

DAVID A BALL

Please Reply To Bridgeport  
E-Mail: [dball@cohenandwolf.com](mailto:dball@cohenandwolf.com)

October 5, 2023

*Via Email and Hand Delivery*

Attorney Melanie Bachman  
Executive Director  
Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

Re: **Connecticut Siting Council Docket No. 308 - Westport Broadcasting Co., LLC  
and Town of Wilton Petition for a Declaratory Ruling for Approval of an  
Eligible Facility Request for Modifications to an Existing  
Telecommunications Tower at 160 Deer Run Road, Wilton, CT**

Dear Attorney Bachman:

I've enclosed the following:

1. An original and fifteen (15) copies of a Petition for a Declaratory Ruling for Approval of an Eligible Facility Request for Modifications to an Existing Telecommunications Tower on behalf of Westport Broadcasting Co., LLC and Town of Wilton; and
2. A check for the filing fee in the amount of \$625.00.

If you have any questions, please do not hesitate to contact me.

Very truly yours,



David A. Ball

Enclosures

**STATE OF CONNECTICUT**  
**CONNECTICUT SITING COUNCIL**

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**PETITION OF  
WESTPORT BROADCASTING CO., LLC  
AND TOWN OF WILTON  
FOR A DECLARATORY RULING**

**160 DEER RUN ROAD  
WILTON, CONNECTICUT**

**Docket No. 308**

**OCTOBER 5, 2023**

**STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL**

**IN RE: DOCKET NO. 308** :  
 :  
 PETITION OF WESTPORT BROADCASTING :  
 CO., LLC AND TOWN OF WILTON PETITION :  
 FOR A DECLARATORY RULING FOR :  
 APPROVAL OF AN ELIGIBLE FACILITY :  
 REQUEST FOR MODIFICATIONS TO AN :  
 EXISTING TELECOMMUNICATIONS :  
 TOWER AT 160 DEER RUN ROAD, WILTON, :  
 CONNECTICUT : October 5, 2023

**I. Introduction**

Pursuant to Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §1455(a) (“Section 6409(a)”) and the October 21, 2014 Report and Order (FCC-14-533) issued by the Federal Communications Commission (“FCC”) (the “FCC Order”), Westport Broadcasting Co., LLC (“WBC”) and Town of Wilton (the “Town”) (WBC and the Town are collectively referred to herein as the “Petitioners”) hereby petition the Connecticut Siting Council (“Council”) for a declaratory ruling for approval of a proposed modification to the existing tower at 160 Deer Run Road, Wilton, Connecticut (the “Property”) as an Eligible Facilities Request (“EFR”) under the FCC Order. As set forth below, the Petitioners seek an extension of 12 feet of the existing tower at the Property in order to accommodate antenna arrays for the Town for purposes of emergency services.

**II. Background**

The tower is a 118-foot self-supporting lattice tower (“Facility”) located on a two-acre parcel of property owned by WBC. The Facility was approved by the Council in Docket No. 308 on August 31, 2006, and a Certificate was issued to applicants WBC, Optasite, Inc., and

New Cingular Wireless PCS (“New Cingular or “AT&T”). The Decision and Order provides that the tower should be capable of supporting the equipment constructed as a self-supporting lattice tower, sufficient to accommodate the equipment of New Cingular, and other entities, public and private, but should not exceed 118 feet above ground level, with the height of the top of the antennas not to exceed 122 feet above ground level. The Decision and Order also provides that “the Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Wilton public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.”

Since the issuance of the Certificate, T-Mobile, New Cingular and Verizon co-locate on the tower at the 118 foot (T-Mobile), 110 foot (New Cingular) and 96.5 foot (Verizon) levels. The proposed modifications in this Sub-Petition will have no impact on any of those carriers, whose equipment will not be moved or affected by the new antenna arrays in favor of the Town.

### **III. Proposed Facility Modifications**

The Petitioners propose to extend the tower by 12 feet, for the purpose of allowing the Town’s emergency services antennas to be mounted at the 128 foot level, with an elevation of 130 feet AGL (the “Proposed Modification”). No modifications are proposed to the equipment compound layout approved in the Development and Management Plan. Petitioners propose the replacement of the existing generator under the building roof overhang with a new 50KW generator next to the Verizon shelter. Plans depicting the Proposed Modification are attached hereto as Exhibit A. A Structural Analysis Report performed by FDH Infrastructure Services, LLC dated January 27, 2023 confirming the Facility’s integrity with the proposed extension is attached hereto as Exhibit B.



#### **IV. Eligible Facilities Request**

##### **A. The Proposed Modification Will Not Cause a Substantial Change to the Physical Dimensions of the Existing Tower or Base Station**

Section 6409(a) provides, in relevant part, that “a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station.” Pursuant to the FCC Order, the Proposed Modification does not substantially change the physical dimensions of the tower or base station if certain criteria are satisfied. As set forth below, those criteria are satisfied by the Proposed Modification:

- 1. The proposed modified facility will not increase the height of the tower by more than (ten) percent or by the height of one additional array with separation from the nearest existing antenna not to exceed twenty (20) feet, whichever is greater.*

The existing tower is a 118 foot self-supporting lattice tower with antennas located at the 118 foot (T-Mobile), 110 foot (AT&T) and 96.5 foot (Verizon) levels. The Petitioners propose to extend the tower by 12 feet to accommodate new antennas for the Town of Wilton’s emergency services needs. The Town’s antenna arrays would then be mounted at the 128 foot level, with an elevation of 130 feet. The separation of the Town’s antennas to the nearest existing antennas (belonging to T-Mobile) is ten (10) feet, thereby satisfying this criterion.

- 2. The proposed facility will not protrude from the edge of the structure more than six (6) feet.*

The tower extension is only proposed to increase vertically, not horizontally.

- 3. The proposed facility does not involve the installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four cabinets.*

Four (4) additional cabinets are proposed within the existing equipment shelter, which is standard for the technology involved.

- 4. The proposed facility does not entail any excavation or deployment outside the current site of the base station.*

No excavation or deployment outside the current site is proposed.

- 5. The proposed facility does not defeat the existing concealment elements of the base station.*

The tower extension will match the existing tower design, which does not implicate any concealment elements.

6. *The proposed facility complies with the conditions associated with the prior approvals of construction or modification of the base station.*

Petitioners are not aware of any restriction or condition placed on the Facility that would limit or prohibit the Proposed Modification. In fact, this extension is consistent with the Council's order that there shall be reasonable space on the tower for any Town of Wilton public safety services (police, fire and medical services).

#### B. FCC Compliance

The Proposed Modification will not increase the total radio frequency (RF) power density, measured at the base of the tower, to a level at or above the applicable standard. According to a Radio Frequency Site Compliance Report prepared by Advantage Environmental Consultants, LLC dated July 25, 2023, the calculated "worst case" power density for the planned combined operation at the site including all of the proposed antennas for the Town of Wilton would be 6.02% of the FCC Standard as calculated as a percentage of the Maximum Permissible Exposure Limits as detailed in 47 CFR § 1.1310 as well as FCC OET Bulletin 65 Edition 97-01. See, Radio Frequency Site Compliance Report attached hereto as Exhibit C.

#### C. Environmental

Petitioners engaged Advantage Environmental Consultants, LLC ("AEC") to seek a collocation exemption determination concerning the Proposed Modification to the Facility. As set forth in its report dated July 25, 2023, AEC concluded that the Proposed Modification is exempt from a Section 106 review. See, AEC Report dated July 25, 2023 attached hereto as Exhibit D. More specifically, "AEC notes that, as the proposed installation consists of mounting

antennas to an existing structure (tower), the project is categorically excluded from environmental review (Federal Communications Commission (FCC) NEPA categories one through three and six through eight) under Title 47 of the Code of Federal Regulations (CFR), Section 1.1306, Note 1.”

In addition to meeting all criteria of the FCC Order as set forth above, AEC made the following findings:

- The tower has not been determined by the FCC to have an effect on one or more historic properties, unless such effect has been found to be not adverse through a no adverse effect finding, or if found to be adverse or potentially adverse, has been resolved, such as through a conditional no adverse effect determination, a Memorandum of Agreement, a programmatic agreement, or otherwise in compliance with Section 106 and Subpart B of 36 CFR Part 800,
- The tower is not the subject of a pending environmental review or related proceeding before the FCC involving compliance with Section 106 of the National Historic Preservation Act,
- The collocation licensee or the owner of the tower has not received written or electronic notification that the FCC is in receipt of a complaint from a member of the public, a State Historic Preservation Office (SHPO) or the Council, that the collocation has an adverse effect on one or more historic properties. Any such complaint must be in writing and supported by substantial evidence describing how the effect from the collocation is adverse to the attributes that qualify any affected historic property for eligibility or potential eligibility for the National Register.

Based on the foregoing, “...AEC determined that the proposed project is **NOT** required to complete Section 106 Consultation.”

#### D. FAA Determination of No Hazard to Air Navigation

Petitioners received a report from the Federal Aviation Administration (“FAA”) dated September 19, 2023 for the Proposed Modification to the Facility, which is attached hereto as Exhibit E. The results indicate that the Facility does not exceed obstruction standards and would

not be a hazard to air navigation. Therefore, no FAA lighting or marking would be required for the Modifications to the Facility proposed in this Petition.

E. Notice

On October 5, 2023 a copy of this Sub-Petition was sent to the Wilton First Selectwoman, Lynne Vanderslice, as well as the following Town of Wilton agencies: Planning and Zoning Commission, Conservation Commission, and Inland Wetlands Commission. In addition, copies of this Sub-Petition have been provided to the appropriate municipal officials and government agencies as provided in Conn. Gen. Stat. section 16-50*l*. A sample of the letter to those officials is attached hereto as Exhibit F. The Town is also a Petitioner.

Notice of the filing of this Sub-Petition was also sent to each owner of land that abuts the Property on October 5, 2023. A list of the abutting property owners and a sample notice letter are attached hereto as Exhibit G.

**7. Conclusion**

Petitioners respectfully submit that based upon the information provided above and the materials attached, the Proposed Modification constitutes an “eligible facilities request” under Section 6409(a) and the FCC Order, and request that the Council approve this Petition.

**Respectfully Submitted,**

**PETITIONERS,  
WESTPORT BROADCASTING CO., LLC,  
AND TOWN OF WILTON**

By: 

David A. Ball, Esq.  
Cohen and Wolf, P.C.  
1115 Broad Street  
Bridgeport, CT 06604  
Tel. No. (203) 368-0211  
E-Mail: [dball@cohenandwolf.com](mailto:dball@cohenandwolf.com)  
Juris No. 010032

# **EXHIBIT A**

**PROJECT DESCRIPTION**  
 INSTALLATION OF ANTENNAS, COAXIAL CABLE, AND ASSOCIATED MOUNTS ON AN EXISTING 118' SELF SUPPORT TOWER WITH NEW EXTENSION TO 130'.  
 UTILIZING EXISTING UNMANNED BUILDING ON CONCRETE FOUNDATION WITH EQUIPMENT ROOM UPGRADES.  
 NEW ELECTRIC SERVICE TO EQUIPMENT BUILDING. NO WATER SUPPLY OR SEWAGE TO/FROM THE SITE.  
**SITE NAME:**  
 DEER RUN  
**SITE ADDRESS:**  
 DEER RUN RD  
 WILTON, CT 06897  
**SITE COORDINATES**  
 LATITUDE - N 41° 14' 29.1"  
 LONGITUDE - W 73° 28' 12"

**SITE INFORMATION**

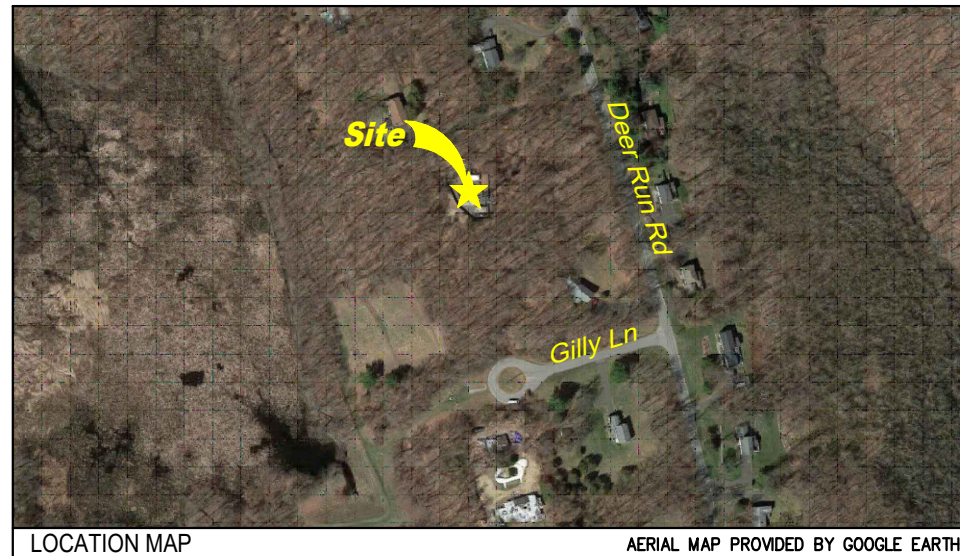
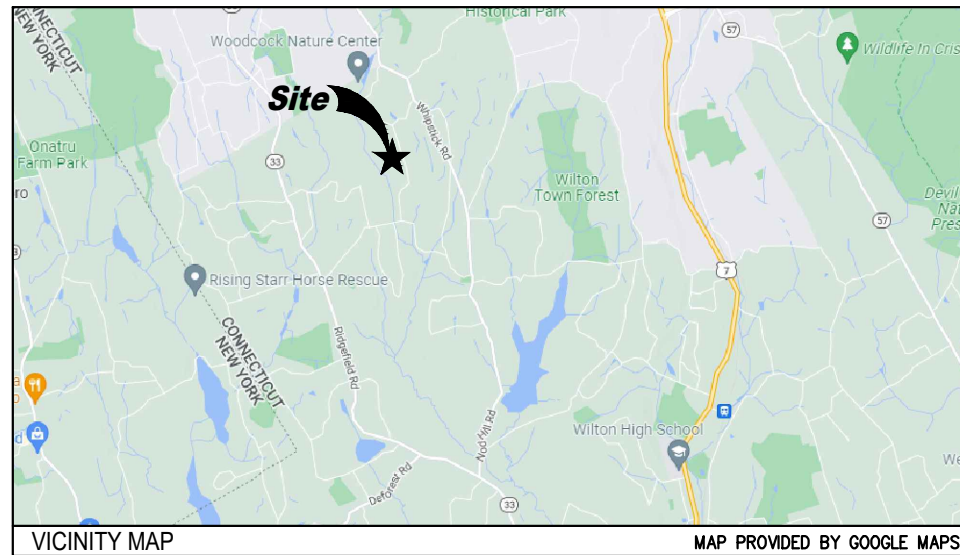
**LANDLORD**  
 SBA  
 SITE - CT98078  
**APPLICANT**  
 TOWN OF WILTON  
 240 DANBURY ROAD  
 WILTON, CT 06897  
 PH: (203) 834-6206  
**CONTACT**  
 MOTOROLA SOLUTIONS  
 STEFANITA VASILESCU  
 PH: (914) 281-0867  
**PROJECT MANAGER**  
 PYRAMID NETWORK SERVICES, LLC  
 MICHAEL DIMONDA  
 PH: (518) 366-5679  
 EMAIL: MDIMONDA@PYRAMIDNS.COM  
**ARCHITECTURAL AND ENGINEERING**  
 MISSION 1 COMMUNICATIONS  
 SCOTT HARTMAN  
 6202 CONSTITUTION DRIVE, SUITE C  
 FORT WAYNE, IN 46804  
 PH: (260) 436-3922  
 EMAIL: SHARTMAN@M1COMM.COM

**CONSULTANT TEAM**

<b>TOWN OF WILTON REPRESENTATIVE :</b>	RECEIVED :
	ACCEPTED :
<b>MOTOROLA :</b>	RECEIVED :
	ACCEPTED :
<b>PROPERTY OWNER:</b>	RECEIVED :
	ACCEPTED :
RECEIVED AND ACCEPTED	



**DIRECTIONS TO SITE**



# DEER RUN

DEER RUN RD  
 WILTON, CT 06897  
 FAIRFIELD COUNTY



## DRAWING INDEX

- T-1 PROJECT INFORMATION, LOCATION MAPS, AND DRAWING INDEX
- C-1 SITE LOCATION PLAN
- C-2 ENLARGED SITE PLAN
- C-3 EXISTING TOWER ELEVATION AND ANTENNA LOADING INFORMATION
- C-3.1 PROPOSED TOWER ELEVATION AND ANTENNA LOADING INFORMATION
- A-1 ENLARGED DEMO PLAN
- A-2 FLOOR PLAN

PRELIMINARY  
 NOT FOR  
 CONSTRUCTION



NO.	DATE	REVISIONS	BY	CHK	APP'D
F	10-02-23	PRELIM LEASE EXHIBIT - REVISED PER COMMENTS	RNV	SAH	
E	07-10-23	PRELIM LEASE EXHIBIT - REVISED PER STRUCTURAL	RNV	SAH	
D	12-12-22	PRELIM LEASE EXHIBIT - CLIENT REVISIONS	SAH	SAH	
C	10-06-22	PRELIM LEASE EXHIBIT - CLIENT REVISIONS	SAH	SAH	
B	09-27-22	PRELIM LEASE EXHIBIT - ADDED MW	SAH	SAH	



PROJECT INFORMATION, LOCATION MAPS, AND DRAWING INDEX  
 DEER RUN  
 DEER RUN RD  
 WILTON, CT 06897

T-1

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 IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.





- GENERAL NOTES:**
1. PROPERTY OFFSETS ARE APPROXIMATE. FINAL LOCATION OF COMPOUND TO BE DEVELOPED FROM TOWER ☐
  2. THE LOCATION, SIZE & TYPE OF MATERIAL OF EXISTING UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING THE SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS & SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION & ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES & THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS & SERVICES SHALL BE RESTORED TO SERVICE AT ONCE & PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.
  3. ALL PROPOSED CONSTRUCTION ACTIVITIES & MODIFICATIONS SHALL COMPLY WITH MOTOROLA R-56 STANDARDS, REV 2017.
  4. ANY DISCREPANCIES BETWEEN THIS DRAWING PACKAGE AND EXISTING FIELD CONDITIONS MUST BE REPORTED TO THE ENGINEER OF RECORD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

Site Location Plan



Know what's below.  
Call before you dig.  
1-800-922-4455  
CALL TOLL FREE

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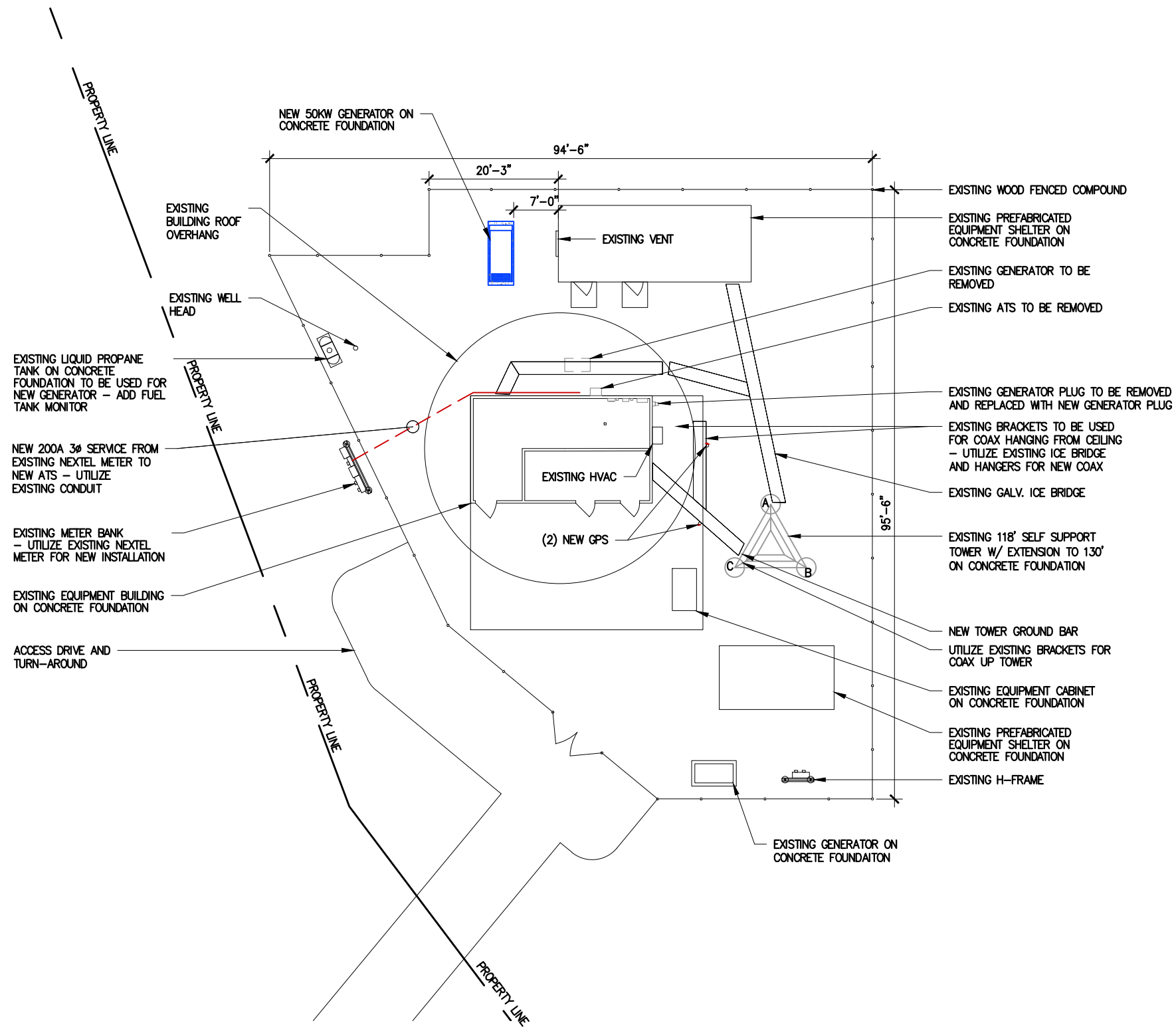


SITE LOCATION PLAN  
DEER RUN  
DEER RUN RD  
WILTON, CT 06897

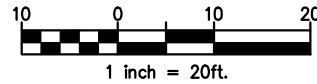
C-1

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Enlarged Site Plan



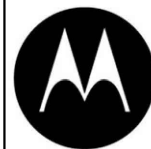
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1-800-922-4455  
CALL TOLL FREE

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CONSTRUCTION

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B	09-27-22	PRELIM LEASE EXHIBIT - ADDED MW	SAH	SAH	



6202 Constitution Drive, Suite C  
Fort Wayne, IN 46804



MOTOROLA SOLUTIONS



ENLARGED SITE PLAN

DEER RUN  
DEER RUN RD  
WILTON, CT 06897

C-2

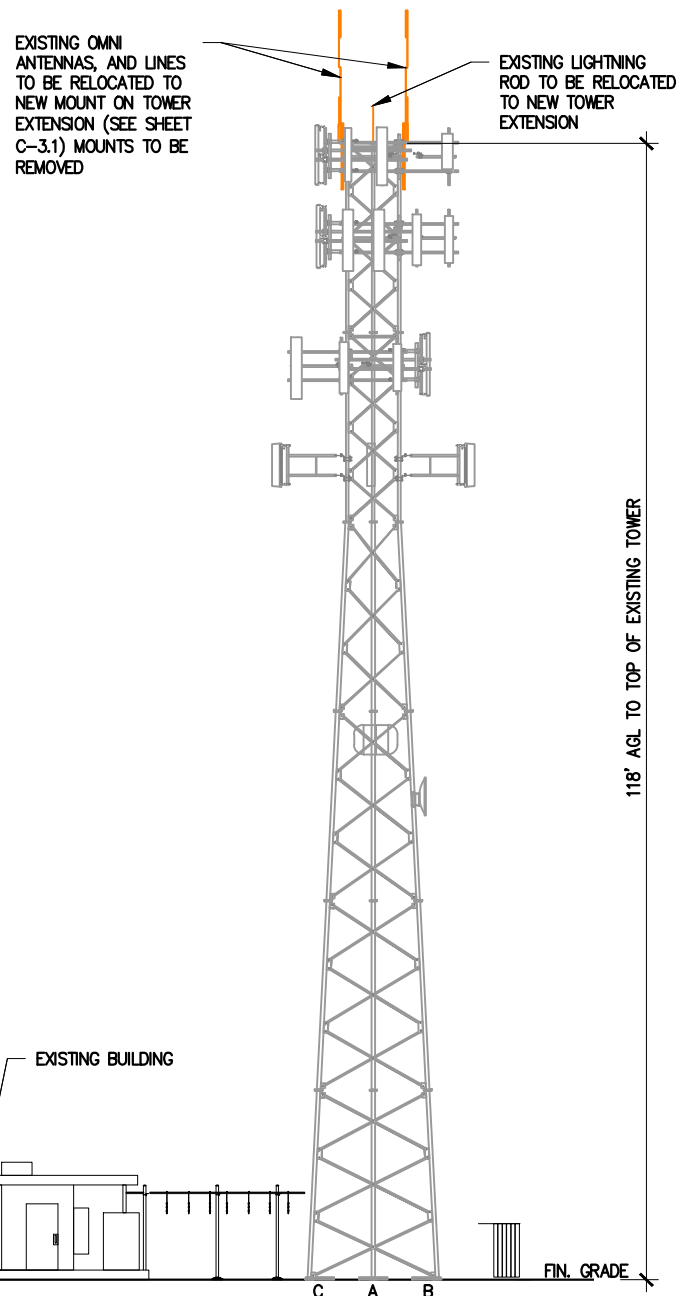
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**Existing Loading:**

Antenna Elevation (ft)	Description	Feed Lines	Carrier	Mount Elevation (ft)	Mount Type
126.5	(2) 3" Ø x 12' Omni <sup>1</sup>	(2) 7/8" <sup>1</sup>	-	122.0	(3) 2.4" Ø x 7' Pipe Mounts <sup>2</sup>
118.0	(3) Ericsson AIR6449 B41 (3) Ericsson AIR32 KRD901146-1_B66A_B2A (Octo) (3) RFS APXVAALL24-43-U-NA20 (3) Commscope SDX1926Q-43 (E14F05P86) (3) Ericsson KRY 112 71 (3) Ericsson Radio 4449 B71+B85 (3) Ericsson Radio 4415 B25	(7) 1-5/8" (6) Fiber	T-Mobile	118.0	(3) Sector Mounts [Sitepro1 P/N: VFA12-HD]
110.0	(3) Powerwave 7770 (3) Kathrein 800-10965 (3) Powerwave P65-16-XLH-RR (3) CCI OPA65R-BU6DA (6) Powerwave LGP 21401 (3) Powerwave TT19-08BP111-001 (3) Ericsson RRUS-11 (3) Ericsson RRUS 4478 B5 (3) Ericsson RRUS 4415 B25 (3) Ericsson RRUS 4478 B14 (2) Raycap DC6-48-60-18-8F	(12) 1-5/8" (4) 3/4" DC (2) 3/8" Fiber (2) 3/8" Alarm Cables (1) 3" Flex	AT&T	110.0	(3) 12' Sector Mounts [Sabre P/N: C10857001C]
98.0	(3) Amphenol BXA-80090-8CF-EDIN-X (6) JMA MX06FRO660-03 (3) Samsung MT6407-77A (3) Samsung RF4440d-13A (3) Samsung RF4439d-25A (2) Raycap RRFDC-3315-PF-48	(6) 1-5/8" (2) Hybrid	Verizon	96.5	(3) 10'x2' T-Frames
86.0	(3) 60"x12"x4.5" Panels <sup>3</sup>	(9) 1-5/8" <sup>3</sup> (2) 1-1/2" <sup>3</sup>	Sprint	86.0	(3) 2.7' Stand-Offs <sup>3</sup>
57.0	(1) Scala PR-850	(1) 7/8"		57.0	Direct
51.0	(1) Scala PR-850	(2) 7/8"		55.0	(1) 1.9'x9.8' Pipe Mount

- EXISTING OMNI ANTENNA AND FEEDLINES TO BE RELOCATED ON THE PROPOSED TOWER EXTENSION ON NEW MOUNTS (SEE SHEET E-3.1)
- EXISTING MOUNTS NEED TO BE REMOVED PRIOR TO THE INSTALLATION OF THE PROPOSED LOADING.
- EXISTING ANTENNA, FEEDLINES AND MOUNTS NEED TO BE REMOVED PRIOR TO THE INSTALLATION OF PROPOSED LOADING.



**GENERAL NOTES:**

- SEE STRUCTURAL ANALYSIS W/ MODIFICATION DESIGN BY FDH INFRASTRUCTURE SERVICES, LLC PROJECT NUMBER PR-009191
- ALL VERTICAL TRANSMISSION LINE RUNS FROM THE ANTENNAS SHALL BE GROUNDED NEAR THE TOP & BOTTOM OF THE TOWER (BEFORE THE CABLE MAKES HORIZONTAL TRANSITION & NEAR ENTRY PORT ON THE SHELTER).
- THE CONTRACTOR SHALL CONDUCT A FREQUENCY DOMAIN REFLECTOMETER (FDR) WITH PRECISION LOAD / SWEEP TEST FOR ANTENNA AND TRANSMISSION LINE INSTALLATION WORK. ALL SWEEP AND TEST MUST BE WITHIN THE GUIDELINES OUTLINED IN MOTOROLA MOP.
- DRIP LOOPS SHALL BE INCORPORATED IN CABLE RUNS TO PREVENT WATER FROM TRICKLING DOWN THE LINES INTO THE SHELTER.
- ALL TRANSMISSION LINES SHALL BE MARKED WITH APPROPRIATE COLOR TAPE BANDS (ONE INCH WIDE COLOR TAPE) FOR IDENTIFICATION NEAR THE ANTENNA. JUST BEFORE ENTERING THE SHELTER AS WELL AS INSIDE THE SHELTER, BEFORE CONNECTING TO THE SURGE SUPPRESSORS. SEE EQUIPMENT & COAXIAL CABLE SCHEDULE FOR COLOR CODING SCHEME.

PRELIMINARY  
NOT FOR  
CONSTRUCTION

**1 Proposed Tower Elevation**  
NOT TO SCALE

NO.	DATE	REVISIONS	BY	CHK	APP'D
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6202 Constitution Drive, Suite C  
Fort Wayne, IN 46804

EXISTING TOWER ELEVATION AND ANTENNA  
LOADING INFORMATION

DEER RUN  
DEER RUN RD  
WILTON, CT 06897

**C-3**

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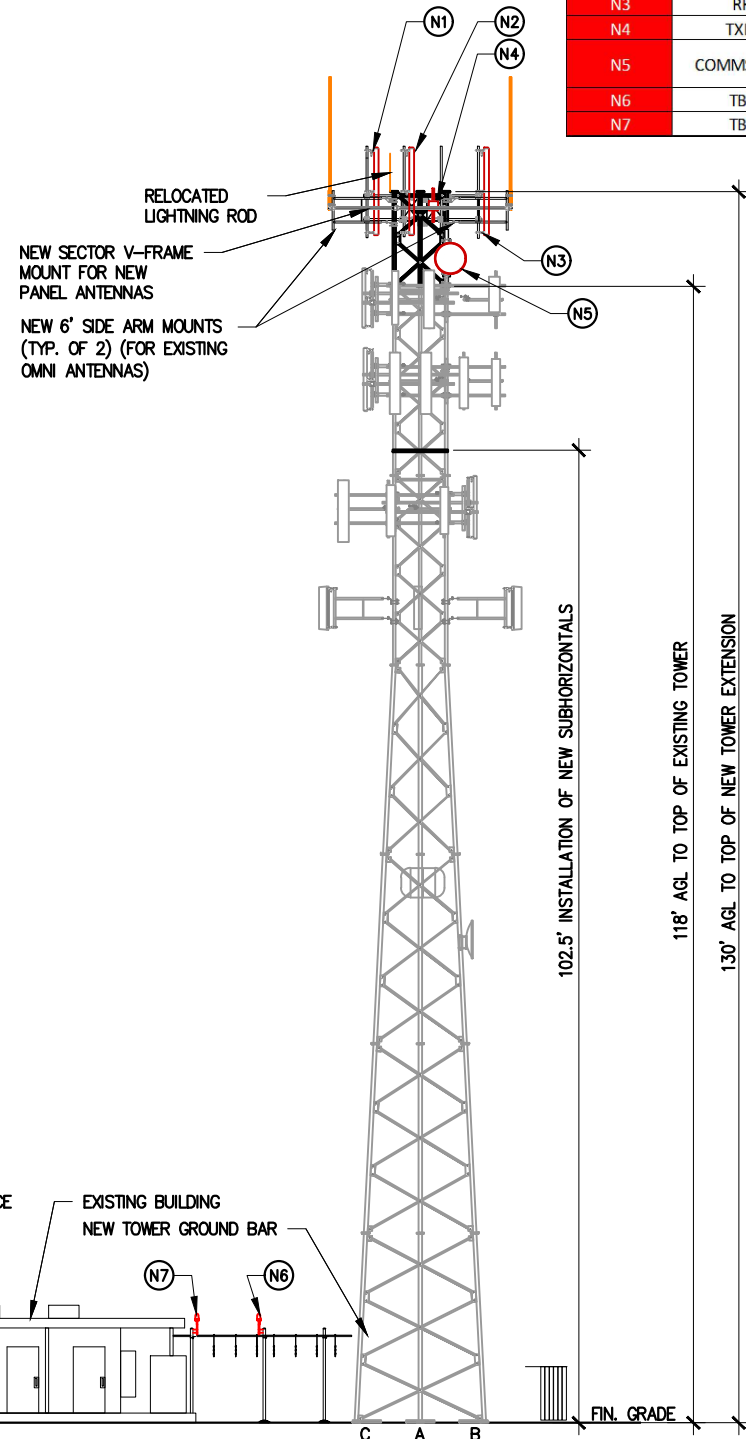
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DEER RUN - 118' SELF SUPPORT TOWER  
 LAT: 41° 14' 29.1"  
 LON: - 73° 28' 12"

Antenna/Appurtenance Location Chart

E = EXISTING  
 N = NEW  
 F = FUTURE

PROPOSED ANTENNA INFORMATION													FEEDLINE INFORMATION				COLOR CODE					
ANTENNA ID	MANUFACTURER	MODEL	TYPE	LENGTH	BOTTOM ELEV	RAD CENTER	TOP ELEV.	AZIMUTH	LEG	TILT	DEST.	MOUNT	QTY.	TYPE	MANUFACTURER	MODEL	SIZE	QTY.	BAND 1	BAND 2	BAND 3	BAND 4
N1	RFI	BPA7496-180-14	TX	9.3'	125.4'	130.0'	134.6'	90°	A	-	-	12.5' SECTOR FRAME	1	COAX	EUPEN	EC7-50A	1-5/8"	1	RED			
N2	RFI	BPA7496-180-14	RX	9.3'	125.4'	130.0'	134.6'	90°	A	-	-			COAX	EUPEN	EC7-50A	1-5/8"	1	GREEN			
N3	RFI	BPA7496-180-14	RX	9.3'	125.4'	130.0'	134.6'	90°	A	-	-			COAX	EUPEN	EC7-50A	1-5/8"	1	GREEN	WHITE		
N4	TXRX	432F-83W-01-T	TTA	1.0'	129.5'	130.0'	130.5'	-	A	-	-			COAX	EUPEN	EC4-50	1/2"	1	GREEN	WHITE	WHITE	
N5	COMMSCOPE	VHLP3-11W	MW	3.0'	121.5'	123.0'	124.5'	158.44°	B	-0.51°	-	WILTON TOWER 31	-	1	WAVEGUIDE	COMMSCOPE	EW90	-	1	BLUE		
N6	TBD	TBD	GPS			ICE BRIDGE						-	1	COAX	TBD	TBD		1	ORANGE			
N7	TBD	TBD	GPS			ICE BRIDGE						-	1	COAX	TBD	TBD		1	ORANGE	WHITE		



Proposed Carrier Final Loading:

Antenna Elevation (ft)	Description	Feed Lines	Carrier	Mount Elevation (ft)	Mount Type
130.0	(3) RFI BPA7496-180-14 (1) TXRX 432F-83W-01-T	(3) 1-5/8" (1) 1/2"	Town of Wilton	128.0	(1) 12.5' Sector Frame [Site Pro 1 P/N: VFA12-SD-S]
	(2) 3' x 12' Omni	(2) 7/8"	-		(2) 6' Side Arm [Site Pro 1 P/N: PSA6]
123.0	(1) Commscope VHLP3-11W	(1) EW90	Town of Wilton	123.0	(1) Pipe Mount

GENERAL NOTES:

- SEE STRUCTURAL ANALYSIS W/ MODIFICATION DESIGN BY FDH INFRASTRUCTURE SERVICES, LLC PROJECT NUMBER PR-009191
- ALL VERTICAL TRANSMISSION LINE RUNS FROM THE ANTENNAS SHALL BE GROUNDED NEAR THE TOP & BOTTOM OF THE TOWER (BEFORE THE CABLE MAKES HORIZONTAL TRANSITION & NEAR ENTRY PORT ON THE SHELTER).
- THE CONTRACTOR SHALL CONDUCT A FREQUENCY DOMAIN REFLECTOMETER (FDR) WITH PRECISION LOAD / SWEEP TEST FOR ANTENNA AND TRANSMISSION LINE INSTALLATION WORK. ALL SWEEP AND TEST MUST BE WITHIN THE GUIDELINES OUTLINED IN MOTOROLA MOP.
- DRIP LOOPS SHALL BE INCORPORATED IN CABLE RUNS TO PREVENT WATER FROM TRICKLING DOWN THE LINES INTO THE SHELTER.
- ALL TRANSMISSION LINES SHALL BE MARKED WITH APPROPRIATE COLOR TAPE BANDS (ONE INCH WIDE COLOR TAPE) FOR IDENTIFICATION NEAR THE ANTENNA. JUST BEFORE ENTERING THE SHELTER AS WELL AS INSIDE THE SHELTER, BEFORE CONNECTING TO THE SURGE SUPPRESSORS. SEE EQUIPMENT & COAXIAL CABLE SCHEDULE FOR COLOR CODING SCHEME.

PRELIMINARY  
 NOT FOR  
 CONSTRUCTION

1 Proposed Tower Elevation  
 NOT TO SCALE

NO.	DATE	REVISIONS	BY	CHK	APP'D
F	10-02-23	PRELIM LEASE EXHIBIT - REVISED PER COMMENTS	RNV	SAH	
E	07-10-23	PRELIM LEASE EXHIBIT - REVISED PER STRUCTURAL	RNV	SAH	
D	12-12-22	PRELIM LEASE EXHIBIT - CLIENT REVISIONS	SAH	SAH	
C	10-06-22	PRELIM LEASE EXHIBIT - CLIENT REVISIONS	SAH	SAH	
B	09-27-22	PRELIM LEASE EXHIBIT - ADDED MW	SAH	SAH	

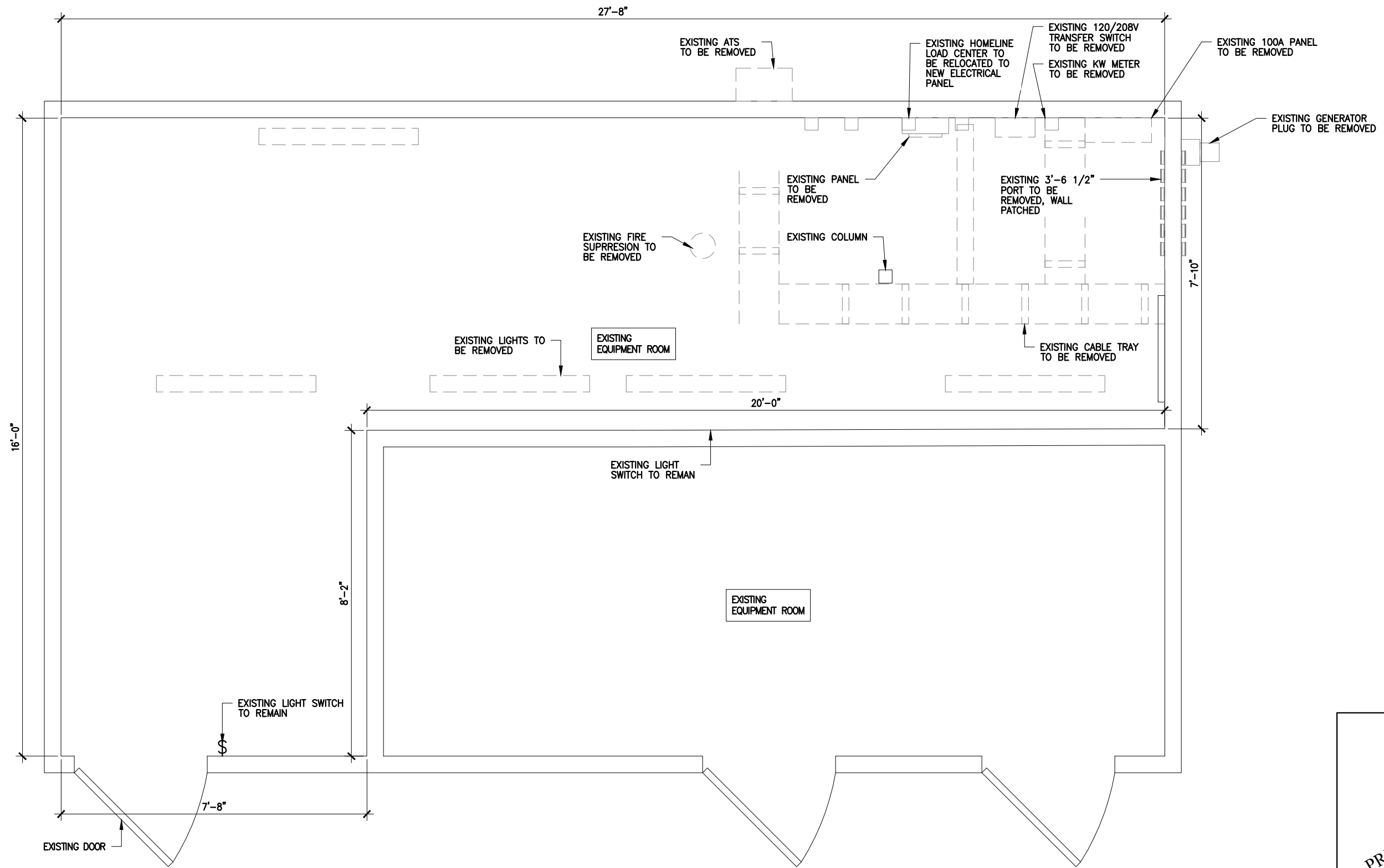


PROPOSED TOWER ELEVATION AND ANTENNA LOADING INFORMATION

DEER RUN  
 DEER RUN RD  
 WILTON, CT 06897

C-3.1

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### Enlarged Demo Plan

SCALE : 3/8" = 1'-0"



**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

NO.	DATE	REVISIONS	BY	CHK	APP'D
F	10-02-23	PRELIM LEASE EXHIBIT - REVISED PER COMMENTS	RNV	SAH	
E	07-10-23	PRELIM LEASE EXHIBIT - REVISED PER STRUCTURAL	RNV	SAH	
D	12-12-22	PRELIM LEASE EXHIBIT - CLIENT REVISIONS	SAH	SAH	
C	10-06-22	PRELIM LEASE EXHIBIT - CLIENT REVISIONS	SAH	SAH	
B	09-27-22	PRELIM LEASE EXHIBIT - ADDED MW	SAH	SAH	



ENLARGED DEMO PLAN

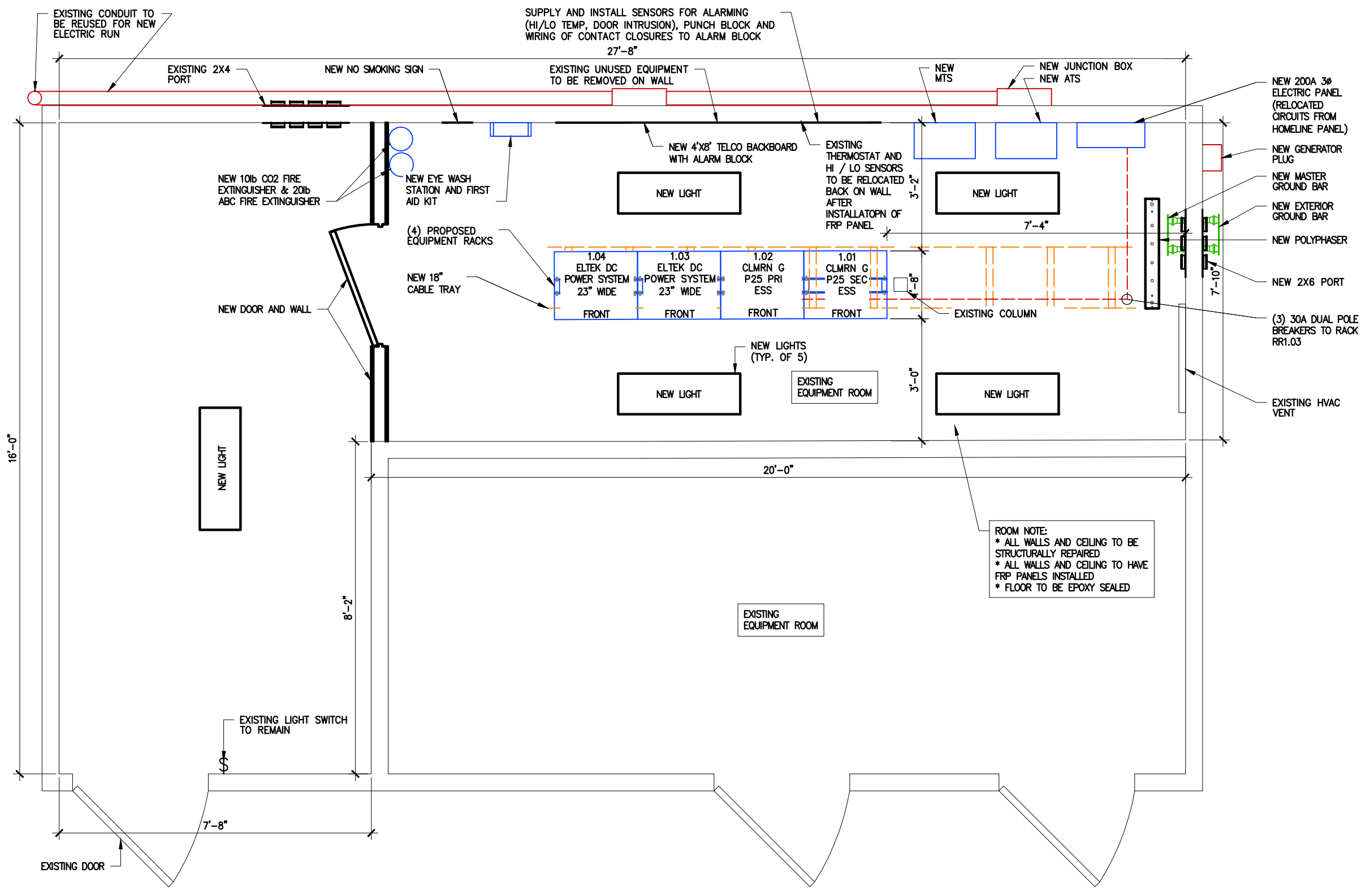
DEER RUN  
DEER RUN RD  
WILTON, CT 06897

**A-1**

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- NOTES:**
1. NEW GROUND HALO TO BE INSTALLED IN SHELTER.
  2. GROUND GENERATOR, ICE BRIDGE AND WOOD FENCE.
  3. GROUND ALL METALLIC ITEMS IN EQUIPMENT ROOM PER R56
  4. GROUND ALL METALLIC ITEMS FOR THIS NEW INSTALLATION ON BUILDING EXTERIOR PER R56



**ROOM NOTE:**  
 \* ALL WALLS AND CEILING TO BE STRUCTURALLY REPAIRED  
 \* ALL WALLS AND CEILING TO HAVE FRP PANELS INSTALLED  
 \* FLOOR TO BE EPOXY SEALED

**Floor Plan**  
 SCALE : 3/8" = 1'-0"  
 NORTH

**PRELIMINARY  
 NOT FOR  
 CONSTRUCTION**

NO.	DATE	REVISIONS	BY	CHK	APP'D
F	10-02-23	PRELIM LEASE EXHIBIT - REVISED PER COMMENTS	RNV	SAH	
E	07-10-23	PRELIM LEASE EXHIBIT - REVISED PER STRUCTURAL	RNV	SAH	
D	12-12-22	PRELIM LEASE EXHIBIT - CLIENT REVISIONS	SAH	SAH	
C	10-06-22	PRELIM LEASE EXHIBIT - CLIENT REVISIONS	SAH	SAH	
B	09-27-22	PRELIM LEASE EXHIBIT - ADDED MW	SAH	SAH	



FLOOR PLAN  
 DEER RUN  
 DEER RUN RD  
 WILTON, CT 06897

A-2

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# **EXHIBIT B**

**Structural Analysis w/ Modification Design for  
Pyramid Network Services, LLC**

**120.0' Self-Support Tower w/ 10' Proposed Extension**

**Site Name: Wilton\_Deer Run**

**Site ID: CT98078**

**Site Address: 160 Deer Run Rd, Wilton, CT 06897**

FDH Infrastructure Services, LLC Project Number PR-009191

**Analysis Results**

Tower Components	82.6%	Sufficient
Foundation	39.1%	Sufficient

**Dish Rotation Results (60-mph)**

Centerline Elevation (ft.)	Dish	Tilt (deg)	Twist (deg)
123.0	(1) Commscope VHLP3-11W	0.2365	0.0664

Prepared By:



Hailey Hipp, PE  
Project Engineer III

Reviewed By:

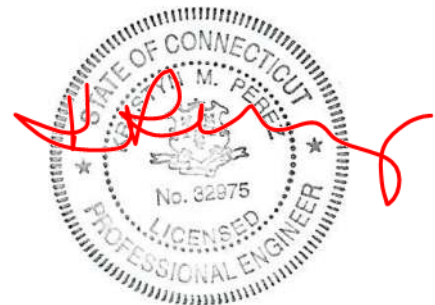


Krystyn M. Perez, PE  
Vice President, Structural Engineering  
CT License No. 32975

**FDH Infrastructure Services, LLC**

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Raleigh, NC, 27616  
(919) 755-1012  
Structural@fdh-is.com

January 27, 2023



01-27-2023

*Prepared pursuant to the ANSI/TIA-222-H Structural Standard for Antenna Supporting Structures, Antennas and Small Wind Turbine Support Structures and the 2022 Connecticut State Building Code (2021 IBC)*



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## EXECUTIVE SUMMARY

At the request of Pyramid Network Services, LLC, FDH Infrastructure Services, LLC performed a structural analysis of the existing 120' Self-Support Tower w/ 10' Proposed Extension located in Wilton, CT to determine whether the tower is structurally adequate to support the antenna configuration in place per **Table 1** pursuant to the *ANSI/TIA-222-H Structural Standard for Antenna Supporting Structures, Antennas and Small Wind Turbine Support Structures and the 2022 Connecticut State Building Code (2021 IBC)*. Information pertaining to the antenna loading, current tower geometry, member sizes, and below grade parameters was obtained from:

Source	Document Type	Reference	Date
World Tower	Tower & Foundation Drawings	Drawing No. Q06515	October 16, 2006
JGI Eastern, Inc.	Geotechnical Report	Project No. 06517G	August 31, 2006
FDH Infrastructure Services, LLC	Tower Mapping Report	Project No. 18TBQN1500	December 12, 2018
FDH Infrastructure Services, LLC	Previous Structural Analysis	Project No. PR-007866 (R.1)	June 6, 2022
Pyramid Network Services, LLC	Construction Drawings	Site Name: Deer Run	September 27, 2022
FDH Infrastructure Services, LLC	Mount Analysis	Project No. PR-009159	December 27, 2022
FDH Infrastructure Services, LLC	Modification Design Drawings	Project No. PR-009191	January 27, 2023
Pyramid Network Services, LLC			

The *ultimate design wind speed* per the *ANSI/TIA-222-H Standard* is 116 mph without ice and a *basic design wind speed* of 50 mph with 1" radial ice. Ice is considered to increase in thickness with height. Furthermore, this structure was analyzed as a Class II structure in Exposure Category B using Topographical Factor of 1 and Spectral Response Accelerations of  $S_s=0.243$  and  $S_1=0.057$ . This evaluation considers the load modification factors in *Annex S of TIA-222-H*.

## Conclusions

With the antenna configuration in place per **Table 1** we have determined the tower stress level to be sufficient and the foundation(s) to be sufficient pursuant to the requirements stipulated by *ANSI/TIA-222-H, Structural Standard for Antenna Supporting Structures, Antennas and Small Wind Turbine Support Structures and the 2022 Connecticut State Building Code (2021 IBC)* provided the **Recommendations** listed below are satisfied. For a more detailed description of the analysis of the tower, see the **Results** section of this report.

Our structural analysis has been performed assuming all information provided to FDH Infrastructure Services, LLC is accurate (i.e., the structure member information, tower layout, existing antenna loading, and proposed antenna loading) and that the tower has been properly erected and maintained per the original design drawings.

## Recommendations

To ensure the requirements of the current analysis standards are met with the antenna configuration in place per **Table 1**, we have the following recommendations:

1. Feed lines to be installed as shown in **Figure 1** in the **Appendix**.
2. RRU/RRH Stipulation: The equipment may be installed in any arrangement as determined by the client.
3. Modifications listed in the FDH Infrastructure Services, LLC Modification Drawings for a 130' Self-Support Tower (FDH-IS Project No. PR-009191) dated January 27, 2023 must be properly installed per the referenced drawings for this analysis to be considered valid.

**APPURTENANCE LISTING**

The antennas and equipment, with their corresponding feed lines, considered for this analysis are shown in **Table 1**. If the actual layout determined in the field deviates from the layout, FDH Infrastructure Services, LLC should be contacted to perform a revised analysis.

**Table 1 - Appurtenance Loading**

**Existing Loading:**

Antenna Elevation (ft)	Description	Feed Lines	Carrier	Mount Elevation (ft)	Mount Type
126.5	(2) 3" Ø x 12'Omni <sup>1</sup>	(2) 7/8" <sup>1</sup>	-	122.0	(3) 2.4" Ø x 7' Pipe Mounts <sup>2</sup>
118.0	(3) Ericsson AIR6449 B41 (3) Ericsson AIR32 KRD901146-1_B66A_B2A (Octo) (3) RFS APXVAALL24-43-U-NA20 (3) Commscope SDX1926Q-43 (E14F05P86) (3) Ericsson KRY 112 71 (3) Ericsson Radio 4449 B71+B85 (3) Ericsson Radio 4415 B25	(7) 1-5/8" (6) Fiber	T-Mobile	118.0	(3) Sector Mounts [Sitepro1 P/N: VFA12-HD]
110.0	(3) Powerwave 7770 (3) Kathrein 800-10965 (3) Powerwave P65-16-XLH-RR (3) CCI OPA65R-BU6DA (6) Powerwave LGP 21401 (3) Powerwave TT19-08BP111-001 (3) Ericsson RRUS-11 (3) Ericsson RRUS 4478 B5 (3) Ericsson RRUS 4415 B25 (3) Ericsson RRUS 4478 B14 (2) Raycap DC6-48-60-18-8F	(12) 1-5/8" (4) 3/4" DC (2) 3/8" Fiber (2) 3/8" Alarm Cables (1) 3" Flex	AT&T	110.0	(3) 12' Sector Mounts [Sabre P/N: C10857001C]
98.0	(3) Amphenol BXA-80090-8CF-EDIN-X (6) JMA MX06FRO660-03 (3) Samsung MT6407-77A (3) Samsung RF4440d-13A (3) Samsung RF4439d-25A (2) Raycap RRFDC-3315-PF-48	(6) 1-5/8" (2) Hybrid	Verizon	96.5	(3) 10'x2' T-Frames
86.0	(3) 60"x12"x4.5" Panels <sup>3</sup>	(9) 1-5/8" <sup>3</sup> (2) 1-1/2" <sup>3</sup>	Sprint	86.0	(3) 2.7' Stand-Offs <sup>3</sup>
57.0	(1) Scala PR-850	(1) 7/8"		57.0	Direct
51.0	(1) Scala PR-850	(2) 7/8"		55.0	(1) 1.9"x9.8' Pipe Mount

- Existing omni antennas and feedlines to be relocated on to the proposed tower extension on new mounts (see below).
- Existing mounts need to be removed prior to the installation of proposed loading.
- Existing antenna, feedlines and mounts need to be removed prior to the installation of proposed loading.

**Proposed Carrier Final Loading:**

Antenna Elevation (ft)	Description	Feed Lines	Carrier	Mount Elevation (ft)	Mount Type
130.0	(3) RFI BPA7496-180-14 (1) TXRX 432F-83W-01-T	(3) 1-5/8" (1) 1/2"	Town of Wilton	128.0	(1) 12.5' Sector Frame [Site Pro 1 P/N: VFA12-SD-S]
	(2) 3" x 12' Omni	(2) 7/8"	-		(2) 6'Side Arm [Site Pro 1 P/N: PSA6]
123.0	(1) Commscope VHLP3-11W	(1) EW90	Town of Wilton	123.0	(1) Pipe Mount

## RESULTS

The following material grades for individual members were used for analysis:

**Table 2 - Material Grade**

Member Type	Material Grade
Legs	A572-50
Bracing	A36 & A572-50
Anchor Rods	A449

**Table 3** and **Table 4** display the summary of capacities for the analyzed structure and its additional components. Values greater than 100% indicate locations where the maximum force in the member exceeds its capacity. **Table 5** displays the maximum dish rotations at service winds speeds.

If the assumptions outlined in this report differ from actual field conditions, FDH Infrastructure Services, LLC should be contacted to perform a revised analysis. Furthermore, as no information pertaining to the allowable twist and sway requirements for the appurtenances was provided, deflection and rotation were not taken into consideration when performing this analysis.

See the **Appendix** for detailed modeling information.

**Table 3 - Structure Member Capacities**

Section No.	Elevation (ft.)	Component Type	Size	% Capacity <sup>1</sup>	Pass / Fail
T1	130 - 120	Leg	1 3/4	13.1	Pass
T2	120 - 115	Leg	1 3/4	24.1	Pass
T3	115 - 110	Leg	1 3/4	45.5	Pass
T4	110 - 105	Leg	1 3/4	76.9	Pass
T5	105 - 100	Leg	1 3/4	41.4	Pass
T6	100 - 80	Leg	2 1/2	75.2	Pass
T7	80 - 60	Leg	2 3/4	77.5	Pass
T8	60 - 40	Leg	3	76.4	Pass
T9	40 - 20	Leg	3 1/4	72.5	Pass
T10	20 - 0	Leg	3 1/2	67.2	Pass
T1	130 - 120	Diagonal	L2x2x1/4	7.2 12.7 (b)	Pass
T2	120 - 115	Diagonal	L2x2x3/16	13.6 28.9 (b)	Pass
T3	115 - 110	Diagonal	L2x2x3/16	18.4 37.1 (b)	Pass
T4	110 - 105	Diagonal	L2x2x3/16	26.3 53.9 (b)	Pass
T5	105 - 100	Diagonal	L2x2x3/16	28.4 57.4 (b)	Pass
T6	100 - 80	Diagonal	L2x2x3/16	44.9 82.6 (b)	Pass
T7	80 - 60	Diagonal	L2x2x3/16	32.0 54.8 (b)	Pass
T8	60 - 40	Diagonal	L2x2x3/16	46.0 54.0 (b)	Pass
T9	40 - 20	Diagonal	L3x3x1/4	28.7 45.8 (b)	Pass
T10	20 - 0	Diagonal	L3x3x1/4	32.3 42.9 (b)	Pass
T5	105 - 100	Secondary Horizontal	L2x2x1/4	2.3 5.7 (b)	Pass

Section No.	Elevation (ft.)	Component Type	Size	% Capacity <sup>1</sup>	Pass / Fail
T9	40 - 20	Secondary Horizontal	L2x2x1/8	48.3 63.0 (b)	Pass
T10	20 - 0	Secondary Horizontal	L2x2x1/8	70.8	Pass
T1	130 - 120	Top Girt	L2x2x1/4	1.3	Pass
T2	120 - 115	Top Girt	L2x2x1/8	10.0 12.0 (b)	Pass
T7	80 - 60	Top Girt	L2x2x1/8	34.9 42.5 (b)	Pass

1. Seismic loads do not control the section capacities.

**Table 4 – Additional Structure Component Capacities**

Elevation (ft.)	Component	% Capacity	Pass / Fail	Notes
0	Anchor Rods	54.5	Pass	1
0	Base Foundation (Soil Interaction)	39.1	Pass	1
0	Base Foundation (Structural)	34.3	Pass	1

1. Seismic loads do not control the section capacities.

**Table 5 - Maximum Dish Rotations at Service Wind Speeds**

Centerline Elevation (ft.)	Dish	Tilt (deg)*	Twist (deg)*
123.0	(1) Commscope VHLP3-11W	0.2365	0.0664
57.0	(2) Scala PR-850	0.1129	0.0226
51.0	(1) Scala PR-850	0.0986	0.0183

\*Allowable tilt and twist to be reviewed by the carrier

**GENERAL COMMENTS**

This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of Pyramid Network Services, LLC to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading information) modeled. If there are substantial modifications to be made or the assumptions made in this analysis are not accurate, FDH Infrastructure Services, LLC should be notified immediately to perform a revised analysis.

**LIMITATIONS**

All opinions and conclusions are considered accurate to a reasonable degree of engineering certainty based upon the evidence available at the time of this report. All opinions and conclusions are subject to revision based upon receipt of new or additional/updated information. All services are provided exercising a level of care and diligence equivalent to the standard and care of our profession. No other warranty or guarantee, expressed or implied, is offered. Our services are confidential in nature and we will not release this report to any other party without the client's consent. The use of this engineering work is limited to the express purpose for which it was commissioned and it may not be reused, copied, or distributed for any other purpose without the written consent of FDH Infrastructure Services, LLC.

## **APPENDIX**

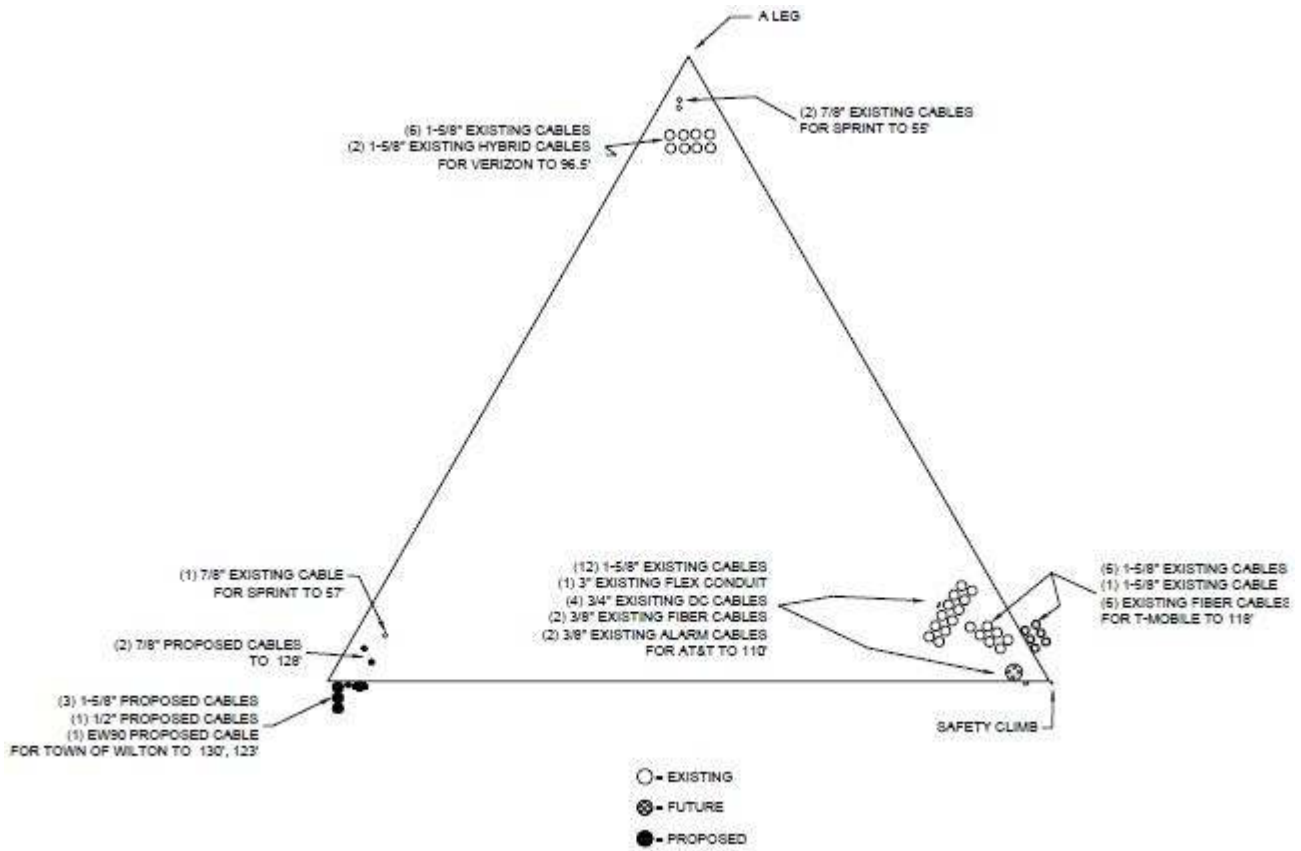
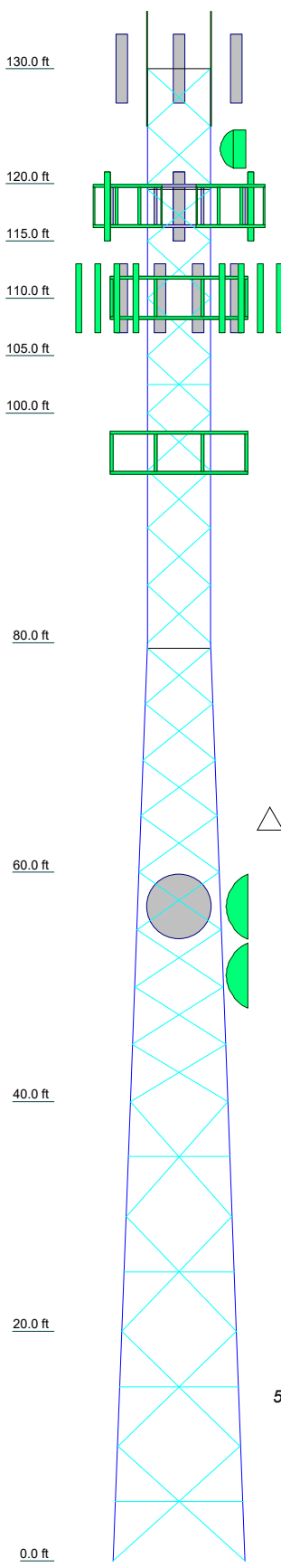


Figure 1- Assumed Feed Line Layout

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10
Legs	SR 1 3/4									
Leg Grade	A572-50									
Diagonals	L2x2x3/16									
Diagonal Grade	A36									
Top Glirts	L2x2x1/8									
Sec. Horizontals	N.A.									
Face Width (ft)	5.5									
# Panels @ (ft)	2 @ 5									
Weight (K)	0.6									



**DESIGNED APPURTENANCE LOADING**

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod	130	P65-16-XLH-RR w/ Mount Pipe	110
3"x12' Omni	128	(2) LGP21401 TMA	110
3"x12' Omni	128	(2) LGP21401 TMA	110
6' Side Arm [Site Pro 1 P/N: PSA6]	128	(2) LGP21401 TMA	110
6' Side Arm [Site Pro 1 P/N: PSA6]	128	TT19-08BP111-001	110
(3) BPA7496-180-14 w/Mount Pipe	128	TT19-08BP111-001	110
432F-83W-01-T	128	TT19-08BP111-001	110
12' Standard Duty V-Frame [Site Pro 1 P/N: VFA12-SD-S]	128	RRUS-11	110
Pipe Mount	123	RRUS-11	110
VHLP3-11W	123	RRUS 4478 B5	110
AIR32 KRD901146-1-B66A-B2A w/ Mount Pipe	118	RRUS 4478 B5	110
APXVAALL24_43-U-NA20 w/ Mount Pipe	118	RRUS 4478 B5	110
APXVAALL24_43-U-NA20 w/ Mount Pipe	118	RRUS 4415 B25	110
APXVAALL24_43-U-NA20 w/ Mount Pipe	118	RRUS 4415 B25	110
APXVAALL24_43-U-NA20 w/ Mount Pipe	118	RRUS 4415 B25	110
4449 B71 + B85	118	DC6-48-60-18-8F	110
4449 B71 + B85	118	DC6-48-60-18-8F	110
4449 B71 + B85	118	(3) 12' Sector Mounts [Sabre C10857001C]	110
4415 B25	118	OPA65R-BU6DA w/ Mount Pipe	110
4415 B25	118	OPA65R-BU6DA w/ Mount Pipe	110
4415 B25	118	OPA65R-BU6DA w/ Mount Pipe	110
4415 B25	118	RRUS 4478 B14	110
SDX1926Q-43	118	RRUS 4478 B14	110
SDX1926Q-43	118	(2) MX06FRO660-03_TIA w/ Mount Pipe	96.5
SDX1926Q-43	118	BXA-80090-8CF-EDIN-X w/ Mount Pipe	96.5
KRY 112 71	118	BXA-80090-8CF-EDIN-X w/ Mount Pipe	96.5
KRY 112 71	118	BXA-80090-8CF-EDIN-X w/ Mount Pipe	96.5
KRY 112 71	118	BXA-80090-8CF-EDIN-X w/ Mount Pipe	96.5
Sector Frame (SitePro 1 P/N: VFA12-HD)	118	RF4439d-25A	96.5
Sector Frame (SitePro 1 P/N: VFA12-HD)	118	RF4439d-25A	96.5
Sector Frame (SitePro 1 P/N: VFA12-HD)	118	RF4439d-25A	96.5
Air 6449 B41 w/ Pipe Mount	118	RF4440d-13A	96.5
Air 6449 B41 w/ Pipe Mount	118	RF4440d-13A	96.5
Air 6449 B41 w/ Pipe Mount	118	RF4440d-13A	96.5
AIR32 KRD901146-1-B66A-B2A w/ Mount Pipe	118	RRFDC-3315-PF-48	96.5
AIR32 KRD901146-1-B66A-B2A w/ Mount Pipe	118	RRFDC-3315-PF-48	96.5
AIR32 KRD901146-1-B66A-B2A w/ Mount Pipe	118	(3) 10' x 2' T-Arms	96.5
RRUS 4478 B14	110	MT6407-77A w/Mount Pipe	96.5
7770 w/Mount Pipe	110	MT6407-77A w/Mount Pipe	96.5
7770 w/Mount Pipe	110	(2) MX06FRO660-03_TIA w/ Mount Pipe	96.5
7770 w/Mount Pipe	110	PR-850	57
800 10965 w/ Mount Pipe	110	PR-850	55
800 10965 w/ Mount Pipe	110	PR-850	55
800 10965 w/ Mount Pipe	110	PR-850	55
P65-16-XLH-RR w/ Mount Pipe	110	1.9"Ø x 9.8' Pipe Mount	55

ALL REACTION ARE FACED DOWN SHEAR

UPLIFT SHEAR

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

**MATERIAL STRENGTH**

**TOWER DESIGN NOTES**

1. Tower is located in Fairfield County, Connecticut.
  2. Tower designed for Exposure B to the TIA-222-H Standard.
  3. Tower designed for a 116 mph basic wind in accordance with the TIA-222-H Standard.
  4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
  5. Deflections are based upon a 60 mph wind.
  6. Tower Risk Category II.
  7. Topographic Category 1 with Crest Height of 0.00 ft
  8. Evaluation considers Annex S of TIA-222-H.
  9. TOWER RATING: 82.6%
- TORQUE 15 kip-ft  
REACTIONS - 116 mph WIND

<p><b>FDH</b> INFRASTRUCTURE SERVICES ENGINEERING INNOVATION FDH-IS</p>	<p><b>FDH Infrastructure Services, LLC</b> 6521 Meridian Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>		<p>Job: <b>CT98078_Wilton_Deer Run</b></p>		
	<p>Project: <b>PR-009191</b></p>		<p>Client: <b>Pyramid Network Services, LLC</b></p>	<p>Drawn by: <b>Hailey Hipp</b></p>	<p>App'd:</p>
		<p>Code: <b>TIA-222-H</b></p>	<p>Date: <b>01/27/23</b></p>	<p>Scale: <b>NTS</b></p>	<p>Dwg No. <b>E-1</b></p>



BU:   
 WO:   
 Order:

Structure:   
 Rev:

**Location**

	Decimal Degrees	Deg	Min	Sec
Lat:	41.241389	+	41	14 29.00
Long:	-73.469889	-	73	28 11.60

**Code and Site Parameters**

Seismic Design Code:	<input type="text" value="TIA-222-H"/>	
Site Soil:	<input type="text" value="D (Default)"/>	Default
Risk Category:	<input type="text" value="II"/>	
<u>USGS Seismic Reference</u>		
S <sub>s</sub> :	<input type="text" value="0.2430"/>	g
S <sub>1</sub> :	<input type="text" value="0.0570"/>	g
T <sub>L</sub> :	<input type="text" value="6"/>	s

**Seismic Design Category Determination**

Importance Factor, I <sub>e</sub> :	<input type="text" value="1"/>	
Acceleration-based site coefficient, F <sub>a</sub> :	<input type="text" value="1.6000"/>	
Velocity-based site coefficient, F <sub>v</sub> :	<input type="text" value="2.4000"/>	
Design spectral response acceleration short period, S <sub>DS</sub> :	<input type="text" value="0.2592"/>	g
Design spectral response acceleration 1 s period, S <sub>D1</sub> :	<input type="text" value="0.0912"/>	g
Seismic Design Category Based on S <sub>DS</sub> :	<input type="text" value="B"/>	
Seismic Design Category Based on S <sub>D1</sub> :	<input type="text" value="B"/>	
Seismic Design Category Based on S <sub>1</sub> :	<input type="text" value="N/A"/>	
Controlling Seismic Design Category:	<input style="background-color: #00b09b; color: white;" type="text" value="B"/>	

BU:   
 WO:   
 Order:

Structure:   
 Rev:

**Tower Details**

	Tower Type:	Self-Support	
	Height, h:	130	ft
	Effective Seismic Weight, W:	29.65	kips
	Amplification Factor, A <sub>s</sub> :	1.0	2.7.8.1

**Seismic Base Shear**

	Response Modification Factor, R:	3	
	w <sub>a</sub> :	7.3462	ft
	w <sub>0</sub> :	11.5000	ft
	W <sub>1</sub> :	16.5471	kips
Weight of Structure and Appurtenances within top 5%, W <sub>2</sub> :		1.2467	kips
	K <sub>f</sub> :	4540	ft
	F <sub>a</sub> :	1.9031	hz
Approximate Fundamental Period Self-Support, T <sub>a</sub> :		0.5255	s 2.7.7.1.3.2
	Seismic Response Coefficient, C <sub>s</sub>	0.0864	2.7.7.1.1
	Seismic Response Coefficient Max 1, C <sub>smax</sub>	0.0579	2.7.7.1.1
	Seismic Response Coefficient Max 2, C <sub>smax</sub>	N/A	2.7.7.1.1
	Seismic Response Coefficient Min 1, C <sub>smin</sub>	0.0300	2.7.7.1.1
	Seismic Response Coefficient Min 2, C <sub>smin</sub>	N/A	2.7.7.1.1
	Controlling Seismic Response Coefficient, C <sub>sc</sub>	0.0579	
	Seismic Base Shear, V	1.715	kips 2.7.7.1.1

**Vertical Distribution Factors**

	Period Related Exponent, k:	1.013	2.7.7.1.2
	Sum of w <sub>i</sub> h <sub>i</sub> <sup>k</sup>	2371.57	2.7.7.1.2

Tower Section Loads								
Section Number	Length	Top Height	Mid Height, $h_x$	Section Weight, $w_x$	$w_x h_x^k$	$C_{vx}$	$F_{xh}$	$F_{xv}$
1	10.00	130.00	125.00	0.5829	77.48	0.0327	0.0560	0.0302
2	5.00	120.00	117.50	0.2537	31.68	0.0134	0.0229	0.0132
3	5.00	115.00	112.50	0.2313	27.63	0.0117	0.0200	0.0120
4	5.00	110.00	107.50	0.2313	26.39	0.0111	0.0191	0.0120
5	5.00	105.00	102.50	0.2839	30.87	0.0130	0.0223	0.0147
6	20.00	100.00	90.00	1.4362	136.88	0.0577	0.0990	0.0745
7	20.00	80.00	70.00	1.7052	126.00	0.0531	0.0911	0.0884
8	20.00	60.00	50.00	1.9833	104.23	0.0439	0.0754	0.1028
9	20.00	40.00	30.00	2.5879	81.07	0.0342	0.0586	0.1342
10	20.00	20.00	10.00	2.9359	30.23	0.0127	0.0219	0.1522
Sum				12.2315	672.46			

Discrete Loads						
Name	$h_x$	$w_x$	$w_x h_x^k$	$C_{vx}$	$F_{xh}$	$F_{xv}$
lightning rod Lightning Rod	130.00	0.0300	4.15	0.0017	0.0030	0.0016
omni 3"x12' Omni	128.00	0.0300	4.08	0.0017	0.0030	0.0016
omni 3"x12' Omni	128.00	0.0300	4.08	0.0017	0.0030	0.0016
6' Side Arm [Site Pro 1 P/N: PSA6]	128.00	0.0530	7.22	0.0030	0.0052	0.0027
6' Side Arm [Site Pro 1 P/N: PSA6]	128.00	0.0530	7.22	0.0030	0.0052	0.0027
ericsson Air 6449 B41 w/ Pipe Mount	118.00	0.1000	12.54	0.0053	0.0091	0.0052
ericsson Air 6449 B41 w/ Pipe Mount	118.00	0.1000	12.54	0.0053	0.0091	0.0052
ericsson Air 6449 B41 w/ Pipe Mount	118.00	0.1000	12.54	0.0053	0.0091	0.0052
AIR32 KRD901146-1-B66A-B2A w/ Mount Pipe	118.00	0.1500	18.81	0.0079	0.0136	0.0078
AIR32 KRD901146-1-B66A-B2A w/ Mount Pipe	118.00	0.1500	18.81	0.0079	0.0136	0.0078
AIR32 KRD901146-1-B66A-B2A w/ Mount Pipe	118.00	0.1500	18.81	0.0079	0.0136	0.0078
APXVAALL24_43-U-NA20 w/ Mount Pipe	118.00	0.1862	23.35	0.0098	0.0169	0.0097
APXVAALL24_43-U-NA20 w/ Mount Pipe	118.00	0.1862	23.35	0.0098	0.0169	0.0097
APXVAALL24_43-U-NA20 w/ Mount Pipe	118.00	0.1862	23.35	0.0098	0.0169	0.0097
4449 B71 + B85	118.00	0.0700	8.78	0.0037	0.0063	0.0036
4449 B71 + B85	118.00	0.0700	8.78	0.0037	0.0063	0.0036
4449 B71 + B85	118.00	0.0700	8.78	0.0037	0.0063	0.0036
ericsson 4415 B25	118.00	0.0600	7.52	0.0032	0.0054	0.0031
ericsson 4415 B25	118.00	0.0600	7.52	0.0032	0.0054	0.0031
ericsson 4415 B25	118.00	0.0600	7.52	0.0032	0.0054	0.0031
commscope SDX1926Q-43	118.00	0.0061	0.76	0.0003	0.0006	0.0003
commscope SDX1926Q-43	118.00	0.0061	0.76	0.0003	0.0006	0.0003
commscope SDX1926Q-43	118.00	0.0061	0.76	0.0003	0.0006	0.0003
ericsson KRY 112 71	118.00	0.0200	2.51	0.0011	0.0018	0.0010
ericsson KRY 112 71	118.00	0.0200	2.51	0.0011	0.0018	0.0010
ericsson KRY 112 71	118.00	0.0200	2.51	0.0011	0.0018	0.0010
Sector Frame (SitePro 1 P/N: VFA12-HD)	118.00	0.6580	82.51	0.0348	0.0597	0.0341
Sector Frame (SitePro 1 P/N: VFA12-HD)	118.00	0.6580	82.51	0.0348	0.0597	0.0341
Sector Frame (SitePro 1 P/N: VFA12-HD)	118.00	0.6580	82.51	0.0348	0.0597	0.0341
OPA65R-BU6DA w/ Mount Pipe	110.00	0.0889	10.38	0.0044	0.0075	0.0046
OPA65R-BU6DA w/ Mount Pipe	110.00	0.0889	10.38	0.0044	0.0075	0.0046
OPA65R-BU6DA w/ Mount Pipe	110.00	0.0889	10.38	0.0044	0.0075	0.0046
ericsson RRUS 4478 B14	110.00	0.0600	7.01	0.0030	0.0051	0.0031
ericsson RRUS 4478 B14	110.00	0.0600	7.01	0.0030	0.0051	0.0031
ericsson RRUS 4478 B14	110.00	0.0600	7.01	0.0030	0.0051	0.0031
powerwave 7770 w/Mount Pipe	110.00	0.0700	8.17	0.0034	0.0059	0.0036
powerwave 7770 w/Mount Pipe	110.00	0.0700	8.17	0.0034	0.0059	0.0036
powerwave 7770 w/Mount Pipe	110.00	0.0700	8.17	0.0034	0.0059	0.0036
kathrein 800 10965 w/ Mount Pipe	110.00	0.1400	16.35	0.0069	0.0118	0.0073
kathrein 800 10965 w/ Mount Pipe	110.00	0.1400	16.35	0.0069	0.0118	0.0073
kathrein 800 10965 w/ Mount Pipe	110.00	0.1400	16.35	0.0069	0.0118	0.0073
powerwave P65-16-XLH-RR w/ Mount Pipe	110.00	0.0800	9.34	0.0039	0.0068	0.0041
powerwave P65-16-XLH-RR w/ Mount Pipe	110.00	0.0800	9.34	0.0039	0.0068	0.0041
powerwave P65-16-XLH-RR w/ Mount Pipe	110.00	0.0800	9.34	0.0039	0.0068	0.0041
(2) powerwave LGP21401 TMA	110.00	0.0400	4.67	0.0020	0.0034	0.0021
(2) powerwave LGP21401 TMA	110.00	0.0400	4.67	0.0020	0.0034	0.0021
(2) powerwave LGP21401 TMA	110.00	0.0400	4.67	0.0020	0.0034	0.0021
powerwave TT19-08BP111-001	110.00	0.0200	2.34	0.0010	0.0017	0.0010
powerwave TT19-08BP111-001	110.00	0.0200	2.34	0.0010	0.0017	0.0010
powerwave TT19-08BP111-001	110.00	0.0200	2.34	0.0010	0.0017	0.0010
ericsson RRUS-11	110.00	0.0600	7.01	0.0030	0.0051	0.0031
ericsson RRUS-11	110.00	0.0600	7.01	0.0030	0.0051	0.0031
ericsson RRUS-11	110.00	0.0600	7.01	0.0030	0.0051	0.0031
ericsson RRUS 4478 B5	110.00	0.0600	7.01	0.0030	0.0051	0.0031
ericsson RRUS 4478 B5	110.00	0.0600	7.01	0.0030	0.0051	0.0031
ericsson RRUS 4478 B5	110.00	0.0600	7.01	0.0030	0.0051	0.0031
ericsson RRUS 4415 B25	110.00	0.0400	4.67	0.0020	0.0034	0.0021
ericsson RRUS 4415 B25	110.00	0.0400	4.67	0.0020	0.0034	0.0021
ericsson RRUS 4415 B25	110.00	0.0400	4.67	0.0020	0.0034	0.0021
raycap DC6-48-60-18-8F	110.00	0.0300	3.50	0.0015	0.0025	0.0016
raycap DC6-48-60-18-8F	110.00	0.0300	3.50	0.0015	0.0025	0.0016
(3) 12' Sector Mounts [Sabre C10857001C]	110.00	1.5000	175.18	0.0739	0.1267	0.0778
samsung MT6407-77A w/Mount Pipe	96.50	0.1100	11.25	0.0047	0.0081	0.0057
samsung MT6407-77A w/Mount Pipe	96.50	0.1100	11.25	0.0047	0.0081	0.0057
samsung MT6407-77A w/Mount Pipe	96.50	0.1100	11.25	0.0047	0.0081	0.0057
(2) jma wireless MX06FRO660-03_TIA w/ Mount Pipe	96.50	0.2000	20.46	0.0086	0.0148	0.0104
(2) jma wireless MX06FRO660-03_TIA w/ Mount Pipe	96.50	0.2000	20.46	0.0086	0.0148	0.0104
(2) jma wireless MX06FRO660-03_TIA w/ Mount Pipe	96.50	0.2000	20.46	0.0086	0.0148	0.0104
antel BXA-80090-8CF-EDIN-X w/ Mount Pipe	96.50	0.0600	6.14	0.0026	0.0044	0.0031
antel BXA-80090-8CF-EDIN-X w/ Mount Pipe	96.50	0.0600	6.14	0.0026	0.0044	0.0031
antel BXA-80090-8CF-EDIN-X w/ Mount Pipe	96.50	0.0600	6.14	0.0026	0.0044	0.0031
samsung RF4439d-25A	96.50	0.0700	7.16	0.0030	0.0052	0.0036
samsung RF4439d-25A	96.50	0.0700	7.16	0.0030	0.0052	0.0036
samsung RF4439d-25A	96.50	0.0700	7.16	0.0030	0.0052	0.0036
samsung RF4440d-13A	96.50	0.0700	7.16	0.0030	0.0052	0.0036
samsung RF4440d-13A	96.50	0.0700	7.16	0.0030	0.0052	0.0036
samsung RF4440d-13A	96.50	0.0700	7.16	0.0030	0.0052	0.0036
raycap RRFDC-3315-PF-48	96.50	0.0300	3.07	0.0013	0.0022	0.0016
raycap RRFDC-3315-PF-48	96.50	0.0300	3.07	0.0013	0.0022	0.0016
(3) 10' x 2' T-Arms	96.50	1.7400	177.97	0.0750	0.1287	0.0902
1.9"Ø x 9.8' Pipe Mount	55.00	0.0200	1.16	0.0005	0.0008	0.0010

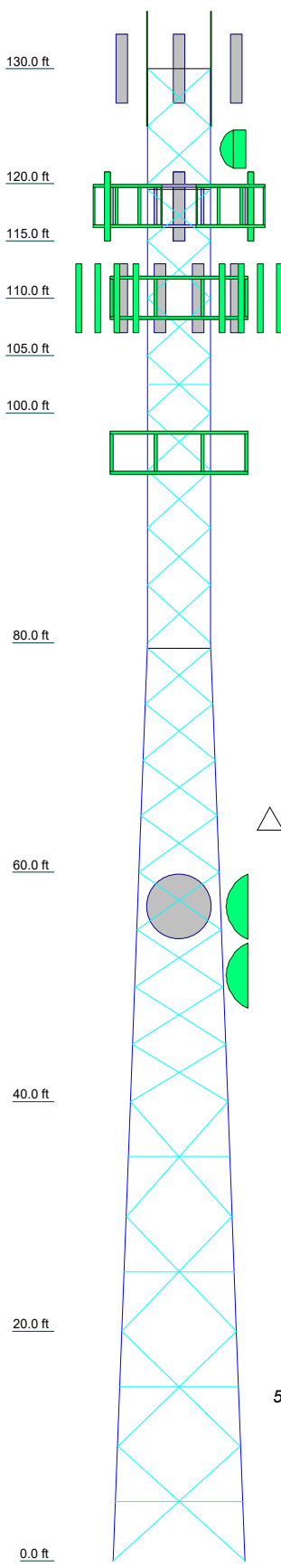
(3) rfi antennas BPA7496-180-14 w/Mount Pipe	128.00	0.2100	28.59	0.0121	0.0207	0.0109
432F-83W-01-T	128.00	0.0100	1.36	0.0006	0.0010	0.0005
12' Standard Duty V-Frame [Site Pro1 P/N: VFA12-SD-S]	128.00	0.4300	58.55	0.0247	0.0423	0.0223
Pipe Mount	123.00	0.0400	5.23	0.0022	0.0038	0.0021
scala PR-850	57.00	0.0400	2.40	0.0010	0.0017	0.0021
scala PR-850	55.00	0.0400	2.32	0.0010	0.0017	0.0021
scala PR-850	55.00	0.0400	2.32	0.0010	0.0017	0.0021
commscope VHLP3-11W	123.00	0.0500	6.54	0.0028	0.0047	0.0026
Sum		11.6934	1359.14			

Linear Loads								
Name	Start Height	End Height	$h_x$	$w_x$	$w_x h_x^k$	$C_{vx}$	$F_{xh}$	$F_{xv}$
misc Safety Line 3/8 From 0 to 118	115.00	118.00	116.50	0.0007	0.08	0.0000	0.0001	0.0000
misc Safety Line 3/8 From 0 to 118	110.00	115.00	112.50	0.0011	0.13	0.0001	0.0001	0.0001
misc Safety Line 3/8 From 0 to 118	105.00	110.00	107.50	0.0011	0.13	0.0001	0.0001	0.0001
misc Safety Line 3/8 From 0 to 118	100.00	105.00	102.50	0.0011	0.12	0.0001	0.0001	0.0001
misc Safety Line 3/8 From 0 to 118	80.00	100.00	90.00	0.0044	0.42	0.0002	0.0003	0.0002
misc Safety Line 3/8 From 0 to 118	60.00	80.00	70.00	0.0044	0.33	0.0001	0.0002	0.0002
misc Safety Line 3/8 From 0 to 118	40.00	60.00	50.00	0.0044	0.23	0.0001	0.0002	0.0002
misc Safety Line 3/8 From 0 to 118	20.00	40.00	30.00	0.0044	0.14	0.0001	0.0001	0.0002
misc Safety Line 3/8 From 0 to 118	0.00	20.00	10.00	0.0044	0.05	0.0000	0.0000	0.0002
(7) 1-5/8" From 0 to 118	115.00	118.00	116.50	0.0172	2.13	0.0009	0.0015	0.0009
(7) 1-5/8" From 0 to 118	110.00	115.00	112.50	0.0287	3.43	0.0014	0.0025	0.0015
(7) 1-5/8" From 0 to 118	105.00	110.00	107.50	0.0287	3.27	0.0014	0.0024	0.0015
(7) 1-5/8" From 0 to 118	100.00	105.00	102.50	0.0287	3.12	0.0013	0.0023	0.0015
(7) 1-5/8" From 0 to 118	80.00	100.00	90.00	0.1148	10.94	0.0046	0.0079	0.0060
(7) 1-5/8" From 0 to 118	60.00	80.00	70.00	0.1148	8.48	0.0036	0.0061	0.0060
(7) 1-5/8" From 0 to 118	40.00	60.00	50.00	0.1148	6.03	0.0025	0.0044	0.0060
(7) 1-5/8" From 0 to 118	20.00	40.00	30.00	0.1148	3.60	0.0015	0.0026	0.0060
(7) 1-5/8" From 0 to 118	0.00	20.00	10.00	0.1148	1.18	0.0005	0.0009	0.0060
(6) heliax-hj 1-5/8" From 0 to 118	115.00	118.00	116.50	0.0148	1.83	0.0008	0.0013	0.0008
(6) heliax-hj 1-5/8" From 0 to 118	110.00	115.00	112.50	0.0246	2.94	0.0012	0.0021	0.0013
(6) heliax-hj 1-5/8" From 0 to 118	105.00	110.00	107.50	0.0246	2.81	0.0012	0.0020	0.0013
(6) heliax-hj 1-5/8" From 0 to 118	100.00	105.00	102.50	0.0246	2.67	0.0011	0.0019	0.0013
(6) heliax-hj 1-5/8" From 0 to 118	80.00	100.00	90.00	0.0984	9.38	0.0040	0.0068	0.0051
(6) heliax-hj 1-5/8" From 0 to 118	60.00	80.00	70.00	0.0984	7.27	0.0031	0.0053	0.0051
(6) heliax-hj 1-5/8" From 0 to 118	40.00	60.00	50.00	0.0984	5.17	0.0022	0.0037	0.0051
(6) heliax-hj 1-5/8" From 0 to 118	20.00	40.00	30.00	0.0984	3.08	0.0013	0.0022	0.0051
(6) heliax-hj 1-5/8" From 0 to 118	0.00	20.00	10.00	0.0984	1.01	0.0004	0.0007	0.0051
T-Brackets From 8.5 to 110	105.00	110.00	107.50	0.0210	2.40	0.0010	0.0017	0.0011
T-Brackets From 8.5 to 110	100.00	105.00	102.50	0.0210	2.28	0.0010	0.0017	0.0011
T-Brackets From 8.5 to 110	80.00	100.00	90.00	0.0840	8.01	0.0034	0.0058	0.0044
T-Brackets From 8.5 to 110	60.00	80.00	70.00	0.0840	6.21	0.0026	0.0045	0.0044
T-Brackets From 8.5 to 110	40.00	60.00	50.00	0.0840	4.41	0.0019	0.0032	0.0044
T-Brackets From 8.5 to 110	20.00	40.00	30.00	0.0840	2.63	0.0011	0.0019	0.0044
T-Brackets From 8.5 to 110	8.50	20.00	14.25	0.0483	0.71	0.0003	0.0005	0.0025
(12) 1-5/8" From 0 to 110	105.00	110.00	107.50	0.0492	5.61	0.0024	0.0041	0.0026
(12) 1-5/8" From 0 to 110	100.00	105.00	102.50	0.0492	5.35	0.0023	0.0039	0.0026
(12) 1-5/8" From 0 to 110	80.00	100.00	90.00	0.1968	18.76	0.0079	0.0136	0.0102
(12) 1-5/8" From 0 to 110	60.00	80.00	70.00	0.1968	14.54	0.0061	0.0105	0.0102
(12) 1-5/8" From 0 to 110	40.00	60.00	50.00	0.1968	10.34	0.0044	0.0075	0.0102
(12) 1-5/8" From 0 to 110	20.00	40.00	30.00	0.1968	6.17	0.0026	0.0045	0.0102
(12) 1-5/8" From 0 to 110	0.00	20.00	10.00	0.1968	2.03	0.0009	0.0015	0.0102
heliax-hj 3" From 0 to 110	105.00	110.00	107.50	0.0089	1.02	0.0004	0.0007	0.0005
heliax-hj 3" From 0 to 110	100.00	105.00	102.50	0.0089	0.97	0.0004	0.0007	0.0005
heliax-hj 3" From 0 to 110	80.00	100.00	90.00	0.0356	3.39	0.0014	0.0025	0.0018
heliax-hj 3" From 0 to 110	60.00	80.00	70.00	0.0356	2.63	0.0011	0.0019	0.0018
heliax-hj 3" From 0 to 110	40.00	60.00	50.00	0.0356	1.87	0.0008	0.0014	0.0018
heliax-hj 3" From 0 to 110	20.00	40.00	30.00	0.0356	1.12	0.0005	0.0008	0.0018
heliax-hj 3" From 0 to 110	0.00	20.00	10.00	0.0356	0.37	0.0002	0.0003	0.0018
(4) 3/4" From 0 to 110	105.00	110.00	107.50	0.0356	4.06	0.0017	0.0029	0.0018
(4) 3/4" From 0 to 110	100.00	105.00	102.50	0.0356	3.87	0.0016	0.0028	0.0018
(4) 3/4" From 0 to 110	80.00	100.00	90.00	0.1424	13.57	0.0057	0.0098	0.0074
(4) 3/4" From 0 to 110	60.00	80.00	70.00	0.1424	10.52	0.0044	0.0076	0.0074
(4) 3/4" From 0 to 110	40.00	60.00	50.00	0.1424	7.48	0.0032	0.0054	0.0074
(4) 3/4" From 0 to 110	20.00	40.00	30.00	0.1424	4.46	0.0019	0.0032	0.0074
(4) 3/4" From 0 to 110	0.00	20.00	10.00	0.1424	1.47	0.0006	0.0011	0.0074
(2) heliax-hj 3/8" From 0 to 110	105.00	110.00	107.50	0.0018	0.21	0.0001	0.0001	0.0001
(2) heliax-hj 3/8" From 0 to 110	100.00	105.00	102.50	0.0018	0.20	0.0001	0.0001	0.0001
(2) heliax-hj 3/8" From 0 to 110	80.00	100.00	90.00	0.0072	0.69	0.0003	0.0005	0.0004
(2) heliax-hj 3/8" From 0 to 110	60.00	80.00	70.00	0.0072	0.53	0.0002	0.0004	0.0004
(2) heliax-hj 3/8" From 0 to 110	40.00	60.00	50.00	0.0072	0.38	0.0002	0.0003	0.0004
(2) heliax-hj 3/8" From 0 to 110	20.00	40.00	30.00	0.0072	0.23	0.0001	0.0002	0.0004
(2) heliax-hj 3/8" From 0 to 110	0.00	20.00	10.00	0.0072	0.07	0.0000	0.0001	0.0004
(2) heliax-hj 3/8" From 0 to 110	105.00	110.00	107.50	0.0018	0.21	0.0001	0.0001	0.0001
(2) heliax-hj 3/8" From 0 to 110	100.00	105.00	102.50	0.0018	0.20	0.0001	0.0001	0.0001
(2) heliax-hj 3/8" From 0 to 110	80.00	100.00	90.00	0.0072	0.69	0.0003	0.0005	0.0004
(2) heliax-hj 3/8" From 0 to 110	60.00	80.00	70.00	0.0072	0.53	0.0002	0.0004	0.0004
(2) heliax-hj 3/8" From 0 to 110	40.00	60.00	50.00	0.0072	0.38	0.0002	0.0003	0.0004
(2) heliax-hj 3/8" From 0 to 110	20.00	40.00	30.00	0.0072	0.23	0.0001	0.0002	0.0004
(2) heliax-hj 3/8" From 0 to 110	0.00	20.00	10.00	0.0072	0.07	0.0000	0.0001	0.0004
(8) (6) 1-5/8"; (2) 1-5/8" Hybrid From 9.5 to 96.5	80.00	96.50	88.25	0.1082	10.11	0.0043	0.0073	0.0056
(8) (6) 1-5/8"; (2) 1-5/8" Hybrid From 9.5 to 96.5	60.00	80.00	70.00	0.1312	9.69	0.0041	0.0070	0.0068
(8) (6) 1-5/8"; (2) 1-5/8" Hybrid From 9.5 to 96.5	40.00	60.00	50.00	0.1312	6.90	0.0029	0.0050	0.0068
(8) (6) 1-5/8"; (2) 1-5/8" Hybrid From 9.5 to 96.5	20.00	40.00	30.00	0.1312	4.11	0.0017	0.0030	0.0068
(8) (6) 1-5/8"; (2) 1-5/8" Hybrid From 9.5 to 96.5	9.50	20.00	14.75	0.0689	1.05	0.0004	0.0008	0.0036
T-Brackets From 9.5 to 95	80.00	95.00	87.50	0.0630	5.84	0.0025	0.0042	0.0033
T-Brackets From 9.5 to 95	60.00	80.00	70.00	0.0840	6.21	0.0026	0.0045	0.0044
T-Brackets From 9.5 to 95	40.00	60.00	50.00	0.0840	4.41	0.0019	0.0032	0.0044
T-Brackets From 9.5 to 95	20.00	40.00	30.00	0.0840	2.63	0.0011	0.0019	0.0044
T-Brackets From 9.5 to 95	9.50	20.00	14.75	0.0441	0.67	0.0003	0.0005	0.0023
heliax-hj 7/8" From 9 to 57	40.00	57.00	48.50	0.0092	0.47	0.0002	0.0003	0.0005
heliax-hj 7/8" From 9 to 57	20.00	40.00	30.00	0.0108	0.34	0.0001	0.0002	0.0006

heliac-hj 7/8" From 9 to 57	9.00	20.00	14.50	0.0059	0.09	0.0000	0.0001	0.0003
(2) heliac-hj 7/8" From 9 to 128	120.00	128.00	124.00	0.0086	1.14	0.0005	0.0008	0.0004
(2) heliac-hj 7/8" From 9 to 128	115.00	120.00	117.50	0.0054	0.67	0.0003	0.0005	0.0003
(2) heliac-hj 7/8" From 9 to 128	110.00	115.00	112.50	0.0054	0.65	0.0003	0.0005	0.0003
(2) heliac-hj 7/8" From 9 to 128	105.00	110.00	107.50	0.0054	0.62	0.0003	0.0004	0.0003
(2) heliac-hj 7/8" From 9 to 128	100.00	105.00	102.50	0.0054	0.59	0.0002	0.0004	0.0003
(2) heliac-hj 7/8" From 9 to 128	80.00	100.00	90.00	0.0216	2.06	0.0009	0.0015	0.0011
(2) heliac-hj 7/8" From 9 to 128	60.00	80.00	70.00	0.0216	1.60	0.0007	0.0012	0.0011
(2) heliac-hj 7/8" From 9 to 128	40.00	60.00	50.00	0.0216	1.14	0.0005	0.0008	0.0011
(2) heliac-hj 7/8" From 9 to 128	20.00	40.00	30.00	0.0216	0.68	0.0003	0.0005	0.0011
(2) heliac-hj 7/8" From 9 to 128	9.00	20.00	14.50	0.0119	0.18	0.0001	0.0001	0.0006
(2) heliac-hj 7/8" From 9.5 to 55	40.00	55.00	47.50	0.0162	0.81	0.0003	0.0006	0.0008
(2) heliac-hj 7/8" From 9.5 to 55	20.00	40.00	30.00	0.0216	0.68	0.0003	0.0005	0.0011
(2) heliac-hj 7/8" From 9.5 to 55	9.50	20.00	14.75	0.0113	0.17	0.0001	0.0001	0.0006
T-Brackets From 8.5 to 95	80.00	95.00	87.50	0.0630	5.84	0.0025	0.0042	0.0033
T-Brackets From 8.5 to 95	60.00	80.00	70.00	0.0840	6.21	0.0026	0.0045	0.0044
T-Brackets From 8.5 to 95	40.00	60.00	50.00	0.0840	4.41	0.0019	0.0032	0.0044
T-Brackets From 8.5 to 95	20.00	40.00	30.00	0.0840	2.63	0.0011	0.0019	0.0044
T-Brackets From 8.5 to 95	8.50	20.00	14.25	0.0483	0.71	0.0003	0.0005	0.0025
(3) andrew LDF7-50A(1-5/8") From 0 to 130	120.00	130.00	125.00	0.0246	3.27	0.0014	0.0024	0.0013
(3) andrew LDF7-50A(1-5/8") From 0 to 130	115.00	120.00	117.50	0.0123	1.54	0.0006	0.0011	0.0006
(3) andrew LDF7-50A(1-5/8") From 0 to 130	110.00	115.00	112.50	0.0123	1.47	0.0006	0.0011	0.0006
(3) andrew LDF7-50A(1-5/8") From 0 to 130	105.00	110.00	107.50	0.0123	1.40	0.0006	0.0010	0.0006
(3) andrew LDF7-50A(1-5/8") From 0 to 130	100.00	105.00	102.50	0.0123	1.34	0.0006	0.0010	0.0006
(3) andrew LDF7-50A(1-5/8") From 0 to 130	80.00	100.00	90.00	0.0492	4.69	0.0020	0.0034	0.0026
(3) andrew LDF7-50A(1-5/8") From 0 to 130	60.00	80.00	70.00	0.0492	3.64	0.0015	0.0026	0.0026
(3) andrew LDF7-50A(1-5/8") From 0 to 130	40.00	60.00	50.00	0.0492	2.59	0.0011	0.0019	0.0026
(3) andrew LDF7-50A(1-5/8") From 0 to 130	20.00	40.00	30.00	0.0492	1.54	0.0006	0.0011	0.0026
(3) andrew LDF7-50A(1-5/8") From 0 to 130	0.00	20.00	10.00	0.0492	0.51	0.0002	0.0004	0.0026
andrew LDF4-50A(1/2") From 0 to 130	120.00	130.00	125.00	0.0015	0.20	0.0001	0.0001	0.0001
andrew LDF4-50A(1/2") From 0 to 130	115.00	120.00	117.50	0.0008	0.09	0.0000	0.0001	0.0000
andrew LDF4-50A(1/2") From 0 to 130	110.00	115.00	112.50	0.0008	0.09	0.0000	0.0001	0.0000
andrew LDF4-50A(1/2") From 0 to 130	105.00	110.00	107.50	0.0008	0.09	0.0000	0.0001	0.0000
andrew LDF4-50A(1/2") From 0 to 130	100.00	105.00	102.50	0.0008	0.08	0.0000	0.0001	0.0000
andrew LDF4-50A(1/2") From 0 to 130	80.00	100.00	90.00	0.0030	0.29	0.0001	0.0002	0.0002
andrew LDF4-50A(1/2") From 0 to 130	60.00	80.00	70.00	0.0030	0.22	0.0001	0.0002	0.0002
andrew LDF4-50A(1/2") From 0 to 130	40.00	60.00	50.00	0.0030	0.16	0.0001	0.0001	0.0002
andrew LDF4-50A(1/2") From 0 to 130	20.00	40.00	30.00	0.0030	0.09	0.0000	0.0001	0.0002
andrew LDF4-50A(1/2") From 0 to 130	0.00	20.00	10.00	0.0030	0.03	0.0000	0.0000	0.0002
commscope EW90(ELLIPTICAL) From 0 to 123	120.00	123.00	121.50	0.0010	0.12	0.0001	0.0001	0.0000
commscope EW90(ELLIPTICAL) From 0 to 123	115.00	120.00	117.50	0.0016	0.20	0.0001	0.0001	0.0001
commscope EW90(ELLIPTICAL) From 0 to 123	110.00	115.00	112.50	0.0016	0.19	0.0001	0.0001	0.0001
commscope EW90(ELLIPTICAL) From 0 to 123	105.00	110.00	107.50	0.0016	0.18	0.0001	0.0001	0.0001
commscope EW90(ELLIPTICAL) From 0 to 123	100.00	105.00	102.50	0.0016	0.17	0.0001	0.0001	0.0001
commscope EW90(ELLIPTICAL) From 0 to 123	80.00	100.00	90.00	0.0064	0.61	0.0003	0.0004	0.0003
commscope EW90(ELLIPTICAL) From 0 to 123	60.00	80.00	70.00	0.0064	0.47	0.0002	0.0003	0.0003
commscope EW90(ELLIPTICAL) From 0 to 123	40.00	60.00	50.00	0.0064	0.34	0.0001	0.0002	0.0003
commscope EW90(ELLIPTICAL) From 0 to 123	20.00	40.00	30.00	0.0064	0.20	0.0001	0.0001	0.0003
commscope EW90(ELLIPTICAL) From 0 to 123	0.00	20.00	10.00	0.0064	0.07	0.0000	0.0000	0.0003
Sum				5.7261	339.97			



Section	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
Legs	SR 3 1/2	SR 3 1/4	SR 3	SR 2 3/4	SR 2 1/2	SR 1 3/4	SR 1 3/4	SR 1 3/4	SR 1 3/4	SR 1 3/4
Leg Grade										
Diagonals	L3x3x1/4	N.A.	N.A.	L2x2x1/8	L2x2x3/16	L2x2x1/8	L2x2x1/8	L2x2x1/8	L2x2x1/8	L2x2x1/4
Diagonal Grade										A572-50
Top Girts										
Sec. Horizontals	L2x2x1/8	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Face Width (ft)	10	8.5	7	4 @ 4.875	4 @ 4.875	4 @ 4.875	4 @ 4.875	4 @ 4.875	4 @ 4.875	4 @ 4.875
# Panels @ (ft)	4 @ 10	2.6	2.0	1.7	1.4	0.3	0.2	0.2	0.3	0.6
Weight (K)	12.2	2.9								5.5



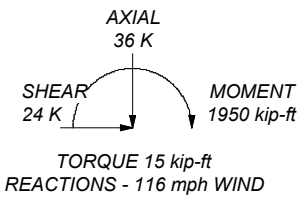
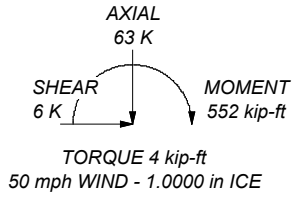
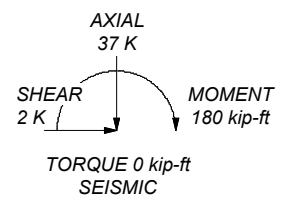
MATERIAL STRENGTH					
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

**TOWER DESIGN NOTES**

1. Tower is located in Fairfield County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 116 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. Evaluation considers Annex S of TIA-222-H.
9. CCISeismic Note: Seismic loads generated by CCISeismic 3.38
10. CCISeismic Note: Seismic calculations are in accordance with TIA-222-H
11. TOWER RATING: 82.6%

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:  
 DOWN: 208 K  
 SHEAR: 15 K  
 UPLIFT: -178 K  
 SHEAR: 13 K



**FDH Infrastructure Services, LLC**  
 6521 Meridian Drive  
 Raleigh, North Carolina 27616  
 Phone: (919) 755-1012  
 FAX: (919) 755-1031

Job: <b>CT98078_Wilton_Deer Run</b>			
Project: <b>PR-009191</b>		Drawn by: <b>Hailey Hipp</b>	
Client: <b>Pyramid Network Services, LLC</b>		App'd:	
Code: <b>TIA-222-H</b>		Date: <b>01/27/23</b>	
Path:		Scale: <b>NTS</b>	
		Dwg No. <b>E-1</b>	



<p><b>tnxTower</b></p> <p><b>FDH Infrastructure Services, LLC</b></p> <p>6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p>CT98078_ Wilton_ Deer Run</p>	<p><b>Page</b></p> <p>1 of 59</p>
	<p><b>Project</b></p> <p>PR-009191</p>	<p><b>Date</b></p> <p>12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p>Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p>Hailey Hipp</p>

## Tower Input Data

The main tower is a 3x free standing tower with an overall height of 130.00 ft above the ground line.

The base of the tower is set at an elevation of 0.00 ft above the ground line.

The face width of the tower is 5.50 ft at the top and 11.50 ft at the base.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

Tower is located in Fairfield County, Connecticut.

Tower base elevation above sea level: 41.00 ft.

Basic wind speed of 116 mph.

Risk Category II.

Exposure Category B.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0.00 ft.

Nominal ice thickness of 1.0000 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 50 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

Evaluation considers Annex S of TIA-222-H.

CCISEismic Note: Seismic loads generated by CCISEismic 3.38.

CCISEismic Note: Seismic calculations are in accordance with TIA-222-H.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in tower member design is 1.

Tower analysis based on target reliabilities in accordance with Annex S.

Load Modification Factors used:  $K_{es}(F_w) = 0.95$ ,  $K_{es}(t_i) = 0.85$ ,  $K_{es}(E_v \text{ and } E_h) = 1.0$ .

Maximum demand-capacity ratio is: 1.

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	Retention 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-H Bracing Resist. Exemption
√ Include Bolts In Member Capacity	Autocalc Torque Arm Areas	Use TIA-222-H 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	Ignore KL/ry For 60 Deg. Angle Legs	Pole Without Linear Attachments
		Pole With Shroud Or No Appurtenances
		Outside and Inside Corner Radii Are



<p style="text-align: center;"><b>tnxTower</b></p> <p style="text-align: center;"><b>FDH Infrastructure Services, LLC</b></p> <p style="text-align: center;">6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<b>Job</b>	CT98078_ Wilton_Deer Run	<b>Page</b>	3 of 59
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	<b>Client</b>	Pyramid Network Services, LLC	<b>Designed by</b>	Hailey Hipp

Tower Section	Tower Elevation <i>ft</i>	Diagonal Spacing <i>ft</i>	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset <i>in</i>	Bottom Girt Offset <i>in</i>
T1	130.00-120.00	5.00	X Brace	No	No	0.0000	0.0000
T2	120.00-115.00	4.50	X Brace	No	No	6.0000	0.0000
T3	115.00-110.00	5.00	X Brace	No	No	0.0000	0.0000
T4	110.00-105.00	5.00	X Brace	No	No	0.0000	0.0000
T5	105.00-100.00	5.00	X Brace	No	Yes	0.0000	0.0000
T6	100.00-80.00	5.00	X Brace	No	No	0.0000	0.0000
T7	80.00-60.00	4.88	X Brace	No	No	6.0000	0.0000
T8	60.00-40.00	5.00	X Brace	No	No	0.0000	0.0000
T9	40.00-20.00	10.00	X Brace	No	Yes	0.0000	0.0000
T10	20.00-0.00	10.00	X Brace	No	Yes	0.0000	0.0000

### Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 130.00-120.00	Solid Round	1 3/4	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A572-50 (50 ksi)
T2 120.00-115.00	Solid Round	1 3/4	A572-50 (50 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T3 115.00-110.00	Solid Round	1 3/4	A572-50 (50 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T4 110.00-105.00	Solid Round	1 3/4	A572-50 (50 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T5 105.00-100.00	Solid Round	1 3/4	A572-50 (50 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T6 100.00-80.00	Solid Round	2 1/2	A572-50 (50 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T7 80.00-60.00	Solid Round	2 3/4	A572-50 (50 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T8 60.00-40.00	Solid Round	3	A572-50 (50 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T9 40.00-20.00	Solid Round	3 1/4	A572-50 (50 ksi)	Equal Angle	L3x3x1/4	A36 (36 ksi)
T10 20.00-0.00	Solid Round	3 1/2	A572-50 (50 ksi)	Equal Angle	L3x3x1/4	A36 (36 ksi)

### Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 130.00-120.00	Equal Angle	L2x2x1/4	A572-50 (50 ksi)	Solid Round		A36 (36 ksi)
T2 120.00-115.00	Equal Angle	L2x2x1/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T7 80.00-60.00	Equal Angle	L2x2x1/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)





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	<p><b>Project</b></p> <p style="text-align: center;">PR-009191</p>	<p><b>Date</b></p> <p style="text-align: center;">12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p style="text-align: center;">Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p style="text-align: center;">Hailey Hipp</p>

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	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
T2 120.00-115.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T3 115.00-110.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T4 110.00-105.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T5 105.00-100.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T6 100.00-80.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T7 80.00-60.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T8 60.00-40.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T9 40.00-20.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T10 20.00-0.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

**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 130.00-120.00	Flange	0.6250	4	0.6250	1	0.6250	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T2 120.00-115.00	Flange	0.7500	0	0.6250	1	0.3750	1	0.0000	0	0.6250	0	0.6250	0	0.6250	0
T3 115.00-110.00	Flange	0.7500	0	0.6250	1	0.6250	0	0.0000	0	0.6250	0	0.6250	0	0.6250	0
T4 110.00-105.00	Flange	0.7500	0	0.6250	1	0.6250	0	0.0000	0	0.6250	0	0.6250	0	0.6250	0
T5 105.00-100.00	Flange	0.7500	4	0.6250	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	1
T6 100.00-80.00	Flange	1.0000	4	0.6250	1	0.6250	0	0.6250	0	0.6250	0	0.6250	0	0.6250	0
T7 80.00-60.00	Flange	1.0000	4	0.6250	1	0.3750	1	0.0000	0	0.6250	0	0.6250	0	0.6250	0
T8 60.00-40.00	Flange	1.0000	6	0.6250	1	0.6250	0	0.0000	0	0.6250	0	0.6250	0	0.6250	0
T9 40.00-20.00	Flange	1.0000	6	0.6250	1	0.6250	0	0.0000	0	0.6250	0	0.6250	0	0.6250	1
T10 20.00-0.00	Flange	1.0000	0	0.6250	1	0.6250	0	0.0000	0	0.6250	0	0.6250	0	0.6250	1

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

<b>tnxTower</b>  <b>FDH Infrastructure Services, LLC</b> 6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	<b>Job</b>	CT98078_ Wilton_ Deer Run	<b>Page</b>	7 of 59
	<b>Project</b>	PR-009191	<b>Date</b>	12:11:08 01/27/23
	<b>Client</b>	Pyramid Network Services, LLC	<b>Designed by</b>	Hailey Hipp

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
*** Safety Line 3/8 *** ***	B	No	No	Ar (CaAa)	118.00 - 0.00	0.0000	0.5	1	1	0.0000	0.3750		0.22
1-5/8"	A	No	No	Ar (CaAa)	118.00 - 0.00	-85.0000	0	7	2	0.5000	1.9800		0.82
1-5/8"	B	No	No	Ar (CaAa)	118.00 - 0.00	0.0000	0.4	6	3	0.5000	1.9800		0.82
T-Brackets	A	No	No	Af (CaAa)	110.00 - 8.50	-100.0000	0	1	1	1.0000	1.0000		4.20
*** 1-5/8"	A	No	No	Ar (CaAa)	110.00 - 0.00	-75.0000	0	12	6	0.5000	1.9800		0.82
3"	C	No	No	Ar (CaAa)	110.00 - 0.00	-0.5000	-0.43	1	1	0.5000	3.0100		1.78
3/8"	A	No	No	Ar (CaAa)	110.00 - 0.00	-72.0000	0	2	2	0.0000	0.3750		0.18
3/8"	C	No	No	Ar (CaAa)	110.00 - 0.00	0.0000	-0.45	2	2	0.0000	0.3750		0.18
*** (6) 1-5/8"; (2) 1-5/8" Hybrid T-Brackets	C	No	No	Ar (CaAa)	96.50 - 9.50	-85.0000	0	8	4	0.5000	1.9800		0.82
	C	No	No	Af (CaAa)	95.00 - 9.50	-95.0000	0	1	1	1.0000	1.0000		4.20
*** 7/8"	B	No	No	Ar (CaAa)	57.00 - 9.00	-85.0000	0	1	1	0.5000	1.1100		0.54
7/8"	B	No	No	Ar (CaAa)	128.00 - 9.00	-90.0000	0	2	2	0.5000	1.1100		0.54
7/8"	C	No	No	Ar (CaAa)	55.00 - 9.50	-90.0000	0.02	2	1	0.5000	1.1100		0.54
T-Brackets	B	No	No	Af (CaAa)	95.00 - 8.50	-95.0000	0	1	1	1.0000	1.0000		4.20
*** LDF7-50A(1-5/8")	C	No	No	Ar (CaAa)	130.00 - 0.00	0.0000	0.49	3	1	0.5000	1.9800		0.82
LDF4-50A(1/2")	C	No	No	Ar (CaAa)	130.00 - 0.00	0.0000	0.47	1	1	0.5000	0.6300		0.15
EW90(ELLIP TICAL)	C	No	No	Ar (CaAa)	123.00 - 0.00	0.0000	0.46	1	1	0.5000	1.3200		0.32

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

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	C <sub>A</sub> A <sub>A</sub>	Weight plf
*** 3/4"	C	No	No	CaAa (In Face)	110.00 - 0.00	-0.5000	-0.43	4	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00 0.00

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	<b>Project</b>	PR-009191	<b>Date</b>	12:11:08 01/27/23
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### Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>	Weight K
T1	130.00-120.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	1.776	0.000	0.01
		C	0.000	0.000	6.966	0.000	0.03
T2	120.00-115.00	A	0.000	0.000	4.158	0.000	0.02
		B	0.000	0.000	4.787	0.000	0.02
		C	0.000	0.000	3.945	0.000	0.01
T3	115.00-110.00	A	0.000	0.000	6.930	0.000	0.03
		B	0.000	0.000	7.237	0.000	0.03
		C	0.000	0.000	3.945	0.000	0.01
T4	110.00-105.00	A	0.000	0.000	20.018	0.000	0.10
		B	0.000	0.000	7.237	0.000	0.03
		C	0.000	0.000	5.825	0.000	0.06
T5	105.00-100.00	A	0.000	0.000	20.018	0.000	0.10
		B	0.000	0.000	7.237	0.000	0.03
		C	0.000	0.000	5.825	0.000	0.06
T6	100.00-80.00	A	0.000	0.000	80.073	0.000	0.40
		B	0.000	0.000	31.450	0.000	0.19
		C	0.000	0.000	51.936	0.000	0.42
T7	80.00-60.00	A	0.000	0.000	80.073	0.000	0.40
		B	0.000	0.000	32.283	0.000	0.21
		C	0.000	0.000	58.313	0.000	0.46
T8	60.00-40.00	A	0.000	0.000	80.073	0.000	0.40
		B	0.000	0.000	34.170	0.000	0.22
		C	0.000	0.000	61.643	0.000	0.48
T9	40.00-20.00	A	0.000	0.000	80.073	0.000	0.40
		B	0.000	0.000	34.503	0.000	0.22
		C	0.000	0.000	62.753	0.000	0.48
T10	20.00-0.00	A	0.000	0.000	78.657	0.000	0.37
		B	0.000	0.000	30.090	0.000	0.17
		C	0.000	0.000	44.013	0.000	0.37

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

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>	Weight K
T1	130.00-120.00	A	0.971	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	5.572	0.000	0.04
		C		0.000	0.000	15.688	0.000	0.16
T2	120.00-115.00	A	0.965	0.000	0.000	4.885	0.000	0.06
		B		0.000	0.000	8.264	0.000	0.09
		C		0.000	0.000	8.964	0.000	0.09
T3	115.00-110.00	A	0.961	0.000	0.000	8.134	0.000	0.11
		B		0.000	0.000	11.439	0.000	0.13
		C		0.000	0.000	8.949	0.000	0.09
T4	110.00-105.00	A	0.957	0.000	0.000	23.045	0.000	0.33
		B		0.000	0.000	11.419	0.000	0.13
		C		0.000	0.000	13.589	0.000	0.13
T5	105.00-100.00	A	0.952	0.000	0.000	23.017	0.000	0.33
		B		0.000	0.000	11.399	0.000	0.13
		C		0.000	0.000	13.559	0.000	0.13
T6	100.00-80.00	A	0.940	0.000	0.000	91.771	0.000	1.29
		B		0.000	0.000	50.695	0.000	0.60
		C		0.000	0.000	85.964	0.000	1.01



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	<b>Client</b> Pyramid Network Services, LLC	<b>Designed by</b> Hailey Hipp

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>	Weight K
T7	80.00-60.00	A	0.916	0.000	0.000	91.203	0.000	1.28
		B		0.000	0.000	51.958	0.000	0.63
		C		0.000	0.000	92.556	0.000	1.11
T8	60.00-40.00	A	0.886	0.000	0.000	90.466	0.000	1.26
		B		0.000	0.000	56.194	0.000	0.66
		C		0.000	0.000	101.458	0.000	1.16
T9	40.00-20.00	A	0.842	0.000	0.000	89.393	0.000	1.23
		B		0.000	0.000	55.916	0.000	0.65
		C		0.000	0.000	102.883	0.000	1.14
T10	20.00-0.00	A	0.754	0.000	0.000	84.567	0.000	1.11
		B		0.000	0.000	42.999	0.000	0.49
		C		0.000	0.000	75.382	0.000	0.75

### Feed Line Center of Pressure

Section	Elevation ft	CP <sub>X</sub> in	CP <sub>Z</sub> in	CP <sub>X</sub> Ice in	CP <sub>Z</sub> Ice in
T1	130.00-120.00	-5.2717	5.6117	-7.9522	7.3284
T2	120.00-115.00	3.9100	8.7139	0.3048	9.9964
T3	115.00-110.00	9.6162	11.0437	5.3395	11.9239
T4	110.00-105.00	17.0321	15.4423	14.7626	15.9341
T5	105.00-100.00	15.4752	14.3094	13.7320	14.9876
T6	100.00-80.00	13.3929	9.6363	11.2056	10.1800
T7	80.00-60.00	11.8712	8.4435	9.8504	9.1044
T8	60.00-40.00	10.2594	7.6483	8.0402	7.9250
T9	40.00-20.00	8.8041	7.2058	7.1803	7.7733
T10	20.00-0.00	9.4233	9.3536	8.4398	10.5613

### Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K <sub>a</sub> No Ice	K <sub>a</sub> Ice
T1	22	7/8"	120.00 - 128.00	0.6000	0.6000
T1	27	LDF7-50A(1-5/8")	120.00 - 130.00	0.6000	0.6000
T1	28	LDF4-50A(1/2")	120.00 - 130.00	0.6000	0.6000
T1	29	EW90(ELLIPTICAL)	120.00 - 123.00	0.6000	0.6000
T2	2	Safety Line 3/8	115.00 - 118.00	0.6000	0.6000
T2	5	1-5/8"	115.00 - 118.00	0.6000	0.6000
T2	6	1-5/8"	115.00 - 118.00	0.6000	0.6000
T2	22	7/8"	115.00 - 120.00	0.6000	0.6000
T2	27	LDF7-50A(1-5/8")	115.00 - 120.00	0.6000	0.6000

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	<p><b>Client</b></p> <p>Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p>Hailey Hipp</p>

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	$K_a$ No Ice	$K_a$ Ice
T2	28	LDF4-50A(1/2")	115.00 - 120.00	0.6000	0.6000
T2	29	EW90(ELLIPTICAL)	115.00 - 120.00	0.6000	0.6000
T3	2	Safety Line 3/8	110.00 - 115.00	0.6000	0.6000
T3	5	1-5/8"	110.00 - 115.00	0.6000	0.6000
T3	6	1-5/8"	110.00 - 115.00	0.6000	0.6000
T3	22	7/8"	110.00 - 115.00	0.6000	0.6000
T3	27	LDF7-50A(1-5/8")	110.00 - 115.00	0.6000	0.6000
T3	28	LDF4-50A(1/2")	110.00 - 115.00	0.6000	0.6000
T3	29	EW90(ELLIPTICAL)	110.00 - 115.00	0.6000	0.6000
T4	2	Safety Line 3/8	105.00 - 110.00	0.6000	0.6000
T4	5	1-5/8"	105.00 - 110.00	0.6000	0.6000
T4	6	1-5/8"	105.00 - 110.00	0.6000	0.6000
T4	9	T-Brackets	105.00 - 110.00	0.6000	0.6000
T4	11	1-5/8"	105.00 - 110.00	0.6000	0.6000
T4	12	3"	105.00 - 110.00	0.6000	0.6000
T4	13	3/4"	105.00 - 110.00	0.6000	0.6000
T4	14	3/8"	105.00 - 110.00	0.6000	0.6000
T4	15	3/8"	105.00 - 110.00	0.6000	0.6000
T4	22	7/8"	105.00 - 110.00	0.6000	0.6000
T4	27	LDF7-50A(1-5/8")	105.00 - 110.00	0.6000	0.6000
T4	28	LDF4-50A(1/2")	105.00 - 110.00	0.6000	0.6000
T4	29	EW90(ELLIPTICAL)	105.00 - 110.00	0.6000	0.6000
T5	2	Safety Line 3/8	100.00 - 105.00	0.6000	0.6000
T5	5	1-5/8"	100.00 - 105.00	0.6000	0.6000
T5	6	1-5/8"	100.00 - 105.00	0.6000	0.6000
T5	9	T-Brackets	100.00 - 105.00	0.6000	0.6000
T5	11	1-5/8"	100.00 - 105.00	0.6000	0.6000
T5	12	3"	100.00 - 105.00	0.6000	0.6000
T5	13	3/4"	100.00 - 105.00	0.6000	0.6000
T5	14	3/8"	100.00 - 105.00	0.6000	0.6000
T5	15	3/8"	100.00 - 105.00	0.6000	0.6000

<p><b>tnxTower</b></p> <p><b>FDH Infrastructure Services, LLC</b></p> <p>6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p>CT98078_ Wilton_ Deer Run</p>	<p><b>Page</b></p> <p>11 of 59</p>
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	<p><b>Client</b></p> <p>Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p>Hailey Hipp</p>

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K <sub>a</sub> No Ice	K <sub>a</sub> Ice
T5	22	7/8"	100.00 - 105.00	0.6000	0.6000
T5	27	LDF7-50A(1-5/8")	100.00 - 105.00	0.6000	0.6000
T5	28	LDF4-50A(1/2")	100.00 - 105.00	0.6000	0.6000
T5	29	EW90(ELLIPTICAL)	100.00 - 105.00	0.6000	0.6000
T6	2	Safety Line 3/8"	80.00 - 100.00	0.6000	0.6000
T6	5	1-5/8"	80.00 - 100.00	0.6000	0.6000
T6	6	1-5/8"	80.00 - 100.00	0.6000	0.6000
T6	9	T-Brackets	80.00 - 100.00	0.6000	0.6000
T6	11	1-5/8"	80.00 - 100.00	0.6000	0.6000
T6	12	3"	80.00 - 100.00	0.6000	0.6000
T6	13	3/4"	80.00 - 100.00	0.6000	0.6000
T6	14	3/8"	80.00 - 100.00	0.6000	0.6000
T6	15	3/8"	80.00 - 100.00	0.6000	0.6000
T6	17	(6) 1-5/8"; (2) 1-5/8" Hybrid	80.00 - 96.50	0.6000	0.6000
T6	18	T-Brackets	80.00 - 95.00	0.6000	0.6000
T6	22	7/8"	80.00 - 100.00	0.6000	0.6000
T6	25	T-Brackets	80.00 - 95.00	0.6000	0.6000
T6	27	LDF7-50A(1-5/8")	80.00 - 100.00	0.6000	0.6000
T6	28	LDF4-50A(1/2")	80.00 - 100.00	0.6000	0.6000
T6	29	EW90(ELLIPTICAL)	80.00 - 100.00	0.6000	0.6000
T7	2	Safety Line 3/8"	60.00 - 80.00	0.6000	0.6000
T7	5	1-5/8"	60.00 - 80.00	0.6000	0.6000
T7	6	1-5/8"	60.00 - 80.00	0.6000	0.6000
T7	9	T-Brackets	60.00 - 80.00	0.6000	0.6000
T7	11	1-5/8"	60.00 - 80.00	0.6000	0.6000
T7	12	3"	60.00 - 80.00	0.6000	0.6000
T7	13	3/4"	60.00 - 80.00	0.6000	0.6000
T7	14	3/8"	60.00 - 80.00	0.6000	0.6000
T7	15	3/8"	60.00 - 80.00	0.6000	0.6000
T7	17	(6) 1-5/8"; (2) 1-5/8" Hybrid	60.00 - 80.00	0.6000	0.6000
T7	18	T-Brackets	60.00 - 80.00	0.6000	0.6000
T7	22	7/8"	60.00 - 80.00	0.6000	0.6000
T7	25	T-Brackets	60.00 - 80.00	0.6000	0.6000
T7	27	LDF7-50A(1-5/8")	60.00 - 80.00	0.6000	0.6000
T7	28	LDF4-50A(1/2")	60.00 - 80.00	0.6000	0.6000
T7	29	EW90(ELLIPTICAL)	60.00 - 80.00	0.6000	0.6000
T8	2	Safety Line 3/8"	40.00 - 60.00	0.6000	0.6000
T8	5	1-5/8"	40.00 - 60.00	0.6000	0.6000
T8	6	1-5/8"	40.00 - 60.00	0.6000	0.6000
T8	9	T-Brackets	40.00 - 60.00	0.6000	0.6000
T8	11	1-5/8"	40.00 - 60.00	0.6000	0.6000
T8	12	3"	40.00 - 60.00	0.6000	0.6000
T8	13	3/4"	40.00 - 60.00	0.6000	0.6000
T8	14	3/8"	40.00 - 60.00	0.6000	0.6000
T8	15	3/8"	40.00 - 60.00	0.6000	0.6000
T8	17	(6) 1-5/8"; (2) 1-5/8" Hybrid	40.00 - 60.00	0.6000	0.6000
T8	18	T-Brackets	40.00 - 60.00	0.6000	0.6000
T8	21	7/8"	40.00 - 57.00	0.6000	0.6000
T8	22	7/8"	40.00 - 60.00	0.6000	0.6000
T8	23	7/8"	40.00 - 55.00	0.6000	0.6000
T8	25	T-Brackets	40.00 - 60.00	0.6000	0.6000
T8	27	LDF7-50A(1-5/8")	40.00 - 60.00	0.6000	0.6000
T8	28	LDF4-50A(1/2")	40.00 - 60.00	0.6000	0.6000
T8	29	EW90(ELLIPTICAL)	40.00 - 60.00	0.6000	0.6000
T9	2	Safety Line 3/8"	20.00 - 40.00	0.6000	0.6000
T9	5	1-5/8"	20.00 - 40.00	0.6000	0.6000
T9	6	1-5/8"	20.00 - 40.00	0.6000	0.6000
T9	9	T-Brackets	20.00 - 40.00	0.6000	0.6000

<p style="text-align: center;"><b>tnxTower</b></p> <p style="text-align: center;"><b>FDH Infrastructure Services, LLC</b></p> <p style="text-align: center;">6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p style="text-align: center;">CT98078_ Wilton_ Deer Run</p>	<p><b>Page</b></p> <p style="text-align: center;">12 of 59</p>
	<p><b>Project</b></p> <p style="text-align: center;">PR-009191</p>	<p><b>Date</b></p> <p style="text-align: center;">12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p style="text-align: center;">Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p style="text-align: center;">Hailey Hipp</p>

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	$K_a$ No Ice	$K_a$ Ice
T9	11	1-5/8"	20.00 - 40.00	0.6000	0.6000
T9	12	3"	20.00 - 40.00	0.6000	0.6000
T9	13	3/4"	20.00 - 40.00	0.6000	0.6000
T9	14	3/8"	20.00 - 40.00	0.6000	0.6000
T9	15	3/8"	20.00 - 40.00	0.6000	0.6000
T9	17	(6) 1-5/8"; (2) 1-5/8" Hybrid	20.00 - 40.00	0.6000	0.6000
T9	18	T-Brackets	20.00 - 40.00	0.6000	0.6000
T9	21	7/8"	20.00 - 40.00	0.6000	0.6000
T9	22	7/8"	20.00 - 40.00	0.6000	0.6000
T9	23	7/8"	20.00 - 40.00	0.6000	0.6000
T9	25	T-Brackets	20.00 - 40.00	0.6000	0.6000
T9	27	LDF7-50A(1-5/8")	20.00 - 40.00	0.6000	0.6000
T9	28	LDF4-50A(1/2")	20.00 - 40.00	0.6000	0.6000
T9	29	EW90(ELLIPTICAL)	20.00 - 40.00	0.6000	0.6000
T10	2	Safety Line 3/8"	0.00 - 20.00	0.6000	0.6000
T10	5	1-5/8"	0.00 - 20.00	0.6000	0.6000
T10	6	1-5/8"	0.00 - 20.00	0.6000	0.6000
T10	9	T-Brackets	8.50 - 20.00	0.6000	0.6000
T10	11	1-5/8"	0.00 - 20.00	0.6000	0.6000
T10	12	3"	0.00 - 20.00	0.6000	0.6000
T10	13	3/4"	0.00 - 20.00	0.6000	0.6000
T10	14	3/8"	0.00 - 20.00	0.6000	0.6000
T10	15	3/8"	0.00 - 20.00	0.6000	0.6000
T10	17	(6) 1-5/8"; (2) 1-5/8" Hybrid	9.50 - 20.00	0.6000	0.6000
T10	18	T-Brackets	9.50 - 20.00	0.6000	0.6000
T10	21	7/8"	9.00 - 20.00	0.6000	0.6000
T10	22	7/8"	9.00 - 20.00	0.6000	0.6000
T10	23	7/8"	9.50 - 20.00	0.6000	0.6000
T10	25	T-Brackets	8.50 - 20.00	0.6000	0.6000
T10	27	LDF7-50A(1-5/8")	0.00 - 20.00	0.6000	0.6000
T10	28	LDF4-50A(1/2")	0.00 - 20.00	0.6000	0.6000
T10	29	EW90(ELLIPTICAL)	0.00 - 20.00	0.6000	0.6000

### User Defined Loads - Seismic

Description	Elevation	Offset From Centroid	Azimuth Angle	$E_v$	$E_{hx}$	$E_{hz}$	$E_h$
	ft	ft	°	K	K	K	K
CCISeismic Tower Section 1	125.00	0.00	0.0000	0.03	0.00	0.00	0.06
CCISeismic Tower Section 2	117.50	0.00	0.0000	0.01	0.00	0.00	0.02
CCISeismic Tower Section 3	112.50	0.00	0.0000	0.01	0.00	0.00	0.02
CCISeismic Tower Section 4	107.50	0.00	0.0000	0.01	0.00	0.00	0.02
CCISeismic Tower Section 5	102.50	0.00	0.0000	0.01	0.00	0.00	0.02
CCISeismic Tower Section 6	90.00	0.00	0.0000	0.07	0.00	0.00	0.10
CCISeismic Tower Section 7	70.00	0.00	0.0000	0.09	0.00	0.00	0.09
CCISeismic Tower Section 8	50.00	0.00	0.0000	0.10	0.00	0.00	0.08
CCISeismic Tower Section 9	30.00	0.00	0.0000	0.13	0.00	0.00	0.06
CCISeismic Tower Section 10	10.00	0.00	0.0000	0.15	0.00	0.00	0.02
CCISeismic lightning rod	130.00	0.00	0.0000	0.00	0.00	0.00	0.00
Lightning Rod							
CCISeismic omni 3"x12' Omni	128.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic omni 3"x12' Omni	128.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic 6' Side Arm [Site Pro 1 P/N: PSA6]	128.00	0.00	0.0000	0.00	0.00	0.00	0.01

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	<b>Project</b>	PR-009191	<b>Date</b>	12:11:08 01/27/23
	<b>Client</b>	Pyramid Network Services, LLC	<b>Designed by</b>	Hailey Hipp

Description	Elevation	Offset From Centroid	Azimuth Angle	$E_v$	$E_{rx}$	$E_{hz}$	$E_h$
	ft	ft	°	K	K	K	K
CCISeismic 6' Side Arm [Site Pro 1 P/N: PSA6]	128.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson Air 6449 B41 w/ Pipe Mount	118.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic ericsson Air 6449 B41 w/ Pipe Mount	118.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic ericsson Air 6449 B41 w/ Pipe Mount	118.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic AIR32	118.00	0.00	0.0000	0.01	0.00	0.00	0.01
KRD901146-1-B66A-B2A w/ Mount Pipe	118.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic AIR32	118.00	0.00	0.0000	0.01	0.00	0.00	0.01
KRD901146-1-B66A-B2A w/ Mount Pipe	118.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic AIR32	118.00	0.00	0.0000	0.01	0.00	0.00	0.01
KRD901146-1-B66A-B2A w/ Mount Pipe	118.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic	118.00	0.00	0.0000	0.01	0.00	0.00	0.02
APXVAALL24_43-U-NA20 w/ Mount Pipe	118.00	0.00	0.0000	0.01	0.00	0.00	0.02
CCISeismic	118.00	0.00	0.0000	0.01	0.00	0.00	0.02
APXVAALL24_43-U-NA20 w/ Mount Pipe	118.00	0.00	0.0000	0.01	0.00	0.00	0.02
CCISeismic	118.00	0.00	0.0000	0.01	0.00	0.00	0.02
APXVAALL24_43-U-NA20 w/ Mount Pipe	118.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic 4449 B71 + B85	118.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic 4449 B71 + B85	118.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic 4449 B71 + B85	118.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson 4415 B25	118.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson 4415 B25	118.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson 4415 B25	118.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic commscope SDX1926Q-43	118.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic commscope SDX1926Q-43	118.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic commscope SDX1926Q-43	118.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic ericsson KRY 112 71	118.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic ericsson KRY 112 71	118.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic ericsson KRY 112 71	118.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic Sector Frame (SitePro 1 P/N: VFA12-HD)	118.00	0.00	0.0000	0.03	0.00	0.00	0.06
CCISeismic Sector Frame (SitePro 1 P/N: VFA12-HD)	118.00	0.00	0.0000	0.03	0.00	0.00	0.06
CCISeismic Sector Frame (SitePro 1 P/N: VFA12-HD)	118.00	0.00	0.0000	0.03	0.00	0.00	0.06
CCISeismic OPA65R-BU6DA w/ Mount Pipe	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic OPA65R-BU6DA w/ Mount Pipe	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic OPA65R-BU6DA w/ Mount Pipe	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4478 B14	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4478 B14	110.00	0.00	0.0000	0.00	0.00	0.00	0.01

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	<b>Project</b>	PR-009191	<b>Date</b>	12:11:08 01/27/23
	<b>Client</b>	Pyramid Network Services, LLC	<b>Designed by</b>	Hailey Hipp

Description	Elevation	Offset From Centroid	Azimuth Angle	$E_v$	$E_{hx}$	$E_{hz}$	$E_h$
	ft	ft	°	K	K	K	K
CCISeismic ericsson RRUS 4478 B14	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic powerwave 7770 w/ Mount Pipe	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic powerwave 7770 w/ Mount Pipe	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic powerwave 7770 w/ Mount Pipe	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic kathrein 800 10965 w/ Mount Pipe	110.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic kathrein 800 10965 w/ Mount Pipe	110.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic kathrein 800 10965 w/ Mount Pipe	110.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic powerwave	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
P65-16-XLH-RR w/ Mount Pipe	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic powerwave	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
P65-16-XLH-RR w/ Mount Pipe	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic powerwave	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
P65-16-XLH-RR w/ Mount Pipe	110.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) powerwave LGP21401 TMA	110.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) powerwave LGP21401 TMA	110.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) powerwave LGP21401 TMA	110.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic powerwave TT19-08BP111-001	110.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic powerwave TT19-08BP111-001	110.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic powerwave TT19-08BP111-001	110.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic ericsson RRUS-11	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS-11	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS-11	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4478 B5	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4478 B5	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4478 B5	110.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic ericsson RRUS 4415 B25	110.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic ericsson RRUS 4415 B25	110.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic ericsson RRUS 4415 B25	110.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic raycap DC6-48-60-18-8F	110.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic raycap DC6-48-60-18-8F	110.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) 12' Sector Mounts [Sabre C10857001C]	110.00	0.00	0.0000	0.08	0.00	0.00	0.13
CCISeismic samsung MT6407-77A w/ Mount Pipe	96.50	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic samsung MT6407-77A w/ Mount Pipe	96.50	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic samsung MT6407-77A w/ Mount Pipe	96.50	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (2) jma wireless	96.50	0.00	0.0000	0.01	0.00	0.00	0.01

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	<p><b>Project</b></p> <p style="text-align: center;">PR-009191</p>	<p><b>Date</b></p> <p style="text-align: center;">12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p style="text-align: center;">Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p style="text-align: center;">Hailey Hipp</p>

Description	Elevation	Offset From Centroid	Azimuth Angle	E <sub>v</sub>	E <sub>lx</sub>	E <sub>lz</sub>	E <sub>h</sub>
	ft	ft	°	K	K	K	K
MX06FRO660-03_TIA w/ Mount Pipe							
CCISeismic (2) jma wireless MX06FRO660-03_TIA w/ Mount Pipe	96.50	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (2) jma wireless MX06FRO660-03_TIA w/ Mount Pipe	96.50	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic antel BXA-80090-8CF-EDIN-X w/ Mount Pipe	96.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic antel BXA-80090-8CF-EDIN-X w/ Mount Pipe	96.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic antel BXA-80090-8CF-EDIN-X w/ Mount Pipe	96.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic samsung RF4439d-25A	96.50	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic samsung RF4439d-25A	96.50	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic samsung RF4439d-25A	96.50	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic samsung RF4440d-13A	96.50	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic samsung RF4440d-13A	96.50	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic samsung RF4440d-13A	96.50	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic raycap RRFDC-3315-PF-48	96.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic raycap RRFDC-3315-PF-48	96.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) 10' x 2' T-Arms	96.50	0.00	0.0000	0.09	0.00	0.00	0.13
CCISeismic 1.9"Ø x 9.8' Pipe Mount	55.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) rfi antennas BPA7496-180-14 w/Mount Pipe	128.00	0.00	0.0000	0.01	0.00	0.00	0.02
CCISeismic 432F-83W-01-T	128.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic 12' Standard Duty V-Frame [Site Pro1 P/N: VFA12-SD-S]	128.00	0.00	0.0000	0.02	0.00	0.00	0.04
CCISeismic Pipe Mount	123.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic scala PR-850	57.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic scala PR-850	55.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic scala PR-850	55.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic commscope VHLP3-11W	123.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic miscl Safety Line 3/8 From 0 to 118 (115ft to118ft)	116.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic miscl Safety Line 3/8 From 0 to 118 (110ft to115ft)	112.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic miscl Safety Line 3/8 From 0 to 118 (105ft to110ft)	107.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic miscl Safety Line 3/8 From 0 to 118 (100ft to105ft)	102.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic miscl Safety Line 3/8 From 0 to 118 (80ft to100ft)	90.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic miscl Safety Line 3/8 From 0 to 118 (60ft to80ft)	70.00	0.00	0.0000	0.00	0.00	0.00	0.00

<p style="text-align: center;"><b>tnxTower</b></p> <p style="text-align: center;"><b>FDH Infrastructure Services, LLC</b></p> <p style="text-align: center;">6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<b>Job</b>	CT98078_ Wilton_Deer Run	<b>Page</b>	16 of 59
	<b>Project</b>	PR-009191	<b>Date</b>	12:11:08 01/27/23
	<b>Client</b>	Pyramid Network Services, LLC	<b>Designed by</b>	Hailey Hipp

Description	Elevation	Offset From Centroid	Azimuth Angle	$E_v$	$E_{hx}$	$E_{hz}$	$E_h$
	ft	ft	°	K	K	K	K
CCISeismic misc Safety Line 3/8 From 0 to 118 (40ft to60ft)	50.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic misc Safety Line 3/8 From 0 to 118 (20ft to40ft)	30.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic misc Safety Line 3/8 From 0 to 118 (0ft to20ft)	10.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (7) 1-5/8" From 0 to 118 (115ft to118ft)	116.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (7) 1-5/8" From 0 to 118 (110ft to115ft)	112.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (7) 1-5/8" From 0 to 118 (105ft to110ft)	107.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (7) 1-5/8" From 0 to 118 (100ft to105ft)	102.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (7) 1-5/8" From 0 to 118 (80ft to100ft)	90.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (7) 1-5/8" From 0 to 118 (60ft to80ft)	70.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (7) 1-5/8" From 0 to 118 (40ft to60ft)	50.00	0.00	0.0000	0.01	0.00	0.00	0.00
CCISeismic (7) 1-5/8" From 0 to 118 (20ft to40ft)	30.00	0.00	0.0000	0.01	0.00	0.00	0.00
CCISeismic (7) 1-5/8" From 0 to 118 (0ft to20ft)	10.00	0.00	0.0000	0.01	0.00	0.00	0.00
CCISeismic (6) heliax-hj 1-5/8" From 0 to 118 (115ft to118ft)	116.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (6) heliax-hj 1-5/8" From 0 to 118 (110ft to115ft)	112.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (6) heliax-hj 1-5/8" From 0 to 118 (105ft to110ft)	107.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (6) heliax-hj 1-5/8" From 0 to 118 (100ft to105ft)	102.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (6) heliax-hj 1-5/8" From 0 to 118 (80ft to100ft)	90.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (6) heliax-hj 1-5/8" From 0 to 118 (60ft to80ft)	70.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (6) heliax-hj 1-5/8" From 0 to 118 (40ft to60ft)	50.00	0.00	0.0000	0.01	0.00	0.00	0.00
CCISeismic (6) heliax-hj 1-5/8" From 0 to 118 (20ft to40ft)	30.00	0.00	0.0000	0.01	0.00	0.00	0.00
CCISeismic (6) heliax-hj 1-5/8" From 0 to 118 (0ft to20ft)	10.00	0.00	0.0000	0.01	0.00	0.00	0.00
CCISeismic T-Brackets From 8.5 to 110 (105ft to110ft)	107.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic T-Brackets From 8.5 to 110 (100ft to105ft)	102.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic T-Brackets From 8.5 to 110 (80ft to100ft)	90.00	0.00	0.0000	0.00	0.00	0.00	0.01
CCISeismic T-Brackets From 8.5 to 110 (60ft to80ft)	70.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic T-Brackets From 8.5 to 110 (40ft to60ft)	50.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic T-Brackets From 8.5 to 110 (20ft to40ft)	30.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic T-Brackets From 8.5 to 110 (8.5ft to20ft)	14.25	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (12) 1-5/8" From 0 to 110 (105ft to110ft)	107.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (12) 1-5/8" From 0 to 110 (100ft to105ft)	102.50	0.00	0.0000	0.00	0.00	0.00	0.00



<p style="text-align: center;"><b>tnxTower</b></p> <p style="text-align: center;"><b>FDH Infrastructure Services, LLC</b></p> <p style="text-align: center;">6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p style="text-align: center;">CT98078_ Wilton_ Deer Run</p>	<p><b>Page</b></p> <p style="text-align: center;">17 of 59</p>
	<p><b>Project</b></p> <p style="text-align: center;">PR-009191</p>	<p><b>Date</b></p> <p style="text-align: center;">12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p style="text-align: center;">Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p style="text-align: center;">Hailey Hipp</p>

Description	Elevation	Offset From Centroid	Azimuth Angle	$E_v$	$E_{hx}$	$E_{hz}$	$E_h$
	ft	ft	°	K	K	K	K
CCISeismic (12) 1-5/8" From 0 to 110 (80ft to100ft)	90.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (12) 1-5/8" From 0 to 110 (60ft to80ft)	70.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (12) 1-5/8" From 0 to 110 (40ft to60ft)	50.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (12) 1-5/8" From 0 to 110 (20ft to40ft)	30.00	0.00	0.0000	0.01	0.00	0.00	0.00
CCISeismic (12) 1-5/8" From 0 to 110 (0ft to20ft)	10.00	0.00	0.0000	0.01	0.00	0.00	0.00
CCISeismic heliax-hj 3" From 0 to 110 (105ft to110ft)	107.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic heliax-hj 3" From 0 to 110 (100ft to105ft)	102.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic heliax-hj 3" From 0 to 110 (80ft to100ft)	90.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic heliax-hj 3" From 0 to 110 (60ft to80ft)	70.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic heliax-hj 3" From 0 to 110 (40ft to60ft)	50.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic heliax-hj 3" From 0 to 110 (20ft to40ft)	30.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic heliax-hj 3" From 0 to 110 (0ft to20ft)	10.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (4) 3/4" From 0 to 110 (105ft to110ft)	107.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (4) 3/4" From 0 to 110 (100ft to105ft)	102.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (4) 3/4" From 0 to 110 (80ft to100ft)	90.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (4) 3/4" From 0 to 110 (60ft to80ft)	70.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (4) 3/4" From 0 to 110 (40ft to60ft)	50.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (4) 3/4" From 0 to 110 (20ft to40ft)	30.00	0.00	0.0000	0.01	0.00	0.00	0.00
CCISeismic (4) 3/4" From 0 to 110 (0ft to20ft)	10.00	0.00	0.0000	0.01	0.00	0.00	0.00
CCISeismic (2) heliax-hj 3/8" From 0 to 110 (105ft to110ft)	107.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 3/8" From 0 to 110 (100ft to105ft)	102.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 3/8" From 0 to 110 (80ft to100ft)	90.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 3/8" From 0 to 110 (60ft to80ft)	70.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 3/8" From 0 to 110 (40ft to60ft)	50.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 3/8" From 0 to 110 (20ft to40ft)	30.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 3/8" From 0 to 110 (0ft to20ft)	10.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 3/8" From 0 to 110 (105ft to110ft)	107.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 3/8" From 0 to 110 (100ft to105ft)	102.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 3/8" From 0 to 110 (80ft to100ft)	90.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 3/8" From 0 to 110 (60ft to80ft)	70.00	0.00	0.0000	0.00	0.00	0.00	0.00

<p style="text-align: center;"><b>tnxTower</b></p> <p style="text-align: center;"><b>FDH Infrastructure Services, LLC</b></p> <p style="text-align: center;">6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p style="text-align: center;">CT98078_ Wilton_Deer Run</p>	<p><b>Page</b></p> <p style="text-align: center;">18 of 59</p>
	<p><b>Project</b></p> <p style="text-align: center;">PR-009191</p>	<p><b>Date</b></p> <p style="text-align: center;">12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p style="text-align: center;">Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p style="text-align: center;">Hailey Hipp</p>

Description	Elevation	Offset From Centroid	Azimuth Angle	$E_v$	$E_{hx}$	$E_{hz}$	$E_h$
	ft	ft	°	K	K	K	K
CCISeismic (2) heliax-hj 3/8" From 0 to 110 (40ft to60ft)	50.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 3/8" From 0 to 110 (20ft to40ft)	30.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 3/8" From 0 to 110 (0ft to20ft)	10.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (8) (6) 1-5/8"; (2) 1-5/8" Hybrid From 9.5 to 96.5 (80ft to96.5ft)	88.25	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (8) (6) 1-5/8"; (2) 1-5/8" Hybrid From 9.5 to 96.5 (60ft to80ft)	70.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (8) (6) 1-5/8"; (2) 1-5/8" Hybrid From 9.5 to 96.5 (40ft to60ft)	50.00	0.00	0.0000	0.01	0.00	0.00	0.01
CCISeismic (8) (6) 1-5/8"; (2) 1-5/8" Hybrid From 9.5 to 96.5 (20ft to40ft)	30.00	0.00	0.0000	0.01	0.00	0.00	0.00
CCISeismic (8) (6) 1-5/8"; (2) 1-5/8" Hybrid From 9.5 to 96.5 (9.5ft to20ft)	14.75	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic T-Brackets From 9.5 to 95 (80ft to95ft)	87.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic T-Brackets From 9.5 to 95 (60ft to80ft)	70.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic T-Brackets From 9.5 to 95 (40ft to60ft)	50.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic T-Brackets From 9.5 to 95 (20ft to40ft)	30.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic T-Brackets From 9.5 to 95 (9.5ft to20ft)	14.75	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic heliax-hj 7/8" From 9 to 57 (40ft to57ft)	48.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic heliax-hj 7/8" From 9 to 57 (20ft to40ft)	30.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic heliax-hj 7/8" From 9 to 57 (9ft to20ft)	14.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 7/8" From 9 to 128 (120ft to128ft)	124.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 7/8" From 9 to 128 (115ft to120ft)	117.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 7/8" From 9 to 128 (110ft to115ft)	112.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 7/8" From 9 to 128 (105ft to110ft)	107.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 7/8" From 9 to 128 (100ft to105ft)	102.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 7/8" From 9 to 128 (80ft to100ft)	90.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 7/8" From 9 to 128 (60ft to80ft)	70.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 7/8" From 9 to 128 (40ft to60ft)	50.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 7/8" From 9 to 128 (20ft to40ft)	30.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 7/8" From 9 to 128 (9ft to20ft)	14.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 7/8" From 9.5 to 55 (40ft to55ft)	47.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (2) heliax-hj 7/8"	30.00	0.00	0.0000	0.00	0.00	0.00	0.00

<p style="text-align: center;"><b>tnxTower</b></p> <p style="text-align: center;"><b>FDH Infrastructure Services, LLC</b></p> <p style="text-align: center;">6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p style="text-align: center;">CT98078_ Wilton_Deer Run</p>	<p><b>Page</b></p> <p style="text-align: center;">19 of 59</p>
	<p><b>Project</b></p> <p style="text-align: center;">PR-009191</p>	<p><b>Date</b></p> <p style="text-align: center;">12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p style="text-align: center;">Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p style="text-align: center;">Hailey Hipp</p>

Description	Elevation	Offset From Centroid	Azimuth Angle	$E_v$	$E_{hx}$	$E_{hz}$	$E_h$
	ft	ft	°	K	K	K	K
From 9.5 to 55 (20ft to40ft)							
CCISeismic (2) heliax-hj 7/8"	14.75	0.00	0.0000	0.00	0.00	0.00	0.00
From 9.5 to 55 (9.5ft to20ft)							
CCISeismic T-Brackets From 8.5 to 95 (80ft to95ft)	87.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic T-Brackets From 8.5 to 95 (60ft to80ft)	70.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic T-Brackets From 8.5 to 95 (40ft to60ft)	50.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic T-Brackets From 8.5 to 95 (20ft to40ft)	30.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic T-Brackets From 8.5 to 95 (8.5ft to20ft)	14.25	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) andrew LDF7-50A(1-5/8") From 0 to 130 (120ft to130ft)	125.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) andrew LDF7-50A(1-5/8") From 0 to 130 (115ft to120ft)	117.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) andrew LDF7-50A(1-5/8") From 0 to 130 (110ft to115ft)	112.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) andrew LDF7-50A(1-5/8") From 0 to 130 (105ft to110ft)	107.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) andrew LDF7-50A(1-5/8") From 0 to 130 (100ft to105ft)	102.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) andrew LDF7-50A(1-5/8") From 0 to 130 (80ft to100ft)	90.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) andrew LDF7-50A(1-5/8") From 0 to 130 (60ft to80ft)	70.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) andrew LDF7-50A(1-5/8") From 0 to 130 (40ft to60ft)	50.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) andrew LDF7-50A(1-5/8") From 0 to 130 (20ft to40ft)	30.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic (3) andrew LDF7-50A(1-5/8") From 0 to 130 (0ft to20ft)	10.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic andrew LDF4-50A(1/2") From 0 to 130 (120ft to130ft)	125.00	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic andrew LDF4-50A(1/2") From 0 to 130 (115ft to120ft)	117.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic andrew LDF4-50A(1/2") From 0 to 130 (110ft to115ft)	112.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic andrew LDF4-50A(1/2") From 0 to 130 (105ft to110ft)	107.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic andrew LDF4-50A(1/2") From 0 to 130 (100ft to105ft)	102.50	0.00	0.0000	0.00	0.00	0.00	0.00
CCISeismic andrew LDF4-50A(1/2") From 0 to 130	90.00	0.00	0.0000	0.00	0.00	0.00	0.00

<p><b>tnxTower</b></p> <p><b>FDH Infrastructure Services, LLC</b></p> <p>6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<b>Job</b>	CT98078_ Wilton_ Deer Run	<b>Page</b>	20 of 59
	<b>Project</b>	PR-009191	<b>Date</b>	12:11:08 01/27/23
	<b>Client</b>	Pyramid Network Services, LLC	<b>Designed by</b>	Hailey Hipp

Description	Elevation	Offset From Centroid	Azimuth Angle	E <sub>v</sub>	E <sub>hx</sub>	E <sub>hz</sub>	E <sub>h</sub>
	ft	ft	°	K	K	K	K
(80ft to100ft) CCISeismic andrew LDF4-50A(1/2") From 0 to 130 (60ft to80ft)	70.00	0.00	0.0000	0.00	0.00	0.00	0.00
(60ft to80ft) CCISeismic andrew LDF4-50A(1/2") From 0 to 130 (40ft to60ft)	50.00	0.00	0.0000	0.00	0.00	0.00	0.00
(40ft to60ft) CCISeismic andrew LDF4-50A(1/2") From 0 to 130 (20ft to40ft)	30.00	0.00	0.0000	0.00	0.00	0.00	0.00
(20ft to40ft) CCISeismic andrew LDF4-50A(1/2") From 0 to 130 (0ft to20ft)	10.00	0.00	0.0000	0.00	0.00	0.00	0.00
(0ft to20ft) CCISeismic commscope EW90(ELLIPTICAL) From 0 to 123 (120ft to123ft)	121.50	0.00	0.0000	0.00	0.00	0.00	0.00
(120ft to123ft) CCISeismic commscope EW90(ELLIPTICAL) From 0 to 123 (115ft to120ft)	117.50	0.00	0.0000	0.00	0.00	0.00	0.00
(115ft to120ft) CCISeismic commscope EW90(ELLIPTICAL) From 0 to 123 (110ft to115ft)	112.50	0.00	0.0000	0.00	0.00	0.00	0.00
(110ft to115ft) CCISeismic commscope EW90(ELLIPTICAL) From 0 to 123 (105ft to110ft)	107.50	0.00	0.0000	0.00	0.00	0.00	0.00
(105ft to110ft) CCISeismic commscope EW90(ELLIPTICAL) From 0 to 123 (100ft to105ft)	102.50	0.00	0.0000	0.00	0.00	0.00	0.00
(100ft to105ft) CCISeismic commscope EW90(ELLIPTICAL) From 0 to 123 (80ft to100ft)	90.00	0.00	0.0000	0.00	0.00	0.00	0.00
(80ft to100ft) CCISeismic commscope EW90(ELLIPTICAL) From 0 to 123 (60ft to80ft)	70.00	0.00	0.0000	0.00	0.00	0.00	0.00
(60ft to80ft) CCISeismic commscope EW90(ELLIPTICAL) From 0 to 123 (40ft to60ft)	50.00	0.00	0.0000	0.00	0.00	0.00	0.00
(40ft to60ft) CCISeismic commscope EW90(ELLIPTICAL) From 0 to 123 (20ft to40ft)	30.00	0.00	0.0000	0.00	0.00	0.00	0.00
(20ft to40ft) CCISeismic commscope EW90(ELLIPTICAL) From 0 to 123 (0ft to20ft)	10.00	0.00	0.0000	0.00	0.00	0.00	0.00
(0ft to20ft)							

### Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight	
			ft ft ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	K	
Lightning Rod	C	None		0.0000	130.00	No Ice 1/2" Ice	0.25 0.66	0.25 0.66	0.03 0.03

<p><b>tnxTower</b></p> <p><b>FDH Infrastructure Services, LLC</b></p> <p>6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<b>Job</b>		CT98078_ Wilton_Deer Run		<b>Page</b>		21 of 59	
	<b>Project</b>		PR-009191		<b>Date</b>		12:11:08 01/27/23	
	<b>Client</b>		Pyramid Network Services, LLC		<b>Designed by</b>		Hailey Hipp	

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight
			Horz	Vert					
***									
3"x12' Omni	B	From Leg	0.00	0.0000	128.00	No Ice	0.97	0.97	0.04
			0.00			1/2" Ice	3.60	3.60	0.03
			2.00			1" Ice	4.83	4.83	0.05
3"x12' Omni	C	From Leg	0.00	0.0000	128.00	No Ice	6.08	6.08	0.08
			0.00			1/2" Ice	3.60	3.60	0.03
			2.00			1" Ice	4.83	4.83	0.05
6' Side Arm [Site Pro 1 P/N: PSA6]	B	From Leg	0.00	0.0000	128.00	No Ice	6.08	6.08	0.08
			0.00			1/2" Ice	0.41	3.06	0.05
			0.00			1" Ice	0.81	5.10	0.08
6' Side Arm [Site Pro 1 P/N: PSA6]	C	From Leg	0.00	0.0000	128.00	No Ice	1.23	7.20	0.12
			0.00			1/2" Ice	0.41	3.06	0.05
			0.00			1" Ice	0.81	5.10	0.08
***									
Air 6449 B41 w/ Pipe Mount	A	From Leg	4.00	0.0000	118.00	No Ice	1.23	7.20	0.12
			0.00			1/2" Ice	0.41	3.06	0.05
			0.00			1" Ice	0.81	5.10	0.08
Air 6449 B41 w/ Pipe Mount	B	From Leg	4.00	0.0000	118.00	No Ice	6.60	2.67	0.10
			0.00			1/2" Ice	6.95	2.94	0.14
			0.00			1" Ice	7.31	3.22	0.18
Air 6449 B41 w/ Pipe Mount	C	From Leg	4.00	0.0000	118.00	No Ice	6.60	2.67	0.10
			0.00			1/2" Ice	6.95	2.94	0.14
			0.00			1" Ice	7.31	3.22	0.18
AIR32	A	From Leg	4.00	0.0000	118.00	No Ice	6.75	6.07	0.15
KRD901146-1-B66A-B2A w/ Mount Pipe			0.00			1/2" Ice	6.75	6.07	0.15
			0.00			1" Ice	7.20	6.87	0.21
AIR32	B	From Leg	4.00	0.0000	118.00	No Ice	7.65	7.58	0.28
KRD901146-1-B66A-B2A w/ Mount Pipe			0.00			1/2" Ice	6.75	6.07	0.15
			0.00			1" Ice	7.20	6.87	0.21
AIR32	C	From Leg	4.00	0.0000	118.00	No Ice	7.65	7.58	0.28
KRD901146-1-B66A-B2A w/ Mount Pipe			0.00			1/2" Ice	6.75	6.07	0.15
			0.00			1" Ice	7.20	6.87	0.21
APXVAALL24_43-U-NA20 w/ Mount Pipe	A	From Leg	4.00	0.0000	118.00	No Ice	6.75	6.07	0.15
			0.00			1/2" Ice	14.69	6.87	0.19
			0.00			1" Ice	15.46	7.55	0.31
APXVAALL24_43-U-NA20 w/ Mount Pipe	B	From Leg	4.00	0.0000	118.00	No Ice	16.23	8.25	0.46
			0.00			1/2" Ice	14.69	6.87	0.19
			0.00			1" Ice	15.46	7.55	0.31
APXVAALL24_43-U-NA20 w/ Mount Pipe	C	From Leg	4.00	0.0000	118.00	No Ice	16.23	8.25	0.46
			0.00			1/2" Ice	14.69	6.87	0.19
			0.00			1" Ice	15.46	7.55	0.31
4449 B71 + B85	A	From Leg	4.00	0.0000	118.00	No Ice	16.23	8.25	0.46
			0.00			1/2" Ice	2.09	1.59	0.07
			0.00			1" Ice	2.27	1.75	0.09
4449 B71 + B85	B	From Leg	4.00	0.0000	118.00	No Ice	2.46	1.92	0.12
			0.00			1/2" Ice	2.09	1.59	0.07
			0.00			1" Ice	2.27	1.75	0.09
4449 B71 + B85	C	From Leg	4.00	0.0000	118.00	No Ice	2.46	1.92	0.12
			0.00			1/2" Ice	2.09	1.59	0.07
			0.00			1" Ice	2.27	1.75	0.09
4415 B25	A	From Leg	4.00	0.0000	118.00	No Ice	2.46	1.92	0.12
			0.00			1/2" Ice	2.02	1.25	0.06
			0.00			1" Ice	2.20	1.40	0.08
4415 B25	B	From Leg	4.00	0.0000	118.00	No Ice	2.39	1.56	0.10
			0.00			1/2" Ice	2.02	1.25	0.06
			0.00			1" Ice	2.20	1.40	0.08

<b>tnxTower</b>  <b>FDH Infrastructure Services, LLC</b> 6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	<b>Job</b>	CT98078_Wilton_Deer Run	<b>Page</b>	22 of 59
	<b>Project</b>	PR-009191	<b>Date</b>	12:11:08 01/27/23
	<b>Client</b>	Pyramid Network Services, LLC	<b>Designed by</b>	Hailey Hipp

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight
			Horz	Vert					
			ft	ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	K
4415 B25	C	From Leg	4.00	0.0000	118.00	No Ice	2.02	1.25	0.06
			0.00			1/2" Ice	2.20	1.40	0.08
			0.00			1" Ice	2.39	1.56	0.10
SDX1926Q-43	A	From Leg	4.00	0.0000	118.00	No Ice	0.24	0.10	0.01
			0.00			1/2" Ice	0.30	0.14	0.01
			0.00			1" Ice	0.37	0.19	0.01
SDX1926Q-43	B	From Leg	4.00	0.0000	118.00	No Ice	0.24	0.10	0.01
			0.00			1/2" Ice	0.30	0.14	0.01
			0.00			1" Ice	0.37	0.19	0.01
SDX1926Q-43	C	From Leg	4.00	0.0000	118.00	No Ice	0.24	0.10	0.01
			0.00			1/2" Ice	0.30	0.14	0.01
			0.00			1" Ice	0.37	0.19	0.01
KRY 112 71	A	From Leg	4.00	0.0000	118.00	No Ice	1.50	0.50	0.02
			0.00			1/2" Ice	1.65	0.60	0.03
			0.00			1" Ice	1.81	0.72	0.04
KRY 112 71	B	From Leg	4.00	0.0000	118.00	No Ice	1.50	0.50	0.02
			0.00			1/2" Ice	1.65	0.60	0.03
			0.00			1" Ice	1.81	0.72	0.04
KRY 112 71	C	From Leg	4.00	0.0000	118.00	No Ice	1.50	0.50	0.02
			0.00			1/2" Ice	1.65	0.60	0.03
			0.00			1" Ice	1.81	0.72	0.04
Sector Frame (SitePro 1 P/N: VFA12-HD)	A	From Leg	2.00	0.0000	118.00	No Ice	13.20	9.20	0.66
			0.00			1/2" Ice	19.50	14.60	0.80
			0.00			1" Ice	25.80	19.50	1.01
Sector Frame (SitePro 1 P/N: VFA12-HD)	B	From Leg	2.00	0.0000	118.00	No Ice	13.20	9.20	0.66
			0.00			1/2" Ice	19.50	14.60	0.80
			0.00			1" Ice	25.80	19.50	1.01
Sector Frame (SitePro 1 P/N: VFA12-HD)	C	From Leg	2.00	0.0000	118.00	No Ice	13.20	9.20	0.66
			0.00			1/2" Ice	19.50	14.60	0.80
			0.00			1" Ice	25.80	19.50	1.01
***									
OPA65R-BU6DA w/ Mount Pipe	A	From Leg	4.00	0.0000	110.00	No Ice	12.25	6.05	0.09
			0.00			1/2" Ice	13.00	6.71	0.18
			0.00			1" Ice	13.76	7.39	0.27
OPA65R-BU6DA w/ Mount Pipe	B	From Leg	4.00	0.0000	110.00	No Ice	12.25	6.05	0.09
			0.00			1/2" Ice	13.00	6.71	0.18
			0.00			1" Ice	13.76	7.39	0.27
OPA65R-BU6DA w/ Mount Pipe	C	From Leg	4.00	0.0000	110.00	No Ice	12.25	6.05	0.09
			0.00			1/2" Ice	13.00	6.71	0.18
			0.00			1" Ice	13.76	7.39	0.27
RRUS 4478 B14	A	From Leg	4.00	0.0000	110.00	No Ice	1.84	1.06	0.06
			0.00			1/2" Ice	2.01	1.20	0.08
			0.00			1" Ice	2.19	1.34	0.09
RRUS 4478 B14	B	From Leg	4.00	0.0000	110.00	No Ice	1.84	1.06	0.06
			0.00			1/2" Ice	2.01	1.20	0.08
			0.00			1" Ice	2.19	1.34	0.09
RRUS 4478 B14	C	From Leg	4.00	0.0000	110.00	No Ice	1.84	1.06	0.06
			0.00			1/2" Ice	2.01	1.20	0.08
			0.00			1" Ice	2.19	1.34	0.09
7770 w/Mount Pipe	A	From Face	4.00	0.0000	110.00	No Ice	6.20	4.94	0.07
			0.00			1/2" Ice	6.76	5.86	0.12
			0.00			1" Ice	7.27	6.64	0.19
7770 w/Mount Pipe	B	From Face	4.00	0.0000	110.00	No Ice	6.20	4.94	0.07
			0.00			1/2" Ice	6.76	5.86	0.12
			0.00			1" Ice	7.27	6.64	0.19
7770 w/Mount Pipe	C	From Face	4.00	0.0000	110.00	No Ice	6.20	4.94	0.07
			0.00			1/2" Ice	6.76	5.86	0.12

<p><b>tnxTower</b></p> <p><b>FDH Infrastructure Services, LLC</b></p> <p>6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<b>Job</b>		CT98078_Wilton_Deer Run		<b>Page</b>		23 of 59	
	<b>Project</b>		PR-009191		<b>Date</b>		12:11:08 01/27/23	
	<b>Client</b>		Pyramid Network Services, LLC		<b>Designed by</b>		Hailey Hipp	

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight	
			Horz	Vert						
			ft	ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	K	
800 10965 w/ Mount Pipe	A	From Face	0.00	4.00	0.0000	110.00	1" Ice	7.27	6.64	0.19
			0.00	0.00			No Ice	14.05	7.63	0.14
			0.00	0.00			1/2" Ice	14.69	8.90	0.23
			0.00	0.00			1" Ice	15.30	9.96	0.34
800 10965 w/ Mount Pipe	B	From Face	4.00	0.00	0.0000	110.00	No Ice	14.05	7.63	0.14
			0.00	0.00			1/2" Ice	14.69	8.90	0.23
			0.00	0.00			1" Ice	15.30	9.96	0.34
			0.00	0.00			No Ice	14.05	7.63	0.14
800 10965 w/ Mount Pipe	C	From Face	4.00	0.00	0.0000	110.00	No Ice	14.05	7.63	0.14
			0.00	0.00			1/2" Ice	14.69	8.90	0.23
			0.00	0.00			1" Ice	15.30	9.96	0.34
			0.00	0.00			No Ice	14.05	7.63	0.14
P65-16-XLH-RR w/ Mount Pipe	A	From Face	4.00	0.00	0.0000	110.00	No Ice	8.37	6.36	0.08
			0.00	0.00			1/2" Ice	8.93	7.54	0.14
			0.00	0.00			1" Ice	9.46	8.43	0.22
			0.00	0.00			No Ice	8.37	6.36	0.08
P65-16-XLH-RR w/ Mount Pipe	B	From Face	4.00	0.00	0.0000	110.00	No Ice	8.37	6.36	0.08
			0.00	0.00			1/2" Ice	8.93	7.54	0.14
			0.00	0.00			1" Ice	9.46	8.43	0.22
			0.00	0.00			No Ice	8.37	6.36	0.08
P65-16-XLH-RR w/ Mount Pipe	C	From Face	4.00	0.00	0.0000	110.00	No Ice	8.37	6.36	0.08
			0.00	0.00			1/2" Ice	8.93	7.54	0.14
			0.00	0.00			1" Ice	9.46	8.43	0.22
			0.00	0.00			No Ice	8.37	6.36	0.08
(2) LGP21401 TMA	A	From Face	4.00	0.00	0.0000	110.00	No Ice	0.82	0.35	0.02
			0.00	0.00			1/2" Ice	0.94	0.44	0.02
			0.00	0.00			1" Ice	1.06	0.54	0.03
			0.00	0.00			No Ice	0.82	0.35	0.02
(2) LGP21401 TMA	B	From Face	4.00	0.00	0.0000	110.00	No Ice	0.82	0.35	0.02
			0.00	0.00			1/2" Ice	0.94	0.44	0.02
			0.00	0.00			1" Ice	1.06	0.54	0.03
			0.00	0.00			No Ice	0.82	0.35	0.02
(2) LGP21401 TMA	C	From Face	4.00	0.00	0.0000	110.00	No Ice	0.82	0.35	0.02
			0.00	0.00			1/2" Ice	0.94	0.44	0.02
			0.00	0.00			1" Ice	1.06	0.54	0.03
			0.00	0.00			No Ice	0.82	0.35	0.02
TT19-08BP111-001	A	From Face	4.00	0.00	0.0000	110.00	No Ice	0.55	0.45	0.02
			0.00	0.00			1/2" Ice	0.65	0.53	0.02
			0.00	0.00			1" Ice	0.75	0.63	0.03
			0.00	0.00			No Ice	0.55	0.45	0.02
TT19-08BP111-001	B	From Face	4.00	0.00	0.0000	110.00	No Ice	0.55	0.45	0.02
			0.00	0.00			1/2" Ice	0.65	0.53	0.02
			0.00	0.00			1" Ice	0.75	0.63	0.03
			0.00	0.00			No Ice	0.55	0.45	0.02
TT19-08BP111-001	C	From Face	4.00	0.00	0.0000	110.00	No Ice	0.55	0.45	0.02
			0.00	0.00			1/2" Ice	0.65	0.53	0.02
			0.00	0.00			1" Ice	0.75	0.63	0.03
			0.00	0.00			No Ice	0.55	0.45	0.02
RRUS-11	A	From Face	4.00	0.00	0.0000	110.00	No Ice	2.52	1.07	0.06
			0.00	0.00			1/2" Ice	2.72	1.21	0.07
			0.00	0.00			1" Ice	2.92	1.36	0.10
			0.00	0.00			No Ice	2.52	1.07	0.06
RRUS-11	B	From Face	4.00	0.00	0.0000	110.00	No Ice	2.52	1.07	0.06
			0.00	0.00			1/2" Ice	2.72	1.21	0.07
			0.00	0.00			1" Ice	2.92	1.36	0.10
			0.00	0.00			No Ice	2.52	1.07	0.06
RRUS-11	C	From Face	4.00	0.00	0.0000	110.00	No Ice	2.52	1.07	0.06
			0.00	0.00			1/2" Ice	2.72	1.21	0.07
			0.00	0.00			1" Ice	2.92	1.36	0.10
			0.00	0.00			No Ice	2.52	1.07	0.06
RRUS 4478 B5	A	From Face	4.00	0.00	0.0000	110.00	No Ice	1.84	1.06	0.06
			0.00	0.00			1/2" Ice	2.01	1.20	0.08
			0.00	0.00			1" Ice	2.19	1.34	0.09
			0.00	0.00			No Ice	1.84	1.06	0.06
RRUS 4478 B5	B	From Face	4.00	0.00	0.0000	110.00	No Ice	1.84	1.06	0.06
			0.00	0.00			1/2" Ice	2.01	1.20	0.08
			0.00	0.00			1" Ice	2.19	1.34	0.09
			0.00	0.00			No Ice	1.84	1.06	0.06
RRUS 4478 B5	C	From Face	4.00	0.00	0.0000	110.00	No Ice	1.84	1.06	0.06
			0.00	0.00			1/2" Ice	2.01	1.20	0.08
			0.00	0.00			1" Ice	2.19	1.34	0.09
			0.00	0.00			No Ice	1.84	1.06	0.06
RRUS 4415 B25	A	From Face	4.00	0.00	0.0000	110.00	No Ice	1.64	0.68	0.04
			0.00	0.00			1/2" Ice	1.80	0.79	0.06



<p><b>tnxTower</b></p> <p><b>FDH Infrastructure Services, LLC</b></p> <p>6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<b>Job</b>	CT98078_Wilton_Deer Run	<b>Page</b>	24 of 59
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	<b>Client</b>	Pyramid Network Services, LLC	<b>Designed by</b>	Hailey Hipp

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight	
			Horz	Vert						
			ft	ft	°	ft	ft <sup>2</sup>	ft <sup>2</sup>	K	
RRUS 4415 B25	B	From Face	0.00		0.0000	110.00	1" Ice	1.97	0.91	0.07
			4.00				No Ice	1.64	0.68	0.04
			0.00				1/2" Ice	1.80	0.79	0.06
			0.00				1" Ice	1.97	0.91	0.07
RRUS 4415 B25	C	From Face	4.00		0.0000	110.00	No Ice	1.64	0.68	0.04
			0.00				1/2" Ice	1.80	0.79	0.06
			0.00				1" Ice	1.97	0.91	0.07
			0.00				1" Ice	1.97	0.91	0.07
DC6-48-60-18-8F	A	From Face	0.50		0.0000	110.00	No Ice	1.21	1.21	0.03
			0.00				1/2" Ice	1.89	1.89	0.05
			0.00				1" Ice	2.11	2.11	0.08
			0.00				1" Ice	2.11	2.11	0.08
DC6-48-60-18-8F	B	From Face	0.50		0.0000	110.00	No Ice	1.21	1.21	0.03
			0.00				1/2" Ice	1.89	1.89	0.05
			0.00				1" Ice	2.11	2.11	0.08
			0.00				1" Ice	2.11	2.11	0.08
(3) 12' Sector Mounts [Sabre C10857001C]	C	None			0.0000	110.00	No Ice	15.85	15.85	1.50
							1/2" Ice	20.80	20.80	1.95
							1" Ice	25.75	25.75	2.40
***										
MT6407-77A w/Mount Pipe	A	From Leg	4.00		0.0000	96.50	No Ice	6.68	3.78	0.11
			0.00				1/2" Ice	7.54	4.87	0.16
			1.50				1" Ice	8.31	5.82	0.22
MT6407-77A w/Mount Pipe	B	From Leg	4.00		0.0000	96.50	No Ice	6.68	3.78	0.11
			0.00				1/2" Ice	7.54	4.87	0.16
			1.50				1" Ice	8.31	5.82	0.22
MT6407-77A w/Mount Pipe	C	From Leg	4.00		0.0000	96.50	No Ice	6.68	3.78	0.11
			0.00				1/2" Ice	7.54	4.87	0.16
			1.50				1" Ice	8.31	5.82	0.22
(2) MX06FRO660-03_TIA w/ Mount Pipe	A	From Leg	4.00		0.0000	96.50	No Ice	10.11	8.99	0.10
			0.00				1/2" Ice	10.68	10.15	0.19
			1.50				1" Ice	11.22	11.03	0.29
(2) MX06FRO660-03_TIA w/ Mount Pipe	B	From Leg	4.00		0.0000	96.50	No Ice	10.11	8.99	0.10
			0.00				1/2" Ice	10.68	10.15	0.19
			1.50				1" Ice	11.22	11.03	0.29
(2) MX06FRO660-03_TIA w/ Mount Pipe	C	From Leg	4.00		0.0000	96.50	No Ice	10.11	8.99	0.10
			0.00				1/2" Ice	10.68	10.15	0.19
			1.50				1" Ice	11.22	11.03	0.29
BXA-80090-8CF-EDIN-X w/ Mount Pipe	A	From Leg	4.00		0.0000	96.50	No Ice	8.44	8.70	0.06
			0.00				1/2" Ice	9.13	10.20	0.13
			1.50				1" Ice	9.83	11.70	0.21
BXA-80090-8CF-EDIN-X w/ Mount Pipe	B	From Leg	4.00		0.0000	96.50	No Ice	8.44	8.70	0.06
			0.00				1/2" Ice	9.13	10.20	0.13
			1.50				1" Ice	9.83	11.70	0.21
BXA-80090-8CF-EDIN-X w/ Mount Pipe	C	From Leg	4.00		0.0000	96.50	No Ice	8.44	8.70	0.06
			0.00				1/2" Ice	9.13	10.20	0.13
			1.50				1" Ice	9.83	11.70	0.21
RF4439d-25A	A	From Leg	4.00		0.0000	96.50	No Ice	2.18	1.46	0.07
			0.00				1/2" Ice	2.37	1.63	0.09
			1.50				1" Ice	2.58	1.80	0.11
RF4439d-25A	B	From Leg	4.00		0.0000	96.50	No Ice	2.18	1.46	0.07
			0.00				1/2" Ice	2.37	1.63	0.09
			1.50				1" Ice	2.58	1.80	0.11
RF4439d-25A	C	From Leg	4.00		0.0000	96.50	No Ice	2.18	1.46	0.07
			0.00				1/2" Ice	2.37	1.63	0.09
			1.50				1" Ice	2.58	1.80	0.11
RF4440d-13A	A	From Leg	4.00		0.0000	96.50	No Ice	2.18	1.32	0.07
			0.00				1/2" Ice	2.37	1.48	0.09
			1.50				1" Ice	2.58	1.64	0.11
RF4440d-13A	B	From Leg	4.00		0.0000	96.50	No Ice	2.18	1.32	0.07

<b>tnxTower</b>  <b>FDH Infrastructure Services, LLC</b> 6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	<b>Job</b> CT98078_Wilton_Deer Run	<b>Page</b> 25 of 59
	<b>Project</b> PR-009191	<b>Date</b> 12:11:08 01/27/23
	<b>Client</b> Pyramid Network Services, LLC	<b>Designed by</b> Hailey Hipp

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C <sub>AA</sub> Front	C <sub>AA</sub> Side	Weight
			Horz	Lateral					
RF4440d-13A	C	From Leg	0.00			1/2" Ice	2.37	1.48	0.09
			1.50			1" Ice	2.58	1.64	0.11
			4.00	0.0000	96.50	No Ice	2.18	1.32	0.07
			0.00			1/2" Ice	2.37	1.48	0.09
RRFDC-3315-PF-48	A	From Leg	1.50			1" Ice	2.58	1.64	0.11
			4.00	0.0000	96.50	No Ice	3.02	1.96	0.03
			0.00			1/2" Ice	3.24	2.15	0.06
			1.50			1" Ice	3.47	2.35	0.09
RRFDC-3315-PF-48	B	From Leg	4.00	0.0000	96.50	No Ice	3.02	1.96	0.03
			0.00			1/2" Ice	3.24	2.15	0.06
			1.50			1" Ice	3.47	2.35	0.09
			0.00			1/2" Ice	3.24	2.15	0.06
(3) 10' x 2' T-Arms	C	None	1.50			1" Ice	3.47	2.35	0.09
			0.00	0.0000	96.50	No Ice	17.87	17.87	1.74
			1.50			1/2" Ice	25.31	25.31	1.16
			0.00			1" Ice	32.75	32.75	1.52
***									
***									
1.9"Ø x 9.8' Pipe Mount	B	From Leg	0.00	0.0000	55.00	No Ice	1.65	1.65	0.02
			0.00			1/2" Ice	2.67	2.67	0.04
			0.00			1" Ice	3.71	3.71	0.06
			0.00						
***									
***									
(3) BPA7496-180-14 w/Mount Pipe	A	From Leg	4.00	0.0000	128.00	No Ice	12.38	10.62	0.07
			0.00			1/2" Ice	13.15	12.32	0.17
			2.00			1" Ice	13.93	14.04	0.27
			4.00	0.0000	128.00	No Ice	1.40	0.82	0.01
432F-83W-01-T	A	From Leg	0.00			1/2" Ice	1.55	0.94	0.02
			2.00			1" Ice	1.70	1.06	0.04
			0.00	0.0000	128.00	No Ice	10.80	6.40	0.43
			0.00			1/2" Ice	16.20	10.00	0.52
12' Standard Duty V-Frame [Site Pro1 P/N: VFA12-SD-S] ***** Pipe Mount	A	From Leg	0.00	0.0000	128.00	1" Ice	21.40	13.50	0.66
			0.00			No Ice	1.19	1.19	0.04
			0.00			1/2" Ice	1.50	1.50	0.05
			0.00			1" Ice	1.81	1.81	0.06

## Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets:		Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight	
				Horz	Lateral							Vert
PR-850	A	Grid	From Leg	0.50		0.0000		57.00	5.67	No Ice	25.22	0.04
				0.00						1/2" Ice	25.97	0.17
				0.00						1" Ice	26.71	0.30
**												
PR-850	B	Grid	From Leg	0.50		10.0000		55.00	5.67	No Ice	25.22	0.04
				0.00						1/2" Ice	25.97	0.17
				2.00						1" Ice	26.71	0.30
PR-850	B	Grid	From Leg	0.50		25.0000		55.00	5.67	No Ice	25.22	0.04
				0.00						1/2" Ice	25.97	0.17
				0.00						1" Ice	25.97	0.17

<b>tnxTower</b>  <b>FDH Infrastructure Services, LLC</b> 6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	<b>Job</b>	CT98078_Wilton_Deer Run	<b>Page</b>	26 of 59
	<b>Project</b>	PR-009191	<b>Date</b>	12:11:08 01/27/23
	<b>Client</b>	Pyramid Network Services, LLC	<b>Designed by</b>	Hailey Hipp

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight	
				ft	°	°	ft	ft	ft <sup>2</sup>	K	
**				-4.00					1" Ice	26.71	0.30
VHLP3-11W	B	Paraboloid w/Shroud (HP)	From Leg	1.00 0.00 0.00	38.4400		123.00	3.28	No Ice 1/2" Ice 1" Ice	8.47 8.90 9.34	0.05 0.10 0.14

**Tower Pressures - No Ice**

$G_H = 0.850$

Section Elevation	z	K <sub>Z</sub>	q <sub>z</sub>	A <sub>G</sub>	F a c e	A <sub>F</sub>	A <sub>R</sub>	A <sub>leg</sub>	Leg %	C <sub>AA</sub> In Face	C <sub>AA</sub> Out Face
ft	ft		psf	ft <sup>2</sup>	e	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>		ft <sup>2</sup>	ft <sup>2</sup>
T1 130.00-120.00	125.00	1.053	29	56.458	A	5.716	2.917	2.917	33.79	0.000	0.000
					B	5.716	2.917		33.79	1.776	0.000
					C	5.716	2.917		33.79	6.966	0.000
T2 120.00-115.00	117.50	1.035	29	28.229	A	3.198	1.458	1.458	31.32	4.158	0.000
					B	3.198	1.458		31.32	4.787	0.000
					C	3.198	1.458		31.32	3.945	0.000
T3 115.00-110.00	112.50	1.022	28	28.229	A	2.412	1.458	1.458	37.68	6.930	0.000
					B	2.412	1.458		37.68	7.237	0.000
					C	2.412	1.458		37.68	3.945	0.000
T4 110.00-105.00	107.50	1.009	28	28.229	A	2.412	1.458	1.458	37.68	20.018	0.000
					B	2.412	1.458		37.68	7.237	0.000
					C	2.412	1.458		37.68	5.825	0.000
T5 105.00-100.00	102.50	0.995	28	28.229	A	3.304	1.458	1.458	30.62	20.018	0.000
					B	3.304	1.458		30.62	7.237	0.000
					C	3.304	1.458		30.62	5.825	0.000
T6 100.00-80.00	90.00	0.959	27	114.167	A	9.535	8.333	8.333	46.64	80.073	0.000
					B	9.535	8.333		46.64	31.450	0.000
					C	9.535	8.333		46.64	51.936	0.000
T7 80.00-60.00	70.00	0.892	25	129.587	A	11.091	9.175	9.175	45.27	80.073	0.000
					B	11.091	9.175		45.27	32.283	0.000
					C	11.091	9.175		45.27	58.313	0.000
T8 60.00-40.00	50.00	0.811	23	160.004	A	11.905	10.009	10.009	45.68	80.073	0.000
					B	11.905	10.009		45.68	34.170	0.000
					C	11.905	10.009		45.68	61.643	0.000
T9 40.00-20.00	30.00	0.701	19	190.420	A	16.215	10.843	10.843	40.07	80.073	0.000
					B	16.215	10.843		40.07	34.503	0.000
					C	16.215	10.843		40.07	62.753	0.000
T10 20.00-0.00	10.00	0.7	19	220.837	A	17.769	11.678	11.678	39.66	78.657	0.000
					B	17.769	11.678		39.66	30.090	0.000
					C	17.769	11.678		39.66	44.013	0.000

**Tower Pressure - With Ice**

$G_H = 0.850$

<b>tnxTower</b>  <b>FDH Infrastructure Services, LLC</b> 6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	<b>Job</b> CT98078_Wilton_Deer Run	<b>Page</b> 27 of 59
	<b>Project</b> PR-009191	<b>Date</b> 12:11:08 01/27/23
	<b>Client</b> Pyramid Network Services, LLC	<b>Designed by</b> Hailey Hipp

Section Elevation <i>ft</i>	<i>z</i> <i>ft</i>	<i>K<sub>Z</sub></i>	<i>q<sub>z</sub></i> <i>psf</i>	<i>t<sub>z</sub></i> <i>in</i>	<i>A<sub>G</sub></i> <i>ft<sup>2</sup></i>	<i>F<sub>a</sub></i> <i>c</i> <i>e</i>	<i>A<sub>F</sub></i> <i>ft<sup>2</sup></i>	<i>A<sub>R</sub></i> <i>ft<sup>2</sup></i>	<i>A<sub>leg</sub></i> <i>ft<sup>2</sup></i>	<i>Leg</i> <i>%</i>	<i>C<sub>A</sub>A<sub>A</sub></i> <i>In</i> <i>Face</i> <i>ft<sup>2</sup></i>	<i>C<sub>A</sub>A<sub>A</sub></i> <i>Out</i> <i>Face</i> <i>ft<sup>2</sup></i>
T1 130.00-120.00	125.00	1.053	5	0.9711	58.077	A	5.716	11.705	6.154	35.32	0.000	0.000
						B	5.716	11.705		35.32	5.572	0.000
						C	5.716	11.705		35.32	15.688	0.000
T2 120.00-115.00	117.50	1.035	5	0.9651	29.033	A	3.198	6.154	3.067	32.79	4.885	0.000
						B	3.198	6.154		32.79	8.264	0.000
						C	3.198	6.154		32.79	8.964	0.000
T3 115.00-110.00	112.50	1.022	5	0.9609	29.030	A	2.412	5.378	3.060	39.28	8.134	0.000
						B	2.412	5.378		39.28	11.439	0.000
						C	2.412	5.378		39.28	8.949	0.000
T4 110.00-105.00	107.50	1.009	5	0.9566	29.026	A	2.412	5.360	3.053	39.28	23.045	0.000
						B	2.412	5.360		39.28	11.419	0.000
						C	2.412	5.360		39.28	13.589	0.000
T5 105.00-100.00	102.50	0.995	5	0.9520	29.023	A	3.304	6.191	3.045	32.07	23.017	0.000
						B	3.304	6.191		32.07	11.399	0.000
						C	3.304	6.191		32.07	13.559	0.000
T6 100.00-80.00	90.00	0.959	5	0.9397	117.299	A	9.535	23.558	14.598	44.11	91.771	0.000
						B	9.535	23.558		44.11	50.695	0.000
						C	9.535	23.558		44.11	85.964	0.000
T7 80.00-60.00	70.00	0.892	5	0.9164	132.643	A	11.091	25.454	15.290	41.84	91.203	0.000
						B	11.091	25.454		41.84	51.958	0.000
						C	11.091	25.454		41.84	92.556	0.000
T8 60.00-40.00	50.00	0.811	4	0.8861	162.959	A	11.905	26.470	15.922	41.49	90.466	0.000
						B	11.905	26.470		41.49	56.194	0.000
						C	11.905	26.470		41.49	101.458	0.000
T9 40.00-20.00	30.00	0.701	4	0.8419	193.229	A	16.215	26.402	16.462	38.63	89.393	0.000
						B	16.215	26.402		38.63	55.916	0.000
						C	16.215	26.402		38.63	102.883	0.000
T10 20.00-0.00	10.00	0.7	4	0.7543	223.354	A	17.769	26.523	16.711	37.73	84.567	0.000
						B	17.769	26.523		37.73	42.999	0.000
						C	17.769	26.523		37.73	75.382	0.000

**Tower Pressure - Service**

$G_H = 0.850$

Section Elevation <i>ft</i>	<i>z</i> <i>ft</i>	<i>K<sub>Z</sub></i>	<i>q<sub>z</sub></i> <i>psf</i>	<i>A<sub>G</sub></i> <i>ft<sup>2</sup></i>	<i>F<sub>a</sub></i> <i>c</i> <i>e</i>	<i>A<sub>F</sub></i> <i>ft<sup>2</sup></i>	<i>A<sub>R</sub></i> <i>ft<sup>2</sup></i>	<i>A<sub>leg</sub></i> <i>ft<sup>2</sup></i>	<i>Leg</i> <i>%</i>	<i>C<sub>A</sub>A<sub>A</sub></i> <i>In</i> <i>Face</i> <i>ft<sup>2</sup></i>	<i>C<sub>A</sub>A<sub>A</sub></i> <i>Out</i> <i>Face</i> <i>ft<sup>2</sup></i>
T1 130.00-120.00	125.00	1.053	8	56.458	A	5.716	2.917	2.917	33.79	0.000	0.000
					B	5.716	2.917		33.79	1.776	0.000
					C	5.716	2.917		33.79	6.966	0.000
T2 120.00-115.00	117.50	1.035	8	28.229	A	3.198	1.458	1.458	31.32	4.158	0.000
					B	3.198	1.458		31.32	4.787	0.000
					C	3.198	1.458		31.32	3.945	0.000
T3 115.00-110.00	112.50	1.022	8	28.229	A	2.412	1.458	1.458	37.68	6.930	0.000
					B	2.412	1.458		37.68	7.237	0.000
					C	2.412	1.458		37.68	3.945	0.000
T4 110.00-105.00	107.50	1.009	8	28.229	A	2.412	1.458	1.458	37.68	20.018	0.000
					B	2.412	1.458		37.68	7.237	0.000
					C	2.412	1.458		37.68	5.825	0.000
T5 105.00-100.00	102.50	0.995	8	28.229	A	3.304	1.458	1.458	30.62	20.018	0.000
					B	3.304	1.458		30.62	7.237	0.000
					C	3.304	1.458		30.62	5.825	0.000
T6 90.00	90.00	0.959	8	114.167	A	9.535	8.333	8.333	46.64	80.073	0.000

<p><b>tnxTower</b></p> <p><b>FDH Infrastructure Services, LLC</b></p> <p>6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p>CT98078_ Wilton_ Deer Run</p>	<p><b>Page</b></p> <p>28 of 59</p>
	<p><b>Project</b></p> <p>PR-009191</p>	<p><b>Date</b></p> <p>12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p>Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p>Hailey Hipp</p>

Section Elevation ft	z ft	K <sub>Z</sub>	q <sub>z</sub> psf	A <sub>G</sub> ft <sup>2</sup>	F <sub>a</sub> c e	A <sub>F</sub> ft <sup>2</sup>	A <sub>R</sub> ft <sup>2</sup>	A <sub>leg</sub> ft <sup>2</sup>	Leg %	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>
100.00-80.00					B	9.535	8.333		46.64	31.450	0.000
					C	9.535	8.333		46.64	51.936	0.000
T7 80.00-60.00	70.00	0.892	7	129.587	A	11.091	9.175	9.175	45.27	80.073	0.000
					B	11.091	9.175		45.27	32.283	0.000
					C	11.091	9.175		45.27	58.313	0.000
T8 60.00-40.00	50.00	0.811	6	160.004	A	11.905	10.009	10.009	45.68	80.073	0.000
					B	11.905	10.009		45.68	34.170	0.000
					C	11.905	10.009		45.68	61.643	0.000
T9 40.00-20.00	30.00	0.701	5	190.420	A	16.215	10.843	10.843	40.07	80.073	0.000
					B	16.215	10.843		40.07	34.503	0.000
					C	16.215	10.843		40.07	62.753	0.000
T10 20.00-0.00	10.00	0.7	5	220.837	A	17.769	11.678	11.678	39.66	78.657	0.000
					B	17.769	11.678		39.66	30.090	0.000
					C	17.769	11.678		39.66	44.013	0.000

### Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	F <sub>a</sub> c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T1 130.00-120.00	0.04	0.58	A	0.153	2.761	29	1	1	7.373	0.64	63.66	B
			B	0.153	2.761		1	1	7.373			
			C	0.153	2.761		1	1	7.373			
T2 120.00-115.00	0.05	0.25	A	0.165	2.717	29	1	1	4.028	0.43	85.26	B
			B	0.165	2.717		1	1	4.028			
			C	0.165	2.717		1	1	4.028			
T3 115.00-110.00	0.07	0.23	A	0.137	2.82	28	1	1	3.238	0.43	86.60	B
			B	0.137	2.82		1	1	3.238			
			C	0.137	2.82		1	1	3.238			
T4 110.00-105.00	0.19	0.23	A	0.137	2.82	28	1	1	3.238	0.54	108.73	A
			B	0.137	2.82		1	1	3.238			
			C	0.137	2.82		1	1	3.238			
T5 105.00-100.00	0.19	0.28	A	0.169	2.704	28	1	1	4.135	0.58	116.90	A
			B	0.169	2.704		1	1	4.135			
			C	0.169	2.704		1	1	4.135			
T6 100.00-80.00	1.01	1.44	A	0.157	2.748	27	1	1	14.271	2.34	116.93	A
			B	0.157	2.748		1	1	14.271			
			C	0.157	2.748		1	1	14.271			
T7 80.00-60.00	1.07	1.71	A	0.156	2.748	25	1	1	16.305	2.34	117.09	A
			B	0.156	2.748		1	1	16.305			
			C	0.156	2.748		1	1	16.305			
T8 60.00-40.00	1.10	1.98	A	0.137	2.82	23	1	1	17.573	2.28	113.90	A
			B	0.137	2.82		1	1	17.573			
			C	0.137	2.82		1	1	17.573			
T9 40.00-20.00	1.10	2.59	A	0.142	2.801	19	1	1	22.361	2.20	109.96	A
			B	0.142	2.801		1	1	22.361			
			C	0.142	2.801		1	1	22.361			
T10 20.00-0.00	0.90	2.94	A	0.133	2.834	19	1	1	24.379	2.16	107.81	A
			B	0.133	2.834		1	1	24.379			
			C	0.133	2.834		1	1	24.379			
Sum Weight:	5.73	12.23						OTM	872.55 kip-ft	13.94		

<p><b>tnxTower</b></p> <p><b>FDH Infrastructure Services, LLC</b></p> <p>6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p>CT98078_Wilton_Deer Run</p>	<p><b>Page</b></p> <p>29 of 59</p>
	<p><b>Project</b></p> <p>PR-009191</p>	<p><b>Date</b></p> <p>12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p>Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p>Hailey Hipp</p>

**Tower Forces - No Ice - Wind 60 To Face**

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T1 130.00-120.00	0.04	0.58	A	0.153	2.761	29	0.8	1	6.229	0.56	55.81	C
			B	0.153	2.761	0.8	1	6.229				
			C	0.153	2.761	0.8	1	6.229				
T2 120.00-115.00	0.05	0.25	A	0.165	2.717	29	0.8	1	3.389	0.38	76.77	C
			B	0.165	2.717	0.8	1	3.389				
			C	0.165	2.717	0.8	1	3.389				
T3 115.00-110.00	0.07	0.23	A	0.137	2.82	28	0.8	1	2.756	0.40	80.04	C
			B	0.137	2.82	0.8	1	2.756				
			C	0.137	2.82	0.8	1	2.756				
T4 110.00-105.00	0.19	0.23	A	0.137	2.82	28	0.8	1	2.756	0.51	102.25	B
			B	0.137	2.82	0.8	1	2.756				
			C	0.137	2.82	0.8	1	2.756				
T5 105.00-100.00	0.19	0.28	A	0.169	2.704	28	0.8	1	3.474	0.54	108.50	B
			B	0.169	2.704	0.8	1	3.474				
			C	0.169	2.704	0.8	1	3.474				
T6 100.00-80.00	1.01	1.44	A	0.157	2.748	27	0.8	1	12.364	2.22	111.00	B
			B	0.157	2.748	0.8	1	12.364				
			C	0.157	2.748	0.8	1	12.364				
T7 80.00-60.00	1.07	1.71	A	0.156	2.748	25	0.8	1	14.087	2.21	110.67	B
			B	0.156	2.748	0.8	1	14.087				
			C	0.156	2.748	0.8	1	14.087				
T8 60.00-40.00	1.10	1.98	A	0.137	2.82	23	0.8	1	15.192	2.15	107.47	B
			B	0.137	2.82	0.8	1	15.192				
			C	0.137	2.82	0.8	1	15.192				
T9 40.00-20.00	1.10	2.59	A	0.142	2.801	19	0.8	1	19.118	2.05	102.44	B
			B	0.142	2.801	0.8	1	19.118				
			C	0.142	2.801	0.8	1	19.118				
T10 20.00-0.00	0.90	2.94	A	0.133	2.834	19	0.8	1	20.825	1.99	99.49	B
			B	0.133	2.834	0.8	1	20.825				
			C	0.133	2.834	0.8	1	20.825				
Sum Weight:	5.73	12.23						OTM	814.01 kip-ft	13.02		

**Tower Forces - No Ice - Wind 90 To Face**

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T1 130.00-120.00	0.04	0.58	A	0.153	2.761	29	0.85	1	6.515	0.58	57.77	C
			B	0.153	2.761	0.85	1	6.515				
			C	0.153	2.761	0.85	1	6.515				
T2 120.00-115.00	0.05	0.25	A	0.165	2.717	29	0.85	1	3.549	0.38	76.76	A
			B	0.165	2.717	0.85	1	3.549				
			C	0.165	2.717	0.85	1	3.549				
T3 115.00-110.00	0.07	0.23	A	0.137	2.82	28	0.85	1	2.876	0.40	80.03	A
			B	0.137	2.82	0.85	1	2.876				
			C	0.137	2.82	0.85	1	2.876				
T4 110.00-105.00	0.19	0.23	A	0.137	2.82	28	0.85	1	2.876	0.52	104.17	C
			B	0.137	2.82	0.85	1	2.876				

<p><b>tnxTower</b></p> <p><b>FDH Infrastructure Services, LLC</b></p> <p>6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p>CT98078_ Wilton_ Deer Run</p>	<p><b>Page</b></p> <p>30 of 59</p>
	<p><b>Project</b></p> <p>PR-009191</p>	<p><b>Date</b></p> <p>12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p>Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p>Hailey Hipp</p>

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T5 105.00-100.00	0.19	0.28	C	0.137	2.82	28	0.85	1	2.876	0.55	110.90	C
			A	0.169	2.704		0.85	1	3.640			
			B	0.169	2.704		0.85	1	3.640			
T6 100.00-80.00	1.01	1.44	C	0.169	2.704	27	0.85	1	3.640	2.22	111.03	C
			A	0.157	2.748		0.85	1	12.840			
			B	0.157	2.748		0.85	1	12.840			
T7 80.00-60.00	1.07	1.71	C	0.157	2.748	25	0.85	1	12.840	2.21	110.58	C
			A	0.156	2.748		0.85	1	14.641			
			B	0.156	2.748		0.85	1	14.641			
T8 60.00-40.00	1.10	1.98	C	0.156	2.748	23	0.85	1	14.641	2.15	107.54	C
			A	0.137	2.82		0.85	1	15.788			
			B	0.137	2.82		0.85	1	15.788			
T9 40.00-20.00	1.10	2.59	C	0.137	2.82	19	0.85	1	15.788	2.06	102.99	C
			A	0.142	2.801		0.85	1	19.929			
			B	0.142	2.801		0.85	1	19.929			
T10 20.00-0.00	0.90	2.94	C	0.142	2.801	19	0.85	1	19.929	2.02	100.83	C
			A	0.133	2.834		0.85	1	21.714			
			B	0.133	2.834		0.85	1	21.714			
Sum Weight:	5.73	12.23						OTM	819.33 kip-ft	13.10		

**Tower Forces - With Ice - Wind Normal To Face**

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T1 130.00-120.00	0.20	1.16	A	0.3	2.296	5	1	1	12.726	0.18	18.42	B
			B	0.3	2.296		1	1	12.726			
			C	0.3	2.296		1	1	12.726			
T2 120.00-115.00	0.24	0.57	A	0.322	2.239	5	1	1	6.928	0.12	24.10	B
			B	0.322	2.239		1	1	6.928			
			C	0.322	2.239		1	1	6.928			
T3 115.00-110.00	0.32	0.48	A	0.268	2.384	5	1	1	5.583	0.12	24.61	B
			B	0.268	2.384		1	1	5.583			
			C	0.268	2.384		1	1	5.583			
T4 110.00-105.00	0.58	0.48	A	0.268	2.385	5	1	1	5.572	0.16	31.34	A
			B	0.268	2.385		1	1	5.572			
			C	0.268	2.385		1	1	5.572			
T5 105.00-100.00	0.58	0.60	A	0.327	2.226	5	1	1	7.067	0.17	33.02	A
			B	0.327	2.226		1	1	7.067			
			C	0.327	2.226		1	1	7.067			
T6 100.00-80.00	2.91	2.44	A	0.282	2.345	5	1	1	23.519	0.67	33.41	A
			B	0.282	2.345		1	1	23.519			
			C	0.282	2.345		1	1	23.519			
T7 80.00-60.00	3.01	2.82	A	0.276	2.363	5	1	1	26.152	0.66	33.01	A
			B	0.276	2.363		1	1	26.152			
			C	0.276	2.363		1	1	26.152			
T8 60.00-40.00	3.07	3.13	A	0.235	2.482	4	1	1	27.300	0.64	32.17	A
			B	0.235	2.482		1	1	27.300			
			C	0.235	2.482		1	1	27.300			
T9 40.00-20.00	3.01	3.91	A	0.221	2.529	4	1	1	31.486	0.59	29.62	A
			B	0.221	2.529		1	1	31.486			



<b>tnxTower</b>  <b>FDH Infrastructure Services, LLC</b> 6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	<b>Job</b> CT98078_ Wilton_ Deer Run	<b>Page</b> 31 of 59
	<b>Project</b> PR-009191	<b>Date</b> 12:11:08 01/27/23
	<b>Client</b> Pyramid Network Services, LLC	<b>Designed by</b> Hailey Hipp

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T10 20.00-0.00	2.35	4.20	C	0.221	2.529	4	1	1	31.486	0.55	27.41	A
			A	0.198	2.602		1	1	32.998			
			B	0.198	2.602		1	1	32.998			
			C	0.198	2.602		1	1	32.998			
Sum Weight:	16.29	19.77						OTM	246.57 kip-ft	3.86		

### Tower Forces - With Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T1 130.00-120.00	0.20	1.16	A	0.3	2.296	5	0.8	1	11.583	0.17	17.21	C
			B	0.3	2.296		0.8	1	11.583			
			C	0.3	2.296		0.8	1	11.583			
T2 120.00-115.00	0.24	0.57	A	0.322	2.239	5	0.8	1	6.288	0.11	22.80	C
			B	0.322	2.239		0.8	1	6.288			
			C	0.322	2.239		0.8	1	6.288			
T3 115.00-110.00	0.32	0.48	A	0.268	2.384	5	0.8	1	5.101	0.12	23.58	C
			B	0.268	2.384		0.8	1	5.101			
			C	0.268	2.384		0.8	1	5.101			
T4 110.00-105.00	0.58	0.48	A	0.268	2.385	5	0.8	1	5.089	0.15	30.32	B
			B	0.268	2.385		0.8	1	5.089			
			C	0.268	2.385		0.8	1	5.089			
T5 105.00-100.00	0.58	0.60	A	0.327	2.226	5	0.8	1	6.406	0.16	31.74	B
			B	0.327	2.226		0.8	1	6.406			
			C	0.327	2.226		0.8	1	6.406			
T6 100.00-80.00	2.91	2.44	A	0.282	2.345	5	0.8	1	21.612	0.65	32.47	B
			B	0.282	2.345		0.8	1	21.612			
			C	0.282	2.345		0.8	1	21.612			
T7 80.00-60.00	3.01	2.82	A	0.276	2.363	5	0.8	1	23.934	0.64	31.99	B
			B	0.276	2.363		0.8	1	23.934			
			C	0.276	2.363		0.8	1	23.934			
T8 60.00-40.00	3.07	3.13	A	0.235	2.482	4	0.8	1	24.919	0.62	31.12	B
			B	0.235	2.482		0.8	1	24.919			
			C	0.235	2.482		0.8	1	24.919			
T9 40.00-20.00	3.01	3.91	A	0.221	2.529	4	0.8	1	28.243	0.57	28.36	B
			B	0.221	2.529		0.8	1	28.243			
			C	0.221	2.529		0.8	1	28.243			
T10 20.00-0.00	2.35	4.20	A	0.198	2.602	4	0.8	1	29.444	0.52	25.99	B
			B	0.198	2.602		0.8	1	29.444			
			C	0.198	2.602		0.8	1	29.444			
Sum Weight:	16.29	19.77							OTM			

### Tower Forces - With Ice - Wind 90 To Face

<b>tnxTower</b>  <b>FDH Infrastructure Services, LLC</b> 6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	<b>Job</b> CT98078_ Wilton_ Deer Run	<b>Page</b> 32 of 59
	<b>Project</b> PR-009191	<b>Date</b> 12:11:08 01/27/23
	<b>Client</b> Pyramid Network Services, LLC	<b>Designed by</b> Hailey Hipp

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T1 130.00-120.00	0.20	1.16	A	0.3	2.296	5	0.85	1	11.869	0.18	17.83	C
			B	0.3	2.296		0.85	1	11.869			
			C	0.3	2.296		0.85	1	11.869			
T2 120.00-115.00	0.24	0.57	A	0.322	2.239	5	0.85	1	6.448	0.11	22.77	C
			B	0.322	2.239		0.85	1	6.448			
			C	0.322	2.239		0.85	1	6.448			
T3 115.00-110.00	0.32	0.48	A	0.268	2.384	5	0.85	1	5.221	0.12	23.07	C
			B	0.268	2.384		0.85	1	5.221			
			C	0.268	2.384		0.85	1	5.221			
T4 110.00-105.00	0.58	0.48	A	0.268	2.385	5	0.85	1	5.210	0.16	31.20	C
			B	0.268	2.385		0.85	1	5.210			
			C	0.268	2.385		0.85	1	5.210			
T5 105.00-100.00	0.58	0.60	A	0.327	2.226	5	0.85	1	6.572	0.16	32.66	C
			B	0.327	2.226		0.85	1	6.572			
			C	0.327	2.226		0.85	1	6.572			
T6 100.00-80.00	2.91	2.44	A	0.282	2.345	5	0.85	1	22.088	0.66	32.96	C
			B	0.282	2.345		0.85	1	22.088			
			C	0.282	2.345		0.85	1	22.088			
T7 80.00-60.00	3.01	2.82	A	0.276	2.363	5	0.85	1	24.489	0.65	32.43	C
			B	0.276	2.363		0.85	1	24.489			
			C	0.276	2.363		0.85	1	24.489			
T8 60.00-40.00	3.07	3.13	A	0.235	2.482	4	0.85	1	25.514	0.63	31.62	C
			B	0.235	2.482		0.85	1	25.514			
			C	0.235	2.482		0.85	1	25.514			
T9 40.00-20.00	3.01	3.91	A	0.221	2.529	4	0.85	1	29.053	0.58	28.91	C
			B	0.221	2.529		0.85	1	29.053			
			C	0.221	2.529		0.85	1	29.053			
T10 20.00-0.00	2.35	4.20	A	0.198	2.602	4	0.85	1	30.333	0.53	26.59	C
			B	0.198	2.602		0.85	1	30.333			
			C	0.198	2.602		0.85	1	30.333			
Sum Weight:	16.29	19.77						OTM	241.18 kip-ft	3.78		

**Tower Forces - Service - Wind Normal To Face**

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T1 130.00-120.00	0.04	0.58	A	0.153	2.761	8	1	1	7.373	0.18	17.93	B
			B	0.153	2.761		1	1	7.373			
			C	0.153	2.761		1	1	7.373			
T2 120.00-115.00	0.05	0.25	A	0.165	2.717	8	1	1	4.028	0.12	24.01	B
			B	0.165	2.717		1	1	4.028			
			C	0.165	2.717		1	1	4.028			
T3 115.00-110.00	0.07	0.23	A	0.137	2.82	8	1	1	3.238	0.12	24.39	B
			B	0.137	2.82		1	1	3.238			
			C	0.137	2.82		1	1	3.238			
T4 110.00-105.00	0.19	0.23	A	0.137	2.82	8	1	1	3.238	0.15	30.62	A
			B	0.137	2.82		1	1	3.238			
			C	0.137	2.82		1	1	3.238			
T5 105.00-100.00	0.19	0.28	A	0.169	2.704	8	1	1	4.135	0.16	32.92	A
			B	0.169	2.704		1	1	4.135			
			C	0.169	2.704		1	1	4.135			

<p><b>tnxTower</b></p> <p><b>FDH Infrastructure Services, LLC</b></p> <p>6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p>CT98078_ Wilton_ Deer Run</p>	<p><b>Page</b></p> <p>33 of 59</p>
	<p><b>Project</b></p> <p>PR-009191</p>	<p><b>Date</b></p> <p>12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p>Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p>Hailey Hipp</p>

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T6 100.00-80.00	1.01	1.44	A	0.157	2.748	8	1	1	14.271	0.66	32.93	A
			B	0.157	2.748		1	1	14.271			
			C	0.157	2.748		1	1	14.271			
T7 80.00-60.00	1.07	1.71	A	0.156	2.748	7	1	1	16.305	0.66	32.97	A
			B	0.156	2.748		1	1	16.305			
			C	0.156	2.748		1	1	16.305			
T8 60.00-40.00	1.10	1.98	A	0.137	2.82	6	1	1	17.573	0.64	32.08	A
			B	0.137	2.82		1	1	17.573			
			C	0.137	2.82		1	1	17.573			
T9 40.00-20.00	1.10	2.59	A	0.142	2.801	5	1	1	22.361	0.62	30.97	A
			B	0.142	2.801		1	1	22.361			
			C	0.142	2.801		1	1	22.361			
T10 20.00-0.00	0.90	2.94	A	0.133	2.834	5	1	1	24.379	0.61	30.36	A
			B	0.133	2.834		1	1	24.379			
			C	0.133	2.834		1	1	24.379			
Sum Weight:	5.73	12.23						OTM	245.73 kip-ft	3.93		

**Tower Forces - Service - Wind 60 To Face**

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C <sub>F</sub>	q <sub>z</sub> psf	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub> ft <sup>2</sup>	F K	w plf	Ctrl. Face
T1 130.00-120.00	0.04	0.58	A	0.153	2.761	8	0.8	1	6.229	0.16	15.72	C
			B	0.153	2.761		0.8	1	6.229			
			C	0.153	2.761		0.8	1	6.229			
T2 120.00-115.00	0.05	0.25	A	0.165	2.717	8	0.8	1	3.389	0.11	21.62	C
			B	0.165	2.717		0.8	1	3.389			
			C	0.165	2.717		0.8	1	3.389			
T3 115.00-110.00	0.07	0.23	A	0.137	2.82	8	0.8	1	2.756	0.11	22.54	C
			B	0.137	2.82		0.8	1	2.756			
			C	0.137	2.82		0.8	1	2.756			
T4 110.00-105.00	0.19	0.23	A	0.137	2.82	8	0.8	1	2.756	0.14	28.80	B
			B	0.137	2.82		0.8	1	2.756			
			C	0.137	2.82		0.8	1	2.756			
T5 105.00-100.00	0.19	0.28	A	0.169	2.704	8	0.8	1	3.474	0.15	30.56	B
			B	0.169	2.704		0.8	1	3.474			
			C	0.169	2.704		0.8	1	3.474			
T6 100.00-80.00	1.01	1.44	A	0.157	2.748	8	0.8	1	12.364	0.63	31.26	B
			B	0.157	2.748		0.8	1	12.364			
			C	0.157	2.748		0.8	1	12.364			
T7 80.00-60.00	1.07	1.71	A	0.156	2.748	7	0.8	1	14.087	0.62	31.17	B
			B	0.156	2.748		0.8	1	14.087			
			C	0.156	2.748		0.8	1	14.087			
T8 60.00-40.00	1.10	1.98	A	0.137	2.82	6	0.8	1	15.192	0.61	30.27	B
			B	0.137	2.82		0.8	1	15.192			
			C	0.137	2.82		0.8	1	15.192			
T9 40.00-20.00	1.10	2.59	A	0.142	2.801	5	0.8	1	19.118	0.58	28.85	B
			B	0.142	2.801		0.8	1	19.118			
			C	0.142	2.801		0.8	1	19.118			
T10 20.00-0.00	0.90	2.94	A	0.133	2.834	5	0.8	1	20.825	0.56	28.02	B
			B	0.133	2.834		0.8	1	20.825			
			C	0.133	2.834		0.8	1	20.825			

<b>tnxTower</b>  <b>FDH Infrastructure Services, LLC</b> 6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	<b>Job</b> CT98078_ Wilton_ Deer Run	<b>Page</b> 34 of 59
	<b>Project</b> PR-009191	<b>Date</b> 12:11:08 01/27/23
	<b>Client</b> Pyramid Network Services, LLC	<b>Designed by</b> Hailey Hipp

Section Elevation	Add Weight	Self Weight	F a c e	e	C <sub>F</sub>	q <sub>z</sub>	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub>	F	w	Ctrl. Face
ft	K	K				psf			ft <sup>2</sup>	K	plf	
Sum Weight:	5.73	12.23						OTM	229.24 kip-ft	3.67		

**Tower Forces - Service - Wind 90 To Face**

Section Elevation	Add Weight	Self Weight	F a c e	e	C <sub>F</sub>	q <sub>z</sub>	D <sub>F</sub>	D <sub>R</sub>	A <sub>E</sub>	F	w	Ctrl. Face
ft	K	K				psf			ft <sup>2</sup>	K	plf	
T1 130.00-120.00	0.04	0.58	A	0.153	2.761	8	0.85	1	6.515	0.16	16.27	C
			B	0.153	2.761		0.85	1	6.515			
			C	0.153	2.761		0.85	1	6.515			
T2 120.00-115.00	0.05	0.25	A	0.165	2.717	8	0.85	1	3.549	0.11	21.62	A
			B	0.165	2.717		0.85	1	3.549			
			C	0.165	2.717		0.85	1	3.549			
T3 115.00-110.00	0.07	0.23	A	0.137	2.82	8	0.85	1	2.876	0.11	22.54	A
			B	0.137	2.82		0.85	1	2.876			
			C	0.137	2.82		0.85	1	2.876			
T4 110.00-105.00	0.19	0.23	A	0.137	2.82	8	0.85	1	2.876	0.15	29.34	C
			B	0.137	2.82		0.85	1	2.876			
			C	0.137	2.82		0.85	1	2.876			
T5 105.00-100.00	0.19	0.28	A	0.169	2.704	8	0.85	1	3.640	0.16	31.23	C
			B	0.169	2.704		0.85	1	3.640			
			C	0.169	2.704		0.85	1	3.640			
T6 100.00-80.00	1.01	1.44	A	0.157	2.748	8	0.85	1	12.840	0.63	31.27	C
			B	0.157	2.748		0.85	1	12.840			
			C	0.157	2.748		0.85	1	12.840			
T7 80.00-60.00	1.07	1.71	A	0.156	2.748	7	0.85	1	14.641	0.62	31.14	C
			B	0.156	2.748		0.85	1	14.641			
			C	0.156	2.748		0.85	1	14.641			
T8 60.00-40.00	1.10	1.98	A	0.137	2.82	6	0.85	1	15.788	0.61	30.29	C
			B	0.137	2.82		0.85	1	15.788			
			C	0.137	2.82		0.85	1	15.788			
T9 40.00-20.00	1.10	2.59	A	0.142	2.801	5	0.85	1	19.929	0.58	29.01	C
			B	0.142	2.801		0.85	1	19.929			
			C	0.142	2.801		0.85	1	19.929			
T10 20.00-0.00	0.90	2.94	A	0.133	2.834	5	0.85	1	21.714	0.57	28.40	C
			B	0.133	2.834		0.85	1	21.714			
			C	0.133	2.834		0.85	1	21.714			
Sum Weight:	5.73	12.23						OTM	230.74 kip-ft	3.69		

**Discrete Appurtenance Pressures - No Ice**      *G<sub>H</sub> = 0.850*

Description	Aiming Azimuth °	Weight K	Offset <sub>x</sub> ft	Offset <sub>z</sub> ft	z ft	K <sub>z</sub>	q <sub>z</sub> psf	C <sub>A</sub> A <sub>C</sub> Front ft <sup>2</sup>	C <sub>A</sub> A <sub>C</sub> Side ft <sup>2</sup>
Lightning Rod	0.0000	0.03	0.00	0.00	130.00	1.065	30	0.25	0.25
3"x12' Omni	120.0000	0.03	2.75	1.59	130.00	1.065	30	3.60	3.60

<p style="text-align: center;"><b>tnxTower</b></p> <p style="text-align: center;"><b>FDH Infrastructure Services, LLC</b></p> <p style="text-align: center;">6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p style="text-align: center;">CT98078_ Wilton_ Deer Run</p>	<p><b>Page</b></p> <p style="text-align: center;">35 of 59</p>
	<p><b>Project</b></p> <p style="text-align: center;">PR-009191</p>	<p><b>Date</b></p> <p style="text-align: center;">12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p style="text-align: center;">Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p style="text-align: center;">Hailey Hipp</p>

Description	Aiming Azimuth °	Weight K	Offset <sub>x</sub> ft	Offset <sub>z</sub> ft	z ft	K <sub>z</sub>	q <sub>z</sub> psf	C <sub>AAc</sub> Front ft <sup>2</sup>	C <sub>AAc</sub> Side ft <sup>2</sup>
3"x12' Omni	240.0000	0.03	-2.75	1.59	130.00	1.065	30	3.60	3.60
6' Side Arm [Site Pro 1 P/N: PSA6]	120.0000	0.05	2.75	1.59	128.00	1.060	29	0.41	3.06
6' Side Arm [Site Pro 1 P/N: PSA6]	240.0000	0.05	-2.75	1.59	128.00	1.060	29	0.41	3.06
Air 6449 B41 w/ Pipe Mount	0.0000	0.10	0.00	-7.18	118.00	1.036	29	6.60	2.67
Air 6449 B41 w/ Pipe Mount	120.0000	0.10	6.21	3.59	118.00	1.036	29	6.60	2.67
Air 6449 B41 w/ Pipe Mount	240.0000	0.10	-6.21	3.59	118.00	1.036	29	6.60	2.67
AIR32	0.0000	0.15	0.00	-7.18	118.00	1.036	29	6.75	6.07
KRD901146-1-B66A-B2 A w/ Mount Pipe	120.0000	0.15	6.21	3.59	118.00	1.036	29	6.75	6.07
AIR32	120.0000	0.15	6.21	3.59	118.00	1.036	29	6.75	6.07
KRD901146-1-B66A-B2 A w/ Mount Pipe	240.0000	0.15	-6.21	3.59	118.00	1.036	29	6.75	6.07
AIR32	240.0000	0.15	-6.21	3.59	118.00	1.036	29	6.75	6.07
KRD901146-1-B66A-B2 A w/ Mount Pipe	0.0000	0.19	0.00	-7.18	118.00	1.036	29	14.69	6.87
APXVAALL24_43-U-N A20 w/ Mount Pipe	120.0000	0.19	6.21	3.59	118.00	1.036	29	14.69	6.87
APXVAALL24_43-U-N A20 w/ Mount Pipe	240.0000	0.19	-6.21	3.59	118.00	1.036	29	14.69	6.87
APXVAALL24_43-U-N A20 w/ Mount Pipe	0.0000	0.07	0.00	-7.18	118.00	1.036	29	2.09	1.59
4449 B71 + B85	120.0000	0.07	6.21	3.59	118.00	1.036	29	2.09	1.59
4449 B71 + B85	240.0000	0.07	-6.21	3.59	118.00	1.036	29	2.09	1.59
4415 B25	0.0000	0.06	0.00	-7.18	118.00	1.036	29	2.02	1.25
4415 B25	120.0000	0.06	6.21	3.59	118.00	1.036	29	2.02	1.25
4415 B25	240.0000	0.06	-6.21	3.59	118.00	1.036	29	2.02	1.25
SDX1926Q-43	0.0000	0.01	0.00	-7.18	118.00	1.036	29	0.24	0.10
SDX1926Q-43	120.0000	0.01	6.21	3.59	118.00	1.036	29	0.24	0.10
SDX1926Q-43	240.0000	0.01	-6.21	3.59	118.00	1.036	29	0.24	0.10
KRY 112 71	0.0000	0.02	0.00	-7.18	118.00	1.036	29	1.50	0.50
KRY 112 71	120.0000	0.02	6.21	3.59	118.00	1.036	29	1.50	0.50
KRY 112 71	240.0000	0.02	-6.21	3.59	118.00	1.036	29	1.50	0.50
Sector Frame (SitePro 1 P/N: VFA12-HD)	0.0000	0.66	0.00	-5.18	118.00	1.036	29	13.20	9.20
Sector Frame (SitePro 1 P/N: VFA12-HD)	120.0000	0.66	4.48	2.59	118.00	1.036	29	13.20	9.20
Sector Frame (SitePro 1 P/N: VFA12-HD)	240.0000	0.66	-4.48	2.59	118.00	1.036	29	13.20	9.20
OPA65R-BU6DA w/ Mount Pipe	0.0000	0.09	0.00	-7.18	110.00	1.016	28	12.25	6.05
OPA65R-BU6DA w/ Mount Pipe	120.0000	0.09	6.21	3.59	110.00	1.016	28	12.25	6.05
OPA65R-BU6DA w/ Mount Pipe	240.0000	0.09	-6.21	3.59	110.00	1.016	28	12.25	6.05
RRUS 4478 B14	0.0000	0.06	0.00	-7.18	110.00	1.016	28	1.84	1.06
RRUS 4478 B14	120.0000	0.06	6.21	3.59	110.00	1.016	28	1.84	1.06
RRUS 4478 B14	240.0000	0.06	-6.21	3.59	110.00	1.016	28	1.84	1.06
7770 w/Mount Pipe	300.0000	0.07	-4.84	-2.79	110.00	1.016	28	6.20	4.94
7770 w/Mount Pipe	60.0000	0.07	4.84	-2.79	110.00	1.016	28	6.20	4.94
7770 w/Mount Pipe	180.0000	0.07	0.00	5.59	110.00	1.016	28	6.20	4.94
800 10965 w/ Mount Pipe	300.0000	0.14	-4.84	-2.79	110.00	1.016	28	14.05	7.63
800 10965 w/ Mount Pipe	60.0000	0.14	4.84	-2.79	110.00	1.016	28	14.05	7.63
800 10965 w/ Mount	180.0000	0.14	0.00	5.59	110.00	1.016	28	14.05	7.63

<p><b>tnxTower</b></p> <p><b>FDH Infrastructure Services, LLC</b></p> <p>6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p>CT98078_Wilton_Deer Run</p>	<p><b>Page</b></p> <p>36 of 59</p>
	<p><b>Project</b></p> <p>PR-009191</p>	<p><b>Date</b></p> <p>12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p>Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p>Hailey Hipp</p>

Description	Aiming Azimuth °	Weight K	Offset <sub>x</sub> ft	Offset <sub>z</sub> ft	z ft	K <sub>z</sub>	q <sub>z</sub> psf	C <sub>AAc</sub> Front ft <sup>2</sup>	C <sub>AAc</sub> Side ft <sup>2</sup>
Pipe									
P65-16-XLH-RR w/ Mount Pipe	300.0000	0.08	-4.84	-2.79	110.00	1.016	28	8.37	6.36
P65-16-XLH-RR w/ Mount Pipe	60.0000	0.08	4.84	-2.79	110.00	1.016	28	8.37	6.36
P65-16-XLH-RR w/ Mount Pipe	180.0000	0.08	0.00	5.59	110.00	1.016	28	8.37	6.36
LGP21401 TMA	300.0000	0.04	-4.84	-2.79	110.00	1.016	28	1.63	0.69
LGP21401 TMA	60.0000	0.04	4.84	-2.79	110.00	1.016	28	1.63	0.69
LGP21401 TMA	180.0000	0.04	0.00	5.59	110.00	1.016	28	1.63	0.69
TT19-08BP111-001	300.0000	0.02	-4.84	-2.79	110.00	1.016	28	0.55	0.45
TT19-08BP111-001	60.0000	0.02	4.84	-2.79	110.00	1.016	28	0.55	0.45
TT19-08BP111-001	180.0000	0.02	0.00	5.59	110.00	1.016	28	0.55	0.45
RRUS-11	300.0000	0.06	-4.84	-2.79	110.00	1.016	28	2.52	1.07
RRUS-11	60.0000	0.06	4.84	-2.79	110.00	1.016	28	2.52	1.07
RRUS-11	180.0000	0.06	0.00	5.59	110.00	1.016	28	2.52	1.07
RRUS 4478 B5	300.0000	0.06	-4.84	-2.79	110.00	1.016	28	1.84	1.06
RRUS 4478 B5	60.0000	0.06	4.84	-2.79	110.00	1.016	28	1.84	1.06
RRUS 4478 B5	180.0000	0.06	0.00	5.59	110.00	1.016	28	1.84	1.06
RRUS 4415 B25	300.0000	0.04	-4.84	-2.79	110.00	1.016	28	1.64	0.68
RRUS 4415 B25	60.0000	0.04	4.84	-2.79	110.00	1.016	28	1.64	0.68
RRUS 4415 B25	180.0000	0.04	0.00	5.59	110.00	1.016	28	1.64	0.68
DC6-48-60-18-8F	300.0000	0.03	-1.81	-1.04	110.00	1.016	28	1.21	1.21
DC6-48-60-18-8F	60.0000	0.03	1.81	-1.04	110.00	1.016	28	1.21	1.21
(3) 12' Sector Mounts [Sabre C10857001C]	0.0000	1.50	0.00	0.00	110.00	1.016	28	15.85	15.85
MT6407-77A w/Mount Pipe	0.0000	0.11	0.00	-7.18	98.00	0.983	27	6.68	3.78
MT6407-77A w/Mount Pipe	120.0000	0.11	6.21	3.59	98.00	0.983	27	6.68	3.78
MT6407-77A w/Mount Pipe	240.0000	0.11	-6.21	3.59	98.00	0.983	27	6.68	3.78
MX06FRO660-03_TIA w/ Mount Pipe	0.0000	0.20	0.00	-7.18	98.00	0.983	27	20.22	17.97
MX06FRO660-03_TIA w/ Mount Pipe	120.0000	0.20	6.21	3.59	98.00	0.983	27	20.22	17.97
MX06FRO660-03_TIA w/ Mount Pipe	240.0000	0.20	-6.21	3.59	98.00	0.983	27	20.22	17.97
BXA-80090-8CF-EDIN-X w/ Mount Pipe	0.0000	0.06	0.00	-7.18	98.00	0.983	27	8.44	8.70
BXA-80090-8CF-EDIN-X w/ Mount Pipe	120.0000	0.06	6.21	3.59	98.00	0.983	27	8.44	8.70
BXA-80090-8CF-EDIN-X w/ Mount Pipe	240.0000	0.06	-6.21	3.59	98.00	0.983	27	8.44	8.70
RF4439d-25A	0.0000	0.07	0.00	-7.18	98.00	0.983	27	2.18	1.46
RF4439d-25A	120.0000	0.07	6.21	3.59	98.00	0.983	27	2.18	1.46
RF4439d-25A	240.0000	0.07	-6.21	3.59	98.00	0.983	27	2.18	1.46
RF4440d-13A	0.0000	0.07	0.00	-7.18	98.00	0.983	27	2.18	1.32
RF4440d-13A	120.0000	0.07	6.21	3.59	98.00	0.983	27	2.18	1.32
RF4440d-13A	240.0000	0.07	-6.21	3.59	98.00	0.983	27	2.18	1.32
RRFDC-3315-PF-48	0.0000	0.03	0.00	-7.18	98.00	0.983	27	3.02	1.96
RRFDC-3315-PF-48	120.0000	0.03	6.21	3.59	98.00	0.983	27	3.02	1.96
(3) 10' x 2' T-Arms	0.0000	1.74	0.00	0.00	96.50	0.978	27	17.87	17.87
1.9"Ø x 9.8' Pipe Mount	120.0000	0.02	3.69	2.13	55.00	0.833	23	1.65	1.65
BPA7496-180-14 w/Mount Pipe	0.0000	0.21	0.00	-7.18	130.00	1.065	30	37.15	31.87
432F-83W-01-T	0.0000	0.01	0.00	-7.18	130.00	1.065	30	1.40	0.82
12' Standard Duty V-Frame [Site Pro1 P/N: VFA12-SD-S]	0.0000	0.43	0.00	-3.18	128.00	1.060	29	10.80	6.40
Pipe Mount	120.0000	0.04	3.18	1.84	123.00	1.048	29	1.19	1.19

<p style="text-align: center;"><b>tnxTower</b></p> <p style="text-align: center;"><b>FDH Infrastructure Services, LLC</b></p> <p style="text-align: center;">6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p style="text-align: center;">CT98078_ Wilton_ Deer Run</p>	<p><b>Page</b></p> <p style="text-align: center;">37 of 59</p>
	<p><b>Project</b></p> <p style="text-align: center;">PR-009191</p>	<p><b>Date</b></p> <p style="text-align: center;">12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p style="text-align: center;">Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p style="text-align: center;">Hailey Hipp</p>

Description	Aiming Azimuth °	Weight K	Offset <sub>x</sub> ft	Offset <sub>z</sub> ft	z ft	K <sub>z</sub>	q <sub>z</sub> psf	C <sub>AAc</sub> Front ft <sup>2</sup>	C <sub>AAc</sub> Side ft <sup>2</sup>
Sum Weight:		11.52							

**Discrete Appurtenance Pressures - With Ice** *G<sub>H</sub>* = 0.850

Description	Aiming Azimuth °	Weight K	Offset <sub>x</sub> ft	Offset <sub>z</sub> ft	z ft	K <sub>z</sub>	q <sub>z</sub> psf	C <sub>AAc</sub> Front ft <sup>2</sup>	C <sub>AAc</sub> Side ft <sup>2</sup>	t <sub>z</sub> in
Lightning Rod	0.0000	0.04	0.00	0.00	130.00	1.065	5	0.96	0.96	0.9749
3"x12' Omni	120.0000	0.08	2.75	1.59	130.00	1.065	5	6.02	6.02	0.9749
3"x12' Omni	240.0000	0.08	-2.75	1.59	130.00	1.065	5	6.02	6.02	0.9749
6' Side Arm [Site Pro 1 P/N: PSA6]	120.0000	0.12	2.75	1.59	128.00	1.060	5	1.21	7.09	0.9734
6' Side Arm [Site Pro 1 P/N: PSA6]	240.0000	0.12	-2.75	1.59	128.00	1.060	5	1.21	7.09	0.9734
Air 6449 B41 w/ Pipe Mount	0.0000	0.18	0.00	-7.18	118.00	1.036	5	7.28	3.21	0.9655
Air 6449 B41 w/ Pipe Mount	120.0000	0.18	6.21	3.59	118.00	1.036	5	7.28	3.21	0.9655
Air 6449 B41 w/ Pipe Mount	240.0000	0.18	-6.21	3.59	118.00	1.036	5	7.28	3.21	0.9655
AIR32	0.0000	0.28	0.00	-7.18	118.00	1.036	5	7.62	7.53	0.9655
KRD901146-1-B66A-B2 A w/ Mount Pipe	120.0000	0.28	6.21	3.59	118.00	1.036	5	7.62	7.53	0.9655
KRD901146-1-B66A-B2 A w/ Mount Pipe	240.0000	0.28	-6.21	3.59	118.00	1.036	5	7.62	7.53	0.9655
KRD901146-1-B66A-B2 A w/ Mount Pipe	0.0000	0.45	0.00	-7.18	118.00	1.036	5	16.18	8.20	0.9655
APXVAALL24 43-U-N A20 w/ Mount Pipe	120.0000	0.45	6.21	3.59	118.00	1.036	5	16.18	8.20	0.9655
APXVAALL24 43-U-N A20 w/ Mount Pipe	240.0000	0.45	-6.21	3.59	118.00	1.036	5	16.18	8.20	0.9655
APXVAALL24 43-U-N A20 w/ Mount Pipe	0.0000	0.12	0.00	-7.18	118.00	1.036	5	2.44	1.91	0.9655
4449 B71 + B85	120.0000	0.12	6.21	3.59	118.00	1.036	5	2.44	1.91	0.9655
4449 B71 + B85	240.0000	0.12	-6.21	3.59	118.00	1.036	5	2.44	1.91	0.9655
4415 B25	0.0000	0.10	0.00	-7.18	118.00	1.036	5	2.37	1.55	0.9655
4415 B25	120.0000	0.10	6.21	3.59	118.00	1.036	5	2.37	1.55	0.9655
4415 B25	240.0000	0.10	-6.21	3.59	118.00	1.036	5	2.37	1.55	0.9655
SDX1926Q-43	0.0000	0.01	0.00	-7.18	118.00	1.036	5	0.37	0.19	0.9655
SDX1926Q-43	120.0000	0.01	6.21	3.59	118.00	1.036	5	0.37	0.19	0.9655
SDX1926Q-43	240.0000	0.01	-6.21	3.59	118.00	1.036	5	0.37	0.19	0.9655
KRY 112 71	0.0000	0.04	0.00	-7.18	118.00	1.036	5	1.80	0.71	0.9655
KRY 112 71	120.0000	0.04	6.21	3.59	118.00	1.036	5	1.80	0.71	0.9655
KRY 112 71	240.0000	0.04	-6.21	3.59	118.00	1.036	5	1.80	0.71	0.9655
Sector Frame (SitePro 1 P/N: VFA12-HD)	0.0000	1.00	0.00	-5.18	118.00	1.036	5	25.37	19.16	0.9655
Sector Frame (SitePro 1 P/N: VFA12-HD)	120.0000	1.00	4.48	2.59	118.00	1.036	5	25.37	19.16	0.9655
Sector Frame (SitePro 1 P/N: VFA12-HD)	240.0000	1.00	-4.48	2.59	118.00	1.036	5	25.37	19.16	0.9655
OPA65R-BU6DA w/ Mount Pipe	0.0000	0.27	0.00	-7.18	110.00	1.016	5	13.70	7.33	0.9588
OPA65R-BU6DA w/ Mount Pipe	120.0000	0.27	6.21	3.59	110.00	1.016	5	13.70	7.33	0.9588



<p><b>tnxTower</b></p> <p><b>FDH Infrastructure Services, LLC</b></p> <p>6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p>CT98078_Wilton_Deer Run</p>	<p><b>Page</b></p> <p>38 of 59</p>
	<p><b>Project</b></p> <p>PR-009191</p>	<p><b>Date</b></p> <p>12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p>Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p>Hailey Hipp</p>

Description	Aiming Azimuth °	Weight K	Offset <sub>x</sub> ft	Offset <sub>z</sub> ft	z ft	K <sub>z</sub>	q <sub>z</sub> psf	C <sub>AAc</sub> Front ft <sup>2</sup>	C <sub>AAc</sub> Side ft <sup>2</sup>	t <sub>z</sub> in
OPA65R-BU6DA w/ Mount Pipe	240.0000	0.27	-6.21	3.59	110.00	1.016	5	13.70	7.33	0.9588
RRUS 4478 B14	0.0000	0.09	0.00	-7.18	110.00	1.016	5	2.17	1.33	0.9588
RRUS 4478 B14	120.0000	0.09	6.21	3.59	110.00	1.016	5	2.17	1.33	0.9588
RRUS 4478 B14	240.0000	0.09	-6.21	3.59	110.00	1.016	5	2.17	1.33	0.9588
7770 w/Mount Pipe	300.0000	0.18	-4.84	-2.79	110.00	1.016	5	7.23	6.58	0.9588
7770 w/Mount Pipe	60.0000	0.18	4.84	-2.79	110.00	1.016	5	7.23	6.58	0.9588
7770 w/Mount Pipe	180.0000	0.18	0.00	5.59	110.00	1.016	5	7.23	6.58	0.9588
800 10965 w/ Mount Pipe	300.0000	0.33	-4.84	-2.79	110.00	1.016	5	15.25	9.88	0.9588
800 10965 w/ Mount Pipe	60.0000	0.33	4.84	-2.79	110.00	1.016	5	15.25	9.88	0.9588
800 10965 w/ Mount Pipe	180.0000	0.33	0.00	5.59	110.00	1.016	5	15.25	9.88	0.9588
P65-16-XLH-RR w/ Mount Pipe	300.0000	0.21	-4.84	-2.79	110.00	1.016	5	9.41	8.35	0.9588
P65-16-XLH-RR w/ Mount Pipe	60.0000	0.21	4.84	-2.79	110.00	1.016	5	9.41	8.35	0.9588
P65-16-XLH-RR w/ Mount Pipe	180.0000	0.21	0.00	5.59	110.00	1.016	5	9.41	8.35	0.9588
LGP21401 TMA	300.0000	0.06	-4.84	-2.79	110.00	1.016	5	2.11	1.06	0.9588
LGP21401 TMA	60.0000	0.06	4.84	-2.79	110.00	1.016	5	2.11	1.06	0.9588
LGP21401 TMA	180.0000	0.06	0.00	5.59	110.00	1.016	5	2.11	1.06	0.9588
TT19-08BP111-001	300.0000	0.03	-4.84	-2.79	110.00	1.016	5	0.74	0.62	0.9588
TT19-08BP111-001	60.0000	0.03	4.84	-2.79	110.00	1.016	5	0.74	0.62	0.9588
TT19-08BP111-001	180.0000	0.03	0.00	5.59	110.00	1.016	5	0.74	0.62	0.9588
RRUS-11	300.0000	0.09	-4.84	-2.79	110.00	1.016	5	2.91	1.35	0.9588
RRUS-11	60.0000	0.09	4.84	-2.79	110.00	1.016	5	2.91	1.35	0.9588
RRUS-11	180.0000	0.09	0.00	5.59	110.00	1.016	5	2.91	1.35	0.9588
RRUS 4478 B5	300.0000	0.09	-4.84	-2.79	110.00	1.016	5	2.17	1.33	0.9588
RRUS 4478 B5	60.0000	0.09	4.84	-2.79	110.00	1.016	5	2.17	1.33	0.9588
RRUS 4478 B5	180.0000	0.09	0.00	5.59	110.00	1.016	5	2.17	1.33	0.9588
RRUS 4415 B25	300.0000	0.07	-4.84	-2.79	110.00	1.016	5	1.96	0.90	0.9588
RRUS 4415 B25	60.0000	0.07	4.84	-2.79	110.00	1.016	5	1.96	0.90	0.9588
RRUS 4415 B25	180.0000	0.07	0.00	5.59	110.00	1.016	5	1.96	0.90	0.9588
DC6-48-60-18-8F	300.0000	0.08	-1.81	-1.04	110.00	1.016	5	2.09	2.09	0.9588
DC6-48-60-18-8F	60.0000	0.08	1.81	-1.04	110.00	1.016	5	2.09	2.09	0.9588
(3) 12' Sector Mounts [Sabre C10857001C]	0.0000	2.36	0.00	0.00	110.00	1.016	5	25.34	25.34	0.9588
MT6407-77A w/Mount Pipe	0.0000	0.21	0.00	-7.18	98.00	0.983	5	8.23	5.72	0.9477
MT6407-77A w/Mount Pipe	120.0000	0.21	6.21	3.59	98.00	0.983	5	8.23	5.72	0.9477
MT6407-77A w/Mount Pipe	240.0000	0.21	-6.21	3.59	98.00	0.983	5	8.23	5.72	0.9477
MX06FRO660-03_TIA w/ Mount Pipe	0.0000	0.55	0.00	-7.18	98.00	0.983	5	22.33	21.88	0.9477
MX06FRO660-03_TIA w/ Mount Pipe	120.0000	0.55	6.21	3.59	98.00	0.983	5	22.33	21.88	0.9477
MX06FRO660-03_TIA w/ Mount Pipe	240.0000	0.55	-6.21	3.59	98.00	0.983	5	22.33	21.88	0.9477
BXA-80090-8CF-EDIN- X w/ Mount Pipe	0.0000	0.20	0.00	-7.18	98.00	0.983	5	9.76	11.54	0.9477
BXA-80090-8CF-EDIN- X w/ Mount Pipe	120.0000	0.20	6.21	3.59	98.00	0.983	5	9.76	11.54	0.9477
BXA-80090-8CF-EDIN- X w/ Mount Pipe	240.0000	0.20	-6.21	3.59	98.00	0.983	5	9.76	11.54	0.9477
RF4439d-25A	0.0000	0.11	0.00	-7.18	98.00	0.983	5	2.56	1.78	0.9477
RF4439d-25A	120.0000	0.11	6.21	3.59	98.00	0.983	5	2.56	1.78	0.9477
RF4439d-25A	240.0000	0.11	-6.21	3.59	98.00	0.983	5	2.56	1.78	0.9477
RF4440d-13A	0.0000	0.11	0.00	-7.18	98.00	0.983	5	2.56	1.63	0.9477

<p style="text-align: center;"><b>tnxTower</b></p> <p style="text-align: center;"><b>FDH Infrastructure Services, LLC</b></p> <p style="text-align: center;">6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p style="text-align: center;">CT98078_ Wilton_ Deer Run</p>	<p><b>Page</b></p> <p style="text-align: center;">39 of 59</p>
	<p><b>Project</b></p> <p style="text-align: center;">PR-009191</p>	<p><b>Date</b></p> <p style="text-align: center;">12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p style="text-align: center;">Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p style="text-align: center;">Hailey Hipp</p>

Description	Aiming Azimuth °	Weight K	Offset <sub>x</sub> ft	Offset <sub>z</sub> ft	z ft	K <sub>z</sub>	q <sub>z</sub> psf	C <sub>AAc</sub> Front ft <sup>2</sup>	C <sub>AAc</sub> Side ft <sup>2</sup>	t <sub>z</sub> in
RF4440d-13A	120.0000	0.11	6.21	3.59	98.00	0.983	5	2.56	1.63	0.9477
RF4440d-13A	240.0000	0.11	-6.21	3.59	98.00	0.983	5	2.56	1.63	0.9477
RRFDC-3315-PF-48	0.0000	0.08	0.00	-7.18	98.00	0.983	5	3.45	2.33	0.9477
RRFDC-3315-PF-48	120.0000	0.08	6.21	3.59	98.00	0.983	5	3.45	2.33	0.9477
(3) 10' x 2' T-Arms	0.0000	1.49	0.00	0.00	96.50	0.978	5	31.95	31.95	0.9463
1.9"Ø x 9.8' Pipe Mount	120.0000	0.05	3.69	2.13	55.00	0.833	4	3.49	3.49	0.8945
BPA7496-180-14 w/Mount Pipe	0.0000	0.79	0.00	-7.18	130.00	1.065	5	41.68	41.87	0.9749
432F-83W-01-T	0.0000	0.04	0.00	-7.18	130.00	1.065	5	1.69	1.05	0.9749
12' Standard Duty V-Frame [Site Pro1 P/N: VFA12-SD-S]	0.0000	0.65	0.00	-3.18	128.00	1.060	5	21.12	13.31	0.9734
Pipe Mount	120.0000	0.06	3.18	1.84	123.00	1.048	5	1.79	1.79	0.9695
Sum		20.55								
Weight:										

**Discrete Appurtenance Pressures - Service** *G<sub>H</sub> = 0.850*

Description	Aiming Azimuth °	Weight K	Offset <sub>x</sub> ft	Offset <sub>z</sub> ft	z ft	K <sub>z</sub>	q <sub>z</sub> psf	C <sub>AAc</sub> Front ft <sup>2</sup>	C <sub>AAc</sub> Side ft <sup>2</sup>
Lightning Rod	0.0000	0.03	0.00	0.00	130.00	1.065	8	0.25	0.25
3"x12' Omni	120.0000	0.03	2.75	1.59	130.00	1.065	8	3.60	3.60
3"x12' Omni	240.0000	0.03	-2.75	1.59	130.00	1.065	8	3.60	3.60
6' Side Arm [Site Pro 1 P/N: PSA6]	120.0000	0.05	2.75	1.59	128.00	1.060	8	0.41	3.06
6' Side Arm [Site Pro 1 P/N: PSA6]	240.0000	0.05	-2.75	1.59	128.00	1.060	8	0.41	3.06
Air 6449 B41 w/ Pipe Mount	0.0000	0.10	0.00	-7.18	118.00	1.036	8	6.60	2.67
Air 6449 B41 w/ Pipe Mount	120.0000	0.10	6.21	3.59	118.00	1.036	8	6.60	2.67
Air 6449 B41 w/ Pipe Mount	240.0000	0.10	-6.21	3.59	118.00	1.036	8	6.60	2.67
AIR32	0.0000	0.15	0.00	-7.18	118.00	1.036	8	6.75	6.07
KRD901146-1-B66A-B2 A w/ Mount Pipe	120.0000	0.15	6.21	3.59	118.00	1.036	8	6.75	6.07
AIR32	240.0000	0.15	-6.21	3.59	118.00	1.036	8	6.75	6.07
KRD901146-1-B66A-B2 A w/ Mount Pipe	0.0000	0.19	0.00	-7.18	118.00	1.036	8	14.69	6.87
APXVAALL24 43-U-N A20 w/ Mount Pipe	120.0000	0.19	6.21	3.59	118.00	1.036	8	14.69	6.87
APXVAALL24 43-U-N A20 w/ Mount Pipe	240.0000	0.19	-6.21	3.59	118.00	1.036	8	14.69	6.87
APXVAALL24 43-U-N A20 w/ Mount Pipe	0.0000	0.07	0.00	-7.18	118.00	1.036	8	2.09	1.59
4449 B71 + B85	120.0000	0.07	6.21	3.59	118.00	1.036	8	2.09	1.59
4449 B71 + B85	240.0000	0.07	-6.21	3.59	118.00	1.036	8	2.09	1.59
4415 B25	0.0000	0.06	0.00	-7.18	118.00	1.036	8	2.02	1.25
4415 B25	120.0000	0.06	6.21	3.59	118.00	1.036	8	2.02	1.25
4415 B25	240.0000	0.06	-6.21	3.59	118.00	1.036	8	2.02	1.25
SDX1926Q-43	0.0000	0.01	0.00	-7.18	118.00	1.036	8	0.24	0.10
SDX1926Q-43	120.0000	0.01	6.21	3.59	118.00	1.036	8	0.24	0.10
SDX1926Q-43	240.0000	0.01	-6.21	3.59	118.00	1.036	8	0.24	0.10

<p><b>tnxTower</b></p> <p><b>FDH Infrastructure Services, LLC</b></p> <p>6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p>CT98078_ Wilton_ Deer Run</p>	<p><b>Page</b></p> <p>40 of 59</p>
	<p><b>Project</b></p> <p>PR-009191</p>	<p><b>Date</b></p> <p>12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p>Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p>Hailey Hipp</p>

Description	Aiming Azimuth °	Weight K	Offset <sub>x</sub> ft	Offset <sub>z</sub> ft	z ft	K <sub>z</sub>	q <sub>z</sub> psf	C <sub>AAc</sub> Front ft <sup>2</sup>	C <sub>AAc</sub> Side ft <sup>2</sup>
KRY 112 71	0.0000	0.02	0.00	-7.18	118.00	1.036	8	1.50	0.50
KRY 112 71	120.0000	0.02	6.21	3.59	118.00	1.036	8	1.50	0.50
KRY 112 71	240.0000	0.02	-6.21	3.59	118.00	1.036	8	1.50	0.50
Sector Frame (SitePro 1 P/N: VFA12-HD)	0.0000	0.66	0.00	-5.18	118.00	1.036	8	13.20	9.20
Sector Frame (SitePro 1 P/N: VFA12-HD)	120.0000	0.66	4.48	2.59	118.00	1.036	8	13.20	9.20
Sector Frame (SitePro 1 P/N: VFA12-HD)	240.0000	0.66	-4.48	2.59	118.00	1.036	8	13.20	9.20
OPA65R-BU6DA w/ Mount Pipe	0.0000	0.09	0.00	-7.18	110.00	1.016	8	12.25	6.05
OPA65R-BU6DA w/ Mount Pipe	120.0000	0.09	6.21	3.59	110.00	1.016	8	12.25	6.05
OPA65R-BU6DA w/ Mount Pipe	240.0000	0.09	-6.21	3.59	110.00	1.016	8	12.25	6.05
RRUS 4478 B14	0.0000	0.06	0.00	-7.18	110.00	1.016	8	1.84	1.06
RRUS 4478 B14	120.0000	0.06	6.21	3.59	110.00	1.016	8	1.84	1.06
RRUS 4478 B14	240.0000	0.06	-6.21	3.59	110.00	1.016	8	1.84	1.06
7770 w/Mount Pipe	300.0000	0.07	-4.84	-2.79	110.00	1.016	8	6.20	4.94
7770 w/Mount Pipe	60.0000	0.07	4.84	-2.79	110.00	1.016	8	6.20	4.94
7770 w/Mount Pipe	180.0000	0.07	0.00	5.59	110.00	1.016	8	6.20	4.94
800 10965 w/ Mount Pipe	300.0000	0.14	-4.84	-2.79	110.00	1.016	8	14.05	7.63
800 10965 w/ Mount Pipe	60.0000	0.14	4.84	-2.79	110.00	1.016	8	14.05	7.63
800 10965 w/ Mount Pipe	180.0000	0.14	0.00	5.59	110.00	1.016	8	14.05	7.63
P65-16-XLH-RR w/ Mount Pipe	300.0000	0.08	-4.84	-2.79	110.00	1.016	8	8.37	6.36
P65-16-XLH-RR w/ Mount Pipe	60.0000	0.08	4.84	-2.79	110.00	1.016	8	8.37	6.36
P65-16-XLH-RR w/ Mount Pipe	180.0000	0.08	0.00	5.59	110.00	1.016	8	8.37	6.36
LGP21401 TMA	300.0000	0.04	-4.84	-2.79	110.00	1.016	8	1.63	0.69
LGP21401 TMA	60.0000	0.04	4.84	-2.79	110.00	1.016	8	1.63	0.69
LGP21401 TMA	180.0000	0.04	0.00	5.59	110.00	1.016	8	1.63	0.69
TT19-08BP111-001	300.0000	0.02	-4.84	-2.79	110.00	1.016	8	0.55	0.45
TT19-08BP111-001	60.0000	0.02	4.84	-2.79	110.00	1.016	8	0.55	0.45
TT19-08BP111-001	180.0000	0.02	0.00	5.59	110.00	1.016	8	0.55	0.45
RRUS-11	300.0000	0.06	-4.84	-2.79	110.00	1.016	8	2.52	1.07
RRUS-11	60.0000	0.06	4.84	-2.79	110.00	1.016	8	2.52	1.07
RRUS-11	180.0000	0.06	0.00	5.59	110.00	1.016	8	2.52	1.07
RRUS 4478 B5	300.0000	0.06	-4.84	-2.79	110.00	1.016	8	1.84	1.06
RRUS 4478 B5	60.0000	0.06	4.84	-2.79	110.00	1.016	8	1.84	1.06
RRUS 4478 B5	180.0000	0.06	0.00	5.59	110.00	1.016	8	1.84	1.06
RRUS 4415 B25	300.0000	0.04	-4.84	-2.79	110.00	1.016	8	1.64	0.68
RRUS 4415 B25	60.0000	0.04	4.84	-2.79	110.00	1.016	8	1.64	0.68
RRUS 4415 B25	180.0000	0.04	0.00	5.59	110.00	1.016	8	1.64	0.68
DC6-48-60-18-8F	300.0000	0.03	-1.81	-1.04	110.00	1.016	8	1.43	1.43
DC6-48-60-18-8F	60.0000	0.03	1.81	-1.04	110.00	1.016	8	1.43	1.43
(3) 12' Sector Mounts [Sabre C10857001C]	0.0000	1.50	0.00	0.00	110.00	1.016	8	15.85	15.85
MT6407-77A w/Mount Pipe	0.0000	0.11	0.00	-7.18	98.00	0.983	8	6.68	3.78
MT6407-77A w/Mount Pipe	120.0000	0.11	6.21	3.59	98.00	0.983	8	6.68	3.78
MT6407-77A w/Mount Pipe	240.0000	0.11	-6.21	3.59	98.00	0.983	8	6.68	3.78
MX06FRO660-03_TIA w/ Mount Pipe	0.0000	0.20	0.00	-7.18	98.00	0.983	8	20.22	17.97
MX06FRO660-03_TIA	120.0000	0.20	6.21	3.59	98.00	0.983	8	20.22	17.97



<b>tnxTower</b>  <b>FDH Infrastructure Services, LLC</b> 6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	<b>Job</b> CT98078_Wilton_Deer Run	<b>Page</b> 42 of 59
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	<b>Client</b> Pyramid Network Services, LLC	<b>Designed by</b> Hailey Hipp

### Dish Pressures - Service

Elevation ft	Dish Description	Aiming Azimuth °	Weight K	Offset <sub>x</sub> ft	Offset <sub>z</sub> ft	K <sub>z</sub>	A <sub>A</sub> ft <sup>2</sup>	q <sub>z</sub> psf
57.00	PR-850	0.0000	0.04	0.00	-4.67	0.842	25.22	7
57.00	PR-850	130.0000	0.04	4.05	2.34	0.842	25.22	7
51.00	PR-850	145.0000	0.04	4.27	2.47	0.815	25.22	6
123.00	VHLP3-11W	158.4400	0.05	3.62	2.09	1.048	8.47	8
	Sum Weight:		0.17					

### Force Totals

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M <sub>x</sub> kip-ft	Sum of Overturning Moments, M <sub>z</sub> kip-ft	Sum of Torques kip-ft
Leg Weight	8.06					
Bracing Weight	4.17					
Total Member Self-Weight	12.23			2.90	-11.49	
Total Weight	29.65			2.90	-11.49	
Wind 0 deg - No Ice		-0.14	-23.37	-1913.40	0.36	14.49
Wind 30 deg - No Ice		10.96	-19.65	-1624.80	-908.12	11.51
Wind 60 deg - No Ice		19.22	-11.26	-930.25	-1589.11	9.16
Wind 90 deg - No Ice		22.62	0.14	15.56	-1858.82	4.76
Wind 120 deg - No Ice		20.39	12.11	990.60	-1657.80	-3.77
Wind 150 deg - No Ice		11.35	19.94	1639.38	-935.01	-12.47
Wind 180 deg - No Ice		0.13	22.35	1851.48	-22.24	-14.30
Wind 210 deg - No Ice		-10.97	19.65	1627.77	886.66	-11.54
Wind 240 deg - No Ice		-19.96	11.77	969.29	1613.43	-9.32
Wind 270 deg - No Ice		-22.63	-0.21	-15.83	1836.37	-4.67
Wind 300 deg - No Ice		-19.60	-11.66	-958.98	1586.45	3.78
Wind 330 deg - No Ice		-11.32	-19.98	-1639.01	911.43	12.57
Member Ice	7.54					
Total Weight Ice	57.55			7.72	-28.20	
Wind 0 deg - Ice		-0.22	-6.35	-505.82	-15.31	3.23
Wind 30 deg - Ice		2.86	-5.44	-434.40	-263.65	3.15
Wind 60 deg - Ice		5.27	-3.05	-242.66	-456.36	2.59
Wind 90 deg - Ice		6.19	0.03	10.30	-528.87	1.95
Wind 120 deg - Ice		5.44	3.35	275.97	-465.71	-0.05
Wind 150 deg - Ice		3.03	5.46	449.71	-273.81	-2.45
Wind 180 deg - Ice		0.02	6.14	508.29	-30.03	-3.50
Wind 210 deg - Ice		-2.91	5.41	447.93	210.23	-3.34
Wind 240 deg - Ice		-5.46	3.18	266.15	411.20	-2.66
Wind 270 deg - Ice		-6.28	-0.24	-6.92	477.41	-1.05
Wind 300 deg - Ice		-5.38	-3.30	-257.16	405.54	0.87
Wind 330 deg - Ice		-3.19	-5.45	-434.05	226.32	2.64
Total Weight	29.65			2.90	-11.49	
Wind 0 deg - Service		-0.04	-6.58	-542.55	2.44	4.08
Wind 30 deg - Service		3.09	-5.53	-461.24	-253.54	3.24
Wind 60 deg - Service		5.42	-3.17	-265.55	-445.41	2.58
Wind 90 deg - Service		6.37	0.04	0.94	-521.40	1.34
Wind 120 deg - Service		5.74	3.41	275.66	-464.76	-1.06
Wind 150 deg - Service		3.20	5.62	458.46	-261.11	-3.51
Wind 180 deg - Service		0.04	6.30	518.23	-3.93	-4.03
Wind 210 deg - Service		-3.09	5.54	455.19	252.16	-3.25
Wind 240 deg - Service		-5.62	3.32	269.66	456.93	-2.62
Wind 270 deg - Service		-6.37	-0.06	-7.90	519.75	-1.31
Wind 300 deg - Service		-5.52	-3.29	-273.64	449.33	1.07

<p style="text-align: center;"><b>tnxTower</b></p> <p style="text-align: center;"><b>FDH Infrastructure Services, LLC</b></p> <p style="text-align: center;">6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<b>Job</b> CT98078_ Wilton_Deer Run	<b>Page</b> 43 of 59
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	<b>Client</b> Pyramid Network Services, LLC	<b>Designed by</b> Hailey Hipp

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, $M_x$ kip-ft	Sum of Overturning Moments, $M_z$ kip-ft	Sum of Torques kip-ft
Wind 330 deg - Service		-3.19	-5.63	-465.24	259.14	3.54
Seismic Vertical	1.54					
Seismic Horizontal 0 deg		0.00	-1.72	-164.21	0.00	0.00
Seismic Horizontal 30 deg		0.86	-1.49	-142.21	-82.11	0.00
Seismic Horizontal 60 deg		1.49	-0.86	-82.11	-142.21	0.00
Seismic Horizontal 90 deg		1.72	0.00	0.00	-164.21	0.00
Seismic Horizontal 120 deg		1.49	0.86	82.11	-142.21	0.00
Seismic Horizontal 150 deg		0.86	1.49	142.21	-82.11	0.00
Seismic Horizontal 180 deg		0.00	1.72	164.21	0.00	0.00
Seismic Horizontal 210 deg		-0.86	1.49	142.21	82.11	0.00
Seismic Horizontal 240 deg		-1.49	0.86	82.11	142.21	0.00
Seismic Horizontal 270 deg		-1.72	0.00	0.00	164.21	0.00
Seismic Horizontal 300 deg		-1.49	-0.86	-82.11	142.21	0.00
Seismic Horizontal 330 deg		-0.86	-1.49	-142.21	82.11	0.00

### Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp

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	<p><b>Client</b></p> <p style="text-align: center;">Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p style="text-align: center;">Hailey Hipp</p>

Comb. No.	Description
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service
51	1.2 Dead+1.0 Ev+1.0 Eh 0 deg
52	0.9 Dead-1.0 Ev+1.0 Eh 0 deg
53	1.2 Dead+1.0 Ev+1.0 Eh 30 deg
54	0.9 Dead-1.0 Ev+1.0 Eh 30 deg
55	1.2 Dead+1.0 Ev+1.0 Eh 60 deg
56	0.9 Dead-1.0 Ev+1.0 Eh 60 deg
57	1.2 Dead+1.0 Ev+1.0 Eh 90 deg
58	0.9 Dead-1.0 Ev+1.0 Eh 90 deg
59	1.2 Dead+1.0 Ev+1.0 Eh 120 deg
60	0.9 Dead-1.0 Ev+1.0 Eh 120 deg
61	1.2 Dead+1.0 Ev+1.0 Eh 150 deg
62	0.9 Dead-1.0 Ev+1.0 Eh 150 deg
63	1.2 Dead+1.0 Ev+1.0 Eh 180 deg
64	0.9 Dead-1.0 Ev+1.0 Eh 180 deg
65	1.2 Dead+1.0 Ev+1.0 Eh 210 deg
66	0.9 Dead-1.0 Ev+1.0 Eh 210 deg
67	1.2 Dead+1.0 Ev+1.0 Eh 240 deg
68	0.9 Dead-1.0 Ev+1.0 Eh 240 deg
69	1.2 Dead+1.0 Ev+1.0 Eh 270 deg
70	0.9 Dead-1.0 Ev+1.0 Eh 270 deg
71	1.2 Dead+1.0 Ev+1.0 Eh 300 deg
72	0.9 Dead-1.0 Ev+1.0 Eh 300 deg
73	1.2 Dead+1.0 Ev+1.0 Eh 330 deg
74	0.9 Dead-1.0 Ev+1.0 Eh 330 deg

## 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	130 - 120	Leg	Max Tension	23	2.13	0.05	0.36
			Max. Compression	2	-3.79	0.01	-0.03
			Max. Mx	8	-1.11	0.97	-0.01
			Max. My	16	-0.64	0.05	0.69
			Max. Vy	8	-0.49	0.00	0.00
			Max. Vx	16	-0.35	0.00	0.00
		Diagonal	Max Tension	10	1.59	0.00	0.00
			Max. Compression	22	-1.60	0.00	0.00
			Max. Mx	2	-0.08	0.01	0.00
			Max. My	22	-1.59	0.01	-0.01
			Max. Vy	30	-0.02	0.01	0.00
			Max. Vx	22	-0.00	0.00	0.00
		Top Girt	Max Tension	15	0.11	0.00	0.00
			Max. Compression	2	-0.15	0.00	0.00
			Max. Mx	26	-0.02	-0.03	0.00
			Max. My	24	0.01	0.00	-0.00



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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T2	120 - 115	Leg	Max. Vy	26	0.02	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
			Max Tension	23	4.85	0.36	0.32
			Max. Compression	2	-8.60	-0.01	0.15
			Max. Mx	20	3.92	-0.51	0.13
			Max. My	14	-3.08	0.08	0.52
		Diagonal	Max. Vy	20	-0.94	-0.07	-0.00
			Max. Vx	2	-1.08	0.06	0.51
			Max Tension	10	2.27	0.00	0.00
			Max. Compression	22	-2.28	0.00	0.00
			Max. Mx	2	-0.04	0.01	-0.00
			Max. My	22	-2.27	0.00	-0.01
		Top Girt	Max. Vy	29	-0.01	0.01	0.00
			Max. Vx	22	-0.00	0.00	0.00
			Max Tension	2	0.58	0.00	0.00
			Max. Compression	14	-0.60	0.00	0.00
			Max. Mx	26	-0.01	-0.02	0.00
			Max. My	24	-0.01	0.00	-0.00
T3	115 - 110	Leg	Max. Vy	26	0.02	0.00	0.00
			Max. Vx	24	0.00	0.00	0.00
			Max Tension	23	7.80	0.15	0.05
			Max. Compression	2	-13.15	0.03	-0.01
		Diagonal	Max. Mx	20	5.89	0.19	-0.05
			Max. My	24	-1.35	0.12	0.20
			Max. Vy	6	-0.07	0.09	-0.00
			Max. Vx	4	0.08	-0.12	0.20
			Max Tension	22	2.92	0.00	0.00
			Max. Compression	10	-2.96	0.00	0.00
			Max. Mx	28	0.16	0.02	0.00
			Max. My	20	-1.64	0.00	-0.01
T4	110 - 105	Leg	Max. Vy	27	-0.01	0.02	0.00
			Max. Vx	20	0.00	0.00	-0.01
			Max Tension	15	14.99	-0.03	0.02
			Max. Compression	2	-22.22	0.02	0.00
		Diagonal	Max. Mx	6	-11.73	0.09	-0.00
			Max. My	4	-2.85	-0.05	0.10
			Max. Vy	8	-0.96	0.02	-0.01
			Max. Vx	2	0.96	0.01	-0.03
			Max Tension	24	4.25	0.00	0.00
			Max. Compression	24	-4.22	0.00	0.00
T5	105 - 100	Leg	Max. Mx	4	1.91	0.02	-0.00
			Max. My	24	-4.20	-0.00	-0.01
			Max. Vy	29	-0.01	0.01	0.00
			Max. Vx	24	0.00	-0.00	-0.01
			Max Tension	15	23.14	-0.02	-0.13
			Max. Compression	2	-31.77	0.02	0.00
		Diagonal	Max. Mx	9	-2.96	-0.16	-0.00
			Max. My	3	10.68	-0.03	0.18
			Max. Vy	9	0.10	0.06	0.01
			Max. Vx	2	-0.11	-0.03	0.18
			Max Tension	24	4.52	0.00	0.00
			Max. Compression	24	-4.57	-0.01	0.00
			Max. Mx	2	3.86	0.03	0.01
			Max. My	23	-2.83	-0.01	-0.01
Secondary Horizontal	Max. Vy	27	-0.02	0.02	0.00		
	Max. Vx	23	0.00	-0.01	-0.01		
	Max Tension	20	0.16	0.00	0.00		
	Max. Compression	7	-0.15	0.00	0.00		
	Max. Mx	8	0.16	0.02	-0.00		
	Max. My	2	-0.05	0.00	-0.01		

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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T6	100 - 80	Leg	Max. Vy	27	0.02	0.02	-0.00
			Max. Vx	10	0.00	0.00	0.00
			Max Tension	15	70.97	-0.05	-0.27
			Max. Compression	2	-84.70	-0.09	-0.61
			Max. Mx	8	-36.65	0.60	0.01
			Max. My	3	-82.75	-0.09	-0.62
		Diagonal	Max. Vy	8	0.69	-0.42	0.01
			Max. Vx	14	0.72	0.02	-0.44
			Max Tension	24	7.13	0.00	0.00
			Max. Compression	24	-7.32	0.00	0.00
			Max. Mx	2	5.99	0.03	-0.00
			Max. My	2	-5.26	-0.00	-0.01
			Max. Vy	31	-0.02	0.02	-0.00
			Max. Vx	2	0.00	0.00	0.00
T7	80 - 60	Leg	Max Tension	15	105.19	-0.05	0.01
			Max. Compression	2	-121.88	0.19	-0.04
			Max. Mx	18	-90.16	1.31	0.06
			Max. My	14	-49.70	0.60	0.71
			Max. Vy	19	-3.90	1.31	0.06
			Max. Vx	14	-2.29	0.60	0.71
		Diagonal	Max Tension	24	4.73	0.00	0.00
			Max. Compression	24	-5.01	0.00	0.00
			Max. Mx	2	2.54	0.03	-0.01
			Max. My	24	-4.98	-0.01	-0.01
			Max. Vy	31	-0.02	0.02	0.00
			Max. Vx	24	0.00	0.00	0.00
			Max Tension	11	0.21	0.00	0.00
			Max. Compression	22	-0.36	0.00	0.00
T8	60 - 40	Leg	Max. Mx	26	-0.06	-0.02	0.00
			Max. My	27	-0.10	0.00	0.00
			Max. Vy	26	0.02	0.00	0.00
			Max. Vx	27	0.00	0.00	0.00
			Max Tension	15	131.77	-0.17	0.00
			Max. Compression	10	-152.00	-0.07	0.01
		Diagonal	Max. Mx	31	-54.00	0.21	-0.00
			Max. My	5	-4.22	0.00	-0.28
			Max. Vy	14	0.12	-0.21	0.06
			Max. Vx	2	0.18	-0.13	-0.23
			Max Tension	24	4.66	0.00	0.00
			Max. Compression	24	-4.79	0.00	0.00
			Max. Mx	31	0.58	0.03	0.00
			Max. My	2	-4.26	-0.01	-0.01
T9	40 - 20	Leg	Max. Vy	31	-0.02	0.03	0.00
			Max. Vx	2	0.00	0.00	0.00
			Max Tension	15	152.01	0.44	0.03
			Max. Compression	10	-175.94	-0.46	0.00
			Max. Mx	10	-175.69	0.84	-0.01
			Max. My	4	-7.49	-0.09	-0.74
		Diagonal	Max. Vy	2	-0.32	0.84	-0.00
			Max. Vx	4	-0.22	-0.09	-0.74
			Max Tension	25	5.97	0.08	-0.02
			Max. Compression	24	-6.32	0.00	0.00
			Max. Mx	10	3.62	0.12	0.02
			Max. My	12	-6.23	-0.05	0.04
			Max. Vy	29	0.04	0.07	-0.00
			Max. Vx	12	0.01	0.00	0.00
Secondary Horizontal	Max Tension	6	0.36	0.01	-0.00		
	Max. Compression	5	-0.44	0.00	0.01		
	Max. Mx	34	-0.05	0.02	0.00		
	Max. My	14	-0.33	0.01	0.01		

<b>tnxTower</b>  <b>FDH Infrastructure Services, LLC</b> 6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	<b>Job</b>	CT98078_ Wilton_ Deer Run	<b>Page</b>	47 of 59
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Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
T10	20 - 0	Leg	Max. Vy	28	0.02	0.02	0.00
			Max. Vx	14	-0.00	0.00	0.00
			Max Tension	23	173.25	0.51	-0.01
			Max. Compression	10	-201.22	0.00	0.00
			Max. Mx	10	-188.87	0.96	-0.01
			Max. My	4	-8.94	-0.11	-0.87
		Diagonal	Max. Vy	10	0.34	0.96	-0.01
			Max. Vx	4	0.24	-0.11	-0.87
			Max Tension	25	5.73	0.07	-0.01
			Max. Compression	24	-5.92	0.00	0.00
			Max. Mx	12	0.96	0.11	0.02
			Max. My	12	-5.78	-0.03	0.03
		Secondary Horizontal	Max. Vy	29	0.04	0.09	-0.00
			Max. Vx	12	0.01	0.00	0.00
			Max Tension	6	0.40	0.00	0.00
			Max. Compression	5	-0.48	0.01	0.01
			Max. Mx	34	-0.09	0.02	0.00
			Max. My	14	-0.41	0.01	0.01
			Max. Vy	34	-0.02	0.02	0.00
Max. Vx	14	-0.00	0.00	0.00			

### Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Leg C	Max. Vert	18	202.23	12.86	-6.89
	Max. H <sub>x</sub>	18	202.23	12.86	-6.89
	Max. H <sub>z</sub>	7	-177.06	-11.49	6.10
	Min. Vert	7	-177.06	-11.49	6.10
	Min. H <sub>x</sub>	7	-177.06	-11.49	6.10
	Min. H <sub>z</sub>	18	202.23	12.86	-6.89
Leg B	Max. Vert	10	207.60	-12.82	-7.63
	Max. H <sub>x</sub>	23	-178.47	11.41	6.81
	Max. H <sub>z</sub>	25	-153.76	9.32	6.89
	Min. Vert	23	-178.47	11.41	6.81
	Min. H <sub>x</sub>	10	207.60	-12.82	-7.63
	Min. H <sub>z</sub>	10	207.60	-12.82	-7.63
Leg A	Max. Vert	2	205.55	0.74	14.72
	Max. H <sub>x</sub>	22	108.91	1.52	7.54
	Max. H <sub>z</sub>	2	205.55	0.74	14.72
	Min. Vert	15	-178.14	-0.73	-13.06
	Min. H <sub>x</sub>	11	-91.15	-1.43	-6.97
	Min. H <sub>z</sub>	15	-178.14	-0.73	-13.06

### Tower Mast Reaction Summary

Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
Dead Only	29.65	0.00	0.00	2.90	-11.53	-0.00
1.2 Dead+1.0 Wind 0 deg - No	35.58	-0.14	-23.37	-1928.98	-2.01	14.59

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	<p style="text-align: center;"><b>Project</b></p> <p style="text-align: center;">PR-009191</p>	<p style="text-align: center;"><b>Date</b></p> <p style="text-align: center;">12:11:08 01/27/23</p>
	<p style="text-align: center;"><b>Client</b></p> <p style="text-align: center;">Pyramid Network Services, LLC</p>	<p style="text-align: center;"><b>Designed by</b></p> <p style="text-align: center;">Hailey Hipp</p>

Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
Ice						
0.9 Dead+1.0 Wind 0 deg - No Ice	26.69	-0.14	-23.37	-1925.62	1.47	14.56
1.2 Dead+1.0 Wind 30 deg - No Ice	35.58	10.96	-19.65	-1638.02	-918.11	11.60
0.9 Dead+1.0 Wind 30 deg - No Ice	26.69	10.96	-19.65	-1635.28	-912.63	11.58
1.2 Dead+1.0 Wind 60 deg - No Ice	35.58	19.22	-11.26	-937.58	-1604.84	9.21
0.9 Dead+1.0 Wind 60 deg - No Ice	26.69	19.22	-11.26	-936.37	-1597.85	9.20
1.2 Dead+1.0 Wind 90 deg - No Ice	35.58	22.62	0.14	16.26	-1876.76	4.75
0.9 Dead+1.0 Wind 90 deg - No Ice	26.69	22.62	0.14	15.36	-1869.19	4.75
1.2 Dead+1.0 Wind 120 deg - No Ice	35.58	20.39	12.11	999.47	-1673.95	-3.82
0.9 Dead+1.0 Wind 120 deg - No Ice	26.69	20.39	12.11	996.43	-1666.85	-3.81
1.2 Dead+1.0 Wind 150 deg - No Ice	35.58	11.35	19.94	1653.75	-945.20	-12.55
0.9 Dead+1.0 Wind 150 deg - No Ice	26.69	11.35	19.94	1649.27	-939.67	-12.52
1.2 Dead+1.0 Wind 180 deg - No Ice	35.58	0.13	22.35	1867.74	-24.81	-14.39
0.9 Dead+1.0 Wind 180 deg - No Ice	26.69	0.13	22.35	1862.77	-21.28	-14.37
1.2 Dead+1.0 Wind 210 deg - No Ice	35.58	-10.97	19.65	1642.15	891.73	-11.63
0.9 Dead+1.0 Wind 210 deg - No Ice	26.69	-10.97	19.65	1637.68	893.26	-11.61
1.2 Dead+1.0 Wind 240 deg - No Ice	35.58	-19.96	11.77	978.07	1624.60	-9.37
0.9 Dead+1.0 Wind 240 deg - No Ice	26.69	-19.96	11.77	975.06	1624.54	-9.36
1.2 Dead+1.0 Wind 270 deg - No Ice	35.58	-22.63	-0.21	-15.41	1849.44	-4.66
0.9 Dead+1.0 Wind 270 deg - No Ice	26.69	-22.63	-0.21	-16.24	1848.89	-4.66
1.2 Dead+1.0 Wind 300 deg - No Ice	35.58	-19.60	-11.66	-966.57	1597.40	3.83
0.9 Dead+1.0 Wind 300 deg - No Ice	26.69	-19.60	-11.66	-965.31	1597.40	3.82
1.2 Dead+1.0 Wind 330 deg - No Ice	35.58	-11.32	-19.98	-1652.31	916.70	12.65
0.9 Dead+1.0 Wind 330 deg - No Ice	26.69	-11.32	-19.98	-1649.56	918.18	12.63
1.2 Dead+1.0 Ice+1.0 Temp	63.48	0.00	0.00	8.32	-31.03	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	63.48	-0.22	-6.35	-512.94	-18.06	3.29
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	63.48	2.86	-5.44	-440.46	-270.11	3.20
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	63.48	5.27	-3.05	-245.85	-465.67	2.62
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	63.48	6.19	0.03	10.96	-539.27	1.95
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	63.48	5.44	3.35	280.59	-475.14	-0.08
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	63.48	3.03	5.46	456.97	-280.38	-2.50
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	63.48	0.02	6.14	516.49	-32.92	-3.56

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	<p><b>Project</b></p> <p style="text-align: center;">PR-009191</p>	<p><b>Date</b></p> <p style="text-align: center;">12:11:08 01/27/23</p>
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Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 210	63.48	-2.91	5.41	455.20	210.99	-3.39
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 240	63.48	-5.46	3.18	270.68	414.93	-2.69
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 270	63.48	-6.28	-0.24	-6.45	482.13	-1.05
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 300	63.48	-5.38	-3.30	-260.49	409.16	0.90
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 330	63.48	-3.19	-5.45	-440.10	227.24	2.69
deg+1.0 Ice+1.0 Temp						
Dead+Wind 0 deg - Service	29.65	-0.04	-6.58	-540.79	-8.24	4.10
Dead+Wind 30 deg - Service	29.65	3.09	-5.53	-458.93	-265.99	3.26
Dead+Wind 60 deg - Service	29.65	5.42	-3.17	-261.86	-459.20	2.59
Dead+Wind 90 deg - Service	29.65	6.37	0.04	6.50	-535.70	1.34
Dead+Wind 120 deg - Service	29.65	5.74	3.41	283.12	-478.64	-1.08
Dead+Wind 150 deg - Service	29.65	3.20	5.62	467.20	-273.61	-3.53
Dead+Wind 180 deg - Service	29.65	0.04	6.30	527.41	-14.65	-4.05
Dead+Wind 210 deg - Service	29.65	-3.09	5.54	463.94	243.22	-3.27
Dead+Wind 240 deg - Service	29.65	-5.62	3.32	277.10	449.41	-2.63
Dead+Wind 270 deg - Service	29.65	-6.37	-0.06	-2.41	512.68	-1.31
Dead+Wind 300 deg - Service	29.65	-5.52	-3.29	-270.02	441.76	1.08
Dead+Wind 330 deg - Service	29.65	-3.19	-5.63	-462.95	250.24	3.56
1.2 Dead+1.0 Ev+1.0 Eh 0 deg	37.12	0.00	-1.72	-162.31	-13.93	0.01
0.9 Dead-1.0 Ev+1.0 Eh 0 deg	25.15	0.00	-1.72	-162.67	-10.42	0.01
1.2 Dead+1.0 Ev+1.0 Eh 30 deg	37.12	0.86	-1.49	-140.10	-96.83	0.01
0.9 Dead-1.0 Ev+1.0 Eh 30 deg	25.15	0.86	-1.49	-140.53	-93.04	0.01
1.2 Dead+1.0 Ev+1.0 Eh 60 deg	37.12	1.49	-0.86	-79.42	-157.52	0.00
0.9 Dead-1.0 Ev+1.0 Eh 60 deg	25.15	1.49	-0.86	-80.03	-153.56	0.00
1.2 Dead+1.0 Ev+1.0 Eh 90 deg	37.12	1.72	0.00	3.50	-179.72	0.00
0.9 Dead-1.0 Ev+1.0 Eh 90 deg	25.15	1.72	0.00	2.62	-175.69	0.00
1.2 Dead+1.0 Ev+1.0 Eh 120	37.12	1.49	0.86	86.38	-157.52	-0.00
deg						
0.9 Dead-1.0 Ev+1.0 Eh 120	25.15	1.49	0.86	85.25	-153.55	-0.00
deg						
1.2 Dead+1.0 Ev+1.0 Eh 150	37.12	0.86	1.49	147.05	-96.84	-0.01
deg						
0.9 Dead-1.0 Ev+1.0 Eh 150	25.15	0.86	1.49	145.74	-93.06	-0.01
deg						
1.2 Dead+1.0 Ev+1.0 Eh 180	37.12	0.00	1.72	169.28	-13.94	-0.01
deg						
0.9 Dead-1.0 Ev+1.0 Eh 180	25.15	0.00	1.72	167.89	-10.42	-0.01
deg						
1.2 Dead+1.0 Ev+1.0 Eh 210	37.12	-0.86	1.49	147.05	68.97	-0.01
deg						
0.9 Dead-1.0 Ev+1.0 Eh 210	25.15	-0.86	1.49	145.74	72.23	-0.01
deg						
1.2 Dead+1.0 Ev+1.0 Eh 240	37.12	-1.49	0.86	86.38	129.65	-0.00
deg						
0.9 Dead-1.0 Ev+1.0 Eh 240	25.15	-1.49	0.86	85.25	132.72	-0.00
deg						
1.2 Dead+1.0 Ev+1.0 Eh 270	37.12	-1.72	0.00	3.50	151.85	-0.00
deg						
0.9 Dead-1.0 Ev+1.0 Eh 270	25.15	-1.72	0.00	2.62	154.86	-0.00
deg						
1.2 Dead+1.0 Ev+1.0 Eh 300	37.12	-1.49	-0.86	-79.42	129.65	0.00
deg						
0.9 Dead-1.0 Ev+1.0 Eh 300	25.15	-1.49	-0.86	-80.03	132.72	0.00
deg						
1.2 Dead+1.0 Ev+1.0 Eh 330	37.12	-0.86	-1.49	-140.10	68.95	0.01
deg						

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Load Combination	Vertical K	Shear <sub>x</sub> K	Shear <sub>z</sub> K	Overturning Moment, M <sub>x</sub> kip-ft	Overturning Moment, M <sub>z</sub> kip-ft	Torque kip-ft
0.9 Dead-1.0 Ev+1.0 Eh 330 deg	25.15	-0.86	-1.49	-140.53	72.21	0.01

## Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.00	-29.65	0.00	0.00	29.65	0.00	0.000%
2	-0.14	-35.58	-23.37	0.14	35.58	23.37	0.000%
3	-0.14	-26.69	-23.37	0.14	26.69	23.37	0.000%
4	10.96	-35.58	-19.65	-10.96	35.58	19.65	0.000%
5	10.96	-26.69	-19.65	-10.96	26.69	19.65	0.000%
6	19.22	-35.58	-11.26	-19.22	35.58	11.26	0.000%
7	19.22	-26.69	-11.26	-19.22	26.69	11.26	0.000%
8	22.62	-35.58	0.14	-22.62	35.58	-0.14	0.000%
9	22.62	-26.69	0.14	-22.62	26.69	-0.14	0.000%
10	20.39	-35.58	12.11	-20.39	35.58	-12.11	0.000%
11	20.39	-26.69	12.11	-20.39	26.69	-12.11	0.000%
12	11.35	-35.58	19.94	-11.35	35.58	-19.94	0.000%
13	11.35	-26.69	19.94	-11.35	26.69	-19.94	0.000%
14	0.13	-35.58	22.35	-0.13	35.58	-22.35	0.000%
15	0.13	-26.69	22.35	-0.13	26.69	-22.35	0.000%
16	-10.97	-35.58	19.65	10.97	35.58	-19.65	0.000%
17	-10.97	-26.69	19.65	10.97	26.69	-19.65	0.000%
18	-19.96	-35.58	11.77	19.96	35.58	-11.77	0.000%
19	-19.96	-26.69	11.77	19.96	26.69	-11.77	0.000%
20	-22.63	-35.58	-0.21	22.63	35.58	0.21	0.000%
21	-22.63	-26.69	-0.21	22.63	26.69	0.21	0.000%
22	-19.60	-35.58	-11.66	19.60	35.58	11.66	0.000%
23	-19.60	-26.69	-11.66	19.60	26.69	11.66	0.000%
24	-11.32	-35.58	-19.98	11.32	35.58	19.98	0.000%
25	-11.32	-26.69	-19.98	11.32	26.69	19.98	0.000%
26	0.00	-63.48	0.00	0.00	63.48	0.00	0.000%
27	-0.22	-63.48	-6.35	0.22	63.48	6.35	0.000%
28	2.86	-63.48	-5.44	-2.86	63.48	5.44	0.000%
29	5.27	-63.48	-3.05	-5.27	63.48	3.05	0.000%
30	6.19	-63.48	0.03	-6.19	63.48	-0.03	0.000%
31	5.44	-63.48	3.35	-5.44	63.48	-3.35	0.000%
32	3.03	-63.48	5.46	-3.03	63.48	-5.46	0.000%
33	0.02	-63.48	6.14	-0.02	63.48	-6.14	0.000%
34	-2.91	-63.48	5.41	2.91	63.48	-5.41	0.000%
35	-5.46	-63.48	3.18	5.46	63.48	-3.18	0.000%
36	-6.28	-63.48	-0.24	6.28	63.48	0.24	0.000%
37	-5.38	-63.48	-3.30	5.38	63.48	3.30	0.000%
38	-3.19	-63.48	-5.45	3.19	63.48	5.45	0.000%
39	-0.04	-29.65	-6.58	0.04	29.65	6.58	0.000%
40	3.09	-29.65	-5.53	-3.09	29.65	5.53	0.000%
41	5.42	-29.65	-3.17	-5.42	29.65	3.17	0.000%
42	6.37	-29.65	0.04	-6.37	29.65	-0.04	0.000%
43	5.74	-29.65	3.41	-5.74	29.65	-3.41	0.000%
44	3.20	-29.65	5.62	-3.20	29.65	-5.62	0.000%
45	0.04	-29.65	6.30	-0.04	29.65	-6.30	0.000%
46	-3.09	-29.65	5.54	3.09	29.65	-5.54	0.000%
47	-5.62	-29.65	3.32	5.62	29.65	-3.32	0.000%
48	-6.37	-29.65	-0.06	6.37	29.65	0.06	0.000%
49	-5.52	-29.65	-3.29	5.52	29.65	3.29	0.000%
50	-3.19	-29.65	-5.63	3.19	29.65	5.63	0.000%

<p style="text-align: center;"><b>tnxTower</b></p> <p style="text-align: center;"><b>FDH Infrastructure Services, LLC</b></p> <p style="text-align: center;">6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p style="text-align: center;">CT98078_ Wilton_ Deer Run</p>	<p><b>Page</b></p> <p style="text-align: center;">51 of 59</p>
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	<p><b>Client</b></p> <p style="text-align: center;">Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p style="text-align: center;">Hailey Hipp</p>

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
51	0.00	-37.12	-1.72	0.00	37.12	1.72	0.000%
52	0.00	-25.15	-1.72	0.00	25.15	1.72	0.000%
53	0.86	-37.12	-1.49	-0.86	37.12	1.49	0.000%
54	0.86	-25.15	-1.49	-0.86	25.15	1.49	0.000%
55	1.49	-37.12	-0.86	-1.49	37.12	0.86	0.000%
56	1.49	-25.15	-0.86	-1.49	25.15	0.86	0.000%
57	1.72	-37.12	0.00	-1.72	37.12	0.00	0.000%
58	1.72	-25.15	0.00	-1.72	25.15	0.00	0.000%
59	1.49	-37.12	0.86	-1.49	37.12	-0.86	0.000%
60	1.49	-25.15	0.86	-1.49	25.15	-0.86	0.000%
61	0.86	-37.12	1.49	-0.86	37.12	-1.49	0.000%
62	0.86	-25.15	1.49	-0.86	25.15	-1.49	0.000%
63	0.00	-37.12	1.72	0.00	37.12	-1.72	0.000%
64	0.00	-25.15	1.72	0.00	25.15	-1.72	0.000%
65	-0.86	-37.12	1.49	0.86	37.12	-1.49	0.000%
66	-0.86	-25.15	1.49	0.86	25.15	-1.49	0.000%
67	-1.49	-37.12	0.86	1.49	37.12	-0.86	0.000%
68	-1.49	-25.15	0.86	1.49	25.15	-0.86	0.000%
69	-1.72	-37.12	0.00	1.72	37.12	0.00	0.000%
70	-1.72	-25.15	0.00	1.72	25.15	0.00	0.000%
71	-1.49	-37.12	-0.86	1.49	37.12	0.86	0.000%
72	-1.49	-25.15	-0.86	1.49	25.15	0.86	0.000%
73	-0.86	-37.12	-1.49	0.86	37.12	1.49	0.000%
74	-0.86	-25.15	-1.49	0.86	25.15	1.49	0.000%

## Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.0000001	0.0000001
2	Yes	4	0.0000001	0.00000541
3	Yes	4	0.0000001	0.00000573
4	Yes	4	0.0000001	0.00001013
5	Yes	4	0.0000001	0.00000916
6	Yes	4	0.0000001	0.00001229
7	Yes	4	0.0000001	0.00001066
8	Yes	4	0.0000001	0.00000978
9	Yes	4	0.0000001	0.00000882
10	Yes	4	0.0000001	0.00000543
11	Yes	4	0.0000001	0.00000576
12	Yes	4	0.0000001	0.00001000
13	Yes	4	0.0000001	0.00000901
14	Yes	4	0.0000001	0.00001252
15	Yes	4	0.0000001	0.00001090
16	Yes	4	0.0000001	0.00001040
17	Yes	4	0.0000001	0.00000936
18	Yes	4	0.0000001	0.00000505
19	Yes	4	0.0000001	0.00000535
20	Yes	4	0.0000001	0.00000962
21	Yes	4	0.0000001	0.00000869
22	Yes	4	0.0000001	0.00001243
23	Yes	4	0.0000001	0.00001089
24	Yes	4	0.0000001	0.00000955
25	Yes	4	0.0000001	0.00000867
26	Yes	4	0.0000001	0.00000001
27	Yes	4	0.0000001	0.00001101



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28	Yes	4	0.00000001	0.00001124
29	Yes	4	0.00000001	0.00001140
30	Yes	4	0.00000001	0.00001125
31	Yes	4	0.00000001	0.00001108
32	Yes	4	0.00000001	0.00001113
33	Yes	4	0.00000001	0.00001117
34	Yes	4	0.00000001	0.00001093
35	Yes	4	0.00000001	0.00001065
36	Yes	4	0.00000001	0.00001056
37	Yes	4	0.00000001	0.00001094
38	Yes	4	0.00000001	0.00001095
39	Yes	4	0.00000001	0.00000001
40	Yes	4	0.00000001	0.00000001
41	Yes	4	0.00000001	0.00000001
42	Yes	4	0.00000001	0.00000001
43	Yes	4	0.00000001	0.00000001
44	Yes	4	0.00000001	0.00000001
45	Yes	4	0.00000001	0.00000001
46	Yes	4	0.00000001	0.00000001
47	Yes	4	0.00000001	0.00000001
48	Yes	4	0.00000001	0.00000001
49	Yes	4	0.00000001	0.00000001
50	Yes	4	0.00000001	0.00000001
51	Yes	4	0.00000001	0.00000001
52	Yes	4	0.00000001	0.00000001
53	Yes	4	0.00000001	0.00000001
54	Yes	4	0.00000001	0.00000001
55	Yes	4	0.00000001	0.00000001
56	Yes	4	0.00000001	0.00000001
57	Yes	4	0.00000001	0.00000001
58	Yes	4	0.00000001	0.00000001
59	Yes	4	0.00000001	0.00000001
60	Yes	4	0.00000001	0.00000001
61	Yes	4	0.00000001	0.00000001
62	Yes	4	0.00000001	0.00000001
63	Yes	4	0.00000001	0.00000001
64	Yes	4	0.00000001	0.00000001
65	Yes	4	0.00000001	0.00000001
66	Yes	4	0.00000001	0.00000001
67	Yes	4	0.00000001	0.00000001
68	Yes	4	0.00000001	0.00000001
69	Yes	4	0.00000001	0.00000001
70	Yes	4	0.00000001	0.00000001
71	Yes	4	0.00000001	0.00000001
72	Yes	4	0.00000001	0.00000001
73	Yes	4	0.00000001	0.00000001
74	Yes	4	0.00000001	0.00000001

**Maximum Tower Deflections - Service Wind**

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	130 - 120	3.722	43	0.2378	0.0669
T2	120 - 115	3.230	43	0.2355	0.0646
T3	115 - 110	2.986	43	0.2329	0.0596
T4	110 - 105	2.742	43	0.2286	0.0576
T5	105 - 100	2.498	43	0.2227	0.0554
T6	100 - 80	2.264	43	0.2131	0.0530
T7	80 - 60	1.407	43	0.1723	0.0395

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Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T8	60 - 40	0.762	43	0.1204	0.0249
T9	40 - 20	0.327	43	0.0743	0.0116
T10	20 - 0	0.085	43	0.0343	0.0051

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

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
130.00	Lightning Rod	43	3.722	0.2378	0.0669	190252
128.00	3"x12' Omni	43	3.623	0.2375	0.0671	190252
125.00	CCISeismic Tower Section 1	43	3.475	0.2370	0.0669	190252
124.00	CCISeismic (2) heliax-hj 7/8" From 9 to 128 (120ft to128ft)	43	3.426	0.2368	0.0667	158997
123.00	VHLP3-11W	43	3.377	0.2365	0.0664	138607
121.50	CCISeismic commscope EW90(ELLIPTICAL) From 0 to 123 (120ft to123ft)	43	3.304	0.2361	0.0657	122496
118.00	Air 6449 B41 w/ Pipe Mount	43	3.132	0.2346	0.0626	113442
117.50	CCISeismic Tower Section 2	43	3.108	0.2344	0.0620	111587
116.50	CCISeismic miscl Safety Line 3/8 From 0 to 118 (115ft to118ft)	43	3.059	0.2338	0.0610	113999
112.50	CCISeismic Tower Section 3	43	2.864	0.2309	0.0584	162411
110.00	OPA65R-BU6DA w/ Mount Pipe	43	2.742	0.2286	0.0576	454271
107.50	CCISeismic Tower Section 4	43	2.619	0.2261	0.0566	45785
102.50	CCISeismic Tower Section 5	43	2.380	0.2182	0.0542	28694
96.50	MT6407-77A w/Mount Pipe	43	2.104	0.2061	0.0510	48453
90.00	CCISeismic Tower Section 6	43	1.816	0.1935	0.0468	30042
88.25	CCISeismic (8) (6) 1-5/8"; (2) 1-5/8" Hybrid From 9.5 to 96.5 (80ft to96.5ft)	43	1.741	0.1900	0.0456	27204
87.50	CCISeismic T-Brackets From 9.5 to 95 (80ft to95ft)	43	1.709	0.1885	0.0450	26146
70.00	CCISeismic Tower Section 7	43	1.056	0.1469	0.0323	21022
57.00	PR-850	43	0.684	0.1129	0.0226	23867
55.00	1.9"Ø x 9.8' Pipe Mount	43	0.635	0.1080	0.0212	23995
51.00	PR-850	43	0.542	0.0986	0.0183	24229
50.00	CCISeismic Tower Section 8	43	0.520	0.0963	0.0176	24288
48.50	CCISeismic heliax-hj 7/8" From 9 to 57 (40ft to57ft)	43	0.488	0.0929	0.0166	24378
47.50	CCISeismic (2) heliax-hj 7/8" From 9.5 to 55 (40ft to55ft)	43	0.467	0.0906	0.0160	24438
30.00	CCISeismic Tower Section 9	43	0.182	0.0536	0.0077	25294
14.75	CCISeismic (8) (6) 1-5/8"; (2) 1-5/8" Hybrid From 9.5 to 96.5 (9.5ft to20ft)	43	0.052	0.0248	0.0038	34853
14.50	CCISeismic heliax-hj 7/8" From 9 to 57 (9ft to20ft)	43	0.051	0.0244	0.0037	35454
14.25	CCISeismic T-Brackets From 8.5 to 110 (8.5ft to20ft)	43	0.050	0.0240	0.0036	36076
10.00	CCISeismic Tower Section 10	43	0.031	0.0167	0.0026	51408

### Maximum Tower Deflections - Design Wind

<b>tnxTower</b>  <b>FDH Infrastructure Services, LLC</b> 6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	<b>Job</b>	CT98078_ Wilton_ Deer Run	<b>Page</b>	54 of 59
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Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	130 - 120	13.099	2	0.8365	0.2380
T2	120 - 115	11.343	2	0.8312	0.2295
T3	115 - 110	10.472	2	0.8232	0.2120
T4	110 - 105	9.612	10	0.8091	0.2049
T5	105 - 100	8.756	10	0.7854	0.1970
T6	100 - 80	7.937	10	0.7494	0.1884
T7	80 - 60	4.933	10	0.6030	0.1406
T8	60 - 40	2.674	10	0.4215	0.0885
T9	40 - 20	1.148	10	0.2603	0.0414
T10	20 - 0	0.299	10	0.1200	0.0181

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

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
130.00	Lightning Rod	2	13.099	0.8365	0.2380	59064
128.00	3"x12' Omni	2	12.747	0.8360	0.2385	59064
125.00	CCISeismic Tower Section 1	2	12.219	0.8350	0.2380	59064
124.00	CCISeismic (2) heliax-hj 7/8" From 9 to 128 (120ft to128ft)	2	12.044	0.8345	0.2372	49374
123.00	VHLP3-11W	2	11.868	0.8338	0.2361	43113
121.50	CCISeismic commscope EW90(ELLIPTICAL) From 0 to 123 (120ft to123ft)	2	11.605	0.8327	0.2335	38285
118.00	Air 6449 B41 w/ Pipe Mount	2	10.994	0.8286	0.2224	40366
117.50	CCISeismic Tower Section 2	2	10.906	0.8279	0.2205	39631
116.50	CCISeismic miscl Safety Line 3/8 From 0 to 118 (115ft to118ft)	2	10.733	0.8262	0.2168	40692
112.50	CCISeismic Tower Section 3	10	10.040	0.8171	0.2075	48732
110.00	OPA65R-BU6DA w/ Mount Pipe	10	9.612	0.8091	0.2049	152117
107.50	CCISeismic Tower Section 4	10	9.181	0.7988	0.2013	13671
102.50	CCISeismic Tower Section 5	10	8.342	0.7682	0.1928	8356
96.50	MT6407-77A w/Mount Pipe	10	7.377	0.7237	0.1815	13846
90.00	CCISeismic Tower Section 6	10	6.367	0.6778	0.1665	8525
88.25	CCISeismic (8) (6) 1-5/8"; (2) 1-5/8" Hybrid From 9.5 to 96.5 (80ft to96.5ft)	10	6.104	0.6654	0.1621	7712
87.50	CCISeismic T-Brackets From 9.5 to 95 (80ft to95ft)	10	5.992	0.6600	0.1602	7409
70.00	CCISeismic Tower Section 7	10	3.704	0.5142	0.1151	5956
57.00	PR-850	10	2.401	0.3951	0.0805	6811
55.00	1.9"Ø x 9.8' Pipe Mount	10	2.227	0.3781	0.0753	6850
51.00	PR-850	10	1.902	0.3452	0.0651	6919
50.00	CCISeismic Tower Section 8	10	1.825	0.3371	0.0627	6936
48.50	CCISeismic heliax-hj 7/8" From 9 to 57 (40ft to57ft)	10	1.712	0.3252	0.0591	6960
47.50	CCISeismic (2) heliax-hj 7/8" From 9.5 to 55 (40ft to55ft)	10	1.639	0.3174	0.0568	6976
30.00	CCISeismic Tower Section 9	10	0.641	0.1877	0.0276	7215
14.75	CCISeismic (8) (6) 1-5/8"; (2) 1-5/8" Hybrid From 9.5 to 96.5 (9.5ft to20ft)	10	0.184	0.0870	0.0134	9944
14.50	CCISeismic heliax-hj 7/8" From 9 to 57 (9ft to20ft)	10	0.180	0.0855	0.0131	10115
14.25	CCISeismic T-Brackets From 8.5	10	0.175	0.0839	0.0129	10292

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Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
10.00	to 110 (8.5ft to20ft) CCISeismic Tower Section 10	10	0.109	0.0583	0.0091	14667

### Bolt Design Data

Section No.	Elevation	Component Type	Bolt Grade	Bolt Size	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load Allowable	Allowable Ratio	Criteria
	ft			in						
T1	130	Leg	A325N	0.6250	4	0.53	20.34	0.026	1	Bolt Tension
		Diagonal	A325N	0.6250	1	1.59	12.49	0.127	1	Member Block Shear
T2	120	Top Girt	A325N	0.6250	1	0.15	13.81	0.011	1	Bolt Shear
		Diagonal	A325N	0.6250	1	2.27	7.88	0.289	1	Member Block Shear
T3	115	Top Girt	A325N	0.3750	1	0.60	4.97	0.120	1	Bolt Shear
		Diagonal	A325N	0.6250	1	2.92	7.88	0.371	1	Member Block Shear
T4	110	Diagonal	A325N	0.6250	1	4.25	7.88	0.539	1	Member Block Shear
T5	105	Leg	A325N	0.7500	4	5.79	30.10	0.192	1	Bolt Tension
		Diagonal	A325N	0.6250	1	4.52	7.88	0.574	1	Member Block Shear
T6	100	Secondary Horizontal	A325N	0.6250	1	0.60	10.66	0.057	1	Member Block Shear
		Leg	A325N	1.0000	4	17.74	54.52	0.325	1	Bolt Tension
T7	80	Diagonal	A325N	0.6250	1	7.13	8.63	0.826	1	Member Block Shear
		Leg	A325N	1.0000	4	26.30	54.52	0.482	1	Bolt Tension
T8	60	Diagonal	A325N	0.6250	1	4.73	8.63	0.548	1	Member Block Shear
		Top Girt	A325N	0.3750	1	2.11	4.97	0.425	1	Bolt Shear
T9	40	Leg	A325N	1.0000	6	21.96	54.52	0.403	1	Bolt Tension
		Diagonal	A325N	0.6250	1	4.66	8.63	0.540	1	Member Block Shear
T10	20	Secondary Horizontal	A325N	0.6250	1	3.63	5.76	0.630	1	Member Block Shear
		Diagonal	A325N	0.6250	1	5.92	13.81	0.429	1	Bolt Shear
		Secondary Horizontal	A325N	0.6250	1	3.92	5.76	0.681	1	Member Block Shear

### Compression Checks

### Leg Design Data (Compression)

<b>tnxTower</b>  <b>FDH Infrastructure Services, LLC</b> 6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	<b>Job</b>	CT98078_ Wilton_ Deer Run	<b>Page</b>	56 of 59
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Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	130 - 120	1 3/4	10.00	5.00	137.1 K=1.00	2.4053	-3.79	28.89	0.131 <sup>1</sup>
T2	120 - 115	1 3/4	5.00	4.50	123.4 K=1.00	2.4053	-8.60	35.67	0.241 <sup>1</sup>
T3	115 - 110	1 3/4	5.00	5.00	137.1 K=1.00	2.4053	-13.15	28.89	0.455 <sup>1</sup>
T4	110 - 105	1 3/4	5.00	5.00	137.1 K=1.00	2.4053	-22.22	28.89	0.769 <sup>1</sup>
T5	105 - 100	1 3/4	5.00	2.50	68.6 K=1.00	2.4053	-31.77	76.75	0.414 <sup>1</sup>
T6	100 - 80	2 1/2	20.00	5.00	96.0 K=1.00	4.9087	-84.70	112.60	0.752 <sup>1</sup>
T7	80 - 60	2 3/4	20.02	4.88	85.2 K=1.00	5.9396	-121.88	157.26	0.775 <sup>1</sup>
T8	60 - 40	3	20.02	5.00	80.1 K=1.00	7.0686	-152.00	199.04	0.764 <sup>1</sup>
T9	40 - 20	3 1/4	20.02	5.20	76.8 K=1.00	8.2958	-175.94	242.55	0.725 <sup>1</sup>
T10	20 - 0	3 1/2	20.02	5.17	70.9 K=1.00	9.6211	-201.22	299.63	0.672 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	130 - 120	L2x2x1/4	7.43	3.47	109.9 K=1.03	0.9380	-1.60	22.22	0.072 <sup>1</sup>
T2	120 - 115	L2x2x3/16	7.11	3.31	105.7 K=1.05	0.7150	-2.28	16.70	0.136 <sup>1</sup>
T3	115 - 110	L2x2x3/16	7.43	3.47	109.3 K=1.03	0.7150	-2.96	16.07	0.184 <sup>1</sup>
T4	110 - 105	L2x2x3/16	7.43	3.47	109.3 K=1.03	0.7150	-4.22	16.07	0.263 <sup>1</sup>
T5	105 - 100	L2x2x3/16	7.43	3.47	109.3 K=1.03	0.7150	-4.57	16.07	0.284 <sup>1</sup>
T6	100 - 80	L2x2x3/16	7.43	3.41	107.9 K=1.04	0.7150	-7.32	16.32	0.449 <sup>1</sup>
T7	80 - 60	L2x2x3/16	7.52	3.57	111.6 K=1.03	0.7150	-5.01	15.67	0.320 <sup>1</sup>
T8	60 - 40	L2x2x3/16	9.70	4.65	141.5 K=1.00	0.7150	-4.70	10.21	0.460 <sup>1</sup>
T9	40 - 20	L3x3x1/4	13.88	6.87	139.3 K=1.00	1.4400	-6.10	21.25	0.287 <sup>1</sup>
T10	20 - 0	L3x3x1/4	14.96	7.39	149.8 K=1.00	1.4400	-5.92	18.37	0.323 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Secondary Horizontal Design Data (Compression)

<b>tnxTower</b>  <b>FDH Infrastructure Services, LLC</b> 6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	<b>Job</b>	CT98078_ Wilton_ Deer Run	<b>Page</b>	57 of 59
	<b>Project</b>	PR-009191	<b>Date</b>	12:11:08 01/27/23
	<b>Client</b>	Pyramid Network Services, LLC	<b>Designed by</b>	Hailey Hipp

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T5	105 - 100	L2x2x1/4	5.50	2.55	99.2 K=1.27	0.9380	-0.60	26.76	0.023 <sup>1</sup>
T9	40 - 20	L2x2x1/8	9.61	4.50	135.9 K=1.00	0.4844	-3.63	7.50	0.483 <sup>1</sup>
T10	20 - 0	L2x2x1/8	11.11	5.24	158.3 K=1.00	0.4844	-3.92	5.53	0.708 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	130 - 120	L2x2x1/4	5.50	5.06	155.4 K=1.00	0.9380	-0.15	11.12	0.013 <sup>1</sup>
T2	120 - 115	L2x2x1/8	5.50	5.06	152.8 K=1.00	0.4844	-0.60	5.94	0.100 <sup>1</sup>
T7	80 - 60	L2x2x1/8	5.54	5.02	151.4 K=1.00	0.4844	-2.11	6.05	0.349 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Tension Checks

### Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	130 - 120	1 3/4	10.00	5.00	137.1	2.4053	2.13	108.24	0.020 <sup>1</sup>
T2	120 - 115	1 3/4	5.00	4.50	123.4	2.4053	4.85	108.24	0.045 <sup>1</sup>
T3	115 - 110	1 3/4	5.00	5.00	137.1	2.4053	7.80	108.24	0.072 <sup>1</sup>
T4	110 - 105	1 3/4	5.00	5.00	137.1	2.4053	14.99	108.24	0.138 <sup>1</sup>
T5	105 - 100	1 3/4	5.00	2.50	68.6	2.4053	23.14	108.24	0.214 <sup>1</sup>
T6	100 - 80	2 1/2	20.00	5.00	96.0	4.9087	70.97	220.89	0.321 <sup>1</sup>
T7	80 - 60	2 3/4	20.02	4.88	85.2	5.9396	105.19	267.28	0.394 <sup>1</sup>
T8	60 - 40	3	20.02	5.00	80.1	7.0686	131.77	318.09	0.414 <sup>1</sup>
T9	40 - 20	3 1/4	20.02	4.81	71.0	8.2958	152.01	373.31	0.407 <sup>1</sup>
T10	20 - 0	3 1/2	20.02	4.84	66.3	9.6211	173.25	432.95	0.400 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Diagonal Design Data (Tension)

<b>tnxTower</b>  <b>FDH Infrastructure Services, LLC</b> 6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031	<b>Job</b> CT98078_Wilton_Deer Run	<b>Page</b> 58 of 59
	<b>Project</b> PR-009191	<b>Date</b> 12:11:08 01/27/23
	<b>Client</b> Pyramid Network Services, LLC	<b>Designed by</b> Hailey Hipp

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	130 - 120	L2x2x1/4	7.43	3.47	71.3	0.5629	1.59	27.44	0.058 <sup>1</sup>
T2	120 - 115	L2x2x3/16	7.11	3.31	67.3	0.4308	2.27	18.74	0.121 <sup>1</sup>
T3	115 - 110	L2x2x3/16	7.43	3.47	70.4	0.4308	2.92	18.74	0.156 <sup>1</sup>
T4	110 - 105	L2x2x3/16	7.43	3.47	70.4	0.4308	4.25	18.74	0.227 <sup>1</sup>
T5	105 - 100	L2x2x3/16	7.43	3.47	70.4	0.4308	4.52	18.74	0.241 <sup>1</sup>
T6	100 - 80	L2x2x3/16	7.43	3.41	69.5	0.4308	7.13	18.74	0.381 <sup>1</sup>
T7	80 - 60	L2x2x3/16	7.52	3.57	72.7	0.4308	4.73	18.74	0.253 <sup>1</sup>
T8	60 - 40	L2x2x3/16	9.38	4.49	90.5	0.4308	4.66	18.74	0.249 <sup>1</sup>
T9	40 - 20	L3x3x1/4	13.37	6.63	87.4	0.9394	5.97	40.86	0.146 <sup>1</sup>
T10	20 - 0	L3x3x1/4	14.41	7.12	93.8	0.9394	5.73	40.86	0.140 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Secondary Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T5	105 - 100	L2x2x1/4	5.50	2.55	105.5	0.5629	0.60	27.44	0.022 <sup>1</sup>
T9	40 - 20	L2x2x1/8	8.86	4.13	164.6	0.2930	3.63	12.74	0.285 <sup>1</sup>
T10	20 - 0	L2x2x1/8	11.11	5.24	207.3	0.2930	3.92	12.74	0.307 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	130 - 120	L2x2x1/4	5.50	5.06	105.5	0.5629	0.11	27.44	0.004 <sup>1</sup>
T2	120 - 115	L2x2x1/8	5.50	5.06	102.6	0.3164	0.58	13.76	0.042 <sup>1</sup>
T7	80 - 60	L2x2x1/8	5.54	5.02	101.7	0.3164	2.11	13.76	0.153 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	φP <sub>allow</sub> K	% Capacity	Pass Fail
T1	130 - 120	Leg	1 3/4	3	-3.79	28.89	13.1	Pass
T2	120 - 115	Leg	1 3/4	21	-8.60	35.67	24.1	Pass
T3	115 - 110	Leg	1 3/4	33	-13.15	28.89	45.5	Pass
T4	110 - 105	Leg	1 3/4	42	-22.22	28.89	76.9	Pass
T5	105 - 100	Leg	1 3/4	51	-31.77	76.75	41.4	Pass
T6	100 - 80	Leg	2 1/2	63	-84.70	112.60	75.2	Pass
T7	80 - 60	Leg	2 3/4	90	-121.88	157.26	77.5	Pass



<p style="text-align: center;"><b>tnxTower</b></p> <p style="text-align: center;"><b>FDH Infrastructure Services, LLC</b></p> <p style="text-align: center;">6521 Meridien Drive Raleigh, North Carolina 27616 Phone: (919) 755-1012 FAX: (919) 755-1031</p>	<p><b>Job</b></p> <p style="text-align: center;">CT98078_ Wilton_ Deer Run</p>	<p><b>Page</b></p> <p style="text-align: center;">59 of 59</p>
	<p><b>Project</b></p> <p style="text-align: center;">PR-009191</p>	<p><b>Date</b></p> <p style="text-align: center;">12:11:08 01/27/23</p>
	<p><b>Client</b></p> <p style="text-align: center;">Pyramid Network Services, LLC</p>	<p><b>Designed by</b></p> <p style="text-align: center;">Hailey Hipp</p>

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$\phi P_{allow}$ K	% Capacity	Pass Fail
T8	60 - 40	Leg	3	119	-152.00	199.04	76.4	Pass
T9	40 - 20	Leg	3 1/4	146	-175.94	242.55	72.5	Pass
T10	20 - 0	Leg	3 1/2	167	-201.22	299.63	67.2	Pass
T1	130 - 120	Diagonal	L2x2x1/4	10	-1.60	22.22	7.2	Pass
T2	120 - 115	Diagonal	L2x2x3/16	28	-2.28	16.70	12.7 (b) 13.6	Pass
T3	115 - 110	Diagonal	L2x2x3/16	36	-2.96	16.07	18.4 28.9 (b)	Pass
T4	110 - 105	Diagonal	L2x2x3/16	46	-4.22	16.07	18.4 37.1 (b)	Pass
T5	105 - 100	Diagonal	L2x2x3/16	55	-4.57	16.07	26.3 53.9 (b)	Pass
T6	100 - 80	Diagonal	L2x2x3/16	67	-7.32	16.32	28.4 57.4 (b)	Pass
T7	80 - 60	Diagonal	L2x2x3/16	115	-5.01	15.67	44.9 82.6 (b)	Pass
T8	60 - 40	Diagonal	L2x2x3/16	124	-4.70	10.21	32.0 54.8 (b)	Pass
T9	40 - 20	Diagonal	L3x3x1/4	151	-6.10	21.25	46.0 54.0 (b)	Pass
T10	20 - 0	Diagonal	L3x3x1/4	172	-5.92	18.37	28.7 45.8 (b)	Pass
T5	105 - 100	Secondary Horizontal	L2x2x1/4	59	-0.60	26.76	32.3 42.9 (b)	Pass
T9	40 - 20	Secondary Horizontal	L2x2x1/8	154	-3.63	7.50	2.3 5.7 (b)	Pass
T10	20 - 0	Secondary Horizontal	L2x2x1/8	175	-3.92	5.53	48.3 63.0 (b)	Pass
T1	130 - 120	Top Girt	L2x2x1/4	4	-0.15	11.12	70.8	Pass
T2	120 - 115	Top Girt	L2x2x1/8	22	-0.60	5.94	1.3	Pass
T7	80 - 60	Top Girt	L2x2x1/8	92	-2.11	6.05	10.0 12.0 (b)	Pass
							34.9 42.5 (b)	Pass
							Summary	
							Leg (T7)	Pass
							Diagonal (T6)	Pass
							Secondary Horizontal (T10)	Pass
							Top Girt (T7)	Pass
							Bolt Checks	Pass
							<b>RATING = 82.6</b>	<b>Pass</b>

## Self Support Anchor Rod Capacity

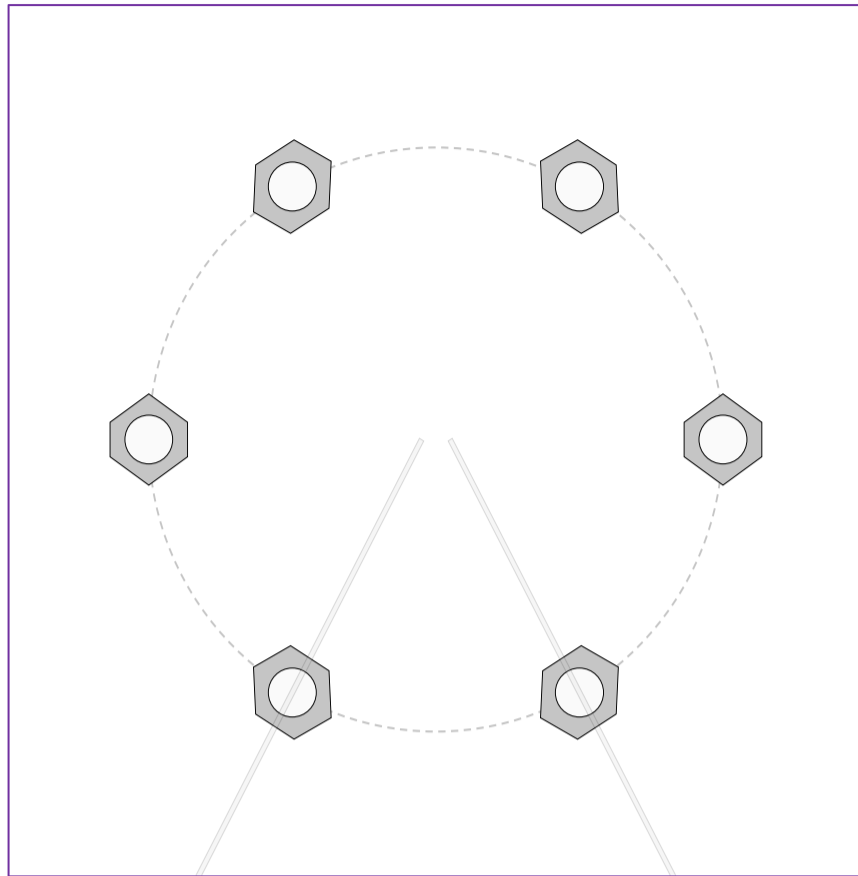
Site Info	
BU #	CT98078
Site Name	Wilton_Deer Run
Order #	PR-009191

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
$l_{ar}$ (in)	1

Applied Loads		
	Comp.	Uplift
Axial Force (kips)	207.60	178.47
Shear Force (kips)	14.92	13.29

Considered Eccentricity	
Leg Mod Eccentricity (in)	0.000
Anchor Rod N.A Shift (in)	0.000
Total Eccentricity (in)	0.000

\*Anchor Rod Eccentricity Applied



Connection Properties	Analysis Results
-----------------------	------------------

Anchor Rod Data	
(6) 1" $\varnothing$ bolts (A449 N; Fy=92 ksi, Fu=120 ksi)	
$l_{ar}$ (in):	1

Anchor Rod Summary			<i>(units of kips, kip-in)</i>
$Pu_t = 29.75$	$\phi Pn_t = 54.54$	<b>Stress Rating</b>	
$Vu = 2.22$	$\phi Vn = 35.34$	<b>54.5%</b>	
$Mu = n/a$	$\phi Mn = n/a$	<b>Pass</b>	

## Self Support Anchor Rod Capacity

Site Info	
BU #	CT98078
Site Name	Wilton_Deer Run
Order #	PR-009191

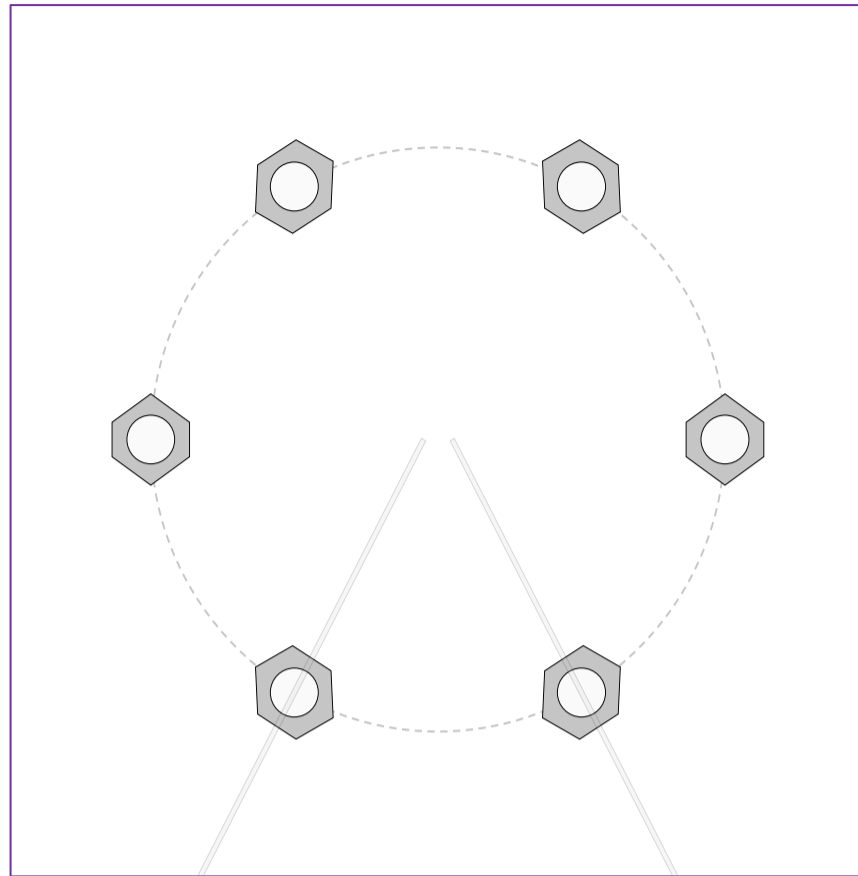
Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
$l_{ar}$ (in)	1

Applied Loads		
	Comp.	Uplift
Axial Force (kips)	45.62	13.49
Shear Force (kips)	2.60	0.98

\*1.5 Overstrength Factor Applied

Considered Eccentricity	
Leg Mod Eccentricity (in)	0.000
Anchor Rod N.A Shift (in)	0.000
Total Eccentricity (in)	0.000

\*Anchor Rod Eccentricity Applied



### Connection Properties

#### Anchor Rod Data

(6) 1"  $\varnothing$  bolts (A449 N; Fy=92 ksi, Fu=120 ksi)  
 $l_{ar}$  (in): 1

### Analysis Results

#### Anchor Rod Summary

(units of kips, kip-in)

$Pu_c = 7.6$	$\phi Pn_c = 65.03$	<b>Stress Rating</b>
$Vu = 0.43$	$\phi Vn = 29.26$	<b>11.7%</b>
$Mu = n/a$	$\phi Mn = n/a$	<b>Pass</b>

# Pier and Pad Foundation

BU #: CT98078  
 Site Name: Wilton\_Deer Run  
 App. Number: PR-009191

TIA-222 Revision: H  
 Tower Type: Self Support

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

Superstructure Analysis Reactions		
Compression, $P_{comp}$ :	207.6	kips
Compression Shear, $V_{u\_comp}$ :	14.92	kips
Uplift, $P_{uplift}$ :	178.47	kips
Uplift Shear, $V_{u\_uplift}$ :	13.29	kips
Tower Height, $H$ :	130	ft
Base Face Width, $BW$ :	11.5	ft
BP Dist. Above Fdn, $bp_{dist}$ :	2	in

Foundation Analysis Checks				
	Capacity	Demand	Rating	Check
<i>Uplift (kips)</i>	456.98	178.47	39.1%	Pass
<i>Lateral (Sliding) (kips)</i>	154.87	13.29	8.6%	Pass
<i>Bearing Pressure (ksf)</i>	9.77	1.88	19.2%	Pass
<i>Pier Flexure (Comp.) (kip*ft)</i>	857.15	104.44	12.2%	Pass
<i>Pier Flexure (Tension) (kip*ft)</i>	578.72	93.03	16.1%	Pass
<i>Pier Compression (kip)</i>	3374.26	216.51	6.4%	Pass
<i>Pad Flexure (kip*ft)</i>	2102.07	353.50	16.8%	Pass
<i>Pad Shear - 1-way (kips)</i>	361.68	70.60	19.5%	Pass
<i>Pad Shear - 2-way (Comp) (ksi)</i>	0.164	0.055	33.6%	Pass
<i>Flexural 2-way (Comp) (kip*ft)</i>	1977.73	62.66	3.2%	Pass
<i>Pad Shear - 2-way (Uplift) (ksi)</i>	0.164	0.056	34.3%	Pass
<i>Flexural 2-way (Tension) (kip*ft)</i>	1977.73	55.82	2.8%	Pass

Pier Properties		
Pier Shape:	Circular	
Pier Diameter, $dpier$ :	3	ft
Ext. Above Grade, $E$ :	0.5	ft
Pier Rebar Size, $Sc$ :	8	
Pier Rebar Quantity, $mc$ :	16	
Pier Tie/Spiral Size, $St$ :	4	
Pier Tie/Spiral Quantity, $mt$ :	10	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, $cc_{pier}$ :	3	in

Structural Rating: 34.3%  
 Soil Rating: 39.1%

Pad Properties		
Depth, $D$ :	8.5	ft
Pad Width, $W_1$ :	19	ft
Pad Thickness, $T$ :	2	ft
Pad Rebar Size (Bottom dir. 2), $Sp_2$ :	9	
Pad Rebar Quantity (Bottom dir. 2), $mp_2$ :	26	
Pad Clear Cover, $cc_{pad}$ :	3	in

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

Soil Properties		
Total Soil Unit Weight, $\gamma$ :	120	pcf
Ultimate Net Bearing, $Q_{net}$ :	12.000	ksf
Cohesion, $C_u$ :		ksf
Friction Angle, $\phi$ :	30	degrees
SPT Blow Count, $N_{blows}$ :	8	
Base Friction, $\mu$ :	0.5	
Neglected Depth, $N$ :	3.33	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, $gw$ :	N/A	ft

<--Toggle between Gross and Net

# **EXHIBIT C**



July 25, 2023

Mr. Michael DiMonda  
Pyramid Network Services, LLC  
6615 Towpath Road  
East Syracuse, New York 13057

Subject: **Radio Frequency Site Compliance Report  
Wilton Deer Run  
160 Deer Run Road  
Wilton, Connecticut 06897  
AEC Project No. PSN-22-364**

Dear Mr. DiMonda:

Advantage Environmental Consultants, LLC (AEC) performed a Radio Frequency Site Compliance Report (EME) to determine if the proposed modifications to Wilton Deer Run, at 160 Deer Run Road, Wilton, Connecticut (i.e., the Site), are in compliance with Federal Communication Commission (FCC) rules and Regulations for radio frequency emissions. This EME includes a statement of compliance and recommendations for implementation of remedial actions necessary to achieve and maintain compliance (including a signage map). The following report includes AEC's findings, conclusions, recommendations, and supporting documentation.

We appreciate the opportunity to be of service to Pyramid Network Services, LLC (PNS). If you should have any questions regarding this report, or if we can be of further assistance, please contact the undersigned at (301) 776-0500.

Sincerely,

**ADVANTAGE ENVIRONMENTAL CONSULTANTS, LLC**

A handwritten signature in black ink, appearing to read 'Andrew L. Fleming', is written over a horizontal line.

Andrew L. Fleming  
Program Manager









# CENTERLINE

## Radio Frequency – Electromagnetic Energy (RF-EME) Site Compliance Report

Town of Wilton Lattice Tower Facility

July 17, 2023

Analysis Format: Theoretical Calculations

	Sign Count	
		0
		0
		0
		0
	0	

### Statement of Compliance

Town of Wilton is in compliance with FCC Regulations. No additional action is required.

Site ID: CT98078

Site Name: WILTON\_DEER RUN  
160 DEER RUN RD, WILTON, CT 06897



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## 1. Overview

Centerline has been contracted to provide a Radio Frequency (RF) analysis for the following Town of Wilton facility to certify compliance with federal standards and regulations regarding RF exposure. This analysis includes theoretical exposure calculations for all existing and/or proposed equipment for Town of Wilton and any other licensees based on the provided data.

### Analysis Site Data

<b>Site ID:</b>	CT98078
<b>Site Name:</b>	WILTON_DEER RUN
<b>Site Address:</b>	160 DEER RUN RD, WILTON, CT 06897
<b>Site Latitude:</b>	41.241417
<b>Site Longitude:</b>	-73.470000
<b>Facility Type:</b>	Lattice Tower

### Compliance Summary

<b>Status:</b>	Compliant with FCC regulations
<b>Maximum Calculated Town of Wilton MPE Level on Site (General Population Limit):</b>	0.02%
<b>Maximum Calculated Composite MPE Level on Site (General Population Limit):</b>	6.02%
<b>Maximum Calculated Town of Wilton MPE Level at Ground (General Population Limit):</b>	0.02%
<b>Maximum Calculated Composite MPE Level at Ground (General Population Limit):</b>	4.10%

### Site Data Information

<b>CD:</b>	Town of Wilton_Deer Run_LE_071023.pdf
<b>RFDS:</b>	N/A

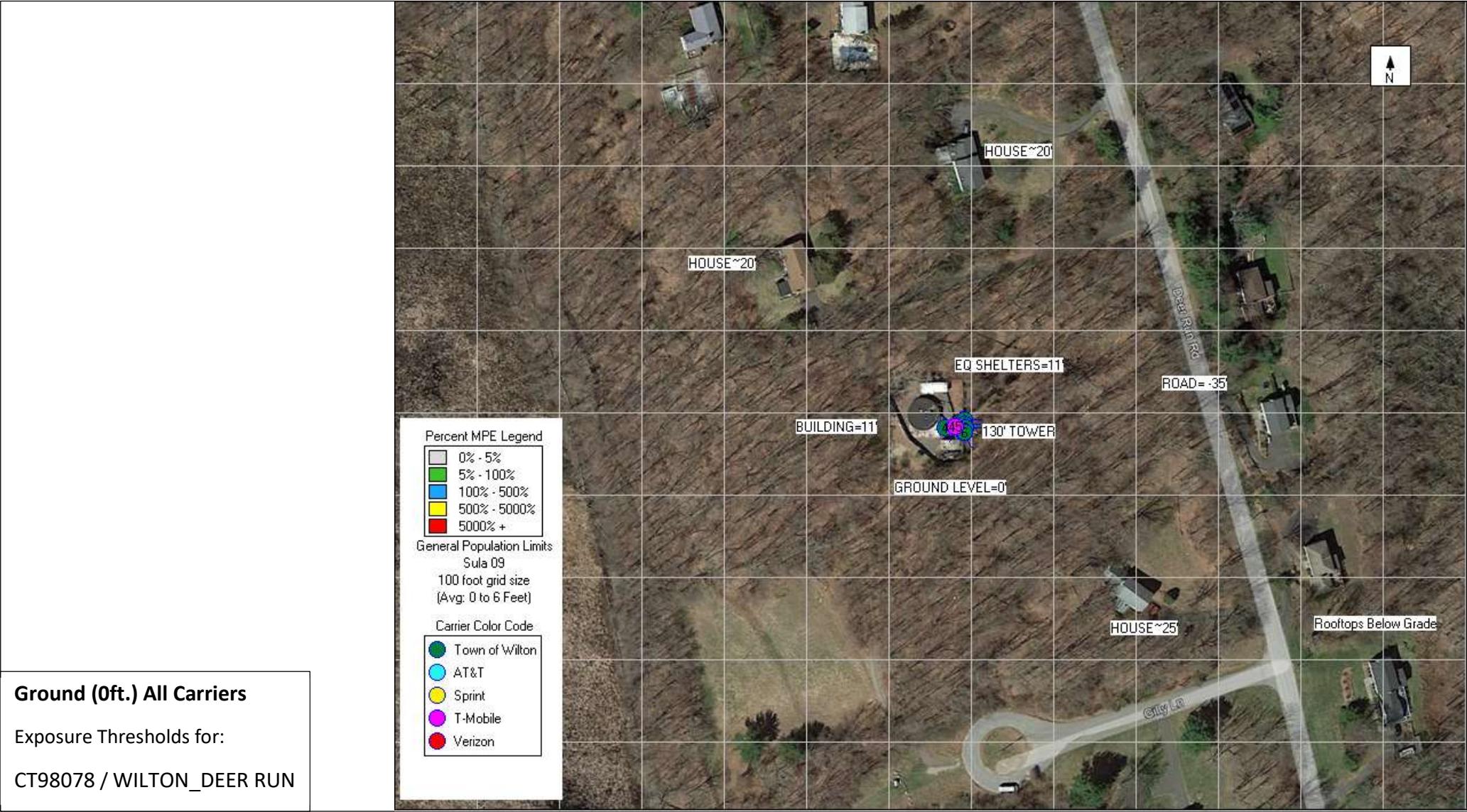
## 2. Site Antenna Data Table

Antenna ID	Operator	Antenna Make	Antenna Model	Tech & Frequency Band (MHz)	TX Power (watts)	TX #	Gain (dBd)	ERP (watts)	Az (°)	Antenna Centerline Height (ft)
1	Town of Wilton	RFI	BPA7496-180-14	L850	40	4	12	2535.83	90	130
2	Town of Wilton	RFI	BPA7496-180-14	L850	40	4	12	2535.83	90	130
3	Town of Wilton	RFI	BPA7496-180-14	L850	40	4	12	2535.83	90	130
4	Town of Wilton	GENERIC	OMNI 12FT	850	12.7	1	8.96	99.95	0	130
5	Town of Wilton	GENERIC	OMNI 12FT	850	12.7	1	8.96	99.95	0	130
6	Town of Wilton	ANDREW	VHLP3-11W	11000	0.1	1	36.25	421.70	158	123
7	T-Mobile	ERICSSON	SON AIR6449	N2500	30	2	17.3	3222.19	50	118
7	T-Mobile	ERICSSON	SON AIR6449	N2500	90	2	22.35	30922.35	50	118
8	T-Mobile	ERICSSON	AIR 32	L2100	30	4	15.55	4307.06	50	118
8	T-Mobile	ERICSSON	AIR 32	L1900	30	2	15.65	2203.69	50	118
8	T-Mobile	ERICSSON	AIR 32	L1900	30	2	15.65	2203.69	50	118
9	T-Mobile	RFS	APXVAALL24 43-U-NA20	L600	40	4	12.95	3155.88	50	118
9	T-Mobile	RFS	APXVAALL24 43-U-NA20	L700	40	4	13.65	3707.83	50	118
10	T-Mobile	ERICSSON	SON AIR6449	N2500	30	2	17.3	3222.19	200	118
10	T-Mobile	ERICSSON	SON AIR6449	N2500	90	2	22.35	30922.35	200	118
11	T-Mobile	ERICSSON	AIR 32	L2100	30	4	15.55	4307.06	200	118
11	T-Mobile	ERICSSON	AIR 32	L1900	30	2	15.65	2203.69	200	118
11	T-Mobile	ERICSSON	AIR 32	L1900	30	2	15.65	2203.69	200	118
12	T-Mobile	RFS	APXVAALL24 43-U-NA20	L600	40	4	12.95	3155.88	200	118
12	T-Mobile	RFS	APXVAALL24 43-U-NA20	L700	40	4	13.65	3707.83	200	118
13	T-Mobile	ERICSSON	SON AIR6449	N2500	30	2	17.3	3222.19	310	118
13	T-Mobile	ERICSSON	SON AIR6449	N2500	90	2	22.35	30922.35	310	118
14	T-Mobile	ERICSSON	AIR 32	L2100	30	4	15.55	4307.06	310	118
14	T-Mobile	ERICSSON	AIR 32	L1900	30	2	15.65	2203.69	310	118
14	T-Mobile	ERICSSON	AIR 32	L1900	30	2	15.65	2203.69	310	118
15	T-Mobile	RFS	APXVAALL24 43-U-NA20	L600	40	4	12.95	3155.88	310	118
15	T-Mobile	RFS	APXVAALL24 43-U-NA20	L700	40	4	13.65	3707.83	310	118
16	AT&T	POWERWAVE	7770 00	L850	40	4	11.35	2183.33	50	110
17	AT&T	KATHREIN	80010965	L700	40	4	12.15	2624.94	50	110
18	AT&T	CCI	OPA65R-BU6D	L1900	40	4	14.45	4457.79	50	110
18	AT&T	CCI	OPA65R-BU6D	L2100	40	4	14.95	5001.73	50	110
19	AT&T	POWERWAVE	P65-16-XLH-RR	L850	40	1	12.9	779.94	50	110
20	AT&T	POWERWAVE	7770 00	L850	40	4	11.35	2183.33	200	110
21	AT&T	KATHREIN	80010965	L700	40	4	12.15	2624.94	200	110
22	AT&T	CCI	OPA65R-BU6D	L1900	40	4	14.45	4457.79	200	110
22	AT&T	CCI	OPA65R-BU6D	L2100	40	4	14.95	5001.73	200	110
23	AT&T	POWERWAVE	P65-16-XLH-RR	L850	40	1	12.9	779.94	200	110
24	AT&T	POWERWAVE	7770 00	L850	40	4	11.35	2183.33	310	110
25	AT&T	KATHREIN	80010965	L700	40	4	12.15	2624.94	310	110
26	AT&T	CCI	OPA65R-BU6D	L1900	40	4	14.45	4457.79	310	110
26	AT&T	CCI	OPA65R-BU6D	L2100	40	4	14.95	5001.73	310	110
27	AT&T	POWERWAVE	P65-16-XLH-RR	L850	40	1	12.9	779.94	310	110
28	Verizon	AMPHENOL	BXA-80090-8CF (Off Air)	CDMA850	0	1	14	0.00	50	96.5
29	Verizon	JMA	MX06FRO660-03	L700	40	2	12.05	1282.60	50	96.5
29	Verizon	JMA	MX06FRO660-03	L850	40	2	12.05	1282.60	50	96.5
29	Verizon	JMA	MX06FRO660-03	L1900	40	4	15.75	6013.40	50	96.5
30	Verizon	JMA	MX06FRO660-03	L700	40	2	12.05	1282.60	50	96.5
30	Verizon	JMA	MX06FRO660-03	L850	40	2	12.05	1282.60	50	96.5

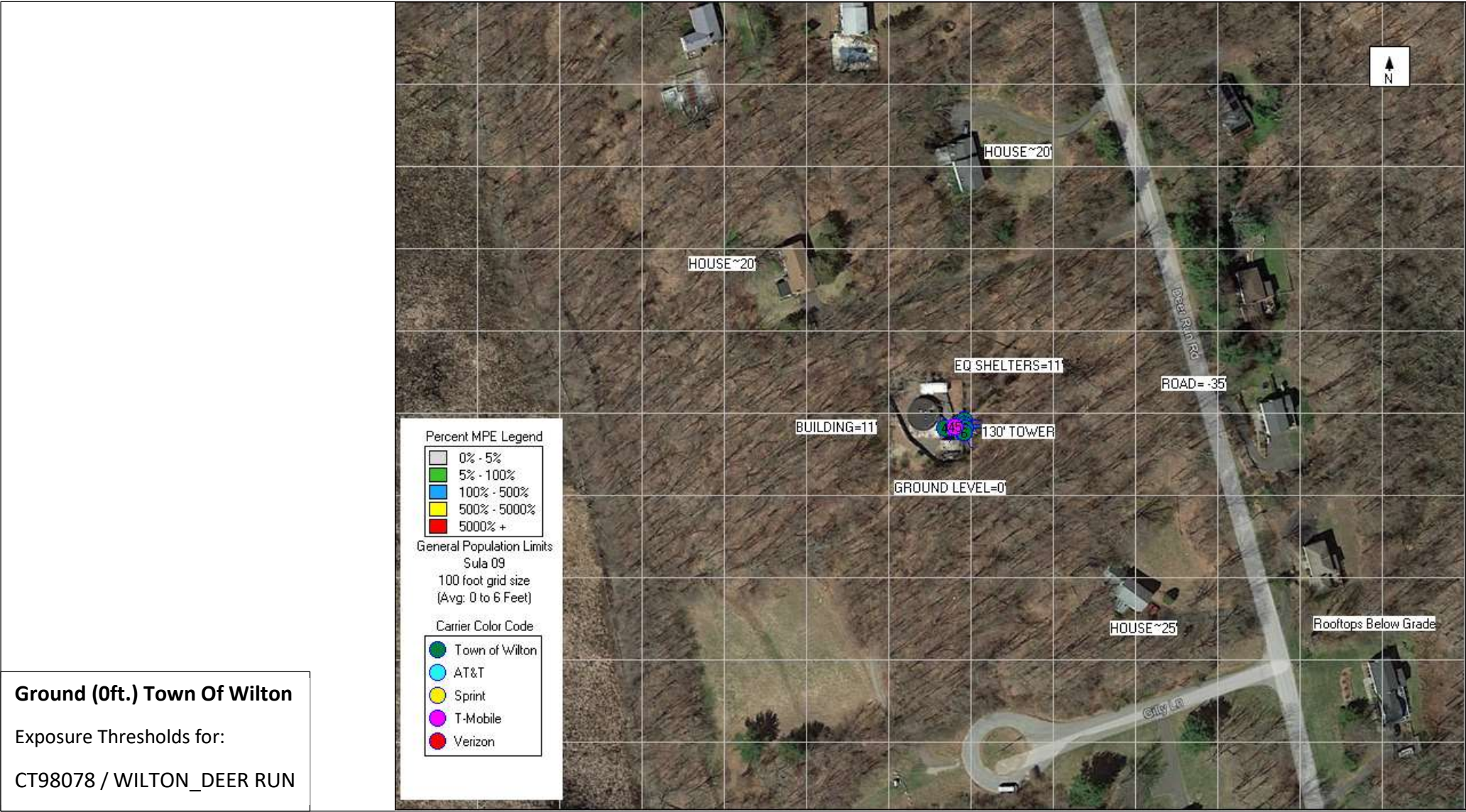
30	Verizon	JMA	MX06FRO660-03	L2100	40	4	15.95	6296.80	50	96.5
31	Verizon	Samsung	SON MT6407	N3700	50	4	23.45	44261.89	50	96.5
32	Verizon	AMPHENOL	BXA-80090-8CF (Off Air)	CDMA850	0	1	14	0.00	200	96.5
33	Verizon	JMA	MX06FRO660-03	L700	40	2	12.05	1282.60	200	96.5
33	Verizon	JMA	MX06FRO660-03	L850	40	2	12.05	1282.60	200	96.5
33	Verizon	JMA	MX06FRO660-03	L1900	40	4	15.75	6013.40	200	96.5
34	Verizon	JMA	MX06FRO660-03	L700	40	2	12.05	1282.60	200	96.5
34	Verizon	JMA	MX06FRO660-03	L850	40	2	12.05	1282.60	200	96.5
34	Verizon	JMA	MX06FRO660-03	L2100	40	4	15.95	6296.80	200	96.5
35	Verizon	Samsung	SON MT6407	N3700	50	4	23.45	44261.89	200	96.5
36	Verizon	AMPHENOL	BXA-80090-8CF (Off Air)	CDMA850	0	1	14	0.00	310	96.5
37	Verizon	JMA	MX06FRO660-03	L700	40	2	12.05	1282.60	310	96.5
37	Verizon	JMA	MX06FRO660-03	L850	40	2	12.05	1282.60	310	96.5
37	Verizon	JMA	MX06FRO660-03	L1900	40	4	15.75	6013.40	310	96.5
38	Verizon	JMA	MX06FRO660-03	L700	40	2	12.05	1282.60	310	96.5
38	Verizon	JMA	MX06FRO660-03	L850	40	2	12.05	1282.60	310	96.5
38	Verizon	JMA	MX06FRO660-03	L2100	40	4	15.95	6296.80	310	96.5
39	Verizon	Samsung	SON MT6407	N3700	50	4	23.45	44261.89	310	96.5
40	Sprint	GENERIC	PANEL 6FT (Decommissioned)	L862	0	1	12.62	0.00	50	86
40	Sprint	GENERIC	PANEL 6FT (Decommissioned)	L1900	0	1	15.84	0.00	50	86
40	Sprint	GENERIC	PANEL 6FT (Decommissioned)	L2500	0	1	14.49	0.00	50	86
41	Sprint	GENERIC	PANEL 6FT (Decommissioned)	L862	0	1	12.62	0.00	200	86
41	Sprint	GENERIC	PANEL 6FT (Decommissioned)	L1900	0	1	15.84	0.00	200	86
41	Sprint	GENERIC	PANEL 6FT (Decommissioned)	L2500	0	1	14.49	0.00	200	86
42	Sprint	GENERIC	PANEL 6FT (Decommissioned)	L862	0	1	12.62	0.00	310	86
42	Sprint	GENERIC	PANEL 6FT (Decommissioned)	L1900	0	1	15.84	0.00	310	86
42	Sprint	GENERIC	PANEL 6FT (Decommissioned)	L2500	0	1	14.49	0.00	310	86
43	T-Mobile	KATHREIN	PR-850	850	0.1	1	16.35	4.32	50	57
44	T-Mobile	KATHREIN	PR-850	850	0.1	1	16.35	4.32	200	57
45	T-Mobile	KATHREIN	PR-850	850	0.1	1	16.35	4.32	310	51



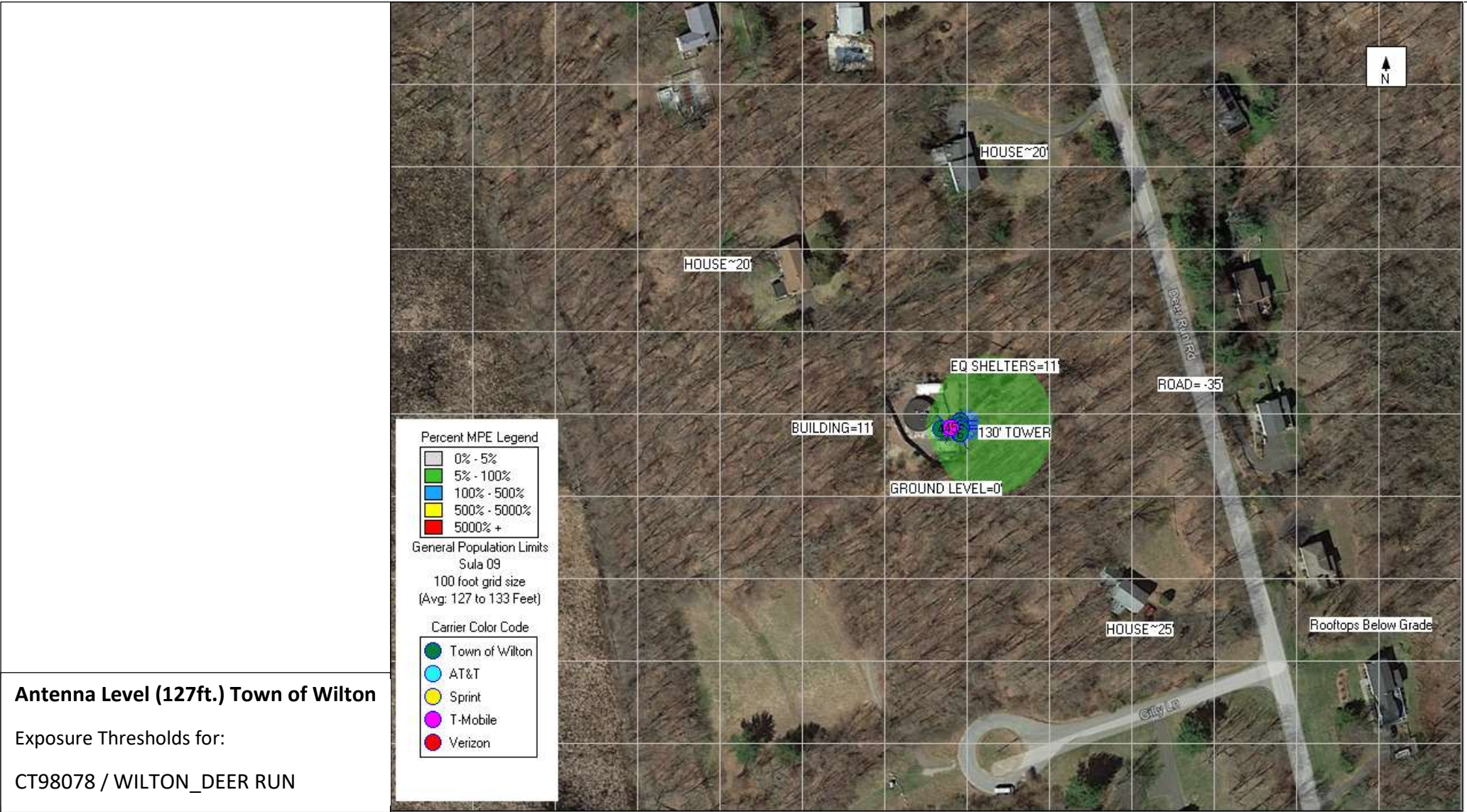
### 3. RF Exposure Diagrams



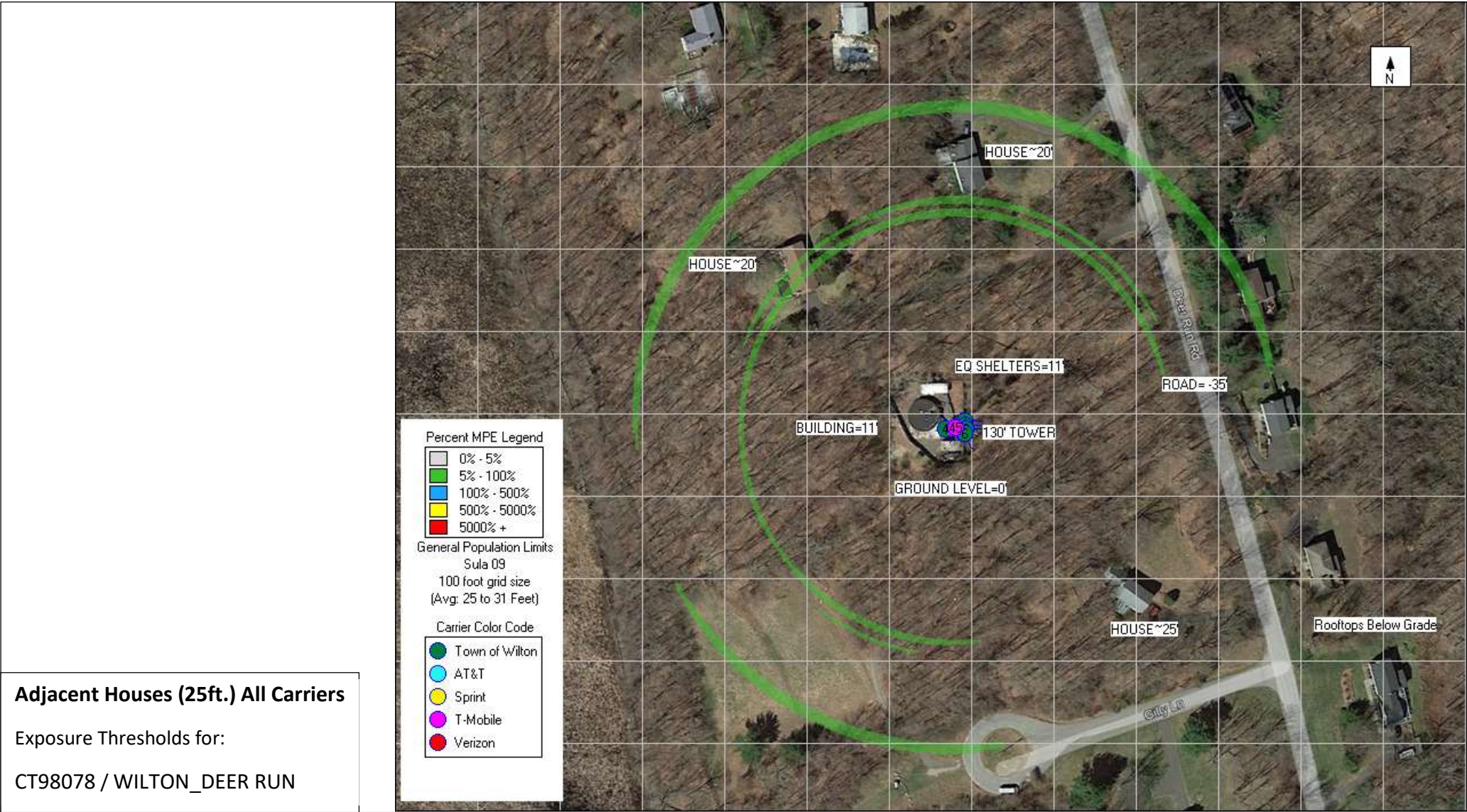














Note: Town of Wilton antennas contribute less than 5% of the MPE limit at the tallest adjacent building level (25' level) and all levels below.

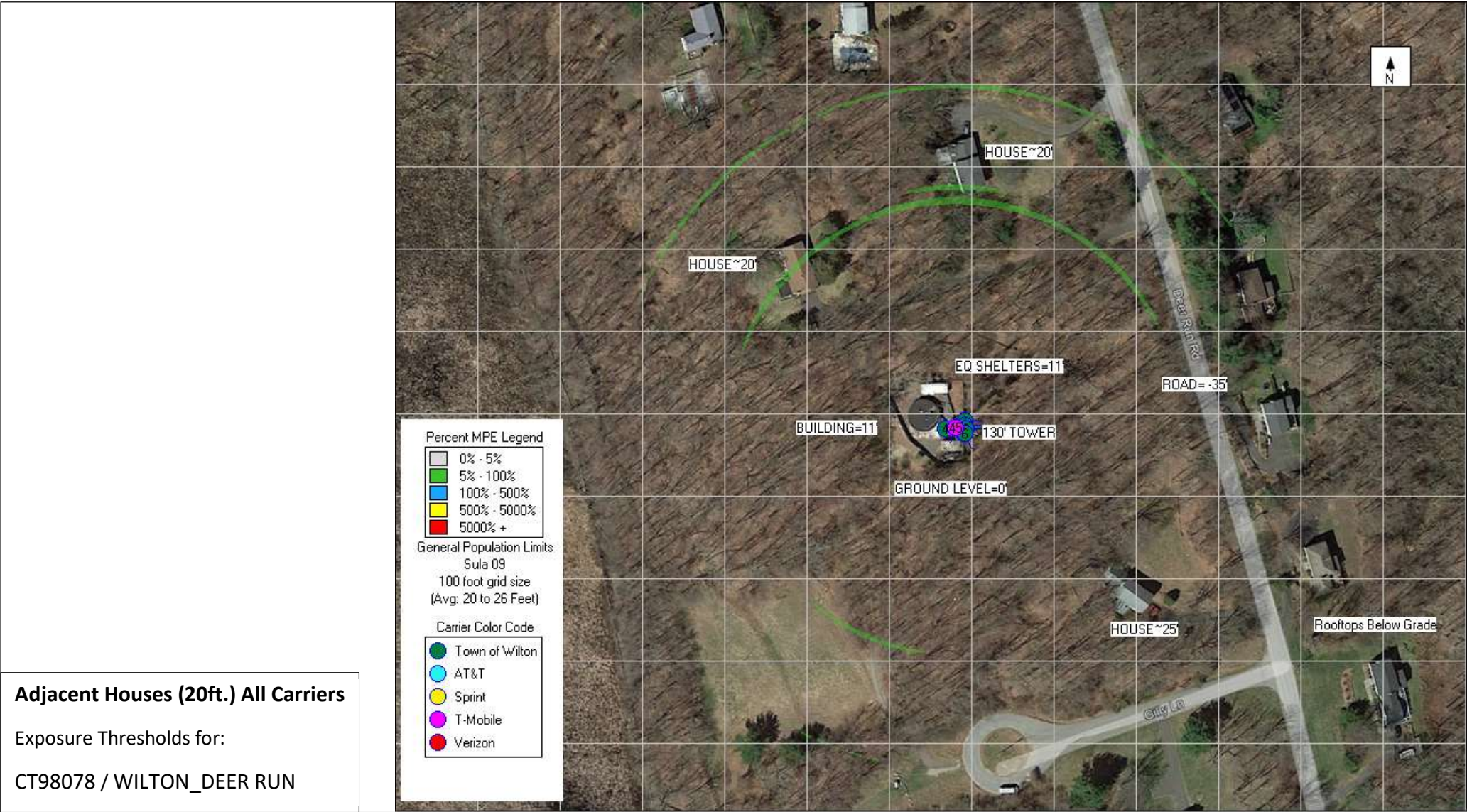


**Adjacent Houses (25ft.) Town of Wilton**

Exposure Thresholds for:

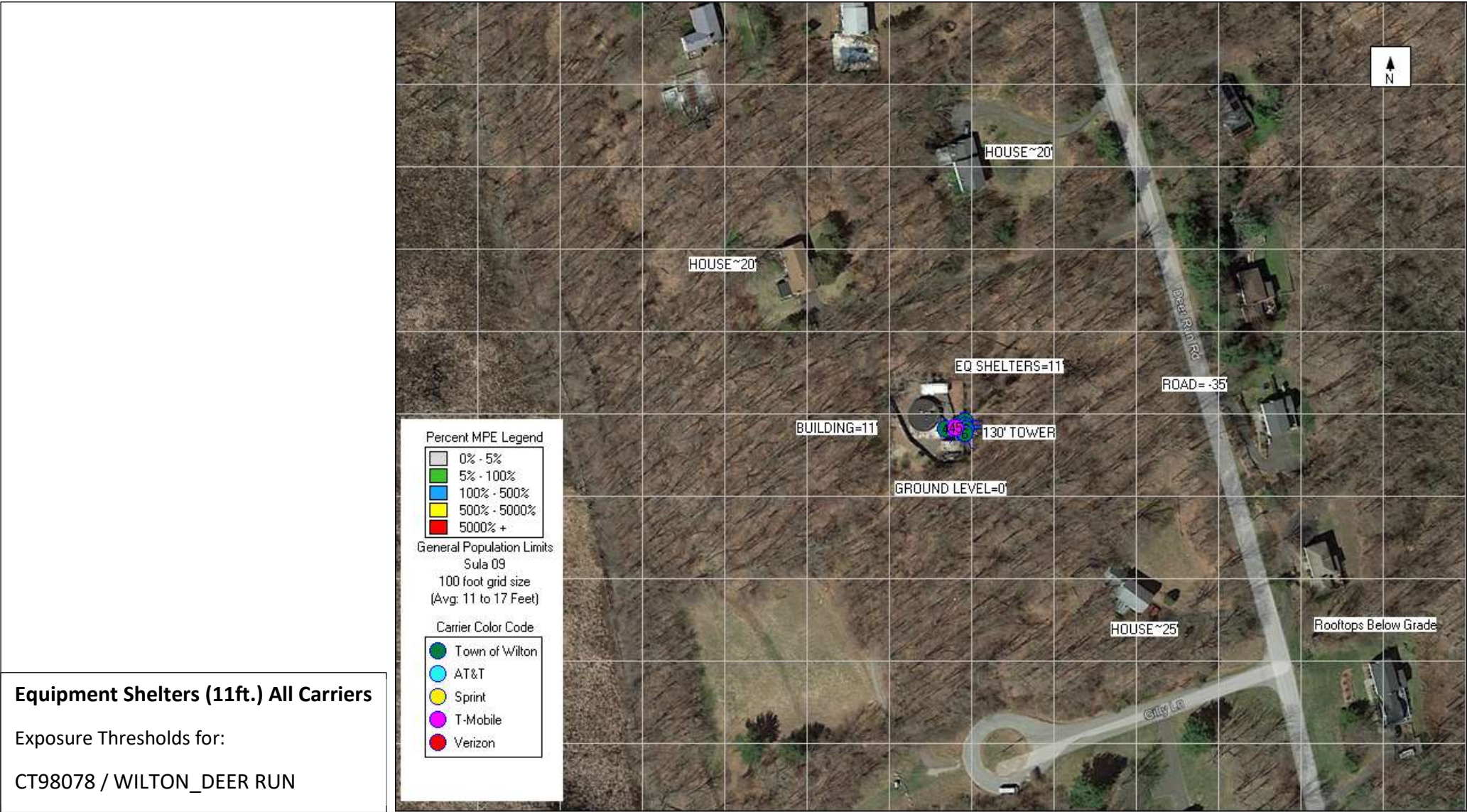
CT98078 / WILTON\_DEER RUN

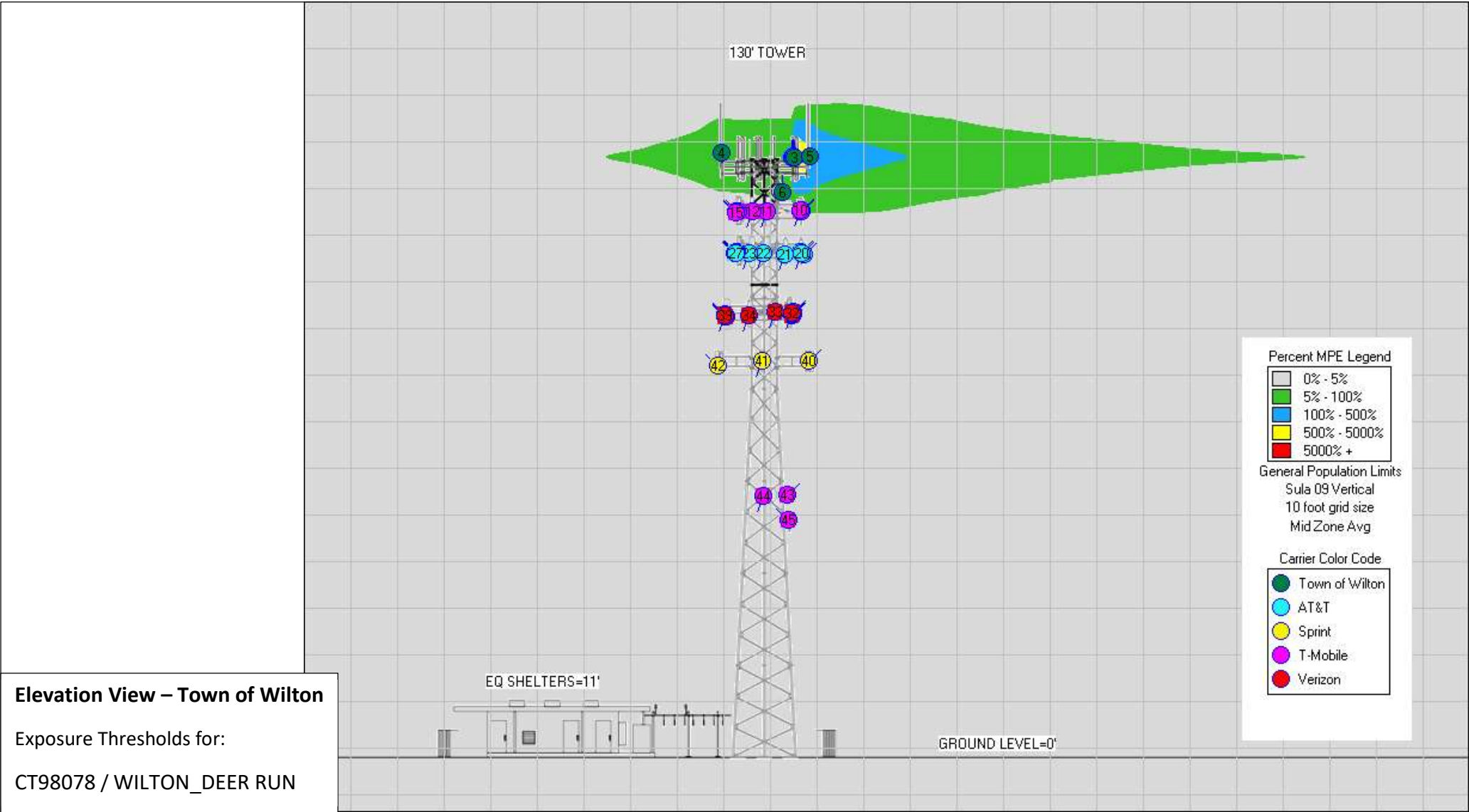




**Adjacent Houses (20ft.) All Carriers**  
 Exposure Thresholds for:  
 CT98078 / WILTON\_DEER RUN

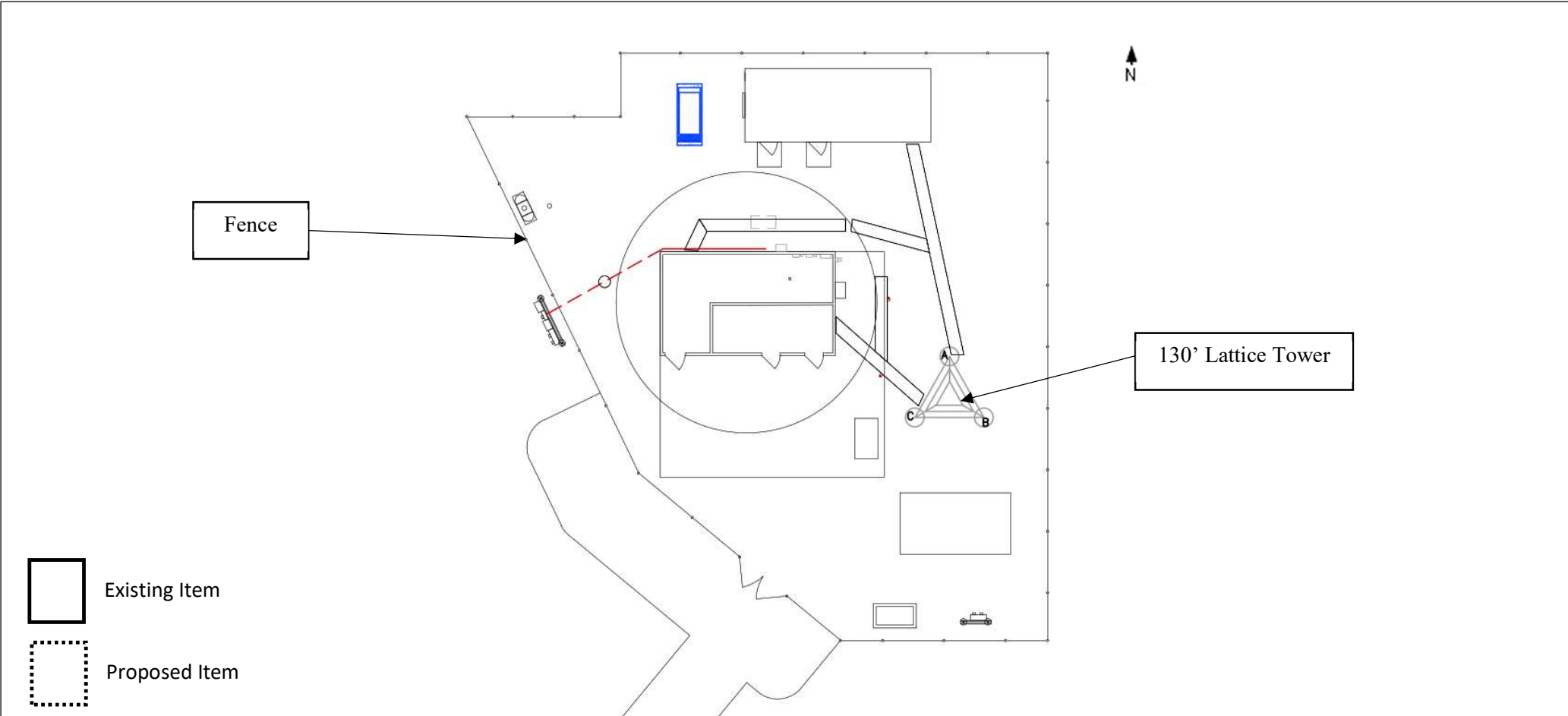






**Elevation View – Town of Wilton**  
 Exposure Thresholds for:  
 CT98078 / WILTON\_DEER RUN

### 4. Mitigation Diagram



Signage Count								Signage Diagram		
	0		0		0		0		0	Signage for: CT98078 / WILTON_DEER RUN

## 5. Results

All calculations performed based upon the data listed for this facility have produced results that are within allowable limits for General Population for exposure to RF exposure as specified by federal standards.

<b>Maximum Calculated Town of Wilton MPE Level on Site:</b>	<b>% of MPE Limit:</b>
Accessible <b>General Population</b> MPE Limits:	<b>0.02%</b>
Accessible <b>Occupational</b> MPE Limits:	<b>0.00%</b>

<b>Maximum Calculated Composite MPE Level on Site:</b>	<b>% of MPE Limit:</b>
Accessible <b>General Population</b> MPE Limits:	<b>6.02%</b>
Accessible <b>Occupational</b> MPE Limits:	<b>1.20%</b>

<b>Maximum Calculated Town of Wilton MPE Level at Ground:</b>	<b>% of MPE Limit:</b>
Accessible <b>General Population</b> MPE Limits:	<b>0.02%</b>
Accessible <b>Occupational</b> MPE Limits:	<b>0.00%</b>






<b>Maximum Calculated Composite MPE Level at Ground:</b>	<b>% of MPE Limit:</b>
Accessible <b>General Population</b> MPE Limits:	<b>4.10%</b>
Accessible <b>Occupational</b> MPE Limits:	<b>0.82%</b>

## 6. Compliance Actions

<b>Access</b>	<ul style="list-style-type: none"><li>• No Action Needed.</li></ul>
<b>Alpha Sector</b>	<ul style="list-style-type: none"><li>• No Action Needed.</li></ul>
<b>Beta Sector</b>	<ul style="list-style-type: none"><li>• No Action Needed.</li></ul>
<b>Gamma Sector</b>	<ul style="list-style-type: none"><li>• No Action Needed.</li></ul>
<b>Notes</b>	<ul style="list-style-type: none"><li>• N/A</li></ul>



## Appendix A: RF Signage Description Table

Sign	Description
	<p style="text-align: center;"><b>RF Guideline Sign</b></p> <p style="text-align: center;">Gives guidelines on how to proceed in areas that may exceed either the FCC’s General Population or Occupational exposure limits.</p>
	<p style="text-align: center;"><b>Information Sign</b></p> <p style="text-align: center;">Informational Sign to be posted at access points.</p>
	<p style="text-align: center;"><b>Blue Notice Sign</b></p> <p>Used to inform individuals that they are entering an area that may exceed the FCC’s General Population limits. It must be placed so it is visible from all approachable sides. It must also be just outside of the area predicted to exceed the MPE limits so it can be read without standing within the affected area.</p>
	<p style="text-align: center;"><b>Yellow Caution Sign</b></p> <p>Used to inform individuals that they are entering an area that may exceed either the FCC’s General Population or Occupational exposure limits. It must be placed so it is visible from all approachable sides. It must also be just outside of the area predicted to exceed the MPE limits so it can be read without standing within the affected area.</p>
	<p style="text-align: center;"><b>Orange Warning Sign</b></p> <p>Used to inform individuals that they are entering an area that may exceed 10x the FCC’s Occupational exposure limit. It must be placed so it is visible from all approachable sides. It must also be just outside of the area predicted to exceed the MPE limits so it can be read without standing within the affected area.</p>

## Appendix B: FCC Guidelines and Exposure Threshold Limits

All information used in this report was analyzed as a percentage of the Maximum Permissible Exposure (% MPE) limits as detailed in 47 CFR § 1.1310 as well as Federal Communications Commission (FCC) OET Bulletin 65 Edition 97-01. The FCC MPE limits are typically expressed in units of milliwatts per square centimeter ( $\text{mW}/\text{cm}^2$ ) or microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ). The exposure limits vary depending upon the frequencies being utilized. The General Population/Uncontrolled MPE limit (in  $\text{mW}/\text{cm}^2$ ) for frequencies between 300 and 1500 is defined as frequency (in MHz) divided by 1500 ( $f_{\text{MHz}}/1500$ ). Frequencies between 1500 and 100,000 MHz have a General Population/Uncontrolled MPE limit of  $1 \text{ mW}/\text{cm}^2$  ( $1000 \mu\text{W}/\text{cm}^2$ ). The calculated power density at each sample point divided by the limit at each calculated frequency provides a result in % MPE. Summing the calculated % MPE from all contributors provides a cumulative % MPE at a particular sample point. Because exposure limits may vary for each frequency band, it is necessary to report % MPE rather than power density.

All results were compared to the FCC radio frequency exposure rules as detailed in 47 CFR § 1.1307(b) to determine compliance with the MPE limits for General Population/Uncontrolled environments as defined below.

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

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, 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.

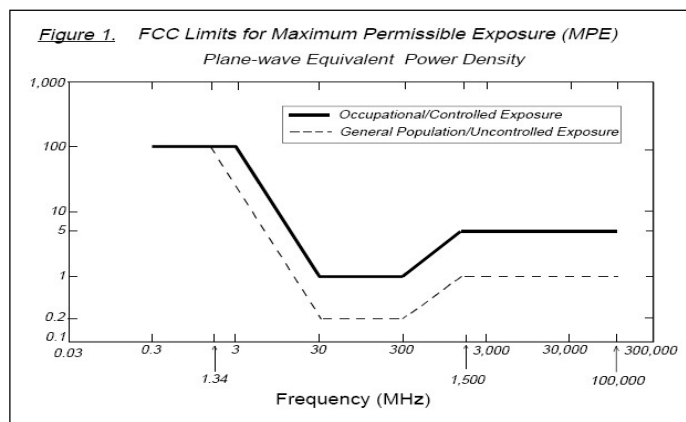
The FCC Mandates that if a site is found to be out of compliance with regard to exposure that any system operator contributing 5% or more to areas exceeding the FCC's allowable limits will be responsible for bringing the site into compliance.

Additional details can be found in FCC OET 65.

Limits for Maximum Permissible Exposure (MPE)				
(A) Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time [E] <sup>2</sup> , [H] <sup>2</sup> , or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f <sup>2</sup> )*	6
30-300	61.4	0.163	1.0	6
300-1,500	--	--	f/300	6
1,500-100,000	--	--	5	6
(B) Limits for General Public/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time [E] <sup>2</sup> , [H] <sup>2</sup> , or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1,500	--	--	f/1,500	30
1,500-100,000	--	--	1.0	30

f = Frequency in (MHz)

\* Plane-wave equivalent power density



## **Appendix C: Calculation Methodology**

Centerline has performed theoretical modeling using Waterford Consultants' RoofMaster™ 2020 Version 40.12.23.2022 which uses a cylindrical model for conservative power density predictions within the near field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations the power decreases inversely with the square of the distance. This modeling technique is accurate with low antenna centerlines, such as rooftops, where persons can get close to the antennas and pass through fields in close proximity.

The modeling is based on worst-case assumptions for the number of antennas and transmitter power. No losses were included in the power calculations unless they were specifically provided for the project.

## Appendix D: Certifications

I, Katrina Styx, preparer of this report certify that I am fully trained and aware of the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation. I have been trained in the procedures and requirements outlined in the FCC Regulatory Compliance Manual.

A handwritten signature in black ink, appearing to read "Katrina Styx".

Katrina Styx

7/17/2023

I, Yasir Alqadhili, reviewer and approver of this report certify that I am fully trained and aware of the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation. I have been trained in the procedures and requirements outlined in the FCC Regulatory Compliance Manual.

A handwritten signature in black ink, appearing to read "yqadhili".

Yasir Alqadhili

7/17/2023

## **Appendix E: Proprietary Statement**

This report was prepared for the use of Town of Wilton to meet requirements specified by FCC RF safety guidelines. It was performed in accordance with generally accepted industry practices. The conclusions provided by Centerline Communications, LLC are based solely on the information provided by Town of Wilton or its representatives, and all observations in this report are valid on the date of the investigation. Any additional information that becomes available concerning the site should be provided to Centerline Communications, LLC so that this analysis may be revised, if necessary. This report has been prepared in accordance with Standard Conditions for Engagement and authorized proposal, both of which are integral parts of this report. No other warranty, expressed or implied, is made.

# **EXHIBIT D**



July 25, 2023

Mr. Michael DiMonda  
Pyramid Network Services, LLC  
6615 Towpath Road  
East Syracuse, New York 13057

Subject: **Collocation Exemption Letter  
Proposed Tower Collocation: "Wilton Deer Run"  
41.2414° North, -73.4699° West  
160 Deer Run Road  
Wilton, Connecticut 06897  
Fairfield County  
AEC Project No. PNS-22-364**

Dear Mr. DiMonda:

Advantage Environmental Consultants, LLC (AEC), under contract to Pyramid Network Services, LLC (Pyramid), completed a collocation exemption determination at the above-referenced property (i.e., the Site). AEC reviewed the 2001 Nationwide Programmatic Agreement for the Collocation of Wireless Antennas (CPA); and the 2005 Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission (NPA). Per these two agreements, certain undertakings are exempt from Section 106 Consultation. AEC reviewed the site conditions and proposed scope of work against these conditions to evaluate the Site and determine if any stipulations of the agreements are relevant, and if further consultation is necessary. AEC notes that, as the proposed installation consists of mounting antennas to an existing structure (tower), the project is categorically excluded from environmental review (Federal Communications Commission (FCC) NEPA categories one through three and six through eight) under Title 47 of the Code of Federal Regulations (CFR), Section 1.1306, Note 1.

### **Scope of Work**

The Site consists of an existing 120-foot self-support tower and associated equipment within an existing fenced compound, located on a larger parcel. Pyramid proposes the installation of a new 10-foot tower extension, raising the height of the tower to 130-feet, on the existing 120-foot self-support tower. Three 9.3 foot omni antennas are proposed at a base mount height of 124.4 feet and one 3-foot microwave is proposed at a centerline height of 123 feet. A new 50kW generator is proposed on a concrete foundation within the existing compound. Lastly, additional cabinets are proposed within the existing equipment shelter. AEC has determined, based on the provided PAL, that the existing tower was constructed in 2003 (i.e. after March 16, 2001). A copy of the lease exhibits (LEs) is included in Attachment A. Aerial imagery is attached within Attachment B.



## Description of Regulations

The 2001 National Programmatic Agreement for the Collocation of Wireless Antennas for projects involving antenna collocations on existing towers constructed after March 16, 2001 must meet the following stipulations to be exempt from Section 106 review:

- The Section 106 review process for the existing tower set forth in 36 CFR Part 800 and any associated environmental reviews required by the FCC has been completed.
- The mounting of the antenna will not result in a substantial increase in the size of the tower.
  - The mounting of the proposed antenna on the tower would not increase the existing height of the tower by more than 10%, or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater, except that the mounting of the proposed antenna may exceed the size limits set forth in this paragraph if necessary to avoid interference with existing antennas; or
  - The mounting of the proposed antenna would not involve the installation of more than the standard number of new equipment cabinets for the technology involved, not to exceed four, or more than one new equipment shelter; or
  - The mounting of the proposed antenna would not involve adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater, except that the mounting of the proposed antenna may exceed the size limits set forth in this paragraph if necessary to shelter the antenna from inclement weather or to connect the antenna to the tower via cable; or
  - The mounting of the proposed antenna would not involve excavation outside the current tower site, defined as the current boundaries of the leased or owned property surrounding the tower and any access or utility easements currently related to the site.
- The tower has not been determined by the FCC to have an effect on one or more historic properties, unless such effect has been found to be not adverse through a no adverse effect finding, or if found to be adverse or potentially adverse, has been resolved, such as through a conditional no adverse effect determination, a Memorandum of Agreement, a programmatic agreement, or otherwise in compliance with Section 106 and Subpart B of 36 CFR Part 800,
- The tower is not the subject of a pending environmental review or related proceeding before the FCC involving compliance with Section 106 of the National Historic Preservation Act, or
- The collocation licensee or the owner of the tower has not received written or electronic notification that the FCC is in receipt of a complaint from a member of the public, a State Historic Preservation Office (SHPO) or the Council, that the collocation has an adverse effect on one or more historic properties. Any such complaint must be in writing and supported by substantial evidence describing how the effect from the collocation is adverse to the attributes that qualify any affected historic property for eligibility or potential eligibility for the National Register.

## Review of Section 106 Exemption Criteria

AEC reviewed the proposed scope of work against the CPA and NPA to determine if the conditions would be met to exclude the site from additional Section 106 consultation.

Stipulation 1: The Section 106 review process for the existing tower set forth in 36 CFR Part 800 and any associated environmental reviews required by the FCC has been completed:

**Met** – *Per the provided PAL, it is AEC's understanding that Section 106 consultation has been completed.*

Stipulation 2: The mounting of the antenna and associated equipment will not result in a substantial increase in the size of the tower:

**Met** – *The proposed installation increases the height of the tower by ten feet. The proposed height increase is not considered substantial and the stipulation is met. There is no proposed expansion to the compound.*

Stipulation 3: The tower has been determined by the FCC to not have an effect on one or more historic properties, or any effect that has been identified is found to be not adverse through a no adverse effect finding, or if found to be adverse or potentially adverse, has been resolved, such as through a conditional no adverse effect determination, a Memorandum of Agreement, a programmatic agreement, or otherwise in compliance with Section 106:

**Met** – *It is the FCC's and Pyramid's understanding that this is true.*

Stipulation 4: - The tower is not the subject of a pending environmental review or related proceeding before the FCC involving compliance with Section 106 of the National Historic Preservation Act:

**Met** – *It is the FCC's and Pyramid's understanding that this is true.*

Stipulation 5: - The collocation licensee or the owner of the tower has not received written or electronic notification that the FCC is in receipt of a complaint from a member of the public, a SHPO or the Council, that the collocation has an adverse effect on one or more historic properties.

**Met** – *It is FCC's and Pyramid's understanding that this is true.*

A copy of the Lease Exhibits is included in Attachment A, while a copy of the correspondence with the FCC is included in Attachment C.

## Conclusions

Based on AEC's understanding of the proposed project reviewed against the CPA and NPA; the proposed undertaking meets the conditions outlined above. Therefore, AEC determined that the proposed project is **NOT** required to complete Section 106 Consultation. It should be noted that if significant changes are made to the proposed installation plan, further evaluation may be necessary.

Please note that if archeological items (including Native American artifacts), human remains, and/or funerary objects are uncovered during construction, work should cease immediately and AEC should be contacted to coordinate with the SHPO and appropriate tribes.

We appreciate the opportunity to be of service to Pyramid. If you should have any questions regarding this report, or if we can be of further assistance, please contact Mr. Andrew Fleming at (301) 776-0500.

Sincerely,  
**ADVANTAGE ENVIRONMENTAL CONSULTANTS, LLC**

*Sonia Klein*

---

Sonia Klein  
Staff Scientist  
Preparer

*Andrew Fleming*

---

Andrew L. Fleming  
Senior Project Manager

## **ATTACHMENT A**

**PROJECT DESCRIPTION**

INSTALLATION OF ANTENNAS, COAXIAL CABLE, AND ASSOCIATED MOUNTS ON AN EXISTING 120' SELF SUPPORT TOWER WITH NEW EXTENSION TO 130'.

UTILIZING EXISTING UNMANNED BUILDING ON CONCRETE FOUNDATION WITH EQUIPMENT ROOM UPGRADES.

NEW ELECTRIC SERVICE TO EQUIPMENT BUILDING. NO WATER SUPPLY OR SEWAGE TO/FROM THE SITE.

**SITE NAME:**

DEER RUN

**SITE ADDRESS:**

DEER RUN RD  
WILTON, CT 06897

**SITE COORDINATES**

LATITUDE - N 41° 14' 29.1"  
LONGITUDE - W 73° 28' 12"

**SITE INFORMATION**

**LANDLORD**

SBA  
SITE - CT98078

**APPLICANT**

TOWN OF WILTON  
240 DANBURY ROAD  
WILTON, CT 06897  
PH: (203) 834-6206

**CONTACT**

MOTOROLA SOLUTIONS  
STEFANITA VASILESCU  
PH: (914) 281-0867

**PROJECT MANAGER**

PYRAMID NETWORK SERVICES, LLC  
MICHAEL DIMONDA  
PH: (518) 366-5679  
EMAIL: MDIMONDA@PYRAMIDNS.COM

**ARCHITECTURAL AND ENGINEERING**

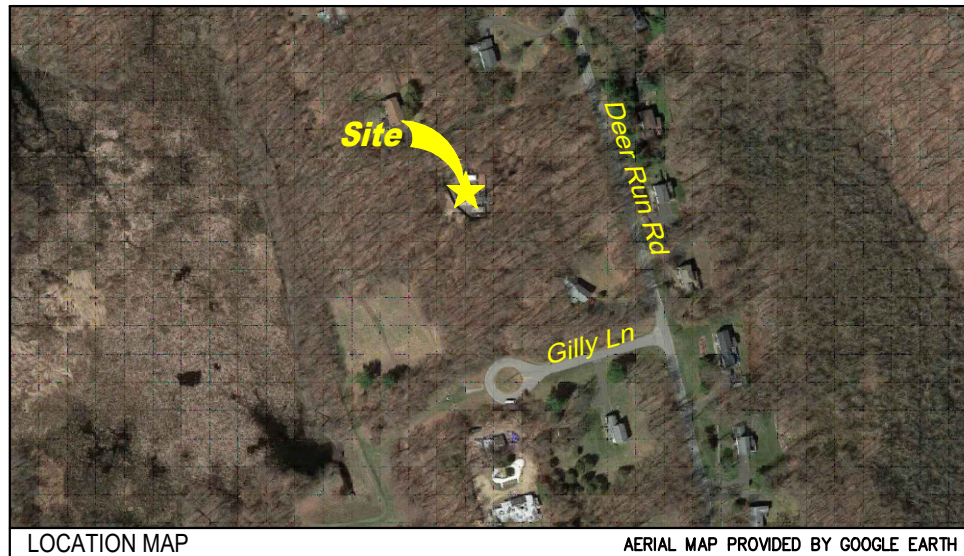
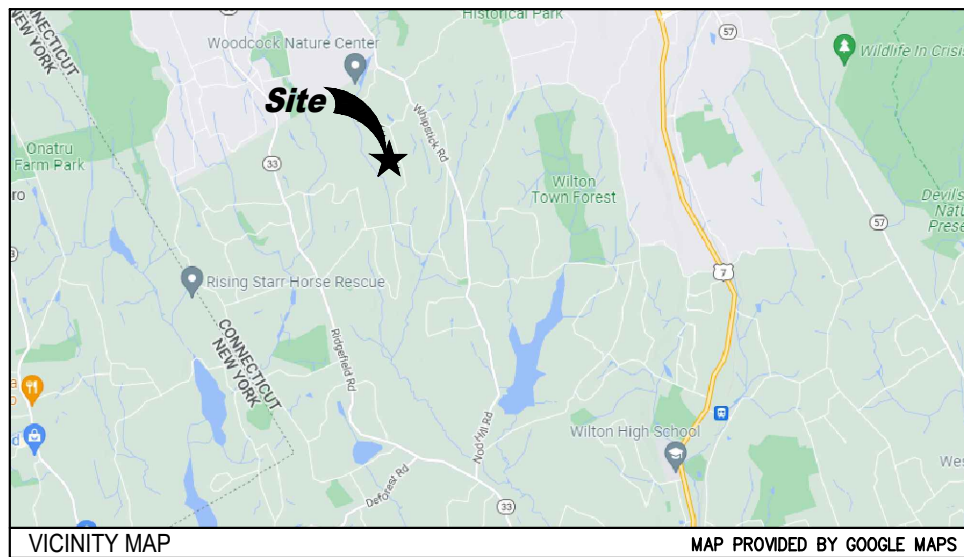
MISSION 1 COMMUNICATIONS  
SCOTT HARTMAN  
6202 CONSTITUTION DRIVE, SUITE C  
FORT WAYNE, IN 46804  
PH: (260) 436-3922  
EMAIL: SHARTMAN@M1COMM.COM

**CONSULTANT TEAM**

<b>TOWN OF WILTON REPRESENTATIVE :</b>	RECEIVED :
	ACCEPTED :
<b>MOTOROLA :</b>	RECEIVED :
	ACCEPTED :
<b>PROPERTY OWNER:</b>	RECEIVED :
	ACCEPTED :
RECEIVED AND ACCEPTED	



**DIRECTIONS TO SITE**



# DEER RUN

DEER RUN RD  
WILTON, CT 06897  
FAIRFIELD COUNTY



## DRAWING INDEX

- T-1 PROJECT INFORMATION, LOCATION MAPS, AND DRAWING INDEX
- C-1 SITE LOCATION PLAN
- C-2 ENLARGED SITE PLAN
- C-3 EXISTING TOWER ELEVATION AND ANTENNA LOADING INFORMATION
- C-3.1 PROPOSED TOWER ELEVATION AND ANTENNA LOADING INFORMATION
- A-1 ENLARGED DEMO PLAN
- A-2 FLOOR PLAN

PRELIMINARY  
NOT FOR  
CONSTRUCTION



NO.	DATE	REVISIONS	BY	CHK	APP'D
E	07-10-23	PRELIM LEASE EXHIBIT - REVISED PER STRUCTURAL	RNV	SAH	
D	12-12-22	PRELIM LEASE EXHIBIT - CLIENT REVISIONS	SAH	SAH	
C	10-06-22	PRELIM LEASE EXHIBIT - CLIENT REVISIONS	SAH	SAH	
B	09-27-22	PRELIM LEASE EXHIBIT - ADDED MW	SAH	SAH	
A	09-26-22	PRELIM LEASE EXHIBIT	NTA	SAH	



PROJECT INFORMATION, LOCATION MAPS, AND DRAWING INDEX	T-1
DEER RUN DEER RUN RD WILTON, CT 06897	

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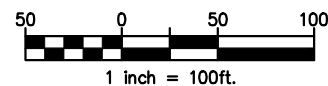
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- GENERAL NOTES:**
1. PROPERTY OFFSETS ARE APPROXIMATE. FINAL LOCATION OF COMPOUND TO BE DEVELOPED FROM TOWER ☺
  2. THE LOCATION, SIZE & TYPE OF MATERIAL OF EXISTING UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING THE SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS & SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION & ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES & THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS & SERVICES SHALL BE RESTORED TO SERVICE AT ONCE & PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.
  3. ALL PROPOSED CONSTRUCTION ACTIVITIES & MODIFICATIONS SHALL COMPLY WITH MOTOROLA R-56 STANDARDS, REV 2017.
  4. ANY DISCREPANCIES BETWEEN THIS DRAWING PACKAGE AND EXISTING FIELD CONDITIONS MUST BE REPORTED TO THE ENGINEER OF RECORD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

Site Location Plan



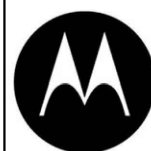
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Call before you dig.  
1-800-922-4455  
CALL TOLL FREE

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B	09-27-22	PRELIM LEASE EXHIBIT - ADDED MW	SAH	SAH	
A	09-26-22	PRELIM LEASE EXHIBIT	NTA	SAH	



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Fort Wayne, IN 46804



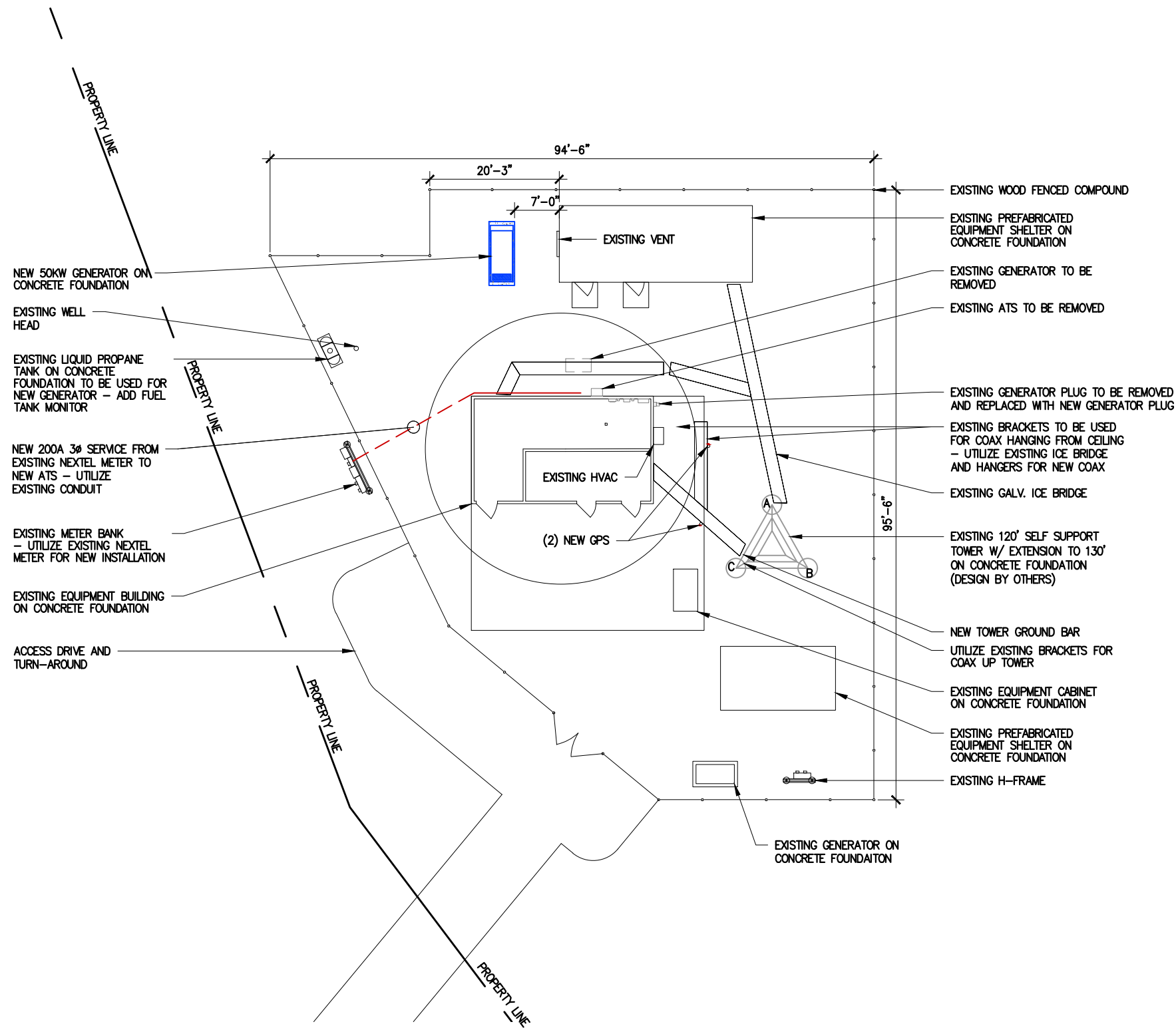
SITE LOCATION PLAN

DEER RUN  
DEER RUN RD  
WILTON, CT 06897

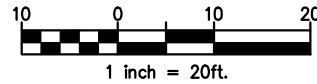
C-1

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Enlarged Site Plan



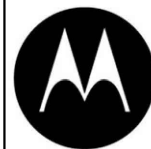
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MOTOROLA SOLUTIONS



ENLARGED SITE PLAN

DEER RUN  
DEER RUN RD  
WILTON, CT 06897

C-2

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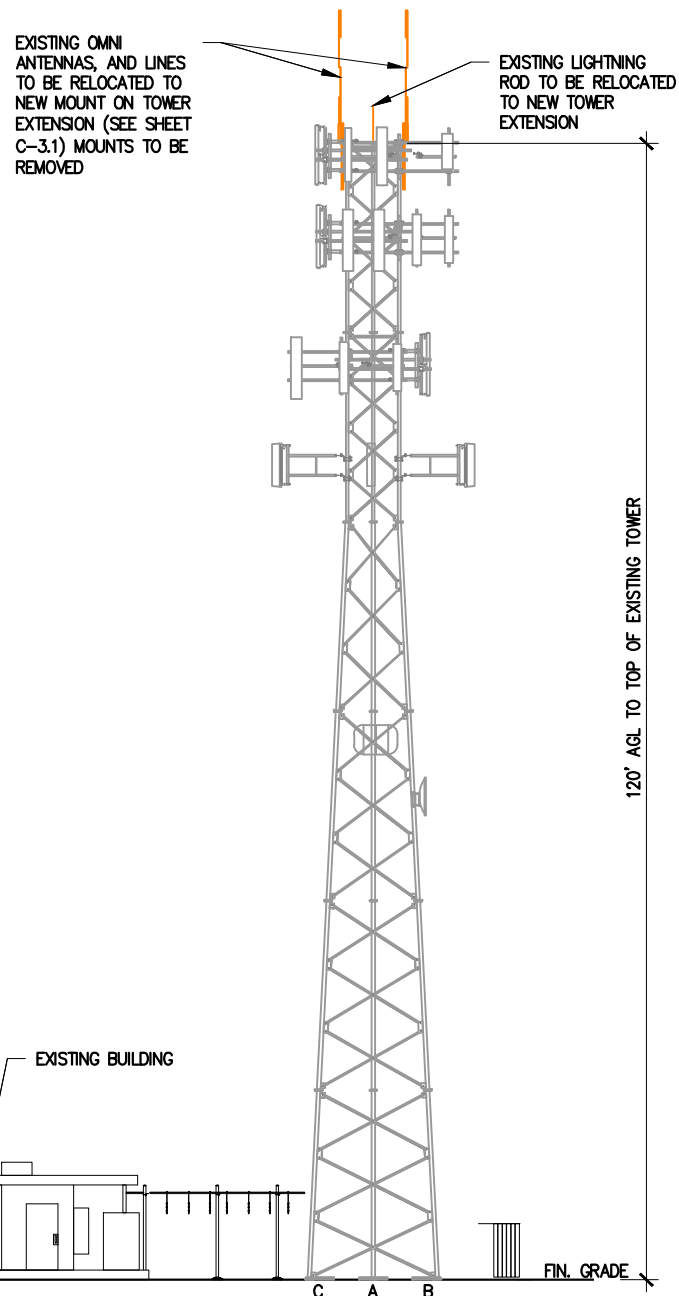
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**Existing Loading:**

Antenna Elevation (ft)	Description	Feed Lines	Carrier	Mount Elevation (ft)	Mount Type
126.5	(2) 3" Ø x 12' Omni <sup>1</sup>	(2) 7/8" <sup>1</sup>	-	122.0	(3) 2.4" Ø x 7' Pipe Mounts <sup>2</sup>
118.0	(3) Ericsson AIR6449 B41 (3) Ericsson AIR32 KR901146-1_B66A_B2A (Octo) (3) RFS APXVAALL24-43-U-NA20 (3) Commscope SDX1926Q-43 (E14F05P86) (3) Ericsson KRY 112 71 (3) Ericsson Radio 4449 B71+B85 (3) Ericsson Radio 4415 B25	(7) 1-5/8" (6) Fiber	T-Mobile	118.0	(3) Sector Mounts [Sitepro1 P/N: VFA12-HD]
110.0	(3) Powerwave 7770 (3) Kathrein 800-10965 (3) Powerwave P65-16-XLH-RR (3) CCI OPA65R-BU6DA (6) Powerwave LGP 21401 (3) Powerwave TT19-08BP111-001 (3) Ericsson RRUS-11 (3) Ericsson RRUS 4478 B5 (3) Ericsson RRUS 4415 B25 (3) Ericsson RRUS 4478 B14 (2) Raycap DC6-48-60-18-8F	(12) 1-5/8" (4) 3/4" DC (2) 3/8" Fiber (2) 3/8" Alarm Cables (1) 3" Flex	AT&T	110.0	(3) 12' Sector Mounts [Sabre P/N: C10857001C]
98.0	(3) Amphenol BXA-80090-8CF-EDIN-X (6) JMA MX06FRO660-03 (3) Samsung MT6407-77A (3) Samsung RF4440d-13A (3) Samsung RF4439d-25A (2) Raycap RRFDC-3315-PF-48	(6) 1-5/8" (2) Hybrid	Verizon	96.5	(3) 10'x2' T-Frames
86.0	(3) 60"x12"x4.5" Panels <sup>3</sup>	(9) 1-5/8" <sup>3</sup> (2) 1-1/2" <sup>3</sup>	Sprint	86.0	(3) 2.7' Stand-Offs <sup>3</sup>
57.0	(1) Scala PR-850	(1) 7/8"		57.0	Direct
51.0	(1) Scala PR-850	(2) 7/8"		55.0	(1) 1.9'x9.8' Pipe Mount

- EXISTING OMNI ANTENNA AND FEEDLINES TO BE RELOCATED ON THE PROPOSED TOWER EXTENSION ON NEW MOUNTS (SEE SHEET E-3.1)
- EXISTING MOUNTS NEED TO BE REMOVED PRIOR TO THE INSTALLATION OF THE PROPOSED LOADING.
- EXISTING ANTENNA, FEEDLINES AND MOUNTS NEED TO BE REMOVED PRIOR TO THE INSTALLATION OF PROPOSED LOADING.



**GENERAL NOTES:**

- SEE STRUCTURAL ANALYSIS W/ MODIFICATION DESIGN BY FDH INFRASTRUCTURE SERVICES, LLC PROJECT NUMBER PR-009191
- ALL VERTICAL TRANSMISSION LINE RUNS FROM THE ANTENNAS SHALL BE GROUNDED NEAR THE TOP & BOTTOM OF THE TOWER (BEFORE THE CABLE MAKES HORIZONTAL TRANSITION & NEAR ENTRY PORT ON THE SHELTER).
- THE CONTRACTOR SHALL CONDUCT A FREQUENCY DOMAIN REFLECTOMETER (FDR) WITH PRECISION LOAD / SWEEP TEST FOR ANTENNA AND TRANSMISSION LINE INSTALLATION WORK. ALL SWEEP AND TEST MUST BE WITHIN THE GUIDELINES OUTLINED IN MOTOROLA MOP.
- DRIP LOOPS SHALL BE INCORPORATED IN CABLE RUNS TO PREVENT WATER FROM TRICKLING DOWN THE LINES INTO THE SHELTER.
- ALL TRANSMISSION LINES SHALL BE MARKED WITH APPROPRIATE COLOR TAPE BANDS (ONE INCH WIDE COLOR TAPE) FOR IDENTIFICATION NEAR THE ANTENNA. JUST BEFORE ENTERING THE SHELTER AS WELL AS INSIDE THE SHELTER, BEFORE CONNECTING TO THE SURGE SUPPRESSORS. SEE EQUIPMENT & COAXIAL CABLE SCHEDULE FOR COLOR CODING SCHEME.

PRELIMINARY  
NOT FOR  
CONSTRUCTION

**1 Proposed Tower Elevation**  
NOT TO SCALE

NO.	DATE	REVISIONS	BY	CHK	APP'D
E	07-10-23	PRELIM LEASE EXHIBIT - REVISED PER STRUCTURAL	RNV	SAH	
D	12-12-22	PRELIM LEASE EXHIBIT - CLIENT REVISIONS	SAH	SAH	
C	10-06-22	PRELIM LEASE EXHIBIT - CLIENT REVISIONS	SAH	SAH	
B	09-27-22	PRELIM LEASE EXHIBIT - ADDED MW	SAH	SAH	
A	09-26-22	PRELIM LEASE EXHIBIT	NTA	SAH	



EXISTING TOWER ELEVATION AND ANTENNA LOADING INFORMATION  
DEER RUN  
DEER RUN RD  
WILTON, CT 06897

C-3

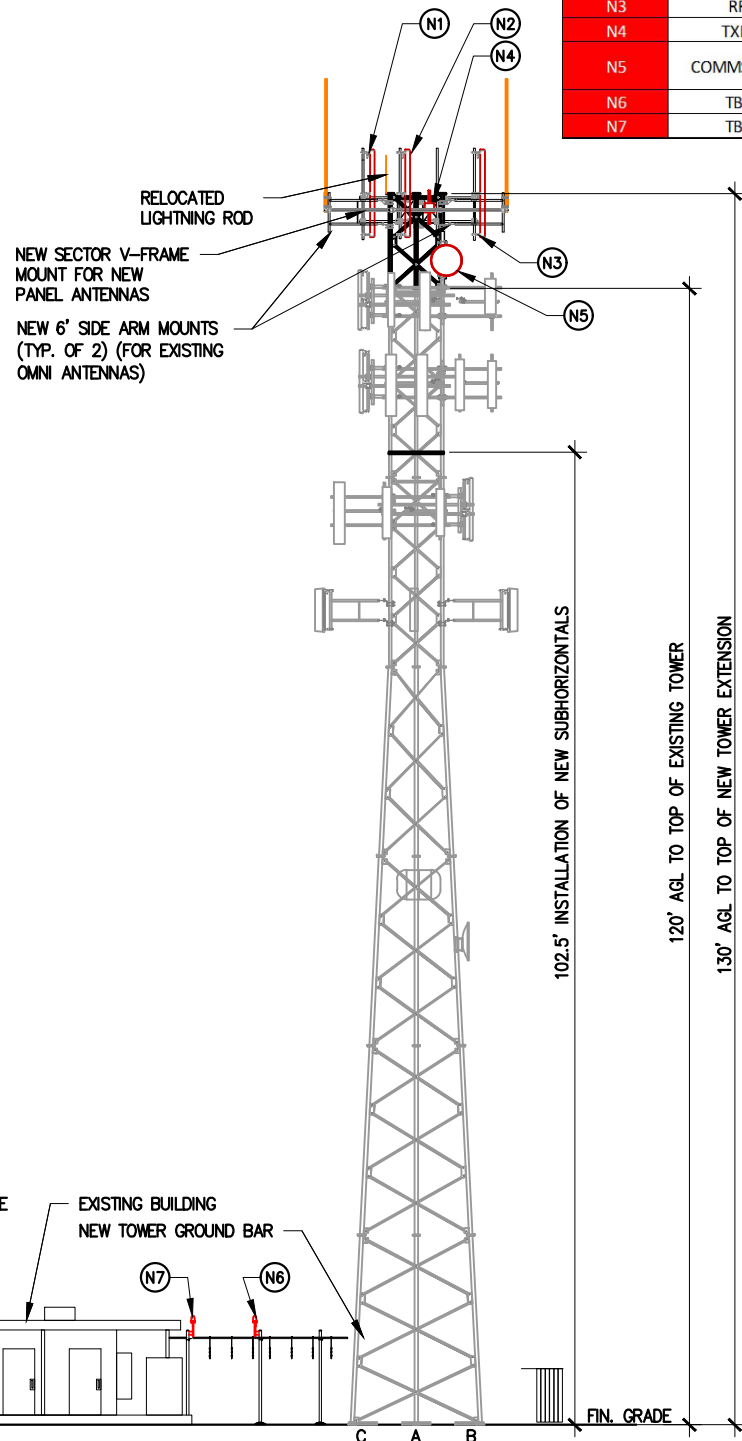
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DEER RUN - 120' SELF SUPPORT TOWER  
 LAT: 41° 14' 29.1"  
 LON: - 73° 28' 12"

Antenna/Appurtenance Location Chart

E = EXISTING  
 N = NEW  
 F = FUTURE

PROPOSED ANTENNA INFORMATION													FEEDLINE INFORMATION				COLOR CODE					
ANTENNA ID	MANUFACTURER	MODEL	TYPE	LENGTH	BOTTOM ELEV	RAD CENTER	TOP ELEV.	AZIMUTH	LEG	TILT	DEST.	MOUNT	QTY.	TYPE	MANUFACTURER	MODEL	SIZE	QTY.	BAND 1	BAND 2	BAND 3	BAND 4
N1	RFI	BPA7496-180-14	TX	9.3'	125.4'	130.0'	134.6'	90°	A	-	-	12.5' SECTOR FRAME	1	COAX	EUPEN	EC7-50A	1-5/8"	1	RED			
N2	RFI	BPA7496-180-14	RX	9.3'	125.4'	130.0'	134.6'	90°	A	-	-			COAX	EUPEN	EC7-50A	1-5/8"	1	GREEN			
N3	RFI	BPA7496-180-14	RX	9.3'	125.4'	130.0'	134.6'	90°	A	-	-			COAX	EUPEN	EC7-50A	1-5/8"	1	GREEN	WHITE		
N4	TXRX	432F-83W-01-T	TTA	1.0'	129.5'	130.0'	130.5'	-	A	-	-			COAX	EUPEN	EC4-50	1/2"	1	GREEN	WHITE	WHITE	
N5	COMMSCOPE	VHLP3-11W	MW	3.0'	121.5'	123.0'	124.5'	158.44°	B	-0.51°	-	WILTON TOWER 31	-	1	WAVEGUIDE	COMMSCOPE	EW90	-	1	BLUE		
N6	TBD	TBD	GPS			ICE BRIDGE							1	COAX	TBD	TBD		1	ORANGE			
N7	TBD	TBD	GPS			ICE BRIDGE							1	COAX	TBD	TBD		1	ORANGE	WHITE		



Proposed Carrier Final Loading:

Antenna Elevation (ft)	Description	Feed Lines	Carrier	Mount Elevation (ft)	Mount Type
130.0	(3) RFI BPA7496-180-14 (1) TXRX 432F-83W-01-T	(3) 1-5/8" (1) 1/2"	Town of Wilton	128.0	(1) 12.5' Sector Frame [Site Pro 1 P/N: VFA12-SD-S]
	(2) 3' x 12' Omni	(2) 7/8"	-		(2) 6' Side Arm [Site Pro 1 P/N: PSA6]
123.0	(1) Commscope VHLP3-11W	(1) EW90	Town of Wilton	123.0	(1) Pipe Mount

GENERAL NOTES:

- SEE STRUCTURAL ANALYSIS W/ MODIFICATION DESIGN BY FDH INFRASTRUCTURE SERVICES, LLC PROJECT NUMBER PR-009191
- ALL VERTICAL TRANSMISSION LINE RUNS FROM THE ANTENNAS SHALL BE GROUNDED NEAR THE TOP & BOTTOM OF THE TOWER (BEFORE THE CABLE MAKES HORIZONTAL TRANSITION & NEAR ENTRY PORT ON THE SHELTER).
- THE CONTRACTOR SHALL CONDUCT A FREQUENCY DOMAIN REFLECTOMETER (FDR) WITH PRECISION LOAD / SWEEP TEST FOR ANTENNA AND TRANSMISSION LINE INSTALLATION WORK. ALL SWEEP AND TEST MUST BE WITHIN THE GUIDELINES OUTLINED IN MOTOROLA MOP.
- DRIP LOOPS SHALL BE INCORPORATED IN CABLE RUNS TO PREVENT WATER FROM TRICKLING DOWN THE LINES INTO THE SHELTER.
- ALL TRANSMISSION LINES SHALL BE MARKED WITH APPROPRIATE COLOR TAPE BANDS (ONE INCH WIDE COLOR TAPE) FOR IDENTIFICATION NEAR THE ANTENNA. JUST BEFORE ENTERING THE SHELTER AS WELL AS INSIDE THE SHELTER, BEFORE CONNECTING TO THE SURGE SUPPRESSORS. SEE EQUIPMENT & COAXIAL CABLE SCHEDULE FOR COLOR CODING SCHEME.

PRELIMINARY  
 NOT FOR  
 CONSTRUCTION

1 Proposed Tower Elevation  
 NOT TO SCALE

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B	09-27-22	PRELIM LEASE EXHIBIT - ADDED MW	SAH	SAH	
A	09-26-22	PRELIM LEASE EXHIBIT	NTA	SAH	

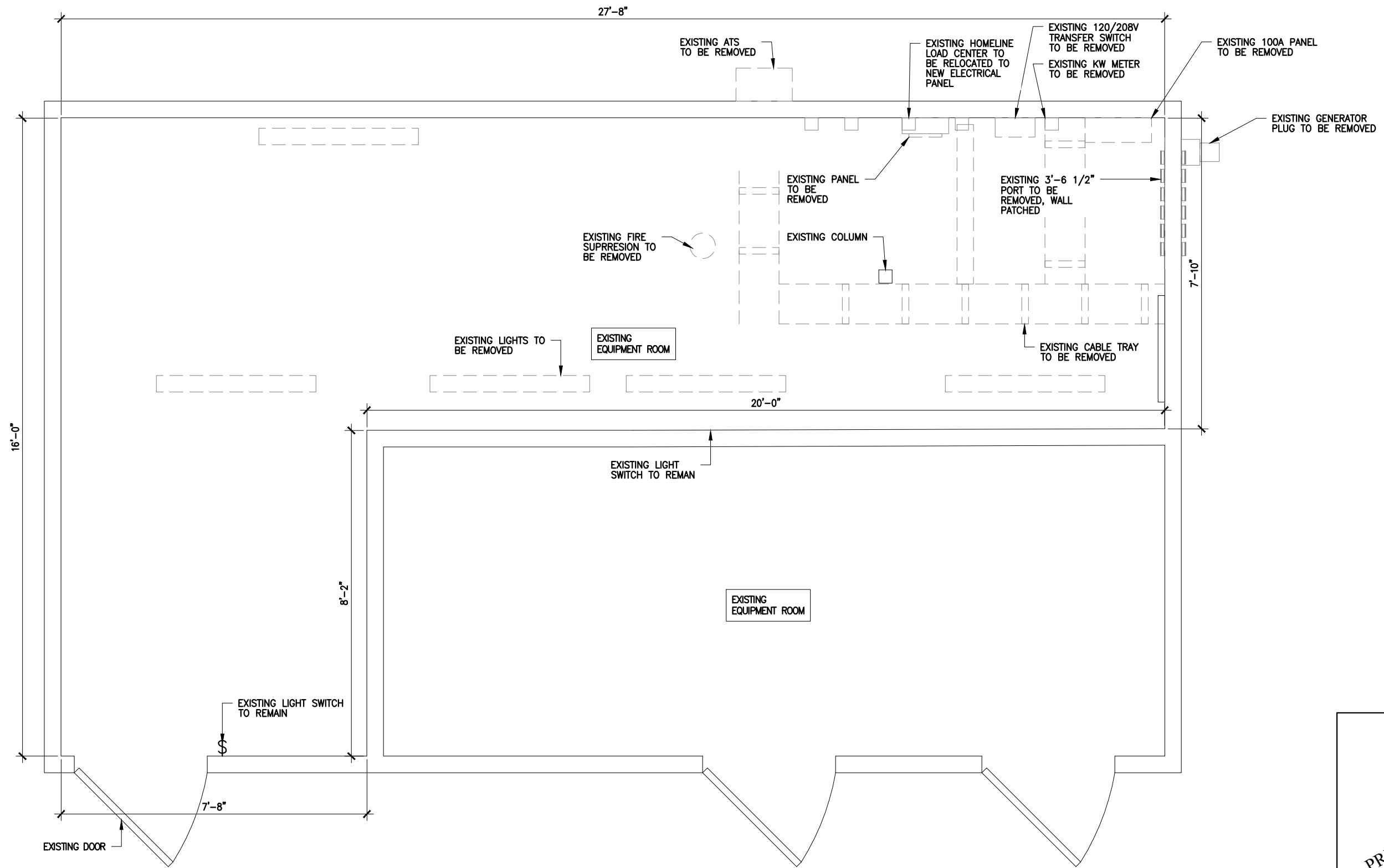


PROPOSED TOWER ELEVATION AND ANTENNA LOADING INFORMATION

DEER RUN  
 DEER RUN RD  
 WILTON, CT 06897

C-3.1

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### Enlarged Demo Plan

SCALE : 3/8" = 1'-0"

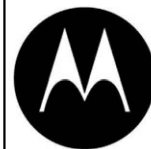


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**MOTOROLA  
SOLUTIONS**



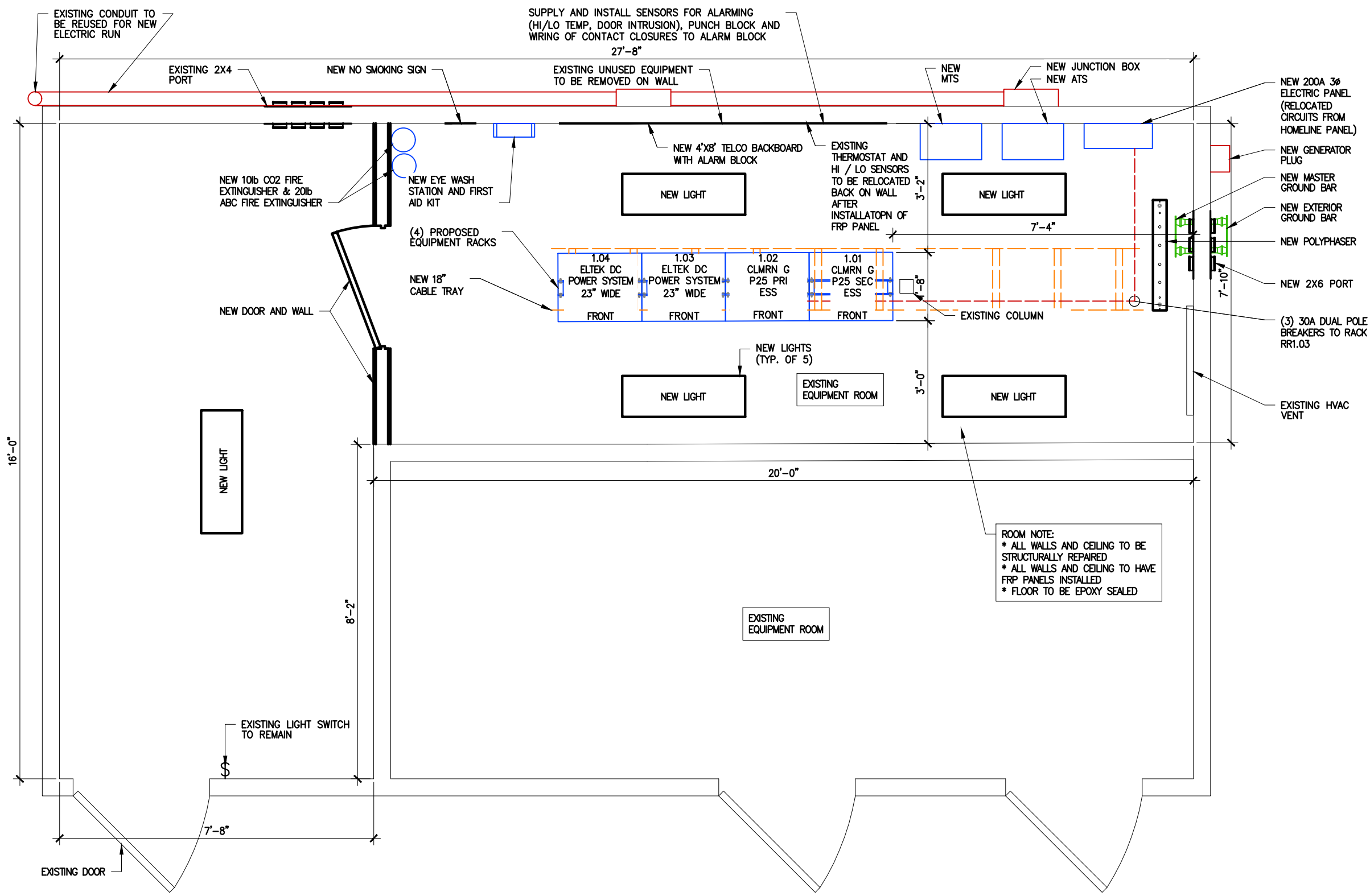
ENLARGED DEMO PLAN

DEER RUN  
DEER RUN RD  
WILTON, CT 06897

**A-1**

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- NOTES:**
1. NEW GROUND HALO TO BE INSTALLED IN SHELTER.
  2. GROUND GENERATOR, ICE BRIDGE AND WOOD FENCE.
  3. GROUND ALL METALLIC ITEMS IN EQUIPMENT ROOM PER R56
  4. GROUND ALL METALLIC ITEMS FOR THIS NEW INSTALLATION ON BUILDING EXTERIOR PER R56



**ROOM NOTE:**  
 \* ALL WALLS AND CEILING TO BE STRUCTURALLY REPAIRED  
 \* ALL WALLS AND CEILING TO HAVE FRP PANELS INSTALLED  
 \* FLOOR TO BE EPOXY SEALED

**Floor Plan**  
 SCALE : 3/8" = 1'-0"  
 NORTH

**PRELIMINARY  
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 CONSTRUCTION**

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FLOOR PLAN  
 DEER RUN  
 DEER RUN RD  
 WILTON, CT 06897

A-2

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**ATTACHMENT B**





# Antenna Structure Registration

[FCC](#) > [WTB](#) > [ASR](#) > [Online Systems](#) > ASR Search

[FCC Site Map](#)

ASR Registration Search

## Registration 1256129

[? HELP](#)

[New Search](#) [Return to Results](#) [Printable Page](#) [Reference Copy](#) [Map Registration](#)

### Registration Detail

Reg Number	1256129	Status	Constructed
File Number	A1232608	Constructed	03/10/2007
EMI	No	Dismantled	
NEPA	No		

### Antenna Structure

Structure Type LTOWER - Lattice Tower

**Location** (in NAD83 Coordinates - [Convert to NAD27](#))

Lat/Long	41-14-28.9 N 073-28-11.6 W	Address	160 Deer Run Road
City, State	Wilton , CT		
Zip	06897	County	FAIRFIELD
Center of AM Array		Position of Tower in Array	

### Heights (meters)

Elevation of Site Above Mean Sea Level	191.4	Overall Height Above Ground (AGL)	36.6
Overall Height Above Mean Sea Level	228.0	Overall Height Above Ground w/o Appurtenances	36.0

### Painting and Lighting Specifications

None

### FAA Notification

FAA Study	2021-ANE-8838-OE	FAA Issue Date	10/17/2022
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### Owner & Contact Information

FRN	0020767802	Owner Entity Type	Limited Liability Company
-----	------------	-------------------	---------------------------

### Owner

Westport Broadcasting LLC Attention To: Douglas Flamm 216 B 50th Street Virginia Beach , VA 23451	P: (804)551-1720 F: (804)587-8255 E: fresh5@theflamms.com
--	---

### Contact

Attention To: Douglas Flamm 4513 Tweedsmuir Turn Moseley , VA 23120	P: (804)551-1720 F: E: Fresh5@TheFlamms.com
---	---

### Last Action Status



Status	Constructed	Received	12/01/2022
Purpose	Notification	Entered	12/01/2022
Mode	Interactive		

#### Related Applications

12/01/2022 [A1232608](#) - Notification (NT)  
12/01/2022 [A1232607](#) - Modification (MD)  
04/14/2011 [A0725295](#) - Change Owner (OC)

[All related applications \(10\).](#)

#### Comments

##### Comments

None

#### History

Date	Event
12/01/2022	Construction Notification Received
12/01/2022	Modification Received
04/15/2011	Registration Printed

[All History \(24\).](#)

#### Pleadings

Pleading Type	Filer Name	Description	Date Entered
None			

#### Automated Letters

04/15/2011 [Ownership Change](#), Reference 685039  
09/23/2008 [Ownership Change](#), Reference 607401  
12/04/2007 [Construction Reminder](#), Reference 587412

[All letters \(7\).](#)

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**ASR Online Systems** [TOWAIR](#)- [CORES](#) - [ASR Online Filing](#) - [Application Search](#) - [Registration Search](#)

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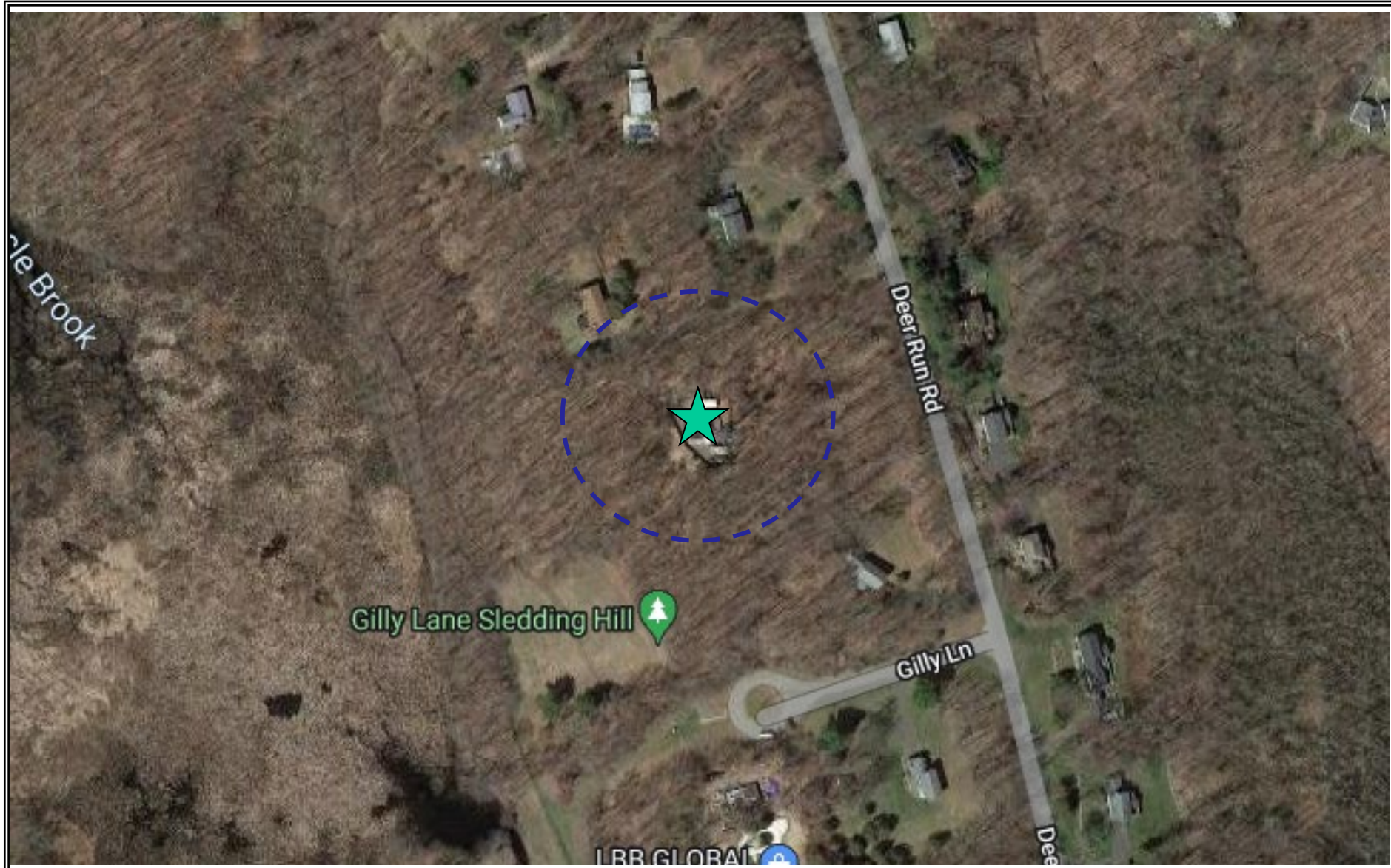
**Registration Search** By Registration Number

[FCC](#) | [Wireless](#) | [ULS](#) | [CORES](#)


[Help](#) | [Tech Support](#)

Federal Communications Commission  
45 L Street NE  
Washington, DC 20554

Phone: 1-877-480-3201  
TTY: 1-717-338-2824  
[Submit Help Request](#)



**AEC** Advantage Environmental Consultants, LLC  
 8610 Washington Boulevard, Suite 217  
 Jessup, Maryland 20794  
 Phone: 301-776-0500 Fax: 301-776-1123

**Legend**  
 = 250-Foot Radius from antenna locations

**Local Historic District and Property Commissions in CT**  
 "Wilton Deer Run"  
 160 Deer Run Road  
 Wilton, Connecticut 06897

↑ N

Project No.: PNS-22-364	Report Date: December 2022	Drawn By: SRK
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**ATTACHMENT C**



Gary J. Flamm  
STRUCTURE OWNER

CT98078-L Wilton West CT  
NAME OF STRUCTURE

160 Deer Run Road  
ADDRESS OF STRUCTURE

Wilton, CT 06897  
CITY, STATE, ZIP CODE

To Whom it may concern

To facilitate Tenant's collocation of its telecommunications equipment on the above referenced structure in compliance with the Nationwide Programmatic Agreement for the Collocation of Wireless Antennas executed by the Federal Communication Commission, the National Conference of State Historic Preservation Officers and the Advisory Council on Historic Preservation (the "Programmatic Agreement"), Owner makes the following statements:

1.  Tower construction or redevelopment was completed **on or before** March 16, 2001.  
 Tower construction or redevelopment was completed **after** March 16, 2001.

**Date Tower Constructed:** 2003

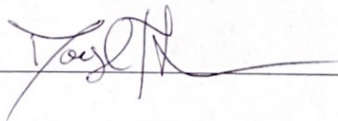
*If built after March 16, 2001, attached is a copy of structure owner's SHPO documentation.*

2. If the tower was constructed or redeveloped **after** March 16, 2001; the owner states that a Section 106 review (SHPO review) or any associated environmental (NEPA) review required by the FCC has been completed for this tower.
3. Owner has no knowledge of having received any written or electronic notification that the FCC has determined that the Structure has an effect on one or more historic properties, or if such an effect has been found, such effect has been found to be not adverse through a no adverse effect finding, or if found to be adverse or potentially adverse, the effect has been resolved through a conditional no adverse effect determination, a Memorandum of Agreement, a programmatic agreement, or otherwise in compliance with Section 106 and Subpart B of 36 CFR Part 800.
4. Owner has no knowledge of having received any written or electronic notification that the Structure is the subject of a pending environmental review or related proceeding before the FCC involving compliance with Section 106 of the National Historic Preservation Act.
5. Owner has no knowledge of having received any written or electronic notification that the FCC is in receipt of a complaint from a member of the public, a State Historic Preservation Office, or the Advisory Council On Historic Preservation that the collocation has or will have an adverse effect on one or more historic properties.

NAME: Douglas J Flamm

COMPANY: Westport Broadcasting, LLC

SIGNATURE: \_\_\_\_\_



DATE: \_\_\_\_\_

8/21/22

# **EXHIBIT E**



Mail Processing Center  
Federal Aviation Administration  
Southwest Regional Office  
Obstruction Evaluation Group  
10101 Hillwood Parkway  
Fort Worth, TX 76177

Aeronautical Study No.  
2023-ANE-4341-OE  
Prior Study No.  
2006-ANE-1255-OE

Issued Date: 09/19/2023

Pyramid Network Services, LLC c/o Michael DiMonda)  
Barry County  
6615 Towpath Road  
East Syracuse, NY 13057

**\*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\***

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Antenna Tower Wilton-Deer Run  
Location: Wilton, CT  
Latitude: 41-14-28.94N NAD 83  
Longitude: 73-28-11.60W  
Heights: 628 feet site elevation (SE)  
140 feet above ground level (AGL)  
768 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Emissions from this site must be in compliance with the parameters set by collaboration between the FAA and telecommunications companies and reflected in the FAA 5G C band compatibility evaluation process (such as power, frequencies, and tilt angle). Operational use of this frequency band is not objectionable provided the Wireless Providers (WP) obtain and adhere to the parameters established by the FAA 5G C band compatibility evaluation process. **Failure to comply with this condition will void this determination of no hazard.**

**See attachment for additional condition(s) or information.**

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.



If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (404) 305-6430, or [kelly.r.nelson@faa.gov](mailto:kelly.r.nelson@faa.gov). On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-ANE-4341-OE.

**Signature Control No: 594044564-599650066**

( DNE )

Kelly Nelson  
Specialist

Attachment(s)  
Additional Information  
Frequency Data  
Map(s)

cc: FCC

## **Additional information for ASN 2023-ANE-4341-OE**

Part 77 authorizes the FAA to evaluate a structure or object's potential electromagnetic effects on air navigation, communication facilities, and other surveillance systems. It also authorizes study of impact on arrival, departure, and en route procedures for aircraft operating under visual or instrument flight rules, as well as the impact on airport traffic capacity at existing public use airports. Broadcast in the 3.7 to 3.98 GHz frequency (5G C band) currently causes errors in certain aircraft radio altimeters and the FAA has determined they cannot be relied upon to perform their intended function when experiencing interference from wireless broadband operations in the 5G C band. The FAA has adopted Airworthiness Directives for all transport and commuter category aircraft equipped with radio altimeters that prohibit certain operations when in the presence of 5G C band

This determination of no hazard is based upon those mitigations implemented by the FAA and operators of transport and commuter category aircraft, and helicopters operating in the vicinity of your proposed location. It is also based on telecommunication industry and FAA collaboration on acceptable power levels and other parameters as reflected in the FAA 5G C band evaluation process.

The FAA 5G C band compatibility evaluation is a data analytics system used by FAA to evaluate operational hazards related to aircraft design. The FAA 5G C band compatibility evaluation process refers to the process in which the telecommunication companies and the FAA have set parameters, such as power output, locations, frequencies, and tilt angles for antenna that mitigate the hazard to aviation. As the telecommunication companies and FAA refine the tools and methodology, the allowable frequencies and power levels may change in the FAA 5G C band compatibility evaluation process. Therefore, your proposal will not have a substantial adverse effect on the safe and efficient use of the navigable airspace by aircraft provided the equipment and emissions are in compliance with the parameters established through the FAA 5G C band compatibility evaluation process.

Any future changes that are not consistent with the parameters listed in the FAA 5G C band compatibility evaluation process will void this determination of no hazard.

**Frequency Data for ASN 2023-ANE-4341-OE**

<b>LOW FREQUENCY</b>	<b>HIGH FREQUENCY</b>	<b>FREQUENCY UNIT</b>	<b>ERP</b>	<b>ERP UNIT</b>
6	7	GHz	42	dBW
6	7	GHz	55	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
806	901	MHz	500	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W
3550	3700	MHz	47	dBm
3700	3980	MHz	1640	W
3700	3980	MHz	3280	W
27500	28350	MHz	75	dBm
29100	29250	MHz	75	dBm
31000	31225	MHz	75	dBm
31225	31300	MHz	75	dBm

38600

40000

MHz

75

dBm



# **EXHIBIT F**



## **CERTIFICATION OF SERVICE**

I hereby certify that on this 5<sup>th</sup> day of October, 2023, copies of the Petition and attachments were sent to the following:

### **STATE OFFICIALS:**

The Honorable William Tong  
Attorney General  
Office of the Attorney General  
165 Capitol Avenue  
Hartford, CT 06106

James C. Rovella, Commissioner  
Department of Emergency Services and Public Protection  
Emergency Management and Homeland Security Division  
1111 Country Club Road  
Middletown, CT 06457

Katie Dykes, Commissioner  
Department of Energy and Environmental Protection  
79 Elm Street  
Hartford, CT 06134-0308

Paul Aresta, Executive Director  
Council on Environmental Quality  
79 Elm Street  
Hartford, CT 06106

Marissa Paslick Gillett, Chair  
Public Utilities Regulatory Authority  
Ten Franklin Square  
New Britain, CT 06051

Benjamin Barnes, Secretary  
Office of Policy and Management  
450 Capitol Avenue  
Hartford, CT 06106

Alexandra Daum, Commissioner  
Department of Economic and Community Development  
450 Columbus Boulevard  
Hartford, CT 06103

Joseph Giuliatti, Commissioner  
Department of Transportation  
P.O. Box 317546  
2800 Berlin Turnpike  
Newington, CT 06131-7546

Mary Dunne, Director of Culture  
State Historic Preservation Officer  
Connecticut Commission on Culture & Tourism  
450 Columbus Boulevard, Suite 5  
Hartford, CT 06103

Bryan P. Hurlburt, Commissioner  
Department of Agriculture  
450 Columbus Boulevard, Suite 701  
Hartford, CT 06103

Michelle H. Seagull,  
Commissioner Department of Consumer Protection  
450 Columbus Boulevard, Suite 901  
Hartford, CT 06103

Kurt Westby, Commissioner  
Department of Labor  
200 Folly Brook Boulevard  
Wethersfield, CT 06109

Michelle Gilman, Commissioner  
Department of Administrative Services  
450 Columbus Boulevard  
Hartford, CT 06103

The Honorable Jonathan Steinberg  
Representative, House District 136  
Legislative Office Building  
300 Capitol Avenue, Room 3004  
Hartford, CT 06106

The Honorable Stephanie Thomas  
Representative, House District 143  
Legislative Office Building  
300 Capitol Avenue  
Hartford, CT 06106

The Honorable Will Haskell  
State Senator, District 26  
Legislative Office Building  
300 Capitol Avenue, Room 3300  
Hartford, CT 06106

The Honorable Tony Hwang  
State Senator, District 28  
Legislative Office Building  
300 Capitol Avenue, Room 3400  
Hartford, CT 06106

**WILTON TOWN OFFICIALS:**

Lynne Vanderslice, First Selectwoman  
238 Danbury Road  
Wilton, CT 06897

Wilton Planning & Zoning Department  
Town Annex  
238 Danbury Road  
Wilton, CT 06897

Westport Conservation Commission  
238 Danbury Road  
Wilton, CT 06897

Westport Inland Wetlands Commission  
238 Danbury Road  
Wilton, CT 06897

**REGIONAL COUNCIL OF GOVERNMENTS:**

Western Connecticut Council of Governments  
1 Riverside Rd.  
Sandy Hook, CT 06482

**FEDERAL:**

Federal Communications Commission  
45 L St NE  
Washington, DC 20554

U.S. Senator Richard Blumenthal  
90 State House Square, 10<sup>th</sup> Floor  
Hartford, CT 06103

U.S. Senator Christopher Murphy  
120 Huyshope Avenue, Suite 401  
Hartford, CT 06106

U.S. Congressman Jim Himes  
District Four  
350 Fairfield Avenue, Suite 603  
Bridgeport, CT 06604

**WESTPORT BROADCASTING CO., LLC,  
AND TOWN OF WILTON**

By: \_\_\_\_\_



David A. Ball, Esq.  
Cohen and Wolf, P.C.  
1115 Broad Street  
Bridgeport, CT 06604  
Tel. No. (203) 368-0211  
E-Mail: [dball@cohenandwolf.com](mailto:dball@cohenandwolf.com)  
Juris No. 010032

DAVID A BALL

Please Reply To Bridgeport  
E-Mail: dball@cohenandwolf.com

October 5, 2023

<Name and address>

**Re: Connecticut Siting Council Docket No. 308 - Westport Broadcasting Co., LLC  
and Town of Wilton Petition for a Declaratory Ruling for Approval of an  
Eligible Facility Request for Modifications to an Existing  
Telecommunications Tower at 160 Deer Run Road, Wilton, CT**

Dear <Salutation>:

On October 5, 2023, Westport Broadcasting Co., LLC and the Town of Wilton will be submitting a Petition to the Connecticut Siting Council for a declaratory ruling for approval of an eligible facility request for modifications to an existing telecommunications tower at 160 Deer Run Road, Wilton, Connecticut. I've enclosed a copy of the Petition.

If you have any questions, please do not hesitate to contact me.

Very truly yours,

David A. Ball

Enclosure

# **EXHIBIT G**



# TOWN OF WILTON, CT

Mon Oct 02 2023 11:43:30 GMT-0400 (Eastern Daylight Time)

Parcel ID	Site Address	Owner Name	Mailing Address	Mailing City	Mailing State	Mailing Zip
80-9	14 GILLY LA	CONNECTICUT STATE OF	450 CAPITOL AVE	HARTFORD	CT	06134-0000
80-10	182 DEER RUN RD	BAXENDALE ANTHONY B	182 DEER RUN RD	WILTON	CT	06897-0000
81-25	149 DEER RUN RD	VIGNOLA JIMENA A 2007 REV TR	149 DEER RUN RD	WILTON	CT	06897-0000
81-26	159 DEER RUN RD	STEWARD CHARLES & STEWARD MARY ELIZABETH	159 DEER RUN RD	WILTON	CT	06897-0000
81-27	167 DEER RUN RD	SEBASTIAN MARIA T & SEBASTIAN JAKE A	167 DEER RUN RD	WILTON	CT	06897-0000
81-28	160 DEER RUN RD	WESTPORT BROADCASTING CO LLC	PO BOX 1041	VIRGINIA BEACH	VA	23451-0000
81-29	154 DEER RUN RD	CARVAJAL JOSE GABRIEL & BASSAS MARIA T	154 DEER RUN RD	WILTON	CT	06897-0000
81-30	148 DEER RUN RD	SATO HITOSHI EUGENE	148 DEER RUN RD	WILTON	CT	06897-0000

DAVID A. BALL

Please Reply To Bridgeport  
E-Mail: [dball@cohenandwolf.com](mailto:dball@cohenandwolf.com)

October 5, 2023

***Via Certified Mail Return Receipt Requested***

«Name\_ and Address»

**Re: Connecticut Siting Council Docket No. 308 - Westport Broadcasting Co., LLC  
and Town of Wilton Petition for a Declaratory Ruling for Approval of an  
Eligible Facility Request for Modifications to an Existing  
Telecommunications Tower at 160 Deer Run Road, Wilton, CT**

Dear «Salutation»:

On October 5, 2023, Westport Broadcasting Co., LLC and the Town of Wilton (the “Petitioners”) will be submitting a Petition to the Connecticut Siting Council for a declaratory ruling for approval of an eligible facility request for modifications to an existing telecommunications tower at 160 Deer Run Road, Wilton, Connecticut.

The Petitioners propose to extend the existing tower by 12 feet, for the purpose of allowing the Town’s emergency services antennas to be mounted at the 128 foot level, with an elevation of 130 feet above ground level. Site plan drawings for the proposed modifications are attached for your review.

State law provides that owners of record of property which abuts the subject parcel must receive notice of the submission of this Petition. This notice is directed to you either because you may be an abutting landowner or as a courtesy notice.

If you have any questions concerning the Petition, please direct them to either the Connecticut Siting Council or to me. My address and telephone number are contained in this letter. The Siting Council may be reached at its New Britain, Connecticut office at (860) 827-2935.

Very truly yours,

David A. Ball

Enclosure