NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development

Northeast Site Solutions
Denise Sabo
199 Brickyard Rd Farmington, CT 06032
860-209-4690
denise@northeastsitesolutions.com

October 19, 2016

Members of the Siting Council
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Notice of Exempt Modification
7 SURDAN MOUNTAIN ROAD, SHARON, CT 06069
Latitude: 41.86205
Longitude: -73.39963
T-Mobile Site#: CTNH544A-NSD-ROB

Dear Ms. Bachman:

T-Mobile is proposing to collocate onto an existing tower located at 7 Surdan Mountain Road, Sharon, CT 06069. The tower is owned by Litchfield County Dispatch. The property is owned by Ann Adele Prindle. T-Mobile now intends to install three (3) new 700 MHz antennas, three (3) new 1900/2100 MHz antennas add (2) hybrid cables and add (9) RRUs to the tower loading at the 140' RAD.

Planned Modifications:

Install New: (3) APX16DWV-16DWV-S-E-A20
(3) LNX-6515DS-A1M
(2) 1-5/8" Hybrid Cable (1 installed now, 1 for future)
(3) RRUS11 B2
(3) RRUS11 B4
(3) RRUS11 B12
(1) GPS at equipment
(1) ½" coax at equipment for the GPS

This facility was approved by Town of Sharon Zoning Board on 2/22/1994 with Zoning Permit issued on 1/21/1998. Please see attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies§ 16- SOj-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.SA. § 16-SOj-73, a copy of this letter is being sent to Brent M. Colley-First Selectman, highest elected Official for the Town of Sharon, as well as the property owner and the tower owner.

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The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S;A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing structure.

2. The proposed modifications will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the new antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.

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

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

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

Sincerely,

Denise Sabo
Mobile: 860-209-4690
Fax: 413-521-0558
Office: 199 Brickyard Rd, Farmington, CT 06032
Email: denise@northeastsitesolutions.com

Attachments

cc: Brent M. Colley-First Selectman, as elected official
Litchfield County Dispatch - as tower owner
Ann Adele Pringle - as property owner

Exhibit A

TOWN OF SHARON, CONN.

ZONING PERMIT № 2640

Date 1/21 19 98

Permission is hereby given to Litchfield County Dispatch

of P O Box 1349 Litchfield, CT 06759

to erect a 195' telecomm. tower (28' leg) & a 22' x 58' building

located on 7 Sunden Mt. Road, Map # 15 Lot # 2 ehe

Owner of property Darien Brindle

in accordance with application dated 1/13 19 98

Signed Elizabeth M Abel

Sharon Planning and Zoning Commission

ZBA decision 2/22/94

TOWN OF SHARON

ZONING PERMIT APPLICATION NO. _____

PERMIT FEE: $15.00 plus $10.00 (CT Fee) = $25.00

APPLICATION IS HEREBY MADE TO THE PLANNING & ZONING COMMISSION FOR A PERMIT TO:

( ) Construct (X) Enlarge ( ) Alter ( ) Move ( ) Other existing tower & existing building

The building(s) described below: Assessor Tax Map # 15 Lot # 2

Location of Property 7 Sudan Mt Road.

Subdivision/development: — Lot No. —

Name of Owner: Darien R Prindle Address: 7 Sudan Mt Rd

Name of Applicant: Litchfield County Dispatch Inc Address: P.O. Box 1349 Litchfield CT 06759

Phone: 860-567-3877

ZONE: RR

Width of Lot _____ Depth of Lot _____ Area of Lot 4A. (dimensions of easement 75'x145')

Use of building(s): ( ) Dwelling for _____ families; ( ) Accessory; ( ) Commercial;

( ) Industrial; (X) Other telecommunication tower - current bldg. is 8x12' (to be removed) bldg.

Size of Building(s) ~~or addition~~(s): ~~22~~ 20 x 58' ; ~~No. of stories~~ height 195' tower

size of tower - leg of triangle 28' height 195'

Additional Information: _____

ZBA approval for hgt. of tower 2/22/94

Complete a PLOT PLAN on reverse side. Show boundaries, location of existing building(s) if any, proposed construction / or work.

owner Signature Darien R Prindle

Date: 1-13-98 Applicant's Signature Allan F. Gowel Manager.

****

Approved by Planning and Zoning Commission. Date: 1/21/98

Permit No. 2640

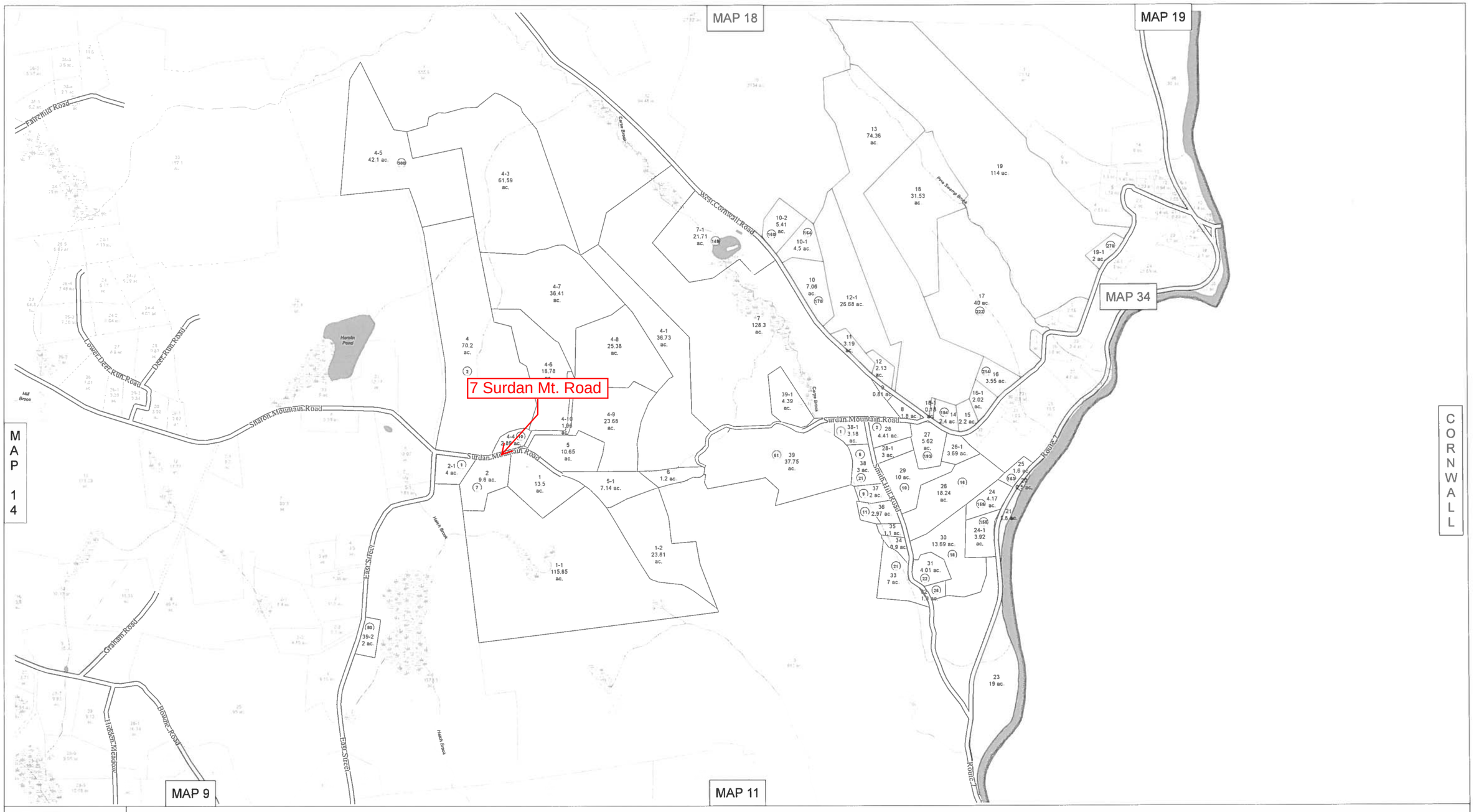
Rejected Date: _____

Reason: _____

Signature: Elizabeth M Hall for Planning & Zoning Commission

This permit is granted with the express condition that the applicant shall conform in all respects to the zoning regulations of the Town of Sharon. This permit may be revoked at any time upon violation of any provisions of said regulations. Any deviation from the approved application must be authorized by approval of the revised plans subject to the same procedures established for the examination of the original plans. ***Zoning permit expires 12 months from date of issue unless it has been renewed by ZEO or a valid building permit is in effect.***

Exhibit B


MAP 18
MAP 19
MAP 34
MAP 14
MAP 9
MAP 11
CORNWALL
7 Surdan Mt. Road
Fairchild Road
Lower Deer Run Road
Deer Run Road
Sharon Mountain Road
Surdan Mountain Road
West Cornwall Road
Smith Hill Road
East Street
Graham Road
Hidden Meadow
Housatonic Road
Route 7
Hamlin Pond
Mill Brook
Hatch Brook
Cargo Brook
Pine Swamp Brook
4-5 42.1 ac.
4-3 61.59 ac.
4-7 36.41 ac.
4 70.2 ac.
4-6 18.78 ac.
4-8 25.38 ac.
4-1 36.73 ac.
4-10 1.88 ac.
4-9 23.68 ac.
4-4 2.88 ac.
5 10.65 ac.
2-1 4 ac.
2 9.6 ac.
1 13.5 ac.
5-1 7.14 ac.
6 1.2 ac.
1-2 23.81 ac.
1-1 115.85 ac.
39-2 2 ac.
7-1 21.71 ac.
10-2 5.41 ac.
10-1 4.5 ac.
10 7.06 ac.
7 128.3 ac.
13 74.36 ac.
18 31.53 ac.
19 114 ac.
19-1 2 ac.
12-1 26.68 ac.
17 40 ac.
11 3.19 ac.
12 2.13 ac.
16 3.55 ac.
16-1 2.02 ac.
15 2.2 ac.
39-1 4.39 ac.
39 37.75 ac.
35-1 3.18 ac.
28 4.41 ac.
27 5.62 ac.
28-1 3 ac.
26-1 3.69 ac.
38 3 ac.
29 10 ac.
37 2 ac.
26 18.24 ac.
36 2.97 ac.
35 1.1 ac.
34 0.9 ac.
30 13.69 ac.
24 4.17 ac.
24-1 3.92 ac.
31 4.01 ac.
33 7 ac.
25 1.6 ac.
23 19 ac.
Sharon
Street Number
Parcel Boundary
Town Boundary
Roads
Water Course
Water
Marsh
0 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500 5,000 5,500 Feet
Property Map
TOWN OF SHARON
Litchfield County, Connecticut
----------2013----------
MAP 15
Revised October 1, 2013
N
W
E
S
For assessment purposes only.
Not to be used for conveyance.
Prepared by
Housatonic Valley Association
PO Box 28, 150 Kent Road
Cornwall Bridge, CT 06754
860-672-6678
maps@hvatoday.org
HVA

7 SURDAN MOUNTAIN RD

Location	7 SURDAN MOUNTAIN RD	**Mblu**	15/ 2/ / /
Acct#	00173200	**Owner**	PRINDLE ANN ADELE
Assessment	$474,200	**Appraisal**	$677,400
PID	1487	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$412,700	$264,700	$677,400
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2014	$288,900	$185,300	$474,200

Owner of Record

Owner	PRINDLE ANN ADELE	**Sale Price**	$0
Co-Owner		**Certificate**	
		Book & Page	158/ 453
		Sale Date	04/19/2004

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
PRINDLE ANN ADELE	$0		158/ 453	04/19/2004
PRINDLE DARIEN R & ANN ADELE	$0		136/ 456	09/23/1999
PRINDLE DARIEN R & ANN ADELE	$115,000		132/ 861	08/03/1998
PRINDLE DARIEN	$0		98/ 458	10/19/1981

Building Information

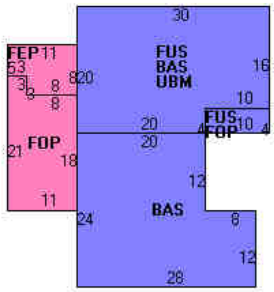
Building 1 : Section 1

Year Built:	1952
Living Area:	1,736
Building Percent Good:	80
Replacement Cost Less Depreciation:	$163,500

Building Attributes	
Field	**Description**

Building Layout

Style	Conventional
Model	Residential
Grade:	C+
Stories:	2 Stories
Occupancy	1
Exterior Wall 1	Vinyl Siding
Exterior Wall 2	
Roof Structure:	Gable/Hip
Roof Cover	Asphalt Shngl.
Interior Wall 1	Drywall
Interior Wall 2	
Interior Flr 1	Hardwood
Interior Flr 2	Carpet
Heat Fuel	Oil
Heat Type:	Hot Water
AC Type:	None
Total Bedrooms:	3 Bedrooms
Total Bthrms:	2
Total Half Baths:	0
Total Rooms:	7
Bath Style:	Average
Kitchen Style:	Average



Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	1,136	1,136
FUS	Upper Story, Finished	600	600
FEP	Enclosed Porch	79	0
FOP	Open Porch	247	0
UBM	Basement, Unfinished	560	0
		2,622	1,736

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	101
Description	Single Family
Zone	RR
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	9.6
Frontage	
Depth	
Assessed Value	$185,300
Appraised Value	$264,700

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
BRN1	Barn 1 St.			860 S.F.	$11,600	1
SHD1	Shed			100 S.F.	$1,400	1
GAR1	Garage w/Shop			1254 S.F.	$31,000	1
CELL	Cell Tower site			1 UNITS	$205,200	1

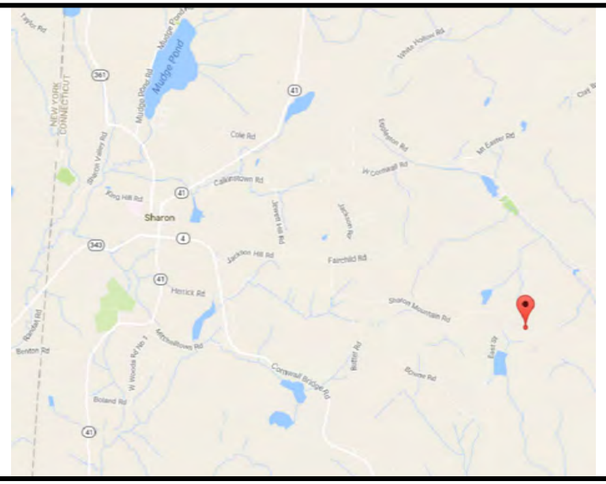
Exhibit C

Exhibit C

GENERAL NOTES

1. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTORS SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
2. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
3. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
4. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
5. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
6. THE SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
7. THE SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
8. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWING MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
9. ALL SAFETY PRECAUTIONS MUCH BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

LOCATION MAP



HANDICAP REQUIREMENTS

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAP ACCESS IS NOT REQUIRED.

PLUMBING REQUIREMENTS

FACILITY HAS NO SANITARY OR POTABLE WATER

T··Mobile·

2016 INFILL/ROB/GREENFIELD

T-MOBILE SITE NUMBER

CTNH544A

195' SELF SUPPORT TOWER

SITE ADDRESS
7 SURDAN MOUNTAIN ROAD
SHARON, CT 06498

SITE SUMMARY

SITE TYPE:	PROPOSED EQUIPMENT INSTALLATION
TECHNOLOGY TYPE:	U1900/L2100/L700
SITE ADDRESS:	7 SURDAN MOUNTAIN ROAD SHARON, CT 06498
SITE LATITUDE:	41.86205000
SITE LONGITUDE:	−73.39963000
JURISDICTION:	TOWN OF SHARON
POWER COMPANY:	EVERSOURCE
TELEPHONE COMPANY:	TO BE DETERMINED
PROPERTY OWNER:	ANN ADELE PRINDLE
TOWER OWNER:	LITCHFIELD COUNTY DISPATCH
TOWER MANAGER:	NORTHEAST SITE SOLUTIONS, LLC 199 BRICKYARD ROAD FARMINGTON, CT 06032 SHELDON FREINCLE (201) 776−8521
WIRELESS CARRIER:	T−MOBILE 35 GRIFFIN RD S BLOOMFIELD, CT 06002 OFFICE: 860−692−7100 FAX: 860−692−7159
ENGINEER:	SMW ENGINEERING 158 BUSINESS CENTER DRIVE BIRMINGHAM, AL 35244 CONTACT: V.G. DUVALL, JR., PE PHONE: 205−252−6985

BUILDING CODES

ALL CONSTRUCTION SHALL COMPLY WITH THE LATEST EDITION OF THE (AS ADOPTED BY LOCAL JURISDICTION):

- 2016 CONNECTICUT BUILDING CODE
- 2012 INTERNATIONAL BUILDING CODE W/AMENDMENTS
- 2009 ICC/ANSI A117.1 W/AMENDMENTS
- 2012 INTERNATIONAL EXISTING BUILDING CODE W/AMENDMENTS
- 2012 INTERNATIONAL PLUMBING CODE WITH AMENDMENTS
- 2012 INTERNATIONAL MECHANICAL CODE W/AMENDMENTS
- 2012 INTERNATIONAL ENERGY CONSERVATION CODE W/AMENDMENTS
- 2014 NFPA 70, NATIONAL ELECTRICAL CODE W/AMENDMENTS
- 2012 INTERNATIONAL RESIDENTIAL CODE W/AMENDMENTS

APPROVALS

DEPARTMENT	NAME/SIGNATURE	DATE
DEVELOPMENT MANAGER		
PROPERTY/TOWER OWNER		
SITE ACQUISITION MANAGER		
CONSTRUCTION MANAGER		
RF ENGINEER		
OPERATIONS MANAGER		

PROJECT SCOPE

THE PROPOSED PROJECT SCOPE WILL CONSIST OF CONSTRUCTING A NEW TELECOMMUNICATIONS BASE STATION INSTALLATION ON AN EXISTING TOWER SITE. THE PROPOSED CONSTRUCTION WILL INCLUDE THE INSTALLATION OF ANTENNA, RADIOS, CABLES AND RELATED EQUIPMENT ON THE TOWER AS WELL AS THE RADIOS, CABINETS, UTILITIES AND ANCILLARY EQUIPMENT ON THE GROUND.

SHEET INDEX

CALL BEFORE YOU DIG

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

CONNECTICUT CALL BEFORE YOU DIG
STATE WIDE
1−800−922−4455 OR 811
HTTP://WWW.CBYD.COM/#

T··Mobile·
35 GRIFFIN RD S
BLOOMFIELD, CT 06002
OFFICE: 860−692−7100
FAX: 860−692−7159

PLANS PREPARED BY:
NSS NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development
NORTHEAST SITE SOLUTIONS, LLC
199 BRICKYARD ROAD
FARMINGTON CT 06032
(860) 677−1999

SMW ENGINEERING GROUP, INC.
TOGETHER PLANNING A BETTER TOMORROW

PRELIMINARY DRAWING
(NOT VALID UNLESS STAMPED AND SIGNED)

SITE INFORMATION:
CTNH544A
7 SURDAN MOUNTAIN ROAD
SHARON, CT 06498

#	DATE	DESCRIPTION:
0	10/19/16	ISSUED FOR CLIENT REV.

T-MOBILE SITE ID: CTNH544A

SHEET NAME: TITLE SHEET

SMW #: 16−2211

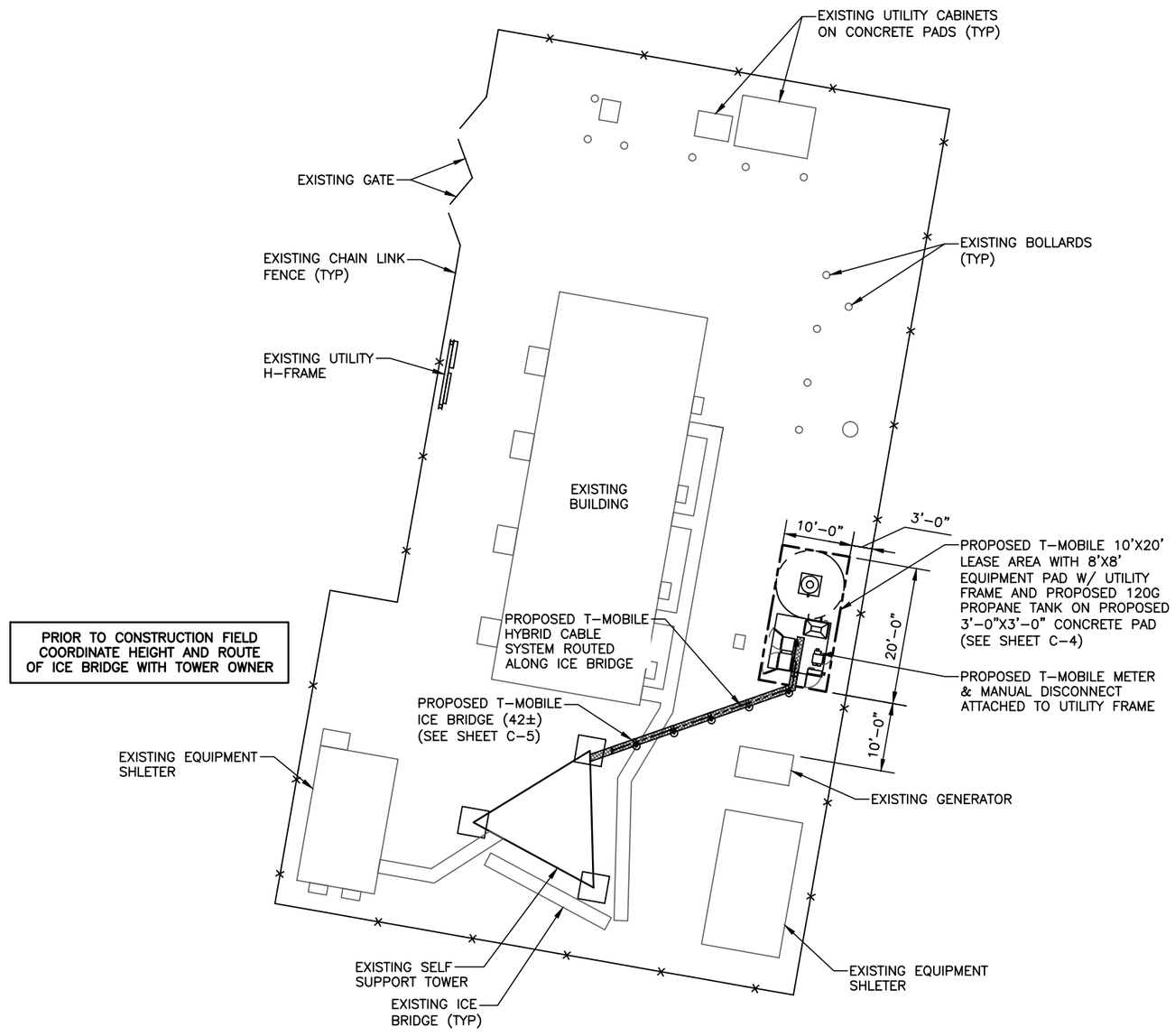
DESIGNER:	BMD
CHECKED BY:	RTB
ENGINEER:	JDS

SHEET NUMBER: T-1

NOTE TO CONTRACTORS:
DIGGING AND/OR TRENCHING INSIDE COMPOUND, MUST BE DONE BY HAND.

UTILITY NOTE:
THERE ARE NOT ANY EXISTING STORM OR SANITARY SEWER LINES OR BURIED UTILITIES ON THE PARENT TRACK WITHIN THE VICINITY OF THE PROPOSED CONSTRUCTION.

SUBJECT PROPERTY IS LOCATED IN PANEL # 09005300016B, DATED (AUGUST 16, 1988) AND IS IN THE BASE FLOOD ZONE "X" AND IS NOT IN A SPECIAL FLOOD HAZARD AREA.



PRIOR TO CONSTRUCTION FIELD COORDINATE HEIGHT AND ROUTE OF ICE BRIDGE WITH TOWER OWNER

N

0' 20' 40' 60'
1" = 20' (11"x17")

1/C-1 OVERALL SITE PLAN

T-Mobile
35 GRIFFIN RD S
BLOOMFIELD, CT 06002
OFFICE: 860-692-7100
FAX: 860-692-7159

PLANS PREPARED BY:
NSS NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development
NORTHEAST SITE SOLUTIONS, LLC
199 BRICKYARD ROAD
FARMINGTON CT 06032
(860) 677-1999

SMW ENGINEERING GROUP, INC.
TOGETHER PLANNING A BETTER TOMORROW

PRELIMINARY DRAWING
(NOT VALID UNLESS STAMPED AND SIGNED)

SITE INFORMATION:
CTNH544A
7 SURDAN MOUNTAIN ROAD
SHARON, CT 06498

#	DATE	DESCRIPTION:
0	10/19/16	ISSUED FOR CLIENT REV.

T-MOBILE SITE ID: CTNH544A

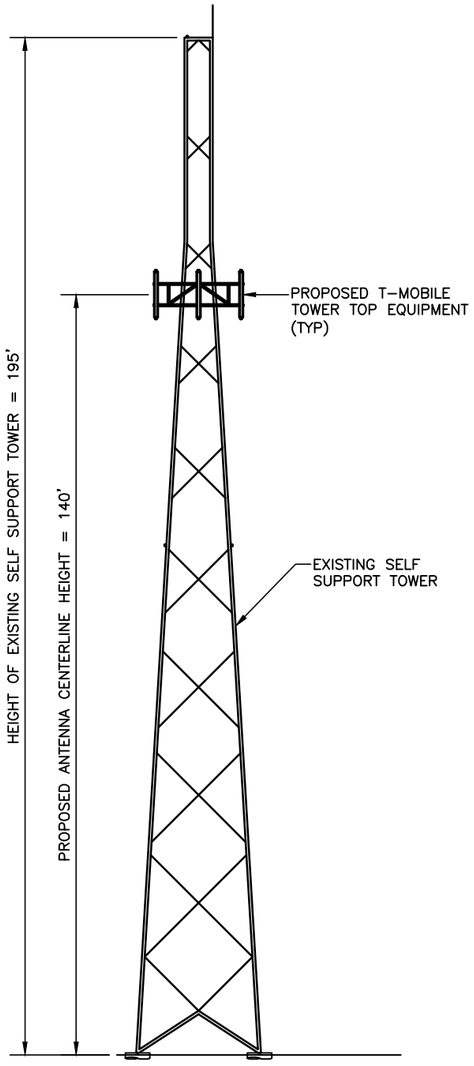
SHEET NAME: OVERALL SITE PLAN

SMW #: 16-2211

DESIGNER:	BMD
CHECKED BY:	RTB
ENGINEER:	JDS

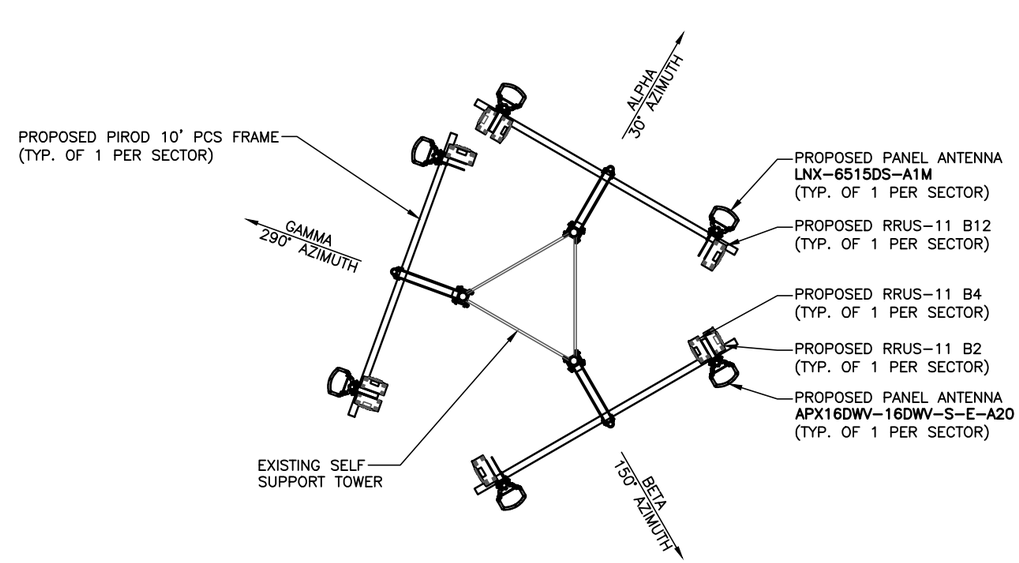
SHEET NUMBER: C-1

STRUCTURAL ANALYSIS COMPLETED BY SMW ENGINEERING GROUP, INC
DATED OCTOBER 6, 2016, SMW PROJECT #16-2211

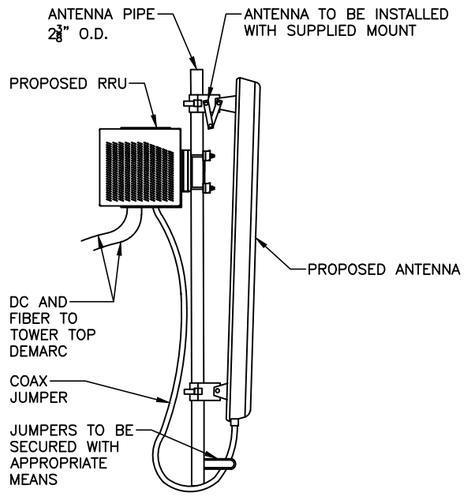


NOTES:
1. IF THE TOWER STRUCTURAL ANALYSIS SHOWS THE NEED FOR TOWER REINFORCEMENT REFER TO TOWER REINFORCEMENT DESIGN PRIOR TO THE INSTALLATION OF ANY PROPOSED EQUIPMENT.
2. REFER TO TOWER STRUCTURAL ANALYSIS FOR PROPOSED CABLE ROUTING AND ATTACHMENT DETAILS.
3. TOWER ELEVATION SHOWN IS NOT DRAWN TO SCALE AND IS INTENDED ONLY FOR REFERENCE PURPOSES. REFER TO ORIGINAL TOWER DESIGN FOR ADDITIONAL INFORMATION.

1 / C-2 TOWER ELEVATION
NOT TO SCALE



2 / C-2 PROPOSED ANTENNA ORIENTATION PLAN
NOT TO SCALE



3 / C-2 ANTENNA MOUNT DETAIL
NOT TO SCALE

T-Mobile
35 GRIFFIN RD S
BLOOMFIELD, CT 06002
OFFICE: 860-692-7100
FAX: 860-692-7159

PLANS PREPARED BY:
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TOGETHER PLANNING A BETTER TOMORROW

PRELIMINARY DRAWING
(NOT VALID UNLESS STAMPED AND SIGNED)

SITE INFORMATION:
CTNH544A
7 SURDAN MOUNTAIN ROAD
SHARON, CT 06498

#	DATE	DESCRIPTION:
0	10/19/16	ISSUED FOR CLIENT REV.

T-MOBILE SITE ID: CTNH544A

SHEET NAME:
TOWER ELEVATION
& ANTENNA PLAN

SMW #: 16-2211

DESIGNER:	BMD
CHECKED BY:	RTB
ENGINEER:	JDS

SHEET NUMBER: C-2

707C_TOWER_1QP_1DP / U1900/L2100/L700 – TOWER TOP EQUIPMENT SCHEDULE							
ANTENNA SECTOR	ANTENNA MARK	ANTENNA AZIMUTH	ANTENNA MODEL	RRU MODEL	TMA MODEL	TOWER TOP COVP MODEL	ANTENNA CABLE DESCRIPTION
ALPHA	A1	30°	APX16DWV-16DWV-S-E-A20 (QUAD)	(1) RRUS-11 B2 (P) (1) RRUS-11 B4 (P)	--	--	(1) 1 5/8" HYBRID CABLE SYSTEM (P)
	A2	30°	--	--	--	--	--
	A3	30°	LNX-6515DS-A1M (DUAL)	(1) RRUS-11 B12 (P)	--	--	--
BETA	B1	150°	APX16DWV-16DWV-S-E-A20 (QUAD)	(1) RRUS-11 B2 (P) (1) RRUS-11 B4 (P)	--	--	(1) 1 5/8" HYBRID CABLE SYSTEM (R)
	B2	150°	--	--	--	--	--
	B3	150°	LNX-6515DS-A1M (DUAL)	(1) RRUS-11 B12 (P)	--	--	--
GAMMA	C1	290°	APX16DWV-16DWV-S-E-A20 (QUAD)	(1) RRUS-11 B2 (P) (1) RRUS-11 B4 (P)	--	--	--
	C2	290°	--	--	--	--	--
	C3	290°	LNX-6515DS-A1M (DUAL)	(1) RRUS-11 B12 (P)	--	--	--

NOTE:
(P) DENOTES PROPOSED EQUIPMENT
(R) DENOTES RESERVED EQUIPMENT
(E) DENOTES EXISTING EQUIPMENT

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

TOWER LOADING SUMMARY		
EQUIPMENT TYPE	ADD QUANITY	TOTAL QUANITY
PANEL ANTENNA	6	6
COAX CABLE	0	0
RRUS	9	9
HYBRID CABLE	2	2
COVP	0	0

T-Mobile
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FAX: 860-692-7159

PLANS PREPARED BY:
NSS NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development
NORTHEAST SITE SOLUTIONS, LLC
199 BRICKYARD ROAD
FARMINGTON CT 06032
(860) 677-1999

SMW ENGINEERING GROUP, INC.
TOGETHER PLANNING A BETTER TOMORROW

PRELIMINARY DRAWING
(NOT VALID UNLESS STAMPED AND SIGNED)

SITE INFORMATION:
CTNH544A
7 SURDAN MOUNTAIN ROAD
SHARON, CT 06498

#	DATE	DESCRIPTION:
0	10/19/16	ISSUED FOR CLIENT REV.

T-MOBILE SITE ID:
CTNH544A

SHEET NAME:
TOWER TOP EQUIPMENT SCHEDULE

SMW #:
16-2211

DESIGNER:	BMD
CHECKED BY:	RTB
ENGINEER:	JDS

SHEET NUMBER:
C-3

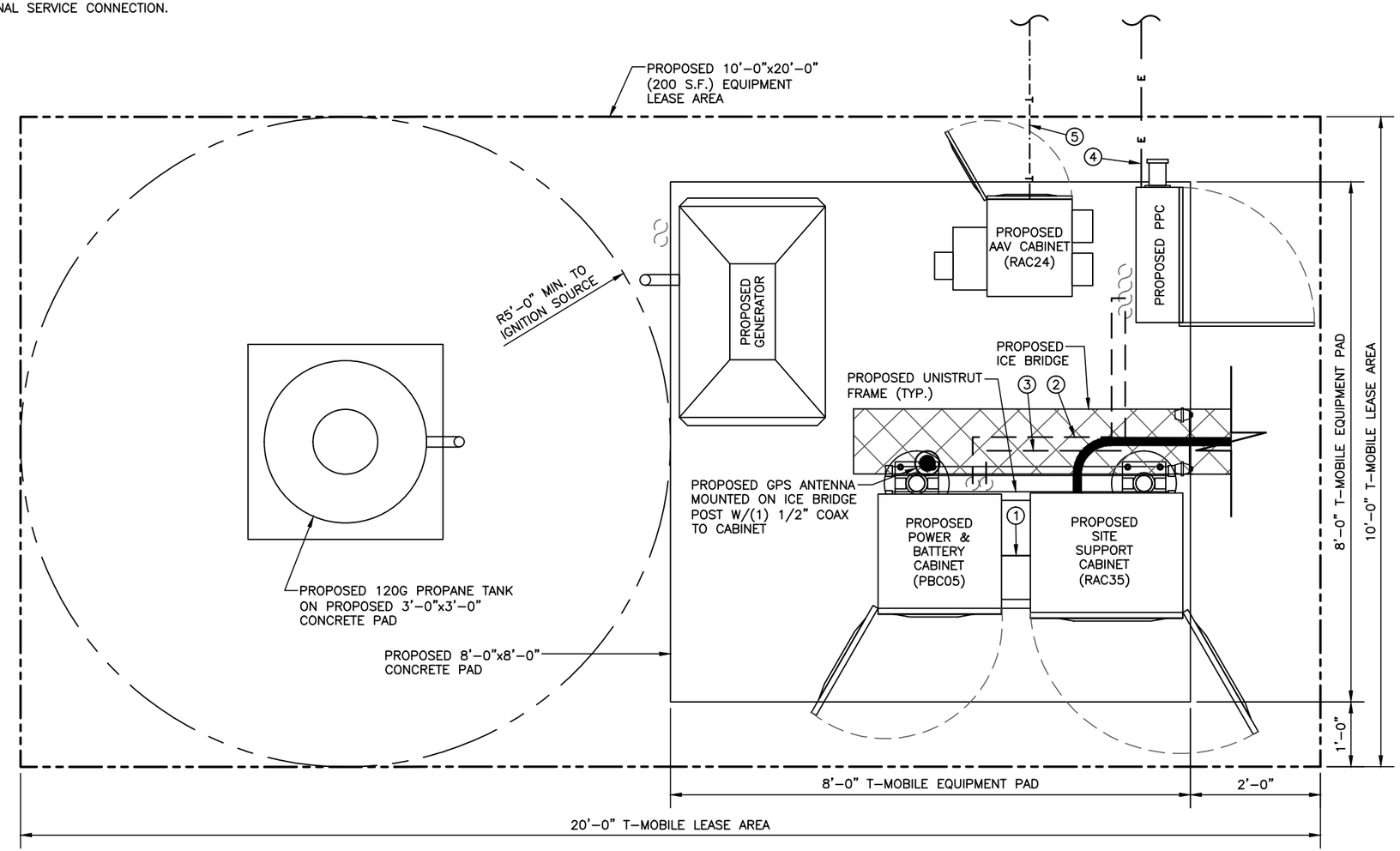
① 2"ø CONDUIT (ABOVE SLAB)

② 2"ø U/G CONDUIT (UNDER CONCRETE) FROM PROPOSED PPC TO PROPOSED PBC CABINETS

③ 2"ø U/G CONDUIT (UNDER CONCRETE) FROM PROPOSED PPC DAISY-CHAINING SSC CAGINETS

④ 2"ø PVC CONDUIT WITH (3) 3/0 + #4G FROM PROPOSED METER TO PPC CABINET. COORDINATE WITH THE LOCAL UTILITY COMPANY REGARDING FINAL SERVICE CONNECTION.

⑤ 2"ø PVC CONDUIT WITH PULLSTRING FOR TELCO FROM PROPOSED AAV CABINET TO EXISTING TELCO SERVICE. COORDINATE WITH THE LOCAL UTILITY COMPANY REGARDING FINAL SERVICE CONNECTION.



N

0' 2' 4' 6'

1" = 2' (11"x17")

1 C-4 GROUND EQUIPMENT DETAIL
SCALE: 1" = 2'

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#	DATE	DESCRIPTION:
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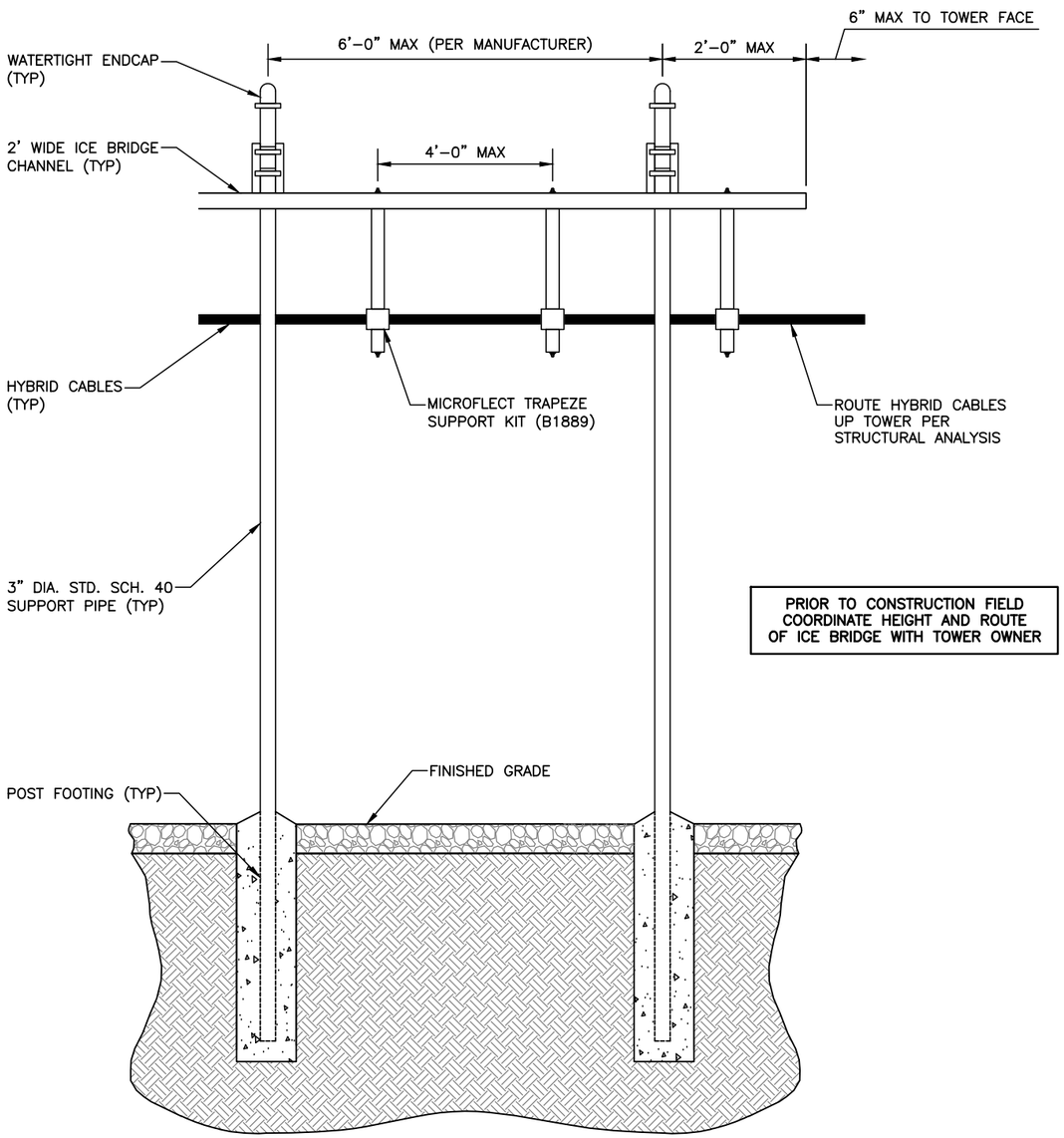
T-MOBILE SITE ID: CTNH544A

SHEET NAME: GROUND EQUIPMENT DETAIL

SMW #: 16-2211

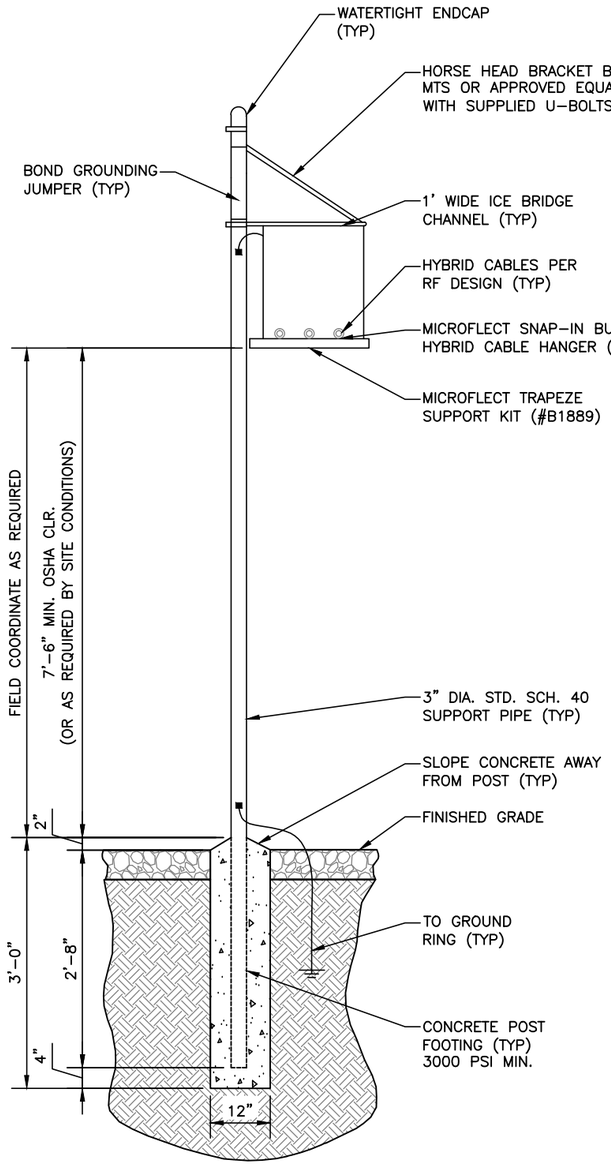
DESIGNER:	BMD
CHECKED BY:	RTB
ENGINEER:	JDS

SHEET NUMBER: C-4



PRIOR TO CONSTRUCTION FIELD COORDINATE HEIGHT AND ROUTE OF ICE BRIDGE WITH TOWER OWNER

1 C-5 ICE BRIDGE ELEVATION
NOT TO SCALE



2 C-5 ICE BRIDGE SECTION (WITH 1 SUPPORT POST)
NOT TO SCALE

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SMW ENGINEERING GROUP, INC.
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PRELIMINARY DRAWING
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SHARON, CT 06498

#	DATE	DESCRIPTION:
0	10/19/16	ISSUED FOR CLIENT REV.

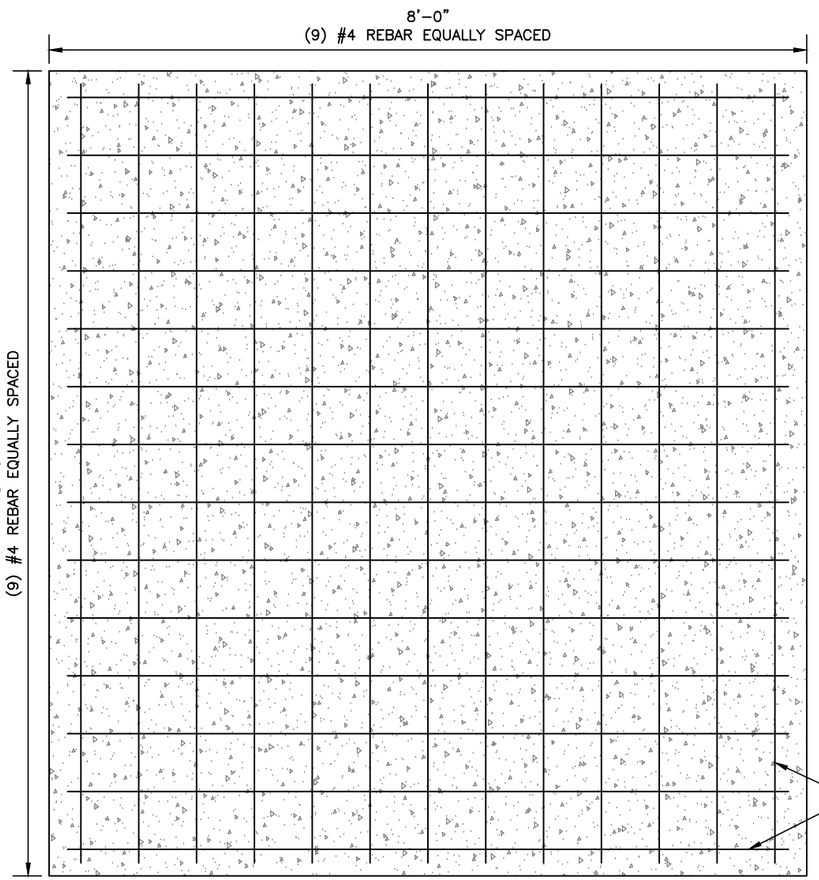
T-MOBILE SITE ID: CTNH544A

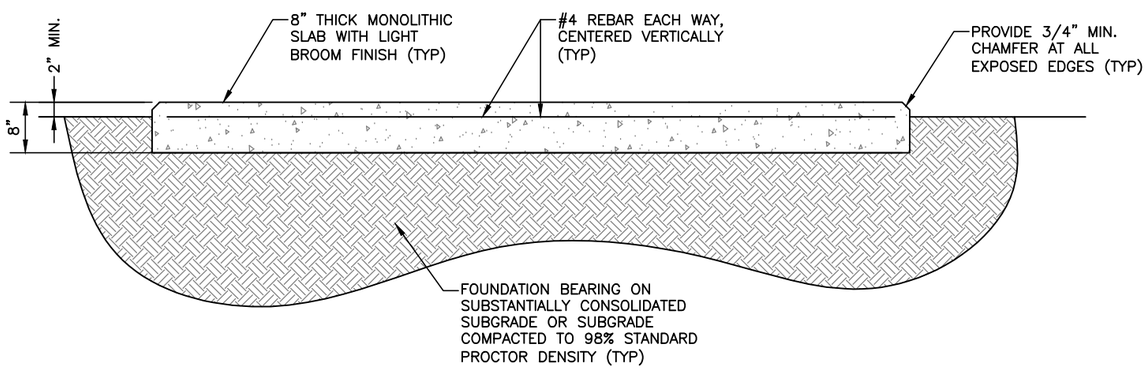
SHEET NAME: ICE BRIDGE DETAILS

SMW #: 16-2211

DESIGNER:	BMD
CHECKED BY:	RTB
ENGINEER:	JDS

SHEET NUMBER: C-5





1 C-6 MONOLITHIC EQUIPMENT SLAB DETAIL
NOT TO SCALE

REINFORCED CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI SPECIFICATIONS FOR THE DESIGN & CONSTRUCTION OF CAST-IN-PLACE CONCRETE, AND WHERE CODES CONFLICT THE MORE STRINGENT NATIONAL OR LOCAL CODE SHALL GOVERN.

2. SITECAST CONCRETE FOR SLABS AND POST FOOTINGS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. CONCRETE TESTING IS NOT REQUIRED FOR SLABS AND POST FOOTINGS UNLESS NOTED OTHERWISE.

   SLUMP – 4" MIN. / 6" MAX.
   AIR ENTRAINMENT – 2% TO 3% BY VOLUME

CLASSES OF CONCRETE				
CLASS	28 DAY STRENGTH (PSI)	MAX WATER/CEMENT RATIO	PLACEMENT LOCATION	NOTES
TYPE I	3000	0.55	SLABS & POST FOOTINGS	NORMAL WEIGHT
TYPE II*	5000	0.45	SLABS & POST FOOTINGS	HIGH EARLY STRENGTH

   *IF REQUIRED BY THE CONSTRUCTION SCHEDULE THE CONTRACTOR MAY SUBSTITUTE TYPE III HIGH EARLY STRENGTH CONCRETE WITH THE APPROVAL OF THE CONSTRUCTION MANAGER.

3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES FOR REBAR SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO. LAPS FOR WELDED WIRE FABRIC SHALL BE AST LEAST 8", UNO.

4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

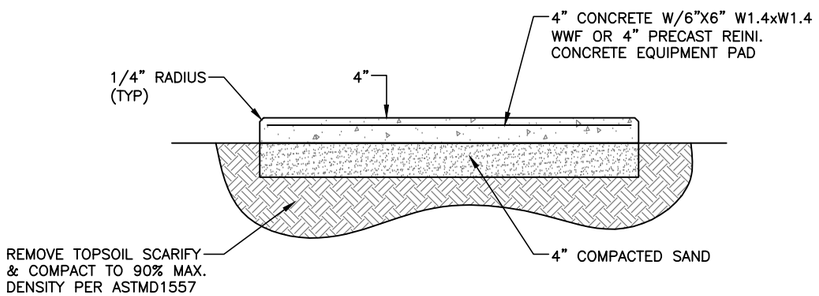
   CONCRETE CAST AGAINST EARTH.....3"
   CONCRETE EXPOSED TO EARTH OR WEATHER
   #6 AND LARGER.....2"
   #5 AND SMALLER & W.W.F.....1-1/2"

5. MAXIMUM COARSE AGGREGATE SIZE SHALL BE 3/4"

6. INSTALLATION OF CONCRETE ANCHORS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATIONS. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO THE ANCHOR MANUFACTURER'S SPECIFICATIONS FOR MATERIAL STRENGTH, EMBEDMENT DEPTH, SPACING, AND EDGE DISTANCE OR AS DETAILED ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD, HILTI, OR APPROVED EQUAL. IF THE MANUFACTURER'S SPECIFICATIONS AND DETAILS ARE FOUND TO CONFLICT WITH THAT SHOWN HEREIN, THE ENGINEER SHAL LBE NOTIFIED IMMEDIATELY.

7. THE CONTRACTOR SHALL VERIFY FROST LINE AND FOOTING DEPTH REQUIREMENTS WITH THE JURISDICTION HAVING AUTHORITY PRIOR TO CONSTRUCTION AND CONSULT THE ENGINEER ACCORDINGLY.

8. THE CONTRACTOR SHALL VERIFY ALL ELECTRICAL CONDUIT SIZES AND PENETRATION LOCATIONS PRIOR TO POURING THE SLAB.



2 C-6 3'x3' TANK SLAB
NOT TO SCALE

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SMW ENGINEERING GROUP, INC.
TOGETHER PLANNING A BETTER TOMORROW

PRELIMINARY DRAWING
(NOT VALID UNLESS STAMPED AND SIGNED)

SITE INFORMATION:
CTNH544A
7 SURDAN MOUNTAIN ROAD
SHARON, CT 06498

#	DATE	DESCRIPTION:
0	10/19/16	ISSUED FOR CLIENT REV.

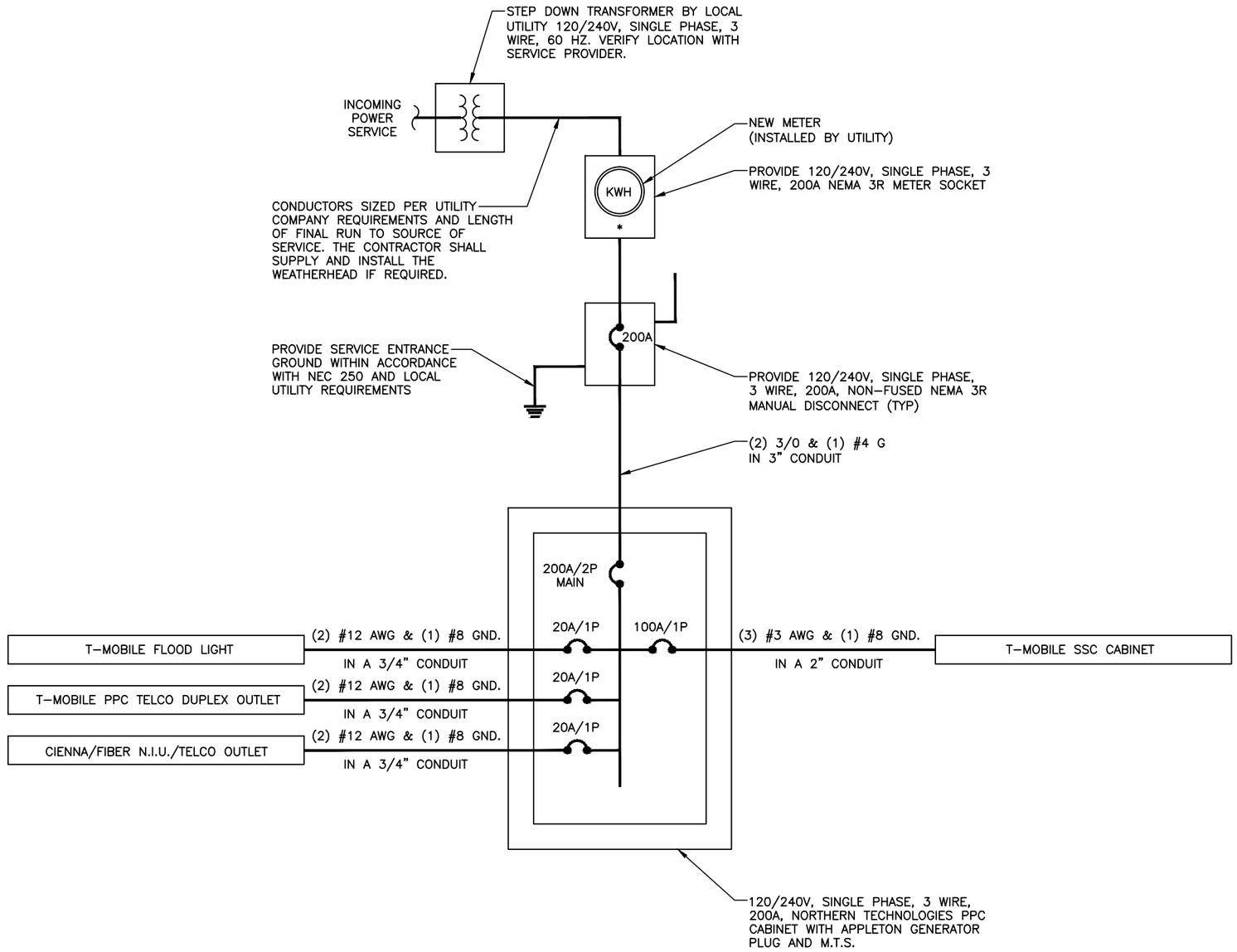
T-MOBILE SITE ID: CTNH544A

SHEET NAME:
FOUNDATION DETAILS & NOTES

SMW #: 16-2211

DESIGNER:	BMD
CHECKED BY:	RTB
ENGINEER:	JDS

SHEET NUMBER: C-6



1 / E-1 ONE-LINE DIAGRAM
NOT TO SCALE

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T-MOBILE SITE ID: CTNH544A

SHEET NAME: ONE-LINE DIAGRAM

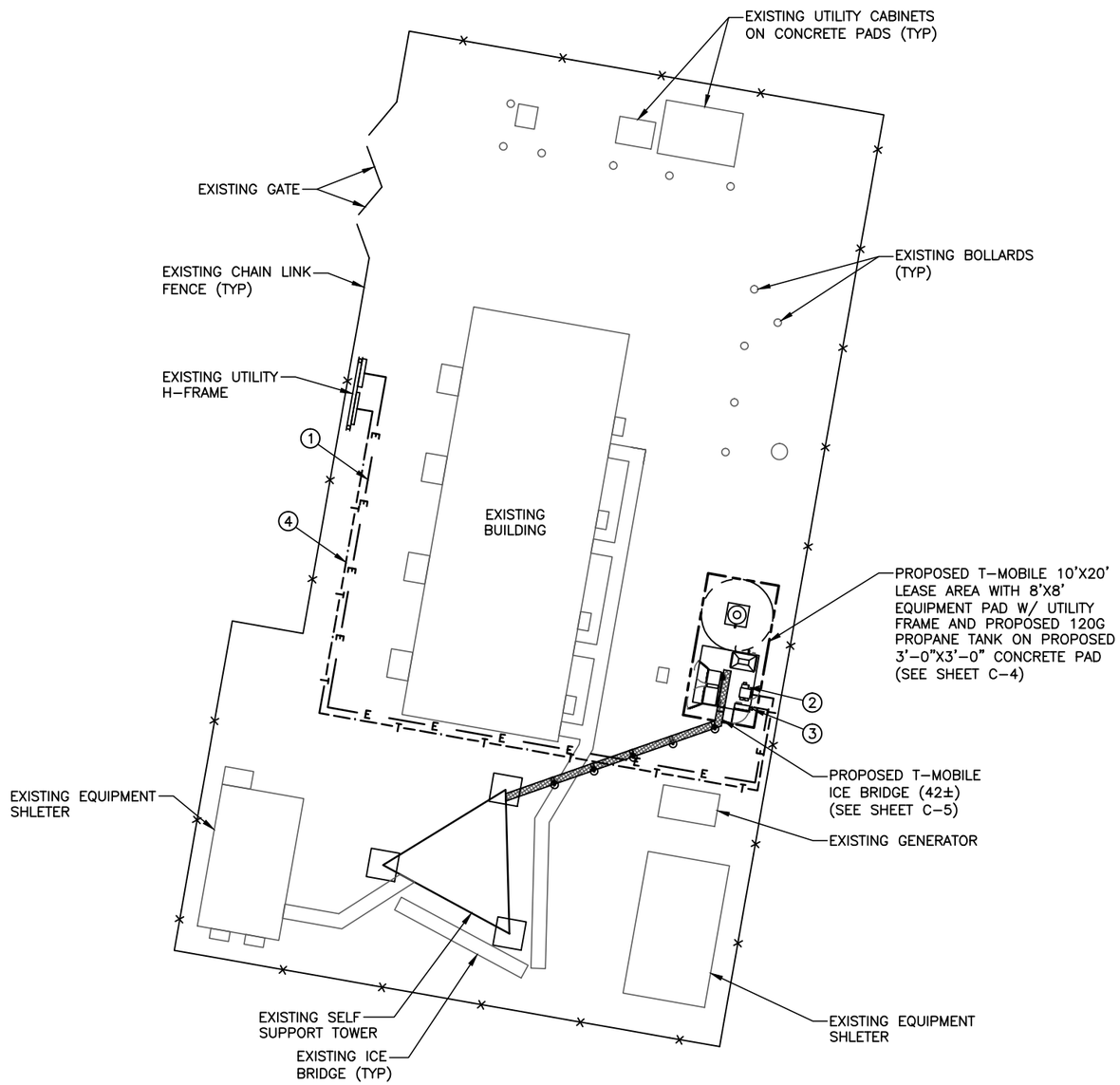
SMW #: 16-2211

DESIGNER:	BMD
CHECKED BY:	RTB
ENGINEER:	JDS

SHEET NUMBER: E-1

ELECTRICAL KEY NOTES:

1. PROPOSED 3" PVC CONDUIT WITH (3) 3/0 + #4G FROM EXISTING UTILITY H-FRAME TO METER BASE. THE CONTRACTOR SHALL PROVIDE AND INSTALL THE WEATHERHEAD WITH COILED EXCESS CONDUCTORS. COORDINATE WITH THE LOCAL UTILITY COMPANY REGARDING FINAL SERVICE CONNECTION.
2. PROPOSED METER & 200A MANUAL DISCONNECT. COORDINATE WITH LOCAL UTILITY COMPANY REGARDING FINAL SERVICE CONNECTION.
3. PROPOSED 200A NORTHERN TECHNOLOGIES PPC CABINET WITH INTEGRATED 200A APPLETON GENERATOR BACKUP PLUG.
4. PROPOSED 2" PVC CONDUIT WITH PULLSTRING FOR TELCO FROM EXISTING TELCO BOX ON H-FRAME TO PROPOSED TELCO BOX



N

0' 20' 40' 60'

1" = 20' (11"x17")

1/E-2 ELECTRICAL UTILITY PLAN

T-Mobile

35 GRIFFIN RD S
BLOOMFIELD, CT 06002
OFFICE: 860-692-7100
FAX: 860-692-7159

PLANS PREPARED BY:

NSS NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development

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SITE INFORMATION:

CTNH544A
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SHARON, CT 06498

#	DATE	DESCRIPTION:
0	10/19/16	ISSUED FOR CLIENT REV.

T-MOBILE SITE ID: CTNH544A

SHEET NAME: ELECTRICAL UTILITY PLAN

SMW #: 16-2211

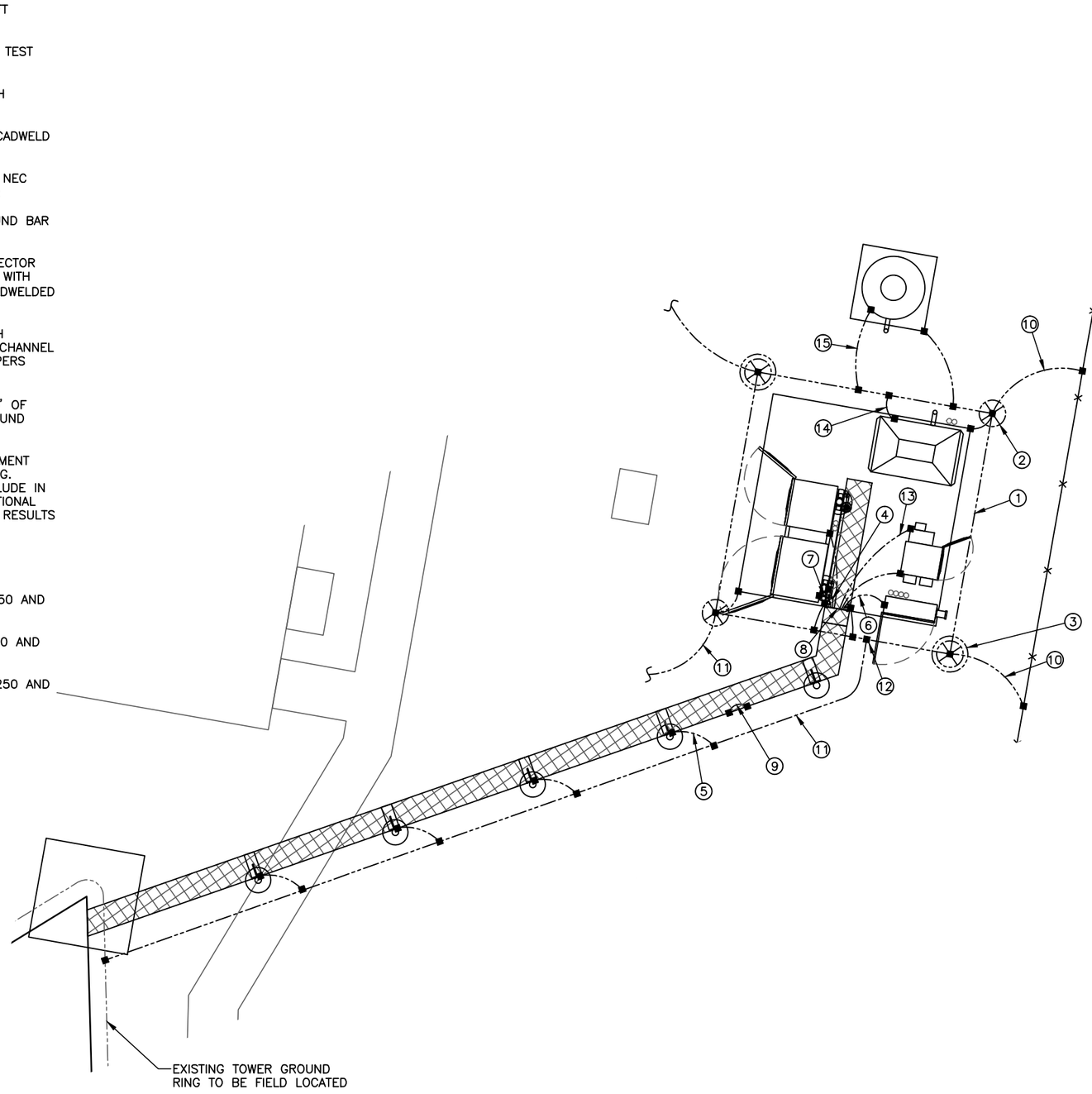
DESIGNER:	BMD
CHECKED BY:	RTB
ENGINEER:	JDS

SHEET NUMBER: E-2

GROUNDING KEY NOTES:

1. PROPOSED #2 BARE TINNED SOLID COPPER GROUND RING (TYP)
2. PROPOSED 5/8" DIA. X 8' LONG STEEL SHAFT COPPER CLAD GROUND ROD (TYP)
3. PROPOSED GROUND ROD WITH COVERED PVC TEST WELL (TYP)
4. GROUND PROPOSED UTILITY FRAME POST WITH CADWELD CONNECTION TO BASE PLATE (TYP)
5. GROUND PROPOSED ICE BRIDGE POST WITH CADWELD CONNECTION TO BASE (TYP)
6. GROUND PROPOSED PPC POWER PANEL PER NEC 250 AND LOCAL UTILITY REQUIREMENTS (TYP)
7. GROUND PROPOSED SSC CABINET MAIN GROUND BAR WITH 2-HOLE LUG CONNECTION (TYP)
8. PROVIDE 12 POSITION MAIN EQUIPMENT COLLECTOR GROUND BAR ATTACHED TO UNISTRUT FRAME WITH STANDOFF INSULATORS, GROUND WITH (2) CADWELDED CONNECTIONS, 1 PER SITE (TYP)
9. GROUND ICE BRIDGE CHANNEL SECTIONS WITH 2-HOLE LUG CONNECTION. BOND ADJOINING CHANNEL SECTIONS TOGETHER WITH 2-HOLE LUG JUMPERS (TYP)
10. GROUND TO ALL METALLIC OBJECTS WITHIN 6' OF THE PROPOSED EQUIPMENT AND BURIED GROUND RING (TYP)
11. GROUND PROPOSED T-MOBILE BURIED EQUIPMENT GROUND RING TO EXISTING SITE GROUND RING. CONDUCT GROUNDING SYSTEM TEST AND INCLUDE IN THE CLOSEOUT PACKAGE TO T-MOBILE. ADDITIONAL GROUNDING MAY BE REQUIRED PENDING THE RESULTS OF THE GROUNDING SYSTEM TEST (TYP x2)'
12. CADWELD CONNECTION (SEE SHEET E-6)
13. GROUND PROPOSED DISCONNECT PER NEC 250 AND LOCAL UTILITY REQUIREMENTS (TYP)
14. GROUND PROPOSED GENERATOR PER NEC 250 AND LOCAL UTILITY REQUIREMENTS (TYP)
15. GROUND PROPOSED TANK & PAD PER NEC 250 AND LOCAL UTILITY REQUIREMENTS (TYP)

NOTE TO CONTRACTORS:
DIGGING AND/OR TRENCHING INSIDE COMPOUND, MUST BE DONE BY HAND.



N

1 / E-3 GROUNDING PLAN
NOT TO SCALE

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OFFICE: 860-692-7100
FAX: 860-692-7159

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SHARON, CT 06498

#	DATE	DESCRIPTION:
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T-MOBILE SITE ID: CTNH544A

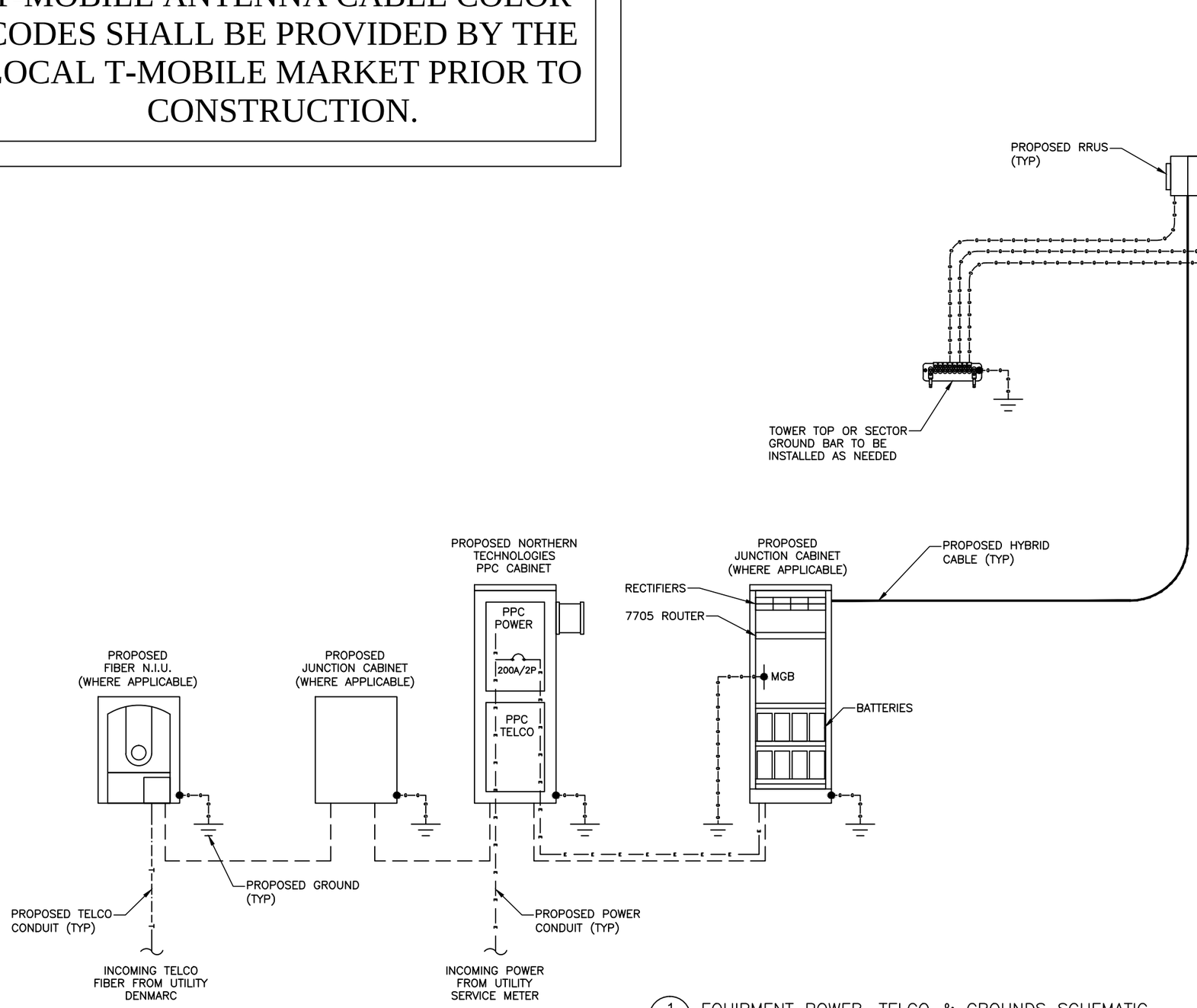
SHEET NAME:
GROUNDING PLAN

SMW #: 16-2211

DESIGNER:	BMD
CHECKED BY:	RTB
ENGINEER:	JDS

SHEET NUMBER: E-3

T-MOBILE ANTENNA CABLE COLOR CODES SHALL BE PROVIDED BY THE LOCAL T-MOBILE MARKET PRIOR TO CONSTRUCTION.



1 / E-4 EQUIPMENT POWER, TELCO & GROUNDS SCHEMATIC
NOT TO SCALE

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T-MOBILE SITE ID: CTNH544A

SHEET NAME: EQUIPMENT SCHEMATIC

SMW #: 16-2211

DESIGNER:	BMD
CHECKED BY:	RTB
ENGINEER:	JDS

SHEET NUMBER: E-4

1. ALL WORK IS TO COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE (NEC) AND ANY LOCAL ORDINANCES, CODES, AND ALL OTHER ADMINISTRATIVE AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL FURNISH AND PAY FOR ALL PERMITS AND RELATED FEES.

2. ALL EQUIPMENT AND MATERIAL FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL BE UNDERWRITERS LABORATORIES (U.L.) LISTED, NEW, FREE FROM DEFECTS, AND SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY OWNER OR HIS REPRESENTATIVE. SHOULD ANY TROUBLE DEVELOP DURING THIS PERIOD DUE TO FAULTY WORKMANSHIP, MATERIAL, OR EQUIPMENT, THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIALS AND LABOR TO CORRECT THE TROUBLE WITHOUT COST TO THE OWNER.

3. ALL WORK SHALL BE EXECUTED IN A WORKMAN LIKE MANNER AND SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED. CONTRACTOR SHOULD AVOID DAMAGE TO EXISTING UTILITIES WHEREVER POSSIBLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING RELATED TO ELECTRICAL WORK, AND SHALL RESTORE ALL EXISTING LANDSCAPING, SPRINKLER SYSTEMS, CONDUITS, WIRING, PIPING, ETC. DAMAGED BY THE ELECTRICAL WORK TO MATCH EXISTING CONDITIONS.

4. ELECTRICAL WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE ELECTRICAL POWER AND LIGHTING SYSTEMS, TELEPHONE AND COMMUNICATION SYSTEMS, PANELBOARDS, CONDUIT, CONTROL WIRING, GROUNDING, ETC. AS INDICATED ON ELECTRICAL DRAWINGS AND/OR AS REQUIRED BY GOVERNING CODES.

5. PRIOR TO INSTALLING ANY ELECTRICAL WORK, THE CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY EXISTING SITE LOCATIONS AND CONDITIONS AND UTILITY SERVICE REQUIREMENTS OF THE JOB, AND BY REFERENCE TO ENGINEERING AND EQUIPMENT SUPPLIERS' DRAWINGS. SHOULD THERE BE ANY QUESTION OR PROBLEM CONCERNING THE NECESSARY PROVISIONS TO BE MADE. PROPER DIRECTIONS SHALL BE OBTAINED BEFORE PROCEEDING WITH ANY WORK.

6. PROVIDE POWER AND TELEPHONE TO SERVICE POINTS PER UTILITY COMPANY REQUIREMENTS. CONTRACTOR SHALL CONTACT UTILITY SERVICE PLANNERS AND OBTAIN ALL SERVICE REQUIREMENTS AND INCLUDE COSTS FOR SUCH IN THEIR BID.

7. SERVICE EQUIPMENT SHALL HAVE A SHORT CIRCUIT WITHSTAND RATING EXCEEDING THE MAXIMUM AVAILABLE FAULT CURRENT AT THE SUPPLY TERMINAL ON THE UTILITY TRANSFORMER SECONDARY, THE INSULATION SHALL BE FREE FROM ANY SHORT CIRCUITS AND GROUNDS. CONTRACTOR TO OBTAIN THE AVAILABLE SHORT CIRCUIT CURRENT FROM THE ELECTRICAL SERVICE PROVIDER.

8. ALL WIRES SHALL BE STRANDED COPPER WITH THHN/THWN AND 600 VOLTS INSULATION. ALL GROUND CONDUCTORS TO BE PROPERLY SIZED COPPER. (STRANDED OR SOLID)

9. IN THE EVENT OF ANY CONFLICT OR INCONSISTENCY BETWEEN ITEMS SHOWN ON THE PLANS AND/OR SPECIFICATIONS, THE NOTE, SPECIFICATION OR CODE WHICH PRESCRIBES AND ESTABLISHES THE HIGHEST STANDARD OF PERFORMANCE SHALL PREVAIL.

10. SERVICE CONDUITS SHALL HAVE NO MORE THAN (4) –50° BENDS IN ANY SINGLE RUN. THE CONTRACTOR SHALL PROVIDE PULL BOXES AS NEEDED WHERE CONDUIT REQUIREMENTS EXCEED THESE CONDITIONS. PULL WIRES AND CAPS SHALL BE PROVIDED AT ALL SPARE CONDUITS FOR FUTURE USE.

11. ALL ELECTRICAL EQUIPMENT SHALL BE ANCHORED TO WITHSTAND LOCAL WIND SPEED REQUIREMENTS AND DESIGNED FOR OUTDOOR EXPOSURE.

12. ALL COAX, POWER AND TELEPHONE SYSTEM CONDUITS SHALL HAVE A MINIMUM 24" SCH. 80 PVC RADIUS SWEEPS TO EQUIPMENT, PULLBOXES, GUY, ETC., UNLESS OTHERWISE NOTED, OR AS REQUIRED BY UTILITY COMPANIES.

13. FUSE TYPE SHALL BE BUSSMAN RKI LOW PEAK FUSE (LPN–RK–140).

14. UPON COMPLETION OF THE JOB, THE CONTRACTOR SHALL FURNISH AS–BUILT DRAWINGS TO THE OWNER.

15. GENERAL GROUNDING CRITERIA
    1ST STEP: GROUND TO EXISTING BUILDING STRUCTURAL STEEL AND TO THE EXISTING COLD WATER METAL PIPE LINE. (WHERE APPLICABLE) THEN TEST GROUNDING RESISTANCE FOR 5 OHMS OR LESS OVERALL GROUND RESISTANCE. WHERE THE EFFECTIVE RESISTANCE DOES NOT MEET THIS CRITERIA, PROVIDE SUPPLEMENTAL GROUNDING AND RE–TEST UNTIL GROUND RESISTANCE FALLS BELOW THIS LEVEL.

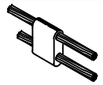
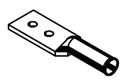
16. SUPPLEMENTAL GROUND MAY CONSIST OF ONE OR MORE OF THE FOLLOWING:
    COUNTERPOISE, USER GROUND, GROUND ROD AND/OR GROUND WELL IN EXTREMELY ADVERSE SOIL CONDITIONS. WHERE THE EXISTING BUILDING STEEL DOES NOT PROVIDE AN EFFECTIVE GROUND RESISTANCE, THEN THE CONTRACTOR SHALL PROVIDE A SEPARATE GROUND CONDUCTOR FROM ROOF MOUNTED BTS EQUIPMENT LOCATIONS EITHER DOWN THROUGH THE INSIDE OF THE BUILDING OR DOWN THE OUTSIDE OF THE BUILDING, DEPENDING UPON OWNER PREFERENCE. WHERE THE GROUND CONDUCTOR FROM THE ROOF MOUNTED EQUIPMENT IS ROUTED IN CONDUIT, THE CONDUIT SHALL BE EFFECTIVELY GROUNDED TO THE GROUND CONDUCTOR AT BOTH ENDS OF THE CONDUIT. (GUY INSTALLATIONS):

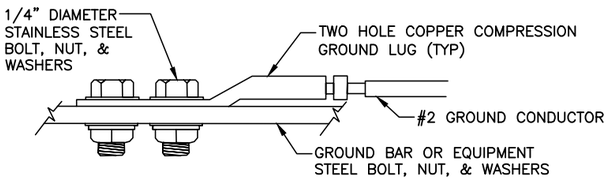
    FOR INSTALLATIONS WHERE WOODEN STRUCTURES, TOWERS, CONCRETE SILOS ETC. ARE ENCOUNTERED A PARATE DOWNLEAD SHALL BE PROVIDED FROM THE 3 ANTENNAS SEPARATED BY A MINIMUM OF 12 INCHES FROM THE COAXIAL CABLES. THE GROUND CONDUCTOR SHALL BE SECURELY FASTENED TO THE EXTERIOR OF OUTSIDE STRUCTURES WITH NONMETALLIC GROUND STRAPS EVERY 10 FEET. AGAIN, AS FOR TENANT IMPROVEMENT PROJECTS, TEST THE GROUND RESISTANCE FOR GUY INSTALLATIONS AND PROCEED PER THE ABOVE STEPS.

17. CONTRACTOR TO COLOR PHASE CONDUCTORS BLACK (B PHASE), RED (A PHASE), WHITE (NEUTRAL), AND GREEN (GROUND).

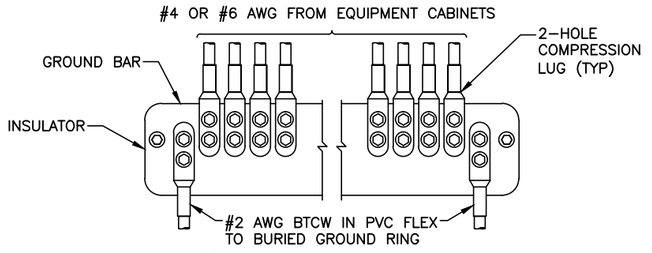
18. CONTRACTOR TO PROVIDE GUTTER TAP.

19. THERE SHALL BE A MINIMUM CLEARANCE OF 48" BETWEEN FRONT OF ELECTRICAL EQUIPMENT AND ANY WALL OR OBSTRUCTION.

CADWELD CONNECTIONS OR APPROVED EQUAL			BURNDY CONNECTIONS OR APPROVED EQUAL
 PARALLEL HORIZONTAL CONDUCTORS PARALLEL THROUGH CONNECTION OF HORIZONTAL CABLES TYPE PT	 HORIZONTAL STEEL SURFACE TO FLAT STEEL SURFACE OR HORIZONTAL PIPE TYPE HS	 VERTICAL PIPE CABLE DOWN AT 45° TO RANGE OF VERTICAL PIPES TYPE VS	 BOND JUMPER FIELD FABRICATED GREEN STRANDED INSULATED TYPE 2–YA–2
 THROUGH CABLE TO GROUND ROD THROUGH CABLE TO TOP OF GROUND ROD TYPE GT	 VERTICAL STEEL SURFACE CABLE DOWN AT 45° TO VERTICAL STEEL SURFACE INCLUDING PIPE TYPE VS		 COPPER LUGS TWO HOLE – LONG BARREL LENGTH TYPE YA–2



1 / E–5 TWO HOLE LUG CONNECTION DETAIL
NOT TO SCALE



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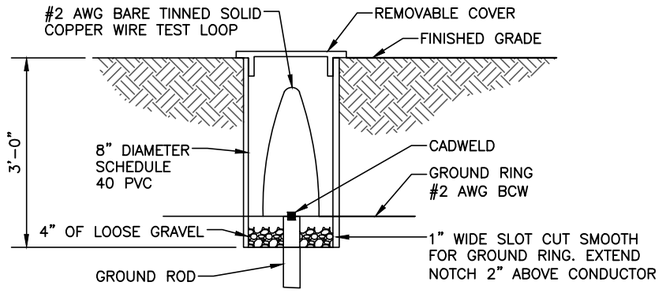
NOT TO SCALE



3 / E–5 TEST WELL DETAIL
NOT TO SCALE

T-Mobile
35 GRIFFIN RD S
BLOOMFIELD, CT 06002
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FAX: 860–692–7159

PLANS PREPARED BY:
NSS NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development
NORTHEAST SITE SOLUTIONS, LLC
199 BRICKYARD ROAD
FARMINGTON CT 06032
(860) 677–1999

SMW ENGINEERING GROUP, INC.
TOGETHER PLANNING A BETTER TOMORROW

PRELIMINARY DRAWING
(NOT VALID UNLESS STAMPED AND SIGNED)

SITE INFORMATION:
CTNH544A
7 SURDAN MOUNTAIN ROAD
SHARON, CT 06498

#	DATE	DESCRIPTION:
0	10/19/16	ISSUED FOR CLIENT REV.

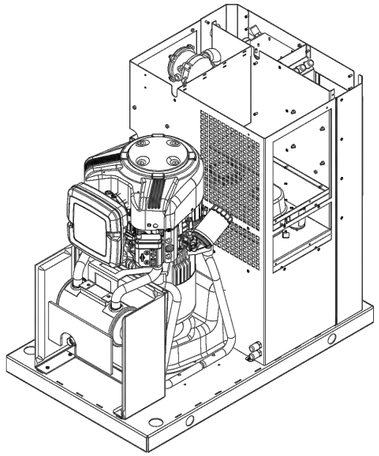
T-MOBILE SITE ID: CTNH544A

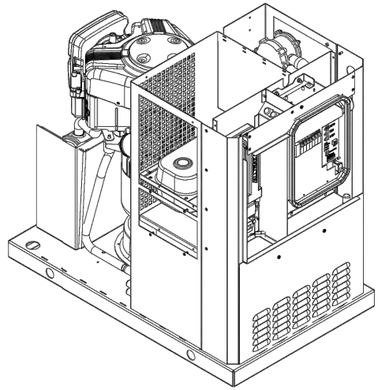
SHEET NAME:
ELECTRICAL & GROUNDING DETAILS

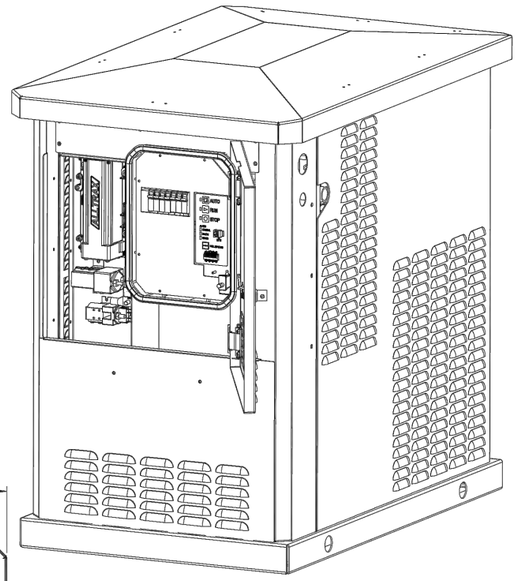
SMW #: 16–2211

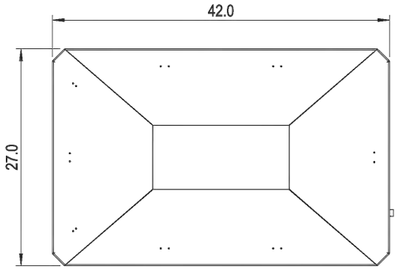
DESIGNER:	BMD
CHECKED BY:	RTB
ENGINEER:	JDS

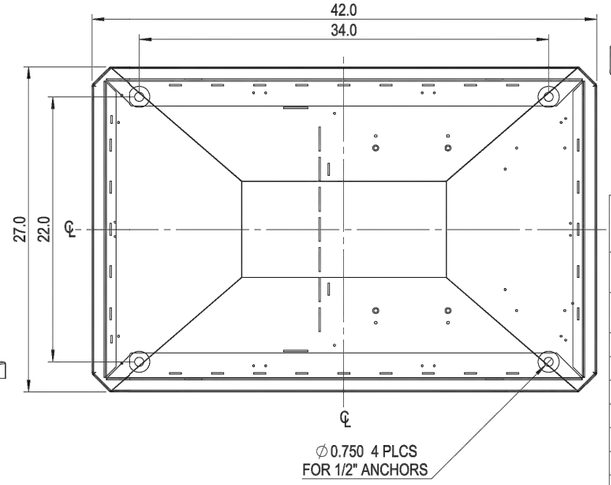
SHEET NUMBER: E-5

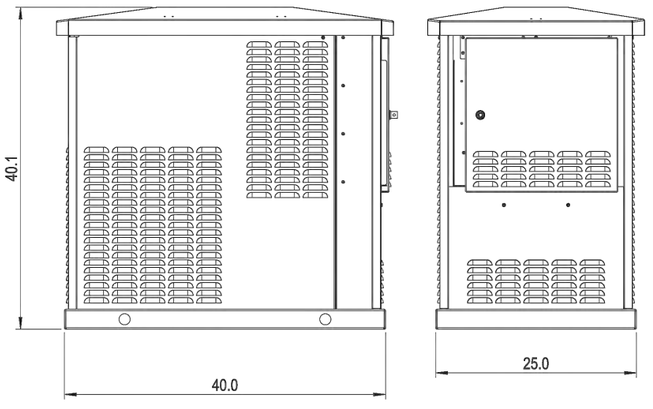












Item	Part NO.	Q'ty	Description
J	McMaster Carr 90221A418	4	RIVET NYLON RIBBED SHANK 1/2"
I	McMaster Carr 93880A245	4	SCREW #10-16x1/2" TYPE B THREAD FORMING, HEX SLOT
H	McMaster Carr 93776A401	4	NUT HEX FLANGE 10-32 STAINLESS STEEL
G	IN01265	1	INSULATOR, ROOF
F	-	-	-
E	-	-	-
D	-	-	-
C	-	-	-
B	CH01274	1	ROOF PLATE
A	CAB01269	1	CABINET ASSY

台達電子工業股份有限公司
DELTA ELECTRONICS, INC.

DIMENSIONAL TOLERANCES HOLES : ±0.05 ANGLES : ±0.5°

( )		( )		( )		( )	
<30	±0.25	DECIMALS		UP~100	±0.2	250~300	±0.4	UP~600	±1.5
>30~100	±0.35	X	±0.3	100~150	±0.25	300~350	±0.45	600~900	±2.4
>100~300	±0.5	X.X	±0.2	150~200	±0.3	350~400	±0.5	900~OVER	±3.1
ABOVE 300	±0.6	X.XX	±0.1	200~250	±0.35				

SCALE 1:3 | UNIT in | USED ON -

THIRD ANGLE PROJECTION

A3 SIZE

Drawn: 03/25/2014 Vince Byrne

Design: 03/25/2014 Vince Byrne

Description: APU ASSY

Part No. ESOG150-PCA01

REV. 0E

SHEET 1 OF 2

ISSUE DATE: 03/25/2014

X:\0_Projects\TMO_APU\CAB01270-APU_assy (closed)
X:\0_Projects\TMO_APU\CAB01270-APU_assy

FRAME NAME:DF-MEA3H-1R01.SLDDRT

T-Mobile
35 GRIFFIN RD S
BLOOMFIELD, CT 06002
OFFICE: 860-692-7100
FAX: 860-692-7159

PLANS PREPARED BY:
NSS NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development
NORTHEAST SITE SOLUTIONS, LLC
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(860) 677-1999

SMW ENGINEERING GROUP, INC.
TOGETHER PLANNING A BETTER TOMORROW

PRELIMINARY DRAWING
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SITE INFORMATION:
CTNH544A
7 SURDAN MOUNTAIN ROAD
SHARON, CT 06498

#	DATE	DESCRIPTION:
0	10/19/16	ISSUED FOR CLIENT REV.

T-MOBILE SITE ID: CTNH544A

SHEET NAME: ATTACHMENTS

SMW #: 16-2211

DESIGNER:	BMD
CHECKED BY:	RTB
ENGINEER:	JDS

SHEET NUMBER: A-1

Product Feature

- Reliable 52V DC backup solution
- Extremely simple installation
- Extended run times (over 72 hours)
- Automated exercising routines
- Intelligent control panel monitoring
- Minimal maintenance

Specifications

1. General	
Construction	Aluminum enclosure with Pre-galvanized steel base
Dimensions (W x H x D)	**27 x 40 x 42 in (686 x 1016 x 1067 mm)**
Weight	350 lbs (159 kg) (without optional start batteries)
Mounting options	**Pad-mount**
Finish	Polyester Powder Paint (Gray)
Fuel options	**Propane (LPG) or Natural Gas**
Safety	UL2200 Listed (Pending)
2. Environment	
Operating temperature	-20°C to +46°C (-4F to +115F)
Protection class	**IP55 electronics enclosure**
Altitude	< 4000m above mean sea level
Acoustics	**76 dB(A) at 23 feet (7m)**
3. Generator Specifications	
Output Power (W)	7500W
Output Voltage (V)	**52V DC**
Output Voltage Regulation	≤ ± 250mV
Engine	**570cc Air Cooled Engine**
DC Motor	Permanent Magnet Brushed DC Motor
RPM	**3450 to 3750**
Fuel consumption	1.2 lbs/hr @ 5kW, LPG
Gas inlet pressure	**11 in-H2O (0.40 psi)**
Output connections	¼"-20, 5/8" C-C threaded stud interface for 1/0 2-hole lugs
Output protection	**200A Circuit Breaker**
4. Batteries	
Site	Start-up from site batteries (50A@49V for <2min)
Start-up (optional)	**Start-up with no energy from site batteries**
5. Control and Interface	
Controls	Auto, Run, Stop
Alarms	**Critical, Major, Minor alarm relays (Form-C)**
Craft Interface	RJ45 Ethernet
Automated Exercise	**Automated periodic exercising with weekend and holiday blackout**
6. Ordering Information	
ESOG150-PCA01	PowerGen 7500 with Large Oil Reservoir
ESOG150-PCA02	**PowerGen 7500 with Standard Oil Reservoir**
	Battery Heater Kit
	Battery String, 48V, PWL12V38

*All specifications are subject to change without prior notice.

Delta Group Website:
www.deltaww.com

Product Website:
www.deltapowersolutions.com

United States of America & Canada
Delta Greentech (USA) Corp.
2360 Campbell Creek Blvd. #530
Richardson (Texas) 75082
Phone: 972-437-7900
DLDGASales@delta-corp.com

Central America
Delta Electronics International Mexico, S.A. de C.V.
Via Gustavo Baz No. 2160
Col. Industrial La Loma Tlainepartla
CP 54060, Edo de Mexico

South America
Delta Greentech (Brasil) S.A
Rua Itapeva, 26 - 3 andar - Bela Vista
01332-000 - São Paulo - SP - Brasil

Asia Pacific
Delta Electronics, Inc.
3 Tungyuan Road, Chungli Industrial Zone,
Taoyuan County 32063, Taiwan

China
Delta Electronics (Shanghai) Co., Ltd
No.182 Minyu Road, Pudong Shanghai, P.R.C., China

Japan
Delta Electronics (Japan), Inc
2-1-14 Minato-ku shibadamin, Tokyo 105-0012, Japan

Russia
Delta Energy Systems LLC
Vereyskaya Plaza II, office 401
121357 Moscow, Russia

Europe
Delta Energy Systems (Switzerland) AG
Freiburgstrasse 251
3010 Bern-Bümpliz, Switzerland

EN_V3 / VB

1 GENERATOR SPECIFICATIONS

NOT TO SCALE

100# MINI ASME, 200# & 420# PORTABLES

DOT VS. ASME COMPARISON

- The DOT 200#, 420# and ASME 100#, 200# & 420# cylinders can be transported with 80% of total container volume.
- The weight of an ASME 420# is 13 lbs. more than a DOT 420#. This thicker steel provides the customer greater longevity of the 420# assets.
- ASME code does not mandate a retest period. DOT retest periods are 12 years after manufacturing, then each 5 year period thereafter.
- State-of-the-art powder coating system cylinder finish, called "Armor Clad II - THE NEXT GENERATION," which improves the durability of the tank by 150%!
- Vacuum Pre-purged tank saves in the cost to prepare a tank for customer use.
- HDPE (High Density Polyethylene) Lids. Extremely durable rust-proof and dent-proof. So reliable, they come with a 10 year guarantee!

Lifting Lugs standard on 200# & 420#

100#/ASME MINI 200# DOT/57 GAL. ASME 420# DOT/120 GAL. ASME

	Product Data	Propane Capacities		Water Capacity	Length OL	Height H	Diameter D	Diameter B	Tare Weight	Skid Quantity
Catalog No.	**DOT**	**Lb**	**Gal**	**Lb**	**In**	**In**	**In**	**In**	**Lb**	
14205TC.11HL	200# DOT 4BW240 Vertical - Multi - Valve w/ Gauge	200	45.6	476	41.9	34.1	24	20.0	152	16
1499TC.11HL	420# DOT 4BW240 Vertical - Quickfit Valve	420	95.9	1000	53.8	45.6	30	23.1	278	9
		kg	**Liter**	**Kg**	**mm**	**mm**	**mm**	**mm**	**Kg**	
14205TC.11HL	200# DOT 4BW240 Vertical - Multi - Valve w/ Gauge	90.7	172.9	256.7	1064	865	610	508	66.7	16
1499TC.11HL	420# DOT 4BW240 Vertical - Quadrifitt Valve	190.5	363.0	453.6	1366	1159	762	587	126.1	9
	ASME	**Lb**	**Gal**	**Lb**	**In**	**In**	**In**	**In**	**Lb**	
68143HL	28.6 (100#) ASME MINI Vertical - 250 PSI 2 hole w/Gauge	100	22.9	238	37.1	29.8	18	15.5	85	20
6765.11HL	57 gal. (200#) ASME Vertical - 250 PSI Multi Valve w/ Gauge	200	45.6	476	41.9	34.1	24	20.0	188	16
6762.11HL	120 gal. (420#) ASME Vertical - 250 PSI Quadrifitt Valve	420	95.9	1000	53.8	45.6	30	23.1	291	9
		Kg	**Liter**	**Kg**	**mm**	**mm**	**mm**	**mm**	**Kg**	
68143HL	28.6 (100#) ASME MINI Vertical - 250 PSI 2 hole w/Gauge	45.4	86.6	108.3	942	756	457	394	38.6	20
6765.11HL	57 gal. (200#) ASME Vertical - 250 PSI Multi Valve w/ Gauge	90.7	172.9	256.7	1064	865	610	508	85.3	16
6762.11HL	120 gal. (420#) ASME Vertical - 250 PSI Quadrifitt Valve	190.5	363.0	453.6	1366	1159	762	587	132.0	9

6

TANK SIZE

2 120 GALLON PROPANE TANK SPECIFICATIONS

NOT TO SCALE

T-Mobile
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BLOOMFIELD, CT 06002
OFFICE: 860-692-7100
FAX: 860-692-7159

PLANS PREPARED BY:
NSS NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development
NORTHEAST SITE SOLUTIONS, LLC
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FARMINGTON CT 06032
(860) 677-1999

SMW ENGINEERING GROUP, INC.
TOGETHER PLANNING A BETTER TOMORROW

PRELIMINARY DRAWING
(NOT VALID UNLESS STAMPED AND SIGNED)

SITE INFORMATION:
CTNH544A
7 SURDAN MOUNTAIN ROAD
SHARON, CT 06498

#	DATE	DESCRIPTION:
0	10/19/16	ISSUED FOR CLIENT REV.

T-MOBILE SITE ID:
CTNH544A

SHEET NAME:
ATTACHMENTS

SMW #:
16-2211

DESIGNER:	BMD
CHECKED BY:	RTB
ENGINEER:	JDS

SHEET NUMBER:
A-2

Exhibit D

Date: **October 11, 2016**

Sheldon Freincle
Northeast Site Solutions
199 Brickyard Road
Farmington, CT 06032

SMW Engineering Group
158 Business Center Drive
Birmingham, AL 35244
205.252.6985

Subject: **Structural Analysis Report**

Carrier Designation:	***T-Mobile* Co-Locate**	
	Carrier Site Number:	CTNH544A
	Carrier Site Name:	CTNH544A
Engineering Firm Designation:	**SMW Engineering Group Project Number:**	16-2211
Site Data:	**7 Surdan Mountain Road, Sharon, CT**	
	Latitude *41° 51' 43.38"*, Longitude *-73° 23' 58.67"*	
	195 Foot - Self Support Tower	

Dear Sheldon Freincle,

SMW Engineering Group is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned tower. This analysis has been performed in accordance with the terms of Northeast Site Solutions Purchase Order Number 1405.

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:

Existing + Reserved + Proposed Equipment **Sufficient Capacity**
Note: See Table I and Table II for the proposed and existing/reserved loading, respectively.

This analysis has been performed in accordance with the 2016 Connecticut State Building Code based upon an ultimate 3-second gust wind speed of 120 mph converted to a nominal 3-second gust wind speed of 93 mph per section 1609.3.1 as required for use in the TIA-222-G Standard per Exception #5 of Section 1609.1.1. Exposure Category C and Risk Category III were used in this analysis.

All modifications and equipment proposed in this report shall be installed in accordance with the attached drawings for the determined available structural capacity to be effective.

We at *SMW Engineering Group* appreciate the opportunity of providing our continuing professional services to you and Northeast Site Solutions. If you have any questions or need further assistance on this or any other projects please give us a call.

Structural analysis prepared by:

Respectfully submitted by:

STATE OF CONNECTICUT
ALVIN A. KRAFT
No. 20787
LICENSED
PROFESSIONAL ENGINEER

10-12-16

V.G. Duvall, Jr., PE
Project Engineer

Al Kraft, P.E.
Connecticut Professional Engineer

tnxTower Report - version 7.0.6.2

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 195 ft Self Support tower designed by Pirod Manufactures Inc. in October of 1998. The original design wind speed criteria and loading are unknown.

2) ANALYSIS CRITERIA

The structural analysis was performed for this tower in accordance with the requirements of TIA-222-G Structural Standards for Steel Antenna Towers and Antenna Supporting Structures using a 3-second gust wind speed of 93 mph with no ice, 40 mph with 0.75 inch ice thickness and 60 mph under service loads, exposure category C, and Structure Class III.

Table 1 - Proposed Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
138.0	139.0	3	ericsson	RRUS 11 B2	1	1-5/8 Hybrid	-
	138.0	3	andrew	LNX-6515DS-A1M			
		3	ericsson	RRUS 11 B12			
		3	rfs celwave	APX16DWV-16DWV-S-E-A20			
		3	tower mounts 2	Pirod 10' PCS Frame (1)			
	137.0	3	ericsson	RRUS 11 B4			

Table 2 - Existing and Reserved Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
194.3	194.3	1	decibel	DB201-D	1	7/8	1
194.0	194.0	1	tower mounts	Pirod 6'-8" Rigid Side Arm	-	-	1
192.9	192.9	1	tower mounts 2	6' x 4-1/2" Mount Pipe	-	--	1
192.3	192.3	1	andrew	PA6-65AC	1	WE65	1
188.3	188.3	1	scala	OGT9-840	1	1-5/8	1
186.8	186.8	1	misc whips	3" x 9' Omni	1	1-5/8	1
184.5	190.8	1	misc whips	3" x 9' Omni	1	1-5/8	1
	184.5	1	tower mounts	Pirod 4' Side Mount Standoff (1)			
	183.3	1	decibel	DB222-A			
	178.3	1	decibel	DB222-A			
181.5	181.5	1	antel	BCD87077	1	7/8	1
181.0	181.0	1	miscl	Filter Box	-	-	1
179.3	179.3	1	pirod	PiROD 15' Rotatable Platform (Lattice)	2	1-5/8	1
		12	tower mounts 2	6' x 2" Mount Pipe			
	173.3	1	misc whips	3" x 12' Omni			
	172.3	1	misc whips	3" x 10' Omni			

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
172.5	172.5	1	telewave	ANT150D6-9	1	7/8	1
172.3	172.3	1	tower mounts	Pirod 4' Side Mount Standoff (1)	-	-	1
170.3	180.3	1	celwave	PD220	1	7/8	1
	170.3	1	tower mounts	Pirod 6' Side Mount Standoff (1)			
168.2	173.2	1	misc whips	3" x 12' Omni	1	7/8	1
	168.2	1	tower mounts	3' Side Mount Standoff			
161.0	165.0	6	antel	LPA-185080/8CF	12	1-5/8	1
		6	antel	LPA-80080/4CF			
	161.0	3	tower mounts	Pirod 15' T-Frame Sector Mount (1)			
148.3	148.3	6		LGP21401	12	1-5/8	1
		6	allgon	7770.00			
		6	ericsson	RRUS 11			
		1	kathrein	80010764			
		2	kmw communications	AM-X-CD-16-65-00T			
		3	lgp telecom	LGP13519			
		1	raycap	DC6-48-60-18-8F			
		3	tower mounts	Pirod 12' T-Frame Sector Mount (1)			
138.0	138.0	1	-	-	1	1-5/8 Hybrid	2
132.0	133.0	1	sinclair	SRL110A	1	7/8	1
	132.0	1	-	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe			
124.0	128.0	1	decibel	DB586-Y	1	7/8	1
	124.0	1	-	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe			
		1	-	Tower Top Amplifier			
	123.0	1	decibel	DB586-Y			
118.7	118.7	1	-	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	1	7/8	1
		1	decibel	DB212-1			
118.5	118.5	1	-	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	-	-	1
104.0	104.0	1	-	Ice Canopy			1
100.3	100.3	1	andrew	PA6-65AC	1	WE65	1
99.2	99.2	1	tower mounts	6'8"x4" Pipe Mount	-	-	1
98.8	107.3	1	decibel	DB205-L	1	7/8	1
	98.8	1	-	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe			
83.0	92.0	1	decibel	DB224	1	1/2	1

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
	83.0	1	-	2-ft Standoff			
80.7	80.7	1	-	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	1	1/2	1
	74.7	1	misc whips	3" x 12' Omni			
77.5	88.4	1	celwave	PD220	1	1/2	1
	77.5	1	-	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe			
68.3	68.3	1	decibel	DB432-A	1	1/2	1
15.0	15.0	1	misc dish	1.2M	2	1/4	1
13.0	13.0	1	-	2-ft Standoff	-	-	1

Notes:
1) Existing Equipment.
2) Reserved Equipment for future Entitlement.

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
Structuatl Analysis	Centek Engineering	Rev 1 12/03/12	Northeast Site Solutions
RFDS	T-Mobile	Version 0.2 09/27/16	Northeast Site Solutions

3.1) Analysis Method

tnxTower (version 7.0.6.2), 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 in accordance with the manufacturer's specifications.
2) The tower and structures have been maintained in accordance with the manufacturer's specification.
3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
4) The tower has had modifications implemented.
5) The previous leg modifications do not meet the stiffness ratio requirements of the Rev G Standard and are not considered to be active load carrying members in this analysis. Additional welding will be required to bring them into compliance with the provisions of the Standard.

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

4) ANALYSIS RESULTS

Table 5 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T1	197 - 187	Leg	1 3/4	3	-4.7	83.6	5.6	Pass
T2	187 - 172	Leg	2	36	-25.4	113.6	22.3	Pass
T3	172 - 152	Leg	2 1/4	81	-73.6	149.0	49.4	Pass
T4	152 - 142	Leg	Pirod 105245	138	-81.8	214.9	38.1	Pass
T5	142 - 122	Leg	Pirod 105217	147	-136.0	214.9	63.3	Pass
T6	122 - 102	Leg	Pirod 105218	162	-187.3	300.7	62.3	Pass
T7	102 - 82	Leg	Pirod 105218	177	-240.8	300.7	80.1	Pass
T8	82 - 62	Leg	Pirod 105219	195	-292.3	399.9	73.1	Pass
T9	62 - 42	Leg	Pirod 105219	210	-342.4	399.9	85.6	Pass
T10	42 - 22	Leg	Pirod 105220	225	-391.9	512.4	76.5	Pass
T11	22 - 2	Leg	Pirod 105220	240	-438.9	512.4	85.7	Pass
T1	197 - 187	Diagonal	7/8	14	-1.7	13.1	12.8	Pass
T2	187 - 172	Diagonal	7/8	47	-4.1	13.0	31.3	Pass
T3	172 - 152	Diagonal	1	92	-5.1	18.1	28.2	Pass
T4	152 - 142	Diagonal	L2 1/2x2 1/2x3/16	144	-8.3	13.4	61.7	Pass
T5	142 - 122	Diagonal	L3x3x3/16	153	-10.3	18.1	56.6 68.7 (b)	Pass
T6	122 - 102	Diagonal	L3x3x1/4	168	-11.4	19.5	58.5	Pass
T7	102 - 82	Diagonal	L3x3x1/4	186	-11.4	15.6	73.1	Pass
T8	82 - 62	Diagonal	L3x3x5/16	201	-12.3	15.6	79.2	Pass
T9	62 - 42	Diagonal	L3 1/2x3 1/2x1/4	216	-13.0	16.8	77.6	Pass
T10	42 - 22	Diagonal	L3 1/2x3 1/2x5/16	231	-13.8	17.0	81.3	Pass
T11	22 - 2	Diagonal	L4x4x1/4	246	-15.9	17.5	90.6	Pass
T1	197 - 187	Top Girt	L3x3x5/16	4	-0.2	38.1	0.5	Pass
T2	187 - 172	Top Girt	1	38	-0.9	16.0	5.3	Pass
T3	172 - 152	Top Girt	1	83	-1.6	16.1	10.0	Pass
T7	102 - 82	Top Girt	L3x3x3/16	178	-4.4	8.1	54.5	Pass
T1	197 - 187	Bottom Girt	7/8	7	-0.6	2.4	27.0	Pass
T2	187 - 172	Bottom Girt	1	40	-1.5	16.0	9.6	Pass
T3	172 - 152	Bottom Girt	1	85	-0.6	13.4	4.5	Pass
							Summary	
						Leg (T11)	85.7	Pass
						Diagonal (T11)	90.6	Pass
						Top Girt (T7)	54.5	Pass
						Bottom Girt (T1)	27.0	Pass
						Bolt Checks	68.7	Pass
						Rating =	90.6	Pass

Table 5 - Tower Component Stresses vs. Capacity

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	71.4	Pass
2	Base Foundation	0	71.2	Pass

Structure Rating (max from all components) =	90.6%

Notes:
1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.
2) Foundation capacity determined by comparing analysis reactions to original previous structural analysis reactions.

Table 6 - Dish Twist/Sway Results for 60 mph Service Wind

Elevation (ft)	Dish Model	Deflection (in)	Tilt (deg)*	Twist (deg)*
194.25	PA6-65AC	7.839	0.3691	0.0950
102.25	PA6-65AC	1.958	0.1882	0.0119
17	1.2M	0.0660	0.0236	0.0013

*Allowable tilt and twist values to be reviewed by the carrier.

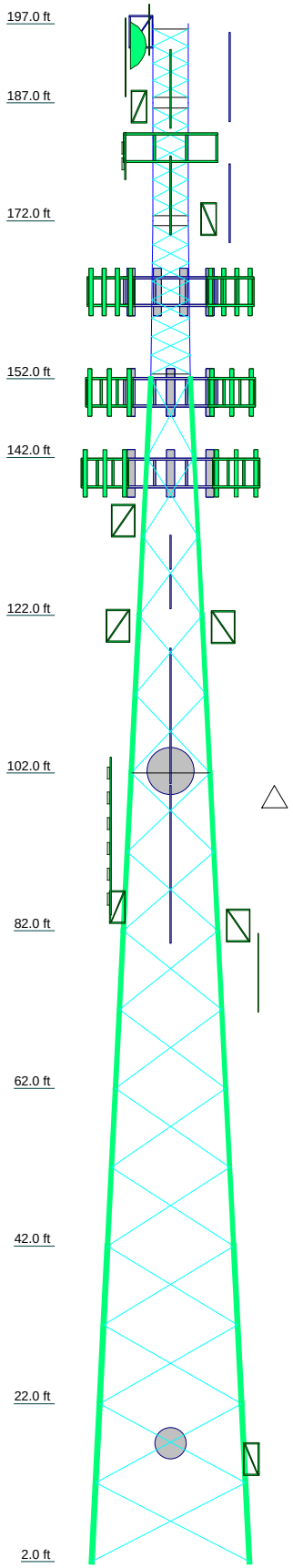
4.1) Recommendations

The tower and its foundation are sufficient to carry the existing, reserved, and proposed loads. No modifications are required at this time.

APPENDIX A

TNXTOWER OUTPUT

Section		T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11		
Legs		SR 1 3/4	SR 2	SR 2 1/4	A	Pirod 105217	Pirod 105218	Pirod 105219			Pirod 105220			
Leg Grade		A572-50												
Diagonals		SR 7/8		SR 1	B	L3x3x3/16	L3x3x1/4	L3x3x5/16		L3 1/2x3 1/2x1/4	L3 1/2x3 1/2x5/16	L4x4x1/4		
Diagonal Grade		A572-50			A36	A572-50			A36	A572-50	A36	A572-50		
Top Girts		L3x3x5/16		SR 1		N.A.		L3x3x3/16		N.A.				
Bottom Girts		SR 7/8		SR 1					N.A.					
Face Width (ft)	4.5	5		9 @ 2.344			15 @ 10							
# Panels @ (ft)	5 @ 2.166	7 @ 2.27733												
Weight (K)	0.6	0.9	1.6	1.3	2.6	3.3	3.5	4.3	4.3	5.3	5.4	33.2		
	20	18	16	14	12	10	8	6	5					



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
DB201-D	196.26	(2) RRUS 11	150.25
Pirod 6'-8" Rigid Side Arm	196	(2) RRUS 11	150.25
6' x 4-1/2" Mount Pipe	194.92	(2) RRUS 11	150.25
PA6-65AC	194.25	DC6-48-60-18-8F	150.25
OGT9-840	190.25	(2) 7770.00	150.25
3" x 9' Omni	188.75	LNX-6515DS-A1M	140
Pirod 4' Side Mount Standoff (1)	186.5	LNX-6515DS-A1M	140
3" x 9' Omni	186.5	LNX-6515DS-A1M	140
DB222-A	186.5	APX16DWV-16DWV-S-E-A20	140
DB222-A	185.25	APX16DWV-16DWV-S-E-A20	140
BCD87077	183.5	APX16DWV-16DWV-S-E-A20	140
Filter Box	183	RRUS 11 B12	140
PiROD 15' Rotatable Platform (Lattice)	181.25	RRUS 11 B12	140
(4) 6' x 2" Mount Pipe	181.25	RRUS 11 B12	140
(4) 6' x 2" Mount Pipe	181.25	RRUS 11 B2	140
(4) 6' x 2" Mount Pipe	181.25	RRUS 11 B2	140
ANT150D6-9	175.75 - 173.25	RRUS 11 B2	140
3" x 12' Omni	175.25	RRUS 11 B4	140
Pirod 4' Side Mount Standoff (1)	174.25	RRUS 11 B4	140
3" x 10' Omni	174.25	RRUS 11 B4	140
PD220	172.25	Pirod 10' PCS Frame (1)	140
Pirod 6' Side Mount Standoff (1)	172.25	Pirod 10' PCS Frame (1)	140
3" x 12' Omni	170.2	Pirod 10' PCS Frame (1)	140
3' Side Mount Standoff	170.2	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	134
LPA-185080/8CF	163	SRL110A	134
LPA-185080/8CF	163	DB586-Y	126
LPA-80080/4CF	163	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	126
LPA-80080/4CF	163	Tower Top Amplifier	126
LPA-185080/8CF	163	DB586-Y	126
LPA-185080/8CF	163	DB212-1	120.67
LPA-80080/4CF	163	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	120.67
LPA-80080/4CF	163	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	120.5
LPA-185080/8CF	163	Ice Canopy	106
LPA-185080/8CF	163	PA6-65AC	102.25
LPA-80080/4CF	163	6'8"x4" Pipe Mount	101.2
Pirod 15' T-Frame Sector Mount (1)	163	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	100.83
Pirod 15' T-Frame Sector Mount (1)	163	DB205-L	100.83
Pirod 15' T-Frame Sector Mount (1)	163	DB224	85
LPA-80080/4CF	163	2-ft Standoff	85
(2) 7770.00	150.25	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	82.67
(2) 7770.00	150.25	3" x 12' Omni	82.67
(2) LGP21401	150.25	PD220	79.5
(2) LGP21401	150.25	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	79.5
(2) LGP21401	150.25	DB432-A	70.25
Pirod 12' T-Frame Sector Mount (1)	150.25	1.2M	17
Pirod 12' T-Frame Sector Mount (1)	150.25	2-ft Standoff	15
Pirod 12' T-Frame Sector Mount (1)	150.25		
LGP13519	150.25		
LGP13519	150.25		
LGP13519	150.25		
AM-X-CD-16-65-00T	150.25		
AM-X-CD-16-65-00T	150.25		
80010764	150.25		

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	Pirod 105245	B	L2 1/2x2 1/2x3/16

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

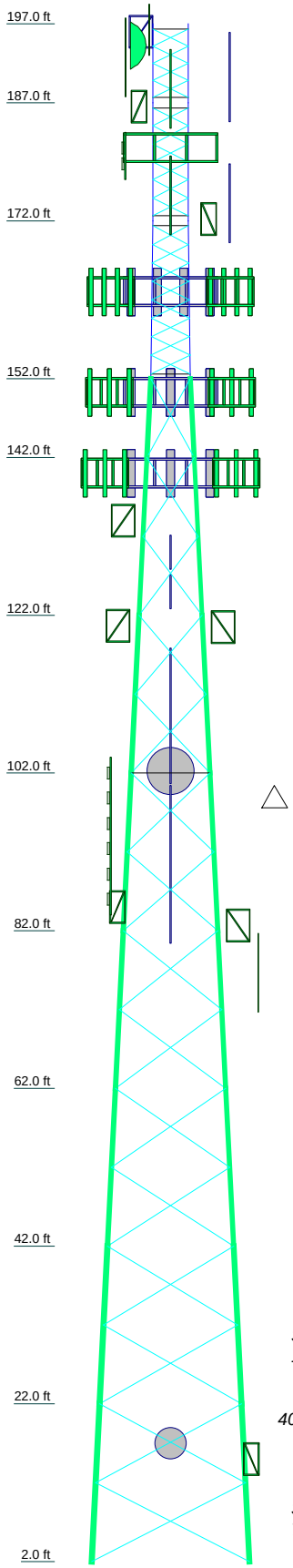
TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-G Standard.
2. Tower designed for a 93 mph basic wind in accordance with the TIA-222-G Standard.
3. Tower is also designed for a 40 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Structure Class II.
6. Topographic Category 1 with Crest Height of 0.00 ft

SMW Engineering Group
158 Business Center Drive
Birmingham, AL 35244
Phone: 205.252.6985
FAX: 205.795.7253

Job: ***16-2211***			
Project: ***CTNH544A***			
Client: Northeast Site Solutions	Drawn by: VGD	App'd:	
Code: TIA-222-G	Date: 10/11/16	Scale: NTS	
Path: C:\CONSULTING\SMW 2016\16-2211_CTNH544A Connecticut\Structural\RISA\16-2211_CTNH544A.er		Dwg No. E-1	

Section	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1	
Legs	Pirod 105220		Pirod 105219		Pirod 105218		Pirod 105217	A	SR 2 1/4	SR 2	SR 1 3/4	
Leg Grade	A572-50											
Diagonals	L4x4x1/4	L3 1/2x3 1/2x5/16	L3 1/2x3 1/2x1/4	L3x3x5/16	L3x3x1/4		L3x3x3/16	B	SR 1	SR 7/8		
Diagonal Grade	A572-50	A36	A572-50	A36	A572-50			A36				
Top Girts			N.A.		L3x3x3/16		N.A.		SR 1		L3x3x5/16	
Bottom Girts				N.A.					SR 1		SR 7/8	
Face Width (ft)	18	16	14	12	10	8	6	5	4.5			
# Panels @ (ft)	15 @ 10								9 @ 2.344	7 @ 2.27733	5 @ 2.166	
Weight (K)	5.4	5.3	4.3	4.3	3.5	3.3	2.6	1.3	1.6	0.9	0.6	33.2



SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	Pirod 105245	B	L2 1/2x2 1/2x3/16

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower designed for Exposure C to the TIA-222-G Standard.
2. Tower designed for a 93 mph basic wind in accordance with the TIA-222-G Standard.
3. Tower is also designed for a 40 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Structure Class II.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. TOWER RATING: 90.6%

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
DOWN: 452 K
SHEAR: 47 K

UPLIFT: -402 K
SHEAR: 43 K

AXIAL 203 K
SHEAR 18 K
MOMENT 1878 kip-ft
TORQUE 6 kip-ft
40 mph WIND - 0.7500 in ICE

AXIAL 63 K
SHEAR 74 K
MOMENT 7477 kip-ft
TORQUE 23 kip-ft
REACTIONS - 93 mph WIND

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Birmingham, AL 35244
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Job: **16-2211**			
Project: ***CTNH544A***			
Client: Northeast Site Solutions	Drawn by: VGD	App'd:	
Code: TIA-222-G	Date: 10/11/16	Scale: NTS	
Path: C:\CONSULTING\SMW 2016\16-2211_CTNH544A Connecticut\Structural\RISA\16-2211_CTNH544A.eri		Dwg No. E-1	

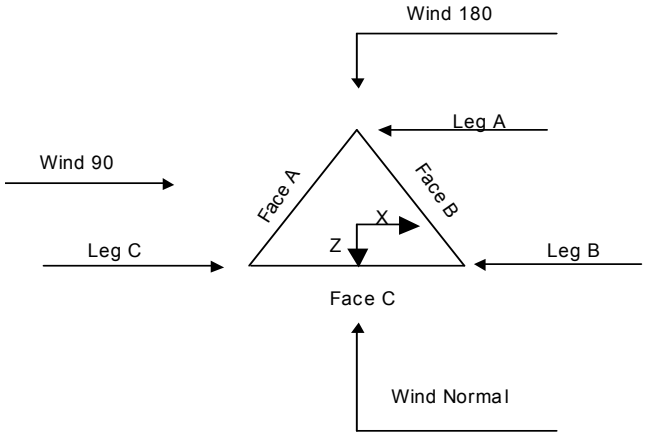
Tower Input Data

The main tower is a 3x free standing tower with an overall height of 197.00 ft above the ground line.
The base of the tower is set at an elevation of 2.00 ft above the ground line.
The face width of the tower is 4.50 ft at the top and 20.00 ft at the base.
This tower is designed using the TIA-222-G standard.
The following design criteria apply:

6) Basic wind speed of 93 mph.
7) Structure Class II.
8) Exposure Category C.
9) Topographic Category 1.
10) Crest Height 0.00 ft.
11) Nominal ice thickness of 0.7500 in.
12) Ice thickness is considered to increase with height.
13) Ice density of 56 pcf.
14) A wind speed of 40 mph is used in combination with ice.
15) Temperature drop of 50 °F.
16) Deflections calculated using a wind speed of 60 mph.
17) A non-linear (P-delta) analysis was used.
18) Pressures are calculated at each section.
19) Stress ratio used in tower member design is 1.
20) Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned	√	Calculate Redundant Bracing Forces
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification	√	Use Clear Spans For Wind Area	√	SR Leg Bolts Resist Compression
√	Use Code Stress Ratios	√	Use Clear Spans For KL/r	√	All Leg Panels Have Same Allowable
√	Use Code Safety Factors - Guys		Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice		Bypass Mast Stability Checks	√	Consider Feed Line Torque
	Always Use Max Kz	√	Use Azimuth Dish Coefficients		Include Angle Block Shear Check
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Use TIA-222-G Bracing Resist. Exemption
√	Include Bolts In Member Capacity		Autocalc Torque Arm Areas		Use TIA-222-G Tension Splice Exemption
	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
√	Secondary Horizontal Braces Leg	√	Sort Capacity Reports By Component		Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
√	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric				



Triangular Tower

Tower Section Geometry

Tower Section	*Tower Elevation*	*Assembly Database*	*Description*	*Section Width*	*Number of Sections*	*Section Length*
	ft			*ft*		*ft*
T1	197.00-187.00		V4.5 111574	4.50	1	10.00
T2	187.00-172.00		V4.5 111574	4.50	1	15.00
T3	172.00-152.00		H5.0 116640	4.50	1	20.00
T4	152.00-142.00		U6.0 105245	5.00	1	10.00
T5	142.00-122.00		U8.0 105217	6.00	1	20.00
T6	122.00-102.00		U10.0 105217 L3x3/16	8.00	1	20.00
T7	102.00-82.00		U12.0 105218	10.00	1	20.00
T8	82.00-62.00		U14.0 105218	12.00	1	20.00
T9	62.00-42.00		U16.0 105219	14.00	1	20.00
T10	42.00-22.00		U18.0 105219	16.00	1	20.00
T11	22.00-2.00		U20.0 105219 L3.5x5/16	18.00	1	20.00

Tower Section Geometry *(cont'd)*

Tower Section	*Tower Elevation*	*Diagonal Spacing*	*Bracing Type*	*Has K Brace End Panels*	*Has Horizontals*	*Top Girt Offset*	*Bottom Girt Offset*
	ft	*ft*				*in*	*in*
T1	197.00-187.00	2.17	X Brace	No	Steps	8.0160	8.0160
T2	187.00-172.00	2.28	X Brace	No	Steps	8.0160	8.0160
T3	172.00-152.00	2.34	X Brace	No	Steps	7.4880	7.4880
T4	152.00-142.00	10.00	X Brace	No	No	0.0000	0.0000
T5	142.00-122.00	10.00	X Brace	No	No	0.0000	0.0000
T6	122.00-102.00	10.00	X Brace	No	No	0.0000	0.0000
T7	102.00-82.00	10.00	X Brace	No	Yes	0.0000	0.0000
T8	82.00-62.00	10.00	X Brace	No	No	0.0000	0.0000
T9	62.00-42.00	10.00	X Brace	No	Yes	0.0000	0.0000
T10	42.00-22.00	10.00	X Brace	No	No	0.0000	0.0000
T11	22.00-2.00	10.00	X Brace	No	Yes	0.0000	0.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 197.00-187.00	Solid Round	1 3/4	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T2 187.00-172.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T3 172.00-152.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T4 152.00-142.00	Truss Leg	Pirod 105245	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T5 142.00-122.00	Truss Leg	Pirod 105217	A572-50 (50 ksi)	Equal Angle	L3x3x3/16	A572-50 (50 ksi)
T6 122.00-102.00	Truss Leg	Pirod 105218	A572-50 (50 ksi)	Equal Angle	L3x3x1/4	A572-50 (50 ksi)
T7 102.00-82.00	Truss Leg	Pirod 105218	A572-50 (50 ksi)	Equal Angle	L3x3x1/4	A572-50 (50 ksi)
T8 82.00-62.00	Truss Leg	Pirod 105219	A572-50 (50 ksi)	Equal Angle	L3x3x5/16	A36 (36 ksi)
T9 62.00-42.00	Truss Leg	Pirod 105219	A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A572-50 (50 ksi)
T10 42.00-22.00	Truss Leg	Pirod 105220	A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x5/16	A36 (36 ksi)
T11 22.00-2.00	Truss Leg	Pirod 105220	A572-50 (50 ksi)	Equal Angle	L4x4x1/4	A572-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 197.00-187.00	Equal Angle	L3x3x5/16	A36 (36 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T2 187.00-172.00	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T3 172.00-152.00	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T7 102.00-82.00	Equal Angle	L3x3x3/16	A36 (36 ksi)	Single Angle		A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	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
T1 197.00-187.00	0.00	0.0000	A36 (36 ksi)	1	1	1.02	36.0000	36.0000	36.0000
T2 187.00-172.00	0.00	0.0000	A36 (36 ksi)	1	1	1.02	36.0000	36.0000	36.0000
T3 172.00-152.00	0.00	0.0000	A36 (36 ksi)	1	1	1.02	36.0000	36.0000	36.0000
T4 152.00-142.00	1.78	0.5000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T5 142.00-122.00	3.22	0.5000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	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
T6 122.00-102.00	3.22	0.5000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T7 102.00-82.00	3.22	0.5000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T8 82.00-62.00	3.22	0.5000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T9 62.00-42.00	3.22	0.5000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T10 42.00-22.00	3.22	0.5000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T11 22.00-2.00	3.22	0.5000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
T1 197.00-187.00	No	No	1	0.75 0.75	1 1	1 1	1 1	1 1	1 1	1 1
T2 187.00-172.00	No	No	1	0.75 0.75	1 1	1 1	0.5 0.5	1 1	1 1	1 1
T3 172.00-152.00	No	No	1	0.75 0.75	1 1	1 1	0.5 0.5	1 1	1 1	1 1
T4 152.00-142.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T5 142.00-122.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T6 122.00-102.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T7 102.00-82.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T8 82.00-62.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T9 62.00-42.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T10 42.00-22.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T11 22.00-2.00	Yes	No	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1

[1]*Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.*

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Truss-Leg K Factors					
	Truss-Legs Used As Leg Members			Truss-Legs Used As Inner Members		
	Leg Panels	X Brace Diagonals	Z Brace Diagonals	Leg Panels	X Brace Diagonals	Z Brace Diagonals
T4 152.00-142.00	1	0.5	0.85	1	0.5	0.85
T5 142.00-122.00	1	0.5	0.85	1	0.5	0.85
T6 122.00-102.00	1	0.5	0.85	1	0.5	0.85
T7 102.00-82.00	1	0.5	0.85	1	0.5	0.85
T8 82.00-62.00	1	0.5	0.85	1	0.5	0.85
T9 62.00-42.00	1	0.5	0.85	1	0.5	0.85
T10 42.00-22.00	1	0.5	0.85	1	0.5	0.85
T11 22.00-2.00	1	0.5	0.85	1	0.5	0.85

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 197.00-187.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T2 187.00-172.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T3 172.00-152.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T4 152.00-142.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T5 142.00-122.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T6 122.00-102.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T7 102.00-82.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T8 82.00-62.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T9 62.00-42.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T10 42.00-22.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1
T11 22.00-2.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	1

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 197.00-187.00	Sleeve DS	0.6250 A325N	5	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T2 187.00-172.00	Sleeve DS	0.7500 A325N	5	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T3 172.00-152.00	Flange	1.0000 A325N	6	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T4 152.00-142.00	Flange	1.0000 A325N	6	1.0000 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T5 142.00-122.00	Flange	1.0000 A325N	6	1.0000 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T6 122.00-102.00	Flange	1.0000 A325N	6	1.0000 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T7 102.00-82.00	Flange	1.0000 A325N	6	1.0000 A325N	1	1.0000 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T8 82.00-62.00	Flange	1.2500 A687	6	1.2500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T9 62.00-42.00	Flange	1.2500 A687	6	1.2500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T10 42.00-22.00	Flange	1.2500 A687	6	1.2500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T11 22.00-2.00	Flange	1.2500 A687	6	1.2500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
1 5/8	A	No	Ar (CaAa)	165.00 - 7.00	2.0000	-0.365	9	5	1.9800	1.9800		1.04
1 5/8	A	No	Ar (CaAa)	165.00 - 7.00	2.0000	-0.42	1	1	1.9800	1.9800		1.04
1 5/8	A	No	Ar (CaAa)	165.00 - 7.00	4.5000	-0.45	1	1	1.9800	1.9800		1.04
1 5/8	A	No	Ar (CaAa)	165.00 - 7.00	2.0000	-0.47	1	1	1.9800	1.9800		1.04
1/2	A	No	Ar (CaAa)	194.00 - 7.00	3.0000	-0.42	1	1	0.5800	0.5800		0.25
7/8	A	No	Ar (CaAa)	194.00 - 7.00	2.0000	-0.445	1	1	1.1100	1.1100		0.54
1 5/8	C	No	Ar (CaAa)	150.00 - 10.00	0.0000	0.1	12	6	1.9800	1.9800		1.04
7/8	B	No	Ar (CaAa)	152.00 - 9.50	0.0000	0.095	2	2	1.1100	1.1100		0.54
1 5/8	B	No	Ar (CaAa)	82.67 - 9.50	0.0000	0.12	1	1	1.9800	1.9800		1.04
1 5/8	B	No	Ar (CaAa)	152.00 - 9.50	0.0000	0.1	1	1	1.9800	1.9800		1.04
7/8	B	No	Ar (CaAa)	194.00 - 7.00	2.0000	-0.44	3	3	1.1100	1.1100		0.54
WE65	B	No	Ar (CaAa)	194.00 - 7.00	2.0000	-0.42	1	1	1.5836	1.5836		0.53
WE65	B	No	Ar (CaAa)	102.00 - 7.00	2.0000	-0.405	1	1	1.5836	1.5836		0.53
1/2	B	No	Ar (CaAa)	194.00 - 7.00	2.0000	-0.385	1	1	0.5800	0.5800		0.25
LDF2-50(3/8")	B	No	Ar (CaAa)	194.00 - 7.00	2.0000	-0.375	1	1	0.4400	0.4400		0.08
1 5/8	B	No	Ar (CaAa)	185.00 - 7.00	2.0000	-0.355	4	2	1.9800	1.9800		1.04
1/2	B	No	Ar (CaAa)	194.00 - 7.00	3.0000	-0.31	1	1	0.5800	0.5800		0.25
7/8	B	No	Ar (CaAa)	194.00 - 7.00	1.0000	-0.31	2	1	1.1100	1.1100		0.54
LDF1-50A (1/4 FOAM)	B	No	Ar (CaAa)	17.00 - 9.50	0.0000	0.08	2	2	0.3500	0.3500		0.06
#8 AWG Copper Wire	C	No	Ar (CaAa)	150.00 - 10.00	0.0000	0.155	2	2	0.2500 0.0000	0.1285		0.05
RG6-Fiber	C	No	Ar (CaAa)	150.00 - 10.00	0.0000	0.165	1	1	0.5000 0.0000	0.5000		1.00
LDF2-50 (3/8 FOAM)	B	No	Ar (CaAa)	194.00 - 7.00	1.0000	-0.33	1	1	0.4400	0.4400		0.08
7/8	B	No	Ar (CaAa)	194.00 - 7.00	1.0000	-0.32	1	1	1.1100	1.1100		0.54
MLE Hybrid 9Power/18Fi	B	No	Ar (CaAa)	140.00 - 7.00	0.0000	-0.45	2	2	1.6250	1.6250		1.00

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
ber RL2 (1-5/8)												
1" Dia. SR	A	No	Ar (CaAa)	104.00 - 4.00	0.0000	0.5	1	1	0.0000	1.0000		2.67
1" Dia. SR	A	No	Ar (CaAa)	104.00 - 4.00	0.0000	0.45	1	1	0.0000	1.0000		2.67
1" Dia. SR	A	No	Ar (CaAa)	104.00 - 4.00	0.0000	-0.45	1	1	0.0000	1.0000		2.67
1" Dia. SR	B	No	Ar (CaAa)	104.00 - 4.00	0.0000	0.5	1	1	0.0000	1.0000		2.67
1" Dia. SR	B	No	Ar (CaAa)	104.00 - 4.00	0.0000	0.45	1	1	0.0000	1.0000		2.67
1" Dia. SR	B	No	Ar (CaAa)	104.00 - 4.00	0.0000	-0.45	1	1	0.0000	1.0000		2.67
1" Dia. SR	C	No	Ar (CaAa)	104.00 - 4.00	0.0000	0.5	1	1	0.0000	1.0000		2.67
1" Dia. SR	C	No	Ar (CaAa)	104.00 - 4.00	0.0000	0.45	1	1	0.0000	1.0000		2.67
1" Dia. SR	C	No	Ar (CaAa)	104.00 - 4.00	0.0000	-0.45	1	1	0.0000	1.0000		2.67

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T1	197.00-187.00	A	0.000	0.000	1.183	0.000	0.0
		B	0.000	0.000	7.199	0.000	0.0
		C	0.000	0.000	0.000	0.000	0.0
T2	187.00-172.00	A	0.000	0.000	2.535	0.000	0.0
		B	0.000	0.000	25.721	0.000	0.1
		C	0.000	0.000	0.000	0.000	0.0
T3	172.00-152.00	A	0.000	0.000	34.268	0.000	0.2
		B	0.000	0.000	36.407	0.000	0.2
		C	0.000	0.000	0.000	0.000	0.0
T4	152.00-142.00	A	0.000	0.000	25.450	0.000	0.1
		B	0.000	0.000	22.404	0.000	0.1
		C	0.000	0.000	19.614	0.000	0.1
T5	142.00-122.00	A	0.000	0.000	50.900	0.000	0.3
		B	0.000	0.000	50.657	0.000	0.3
		C	0.000	0.000	49.034	0.000	0.3
T6	122.00-102.00	A	0.000	0.000	51.500	0.000	0.3
		B	0.000	0.000	51.907	0.000	0.3
		C	0.000	0.000	49.634	0.000	0.3
T7	102.00-82.00	A	0.000	0.000	56.900	0.000	0.4
		B	0.000	0.000	60.607	0.000	0.4
		C	0.000	0.000	55.034	0.000	0.4
T8	82.00-62.00	A	0.000	0.000	56.900	0.000	0.4
		B	0.000	0.000	64.434	0.000	0.4
		C	0.000	0.000	55.034	0.000	0.4
T9	62.00-42.00	A	0.000	0.000	56.900	0.000	0.4
		B	0.000	0.000	64.434	0.000	0.4
		C	0.000	0.000	55.034	0.000	0.4
T10	42.00-22.00	A	0.000	0.000	56.900	0.000	0.4
		B	0.000	0.000	64.434	0.000	0.4
		C	0.000	0.000	55.034	0.000	0.4
T11	22.00-2.00	A	0.000	0.000	43.575	0.000	0.3
		B	0.000	0.000	48.206	0.000	0.4
		C	0.000	0.000	34.820	0.000	0.3

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T1	197.00-187.00	A	1.789	0.000	0.000	6.192	0.000	0.1
		B		0.000	0.000	34.623	0.000	0.5
		C		0.000	0.000	0.000	0.000	0.0
T2	187.00-172.00	A	1.777	0.000	0.000	13.196	0.000	0.2
		B		0.000	0.000	95.670	0.000	1.4
		C		0.000	0.000	0.000	0.000	0.0
T3	172.00-152.00	A	1.759	0.000	0.000	76.816	0.000	1.5
		B		0.000	0.000	131.224	0.000	1.9
		C		0.000	0.000	0.000	0.000	0.0
T4	152.00-142.00	A	1.742	0.000	0.000	54.165	0.000	1.1
		B		0.000	0.000	80.966	0.000	1.1
		C		0.000	0.000	35.533	0.000	0.8
T5	142.00-122.00	A	1.723	0.000	0.000	107.834	0.000	2.1
		B		0.000	0.000	182.820	0.000	2.5
		C		0.000	0.000	88.505	0.000	2.0
T6	122.00-102.00	A	1.695	0.000	0.000	109.722	0.000	2.1
		B		0.000	0.000	186.134	0.000	2.5
		C		0.000	0.000	90.648	0.000	2.0
T7	102.00-82.00	A	1.662	0.000	0.000	132.153	0.000	2.5
		B		0.000	0.000	217.550	0.000	3.1
		C		0.000	0.000	113.380	0.000	2.4
T8	82.00-62.00	A	1.622	0.000	0.000	130.600	0.000	2.5
		B		0.000	0.000	224.482	0.000	3.1
		C		0.000	0.000	112.194	0.000	2.4
T9	62.00-42.00	A	1.570	0.000	0.000	128.597	0.000	2.4
		B		0.000	0.000	220.199	0.000	3.0
		C		0.000	0.000	110.664	0.000	2.3
T10	42.00-22.00	A	1.495	0.000	0.000	125.728	0.000	2.3
		B		0.000	0.000	214.067	0.000	2.9
		C		0.000	0.000	108.472	0.000	2.2
T11	22.00-2.00	A	1.356	0.000	0.000	93.596	0.000	1.7
		B		0.000	0.000	155.226	0.000	2.0
		C		0.000	0.000	69.295	0.000	1.4

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
T1	197.00-187.00	0.1143	-3.2566	-0.0255	-2.8002
T2	187.00-172.00	0.6862	-4.6189	0.1205	-3.1975
T3	172.00-152.00	-2.3441	-2.1899	-1.4405	-2.0351
T4	152.00-142.00	-2.3207	0.2909	-1.5305	-0.5732
T5	142.00-122.00	-2.7388	0.3360	-1.8118	-0.6512
T6	122.00-102.00	-3.3980	0.3937	-2.2490	-0.7994
T7	102.00-82.00	-3.6436	0.1854	-2.2412	-1.1028
T8	82.00-62.00	-3.9700	0.1941	-2.3691	-1.2814
T9	62.00-42.00	-4.4971	0.2296	-2.7232	-1.4297
T10	42.00-22.00	-5.0230	0.2649	-3.0921	-1.5612
T11	22.00-2.00	-5.1037	-0.4461	-3.2221	-1.8931

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	5	1/2	187.00 - 194.00	1.0000	1.0000
T1	6	7/8	187.00 - 194.00	1.0000	1.0000
T1	11	7/8	187.00 - 194.00	1.0000	1.0000
T1	12	WE65	187.00 - 194.00	1.0000	1.0000
T1	14	1/2	187.00 - 194.00	1.0000	1.0000
T1	15	LDF2-50(3/8")	187.00 - 194.00	1.0000	1.0000
T1	17	1/2	187.00 - 194.00	1.0000	1.0000
T1	18	7/8	187.00 - 194.00	1.0000	1.0000
T1	22	LDF2-50 (3/8 FOAM)	187.00 - 194.00	1.0000	1.0000
T1	23	7/8	187.00 - 194.00	1.0000	1.0000
T2	5	1/2	172.00 - 187.00	1.0000	1.0000
T2	6	7/8	172.00 - 187.00	1.0000	1.0000
T2	11	7/8	172.00 - 187.00	1.0000	1.0000
T2	12	WE65	172.00 - 187.00	1.0000	1.0000
T2	14	1/2	172.00 - 187.00	1.0000	1.0000
T2	15	LDF2-50(3/8")	172.00 - 187.00	1.0000	1.0000
T2	16	1 5/8	172.00 - 185.00	1.0000	1.0000
T2	17	1/2	172.00 - 187.00	1.0000	1.0000
T2	18	7/8	172.00 - 187.00	1.0000	1.0000
T2	22	LDF2-50 (3/8 FOAM)	172.00 - 187.00	1.0000	1.0000
T2	23	7/8	172.00 - 187.00	1.0000	1.0000
T3	1	1 5/8	152.00 - 165.00	1.0000	1.0000
T3	2	1 5/8	152.00 - 165.00	1.0000	1.0000
T3	3	1 5/8	152.00 - 165.00	1.0000	1.0000
T3	4	1 5/8	152.00 - 165.00	1.0000	1.0000
T3	5	1/2	152.00 - 172.00	1.0000	1.0000
T3	6	7/8	152.00 - 172.00	1.0000	1.0000
T3	11	7/8	152.00 - 172.00	1.0000	1.0000
T3	12	WE65	152.00 - 172.00	1.0000	1.0000
T3	14	1/2	152.00 - 172.00	1.0000	1.0000
T3	15	LDF2-50(3/8")	152.00 - 172.00	1.0000	1.0000
T3	16	1 5/8	152.00 - 172.00	1.0000	1.0000
T3	17	1/2	152.00 - 172.00	1.0000	1.0000

Tower Section	*Feed Line Record No.*	*Description*	*Feed Line Segment Elev.*	*K_a No Ice*	*K_a Ice*
T3	18	7/8	152.00 - 172.00	1.0000	1.0000
T3	22	LDF2-50 (3/8 FOAM)	152.00 - 172.00	1.0000	1.0000
T3	23	7/8	152.00 - 172.00	1.0000	1.0000
T4	1	1 5/8	142.00 - 152.00	1.0000	1.0000
T4	2	1 5/8	142.00 - 152.00	1.0000	1.0000
T4	3	1 5/8	142.00 - 152.00	1.0000	1.0000
T4	4	1 5/8	142.00 - 152.00	1.0000	1.0000
T4	5	1/2	142.00 - 152.00	1.0000	1.0000
T4	6	7/8	142.00 - 152.00	1.0000	1.0000
T4	7	1 5/8	142.00 - 150.00	1.0000	1.0000
T4	8	7/8	142.00 - 152.00	1.0000	1.0000
T4	10	1 5/8	142.00 - 152.00	1.0000	1.0000
T4	11	7/8	142.00 - 152.00	1.0000	1.0000
T4	12	WE65	142.00 - 152.00	1.0000	1.0000
T4	14	1/2	142.00 - 152.00	1.0000	1.0000
T4	15	LDF2-50(3/8")	142.00 - 152.00	1.0000	1.0000
T4	16	1 5/8	142.00 - 152.00	1.0000	1.0000
T4	17	1/2	142.00 - 152.00	1.0000	1.0000
T4	18	7/8	142.00 - 152.00	1.0000	1.0000
T4	20	#8 AWG Copper Wire	142.00 - 150.00	1.0000	1.0000
T4	21	RG6-Fiber	142.00 - 150.00	1.0000	1.0000
T4	22	LDF2-50 (3/8 FOAM)	142.00 - 152.00	1.0000	1.0000
T4	23	7/8	142.00 - 152.00	1.0000	1.0000
T5	1	1 5/8	122.00 - 142.00	1.0000	1.0000
T5	2	1 5/8	122.00 - 142.00	1.0000	1.0000
T5	3	1 5/8	122.00 - 142.00	1.0000	1.0000
T5	4	1 5/8	122.00 - 142.00	1.0000	1.0000
T5	5	1/2	122.00 - 142.00	1.0000	1.0000
T5	6	7/8	122.00 - 142.00	1.0000	1.0000
T5	7	1 5/8	122.00 - 142.00	1.0000	1.0000
T5	8	7/8	122.00 - 142.00	1.0000	1.0000
T5	10	1 5/8	122.00 - 142.00	1.0000	1.0000
T5	11	7/8	122.00 - 142.00	1.0000	1.0000
T5	12	WE65	122.00 - 142.00	1.0000	1.0000
T5	14	1/2	122.00 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T5	15	LDF2-50(3/8")	142.00 122.00 - 142.00	1.0000	1.0000
T5	16	1 5/8	142.00 122.00 - 142.00	1.0000	1.0000
T5	17	1/2	142.00 122.00 - 142.00	1.0000	1.0000
T5	18	7/8	142.00 122.00 - 142.00	1.0000	1.0000
T5	20	#8 AWG Copper Wire	142.00 122.00 - 142.00	1.0000	1.0000
T5	21	RG6-Fiber	142.00 122.00 - 142.00	1.0000	1.0000
T5	22	LDF2-50 (3/8 FOAM)	142.00 122.00 - 142.00	1.0000	1.0000
T5	23	7/8	142.00 122.00 - 142.00	1.0000	1.0000
T5	24	MLE Hybrid 9Power/18Fiber RL2 (1-5/8)	142.00 122.00 - 140.00	1.0000	1.0000
T6	1	1 5/8	122.00 102.00 - 122.00	1.0000	1.0000
T6	2	1 5/8	122.00 102.00 - 122.00	1.0000	1.0000
T6	3	1 5/8	122.00 102.00 - 122.00	1.0000	1.0000
T6	4	1 5/8	122.00 102.00 - 122.00	1.0000	1.0000
T6	5	1/2	122.00 102.00 - 122.00	1.0000	1.0000
T6	6	7/8	122.00 102.00 - 122.00	1.0000	1.0000
T6	7	1 5/8	122.00 102.00 - 122.00	1.0000	1.0000
T6	8	7/8	122.00 102.00 - 122.00	1.0000	1.0000
T6	10	1 5/8	122.00 102.00 - 122.00	1.0000	1.0000
T6	11	7/8	122.00 102.00 - 122.00	1.0000	1.0000
T6	12	WE65	122.00 102.00 - 122.00	1.0000	1.0000
T6	14	1/2	122.00 102.00 - 122.00	1.0000	1.0000
T6	15	LDF2-50(3/8")	122.00 102.00 - 122.00	1.0000	1.0000
T6	16	1 5/8	122.00 102.00 - 122.00	1.0000	1.0000
T6	17	1/2	122.00 102.00 - 122.00	1.0000	1.0000
T6	18	7/8	122.00 102.00 - 122.00	1.0000	1.0000
T6	20	#8 AWG Copper Wire	122.00 102.00 - 122.00	1.0000	1.0000
T6	21	RG6-Fiber	122.00 102.00 - 122.00	1.0000	1.0000
T6	22	LDF2-50 (3/8 FOAM)	122.00 102.00 - 122.00	1.0000	1.0000
T6	23	7/8	122.00 102.00 - 122.00	1.0000	1.0000
T6	24	MLE Hybrid 9Power/18Fiber RL2 (1-5/8)	122.00 102.00 - 122.00	1.0000	1.0000
T6	25	1" Dia. SR	102.00 - 104.00	1.0000	1.0000
T6	26	1" Dia. SR	102.00 - 104.00	1.0000	1.0000
T6	27	1" Dia. SR	102.00 - 104.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T6	28	1" Dia. SR	102.00 - 104.00	1.0000	1.0000
T6	29	1" Dia. SR	102.00 - 104.00	1.0000	1.0000
T6	30	1" Dia. SR	102.00 - 104.00	1.0000	1.0000
T6	31	1" Dia. SR	102.00 - 104.00	1.0000	1.0000
T6	32	1" Dia. SR	102.00 - 104.00	1.0000	1.0000
T6	33	1" Dia. SR	102.00 - 104.00	1.0000	1.0000
T7	1	1 5/8	82.00 - 102.00	1.0000	1.0000
T7	2	1 5/8	82.00 - 102.00	1.0000	1.0000
T7	3	1 5/8	82.00 - 102.00	1.0000	1.0000
T7	4	1 5/8	82.00 - 102.00	1.0000	1.0000
T7	5	1/2	82.00 - 102.00	1.0000	1.0000
T7	6	7/8	82.00 - 102.00	1.0000	1.0000
T7	7	1 5/8	82.00 - 102.00	1.0000	1.0000
T7	8	7/8	82.00 - 102.00	1.0000	1.0000
T7	9	1 5/8	82.00 - 82.67	1.0000	1.0000
T7	10	1 5/8	82.00 - 102.00	1.0000	1.0000
T7	11	7/8	82.00 - 102.00	1.0000	1.0000
T7	12	WE65	82.00 - 102.00	1.0000	1.0000
T7	13	WE65	82.00 - 102.00	1.0000	1.0000
T7	14	1/2	82.00 - 102.00	1.0000	1.0000
T7	15	LDF2-50(3/8")	82.00 - 102.00	1.0000	1.0000
T7	16	1 5/8	82.00 - 102.00	1.0000	1.0000
T7	17	1/2	82.00 - 102.00	1.0000	1.0000
T7	18	7/8	82.00 - 102.00	1.0000	1.0000
T7	20	#8 AWG Copper Wire	82.00 - 102.00	1.0000	1.0000
T7	21	RG6-Fiber	82.00 - 102.00	1.0000	1.0000
T7	22	LDF2-50 (3/8 FOAM)	82.00 - 102.00	1.0000	1.0000
T7	23	7/8	82.00 - 102.00	1.0000	1.0000
T7	24	MLE Hybrid 9Power/18Fiber RL2 (1-5/8)	82.00 - 102.00	1.0000	1.0000
T7	25	1" Dia. SR	82.00 - 102.00	1.0000	1.0000
T7	26	1" Dia. SR	82.00 - 102.00	1.0000	1.0000
T7	27	1" Dia. SR	82.00 - 102.00	1.0000	1.0000
T7	28	1" Dia. SR	82.00 - 102.00	1.0000	1.0000
T7	29	1" Dia. SR	82.00 - 102.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T7	30	1" Dia. SR	82.00 - 102.00	1.0000	1.0000
T7	31	1" Dia. SR	82.00 - 102.00	1.0000	1.0000
T7	32	1" Dia. SR	82.00 - 102.00	1.0000	1.0000
T7	33	1" Dia. SR	82.00 - 102.00	1.0000	1.0000
T8	1	1 5/8	62.00 - 82.00	1.0000	1.0000
T8	2	1 5/8	62.00 - 82.00	1.0000	1.0000
T8	3	1 5/8	62.00 - 82.00	1.0000	1.0000
T8	4	1 5/8	62.00 - 82.00	1.0000	1.0000
T8	5	1/2	62.00 - 82.00	1.0000	1.0000
T8	6	7/8	62.00 - 82.00	1.0000	1.0000
T8	7	1 5/8	62.00 - 82.00	1.0000	1.0000
T8	8	7/8	62.00 - 82.00	1.0000	1.0000
T8	9	1 5/8	62.00 - 82.00	1.0000	1.0000
T8	10	1 5/8	62.00 - 82.00	1.0000	1.0000
T8	11	7/8	62.00 - 82.00	1.0000	1.0000
T8	12	WE65	62.00 - 82.00	1.0000	1.0000
T8	13	WE65	62.00 - 82.00	1.0000	1.0000
T8	14	1/2	62.00 - 82.00	1.0000	1.0000
T8	15	LDF2-50(3/8")	62.00 - 82.00	1.0000	1.0000
T8	16	1 5/8	62.00 - 82.00	1.0000	1.0000
T8	17	1/2	62.00 - 82.00	1.0000	1.0000
T8	18	7/8	62.00 - 82.00	1.0000	1.0000
T8	20	#8 AWG Copper Wire	62.00 - 82.00	1.0000	1.0000
T8	21	RG6-Fiber	62.00 - 82.00	1.0000	1.0000
T8	22	LDF2-50 (3/8 FOAM)	62.00 - 82.00	1.0000	1.0000
T8	23	7/8	62.00 - 82.00	1.0000	1.0000
T8	24	MLE Hybrid 9Power/18Fiber RL2 (1-5/8)	62.00 - 82.00	1.0000	1.0000
T8	25	1" Dia. SR	62.00 - 82.00	1.0000	1.0000
T8	26	1" Dia. SR	62.00 - 82.00	1.0000	1.0000
T8	27	1" Dia. SR	62.00 - 82.00	1.0000	1.0000
T8	28	1" Dia. SR	62.00 - 82.00	1.0000	1.0000
T8	29	1" Dia. SR	62.00 - 82.00	1.0000	1.0000
T8	30	1" Dia. SR	62.00 - 82.00	1.0000	1.0000
T8	31	1" Dia. SR	62.00 - 82.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T8	32	1" Dia. SR	62.00 - 82.00	1.0000	1.0000
T8	33	1" Dia. SR	62.00 - 82.00	1.0000	1.0000
T9	1	1 5/8	42.00 - 62.00	1.0000	1.0000
T9	2	1 5/8	42.00 - 62.00	1.0000	1.0000
T9	3	1 5/8	42.00 - 62.00	1.0000	1.0000
T9	4	1 5/8	42.00 - 62.00	1.0000	1.0000
T9	5	1/2	42.00 - 62.00	1.0000	1.0000
T9	6	7/8	42.00 - 62.00	1.0000	1.0000
T9	7	1 5/8	42.00 - 62.00	1.0000	1.0000
T9	8	7/8	42.00 - 62.00	1.0000	1.0000
T9	9	1 5/8	42.00 - 62.00	1.0000	1.0000
T9	10	1 5/8	42.00 - 62.00	1.0000	1.0000
T9	11	7/8	42.00 - 62.00	1.0000	1.0000
T9	12	WE65	42.00 - 62.00	1.0000	1.0000
T9	13	WE65	42.00 - 62.00	1.0000	1.0000
T9	14	1/2	42.00 - 62.00	1.0000	1.0000
T9	15	LDF2-50(3/8")	42.00 - 62.00	1.0000	1.0000
T9	16	1 5/8	42.00 - 62.00	1.0000	1.0000
T9	17	1/2	42.00 - 62.00	1.0000	1.0000
T9	18	7/8	42.00 - 62.00	1.0000	1.0000
T9	20	#8 AWG Copper Wire	42.00 - 62.00	1.0000	1.0000
T9	21	RG6-Fiber	42.00 - 62.00	1.0000	1.0000
T9	22	LDF2-50 (3/8 FOAM)	42.00 - 62.00	1.0000	1.0000
T9	23	7/8	42.00 - 62.00	1.0000	1.0000
T9	24	MLE Hybrid 9Power/18Fiber RL2 (1-5/8)	42.00 - 62.00	1.0000	1.0000
T9	25	1" Dia. SR	42.00 - 62.00	1.0000	1.0000
T9	26	1" Dia. SR	42.00 - 62.00	1.0000	1.0000
T9	27	1" Dia. SR	42.00 - 62.00	1.0000	1.0000
T9	28	1" Dia. SR	42.00 - 62.00	1.0000	1.0000
T9	29	1" Dia. SR	42.00 - 62.00	1.0000	1.0000
T9	30	1" Dia. SR	42.00 - 62.00	1.0000	1.0000
T9	31	1" Dia. SR	42.00 - 62.00	1.0000	1.0000
T9	32	1" Dia. SR	42.00 - 62.00	1.0000	1.0000
T9	33	1" Dia. SR	42.00 - 62.00	1.0000	1.0000

Tower Section	*Feed Line Record No.*	*Description*	*Feed Line Segment Elev.*	*K_a No Ice*	*K_a Ice*
T10	1	1 5/8	22.00 - 42.00	1.0000	1.0000
T10	2	1 5/8	22.00 - 42.00	1.0000	1.0000
T10	3	1 5/8	22.00 - 42.00	1.0000	1.0000
T10	4	1 5/8	22.00 - 42.00	1.0000	1.0000
T10	5	1/2	22.00 - 42.00	1.0000	1.0000
T10	6	7/8	22.00 - 42.00	1.0000	1.0000
T10	7	1 5/8	22.00 - 42.00	1.0000	1.0000
T10	8	7/8	22.00 - 42.00	1.0000	1.0000
T10	9	1 5/8	22.00 - 42.00	1.0000	1.0000
T10	10	1 5/8	22.00 - 42.00	1.0000	1.0000
T10	11	7/8	22.00 - 42.00	1.0000	1.0000
T10	12	WE65	22.00 - 42.00	1.0000	1.0000
T10	13	WE65	22.00 - 42.00	1.0000	1.0000
T10	14	1/2	22.00 - 42.00	1.0000	1.0000
T10	15	LDF2-50(3/8")	22.00 - 42.00	1.0000	1.0000
T10	16	1 5/8	22.00 - 42.00	1.0000	1.0000
T10	17	1/2	22.00 - 42.00	1.0000	1.0000
T10	18	7/8	22.00 - 42.00	1.0000	1.0000
T10	20	#8 AWG Copper Wire	22.00 - 42.00	1.0000	1.0000
T10	21	RG6-Fiber	22.00 - 42.00	1.0000	1.0000
T10	22	LDF2-50 (3/8 FOAM)	22.00 - 42.00	1.0000	1.0000
T10	23	7/8	22.00 - 42.00	1.0000	1.0000
T10	24	MLE Hybrid 9Power/18Fiber RL2 (1-5/8)	22.00 - 42.00	1.0000	1.0000
T10	25	1" Dia. SR	22.00 - 42.00	1.0000	1.0000
T10	26	1" Dia. SR	22.00 - 42.00	1.0000	1.0000
T10	27	1" Dia. SR	22.00 - 42.00	1.0000	1.0000
T10	28	1" Dia. SR	22.00 - 42.00	1.0000	1.0000
T10	29	1" Dia. SR	22.00 - 42.00	1.0000	1.0000
T10	30	1" Dia. SR	22.00 - 42.00	1.0000	1.0000
T10	31	1" Dia. SR	22.00 - 42.00	1.0000	1.0000
T10	32	1" Dia. SR	22.00 - 42.00	1.0000	1.0000
T10	33	1" Dia. SR	22.00 - 42.00	1.0000	1.0000
T11	1	1 5/8	7.00 - 22.00	1.0000	1.0000
T11	2	1 5/8	7.00 - 22.00	1.0000	1.0000
T11	3	1 5/8	7.00 - 22.00	1.0000	1.0000
T11	4	1 5/8	7.00 - 22.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T11	5	1/2	7.00 - 22.00	1.0000	1.0000
T11	6	7/8	7.00 - 22.00	1.0000	1.0000
T11	7	1 5/8	10.00 - 22.00	1.0000	1.0000
T11	8	7/8	9.50 - 22.00	1.0000	1.0000
T11	9	1 5/8	9.50 - 22.00	1.0000	1.0000
T11	10	1 5/8	9.50 - 22.00	1.0000	1.0000
T11	11	7/8	7.00 - 22.00	1.0000	1.0000
T11	12	WE65	7.00 - 22.00	1.0000	1.0000
T11	13	WE65	7.00 - 22.00	1.0000	1.0000
T11	14	1/2	7.00 - 22.00	1.0000	1.0000
T11	15	LDF2-50(3/8")	7.00 - 22.00	1.0000	1.0000
T11	16	1 5/8	7.00 - 22.00	1.0000	1.0000
T11	17	1/2	7.00 - 22.00	1.0000	1.0000
T11	18	7/8	7.00 - 22.00	1.0000	1.0000
T11	19	LDF1-50A (1/4 FOAM)	9.50 - 17.00	1.0000	1.0000
T11	20	#8 AWG Copper Wire	10.00 - 22.00	1.0000	1.0000
T11	21	RG6-Fiber	10.00 - 22.00	1.0000	1.0000
T11	22	LDF2-50 (3/8 FOAM)	7.00 - 22.00	1.0000	1.0000
T11	23	7/8	7.00 - 22.00	1.0000	1.0000
T11	24	MLE Hybrid 9Power/18Fiber RL2 (1-5/8)	7.00 - 22.00	1.0000	1.0000
T11	25	1" Dia. SR	4.00 - 22.00	1.0000	1.0000
T11	26	1" Dia. SR	4.00 - 22.00	1.0000	1.0000
T11	27	1" Dia. SR	4.00 - 22.00	1.0000	1.0000
T11	28	1" Dia. SR	4.00 - 22.00	1.0000	1.0000
T11	29	1" Dia. SR	4.00 - 22.00	1.0000	1.0000
T11	30	1" Dia. SR	4.00 - 22.00	1.0000	1.0000
T11	31	1" Dia. SR	4.00 - 22.00	1.0000	1.0000
T11	32	1" Dia. SR	4.00 - 22.00	1.0000	1.0000
T11	33	1" Dia. SR	4.00 - 22.00	1.0000	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment ° ft	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
DB201-D	C	From Leg	0.50 0.00 0.00	0.0000	196.26	No Ice 1/2" Ice 1" Ice	0.81 1.48 2.15	0.81 1.48 2.15	0.0 0.0 0.0
Pirod 6'-8" Rigid Side Arm	A	From Face	3.00 0.00 0.00	0.0000	196.00	No Ice 1/2" Ice 1" Ice	8.00 9.60 11.20	8.00 9.60 11.20	0.2 0.2 0.3
6' x 4-1/2" Mount Pipe	A	From Face	0.67 0.00 0.00	0.0000	194.92	No Ice 1/2" Ice 1" Ice	1.83 2.62 3.00	1.83 2.62 3.00	0.0 0.1 0.1
OGT9-840	A	From Leg	3.00 7.50 0.00	0.0000	190.25	No Ice 1/2" Ice 1" Ice	2.27 3.44 4.61	2.27 3.44 4.61	0.0 0.0 0.1
Filter Box	C	From Face	0.00 0.00 0.00	0.0000	183.00	No Ice 1/2" Ice 1" Ice	3.50 3.75 4.00	1.40 1.57 1.74	0.0 0.1 0.1
3" x 10' Omni	A	From Leg	3.00 7.50 0.00	0.0000	174.25	No Ice 1/2" Ice 1" Ice	3.00 4.03 5.03	3.00 4.03 5.03	0.0 0.1 0.1
3" x 9' Omni	C	From Face	4.00 0.00 0.00	0.0000	188.75	No Ice 1/2" Ice 1" Ice	2.70 3.63 4.33	2.70 3.63 4.33	0.0 0.0 0.1
3" x 12' Omni	C	From Face	4.00 0.00 0.00	0.0000	175.25	No Ice 1/2" Ice 1" Ice	3.60 4.83 6.08	3.60 4.83 6.08	0.0 0.1 0.1
DB222-A	A	From Leg	3.00 -7.50 0.00	0.0000	185.25	No Ice 1/2" Ice 1" Ice	1.60 2.88 4.16	1.60 2.88 4.16	0.0 0.0 0.0
ANT150D6-9	A	From Leg	3.00 -7.50 0.00	0.0000	175.75 - 173.25	No Ice 1/2" Ice 1" Ice	5.94 11.80 17.66	5.94 11.80 17.66	0.0 0.1 0.1
Pirod 4' Side Mount Standoff (1)	C	From Leg	2.00 0.00 0.00	-60.0000	186.50	No Ice 1/2" Ice 1" Ice	2.72 4.91 7.10	2.72 4.91 7.10	0.1 0.1 0.1
3" x 9' Omni	C	From Leg	4.00 0.00 6.25	-60.0000	186.50	No Ice 1/2" Ice 1" Ice	2.70 3.63 4.33	2.70 3.63 4.33	0.0 0.0 0.1
DB222-A	C	From Leg	4.00 0.00 -6.25	-60.0000	186.50	No Ice 1/2" Ice 1" Ice	1.60 2.88 4.16	1.60 2.88 4.16	0.0 0.0 0.0
BCD87077	A	From Leg	4.00 0.00 0.00	0.0000	183.50	No Ice 1/2" Ice 1" Ice	3.06 4.24 5.42	3.06 4.24 5.42	0.0 0.0 0.0
PiROD 15' Rotatable Platform (Lattice)	C	None		0.0000	181.25	No Ice 1/2" Ice 1" Ice	24.90 30.70 36.50	24.90 30.70 36.50	1.8 2.4 3.1
(4) 6' x 2" Mount Pipe	A	From Leg	3.00	0.0000	181.25	No Ice	1.43	1.43	0.0

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1/2"	1.92	1.92	0.0
			0.00			Ice	2.29	2.29	0.0
						1" Ice			
(4) 6' x 2" Mount Pipe	B	From Leg	3.00	0.0000	181.25	No Ice	1.43	1.43	0.0
			0.00			1/2"	1.92	1.92	0.0
			0.00			Ice	2.29	2.29	0.0
						1" Ice			
(4) 6' x 2" Mount Pipe	C	From Leg	3.00	0.0000	181.25	No Ice	1.43	1.43	0.0
			0.00			1/2"	1.92	1.92	0.0
			0.00			Ice	2.29	2.29	0.0
						1" Ice			
Pirod 4' Side Mount Standoff (1)	A	From Leg	2.00	0.0000	174.25	No Ice	2.72	2.72	0.1
			0.00			1/2"	4.91	4.91	0.1
			0.00			Ice	7.10	7.10	0.1
						1" Ice			
Pirod 6' Side Mount Standoff (1)	B	From Leg	3.00	0.0000	172.25	No Ice	4.97	4.97	0.1
			0.00			1/2"	6.12	6.12	0.1
			0.00			Ice	7.27	7.27	0.2
						1" Ice			
PD220	B	From Leg	6.00	0.0000	172.25	No Ice	3.56	3.56	0.0
			0.00			1/2"	7.13	7.13	0.0
			10.00			Ice	10.70	10.70	0.1
						1" Ice			
3' Side Mount Standoff	A	From Leg	1.25	-10.0000	170.20	No Ice	2.18	2.18	0.0
			0.00			1/2"	3.93	3.93	0.1
			0.00			Ice	5.68	5.68	0.1
						1" Ice			
3" x 12' Omni	A	From Leg	3.00	-10.0000	170.20	No Ice	3.60	3.60	0.0
			0.00			1/2"	4.83	4.83	0.1
			5.00			Ice	6.08	6.08	0.1
						1" Ice			
LPA-80080/4CF	A	From Leg	3.00	0.0000	163.00	No Ice	2.62	5.40	0.0
			6.00			1/2"	2.92	5.73	0.0
			4.00			Ice	3.23	6.06	0.1
						1" Ice			
LPA-185080/8CF	A	From Leg	3.00	0.0000	163.00	No Ice	2.09	2.79	0.0
			2.00			1/2"	2.39	3.09	0.0
			4.00			Ice	2.69	3.40	0.0
						1" Ice			
LPA-185080/8CF	A	From Leg	3.00	0.0000	163.00	No Ice	2.09	2.79	0.0
			-2.00			1/2"	2.39	3.09	0.0
			4.00			Ice	2.69	3.40	0.0
						1" Ice			
LPA-80080/4CF	A	From Leg	3.00	0.0000	163.00	No Ice	2.62	5.40	0.0
			-6.00			1/2"	2.92	5.73	0.0
			4.00			Ice	3.23	6.06	0.1
						1" Ice			
LPA-80080/4CF	B	From Leg	3.00	0.0000	163.00	No Ice	2.62	5.40	0.0
			6.00			1/2"	2.92	5.73	0.0
			4.00			Ice	3.23	6.06	0.1
						1" Ice			
LPA-185080/8CF	B	From Leg	3.00	0.0000	163.00	No Ice	2.09	2.79	0.0
			2.00			1/2"	2.39	3.09	0.0
			4.00			Ice	2.69	3.40	0.0
						1" Ice			
LPA-185080/8CF	B	From Leg	3.00	0.0000	163.00	No Ice	2.09	2.79	0.0
			-2.00			1/2"	2.39	3.09	0.0
			4.00			Ice	2.69	3.40	0.0
						1" Ice			
LPA-80080/4CF	B	From Leg	3.00	0.0000	163.00	No Ice	2.62	5.40	0.0
			-6.00			1/2"	2.92	5.73	0.0
			4.00			Ice	3.23	6.06	0.1
						1" Ice			
LPA-80080/4CF	B	From Leg	3.00	0.0000	163.00	No Ice	2.62	5.40	0.0
			6.00			1/2"	2.92	5.73	0.0

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			4.00			Ice	3.23	6.06	0.1
						1" Ice			
LPA-185080/8CF	C	From Leg	3.00	0.0000	163.00	No Ice	2.09	2.79	0.0
			2.00			1/2"	2.39	3.09	0.0
			4.00			Ice	2.69	3.40	0.0
						1" Ice			
LPA-185080/8CF	C	From Leg	3.00	0.0000	163.00	No Ice	2.09	2.79	0.0
			-2.00			1/2"	2.39	3.09	0.0
			4.00			Ice	2.69	3.40	0.0
						1" Ice			
LPA-80080/4CF	C	From Leg	3.00	0.0000	163.00	No Ice	2.62	5.40	0.0
			-6.00			1/2"	2.92	5.73	0.0
			4.00			Ice	3.23	6.06	0.1
						1" Ice			
Pirod 15' T-Frame Sector Mount (1)	A	From Leg	1.50	0.0000	163.00	No Ice	15.00	15.00	0.5
			0.00			1/2"	20.60	20.60	0.7
			0.00			Ice	26.20	26.20	0.8
						1" Ice			
Pirod 15' T-Frame Sector Mount (1)	B	From Leg	1.50	0.0000	163.00	No Ice	15.00	15.00	0.5
			0.00			1/2"	20.60	20.60	0.7
			0.00			Ice	26.20	26.20	0.8
						1" Ice			
Pirod 15' T-Frame Sector Mount (1)	C	From Leg	1.50	0.0000	163.00	No Ice	15.00	15.00	0.5
			0.00			1/2"	20.60	20.60	0.7
			0.00			Ice	26.20	26.20	0.8
						1" Ice			
(2) 7770.00	A	From Leg	3.00	0.0000	150.25	No Ice	5.51	2.93	0.0
			0.00			1/2"	5.87	3.27	0.1
			0.00			Ice	6.23	3.63	0.1
						1" Ice			
(2) 7770.00	B	From Leg	3.00	0.0000	150.25	No Ice	5.51	2.93	0.0
			0.00			1/2"	5.87	3.27	0.1
			0.00			Ice	6.23	3.63	0.1
						1" Ice			
(2) 7770.00	C	From Leg	3.00	0.0000	150.25	No Ice	5.51	2.93	0.0
			0.00			1/2"	5.87	3.27	0.1
			0.00			Ice	6.23	3.63	0.1
						1" Ice			
(2) LGP21401	A	From Leg	2.25	0.0000	150.25	No Ice	0.00	0.37	0.0
			0.00			1/2"	0.00	0.48	0.0
			0.00			Ice	0.00	0.59	0.0
						1" Ice			
(2) LGP21401	B	From Leg	2.25	0.0000	150.25	No Ice	0.00	0.37	0.0
			0.00			1/2"	0.00	0.48	0.0
			0.00			Ice	0.00	0.59	0.0
						1" Ice			
(2) LGP21401	C	From Leg	2.25	0.0000	150.25	No Ice	0.00	0.37	0.0
			0.00			1/2"	0.00	0.48	0.0
			0.00			Ice	0.00	0.59	0.0
						1" Ice			
Pirod 12' T-Frame Sector Mount (1)	A	From Leg	1.25	0.0000	150.25	No Ice	13.60	13.60	0.5
			0.00			1/2"	18.40	18.40	0.6
			0.00			Ice	23.20	23.20	0.7
						1" Ice			
Pirod 12' T-Frame Sector Mount (1)	B	From Leg	1.25	0.0000	150.25	No Ice	13.60	13.60	0.5
			0.00			1/2"	18.40	18.40	0.6
			0.00			Ice	23.20	23.20	0.7
						1" Ice			
Pirod 12' T-Frame Sector Mount (1)	C	From Leg	1.25	0.0000	150.25	No Ice	13.60	13.60	0.5
			0.00			1/2"	18.40	18.40	0.6
			0.00			Ice	23.20	23.20	0.7
						1" Ice			
LGP13519	A	From Leg	2.50	0.0000	150.25	No Ice	0.27	0.18	0.0
			0.00			1/2"	0.34	0.25	0.0
			0.00			Ice	0.41	0.32	0.0

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						1" Ice			
LGP13519	B	From Leg	2.50	0.0000	150.25	No Ice	0.27	0.18	0.0
			0.00			1/2"	0.34	0.25	0.0
			0.00			Ice	0.41	0.32	0.0
						1" Ice			
LGP13519	C	From Leg	2.50	0.0000	150.25	No Ice	0.27	0.18	0.0
			0.00			1/2"	0.34	0.25	0.0
			0.00			Ice	0.41	0.32	0.0
						1" Ice			
AM-X-CD-16-65-00T	A	From Leg	3.00	0.0000	150.25	No Ice	6.04	4.11	0.0
			0.00			1/2"	6.41	4.45	0.1
			0.00			Ice	6.77	4.80	0.1
						1" Ice			
AM-X-CD-16-65-00T	B	From Leg	3.00	0.0000	150.25	No Ice	6.04	4.11	0.0
			0.00			1/2"	6.41	4.45	0.1
			0.00			Ice	6.77	4.80	0.1
						1" Ice			
80010764	C	From Leg	3.00	0.0000	150.25	No Ice	5.87	3.39	0.0
			0.00			1/2"	6.23	3.74	0.1
			0.00			Ice	6.60	4.10	0.1
						1" Ice			
(2) RRUS 11	A	From Leg	2.50	0.0000	150.25	No Ice	2.78	1.19	0.1
			0.00			1/2"	2.99	1.33	0.1
			0.00			Ice	3.21	1.49	0.1
						1" Ice			
(2) RRUS 11	B	From Leg	2.50	0.0000	150.25	No Ice	2.78	1.19	0.1
			0.00			1/2"	2.99	1.33	0.1
			0.00			Ice	3.21	1.49	0.1
						1" Ice			
(2) RRUS 11	C	From Leg	2.50	0.0000	150.25	No Ice	2.78	1.19	0.1
			0.00			1/2"	2.99	1.33	0.1
			0.00			Ice	3.21	1.49	0.1
						1" Ice			
DC6-48-60-18-8F	B	From Leg	2.50	0.0000	150.25	No Ice	2.20	2.20	0.0
			0.00			1/2"	2.40	2.40	0.0
			0.00			Ice	2.60	2.60	0.1
						1" Ice			
SRL110A	C	From Leg	6.00	0.0000	134.00	No Ice	9.00	9.00	0.0
			0.00			1/2"	10.58	10.58	0.1
			1.00			Ice	12.16	12.16	0.1
						1" Ice			
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	C	From Leg	3.00	0.0000	134.00	No Ice	2.60	3.41	0.2
			0.00			1/2"	4.20	7.18	0.3
			0.00			Ice	5.80	10.95	0.4
						1" Ice			
DB586-Y	A	From Leg	6.00	0.0000	126.00	No Ice	1.01	1.01	0.0
			0.00			1/2"	1.28	1.28	0.0
			4.00			Ice	1.56	1.56	0.0
						1" Ice			
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	A	From Leg	3.00	0.0000	126.00	No Ice	2.60	3.41	0.2
			0.00			1/2"	4.20	7.18	0.3
			0.00			Ice	5.80	10.95	0.4
						1" Ice			
Tower Top Amplifier	A	From Leg	3.00	0.0000	126.00	No Ice	2.10	2.10	0.0
			0.00			1/2"	2.40	2.40	0.1
			0.00			Ice	2.70	2.70	0.1
						1" Ice			
DB586-Y	A	From Leg	6.00	0.0000	126.00	No Ice	1.01	1.01	0.0
			0.00			1/2"	1.28	1.28	0.0
			-1.00			Ice	1.56	1.56	0.0
						1" Ice			
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	B	From Leg	3.00	0.0000	120.50	No Ice	2.60	3.41	0.2
			0.00			1/2"	4.20	7.18	0.3
			0.00			Ice	5.80	10.95	0.4
						1" Ice			

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
DB212-1	C	From Leg	6.00 0.00 0.00	0.0000	120.67	No Ice 1/2" Ice 1" Ice	4.50 8.10 11.70	4.50 8.10 11.70	0.0 0.0 0.0
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	C	From Leg	3.00 0.00 0.00	0.0000	120.67	No Ice 1/2" Ice 1" Ice	2.60 4.20 5.80	3.41 7.18 10.95	0.2 0.3 0.4
DB205-L	A	From Leg	5.20 0.00 8.42	0.0000	100.83	No Ice 1/2" Ice 1" Ice	1.72 3.45 5.20	1.72 3.45 5.20	0.0 0.1 0.1
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	A	From Leg	3.00 0.00 0.00	0.0000	100.83	No Ice 1/2" Ice 1" Ice	2.60 4.20 5.80	3.41 7.18 10.95	0.2 0.3 0.4
Ice Canopy	B	From Leg	3.00 0.00 0.00	-50.0000	106.00	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.00 0.00 0.00	0.0 0.0 0.0
6'8"x4" Pipe Mount	B	From Leg	0.67 0.00 0.00	0.0000	101.20	No Ice 1/2" Ice 1" Ice	2.20 3.01 3.42	2.20 3.01 3.42	0.1 0.1 0.1
DB224	C	From Leg	2.00 0.00 9.00	60.0000	85.00	No Ice 1/2" Ice 1" Ice	3.15 5.67 8.19	3.15 5.67 8.19	0.0 0.0 0.1
2-ft Standoff	C	From Leg	1.00 0.00 0.00	60.0000	85.00	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.00 0.00 0.00	0.0 0.0 0.0
PD220	A	From Leg	5.20 0.00 10.91	0.0000	79.50	No Ice 1/2" Ice 1" Ice	3.56 7.13 10.70	3.56 7.13 10.70	0.0 0.0 0.1
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	A	From Leg	3.00 0.00 0.00	0.0000	79.50	No Ice 1/2" Ice 1" Ice	2.60 4.20 5.80	3.41 7.18 10.95	0.2 0.3 0.4
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	B	From Leg	3.00 0.00 0.00	0.0000	82.67	No Ice 1/2" Ice 1" Ice	2.60 4.20 5.80	3.41 7.18 10.95	0.2 0.3 0.4
3" x 12' Omni	B	From Leg	6.00 0.00 -6.00	0.0000	82.67	No Ice 1/2" Ice 1" Ice	3.60 4.83 6.08	3.60 4.83 6.08	0.0 0.1 0.1
DB432-A	A	From Leg	1.50 0.00 0.00	0.0000	70.25	No Ice 1/2" Ice 1" Ice	0.30 0.54 0.78	0.30 0.54 0.78	0.0 0.0 0.0
2-ft Standoff	B	From Leg	1.00 0.00 0.00	0.0000	15.00	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.00 0.00 0.00	0.0 0.0 0.0
*									
LNX-6515DS-A1M	A	From Leg	3.00 -5.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	11.41 12.03 12.65	7.70 8.29 8.89	0.1 0.1 0.2
LNX-6515DS-A1M	B	From Leg	3.00 -5.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	11.41 12.03 12.65	7.70 8.29 8.89	0.1 0.1 0.2

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
LNX-6515DS-A1M	C	From Leg	3.00 -5.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	11.41 12.03 12.65	7.70 8.29 8.89	0.1 0.1 0.2
APX16DWV-16DWV-S-E-A20	A	From Leg	3.00 5.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	6.59 6.96 7.34	2.15 2.49 2.84	0.0 0.1 0.1
APX16DWV-16DWV-S-E-A20	B	From Leg	3.00 5.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	6.59 6.96 7.34	2.15 2.49 2.84	0.0 0.1 0.1
APX16DWV-16DWV-S-E-A20	C	From Leg	3.00 5.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	6.59 6.96 7.34	2.15 2.49 2.84	0.0 0.1 0.1
RRUS 11 B12	A	From Leg	2.50 -5.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	2.83 3.04 3.26	1.18 1.33 1.48	0.1 0.1 0.1
RRUS 11 B12	B	From Leg	2.50 -5.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	2.83 3.04 3.26	1.18 1.33 1.48	0.1 0.1 0.1
RRUS 11 B12	C	From Leg	2.50 -5.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	2.83 3.04 3.26	1.18 1.33 1.48	0.1 0.1 0.1
RRUS 11 B2	A	From Leg	2.50 5.00 1.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	2.83 3.04 3.26	1.18 1.33 1.48	0.1 0.1 0.1
RRUS 11 B2	B	From Leg	2.50 5.00 1.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	2.83 3.04 3.26	1.18 1.33 1.48	0.1 0.1 0.1
RRUS 11 B2	C	From Leg	2.50 5.00 1.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	2.83 3.04 3.26	1.18 1.33 1.48	0.1 0.1 0.1
RRUS 11 B4	A	From Leg	2.50 5.00 -1.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	2.83 3.04 3.26	1.18 1.33 1.48	0.1 0.1 0.1
RRUS 11 B4	B	From Leg	2.50 5.00 -1.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	2.83 3.04 3.26	1.18 1.33 1.48	0.1 0.1 0.1
RRUS 11 B4	C	From Leg	2.50 5.00 -1.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	2.83 3.04 3.26	1.18 1.33 1.48	0.1 0.1 0.1
Pirod 10' PCS Frame (1)	A	From Leg	2.75 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	9.00 13.20 17.40	9.00 13.20 17.40	0.3 0.3 0.5
Pirod 10' PCS Frame (1)	B	From Leg	2.75 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	9.00 13.20 17.40	9.00 13.20 17.40	0.3 0.3 0.5
Pirod 10' PCS Frame (1)	C	From Leg	2.75 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	9.00 13.20 17.40	9.00 13.20 17.40	0.3 0.3 0.5

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight K
PA6-65AC	C	Paraboloid w/o Radome	From Leg	1.00	-10.0000		194.25	6.00	No Ice	28.27	0.1
				0.00					1/2" Ice	29.07	0.2
				0.00					1" Ice	29.86	0.4
PA6-65AC	A	Paraboloid w/o Radome	From Leg	1.00	-50.0000		102.25	6.00	No Ice	28.27	0.1
				0.00					1/2" Ice	29.07	0.2
				0.00					1" Ice	29.86	0.4
1.2M	A	Paraboloid w/o Radome	From Leg	2.00	40.0000		17.00	4.00	No Ice	12.57	0.2
				0.00					1/2" Ice	13.10	0.2
				0.00					1" Ice	13.62	0.3

Truss-Leg Properties

Section Designation	Area in^2	Area Ice in^2	Self Weight K	Ice Weight K	Equiv. Diameter in	Equiv. Diameter Ice in	Leg Area in^2
Pirod 105245	1090.3344	3194.6741	0.7	1.1	7.5718	22.1852	5.3014
Pirod 105217	2130.7479	6556.2191	0.6	2.2	7.3984	22.7646	5.3014
Pirod 105218	2263.4687	6603.3973	0.8	2.3	7.8593	22.9285	7.2158
Pirod 105218	2263.4687	6574.2112	0.8	2.2	7.8593	22.8271	7.2158
Pirod 105219	2441.8688	6610.6364	0.9	2.3	8.4787	22.9536	9.4248
Pirod 105219	2441.8688	6564.7351	0.9	2.2	8.4787	22.7942	9.4248
Pirod 105220	2578.8005	6570.9710	1.1	2.2	8.9542	22.8159	11.9282
Pirod 105220	2578.8005	6447.4684	1.1	2.2	8.9542	22.3870	11.9282

Tower Pressures - No Ice

$G_H = 0.850$

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft^2	Face	A_F ft^2	A_R ft^2	A_{leg} ft^2	Leg %	C_AA_A In Face ft^2	C_AA_A Out Face ft^2
T1 197.00-187.00	192.00	1.452	27.3	46.458	A	1.089	6.053	2.917	40.84	1.183	0.000
					B	1.089	6.053		40.84	7.199	0.000
					C	1.089	6.053		40.84	0.000	0.000
T2 187.00-172.00	179.50	1.431	26.9	70.000	A	0.000	9.972	5.000	50.14	2.535	0.000
					B	0.000	9.972		50.14	25.721	0.000
					C	0.000	9.972		50.14	0.000	0.000
T3 172.00-152.00	162.00	1.401	26.4	98.750	A	0.000	15.045	7.501	49.85	34.268	0.000
					B	0.000	15.045		49.85	36.407	0.000
					C	0.000	15.045		49.85	0.000	0.000
T4 152.00-142.00	147.00	1.373	25.8	66.264	A	6.024	12.641	12.641	67.73	25.450	0.000
					B	6.024	12.641		67.73	22.404	0.000
					C	6.024	12.641		67.73	19.614	0.000
T5 142.00-122.00	132.00	1.342	25.3	162.528	A	13.687	24.703	24.703	64.35	50.900	0.000
					B	13.687	24.703		64.35	50.657	0.000
					C	13.687	24.703		64.35	49.034	0.000
T6 122.00-102.00	112.00	1.296	24.4	202.945	A	15.184	26.241	26.241	63.35	51.500	0.000
					B	15.184	26.241		63.35	51.907	0.000
					C	15.184	26.241		63.35	49.634	0.000
T7 102.00-82.00	92.00	1.244	23.4	242.945	A	18.990	26.241	26.241	58.02	56.900	0.000
					B	18.990	26.241		58.02	60.607	0.000
					C	18.990	26.241		58.02	55.034	0.000
T8 82.00-62.00	72.00	1.181	22.2	283.362	A	18.364	28.309	28.309	60.65	56.900	0.000
					B	18.364	28.309		60.65	64.434	0.000
					C	18.364	28.309		60.65	55.034	0.000

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft^2	Face	A_F ft^2	A_R ft^2	A_{leg} ft^2	Leg %	C_AA_A In Face ft^2	C_AA_A Out Face ft^2
T9 62.00-42.00	52.00	1.103	20.8	323.362	A	22.855	28.309	28.309	55.33	56.900	0.000
					B	22.855	28.309		55.33	64.434	0.000
					C	22.855	28.309		55.33	55.034	0.000
T10 42.00-22.00	32.00	0.996	18.7	363.780	A	24.881	29.897	29.897	54.58	56.900	0.000
					B	24.881	29.897		54.58	64.434	0.000
					C	24.881	29.897		54.58	55.034	0.000
T11 22.00-2.00	12.00	0.85	16.0	403.780	A	30.345	29.897	29.897	49.63	43.575	0.000
					B	30.345	29.897		49.63	48.206	0.000
					C	30.345	29.897		49.63	34.820	0.000

Tower Pressure - With Ice

G_H = 0.850

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft^2	Face	A_F ft^2	A_R ft^2	A_{leg} ft^2	Leg %	C_AA_A In Face ft^2	C_AA_A Out Face ft^2
T1 197.00-187.00	192.00	1.452	5.1	1.7888	49.440	A	1.089	26.138	8.879	32.61	6.192	0.000
						B	1.089	26.138		32.61	34.623	0.000
						C	1.089	26.138		32.61	0.000	0.000
T2 187.00-172.00	179.50	1.431	5.0	1.7768	74.442	A	0.000	38.681	13.884	35.89	13.196	0.000
						B	0.000	38.681		35.89	95.670	0.000
						C	0.000	38.681		35.89	0.000	0.000
T3 172.00-152.00	162.00	1.401	4.9	1.7587	104.613	A	0.000	53.308	19.227	36.07	76.816	0.000
						B	0.000	53.308		36.07	131.224	0.000
						C	0.000	53.308		36.07	0.000	0.000
T4 152.00-142.00	147.00	1.373	4.8	1.7417	69.171	A	6.024	43.725	37.037	74.45	54.165	0.000
						B	6.024	43.725		74.45	80.966	0.000
						C	6.024	43.725		74.45	35.533	0.000
T5 142.00-122.00	132.00	1.342	4.7	1.7230	168.279	A	13.687	89.063	76.009	73.97	107.834	0.000
						B	13.687	89.063		73.97	182.820	0.000
						C	13.687	89.063		73.97	88.505	0.000
T6 122.00-102.00	112.00	1.296	4.5	1.6950	208.602	A	15.184	91.089	76.555	72.04	109.722	0.000
						B	15.184	91.089		72.04	186.134	0.000
						C	15.184	91.089		72.04	90.648	0.000
T7 102.00-82.00	92.00	1.244	4.3	1.6620	248.492	A	18.990	94.684	76.217	67.05	132.153	0.000
						B	18.990	94.684		67.05	217.550	0.000
						C	18.990	94.684		67.05	113.380	0.000
T8 82.00-62.00	72.00	1.181	4.1	1.6217	288.775	A	18.364	93.982	76.639	68.22	130.600	0.000
						B	18.364	93.982		68.22	224.482	0.000
						C	18.364	93.982		68.22	112.194	0.000
T9 62.00-42.00	52.00	1.103	3.8	1.5698	328.602	A	22.855	94.659	76.107	64.76	128.597	0.000
						B	22.855	94.659		64.76	220.199	0.000
						C	22.855	94.659		64.76	110.664	0.000
T10 42.00-22.00	32.00	0.996	3.5	1.4954	368.771	A	24.881	95.583	76.180	63.24	125.728	0.000
						B	24.881	95.583		63.24	214.067	0.000
						C	24.881	95.583		63.24	108.472	0.000
T11 22.00-2.00	12.00	0.85	3.0	1.3557	408.304	A	30.345	93.945	74.748	60.14	93.596	0.000
						B	30.345	93.945		60.14	155.226	0.000
						C	30.345	93.945		60.14	69.295	0.000

Tower Pressure - Service

G_H = 0.850

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T1 197.00-187.00	192.00	1.452	11.4	46.458	A	1.089	6.053	2.917	40.84	1.183	0.000
					B	1.089	6.053		40.84	7.199	0.000
					C	1.089	6.053		40.84	0.000	0.000
T2 187.00-172.00	179.50	1.431	11.2	70.000	A	0.000	9.972	5.000	50.14	2.535	0.000
					B	0.000	9.972		50.14	25.721	0.000
					C	0.000	9.972		50.14	0.000	0.000
T3 172.00-152.00	162.00	1.401	11.0	98.750	A	0.000	15.045	7.501	49.85	34.268	0.000
					B	0.000	15.045		49.85	36.407	0.000
					C	0.000	15.045		49.85	0.000	0.000
T4 152.00-142.00	147.00	1.373	10.8	66.264	A	6.024	12.641	12.641	67.73	25.450	0.000
					B	6.024	12.641		67.73	22.404	0.000
					C	6.024	12.641		67.73	19.614	0.000
T5 142.00-122.00	132.00	1.342	10.5	162.528	A	13.687	24.703	24.703	64.35	50.900	0.000
					B	13.687	24.703		64.35	50.657	0.000
					C	13.687	24.703		64.35	49.034	0.000
T6 122.00-102.00	112.00	1.296	10.2	202.945	A	15.184	26.241	26.241	63.35	51.500	0.000
					B	15.184	26.241		63.35	51.907	0.000
					C	15.184	26.241		63.35	49.634	0.000
T7 102.00-82.00	92.00	1.244	9.7	242.945	A	18.990	26.241	26.241	58.02	56.900	0.000
					B	18.990	26.241		58.02	60.607	0.000
					C	18.990	26.241		58.02	55.034	0.000
T8 82.00-62.00	72.00	1.181	9.3	283.362	A	18.364	28.309	28.309	60.65	56.900	0.000
					B	18.364	28.309		60.65	64.434	0.000
					C	18.364	28.309		60.65	55.034	0.000
T9 62.00-42.00	52.00	1.103	8.6	323.362	A	22.855	28.309	28.309	55.33	56.900	0.000
					B	22.855	28.309		55.33	64.434	0.000
					C	22.855	28.309		55.33	55.034	0.000
T10 42.00-22.00	32.00	0.996	7.8	363.780	A	24.881	29.897	29.897	54.58	56.900	0.000
					B	24.881	29.897		54.58	64.434	0.000
					C	24.881	29.897		54.58	55.034	0.000
T11 22.00-2.00	12.00	0.85	6.7	403.780	A	30.345	29.897	29.897	49.63	43.575	0.000
					B	30.345	29.897		49.63	48.206	0.000
					C	30.345	29.897		49.63	34.820	0.000

Discrete Appurtenance Pressures - No Ice G_H = 0.850

Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	z ft	K_z	q_z psf	C_AA_C Front ft²	C_AA_C Side ft²
DB201-D	240.0000	0.0	-2.68	1.55	196.26	1.459	27.5	0.81	0.81
Pirod 6'-8" Rigid Side Arm	300.0000	0.2	-3.72	-2.15	196.00	1.458	27.4	8.00	8.00
6' x 4-1/2" Mount Pipe	300.0000	0.0	-1.71	-0.98	194.92	1.457	27.4	1.83	1.83
OGT9-840	0.0000	0.0	7.50	-5.60	190.25	1.449	27.3	2.27	2.27
Filter Box	180.0000	0.0	0.00	1.30	183.00	1.437	27.1	3.50	1.40
3" x 10' Omni	0.0000	0.0	7.50	-5.60	174.25	1.423	26.8	3.00	3.00
3" x 9' Omni	180.0000	0.0	0.00	5.30	188.75	1.447	27.2	2.70	2.70
3" x 12' Omni	180.0000	0.0	0.00	5.30	175.25	1.424	26.8	3.60	3.60
DB222-A	0.0000	0.0	-7.50	-5.60	185.25	1.441	27.1	1.60	1.60
ANT150D6-9	0.0000	0.0	-7.50	-5.60	174.50	1.423	26.8	5.94	5.94
Pirod 4' Side Mount Standoff (1)	180.0000	0.1	-3.98	2.30	186.50	1.443	27.2	2.72	2.72
3" x 9' Omni	180.0000	0.0	-5.71	3.30	192.75	1.453	27.3	2.70	2.70
DB222-A	180.0000	0.0	-5.71	3.30	180.25	1.433	27.0	1.60	1.60
BCD87077	0.0000	0.0	0.00	-6.60	183.50	1.438	27.1	3.06	3.06
PiROD 15' Rotatable Platform (Lattice)	0.0000	1.8	0.00	0.00	181.25	1.434	27.0	24.90	24.90
6' x 2" Mount Pipe	0.0000	0.1	0.00	-5.60	181.25	1.434	27.0	5.70	5.70

Description	*Aiming Azimuth* °	*Weight* *K*	*Offset$_x$* *ft*	*Offset$_z$* *ft*	*z* *ft*	*K_z*	*q_z* *psf*	*C_AA_C Front* *ft^2*	*C_AA_C Side* *ft^2*
6' x 2" Mount Pipe	120.0000	0.1	4.85	2.80	181.25	1.434	27.0	5.70	5.70
6' x 2" Mount Pipe	240.0000	0.1	-4.85	2.80	181.25	1.434	27.0	5.70	5.70
Pirod 4' Side Mount Standoff (1)	0.0000	0.1	0.00	-4.60	174.25	1.423	26.8	2.72	2.72
Pirod 6' Side Mount Standoff (1)	120.0000	0.1	4.85	2.80	172.25	1.419	26.7	4.97	4.97
PD220	120.0000	0.0	7.45	4.30	182.25	1.436	27.0	3.56	3.56
3' Side Mount Standoff	-10.0000	0.0	0.00	-3.87	170.20	1.416	26.6	2.18	2.18
3" x 12' Omni	-10.0000	0.0	0.00	-5.62	175.20	1.424	26.8	3.60	3.60
LPA-80080/4CF	0.0000	0.0	6.00	-5.73	167.00	1.410	26.5	2.62	5.40
LPA-185080/8CF	0.0000	0.0	2.00	-5.73	167.00	1.410	26.5	2.09	2.79
LPA-185080/8CF	0.0000	0.0	-2.00	-5.73	167.00	1.410	26.5	2.09	2.79
LPA-80080/4CF	0.0000	0.0	-6.00	-5.73	167.00	1.410	26.5	2.62	5.40
LPA-80080/4CF	120.0000	0.0	1.96	8.06	167.00	1.410	26.5	2.62	5.40
LPA-185080/8CF	120.0000	0.0	3.96	4.60	167.00	1.410	26.5	2.09	2.79
LPA-185080/8CF	120.0000	0.0	5.96	1.13	167.00	1.410	26.5	2.09	2.79
LPA-80080/4CF	120.0000	0.0	7.96	-2.33	167.00	1.410	26.5	2.62	5.40
LPA-80080/4CF	120.0000	0.0	1.96	8.06	167.00	1.410	26.5	2.62	5.40
LPA-185080/8CF	240.0000	0.0	-5.96	1.13	167.00	1.410	26.5	2.09	2.79
LPA-185080/8CF	240.0000	0.0	-3.96	4.60	167.00	1.410	26.5	2.09	2.79
LPA-80080/4CF	240.0000	0.0	-1.96	8.06	167.00	1.410	26.5	2.62	5.40
Pirod 15' T-Frame Sector Mount (1)	0.0000	0.5	0.00	-4.23	163.00	1.403	26.4	15.00	15.00
Pirod 15' T-Frame Sector Mount (1)	120.0000	0.5	3.66	2.11	163.00	1.403	26.4	15.00	15.00
Pirod 15' T-Frame Sector Mount (1)	240.0000	0.5	-3.66	2.11	163.00	1.403	26.4	15.00	15.00
7770.00	0.0000	0.1	0.00	-5.99	150.25	1.379	26.0	11.02	5.86
7770.00	120.0000	0.1	5.19	2.99	150.25	1.379	26.0	11.02	5.86
7770.00	240.0000	0.1	-5.19	2.99	150.25	1.379	26.0	11.02	5.86
LGP21401	0.0000	0.0	0.00	-5.24	150.25	1.379	26.0	0.00	0.74
LGP21401	120.0000	0.0	4.54	2.62	150.25	1.379	26.0	0.00	0.74
LGP21401	240.0000	0.0	-4.54	2.62	150.25	1.379	26.0	0.00	0.74
Pirod 12' T-Frame Sector Mount (1)	0.0000	0.5	0.00	-4.24	150.25	1.379	26.0	13.60	13.60
Pirod 12' T-Frame Sector Mount (1)	120.0000	0.5	3.67	2.12	150.25	1.379	26.0	13.60	13.60
Pirod 12' T-Frame Sector Mount (1)	240.0000	0.5	-3.67	2.12	150.25	1.379	26.0	13.60	13.60
LGP13519	0.0000	0.0	0.00	-5.49	150.25	1.379	26.0	0.27	0.18
LGP13519	120.0000	0.0	4.75	2.74	150.25	1.379	26.0	0.27	0.18
LGP13519	240.0000	0.0	-4.75	2.74	150.25	1.379	26.0	0.27	0.18
AM-X-CD-16-65-00T	0.0000	0.0	0.00	-5.99	150.25	1.379	26.0	6.04	4.11
AM-X-CD-16-65-00T	120.0000	0.0	5.19	2.99	150.25	1.379	26.0	6.04	4.11
80010764	240.0000	0.0	-5.19	2.99	150.25	1.379	26.0	5.87	3.39
RRUS 11	0.0000	0.1	0.00	-5.49	150.25	1.379	26.0	5.57	2.37
RRUS 11	120.0000	0.1	4.75	2.74	150.25	1.379	26.0	5.57	2.37
RRUS 11	240.0000	0.1	-4.75	2.74	150.25	1.379	26.0	5.57	2.37
DC6-48-60-18-8F	120.0000	0.0	4.75	2.74	150.25	1.379	26.0	2.20	2.20
SRL110A	240.0000	0.0	-8.60	4.96	135.00	1.348	25.4	9.00	9.00
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	240.0000	0.2	-6.00	3.46	134.00	1.346	25.3	2.60	3.41
DB586-Y	0.0000	0.0	0.00	-10.39	130.00	1.337	25.2	1.01	1.01
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	0.0000	0.2	0.00	-7.39	126.00	1.329	25.0	2.60	3.41
Tower Top Amplifier	0.0000	0.0	0.00	-7.39	126.00	1.329	25.0	2.10	2.10
DB586-Y	0.0000	0.0	0.00	-10.39	125.00	1.326	25.0	1.01	1.01
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	120.0000	0.2	6.67	3.85	120.50	1.316	24.8	2.60	3.41
DB212-1	240.0000	0.0	-9.26	5.35	120.67	1.317	24.8	4.50	4.50
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	240.0000	0.2	-6.66	3.85	120.67	1.317	24.8	2.60	3.41
DB205-L	0.0000	0.0	0.00	-11.04	109.25	1.289	24.3	1.72	1.72
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	0.0000	0.2	0.00	-8.84	100.83	1.268	23.9	2.60	3.41
Ice Canopy	70.0000	0.0	7.40	4.27	106.00	1.281	24.1	0.00	0.00
6'8"x4" Pipe Mount	120.0000	0.1	5.62	3.24	101.20	1.269	23.9	2.20	2.20
DB224	300.0000	0.0	-7.58	4.38	94.00	1.249	23.5	3.15	3.15
2-ft Standoff	300.0000	0.0	-6.72	3.88	85.00	1.223	23.0	0.00	0.00

Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	z ft	K_z	q_z psf	C_AA_C Front ft^2	C_AA_C Side ft^2
PD220	0.0000	0.0	0.00	-12.27	90.41	1.239	23.3	3.56	3.56
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	0.0000	0.2	0.00	-10.07	79.50	1.206	22.7	2.60	3.41
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	120.0000	0.2	8.56	4.94	82.67	1.216	22.9	2.60	3.41
3" x 12' Omni	120.0000	0.0	11.16	6.44	76.67	1.197	22.5	3.60	3.60
DB432-A	0.0000	0.0	0.00	-9.11	70.25	1.175	22.1	0.30	0.30
2-ft Standoff	120.0000	0.0	10.22	5.90	15.00	0.850	16.0	0.00	0.00
LNX-6515DS-A1M	0.0000	0.1	-5.00	-6.58	140.00	1.359	25.6	11.41	7.70
LNX-6515DS-A1M	120.0000	0.1	8.20	-1.04	140.00	1.359	25.6	11.41	7.70
LNX-6515DS-A1M	240.0000	0.1	-3.20	7.62	140.00	1.359	25.6	11.41	7.70
APX16DWV-16DWV-S-E-A20	0.0000	0.0	5.00	-6.58	140.00	1.359	25.6	6.59	2.15
APX16DWV-16DWV-S-E-A20	120.0000	0.0	3.20	7.62	140.00	1.359	25.6	6.59	2.15
APX16DWV-16DWV-S-E-A20	240.0000	0.0	-8.20	-1.04	140.00	1.359	25.6	6.59	2.15
RRUS 11 B12	0.0000	0.1	-5.00	-6.08	140.00	1.359	25.6	2.83	1.18
RRUS 11 B12	120.0000	0.1	7.77	-1.29	140.00	1.359	25.6	2.83	1.18
RRUS 11 B12	240.0000	0.1	-2.77	7.37	140.00	1.359	25.6	2.83	1.18
RRUS 11 B2	0.0000	0.1	5.00	-6.08	141.00	1.361	25.6	2.83	1.18
RRUS 11 B2	120.0000	0.1	2.77	7.37	141.00	1.361	25.6	2.83	1.18
RRUS 11 B2	240.0000	0.1	-7.77	-1.29	141.00	1.361	25.6	2.83	1.18
RRUS 11 B4	0.0000	0.1	5.00	-6.08	139.00	1.356	25.5	2.83	1.18
RRUS 11 B4	120.0000	0.1	2.77	7.37	139.00	1.356	25.5	2.83	1.18
RRUS 11 B4	240.0000	0.1	-7.77	-1.29	139.00	1.356	25.5	2.83	1.18
Pirod 10' PCS Frame (1)	0.0000	0.3	0.00	-6.33	140.00	1.359	25.6	9.00	9.00
Pirod 10' PCS Frame (1)	120.0000	0.3	5.48	3.16	140.00	1.359	25.6	9.00	9.00
Pirod 10' PCS Frame (1)	240.0000	0.3	-5.48	3.16	140.00	1.359	25.6	9.00	9.00
	Sum Weight:	9.8							

Discrete Appurtenance Pressures - With Ice $G_H = 0.850$

Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	z ft	K_z	q_z psf	C_AA_C Front ft^2	C_AA_C Side ft^2	t_z in
DB201-D	240.0000	0.1	-2.68	1.55	196.26	1.459	5.1	2.80	2.80	1.7928
Pirod 6'-8" Rigid Side Arm	300.0000	0.4	-3.72	-2.15	196.00	1.458	5.1	13.74	13.74	1.7925
6' x 4-1/2" Mount Pipe	300.0000	0.1	-1.71	-0.98	194.92	1.457	5.1	3.62	3.62	1.7915
OGT9-840	0.0000	0.1	7.50	-5.60	190.25	1.449	5.0	6.34	6.34	1.7872
Filter Box	180.0000	0.1	0.00	1.30	183.00	1.437	5.0	4.39	2.01	1.7803
3" x 10' Omni	0.0000	0.1	7.50	-5.60	174.25	1.423	5.0	5.98	5.98	1.7716
3" x 9' Omni	180.0000	0.1	0.00	5.30	188.75	1.447	5.0	5.21	5.21	1.7858
3" x 12' Omni	180.0000	0.2	0.00	5.30	175.25	1.424	5.0	7.58	7.58	1.7726
DB222-A	0.0000	0.0	-7.50	-5.60	185.25	1.441	5.0	6.16	6.16	1.7824
ANT150D6-9	0.0000	0.1	-7.50	-5.60	174.50	1.423	5.0	26.71	26.71	1.7718
Pirod 4' Side Mount Standoff (1)	180.0000	0.2	-3.98	2.30	186.50	1.443	5.0	10.53	10.53	1.7836
3" x 9' Omni	180.0000	0.1	-5.71	3.30	192.75	1.453	5.1	5.20	5.20	1.7836
DB222-A	180.0000	0.0	-5.71	3.30	180.25	1.433	5.0	6.17	6.17	1.7836
BCD87077	0.0000	0.1	0.00	-6.60	183.50	1.438	5.0	7.26	7.26	1.7808
PiROD 15' Rotatable Platform (Lattice)	0.0000	4.0	0.00	0.00	181.25	1.434	5.0	45.53	45.53	1.7786
6' x 2" Mount Pipe	0.0000	0.3	0.00	-5.60	181.25	1.434	5.0	11.56	11.56	1.7786
6' x 2" Mount Pipe	120.0000	0.3	4.85	2.80	181.25	1.434	5.0	11.56	11.56	1.7786
6' x 2" Mount Pipe	240.0000	0.3	-4.85	2.80	181.25	1.434	5.0	11.56	11.56	1.7786
Pirod 4' Side Mount Standoff (1)	0.0000	0.2	0.00	-4.60	174.25	1.423	5.0	10.48	10.48	1.7716
Pirod 6' Side Mount Standoff (1)	120.0000	0.3	4.85	2.80	172.25	1.419	4.9	9.04	9.04	1.7695
PD220	120.0000	0.1	7.45	4.30	182.25	1.436	5.0	16.19	16.19	1.7695

Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	z ft	K_z	q_z psf	C_AA_C Front ft^2	C_AA_C Side ft^2	t_z in
3' Side Mount Standoff	-10.0000	0.2	0.00	-3.87	170.20	1.416	4.9	8.37	8.37	1.7674
3" x 12' Omni	-10.0000	0.2	0.00	-5.62	175.20	1.424	5.0	7.57	7.57	1.7674
LPA-80080/4CF	0.0000	0.2	6.00	-5.73	167.00	1.410	4.9	3.70	6.58	1.7598
LPA-185080/8CF	0.0000	0.1	2.00	-5.73	167.00	1.410	4.9	3.17	3.87	1.7598
LPA-185080/8CF	0.0000	0.1	-2.00	-5.73	167.00	1.410	4.9	3.17	3.87	1.7598
LPA-80080/4CF	0.0000	0.2	-6.00	-5.73	167.00	1.410	4.9	3.70	6.58	1.7598
LPA-80080/4CF	120.0000	0.2	1.96	8.06	167.00	1.410	4.9	3.70	6.58	1.7598
LPA-185080/8CF	120.0000	0.1	3.96	4.60	167.00	1.410	4.9	3.17	3.87	1.7598
LPA-185080/8CF	120.0000	0.1	5.96	1.13	167.00	1.410	4.9	3.17	3.87	1.7598
LPA-80080/4CF	120.0000	0.2	7.96	-2.33	167.00	1.410	4.9	3.70	6.58	1.7598
LPA-80080/4CF	120.0000	0.2	1.96	8.06	167.00	1.410	4.9	3.70	6.58	1.7598
LPA-185080/8CF	240.0000	0.1	-5.96	1.13	167.00	1.410	4.9	3.17	3.87	1.7598
LPA-185080/8CF	240.0000	0.1	-3.96	4.60	167.00	1.410	4.9	3.17	3.87	1.7598
LPA-80080/4CF	240.0000	0.2	-1.96	8.06	167.00	1.410	4.9	3.70	6.58	1.7598
Pirod 15' T-Frame Sector Mount (1)	0.0000	1.0	0.00	-4.23	163.00	1.403	4.9	34.71	34.71	1.7598
Pirod 15' T-Frame Sector Mount (1)	120.0000	1.0	3.66	2.11	163.00	1.403	4.9	34.71	34.71	1.7598
Pirod 15' T-Frame Sector Mount (1)	240.0000	1.0	-3.66	2.11	163.00	1.403	4.9	34.71	34.71	1.7598
7770.00	0.0000	0.4	0.00	-5.99	150.25	1.379	4.8	13.59	8.33	1.7455
7770.00	120.0000	0.4	5.19	2.99	150.25	1.379	4.8	13.59	8.33	1.7455
7770.00	240.0000	0.4	-5.19	2.99	150.25	1.379	4.8	13.59	8.33	1.7455
LGP21401	0.0000	0.0	0.00	-5.24	150.25	1.379	4.8	0.00	1.51	1.7455
LGP21401	120.0000	0.0	4.54	2.62	150.25	1.379	4.8	0.00	1.51	1.7455
LGP21401	240.0000	0.0	-4.54	2.62	150.25	1.379	4.8	0.00	1.51	1.7455
Pirod 12' T-Frame Sector Mount (1)	0.0000	0.9	0.00	-4.24	150.25	1.379	4.8	30.36	30.36	1.7455
Pirod 12' T-Frame Sector Mount (1)	120.0000	0.9	3.67	2.12	150.25	1.379	4.8	30.36	30.36	1.7455
Pirod 12' T-Frame Sector Mount (1)	240.0000	0.9	-3.67	2.12	150.25	1.379	4.8	30.36	30.36	1.7455
LGP13519	0.0000	0.0	0.00	-5.49	150.25	1.379	4.8	0.51	0.42	1.7455
LGP13519	120.0000	0.0	4.75	2.74	150.25	1.379	4.8	0.51	0.42	1.7455
LGP13519	240.0000	0.0	-4.75	2.74	150.25	1.379	4.8	0.51	0.42	1.7455
AM-X-CD-16-65-00T	0.0000	0.2	0.00	-5.99	150.25	1.379	4.8	7.34	5.33	1.7455
AM-X-CD-16-65-00T	120.0000	0.2	5.19	2.99	150.25	1.379	4.8	7.34	5.33	1.7455
80010764	240.0000	0.2	-5.19	2.99	150.25	1.379	4.8	7.17	4.64	1.7455
RRUS 11	0.0000	0.3	0.00	-5.49	150.25	1.379	4.8	7.09	3.49	1.7455
RRUS 11	120.0000	0.3	4.75	2.74	150.25	1.379	4.8	7.09	3.49	1.7455
RRUS 11	240.0000	0.3	-4.75	2.74	150.25	1.379	4.8	7.09	3.49	1.7455
DC6-48-60-18-8F	120.0000	0.1	4.75	2.74	150.25	1.379	4.8	2.93	2.93	1.7455
SRL110A	240.0000	0.2	-8.60	4.96	135.00	1.348	4.7	14.45	14.45	1.7256
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	240.0000	0.5	-6.00	3.46	134.00	1.346	4.7	8.12	16.42	1.7256
DB586-Y	0.0000	0.1	0.00	-10.39	130.00	1.337	4.7	1.97	1.97	1.7151
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	0.0000	0.5	0.00	-7.39	126.00	1.329	4.6	8.09	16.34	1.7151
Tower Top Amplifier	0.0000	0.1	0.00	-7.39	126.00	1.329	4.6	3.13	3.13	1.7151
DB586-Y	0.0000	0.1	0.00	-10.39	125.00	1.326	4.6	1.97	1.97	1.7151
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	120.0000	0.5	6.67	3.85	120.50	1.316	4.6	8.06	16.28	1.7074
DB212-1	240.0000	0.1	-9.26	5.35	120.67	1.317	4.6	16.80	16.80	1.7077
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	240.0000	0.5	-6.66	3.85	120.67	1.317	4.6	8.06	16.29	1.7077
DB205-L	0.0000	0.1	0.00	-11.04	109.25	1.289	4.5	7.60	7.60	1.6773
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	0.0000	0.5	0.00	-8.84	100.83	1.268	4.4	7.97	16.06	1.6773
Ice Canopy	70.0000	0.0	7.40	4.27	106.00	1.281	4.5	0.00	0.00	1.6857
6'8"x4" Pipe Mount	120.0000	0.2	5.62	3.24	101.20	1.269	4.4	4.01	4.01	1.6779
DB224	300.0000	0.1	-7.58	4.38	94.00	1.249	4.3	11.46	11.46	1.6489
2-ft Standoff	300.0000	0.0	-6.72	3.88	85.00	1.223	4.3	0.00	0.00	1.6489
PD220	0.0000	0.1	0.00	-12.27	90.41	1.239	4.3	15.25	15.25	1.6379
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	0.0000	0.5	0.00	-10.07	79.50	1.206	4.2	7.84	15.76	1.6379
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	120.0000	0.5	8.56	4.94	82.67	1.216	4.2	7.86	15.81	1.6443
3" x 12' Omni	120.0000	0.2	11.16	6.44	76.67	1.197	4.2	7.33	7.33	1.6443
DB432-A	0.0000	0.0	0.00	-9.11	70.25	1.175	4.1	1.08	1.08	1.6177

Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	z ft	K_z	q_z psf	C_AA_C Front ft^2	C_AA_C Side ft^2	t_z in
2-ft Standoff	120.0000	0.0	10.22	5.90	15.00	0.850	3.0	0.00	0.00	1.3863
LNX-6515DS-A1M	0.0000	0.3	-5.00	-6.58	140.00	1.359	4.7	13.57	9.79	1.7332
LNX-6515DS-A1M	120.0000	0.3	8.20	-1.04	140.00	1.359	4.7	13.57	9.79	1.7332
LNX-6515DS-A1M	240.0000	0.3	-3.20	7.62	140.00	1.359	4.7	13.57	9.79	1.7332
APX16DWV-16DWV-S-E-A20	0.0000	0.2	5.00	-6.58	140.00	1.359	4.7	7.92	3.36	1.7332
APX16DWV-16DWV-S-E-A20	120.0000	0.2	3.20	7.62	140.00	1.359	4.7	7.92	3.36	1.7332
APX16DWV-16DWV-S-E-A20	240.0000	0.2	-8.20	-1.04	140.00	1.359	4.7	7.92	3.36	1.7332
RRUS 11 B12	0.0000	0.1	-5.00	-6.08	140.00	1.359	4.7	3.59	1.73	1.7332
RRUS 11 B12	120.0000	0.1	7.77	-1.29	140.00	1.359	4.7	3.59	1.73	1.7332
RRUS 11 B12	240.0000	0.1	-2.77	7.37	140.00	1.359	4.7	3.59	1.73	1.7332
RRUS 11 B2	0.0000	0.1	5.00	-6.08	141.00	1.361	4.7	3.59	1.73	1.7332
RRUS 11 B2	120.0000	0.1	2.77	7.37	141.00	1.361	4.7	3.59	1.73	1.7332
RRUS 11 B2	240.0000	0.1	-7.77	-1.29	141.00	1.361	4.7	3.59	1.73	1.7332
RRUS 11 B4	0.0000	0.1	5.00	-6.08	139.00	1.356	4.7	3.59	1.73	1.7332
RRUS 11 B4	120.0000	0.1	2.77	7.37	139.00	1.356	4.7	3.59	1.73	1.7332
RRUS 11 B4	240.0000	0.1	-7.77	-1.29	139.00	1.356	4.7	3.59	1.73	1.7332
Pirod 10' PCS Frame (1)	0.0000	0.6	0.00	-6.33	140.00	1.359	4.7	23.56	23.56	1.7332
Pirod 10' PCS Frame (1)	120.0000	0.6	5.48	3.16	140.00	1.359	4.7	23.56	23.56	1.7332
Pirod 10' PCS Frame (1)	240.0000	0.6	-5.48	3.16	140.00	1.359	4.7	23.56	23.56	1.7332
	Sum Weight:	27.2								

Discrete Appurtenance Pressures - Service $G_H = 0.850$

Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	z ft	K_z	q_z psf	C_AA_C Front ft^2	C_AA_C Side ft^2
DB201-D	240.0000	0.0	-2.68	1.55	196.26	1.459	11.4	0.81	0.81
Pirod 6'-8" Rigid Side Arm	300.0000	0.2	-3.72	-2.15	196.00	1.458	11.4	8.00	8.00
6' x 4-1/2" Mount Pipe	300.0000	0.0	-1.71	-0.98	194.92	1.457	11.4	1.83	1.83
OGT9-840	0.0000	0.0	7.50	-5.60	190.25	1.449	11.4	2.27	2.27
Filter Box	180.0000	0.0	0.00	1.30	183.00	1.437	11.3	3.50	1.40
3" x 10' Omni	0.0000	0.0	7.50	-5.60	174.25	1.423	11.1	3.00	3.00
3" x 9' Omni	180.0000	0.0	0.00	5.30	188.75	1.447	11.3	2.70	2.70
3" x 12' Omni	180.0000	0.0	0.00	5.30	175.25	1.424	11.2	3.60	3.60
DB222-A	0.0000	0.0	-7.50	-5.60	185.25	1.441	11.3	1.60	1.60
ANT150D6-9	0.0000	0.0	-7.50	-5.60	174.50	1.423	11.1	5.94	5.94
Pirod 4' Side Mount Standoff (1)	180.0000	0.1	-3.98	2.30	186.50	1.443	11.3	2.72	2.72
3" x 9' Omni	180.0000	0.0	-5.71	3.30	192.75	1.453	11.4	2.70	2.70
DB222-A	180.0000	0.0	-5.71	3.30	180.25	1.433	11.2	1.60	1.60
BCD87077	0.0000	0.0	0.00	-6.60	183.50	1.438	11.3	3.06	3.06
PiROD 15' Rotatable Platform (Lattice)	0.0000	1.8	0.00	0.00	181.25	1.434	11.2	24.90	24.90
6' x 2" Mount Pipe	0.0000	0.1	0.00	-5.60	181.25	1.434	11.2	5.70	5.70
6' x 2" Mount Pipe	120.0000	0.1	4.85	2.80	181.25	1.434	11.2	5.70	5.70
6' x 2" Mount Pipe	240.0000	0.1	-4.85	2.80	181.25	1.434	11.2	5.70	5.70
Pirod 4' Side Mount Standoff (1)	0.0000	0.1	0.00	-4.60	174.25	1.423	11.1	2.72	2.72
Pirod 6' Side Mount Standoff (1)	120.0000	0.1	4.85	2.80	172.25	1.419	11.1	4.97	4.97
PD220	120.0000	0.0	7.45	4.30	182.25	1.436	11.2	3.56	3.56
3' Side Mount Standoff	-10.0000	0.0	0.00	-3.87	170.20	1.416	11.1	2.18	2.18
3" x 12' Omni	-10.0000	0.0	0.00	-5.62	175.20	1.424	11.2	3.60	3.60
LPA-80080/4CF	0.0000	0.0	6.00	-5.73	167.00	1.410	11.0	2.62	5.40
LPA-185080/8CF	0.0000	0.0	2.00	-5.73	167.00	1.410	11.0	2.09	2.79
LPA-185080/8CF	0.0000	0.0	-2.00	-5.73	167.00	1.410	11.0	2.09	2.79
LPA-80080/4CF	0.0000	0.0	-6.00	-5.73	167.00	1.410	11.0	2.62	5.40
LPA-80080/4CF	120.0000	0.0	1.96	8.06	167.00	1.410	11.0	2.62	5.40

Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	z ft	K_z	q_z psf	C_AA_C Front ft^2	C_AA_C Side ft^2
LPA-185080/8CF	120.0000	0.0	3.96	4.60	167.00	1.410	11.0	2.09	2.79
LPA-185080/8CF	120.0000	0.0	5.96	1.13	167.00	1.410	11.0	2.09	2.79
LPA-80080/4CF	120.0000	0.0	7.96	-2.33	167.00	1.410	11.0	2.62	5.40
LPA-80080/4CF	120.0000	0.0	1.96	8.06	167.00	1.410	11.0	2.62	5.40
LPA-185080/8CF	240.0000	0.0	-5.96	1.13	167.00	1.410	11.0	2.09	2.79
LPA-185080/8CF	240.0000	0.0	-3.96	4.60	167.00	1.410	11.0	2.09	2.79
LPA-80080/4CF	240.0000	0.0	-1.96	8.06	167.00	1.410	11.0	2.62	5.40
Pirod 15' T-Frame Sector Mount (1)	0.0000	0.5	0.00	-4.23	163.00	1.403	11.0	15.00	15.00
Pirod 15' T-Frame Sector Mount (1)	120.0000	0.5	3.66	2.11	163.00	1.403	11.0	15.00	15.00
Pirod 15' T-Frame Sector Mount (1)	240.0000	0.5	-3.66	2.11	163.00	1.403	11.0	15.00	15.00
7770.00	0.0000	0.1	0.00	-5.99	150.25	1.379	10.8	11.02	5.86
7770.00	120.0000	0.1	5.19	2.99	150.25	1.379	10.8	11.02	5.86
7770.00	240.0000	0.1	-5.19	2.99	150.25	1.379	10.8	11.02	5.86
LGP21401	0.0000	0.0	0.00	-5.24	150.25	1.379	10.8	0.00	0.74
LGP21401	120.0000	0.0	4.54	2.62	150.25	1.379	10.8	0.00	0.74
LGP21401	240.0000	0.0	-4.54	2.62	150.25	1.379	10.8	0.00	0.74
Pirod 12' T-Frame Sector Mount (1)	0.0000	0.5	0.00	-4.24	150.25	1.379	10.8	13.60	13.60
Pirod 12' T-Frame Sector Mount (1)	120.0000	0.5	3.67	2.12	150.25	1.379	10.8	13.60	13.60
Pirod 12' T-Frame Sector Mount (1)	240.0000	0.5	-3.67	2.12	150.25	1.379	10.8	13.60	13.60
LGP13519	0.0000	0.0	0.00	-5.49	150.25	1.379	10.8	0.27	0.18
LGP13519	120.0000	0.0	4.75	2.74	150.25	1.379	10.8	0.27	0.18
LGP13519	240.0000	0.0	-4.75	2.74	150.25	1.379	10.8	0.27	0.18
AM-X-CD-16-65-00T	0.0000	0.0	0.00	-5.99	150.25	1.379	10.8	6.04	4.11
AM-X-CD-16-65-00T	120.0000	0.0	5.19	2.99	150.25	1.379	10.8	6.04	4.11
80010764	240.0000	0.0	-5.19	2.99	150.25	1.379	10.8	5.87	3.39
RRUS 11	0.0000	0.1	0.00	-5.49	150.25	1.379	10.8	5.57	2.37
RRUS 11	120.0000	0.1	4.75	2.74	150.25	1.379	10.8	5.57	2.37
RRUS 11	240.0000	0.1	-4.75	2.74	150.25	1.379	10.8	5.57	2.37
DC6-48-60-18-8F	120.0000	0.0	4.75	2.74	150.25	1.379	10.8	2.20	2.20
SRL110A	240.0000	0.0	-8.60	4.96	135.00	1.348	10.6	9.00	9.00
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	240.0000	0.2	-6.00	3.46	134.00	1.346	10.5	2.60	3.41
DB586-Y	0.0000	0.0	0.00	-10.39	130.00	1.337	10.5	1.01	1.01
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	0.0000	0.2	0.00	-7.39	126.00	1.329	10.4	2.60	3.41
Tower Top Amplifier	0.0000	0.0	0.00	-7.39	126.00	1.329	10.4	2.10	2.10
DB586-Y	0.0000	0.0	0.00	-10.39	125.00	1.326	10.4	1.01	1.01
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	120.0000	0.2	6.67	3.85	120.50	1.316	10.3	2.60	3.41
DB212-1	240.0000	0.0	-9.26	5.35	120.67	1.317	10.3	4.50	4.50
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	240.0000	0.2	-6.66	3.85	120.67	1.317	10.3	2.60	3.41
DB205-L	0.0000	0.0	0.00	-11.04	109.25	1.289	10.1	1.72	1.72
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	0.0000	0.2	0.00	-8.84	100.83	1.268	9.9	2.60	3.41
Ice Canopy	70.0000	0.0	7.40	4.27	106.00	1.281	10.0	0.00	0.00
6'8"x4" Pipe Mount	120.0000	0.1	5.62	3.24	101.20	1.269	9.9	2.20	2.20
DB224	300.0000	0.0	-7.58	4.38	94.00	1.249	9.8	3.15	3.15
2-ft Standoff	300.0000	0.0	-6.72	3.88	85.00	1.223	9.6	0.00	0.00
PD220	0.0000	0.0	0.00	-12.27	90.41	1.239	9.7	3.56	3.56
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	0.0000	0.2	0.00	-10.07	79.50	1.206	9.4	2.60	3.41
Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	120.0000	0.2	8.56	4.94	82.67	1.216	9.5	2.60	3.41
3" x 12' Omni	120.0000	0.0	11.16	6.44	76.67	1.197	9.4	3.60	3.60
DB432-A	0.0000	0.0	0.00	-9.11	70.25	1.175	9.2	0.30	0.30
2-ft Standoff	120.0000	0.0	10.22	5.90	15.00	0.850	6.7	0.00	0.00
LNX-6515DS-A1M	0.0000	0.1	-5.00	-6.58	140.00	1.359	10.6	11.41	7.70
LNX-6515DS-A1M	120.0000	0.1	8.20	-1.04	140.00	1.359	10.6	11.41	7.70
LNX-6515DS-A1M	240.0000	0.1	-3.20	7.62	140.00	1.359	10.6	11.41	7.70
APX16DWV-16DWV-S-E-A20	0.0000	0.0	5.00	-6.58	140.00	1.359	10.6	6.59	2.15
APX16DWV-16DWV-	120.0000	0.0	3.20	7.62	140.00	1.359	10.6	6.59	2.15

Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	z ft	K_z	q_z psf	C_AA_C Front ft^2	C_AA_C Side ft^2
S-E-A20									
APX16DWV-16DWV-S-E-A20	240.0000	0.0	-8.20	-1.04	140.00	1.359	10.6	6.59	2.15
RRUS 11 B12	0.0000	0.1	-5.00	-6.08	140.00	1.359	10.6	2.83	1.18
RRUS 11 B12	120.0000	0.1	7.77	-1.29	140.00	1.359	10.6	2.83	1.18
RRUS 11 B12	240.0000	0.1	-2.77	7.37	140.00	1.359	10.6	2.83	1.18
RRUS 11 B2	0.0000	0.1	5.00	-6.08	141.00	1.361	10.7	2.83	1.18
RRUS 11 B2	120.0000	0.1	2.77	7.37	141.00	1.361	10.7	2.83	1.18
RRUS 11 B2	240.0000	0.1	-7.77	-1.29	141.00	1.361	10.7	2.83	1.18
RRUS 11 B4	0.0000	0.1	5.00	-6.08	139.00	1.356	10.6	2.83	1.18
RRUS 11 B4	120.0000	0.1	2.77	7.37	139.00	1.356	10.6	2.83	1.18
RRUS 11 B4	240.0000	0.1	-7.77	-1.29	139.00	1.356	10.6	2.83	1.18
Pirod 10' PCS Frame (1)	0.0000	0.3	0.00	-6.33	140.00	1.359	10.6	9.00	9.00
Pirod 10' PCS Frame (1)	120.0000	0.3	5.48	3.16	140.00	1.359	10.6	9.00	9.00
Pirod 10' PCS Frame (1)	240.0000	0.3	-5.48	3.16	140.00	1.359	10.6	9.00	9.00
	Sum Weight:	9.8							

Dish Pressures - No Ice

Elevation ft	Dish Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	K_z	A_A ft^2	q_z psf
194.25	PA6-65AC	230.0000	0.1	-3.12	1.80	1.455	28.27	27.4
102.25	PA6-65AC	-50.0000	0.1	0.00	-6.76	1.272	28.27	23.9
17.00	1.2M	40.0000	0.2	0.00	-12.68	0.872	12.57	16.4
		Sum Weight:	0.4					

Dish Pressures - With Ice

Elevation ft	Dish Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	K_z	A_A ft^2	q_z psf	t_z in
194.25	PA6-65AC	230.0000	0.6	-3.12	1.80	1.455	31.11	5.1	1.7909
102.25	PA6-65AC	-50.0000	0.6	0.00	-6.76	1.272	30.93	4.4	1.6796
17.00	1.2M	40.0000	0.3	0.00	-12.68	0.872	14.05	3.0	1.4037
		Sum Weight:	1.6						

Dish Pressures - Service

Elevation ft	Dish Description	Aiming Azimuth °	Weight K	$Offset_x$ ft	$Offset_z$ ft	K_z	A_A ft^2	q_z psf
194.25	PA6-65AC	230.0000	0.1	-3.12	1.80	1.455	28.27	11.4
102.25	PA6-65AC	-50.0000	0.1	0.00	-6.76	1.272	28.27	10.0
17.00	1.2M	40.0000	0.2	0.00	-12.68	0.872	12.57	6.8
		Sum Weight:	0.4					

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 45 deg - No Ice
5	0.9 Dead+1.6 Wind 45 deg - No Ice
6	1.2 Dead+1.6 Wind 90 deg - No Ice
7	0.9 Dead+1.6 Wind 90 deg - No Ice
8	1.2 Dead+1.6 Wind 135 deg - No Ice
9	0.9 Dead+1.6 Wind 135 deg - No Ice
10	1.2 Dead+1.6 Wind 180 deg - No Ice
11	0.9 Dead+1.6 Wind 180 deg - No Ice
12	1.2 Dead+1.6 Wind 225 deg - No Ice
13	0.9 Dead+1.6 Wind 225 deg - No Ice
14	1.2 Dead+1.6 Wind 270 deg - No Ice
15	0.9 Dead+1.6 Wind 270 deg - No Ice
16	1.2 Dead+1.6 Wind 315 deg - No Ice
17	0.9 Dead+1.6 Wind 315 deg - No Ice
18	1.2 Dead+1.0 Ice+1.0 Temp
19	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
20	1.2 Dead+1.0 Wind 45 deg+1.0 Ice+1.0 Temp
21	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
22	1.2 Dead+1.0 Wind 135 deg+1.0 Ice+1.0 Temp
23	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
24	1.2 Dead+1.0 Wind 225 deg+1.0 Ice+1.0 Temp
25	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
26	1.2 Dead+1.0 Wind 315 deg+1.0 Ice+1.0 Temp
27	Dead+Wind 0 deg - Service
28	Dead+Wind 45 deg - Service
29	Dead+Wind 90 deg - Service
30	Dead+Wind 135 deg - Service
31	Dead+Wind 180 deg - Service
32	Dead+Wind 225 deg - Service
33	Dead+Wind 270 deg - Service
34	Dead+Wind 315 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
T1	197 - 187	Leg	Max Tension	5	4.4	0.4	-0.5
			Max. Compression	2	-4.7	-0.1	0.1
			Max. Mx	6	-2.4	0.6	-0.2
			Max. My	10	-2.3	0.1	0.6
			Max. Vy	6	1.1	-0.1	0.0
			Max. Vx	10	1.1	-0.0	-0.1
		Diagonal	Max Tension	4	1.8	0.0	0.0
			Max. Compression	2	-1.7	0.0	0.0
			Max. Mx	19	-0.0	-0.0	0.0
			Max. My	10	-1.5	-0.0	0.0
			Max. Vy	23	0.0	-0.0	0.0
			Max. Vx	10	0.0	-0.0	0.0
		Top Girt	Max Tension	3	0.2	0.0	0.0
			Max. Compression	2	-0.2	0.0	0.0
			Max. Mx	18	-0.0	-0.1	0.0
			Max. My	10	-0.1	0.0	0.0
			Max. Vy	18	-0.0	0.0	0.0
			Max. Vx	10	0.0	0.0	0.0
		Bottom Girt	Max Tension	4	0.8	0.0	0.0
			Max. Compression	3	-0.6	0.0	0.0
			Max. Mx	18	0.0	0.0	0.0
			Max. My	10	-0.3	0.0	-0.0
			Max. Vy	18	0.0	0.0	0.0

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	10	0.0	0.0	0.0
T2	187 - 172	Leg	Max Tension	5	23.5	-0.3	0.4
			Max. Compression	2	-25.4	-0.1	0.4
			Max. Mx	6	-8.1	1.4	-0.2
			Max. My	10	-12.4	0.1	1.4
			Max. Vy	6	2.6	1.4	-0.2
			Max. Vx	2	-2.7	-0.1	0.4
		Diagonal	Max Tension	4	4.3	0.0	0.0
			Max. Compression	4	-4.1	0.0	0.0
			Max. Mx	21	0.8	-0.0	-0.0
			Max. My	10	-3.5	-0.0	0.0
			Max. Vy	20	0.0	-0.0	-0.0
			Max. Vx	10	0.0	0.0	0.0
		Top Girt	Max Tension	2	0.8	0.0	0.0
			Max. Compression	4	-0.9	0.0	0.0
			Max. Mx	18	-0.0	0.0	0.0
			Max. My	12	-0.2	0.0	0.0
			Max. Vy	18	-0.0	0.0	0.0
			Max. Vx	12	-0.0	0.0	0.0
		Bottom Girt	Max Tension	4	1.5	0.0	0.0
			Max. Compression	2	-1.5	0.0	0.0
			Max. Mx	18	0.0	0.0	0.0
			Max. My	6	-0.1	0.0	-0.0
			Max. Vy	18	-0.0	0.0	0.0
			Max. Vx	6	0.0	0.0	0.0
T3	172 - 152	Leg	Max Tension	5	69.5	0.7	-0.1
			Max. Compression	2	-73.6	2.9	0.2
			Max. Mx	2	-73.6	2.9	0.2
			Max. My	6	-8.6	0.3	2.0
			Max. Vy	2	-5.8	2.9	0.2
			Max. Vx	6	-2.9	0.2	1.4
		Diagonal	Max Tension	4	5.2	0.0	0.0
			Max. Compression	4	-5.1	0.0	0.0
			Max. Mx	19	1.0	-0.0	-0.0
			Max. My	4	-4.5	-0.0	-0.0
			Max. Vy	19	0.0	-0.0	-0.0
			Max. Vx	4	0.0	0.0	0.0
		Top Girt	Max Tension	2	1.6	0.0	0.0
			Max. Compression	4	-1.6	0.0	0.0
			Max. Mx	18	-0.0	0.0	0.0
			Max. My	12	-0.5	0.0	0.0
			Max. Vy	18	0.0	0.0	0.0
			Max. Vx	12	0.0	0.0	0.0
		Bottom Girt	Max Tension	4	0.6	0.0	0.0
			Max. Compression	3	-0.6	0.0	0.0
			Max. Mx	18	0.1	0.0	0.0
			Max. My	12	0.2	0.0	0.0
			Max. Vy	18	-0.0	0.0	0.0
			Max. Vx	12	0.0	0.0	0.0
T4	152 - 142	Leg	Max Tension	5	76.7	-2.8	0.5
			Max. Compression	2	-81.8	5.0	1.1
			Max. Mx	4	74.9	-5.4	1.9
			Max. My	6	-15.0	0.3	7.0
			Max. Vy	10	-0.8	-2.7	-0.2
			Max. Vx	4	0.9	1.3	-6.9
		Diagonal	Max Tension	5	7.7	0.1	0.0
			Max. Compression	12	-8.3	0.0	0.0
			Max. Mx	4	6.1	0.1	0.0
			Max. My	12	-8.2	-0.0	-0.0
			Max. Vy	26	0.0	0.0	0.0
			Max. Vx	12	0.0	0.0	0.0
T5	142 - 122	Leg	Max Tension	5	124.7	-4.8	1.5
			Max. Compression	2	-136.0	6.5	0.5
			Max. Mx	2	-136.0	6.5	0.5
			Max. My	6	-16.5	0.3	7.0
			Max. Vy	10	-0.9	-5.1	-0.3
			Max. Vx	16	1.0	1.1	6.1
		Diagonal	Max Tension	4	9.8	0.0	0.0
			Max. Compression	12	-10.3	0.0	0.0

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	2	6.6	0.1	0.0
			Max. My	10	-8.4	-0.0	-0.0
			Max. Vy	19	-0.0	0.1	0.0
			Max. Vx	24	0.0	0.0	0.0
T6	122 - 102	Leg	Max Tension	5	171.1	-4.4	2.1
			Max. Compression	2	-187.3	7.9	0.1
			Max. Mx	2	-187.3	7.9	0.1
			Max. My	6	-19.7	-0.0	8.3
			Max. Vy	8	-0.9	7.3	-0.1
			Max. Vx	6	0.9	-0.0	8.3
		Diagonal	Max Tension	5	10.9	0.0	0.0
			Max. Compression	12	-11.4	0.0	0.0
			Max. Mx	2	6.1	0.1	0.0
			Max. My	3	-9.6	-0.0	0.0
			Max. Vy	26	0.1	0.1	0.0
			Max. Vx	23	0.0	0.0	0.0
T7	102 - 82	Leg	Max Tension	5	218.4	-4.3	2.4
			Max. Compression	2	-240.8	7.2	0.4
			Max. Mx	2	-212.5	7.9	0.1
			Max. My	6	-21.2	-0.2	9.5
			Max. Vy	2	0.6	7.9	0.1
			Max. Vx	6	-1.0	-0.2	9.5
		Diagonal	Max Tension	4	11.1	0.0	0.0
			Max. Compression	12	-11.5	0.0	0.0
			Max. Mx	19	2.1	0.1	0.0
			Max. My	4	-10.1	-0.0	0.0
			Max. Vy	26	0.1	0.1	0.0
			Max. Vx	4	-0.0	0.0	0.0
		Top Girt	Max Tension	4	4.9	0.0	0.0
			Max. Compression	3	-4.4	0.0	0.0
			Max. Mx	18	1.1	-0.2	0.0
			Max. My	24	1.9	0.0	0.0
			Max. Vy	18	0.1	0.0	0.0
			Max. Vx	24	0.0	0.0	0.0
T8	82 - 62	Leg	Max Tension	5	263.4	-5.9	1.5
			Max. Compression	2	-292.3	5.9	0.3
			Max. Mx	2	-265.9	7.2	0.4
			Max. My	6	-22.9	0.2	6.0
			Max. Vy	3	0.3	7.1	0.4
			Max. Vx	6	0.2	0.4	5.3
		Diagonal	Max Tension	4	12.0	0.0	0.0
			Max. Compression	12	-12.3	0.0	0.0
			Max. Mx	19	2.0	0.2	0.0
			Max. My	21	-1.5	0.1	0.0
			Max. Vy	26	0.1	0.2	0.0
			Max. Vx	21	0.0	0.0	0.0
T9	62 - 42	Leg	Max Tension	5	307.1	-5.7	1.6
			Max. Compression	2	-342.4	6.9	0.4
			Max. Mx	2	-342.4	6.9	0.4
			Max. My	6	-24.2	0.2	6.9
			Max. Vy	3	-0.2	6.9	0.4
			Max. Vx	2	-0.2	-3.6	5.8
		Diagonal	Max Tension	4	12.5	0.0	0.0
			Max. Compression	12	-13.0	0.0	0.0
			Max. Mx	19	2.3	0.2	0.0
			Max. My	24	0.9	0.2	-0.0
			Max. Vy	26	0.1	0.2	0.0
			Max. Vx	24	-0.0	0.0	0.0
T10	42 - 22	Leg	Max Tension	11	350.1	-6.1	0.0
			Max. Compression	2	-391.9	6.3	0.1
			Max. Mx	2	-366.8	6.9	0.4
			Max. My	6	-24.4	0.2	6.9
			Max. Vy	20	0.8	-6.2	0.3
			Max. Vx	16	0.3	1.5	5.4
		Diagonal	Max Tension	4	13.4	0.0	0.0
			Max. Compression	12	-13.8	0.0	0.0
			Max. Mx	19	3.3	0.2	0.0
			Max. My	20	-2.8	0.2	0.0
			Max. Vy	26	0.1	0.2	0.0

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T11	22 - 2	Leg	Max. Vx	20	0.0	0.0	0.0
			Max Tension	11	390.9	-6.2	0.0
			Max. Compression	2	-438.9	0.0	-0.0
			Max. Mx	19	-160.3	8.6	-0.1
			Max. My	6	-27.5	-0.3	11.2
			Max. Vy	23	-1.3	-6.3	-0.1
			Max. Vx	6	1.2	-0.3	11.2
		Diagonal	Max Tension	5	15.1	0.0	0.0
			Max. Compression	12	-15.9	0.0	0.0
			Max. Mx	19	0.8	0.3	0.0
			Max. My	20	-5.5	0.3	0.0
			Max. Vy	26	0.1	0.3	-0.0
			Max. Vx	20	-0.0	0.0	0.0

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg C	Max. Vert	12	431.1	38.1	-23.8
	Max. H_x	12	431.1	38.1	-23.8
	Max. H_z	5	-399.8	-36.3	22.8
	Min. Vert	5	-399.8	-36.3	22.8
	Min. H_x	5	-399.8	-36.3	22.8
	Min. H_z	12	431.1	38.1	-23.8
Leg B	Max. Vert	8	428.1	-38.5	-23.1
	Max. H_x	17	-388.9	36.1	21.7
	Max. H_z	17	-388.9	36.1	21.7
	Min. Vert	17	-388.9	36.1	21.7
	Min. H_x	8	428.1	-38.5	-23.1
	Min. H_z	8	428.1	-38.5	-23.1
Leg A	Max. Vert	2	451.7	-0.5	47.2
	Max. H_x	15	14.7	4.0	0.9
	Max. H_z	2	451.7	-0.5	47.2
	Min. Vert	11	-401.8	0.5	-43.5
	Min. H_x	7	23.1	-4.1	1.4
	Min. H_z	11	-401.8	0.5	-43.5

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	52.1	0.0	0.0	-4.8	11.2	0.0
1.2 Dead+1.6 Wind 0 deg - No Ice	62.6	1.3	-74.3	-7462.1	-241.6	-21.6
0.9 Dead+1.6 Wind 0 deg - No Ice	46.9	1.3	-74.3	-7449.5	-244.4	-21.5
1.2 Dead+1.6 Wind 45 deg - No Ice	62.6	52.2	-51.5	-5233.7	-5296.7	-22.1
0.9 Dead+1.6 Wind 45 deg - No Ice	46.9	52.2	-51.5	-5224.4	-5292.1	-22.1
1.2 Dead+1.6 Wind 90 deg - No Ice	62.6	74.2	-0.2	-131.7	-7476.1	-14.1
0.9 Dead+1.6 Wind 90 deg - No Ice	46.9	74.2	-0.2	-129.9	-7468.4	-14.1
1.2 Dead+1.6 Wind 135 deg - No Ice	62.6	51.8	51.2	5099.5	-5201.5	6.2
0.9 Dead+1.6 Wind 135 deg - No Ice	46.9	51.8	51.2	5093.5	-5197.2	6.2
1.2 Dead+1.6 Wind 180 deg	62.6	0.7	72.1	7239.1	-71.2	18.1

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
- No Ice 0.9 Dead+1.6 Wind 180 deg	46.9	0.7	72.1	7229.8	-74.5	18.1
- No Ice 1.2 Dead+1.6 Wind 225 deg	62.6	-51.6	51.5	5177.5	5215.5	22.6
- No Ice 0.9 Dead+1.6 Wind 225 deg	46.9	-51.6	51.5	5171.2	5204.3	22.5
- No Ice 1.2 Dead+1.6 Wind 270 deg	62.6	-73.3	0.4	14.2	7356.8	10.0
- No Ice 0.9 Dead+1.6 Wind 270 deg	46.9	-73.3	0.4	15.7	7342.6	10.0
- No Ice 1.2 Dead+1.6 Wind 315 deg	62.6	-51.2	-51.1	-5107.3	5158.6	-9.2
- No Ice 0.9 Dead+1.6 Wind 315 deg	46.9	-51.2	-51.1	-5098.4	5147.6	-9.2
- No Ice 1.2 Dead+1.0 Ice+1.0 Temp	202.7	0.0	0.0	-31.6	78.0	0.0
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	202.7	0.2	-17.6	-1845.7	46.2	-4.3
1.2 Dead+1.0 Wind 45 deg+1.0 Ice+1.0 Temp	202.7	12.5	-12.4	-1311.3	-1213.1	-6.1
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	202.7	17.6	-0.0	-47.3	-1739.8	-4.7
1.2 Dead+1.0 Wind 135 deg+1.0 Ice+1.0 Temp	202.7	12.4	12.4	1233.2	-1201.9	-0.2
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	202.7	0.1	17.5	1770.3	66.7	3.9
1.2 Dead+1.0 Wind 225 deg+1.0 Ice+1.0 Temp	202.7	-12.4	12.4	1242.1	1355.8	6.2
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	202.7	-17.5	0.1	-30.0	1877.6	4.2
1.2 Dead+1.0 Wind 315 deg+1.0 Ice+1.0 Temp	202.7	-12.4	-12.3	-1296.1	1349.7	-0.2
Dead+Wind 0 deg - Service	52.1	0.3	-19.3	-1942.7	-55.0	-5.6
Dead+Wind 45 deg - Service	52.1	13.6	-13.4	-1363.6	-1368.9	-5.7
Dead+Wind 90 deg - Service	52.1	19.3	-0.1	-37.5	-1935.3	-3.7
Dead+Wind 135 deg - Service	52.1	13.5	13.3	1322.0	-1344.1	1.6
Dead+Wind 180 deg - Service	52.1	0.2	18.7	1878.1	-10.8	4.7
Dead+Wind 225 deg - Service	52.1	-13.4	13.4	1342.3	1363.2	5.9
Dead+Wind 270 deg - Service	52.1	-19.1	0.1	0.4	1919.8	2.6
Dead+Wind 315 deg - Service	52.1	-13.3	-13.3	-1330.8	1348.5	-2.4

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX	PY	PZ	PX	PY	PZ	% Error
	K	K	K	K	K	K	
1	0.0	-52.1	0.0	-0.0	52.1	-0.0	0.000%
2	1.3	-62.6	-74.3	-1.3	62.6	74.3	0.002%
3	1.3	-46.9	-74.3	-1.3	46.9	74.3	0.002%
4	52.2	-62.6	-51.5	-52.2	62.6	51.5	0.003%
5	52.2	-46.9	-51.5	-52.2	46.9	51.5	0.002%
6	74.2	-62.6	-0.2	-74.2	62.6	0.2	0.003%
7	74.2	-46.9	-0.2	-74.2	46.9	0.2	0.002%
8	51.8	-62.6	51.2	-51.8	62.6	-51.2	0.002%
9	51.8	-46.9	51.2	-51.8	46.9	-51.2	0.002%
10	0.7	-62.6	72.1	-0.7	62.6	-72.1	0.003%
11	0.7	-46.9	72.1	-0.7	46.9	-72.1	0.002%
12	-51.6	-62.6	51.5	51.6	62.6	-51.5	0.002%
13	-51.6	-46.9	51.5	51.6	46.9	-51.5	0.002%
14	-73.3	-62.6	0.4	73.3	62.6	-0.4	0.003%
15	-73.3	-46.9	0.4	73.3	46.9	-0.4	0.002%

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
16	-51.2	-62.6	-51.1	51.2	62.6	51.1	0.003%
17	-51.2	-46.9	-51.1	51.2	46.9	51.1	0.002%
18	0.0	-202.7	0.0	-0.0	202.7	-0.0	0.000%
19	0.2	-202.7	-17.6	-0.2	202.7	17.6	0.000%
20	12.5	-202.7	-12.4	-12.5	202.7	12.4	0.000%
21	17.6	-202.7	-0.0	-17.6	202.7	0.0	0.000%
22	12.4	-202.7	12.4	-12.4	202.7	-12.4	0.000%
23	0.1	-202.7	17.5	-0.1	202.7	-17.5	0.000%
24	-12.4	-202.7	12.4	12.4	202.7	-12.4	0.000%
25	-17.5	-202.7	0.1	17.5	202.7	-0.1	0.000%
26	-12.4	-202.7	-12.3	12.4	202.7	12.3	0.000%
27	0.3	-52.1	-19.3	-0.3	52.1	19.3	0.001%
28	13.6	-52.1	-13.4	-13.6	52.1	13.4	0.001%
29	19.3	-52.1	-0.1	-19.3	52.1	0.1	0.001%
30	13.5	-52.1	13.3	-13.5	52.1	-13.3	0.001%
31	0.2	-52.1	18.7	-0.2	52.1	-18.7	0.001%
32	-13.4	-52.1	13.4	13.4	52.1	-13.4	0.001%
33	-19.1	-52.1	0.1	19.1	52.1	-0.1	0.001%
34	-13.3	-52.1	-13.3	13.3	52.1	13.3	0.001%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	6	0.00004984	0.00011630
3	Yes	6	0.00003542	0.00008304
4	Yes	6	0.00005920	0.00013813
5	Yes	6	0.00004439	0.00010407
6	Yes	6	0.00005622	0.00013060
7	Yes	6	0.00004158	0.00009706
8	Yes	6	0.00005140	0.00011876
9	Yes	6	0.00003696	0.00008583
10	Yes	6	0.00006027	0.00013930
11	Yes	6	0.00004539	0.00010544
12	Yes	6	0.00005150	0.00012013
13	Yes	6	0.00003705	0.00008683
14	Yes	6	0.00005528	0.00012810
15	Yes	6	0.00004070	0.00009475
16	Yes	6	0.00005887	0.00013572
17	Yes	6	0.00004410	0.00010215
18	Yes	5	0.00000001	0.00006960
19	Yes	7	0.00000001	0.00013497
20	Yes	7	0.00000001	0.00013494
21	Yes	7	0.00000001	0.00013120
22	Yes	7	0.00000001	0.00012809
23	Yes	7	0.00000001	0.00013301
24	Yes	7	0.00000001	0.00013448
25	Yes	7	0.00000001	0.00013692
26	Yes	7	0.00000001	0.00013742
27	Yes	6	0.00000001	0.00010189
28	Yes	6	0.00000001	0.00010771
29	Yes	6	0.00000001	0.00010518
30	Yes	6	0.00000001	0.00010133
31	Yes	6	0.00000001	0.00010708
32	Yes	6	0.00000001	0.00010285
33	Yes	6	0.00000001	0.00010443
34	Yes	6	0.00000001	0.00010600

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	197 - 187	8.055	28	0.3692	0.0989
T2	187 - 172	7.269	28	0.3680	0.0827
T3	172 - 152	6.087	28	0.3558	0.0468
T4	152 - 142	4.631	28	0.3117	0.0281
T5	142 - 122	3.982	28	0.2879	0.0219
T6	122 - 102	2.852	28	0.2329	0.0159
T7	102 - 82	1.948	27	0.1877	0.0118
T8	82 - 62	1.232	27	0.1394	0.0078
T9	62 - 42	0.701	27	0.1012	0.0054
T10	42 - 22	0.326	27	0.0623	0.0033
T11	22 - 2	0.100	27	0.0312	0.0017

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
196.26	DB201-D	28	7.997	0.3692	0.0978	158396
196.00	Pirod 6'-8" Rigid Side Arm	28	7.977	0.3692	0.0975	158396
194.92	6' x 4-1/2" Mount Pipe	28	7.892	0.3691	0.0960	158396
194.25	PA6-65AC	28	7.839	0.3691	0.0950	158396
190.25	OGT9-840	28	7.525	0.3687	0.0888	119080
188.75	3" x 9' Omni	28	7.407	0.3685	0.0862	104007
186.50	Pirod 4' Side Mount Standoff (1)	28	7.229	0.3679	0.0816	106660
185.25	DB222-A	28	7.130	0.3675	0.0788	126592
183.50	BCD87077	28	6.991	0.3667	0.0746	212863
183.00	Filter Box	28	6.952	0.3665	0.0733	275335
181.25	PiROD 15' Rotatable Platform (Lattice)	28	6.813	0.3655	0.0688	187244
175.75	ANT150D6-9	28	6.379	0.3607	0.0546	47626
175.25	3" x 12' Omni	28	6.340	0.3601	0.0534	44682
174.50	ANT150D6-9	28	6.281	0.3592	0.0516	41010
174.25	3" x 10' Omni	28	6.261	0.3589	0.0510	39955
173.25	ANT150D6-9	28	6.184	0.3576	0.0488	36434
172.25	Pirod 6' Side Mount Standoff (1)	28	6.106	0.3561	0.0472	33836
170.20	3' Side Mount Standoff	28	5.948	0.3528	0.0442	30571
163.00	LPA-80080/4CF	28	5.408	0.3382	0.0361	25767
150.25	(2) 7770.00	28	4.513	0.3075	0.0270	21306
140.00	LNX-6515DS-A1M	28	3.859	0.2827	0.0211	21634
134.00	SRL110A	28	3.503	0.2661	0.0194	21183
126.00	DB586-Y	28	3.060	0.2435	0.0171	20579
120.67	DB212-1	28	2.785	0.2296	0.0156	20758
120.50	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	28	2.777	0.2291	0.0155	20790
106.00	Ice Canopy	27	2.113	0.1967	0.0126	25609
102.25	PA6-65AC	27	1.958	0.1882	0.0119	26832
101.20	6'8"x4" Pipe Mount	27	1.916	0.1858	0.0117	26950
100.83	DB205-L	27	1.901	0.1849	0.0116	26962
85.00	DB224	27	1.328	0.1462	0.0084	24695
82.67	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	27	1.253	0.1408	0.0079	24580
79.50	PD220	27	1.156	0.1340	0.0074	25067
70.25	DB432-A	27	0.899	0.1163	0.0063	28374
17.00	1.2M	27	0.066	0.0236	0.0013	41810
15.00	2-ft Standoff	27	0.055	0.0205	0.0011	48242

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	197 - 187	31.123	4	1.4302	0.3810
T2	187 - 172	28.078	4	1.4249	0.3188
T3	172 - 152	23.507	4	1.3755	0.1804
T4	152 - 142	17.879	4	1.2052	0.1084
T5	142 - 122	15.369	4	1.1132	0.0845
T6	122 - 102	11.003	4	0.8999	0.0611
T7	102 - 82	7.511	6	0.7244	0.0455
T8	82 - 62	4.751	6	0.5376	0.0301
T9	62 - 42	2.701	6	0.3901	0.0207
T10	42 - 22	1.254	6	0.2401	0.0125
T11	22 - 2	0.383	2	0.1202	0.0065

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
196.26	DB201-D	4	30.898	1.4301	0.3771	45120
196.00	Pirod 6'-8" Rigid Side Arm	4	30.819	1.4300	0.3758	45120
194.92	6' x 4-1/2" Mount Pipe	4	30.491	1.4298	0.3700	45120
194.25	PA6-65AC	4	30.288	1.4296	0.3663	45120
190.25	OGT9-840	4	29.071	1.4278	0.3425	33950
188.75	3" x 9' Omni	4	28.613	1.4267	0.3321	29770
186.50	Pirod 4' Side Mount Standoff (1)	4	27.925	1.4243	0.3146	31124
185.25	DB222-A	4	27.542	1.4225	0.3038	37978
183.50	BCD87077	4	27.005	1.4194	0.2875	71429
183.00	Filter Box	4	26.852	1.4183	0.2827	100852
181.25	PiROD 15' Rotatable Platform (Lattice)	4	26.315	1.4142	0.2653	43664
175.75	ANT150D6-9	4	24.636	1.3950	0.2106	12139
175.25	3" x 12' Omni	4	24.484	1.3927	0.2059	11410
174.50	ANT150D6-9	4	24.257	1.3892	0.1990	10498
174.25	3" x 10' Omni	4	24.182	1.3879	0.1968	10235
173.25	ANT150D6-9	4	23.881	1.3827	0.1881	9355
172.25	Pirod 6' Side Mount Standoff (1)	4	23.581	1.3770	0.1819	8703
170.20	3' Side Mount Standoff	4	22.972	1.3641	0.1703	7882
163.00	LPA-80080/4CF	4	20.884	1.3073	0.1392	6672
150.25	(2) 7770.00	4	17.424	1.1893	0.1040	5530
140.00	LNX-6515DS-A1M	4	14.893	1.0931	0.0811	5575
134.00	SRL110A	4	13.517	1.0288	0.0746	5458
126.00	DB586-Y	4	11.805	0.9410	0.0655	5301
120.67	DB212-1	4	10.744	0.8870	0.0597	5349
120.50	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	4	10.711	0.8853	0.0595	5357
106.00	Ice Canopy	6	8.146	0.7594	0.0485	6617
102.25	PA6-65AC	6	7.550	0.7266	0.0457	6938
101.20	6'8"x4" Pipe Mount	6	7.388	0.7171	0.0449	6970
100.83	DB205-L	6	7.331	0.7138	0.0446	6973
85.00	DB224	6	5.119	0.5639	0.0321	6394
82.67	Pirod 6' Rigid Side Arm w/ 3" STD mount pipe	6	4.832	0.5434	0.0306	6364
79.50	PD220	6	4.457	0.5171	0.0286	6492
70.25	DB432-A	6	3.467	0.4487	0.0241	7352
17.00	1.2M	2	0.255	0.0909	0.0050	10833
15.00	2-ft Standoff	2	0.212	0.0790	0.0043	12499

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load K	Ratio Load / Allowable	Allowable Ratio	Criteria
T1	197	Leg	A325N	0.6250	5	0.9	24.9	0.038 ✔	1	Bolt DS
T2	187	Leg	A325N	0.7500	5	5.1	35.8	0.142 ✔	1	Bolt DS
T3	172	Leg	A325N	1.0000	6	11.6	53.0	0.218 ✔	1	Bolt Tension
T4	152	Leg	A325N	1.0000	6	12.8	53.0	0.241 ✔	1	Bolt Tension
		Diagonal	A325N	1.0000	1	7.7	12.7	0.608 ✔	1	Member Bearing
T5	142	Leg	A325N	1.0000	6	20.8	53.0	0.392 ✔	1	Bolt Tension
		Diagonal	A325N	1.0000	1	9.8	14.3	0.687 ✔	1	Member Bearing
T6	122	Leg	A325N	1.0000	6	28.5	53.0	0.538 ✔	1	Bolt Tension
		Diagonal	A325N	1.0000	1	10.9	19.0	0.572 ✔	1	Member Bearing
T7	102	Leg	A325N	1.0000	6	36.4	53.0	0.687 ✔	1	Bolt Tension
		Diagonal	A325N	1.0000	1	11.1	19.0	0.583 ✔	1	Member Bearing
		Top Girt	A325N	1.0000	1	4.9	12.7	0.387 ✔	1	Member Bearing
T8	82	Leg	A687	1.2500	6	43.9	96.6	0.454 ✔	1	Bolt Tension
		Diagonal	A325N	1.2500	1	12.0	26.6	0.449 ✔	1	Member Bearing
T9	62	Leg	A687	1.2500	6	51.2	96.6	0.530 ✔	1	Bolt Tension
		Diagonal	A325N	1.2500	1	12.5	23.9	0.524 ✔	1	Member Bearing
T10	42	Leg	A687	1.2500	6	58.4	96.6	0.604 ✔	1	Bolt Tension
		Diagonal	A325N	1.2500	1	13.4	26.6	0.503 ✔	1	Member Bearing
T11	22	Leg	A687	1.2500	6	65.1	96.6	0.674 ✔	1	Bolt Tension
		Diagonal	A325N	1.2500	1	15.1	23.9	0.634 ✔	1	Member Bearing

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	197 - 187	1 3/4	10.00	2.17	59.4 K=1.00	2.4053	-4.7	83.6	0.056 [1] ✔
T2	187 - 172	2	15.00	2.28	54.7 K=1.00	3.1416	-25.4	113.6	0.223 [1] ✔
T3	172 - 152	2 1/4	20.00	2.34	50.0 K=1.00	3.9761	-73.6	149.0	0.494 [1] ✔
T4	152 - 142	Pirod 105245	10.02	10.02	37.8 K=1.00	5.3014	-81.8	214.9	0.381 [1] ✔
T5	142 - 122	Pirod 105217	20.03	10.02	37.8 K=1.00	5.3014	-136.0	214.9	0.633 [1] ✔
T6	122 - 102	Pirod 105218	20.03	10.02	32.4 K=1.00	7.2158	-187.3	300.7	0.623 [1] ✔
T7	102 - 82	Pirod 105218	20.03	10.02	32.4	7.2158	-240.8	300.7	0.801 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T8	82 - 62	Pirod 105219	20.03	10.02	28.4 K=1.00	9.4248	-292.3	399.9	0.731 [1]
T9	62 - 42	Pirod 105219	20.03	10.02	28.4 K=1.00	9.4248	-342.4	399.9	0.856 [1]
T10	42 - 22	Pirod 105220	20.03	10.02	25.2 K=1.00	11.928 2	-391.9	512.4	0.765 [1]
T11	22 - 2	Pirod 105220	20.03	10.02	25.2 K=1.00	11.928 2	-438.9	512.4	0.857 [1]

[1] P_u / ϕP_n controls

Truss-Leg Diagonal Data

Section No.	Elevation ft	Diagonal Size	L_d ft	Kl/r	ϕP_n K	A in^2	V_u K	ϕV_n K	Stress Ratio
T4	152 - 142	0.5	1.47	120.0	238.6	0.1963	0.9	3.4	0.259
T5	142 - 122	0.5	1.47	120.0	238.6	0.1963	1.1	3.3	0.318
T6	122 - 102	0.5	1.46	119.0	324.7	0.1963	1.2	3.4	0.365
T7	102 - 82	0.5	1.46	119.0	324.7	0.1963	1.1	3.4	0.312
T8	82 - 62	0.625	1.45	94.4	424.1	0.3068	0.3	7.0	0.044
T9	62 - 42	0.625	1.45	94.4	424.1	0.3068	0.2	7.0	0.035
T10	42 - 22	0.625	1.43	93.6	536.8	0.3068	0.8	7.0	0.109
T11	22 - 2	0.625	1.43	93.6	536.8	0.3068	1.3	7.0	0.182

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	197 - 187	7/8	4.99	2.42	99.4 K=0.75	0.6013	-1.7	13.1	0.128 [1]
T2	187 - 172	7/8	5.04	2.43	99.9 K=0.75	0.6013	-4.1	13.0	0.313 [1]
T3	172 - 152	1	5.48	2.65	95.5 K=0.75	0.7854	-5.1	18.1	0.282 [1]
T4	152 - 142	L2 1/2x2 1/2x3/16	11.42	5.02	121.8 K=1.00	0.9020	-8.3	13.4	0.617 [1]
T5	142 - 122	L3x3x3/16	12.50	5.67	115.6 K=1.01	1.0900	-10.3	18.1	0.566 [1]
T6	122 - 102	L3x3x1/4	13.80	6.37	129.1 K=1.00	1.4400	-11.4	19.5	0.585 [1]
T7	102 - 82	L3x3x1/4	15.24	7.12	144.4 K=1.00	1.4400	-11.4	15.6	0.731 [1]
T8	82 - 62	L3x3x5/16	16.80	7.89	160.8 K=1.00	1.7800	-12.3	15.6	0.792 [1]

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T9	62 - 42	L3 1/2x3 1/2x1/4	18.45	8.73	150.9 K=1.00	1.6900	-13.0	16.8	0.776 [1] ✔
T10	42 - 22	L3 1/2x3 1/2x5/16	20.16	9.59	166.8 K=1.00	2.0900	-13.8	17.0	0.813 [1] ✔
T11	22 - 2	L4x4x1/4	21.92	10.48	158.2 K=1.00	1.9400	-15.9	17.5	0.906 [1] ✔

[1] P_u / ϕP_n controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	197 - 187	L3x3x5/16	4.50	4.35	88.7 K=1.00	1.7800	-0.2	38.1	0.005 [1] ✔
T2	187 - 172	1	4.50	4.33	104.0 K=0.50	0.7854	-0.9	16.0	0.053 [1] ✔
T3	172 - 152	1	4.52	4.33	103.9 K=0.50	0.7854	-1.6	16.1	0.100 [1] ✔
T7	102 - 82	L3x3x3/16	10.00	8.67	174.5 K=1.00	1.0900	-4.4	8.1	0.545 [1] ✔

[1] P_u / ϕP_n controls

Bottom Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	197 - 187	7/8	4.50	4.35	238.9 K=1.00	0.6013	-0.6	2.4	0.270 [1] ✔
		KL/R > 200 (C) - 7							
T2	187 - 172	1	4.50	4.33	104.0 K=0.50	0.7854	-1.5	16.0	0.096 [1] ✔
T3	172 - 152	1	4.98	4.80	115.1 K=0.50	0.7854	-0.6	13.4	0.045 [1] ✔

[1] P_u / ϕP_n controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	197 - 187	1 3/4	10.00	2.17	59.4	1.7942	4.4	87.5	0.050 [1] [#] ✓
T2	187 - 172	2	15.00	2.28	54.7	2.1885	23.5	106.7	0.221 [1] [#] ✓
T3	172 - 152	2 1/4	20.00	2.34	50.0	3.9761	69.5	178.9	0.388 [1] ✓
T4	152 - 142	Pirod 105245	10.02	10.02	37.8	5.3014	76.7	238.6	0.321 [1] ✓
T5	142 - 122	Pirod 105217	20.03	10.02	37.8	5.3014	124.7	238.6	0.523 [1] ✓
T6	122 - 102	Pirod 105218	20.03	10.02	32.4	7.2158	171.1	324.7	0.527 [1] ✓
T7	102 - 82	Pirod 105218	20.03	10.02	32.4	7.2158	218.4	324.7	0.673 [1] ✓
T8	82 - 62	Pirod 105219	20.03	10.02	28.4	9.4248	263.4	424.1	0.621 [1] ✓
T9	62 - 42	Pirod 105219	20.03	10.02	28.4	9.4248	307.1	424.1	0.724 [1] ✓
T10	42 - 22	Pirod 105220	20.03	10.02	25.2	11.9282	350.1	536.8	0.652 [1] ✓
T11	22 - 2	Pirod 105220	20.03	10.02	25.2	11.9282	390.9	536.8	0.728 [1] ✓

[1] P_u / ϕP_n controls
[#] Based on net area of leg in section below

Truss-Leg Diagonal Data

Section No.	Elevation ft	Diagonal Size	L_d ft	Kl/r	ϕP_n K	A in^2	V_u K	ϕV_n K	Stress Ratio
T4	152 - 142	0.5	1.47	120.0	238.6	0.1963	0.9	3.4	0.259 ✓
T5	142 - 122	0.5	1.47	120.0	238.6	0.1963	1.1	3.3	0.318 ✓
T6	122 - 102	0.5	1.46	119.0	324.7	0.1963	1.2	3.4	0.365 ✓
T7	102 - 82	0.5	1.46	119.0	324.7	0.1963	1.1	3.4	0.312 ✓
T8	82 - 62	0.625	1.45	94.4	424.1	0.3068	0.3	7.0	0.044 ✓
T9	62 - 42	0.625	1.45	94.4	424.1	0.3068	0.2	7.0	0.035 ✓
T10	42 - 22	0.625	1.43	93.6	536.8	0.3068	0.8	7.0	0.109 ✓
T11	22 - 2	0.625	1.43	93.6	536.8	0.3068	1.3	7.0	0.182 ✓

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	197 - 187	7/8	4.99	2.42	132.5	0.6013	1.8	27.1	0.066 [1]
T2	187 - 172	7/8	5.04	2.43	133.2	0.6013	4.3	27.1	0.158 [1]
T3	172 - 152	1	5.48	2.65	127.4	0.7854	5.2	35.3	0.147 [1]
T4	152 - 142	L2 1/2x2 1/2x3/16	11.42	5.02	80.1	0.9020	7.7	29.2	0.265 [1]
T5	142 - 122	L3x3x3/16	12.50	5.67	74.6	0.8791	9.8	42.9	0.228 [1]
T6	122 - 102	L3x3x1/4	13.80	6.37	84.3	1.1588	10.9	56.5	0.193 [1]
T7	102 - 82	L3x3x1/4	15.24	7.12	94.1	1.1588	11.1	56.5	0.196 [1]
T8	82 - 62	L3x3x5/16	16.80	7.89	105.3	1.7800	12.0	57.7	0.207 [1]
T9	62 - 42	L3 1/2x3 1/2x1/4	18.45	8.73	98.3	1.3463	12.5	65.6	0.191 [1]
T10	42 - 22	L3 1/2x3 1/2x5/16	20.16	9.59	108.8	2.0900	13.4	67.7	0.198 [1]
T11	22 - 2	L4x4x1/4	21.92	10.48	102.5	1.5963	15.1	77.8	0.195 [1]

[1] P_u / ϕP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	197 - 187	L3x3x5/16	4.50	4.35	56.7	1.7800	0.2	57.7	0.004 [1]
T2	187 - 172	1	4.50	4.33	208.0	0.7854	0.8	35.3	0.021 [1]
T3	172 - 152	1	4.52	4.33	207.7	0.7854	1.6	35.3	0.045 [1]
T7	102 - 82	L3x3x3/16	10.00	8.67	115.0	1.0900	4.9	35.3	0.140 [1]

[1] P_u / ϕP_n controls

Bottom Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	197 - 187	7/8	4.50	4.35	238.9	0.6013	0.8	27.1	0.028 [1] ✔
T2	187 - 172	1	4.50	4.33	208.0	0.7854	1.5	35.3	0.044 [1] ✔
T3	172 - 152	1	4.98	4.80	230.3	0.7854	0.6	35.3	0.018 [1] ✔

[1] P_u / ϕP_n controls

Section Capacity Table

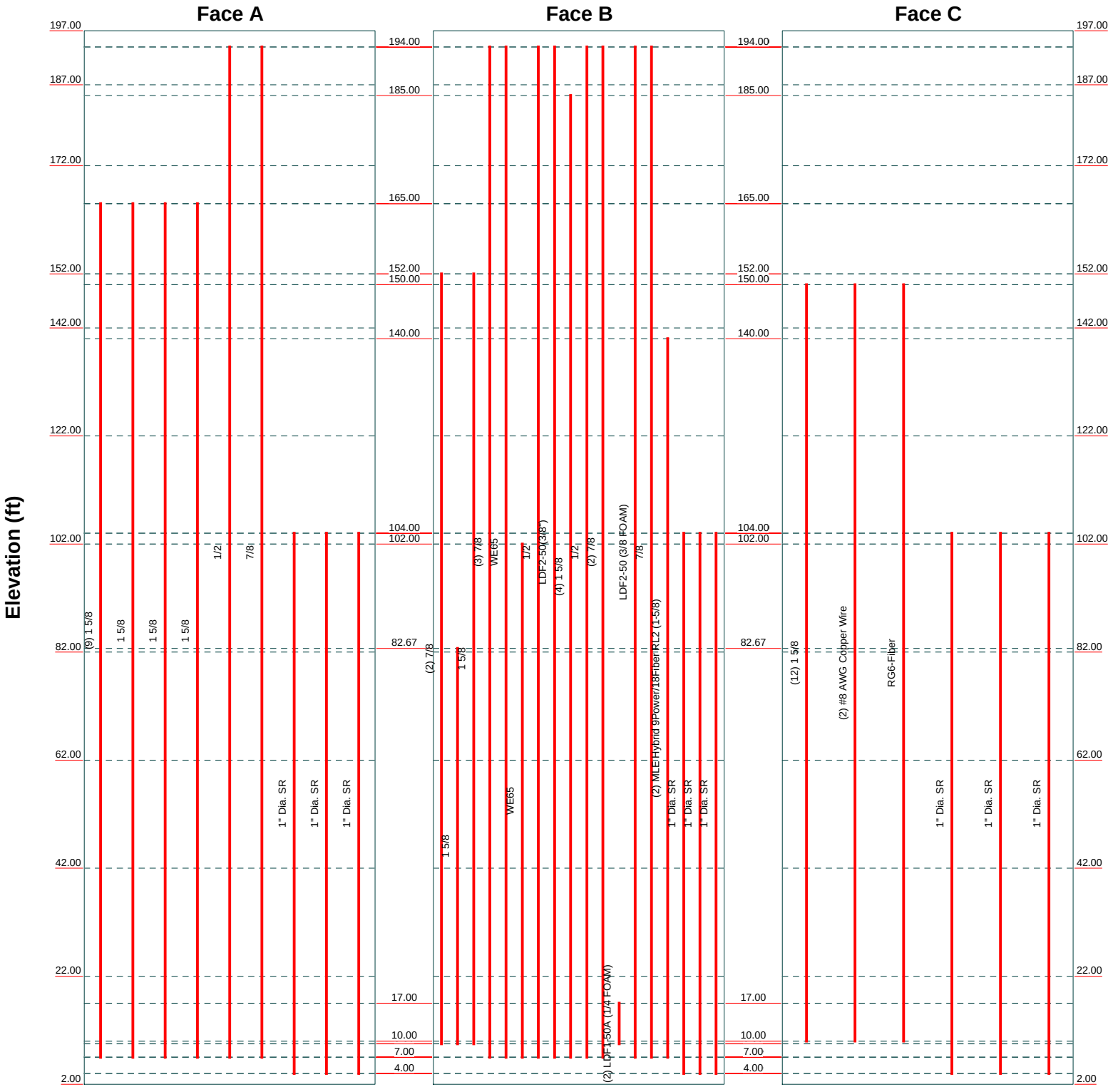
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T1	197 - 187	Leg	1 3/4	3	-4.7	83.6	5.6	Pass
T2	187 - 172	Leg	2	36	-25.4	113.6	22.3	Pass
T3	172 - 152	Leg	2 1/4	81	-73.6	149.0	49.4	Pass
T4	152 - 142	Leg	Pirod 105245	138	-81.8	214.9	38.1	Pass
T5	142 - 122	Leg	Pirod 105217	147	-136.0	214.9	63.3	Pass
T6	122 - 102	Leg	Pirod 105218	162	-187.3	300.7	62.3	Pass
T7	102 - 82	Leg	Pirod 105218	177	-240.8	300.7	80.1	Pass
T8	82 - 62	Leg	Pirod 105219	195	-292.3	399.9	73.1	Pass
T9	62 - 42	Leg	Pirod 105219	210	-342.4	399.9	85.6	Pass
T10	42 - 22	Leg	Pirod 105220	225	-391.9	512.4	76.5	Pass
T11	22 - 2	Leg	Pirod 105220	240	-438.9	512.4	85.7	Pass
T1	197 - 187	Diagonal	7/8	14	-1.7	13.1	12.8	Pass
T2	187 - 172	Diagonal	7/8	47	-4.1	13.0	31.3	Pass
T3	172 - 152	Diagonal	1	92	-5.1	18.1	28.2	Pass
T4	152 - 142	Diagonal	L2 1/2x2 1/2x3/16	144	-8.3	13.4	61.7	Pass
T5	142 - 122	Diagonal	L3x3x3/16	153	-10.3	18.1	56.6 68.7 (b)	Pass
T6	122 - 102	Diagonal	L3x3x1/4	168	-11.4	19.5	58.5	Pass
T7	102 - 82	Diagonal	L3x3x1/4	186	-11.4	15.6	73.1	Pass
T8	82 - 62	Diagonal	L3x3x5/16	201	-12.3	15.6	79.2	Pass
T9	62 - 42	Diagonal	L3 1/2x3 1/2x1/4	216	-13.0	16.8	77.6	Pass
T10	42 - 22	Diagonal	L3 1/2x3 1/2x5/16	231	-13.8	17.0	81.3	Pass
T11	22 - 2	Diagonal	L4x4x1/4	246	-15.9	17.5	90.6	Pass
T1	197 - 187	Top Girt	L3x3x5/16	4	-0.2	38.1	0.5	Pass
T2	187 - 172	Top Girt	1	38	-0.9	16.0	5.3	Pass
T3	172 - 152	Top Girt	1	83	-1.6	16.1	10.0	Pass
T7	102 - 82	Top Girt	L3x3x3/16	178	-4.4	8.1	54.5	Pass
T1	197 - 187	Bottom Girt	7/8	7	-0.6	2.4	27.0	Pass
T2	187 - 172	Bottom Girt	1	40	-1.5	16.0	9.6	Pass
T3	172 - 152	Bottom Girt	1	85	-0.6	13.4	4.5	Pass
							Summary	
						Leg (T11)	85.7	Pass
						Diagonal (T11)	90.6	Pass
						Top Girt (T7)	54.5	Pass
						Bottom Girt (T1)	27.0	Pass
						Bolt Checks	68.7	Pass
						RATING =	**90.6**	**Pass**

APPENDIX B

TRANSMISSION LINE LOCATIONS

Feed Line Distribution Chart
2' - 197'

Round | Flat | App In Face | App Out Face | Truss Leg



SMW Engineering Group
158 Business Center Drive
Birmingham, AL 35244
Phone: 205.252.6985
FAX: 205.795.7253

Job: ***16-2211***		
Project: ***CTNH544A***		
Client: Northeast Site Solutions	Drawn by: VGD	App'd:
Code: TIA-222-G	Date: 10/11/16	Scale: NTS
Path: C:\CONSULTING\SMW 2016\16-2211_CTNH544A Connecticut\Structural\RISA\16-2211_CTNH544A.en		Dwg No. E-7

APPENDIX C

ADDITIONAL CALCULATIONS

Anchor Rod Check for Self Supporting Towers

TIA-222-G, Section 4.9.9 Rev. 6.1

Site Data	
Site Name:	**CTNH544A**

Reactions		
Eta Factor, η	**0.55**	Detail Type
Uplift, Pu:	**402**	kips
Shear, Vu:	**43**	kips

Anchor Rod Data		
Qty:	**6**	
Diam:	**1.25**	in
Rod Material:	**A687**	
Strength (Fu):	150	ksi
Yield (Fy):	105	ksi

* Rod Circle:		in
* e:		in
* # of Rods		1 or 2

Mu= Pu x e:		ft-kips

** Only enter rod circle, offset (e) and number of anchor rods at the extreme fiber to consider if eccentric load due to leg reinforcement exist.*

l_{ar}:		in
Mu = 0.65*l_{ar}*V_u		ft-kips

Anchor Rod Results:

Max Rod (Cu+ Vu/ń):	80.0	Kips
Design Axial, Φ*Fu*Anet:	116.3	Kips
Anchor Rod Stress Ratio:	68.8%	

If Applicable;

Anchor Rod Results with Bending Considered:

When the clear distance from the top of concrete to the bottom of level nut excceeds 1.0 times the diameter of the anchor rod, the following interaction equation shall also be satisfied (see Figure 4-4 of Rev. G):

$$(V_u/\phi R_{nv})^2 + [(P_u/\phi R_{nt}) + (M_u/\phi R_{nm})]^2 <= 1$$

$\phi R_{nv}=\phi*0.45*F_{ub}*A_b=$		kips
$\phi R_{nt}=\phi*F_u*A_{net}=$		kips
$\phi R_{nm}=\phi*F_y*Z=$		ft-kips

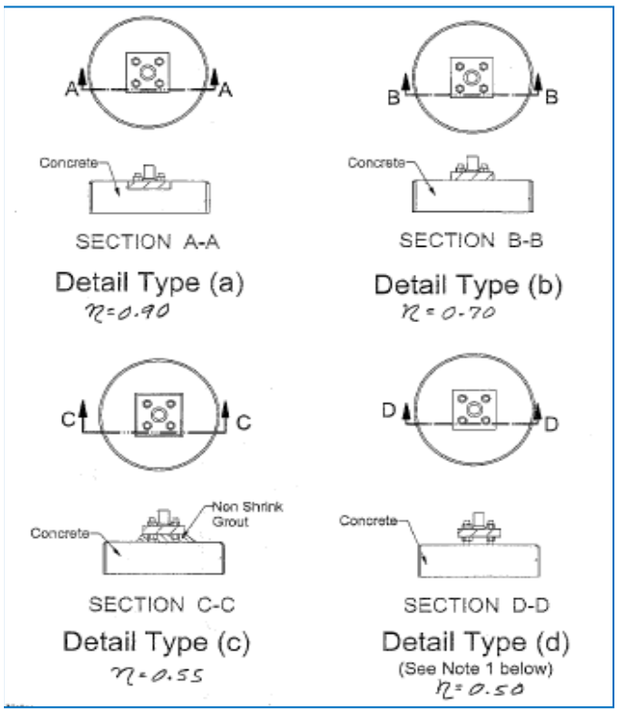


Figure 4-4 of TIA-222-G

Maximum Acceptable Ratio:	**100**	%
Governing Stress Ratio:	**68.8%**	**Pass**

FOUNDATION REACTION COMPARISON

CTNH544A

REACTIONS PER ANCHOR	PREVIOUS REACTIONS	MODIFIED DESIGN REACTIONS*	CURRENT REACTIONS	% CAPACITY
UPLIFT (kips)	442.0	596.7	402.0	67.4%
COMPRESSION (kips)	504.0	680.4	452.0	66.4%
SHEAR (kips)	51.0	68.9	47.0	68.3%

Previous loads from: Centek Structural Analysis 12/03/12

Exhibit E

EBI Consulting
environmental | engineering | due diligence

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

Site ID: CTNH544A

CTNH544A - Sharon CT
7 Surdan Mountain Road
Sharon, CT 06498

October 18, 2016

EBI Project Number: 6216004580

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	12.26 %

21 B Street · Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

EBI Consulting
environmental | engineering | due diligence

October 18, 2016

T-Mobile USA
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 06002

Emissions Analysis for Site: **CTNH544A – CTNH544A - Sharon CT**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **7 Surdan Mountain Road, Sharon, CT**, for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (µW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

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

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

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

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at **7 Surdan Mountain Road, Sharon, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

1) 2 UMTS channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

2) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel

3) 1 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. This channel has a transmit power of 30 Watts.

4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

5) For the following calculations the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

6) The antennas used in this modeling are the **RFS APX16DWV-16DWVS-E-A20** for 1900 MHz (PCS) and 2100 MHz (AWS) channels and the **Commscope LNX-6515DS-VTM** for 700 MHz channels. This is based on feedback from the carrier with regards to anticipated antenna selection. The **RFS APX16DWV-16DWVS-E-A20** has a maximum gain of **16.3 dBd** at its main lobe at 1900 MHz and 2100 MHz. The **Commscope LNX-6515DS-VTM** has a maximum gain of **14.6 dBd** at its main lobe at 700 MHz. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

7) The antenna mounting height centerline of the proposed antennas is **140 feet** above ground level (AGL).

8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

9) All calculations were done with respect to uncontrolled / general public threshold limits.

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	**1**	Antenna #:	**1**	Antenna #:	**1**
Make / Model:	RFS APX16DWV-16DWVS-E-A20	Make / Model:	RFS APX16DWV-16DWVS-E-A20	Make / Model:	RFS APX16DWV-16DWVS-E-A20
Gain:	16.3 dBd	Gain:	16.3 dBd	Gain:	16.3 dBd
Height (AGL):	140	Height (AGL):	140	Height (AGL):	140
Frequency Bands	1900 MHz (PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz (PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz (PCS) / 2100 MHz (AWS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power(W):	180	Total TX Power(W):	180	Total TX Power(W):	180
ERP (W):	7,678.43	ERP (W):	7,678.43	ERP (W):	7,678.43
Antenna A1 MPE%	1.54	Antenna B1 MPE%	1.54	Antenna C1 MPE%	1.54
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM
Gain:	14.6 dBd	Gain:	14.6 dBd	Gain:	14.6 dBd
Height (AGL):	140	Height (AGL):	140	Height (AGL):	140
Frequency Bands	700 MHz	Frequency Bands	700 MHz	Frequency Bands	700 MHz
Channel Count	1	Channel Count	1	Channel Count	1
Total TX Power(W):	30	Total TX Power(W):	30	Total TX Power(W):	30
ERP (W):	865.21	ERP (W):	865.21	ERP (W):	865.21
Antenna A2 MPE%	0.37	Antenna B2 MPE%	0.37	Antenna C2 MPE%	0.37

Site Composite MPE%	
Carrier	**MPE%**
T-Mobile (Per Sector Max)	**1.91 %**
CT State Police	1.87 %
LCD	1.00 %
CL&P	0.87 %
CL&P-SD210	0.13 %
CL&P-SD210	0.09 %
CL&P-DB586	0.16 %
CL&P-DB586	0.24 %
CL&P-SD110	0.34 %
PageNet	0.26 %
Ham	0.97 %
Town of Sharon	0.33 %
Verizon	2.54 %
AT&T	1.55 %
Site Total MPE %:	**12.26 %**

T-Mobile Sector A Total:	1.91 %
T-Mobile Sector B Total:	1.91 %
T-Mobile Sector C Total:	1.91 %
Site Total:	12.26 %

T-Mobile _per sector	**# Channels**	**Watts ERP (Per Channel)**	**Height (feet)**	**Total Power Density (µW/cm²)**	**Frequency (MHz)**	**Allowable MPE (µW/cm²)**	**Calculated % MPE**
T-Mobile AWS - 2100 MHz LTE	2	2,559.48	140	10.25	AWS - 2100 MHz	1000	1.02%
T-Mobile PCS - 1950 MHz UMTS	2	1,279.74	140	5.12	PCS - 1950 MHz	1000	0.51%
T-Mobile 700 MHz LTE	1	865.21	140	1.73	700 MHz	467	0.37%
						Total:	**1.91%**

Summary

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

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

T-Mobile Sector	Power Density Value (%)
Sector A:	1.91 %
Sector B:	1.91 %
Sector C:	1.91 %
T-Mobile Per Sector Maximum:	1.91 %
Site Total:	12.26 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **12.26%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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