 2.00	0.0000	109.00	No Ice 13.59 1/2" 14.19 Ice 14.80 1" Ice 16.04 2" Ice	10.80 12.12 13.17 15.29	0.08 0.18 0.29 0.54
HPA-65R-BUU-H8 w/ Mount Pipe	C	From Face	4.00 0.00 2.00	0.0000	109.00	No Ice 13.59 1/2" 14.19 Ice 14.80 1" Ice 16.04 2" Ice	10.80 12.12 13.17 15.29	0.08 0.18 0.29 0.54
(2) TT19-08BP111-001	A	From Face	4.00 0.00 0.00	0.0000	109.00	No Ice 0.55 1/2" 0.64 Ice 0.74 1" Ice 0.97 2" Ice	0.44 0.53 0.63 0.84	0.02 0.02 0.03 0.05
(2) TT19-08BP111-001	B	From Face	4.00 0.00 0.00	0.0000	109.00	No Ice 0.55 1/2" 0.64 Ice 0.74 1" Ice 0.97 2" Ice	0.44 0.53 0.63 0.84	0.02 0.02 0.03 0.05
(2) TT19-08BP111-001	C	From Face	4.00 0.00 0.00	0.0000	109.00	No Ice 0.55 1/2" 0.64 Ice 0.74 1" Ice 0.97 2" Ice	0.44 0.53 0.63 0.84	0.02 0.02 0.03 0.05
DC6-48-60-18-8F	B	From Face	4.00 0.00 2.00	0.0000	109.00	No Ice 0.92 1/2" 1.46 Ice 1.64 1" Ice 2.04 2" Ice	0.92 1.46 1.64 2.04	0.03 0.05 0.07 0.12
DC6-48-60-18-8F	A	From Face	4.00 0.00 2.00	0.0000	109.00	No Ice 0.92 1/2" 1.46 Ice 1.64 1" Ice 2.04 2" Ice	0.92 1.46 1.64 2.04	0.03 0.05 0.07 0.12
DC6-48-60-18-8F	C	From Face	4.00 0.00 2.00	0.0000	109.00	No Ice 0.92 1/2" 1.46 Ice 1.64 1" Ice 2.04 2" Ice	0.92 1.46 1.64 2.04	0.03 0.05 0.07 0.12
HPA65R-BU8A w/ Mount Pipe	A	From Face	4.00 0.00 2.00	0.0000	109.00	No Ice 11.47 1/2" 12.19 Ice 12.92 1" Ice 14.29 2" Ice	10.18 11.70 13.25 15.59	0.09 0.18 0.28 0.51
HPA65R-BU8A w/ Mount Pipe	B	From Face	4.00 0.00 2.00	0.0000	109.00	No Ice 11.47 1/2" 12.19 Ice 12.92 1" Ice 14.29 2" Ice	10.18 11.70 13.25 15.59	0.09 0.18 0.28 0.51

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
HPA65R-BU8A w/ Mount Pipe	C	From Face	4.00	0.0000	109.00	No Ice	11.47	10.18	0.09
			0.00			1/2"	12.19	11.70	0.18
			2.00			Ice	12.92	13.25	0.28
						1" Ice	14.29	15.59	0.51
						2" Ice			
80010966 w/ Mount Pipe	A	From Face	4.00	0.0000	109.00	No Ice	17.60	9.64	0.15
			0.00			1/2"	18.33	11.15	0.26
			2.00			Ice	19.07	12.70	0.39
						1" Ice	20.49	15.03	0.68
						2" Ice			
80010966 w/ Mount Pipe	B	From Face	4.00	0.0000	109.00	No Ice	17.60	9.64	0.15
			0.00			1/2"	18.33	11.15	0.26
			2.00			Ice	19.07	12.70	0.39
						1" Ice	20.49	15.03	0.68
						2" Ice			
80010966 w/ Mount Pipe	C	From Face	4.00	0.0000	109.00	No Ice	17.60	9.64	0.15
			0.00			1/2"	18.33	11.15	0.26
			2.00			Ice	19.07	12.70	0.39
						1" Ice	20.49	15.03	0.68
						2" Ice			
RADIO 4415 B30	A	From Face	4.00	0.0000	109.00	No Ice	1.64	0.64	0.04
			0.00			1/2"	1.80	0.75	0.05
			2.00			Ice	1.97	0.87	0.07
						1" Ice	2.33	1.13	0.11
						2" Ice			
RADIO 4415 B30	B	From Face	4.00	0.0000	109.00	No Ice	1.64	0.64	0.04
			0.00			1/2"	1.80	0.75	0.05
			2.00			Ice	1.97	0.87	0.07
						1" Ice	2.33	1.13	0.11
						2" Ice			
RADIO 4415 B30	C	From Face	4.00	0.0000	109.00	No Ice	1.64	0.64	0.04
			0.00			1/2"	1.80	0.75	0.05
			2.00			Ice	1.97	0.87	0.07
						1" Ice	2.33	1.13	0.11
						2" Ice			
RRUS 8843 B2/B66A	A	From Face	4.00	0.0000	109.00	No Ice	1.64	1.35	0.07
			0.00			1/2"	1.80	1.50	0.09
			2.00			Ice	1.97	1.65	0.11
						1" Ice	2.32	1.99	0.16
						2" Ice			
RRUS 8843 B2/B66A	B	From Face	4.00	0.0000	109.00	No Ice	1.64	1.35	0.07
			0.00			1/2"	1.80	1.50	0.09
			2.00			Ice	1.97	1.65	0.11
						1" Ice	2.32	1.99	0.16
						2" Ice			
RRUS 8843 B2/B66A	C	From Face	4.00	0.0000	109.00	No Ice	1.64	1.35	0.07
			0.00			1/2"	1.80	1.50	0.09
			2.00			Ice	1.97	1.65	0.11
						1" Ice	2.32	1.99	0.16
						2" Ice			
RRUS 4449 B5/B12	A	From Face	4.00	0.0000	109.00	No Ice	1.97	1.41	0.07
			0.00			1/2"	2.14	1.56	0.09
			2.00			Ice	2.33	1.73	0.11
						1" Ice	2.72	2.07	0.16
						2" Ice			
RRUS 4449 B5/B12	B	From Face	4.00	0.0000	109.00	No Ice	1.97	1.41	0.07
			0.00			1/2"	2.14	1.56	0.09
			2.00			Ice	2.33	1.73	0.11
						1" Ice	2.72	2.07	0.16
						2" Ice			
RRUS 4449 B5/B12	C	From Face	4.00	0.0000	109.00	No Ice	1.97	1.41	0.07
			0.00			1/2"	2.14	1.56	0.09
			2.00			Ice	2.33	1.73	0.11
						1" Ice	2.72	2.07	0.16
						2" Ice			

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
Platform Mount [LP 1201-1]	C	None		0.0000	109.00	No Ice	23.10	23.10	2.10
						1/2"	26.80	26.80	2.50
						Ice	30.50	30.50	2.90
						1" Ice	37.90	37.90	3.70
						2" Ice			
HSS2" x 2" x 0.25" x 16'	A	From Face	4.00 0.00 0.00	0.0000	109.00	No Ice	3.20	0.03	0.09
						1/2"	4.28	0.06	0.12
						Ice	5.37	0.09	0.16
						1" Ice	7.57	0.18	0.29
						2" Ice			
HSS2" x 2" x 0.25" x 16'	B	From Face	4.00 0.00 0.00	0.0000	109.00	No Ice	3.20	0.03	0.09
						1/2"	4.28	0.06	0.12
						Ice	5.37	0.09	0.16
						1" Ice	7.57	0.18	0.29
						2" Ice			
HSS2" x 2" x 0.25" x 16'	C	From Face	4.00 0.00 0.00	0.0000	109.00	No Ice	3.20	0.03	0.09
						1/2"	4.28	0.06	0.12
						Ice	5.37	0.09	0.16
						1" Ice	7.57	0.18	0.29
						2" Ice			
level 92 (2) SC 9012 REV2 w/ Mount Pipe	A	From Face	4.00 0.00 -1.00	0.0000	92.00	No Ice	2.91	4.22	0.03
						1/2"	3.25	4.78	0.06
						Ice	3.59	5.35	0.10
						1" Ice	4.29	6.55	0.21
						2" Ice			
(2) LPA-80080-4CF-EDIN-0 w/ Mount Pipe	B	From Face	4.00 0.00 -1.00	0.0000	92.00	No Ice	2.86	6.57	0.03
						1/2"	3.22	7.19	0.08
						Ice	3.59	7.84	0.13
						1" Ice	4.34	9.17	0.25
						2" Ice			
(2) SC 9012 REV2 w/ Mount Pipe	C	From Face	4.00 0.00 -1.00	0.0000	92.00	No Ice	2.91	4.22	0.03
						1/2"	3.25	4.78	0.06
						Ice	3.59	5.35	0.10
						1" Ice	4.29	6.55	0.21
						2" Ice			
(2) SBNHH-1D65B w/ Mount Pipe	A	From Face	4.00 0.00 -1.00	0.0000	92.00	No Ice	8.29	7.00	0.08
						1/2"	8.85	8.19	0.14
						Ice	9.37	9.08	0.22
						1" Ice	10.45	10.90	0.40
						2" Ice			
(2) SBNHH-1D65B w/ Mount Pipe	B	From Face	4.00 0.00 -1.00	0.0000	92.00	No Ice	8.29	7.00	0.08
						1/2"	8.85	8.19	0.14
						Ice	9.37	9.08	0.22
						1" Ice	10.45	10.90	0.40
						2" Ice			
(2) SBNHH-1D65B w/ Mount Pipe	C	From Face	4.00 0.00 -1.00	0.0000	92.00	No Ice	8.29	7.00	0.08
						1/2"	8.85	8.19	0.14
						Ice	9.37	9.08	0.22
						1" Ice	10.45	10.90	0.40
						2" Ice			
B13 RRH 4X30	A	From Face	4.00 0.00 0.00	0.0000	92.00	No Ice	2.06	1.32	0.06
						1/2"	2.24	1.48	0.07
						Ice	2.43	1.64	0.09
						1" Ice	2.84	2.00	0.14
						2" Ice			
B13 RRH 4X30	B	From Face	4.00 0.00 0.00	0.0000	92.00	No Ice	2.06	1.32	0.06
						1/2"	2.24	1.48	0.07
						Ice	2.43	1.64	0.09
						1" Ice	2.84	2.00	0.14
						2" Ice			
B13 RRH 4X30	C	From Face	4.00 0.00 0.00	0.0000	92.00	No Ice	2.06	1.32	0.06
						1/2"	2.24	1.48	0.07
						Ice	2.43	1.64	0.09
						1" Ice	2.84	2.00	0.14
						2" Ice			

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
(4) DB844H90-XY w/ Mount Pipe	B	From Face	4.00 0.00 1.00	0.0000	80.00	No Ice	3.10	4.98	0.03
						1/2" Ice	3.48	5.60	0.07
						Ice	3.85	6.23	0.11
						1" Ice	4.60	7.53	0.22
						2" Ice			
(4) DB844H90-XY w/ Mount Pipe	C	From Face	4.00 0.00 1.00	0.0000	80.00	No Ice	3.10	4.98	0.03
						1/2" Ice	3.48	5.60	0.07
						Ice	3.85	6.23	0.11
						1" Ice	4.60	7.53	0.22
						2" Ice			
Platform Mount [LP 1201-1]	C	None		0.0000	80.00	No Ice	23.10	23.10	2.10
						1/2" Ice	26.80	26.80	2.50
						Ice	30.50	30.50	2.90
						1" Ice	37.90	37.90	3.70
						2" Ice			
level 74 PCS 1900MHz 4x45W-65MHz	A	From Face	2.00 0.00 0.00	0.0000	74.00	No Ice	2.32	2.24	0.06
						1/2" Ice	2.53	2.44	0.08
						Ice	2.74	2.65	0.11
						1" Ice	3.19	3.09	0.17
						2" Ice			
PCS 1900MHz 4x45W-65MHz	B	From Face	2.00 0.00 0.00	0.0000	74.00	No Ice	2.32	2.24	0.06
						1/2" Ice	2.53	2.44	0.08
						Ice	2.74	2.65	0.11
						1" Ice	3.19	3.09	0.17
						2" Ice			
PCS 1900MHz 4x45W-65MHz	C	From Face	2.00 0.00 0.00	0.0000	74.00	No Ice	2.32	2.24	0.06
						1/2" Ice	2.53	2.44	0.08
						Ice	2.74	2.65	0.11
						1" Ice	3.19	3.09	0.17
						2" Ice			
800MHz 2X50W RRH W/FILTER	A	From Face	2.00 0.00 0.00	0.0000	74.00	No Ice	2.06	1.93	0.06
						1/2" Ice	2.24	2.11	0.09
						Ice	2.43	2.29	0.11
						1" Ice	2.83	2.68	0.17
						2" Ice			
800MHz 2X50W RRH W/FILTER	B	From Face	2.00 0.00 0.00	0.0000	74.00	No Ice	2.06	1.93	0.06
						1/2" Ice	2.24	2.11	0.09
						Ice	2.43	2.29	0.11
						1" Ice	2.83	2.68	0.17
						2" Ice			
800MHz 2X50W RRH W/FILTER	C	From Face	2.00 0.00 0.00	0.0000	74.00	No Ice	2.06	1.93	0.06
						1/2" Ice	2.24	2.11	0.09
						Ice	2.43	2.29	0.11
						1" Ice	2.83	2.68	0.17
						2" Ice			
(2) 5x2 1/2" Pipe Mount	A	From Face	2.00 0.00 0.00	0.0000	74.00	No Ice	1.33	1.33	0.03
						1/2" Ice	1.63	1.63	0.04
						Ice	1.95	1.95	0.05
						1" Ice	2.60	2.60	0.09
						2" Ice			
(2) 5x2 1/2" Pipe Mount	B	From Face	2.00 0.00 0.00	0.0000	74.00	No Ice	1.33	1.33	0.03
						1/2" Ice	1.63	1.63	0.04
						Ice	1.95	1.95	0.05
						1" Ice	2.60	2.60	0.09
						2" Ice			
(2) 5x2 1/2" Pipe Mount	C	From Face	2.00 0.00 0.00	0.0000	74.00	No Ice	1.33	1.33	0.03
						1/2" Ice	1.63	1.63	0.04
						Ice	1.95	1.95	0.05
						1" Ice	2.60	2.60	0.09
						2" Ice			
Side Arm Mount [SO 102-3]	C	None		0.0000	74.00	No Ice	3.00	3.00	0.08
						1/2" Ice	3.48	3.48	0.11
						Ice	3.96	3.96	0.14
						1" Ice	4.92	4.92	0.20

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment t	Placement ft	C _A A ₁ Front ft ²	C _A A ₂ Side ft ²	Weight K	
						2" Ice			
level 69 APXV9ERR18-C-A20 w/ Mount Pipe	A	From Face	4.00 0.00 2.00	0.0000	69.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.26 8.82 9.35 10.42	7.47 8.66 9.56 11.39	0.09 0.16 0.24 0.42
APXV9ERR18-C-A20 w/ Mount Pipe	B	From Face	4.00 0.00 2.00	0.0000	69.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.26 8.82 9.35 10.42	7.47 8.66 9.56 11.39	0.09 0.16 0.24 0.42
APXVSP18-C-A20 w/ Mount Pipe	C	From Face	4.00 0.00 2.00	0.0000	69.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.26 8.82 9.35 10.42	6.95 8.13 9.02 10.84	0.08 0.15 0.23 0.41
APXVTM14-C-120 w/ Mount Pipe	A	From Face	4.00 0.00 2.00	0.0000	69.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.58 7.03 7.47 8.38	4.96 5.75 6.47 7.94	0.08 0.13 0.19 0.34
APXVTM14-C-120 w/ Mount Pipe	B	From Face	4.00 0.00 2.00	0.0000	69.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.58 7.03 7.47 8.38	4.96 5.75 6.47 7.94	0.08 0.13 0.19 0.34
APXVTM14-C-120 w/ Mount Pipe	C	From Face	4.00 0.00 2.00	0.0000	69.00	No Ice 1/2" Ice 1" Ice 2" Ice	6.58 7.03 7.47 8.38	4.96 5.75 6.47 7.94	0.08 0.13 0.19 0.34
TD-RRH8x20-25	A	From Face	4.00 0.00 0.00	0.0000	69.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.05 4.30 4.56 5.10	1.53 1.71 1.90 2.29	0.07 0.10 0.13 0.20
TD-RRH8x20-25	B	From Face	4.00 0.00 0.00	0.0000	69.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.05 4.30 4.56 5.10	1.53 1.71 1.90 2.29	0.07 0.10 0.13 0.20
TD-RRH8x20-25	C	From Face	4.00 0.00 0.00	0.0000	69.00	No Ice 1/2" Ice 1" Ice 2" Ice	4.05 4.30 4.56 5.10	1.53 1.71 1.90 2.29	0.07 0.10 0.13 0.20
5' x 2' Pipe Mount	A	From Face	4.00 0.00 2.00	0.0000	69.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.00 1.39 1.70 2.35	1.00 1.39 1.70 2.35	0.03 0.04 0.05 0.08
5' x 2' Pipe Mount	B	From Face	4.00 0.00 2.00	0.0000	69.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.00 1.39 1.70 2.35	1.00 1.39 1.70 2.35	0.03 0.04 0.05 0.08
5' x 2' Pipe Mount	C	From Face	4.00 0.00 2.00	0.0000	69.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.00 1.39 1.70 2.35	1.00 1.39 1.70 2.35	0.03 0.04 0.05 0.08
Platform Mount [LP 1201- 1]	C	None		0.0000	69.00	No Ice 1/2" Ice	23.10 26.80 30.50	23.10 26.80 30.50	2.10 2.50 2.90

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment t °	Placement ft	C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K	
						1" Ice 2" Ice	37.90 37.90	3.70	
level 62									
APX18-206516L	A	From Face	1.00 0.00 0.00	0.0000	62.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.51 3.85 4.19 4.88 3.51	2.00 2.33 2.66 3.34 2.00	0.02 0.04 0.06 0.12 0.02
APX18-206516L	B	From Face	1.00 0.00 0.00	0.0000	62.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.51 3.85 4.19 4.88 3.51	2.00 2.33 2.66 3.34 2.00	0.02 0.04 0.06 0.12 0.02
APX18-206516L	C	From Face	1.00 0.00 0.00	0.0000	62.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.51 3.85 4.19 4.88 3.51	2.00 2.33 2.66 3.34 2.00	0.02 0.04 0.06 0.12 0.02
Pipe Mount [PM 602-3]	C	None		0.0000	62.00	No Ice 1/2" Ice 1" Ice 2" Ice	7.68 9.50 11.32 14.96 7.68	7.68 9.50 11.32 14.96 7.68	0.28 0.35 0.43 0.58 0.28

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
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

Comb. No.	Description
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	109 - 95	Pole	Max Tension	26	0.00	0.00	-0.00
			Max. Compression	26	-15.29	-0.15	0.00
			Max. Mx	8	-5.77	-138.41	0.01
			Max. My	2	-5.77	-0.02	138.41
			Max. Vy	8	9.47	-138.41	0.01
			Max. Vx	2	-9.47	-0.02	138.41
			Max. Torque	22			0.00
L2	95 - 48.08	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-53.02	-2.38	1.78
			Max. Mx	8	-24.46	-953.24	-0.90
			Max. My	2	-24.46	1.13	953.36
			Max. Vy	8	25.21	-953.24	-0.90
			Max. Vx	2	-25.27	1.13	953.36
			Max. Torque	13			1.84
L3	48.08 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-73.36	-2.54	1.77
			Max. Mx	8	-39.54	-2395.06	-2.79
			Max. My	2	-39.54	3.20	2400.52
			Max. Vy	8	29.00	-2395.06	-2.79
			Max. Vx	2	-29.06	3.20	2400.52
			Max. Torque	13			1.84

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	30	73.36	-7.96	-0.01
	Max. H _x	20	39.57	28.97	0.04
	Max. H _z	2	39.57	0.04	29.03
	Max. M _x	2	2400.52	0.04	29.03
	Max. M _z	8	2395.06	-28.97	-0.04
	Max. Torsion	13	1.84	-14.51	-25.15
	Min. Vert	7	29.68	-25.07	14.48
	Min. H _x	8	39.57	-28.97	-0.04
	Min. H _z	14	39.57	-0.04	-29.03
	Min. M _x	14	-2399.60	-0.04	-29.03

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
	Min. M _z	20	-2394.95	28.97	0.04
	Min. Torsion	25	-1.84	14.51	25.15

Tower Mast Reaction Summary

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturing Moment, M _x kip-ft	Overturing Moment, M _z kip-ft	Torque kip-ft
Dead Only	32.98	0.00	0.00	-0.37	-0.04	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	39.57	-0.04	-29.03	-2400.52	3.20	1.55
0.9 Dead+1.0 Wind 0 deg - No Ice	29.68	-0.04	-29.03	-2381.52	3.19	1.55
1.2 Dead+1.0 Wind 30 deg - No Ice	39.57	14.45	-25.12	-2077.36	-1194.74	0.85
0.9 Dead+1.0 Wind 30 deg - No Ice	29.68	14.45	-25.12	-2060.90	-1185.33	0.85
1.2 Dead+1.0 Wind 60 deg - No Ice	39.57	25.07	-14.48	-1197.68	-2072.57	-0.08
0.9 Dead+1.0 Wind 60 deg - No Ice	29.68	25.07	-14.48	-1188.15	-2056.25	-0.08
1.2 Dead+1.0 Wind 90 deg - No Ice	39.57	28.97	0.04	2.79	-2395.06	-0.99
0.9 Dead+1.0 Wind 90 deg - No Ice	29.68	28.97	0.04	2.88	-2376.20	-0.99
1.2 Dead+1.0 Wind 120 deg - No Ice	39.57	25.10	14.54	1202.39	-2075.81	-1.63
0.9 Dead+1.0 Wind 120 deg - No Ice	29.68	25.10	14.54	1193.04	-2059.46	-1.64
1.2 Dead+1.0 Wind 150 deg - No Ice	39.57	14.51	25.15	2079.68	-1200.36	-1.84
0.9 Dead+1.0 Wind 150 deg - No Ice	29.68	14.51	25.15	2063.43	-1190.90	-1.84
1.2 Dead+1.0 Wind 180 deg - No Ice	39.57	0.04	29.03	2399.60	-3.30	-1.55
0.9 Dead+1.0 Wind 180 deg - No Ice	29.68	0.04	29.03	2380.84	-3.26	-1.55
1.2 Dead+1.0 Wind 210 deg - No Ice	39.57	-14.45	25.12	2076.43	1194.64	-0.85
0.9 Dead+1.0 Wind 210 deg - No Ice	29.68	-14.45	25.12	2060.21	1185.25	-0.85
1.2 Dead+1.0 Wind 240 deg - No Ice	39.57	-25.07	14.48	1196.76	2072.46	0.08
0.9 Dead+1.0 Wind 240 deg - No Ice	29.68	-25.07	14.48	1187.46	2056.17	0.08
1.2 Dead+1.0 Wind 270 deg - No Ice	39.57	-28.97	-0.04	-3.71	2394.95	0.99
0.9 Dead+1.0 Wind 270 deg - No Ice	29.68	-28.97	-0.04	-3.56	2376.12	0.99
1.2 Dead+1.0 Wind 300 deg - No Ice	39.57	-25.10	-14.54	-1203.30	2075.70	1.63
0.9 Dead+1.0 Wind 300 deg - No Ice	29.68	-25.10	-14.54	-1193.72	2059.38	1.64
1.2 Dead+1.0 Wind 330 deg - No Ice	39.57	-14.51	-25.15	-2080.59	1200.26	1.84
0.9 Dead+1.0 Wind 330 deg - No Ice	29.68	-14.51	-25.15	-2064.11	1190.83	1.84
1.2 Dead+1.0 Ice+1.0 Temp	73.36	0.00	-0.00	-1.77	-2.54	-0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	73.36	-0.01	-7.97	-667.97	-2.08	0.32
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	73.36	3.97	-6.90	-578.43	-334.74	0.18
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	73.36	6.89	-3.98	-334.40	-578.43	-0.01

Load Combination	Vertical	Shear _x	Shear _z	Overturning Moment, M _x	Overturning Moment, M _z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	73.36	7.96	0.01	-1.27	-667.84	-0.20
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	73.36	6.89	3.99	331.70	-579.03	-0.34
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	73.36	3.98	6.90	575.29	-335.78	-0.38
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	73.36	0.01	7.97	664.23	-3.27	-0.32
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	73.36	-3.97	6.90	574.69	329.39	-0.18
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	73.36	-6.89	3.98	330.66	573.08	0.01
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	73.36	-7.96	-0.01	-2.47	662.49	0.20
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	73.36	-6.89	-3.99	-335.44	573.67	0.34
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	73.36	-3.98	-6.90	-579.03	330.42	0.38
Dead+Wind 0 deg - Service	32.98	-0.01	-6.49	-534.77	0.68	0.35
Dead+Wind 30 deg - Service	32.98	3.23	-5.62	-462.81	-266.05	0.19
Dead+Wind 60 deg - Service	32.98	5.61	-3.24	-266.95	-461.50	-0.02
Dead+Wind 90 deg - Service	32.98	6.48	0.01	0.34	-533.31	-0.22
Dead+Wind 120 deg - Service	32.98	5.62	3.25	267.44	-462.22	-0.37
Dead+Wind 150 deg - Service	32.98	3.25	5.63	462.77	-267.30	-0.41
Dead+Wind 180 deg - Service	32.98	0.01	6.49	534.00	-0.77	-0.35
Dead+Wind 210 deg - Service	32.98	-3.23	5.62	462.05	265.96	-0.19
Dead+Wind 240 deg - Service	32.98	-5.61	3.24	266.18	461.41	0.02
Dead+Wind 270 deg - Service	32.98	-6.48	-0.01	-1.11	533.21	0.22
Dead+Wind 300 deg - Service	32.98	-5.62	-3.25	-268.20	462.13	0.37
Dead+Wind 330 deg - Service	32.98	-3.25	-5.63	-463.54	267.21	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	-32.98	0.00	0.00	32.98	0.00	0.000%
2	-0.04	-39.57	-29.03	0.04	39.57	29.03	0.000%
3	-0.04	-29.68	-29.03	0.04	29.68	29.03	0.000%
4	14.45	-39.57	-25.12	-14.45	39.57	25.12	0.000%
5	14.45	-29.68	-25.12	-14.45	29.68	25.12	0.000%
6	25.07	-39.57	-14.48	-25.07	39.57	14.48	0.000%
7	25.07	-29.68	-14.48	-25.07	29.68	14.48	0.000%
8	28.97	-39.57	0.04	-28.97	39.57	-0.04	0.000%
9	28.97	-29.68	0.04	-28.97	29.68	-0.04	0.000%
10	25.10	-39.57	14.54	-25.10	39.57	-14.54	0.000%
11	25.10	-29.68	14.54	-25.10	29.68	-14.54	0.000%
12	14.51	-39.57	25.15	-14.51	39.57	-25.15	0.000%
13	14.51	-29.68	25.15	-14.51	29.68	-25.15	0.000%
14	0.04	-39.57	29.03	-0.04	39.57	-29.03	0.000%
15	0.04	-29.68	29.03	-0.04	29.68	-29.03	0.000%
16	-14.45	-39.57	25.12	14.45	39.57	-25.12	0.000%
17	-14.45	-29.68	25.12	14.45	29.68	-25.12	0.000%
18	-25.07	-39.57	14.48	25.07	39.57	-14.48	0.000%
19	-25.07	-29.68	14.48	25.07	29.68	-14.48	0.000%
20	-28.97	-39.57	-0.04	28.97	39.57	0.04	0.000%
21	-28.97	-29.68	-0.04	28.97	29.68	0.04	0.000%
22	-25.10	-39.57	-14.54	25.10	39.57	14.54	0.000%

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
23	-25.10	-29.68	-14.54	25.10	29.68	14.54	0.000%
24	-14.51	-39.57	-25.15	14.51	39.57	25.15	0.000%
25	-14.51	-29.68	-25.15	14.51	29.68	25.15	0.000%
26	0.00	-73.36	0.00	-0.00	73.36	0.00	0.000%
27	-0.01	-73.36	-7.97	0.01	73.36	7.97	0.000%
28	3.97	-73.36	-6.90	-3.97	73.36	6.90	0.000%
29	6.89	-73.36	-3.98	-6.89	73.36	3.98	0.000%
30	7.96	-73.36	0.01	-7.96	73.36	-0.01	0.000%
31	6.89	-73.36	3.99	-6.89	73.36	-3.99	0.000%
32	3.98	-73.36	6.90	-3.98	73.36	-6.90	0.000%
33	0.01	-73.36	7.97	-0.01	73.36	-7.97	0.000%
34	-3.97	-73.36	6.90	3.97	73.36	-6.90	0.000%
35	-6.89	-73.36	3.98	6.89	73.36	-3.98	0.000%
36	-7.96	-73.36	-0.01	7.96	73.36	0.01	0.000%
37	-6.89	-73.36	-3.99	6.89	73.36	3.99	0.000%
38	-3.98	-73.36	-6.90	3.98	73.36	6.90	0.000%
39	-0.01	-32.98	-6.49	0.01	32.98	6.49	0.000%
40	3.23	-32.98	-5.62	-3.23	32.98	5.62	0.000%
41	5.61	-32.98	-3.24	-5.61	32.98	3.24	0.000%
42	6.48	-32.98	0.01	-6.48	32.98	-0.01	0.000%
43	5.62	-32.98	3.25	-5.62	32.98	-3.25	0.000%
44	3.25	-32.98	5.63	-3.25	32.98	-5.63	0.000%
45	0.01	-32.98	6.49	-0.01	32.98	-6.49	0.000%
46	-3.23	-32.98	5.62	3.23	32.98	-5.62	0.000%
47	-5.61	-32.98	3.24	5.61	32.98	-3.24	0.000%
48	-6.48	-32.98	-0.01	6.48	32.98	0.01	0.000%
49	-5.62	-32.98	-3.25	5.62	32.98	3.25	0.000%
50	-3.25	-32.98	-5.63	3.25	32.98	5.63	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	0.00065247
3	Yes	4	0.00000001	0.00041686
4	Yes	5	0.00000001	0.00028744
5	Yes	5	0.00000001	0.00012950
6	Yes	5	0.00000001	0.00028009
7	Yes	5	0.00000001	0.00012595
8	Yes	4	0.00000001	0.00039656
9	Yes	4	0.00000001	0.00025177
10	Yes	5	0.00000001	0.00026847
11	Yes	5	0.00000001	0.00012026
12	Yes	5	0.00000001	0.00029777
13	Yes	5	0.00000001	0.00013445
14	Yes	4	0.00000001	0.00070313
15	Yes	4	0.00000001	0.00044879
16	Yes	5	0.00000001	0.00027199
17	Yes	5	0.00000001	0.00012211
18	Yes	5	0.00000001	0.00027864
19	Yes	5	0.00000001	0.00012536
20	Yes	4	0.00000001	0.00044706
21	Yes	4	0.00000001	0.00028367
22	Yes	5	0.00000001	0.00029568
23	Yes	5	0.00000001	0.00013343
24	Yes	5	0.00000001	0.00026706
25	Yes	5	0.00000001	0.00011953
26	Yes	4	0.00000001	0.00001331
27	Yes	5	0.00000001	0.00013436
28	Yes	5	0.00000001	0.00017581
29	Yes	5	0.00000001	0.00017487
30	Yes	5	0.00000001	0.00013419
31	Yes	5	0.00000001	0.00017192
32	Yes	5	0.00000001	0.00017530
33	Yes	5	0.00000001	0.00013297
34	Yes	5	0.00000001	0.00016905
35	Yes	5	0.00000001	0.00016964
36	Yes	5	0.00000001	0.00013221
37	Yes	5	0.00000001	0.00017397
38	Yes	5	0.00000001	0.00017094
39	Yes	4	0.00000001	0.00004108
40	Yes	4	0.00000001	0.00012585
41	Yes	4	0.00000001	0.00011481
42	Yes	4	0.00000001	0.00002715
43	Yes	4	0.00000001	0.00010255
44	Yes	4	0.00000001	0.00014140
45	Yes	4	0.00000001	0.00004160
46	Yes	4	0.00000001	0.00010507
47	Yes	4	0.00000001	0.00011259
48	Yes	4	0.00000001	0.00002769
49	Yes	4	0.00000001	0.00013772
50	Yes	4	0.00000001	0.00010228

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	109 - 95	11.068	50	0.8505	0.0023
L2	95 - 48.08	8.636	50	0.7962	0.0023
L3	53 - 0	2.801	50	0.4840	0.0007

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
111.00	Lighting Rod 3/4" x 4'	50	11.068	0.8505	0.0023	36382
109.00	800 10121 w/ Mount Pipe	50	11.068	0.8505	0.0023	36382
92.00	(2) SC 9012 REV2 w/ Mount Pipe	50	8.132	0.7811	0.0022	11592
80.00	(4) DB844H90-XY w/ Mount Pipe	50	6.220	0.7064	0.0019	8051
74.00	PCS 1900MHz 4x45W-65MHz	50	5.340	0.6619	0.0016	6984
69.00	APXV9ERR18-C-A20 w/ Mount Pipe	50	4.653	0.6221	0.0014	6290
62.00	APX18-206516L	50	3.773	0.5632	0.0011	5521

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	109 - 95	49.696	24	3.8214	0.0101
L2	95 - 48.08	38.781	24	3.5774	0.0101
L3	53 - 0	12.579	24	2.1749	0.0032

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
111.00	Lighting Rod 3/4" x 4'	24	49.696	3.8214	0.0101	8198
109.00	800 10121 w/ Mount Pipe	24	49.696	3.8214	0.0101	8198
92.00	(2) SC 9012 REV2 w/ Mount Pipe	24	36.518	3.5098	0.0099	2608
80.00	(4) DB844H90-XY w/ Mount Pipe	24	27.932	3.1742	0.0083	1804
74.00	PCS 1900MHz 4x45W-65MHz	24	23.981	2.9744	0.0072	1563
69.00	APXV9ERR18-C-A20 w/ Mount Pipe	24	20.899	2.7954	0.0063	1407
62.00	APX18-206516L	24	16.948	2.5306	0.0049	1233

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	K/lr	A in ²	P _u K	φP _n K	Ratio P _u / φP _n
L1	109 - 95 (1)	TP26.715x23.476x0.1875	14.00	0.00	0.0	15.787	-5.77	1036.38	0.006
L2	95 - 48.08 (2)	TP37.573x26.715x0.3125	46.92	0.00	0.0	35.828	-24.46	2524.85	0.010
L3	48.08 - 0 (3)	TP48.075x35.8094x0.375	53.00	0.00	0.0	56.774	-39.54	3878.16	0.010

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux}	ϕM_{nx}	Ratio	M_{uy}	ϕM_{ny}	Ratio
			kip-ft	kip-ft	$\frac{M_{ux}}{\phi M_{nx}}$	kip-ft	kip-ft	$\frac{M_{uy}}{\phi M_{ny}}$
L1	109 - 95 (1)	TP26.715x23.476x0.1875	138.41	565.78	0.245	0.00	565.78	0.000
L2	95 - 48.08 (2)	TP37.573x26.715x0.3125	955.88	1873.95	0.510	0.00	1873.95	0.000
L3	48.08 - 0 (3)	TP48.075x35.8094x0.375	2401.97	3803.96	0.631	0.00	3803.96	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u	ϕV_n	Ratio	Actual T_u	ϕT_n	Ratio
			K	K	$\frac{V_u}{\phi V_n}$	kip-ft	kip-ft	$\frac{T_u}{\phi T_n}$
L1	109 - 95 (1)	TP26.715x23.476x0.1875	9.47	277.07	0.034	0.00	634.60	0.000
L2	95 - 48.08 (2)	TP37.573x26.715x0.3125	25.28	628.79	0.040	1.84	1954.83	0.001
L3	48.08 - 0 (3)	TP48.075x35.8094x0.375	29.08	996.40	0.029	1.84	4097.10	0.000

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
		$\frac{P_u}{\phi P_n}$	$\frac{M_{ux}}{\phi M_{nx}}$	$\frac{M_{uy}}{\phi M_{ny}}$	$\frac{V_u}{\phi V_n}$	$\frac{T_u}{\phi T_n}$			
L1	109 - 95 (1)	0.006	0.245	0.000	0.034	0.000	0.251	1.050	4.8.2 ✓
L2	95 - 48.08 (2)	0.010	0.510	0.000	0.040	0.001	0.521	1.050	4.8.2 ✓
L3	48.08 - 0 (3)	0.010	0.631	0.000	0.029	0.000	0.643	1.050	4.8.2 ✓

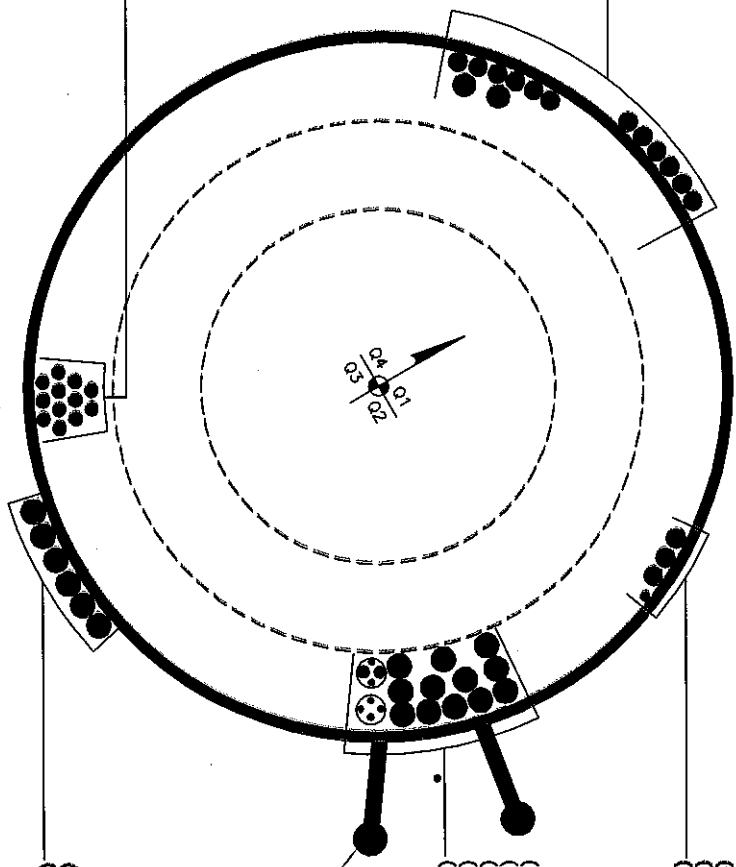
Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	109 - 95	Pole	TP26.715x23.476x0.1875	1	-5.77	1088.20	23.9	Pass
L2	95 - 48.08	Pole	TP37.573x26.715x0.3125	2	-24.46	2651.09	49.7	Pass
L3	48.08 - 0	Pole	TP48.075x35.8094x0.375	3	-39.54	4072.07	61.2	Pass
Summary								
Pole (L3)							61.2	Pass
RATING =							61.2	Pass

APPENDIX B
BASE LEVEL DRAWING



(OTHER CONSIDERED EQUIPMENT)
 (12) 1-1/4" TO 92 FT LEVEL
 (2) 1-1/2" TO 92 FT LEVEL



(OTHER CONSIDERED EQUIPMENT)
 (1) 5/8" TO 69 FT LEVEL
 (3) 1-1/4" TO 69 FT LEVEL

(PROPOSED EQUIPMENT CONFIGURATION)
 (2) 3/8" TO 109 FT LEVEL
 (6) 3/4" TO 109 FT LEVEL
 (12) 1-5/8" TO 109 FT LEVEL
 (2) 2" CONDUIT TO 109 FT LEVEL

CLIMBING PEGS
 W/ SAFETY CLIMB

(OTHER CONSIDERED EQUIPMENT)
 (6) 1-5/8" TO 62 FT LEVEL

(OTHER CONSIDERED EQUIPMENT)
 (12) 7/8" TO 80 FT LEVEL

LEGEND KEY

●	EXISTING EQUIPMENT
○	NEW EQUIPMENT
○	CONSIDERED EQUIPMENT
○	PROPOSED EQUIPMENT
○	UNINSTALLED EQUIPMENT
○	CONSIDERED EQUIPMENT
○	CONSIDERED EQUIPMENT

BASE LEVEL DRAWING

BUSINESS UNIT ADDRESS TOWER B, CLEVELAND

1

CROWN REGION ADDRESS
 USA

12/12/18	UPDATED PER WORK ORDER 1870007
10/26/18	UPDATED PER WORK ORDER 1862819
03/24/18	UPDATED PER WORK ORDER 1842131
20/11/17	UPDATED PER WORK ORDER 1820115
15/11/17	UPDATED PER WORK ORDER 1818061
13/10/2016	UPDATED PER WORK ORDER 1818061
12/16/2014	UPDATED PER WORK ORDER 1803326
07/03/16	UPDATED PER WORK ORDER 1803326
03/12/12	UPDATED PER WORK ORDER 1803326

DRAWN BY: CPR
 CHECKED BY: []
 DRAWING DATE: 17/03/08

SITE NUMBER: []
 SITE NAME: []
 CT SITEFIELD 2 CAC RICHMS []
 BUSINESS UNIT NUMBER: []
 881488 []

SITE ADDRESS: []
 41711 CHARGE []
 50000000 []
 HARTFORD COUNTY []
 USA []

SHEET TITLE: []
BASE LEVEL
 SHEET NUMBER: []

A1-0

APPENDIX C
ADDITIONAL CALCULATIONS

Monopole Flange Plate Connection

Elevation = 95 ft.

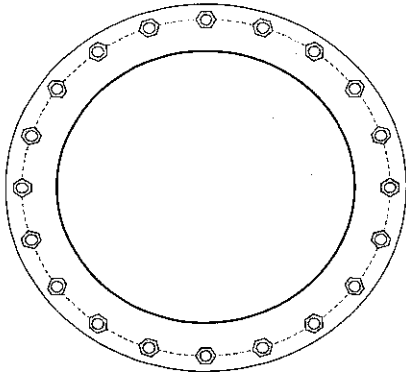


BU #	801486
Site Name	CT SUFFIELD 2 CAC 80
Order #	472236 Rev.0
TIA-222 Revision	H

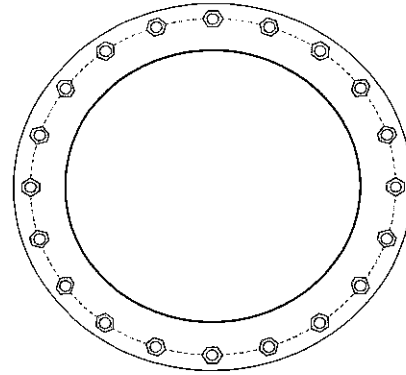
Applied Loads	
Moment (kip-ft)	138.41
Axial Force (kips)	5.77
Shear Force (kips)	9.47

*TIA-222-H Section 15.5 Applied

Top Plate - External



Bottom Plate - External



Connection Properties

Bolt Data

(20) 1" ϕ bolts (A325 X; Fy=92 ksi, Fu=120 ksi) on 33" BC

Top Plate Data

36" OD x 2.25" Plate (A633 Gr. E; Fy=60 ksi, Fu=75 ksi)

Bottom Plate Data

36" OD x 2.25" Plate (A633 Gr. E; Fy=60 ksi, Fu=75 ksi)

Top Stiffener Data

N/A

Bottom Stiffener Data

N/A

Top Pole Data

26.715" x 0.1875" 18-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)

Bottom Pole Data

26.715" x 0.3125" 18-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	9.77
Allowable (kips)	54.54
Stress Rating:	17.1% Pass

Top Plate Capacity

Max Stress (ksi):	3.47	(Flexural)
Allowable Stress (ksi):	54.00	
Stress Rating:	6.1%	Pass
Tension Side Stress Rating:	3.9%	Pass

Bottom Plate Capacity

Max Stress (ksi):	3.47	(Flexural)
Allowable Stress (ksi):	54.00	
Stress Rating:	6.1%	Pass
Tension Side Stress Rating:	3.9%	Pass

Monopole Base Plate Connection

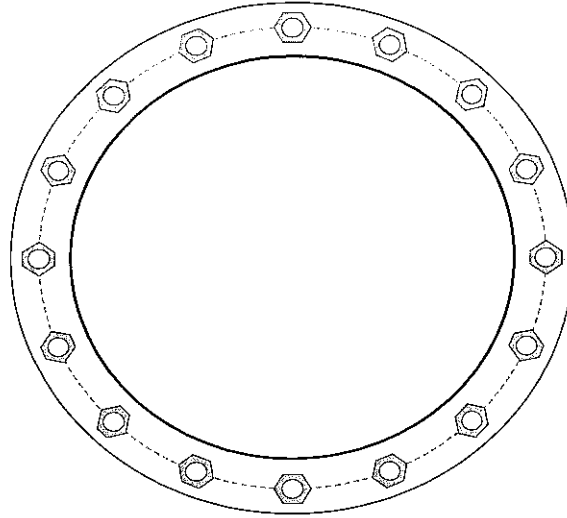


Site Info	
BU #	801486
Site Name	CT SUFFIELD 2 CAC 80
Order #	472236 Rev.0

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
l_{ar} (in)	0.75

Applied Loads	
Moment (kip-ft)	2401.98
Axial Force (kips)	39.54
Shear Force (kips)	29.08

*TIA-222-H Section 15.5 Applied



Connection Properties		Analysis Results		
Anchor Rod Data		Anchor Rod Summary <i>(units of kips, kip-in)</i>		
(16) 2-1/4" ϕ bolts (A615-75 N; Fy=75 ksi, Fu=100 ksi) on 55" BC		Pu_c = 133.4	$\phi Pn_c = 243.75$	Stress Rating
Base Plate Data		Vu = 1.82	$\phi Vn = 73.13$	52.2%
61" OD x 2.75" Plate (A633 Gr. E; Fy=60 ksi, Fu=75 ksi)		Mu = n/a	$\phi Mn = n/a$	Pass
Stiffener Data		Base Plate Summary		
N/A		Max Stress (ksi):	15.84	(Flexural)
Pole Data		Allowable Stress (ksi):	54	
48.075" x 0.375" 18-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)		Stress Rating:	27.9%	Pass

Pier and Pad Foundation



BU #: 801486
 Site Name: CT SUFFIELD 2 C.
 App. Number: 472236 Rev.0

TIA-222 Revision: H
 Tower Type: Monopole

Top & Bot. Pad Rein. Different?:
 Block Foundation?:

Superstructure Analysis Reactions		
Compression, P_{comp} :	39.54	kips
Base Shear, V_{u_comp} :	29.08	kips
Moment, M_u :	2401.98	ft-kips
Tower Height, H:	109	ft
BP Dist. Above Fdn, bp_{dist} :	0	in

Foundation Analysis Checks				
	Capacity	Demand	Rating*	Check
<i>Lateral (Sliding) (kips)</i>	734.84	29.08	3.8%	Pass
<i>Bearing Pressure (ksf)</i>	6.00	1.71	27.2%	Pass
<i>Overturning (kip*ft)</i>	6396.69	2605.54	40.7%	Pass
<i>Pier Flexure (Comp.) (kip*ft)</i>	4649.06	2532.84	51.9%	Pass
<i>Pier Compression (kip)</i>	15840.27	66.42	0.4%	Pass
<i>Pad Flexure (kip*ft)</i>	2373.87	910.89	36.5%	Pass
<i>Pad Shear - 1-way (kips)</i>	635.91	139.15	20.8%	Pass
<i>Pad Shear - 2-way (Comp) (ksi)</i>	0.164	0.041	23.9%	Pass
<i>Flexural 2-way (Comp) (kip*ft)</i>	2507.27	1519.70	57.7%	Pass

Pier Properties		
Pier Shape:	Circular	
Pier Diameter, $dpier$:	6.5	ft
Ext. Above Grade, E:	0.5	ft
Pier Rebar Size, Sc :	9	
Pier Rebar Quantity, mc :	32	
Pier Tie/Spiral Size, St :	5	
Pier Tie/Spiral Quantity, mt :	9	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier} :	3	in

Pad Properties		
Depth, D:	6.5	ft
Pad Width, W:	26	ft
Pad Thickness, T:	2.5	ft
Pad Rebar Size (Bottom), Sp :	9	
Pad Rebar Quantity (Bottom), mp :	22	
Pad Clear Cover, cc_{pad} :	3.5	in

Material Properties		
Rebar Grade, F_y :	60000	psi
Concrete Compressive Strength, F'_c :	3000	psi
Dry Concrete Density, δ_c :	150	pcf

Soil Properties		
Total Soil Unit Weight, γ :	120	pcf
Ultimate Gross Bearing, Q_{ult} :	8.000	ksf
Cohesion, C_u :	1.150	ksf
Friction Angle, ϕ :	0	degrees
SPT Blow Count, N_{blows} :	32	
Base Friction, μ :		
Neglected Depth, N:	3.33	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, gw :	16	ft

*Rating per TIA-222-H Section 15.5

Soil Rating*:	40.7%
Structural Rating*:	57.7%

<--Toggle between Gross and Net

Date: December 18, 2018

Charles McGuirt
Crown Castle
3 Corporate Dr., St 101
Clifton Park, NY 12065

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Infinigy Engineering, PLLC
1033 Watervliet Shaker Road
Albany, NY 12205
518-690-0790
structural@infinigy.com

Subject: Mount Analysis Report

Carrier Designation: AT&T Upgrade
Carrier Site Number: CTL01138
Carrier Site Name: Suffield Ffyer RD

Crown Castle Designation: Crown Castle BU Number: 801486
Crown Castle Site Name: CT Suffield 2 CAC 801486
Crown Castle JDE Job Number: 549069
Crown Castle Order Number: 472236, Rev. 0

Engineering Firm Designation: Infinigy Report Designation: 1039-A0002-B

Site Data: 44 Ffyer Place, Suffield, Hartford County, CT 06078
Latitude 41°58'49.70" Longitude -72°39'26.20"

Structure Information: Tower Height & Type: 109.0 ft Monopole
Mount Elevation: 109.0 ft
Mount Type: 14 ft Platform

Dear Charles McGuirt,

Infinigy is pleased to submit this "Mount Analysis Report" to determine the structural integrity of AT&T's antenna mounting system with the proposed appurtenance and equipment addition on the abovementioned 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:

14 ft Platform (typical)

Sufficient

The analysis has been performed in accordance with the TIA-222-H Standard. This analysis utilizes an ultimate 3-second gust wind speed of 121 mph from the 2015 International Building Code and 2018 Connecticut Building Code. Exposure Category C with a maximum topographic factor, Kzt, of 1.0 and Risk Category II was/were used in this analysis.

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

Mount analysis prepared by: Christopher Kudlacic

Respectfully Submitted by:

Joe Johnston, P.E.
VP Structural Engineering / Principal

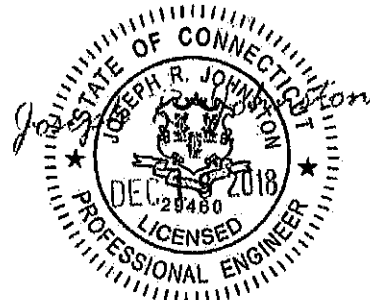


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1) INTRODUCTION

This mount is an existing standoff mapped in a TIA inspection dated March 24, 2016. This mount is installed at the 162 ft elevation on 3 sector(s) of the 177.5 ft Self Supporting Tower.

2) ANALYSIS CRITERIA

Building Code: 2015 IBC
 TIA-222 Revision: TIA-222-H
 Risk Category: II
 Ultimate Wind Speed: 121 mph
 Exposure Category: C
 Topographic Factor at Base: 1.0
 Topographic Factor at Mount: 1.0
 Ice Thickness: 1.7 in
 Wind Speed with Ice: 50 mph
 Live Loading Wind Speed: 30 mph
 Man Live Load at Mount Pipes: 500 lb

Table 1 - Final Equipment Configuration

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
109.0	111.0	3	CCI	HPA65R-BU8A	Platform
		3	CCI	HPA-65R-BUU-H8	
		3	Kathrein	80010966	
		3	Kathrein	80010121	
		3	Ericsson	Radio 4415 B30	
		3	Ericsson	RRUS 4449 B5/B12	
		3	Ericsson	RRUS 8843 B2/B66A	
		6	Powerwave	TT19-08BP111-001	
		3	Raycap	DC6-48-60-18-8F	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Reference	Source
Crown Application	AT&T Application	472236, Rev. 0	CCI Sites
Mount	--	2 ft LPS Mount	FWT
Photos	--	801486	CCI Sites

3.1) Analysis Method

RISA-3D (Version 17.0.0), 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.

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

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 specifications.
- 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) Steel grades have been assumed as follows, unless noted otherwise:

Channel, Solid Round, Angle, Plate	ASTM A36 (GR 36)
HSS (Rectangular)	ASTM A53 (GR 35)
Pipe	ASTM A53 (GR 35)
Connection Bolts	ASTM A325

This analysis may be affected if any assumptions are not valid or have been made in error. Infinigy 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 (14 ft Platform, Typical)

Notes	Component	Critical Member	Centerline (ft)	% Capacity	Pass / Fail
1,2	Standoff	M10	109.0	64.5%	Pass
	Horizontal	M9		69.7%	Pass
	1/2" Bolt	M16		57.0%	Pass
	Mount Pipe	M26		96.5%	Pass

Structure Rating (max from all components) =	96.5%
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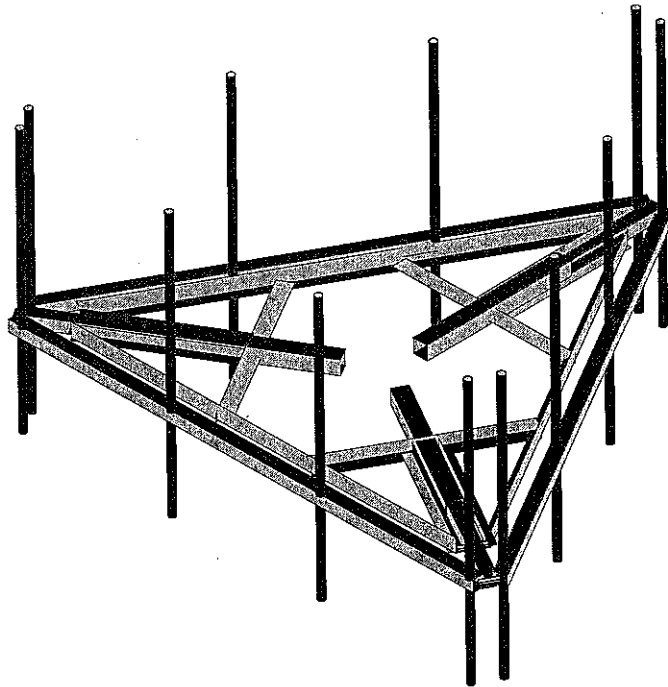
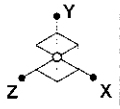
Notes:

- 1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
- 2) All sectors are typical

4.1) Recommendations

Mount was found to be sufficient per code requirement and will no require modification at this time.

APPENDIX A
WIRE FRAME AND RENDERED MODELS



Envelope Only Solution

Infinigy Engineering, PLLC

DVA

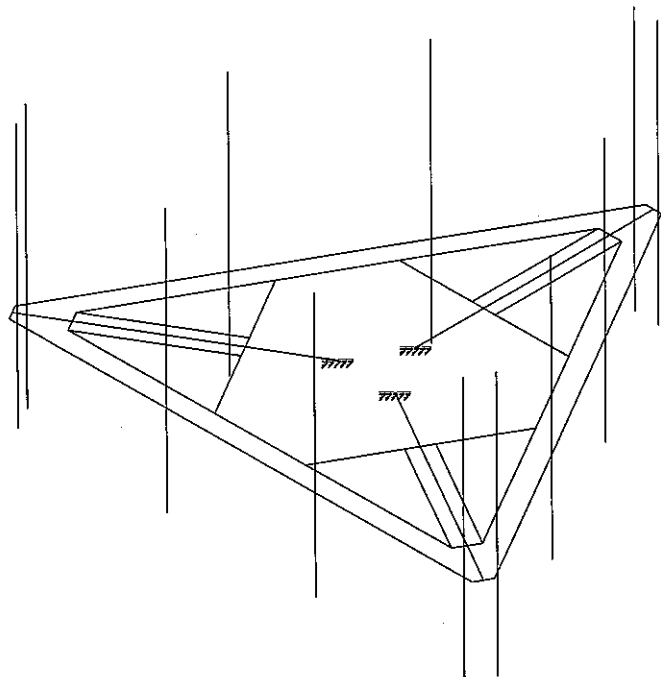
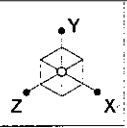
1039-A0002-B

CT Suffield 2 CAC 801486

Final

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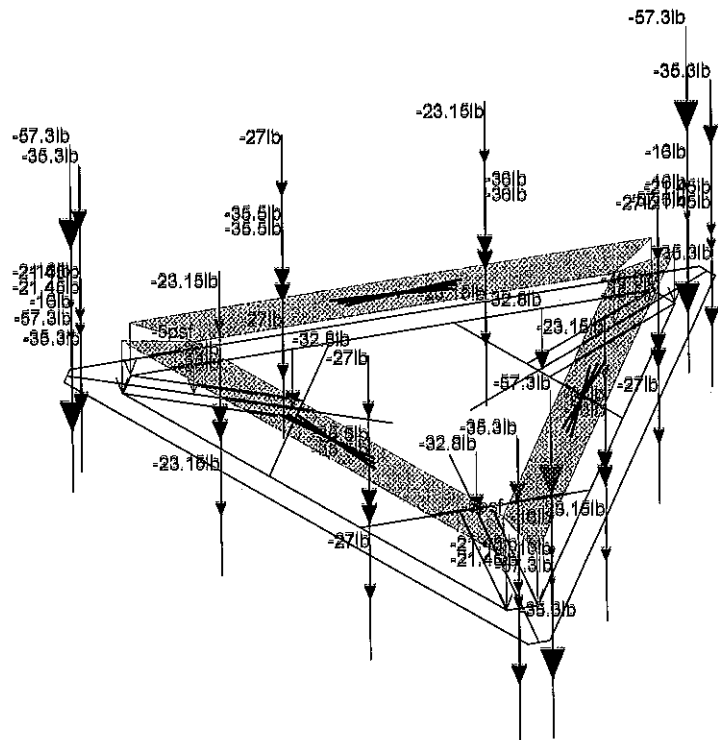
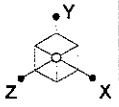


Envelope Only Solution

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DVA
1039-A0002-B

CT Suffield 2 CAC 801486

Wire Frame
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801486.R3D

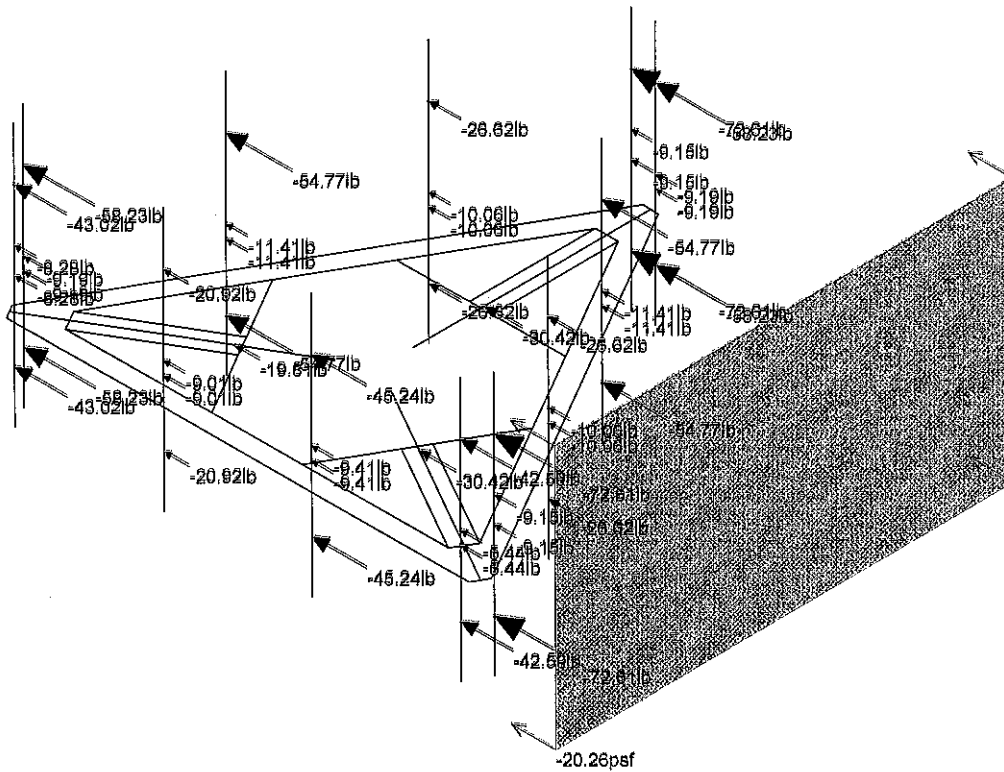
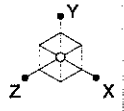


Loads: BLC 1, Self Weight
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1039-A0002-B

CT Suffield 2 CAC 801486

Self Weight
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801486.R3D



Loads: BLC 6, Wind + Ice Load AZI 090
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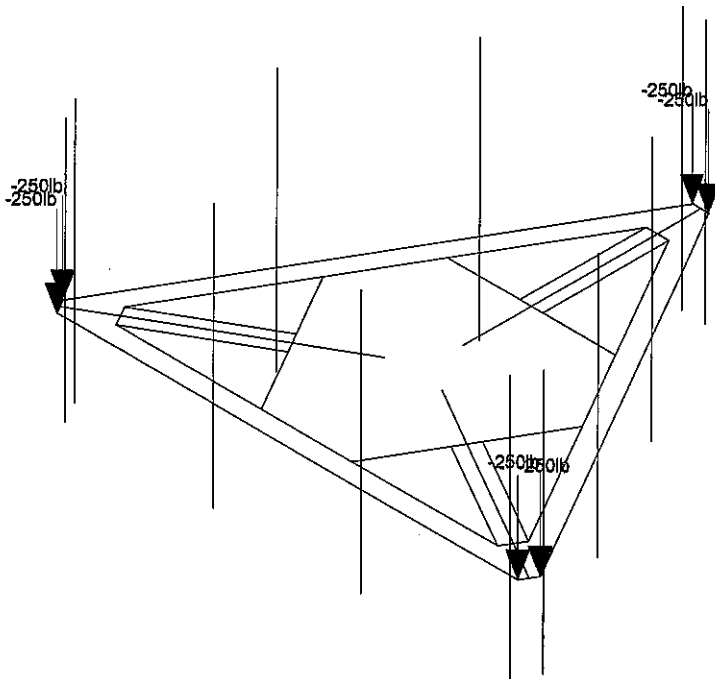
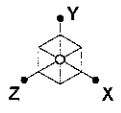
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1039-A0002-B

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090 Ice Wind

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801486.R3D



Loads: BLC 7, Service Live 1

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1039-A0002-B

CT Suffield 2 CAC 801486

Service loads

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801486.R3D

APPENDIX B
SOFTWARE INPUT CALCULATIONS

APPENDIX C
SOFTWARE ANALYSIS OUTPUT

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N5	N1			Frame Rail	Beam	Tube	A500 Gr.B Rect	Typical
2	M2	N4	N2			Frame Rail	Beam	Tube	A500 Gr.B Rect	Typical
3	M3	N3	N6			Frame Rail	Beam	Tube	A500 Gr.B Rect	Typical
4	M4	N1	N2			RIGID	None	None	RIGID	Typical
5	M5	N3	N4			RIGID	None	None	RIGID	Typical
6	M6	N5	N6			RIGID	None	None	RIGID	Typical
7	M7	N17	N27			Frame Angle	Beam	Single Angle	A36 Gr.36	Typical
8	M8	N29	N21			Frame Angle	Beam	Single Angle	A36 Gr.36	Typical
9	M9	N23	N15			Frame Angle	Beam	Single Angle	A36 Gr.36	Typical
10	M10	N75	N8			Externed Arm	Beam	Tube	A500 Gr.B Rect	Typical
11	M11	N74	N10			Externed Arm	Beam	Tube	A500 Gr.B Rect	Typical
12	M12	N11	N73			Externed Arm	Beam	Tube	A500 Gr.B Rect	Typical
13	M13	N17	N15			RIGID	None	None	RIGID	Typical
14	M14	N23	N21			RIGID	None	None	RIGID	Typical
15	M15	N29	N27			RIGID	None	None	RIGID	Typical
16	M16	N14	N13		90	Cross Arm	Beam	Single Angle	A36 Gr.36	Typical
17	M17	N15	N16			Bracing	Beam	Single Angle	A36 Gr.36	Typical
18	M18	N17	N18		270	Bracing	Beam	Single Angle	A36 Gr.36	Typical
19	M19	N20	N19		90	Cross Arm	Beam	Single Angle	A36 Gr.36	Typical
20	M20	N21	N22			Bracing	Beam	Single Angle	A36 Gr.36	Typical
21	M21	N23	N24		270	Bracing	Beam	Single Angle	A36 Gr.36	Typical
22	M22	N26	N25		90	Cross Arm	Beam	Single Angle	A36 Gr.36	Typical
23	M23	N27	N28			Bracing	Beam	Single Angle	A36 Gr.36	Typical
24	M24	N29	N30		270	Bracing	Beam	Single Angle	A36 Gr.36	Typical
25	M25	N31	N32			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
26	M26	N33	N34			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
27	M27	N35	N36			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
28	M28	N37	N38			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
29	M29	N39	N40			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
30	M30	N41	N42			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
31	M31	N43	N44			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
32	M32	N45	N46			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
33	M33	N47	N48			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
34	M34	N49	N50			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
35	M35	N51	N52			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
36	M36	N53	N54			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
37	M37	N73	N12			Arm	Beam	Tube	A500 Gr.B Rect	Typical
38	M38	N74	N9			Arm	Beam	Tube	A500 Gr.B Rect	Typical
39	M39	N75	N7			Arm	Beam	Tube	A500 Gr.B Rect	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[LB]
1	General				
2	RIGID		6	42.9	0
3	Total General		6	42.9	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	L5X3X4	6	601.7	331
7	A36 Gr.36	L3X3X4	6	276	112.7

Material Takeoff (Continued)

	Material	Size	Pieces	Length[in]	Weight[LB]
8	A500 Gr.B Rect	HSS4X4X4	6	606	622.8
9	A500 Gr.B Rect	HSS5X5X4	3	158.2	207.4
10	A53 Gr.B	PIPE 2.0	12	1152	333.2
11	Total HR Steel		33	2793.9	1607.2

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torqu...	Kyy	Kzz	Cb	Function
1	M1	Frame Rail	168			Lbyy						Lateral
2	M2	Frame Rail	168			Lbyy						Lateral
3	M3	Frame Rail	168			Lbyy						Lateral
4	M7	Frame Angle	139.132			Lbyy						Lateral
5	M8	Frame Angle	139.132			Lbyy						Lateral
6	M9	Frame Angle	139.132			Lbyy						Lateral
7	M10	Externed Arm	52.727			Lbyy						Lateral
8	M11	Externed Arm	52.727			Lbyy						Lateral
9	M12	Externed Arm	52.727			Lbyy						Lateral
10	M16	Cross Arm	61.426			Lbyy						Lateral
11	M17	Bracing	46			Lbyy						Lateral
12	M18	Bracing	46			Lbyy						Lateral
13	M19	Cross Arm	61.426			Lbyy						Lateral
14	M20	Bracing	46			Lbyy						Lateral
15	M21	Bracing	46			Lbyy						Lateral
16	M22	Cross Arm	61.426			Lbyy						Lateral
17	M23	Bracing	46			Lbyy						Lateral
18	M24	Bracing	46			Lbyy						Lateral
19	M25	Mount Pipe	96			Lbyy						Lateral
20	M26	Mount Pipe	96			Lbyy						Lateral
21	M27	Mount Pipe	96			Lbyy						Lateral
22	M28	Mount Pipe	96			Lbyy						Lateral
23	M29	Mount Pipe	96			Lbyy						Lateral
24	M30	Mount Pipe	96			Lbyy						Lateral
25	M31	Mount Pipe	96			Lbyy						Lateral
26	M32	Mount Pipe	96			Lbyy						Lateral
27	M33	Mount Pipe	96			Lbyy						Lateral
28	M34	Mount Pipe	96			Lbyy						Lateral
29	M35	Mount Pipe	96			Lbyy						Lateral
30	M36	Mount Pipe	96			Lbyy						Lateral
31	M37	Arm	34			Lbyy						Lateral
32	M38	Arm	34			Lbyy						Lateral
33	M39	Arm	34			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				None
3	M3						Yes				None
4	M4						Yes	** NA **			None
5	M5						Yes	** NA **			None
6	M6						Yes	** NA **			None



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 Designer : DVA
 Job Number : 1039-A0002-B
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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...
7	M7						Yes				None
8	M8						Yes				None
9	M9						Yes				None
10	M10						Yes				None
11	M11						Yes				None
12	M12						Yes				None
13	M13						Yes	** NA **			None
14	M14						Yes	** NA **			None
15	M15						Yes	** NA **			None
16	M16						Yes				None
17	M17						Yes				None
18	M18						Yes				None
19	M19						Yes				None
20	M20						Yes				None
21	M21						Yes				None
22	M22						Yes				None
23	M23						Yes				None
24	M24						Yes				None
25	M25						Yes	** NA **			None
26	M26						Yes	** NA **			None
27	M27						Yes	** NA **			None
28	M28						Yes	** NA **			None
29	M29						Yes	** NA **			None
30	M30						Yes	** NA **			None
31	M31						Yes	** NA **			None
32	M32						Yes	** NA **			None
33	M33						Yes	** NA **			None
34	M34						Yes	** NA **			None
35	M35						Yes	** NA **			None
36	M36						Yes	** NA **			None
37	M37						Yes				None
38	M38						Yes				None
39	M39						Yes				None

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Bracing	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031
2	Cross Arm	L5X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.94	1.41	5.09	.044
3	Frame Angle	L5X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.94	1.41	5.09	.044
4	Externed Arm	HSS5X5X4	Beam	Tube	A500 Gr...	Typical	4.3	16	16	25.8
5	Arm	HSS4X4X4	Beam	Tube	A500 Gr...	Typical	3.37	7.8	7.8	12.8
6	Frame Rail	HSS4X4X4	Beam	Tube	A500 Gr...	Typical	3.37	7.8	7.8	12.8
7	Mount Pipe	PIPE 2.0	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut..	Area(M...	Surface...
1	Self Weight	DL		-1			51		3	
2	Wind Load AZI 000	WLZ					51		1	
3	Wind Load AZI 090	WLX					51		1	



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Load Combinations (Continued)

	Description	So..P...	S...	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor			
38	1.2D + 1.0Di + 1.0Wi AZI 330	Yes	Y	DL	1.2	OL1	1	OL2	.866	OL3	-.5				
39	1.2D + 1.5L + 1.0WL (30 mph) AZI 000	Yes	Y	DL	1.2	LL	1.5	WLZ	.062						
40	1.2D + 1.5L + 1.0WL (30 mph) AZI 030	Yes	Y	DL	1.2	LL	1.5	WLZ	.054	WLX	.031				
41	1.2D + 1.5L + 1.0WL (30 mph) AZI 060	Yes	Y	DL	1.2	LL	1.5	WLZ	.031	WLX	.054				
42	1.2D + 1.5L + 1.0WL (30 mph) AZI 090	Yes	Y	DL	1.2	LL	1.5			WLX	.062				
43	1.2D + 1.5L + 1.0WL (30 mph) AZI 120	Yes	Y	DL	1.2	LL	1.5	WLZ	-.031	WLX	.054				
44	1.2D + 1.5L + 1.0WL (30 mph) AZI 150	Yes	Y	DL	1.2	LL	1.5	WLZ	-.054	WLX	.031				
45	1.2D + 1.5L + 1.0WL (30 mph) AZI 180	Yes	Y	DL	1.2	LL	1.5	WLZ	-.062						
46	1.2D + 1.5L + 1.0WL (30 mph) AZI 210	Yes	Y	DL	1.2	LL	1.5	WLZ	-.054	WLX	-.031				
47	1.2D + 1.5L + 1.0WL (30 mph) AZI 240	Yes	Y	DL	1.2	LL	1.5	WLZ	-.031	WLX	-.054				
48	1.2D + 1.5L + 1.0WL (30 mph) AZI 270	Yes	Y	DL	1.2	LL	1.5			WLX	-.062				
49	1.2D + 1.5L + 1.0WL (30 mph) AZI 300	Yes	Y	DL	1.2	LL	1.5	WLZ	.031	WLX	-.054				
50	1.2D + 1.5L + 1.0WL (30 mph) AZI 330	Yes	Y	DL	1.2	LL	1.5	WLZ	.054	WLX	-.031				

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	N10	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N11	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	N8	Reaction	Reaction	Reaction	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	N10	max	4866.745	16	4333.681	35	3428.512	16	448.398	15	1413.695	10	14258.485	35
2		min	-5253.545	10	187.863	16	-3641.8	10	-8317.682	34	-1418.406	4	-216.327	16
3	N11	max	1414.581	17	4332.941	27	6215.302	2	18443.315	27	2762.799	11	1410.574	23
4		min	-1414.477	23	188.368	20	-5791.172	20	-113.221	20	-2762.898	5	-1413.2	17
5	N8	max	5209.583	6	4333.348	31	3466.535	24	478.772	25	1582.294	12	174.285	24
6		min	-4843.108	24	187.676	24	-3679.989	6	-8307.981	32	-1577.138	6	-14259.083	31
7	Totals:	max	10220.718	5	12408.081	34	10370.261	2						
8		min	-10220.718	11	3042.55	15	-10370.261	20						

Member Point Loads (BLC 1 : Self Weight)

	Member Label	Direction	Magnitude [lb, lb-ft]	Location [in, %]
1	M25	Y	-35.3	%20
2	M28	Y	-27	%20
3	M27	Y	-23.15	%20
4	M26	Y	-57.3	%20
5	M25	Y	-21.45	%45
6	M28	Y	-35.5	%45
7	M27	Y	-36	%45
8	M26	Y	-16	%50
9	M26	Y	-16	%60
10	M10	Y	-32.8	%50
11	M25	Y	-35.3	%80
12	M28	Y	-27	%80
13	M27	Y	-23.15	%80
14	M26	Y	-57.3	%80

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

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
15	M25	Y	-21.45	%50
16	M28	Y	-35.5	%50
17	M27	Y	-36	%50
18	M33	Y	-35.3	%20
19	M36	Y	-27	%20
20	M35	Y	-23.15	%20
21	M34	Y	-57.3	%20
22	M33	Y	-21.45	%45
23	M36	Y	-35.5	%45
24	M35	Y	-36	%45
25	M34	Y	-16	%50
26	M34	Y	-16	%60
27	M12	Y	-32.8	%50
28	M33	Y	-35.3	%80
29	M36	Y	-27	%80
30	M35	Y	-23.15	%80
31	M34	Y	-57.3	%80
32	M33	Y	-21.45	%50
33	M36	Y	-35.5	%50
34	M35	Y	-36	%50
35	M29	Y	-35.3	%20
36	M32	Y	-27	%20
37	M31	Y	-23.15	%20
38	M30	Y	-57.3	%20
39	M29	Y	-21.45	%45
40	M32	Y	-35.5	%45
41	M31	Y	-36	%45
42	M30	Y	-16	%50
43	M30	Y	-16	%60
44	M11	Y	-32.8	%50
45	M29	Y	-35.3	%80
46	M32	Y	-27	%80
47	M31	Y	-23.15	%80
48	M30	Y	-57.3	%80
49	M29	Y	-21.45	%50
50	M32	Y	-35.5	%50
51	M31	Y	-36	%50

Member Point Loads (BLC 2 : Wind Load AZI 000)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	M25	Z	-292.52	%20
2	M28	Z	-257.47	%20
3	M27	Z	-118.3	%20
4	M26	Z	-397.96	%20
5	M25	Z	-37.66	%45
6	M28	Z	-45.09	%45
7	M27	Z	-37.57	%45
8	M26	Z	-25.34	%50
9	M26	Z	-25.34	%60
10	M10	Z	-55.54	%50
11	M25	Z	-292.52	%80

Member Point Loads (BLC 2 : Wind Load AZI 000) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
12	M28	Z	-257.47	%80
13	M27	Z	-118.3	%80
14	M26	Z	-397.96	%80
15	M25	Z	-37.66	%50
16	M28	Z	-45.09	%50
17	M27	Z	-37.57	%50
18	M33	Z	-201.75	%20
19	M36	Z	-202.65	%20
20	M35	Z	-86.18	%20
21	M34	Z	-228.41	%20
22	M33	Z	-20.4	%45
23	M36	Z	-35.48	%45
24	M35	Z	-32.66	%45
25	M34	Z	-21.65	%50
26	M34	Z	-21.65	%60
27	M12	Z	-55.54	%50
28	M33	Z	-201.75	%80
29	M36	Z	-202.65	%80
30	M35	Z	-86.18	%80
31	M34	Z	-228.41	%80
32	M33	Z	-20.4	%50
33	M36	Z	-35.48	%50
34	M35	Z	-32.66	%50
35	M29	Z	-201.75	%20
36	M32	Z	-202.65	%20
37	M31	Z	-86.18	%20
38	M30	Z	-228.41	%20
39	M29	Z	-20.4	%45
40	M32	Z	-35.48	%45
41	M31	Z	-32.66	%45
42	M30	Z	-21.65	%50
43	M30	Z	-21.65	%60
44	M11	Z	-55.54	%50
45	M29	Z	-201.75	%80
46	M32	Z	-202.65	%80
47	M31	Z	-86.18	%80
48	M30	Z	-228.41	%80
49	M29	Z	-20.4	%50
50	M32	Z	-35.48	%50
51	M31	Z	-32.66	%50

Member Point Loads (BLC 3 : Wind Load AZI 090)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	M25	X	-171.49	%20
2	M28	X	-184.38	%20
3	M27	X	-75.47	%20
4	M26	X	-171.9	%20
5	M25	X	-14.65	%45
6	M28	X	-32.27	%45
7	M27	X	-31.02	%45
8	M26	X	-20.42	%50

Member Point Loads (BLC 3 : Wind Load AZI 090) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
9	M26	X	-20.42	%60
10	M10	X	-55.54	%50
11	M25	X	-171.49	%80
12	M28	X	-184.38	%80
13	M27	X	-75.47	%80
14	M26	X	-171.9	%80
15	M25	X	-14.65	%50
16	M28	X	-32.27	%50
17	M27	X	-31.02	%50
18	M33	X	-262.26	%20
19	M36	X	-239.19	%20
20	M35	X	-107.59	%20
21	M34	X	-341.44	%20
22	M33	X	-31.91	%45
23	M36	X	-41.89	%45
24	M35	X	-35.93	%45
25	M34	X	-24.11	%50
26	M34	X	-24.11	%60
27	M12	X	-55.54	%50
28	M33	X	-262.26	%80
29	M36	X	-239.19	%80
30	M35	X	-107.59	%80
31	M34	X	-341.44	%80
32	M33	X	-31.91	%50
33	M36	X	-41.89	%50
34	M35	X	-35.93	%50
35	M29	X	-262.26	%20
36	M32	X	-239.19	%20
37	M31	X	-107.59	%20
38	M30	X	-341.44	%20
39	M29	X	-31.91	%45
40	M32	X	-41.89	%45
41	M31	X	-35.93	%45
42	M30	X	-24.11	%50
43	M30	X	-24.11	%60
44	M11	X	-55.54	%50
45	M29	X	-262.26	%80
46	M32	X	-239.19	%80
47	M31	X	-107.59	%80
48	M30	X	-341.44	%80
49	M29	X	-31.91	%50
50	M32	X	-41.89	%50
51	M31	X	-35.93	%50

Member Point Loads (BLC 4 : Ice Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	M25	Y	-160.04	%20
2	M28	Y	-149.21	%20
3	M27	Y	-76.49	%20
4	M26	Y	-199.46	%20
5	M25	Y	-29.92	%45

Member Point Loads (BLC 4 : Ice Weight) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
6	M28	Y	-43.53	%45
7	M27	Y	-41.51	%45
8	M26	Y	-31.74	%50
9	M26	Y	-31.74	%60
10	M10	Y	-100.4	%50
11	M25	Y	-160.04	%80
12	M28	Y	-149.21	%80
13	M27	Y	-76.49	%80
14	M26	Y	-199.46	%80
15	M25	Y	-29.92	%50
16	M28	Y	-43.53	%50
17	M27	Y	-41.51	%50
18	M33	Y	-160.04	%20
19	M36	Y	-149.21	%20
20	M35	Y	-76.49	%20
21	M34	Y	-199.46	%20
22	M33	Y	-29.92	%45
23	M36	Y	-43.53	%45
24	M35	Y	-41.51	%45
25	M34	Y	-31.74	%50
26	M34	Y	-31.74	%60
27	M12	Y	-100.4	%50
28	M33	Y	-160.04	%80
29	M36	Y	-149.21	%80
30	M35	Y	-76.49	%80
31	M34	Y	-199.46	%80
32	M33	Y	-29.92	%50
33	M36	Y	-43.53	%50
34	M35	Y	-41.51	%50
35	M29	Y	-160.04	%20
36	M32	Y	-149.21	%20
37	M31	Y	-76.49	%20
38	M30	Y	-199.46	%20
39	M29	Y	-29.92	%45
40	M32	Y	-43.53	%45
41	M31	Y	-41.51	%45
42	M30	Y	-31.74	%50
43	M30	Y	-31.74	%60
44	M11	Y	-100.4	%50
45	M29	Y	-160.04	%80
46	M32	Y	-149.21	%80
47	M31	Y	-76.49	%80
48	M30	Y	-199.46	%80
49	M29	Y	-29.92	%50
50	M32	Y	-43.53	%50
51	M31	Y	-41.51	%50

Member Point Loads (BLC 5 : Wind + Ice Load AZI 000)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in, %]
1	M25	Z	-63.44	%20
2	M28	Z	-57.95	%20

Member Point Loads (BLC 5 : Wind + Ice Load AZI 000) (Continued)

	Member Label	Direction	Magnitude [lb.-ft]	Location [in, %]
3	M27	Z	-28.52	%20
4	M26	Z	-82.47	%20
5	M25	Z	-10.43	%45
6	M28	Z	-12.07	%45
7	M27	Z	-10.41	%45
8	M26	Z	-9.44	%50
9	M26	Z	-9.44	%60
10	M10	Z	-33.96	%50
11	M25	Z	-63.44	%80
12	M28	Z	-57.95	%80
13	M27	Z	-28.52	%80
14	M26	Z	-82.47	%80
15	M25	Z	-10.43	%50
16	M28	Z	-12.07	%50
17	M27	Z	-10.41	%50
18	M33	Z	-47.8	%20
19	M36	Z	-48.42	%20
20	M35	Z	-22.82	%20
21	M34	Z	-52.89	%20
22	M33	Z	-6.69	%45
23	M36	Z	-10.08	%45
24	M35	Z	-9.36	%45
25	M34	Z	-8.57	%50
26	M34	Z	-8.57	%60
27	M12	Z	-23.35	%50
28	M33	Z	-47.8	%80
29	M36	Z	-48.42	%80
30	M35	Z	-22.82	%80
31	M34	Z	-52.89	%80
32	M33	Z	-6.69	%50
33	M36	Z	-10.08	%50
34	M35	Z	-9.36	%50
35	M29	Z	-47.8	%20
36	M32	Z	-48.42	%20
37	M31	Z	-22.82	%20
38	M30	Z	-52.89	%20
39	M29	Z	-6.69	%45
40	M32	Z	-10.08	%45
41	M31	Z	-9.36	%45
42	M30	Z	-8.57	%50
43	M30	Z	-8.57	%60
44	M11	Z	-23.35	%50
45	M29	Z	-47.8	%80
46	M32	Z	-48.42	%80
47	M31	Z	-22.82	%80
48	M30	Z	-52.89	%80
49	M29	Z	-6.69	%50
50	M32	Z	-10.08	%50
51	M31	Z	-9.36	%50

Member Point Loads (BLC 6 : Wind + Ice Load AZI 090)

	Member Label	Direction	Magnitude [lb.-ft]	Location [in, %]
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Member Point Loads (BLC 6 : Wind + Ice Load AZI 090) (Continued)

	Member Label	Direction	Magnitude [lb.-ft]	Location [in, %]
1	M25	X	-42.59	%20
2	M28	X	-45.24	%20
3	M27	X	-20.92	%20
4	M26	X	-43.02	%20
5	M25	X	-5.44	%45
6	M28	X	-9.41	%45
7	M27	X	-9.01	%45
8	M26	X	-8.28	%50
9	M26	X	-8.28	%60
10	M10	X	-19.81	%50
11	M25	X	-42.59	%80
12	M28	X	-45.24	%80
13	M27	X	-20.92	%80
14	M26	X	-43.02	%80
15	M25	X	-5.44	%50
16	M28	X	-9.41	%50
17	M27	X	-9.01	%50
18	M33	X	-58.23	%20
19	M36	X	-54.77	%20
20	M35	X	-26.62	%20
21	M34	X	-72.61	%20
22	M33	X	-9.19	%45
23	M36	X	-11.41	%45
24	M35	X	-10.06	%45
25	M34	X	-9.15	%50
26	M34	X	-9.15	%60
27	M12	X	-30.42	%50
28	M33	X	-58.23	%80
29	M36	X	-54.77	%80
30	M35	X	-26.62	%80
31	M34	X	-72.61	%80
32	M33	X	-9.19	%50
33	M36	X	-11.41	%50
34	M35	X	-10.06	%50
35	M29	X	-58.23	%20
36	M32	X	-54.77	%20
37	M31	X	-26.62	%20
38	M30	X	-72.61	%20
39	M29	X	-9.19	%45
40	M32	X	-11.41	%45
41	M31	X	-10.06	%45
42	M30	X	-9.15	%50
43	M30	X	-9.15	%60
44	M11	X	-30.42	%50
45	M29	X	-58.23	%80
46	M32	X	-54.77	%80
47	M31	X	-26.62	%80
48	M30	X	-72.61	%80
49	M29	X	-9.19	%50
50	M32	X	-11.41	%50
51	M31	X	-10.06	%50

Joint Loads and Enforced Displacements (BLC 7 : Service Live 1)

	Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^2/in, lb*s^2*in)]
1	N5	L	Y	-250
2	N1	L	Y	-250
3	N6	L	Y	-250
4	N2	L	Y	-250
5	N3	L	Y	-250
6	N4	L	Y	-250

Member Distributed Loads (BLC 4 : Ice Weight)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location...End Location[i...]
1	M1	Y	-17.672	-17.672	0 %100
2	M2	Y	-17.672	-17.672	0 %100
3	M3	Y	-17.672	-17.672	0 %100
4	M7	Y	-20.657	-20.657	0 %100
5	M8	Y	-20.657	-20.657	0 %100
6	M9	Y	-20.657	-20.657	0 %100
7	M10	Y	-17.672	-17.672	0 %100
8	M11	Y	-17.672	-17.672	0 %100
9	M12	Y	-17.672	-17.672	0 %100
10	M16	Y	-14.686	-14.686	0 %100
11	M17	Y	-14.686	-14.686	0 %100
12	M18	Y	-14.686	-14.686	0 %100
13	M19	Y	-14.686	-14.686	0 %100
14	M20	Y	-14.686	-14.686	0 %100
15	M21	Y	-14.686	-14.686	0 %100
16	M22	Y	-14.686	-14.686	0 %100
17	M23	Y	-14.686	-14.686	0 %100
18	M24	Y	-14.686	-14.686	0 %100
19	M25	Y	-10.069	-10.069	0 %100
20	M26	Y	-10.069	-10.069	0 %100
21	M27	Y	-10.069	-10.069	0 %100
22	M28	Y	-10.069	-10.069	0 %100
23	M29	Y	-10.069	-10.069	0 %100
24	M30	Y	-10.069	-10.069	0 %100
25	M31	Y	-10.069	-10.069	0 %100
26	M32	Y	-10.069	-10.069	0 %100
27	M33	Y	-10.069	-10.069	0 %100
28	M34	Y	-10.069	-10.069	0 %100
29	M35	Y	-10.069	-10.069	0 %100
30	M36	Y	-10.069	-10.069	0 %100
31	M37	Y	-20.657	-20.657	0 %100
32	M38	Y	-20.657	-20.657	0 %100
33	M39	Y	-20.657	-20.657	0 %100

Member Distributed Loads (BLC 8 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location...End Location[i...]
1	M7	Y	-1.606	-1.721	0 27.826
2	M7	Y	-1.721	-3.31	27.826 55.653
3	M7	Y	-3.31	-3.323	55.653 83.479
4	M7	Y	-3.323	-1.737	83.479 111.306

Member Distributed Loads (BLC 8 : BLC 1 Transient Area Loads) (Continued)

Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location	End Location[i..
5	M7	Y	-1.737	-1.605	111.306 139.132
6	M10	Y	-.462	-.462	0 6.845
7	M11	Y	-.462	-.462	0 6.845
8	M16	Y	-.002	-2.869	36.855 45.045
9	M16	Y	-2.869	-5.726	45.045 53.236
10	M16	Y	-5.726	-5.706	53.236 61.426
11	M18	Y	-.627	-1.344	0 8.28
12	M18	Y	-1.344	-2.41	8.28 16.56
13	M18	Y	-2.41	-2.717	16.56 24.84
14	M18	Y	-2.717	-1.789	24.84 33.12
15	M18	Y	-1.789	-.736	33.12 41.4
16	M22	Y	-2.323	-5.128	0 8.19
17	M22	Y	-5.128	-3.382	8.19 16.38
18	M22	Y	-3.382	-.234	16.38 24.57
19	M23	Y	-.686	-1.268	0 8.28
20	M23	Y	-1.268	-2.363	8.28 16.56
21	M23	Y	-2.363	-2.709	16.56 24.84
22	M23	Y	-2.709	-1.734	24.84 33.12
23	M23	Y	-1.734	-.778	33.12 41.4
24	M38	Y	-1.845	-1.563	.071 2.324
25	M38	Y	-1.563	-1.302	2.324 4.577
26	M38	Y	-1.302	-1.06	4.577 6.83
27	M39	Y	-1.845	-1.563	.071 2.324
28	M39	Y	-1.563	-1.302	2.324 4.577
29	M39	Y	-1.302	-1.06	4.577 6.83
30	M9	Y	-1.523	-1.712	0 27.826
31	M9	Y	-1.712	-3.192	27.826 55.653
32	M9	Y	-3.192	-3.179	55.653 83.479
33	M9	Y	-3.179	-1.724	83.479 111.306
34	M9	Y	-1.724	-1.611	111.306 139.132
35	M12	Y	-.462	-.462	45.882 52.727
36	M16	Y	-5.706	-5.726	0 8.19
37	M16	Y	-5.726	-2.869	8.19 16.38
38	M16	Y	-2.869	-.002	16.38 24.57
39	M17	Y	-.627	-1.344	0 8.28
40	M17	Y	-1.344	-2.41	8.28 16.56
41	M17	Y	-2.41	-2.715	16.56 24.84
42	M17	Y	-2.715	-1.788	24.84 33.12
43	M17	Y	-1.788	-.737	33.12 41.4
44	M19	Y	-.035	-2.816	36.855 45.045
45	M19	Y	-2.816	-5.383	45.045 53.236
46	M19	Y	-5.383	-4.958	53.236 61.426
47	M21	Y	-.69	-1.272	0 8.28
48	M21	Y	-1.272	-2.443	8.28 16.56
49	M21	Y	-2.443	-2.807	16.56 24.84
50	M21	Y	-2.807	-1.775	24.84 33.12
51	M21	Y	-1.775	-.744	33.12 41.4
52	M37	Y	-1.845	-1.563	.071 2.324
53	M37	Y	-1.563	-1.302	2.324 4.577
54	M37	Y	-1.302	-1.06	4.577 6.83
55	M8	Y	-1.604	-1.722	0 27.826
56	M8	Y	-1.722	-3.179	27.826 55.653



Company : Infinigy Engineering, PLLC
 Designer : DVA
 Job Number : 1039-A0002-B
 Model Name : CT Suffield 2 CAC 801486

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Member Distributed Loads (BLC 8 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location...	End Location[...
57	M8	Y	-3.179	-3.192	55.653	83.479
58	M8	Y	-3.192	-1.712	83.479	111.306
59	M8	Y	-1.712	-1.524	111.306	139.132
60	M19	Y	-4.958	-5.383	0	8.19
61	M19	Y	-5.383	-2.816	8.19	16.38
62	M19	Y	-2.816	-.035	16.38	24.57
63	M20	Y	-.69	-1.272	0	8.28
64	M20	Y	-1.272	-2.443	8.28	16.56
65	M20	Y	-2.443	-2.807	16.56	24.84
66	M20	Y	-2.807	-1.775	24.84	33.12
67	M20	Y	-1.775	-.744	33.12	41.4
68	M22	Y	-.002	-2.869	36.855	45.045
69	M22	Y	-2.869	-5.726	45.045	53.236
70	M22	Y	-5.726	-5.706	53.236	61.426
71	M24	Y	-.628	-1.345	0	8.28
72	M24	Y	-1.345	-2.409	8.28	16.56
73	M24	Y	-2.409	-2.724	16.56	24.84
74	M24	Y	-2.724	-1.798	24.84	33.12
75	M24	Y	-1.798	-.729	33.12	41.4

Member Distributed Loads (BLC 9 : BLC 2 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location...	End Location[...
1	M1	Z	-30.56	-30.56	0	168
2	M2	Z	-15.28	-15.28	0	168
3	M3	Z	-15.28	-15.28	0	168
4	M4	Z	0	0	0	6
5	M5	Z	0	0	0	6
6	M6	Z	0	0	0	6
7	M7	Z	-38.2	-38.2	0	139.132
8	M8	Z	-19.1	-19.1	0	139.132
9	M9	Z	-19.1	-19.1	0	139.132
10	M10	Z	-33.082	-33.082	0	52.727
11	M11	Z	-33.082	-33.082	0	52.727
12	M13	Z	0	0	0	8.309
13	M14	Z	0	0	0	8.309
14	M15	Z	0	0	0	8.309
15	M16	Z	-11.46	-11.46	0	61.426
16	M17	Z	-19.849	-19.849	0	46
17	M18	Z	-19.849	-19.849	0	46
18	M19	Z	-22.92	-22.92	0	61.426
19	M22	Z	-11.46	-11.46	0	61.426
20	M23	Z	-19.849	-19.849	0	46
21	M24	Z	-19.849	-19.849	0	46
22	M25	Z	-18.145	-18.145	0	96
23	M26	Z	-18.145	-18.145	0	96
24	M27	Z	-18.145	-18.145	0	96
25	M28	Z	-18.145	-18.145	0	96
26	M29	Z	-18.145	-18.145	0	96
27	M30	Z	-18.145	-18.145	0	96
28	M31	Z	-18.145	-18.145	0	96
29	M32	Z	-18.145	-18.145	0	96



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Member Distributed Loads (BLC 9 : BLC 2 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location...	End Location[i..
30	M33	Z	-18.145	-18.145	0	96
31	M34	Z	-18.145	-18.145	0	96
32	M35	Z	-18.145	-18.145	0	96
33	M36	Z	-18.145	-18.145	0	96
34	M38	Z	-26.466	-26.466	0	34
35	M39	Z	-26.466	-26.466	0	34

Member Distributed Loads (BLC 10 : BLC 3 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location...	End Location[i..
1	M2	X	-26.466	-26.466	0	168
2	M3	X	-26.466	-26.466	0	168
3	M4	X	0	0	0	6
4	M6	X	0	0	0	6
5	M8	X	-33.082	-33.082	0	139.132
6	M9	X	-33.082	-33.082	0	139.132
7	M10	X	-19.1	-19.1	0	52.727
8	M11	X	-19.1	-19.1	0	52.727
9	M12	X	-38.2	-38.2	0	52.727
10	M13	X	0	0	0	8.309
11	M15	X	0	0	0	8.309
12	M16	X	-19.849	-19.849	0	61.426
13	M17	X	-11.46	-11.46	0	46
14	M18	X	-11.46	-11.46	0	46
15	M20	X	-22.92	-22.92	0	46
16	M21	X	-22.92	-22.92	0	46
17	M22	X	-19.849	-19.849	0	61.426
18	M23	X	-11.46	-11.46	0	46
19	M24	X	-11.46	-11.46	0	46
20	M25	X	-18.145	-18.145	0	96
21	M26	X	-18.145	-18.145	0	96
22	M27	X	-18.145	-18.145	0	96
23	M28	X	-18.145	-18.145	0	96
24	M29	X	-18.145	-18.145	0	96
25	M30	X	-18.145	-18.145	0	96
26	M31	X	-18.145	-18.145	0	96
27	M32	X	-18.145	-18.145	0	96
28	M33	X	-18.145	-18.145	0	96
29	M34	X	-18.145	-18.145	0	96
30	M35	X	-18.145	-18.145	0	96
31	M36	X	-18.145	-18.145	0	96
32	M37	X	-30.56	-30.56	0	34
33	M38	X	-15.28	-15.28	0	34
34	M39	X	-15.28	-15.28	0	34

Member Distributed Loads (BLC 11 : BLC 4 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location...	End Location[i..
1	M7	Y	-2.392	-2.691	0	27.826
2	M7	Y	-2.691	-5.232	27.826	55.653
3	M7	Y	-5.232	-5.207	55.653	83.479
4	M7	Y	-5.207	-2.732	83.479	111.306
5	M7	Y	-2.732	-2.611	111.306	139.132



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Member Distributed Loads (BLC 11 : BLC 4 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location	End Location[i..
6	M10	Y	-0.727	-0.727	0	6.845
7	M11	Y	-0.727	-0.727	0	6.845
8	M16	Y	-5.32	-5.32	36.855	45.045
9	M16	Y	-8.069	-8.069	45.045	53.236
10	M16	Y	-3.66	-3.66	53.236	61.426
11	M18	Y	-2.003	-2.003	0	8.28
12	M18	Y	-3.849	-3.849	8.28	16.56
13	M18	Y	-4.424	-4.424	16.56	24.84
14	M18	Y	-2.796	-2.796	24.84	33.12
15	M18	Y	-1.164	-1.164	33.12	41.4
16	M22	Y	-9.015	-9.015	0	8.19
17	M22	Y	-4.518	-4.518	8.19	16.38
18	M22	Y	-0.003	-0.003	16.38	24.57
19	M23	Y	-2.117	-2.117	0	8.28
20	M23	Y	-3.704	-3.704	8.28	16.56
21	M23	Y	-4.201	-4.201	16.56	24.84
22	M23	Y	-2.834	-2.834	24.84	33.12
23	M23	Y	-1.153	-1.153	33.12	41.4
24	M38	Y	-2.461	-2.461	0.71	2.324
25	M38	Y	-2.049	-2.049	2.324	4.577
26	M38	Y	-1.668	-1.668	4.577	6.83
27	M39	Y	-2.461	-2.461	0.71	2.324
28	M39	Y	-2.049	-2.049	2.324	4.577
29	M39	Y	-1.668	-1.668	4.577	6.83
30	M9	Y	-2.694	-2.694	0	27.826
31	M9	Y	-5.025	-5.025	27.826	55.653
32	M9	Y	-4.999	-4.999	55.653	83.479
33	M9	Y	-2.704	-2.704	83.479	111.306
34	M9	Y	-2.524	-2.524	111.306	139.132
35	M12	Y	-0.727	-0.727	45.882	52.727
36	M16	Y	-9.015	-9.015	0	8.19
37	M16	Y	-4.518	-4.518	8.19	16.38
38	M16	Y	-0.003	-0.003	16.38	24.57
39	M17	Y	-2.117	-2.117	0	8.28
40	M17	Y	-3.806	-3.806	8.28	16.56
41	M17	Y	-4.307	-4.307	16.56	24.84
42	M17	Y	-2.839	-2.839	24.84	33.12
43	M17	Y	-1.149	-1.149	33.12	41.4
44	M19	Y	-4.429	-4.429	36.855	45.045
45	M19	Y	-8.471	-8.471	45.045	53.236
46	M19	Y	-7.807	-7.807	53.236	61.426
47	M21	Y	-2.003	-2.003	0	8.28
48	M21	Y	-3.849	-3.849	8.28	16.56
49	M21	Y	-4.426	-4.426	16.56	24.84
50	M21	Y	-2.797	-2.797	24.84	33.12
51	M21	Y	-1.163	-1.163	33.12	41.4
52	M37	Y	-2.461	-2.461	0.71	2.324
53	M37	Y	-2.049	-2.049	2.324	4.577
54	M37	Y	-1.668	-1.668	4.577	6.83
55	M8	Y	-2.694	-2.694	0	27.826
56	M8	Y	-5.025	-5.025	27.826	55.653
57	M8	Y	-4.999	-4.999	55.653	83.479

Member Distributed Loads (BLC 11 : BLC 4 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location	End Location[i..
58	M8	Y	-4.999	-2.703	83.479	111.306
59	M8	Y	-2.703	-2.521	111.306	139.132
60	M19	Y	-8.979	-9.015	0	8.19
61	M19	Y	-9.015	-4.518	8.19	16.38
62	M19	Y	-4.518	-.003	16.38	24.57
63	M20	Y	-.989	-2.117	0	8.28
64	M20	Y	-2.117	-3.805	8.28	16.56
65	M20	Y	-3.805	-4.309	16.56	24.84
66	M20	Y	-4.309	-2.842	24.84	33.12
67	M20	Y	-2.842	-1.147	33.12	41.4
68	M22	Y	-.055	-4.429	36.855	45.045
69	M22	Y	-4.429	-8.471	45.045	53.236
70	M22	Y	-8.471	-7.807	53.236	61.426
71	M24	Y	-1.086	-2.003	0	8.28
72	M24	Y	-2.003	-3.849	8.28	16.56
73	M24	Y	-3.849	-4.424	16.56	24.84
74	M24	Y	-4.424	-2.796	24.84	33.12
75	M24	Y	-2.796	-1.164	33.12	41.4

Member Distributed Loads (BLC 12 : BLC 5 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location	End Location[i..
1	M1	Z	-6.753	-6.753	0	168
2	M2	Z	-3.377	-3.377	0	168
3	M3	Z	-3.377	-3.377	0	168
4	M4	Z	0	0	0	6
5	M5	Z	0	0	0	6
6	M6	Z	0	0	0	6
7	M7	Z	-8.442	-8.442	0	139.132
8	M8	Z	-4.221	-4.221	0	139.132
9	M9	Z	-4.221	-4.221	0	139.132
10	M10	Z	-7.311	-7.311	0	52.727
11	M11	Z	-7.311	-7.311	0	52.727
12	M13	Z	0	0	0	8.309
13	M14	Z	0	0	0	8.309
14	M15	Z	0	0	0	8.309
15	M16	Z	-2.533	-2.533	0	61.426
16	M17	Z	-4.386	-4.386	0	46
17	M18	Z	-4.386	-4.386	0	46
18	M19	Z	-5.065	-5.065	0	61.426
19	M22	Z	-2.533	-2.533	0	61.426
20	M23	Z	-4.386	-4.386	0	46
21	M24	Z	-4.386	-4.386	0	46
22	M25	Z	-4.01	-4.01	0	96
23	M26	Z	-4.01	-4.01	0	96
24	M27	Z	-4.01	-4.01	0	96
25	M28	Z	-4.01	-4.01	0	96
26	M29	Z	-4.01	-4.01	0	96
27	M30	Z	-4.01	-4.01	0	96
28	M31	Z	-4.01	-4.01	0	96
29	M32	Z	-4.01	-4.01	0	96
30	M33	Z	-4.01	-4.01	0	96

Member Distributed Loads (BLC 12 : BLC 5 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location...	End Location[i...
31	M34	Z	-4.01	-4.01	0	96
32	M35	Z	-4.01	-4.01	0	96
33	M36	Z	-4.01	-4.01	0	96
34	M38	Z	-5.849	-5.849	0	34
35	M39	Z	-5.849	-5.849	0	34

Member Distributed Loads (BLC 13 : BLC 6 Transient Area Loads)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location...	End Location[i...
1	M2	X	-5.849	-5.849	0	168
2	M3	X	-5.849	-5.849	0	168
3	M4	X	0	0	0	6
4	M6	X	0	0	0	6
5	M8	X	-7.311	-7.311	0	139.132
6	M9	X	-7.311	-7.311	0	139.132
7	M10	X	-4.221	-4.221	0	52.727
8	M11	X	-4.221	-4.221	0	52.727
9	M12	X	-8.442	-8.442	0	52.727
10	M13	X	0	0	0	8.309
11	M15	X	0	0	0	8.309
12	M16	X	-4.386	-4.386	0	61.426
13	M17	X	-2.533	-2.533	0	46
14	M18	X	-2.533	-2.533	0	46
15	M20	X	-5.065	-5.065	0	46
16	M21	X	-5.065	-5.065	0	46
17	M22	X	-4.386	-4.386	0	61.426
18	M23	X	-2.533	-2.533	0	46
19	M24	X	-2.533	-2.533	0	46
20	M25	X	-4.01	-4.01	0	96
21	M26	X	-4.01	-4.01	0	96
22	M27	X	-4.01	-4.01	0	96
23	M28	X	-4.01	-4.01	0	96
24	M29	X	-4.01	-4.01	0	96
25	M30	X	-4.01	-4.01	0	96
26	M31	X	-4.01	-4.01	0	96
27	M32	X	-4.01	-4.01	0	96
28	M33	X	-4.01	-4.01	0	96
29	M34	X	-4.01	-4.01	0	96
30	M35	X	-4.01	-4.01	0	96
31	M36	X	-4.01	-4.01	0	96
32	M37	X	-6.753	-6.753	0	34
33	M38	X	-3.377	-3.377	0	34
34	M39	X	-3.377	-3.377	0	34

Member Area Loads (BLC 1 : Self Weight)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N74	N75	N27	N17	Y	Two Way	-5
2	N74	N73	N23	N15	Y	Two Way	-5
3	N75	N73	N21	N29	Y	Two Way	-5

Member Area Loads (BLC 2 : Wind Load AZI 000)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N76	N77	N79	N78	Z	Open Str...	-91.68

Member Area Loads (BLC 3 : Wind Load AZI 090)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N80	N81	N83	N82	X	Open Str...	-91.68

Member Area Loads (BLC 4 : Ice Weight)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N75	N27	N17	N74	Y	Two Way	-7.87
2	N74	N15	N23	N73	Y	Two Way	-7.87
3	N73	N21	N29	N75	Y	Two Way	-7.87

Member Area Loads (BLC 5 : Wind + Ice Load AZI 000)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N76	N77	N79	N78	Z	Open Str...	-20.26

Member Area Loads (BLC 6 : Wind + Ice Load AZI 090)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[psf]
1	N80	N81	N83	N82	X	Open Str...	-20.26

Envelope AISC 14th(360-10) : LRFD Steel Code Checks

Mem...	Shape	Code Check	L...	LC	Shear Ch...	L...	LC	phi...	phi...	phi*Mn y-y [lb-ft]	phi...	Eqn
1	M26	PIPE 2.0	.965	33	8	.057	33	8	149.321...	1871.625	187...	H...
2	M34	PIPE 2.0	.851	33	5	.050	33	5	149.321...	1871.625	187...	H...
3	M30	PIPE 2.0	.851	33	11	.050	33	11	149.321...	1871.625	187...	H...
4	M25	PIPE 2.0	.754	33	8	.048	33	8	149.321...	1871.625	187...	H...
6	M22	L5X3X4	.735	3...	30	.134	3...z	30	347.628...	1938.892	680...	H...
6	M16	L6X3X4	.733	3...	36	.134	3...z	36	347.628...	1938.892	680...	H...
7	M19	L5X3X4	.726	3...	28	.134	3...z	38	347.628...	1938.892	680...	H...
8	M28	PIPE 2.0	.697	33	8	.046	33	8	149.321...	1871.625	187...	H...
9	M29	PIPE 2.0	.689	33	11	.044	33	11	149.321...	1871.625	187...	H...
10	M33	PIPE 2.0	.689	33	5	.044	33	5	149.321...	1871.625	187...	H...
11	M9	L5X3X4	.685	5...	12	.029	8...y	38	962.628...	1938.892	508...	H...
12	M8	L5X3X4	.675	8...	29	.029	5...y	28	962.628...	1938.892	480...	H...
13	M7	L5X3X4	.664	8...	33	.029	5...y	32	962.628...	1938.892	479...	H...
14	M32	PIPE 2.0	.657	33	11	.044	33	11	149.321...	1871.625	187...	H...
15	M36	PIPE 2.0	.657	33	5	.044	33	5	149.321...	1871.625	187...	H...
16	M10	HSS5X5X4	.645	5...	31	.099	5...y	28	169.178...	26254.5	262...	H...
17	M11	HSS5X5X4	.644	5...	35	.099	5...y	32	169.178...	26254.5	262...	H...
18	M12	HSS5X5X4	.640	0	38	.098	0...y	36	169.178...	26254.5	262...	H...
19	M37	HSS4X4X4	.432	34	30	.224	1...z	5	134.139...	16180.5	161...	H...
20	M39	HSS4X4X4	.430	34	28	.212	1...z	9	134.139...	16180.5	161...	H...
21	M38	HSS4X4X4	.429	34	38	.208	1...z	13	134.139...	16180.5	161...	H...
22	M27	PIPE 2.0	.415	33	8	.030	33	8	149.321...	1871.625	187...	H...
23	M35	PIPE 2.0	.392	33	5	.029	33	5	149.321...	1871.625	187...	H...
24	M31	PIPE 2.0	.392	33	11	.029	33	11	149.321...	1871.625	187...	H...
25	M1	HSS4X4X4	.262	1...	34	.187	0 z	2	614.139...	16180.5	161...	H...
26	M2	HSS4X4X4	.259	0	30	.161	1...z	6	614.139...	16180.5	161...	H...

Envelope AISC 14th(360-10): LRFD Steel Code Checks (Continued)

Mem...	Shape	Code Check	L...	LC	Shear Ch...	L.....	LC	phi...	phi...	phi*Mn y-y [lb-ft]	phi....Eqn
27	M3	HSS4X4X4	.257	1...	35	.160	0 z 10	614..	139..	16180.5	161...H...
28	M18	L3X3X4	.084	46	2	.014	46y 13	336..	466..	1688.138	375...H...
29	M23	L3X3X4	.082	46	2	.013	46z 3	336..	466..	1688.138	375...H...
30	M24	L3X3X4	.082	46	10	.014	46y 9	336..	466..	1688.138	375...H...
31	M17	L3X3X4	.081	46	6	.014	46z 7	336..	466..	1688.138	375...H...
32	M21	L3X3X4	.081	46	6	.014	46y 5	336..	466..	1688.138	375...H...
33	M20	L3X3X4	.081	46	10	.014	46z 11	336..	466..	1688.138	375...H...

APPENDIX D
ADDITIONAL CALCUATIONS

Date:	12/18/2018
Client	Crown
Carrier	AT&T
Engineer:	ATE
Site:	801486
Job #:	600-003

Code:	LRFD
Axial:	6215.30 lbs
Shear:	4333.68 lbs

Bolt Capacity (1/2" A307 Bolt)				
	Ult Load / Bolt	Factored Load ($\phi=0.75$)	# of Bolts	Factor Joint Capacity
Axial (lb)	8226.7	6170.0	2	12340
Shear(lb)	5133.3	3850.0	2	7700

Interaction Check	
$T / \phi T_n$	50.4%
$V / \phi V_n$	56.3%
≤ 1.0	57.0%
	OK



RF EMISSIONS COMPLIANCE REPORT

Crown Castle on behalf of AT&T Mobility, LLC

Crown Castle Site Name: CT SUFFIELD 2 CAC 801486

Crown Castle Site BU: 801486

AT&T Mobility, LLC FA #: 10035284

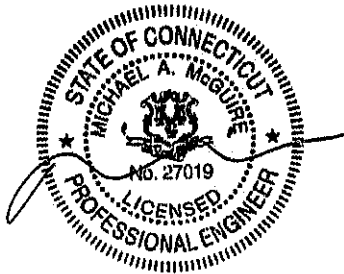
44 Ffyer Place

Suffield, CT

2/1/2019

Report Status:

AT&T Mobility, LLC Is Compliant



Sealed 1Feb2019 mike@h2dc.com

H2DC PLLC Ct CoA#: 0001714

Prepared By:

Sitesafe, LLC

Engineering Statement in Re:
Electromagnetic Energy Analysis
Crown Castle
Suffield, CT

My signature on the cover of this document indicates:

That I, Michael A McGuire, am currently and actively licensed to provide (in this state/jurisdiction as indicated within the professional electrical engineering seal on the cover of this document) professional electrical engineering services, as an employee of Hurricane Hill Development Company, PLLC, a duly authorized/registered engineering firm (in this state, as applicable) on behalf of SiteSafe, LLC; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission ("the FCC" and "the FCC Rules") both in general and specifically as they apply to the FCC's Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; and

That the technical information serving as the basis for this report was supplied by Crown Castle (See attached Site Summary and Carrier documents), and that AT&T Mobility, LLC's installations involve communications equipment, antennas and associated technical equipment at a location referred to as the "CT SUFFIELD 2 CAC 801486" ("the site"); and

That AT&T Mobility, LLC proposes to operate at the site with transmit antennas listed in the carrier summary and with a maximum effective radiated power as specified by AT&T Mobility, LLC and shown on the worksheet, and that worst-case 100% duty cycle have been assumed; and

That this analysis has been performed with the assumption that the ground immediately surrounding the tower is primarily flat or falling; and

That at this time, the FCC requires that certain licensees address specific levels of radio-frequency energy to which workers or members of the public might possibly be exposed (at §1.1307(b) of the FCC Rules); and

That such consideration of possible exposure of humans to radio-frequency radiation must utilize the standards set by the FCC, which is the Federal Agency having jurisdiction over communications facilities; and

That the FCC rules define two tiers of permissible exposure guidelines: 1) "uncontrolled environments," defined as situations in which persons may not be aware of (the "general public"), or may not be able to control their exposure to a transmission facility; and (2) "controlled environments," which defines situations in which persons are aware of their potential for exposure (industry personnel); and

That this statement specifically addresses the uncontrolled environment (which is more conservative than the controlled environment) and the limit set forth in the FCC rules for licensees of AT&T Mobility, LLC's operating frequency as shown on the attached antenna worksheet; and

That when applying the uncontrolled environment standards, the predicted Maximum Power Density at two meters above ground level from the proposed AT&T Mobility, LLC operation is no more than 4.398% of the maximum in any accessible area on the ground and

That it is understood per FCC Guidelines and OET65 Appendix A, that regardless of the existent radio-frequency environment, only those licenses whose contributions exceed five percent of the exposure limit pertinent to their operation(s) bear any responsibility for bringing any non-compliant area(s) into compliance; and

That when applying the uncontrolled environment standards, the cumulative predicted energy density from the proposed operation is no more than 11.981% of the maximum in any accessible area up to two meters above the ground per OET-65; and

That the calculations provided in this report are based on data provided by the client and antenna pattern data supplied by the antenna manufacturer, in accordance with FCC guidelines listed in OET-65. Horizontal and vertical antenna patterns are combined for modeling purposes to accurately reflect the energy two meters above ground level where on-axis energy refers to maximum energy two meters above the ground along the azimuth of the antenna and where area energy refers to the maximum energy anywhere two meters above the ground regardless of the antenna azimuth, accounting for cumulative energy from multiple antennas for the carrier and frequency range indicated; and

That the Occupational Safety and Health Administration has policies in place which address worker safety in and around communications sites, thus individual companies will be responsible for their employees' training regarding Radio Frequency Safety.

In summary, it is stated here that the proposed operation at the site would not result in exposure of the Public to excessive levels of radio-frequency energy as defined in the FCC Rules and Regulations, specifically 47 CFR 1.1307 and that AT&T Mobility, LLC's proposed operation is completely compliant.

Finally, it is stated that access to the tower should be restricted to communication industry professionals, and approved contractor personnel trained in radio-frequency safety; and that the instant analysis addresses exposure levels at two meters above ground level and does not address exposure levels on the tower, or in the immediate proximity of the antennas.

**Crown Castle
CT SUFFIELD 2 CAC 801486
Site Summary**

Carrier	Area Maximum Percentage MPE
AT&T Mobility, LLC	0.48 %
AT&T Mobility, LLC	0.266 %
AT&T Mobility, LLC (Proposed)	0.664 %
AT&T Mobility, LLC (Proposed)	0.75 %
AT&T Mobility, LLC (Proposed)	0.776 %
AT&T Mobility, LLC (Proposed)	0.688 %
AT&T Mobility, LLC (Proposed)	0.774 %
MetroPCS	0.485 %
Sprint	0.774 %
Sprint	0.774 %
Sprint	0.749 %
Sprint	1.107 %
Verizon Wireless	0.907 %
Verizon Wireless	1.293 %
Verizon Wireless	0.725 %
Verizon Wireless	0.768 %
 Composite Site MPE:	 11.981 %

**AT&T Mobility, LLC
CT SUFFIELD 2 CAC 801486
Carrier Summary**

Frequency: 737 MHz
Maximum Permissible Exposure (MPE): 491.33 $\mu\text{W}/\text{cm}^2$
Maximum power density at ground level: 2.35914 $\mu\text{W}/\text{cm}^2$
Highest percentage of Maximum Permissible Exposure: 0.48015 %

Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	On Axis		Area	
					Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE	Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE
CCI Antennas	HPA-65R-BUU-H8	111	10	3382	1.850076	0.376542	1.880422	0.382718
CCI Antennas	HPA-65R-BUU-H8	111	120	3382	1.850547	0.376638	1.880422	0.382718
CCI Antennas	HPA-65R-BUU-H8	111	250	3382	1.850547	0.376638	1.880422	0.382718

**AT&T Mobility, LLC
CT SUFFIELD 2 CAC 801486
Carrier Summary**

Frequency: 850 MHz
Maximum Permissible Exposure (MPE): 566.67 $\mu\text{W}/\text{cm}^2$
Maximum power density at ground level: 1.50908 $\mu\text{W}/\text{cm}^2$
Highest percentage of Maximum Permissible Exposure: 0.26631 %

Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	On Axis		Area	
					Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE	Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE
Kathrein-Scala	800-10121	111	10	1043	0.860531	0.151858	1.31394	0.231872
Kathrein-Scala	800-10121	111	120	1043	0.861629	0.152052	1.313939	0.231872
Kathrein-Scala	800-10121	111	250	1043	0.861629	0.152052	1.313939	0.231872

**AT&T Mobility, LLC (Proposed)
 CT SUFFIELD 2 CAC 801486
 Carrier Summary**

Frequency: 2300 MHz
 Maximum Permissible Exposure (MPE): 1000 $\mu\text{W}/\text{cm}^2$
 Maximum power density at ground level: 6.64125 $\mu\text{W}/\text{cm}^2$
 Highest percentage of Maximum Permissible Exposure: 0.66413 %

Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	On Axis		Area	
					Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE	Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE
CCI Antennas	HPA65R-BU8A	111	10	2667	6.61937	0.661937	6.61937	0.661937
CCI Antennas	HPA65R-BU8A	111	120	2667	6.61937	0.661937	6.61937	0.661937
CCI Antennas	HPA65R-BU8A	111	250	2667	6.61937	0.661937	6.61937	0.661937

**AT&T Mobility, LLC (Proposed)
 CT SUFFIELD 2 CAC 801486
 Carrier Summary**

Frequency: 850 MHz
Maximum Permissible Exposure (MPE): 566.67 $\mu\text{W}/\text{cm}^2$
Maximum power density at ground level: 4.24851 $\mu\text{W}/\text{cm}^2$
Highest percentage of Maximum Permissible Exposure: 0.74974 %

Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	On Axis		Area	
					Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE	Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE
CCI Antennas	HPA65R-BU8A	111	10	3163	2.185685	0.385709	3.576128	0.631081
CCI Antennas	HPA65R-BU8A	111	120	3163	2.178733	0.384482	3.576128	0.631081
CCI Antennas	HPA65R-BU8A	111	250	3163	2.178733	0.384482	3.576128	0.631081

**AT&T Mobility, LLC (Proposed)
 CT SUFFIELD 2 CAC 801486
 Carrier Summary**

Frequency: 2100 MHz
Maximum Permissible Exposure (MPE): 1000 $\mu\text{W}/\text{cm}^2$
Maximum power density at ground level: 7.76075 $\mu\text{W}/\text{cm}^2$
Highest percentage of Maximum Permissible Exposure: 0.77607 %

Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	On Axis		Area	
					Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE	Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE
Kathrein-Scala	800-10966	111	10	7364	3.668621	0.366862	7.228009	0.722801
Kathrein-Scala	800-10966	111	120	7364	3.668621	0.366862	7.228009	0.722801
Kathrein-Scala	800-10966	111	250	7364	3.668621	0.366862	7.228009	0.722801

**AT&T Mobility, LLC (Proposed)
CT SUFFIELD 2 CAC 801486
Carrier Summary**

Frequency: 1900 MHz
 Maximum Permissible Exposure (MPE): 1000 $\mu\text{W}/\text{cm}^2$
 Maximum power density at ground level: 6.88394 $\mu\text{W}/\text{cm}^2$
 Highest percentage of Maximum Permissible Exposure: 0.68839 %

Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	On Axis		Area	
					Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE	Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE
Kathrein-Scala	800-10966	111	10	6168	2.65627	0.265627	5.46941	0.546941
Kathrein-Scala	800-10966	111	120	6168	2.65627	0.265627	5.469409	0.546941
Kathrein-Scala	800-10966	111	250	6168	2.65627	0.265627	5.469409	0.546941

**AT&T Mobility, LLC (Proposed)
CT SUFFIELD 2 CAC 801486
Carrier Summary**

Frequency: 763 MHz
Maximum Permissible Exposure (MPE): 508.67 $\mu\text{W}/\text{cm}^2$
Maximum power density at ground level: 3.93801 $\mu\text{W}/\text{cm}^2$
Highest percentage of Maximum Permissible Exposure: 0.77418 %

Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	On Axis		Area	
					Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE	Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE
Kathrein-Scala	800-10966	111	10	3623	2.073902	0.407713	3.041556	0.597947
Kathrein-Scala	800-10966	111	120	3623	2.073902	0.407713	3.041556	0.597947
Kathrein-Scala	800-10966	111	250	3623	2.073901	0.407713	3.041556	0.597947

MetroPCS
CT SUFFIELD 2 CAC 801486
Carrier Summary

Frequency: 1900 MHz
Maximum Permissible Exposure (MPE): 1000 $\mu\text{W}/\text{cm}^2$
Maximum power density at ground level: 4.84559 $\mu\text{W}/\text{cm}^2$
Highest percentage of Maximum Permissible Exposure: 0.48456 %

Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	On Axis		Area	
					Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE	Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE
RFS	APXV18-206516L-C	62	30	2313	2.418997	0.2419	4.498225	0.449822
RFS	APXV18-206516L-C	62	150	2313	2.420943	0.242094	4.498225	0.449823
RFS	APXV18-206516L-C	62	270	2313	2.420943	0.242094	4.498225	0.449823

Sprint
CT SUFFIELD 2 CAC 801486
Carrier Summary

Frequency: 1990 MHz
Maximum Permissible Exposure (MPE): 1000 $\mu\text{W}/\text{cm}^2$
Maximum power density at ground level: 7.744 $\mu\text{W}/\text{cm}^2$
Highest percentage of Maximum Permissible Exposure: 0.7744 %

Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	On Axis		Area	
					Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE	Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE
RFS	APXV9ERR18-C-A20	71	20	2756	1.634626	0.163463	4.777828	0.477783
RFS	APXVSP18-C-A20	71	140	3804	2.266031	0.226603	7.2916	0.72916
RFS	APXV9ERR18-C-A20	71	260	2756	1.634626	0.163463	4.777828	0.477783

Sprint
CT SUFFIELD 2 CAC 801486
Carrier Summary

Frequency: 1900 MHz
Maximum Permissible Exposure (MPE): 1000 $\mu\text{W}/\text{cm}^2$
Maximum power density at ground level: 7.744 $\mu\text{W}/\text{cm}^2$
Highest percentage of Maximum Permissible Exposure: 0.7744 %

Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	On Axis		Area	
					Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE	Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE
RFS	APXV9ERR18-C-A20	71	20	2756	1.634626	0.163463	4.777828	0.477783
RFS	APXVSPP18-C-A20	71	140	3804	2.266031	0.226603	7.2916	0.72916
RFS	APXV9ERR18-C-A20	71	260	2756	1.634626	0.163463	4.777828	0.477783

Sprint
CT SUFFIELD 2 CAC 801486
Carrier Summary

Frequency: 850 MHz
Maximum Permissible Exposure (MPE): 566.67 $\mu\text{W}/\text{cm}^2$
Maximum power density at ground level: 4.24311 $\mu\text{W}/\text{cm}^2$
Highest percentage of Maximum Permissible Exposure: 0.74878 %

Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	On Axis		Area	
					Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE	Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE
RFS	APXV9ERR18-C-A20	71	20	1535	2.330658	0.411293	3.45187	0.609154
RFS	APXVSPP18-C-A20	71	140	2168	3.007207	0.530684	3.143659	0.554763
RFS	APXV9ERR18-C-A20	71	260	1535	2.330658	0.411293	3.451871	0.609154

Sprint
CT SUFFIELD 2 CAC 801486
Carrier Summary

Frequency: 2500 MHz
Maximum Permissible Exposure (MPE): 1000 $\mu\text{W}/\text{cm}^2$
Maximum power density at ground level: 11.07452 $\mu\text{W}/\text{cm}^2$
Highest percentage of Maximum Permissible Exposure: 1.10745 %

Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	On Axis		Area	
					Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE	Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE
RFS	APXVTM14-C-I20	71	20	6168	3.807419	0.380742	9.307668	0.930767
RFS	APXVTM14-C-I20	71	140	6168	3.807419	0.380742	9.307668	0.930767
RFS	APXVTM14-C-I20	71	260	6168	3.807419	0.380742	9.307668	0.930767

**Verizon Wireless
CT SUFFIELD 2 CAC 801486
Carrier Summary**

Frequency: 2100 MHz
Maximum Permissible Exposure (MPE): 1000 $\mu\text{W}/\text{cm}^2$
Maximum power density at ground level: 9.06651 $\mu\text{W}/\text{cm}^2$
Highest percentage of Maximum Permissible Exposure: 0.90665 %

Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	On Axis		Area	
					Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE	Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE
ANDREW	SBNHH-1D65B	91	30	5154	5.594463	0.559446	8.717522	0.871752
ANDREW	SBNHH-1D65B	91	150	5154	5.603875	0.560387	8.717517	0.871752
ANDREW	SBNHH-1D65B	91	270	5154	5.594463	0.559446	8.717517	0.871752

**Verizon Wireless
CT SUFFIELD 2 CAC 801486
Carrier Summary**

Frequency: 1900 MHz
Maximum Permissible Exposure (MPE): 1000 $\mu\text{W}/\text{cm}^2$
Maximum power density at ground level: 12.93096 $\mu\text{W}/\text{cm}^2$
Highest percentage of Maximum Permissible Exposure: 1.2931 %

Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	On Axis		Area	
					Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE	Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE
ANDREW	SBNHH-1D65B	91	30	4583	10.065389	1.006539	12.817875	1.281788
ANDREW	SBNHH-1D65B	91	150	4583	9.923965	0.992397	12.817875	1.281788
ANDREW	SBNHH-1D65B	91	270	4583	10.065389	1.006539	12.817875	1.281788

**Verizon Wireless
CT SUFFIELD 2 CAC 801486
Carrier Summary**

Frequency: 751 MHz
 Maximum Permissible Exposure (MPE): 500.67 $\mu\text{W}/\text{cm}^2$
 Maximum power density at ground level: 3.6274 $\mu\text{W}/\text{cm}^2$
 Highest percentage of Maximum Permissible Exposure: 0.72451 %

Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	On Axis		Area	
					Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE	Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE
ANDREW	SBNHH-1D65B	91	30	2043	1.890573	0.377611	3.062802	0.611745
ANDREW	SBNHH-1D65B	91	150	2043	1.888285	0.377154	3.062801	0.611745
ANDREW	SBNHH-1D65B	91	270	2043	1.890573	0.377611	3.062802	0.611745

**Verizon Wireless
CT SUFFIELD 2 CAC 801486
Carrier Summary**

Frequency: 850 MHz
Maximum Permissible Exposure (MPE): 566.67 $\mu\text{W}/\text{cm}^2$
Maximum power density at ground level: 4.35087 $\mu\text{W}/\text{cm}^2$
Highest percentage of Maximum Permissible Exposure: 0.7678 %

Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	On Axis		Area	
					Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE	Max Power Density ($\mu\text{W}/\text{cm}^2$)	Percent of MPE
Antel	LPA-80080-4CF	91	30	1423	1.859314	0.328114	1.934474	0.341378
Antel	LPA-80080-4CF	91	30	1423	1.859314	0.328114	1.934474	0.341378
SWEDCOM	SC9012	91	150	1007	1.592544	0.281037	1.663638	0.293583
SWEDCOM	SC9012	91	150	1007	1.592544	0.281037	1.663638	0.293583
SWEDCOM	SC9012	91	270	1007	1.592544	0.281037	1.663638	0.293583
SWEDCOM	SC9012	91	270	1007	1.592544	0.281037	1.663638	0.293583