## COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF	)
NEW CINGULAR WIRELESS PCS, LLC,	)
A DELAWARE LIMITED LIABILITY COMPANY,	)
D/B/A AT&T MOBILITY	)
AND TILLMAN INFRASTRUCTURE LLC, A DELAWARE	)
LIMITED LIABILITY COMPANY	)
FOR ISSUANCE OF A CERTIFICATE OF PUBLIC	) CASE NO.: 2023-00296
CONVENIENCE AND NECESSITY TO CONSTRUCT	)
A WIRELESS COMMUNICATIONS FACILITY	)
IN THE COMMONWEALTH OF KENTUCKY	)
IN THE COUNTY OF HARLAN	)

SITE NAME: CLOVER FORK

\* \* \* \* \* \* \*

# APPLICATION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR CONSTRUCTION OF A WIRELESS COMMUNICATIONS FACILITY

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Tillman Infrastructure LLC, a Delaware limited liability company ("Applicants"), by counsel, pursuant to (i) KRS §§ 278.020, 278.040, 278.650, 278.665, and other statutory authority, and the rules and regulations applicable thereto, and (ii) the Telecommunications Act of 1996, respectfully submit this Application requesting issuance of a Certificate of Public Convenience and Necessity ("CPCN") from the Kentucky Public Service Commission ("PSC") to construct, maintain, and operate a Wireless Communications Facility ("WCF") to serve the customers of AT&T Mobility with wireless communications services.

In support of this Application, Applicants respectfully provide and state the following information:

- 1. The complete name and address of the Applicants are: New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility, having an address of Meidinger Tower, 462 S. 4th Street, Suite 2400, Louisville, Kentucky 40202 and Tillman Infrastructure LLC, a Delaware limited liability company having an address of 152 W 57th Street, New York, NY 10019.
- 2. Applicants propose construction of an antenna tower for communications services, which is to be located in an area outside the jurisdiction of a planning commission, and Applicants submit this application to the PSC for a certificate of public convenience and necessity pursuant to KRS §§ 278.020(1), 278.040, 278.650, 278.665, and other statutory authority.
- 3. AT&T Mobility is a limited liability company organized in the State of Delaware on October 20, 1994. AT&T Mobility's Certificate of Good standing issued by the State of Delaware is attached as part of **Exhibit A** and hereby incorporated by reference.
- 4. Tillman Infrastructure LLC is a limited liability company organized in the State of Delaware on June 13, 2016. Tillman Infrastructure LLC's Certificate of Good standing issued by the State of Delaware is attached as part of **Exhibit A** and hereby incorporated by reference.
- 5. Both Applicants attest that they are in good standing in the state in which they are organized and further state that they are authorized to transact business in Kentucky. Copies of Applicants' Certificate of Authorization issued by the Kentucky Secretary of State are attached as part of **Exhibit A** and are hereby incorporated by reference.
- 6. AT&T Mobility operates on frequencies licensed by the Federal Communications Commission ("FCC") pursuant to applicable FCC requirements. A copy of

AT&T Mobility's FCC applications and licenses to provide wireless services are attached to this Application or described as part of **Exhibit A**, and the facility will be constructed and operated in accordance with applicable FCC regulations.

- 7. The public convenience and necessity require the construction of the proposed WCF. The construction of the WCF will bring or improve AT&T Mobility's services to an area currently not served or not adequately served by AT&T Mobility by increasing coverage or capacity and thereby enhancing the public's access to innovative and competitive wireless communications services. The WCF will provide a necessary link in AT&T Mobility's communications network that is designed to meet the increasing demands for wireless services in Kentucky's wireless communications service area. The WCF is an integral link in AT&T Mobility's network design that must be in place to provide adequate coverage to the service area.
- 8. To address the above-described service needs, Applicants propose to construct a WCF in a lease area located at 227 Industrial Park Road, Harlan, KY 40831 (36° 50′ 08.82" North latitude, 83° 19′ 39.46" West longitude), on a parcel of land located entirely within the county referenced in the caption of this application. The property on which the WCF will be located is owned by Harlan Countians for Progress, LLC, a Kentucky limited liability company pursuant to a Deed recorded at Deed Book 479, Page 151 in the office of the County Clerk. The proposed WCF will consist of a 175-foot tall tower, with an approximately 10-foot tall lightning arrestor attached at the top, for a total height of 185-feet. The WCF will also include concrete foundations and a shelter or cabinets to accommodate the placement of AT&T Mobility's radio electronics equipment and appurtenant equipment. AT&T Mobility's equipment cabinet or shelter will be approved for

use in the Commonwealth of Kentucky by the relevant building inspector. The WCF compound will be fenced and all access gate(s) will be secured. A description of the manner in which the proposed WCF will be constructed is attached as **Exhibit B** and **Exhibit C**.

- 9. A list of utilities, corporations, or persons with whom the proposed WCF is likely to compete is attached as **Exhibit D**.
- 10. The site development plan and a vertical profile sketch of the WCF signed and sealed by a professional engineer registered in Kentucky depicting the tower height, as well as a proposed configuration for the antennas of AT&T Mobility has also been included as part of **Exhibit B**.
- 11. Foundation design plans signed and sealed by a professional engineer registered in Kentucky and a description of the standards according to which the tower was designed are included as part of **Exhibit C**.
- 12. Applicants have considered the likely effects of the installation of the proposed WCF on nearby land uses and values and have concluded that there is no more suitable location reasonably available from which adequate services can be provided, and that there are no reasonably available opportunities to co-locate AT&T Mobility's antennas on an existing structure. When suitable towers or structures exist, AT&T Mobility attempts to co-locate on existing structures such as communications towers or other structures capable of supporting AT&T Mobility's facilities; however, no other suitable or available co-location site was found to be located in the vicinity of the site.
- 13. Copies of the application and Determination of No Hazard to Air Navigation issued by the Federal Aviation Administration ("FAA") are attached as **Exhibit E**.

- 14. A copy of the Kentucky Airport Zoning Commission ("KAZC") application along with documentation from a KAZC Administrator confirming KAZC approval for the proposed construction is not required are attached as **Exhibit F**.
- 15. A geotechnical engineering firm has performed soil boring(s) and subsequent geotechnical engineering studies at the WCF site. A copy of the geotechnical engineering report, signed and sealed by a professional engineer registered in the Commonwealth of Kentucky, is attached as **Exhibit G**. The name and address of the geotechnical engineering firm and the professional engineer registered in the Commonwealth of Kentucky who supervised the examination of this WCF site are included as part of this exhibit.
- 16. Clear directions to the proposed WCF site from the County seat are attached as **Exhibit H**. The name and telephone number of the preparer of **Exhibit H** are included as part of this exhibit.
- 17. Applicants, pursuant to a written agreement, have acquired the right to use the WCF site and associated property rights. A copy of the agreement or an abbreviated agreement recorded with the County Clerk is attached as **Exhibit I**.
- 18. Personnel directly responsible for the design and construction of the proposed WCF are well qualified and experienced. The tower and foundation drawings for the proposed tower submitted as part of **Exhibit C** bear the signature and stamp of a professional engineer registered in the Commonwealth of Kentucky. All tower designs meet or exceed the minimum requirements of applicable laws and regulations.
- 19. The Construction Manager for the proposed facility is John Lounsbury and the identity and qualifications of each person directly responsible for design and construction of

the proposed tower are contained in Exhibits B & C.

- 20. As noted on the Survey attached as part of **Exhibit B**, the surveyor has determined that the site is within Zone AE (area with base flood elevation 1185 feet) per the FEMA Floodplain Maps.
- 21. **Exhibit B** includes a map drawn to an appropriate scale that shows the location of the proposed tower and identifies every owner of real estate within 500 feet of the proposed tower (according to the records maintained by the County Property Valuation Administrator). Every structure and every easement within 500 feet of the proposed tower or within 200 feet of the access road including intersection with the public street system is illustrated in **Exhibit B**.
- 22. Applicants have notified every person who, according to the records of the County Property Valuation Administrator, owns property which is within 500 feet of the proposed tower or contiguous to the site property, by certified mail, return receipt requested, of the proposed construction. Each notified property owner has been provided with a map of the location of the proposed construction, the PSC docket number for this application, the address of the PSC, and has been informed of his or her right to request intervention. A list of the notified property owners and a copy of the form of the notice sent by certified mail to each landowner are attached as **Exhibit J** and **Exhibit K**, respectively. Copies of the certified green card receipts for each of the landowners who were provided notice are also included as part of **Exhibit J**.
- 23. Applicants have notified the Harlan County Judge/Executive and the Mayor for the City of Harlan by certified mail, return receipt requested, of the proposed construction. This notice included the PSC docket number under which the application will

be processed and informed the recipients of their right to request intervention. A copy of those notices are attached as **Exhibit L**.

- 24. Notice signs meeting the requirements prescribed by 807 KAR 5:063, Section 1(2) that measure at least 2 feet in height and 4 feet in width and that contain all required language in letters of required height, have been posted, one in a visible location on the proposed site and one on the nearest public road. Such signs shall remain posted for at least two weeks after filing of the Application, and a copy of the posted text is attached as **Exhibit M**. A legal notice advertisement regarding the location of the proposed facility has been published in a newspaper of general circulation in the county in which the WCF is proposed to be located. A copy of the newspaper legal notice advertisement is attached as part of **Exhibit M**.
- 25. The general area where the proposed facility will be located is industrial in character.
- 26. The process that was used by AT&T Mobility's radio frequency engineers in selecting the site for the proposed WCF was consistent with the general process used for selecting all other existing and proposed WCF facilities within the proposed network design area. Applicant's radio frequency engineers have conducted studies and tests in order to develop a highly efficient network that is designed to handle voice and data traffic in the service area. The engineers determined an optimum area for the placement of the proposed facility in terms of elevation and location to provide the best quality service to customers in the service area. A radio frequency design search area prepared in reference to these radio frequency studies was considered by the Applicants when searching for sites for its antennas that would provide the coverage deemed necessary by AT&T Mobility's

Radio Frequency Engineers. A map of the area in which the tower is proposed to be located which is drawn to scale and clearly depicts the necessary search area within which the site should be located pursuant to radio frequency requirements is attached as **Exhibit N**.

- 27. The tower must be located at the proposed location and proposed height to provide necessary service to wireless communications users in the subject area.
- 28. All Exhibits to this Application are hereby incorporated by reference as if fully set out as part of the Application.
- 29. All responses and requests associated with this Application may be directed to:

David A. Pike
Pike Legal Group, PLLC
1578 Highway 44 East, Suite 6
P. O. Box 369
Shepherdsville, KY 40165-0369
Telephone: (502) 955-4400

Telefax: (502) 543-4410

Email: dpike@pikelegal.com

WHEREFORE, Applicants respectfully request that the PSC accept the foregoing Application for filing, and having met the requirements of KRS §§ 278.020(1), 278.650, and 278.665 and all applicable rules and regulations of the PSC, grant a Certificate of Public Convenience and Necessity to construct and operate the WCF at the location set forth herein.

Respectfully submitted,

David A. Pike

Pike Legal Group, PLLC

1578 Highway 44 East, Suite 6

Lewid a Relse

P. O. Box 369

Shepherdsville, KY 40165-0369

Telephone: (502) 955-4400 Telefax: (502) 543-4410 Email: dpike@pikelegal.com

Attorney for Applicants

#### **LIST OF EXHIBITS**

A - Corporate Documentation & FCC License Documentation

B - Site Development Plan:

500' Vicinity Map Legal Descriptions Flood Plain Certification Site Plan Vertical Tower Profile

C - Tower and Foundation Design

Construction Manager Letter List of Qualified Professionals Tower and Foundation Drawings

D - Competing Utilities, Corporations, or Persons List

E - FAA

F - Kentucky Airport Zoning Commission

G - Geotechnical Report

H - Directions to WCF Site

Copy of Real Estate Agreement

J - Notification Listing & Certified Green Receipts

K - Copy of Property Owner Notification

Copy of County Judge/Executive & City Mayor Notice

M - Copy of Posted Notices and Newspaper Notice Advertisement

N - Copy of Radio Frequency Design Search Area

# EXHIBIT A CORPORATE DOCUMENTATION & FCC LICENSE DOCUMENTATION

# Commonwealth of Kentucky Michael G. Adams, Secretary of State

Michael G. Adams Secretary of State P. O. Box 718 Frankfort, KY 40602-0718 (502) 564-3490 http://www.sos.ky.gov

#### **Certificate of Authorization**

Authentication number: 288316

Visit <a href="https://web.sos.ky.gov/ftshow/certvalidate.aspx">https://web.sos.ky.gov/ftshow/certvalidate.aspx</a> to authenticate this certificate.

I, Michael G. Adams, Secretary of State of the Commonwealth of Kentucky, do hereby certify that according to the records in the Office of the Secretary of State,

#### **NEW CINGULAR WIRELESS PCS, LLC**

, a limited liability company authorized under the laws of the state of Delaware, is authorized to transact business in the Commonwealth of Kentucky, and received the authority to transact business in Kentucky on October 14, 1999.

I further certify that all fees and penalties owed to the Secretary of State have been paid; that an application for certificate of withdrawal has not been filed; and that the most recent annual report required by KRS 14A.6-010 has been delivered to the Secretary of State.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal at Frankfort, Kentucky, this 27<sup>th</sup> day of March, 2023, in the 231<sup>st</sup> year of the Commonwealth.



Michael G. Adams
Secretary of State

Commonwealth of Kentucky 288316/0481848



I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF

DELAWARE, DO HEREBY CERTIFY "NEW CINGULAR WIRELESS PCS, LLC" IS

DULY FORMED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD

STANDING AND HAS A LEGAL EXISTENCE SO FAR AS THE RECORDS OF THIS

OFFICE SHOW, AS OF THE TWENTY-SEVENTH DAY OF MARCH, A.D. 2023.

AND I DO HEREBY FURTHER CERTIFY THAT THE SAID "NEW CINGULAR WIRELESS PCS, LLC" WAS FORMED ON THE TWENTIETH DAY OF OCTOBER, A.D. 1994.



Authentication: 203015265

Date: 03-27-23

# Commonwealth of Kentucky Michael G. Adams, Secretary of St.

0998026 0998026
Michael G. /.......
KY Secretary of State
Received and Filed

9/6/2023 12:00:00 AM Fee receipt: \$134.00

Michael G. Adams Secretary of State P. O. Box 718 Frankfort, KY 40602-0718 (502) 564-3490 http://www.sos.ky.gov

### **Certificate of Authority**

**RCA** 

Pursuant to the provisions of KRS 14A9 - 030 the undersigned hereby applies for authority to transact business in Kentucky on behalf of the entity named below and, for that purpose, submits the following statements.

- 1. The business entity is a limited liability company.
- 2. The name of the entity is: TILLMAN INFRASTRUCTURE LLC
- 3. The name of the entity to be used in Kentucky is (if applicable):
- 4. It is an entity organized and existing under the laws of the state of Delaware.
- 5. The date of organization is See Original Certificate of Authority. and the period of duration is perpetual

#### **Principal Office**

152 W 57TH STREET NEW YORK, NY 10019

#### Registered Agent Name/Address

Registered Agent Solutions, Inc. 828 Lane Allen Road Suite 219 Lexington, KY 40504

#### Members/Managers

Manager

Suruchi Ahuja

152 w 57th Street 27th floor

- 6. Suruchi Ahuja, Manager, on 9/6/2023
- 7. I, Registered Agent Solutions, Inc., consent to serve as the registered agent on behalf of the this entity on 9/6/2023



I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF

DELAWARE, DO HEREBY CERTIFY "TILLMAN INFRASTRUCTURE LLC" IS DULY

FORMED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD

STANDING AND HAS A LEGAL EXISTENCE SO FAR AS THE RECORDS OF THIS

OFFICE SHOW, AS OF THE ELEVENTH DAY OF JANUARY, A.D. 2023.

AND I DO HEREBY FURTHER CERTIFY THAT THE SAID "TILLMAN INFRASTRUCTURE LLC" WAS FORMED ON THE THIRTEENTH DAY OF JUNE, A.D. 2016.

AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL TAXES HAVE BEEN PAID TO DATE.

CANADA CONTRACTOR OF CONTRACTO

Authentication: 202467074

Date: 01-11-23

#### REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



#### **Federal Communications Commission**

**Wireless Telecommunications Bureau** 

#### RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: FCC GROUP

NEW CINGULAR WIRELESS PCS, LLC

208 S. AKARD ST. 20F DALLAS, TX 75202

<b>Call Sign</b> KNKN673	File Number						
<b>Radio</b> CL - C	Service Sellular						
Market Numer	Channel Block						
CMA453	A						
Sub-Market Designator							
(	)						

FCC Registration Number (FRN): 0003291192

Market Name Kentucky 11 - Clay

Grant Date	<b>Effective Date</b> 01-14-2023	Expiration Date	Five Yr Build-Out Date	Print Date
09-08-2021	01-14-2023	10-01-2031		

#### **Site Information:**

Locat	ion Latitude	Longitude	Ground Elevation	Structure Hgt to Tip	Antenna Structure
			(meters)	(meters)	Registration No.
4	36-44-50.6 N	084-08-43.6 W	469.7	62.2	1043812

Address: 969 CELL TOWER ROAD (76426)

City: WILLIAMSBURG County: WHITLEY State: KY Construction Deadline:

Antenna: 1								
<b>Maximum Transmitting ERP in Watts:</b>	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	164.200	142.000	198.300	134.200	151.500	124.900	186.500	184.500
Transmitting ERP (watts) Antenna: 2	80.790	33.632	2.346	0.254	0.164	0.164	5.156	40.160
<b>Maximum Transmitting ERP in Watts:</b>	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	164.200	142.000	198.300	134.200	151.500	124.900	186.500	184.500
Transmitting ERP (watts) Antenna: 3	1.159	16.802	80.666	104.784	22.590	1.407	0.209	0.204
<b>Maximum Transmitting ERP in Watts:</b>	140.820							
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	164.200	142.000	198.300	134.200	151.500	124.900	186.500	184.500
Transmitting ERP (watts)	0.393	0.106	0.095	1.187	9.994	34.712	26.126	3.238

#### **Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

FCC 601-C March 2018

Call Sign: KNKN673 File Number:				Print Date:					
Location Latitude	Longitude		round Elev neters)	ation	Structure Hg (meters)	t to Tip	Antenna St Registratio		
7 36-38-29.0 N	083-46-24.9 W	9	17.4		64.9		1056643		
<b>Address:</b> 2 MILES NORTHY	WEST OF NOETO	WN 19 M	IL (76435)						
City: Middlesboro County	: BELL State: K	Y Cons	struction D	eadline	:				
Antenna: 1		\							
Maximum Transmitting ERP i Azimuth(from true north)	n Watts: 140.820 0	45	90	135	180	225	270	315	
Antenna Height AAT (meters)	514.300	514.900	478.800	557.80		334.800	345.400	421.600	
Transmitting ERP (watts) Antenna: 2	41.864	12.118	1.035	0.164	0.104	0.102	0.886	11.503	
Maximum Transmitting ERP i	n Watts: 140.820								
Azimuth(from true north)	0	45	90	135	180	225	270	315	
Antenna Height AAT (meters) Transmitting ERP (watts)	514.300	514.900	478.800	557.80		334.800	345.400	421.600	
Transmitting ERP (watts)	0.286	0.947	0.706	0.874	0.879	0.224	0.101	0.109	
<b>Location Latitude</b>	Longitude		round Elev neters)	ation	Structure Hg (meters)	t to Tip	Antenna St Registratio		
12 36-58-46.0 N	083-01-30.2 W		36.8		80.5		1010610	100	
Address: 21834 HIGHWAY					00.5		1010010		
	LETCHER State	· KY C	onstruction	. Deadli	ine•				
	SET CITER State			Dedan					
Antenna: 1									
Maximum Transmitting ERP i	n Watts: 140.820								
Azimuth(from true north)	0	45	90	135	180	225	270	315	
Antenna Height AAT (meters) Transmitting ERP (watts)	316.700	319.800	30.000	54.700		198.900	238.900	287.300	
Antenna: 2	112.719	46.762	8.219	1.163	0.285	0.298	5.383	44.574	
Maximum Transmitting ERP i		4-	00	405	100	225	2=0	24.5	
Azimuth(from true north) Antenna Height AAT (meters)	<b>0</b> 316.700	<b>45</b> 319.800	<b>90</b> 30.000	135	180 30.000	<b>225</b> 198.900	<b>270</b> 238.900	<b>315</b> 287.300	
Transmitting ERP (watts)	0.636	12.989	91.274	54.700 94.955		2.175	0.841	0.311	
Antenna: 3									
Maximum Transmitting ERP i Azimuth(from true north)	0	45	90	135	180	225	270	315	
Antenna Height AAT (meters)	316.700	319.800	30.000	54.700		198.900		287.300	
Transmitting ERP (watts)	1.458	0.224	0.588	1.866	27.246	84.787	72.123	11.074	
Location Latitude	Lancituda	C	round Flox	zation	Structure Hg	t to Tin	Antenna St		
Location Latitude	Longitude		neters)	auon	(meters)	t to Tip	Registratio		
13 36-40-53.1 N	084-08-46.5 W	•	46.2		58.8		Acgisti atto	11 110.	
Address: 895 WAGON WHI					50.0				
	County: WHITLEY		KY Con	structio	n Deadline:				
	, , , , , , , , , , , , , , , , , , ,								
Antenna: 1									
Maximum Transmitting ERP i	n Watts: 140.820								
Azimuth(from true north)	0	45	90	135	180	225	270	315	
<b>Antenna Height AAT (meters)</b>									
Transmitting ERP (watts)	159.200 24.755	160.200 89.034	107.400 70.279	125.70 10.065		58.800 0.211	107.500 0.387	145.600 1.828	

Call Sign: KNKN673	File :	File Number:			Print Date:				
Location Latitude	Longitude	(meters)		Structure Hgt (meters)	to Tip	Antenna Structure Registration No.			
13 36-40-53.1 N	084-08-46.5 W		16.2		58.8				
Address: 895 WAGON WHE	1								
City: WILLIAMSBURG	County: WHITLEY	State:	KY Cons	tructio	on Deadline:				
Antenna: 2  Maximum Transmitting ERP i Azimuth(from true north) Antenna Height AAT (meters)  Transmitting ERP (votte)	<b>0</b> 159.200	<b>45</b> 160.200	<b>90</b> 107.400	135 125.7		<b>225</b> 58.800	<b>270</b> 107.500	<b>315</b> 145.600	
Transmitting ERP (watts) Antenna: 3	0.124	3.716	14.234	28.09	5 19.823	32.016	11.426	8.167	
Maximum Transmitting ERP i Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	n Watts: 140.820 0 159.200 21.702	<b>45</b> 160.200 2.370	<b>90</b> 107.400 0.815	135 125.7 0.286	180 00 101.200 0.611	<b>225</b> 58.800 12.974	<b>270</b> 107.500 63.085	<b>315</b> 145.600 92.160	
<b>Location Latitude</b>	Longitude		round Eleva	ation	Structure Hgt (meters)	to Tip	Antenna St Registratio		
16 36-50-41.4 N	084-09-27.9 W	4.	10.0		97.8		1204258		
Address: 4499 HIGHWAY 5	11 (64046)								
City: Rockholds County: V	WHITLEY State:	KY C	onstruction	Deadl	ine: 02-23-2013	3			
Antenna: 1 Maximum Transmitting ERP i Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2	n Watts: 140.820 0 144.000 40.926	<b>45</b> 137.900 37.139	<b>90</b> 124.500 5.069	135 157.7 0.465	180 00 188.600 0.105	<b>225</b> 187.400 0.099	<b>270</b> 152.500 1.028	<b>315</b> 147.000 10.105	
Maximum Transmitting ERP i		4-	00	405	100	225	<b>2</b>	21.5	
Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	<b>0</b> 144.000 0.176	<b>45</b> 137.900 0.199	90 124.500 0.523	135 157.70 10.03		225 187.400 45.959	270 152.500 7.311	315 147.000 1.005	
Location Latitude	Longitude		round Eleva neters)	ation	Structure Hgt (meters)	to Tip	Antenna St Registratio		
17 37-09-19.2 N	083-26-33.1 W	_	16.6		98.1		1043811		
Address: 2255 DAVIDSON									
City: THOUSAND STICKS	County: LESLIE	State:	KY Cons	structi	on Deadline: 02	2-23-2013	3		
Antenna: 1  Maximum Transmitting ERP i  Azimuth(from true north)		45	00	125	190	225	270	215	
Azimutn(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2	<b>0</b> 255.100 183.310	<b>45</b> 250.600 76.153	90 210.300 8.501	135 157.9 2.109		225 186.400 0.548	270 230.000 8.899	315 208.500 75.006	

315

208.500

0.627

225

186.400

4.976

180

145.900 47.594 270

230.000 1.640

90

210.300

136.672

250.600 25.877 135

157.900 204.174

**Maximum Transmitting ERP in Watts:** 140.820

**0** 255.100

1.243

Azimuth(from true north)
Antenna Height AAT (meters)
Transmitting ERP (watts)

Call Sign: KNKN673	File Nu	mber:	Print Date:			
Logotion Lotitude	Longitudo	Cround Floretion	Structure Hat to Tin	Antonno Stave		

**Antenna Structure** Ground Elevation Location Latitude Longitude (meters) (meters) Registration No. 17 37-09-19.2 N 083-26-33.1 W 516.6 1043811 98.1

Address: 2255 DAVIDSON FORK ROAD (76424)

City: THOUSAND STICKS **County:** LESLIE State: KY Construction Deadline: 02-23-2013

Antenna: 3 **Maximum Transmitting ERP in Watts:** 140.820 Azimuth(from true north)
Antenna Height AAT (meters) 90 135 180 225 270 315 45 255.100 250.600 210.300 157.900 145.900 186,400 230.000 208.500 **Transmitting ERP (watts)** 2.923 0.456 0.895 4.155 54.327 193.511 147.915 23.334

**Ground Elevation** Structure Hgt to Tip **Location Latitude** Longitude **Antenna Structure** (meters) (meters) Registration No. 18 083-40-29.0 W 36-45-42.1 N 685.2 129.5 1215974

Address: RO7 PO BOX 264E BIRD BRANCH ROAD (76437)

City: PINEVILLE County: BELL State: KY Construction Deadline: 02-23-2013

Antenna: 1 **Maximum Transmitting ERP in Watts:** 140.820 Azimuth(from true north) 45 90 135 180 225 270 315 Antenna Height AAT (meters) 314.900 270.100 337.000 312.300 338.800 334.000 355.300 387.000 Transmitting ERP (watts) 91.981 37.204 3.868 0.201 0.271 4.377 36.079 0.986 Antenna: 2 **Maximum Transmitting ERP in Watts:** 140.820 Azimuth(from true north) 90 180 225 270 315 45 135 Antenna Height AAT (meters) 314.900 270.100 337.000 312.300 338.800 334.000 355.300 387.000 Transmitting ERP (watts) 2.152 13.241 26.567 29.575 18.963 3.888 1.518 5.601 Antenna: 3 **Maximum Transmitting ERP in Watts: 140.820** Azimuth(from true north) 90 135 180 270 45 225 315 Antenna Height AAT (meters) 314.900 270.100 337.000 312.300 338.800 334.000 355.300 387.000 Transmitting ERP (watts) 5.299 1.993 2.409 23.634 32.748 36.478 14.971 5.378

**Ground Elevation Structure Hgt to Tip Antenna Structure** Longitude **Location Latitude** (meters) (meters) Registration No. 19 083-19-27.0 W 858.6 36-53-53.5 N 35.4

Address: 3017 NORTH US HIGHWAY 421 (76355)

Construction Deadline: 02-23-2013 City: BAXTER County: HARLAN State: KY

Antenna: 1 **Maximum Transmitting ERP in Watts:** 140.820 Azimuth(from true north)
Antenna Height AAT (meters) 270 45 90 135 180 225 315 423.700 288.900 415.500 424.000 260.500 381.500 270.400 273.500 **Transmitting ERP (watts)** 118.281 51.051 5.389 1.305 0.258 0.357 5.945 46.435 Antenna: 2 **Maximum Transmitting ERP in Watts:** 140.820 Azimuth(from true north)
Antenna Height AAT (meters) 270 45 90 135 180 225 315 423.700 288.900 415.500 424.000 260.500 381.500 270.400 273.500 Transmitting ERP (watts) 4.387 28.108 56.992 61.619 38.611 11.792 8.653 3.099

Call Sign: KNKN673	File	Number:			P	:		
Location Latitude  19 36-53-53.5 N	<b>Longitude</b> 083-19-27.0 W	(n 85	round Elev neters) 58.6	ation	Structure Hgt (meters) 35.4	t to Tip	Antenna St Registratio	
Address: 3017 NORTH US H City: BAXTER County: HA	· ·		nstruction I	Deadlin	<b>e:</b> 02-23-2013			
Antenna: 3  Maximum Transmitting ERP in  Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters) Transmitting ERP (watts)	423.700 1.510	288.900 0.244	270.400 0.451	273.50 2.060	00 415.500 26.719	424.000 99.966	260.500 80.742	381.500 11.222
Location Latitude	Longitude	(n	round Elev neters)	ation	Structure Hgt (meters)	t to Tip	Antenna St Registratio	
22 37-09-01.0 N <b>Address:</b> Bear Creek Rd (8700	083-41-03.6 W	48	34.0		94.4		1267062	
City: Hector County: CLA		Construct	ion Deadliı	ne: 02-2	23-2013			
Antenna: 1  Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2  Maximum Transmitting ERP in	<b>0</b> 247.900 153.770	<b>45</b> 220.000 65.269	90 188.600 4.896	135 160.50 0.487	180 206.100 0.313	<b>225</b> 259.700 0.307	<b>270</b> 247.500 9.959	<b>315</b> 246.500 76.610
Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3	0 247.900 1.554	<b>45</b> 220.000 22.565	<b>90</b> 188.600 112.704	135 160.50 140.26		<b>225</b> 259.700 1.874	<b>270</b> 247.500 0.302	<b>315</b> 246.500 0.278
Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	Watts: 140.820 0 247.900 1.012	<b>45</b> 220.000 0.314	<b>90</b> 188.600 0.295	135 160.50 4.424	180 206.100 44.416	<b>225</b> 259.700 139.728	<b>270</b> 247.500 106.944	<b>315</b> 246.500 13.222
Location Latitude	Longitude	(n	round Elev neters)	ation	Structure Hgt (meters)	t to Tip	Antenna St Registratio	
23 37-08-58.7 N  Address: LUCAS ROAD ON  City: MANCHESTER Coun	`	5428)	52.6 C <b>onstructi</b> o	on Dead	96.0 Iline:		1043808	
Antenna: 1								
Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2	Watts: 140.820 0 212.800 111.736	<b>45</b> 191.000 45.822	<b>90</b> 150.800 5.058	135 181.40 1.185	180 00 199.900 0.248	<b>225</b> 198.200 0.336	<b>270</b> 202.800 5.441	<b>315</b> 202.900 44.976
Maximum Transmitting ERP in Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	Watts: 140.820 0 212.800 0.630	<b>45</b> 191.000 13.113	<b>90</b> 150.800 68.789	135 181.40 97.232		<b>225</b> 198.200 2.526	270 202.800 0.830	315 202.900 0.308

Call Sign: KNKN673	File	Number	:		Print Date:			
Location Latitude 23 37-08-58.7 N Address: LUCAS ROAD OF City: MANCHESTER Co	•	(1 2	Ground Elev meters) 452.6 Constructio		Structure Hg (meters) 96.0 line:	to Tip	Antenna St Registratio 1043808	
Antenna: 3 Maximum Transmitting ERP Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	0	<b>45</b> 191.000 3.181	90 150.800 3.850	135 181.400 5.507	<b>180</b> 0 199.900 16.941	<b>225</b> 198.200 16.885	<b>270</b> 202.800 21.020	<b>315</b> 202.900 12.170
Location Latitude  24 36-52-13.8 N  Address: 3700 WATTS CRE City: WALLINS CREEK	Longitude  083-24-54.2 W EEK TOWER ROA County: HARLAN	(1 8 D (76431	,		Structure Hg (meters) 80.5 Deadline:	t to Tip	Antenna St Registratio 1007945	
Antenna: 1 Maximum Transmitting ERP Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2	0	<b>45</b> 283.300 48.918	90 392.600 4.986	135 363.200 1.287	180 0 337.000 0.267	<b>225</b> 470.900 0.341	<b>270</b> 325.200 5.779	<b>315</b> 332.900 46.632
Maximum Transmitting ERP Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 3	0 357.800 1.626	<b>45</b> 283.300 16.756	<b>90</b> 392.600 46.777	135 363,200 60.050		<b>225</b> 470.900 5.464	<b>270</b> 325.200 2.977	<b>315</b> 332.900 1.029
Azimum Transmitting ERP Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	0	<b>45</b> 283.300 0.233	<b>90</b> 392.600 0.427	135 363.200 2.031	180 337.000 27.025	<b>225</b> 470.900 95.886	<b>270</b> 325.200 77.822	<b>315</b> 332.900 11.442
Location Latitude  25 36-36-37.5 N Address: 131 AMESBURY	, , ,	(1	Ground Elev meters) 346.5		Structure Hgt (meters) 60.3	to Tip	Antenna St Registratio 1232693	
City: MIDDLESBORO Co	-	ite: KY	Constructi	on Dead	lline:			
Maximum Transmitting ERP Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts) Antenna: 2 Maximum Transmitting ERP	0 30.000 145.069	<b>45</b> 30.000 41.420	<b>90</b> 30.000 3.508	<b>135</b> 30.000 0.571	<b>180</b> 30.000 0.313	<b>225</b> 30.000 0.301	<b>270</b> 30.000 3.015	<b>315</b> 30.000 39.614
Maximum Transmitting ERP Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	0	<b>45</b> 30.000 3.991	<b>90</b> 30.000 32.278	135 30.000 53.652	<b>180</b> 30.000 8.875	225 30.000 0.818	<b>270</b> 30.000 0.150	<b>315</b> 30.000 0.111

Call Sign: KNKN673 File Number: Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
25	36-36-37.5 N	083-42-49.1 W	346.5	60.3	1232693
	101 ANTECRATORY	CED FEE (5 < 100)			

Address: 131 AMESBURY STREET (76438)

City: MIDDLESBORO County: BELL State: KY Construction Deadline:

Antenna: 3											
Maximum Transmitting ERP in Watts: 140.820											
Azimuth(from true north)	0	45	90	135	180	225	270	315			
Antenna Height AAT (meters)	30.000	30.000	30.000	30.000	30.000	30.000	30.000	30.000			
Transmitting ERP (watts)	0.906	0.242	0.226	0.866	20.330	108.084	76.154	7.898			

Location	1 Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
26	36-42-35.9 N	083-40-58.1 W	636.1	57.3	G

Address: RURAL ROUTE 1 BOX 109 (76441)

City: PINEVILLE County: BELL State: KY Construction Deadline:

Antenna: 1 Maximum Transmitting ERP in Watts: Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	140.820 <b>0</b> 218.900 15.060	<b>45</b> 188.400 36.966	90 284.100 29.277	135 201.300 42.643	180 245.000 20.844	<b>225</b> 65.400 12.416	<b>270</b> 242.700 3.511	<b>315</b> 257.700 5.735
Antenna: 2 Maximum Transmitting ERP in Watts: Azimuth(from true north) Antenna Height AAT (meters) Transmitting ERP (watts)	140.820 0 218.900 0.639	<b>45</b> 188.400 0.133	<b>90</b> 284.100 0.186	135 201.300 4.240	180 245.000 28.970	<b>225</b> 65.400 66.602	<b>270</b> 242.700 17.897	<b>315</b> 257.700 2.186

#### **Control Points:**

Control Pt. No. 1

Address: 1650 LYNDON FARMS COURT

City: LOUISVILLE County: State: KY Telephone Number: (502)329-4700

#### Waivers/Conditions:

WE MAKE NO FINDING IN THESE CASES THE ISSUES RAISED IN FOOTNOTE 3 OF LA STAR CELLULAR TELEPHONE COMPANY, 7 FF Rcd 3762 (1992). THEREFORE, THESE GRANTS OF TRANSFERS/ASSIGNMENTS ARE CONDITIONED ON ANY SUBSEQUENT ACTION THE COMMISSION MAY TAKE CONCERING THE

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

### Reference Copy Only. Do Not Mail to the FCC as an Application.

Submitted: 01/13/2023 at 18:08:22

File Number: 0010374419

#### **FCC 601**

#### **Main Form**

1) Radio Service Code:

# FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau Public Safety and Homeland Security Bureau

1a) Existing Radio Service Code:

Approved by OMB

3060 - 0798

See instructions for public burden estimate

CL	
General Information	
2) (Select only one) ( AU )  NE - New MD - Modification AM - Amendment  RO - Renewal Only RM - Renewal/Modification AM - Amendment  RO - Renewal Only RM - Renewal/Modification RM - Renewal/Modification RL - Registered Location/Link  NT - Required Notification EX - Requests for Ext	
3a) If this application is for a Demonstration License or a <b>S</b> pecial Temporary Authorization (STA), enter the code and attach the required exhibit as described in the instructions. Otherwise enter ' <b>N/A</b> ' (Not Applicable).	(N ) <u>M S N/A</u>
3b) If this application is for Special Temporary Authority due to an emergency situation, enter 'Y'; otherwise enter 'N'. Refer to Rule 1.915 for an explanation of situations considered to be an emergency.	( <u>)Y</u> es <u>N</u> o
If this application is for an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC.	File Number
5) If this application is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, , or Administrative Update, enter the call sign of the existing FCC license.  If this is a request for Registered Location/Link, enter the FCC call sign assigned to the geographic license.	Call Sign <b>KNKN673</b>
6a) If this application is for a New, Amendment, Renewal Only, or Renewal/Modification, enter the requested authorization expiration date (this item is optional).	MM DD
6b) If this application is for a Renewal Only or Renewal/Modification and the license is a geographic area license, is the license used to provide service to customers ( <b>C</b> ), or is the license used for private business (internal) purposes or to meet the licensee's public interest/public safety communications needs ( <b>P</b> )?	( <u>)C</u> P
7) Is this application "major" as defined in § 1.929 of the Commission's Rules when read in conjunction with the applicable radio service rules found in Parts 22 and 90 of the Commission's Rules? (NOTE: This question only applies to certain site-specific applications. See the instructions for applicability and full text of § 1.929).	( ) <u>Y</u> es <u>N</u> o
8) Are attachments (other than associated schedules) being filed with this application?	( <u>)Y</u> es <u>N</u> o
Fees, Waivers, and Exemptions	_
9) Is the Applicant exempt from FCC application fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
10) Is the Applicant exempt from FCC regulatory fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
11) Does this application include a request for a Waiver of the Commission's Rule(s)? If 'Yes', attach an exhibit providing rule number(s) and explaining circumstances.	( N ) <u>Y</u> es <u>N</u> o
12) Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station?	( <u>)Y</u> es <u>N</u> o

pplicant Information 3) FCC Registration Number (FRN):								
0003291192								
4) Applicant/Licensee Legal Entity Type: (Select One) )Individual ( )Unincorporated Association  ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	( )Tru	,	•	, ,	·	( X )Limited	d Liability	Company
)General Partnership ( )Limited Partnershi	ip ( )L	_imited Li	ability P	artnership ( )	Consortium			
<ul> <li>Other:</li></ul>							(	<u>)Y</u> es <u>N</u> o
6) First Name (if individual):		MI: L	ast Nan	ne:			Suffix	:
7) Legal Entity Name (if other than individual):								
NEW CINGULAR WIRELESS PCS, LLC								
B) Attention To:								
FCC Group								
9) P.O. Box:	And/Or	20) St	reet Add	dress:				
		20	08 S. A	kard St. 20F				
1) City:				22) St	ate:	23) Zip Co	de:	
Dallas				Т.	X	75202		
1) Telephone Number:			2	5) Fax:				
(855)699-7073								
S) E-Mail Address:								
FCCMW@att.com								
7) Demographics (Optional) ace:	Ethni	city:			Gen	der:		
)American Indian or Alaska Native		)Hispanio	or Lati	no	(	)Male		
)Asian	(	)Not Hisp	nanic or	Latino	(	)Female		
,	(	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Jan III O	Zaurio		)i diridio		
)Black or African-American								
)Native Hawaiian or Other Pacific Islander								
)White								
jvvinte								
al Party in Interest				0) FCC Degistration	Number (FDN	I) of Dool Do	et in Inte	araat.
8) Name of Real Party in Interest of Applicant (If differ pplicant):	ent from	l	2	9) FCC Registration	number (FRN	i) of Real Pa	arty in inte	erest:
FF								
entact Information (If different from the Applicant)								
) Check here if same as Applicant.								
0) First Name:		MI:		Name:				Suffix:
Cecil		J	IVIat	hew				
1) Company Name: AT&T Services, Inc.								
2) Attention To:								
3) P.O. Box:	And	34) Str	eet Add	ress:				
-,··	/Or			ard St. 20F				
5) City:				36) State:		37) Z	ip Code:	
Dallas				TX			5202	
3) Telephone Number:			39	l )) Fax:				
(855)699-7073				•				
0) E-Mail Address: FCCMW@att.com								

Reg	ulatory Status											
41)	This filing is for auth	horization to provide or	use the follow	wing type(s) of ra	adio servic	e offering (ente	er all tha	t apply):				
(	) <u>C</u> ommon Carrier	( ) <u>N</u> on-Common	Carrier (	) <u>P</u> rivate, inte	ernal comm	nunications (	) <u>B</u> r	oadcast	Services	(	) <u>B</u> and <u>M</u>	anageı
Туре	e of Radio Service											
42)	This filing is for auth	horization to provide the	e following ty	oe(s) of radio se	rvice (choc	se all that app	ly):					
(	) <u>F</u> ixed	( ) <u>M</u> obile	( ) <u>R</u>	adiolocation	(	) <u>S</u> atellite (so	und)	(	) <u>B</u> roadca	ast Servic	es	
43)	Does the Applicant	propose to provide ser	vice intercon	nected to the pul	blic telepho	ne network?				(	) <u>Y</u> es	<u>N</u> o
		tions (If any answer is ions for the "Alien Ow			t explainin	g the circums	stances.	. In pre	paring the	attachm	ent, refe	er to
44)	Is the Applicant a fo	oreign government or th	ne representa	tive of any foreig	gn governn	nent?				(	) <u>Y</u> es	<u>N</u> o
45)	Is the Applicant an	alien or the representat	tive of an alie	n?						(	) <u><b>Y</b></u> es	<u>N</u> o
46)	Is the Applicant a c	orporation organized ur	nder the laws	of any foreign g	overnment	?				(	) <u>Y</u> es	<u>N</u> o
the	• • •	corporation of which mo or by a foreign governm		•				•		( a	) <u>Y</u> es	<u>N</u> o

48a) Is the Applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock ( ) Yes No is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any
corporation organized under the laws of a foreign country?
48b) If the answer to 47 or 48a is 'Y' select one of the choices below.
The Applicant is exempt from the provisions of Section 310(b).
It is not necessary to file a petition for declaratory ruling if the Applicant includes in the attachment required by Item 47 or Item 48a a showing that the requested license(s) is exempt from the provisions of Section 310(b).
The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.
If checked, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Applicant since the issuance of its ruling.
The Applicant: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specified immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/Sublessee that received a declaratory ruling(s) under 47 CFR § 1.5000(a) and is relying on the affiliate's ruling for purposes of filing this application as permitted under the affiliate's ruling and 47 CFR § 1.5004(b)
If checked, and if the Applicant received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 47 or Item 48a the citation(s) of the Applicant's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of its ruling and with the Commission's Rules.
If checked, and if the Applicant received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 48a a copy of a petition for declaratory ruling filed contemporaneously with the Commission to extend the Applicant's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s) involved in the application. Alternatively, the Applicant may request a new declaratory ruling pursuant to Section 1.5000(a) of the Commission's Rules, 47 CFR § 1.5000 (a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).
If checked, and if the Applicant is relying on an affiliate's ruling for purposes of filing this application, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rules. The Applicant must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in 47 CFR § 1.5004(b). See Main Form Instructions for Items 47 or 48a, as applicable.
The Applicant has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under 47 CFR § 1.5004(b) in a petition filed contemporaneously with the Commission.
If checked, include in the attachment required by Item 47 or 48a a copy of the petition for declaratory ruling filed contemporaneously with the Commission pursuant to 47 CFR § 1.5004(b). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).

Basic Qualification Questions			
49) Has the Applicant or any party to this application had any FCC station authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission?	( n	) <u>Y</u> es	<u>N</u> o
50) Has the Applicant or any party to this application, or any party directly or indirectly controlling the Applicant, ever been convicted of a felony by any state or federal court?	(	) <u>Y</u> es	<u>N</u> o
51) Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?	(	) <u>Y</u> es	<u>N</u> o
Note: If the answer to any of 49-51 is 'Y', attach an exhibit explaining the circumstances.			
Aeronautical Advisory Station (Unicom) Certification  52) ( ) I certify that the station will be located on property of the airport to be served, and, in cases where the airport does not hat tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations local within ten days prior to application.			t
Broadband Radio Service and Educational Broadband Service Cable Cross-Ownership			
53a) Will the requested facilities be used to provide multichannel video programming service?	(	) <u>Y</u> es	<u><b>N</b></u> o
53b) If the answer to question 53a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in 47 CFR § 27.1202) in a cable television system whose franchise area is located within the geographic service area of the requested facilities?	(	) <u>Y</u> es	<u>N</u> o
Note: If the answer to question 53b is 'Y', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1202 or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.			
Broadband Radio Service and Educational Broadband Service (Part 27)			
54) (For EBS only) Does the Applicant comply with the programming requirements contained in 47 CFR § 27.1203?	(	) <u>Y</u> es	<u>N</u> o
<b>Note:</b> If the answer to item 54 is 'N', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.	е		
55) (For BRS and EBS) Does the Applicant comply with 47 CFR §§ 27.50, 27.55, and 27.1221?	(	) <u>Y</u> es	<u>N</u> o
<b>Note:</b> If the answer to item 55 is 'N', attach an exhibit justifying a waiver of that rule(s). If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.			
For Applicants Who Participated in an Auction			
56) Is the Applicant a qualifying rural wireless partnership or a member of a qualifying rural wireless partnership?	(	) <u>Y</u> e	s <u>N</u> o
<b>Note:</b> If the answer to item 56 is 'Y', attach an exhibit listing all members of the qualifying rural wireless partnership, including the FRN numbers.	eir		
For Renewal Applicants 57) Operation/Performance Requirement Certification			
[For a site based licensel: Applicant certifies that it is continuing to operate consistent with its most recently filed construction	( )	<b>Y</b> es <u>N</u> o	
For a geographic license, commercial service - licensee in its initial license term with an interim performance	( )	Yes No	
its interim performance requirement, it continues to use its facilities to provide at least the level of service required by its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term.			
For a geographic license, commercial service - licensee in its initial license term with no interim performance	( )	<u>Y</u> es <u>N</u> o	
For a goographic license, commercial service. Ilicenses in any subsequent term? Applicant cortifies that it continues to	( )	<b>Y</b> es <u>N</u> o	
For a geographic license, private systems - licensee in its initial license term with an interim performance	( ):	<u>Y</u> es <u>N</u> o	
[For a geographic license, private systems - licensee in its initial license term with no interim performance requirement]: Applicant certifies that it has met its final performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs, and it continues to use its facilities to provide at least the level of operation required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]	) ]	<u>Y</u> es <u>N</u> o	

[For a geographic license, private systems - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for the first renewal application filed after effective date of the rules]: Applicant certifies that the partitioned and/or disaggregated license that is the subject of this renewal application has no separate performance requirement and that this is the first renewal of this license filed subsequent to the effective date of the rules.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for any subsequent renewal filings]: Applicant certifies that it continues to use its facilities to provide service or to further the applicant's private business or public interest/public safety needs.	(	) <u>Y</u> es <u>N</u> o

#### **Discontinuance of Service Certification**

license term.	( ) <u>Y</u> es <u>N</u> o
Note: If the response to either item 57 or item 58 is 'N', attach an exhibit that demonstrates that over the course of the license term, the Applicant provided and continues to provide service to the public, or operated and continues to operate the license to meet the Applicant's private business or public interest/public safety communications needs. This exhibit must include a detailed description of the Applicant's provision of service or, when allowed under the relevant service rules or pursuant to waiver, use of the spectrum for private business or public interest/public safety communications needs, during the entire license period and address, as applicable: 1) the level and quality of service provided by the applicant (e.g., the population served, the area served, the number of subscribers, the services offered); (2) the date service commenced, whether service was ever interrupted, and the duration of any interruption or outage; (3) the extent to which service is provided to rural areas; (4) the extent to which service is provided to rural areas; (4) the extent to which service is provided to rural areas; (5) any other factors associated with the level of service to the public. The licensee may note in its exhibit: 1) any grant(s) of waiver or extension of a performance deadline or license renewal subject to meeting a performance requirement; or 2) if the final performance deadline and/or expiration date for the license accelerated because the licensee did not meet an interim performance requirement.	

Regulatory Compliance Certification [same for all]

regulatory compliance certification [came for an]	
59) Applicant certifies that it has substantially complied with all applicable FCC rules, policies, and the Communications Act of 1934, as amended.	( ) <u>Y</u> es <u>N</u> o
<b>Note:</b> If the response to item 59 is 'N', attach an exhibit explaining the circumstances and demonstrating why Applicant's license should be renewed.	

#### **General Certification Statements**

- 1) The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application.
- 2) The Applicant certifies that grant of this application would not cause the Applicant to be in violation of any pertinent cross-ownership or attribution rules.\*

  \*If the Applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcome of the waiver request.
- 3) The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference are material, are part of this application, and are true, complete, correct, and made in good faith.
- 4) The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to § 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under § 1.2002(c) of the rules, 47 CFR § 1.2002(c). See 47 CFR § 1.2002(b) for the definition of "party to the" application" as used in this certification.
- 5) The Applicant certifies that it either (1) has current required ownership data on file with the Commission, (2) is filing updated ownership data simultaneously with this application, or (3) is not required to file ownership data under the Commission's Rules.
- 6) The Applicant certifies that the facilities, operations, and transmitters for which this authorization is hereby requested are either: (1) categorically excluded from routine environmental evaluation for RF exposure as set forth in 47 CFR § 1.1307(b); or, (2) have been found not to cause human exposure to levels of radiofrequency radiation in excess of the limits specified in 47 CFR §§ 1.1310 and 2.1093; or, (3) are the subject of one or more Environmental Assessments filed with the Commission.
- 7) The Applicant certifies that it has reviewed the appropriate Commission Rules defining eligibility to hold the requested license(s) and is eligible to hold the requested license(s).
- 8) The Applicant certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
- 9) The Applicant certifies that the Applicant and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

#### Signature

60)Typed or Printed Name of Party Authorized to Sign

First Name:	MI:	Last Name:	Suffix:
Cecil	J	Mathew	
61) Title: Assistant Secretary - Compliance			
Signature:		62) Da	ite:
Cecil J Mathew		01/13	/2023
		L 2 2 2	

#### FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

Upon grant of this license application, the Licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, § 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, § 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, § 503).

FCC 601 Schedule F

#### Technical Data Schedule for the Cellular and Air-ground (Commercial Aviation) Radiotelephone Services (Part 22)

Approved by OMB 3060 - 0798 See 601 Main Form Instructions

#### **Cellular Unserved Area Information**

	whether this is a New g Unserved Area, c	( ) Yes ( ) No			
2) Market Designator			3) Market Name	4) Sub-Market Designator	5) Channel Block
Control P	oints				
6) Action <b>A/M/D</b>	Action Control Point			8) ocation /n, County/Borough/Parish, State	9) Telephone Number
Commercia	al Air-ground Tech	nnical Parameters	(Antenna Data)		
10) Action <b>A/M/D</b>	Action Channel Block		13) Antenna Number	14) Height to Tip of Antenna AGL (meters)	15) Maximum ERP (watts)

#### Cellular Radial Data

16) Action: (	) <u><b>A</b></u> dd	<u>M</u> odify	<u>D</u> elete	17) Location Number:			
18) Identify wh	nether this	is a New	or Modification	application using the non-l	PSD methodology (in	accordance with	( ) Non-PSD
				methodology (in accordance			( ) PSD
3	, ==:: (::)	(//,				(-//-	(
19) Sector Nur	mher:						
10) Oction Ivan	IIDCI.						
<ol><li>20) Provide th</li></ol>	ıe Maximur	m ERP in	watts/MHz (per	sector) if the PSD option f	or determining the CG	SA was selected und	der Item 18 of this Schedule F.
							Watts/MHz
21) If this loca	tion/PSD s	ector con	tributes to the C	GSA, and you are reques	ting that the CGSA bo	undary be determine	d ( ) Yes
				ith 47 CFR § 22.911(c)), h			( ) No
•		<b>O</b> 3 (		· //·	ave you attached the l	equired exhibit:	( ) N/A – Not applicable
II IN/A, au	lacii ali exi	iibit expia	ining the circun	istances.			( ) N/A – Not applicable
22) Antenna N	lumber:						
,							
22) Drovido th	o Movimu	m EDD in	watta (nor amic	ssion) if the Non-PSD option	on for dotormining the	CCSA was salested	Lundor
			watts (per emis	ssion) if the Non-PSD option	on for determining the	CGSA was selected	runder
Item 18 of this	Schedule	F.					
							Watts
24) If this locat	tion/Non-P	SD anteni	na contributes t	o the CGSA, are you reque	esting that the CGSA I	oundary be determine	ned ( ) <u>Y</u> es <u>N</u> o
				R § 22.911(b) (non-PSD)?		,	`
			ining the circum				
11 103, att	acii aii cxi	iibit Cxpiai	ining the chedin	istalices.			
OF 07) If th:- 1-		4	4b - CCCA		- 0004 havedamika	al a 4 a marina a al 11 a ina ar 4la	- Nan
				you are requesting that th			e Non-
PSD methodol	ogy (in acc	cordance	with 47 CFR § 2	22.911(a) or (b)), please pr	ovide the following inf	ormation:	
				25)	26)		27)
A	Azimuth		Antenr	a Height AAT	Transmitting I	ERP	Distance to CGSA
(degrees	from true	north)		meters)	(watts)		(kilometers)
(409.000	0°	,	Α,		(mans)		(1.11.01.01.0)
	U						
	45°						
	10						
	90°						
	40=0						
	135°						
	180°					İ	
	100						
	225°						
	270°						
	0		+				
	315°						
	315°						
	315°						

I certify that the proposed Cellular base or repeater stations comply with the ERP limits and all other applicable requirements in the Commission's rules, including 47 CFR § 22.913.

### Reference Copy Only. Do Not Mail to the FCC as an Application.

#### FCC Application or Notification for Spectrum Leasing Arrangement/ FCC Form 608 **Notification of a Private Commons Arrangement Main Form**

**Wireless Telecommunications Bureau** 

3060-1058

Submitted: 01/22/2023 at

21:00:45

File Number: 0010339462

**Public Safety and Homeland Security Bureau** 

See 608 Main Form Instructions For public burden estimate

General Information	
Application/Notification Purpose	
1a) Purpose of Filing (Select only one):	
( X ) LN – New ( ) LM – Modification	( ) LU – Administrative Update
( ) LT – Transfer of Control ( ) LE – Extend the To	erm ( ) LC – Cancel
( ) LI – Light Touch Leasing Certification ( ) AM – Amendment	( ) <b>WD</b> –Withdraw
1b) If this filing is for an Amendment (AM) or Withdrawal (WD), enter the File Nu Application/Notification currently on file with the FCC.	mber of the pending  File Number:  ———————————————————————————————————
Classification of Filing	
For Leases/Subleases Only	
2a) Classification of Filing (Select only one):	2b) Type of Filing
( ) ML – Spectrum Manager Lease	(X)L-Lease
( X ) TL – De Facto Transfer Lease	( ) <b>S</b> – Sublease (Must be filed manually)
For Private Commons Arrangements Only (Must be filed Manually)	
2c) This filing will be a Private Commons Arrangement pursuant to a (Select only one):	2d) If a Private Commons Arrangement pursuant to a Lease or Sublease, choose the legal type (Select only one):
( ) N— License	( ) <b>M</b> –Spectrum Manager
( ) <b>L—</b> Lease	( ) <b>T</b> –De Facto Transfer
( ) <b>S—</b> Sublease	
Term of Lease/Sublease	
3) Indicate whether the existing Lease/Sublease is: ( x	) Long-Term or ( ) Short-Term
Other Wireless Licenses  4a) Is this filing part of a series of filings involving other wireless license(s) or affiliates of the Licensee (e.g., parents, subsidiaries, or commonly-controlle are not included on this filing and for which Commission approval or notificate.	ed entities), or third parties that (N) Yes No
4b) If the answer to 4a is 'Y', is this filing the lead Application/Notification?	( ) <u>Y</u> es <u>N</u> o
4c) If the answer to 4a is 'Y' and the answer to 4b is 'N', provide the File Numb Application/Notification.	er of the lead File Number:

Attachments	
5) Are attachments (other than associated schedules) being filed with this Application/Notification?	( <sub>Y</sub> ) <u>Y</u> es <u>N</u> o
Fees and Waivers	
Exemption from Application Fees	
6) Is the Applicant exempt from FCC application fees?	( N )Yes No
If the answer to 6 is 'Y', attach an exhibit demonstrating how the applicant is exempt from FCC application fees.	
Waiver/Deferral of Fees	
7) Is a waiver/deferral of the FCC application fees being requested?	( N ) <u>Y</u> es <u>N</u> o
If the answer to 7 is 'Y', attach a date-stamped copy of the request for waiver/deferral of the FCC application fees.	
Waiver of Commission Rules	
8) Does this filing include a request for waiver of the Commission's Rules (other than a request for application fee waivers)?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
If the answer to 8 is 'Y', attach an exhibit specifying the rule section(s) for which a waiver is being requested and including a justification for the waiver request.	
Regulatory Status and Offerings Radio Service Offerings	
9) The Applicant will provide the following type(s) of radio service offerings (select all that apply):	
( ) Non-common Carrier ( ) Private, internal communications All entities that are planning to use the leased spectrum for telecommunications services should select common carrier 'telecommunications service' means the offering of telecommunications (i.e., the transmission, between or among poinformation of the user's choosing, without change in the form or content of the information as sent and received) for classes of users as to be effectively available directly to the public, regardless of the facilities used. Non-common carridiscriminately for hire as carriers of communications provided by the customer. A person engaged in radio broadcaperson is so engaged, be deemed a common carrier. Thus, those entities meeting this definition would select non-contentual users are those entities that utilize telecommunications services purely for internal business purposes or public for-hire or for-profit basis. Such entities should select 'Private' for this item. The term 'Broadcast Services' shall has "broadcasting" in § 3(6) of the Communications Act of 1934, i.e., the dissemination of radio communications intended or by the intermediary of relay stations." 47 U.S.C. § 153(6).	pints specified by the user, of a fee directly to the public, or to such arriers do not hold themselves out asting shall not, insofar as such common carrier for this item. Private slic safety communications and not cave the same meaning as that for
If the Applicant is modifying the type of radio service offerings it provides, please provide an exhibit explaining the mod	lification.
Radio Service	
10) The Applicant will provide the following type(s) of radio service (select all that apply):	
( ) Fixed ( ) Mobile ( ) Radiolocation ( ) Satellite (sound)	( ) Broadcast Services
11) Does the Applicant propose to provide service interconnected to the public telephone network?	( ) <u>Y</u> es <u>N</u> o

#### Designated Entity Information (If the answer to 12a, 12b or 12c is 'Y', Schedule A must be completed.) **Bidding Credits** 12a) Does this filing involve any spectrum associated with any licenses that were awarded with bidding credits ) Yes No within the last five years? If the response to this item is 'Y', the licenses may be subject to the FCC's unjust enrichment rules, and the Applicant should answer relevant bidding credit questions. Closed Bidding 12b) Does this filing involve any spectrum associated with any licenses that were originally granted pursuant to closed bidding within the last five years? ) Yes No If the response to this item is 'Y', the Applicant should answer relevant closed bidding questions. Competition-Related Information 13) Does this filing involve a license authorization or Spectrum Lease/Sublease that may be used to provide (γ) <u>Y</u>es <u>N</u>o interconnected mobile voice and/or data services that would create a geographic overlap with another license authorization(s) or spectrum leasing arrangement(s), that also could be used to provide interconnected mobile voice and/or data services, in which the Applicant already holds attributable interests, as defined in Section 20.22(b) of the Commission's Rules, either as a licensee or spectrum lessee/sublessee? If 'Y', specify in an exhibit all geographic areas/markets (e.g., BTA, CMA, county, etc.) where there are spectrum overlaps and the total amount of spectrum that the Assignee/Transferee will hold and/or lease in each geographic area/market. ( N ) Yes No 14) If the answer to Item 13 is 'Y', would/does this application for a spectrum leasing or subleasing arrangement reduce the number of entities providing service in the affected market(s)? Broadband Radio Service and Educational Broadband Service Information 15a) Will the requested facilities be used to provide multichannel video programming service? ( ) <u>Y</u>es <u>N</u>o 15b) If the answer to 15a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in ) <u>Y</u>es <u>N</u>o Section 27.1202 of the Commission's Rules) in a cable television system whose franchise area is located within the geographic service area of the requested facilities? If 'Y', provide an exhibit explaining how the Applicant (Lessee/Sublessee) complies with Section 27.1202 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission's Rule(s) is being requested, 8a must be answered 'Y'. 16) Does the Applicant comply with the programming requirements contained in Section 27.1203 of the ) Yes No Commission's Rules? If 'N', provide an exhibit explaining how the Applicant complies with Section 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission's Rule(s) is being requested, 8a must be answered 'Y'. Part 90 Public Safety Services **Eligibility**

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) <u>Y</u>es <u>N</u>o

Rules?

17) Is the Applicant a public safety entity or otherwise an entity that will use the leased spectrum to provide communications in support of public safety operations pursuant to Section 90.523 of the Commission's

#### **600 MHz Band Information**

18) Is the spectrum leasing/subleasing arrangement for a term of one year or more (either initially or cumulatively) and involves any licenses in the 600 MHz Band initially granted in the last six years that would, if leased, create a geographic overlap with another licenses(s) in which the Lessee/Sublessee already holds attributable interests, as defined in Section 20.22(b) of the Commission's Rules, either as a licensee or spectrum Lessee/Sublessee, and that would result in the Lessee/Sublessee holding an attributable interest, as defined in Section 20.22(b) of the Commission's Rules, in one-third or more of the total suitable and available below-1-GHz spectrum as calculated on a county-by-county population-weighted basis in the relevant license area, utilizing 2010 U.S. Census data?	é e n d	) <u>Y</u> es <u>I</u>	<u>N</u> o
The initial grant date is the date that the license was originally granted by the Commission after an auction, even if the license was acquired in the secondary market. The initial grant date is not the date on which the Commission granted an assignment or transfer of control of the license.	n, e		
If 'Y', provide an exhibit detailing the proposed spectrum leasing/subleasing exchange of 600 MHz band spectrum in the same market(s), including a list of all file numbers for applications associated with the proposed spectrum leasing arrangement exchange, or describing the <i>pro forma</i> nature of the spectrum leasing arrangement, as appropriate.	d		
19) Is the spectrum leasing/subleasing arrangement for a term of one year or more (either initially or cumulatively) and involves any licenses that were initially granted as reserved spectrum licenses in the 600 MHz Band in the last six years? Otherwise, enter 'N'.		) <u>Y</u> es <u>I</u>	<u>N</u> o
The initial grant date is the date that the license was originally granted by the Commission after an auction, even if the license was acquired in the secondary market. The initial grant date is not the date on which the Commission granted an assignment or transfer of control of the license.			
If 'Y', provide an exhibit demonstrating how the Lessee/Sublessee would have qualified to bid on that reserved spectrum license(s) in Auction 1002 as of the FCC Form 175 filing deadline (February 10, 2016) for Auction 1002, the forward auction of the Broadcast Incentive Auction.			

20) FCC Registration Number: 0003291192					
25)1 55 Negletiation Name					
Entity					
21) Licensee is a(n) (Select One): ( )Individual ( )Unincorporated Association (	)Trust	( )Gove	rnment Entity ( )0	Corporation ( <b>X</b> )Limited	Liability Company
( )General Partnership ( )Limited Partnership	( )Limi	ted Liability	Partnership		
( )Other:					
Licensee Name					
22) Licensee Name (if entity): New Cingular Wireless P	CS, LLC				
23) Licensee Name (if individual): First:		MI:	Last:		Suffix:
24) Attention To: Cecil J. Mathew					
Address 25) P.O. Box: A	nd 26) Stre	et Address	208 S. Akard Street	. RM 1016	
, i		ot / tadi coo			
27) City: Dallas			28) State: TX	29) Zip Code: <b>752</b>	202
30) Telephone Number: <b>(855)699-7073</b>		31) FA	X Number: (214)74	16-6410	
32) E-Mail Address: FCCMW@att.com					
33) Demographics (Optional): Race:	Ethnicit		atino	Gender:	
33) Demographics (Optional):  Race:  ( )American Indian or Alaska Native	( )H	ispanic or L		( )Male	
33) Demographics (Optional): Race:	( )H				
33) Demographics (Optional):  Race: ( )American Indian or Alaska Native	( )H	ispanic or L		( )Male	
33) Demographics (Optional):  Race: ( )American Indian or Alaska Native ( )Asian	( )H	ispanic or L		( )Male	
33) Demographics (Optional):  Race: ( )American Indian or Alaska Native ( )Asian ( )Black or African-American ( )Native Hawaiian or Other Pacific Islander	( )H	ispanic or L		( )Male	
33) Demographics (Optional):  Race: ( )American Indian or Alaska Native ( )Asian ( )Black or African-American	( )H	ispanic or L		( )Male	
33) Demographics (Optional):  Race: ( )American Indian or Alaska Native ( )Asian ( )Black or African-American ( )Native Hawaiian or Other Pacific Islander ( )White  Licensee Contact Information	( )H	ispanic or L		( )Male	
33) Demographics (Optional):  Race: ( )American Indian or Alaska Native ( )Asian ( )Black or African-American ( )Native Hawaiian or Other Pacific Islander ( )White  Licensee Contact Information Contact Name (if other than Licensee)	( )H	ispanic or L		( )Male	
33) Demographics (Optional):  Race: ( )American Indian or Alaska Native ( )Asian ( )Black or African-American ( )Native Hawaiian or Other Pacific Islander ( )White  Licensee Contact Information Contact Name (if other than Licensee) ( ) Check here if same as Licensee Information	( )H	ispanic or I	or Latino	( )Male	Suffiv
33) Demographics (Optional):  Race: ( )American Indian or Alaska Native ( )Asian ( )Black or African-American ( )Native Hawaiian or Other Pacific Islander ( )White  Licensee Contact Information Contact Name (if other than Licensee)	( )H	ispanic or L		( )Male	Suffix:

Address

37) P.O. Box: | And | 38) Street Address: 1120 20th Street NW, Suite 1000 |

39) City: Washington | 40) State: DC | 41) Zip Code: 20036 |

42) Telephone Number: (202)457-2055 | 43) FAX Number: |

44) E-Mail Address: michael.p.goggin@att.com

Lessee Information						
45) FCC Registration Number: 0030856223						
Entity						
46) Lessee is a(n) (Select One): ( )Individual ( )Unincorporated Association	,	Trust (		nment Entity ( )Co	prporation ( <b>X</b> )Limited Li	ability Company
( )General Partnership ( )Limited Partnershi	——	)LIIIIIC	u Liability	raitiieisiiip		
Lessee Name						
47) If the Lessee name is being updated, is the update which proper Commission approval has not been recei	a result	of a chan	ge in owne	ership, corporate structur	e, or entity for	( ) <u>Y</u> es <u>N</u> o
48) Lessee Name (if entity): Trace-Tek	VCG 51 P	10001 1104	loadon no	t provided:		
49) Lessee Name (if individual): First:		$\overline{}$	MI:	Last:		Suffix:
50) Attention To: licenses@trace-tek.com						
Name of Real Party in Interest						
51) Name of Real Party in Interest: Trace-Tek						
52) FCC Registration Number (FRN): 0030856223						
•••						
Address 53) P.O. Box:	And /Or	54) Stree	t Address:	2625 Commons Boule	evard	
55) City: Beavercreek	/Ui			56) State: OH	57) Zip Code: <b>45341</b>	
58) Telephone Number: (972)672-0477			59) FA	X Number:		
60) E-Mail Address: licenses@trace-tek.com		·				
61) Demographics (Optional):						
Race:	$\overline{}$	Ethnicity			Gender:	
( )American Indian or Alaska Native			spanic or L		( )Male	
( )Asian		( )Not	t Hispanic	or Latino	( )Female	
( )Black or African-American						
( )Native Hawaiian or Other Pacific Islander						
( )White						
Lessee Contact Information Contact Name (if other than Lessee) ( ) Check here if same as Lessee Info	o <u>rmati</u>	o <u>n</u>				
62) Name: First: Dan			MI:	Last: Burgess		Suffix:
63) Company Name: Trace-Tek			1			
64) Attention To: licenses@trace-tek.com						<u> </u>
Address						
65) P.O. Box:	And /Or	66) Street	t Address:	2625 Commons Boule		
67) City: Beavercreek				68) State: <b>OH</b>	69) Zip Code: <b>4534</b> 1	
70) Telephone Number: (972)672-0477			71) FA	X Number:		
72) E-Mail Address: licenses@trace-tek.com						

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# Sublessee Information

•	u	VI.	C.	Э,	Э,	<u>_</u>	<b>G</b>	••	••	v	•		1

FRN						
73) FCC Registration Number:						
Entity						
74) Sublessee is a(n) (Select One): ( )Individual ( )Unincorporate	ed Association ( )	)Trust (		nment Entity ( )	Corporation ( )Limited	Liability Company
( )Other:		•				
Sublessee Name  75) If the Sublessee name is being upon for which proper Commission approximately a subject to the subject to	lated, is the update a re oval has not been receiv	esult of a cha ved or prope	inge in owr r notificatio	nership, corporate stru on not provided?	cture, or entity	( ) <u>Y</u> es <u>N</u> o
76) Sublessee Name (if entity):						
77) Sublessee Name (if individual):	First:	1	MI:	Last:		Suffix:
78) Attention To:						
Name of Real Party in Interest						
79) Name of Real Party in Interest:						
80) FCC Registration Number (FRN):						
Address						
Address 81) P.O. Box:	And	82) Street	Address:			
•	/Or			84) State:	85) Zip Code:	
83) City:					65) Zip Code.	
86) Telephone Number:			87) FAX	( Number:		
88) E-Mail Address:						
89) Demographics (Optional):						
Race: ( )American Indian or Alaska Native		Ethnicity:	oanic or La	atino	Gender: ( )Male	
	<b>,</b>				, ,	
( )Asian		( )Not	Hispanic o	or Latino	( )Female	
( )Black or African-American						
( )Native Hawaiian or Other Pacific	Islander					
( )White						
Sublessee Contact Inforr Contact Name (if other than Subles ( ) Check here if same as	ssee)	nation				
90) Name: First:			MI:	Last:		Suffix:
91) Company Name:			<u> </u>			
92) Attention To:						
Address						À
93) P.O. Box:	And /Or	94) Street	Address:			
95) City:				96) State:	97) Zip Code:	
98) Telephone Number:			99) FAX	Number:		
100) F-Mail Address:	<del></del>		1			

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### **Transferee Information** 101) FCC Registration Number: Entity 102) Transferee is a(n) (Select One): )Individual ( )Unincorporated Association ( )Trust )Government Entity )Corporation ( )Limited Liability Company ( )General Partnership )Limited Partnership )Limited Liability Partnership )Other: \_ **Transferee Name** 103) Transferee Name (if entity): 104) Transferee Name (if individual): First: MI: Last: Suffix: 105) Attention To: Name of Real Party in Interest 106) Name of Real Party in Interest: 107) FCC Registration Number (FRN): Address 108) P.O. Box: And 109) Street Address: /Or 110) City: 111) State: 112) Zip Code: 113) Telephone Number: 114) FAX Number: 115) E-Mail Address: 116) Demographics (Optional): Ethnicity: Gender: )American Indian or Alaska Native )Male )Hispanic or Latino )Not Hispanic or Latino )Asian )Female )Black or African-American )Native Hawaiian or Other Pacific Islander )White **Transferee Contact Information Contact Name** (if other than Transferee) ) Check here if same as Transferee Information MI: Suffix: 117) Name: Last: 118) Company Name: 119) Attention To: Address 120) P.O. Box: 121) Street Address: And /Or 122) City: 123) State: 124) Zip Code:

126) FAX Number:

FCC Form 608 – Main Form April 2022 - Page 8

125) Telephone Number:

127) E-Mail Address:

ransteror Information RN							
128) FCC Registration Number:							
ntity							
129) Transferor is a(n) (Select One):							
( )Individual ( )Unincorporated As	ssociation (	)Trust (	)Governm	ent Enti	ity ( )Corpor	ration ( )Limited Lia	ability Company
	,	,	•			, ,	
( )General Partnership ( )Limited	d Partnership	( )Limit	ed Liability Par	tnership	р		
( )Other:							
ransferor Name							
130) Transferor Name (if entity):							
131) Transferor Name (if individual):	First:			MI:	Last:		Suffix:
132) Attention To:							
132) Attention 10.							
ddress							
133) P.O. Box:	And	134) Str	eet Address:				
•	/Or						
135) City:				136) S	tate:	137) Zip Code:	
138) Telephone Number:			139) FAX	Numbo	Ar-		
136) Telephone Number.			139) FAX	Numbe	;i.		
140) E-Mail Address:							
,							
39) Demographics (Optional):							
Race:		Ethnicit				Gender:	
( )American Indian or Alaska Native		( )H	ispanic or Latin	10		( )Male	
( )Asian		( )N	ot Hispanic or I	_atino		( )Female	
,		, ,				,	
( )Black or African-American							
/ Nictive Herreiten en Othen Desifie lele							
( )Native Hawaiian or Other Pacific Isla	ridei						
( )White							
( )							
ransferor Contact Informa	tion						
ontact Name (if other than Transferor							
) Check here if same as Tra		rmation					
140) Name: First:	ansieror imo	IIIIauoii	MI:	Last:			Suffix:
THO) INGINE. FIISL.			IVII.	∟ası.			SuillX.
141) Company Name:			1 1				1
142) Attention To:							
ddress		1400 -					
143) P.O. Box:	And /Or	144) Str	eet Address:				
145) City:			1 -	146) St	tate·	147) Zip Code:	
TO, OILY.				1-TU   U	iuio.	ITI LIP OUGE.	

149) FAX Number:

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148) Telephone Number:

150) E-Mail Address:

### **Ownership Disclosure Information**

### FCC Form 602

153a) Is the Applicant required to file FCC Form 602, Ownership Disclosure Information for the Wireless Telecommunications Services?	(ү) <u>Y</u> es <u>N</u> o
153b) If the answer to 151a is 'Y', provide the File Number of FCC Form 602 that has been filed in conjunction with application or is already on file with the FCC.	File Number: 0009774970

### **Alien Ownership Questions**

Alien Ownership (If any answer is 'Y", provide an attachment explaining the circumstances. In preparing the attachment, refer to the Main Form Instructions for the "Alien Ownership Questions".)

	Torn instructions for the Alien Ownership Questions .	т — — — — — — — — — — — — — — — — — — —		
154)	Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee a foreign government or the representative of any foreign government?	( N	) <u>Y</u> es	<u>N</u> o
155)	Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee an alien or the representative of an alien?	( N	) <u><b>Y</b></u> es	<u>N</u> o
156)	Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee a corporation organized under the laws of a foreign government?	( N	) <u>Y</u> es	<u>N</u> o
157)	Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?		) <u>Y</u> es	<u>N</u> o
158a	) Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	,	) <u>Y</u> es	<u>N</u> o

8b) If the answer to 155 or 156a is 'Y' select one of the choices below.
The Lessee/Sublessee or Post-Transfer Lessee/Sublessee is exempt from the provisions of Section 310(b).
It is not necessary to file a petition for declaratory ruling if the Lessee/Sublessee or Post-Transfer Lessee/Sublessee includes in the attachmen required by Item 155 or Item 156a a showing that the subject Lease(s) is exempt from the provisions of Section 310(b).
The Lessee/Sublessee or Post-Transfer Lessee/Sublessee has received a declaratory ruling(s) approving its foreign ownership, and the application/notification involves only the acquisition/use of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Lessee/Sublessee or Post-Transfer Lessee/Sublessee has been previously authorized.
If checked, include in the attachment required by Item 155 or Item 156a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Lessee/Sublessee or Post-Transfer Lessee/Sublessee since the issuance of its ruling.
The Lessee/Sublessee or Post-Transfer Lessee/Sublessee: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specified immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/SubLessee that received a declaratory ruling(s under Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a), and is relying on the affiliate's ruling for purposes of filing this application/notification as permitted under the affiliate's ruling and Section 1.994(b) of the Rules, 47 CFR § 1.994(b).
If checked, and if the Lessee/Sublessee or Post-Transfer Lessee/Sublessee received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 155 or Item 156a the citation(s) of the Lessee/Sublessee or Post-Transfer Lessee/Sublessee's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Lessee/Sublessee or Post-Transfe Lessee/Sublessee is in compliance with the terms and conditions of its ruling and with the Commission's Rules.
If checked, and if the Lessee/Sublessee or Post-Ttransfer Lessee/Sublessee received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 156a a copy of a petition for declaratory ruling filed contemporaneously with the Commission to extend the Lessee/Sublessee or Post-Transfer Lessee/Sublessee's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s involved in the application/notification. Alternatively, the Lessee/Sublessee or Post-Transfer Lessee/Sublessee may request a new declaratory ruling pursuant to Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).
If checked, and if the Lessee/Sublessee or Post-Transfer Lessee/Sublessee is relying on an affiliate's ruling for purposes of filing this application/notification, include in the attachment required by Item 155 or Item 156a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Lessee/Sublessee or Post-Transfe Lessee/Sublessee is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rules. The Lessee/Sublessee or Post-Transfer Lessee/Sublessee must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in Section 1.994(b) of the Rules, 47 CFR § 1.994(b). See Main Form Instructions for Items 155 or 156a, as applicable.
The Lessee/Sublessee or Post-Transfer Lessee/Sublessee has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a), in a petition filed contemporaneously with the Commission.
If checked, include in the attachment required by Item 155 or 156a a copy of the petition for declaratory ruling filed contemporaneously with the Commission pursuant to Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).
asic Qualification Information
sic Qualification Questions (If any answer is 'Y', provide an attachment explaining the circumstances)

159)	Has the Applicant or any party to this application had any FCC station authorization, license, or construction permit revoked or had any application for an initial, modification, or renewal of FCC station authorization, license, or construction permit denied by the Commission?	( <b>N</b>	) <u>Y</u> es	<u>N</u> o
160)	Has the Applicant or any party to this filing, or any party directly or indirectly controlling the Applicant or any party to this filing ever been convicted of a felony by any state or federal court?	( N	) <u>Y</u> es	<u><b>N</b></u> o
161)	Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?	( N	) <u>Y</u> es	<u>N</u> o

Spectrum Aggregation Limit Certification(s)	
162) The Licensee/Lessor/Sublessor certifies that grant of this application would not cause the Licensee/Lessor/Sublessor to be in violation of the 40 megahertz in-band spectrum aggregation limit set forth under section 96.31 of the Commission's rules for 3.5 GHz licenses, taking into consideration the spectrum attribution rules under section 20.22(b) of the Commission's rules.  If the Licensee/Lessor/Sublessor has sought a waiver of section 96.31 in connection with this application, it may make this certification subject to the outcome of the waiver request.	( ) <u>Y</u> es <u>N</u> o
163) The Licensee/Lessor/Sublessor certifies that grant of this application would not cause the Licensee/Lessor/Sublessor to be in violation of the 40 megahertz in-band spectrum aggregation limit set forth under section 27.1606 of the Commission's rules for 3.45 GHz licenses, taking into consideration the spectrum attribution rules under section 20.22(b) of the Commission's rules.  If the Licensee/Lessor/Sublessor has sought a waiver of section 27.1606 in connection with this application, it may make this certification subject to the outcome of the waiver request.	( ) <u>Y</u> es <u>N</u> o
164) The Lessee/Sublessee/Transferee certifies that grant of this application would not cause the Lessee/Sublessee/Transferee to be in violation of the 40 megahertz in-band spectrum aggregation limit set forth under section 96.31 of the Commission's rules for 3.5 GHz licenses, taking into consideration the spectrum attribution rules under section 20.22(b) of the Commission's rules.  If the Lessee/Sublessee/Transferee has sought a waiver of section 96.31 in connection with this application, it may make this certification subject to the outcome of the waiver request.	( ) <u>Y</u> es <u>N</u> o
165) The Lessee/Sublessee/Transferee certifies that grant of this application would not cause the Lessee/Sublessee/Transferee to be in violation of the 40 megahertz in-band spectrum aggregation limit set forth under section 27.1606 of the Commission's rules for 3.45 GHz licenses, taking into consideration the spectrum attribution rules under section 20.22(b) of the Commission's rules.  If the Lessee/Sublessee/Transferee has sought a waiver of section 27.1606 in connection with this application, it may make this certification subject to the outcome of the waiver request.	( ) <u>Y</u> es <u>N</u> o

### **Licensee Certification Statements**

1)	The Licensee agrees that the Lease is not a sale or transfer of the license itself.
-	
2)	The Licensee certifies that it will not consent to assignment of the Lease except to the extent such assignment complies with the Commission's

- 3) The Licensee certifies that it holds exclusive use rights to use the licensed spectrum.
- 4) The Licensee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.

The Licensee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith.

Type or Printed Name of Party Authorized to Sign

166) First Name:	MI:	Last Name:	Suffix:
Jessica	В	Lyons	
167) Title: Asst. Secretary of Manager			
168) Signature: Jessica B Lyons		165) Date: <b>01/23/2023</b>	
EALL LIDE TO SIGN THIS ADDITION MAY DE	SIII T IN DISMIS	SSAL OF THE ADDITIONAND EXPERITIBLE OF ANY FE	ES DAID

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

Less	ee Certification Statements
1)	The Lessee agrees that the Lease is not a sale or transfer of the license itself.
2)	The Lessee acknowledges that it is required to comply with the Commission's Rules and Regulations and other applicable law at all times, and if the Lessee fails to so comply, the Lease/Sublease may be revoked, cancelled, or terminated by either the Licensee or the Commission.
3)	The Lessee certifies that neither it nor any other party to the Application/Notification is subject to a denial of Federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under Section 1.2002(c) of the Commission's Rules. See Section 1.2002(b) of the Commission's Rules for the definition of "party to the application" as used in this certification.
4)	The Lessee hereby accepts Commission oversight and enforcement consistent with the license and lease authorization. The Lessee acknowledges that it must cooperate fully with any investigation or inquiry conducted either by the Commission or the Licensee, allow the Commission or the Licensee to conduct on-site inspections of transmission facilities, and suspend operations at the direction of the Commission or the Licensee and to the extent that such suspension of operation would be consistent with applicable Commission policies.
5)	The Lessee acknowledges that in the event an authorization held by a Licensee that has associated with it a spectrum leasing arrangement that is the subject of this filing is revoked, cancelled, terminated, or otherwise ceases to be in effect, the Lessee will have no continuing authority to use the leased spectrum and will be required to terminate its operations no later than the date on which the Licensee ceases to have any authority to operate under the license, unless otherwise authorized by the Commission.
6)	The Lessee agrees the Lease shall not be assigned to any entity that is not eligible or qualified to enter into a spectrum leasing arrangement under the Commission's Rules and Regulations.
7)	The Lessee waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by spectrum lease or otherwise.
8)	The Lessee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
9)	The Lessee certifies that it and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This

U.S.C. § 309(j).

The Lessee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in

certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47

Type or Printed Name of Party Authorized to Sign

good faith.

Type of Printed Name of Party Authorized	ເບ ວາgn			
168) First Name: Dan	MI:	Last Name: Burgess	Suffix:	
Dan		Dai gess		
169) Title: Manager				
,				
170) Signature: Dan Burgess		171) Date: <b>01</b>	/23/2023	
FAILURE TO SIGN THIS APPLICATION MAY RESUL	_T IN DISMI	SSAL OF THE APPLICATION AND I	ORFEITURE OF ANY FEES PAID.	
WILLFUL FALSE STATEMENTS MADE ON THIS FO	ORM OR AN	IY ATTACHMENTS ARE PUNISHAE	LE BY FINE AND/OR IMPRISONMENT (U.S.	
Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section				
312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).				
- (-)(-)	,	/		

	essee Certification Statements
1)	The Sublessee agrees that the Lease is not a, sale or transfer of the license itself.
2)	The Sublessee acknowledges that it is required to comply with the Commission's Rules and regulations and other applicable law at all times, and if the Sublessee fails to so comply, the Lease may be revoked, cancelled, or terminated by either the licensee or the Commission.
3)	The Sublessee certifies that neither it nor any other party to the Application/Notification is subject to a denial of Federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under Section 1.2002(c) of the Commission's Rules. Section 1.2002(b) of the Commission's Rules for the definition of "party to the application" as used in this certification.
4)	The Sublessee hereby accepts Commission oversight and enforcement consistent with the license authorization. The Sublessee acknowledges that it must cooperate fully with any investigation or inquiry conducted either by the Commission or the Licensee, allow the Commission or the licensee to conduct on-site inspections of transmission facilities, and suspend operations at the direction of the Commission or the Licensee and to the extent that such suspension of operation would be consistent with the applicable Commission policies.
5)	The Sublessee acknowledges that in the event an authorization held by a Licensee that has entered into a spectrum leasing arrangement is revoked, cancelled, terminated, or otherwise ceases to be in effect, the Sublessee will have no continuing authority to use the leased spectrum and will be required to terminate its operations no later than the date on which the Licensee ceases to have any authority to operate under the license, unless otherwise authorized by the Commission.
6)	The Sublessee agrees the Lease/Sublease shall not be assigned to any entity that is not eligible or qualified to enter into a spectrum leasing arrangement under the Commission's Rules and regulations.
7)	The Sublessee waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by spectrum lease or otherwise.
8)	The Sublessee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
9)	The Sublessee certifies that it and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

The Sublessee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith.

Type or Printed Name of Party Authorized to Sign					
172) First Name:	MI:	Last Name:		Suffix:	
173) Title:					
174) Signature: 175) Date:					
FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.					

FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section

312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

# Transferee Certification Statements 1) The Transferee agrees that the Lease/Sublease is not a sale or transfer of the license itself. 2) The Transferee acknowledges that it is required to comply with the Commission's Rules and Regulations and other applicable law at all times, and if the Transferee fails to so comply, the Lease/Sublease may be revoked, cancelled, or terminated by either the licensee or the Commission. 3) The Transferee certifies that neither it nor any other party to the Application/Notification is subject to a denial of Federal benefits pursuant to Section 5304 of the Apti Drug Abuse Act of 1099 31 U.S.C. S. 962 because of a constitution for perspection or distribution of a controlled

- The Transferee certifies that neither it nor any other party to the Application/Notification is subject to a denial of Federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under Section 1.2002(c) of the Commission's Rules. See Section 1.2002(b) of the Commission's Rules for the definition of "party to the application" as used in this certification.)
- 4) The Transferee hereby accepts Commission oversight and enforcement consistent with the license authorization. The Transferee acknowledges that it must cooperate fully with any investigation or inquiry conducted either by the Commission or the Licensee, allow the Commission or the licensee to conduct on-site inspections of transmission facilities, and suspend operations at the direction of the Commission or the Licensee and to the extent that such suspension of operation would be consistent with the applicable Commission policies.
- The Transferee acknowledges that in the event an authorization held by a Licensee that has entered into a spectrum leasing arrangement is revoked, cancelled, terminated, or otherwise ceases to be in effect, the Transferee will have no continuing authority to use the leased spectrum and will be required to terminate its operations no later than the date on which the Licensee ceases to have any authority to operate under the license, unless otherwise authorized by the Commission.
- 6) The Transferee agrees the Lease shall not be assigned to any entity that is not eligible or qualified to enter into a spectrum leasing arrangement under the Commission's Rules and Regulations.
- 7) The Transferee waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by spectrum lease or otherwise.
- 8) The Transferee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
- 9) The Transferee certifies that it and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

The Transferee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith.

Type or Printed Name of Party Authorized to Sign

176) First Name:	MI:	Last Name:		Suffix:
177) Title:				
178) Signature:			179) Date:	
FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.				

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

### **Transferor Certification Statements**

1)	The Transferor certifies either (1) that control of the Lessee/Sublessee will not be transferred until consent of the Federal Communications
	Commission has been given, or (2) that prior Commission consent is not required because the Lease/Sublease is subject to streamlined
	notification procedures for pro forma transfers of control. See Federal Communications Bar Association's Petition for Forbearance from Section
	310(d) of the Communications Act Regarding Non-Substantial Assignments of Wireless Licenses and Transfers of Control Involving
	Telecommunications Carriers and Personal Communications Industry Association's Broadband Personal Communications Services Alliance's
	Petition for Forbearance For Broadband Personal Communications Services, Memorandum Opinion and Order, 13 FCC Rcd 6293 (1998)
2)	The Transferor certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed
	to any federal agency.

The Transferor certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith.

Type or Printed Name of Party Autl	norized to Sign			
180) First Name:	MI:	Last Name:		Suffix:
181) Title:		1		<u>'</u>
182) Signature:	9/1		183) Date:	
FAILURE TO SIGN THIS APPLICATION MA	Y RESULT IN DISM	ISSAL OF THE APPLI	ICATION AND FORFEITUR	RE OF ANY FEES PAID.
WILLFUL FALSE STATEMENTS MADE O				
Code, Title 18, Section 1001) AND/OR RE 312(a)(1)), AND/OR FORFEITURE (U.S. Cod			E OR CONSTRUCTION PE	ERMIT (U.S. Code, Title 47, Section

### **Private Commons Manager Certification Statements**

- The Licensee/Lessee/Sublessee manager of the Private Commons certifies that it will retain *de facto* control of the use of the spectrum under the Private Commons arrangement, including that it will maintain reasonable oversight over the users' use of the spectrum under the arrangement so as to ensure that the use of the spectrum, and communications equipment employed, comply with all technical and service rules applicable under the license authorization.
- 2) The Licensee/Lessee/Sublessee manager of the Private Commons arrangement certifies that it will maintain the ability to ensure that users under the arrangement comply with all the technical and service rules applicable under the license authorization.
- The Licensee/Lessee/Sublessee manager of the Private Commons certifies that it and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

The Licensee/Lessee/Sublessee manager of the Private Commons arrangement certifies that all of its statements made in this Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Notification, and are true, complete, correct, and made in good faith.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

# License Authorization(s) or Identifiers (pertaining to Lease(s)/Sublease(s)/Private Commons) Associated with the Spectrum To Be Included in the Filing

188) Call Sign(s) or Lease/Sublease/ Private Commons	189) Radio Service Code	190) Location Number	191) Path Number (Microwave only)	192) Frequency Number	193) Lower Frequency (MHz)	194) Upper Frequency (MHz)
Identifier(s)						
KNKA225	CL - Cellular					
KNKA256	CL - Cellular					
KNKA364	CL - Cellular					
KNKN309	CL - Cellular					
KNKN673	CL - Cellular					
KNKN719	CL - Cellular					
KNKN753	CL - Cellular					
KNKN877	CL - Cellular					

<sup>\*</sup> Note: Items 190 – 194 are for New Leases involving spectrum associated with site-based authorizations when only a portion of the licensed locations, paths and/or frequencies will be leased.

### FCC Form 608 Schedule A

### **Federal Communications Commission**

Approved by OMB 3060 - 1058 See 608 Main Form Instructions for public burden estimate

# Schedule for Licensees that Received Bidding Credits or Involving Licenses Won in Closed Bidding

Designated Entity Information Bidding Credits			
Has the full amount of the bidding credits awarded with regard to each of the subject license(s) been paid as part of unjust enrichment payment(s) in previous transaction(s)?	(	) <u>Y</u> es	<u>N</u> o
If the response to Item 1 is 'Y', Items 2 and 3 are not required to be completed.			
Bidding Credits - (Spectrum Manager Leases Only)			
2a) Does the Applicant have a general partnership interest or have a direct or indirect ownership interests of ten percent or greater in the Licensee?	(	) <u>Y</u> es	<u>N</u> o
2b) Is the Applicant a "controlling interest holder" or "affiliate" of the current Licensee?	(	) <u><b>Y</b></u> es	<u><b>N</b></u> o
For purposes of determining whether the Licensee has retained the requisite degree of ownership and control over the leased spectrum in order to remain eligible for the license or for bidding credits, the <i>de jure</i> control standard in 47 CFR §1.2110 and the <i>de facto</i> control standard in 47 CFR § 1.9010 will be applied (pursuant to the conditions set forth in 47 CFR §1.9020).			
2c) Does the Applicant share office space, equipment, or other facilities with any party controlling the entity from which spectrum is being leased/subleased?	(	) <u>Y</u> es	<u>N</u> o
2d) Is the Applicant a disclosable interest holder that holds a ten percent or greater interest of any kind in the Licensee and is the Lease/Sublease for more than 25% of the spectrum capacity of the subject license(s)?	(	) <u>Y</u> es	<u>N</u> o
2e) Does the Licensee certify that the Lease/Sublease does not affect its continuing eligibility to retain bidding credit(s)?	(	) <u>Y</u> es	<u>N</u> o
Bidding Credits – (Long-Term <i>De Facto</i> Transfer Leases Only) Eligibility			
3a) With respect to each of the subject licenses, the Applicant:			
( ) qualifies for the same designated entity benefit as the current Licensee			
( ) qualifies for a different designated entity benefit than the current Licensee			
( ) does not qualify for any designated entity status			
3b) If the Applicant states in Item 3a that it qualifies for the same designated entity benefit as the current Licensee or q designated entity status than the current Licensee, the Applicant qualifies for a (select one):	ualifies for a d	lifferent	
( ) small business bidding credit (%)			

FCC Form 608 - Schedule A April 2022 - Page 1

) <u>Y</u>es <u>N</u>o

rural service provider bidding credit

3c) Is the Applicant a disclosable interest holder that holds a ten percent or greater interest of any kind in the

Licensee and is the Lease/Sublease for more than 25% of the spectrum capacity of the subject license(s)?

Closed Bidding Licenses				
4) Have construction notifications been submitted as required by the Commission's Rules for each of the subject licenses?				
If the response to Item 4 is 'Y', Items 5 and 6 are not required to be completed.				
Closed Bidding Licenses – (Spectrum Manager Leases Only)				
5a) Does the Applicant have a general partnership interest or have a direct or indirect ownership interest of ten percent or greater in the Licensee?	(	) <u>Y</u> es <u>N</u> o		
5b) Is the Applicant a "controlling interest holder" or "affiliate" of the current Licensee?	(	) <u>Y</u> es <u>N</u> o		
5c) Does the Applicant share office space, equipment or other facilities with any party controlling the entity from which spectrum is being leased?	(	) <u>Y</u> es <u>N</u> o		
5d) Does the Licensee certify that the Lease/Sublease does not affect its continuing eligibility to retain closed bidding licenses?	(	) <u>Y</u> es <u>N</u> o		
Closed Bidding Licenses – (Long-Term <i>De Facto</i> Transfer Leases Only) Eligibility				
6) With respect to each of the subject licenses, the Applicant:				
( ) a) qualifies for closed bidding				
( ) b) does not qualify for closed bidding				

7) Revenue and Asset Informat Purpose (Check Modify if filing a provided on the original filing)	on for the Applicant  n Amendment application and changing t	the Revenue and Asset Informati	on from what was		
☐ Modify					
Gross Revenue Disclosure I	ost Recent Reportable Year				
8a) Were the Applicant and any pred If 'N', explain why in an attach	ecessors-in-interest in existence for a full year lent.	of the relevant period?	( ) <u>Y</u> es	<u>N</u> o	
If 'Y', provide the following infor	nation.				
8b) Gross Revenues	\$(Forma	it: 99,999.99)			
8c) Year-end Date:	(Date F	Format: MM/DD/YYYY)			
One Year Prior to Most Recent	Reportable Year				
9a) Were the Applicant and any pred If 'N', explain why in an attach	ecessors-in-interest in existence for a full year nent.	of the relevant period?	( ) <u>Y</u> es	<u>N</u> o	
If 'Y', provide the following infor	nation.				
9b) Gross Revenues	\$(Forma	it: 99,999.99)			
9c) Year-end Date:	(Date F	Format: MM/DD/YYYY)			
Two Years Prior to Most Recen	Reportable Year				
10a) Were the Applicant and any pro If 'N', explain why in an attach	decessors-in-interest in existence for a full yea nent.	r of the relevant period?	( ) <u>Y</u> es	<u>N</u> o	
If 'Y', provide the following infor	nation.				
10b) Gross Revenues	\$(Forma	at: 99,999.99)			
10c) Year-end Date:	(Date Format: MM/DD/YYYY)				
Three Years Prior to Most Rece	nt Reportable Year				
	decessors-in-interest in existence for a full year	of the relevant period? If	( ) <u>Y</u> es	<u> </u>	
If 'Y', provide the following information	1.				
11b) Gross Revenues	\$(Format: 99	9,999.99)			
11c) Year-end Date:	(Date Forma	at: MM/DD/YYYY)			
Four Years Prior to Most Recer	t Reportable Year				
12a) Were the Applicant and any pre 'N', explain why in an attachme	decessors-in-interest in existence for a full year t.	of the relevant period? If	( ) <u>Y</u> es	<u>N</u> o	
If 'Y', provide the following information	1.				
12b) Gross Revenues	\$(Format: 99	9,999.99)			
12c) Year-end Date:	(Date Format: MM/DD/YYYY)				

FCC Form 608 - Schedule A April 2022 - Page 3

Average Gross Revenue	
13) Average Gross Revenue of Reported Years: \$(For	rmat: 99,999.99)
Asset Disclosure	
14) Total Assets as of Application Filing Date: \$	
Financial Statements	
15) Audited or Unaudited (Check One)	
The Applicant used audited financial statements.	
The Applicant used unaudited financial statements prepared in accordance with Gen certified by the Applicant's chief financial officer or the equivalent.	nerally Accepted Accounting Principles (GAAP) and





### **Closed Bidding/Designated Entity Eligibility**

Total Gross Revenues for N	lost Recent Reportal	ole Year			
36a) Gross Revenues	\$	(Format: 99,999.99)			
36b) Year-end Date:		(Date Format: MM/DD/YYYY)			
Total Gross Revenues for C	one Year Prior to Mos	st Recent Reportable Year			
37a) Gross Revenues:	\$	(Format: 99,999.99)			
37b) Year-end Date:		(Date Format: MM/DD/YYYY)			
Total Gross Revenues for T	wo Years Prior to Mo	ost Recent Reportable Year			
38a) Gross Revenues:	\$	(Format: 99,999.99)			
38b) Year-end Date:		(Date Format: MM/DD/YYYY)			
Total Gross Revenues for	or Three Years Pric	or to the Most Recent Reportable Year			
39a) Gross Revenues:	\$	(Format:			
39b) Year-end Date:	<del></del>	(Date Format:			
40a) Gross Revenues: 40b) Year-end Date:		the Most Recent Reportable Year (Format: 99,999.99) (Date Format: MM/DD/YYYY)			
Total Aggregate Average G Revenue Data)	ross Revenues for D	esignated Entity (License(s) Requiring Disclosure of Three Years of Gross			
41) Aggregate Average Gross F	Revenue: \$	(Format: 99,999.99)			
Total Aggregate Average G Revenue Data)	ross Revenues for De	esignated Entity (License(s) Requiring Disclosure of Five Years of Gross			
41) Aggregate Average Gross	Revenue: \$	(Format: 99,999.99)			
Total Aggregate Average G	ross Revenues for Cl	losed Bidding			
42) Aggregate Average Gross F	Revenue: \$	(Format: 99,999.99)			
Total Assets Disclosure for	Closed Bidding				
43) Total Assets: \$		(Format: 99,999.99)			

36) Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?	( ) <u>Y</u> es <u>N</u> o
If the Applicant (the Lessee/Sublessee/Transferee) is seeking a rural service provider (RSP) bidding credit, provide equested in a-e.	le in an exhibit the following information
a) for the Applicant, submit the combined number of commercial communications service subscribers to wireless, that the Applicant serves and provide a list of the name(s) and the Federal Information Processing Standard (FIPS the Applicant has at least one commercial wireless, wireline, broadband, or cable subscriber; b) for each of the Applicant's Affiliates, Controlling Interests, and the Affiliates of its Controlling Interests, submit the Registration Number (FRN), its relationship to the Applicant, and its combined number of commercial communication wireline, broadband, and cable services. For each of the Applicant's Affiliates, Controlling Interests, and the Affiliates provide a list of the name(s) and the FIPS number(s) for each county in which it has at least one commercial wirelessubscriber; c) if neither the Applicant, nor any of its Affiliates, its Controlling Interests, or the Affiliates of its Controlling Interests hor adband, or cable subscriber in a market for which the Applicant is applying for a license, list the market(s) in w Controlling Interests, and the Affiliates of its Controlling Interests have no such subscribers; d) a detailed explanation demonstrating that: (i) the Applicant is in the business of providing commercial communiserves predominantly rural areas; and (iii) the primary focus of the Applicant's business activity is the provision of	S) number(s) for each county in which the individual or entity's name, its FCC tions service subscribers to wireless, ates of its Controlling Interests, also less, wireline, broadband, or cable the have at least one wireless, wireline, thich the Applicant, its Affiliates, its lications services; (ii) the Applicant
counties with a population density of 100 or fewer persons per square mile); and e) If the Applicant is an existing rural partnership that was providing service as of July 16, 2015, provide a detailed member of the partnership is independently eligible for the RSP bidding credit by providing, with respect to each r	d explanation demonstrating that each
information as is required in a-d above.	

### FCC 608 Schedule B

### **Federal Communications Commission**

Approved by OMB 3060 - 1058 See 608 Main Form Instructions for public burden estimate

### **Schedule for New Lease or New Sublease**

Term of Lease [For New Leases Only]	
1) Indicate whether the Lease is:	
( <b>x</b> ) Long-Term or ( ) Short-Term*	
* The cumulative lease period for a Short-Term Lease cannot exceed 365 days from the original commencement date	e.
2) If this filing is for a Long-Term <i>De Facto</i> Transfer Lease, have the Licensee and Lessee entered into any Short-Term <i>De Facto</i> Transfer Lease(s) with regard to any spectrum covered by the license(s) that are part of this filing or within the same geographic area(s) of the license(s) that are part of this filing?	(N ) <u>Y</u> es <u>N</u> o
Leased Spectrum (For Geographically-Licensed Services) [For New Leases Only]	
3a) Does this filing involve geographic-area licenses where only a portion of the licensed spectrum and/or the licensed	( N ) Yes No
3b) If the answer to 3a is 'Yes', does this filing involve one or more individual point-to-point microwave links that will be leased?	( ) <u>Y</u> es <u>N</u> o
If the response to 3b is 'Yes', complete Schedule H. If the response to 3b is 'No', complete Schedule F and, if applicable, Schedule G.	
Leased Spectrum (For Site-Based Services) [For New Leases Only]	
3c) Does this filing involve site-based licenses where only a portion of the licensed locations, paths and/or frequencies will be leased?	(N ) <u>Y</u> es <u>N</u> o
If the response to 3c is 'No', complete Items 184 (Call Sign) and 185 (Radio Service Code) on the Main Form. If the response to 3c is 'Yes', in addition to Items 184 (Call Sign) and 185 (Radio Service Code), complete Items 186-190 (Location Number, Path Number, Frequency Number, Lower Frequency and Upper Frequency), as appropriate, on the Main Form.	
Type and Term of Sublease [For New Subleases Only]	
4a) If the existing Lease is a Long-Term <i>De Facto</i> Transfer Lease, are the Lessee and Sublessee entering into a Spectrum or a Long-Term <i>De Facto</i> Transfer Sublease?  ( ) Spectrum Manager Sublease or ( ) Long-Term <i>De Facto</i> Transfer Sublease	n Manager Sublease
4b) If the answer to 4a is 'Spectrum Manager Sublease', indicate whether the Sublease is:	
( ) Long-Term or ( ) Short-Term	
5) If the existing Lease is a Long-Term Spectrum Manager Lease, indicate whether the Spectrum Manager Sublease is:	
( ) Long-Term or ( ) Short-Term	

### FCC 608 Schedule E

### **Federal Communications Commission**

Approved by OMB 3060 - 1058 See 608 Main Form Instructions for public burden estimate

# Schedule for Supplemental Information Pertaining to a New Lease, New Sublease, Revision to Extend the Term of an Existing Lease or Sublease, or Revision to Cancel an Existing Lease or Sublease

License Authorizations/Lease Identifiers/Sublease Identifiers (Complete as many Schedule E's as necessary)

1)	2)	3)	4)	5)	6)
Call Sign(s) or Lease/Sublease Identifier(s)	Radio Service Code	Commencement Date  (MM/DD/YYYY) OR Check box for FCC Grant Date	Expiration Date (MM/DD/YYYY)	Revised Expiration Date  (MM/DD/YYYY)	Cancellation Date  (MM/DD/YYYY)  OR  Check box if  Lease/Sublease  Never Commenced
KNKA225	CL	X	10/01/2023		
KNKA256	CL	X	10/01/2024		
KNKA364	CL	X	09/16/2026		
KNKN309	CL	X	09/16/2026		
KNKN673	CL	X	09/16/2026		
KNKN719	CL	X	09/16/2026		
KNKN753	CL	X	09/16/2026		
KNKN877	CL	X	09/16/2026		

# Attachment(s):

Туре	Description	Date Entered
0	Exhibit 1 - Public Interest Statement	01/04/2023
0	Exhibit 2 - Licenses	01/04/2023
0	Exhibit 3 - Site Information	01/04/2023
0	Manchester USP Shapefile (KNKN673)	01/04/2023
0	Jesup FCI Shapefile (KNKN877)	01/04/2023
0	FCI Sheridan Shapefile (KNKN309)	01/04/2023
0	FCI Schuylkill Shapefile (KNKN719)	01/04/2023
0	Miami FCI Shapefile (KNKA225 and KNKA364)	01/04/2023
0	FCI Forrest City Shapefile (KNKN753)	01/04/2023
0	FCI Danbury Shapefile (KNKA256)	01/04/2023

#### REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



## **Federal Communications Commission**

**Wireless Telecommunications Bureau** 

### RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: FCC GROUP NEW CINGULAR WIRELESS PCS, LLC 208 S. AKARD ST. 20F DALLAS, TX 75202

<b>Call Sign</b> KNLF251	File Number
<b>Radio</b> CW - PCS	Service Broadband

FCC Registration Number (FRN): 0003291192

registration ramper (11	7				
<b>Grant Date</b> 06-02-2015	Effective Date 01-14-2023	<b>1</b>			
Market Number MTA026		nel Block	Sub-Market Designator 15		
	Market Louisville-Lexin				
1st Build-out Date 06-23-2000	<b>2nd Build-out Date</b> 06-23-2005	3rd Build-out Date	4th Build-out Date		

### Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

### **Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

FCC 601-MB August 2021 Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNLF251 File Number: Print Date:

This license is conditioned upon compliance with the provisions of Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations, Memorandum Opinion and Order, FCC 04-255 (rel. Oct. 26, 2004).

Spectrum Lease Associated with this License. See Spectrum Leasing Arrangement Letter dated 12/06/2004 and File # 0001918512.

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNLF251 File Number: Print Date:

700 MHz Relicensed Area Information:

Market Name Buildout Deadline Buildout Notification Status

# Reference Copy Only. Do Not Mail to the FCC as an Application.

Submitted: 01/13/2023 at 18:08:22

File Number: 0010374919

### **FCC 601**

### **Main Form**

1) Radio Service Code:

# FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau Public Safety and Homeland Security Bureau

1a) Existing Radio Service Code:

Approved by OMB

3060 - 0798

See instructions for public burden estimate

cw	
General Information	
2) (Select only one) ( AU )  NE - New  MD - Modification  AM - Amendment  RO - Renewal Only  RM - Renewal/Modification  CA - Cancellation of License  AU - Administrative Update  WD - Withdrawal of Application  KL - Registered Location/Link  NT - Required Notification  EX - Requests for Ext	
3a) If this application is for a Demonstration License or a <u>Special Temporary Authorization (STA)</u> , enter the code and attach the required exhibit as described in the instructions. Otherwise enter ' <u>N/A</u> ' (Not Applicable).	(N) <u>MSN/A</u>
3b) If this application is for Special Temporary Authority due to an emergency situation, enter 'Y'; otherwise enter 'N'. Refer to Rule 1.915 for an explanation of situations considered to be an emergency.	( <u>)Y</u> es <u>N</u> o
If this application is for an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC.	File Number
5) If this application is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, , or Administrative Update, enter the call sign of the existing FCC license.  If this is a request for Registered Location/Link, enter the FCC call sign assigned to the geographic license.	Call Sign KNLF251
6a) If this application is for a New, Amendment, Renewal Only, or Renewal/Modification, enter the requested authorization expiration date (this item is optional).	MM DD
6b) If this application is for a Renewal Only or Renewal/Modification and the license is a geographic area license, is the license used to provide service to customers ( <b>C</b> ), or is the license used for private business (internal) purposes or to meet the licensee's public interest/public safety communications needs ( <b>P</b> )?	( <u>)C P</u>
7) Is this application "major" as defined in § 1.929 of the Commission's Rules when read in conjunction with the applicable radio service rules found in Parts 22 and 90 of the Commission's Rules? (NOTE: This question only applies to certain site-specific applications. See the instructions for applicability and full text of § 1.929).	( <u>)Y</u> es <u>N</u> o
8) Are attachments (other than associated schedules) being filed with this application?	( ) <u>Y</u> es <u>N</u> o
Fees, Waivers, and Exemptions	
9) Is the Applicant exempt from FCC application fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
10) Is the Applicant exempt from FCC regulatory fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
11) Does this application include a request for a Waiver of the Commission's Rule(s)? If 'Yes', attach an exhibit providing rule number(s) and explaining circumstances.	(N) <u>Y</u> es <u>N</u> o
12) Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station?	( <u>)Y</u> es <u>N</u> o

) FCC Registration Number (FRN):  1003291192  ) Applicant/Licensee Legal Entity Type: (Select One)	( )Tru	st (	)Govern				
)Individual ( )Unincorporated Association )General Partnership ( )Limited Partnershi ) Other:  ) If the Licensee name is being updated, is the updated	( )Tru	st (	)Govern				
) Other: ) If the Licensee name is being updated, is the upda	ip ( )L		,00ven	ment Entity (X)Corpo	oration (	)Limited Li	ability Company
) If the Licensee name is being updated, is the upda		imited Li	ability P	artnership ( )Conso	ortium		
				( , , , , , ) (		\	/ Was Na
party and for whileh proper confiniesion approva							( <u>)Y</u> es <u>N</u> o
) First Name (if individual):		MI: L	ast Nan	ne:			Suffix:
) Legal Entity Name (if other than individual):							
NEW CINGULAR WIRELESS PCS, LLC							
) Attention To:							
FCC Group							
) P.O. Box:	And/Or	20) St	reet Add	dress:			
,		1 ′		kard St. 20F			
) City:				22) State:	2:	3) Zip Code:	
Dallas				TX	-	75202	
) Telephone Number:			12	5) Fax:	<u> </u>		
			-	(214)746-6410			
(855)699-7073 ) E-Mail Address:				(21.)			
FCCMW@att.com							
) Demographics (Optional)							
ace: )American Indian or Alaska Native	Ethni	city: )Hispanio	or Lati	20	Gender	: lale	
American indian of Alaska Native	(	)i iispailid	J OI Lau	10	( )!v	iaic	
)Asian	(	)Not Hisp	oanic or	Latino	( )F	emale	
)Black or African-American							
Notice Herreiten en Othen Besifie Jelenden							
)Native Hawaiian or Other Pacific Islander							
)White							
ll Party in Interest							
) Name of Real Party in Interest of Applicant (If differ	rent from		2	9) FCC Registration Num	nber (FRN) o	f Real Party	in Interest:
pplicant):							
ntact Information (If different from the Applicant)							
) Check here if same as Applicant. ) First Name:		MI:	Last	Name:			Suffix:
Cecil		J		hew			
) Company Name: AT&T Services, Inc.			<u> </u>				
) Attention To: FCC Group							
) P.O. Box:	And	34) Str	eet Add	ress:			
,	/Or			ard St. 20F			
) City:		<u> </u>		36) State:		37) Zip C	Code:
Dallas				TX		7520	
) Telephone Number: (855)699-7073			39	L ) Fax: <b>(214)757-3706</b>			
) E-Mail Address:							

Reg	ulatory Status											
41)	This filing is for auth	horization to provide or	use the follow	wing type(s) of ra	adio servic	e offering (ente	er all tha	t apply):				
(	) <u>C</u> ommon Carrier	( ) <u>N</u> on-Common	Carrier (	) <u>P</u> rivate, inte	ernal comm	nunications (	) <u>B</u> r	oadcast	Services	(	) <u>B</u> and <u>M</u>	anageı
Туре	e of Radio Service											
42)	This filing is for auth	horization to provide the	e following ty	oe(s) of radio se	rvice (choc	se all that app	ly):					
(	) <u>F</u> ixed	( ) <u>M</u> obile	( ) <u>R</u>	adiolocation	(	) <u>S</u> atellite (so	und)	(	) <u>B</u> roadca	ast Servic	es	
43)	Does the Applicant	propose to provide ser	vice intercon	nected to the pul	blic telepho	ne network?				(	) <u>Y</u> es	<u>N</u> o
		tions (If any answer is ions for the "Alien Ow			t explainin	g the circums	stances.	. In pre	paring the	attachm	ent, refe	er to
44)	Is the Applicant a fo	oreign government or th	ne representa	tive of any foreig	gn governn	nent?				(	) <u>Y</u> es	<u>N</u> o
45)	Is the Applicant an	alien or the representat	tive of an alie	n?						(	) <u><b>Y</b></u> es	<u>N</u> o
46)	Is the Applicant a c	orporation organized ur	nder the laws	of any foreign g	overnment	?				(	) <u>Y</u> es	<u>N</u> o
the	• • •	corporation of which mo or by a foreign governm		•				•		( a	) <u>Y</u> es	<u>N</u> o

48a) Is the Applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock ( ) Yes No is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any
corporation organized under the laws of a foreign country?
48b) If the answer to 47 or 48a is 'Y' select one of the choices below.
The Applicant is exempt from the provisions of Section 310(b).
It is not necessary to file a petition for declaratory ruling if the Applicant includes in the attachment required by Item 47 or Item 48a a showing that the requested license(s) is exempt from the provisions of Section 310(b).
The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.
If checked, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Applicant since the issuance of its ruling.
The Applicant: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specified immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/Sublessee that received a declaratory ruling(s) under 47 CFR § 1.5000(a) and is relying on the affiliate's ruling for purposes of filing this application as permitted under the affiliate's ruling and 47 CFR § 1.5004(b)
If checked, and if the Applicant received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 47 or Item 48a the citation(s) of the Applicant's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of its ruling and with the Commission's Rules.
If checked, and if the Applicant received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 48a a copy of a petition for declaratory ruling filed contemporaneously with the Commission to extend the Applicant's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s) involved in the application. Alternatively, the Applicant may request a new declaratory ruling pursuant to Section 1.5000(a) of the Commission's Rules, 47 CFR § 1.5000 (a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).
If checked, and if the Applicant is relying on an affiliate's ruling for purposes of filing this application, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rules. The Applicant must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in 47 CFR § 1.5004(b). See Main Form Instructions for Items 47 or 48a, as applicable.
The Applicant has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under 47 CFR § 1.5004(b) in a petition filed contemporaneously with the Commission.
If checked, include in the attachment required by Item 47 or 48a a copy of the petition for declaratory ruling filed contemporaneously with the Commission pursuant to 47 CFR § 1.5004(b). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).

Basic Qualification Questions			
49) Has the Applicant or any party to this application had any FCC station authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission?	( n	) <u>Y</u> es	<u>N</u> o
50) Has the Applicant or any party to this application, or any party directly or indirectly controlling the Applicant, ever been convicted of a felony by any state or federal court?	(	) <u>Y</u> es	<u>N</u> o
51) Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?	(	) <u>Y</u> es	<u>N</u> o
Note: If the answer to any of 49-51 is 'Y', attach an exhibit explaining the circumstances.			
Aeronautical Advisory Station (Unicom) Certification  52) ( ) I certify that the station will be located on property of the airport to be served, and, in cases where the airport does not hat tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations local within ten days prior to application.			t
Broadband Radio Service and Educational Broadband Service Cable Cross-Ownership			
53a) Will the requested facilities be used to provide multichannel video programming service?	(	) <u>Y</u> es	<u><b>N</b></u> o
53b) If the answer to question 53a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in 47 CFR § 27.1202) in a cable television system whose franchise area is located within the geographic service area of the requested facilities?	(	) <u>Y</u> es	<u>N</u> o
Note: If the answer to question 53b is 'Y', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1202 or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.			
Broadband Radio Service and Educational Broadband Service (Part 27)			
54) (For EBS only) Does the Applicant comply with the programming requirements contained in 47 CFR § 27.1203?	(	) <u>Y</u> es	<u>N</u> o
Note: If the answer to item 54 is 'N', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.	е		
55) (For BRS and EBS) Does the Applicant comply with 47 CFR §§ 27.50, 27.55, and 27.1221?	(	) <u>Y</u> es	<u>N</u> o
<b>Note:</b> If the answer to item 55 is 'N', attach an exhibit justifying a waiver of that rule(s). If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.			
For Applicants Who Participated in an Auction			
56) Is the Applicant a qualifying rural wireless partnership or a member of a qualifying rural wireless partnership?	(	) <u>Y</u> e	s <u>N</u> o
<b>Note:</b> If the answer to item 56 is 'Y', attach an exhibit listing all members of the qualifying rural wireless partnership, including the FRN numbers.	eir		
For Renewal Applicants 57) Operation/Performance Requirement Certification			
[For a site based licensel: Applicant certifies that it is continuing to operate consistent with its most recently filed construction	( )	<b>Y</b> es <u>N</u> o	
For a geographic license, commercial service - licensee in its initial license term with an interim performance	( )	Yes No	
its interim performance requirement, it continues to use its facilities to provide at least the level of service required by its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term.			
For a geographic license, commercial service - licensee in its initial license term with no interim performance	( )	<u>Y</u> es <u>N</u> o	
For a goographic license, commercial service. Ilicenses in any subsequent term? Applicant cortifies that it continues to	( )	<b>Y</b> es <u>N</u> o	
For a geographic license, private systems - licensee in its initial license term with an interim performance	( ):	<u>Y</u> es <u>N</u> o	
[For a geographic license, private systems - licensee in its initial license term with no interim performance requirement]: Applicant certifies that it has met its final performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs, and it continues to use its facilities to provide at least the level of operation required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]	) ]	<u>Y</u> es <u>N</u> o	

[For a geographic license, private systems - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for the first renewal application filed after effective date of the rules]: Applicant certifies that the partitioned and/or disaggregated license that is the subject of this renewal application has no separate performance requirement and that this is the first renewal of this license filed subsequent to the effective date of the rules.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for any subsequent renewal filings]: Applicant certifies that it continues to use its facilities to provide service or to further the applicant's private business or public interest/public safety needs.	(	) <u>Y</u> es <u>N</u> o

### **Discontinuance of Service Certification**

license term.	( ) <u>Y</u> es <u>N</u> o
Note: If the response to either item 57 or item 58 is 'N', attach an exhibit that demonstrates that over the course of the license term, the Applicant provided and continues to provide service to the public, or operated and continues to operate the license to meet the Applicant's private business or public interest/public safety communications needs. This exhibit must include a detailed description of the Applicant's provision of service or, when allowed under the relevant service rules or pursuant to waiver, use of the spectrum for private business or public interest/public safety communications needs, during the entire license period and address, as applicable: 1) the level and quality of service provided by the applicant (e.g., the population served, the area served, the number of subscribers, the services offered); (2) the date service commenced, whether service was ever interrupted, and the duration of any interruption or outage; (3) the extent to which service is provided to rural areas; (4) the extent to which service is provided to rural areas; (4) the extent to which service is provided to rural areas; (5) any other factors associated with the level of service to the public. The licensee may note in its exhibit: 1) any grant(s) of waiver or extension of a performance deadline or license renewal subject to meeting a performance requirement; or 2) if the final performance deadline and/or expiration date for the license accelerated because the licensee did not meet an interim performance requirement.	

Regulatory Compliance Certification [same for all]

regulatory compliance certification [came for an]	
59) Applicant certifies that it has substantially complied with all applicable FCC rules, policies, and the Communications Act of 1934, as amended.	( ) <u>Y</u> es <u>N</u> o
<b>Note:</b> If the response to item 59 is 'N', attach an exhibit explaining the circumstances and demonstrating why Applicant's license should be renewed.	

### **General Certification Statements**

- 1) The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application.
- 2) The Applicant certifies that grant of this application would not cause the Applicant to be in violation of any pertinent cross-ownership or attribution rules.\*

  \*If the Applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcome of the waiver request.
- 3) The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference are material, are part of this application, and are true, complete, correct, and made in good faith.
- 4) The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to § 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under § 1.2002(c) of the rules, 47 CFR § 1.2002(c). See 47 CFR § 1.2002(b) for the definition of "party to the" application" as used in this certification.
- 5) The Applicant certifies that it either (1) has current required ownership data on file with the Commission, (2) is filing updated ownership data simultaneously with this application, or (3) is not required to file ownership data under the Commission's Rules.
- 6) The Applicant certifies that the facilities, operations, and transmitters for which this authorization is hereby requested are either: (1) categorically excluded from routine environmental evaluation for RF exposure as set forth in 47 CFR § 1.1307(b); or, (2) have been found not to cause human exposure to levels of radiofrequency radiation in excess of the limits specified in 47 CFR §§ 1.1310 and 2.1093; or, (3) are the subject of one or more Environmental Assessments filed with the Commission.
- 7) The Applicant certifies that it has reviewed the appropriate Commission Rules defining eligibility to hold the requested license(s) and is eligible to hold the requested license(s).
- 8) The Applicant certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
- 9) The Applicant certifies that the Applicant and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

### Signature

60)Typed or Printed Name of Party Authorized to Sign

First Name:	MI:	Last Name:	Suffix:
Cecil	J	Mathew	
61) Title: Assistant Secretary - Compliance			
Signature:		62) Dat	e:
Cecil J Mathew		01/13/2	2023

### FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

Upon grant of this license application, the Licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, § 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, § 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, § 503).

# Reference Copy Only. Do Not Mail to the FCC as an Application.

#### FCC Application or Notification for Spectrum Leasing Arrangement/ FCC Form 608 **Notification of a Private Commons Arrangement Main Form**

**Wireless Telecommunications Bureau** 

3060-1058

Submitted: 01/23/2023 at

18:42:37

File Number: 0010338098

**Public Safety and Homeland Security Bureau** 

See 608 Main Form Instructions For public burden estimate

Ger	neral Information				
Appl	ication/Notification Purpose				
1a)	Purpose of Filing (Select only one):				
( <b>x</b>	) <b>LN</b> – New (	) LM – Modification		( ) LU	J – Administrative Update
(	) LT – Transfer of Control (	( ) LE – Extend the Term ( ) LC		C – Cancel	
(	) LI – Light Touch Leasing Certification (	( ) AM – Amendment ( ) W			<b>/D</b> –Withdraw
1b)	If this filing is for an Amendment (AM) or Withdrawal ( Application/Notification currently on file with the FCC.		mber of the pending		File Number:
Clas	sification of Filing				
For L	eases/Subleases Only		T		
2a)	Classification of Filing (Select only one):		2b) Type of Filing		
(	) <b>ML</b> – Spectrum Manager Lease		( <b>X</b> ) <b>L</b> – Lease		
( <b>)</b>	( ) <b>TL</b> – <i>De Fact</i> o Transfer Lease		( ) <b>S</b> – Sublease	(Must be fi	iled manually)
For P	rivate Commons Arrangements Only (Must be filed	d Manually)			
20) This filing will be a Drivete Commany Avangement purpugation (Colort					angement pursuant to a Lease or
( ) N— License ( ) M —Spectrum Manager			,		
(	) L— Lease		( ) <b>T</b> –De Facto	ransfer	
(	) <b>S—</b> Sublease				
Term	n of Lease/Sublease				
3) I	ndicate whether the existing Lease/Sublease is:	( <b>x</b>	) Long-Term	or	( ) Short-Term
	r Wireless Licenses Is this filing part of a series of filings involving other affiliates of the Licensee (e.g., parents, subsidiaries, are not included on this filing and for which Commissi	, or commonly-controlle	ed entitiés), or third pa		( <b>N</b> ) <u>Y</u> es <u>N</u> o
4b) If the answer to 4a is 'Y', is this filing the lead Application/Notification?					( ) <u>Y</u> es <u>N</u> o
4c) If the answer to 4a is 'Y' and the answer to 4b is 'N', provide the File Number of the lead Application/Notification.					File Number:

Attachments	
5) Are attachments (other than associated schedules) being filed with this Application/Notification?	( γ ) <u>Y</u> es <u>N</u> o
Fees and Waivers	
Exemption from Application Fees	
6) Is the Applicant exempt from FCC application fees?	( <sub>N</sub> ) <u>Y</u> es <u>N</u> o
If the answer to 6 is 'Y', attach an exhibit demonstrating how the applicant is exempt from FCC application fees.	
Waiver/Deferral of Fees	
7) Is a waiver/deferral of the FCC application fees being requested?	( N ) <u>Y</u> es <u>N</u> o
If the answer to 7 is 'Y', attach a date-stamped copy of the request for waiver/deferral of the FCC application fees.	
Waiver of Commission Rules	
8) Does this filing include a request for waiver of the Commission's Rules (other than a request for application fee waivers)?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
If the appropriate Q is (V) attack an exhibit appointing the mile and a setting (A) for which a waiting in the in-	
If the answer to 8 is 'Y', attach an exhibit specifying the rule section(s) for which a waiver is being requested and including a justification for the waiver request.	
requested and including a justification for the waiver request.	
requested and including a justification for the waiver request.	
requested and including a justification for the waiver request.  Regulatory Status and Offerings	
Regulatory Status and Offerings  Radio Service Offerings  9) The Applicant will provide the following type(s) of radio service offerings (select all that apply):  ( ) Common Carrier ( ) Non-common Carrier ( ) Private, internal communications	,
Regulatory Status and Offerings  Radio Service Offerings  9) The Applicant will provide the following type(s) of radio service offerings (select all that apply):	er in this item. The term ints specified by the user, of a fee directly to the public, or to sucriers do not hold themselves out isting shall not, insofar as such ommon carrier for this item. Private lic safety communications and not ove the same meaning as that for
Regulatory Status and Offerings  Radio Service Offerings  9) The Applicant will provide the following type(s) of radio service offerings (select all that apply):  ( ) Common Carrier ( ) Non-common Carrier ( ) Private, internal communications  All entities that are planning to use the leased spectrum for telecommunications services should select common carrie 'telecommunications service' means the offering of telecommunications (i.e., the transmission, between or among po information of the user's choosing, without change in the form or content of the information as sent and received) for classes of users as to be effectively available directly to the public, regardless of the facilities used. Non-common carindiscriminately for hire as carriers of communications provided by the customer. A person engaged in radio broadca person is so engaged, be deemed a common carrier. Thus, those entities meeting this definition would select non-cinternal users are those entities that utilize telecommunications services purely for internal business purposes or public a for-hire or for-profit basis. Such entities should select 'Private' for this item. The term 'Broadcast Services' shall ha "broadcasting" in § 3(6) of the Communications Act of 1934, i.e., the dissemination of radio communications intended or by the intermediary of relay stations." 47 U.S.C. § 153(6).  If the Applicant is modifying the type of radio service offerings it provides, please provide an exhibit explaining the modified or the provides of the provides	er in this item. The term ints specified by the user, of a fee directly to the public, or to sucriers do not hold themselves out asting shall not, insofar as such ommon carrier for this item. Private lic safety communications and not ove the same meaning as that for to be received by the public, direct
Regulatory Status and Offerings  Padio Service Offerings  9) The Applicant will provide the following type(s) of radio service offerings (select all that apply):  ( ) Common Carrier ( ) Non-common Carrier ( ) Private, internal communications  All entities that are planning to use the leased spectrum for telecommunications services should select common carrie 'telecommunications service' means the offering of telecommunications (i.e., the transmission, between or among poinformation of the user's choosing, without change in the form or content of the information as sent and received) for a classes of users as to be effectively available directly to the public, regardless of the facilities used. Non-common carried indiscriminately for hire as carriers of communications provided by the customer. A person engaged in radio broadcate person is so engaged, be deemed a common carrier. Thus, those entities meeting this definition would select non-contental users are those entities that utilize telecommunications services purely for internal business purposes or public a for-hire or for-profit basis. Such entities should select 'Private' for this item. The term 'Broadcast Services' shall ha "broadcasting" in § 3(6) of the Communications Act of 1934, i.e., the dissemination of radio communications intended or by the intermediary of relay stations." 47 U.S.C. § 153(6).	er in this item. The term ints specified by the user, of a fee directly to the public, or to sucriers do not hold themselves out asting shall not, insofar as such ommon carrier for this item. Private lic safety communications and not ove the same meaning as that for to be received by the public, direct
Regulatory Status and Offerings  Radio Service Offerings  9) The Applicant will provide the following type(s) of radio service offerings (select all that apply):  ( ) Common Carrier ( ) Non-common Carrier ( ) Private, internal communications  All entities that are planning to use the leased spectrum for telecommunications services should select common carrie 'telecommunications service' means the offering of telecommunications (i.e., the transmission, between or among po information of the user's choosing, without change in the form or content of the information as sent and received) for classes of users as to be effectively available directly to the public, regardless of the facilities used. Non-common carindiscriminately for hire as carriers of communications provided by the customer. A person engaged in radio broadca person is so engaged, be deemed a common carrier. Thus, those entities meeting this definition would select non-cinternal users are those entities that utilize telecommunications services purely for internal business purposes or public a for-hire or for-profit basis. Such entities should select 'Private' for this item. The term 'Broadcast Services' shall ha "broadcasting" in § 3(6) of the Communications Act of 1934, i.e., the dissemination of radio communications intended or by the intermediary of relay stations." 47 U.S.C. § 153(6).  If the Applicant is modifying the type of radio service offerings it provides, please provide an exhibit explaining the modified or the provides of the provides	ints specified by the user, of a fee directly to the public, or to suc rriers do not hold themselves out usting shall not, insofar as such ommon carrier for this item. Private lic safety communications and not ove the same meaning as that for I to be received by the public, direct

#### Designated Entity Information (If the answer to 12a, 12b or 12c is 'Y', Schedule A must be completed.) **Bidding Credits** 12a) Does this filing involve any spectrum associated with any licenses that were awarded with bidding credits (N)Yes No within the last five years? If the response to this item is 'Y', the licenses may be subject to the FCC's unjust enrichment rules, and the Applicant should answer relevant bidding credit questions. Closed Bidding 12b) Does this filing involve any spectrum associated with any licenses that were originally granted pursuant to closed bidding within the last five years? (N)Yes No If the response to this item is 'Y', the Applicant should answer relevant closed bidding questions. Competition-Related Information 13) Does this filing involve a license authorization or Spectrum Lease/Sublease that may be used to provide (γ) <u>Y</u>es <u>N</u>o interconnected mobile voice and/or data services that would create a geographic overlap with another license authorization(s) or spectrum leasing arrangement(s), that also could be used to provide interconnected mobile voice and/or data services, in which the Applicant already holds attributable interests, as defined in Section 20.22(b) of the Commission's Rules, either as a licensee or spectrum lessee/sublessee? If 'Y', specify in an exhibit all geographic areas/markets (e.g., BTA, CMA, county, etc.) where there are spectrum overlaps and the total amount of spectrum that the Assignee/Transferee will hold and/or lease in each geographic area/market. ( N ) Yes No 14) If the answer to Item 13 is 'Y', would/does this application for a spectrum leasing or subleasing arrangement reduce the number of entities providing service in the affected market(s)? Broadband Radio Service and Educational Broadband Service Information 15a) Will the requested facilities be used to provide multichannel video programming service? ( ) <u>Y</u>es <u>N</u>o 15b) If the answer to 15a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in ) <u>Y</u>es <u>N</u>o Section 27.1202 of the Commission's Rules) in a cable television system whose franchise area is located within the geographic service area of the requested facilities? If 'Y', provide an exhibit explaining how the Applicant (Lessee/Sublessee) complies with Section 27.1202 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission's Rule(s) is being requested, 8a must be answered 'Y'. 16) Does the Applicant comply with the programming requirements contained in Section 27.1203 of the ) Yes No Commission's Rules? If 'N', provide an exhibit explaining how the Applicant complies with Section 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission's Rule(s) is being requested, 8a must be answered 'Y'. Part 90 Public Safety Services

17) Is the Applicant a public safety entity or otherwise an entity that will use the leased spectrum to provide

communications in support of public safety operations pursuant to Section 90.523 of the Commission's

**Eligibility** 

Rules?

) <u>Y</u>es <u>N</u>o

#### **600 MHz Band Information**

18) Is the spectrum leasing/subleasing arrangement for a term of one year or more (either initially or cumulatively) and involves any licenses in the 600 MHz Band initially granted in the last six years that would, if leased, create a geographic overlap with another licenses(s) in which the Lessee/Sublessee already holds attributable interests, as defined in Section 20.22(b) of the Commission's Rules, either as a licensee or spectrum Lessee/Sublessee, and that would result in the Lessee/Sublessee holding an attributable interest, as defined in Section 20.22(b) of the Commission's Rules, in one-third or more of the total suitable and available below-1-GHz spectrum as calculated on a county-by-county population-weighted basis in the relevant license area, utilizing 2010 U.S. Census data?  The initial grant date is the date that the license was originally granted by the Commission after an auction, even if the license was acquired in the secondary market. The initial grant date is not the date on which the Commission granted an assignment or transfer of control of the license.  If 'Y', provide an exhibit detailing the proposed spectrum leasing/subleasing exchange of 600 MHz band spectrum in the same market(s), including a list of all file numbers for applications associated with the proposed spectrum leasing arrangement exchange, or describing the <i>pro forma</i> nature of the spectrum leasing arrangement, as appropriate.	`
19) Is the spectrum leasing/subleasing arrangement for a term of one year or more (either initially or cumulatively) and involves any licenses that were initially granted as reserved spectrum licenses in the 600 MHz Band in the last six years? Otherwise, enter 'N'.  The initial grant date is the date that the license was originally granted by the Commission after an auction, even if the license was acquired in the secondary market. The initial grant date is not the date on which the	
Commission granted an assignment or transfer of control of the license.  If 'Y', provide an exhibit demonstrating how the Lessee/Sublessee would have qualified to bid on that reserved spectrum license(s) in Auction 1002 as of the FCC Form 175 filing deadline (February 10, 2016) for Auction 1002, the forward auction of the Broadcast Incentive Auction.	

#### **Licensee Information FRN** 20) FCC Registration Number: 0003291192 **Entity** 21) Licensee is a(n) (Select One): )Corporation ( X )Limited Liability Company )Individual ( )Unincorporated Association ( )Trust )Government Entity ( )General Partnership ( )Limited Partnership )Limited Liability Partnership )Other: \_ **Licensee Name** 22) Licensee Name (if entity): New Cingular Wireless PCS, LLC 23) Licensee Name (if individual): MI: First: Last: Suffix: 24) Attention To: Cecil J. Mathew Address 26) Street Address: 208 S. Akard Street, RM 1016 25) P.O. Box: 27) City: Dallas 28) State: TX 29) Zip Code: **75202** 30) Telephone Number: (855)699-7073 31) FAX Number: (214)746-6410 32) E-Mail Address: FCCMW@att.com 33) Demographics (Optional): Ethnicity: Gender: Race: )American Indian or Alaska Native )Hispanic or Latino )Male )Not Hispanic or Latino )Female )Black or African-American )Native Hawaiian or Other Pacific Islander )White **Licensee Contact Information** Contact Name (if other than Licensee) ) Check here if same as Licensee Information 34) Name: MI: Last: Suffix: First: 35) Company Name: AT&T Mobility LLC 36) Attention To: Michael P. Goggin

37) P.O. Box:	And /Or	38) Street /	Address:	1120 20th Street NV	V, Suite 1000	
39) City: Washington				40) State: <b>DC</b>	41) Zip Code: <b>2</b> (	0036
42) Telephone Number: (202)457-2055			43) FAX	( Number:		
44) E-Mail Address: michael.p.goggin@att.com						
_	•		•			

**Address** 

#### **Lessee Information FRN** 45) FCC Registration Number: 0030856223 **Entity** 46) Lessee is a(n) (Select One): )Individual )Unincorporated Association )Trust )Government Entity )Corporation ( x )Limited Liability Company )General Partnership )Limited Partnership )Limited Liability Partnership )Other: **Lessee Name** 47) If the Lessee name is being updated, is the update a result of a change in ownership, corporate structure, or entity for ) <u>Y</u>es <u>N</u>o which proper Commission approval has not been received or proper notification not provided?" 48) Lessee Name (if entity): Trace-Tek 49) Lessee Name (if individual): First: MI: Last: Suffix: 50) Attention To: licenses@trace-tek.com Name of Real Party in Interest 51) Name of Real Party in Interest: Trace-Tek 52) FCC Registration Number (FRN): 0030856223 **Address** 53) P.O. Box: And 54) Street Address: 2625 Commons Boulevard 55) City: Beavercreek 56) State: OH 57) Zip Code: **45341** 58) Telephone Number: (972)672-0477 59) FAX Number: 60) E-Mail Address: licenses@trace-tek.com 61) Demographics (Optional): Race: Ethnicity: Gender: )American Indian or Alaska Native )Hispanic or Latino )Male )Asian )Not Hispanic or Latino )Female )Black or African-American )Native Hawaiian or Other Pacific Islander )White **Lessee Contact Information** Contact Name (if other than Lessee) ) Check here if same as Lessee Information MI: Last: Burgess Suffix: 62) Name: First: Dan 63) Company Name: Trace-Tek 64) Attention To: licenses@trace-tek.com

And

66) Street Address: 2625 Commons Boulevard

71) FAX Number:

68) State: **OH** 

Address 65) P.O. Box:

67) City: Beavercreek

70) Telephone Number:

(972)672-0477

72) E-Mail Address: licenses@trace-tek.com

April 2022 - Page 6

69) Zip Code: 45341

# FRN 73) FCC Registration Number:

<b>-</b> 414				
Entity				
74) Sublessee is a(n) (Select One):				
( )Individual ( )Unincorporated Association (	)Trust ( )Gover	nment Entity (	)Corporation ( )Limited	d Liability Company
( )General Partnership ( )Limited Partnership	( )Limited Liability	Partnership		
( )Other:				
Sublessee Name				
75) If the Sublessee name is being updated, is the update a			ucture, or entity	( ) <u>Y</u> es <u>N</u> o
for which proper Commission approval has not been rec	ceived or proper notificati	on not provided?		
76) Sublessee Name (if entity):				
77) Sublessee Name (if individual): First:	MI:	Last:		Suffix:
<b></b>				
78) Attention To:				
Name of Book Books in Internet				
Name of Real Party in Interest				
79) Name of Real Party in Interest:				
20) 500 5 14 // (501)				
80) FCC Registration Number (FRN):				
Address				
81) P.O. Box: And	82) Street Address:			
/Or		T = 0 = -		
83) City:		84) State:	85) Zip Code:	
86) Telephone Number:	07) [4	X Number:		
oo) Telephone Number.	07) FA	A Number.		
88) E-Mail Address:				
boy E Wall Madress.				
89) Demographics (Optional):				
Race:	Ethnicity:		Gender:	
( )American Indian or Alaska Native	( )Hispanic or L	atino	( )Male	
, ,	(		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
( )Asian	( )Not Hispanic	or Latino	( )Female	
( )Black or African-American				

)Native Hawaiian or Other Pacific Islander )White

#### **Sublessee Contact Information**

**Sublessee Information** 

Contact Name (if other than Sublessee)

Check here if same as Sublessee)

( ) Check here	e it same as Subjessee information				
90) Name:	First:	MI:	Last:		Suffix:
,					
91) Company Name:					
92) Attention To:					
Address	<u> </u>				

Address						
93) P.O. Box:	And /Or	94) Street Ac	ddress:			
95) City:				96) State:	97) Zip Code:	
98) Telephone Number:		9	99) FAX	Number:		
100) E-Mail Address:						

#### **Transferee Information** 101) FCC Registration Number: Entity 102) Transferee is a(n) (Select One): )Individual ( )Unincorporated Association ( )Trust )Government Entity )Corporation ( )Limited Liability Company ( )General Partnership )Limited Partnership )Limited Liability Partnership )Other: \_ **Transferee Name** 103) Transferee Name (if entity): 104) Transferee Name (if individual): First: MI: Last: Suffix: 105) Attention To: Name of Real Party in Interest 106) Name of Real Party in Interest: 107) FCC Registration Number (FRN): Address 108) P.O. Box: And 109) Street Address: /Or 111) State: 110) City: 112) Zip Code: 113) Telephone Number: 114) FAX Number: 115) E-Mail Address: 116) Demographics (Optional): Ethnicity: Gender: )American Indian or Alaska Native )Male )Hispanic or Latino ( )Not Hispanic or Latino )Asian )Female ( )Black or African-American )Native Hawaiian or Other Pacific Islander )White **Transferee Contact Information Contact Name** (if other than Transferee) ) Check here if same as Transferee Information MI: Suffix: 117) Name: Last: 118) Company Name: 119) Attention To: Address 120) P.O. Box: 121) Street Address: And /Or 122) City: 123) State: 124) Zip Code:

126) FAX Number:

125) Telephone Number:

127) E-Mail Address:

#### **Transferor Information** 128) FCC Registration Number: **Entity** 129) Transferor is a(n) (Select One): )Unincorporated Association )Limited Liability Company )Individual ( )Trust )Government Entity )Corporation ( )General Partnership )Limited Partnership )Limited Liability Partnership )Other: **Transferor Name** 130) Transferor Name (if entity): 131) Transferor Name (if individual): First: MI: Last: Suffix: 132) Attention To: Address 133) P.O. Box: 134) Street Address: And /Or 135) City: 136) State: 137) Zip Code: 138) Telephone Number: 139) FAX Number: 140) E-Mail Address: 139) Demographics (Optional): Ethnicity: Gender: Race: )American Indian or Alaska Native )Hispanic or Latino )Male )Asian )Not Hispanic or Latino )Female )Black or African-American )Native Hawaiian or Other Pacific Islander )White Transferor Contact Information **Contact Name** (if other than Transferor) ) Check here if same as Transferor Information 140) Name: MI: Last: Suffix: 141) Company Name: 142) Attention To: Address 143) P.O. Box: 144) Street Address: And 145) City: 146) State: 147) Zip Code:

149) FAX Number:

148) Telephone Number:

150) E-Mail Address:

#### **Ownership Disclosure Information**

#### FCC Form 602

153a) Is the Applicant required to file FCC Form 602, Ownership Disclosure Information for the Wireless Telecommunications Services?	( Y ) <u>Y</u> es <u>N</u> o
153b) If the answer to 151a is 'Y', provide the File Number of FCC Form 602 that has been filed in conjunction with application or is already on file with the FCC.	File Number: 0009774970

#### **Alien Ownership Questions**

Alien Ownership (If any answer is 'Y", provide an attachment explaining the circumstances. In preparing the attachment, refer to the Main Form Instructions for the "Alien Ownership Questions".)

Maiii	Form instructions for the Alien Ownership Questions .)			
154)	Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee a foreign government or the representative of any foreign government?	( N	) <u>Y</u> es	<u>N</u> o
155)	Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee an alien or the representative of an alien?	( N	) <u>Y</u> es	<u>N</u> o
156)	Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee a corporation organized under the laws of a foreign government?	( N	) <u>Y</u> es	<u>N</u> o
157)	Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?		) <u>Y</u> es	<u>N</u> o
158a	) Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	,	) <u>Y</u> es	<u>N</u> o

158b	) If the answer to 155 or 156a is 'Y' select one of the choices below.
	The Lessee/Sublessee or Post-Transfer Lessee/Sublessee is exempt from the provisions of Section 310(b).
	It is not necessary to file a petition for declaratory ruling if the Lessee/Sublessee or Post-Transfer Lessee/Sublessee includes in the attachment required by Item 155 or Item 156a a showing that the subject Lease(s) is exempt from the provisions of Section 310(b).
	The Lessee/Sublessee or Post-Transfer Lessee/Sublessee has received a declaratory ruling(s) approving its foreign ownership, and the application/notification involves only the acquisition/use of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Lessee/Sublessee or Post-Transfer Lessee/Sublessee has been previously authorized.
	If checked, include in the attachment required by Item 155 or Item 156a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Lessee/Sublessee or Post-Transfer Lessee/Sublessee since the issuance of its ruling.
	The Lessee/Sublessee or Post-Transfer Lessee/Sublessee: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specified immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/SubLessee that received a declaratory ruling(s) under Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a), and is relying on the affiliate's ruling for purposes of filing this application/notification as permitted under the affiliate's ruling and Section 1.994(b) of the Rules, 47 CFR § 1.994(b).
	If checked, and if the Lessee/Sublessee or Post-Transfer Lessee/Sublessee received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 155 or Item 156a the citation(s) of the Lessee/Sublessee or Post-Transfer Lessee/Sublessee's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Lessee/Sublessee or Post-Transfer Lessee/Sublessee is in compliance with the terms and conditions of its ruling and with the Commission's Rules.
	If checked, and if the Lessee/Sublessee or Post-Ttransfer Lessee/Sublessee received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 156a a copy of a petition for declaratory ruling filed contemporaneously with the Commission to extend the Lessee/Sublessee or Post-Transfer Lessee/Sublessee's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s) involved in the application/notification. Alternatively, the Lessee/Sublessee or Post-Transfer Lessee/Sublessee may request a new declaratory ruling pursuant to Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).
	If checked, and if the Lessee/Sublessee or Post-Transfer Lessee/Sublessee is relying on an affiliate's ruling for purposes of filing this application/notification, include in the attachment required by Item 155 or Item 156a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Lessee/Sublessee or Post-Transfer Lessee/Sublessee is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rules. The Lessee/Sublessee or Post-Transfer Lessee/Sublessee must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in Section 1.994(b) of the Rules, 47 CFR § 1.994(b). See Main Form Instructions for Items 155 or 156a, as applicable.
	The Lessee/Sublessee or Post-Transfer Lessee/Sublessee has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a), in a petition filed contemporaneously with the Commission.
	If checked, include in the attachment required by Item 155 or 156a a copy of the petition for declaratory ruling filed contemporaneously with the Commission pursuant to Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).
	ic Qualification Information  : Qualification Questions (If any answer is 'Y', provide an attachment explaining the circumstances)
59)	Has the Applicant or any party to this application had any FCC station authorization, license, or construction permit revoked or had any application for an initial, modification, or renewal of FCC station authorization, license, or

159)	Has the Applicant or any party to this application had any FCC station authorization, license, or construction permit revoked or had any application for an initial, modification, or renewal of FCC station authorization, license, or construction permit denied by the Commission?	
160)	Has the Applicant or any party to this filing, or any party directly or indirectly controlling the Applicant or any party to this filing ever been convicted of a felony by any state or federal court?	(N) <u>Y</u> es <u>N</u> o
161)	Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?	( N ) <u>Y</u> es <u>N</u> o

( ) <u>Y</u> es <u>N</u> o
( ) <u>Y</u> es <u>N</u> o
( ) <u>Y</u> es <u>N</u> o
( ) <u>Y</u> es <u>N</u> o

#### **Licensee Certification Statements**

1)	The Licensee agrees that the Lease is not a sale or transfer of the license itself.
2)	The Licensee certifies that it will not consent to assignment of the Lease except to the extent such assignment complies with the Commission's
	Rules and Regulations.

- 3) The Licensee certifies that it holds exclusive use rights to use the licensed spectrum.
- 4) The Licensee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.

The Licensee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith.

Type or Printed Name of Party Authorized to Sign

Type of Frince Name of Farty Mathemates	to Oigii				
166) First Name:	MI:	Last Name:	Suffix:		
Jessica	В	Lyons			
167) Title: Asst. Secretary of Manager					
168) Signature: Jessica B Lyons		165) Date: <b>01/23/2023</b>			
FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.					

			of the license itself.	
2)	The Lessee acknowledges that it is required to if the Lessee fails to so comply, the Lease/Subl			
3)	The Lessee certifies that neither it nor any othe Section 5301 of the Anti-Drug Abuse Act of 198 substance. This certification does not apply to See Section 1.2002(b) of the Commission's Ru	38, 21 U.S. application	C. § 862, because of a conviction for possessions filed in services exempted under Section 1.2	on or distribution of a controlled 2002(c) of the Commission's Rules
4)	The Lessee hereby accepts Commission overs acknowledges that it must cooperate fully with a Commission or the Licensee to conduct on-site Commission or the Licensee and to the extent the commission or the Licensee and to the extent the commission or the Licensee and to the extent the commission or the Licensee and to the extent the commission or the Licensee and to the extent the commission or the Licensee and the commission overs	any investi inspectior	gation or inquiry conducted either by the Comm s of transmission facilities, and suspend operat	nission or the Licensee, allow the tions at the direction of the
5)	The Lessee acknowledges that in the event an that is the subject of this filing is revoked, cance authority to use the leased spectrum and will be have any authority to operate under the license	elled, termi e required	nated, or otherwise ceases to be in effect, the L to terminate its operations no later than the date	_essee will have no continuing
6)	The Lessee agrees the Lease shall not be assigned under the Commission's Rules and Regulations	•	y entity that is not eligible or qualified to enter ir	nto a spectrum leasing arrangement
7)	The Lessee waives any claim to the use of any United States because of the previous use of the			as against the regulatory power of the
8)	The Lessee certifies that it is not in default on a any federal agency.	ny paymei	nt for Commission licenses and that it is not deli	inquent on any non-tax debt owed to
9)	The Lessee certifies that it and all of the related Ownership Disclosure Information for the Wirelessecurity, barred by any agency of the Federal Certification applies only to applications for licer and Job Creation Act of 2012, codified at 47 U.S.C. § 309(j).	ess Teleco Sovernmer nses for sp	mmunications Services) are not person(s) who t from bidding on a contract, participating in an ectrum that is required by Sections 6103, 6401	have been, for reasons of national auction, or receiving a grant. This -6403 of the Middle Class Tax Relief
	ssee certifies that all of its statements made ents incorporated by reference are material, and the components in the components are material.			
	or Printed Name of Party Authorized t	o Sian		

Type or Printed Name of Party Authorized to Sign

168) First Name: Dan MI: Last Name: Burgess Suffix:

169) Title: Manager

170) Signature: Dan Burgess 171) Date: 01/23/2023

FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

1)	The Sublessee agrees that the Lease is not a, sale or transfer of the license itself.
2)	The Sublessee acknowledges that it is required to comply with the Commission's Rules and regulations and other applicable law at all times, and if the Sublessee fails to so comply, the Lease may be revoked, cancelled, or terminated by either the licensee or the Commission.
3)	The Sublessee certifies that neither it nor any other party to the Application/Notification is subject to a denial of Federal benefits pursuant Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controll substance. This certification does not apply to applications filed in services exempted under Section 1.2002(c) of the Commission's Rules. Section 1.2002(b) of the Commission's Rules for the definition of "party to the application" as used in this certification.
4)	The Sublessee hereby accepts Commission oversight and enforcement consistent with the license authorization. The Subless acknowledges that it must cooperate fully with any investigation or inquiry conducted either by the Commission or the Licensee, allow to Commission or the licensee to conduct on-site inspections of transmission facilities, and suspend operations at the direction of the Commission or the Licensee and to the extent that such suspension of operation would be consistent with the applicable Commission policies.
5)	The Sublessee acknowledges that in the event an authorization held by a Licensee that has entered into a spectrum leasing arrangement revoked, cancelled, terminated, or otherwise ceases to be in effect, the Sublessee will have no continuing authority to use the least spectrum and will be required to terminate its operations no later than the date on which the Licensee ceases to have any authority to operating the license, unless otherwise authorized by the Commission.
6)	The Sublessee agrees the Lease/Sublease shall not be assigned to any entity that is not eligible or qualified to enter into a spectrum leasing arrangement under the Commission's Rules and regulations.
7)	The Sublessee waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by spectrum lease or otherwise.
8)	The Sublessee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
9)	The Sublessee certifies that it and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).
	Iblessee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, ents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in go
Type	r Printed Name of Party Authorized to Sign
	rst Name: MI: Last Name: Suffix:
173)	tle:
174) 5	gnature: 175) Date:
, .	110) Duto.

**Sublessee Certification Statements** 

FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

#### **Transferee Certification Statements** The Transferee agrees that the Lease/Sublease is not a sale or transfer of the license itself. The Transferee acknowledges that it is required to comply with the Commission's Rules and Regulations and other applicable law at all times, 2) and if the Transferee fails to so comply, the Lease/Sublease may be revoked, cancelled, or terminated by either the licensee or the The Transferee certifies that neither it nor any other party to the Application/Notification is subject to a denial of Federal benefits pursuant to 3) Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under Section 1.2002(c) of the Commission's Rules. See Section 1.2002(b) of the Commission's Rules for the definition of "party to the application" as used in this certification.) The Transferee hereby accepts Commission oversight and enforcement consistent with the license authorization. 4) acknowledges that it must cooperate fully with any investigation or inquiry conducted either by the Commission or the Licensee, allow the Commission or the licensee to conduct on-site inspections of transmission facilities, and suspend operations at the direction of the Commission or the Licensee and to the extent that such suspension of operation would be consistent with the applicable Commission policies. 5) The Transferee acknowledges that in the event an authorization held by a Licensee that has entered into a spectrum leasing arrangement is revoked, cancelled, terminated, or otherwise ceases to be in effect, the Transferee will have no continuing authority to use the leased spectrum and will be required to terminate its operations no later than the date on which the Licensee ceases to have any authority to operate under the license, unless otherwise authorized by the Commission. The Transferee agrees the Lease shall not be assigned to any entity that is not eligible or qualified to enter into a spectrum leasing 6) arrangement under the Commission's Rules and Regulations. The Transferee waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of 7) the United States because of the previous use of the same, whether by spectrum lease or otherwise. 8) The Transferee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency. 9) The Transferee certifies that it and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax

The Transferee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith.

47 U.S.C. § 309(j).

Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under

Type or Printed Name of Party Authorized to Sign						
<b>/</b> Ι:	Last Name:			Suffix:		
		179) Date:				
			II: Last Name:	II: Last Name:		

FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

#### **Transferor Certification Statements**

1)	The Transferor certifies either (1) that control of the Lessee/Sublessee will not be transferred until consent of the Federal Communications
	Commission has been given, or (2) that prior Commission consent is not required because the Lease/Sublease is subject to streamlined
	notification procedures for pro forma transfers of control. See Federal Communications Bar Association's Petition for Forbearance from Section
	310(d) of the Communications Act Regarding Non-Substantial Assignments of Wireless Licenses and Transfers of Control Involving
	Telecommunications Carriers and Personal Communications Industry Association's Broadband Personal Communications Services Alliance's
	Petition for Forbearance For Broadband Personal Communications Services, Memorandum Opinion and Order, 13 FCC Rcd 6293 (1998)
2)	The Transferor certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed
•	to any federal agency.

The Transferor certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith.

Type or Printed Name of Part	y Authorized to Sign				
180) First Name:	MI:	Last Name:			Suffix:
181) Title:		ı			1
182) Signature:			183) Date:		
FAILURE TO SIGN THIS APPLICAT	ION MAY RESULT IN DISMI	SSAL OF THE APPL	CATION AND FORFEIT	TURE OF ANY FE	ES PAID.
WILLFUL FALSE STATEMENTS M					
Code, Title 18, Section 1001) AND 312(a)(1)), AND/OR FORFEITURE (I			E OR CONSTRUCTION	N PERMIT (U.S. C	ode, Title 47, Section

**Private Commons Manager Certification Statements** 

1)	The Licensee/Lessee/Sublessee manager of the Private Commons certifies that it will retain de facto control of the use of the spectrum under
	the Private Commons arrangement, including that it will maintain reasonable oversight over the users' use of the spectrum under the
	arrangement so as to ensure that the use of the spectrum, and communications equipment employed, comply with all technical and service
	rules applicable under the license authorization.

- 2) The Licensee/Lessee/Sublessee manager of the Private Commons arrangement certifies that it will maintain the ability to ensure that users under the arrangement comply with all the technical and service rules applicable under the license authorization.
- The Licensee/Lessee/Sublessee manager of the Private Commons certifies that it and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

The Licensee/Lessee/Sublessee manager of the Private Commons arrangement certifies that all of its statements made in this Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Notification, and are true, complete, correct, and made in good faith.

Type or Printed Name of Party Authorized to Sign

Type of Finited Hame of Fairly Hamenizon				
184) First Name:	MI:	Last Name:	Suffix:	
101) Thorramo.		East Name.	ounix.	
185) Title:				
186) Signature:		187) Date:		
, 6		'		
FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.				
THE AT LIGHT THE ATT LIGHT THE TELEVISION AND THE ATT LIGHT ON LITTLE OF ART THE ATT.				

### License Authorization(s) or Identifiers (pertaining to Lease(s)/Sublease(s)/Private Commons) Associated with the Spectrum To Be Included in the Filing

188)	189)	190)	191)	192)	193)	194)
Call Sign(s) or	Radio Service	Location Number	Path Number	Frequency	Lower	Upper
Lease/Sublease/	Code		(Microwave only)	Number	Frequency (MHz)	Frequency (MHz)
Private Commons						
Identifier(s)						
KNLF235	CW - PCS					
	Broadband					
KNLF237	CW - PCS					
	Broadband					
KNLF251	CW - PCS					
KINLF251	Broadband					
KNLF256	CW - PCS					
	Broadband					
KNLF367	CW - PCS					
	Broadband					
KNLF367	CW - PCS					
KNLF30/	Broadband					
KNLF391	CW - PCS					
	Broadband					
KNLF467	CW - PCS					
	Broadband					
KNLF882	CW - PCS					
KNLF002	Broadband					
KNLF928	CW - PCS					
	Broadband					
KNLF948	CW - PCS					
	Broadband					
KNLF948	CW - PCS					
KIVLI 540	Broadband					
KNLG485	CW - PCS					
	Broadband					
KNLG502	CW - PCS Broadband					
	5. Oddballd					
KNLG518	CW - PCS					
	Broadband					
	•	•	•	•		

<sup>\*</sup> Note: Items 190 – 194 are for New Leases involving spectrum associated with site-based authorizations when only a portion of the licensed locations, paths and/or frequencies will be leased.

#### FCC Form 608 Schedule A

#### **Federal Communications Commission**

Approved by OMB 3060 - 1058 See 608 Main Form Instructions for public burden estimate

## Schedule for Licensees that Received Bidding Credits or Involving Licenses Won in Closed Bidding

### Designated Entity Information Bidding Credits

Bidding Credits	
Has the full amount of the bidding credits awarded with regard to each of the subject license(s) been paid as part of unjust enrichment payment(s) in previous transaction(s)?	( ) <u>Y</u> es <u>N</u> o
If the response to Item 1 is 'Y', Items 2 and 3 are not required to be completed.	
Bidding Credits - (Spectrum Manager Leases Only)	
2a) Does the Applicant have a general partnership interest or have a direct or indirect ownership interests of ten percent or greater in the Licensee?	( ) <u>Y</u> es <u>N</u> o
2b) Is the Applicant a "controlling interest holder" or "affiliate" of the current Licensee?	( ) <u>Y</u> es <u>N</u> o
For purposes of determining whether the Licensee has retained the requisite degree of ownership and control over the leased spectrum in order to remain eligible for the license or for bidding credits, the <i>de jure</i> control standard in 47 CFR §1.2110 and the <i>de facto</i> control standard in 47 CFR § 1.9010 will be applied (pursuant to the conditions set forth in 47 CFR §1.9020).	
2c) Does the Applicant share office space, equipment, or other facilities with any party controlling the entity from which spectrum is being leased/subleased?	( ) <u>Y</u> es <u>N</u> o
2d) Is the Applicant a disclosable interest holder that holds a ten percent or greater interest of any kind in the Licensee and is the Lease/Sublease for more than 25% of the spectrum capacity of the subject license(s)?	( ) <u>Y</u> es <u>N</u> o
2e) Does the Licensee certify that the Lease/Sublease does not affect its continuing eligibility to retain bidding credit(s)?	( ) <u>Y</u> es <u>N</u> o
Bidding Credits – (Long-Term <i>De Facto</i> Transfer Leases Only) Eligibility	
3a) With respect to each of the subject licenses, the Applicant:	
( ) qualifies for the same designated entity benefit as the current Licensee	
( ) qualifies for a different designated entity benefit than the current Licensee	
( ) does not qualify for any designated entity status	
3b) If the Applicant states in Item 3a that it qualifies for the same designated entity benefit as the current Licensee of designated entity status than the current Licensee, the Applicant qualifies for a (select one):	or qualifies for a different
( ) small business bidding credit (%)	
( ) rural service provider bidding credit	
3c) Is the Applicant a disclosable interest holder that holds a ten percent or greater interest of any kind in the Licensee and is the Lease/Sublease for more than 25% of the spectrum capacity of the subject license(s)?	( ) <u>Y</u> es <u>N</u> o

Closed Bidding Licenses		
Have construction notifications been submitted as required by the Commission's Rules for each of the subject licenses?	(	) <u>Y</u> es <u>N</u> o
If the response to Item 4 is 'Y', Items 5 and 6 are not required to be completed.		
Closed Bidding Licenses – (Spectrum Manager Leases Only)		
5a) Does the Applicant have a general partnership interest or have a direct or indirect ownership interest of ten percent or greater in the Licensee?	(	) <u>Y</u> es <u>N</u> o
5b) Is the Applicant a "controlling interest holder" or "affiliate" of the current Licensee?	(	) <u>Y</u> es <u>N</u> o
5c) Does the Applicant share office space, equipment or other facilities with any party controlling the entity from which spectrum is being leased?	(	) <u>Y</u> es <u>N</u> o
5d) Does the Licensee certify that the Lease/Sublease does not affect its continuing eligibility to retain closed bidding licenses?	(	) <u>Y</u> es <u>N</u> o
Closed Bidding Licenses – (Long-Term <i>De Facto</i> Transfer Leases Only) Eligibility		
6) With respect to each of the subject licenses, the Applicant:		
( ) a) qualifies for closed bidding		
( ) b) does not qualify for closed bidding		

<ol> <li>Revenue and Asset Informating Purpose (Check Modify if filing a provided on the original filing)</li> </ol>	ion for the Applicant In Amendment application and changing the Revenue and Asset Inform	nation from what was
☐ Modify		
Gross Revenue Disclosure N	Most Recent Reportable Year	
8a) Were the Applicant and any pred If 'N', explain why in an attach	decessors-in-interest in existence for a full year of the relevant period?	( ) <u>Y</u> es <u>N</u> o
If 'Y', provide the following inform	mation.	
8b) Gross Revenues	\$(Format: 99,999.99)	
8c) Year-end Date:	(Date Format: MM/DD/YYYY)	
One Year Prior to Most Recent	Reportable Year	
9a) Were the Applicant and any prec If 'N', explain why in an attach	decessors-in-interest in existence for a full year of the relevant period? ment.	( ) <u>Y</u> es <u>N</u> o
If 'Y', provide the following infor	mation.	
9b) Gross Revenues	\$(Format: 99,999.99)	
9c) Year-end Date:	(Date Format: MM/DD/YYYY)	
Two Years Prior to Most Recen	t Reportable Year	
10a) Were the Applicant and any pre If 'N', explain why in an attach	edecessors-in-interest in existence for a full year of the relevant period? ment.	( ) <u>Y</u> es <u>N</u> o
If 'Y', provide the following infor	mation.	
10b) Gross Revenues	\$(Format: 99,999.99)	
10c) Year-end Date:	(Date Format: MM/DD/YYYY)	
Three Vears Brief to Most Base	ent Papartable Vear	
Three Years Prior to Most Rece 11a) Were the Applicant and any pre 'N', explain why in an attachment	edecessors-in-interest in existence for a full year of the relevant period? If	( ) <u>Y</u> es <u>N</u> o
If 'Y', provide the following information	n.	
11b) Gross Revenues	\$(Format: 99,999.99)	
11c) Year-end Date:	(Date Format: MM/DD/YYYY)	
Four Years Prior to Most Recer	nt Reportable Year	
	edecessors-in-interest in existence for a full year of the relevant period? If	( ) <u>Y</u> es <u>N</u> o
If 'Y', provide the following information	n.	
12b) Gross Revenues	\$(Format: 99,999.99)	
12c) Year-end Date:	(Date Format: MM/DD/YYYY)	

Average Gross Revenue	
13) Average Gross Revenue of Reported Years: \$	(Format: 99,999.99)
Asset Disclosure	
14) Total Assets as of Application Filing Date: \$	_
Financial Statements	
15) Audited or Unaudited (Check One)	
The Applicant used audited financial statements.	
The Applicant used unaudited financial statements prepared in accordance certified by the Applicant's chief financial officer or the equivalent.	with Generally Accepted Accounting Principles (GAAP) and

#### **Closed Bidding/Designated Entity Eligibility**

Total Gross Revenues for Mos	t Recent Repor	table Year
36a) Gross Revenues	\$	(Format: 99,999.99)
36b) Year-end Date:		(Date Format: MM/DD/YYYY)
Total Gross Revenues for One	Year Prior to M	lost Recent Reportable Year
37a) Gross Revenues:	\$	_(Format: 99,999.99)
37b) Year-end Date:		(Date Format: MM/DD/YYYY)
Total Gross Revenues for Two	Years Prior to	Most Recent Reportable Year
38a) Gross Revenues:	\$	(Format: 99,999.99)
38b) Year-end Date:		(Date Format: MM/DD/YYYY)
Total Gross Revenues for T	hree Years P	rior to the Most Recent Reportable Year
39a) Gross Revenues:	\$	(Format:
39b) Year-end Date:		(Date Format:
otal Gross Revenues for Fou	ır Years Prior t	to the Most Recent Reportable Year
40a) Gross Revenues:	\$	(Format: 99,999.99)
40b) Year-end Date:		(Date Format: MM/DD/YYYY)
Total Aggregate Average Gross Revenue Data)	s Revenues for	Designated Entity (License(s) Requiring Disclosure of Three Years of Gross
41) Aggregate Average Gross Reve	enue: \$	(Format: 99,999.99)
Total Aggregate Average Gross Revenue Data)	s Revenues for	Designated Entity (License(s) Requiring Disclosure of Five Years of Gross
41) Aggregate Average Gross Reve	enue: \$	(Format: 99,999.99)
Total Aggregate Average Gross	s Revenues for	Closed Bidding
42) Aggregate Average Gross Reve	enue: \$	(Format: 99,999.99)
Total Assets Disclosure for Clo	sed Bidding	
43) Total Assets: \$		(Format: 99,999.99)

36) Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?	( ) <u>Y</u> es <u>N</u> o
If the Applicant (the Lessee/Sublessee/Transferee) is seeking a rural service provider (RSP) bidding credit, proviequested in a-e.	de in an exhibit the following information
a) for the Applicant, submit the combined number of commercial communications service subscribers to wireless that the Applicant serves and provide a list of the name(s) and the Federal Information Processing Standard (FIF the Applicant has at least one commercial wireless, wireline, broadband, or cable subscriber; b) for each of the Applicant's Affiliates, Controlling Interests, and the Affiliates of its Controlling Interests, submit to Registration Number (FRN), its relationship to the Applicant, and its combined number of commercial communicative wireline, broadband, and cable services. For each of the Applicant's Affiliates, Controlling Interests, and the Affiliates of its of the name(s) and the FIPS number(s) for each county in which it has at least one commercial wire subscriber; c) if neither the Applicant, nor any of its Affiliates, its Controlling Interests, or the Affiliates of its Controlling Interests or cable subscriber in a market for which the Applicant is applying for a license, list the market(s) in a Controlling Interests, and the Affiliates of its Controlling Interests have no such subscribers; d) a detailed explanation demonstrating that: (i) the Applicant is in the business of providing commercial communicatives predominantly rural areas; and (iii) the primary focus of the Applicant's business activity is the provision of counties with a population density of 100 or fewer persons per square mile); and e) If the Applicant is an existing rural partnership that was providing service as of July 16, 2015, provide a detailed member of the partnership is independently eligible for the RSP bidding credit by providing, with respect to each information as is required in a-d above.	the individual or entity's name, its FCC ations service subscribers to wireless, lates of its Controlling Interests, also eless, wireline, broadband, or cable at have at least one wireless, wireline, which the Applicant, its Affiliates, its nications services; (ii) the Applicant of services to rural areas (defined as ad explanation demonstrating that each

#### **Federal Communications Commission**

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#### Schedule for New Lease or New Sublease

Term of Lease [For New Leases Only]	
1) Indicate whether the Lease is:	
( <b>x</b> ) Long-Term or ( ) Short-Term*	
* The cumulative lease period for a Short-Term Lease cannot exceed 365 days from the original commencement da	te.
2) If this filing is for a Long-Term <i>De Facto</i> Transfer Lease, have the Licensee and Lessee entered into any Short-Term <i>De Facto</i> Transfer Lease(s) with regard to any spectrum covered by the license(s) that are part of this filing or within the same geographic area(s) of the license(s) that are part of this filing?	(N ) <u>Y</u> es <u>N</u> o
Leased Spectrum (For Geographically-Licensed Services) [For New Leases Only]	
3a) Does this filing involve geographic-area licenses where only a portion of the licensed spectrum and/or the licensed geographic area will be leased?	(γ ) <u>Y</u> es <u>N</u> o
3b) If the answer to 3a is 'Yes', does this filing involve one or more individual point-to-point microwave links that will be leased?	(N) Yes No
If the response to 3b is 'Yes', complete Schedule H. If the response to 3b is 'No', complete Schedule F and, if applicable, Schedule G.	
Leased Spectrum (For Site-Based Services) [For New Leases Only]	
3c) Does this filing involve site-based licenses where only a portion of the licensed locations, paths and/or frequencies will be leased?	( ) <u>Y</u> es <u>N</u> o
If the response to 3c is 'No', complete Items 184 (Call Sign) and 185 (Radio Service Code) on the Main Form. If the response to 3c is 'Yes', in addition to Items 184 (Call Sign) and 185 (Radio Service Code), complete Items 186-190 (Location Number, Path Number, Frequency Number, Lower Frequency and Upper Frequency), as appropriate, on the Main Form.	
Type and Term of Sublease [For New Subleases Only]	
4a) If the existing Lease is a Long-Term <i>De Facto</i> Transfer Lease, are the Lessee and Sublessee entering into a Spectru or a Long-Term <i>De Facto</i> Transfer Sublease?	m Manager Sublease
( ) Spectrum Manager Sublease or ( ) Long-Term <i>De Facto</i> Transfer Sublease	
4b) If the answer to 4a is 'Spectrum Manager Sublease', indicate whether the Sublease is:	
( ) Long-Term or ( ) Short-Term	
5) If the existing Lease is a Long-Term Spectrum Manager Lease, indicate whether the Spectrum Manager Sublease is:	
( ) Long-Term or ( ) Short-Term	

#### **Federal Communications Commission**

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## Schedule for Supplemental Information Pertaining to a New Lease, New Sublease, Revision to Extend the Term of an Existing Lease or Sublease, or Revision to Cancel an Existing Lease or Sublease

License Authorizations/Lease Identifiers/Sublease Identifiers (Complete as many Schedule E's as necessary)

1) Call Sign(s) or Lease/Sublease Identifier(s)	2) Radio Service Code	3) Commencement Date	4) Expiration Date (MM/DD/YYYY)	5) Revised Expiration Date	6) Cancellation Date (MM/DD/YYYY)
		(MM/DD/YYYY) OR Check box for FCC Grant Date		(MM/DD/YYYY)	OR Check box if Lease/Sublease Never Commenced
KNLF235	CW	X	06/23/2025		
KNLF237	CW	X	06/23/2025		
KNLF251	CW	X	06/23/2025		
KNLF256	CW	X	06/23/2025		
KNLF367	CW	X	09/16/2026		
KNLF391	CW	X	09/16/2026		
KNLF467	CW	X	09/16/2026		
KNLF882	CW	X	09/16/2026		
KNLF928	CW	X	09/16/2026		
KNLF948	CW		09/16/2026		
KNLG485	CW	X	09/16/2026		
KNLG502	CW	X	09/16/2026		

1) Call Sign(s) or Lease/Sublease Identifier(s)	2) Radio Service Code	3) Commencement Date  (MM/DD/YYYY) OR Check box for FCC Grant Date	4) Expiration Date (MM/DD/YYYY)	5) Revised Expiration Date (MM/DD/YYYY)	6) Cancellation Date  (MM/DD/YYYY) OR Check box if Lease/Sublease Never Commenced
KNLG518	CW		09/16/2026		
		X			

#### **Federal Communications Commission**

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## Schedule for Defined Geographic Area To Be Leased (Geographically-Licensed Services)

Schedule G # Attached:1

Call Sign		
1) Call Sign: KNLF235		
Geographic Area of Spectrum To Be Inclu	ided in Lease	
2)	3)	4a)
Defined Area to be	Undefined Area to be Leased	Population of

#### 5) Frequencies of Spectrum To Be Included in Lease (MHz)

rum Leased				
Upper Frequency/Bandwidth				
001860.00000000				
001940.00000000				

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	(Geographically-Lice)	iseu Seivices)	
Call Sign			
1) Call Sign: <u>KNLF237</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased		3) urea to be Leased e Schedule G)	4a) Population of Leased Area
	Schedule G # Attache	d:2	
5) Frequencies of Spectrum To Be I	ncluded in Lease (MHz)		
Spectrum Leased			
Lower Frequency/B	andwidth	Upper	Frequency/Bandwidth
			<u> </u>

#### **Federal Communications Commission**

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Call Sign		
1) Call Sign: KNLF251		
Geographic Area of Spectrum To Be	Included in Lease	
2) Defined Area to be Leased	3) Undefined Area to be Le (Complete Schedule G	
	Schedule G # Attached:3	
) Frequencies of Spectrum To Be I	ncluded in Lease (MHz)	
Spectrum Leased		
Lower Frequency/E	andwidth	Upper Frequency/Bandwidth

#### **Federal Communications Commission**

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Call Sign			
1) Call Sign: KNLF256			
Seographic Area of Spectrum To B	e Included in Lease		
2) Defined Area to be Leased	3) Undefined Area (Complete S	to be Leased	4a) Population of Leased Area
	Schedule G # Attached:4		
) Frequencies of Spectrum To Be	Included in Lease (MHz)		
Spectrum Leased			
Lower Frequency/I	Bandwidth	Upper	Frequency/Bandwidth

#### **Federal Communications Commission**

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Call Sign		
1) Call Sign: KNLF367		
Geographic Area of Spectrum To Be	Included in Lease	
2) Defined Area to be Leased	3) Undefined Area to be I (Complete Schedule	
	Schedule G # Attached:5	
) Frequencies of Spectrum To Be	ncluded in Lease (MHz)	
Spectrum Leased		
Lower Frequency/E	Bandwidth	Upper Frequency/Bandwidth

#### **Federal Communications Commission**

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Call Sign	seographically-Licensed Services)			
1) Call Sign: KNLF367				
Geographic Area of Spectrum To Be I	ncluded in Lease			
2) Defined Area to be Leased	3) Undefined Area to be Leased (Complete Schedule G)	4a) Population of Leased Area		
	Schedule G # Attached:6			
5) Frequencies of Spectrum To Be Inc	cluded in Lease (MHz)			
Spectrum Leased				
Lower Frequency/Bar	ndwidth	Upper Frequency/Bandwidth		

#### **Federal Communications Commission**

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Call Sign		· 	
1) Call Sign: KNLF391			
Seographic Area of Spectrum To Be	Included in Lease		
		to be Leased hedule G)	4a) Population of Leased Area
	Schedule G # Attached:7		
i) Frequencies of Spectrum To Be	ncluded in Lease (MHz)		
Spectrum Leased			
Lower Frequency/Bandwidth		Upper Frequency/Bandwidth	

## **Federal Communications Commission**

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	(Geographically-Licens	ed Services)	
Call Sign			
1) Call Sign: <u>KNLF467</u>			
Geographic Area of Spectrum To B	e Included in Lease		
2) Defined Area to be Leased	Undefined Are	B) ea to be Leased Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:	3	
5) Frequencies of Spectrum To Be	Included in Lease (MHz)		
Spectrum Leased			
Lower Frequency/E	Bandwidth	Upper	Frequency/Bandwidth

## **Federal Communications Commission**

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(G	eographically-Licensed Services)	
Call Sign		
1) Call Sign: KNLF882		
Geographic Area of Spectrum To Be In	cluded in Lease	
2) Defined Area to be Leased	3) Undefined Area to be Leased (Complete Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:9	
5) Frequencies of Spectrum To Be Incl	uded in Lease (MHz)	
Spectrum Leased		
Lower Frequency/Ban	dwidth	pper Frequency/Bandwidth

## **Federal Communications Commission**

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Call Sign: KNLF928		
graphic Area of Spectrum To Be In	cluded in Lease	
2) Defined Area to be Leased	3) Undefined Area to be Leased (Complete Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:10	
Frequencies of Spectrum To Be Incl	luded in Lease (MHz)	
ectrum Leased		
Lower Frequency/Ban	dwidth Upper	Frequency/Bandwidth

## **Federal Communications Commission**

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uded in Lease	
3) Undefined Area to be Leased (Complete Schedule G)	4a) Population of Leased Area
Schedule G # Attached:11	
led in Lease (MHz)	
vidth	Upper Frequency/Bandwidth
	Undefined Area to be Leased (Complete Schedule G)

## **Federal Communications Commission**

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Call Sign		
1) Call Sign: KNLF948		
Geographic Area of Spectrum To Be I	ncluded in Lease	
2) Defined Area to be Leased	3) Undefined Area to be Leased (Complete Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:12	
5) Frequencies of Spectrum To Be Inc	cluded in Lease (MHz)	
Spectrum Leased		
Lower Frequency/Bar	ndwidth	per Frequency/Bandwidth

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	(Geographically-Licer	nsed Services)	
Call Sign			
1) Call Sign: KNLG485			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased		3) Area to be Leased te Schedule G)	4a) Population of Leased Area
	Schedule G # Attache	d:13	
5) Frequencies of Spectrum To Be	included in Lease (MHz)		
Spectrum Leased			
Lower Frequency/E	Bandwidth	Upper	Frequency/Bandwidth

## **Federal Communications Commission**

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Call Sign		
Call Sign: KNLG502      eographic Area of Spectrum To Be In	ncluded in Lease	
2) Defined Area to be Leased	3) Undefined Area to be Leased (Complete Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:14	
) Frequencies of Spectrum To Be Inc	cluded in Lease (MHz)	
Spectrum Leased		
Lower Frequency/Bar	ndwidth Upper	Frequency/Bandwidth

## **Federal Communications Commission**

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(6	eographically-License	d Services)	
Call Sign			
1) Call Sign: <u>KNLG518</u>			
Geographic Area of Spectrum To Be In	cluded in Lease		
2) Defined Area to be Leased	3) Undefined Area (Complete S	to be Leased	4a) Population of Leased Area
	Schedule G # Attached:18	5	
5) Frequencies of Spectrum To Be Inc	luded in Lease (MHz)		
Spectrum Leased			
Lower Frequency/Bar	dwidth	Upper	Frequency/Bandwidth

F	C	3	6(	30	3
S	che	dı	ule	9 (	3

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Number:	1	

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	38-26-13.5 N	082-42-26.7 W
2	38-26-12.8 N	082-42-08.2 W
3	38-26-05.8 N	082-42-06.6 W
4	38-26-00.5 N	082-42-13.5 W
5	38-26-00.7 N	082-42-25.2 W
6	38-26-13.5 N	082-42-26.7 W

F	CC	60	8
S	ched	lule	G

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Number:	2		
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	38-52-15.4 N	089-24-33.8 W	
2	38-52-15.4 N	089-24-23.5 W	
3	38-51-59.9 N	089-24-19.2 W	
4	38-51-51.5 N	089-24-26.0 W	
5	38-51-51.5 N	089-24-43.2 W	
6	38-52-00.8 N	089-24-43.2 W	
7	38-52-15.4 N	089-24-33.8 W	

F	C	C	6	0	8
S	ch	ed	ul	е	G

Approved by OMB 3060-1058 See 608 Main Form Instructions for public burden estimate

Number:	3	

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	37-10-52.2 N	083-47-34.4 W
2	37-10-55.7 N	083-47-29.6 W
3	37-10-50.5 N	083-47-15.2 W
4	37-10-44.4 N	083-47-12.3 W
5	37-10-38.8 N	083-47-16.8 W
6	37-10-37.7 N	083-47-24.1 W
7	37-10-41.2 N	083-47-28.2 W
8	37-10-52.2 N	083-47-34.4 W

F	C	3	6(	30	3
S	che	dı	ule	9 (	3

Approved by OMB 3060-1058 See 608 Main Form Instructions for public burden estimate

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	32-53-41.3 N	090-27-04.6 W
2	32-53-44.5 N	090-25-39.4 W
3	32-52-45.6 N	090-25-38.1 W
4	32-52-47.0 N	090-27-01.3 W
5	32-53-41.3 N	090-27-04.6 W

FCC	60	8
<b>Sched</b>	ule	G

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Number:	5	
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	32-43-31.6 N	081-15-29.8 W	
2	32-43-28.5 N	081-14-56.8 W	
3	32-43-01.5 N	081-14-59.6 W	
4	32-43-04.3 N	081-15-33.8 W	
5	32-43-31.6 N	081-15-29.8 W	

FC	C	60	8
Sch	ed	ule	G

Approved by OMB 3060-1058 See 608 Main Form Instructions for public burden estimate

Number:	6	

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	31-33-55.8 N	081-54-19.2 W	
2	31-33-56.7 N	081-54-11.4 W	
3	31-33-52.0 N	081-53-55.9 W	
4	31-33-45.5 N	081-53-55.0 W	
5	31-33-43.7 N	081-54-18.2 W	
6	31-33-55.8 N	081-54-19.2 W	

FCC	60	8
Sched	ule	G

Approved by OMB 3060-1058 See 608 Main Form Instructions for public burden estimate

Number:	7		

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	31-28-20.6 N	092-27-03.8 W
2	31-28-20.4 N	092-25-59.5 W
3	31-27-39.4 N	092-26-05.1 W
4	31-27-41.9 N	092-27-06.3 W
5	31-28-20.6 N	092-27-03.8 W

F	C	C	60	8
S	ch	ed	ule	G

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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	34-59-04.6 N	090-48-28.4 W
2	34-59-03.1 N	090-47-26.3 W
3	34-58-23.7 N	090-47-26.6 W
4	34-58-25.8 N	090-48-30.6 W
5	34-59-04.6 N	090-48-28.4 W

F	C	C	60	8
S	ch	ed	ule	G

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Number: 9	
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	34-40-11.1 N	079-43-15.3 W	
2	34-40-30.9 N	079-43-11.2 W	
3	34-40-28.8 N	079-42-56.7 W	
4	34-40-08.9 N	079-43-01.1 W	
5	34-40-11.1 N	079-43-15.3 W	

F	C	3	6(	30	3
S	che	dı	ule	9 (	3

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Number:	10
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

31-28-20.6 N	092-27-03.8 W
31-28-20.4 N	092-25-59.5 W
31-27-39.4 N	092-26-05.1 W
31-27-41.9 N	092-27-06.3 W
31-28-20.6 N	092-27-03.8 W
3	1-28-20.4 N 1-27-39.4 N 1-27-41.9 N

F	C	C	60	8
S	ch	ed	ule	G

Approved by OMB 3060-1058 See 608 Main Form Instructions for public burden estimate

Number:	11	
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	32-43-31.6 N	081-15-29.8 W	
2	32-43-28.5 N	081-14-56.8 W	
3	32-43-01.5 N	081-14-59.6 W	
4	32-43-04.3 N	081-15-33.8 W	
5	32-43-31.6 N	081-15-29.8 W	

FCC	60	8
Sched	ule	G

Approved by OMB 3060-1058 See 608 Main Form Instructions for public burden estimate

Number:	12	
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	31-33-55.8 N	081-54-19.2 W	
2	31-33-56.7 N	081-54-11.4 W	
3	31-33-52.0 N	081-53-55.9 W	
4	31-33-45.5 N	081-53-55.0 W	
5	31-33-43.7 N	081-54-18.2 W	
6	31-33-55.8 N	081-54-19.2 W	

F	C	C	60	8
S	ch	ed	ule	G

Approved by OMB 3060-1058 See 608 Main Form Instructions for public burden estimate

Number:	13
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	25-37-06.5 N	080-24-48.7 W
2	25-37-14.5 N	080-24-41.2 W
3	25-37-07.9 N	080-24-28.2 W
4	25-36-59.4 N	080-24-27.9 W
5	25-36-58.9 N	080-24-39.8 W
6	25-37-06.5 N	080-24-48.7 W

F	C	3	6(	30	3
S	che	dı	ule	9 (	3

Approved by OMB 3060-1058 See 608 Main Form Instructions for public burden estimate

Number:	14	

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	41-26-18.6 N	073-28-18.5 W	
2	41-26-19.8 N	073-27-51.5 W	
3	41-26-02.2 N	073-27-50.9 W	
4	41-26-00.4 N	073-28-06.5 W	
5	41-26-18.6 N	073-28-18.5 W	

F	C	C	60	8
S	ch	ed	ule	G

Approved by OMB 3060-1058 See 608 Main Form Instructions for public burden estimate

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	45-05-13.0 N	123-23-26.1 W
2	45-05-12.7 N	123-22-40.1 W
3	45-04-55.2 N	123-22-38.7 W
4	45-04-55.6 N	123-23-28.0 W
5	45-05-13.0 N	123-23-26.1 W

## Attachment(s):

Туре	Description	Date Entered
0	Exhibit 3 - Site Information	01/04/2023
0	Exhibit 2 - Description of Licenses	01/04/2023
0	Exhibit 1 - Description of Transaction	01/04/2023

#### REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



## **Federal Communications Commission**

**Wireless Telecommunications Bureau** 

#### RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: FCC GROUP NEW CINGULAR WIRELESS PCS, LLC 208 S. AKARD ST. 20F DALLAS, TX 75202

<b>Call Sign</b> KNLF288	File Number			
Radio Service				
CW - PCS Broadband				

FCC Registration Number (FRN): 0003291192

registration ramber (11			
<b>Grant Date</b> 06-02-2015	Effective Date 01-14-2023	Expiration Date 06-23-2025	Print Date
Market Number MTA044		nel Block B	Sub-Market Designator
		t Name xville	
1st Build-out Date 06-23-2000	<b>2nd Build-out Date</b> 06-23-2005	3rd Build-out Date	4th Build-out Date

#### Waivers/Conditions:

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

#### **Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

FCC 601-MB August 2021 Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNLF288 File Number: Print Date:

700 MHz Relicensed Area Information:

Market Name Buildout Deadline Buildout Notification Status

## Reference Copy Only. Do Not Mail to the FCC as an Application.

Submitted: 01/13/2023 at 18:08:22

File Number: 0010371578

#### **FCC 601**

#### **Main Form**

1) Radio Service Code:

# FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau Public Safety and Homeland Security Bureau

1a) Existing Radio Service Code:

Approved by OMB

3060 - 0798

See instructions for public burden estimate

cw	
General Information	
2) (Select only one) ( AU )  NE - New MD - Modification AM - Amendment  RO - Renewal Only RM - Renewal/Modification AM - Renewal/Modification CA - Cancellation of License  RU - Administrative Update WD - Withdrawal of Application RL - Registered Location/Link  NT - Required Notification EX - Requests for Ext	
3a) If this application is for a Demonstration License or a <u>Special Temporary Authorization (STA)</u> , enter the code and attach the required exhibit as described in the instructions. Otherwise enter ' <u>N/A</u> ' (Not Applicable).	(N ) <u>M S N/A</u>
3b) If this application is for Special Temporary Authority due to an emergency situation, enter 'Y'; otherwise enter 'N'. Refer to Rule 1.915 for an explanation of situations considered to be an emergency.	( <u>)Y</u> es <u>N</u> o
4) If this application is for an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC.	File Number
5) If this application is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, , or Administrative Update, enter the call sign of the existing FCC license.  If this is a request for Registered Location/Link, enter the FCC call sign assigned to the geographic license.	Call Sign KNLF288
6a) If this application is for a New, Amendment, Renewal Only, or Renewal/Modification, enter the requested authorization expiration date (this item is optional).	MM DD
6b) If this application is for a Renewal Only or Renewal/Modification and the license is a geographic area license, is the license used to provide service to customers ( <b>C</b> ), or is the license used for private business (internal) purposes or to meet the licensee's public interest/public safety communications needs ( <b>P</b> )?	( ) <u>C</u> P
7) Is this application "major" as defined in § 1.929 of the Commission's Rules when read in conjunction with the applicable radio service rules found in Parts 22 and 90 of the Commission's Rules? (NOTE: This question only applies to certain site-specific applications. See the instructions for applicability and full text of § 1.929).	( <u>)Y</u> es <u>N</u> o
8) Are attachments (other than associated schedules) being filed with this application?	( ) <u>Y</u> es <u>N</u> o
Fees, Waivers, and Exemptions	_
9) Is the Applicant exempt from FCC application fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
10) Is the Applicant exempt from FCC regulatory fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
11) Does this application include a request for a Waiver of the Commission's Rule(s)? If 'Yes', attach an exhibit providing rule number(s) and explaining circumstances.	( <b>N</b> ) <u>Y</u> es <u>N</u> o
12) Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station?	( <u>)Y</u> es <u>N</u> o

Applicant Information							
13) FCC Registration Number (FRN):							
0003291192							
14) Applicant/Licensee Legal Entity Type: (Select One ( )Individual ( )Unincorporated Association		ıst (	)Gover	nment Entity	( )Corporation	( X )Limited	Liability Company
( )General Partnership ( )Limited Partnersl	hip ( )L	_imited L	Liability F	Partnership	( )Consortium		
( ) Other:	-4	. I. C	41	/ <b>tf</b>	- f t 1\ - f t   1\ 1	(-) +-	/ Voc No
15) If the Licensee name is being updated, is the upd party and for which proper Commission approve	ate a resu al has no	ot been	received	d or transfer of	notification not prov	ided?	( ) <u>Y</u> es <u>N</u> o
16) First Name (if individual):		MI:	Last Na	me:			Suffix:
17) Legal Entity Name (if other than individual):							
NEW CINGULAR WIRELESS PCS, LLC							
18) Attention To:							
FCC Group							
19) P.O. Box:	And/Or	· 20) S	Street Ad	ldress:			
		2	208 S. A	Akard St. 2	0F		
21) City:					22) State:	23) Zip Coo	le:
Dallas					TX	75202	
24) Telephone Number:				<u>l</u> 25) Fax:		<u> </u>	
(855)699-7073				(214)74	6-6410		
(633)699-7073 26) E-Mail Address:				(= : :/: :			
FCCMW@att.com							
27) Demographics (Optional)							
Race: (     )American Indian or Alaska Native	Ethni	,	ic or Lat	ino	Ge	nder: )Male	
JAmerican mulan of Alaska Native	(	)i iispaii	iic oi Lat	.1110	(	Jiviaie	
( )Asian	(	)Not His	spanic o	r Latino	(	)Female	
( )Black or African-American							
( )Native Hawaiian or Other Pacific Islander							
( )White							
eal Party in Interest							
28) Name of Real Party in Interest of Applicant (If diffe	erent from		2	29) FCC Reg	istration Number (FR	N) of Real Par	ty in Interest:
Applicant):							
ontact Information (If different from the Applicant)							
) Check here if same as Applicant. 30) First Name:		MI:	Last	: Name:			Suffix:
Cecil		J		thew			Guillix.
31) Company Name:							
AT&T Services, Inc.							
32) Attention To:							
FCC Group							
33) P.O. Box:	And	34) St	treet Add	dress:			
·	/Or	20	08 S. A	kard St. 20	F		
35) City:		1		36) State:		37) Zip	Code:
Dallas				TX		75	202
38) Telephone Number: (855)699-7073			3	9) Fax: <b>(214)746</b>	ax: 214)746-6410		
40) E-Mail Address:				-			
FCCMW@att.com							

Reg	ulatory Status											
41)	This filing is for auth	horization to provide or	use the follow	wing type(s) of ra	adio servic	e offering (ente	er all tha	t apply):				
(	) <u>C</u> ommon Carrier	( ) <u>N</u> on-Common	Carrier (	) <u>P</u> rivate, inte	ernal comm	nunications (	) <u>B</u> r	oadcast	Services	(	) <u>B</u> and <u>M</u>	anageı
Туре	e of Radio Service											
42)	This filing is for auth	horization to provide the	e following ty	oe(s) of radio se	rvice (choc	se all that app	ly):					
(	) <u>F</u> ixed	( ) <u>M</u> obile	( ) <u>R</u>	adiolocation	(	) <u>S</u> atellite (so	und)	(	) <u>B</u> roadca	ast Servic	es	
43)	Does the Applicant	propose to provide ser	vice intercon	nected to the pul	blic telepho	ne network?				(	) <u>Y</u> es	<u>N</u> o
		tions (If any answer is ions for the "Alien Ow			t explainin	g the circums	stances.	. In pre	paring the	attachm	ent, refe	er to
44)	Is the Applicant a fo	oreign government or th	ne representa	tive of any foreig	gn governn	nent?				(	) <u>Y</u> es	<u>N</u> o
45)	Is the Applicant an	alien or the representat	tive of an alie	n?						(	) <u><b>Y</b></u> es	<u>N</u> o
46)	Is the Applicant a c	orporation organized ur	nder the laws	of any foreign g	overnment	?				(	) <u>Y</u> es	<u>N</u> o
the	• • •	corporation of which mo or by a foreign governm		•				•		( a	) <u>Y</u> es	<u>N</u> o

48a) Is the Applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock ( ) Yes No is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any
corporation organized under the laws of a foreign country?
48b) If the answer to 47 or 48a is 'Y' select one of the choices below.
The Applicant is exempt from the provisions of Section 310(b).
It is not necessary to file a petition for declaratory ruling if the Applicant includes in the attachment required by Item 47 or Item 48a a showing that the requested license(s) is exempt from the provisions of Section 310(b).
The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.
If checked, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Applicant since the issuance of its ruling.
The Applicant: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specified immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/Sublessee that received a declaratory ruling(s) under 47 CFR § 1.5000(a) and is relying on the affiliate's ruling for purposes of filing this application as permitted under the affiliate's ruling and 47 CFR § 1.5004(b)
If checked, and if the Applicant received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 47 or Item 48a the citation(s) of the Applicant's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of its ruling and with the Commission's Rules.
If checked, and if the Applicant received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 48a a copy of a petition for declaratory ruling filed contemporaneously with the Commission to extend the Applicant's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s) involved in the application. Alternatively, the Applicant may request a new declaratory ruling pursuant to Section 1.5000(a) of the Commission's Rules, 47 CFR § 1.5000 (a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).
If checked, and if the Applicant is relying on an affiliate's ruling for purposes of filing this application, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rules. The Applicant must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in 47 CFR § 1.5004(b). See Main Form Instructions for Items 47 or 48a, as applicable.
The Applicant has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under 47 CFR § 1.5004(b) in a petition filed contemporaneously with the Commission.
If checked, include in the attachment required by Item 47 or 48a a copy of the petition for declaratory ruling filed contemporaneously with the Commission pursuant to 47 CFR § 1.5004(b). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).

Basic Qualification Questions			
49) Has the Applicant or any party to this application had any FCC station authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission?	( n	) <u>Y</u> es	<u>N</u> o
50) Has the Applicant or any party to this application, or any party directly or indirectly controlling the Applicant, ever been convicted of a felony by any state or federal court?	(	) <u>Y</u> es	<u>N</u> o
51) Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?	(	) <u>Y</u> es	<u>N</u> o
Note: If the answer to any of 49-51 is 'Y', attach an exhibit explaining the circumstances.			
Aeronautical Advisory Station (Unicom) Certification  52) ( ) I certify that the station will be located on property of the airport to be served, and, in cases where the airport does not hat tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations local within ten days prior to application.			t
Broadband Radio Service and Educational Broadband Service Cable Cross-Ownership			
53a) Will the requested facilities be used to provide multichannel video programming service?	(	) <u>Y</u> es	<u>N</u> o
53b) If the answer to question 53a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in 47 CFR § 27.1202) in a cable television system whose franchise area is located within the geographic service area of the requested facilities?	(	) <u>Y</u> es	<u>N</u> o
Note: If the answer to question 53b is 'Y', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1202 or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.			
Broadband Radio Service and Educational Broadband Service (Part 27)			
54) (For EBS only) Does the Applicant comply with the programming requirements contained in 47 CFR § 27.1203?	(	) <u>Y</u> es	<u>N</u> o
Note: If the answer to item 54 is 'N', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.	е		
55) (For BRS and EBS) Does the Applicant comply with 47 CFR §§ 27.50, 27.55, and 27.1221?	(	) <u><b>Y</b></u> es	<u>N</u> o
Note: If the answer to item 55 is 'N', attach an exhibit justifying a waiver of that rule(s). If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.			
For Applicants Who Participated in an Auction			
56) Is the Applicant a qualifying rural wireless partnership or a member of a qualifying rural wireless partnership?	(	) <u>Y</u> e	s <u>N</u> o
<b>Note:</b> If the answer to item 56 is 'Y', attach an exhibit listing all members of the qualifying rural wireless partnership, including the FRN numbers.	eir		
For Renewal Applicants 57) Operation/Performance Requirement Certification			
[For a site based licensed: Applicant cortifies that it is continuing to energic consistent with its most recently filed construction	( )	<b>Y</b> es <b>N</b> o	
For a geographic license, commercial service - licensee in its initial license term with an interim performance	( )	<u>Y</u> es <u>N</u> o	
<b>requirement]</b> : Applicant certifies that it has met its interim performance requirement, that over the portion of the license term following the interim performance requirement, it continues to use its facilities to provide at least the level of service required by its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term.	,		
[For a geographic license, commercial service - licensee in its initial license term with no interim performance requirement]: Applicant certifies that it has met its final performance requirement and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]	( )	<u>Y</u> es <u>N</u> o	
[For a geographic license, commercial service - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of any subsequent license terms.	( )	<u>Y</u> es <u>N</u> o	
For a geographic license, private systems - licensee in its initial license term with an interim performance	( )	<u>Y</u> es <u>N</u> o	
[For a geographic license, private systems - licensee in its initial license term with no interim performance requirement]: Applicant certifies that it has met its final performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs, and it continues to use its facilities to provide at least the level of operation required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]	( )	<u>Y</u> es <u>N</u> o	

<b>[For a geographic license, private systems - licensee in any subsequent term]</b> : Applicant certifies that it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for the first renewal application filed after effective date of the rules]: Applicant certifies that the partitioned and/or disaggregated license that is the subject of this renewal application has no separate performance requirement and that this is the first renewal of this license filed subsequent to the effective date of the rules.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for any subsequent renewal filings]: Applicant certifies that it continues to use its facilities to provide service or to further the applicant's private business or public interest/public safety needs.	(	) <u>Y</u> es <u>N</u> o

#### **Discontinuance of Service Certification**

license term.	( ) <u>Y</u> es <u>N</u> o
Note: If the response to either item 57 or item 58 is 'N', attach an exhibit that demonstrates that over the course of the license term, the Applicant provided and continues to provide service to the public, or operated and continues to operate the license to meet the Applicant's private business or public interest/public safety communications needs. This exhibit must include a detailed description of the Applicant's provision of service or, when allowed under the relevant service rules or pursuant to waiver, use of the spectrum for private business or public interest/public safety communications needs, during the entire license period and address, as applicable: 1) the level and quality of service provided by the applicant (e.g., the population served, the area served, the number of subscribers, the services offered); (2) the date service commenced, whether service was ever interrupted, and the duration of any interruption or outage; (3) the extent to which service is provided to rural areas; (4) the extent to which service is provided to rural areas; (4) the extent to which service is provided to qualifying tribal land as defined in 47 CFR § 1.2110(e)(3)(i); and (5) any other factors associated with the level of service to the public. The licensee may note in its exhibit: 1) any grant(s) of waiver or extension of a performance deadline or license renewal subject to meeting a performance requirement; or 2) if the final performance deadline and/or expiration date for the license accelerated because the licensee did not meet an interim performance requirement.	

Regulatory Compliance Certification [same for all]

regulatory compliance continuation [came for all]		
59) Applicant certifies that it has substantially complied with all applicable FCC rules, policies, and the Communications Act of 1934, as amended.	( ) <u>Y</u> es <u>N</u> o	
<b>Note:</b> If the response to item 59 is 'N', attach an exhibit explaining the circumstances and demonstrating why Applicant's license should be renewed.		

#### **General Certification Statements**

- 1) The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application.
- 2) The Applicant certifies that grant of this application would not cause the Applicant to be in violation of any pertinent cross-ownership or attribution rules.\*

  \*If the Applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcome of the waiver request.
- 3) The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference are material, are part of this application, and are true, complete, correct, and made in good faith.
- 4) The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to § 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under § 1.2002(c) of the rules, 47 CFR § 1.2002(c). See 47 CFR § 1.2002(b) for the definition of "party to the" application" as used in this certification
- 5) The Applicant certifies that it either (1) has current required ownership data on file with the Commission, (2) is filing updated ownership data simultaneously with this application, or (3) is not required to file ownership data under the Commission's Rules.
- 6) The Applicant certifies that the facilities, operations, and transmitters for which this authorization is hereby requested are either: (1) categorically excluded from routine environmental evaluation for RF exposure as set forth in 47 CFR § 1.1307(b); or, (2) have been found not to cause human exposure to levels of radiofrequency radiation in excess of the limits specified in 47 CFR §§ 1.1310 and 2.1093; or, (3) are the subject of one or more Environmental Assessments filed with the Commission.
- 7) The Applicant certifies that it has reviewed the appropriate Commission Rules defining eligibility to hold the requested license(s) and is eligible to hold the requested license(s).
- 8) The Applicant certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
- 9) The Applicant certifies that the Applicant and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

#### Signature

60)Typed or Printed Name of Par	ty Authorized to Sign			
First Name:		NAI-	Last Namo:	

First Name:	MI:	Last Name:	Suffix:
Cecil	J	Mathew	
61) Title: Assistant Secretary - Compliance			
Signature:			62) Date:
Cecil J Mathew			01/13/2023

#### FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

Upon grant of this license application, the Licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, § 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, § 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, § 503).

#### REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



## **Federal Communications Commission**

**Wireless Telecommunications Bureau** 

#### RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: FCC GROUP NEW CINGULAR WIRELESS PCS, LLC 208 S. AKARD ST. 20F DALLAS, TX 75202

<b>Call Sign</b> KNLH398	File Number			
Radio Service				
CW - PCS	Broadband			

FCC Registration Number (FRN): 0003291192

<b>Grant Date</b> 04-14-2017	Effective Date 01-14-2023	Expiration Date 04-28-2027	Print Date
Market Number BTA252		nel Block D	Sub-Market Designator
		t Name con, KY	
1st Build-out Date 04-28-2002	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

#### Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

#### **Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

FCC 601-MB August 2021 Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: KNLH398 File Number: Print Date:

700 MHz Relicensed Area Information:

Market Name Buildout Deadline Buildout Notification Status

## Reference Copy Only. Do Not Mail to the FCC as an Application.

Submitted: 01/13/2023 at 08:55:27

File Number: 0010359082

#### **FCC 601**

#### **Main Form**

# FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau Public Safety and Homeland Security Bureau

Approved by OMB

3060 - 0798

See instructions for public burden estimate

1)	Radio Service Code:  1a) Existing Radio Service Code:	
	CW	
	eral Information	
2)	(Select only one) ( AU )  NE - New RO - Renewal Only AU - Administrative Update MD - Modification RM - Renewal/Modification AM - Amendment CA - Cancellation of License RL - Registered Location/Link  NT - Required Notification EX - Requests for Ext	
3a)	If this application is for a Demonstration License or a <u>S</u> pecial Temporary Authorization (STA), enter the code and attach the required exhibit as described in the instructions. Otherwise enter ' <u>N/A</u> ' (Not Applicable).	(N ) <u>M S N/A</u>
3b)	If this application is for Special Temporary Authority due to an emergency situation, enter 'Y'; otherwise enter 'N'. Refer to Rule 1.915 for an explanation of situations considered to be an emergency.	( <u>)Y</u> es <u>N</u> o
4)	If this application is for an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC.	File Number
5)	If this application is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, , or Administrative Update, enter the call sign of the existing FCC license.  If this is a request for Registered Location/Link, enter the FCC call sign assigned to the geographic license.	Call Sign KNLH398
6a)	If this application is for a New, Amendment, Renewal Only, or Renewal/Modification, enter the requested authorization expiration date (this item is optional).	MM DD
6b)	If this application is for a Renewal Only or Renewal/Modification and the license is a geographic area license, is the license used to provide service to customers ( <b>C</b> ), or is the license used for private business (internal) purposes or to meet the licensee's public interest/public safety communications needs ( <b>P</b> )?	( ) <u>C</u> <u>P</u>
7) Is	s this application "major" as defined in § 1.929 of the Commission's Rules when read in conjunction with the applicable radio service rules found in Parts 22 and 90 of the Commission's Rules? (NOTE: This question only applies to certain site-specific applications. See the instructions for applicability and full text of § 1.929).	( ) <u>Y</u> es <u>N</u> o
8)	Are attachments (other than associated schedules) being filed with this application?	( ) <u>Y</u> es <u>N</u> o
	s, Waivers, and Exemptions	
9)	Is the Applicant exempt from FCC application fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
	) Is the Applicant exempt from FCC regulatory fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
	) Does this application include a request for a Waiver of the Commission's  Rule(s)? If 'Yes', attach an exhibit providing rule number(s) and explaining  circumstances.	( <b>N</b> ) <u>Y</u> es <u>N</u> o
12)	Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station?	( <u>)Y</u> es <u>N</u> o

FCC 601 – Main Form April 2022 – Page 1

Applicant Information								
13) FCC Registration Number (FRN): 0003291192								
14) Applicant/Licensee Legal Entity Type: (Select One) ( )Individual ( )Unincorporated Association (		ıst (	)Gove	nment Entity	( )Corporation	on (X	( )Limited	Liability Company
( )General Partnership ( )Limited Partnership	p ( )L	_imited L	iability	Partnership	( )Consortiu	m		
( ) Other:								
15) If the Licensee name is being updated, is the updat party and for which proper Commission approval								( ) <u>Y</u> es <u>N</u> o
16) First Name (if individual):		MI: I	Last Na	me:				Suffix:
17) Legal Entity Name (if other than individual):								
NEW CINGULAR WIRELESS PCS, LLC								
18) Attention To:								
Cecil J Mathew								
19) P.O. Box:	And/Or	20) S	treet A	ddress:				
		2	08 S.	Akard St. 20I	•			
21) City:				2	2) State:	2	3) Zip Cod	le:
Dallas					TX		75202	
24) Telephone Number:				25) Fax:		<u> </u>		
(855)699-7073				(214)746-	6410			
26) E-Mail Address:								
FCCMW@att.com								
27. 2								
27) <b>Demographics (Optional)</b> Race:	Ethni	citv:				Gender	•	
( )American Indian or Alaska Native		)Hispani	ic or La	tino			lale	
( )Asian	(	)Not His	panic o	r Latino		( )F	emale	
( )Black or African-American								
( )Native Hawaiian or Other Pacific Islander								
( )White								
eal Party in Interest								
28) Name of Real Party in Interest of Applicant (If different Applicant):	ent from	l		29) FCC Regist	ration Number	(FRN) o	f Real Par	ty in Interest:
Contact Information (If different from the Applicant)) Check here if same as Applicant.			,					
30) First Name:		MI:		t Name:				Suffix:
Cecil		J	Ma	ithew				
31) Company Name: AT&T Services, LLC								
32) Attention To: FCC Group								
33) P.O. Box:	And /Or		reet Ad	dress: kard St. 20F				
35) City: Dallas	1	1		36) State: <b>TX</b>				Code: 202
38) Telephone Number: (855)699-7073			3	9) Fax: <b>(214)746-</b> 6	6410		7	
40) E-Mail Address: FCCMW@att.com								

	julatory Status														
41	) This filing is for	authoriza	tion to provide o	r use the f	ollowii	ng type(s) of ra	adio servic	e offering (er	nter all	that appl	y):				
(	) <u>C</u> ommon Carr	ier (	) <u>N</u> on-Commo	n Carrier	(	) <u>P</u> rivate, inte	ernal comm	nunications	(	) <u>B</u> roadca	ast Ser	vices	(	) <u>B</u> and <u>M</u>	anager
Тур	e of Radio Servi	ce													
42	) This filing is for	authoriza	tion to provide th	e followin	g type	e(s) of radio se	rvice (choc	se all that a	oply):						
(	) <u>F</u> ixed	(	) <u>M</u> obile	(	) <u>R</u> ac	liolocation	(	) <u>S</u> atellite (s	sound)	(	) <u>E</u>	oadca:	st Servi	ices	
43	) Does the Applic	ant propo	se to provide se	rvice inter	conne	ected to the pul	blic telepho	one network	?				(	) <u>Y</u> es	<u>N</u> o
	n Ownership Qu Main Form Instr						t explainin	g the circur	nstan	ces. In p	repari	ng the a	attachr	nent, ref	er to
44	) Is the Applicant	a foreign	government or t	he repres	entativ	e of any foreig	gn governn	nent?					(	) <u><b>Y</b></u> es	<u>N</u> o
45	) Is the Applicant	an alien o	or the representa	ative of an	alien?	?							(	)Yes	No
4.0	) Is the Applicant	a cornors											`	7-	<u> 14</u> 0
46	, , , , ,	a corpora	tion organized ι	ınder the I	aws o	f any foreign g	jovernment	?					(	) <u>Y</u> es	<u>N</u> o

48a) Is the Applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock ( ) Yes No is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any	
corporation organized under the laws of a foreign country?	
48b) If the answer to 47 or 48a is 'Y' select one of the choices below.	
The Applicant is exempt from the provisions of Section 310(b).	
It is not necessary to file a petition for declaratory ruling if the Applicant includes in the attachment required by Item 47 or Item 48a a showi that the requested license(s) is exempt from the provisions of Section 310(b).	ng
The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.	al
If checked, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC numbers the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Applications of the issuance of its ruling.	
The Applicant: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specification immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/Sublessee that received a declaratory ruling(s) under 47 CFR § 1.5000(a) a is relying on the affiliate's ruling for purposes of filing this application as permitted under the affiliate's ruling and 47 CFR § 1.5004(b)	ed nd
If checked, and if the Applicant received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 47 Item 48a the citation(s) of the Applicant's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and statement that the Applicant is in compliance with the terms and conditions of its ruling and with the Commission's Rules.	
If checked, and if the Applicant received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 48a a confunction for declaratory ruling filed contemporaneously with the Commission to extend the Applicant's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s) involved in the application. Alternatively, the Applicant may request a new declaratory ruling pursuant to Section 1.5000(a) of the Commission's Rules, 47 CFR § 1.5000 (a). Petitions for declaratory ruling may be filed electronication on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).	ne
If checked, and if the Applicant is relying on an affiliate's ruling for purposes of filing this application, include in the attachment required by Ite 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, a statement that the Applicant is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rule The Applicant must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in 47 CFF 1.5004(b). See Main Form Instructions for Items 47 or 48a, as applicable.	nd es.
The Applicant has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under 47 CFF 1.5004(b) in a petition filed contemporaneously with the Commission.	§
If checked, include in the attachment required by Item 47 or 48a a copy of the petition for declaratory ruling filed contemporaneously with to Commission pursuant to 47 CFR § 1.5004(b). Petitions for declaratory ruling may be filed electronically on the Internet through the Internation Bureau Filing System (IBFS) (with a copy attached hereto).	

Basic Qualification Questions			
49) Has the Applicant or any party to this application had any FCC station authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construct permit denied by the Commission?	ion (	) <u>Y</u> •	es <u>N</u> o
50) Has the Applicant or any party to this application, or any party directly or indirectly controlling the Applicant, ever been convicted of a felony by any state or federal court?	(	( ) <u>Y</u>	es <u>N</u> o
51) Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?		( <u>)Y</u>	es <u>N</u> o
Note: If the answer to any of 49-51 is 'Y', attach an exhibit explaining the circumstances.			
Aeronautical Advisory Station (Unicom) Certification			
52) ( ) I certify that the station will be located on property of the airport to be served, and, in cases where the airport does not he tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations low within ten days prior to application.			oort
Broadband Radio Service and Educational Broadband Service Cable Cross-Ownership			
53a) Will the requested facilities be used to provide multichannel video programming service?	(	( ) <u>Y</u>	es <u>N</u> o
53b) If the answer to question 53a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in 47 CFR § 27.1202) in a cable television system whose franchise area is located within the geographic service area of the requested facilities?	(	<u>(</u> ) <u>Y</u>	es <u>N</u> o
Note: If the answer to question 53b is 'Y', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1202 or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.			
Broadband Radio Service and Educational Broadband Service (Part 27)			
54) (For EBS only) Does the Applicant comply with the programming requirements contained in 47 CFR § 27.1203?	(	) <u>Y</u> e	es <u>N</u> o
Note: If the answer to item 54 is 'N', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must answered 'Y'.	t be		
55) (For BRS and EBS) Does the Applicant comply with 47 CFR §§ 27.50, 27.55, and 27.1221?	(	) <u>Y</u> (	es <u>N</u> o
<b>Note:</b> If the answer to item 55 is 'N', attach an exhibit justifying a waiver of that rule(s). If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.	s		
For Applicants Who Participated in an Auction			
56) Is the Applicant a qualifying rural wireless partnership or a member of a qualifying rural wireless partnership?		( )	Yes <u>N</u> o
Note: If the answer to item 56 is 'Y', attach an exhibit listing all members of the qualifying rural wireless partnership, including FRN numbers.	their		
For Renewal Applicants			
57) Operation/Performance Requirement Certification	1		
For a site-based license]: Applicant certifies that it is continuing to operate consistent with its most recently filed construction obtification (or most recent authorization, if no construction notification was required).	(	) <u>Y</u> es <u>N</u>	<u>l</u> o
For a geographic license, commercial service - licensee in its initial license term with an interim performance	(	) <u>Y</u> es <u>N</u>	lo
requirement]: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term ollowing the interim performance requirement, it continues to use its facilities to provide at least the level of service required by its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term.	,	<i>,</i> – –	•
For a geographic license, commercial service - licensee in its initial license term with no interim performance equirement]: Applicant certifies that it has met its final performance requirement and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term. [Note: licensee nust provide a showing demonstrating that the final performance requirement has been met, either separately in a timely	(	) <u>Y</u> es <u>N</u>	lo
application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]			
For a geographic license, commercial service - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> es <u>N</u>	<u>l</u> o
For a geographic license, private systems - licensee in its initial license term with an interim performance equirement]: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term ollowing the interim performance requirement, it continues to use its facilities to further its private business or public nterest/public safety communications needs at or above the level required to meet its interim performance requirement, it has	(	) <u>Y</u> es <u>N</u>	lo
net its final performance requirement, and it continues to use its facilities to provide at least the level of operation required by its inal performance requirement through the end of the license term.			
For a geographic license, private systems - licensee in its initial license term with no interim performance equirement]: Applicant certifies that it has met its final performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs, and it continues to use its facilities to provide at least the	(	) <u>Y</u> es <u>N</u>	<u>l</u> o

level of operation required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]

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[For a geographic license, private systems - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for the first renewal application filed after effective date of the rules]: Applicant certifies that the partitioned and/or disaggregated license that is the subject of this renewal application has no separate performance requirement and that this is the first renewal of this license filed subsequent to the effective date of the rules.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for any subsequent renewal filings]: Applicant certifies that it continues to use its facilities to provide service or to further the applicant's private business or public interest/public safety needs.	(	) <u>Y</u> es <u>N</u> o
Discontinuance of Service Certification		
58) Applicant certifies that no permanent discontinuance of service or operation, as applicable, occurred during its current license term.	(	) <u>Y</u> es <u>N</u> o
Note: If the response to either item 57 or item 58 is 'N', attach an exhibit that demonstrates that over the course of the license term, the Applicant provided and continues to provide service to the public, or operated and continues to operate the license to meet the Applicant's private business or public interest/public safety communications needs. This exhibit must include a detailed description of the Applicant's provision of service or, when allowed under the relevant service rules or pursuant to waiver, use of the spectrum for private business or public interest/public safety communications needs, during the entire license period and address, as applicable: 1) the level and quality of service provided by the applicant (e.g., the population served, the area served, the number of subscribers, the services offered); (2) the date service commenced, whether service was ever interrupted, and the duration of any interruption or outage; (3) the extent to which service is provided to rural areas; (4) the extent to which service is provided to qualifying tribal land as defined in 47 CFR § 1.2110(e)(3)(i); and (5) any other factors associated with the level of service to the public. The licensee may note in its exhibit: 1) any grant(s) of waiver or extension of a performance deadline or license renewal subject to meeting a performance requirement; or 2) if the final performance deadline and/or expiration date for the license accelerated because the licensee did not meet an interim performance requirement.		
Regulatory Compliance Certification [same for all]		1
59) Applicant certifies that it has substantially complied with all applicable FCC rules, policies, and the Communications Act of 1934, as amended.	(	) <u>Y</u> es <u>N</u> o
<b>Note:</b> If the response to item 59 is 'N', attach an exhibit explaining the circumstances and demonstrating why Applicant's license should be renewed.		
Consumal Contributions Chatamagnets		
General Certification Statements  1) The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory po	wer of	the United States
because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application		and office offices

- 2) The Applicant certifies that grant of this application would not cause the Applicant to be in violation of any pertinent cross-ownership or attribution rules.\*

  \*If the Applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcome of the waiver request.
- 3) The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference are material, are part of this application, and are true, complete, correct, and made in good faith.
- 4) The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to § 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under § 1.2002(c) of the rules, 47 CFR § 1.2002(c). See 47 CFR § 1.2002(b) for the definition of "party to the" application" as used in this certification.
- 5) The Applicant certifies that it either (1) has current required ownership data on file with the Commission, (2) is filing updated ownership data simultaneously with this application, or (3) is not required to file ownership data under the Commission's Rules.
- 6) The Applicant certifies that the facilities, operations, and transmitters for which this authorization is hereby requested are either: (1) categorically excluded from routine environmental evaluation for RF exposure as set forth in 47 CFR § 1.1307(b); or, (2) have been found not to cause human exposure to levels of radiofrequency radiation in excess of the limits specified in 47 CFR §§ 1.1310 and 2.1093; or, (3) are the subject of one or more Environmental Assessments filed with the Commission.
- 7) The Applicant certifies that it has reviewed the appropriate Commission Rules defining eligibility to hold the requested license(s) and is eligible to hold the requested license(s).
- 8) The Applicant certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency
- The Applicant certifies that the Applicant and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

60)Typed	or Printed	Name of	Party Au	thorized to	Sian

First Name:	MI:	Last Name:	Suffix:
Cecil	J	Mathew	
61) Title: Assistant Secretary - Compliance	_		•
Signature:			62) Date:
Cecil J Mathew			01/13/2023

Upon grant of this license application, the Licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application.

Submitted: 01/13/2023 at 18:08:22

File Number: 0010367813

# **FCC 601**

## **Main Form**

1) Radio Service Code:

# FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau Public Safety and Homeland Security Bureau

1a) Existing Radio Service Code:

Approved by OMB

3060 - 0798

See instructions for public burden estimate

CW	
General Information	
2) (Select only one) ( AU )  NE - New RO - Renewal Only MD - Modification RM - Renewal/Modification AM - Amendment  CA - Cancellation of License  AU - Administrative Update WD - Withdrawal of Application RL - Registered Location/Link  NT - Required Notifi EX - Requests for E	
3a) If this application is for a Demonstration License or a <u>S</u> pecial Temporary Authorization (STA), enter the code and attach the required exhibit as described in the instructions. Otherwise enter ' <u>N/A</u> ' (Not Applicable).	(N ) <u>M</u> <u>S N/A</u>
3b) If this application is for Special Temporary Authority due to an emergency situation, enter 'Y'; otherwise enter 'N'. Refer to Rule 1.915 for an explanation of situations considered to be an emergency.	( <u>)Y</u> es <u>N</u> o
4) If this application is for an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC.	File Number
5) If this application is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, , or Administrative Update, enter the call sign of the existing FCC license.  If this is a request for Registered Location/Link, enter the FCC call sign assigned to the geographic license.	Call Sign KNLH398
6a) If this application is for a New, Amendment, Renewal Only, or Renewal/Modification, enter the requested authorization expiration date (this item is optional).	MM DD
6b) If this application is for a Renewal Only or Renewal/Modification and the license is a geographic area license, is the license used to provide service to customers (C), or is the license used for private business (internal) purposes or to meet the licensee's public interest/public safety communications needs (P)?	( ) <u>C</u> <u>P</u>
7) Is this application "major" as defined in § 1.929 of the Commission's Rules when read in conjunction with the applicable radio service rules found in Parts 22 and 90 of the Commission's Rules? (NOTE: This question only applies to certain site-specific applications. See the instructions for applicability and full text of § 1.929).	( <u>)Y</u> es <u>N</u> o
8) Are attachments (other than associated schedules) being filed with this application?	( <u>)Y</u> es <u>N</u> o
Fees, Waivers, and Exemptions	
9) Is the Applicant exempt from FCC application fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
10) Is the Applicant exempt from FCC regulatory fees?	(N) <u>Y</u> es <u>N</u> o
11) Does this application include a request for a Waiver of the Commission's Rule(s)? If 'Yes', attach an exhibit providing rule number(s) and explaining circumstances.	( <b>N</b> ) <u>Y</u> es <u>N</u> o
12) Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station?	( <u>)Y</u> es <u>N</u> o

Applicant Information							
13) FCC Registration Number (FRN):							
0003291192							
14) Applicant/Licensee Legal Entity Type: (Select One ( )Individual ( )Unincorporated Association		ıst (	)Gover	nment Entity	( )Corporation	( X )Limited	Liability Company
( )General Partnership ( )Limited Partnersl	hip ( )L	_imited L	Liability F	Partnership	( )Consortium		
( ) Other:	-4	. I. C	41	/ <b>tf</b>	- f t 1\ - f th 1!	(-) +-	/ Voc No
15) If the Licensee name is being updated, is the upd party and for which proper Commission approve	ate a resu al has no	ot been	received	d or transfer of	notification not prov	ided?	( ) <u>Y</u> es <u>N</u> o
16) First Name (if individual):		MI:	Last Na	me:			Suffix:
17) Legal Entity Name (if other than individual):							
NEW CINGULAR WIRELESS PCS, LLC							
18) Attention To:							
FCC Group							
19) P.O. Box:	And/Or	· 20) S	Street Ad	ldress:			
		2	208 S. <i>A</i>	Akard St. 2	0F		
21) City:					22) State:	23) Zip Coo	le:
Dallas					TX	75202	
24) Telephone Number:				<u>l</u> 25) Fax:		<u> </u>	
(855)699-7073				(214)74	6-6410		
(633)699-7073 26) E-Mail Address:				(= : :/: :			
FCCMW@att.com							
27) Demographics (Optional)							
Race: (     )American Indian or Alaska Native	Ethni	,	ic or Lat	ino	Ge	nder: )Male	
American mulan of Alaska Native	(	)i iispaii	iic oi Lat	.1110	(	Jiviaie	
( )Asian	(	)Not His	spanic o	r Latino	(	)Female	
( )Black or African-American							
( )Native Hawaiian or Other Pacific Islander							
( )White							
eal Party in Interest							
28) Name of Real Party in Interest of Applicant (If diffe	erent from		2	29) FCC Reg	istration Number (FR	N) of Real Par	ty in Interest:
Applicant):							
ontact Information (If different from the Applicant)							
) Check here if same as Applicant. 30) First Name:		MI:	Last	: Name:			Suffix:
Cecil		J		thew			Guillix.
31) Company Name:							
AT&T Services, Inc.							
32) Attention To:							
FCC Group							
33) P.O. Box:	And	34) St	treet Add	dress:			
·	/Or	20	08 S. A	kard St. 20	F		
35) City:		1		36) State:		37) Zip	Code:
Dallas				TX		75	202
38) Telephone Number: (855)699-7073			3	9) Fax: <b>(214)746</b>	i-6410		
40) E-Mail Address:				-			
FCCMW@att.com							

Reg	ulatory Status											
41)	This filing is for auth	horization to provide or	use the follow	wing type(s) of ra	adio servic	e offering (ente	er all tha	t apply):				
(	) <u>C</u> ommon Carrier	( ) <u>N</u> on-Common	Carrier (	) <u>P</u> rivate, inte	ernal comm	nunications (	) <u>B</u> r	oadcast	Services	(	) <u>B</u> and <u>M</u>	anageı
Туре	e of Radio Service											
42)	This filing is for auth	horization to provide the	e following ty	oe(s) of radio se	rvice (choc	se all that app	ly):					
(	) <u>F</u> ixed	( ) <u>M</u> obile	( ) <u>R</u>	adiolocation	(	) <u>S</u> atellite (so	und)	(	) <u>B</u> roadca	ast Servic	es	
43)	Does the Applicant	propose to provide ser	vice intercon	nected to the pul	blic telepho	ne network?				(	) <u>Y</u> es	<u>N</u> o
		tions (If any answer is ions for the "Alien Ow			t explainin	g the circums	stances.	. In pre	paring the	attachm	ent, refe	er to
44)	Is the Applicant a fo	oreign government or th	ne representa	tive of any foreig	gn governn	nent?				(	) <u>Y</u> es	<u>N</u> o
45)	Is the Applicant an	alien or the representat	tive of an alie	n?						(	) <u><b>Y</b></u> es	<u>N</u> o
46)	Is the Applicant a c	orporation organized ur	nder the laws	of any foreign g	overnment	?				(	) <u>Y</u> es	<u>N</u> o
the	• • •	corporation of which mo or by a foreign governm		•				•		( a	) <u>Y</u> es	<u>N</u> o

48a) Is the Applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock ( ) Yes No is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any
corporation organized under the laws of a foreign country?
48b) If the answer to 47 or 48a is 'Y' select one of the choices below.
The Applicant is exempt from the provisions of Section 310(b).
It is not necessary to file a petition for declaratory ruling if the Applicant includes in the attachment required by Item 47 or Item 48a a showing that the requested license(s) is exempt from the provisions of Section 310(b).
The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.
If checked, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Applicant since the issuance of its ruling.
The Applicant: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specified immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/Sublessee that received a declaratory ruling(s) under 47 CFR § 1.5000(a) and is relying on the affiliate's ruling for purposes of filing this application as permitted under the affiliate's ruling and 47 CFR § 1.5004(b)
If checked, and if the Applicant received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 47 or Item 48a the citation(s) of the Applicant's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of its ruling and with the Commission's Rules.
If checked, and if the Applicant received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 48a a copy of a petition for declaratory ruling filed contemporaneously with the Commission to extend the Applicant's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s) involved in the application. Alternatively, the Applicant may request a new declaratory ruling pursuant to Section 1.5000(a) of the Commission's Rules, 47 CFR § 1.5000 (a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).
If checked, and if the Applicant is relying on an affiliate's ruling for purposes of filing this application, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rules. The Applicant must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in 47 CFR § 1.5004(b). See Main Form Instructions for Items 47 or 48a, as applicable.
The Applicant has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under 47 CFR § 1.5004(b) in a petition filed contemporaneously with the Commission.
If checked, include in the attachment required by Item 47 or 48a a copy of the petition for declaratory ruling filed contemporaneously with the Commission pursuant to 47 CFR § 1.5004(b). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).

Basic Qualification Questions			
49) Has the Applicant or any party to this application had any FCC station authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission?	( n	) <u>Y</u> es	<u>N</u> o
50) Has the Applicant or any party to this application, or any party directly or indirectly controlling the Applicant, ever been convicted of a felony by any state or federal court?	(	) <u>Y</u> es	<u>N</u> o
51) Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?	(	) <u>Y</u> es	<u>N</u> o
Note: If the answer to any of 49-51 is 'Y', attach an exhibit explaining the circumstances.			
Aeronautical Advisory Station (Unicom) Certification  52) ( ) I certify that the station will be located on property of the airport to be served, and, in cases where the airport does not hat tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations local within ten days prior to application.			t
Broadband Radio Service and Educational Broadband Service Cable Cross-Ownership			
53a) Will the requested facilities be used to provide multichannel video programming service?	(	) <u>Y</u> es	<u><b>N</b></u> o
53b) If the answer to question 53a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in 47 CFR § 27.1202) in a cable television system whose franchise area is located within the geographic service area of the requested facilities?	(	) <u>Y</u> es	<u>N</u> o
Note: If the answer to question 53b is 'Y', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1202 or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.			
Broadband Radio Service and Educational Broadband Service (Part 27)			
54) (For EBS only) Does the Applicant comply with the programming requirements contained in 47 CFR § 27.1203?	(	) <u>Y</u> es	<u>N</u> o
<b>Note:</b> If the answer to item 54 is 'N', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.	е		
55) (For BRS and EBS) Does the Applicant comply with 47 CFR §§ 27.50, 27.55, and 27.1221?	(	) <u>Y</u> es	<u>N</u> o
<b>Note:</b> If the answer to item 55 is 'N', attach an exhibit justifying a waiver of that rule(s). If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.			
For Applicants Who Participated in an Auction			
56) Is the Applicant a qualifying rural wireless partnership or a member of a qualifying rural wireless partnership?	(	) <u>Y</u> e	s <u>N</u> o
<b>Note:</b> If the answer to item 56 is 'Y', attach an exhibit listing all members of the qualifying rural wireless partnership, including the FRN numbers.	eir		
For Renewal Applicants 57) Operation/Performance Requirement Certification			
[For a site based licensel: Applicant certifies that it is continuing to operate consistent with its most recently filed construction	( )	<b>Y</b> es <u>N</u> o	
For a geographic license, commercial service - licensee in its initial license term with an interim performance	( )	Yes No	
its interim performance requirement, it continues to use its facilities to provide at least the level of service required by its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term.			
For a geographic license, commercial service - licensee in its initial license term with no interim performance	( )	<u>Y</u> es <u>N</u> o	
For a goographic license, commercial service. Ilicenses in any subsequent term? Applicant cortifies that it continues to	( )	<b>Y</b> es <u>N</u> o	
For a geographic license, private systems - licensee in its initial license term with an interim performance	( ):	<u>Y</u> es <u>N</u> o	
[For a geographic license, private systems - licensee in its initial license term with no interim performance requirement]: Applicant certifies that it has met its final performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs, and it continues to use its facilities to provide at least the level of operation required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]	) ]	<u>Y</u> es <u>N</u> o	

<b>[For a geographic license, private systems - licensee in any subsequent term]</b> : Applicant certifies that it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for the first renewal application filed after effective date of the rules]: Applicant certifies that the partitioned and/or disaggregated license that is the subject of this renewal application has no separate performance requirement and that this is the first renewal of this license filed subsequent to the effective date of the rules.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for any subsequent renewal filings]: Applicant certifies that it continues to use its facilities to provide service or to further the applicant's private business or public interest/public safety needs.	(	) <u>Y</u> es <u>N</u> o

# **Discontinuance of Service Certification**

license term.	( ) <u>Y</u> es <u>N</u> o
Note: If the response to either item 57 or item 58 is 'N', attach an exhibit that demonstrates that over the course of the license term, the Applicant provided and continues to provide service to the public, or operated and continues to operate the license to meet the Applicant's private business or public interest/public safety communications needs. This exhibit must include a detailed description of the Applicant's provision of service or, when allowed under the relevant service rules or pursuant to waiver, use of the spectrum for private business or public interest/public safety communications needs, during the entire license period and address, as applicable: 1) the level and quality of service provided by the applicant (e.g., the population served, the area served, the number of subscribers, the services offered); (2) the date service commenced, whether service was ever interrupted, and the duration of any interruption or outage; (3) the extent to which service is provided to rural areas; (4) the extent to which service is provided to rural areas; (4) the extent to which service is provided to rural areas; (5) any other factors associated with the level of service to the public. The licensee may note in its exhibit: 1) any grant(s) of waiver or extension of a performance deadline or license renewal subject to meeting a performance requirement; or 2) if the final performance deadline and/or expiration date for the license accelerated because the licensee did not meet an interim performance requirement.	

Regulatory Compliance Certification [same for all]

regulatory compliance continuation [came for all]		
59) Applicant certifies that it has substantially complied with all applicable FCC rules, policies, and the Communications Act of 1934, as amended.	( ) <u>Y</u> es <u>N</u> o	
<b>Note:</b> If the response to item 59 is 'N', attach an exhibit explaining the circumstances and demonstrating why Applicant's license should be renewed.		

### **General Certification Statements**

- 1) The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application.
- 2) The Applicant certifies that grant of this application would not cause the Applicant to be in violation of any pertinent cross-ownership or attribution rules.\*

  \*If the Applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcome of the waiver request.
- 3) The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference are material, are part of this application, and are true, complete, correct, and made in good faith.
- 4) The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to § 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under § 1.2002(c) of the rules, 47 CFR § 1.2002(c). See 47 CFR § 1.2002(b) for the definition of "party to the" application" as used in this certification
- 5) The Applicant certifies that it either (1) has current required ownership data on file with the Commission, (2) is filing updated ownership data simultaneously with this application, or (3) is not required to file ownership data under the Commission's Rules.
- 6) The Applicant certifies that the facilities, operations, and transmitters for which this authorization is hereby requested are either: (1) categorically excluded from routine environmental evaluation for RF exposure as set forth in 47 CFR § 1.1307(b); or, (2) have been found not to cause human exposure to levels of radiofrequency radiation in excess of the limits specified in 47 CFR §§ 1.1310 and 2.1093; or, (3) are the subject of one or more Environmental Assessments filed with the Commission.
- 7) The Applicant certifies that it has reviewed the appropriate Commission Rules defining eligibility to hold the requested license(s) and is eligible to hold the requested license(s).
- 8) The Applicant certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
- 9) The Applicant certifies that the Applicant and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

60)Typed or Printed Name of Party Authorized to Sign

First Name:	MI:	Last Name:	Suffix:
Cecil	J	Mathew	
61) Title: Assistant Secretary - Compliance			
Signature:		62) Da	ite:
Cecil J Mathew		01/13	/2023
		L 2 2 2	

# FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

Upon grant of this license application, the Licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application.

#### REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



# **Federal Communications Commission**

**Wireless Telecommunications Bureau** 

# RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: FCC GROUP NEW CINGULAR WIRELESS PCS, LLC 208 S. AKARD ST. 20F DALLAS, TX 75202

<b>Call Sign</b> KNLH550	File Number
Radio	Service
CW - PCS	Broadband

FCC Registration Number (FRN): 0003291192

<b>Grant Date</b> 04-11-2017	Effective Date 01-14-2023	I		-			
Market Number BTA229		nel Block E	Sub-Market Designator				
		t Name ton City, TN-Br					
1st Build-out Date 04-28-2002	2nd Build-out Date	3rd Build-out Date	4th Build-out Date				

# Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

# **Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

FCC 601-MB August 2021

Call Sign: KNLH550 File Number: Print Date:

700 MHz Relicensed Area Information:

Market Name Buildout Deadline Buildout Notification Status

Submitted: 01/13/2023 at 18:08:22

File Number: 0010371952

# **FCC 601**

## **Main Form**

1) Radio Service Code:

# FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau Public Safety and Homeland Security Bureau

1a) Existing Radio Service Code:

Approved by OMB

3060 - 0798

See instructions for public burden estimate

	CW	
•		
	eral Information	
2)	(Select only one) ( AU )  NE - New RO - Renewal Only AU - Administrative Update MD - Modification AM - Amendment CA - Cancellation of License RL - Registered Location/Link  NT - Required Notification EX - Requests for Extended RL - Registered Location/Link	
3a)	If this application is for a Demonstration License or a <u>Special Temporary Authorization</u> (STA), enter the code and attach the required exhibit as described in the instructions. Otherwise enter ' <u>N/A</u> ' (Not Applicable).	(N ) <u>M S N/A</u>
3b)	If this application is for Special Temporary Authority due to an emergency situation, enter 'Y'; otherwise enter 'N'. Refer to Rule 1.915 for an explanation of situations considered to be an emergency.	( ) <u>Y</u> es <u>N</u> o
4)	If this application is for an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC.	File Number
5)	If this application is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, , or Administrative Update, enter the call sign of the existing FCC license.  If this is a request for Registered Location/Link, enter the FCC call sign assigned to the geographic license.	Call Sign KNLH550
6a)	If this application is for a New, Amendment, Renewal Only, or Renewal/Modification, enter the requested authorization expiration date (this item is optional).	MM DD
6b)	If this application is for a Renewal Only or Renewal/Modification and the license is a geographic area license, is the license used to provide service to customers ( <b>C</b> ), or is the license used for private business (internal) purposes or to meet the licensee's public interest/public safety communications needs ( <b>P</b> )?	( <u>)C</u> <u>P</u>
7) Is	this application "major" as defined in § 1.929 of the Commission's Rules when read in conjunction with the applicable radio service rules found in Parts 22 and 90 of the Commission's Rules? (NOTE: This question only applies to certain site-specific applications. See the instructions for applicability and full text of § 1.929).	( <u>)Y</u> es <u>N</u> o
8)	Are attachments (other than associated schedules) being filed with this application?	( ) <u>Y</u> es <u>N</u> o
Fees	s, Waivers, and Exemptions	
	s the Applicant exempt from FCC application fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
10)	Is the Applicant exempt from FCC regulatory fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
	Does this application include a request for a Waiver of the Commission's Rule(s)? If 'Yes', attach an exhibit providing rule number(s) and explaining circumstances.	( N ) <u>Y</u> es <u>N</u> o
12)	Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station?	( ) <u>Y</u> es <u>N</u> o

Applicant Information						
13) FCC Registration Number (FRN):						
0003291192						
14) Applicant/Licensee Legal Entity Type: (Select One) ( )Individual ( )Unincorporated Association (		st (	)Government Entity	v ( )Corporation	n ( <b>X</b> )Limi	ited Liability Company
( )General Partnership ( )Limited Partnership	p ( )L	imited L	iability Partnership	( )Consortium	1	
( )Other:						
15) If the Licensee name is being updated, is the updat party and for which proper Commission approval	te a resu has no	ılt from t t been	the sale (or transfer received or proper	of control) of the lic notification not pr	cense(s) to ovided?	( ) <u>Y</u> es <u>N</u> o
16) First Name (if individual):	1	MI:	Last Name:			Suffix:
17) Legal Entity Name (if other than individual):						
NEW CINGULAR WIRELESS PCS, LLC						
18) Attention To:						
FCC Group						
19) P.O. Box:	And/Or	20) S	treet Address:			
		2	08 S. Akard St. 2	20F		
21) City:		-		22) State:	23) Zip	Code:
Dallas				TX	7520	2
24) Telephone Number:			25) Fax:			
(855)699-7073			(214)74	6-6410		
26) E-Mail Address:						
FCCMW@att.com						
27) Demographics (Optional)	1					
Race:	Ethnic				Gender:	
( )American Indian or Alaska Native	( )	)Hispan	ic or Latino	(	)Male	
( )Asian	(	)Not His	spanic or Latino	(	)Female	
( )Black or African-American						
( )Native Hawaiian or Other Pacific Islander						
( )White						
Pool Porty in Intercet	•					
Real Party in Interest  28) Name of Real Party in Interest of Applicant (If different Applicant):	ent from		29) FCC Reg	gistration Number (l	FRN) of Real	Party in Interest:
Contact Information (If different from the Applicant) () Check here if same as Applicant.						
30) First Name:		MI:	Last Name:			Suffix:
Cecil		J	Mathew			
31) Company Name: AT&T Services, Inc.						
32) Attention To: FCC Group						
33) P.O. Box:	And	34) St	reet Address:			
	/Or	20	08 S. Akard St. 20	)F		
35) City: <b>Dallas</b>			36) State TX			Zip Code: <b>75202</b>
38) Telephone Number: <b>(855)699-7073</b>			39) Fax: <b>(214)74</b> 6	6-6410		
40) E-Mail Address: FCCMW@att.com			<u>,                                      </u>			

	julatory Status														
41	) This filing is for	authoriza	tion to provide o	r use the f	ollowii	ng type(s) of ra	adio servic	e offering (er	nter all	that appl	y):				
(	) <u>C</u> ommon Carr	ier (	) <u>N</u> on-Commo	n Carrier	(	) <u>P</u> rivate, inte	ernal comm	nunications	(	) <u>B</u> roadca	ast Ser	vices	(	) <u>B</u> and <u>M</u>	anager
Тур	e of Radio Servi	ce													
42	) This filing is for	authoriza	tion to provide th	e followin	g type	e(s) of radio se	rvice (choc	se all that a	oply):						
(	) <u>F</u> ixed	(	) <u>M</u> obile	(	) <u>R</u> ac	liolocation	(	) <u>S</u> atellite (s	sound)	(	) <u>E</u>	oadca:	st Servi	ices	
43	) Does the Applic	ant propo	se to provide se	rvice inter	conne	ected to the pul	blic telepho	one network	?				(	) <u>Y</u> es	<u>N</u> o
	n Ownership Qu Main Form Instr						t explainin	g the circur	nstan	ces. In p	repari	ng the a	attachr	nent, ref	er to
44	) Is the Applicant	a foreign	government or t	he repres	entativ	e of any foreig	gn governn	nent?					(	) <u><b>Y</b></u> es	<u>N</u> o
45	) Is the Applicant	an alien o	or the representa	ative of an	alien?	?							(	) <b>Y</b> es	No
4.0	) Is the Applicant	a cornors											`	7-	<u> 14</u> 0
46	, , , , ,	a corpora	tion organized ι	ınder the I	aws o	f any foreign g	jovernment	?					(	) <u>Y</u> es	<u>N</u> o

48a) Is the Applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock ( ) Yes No is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any	
corporation organized under the laws of a foreign country?	
48b) If the answer to 47 or 48a is 'Y' select one of the choices below.	
The Applicant is exempt from the provisions of Section 310(b).	
It is not necessary to file a petition for declaratory ruling if the Applicant includes in the attachment required by Item 47 or Item 48a a showi that the requested license(s) is exempt from the provisions of Section 310(b).	ng
The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.	al
If checked, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC numbers the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Applications of the issuance of its ruling.	
The Applicant: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specification immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/Sublessee that received a declaratory ruling(s) under 47 CFR § 1.5000(a) a is relying on the affiliate's ruling for purposes of filing this application as permitted under the affiliate's ruling and 47 CFR § 1.5004(b)	ed nd
If checked, and if the Applicant received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 47 Item 48a the citation(s) of the Applicant's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and statement that the Applicant is in compliance with the terms and conditions of its ruling and with the Commission's Rules.	
If checked, and if the Applicant received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 48a a confunction for declaratory ruling filed contemporaneously with the Commission to extend the Applicant's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s) involved in the application. Alternatively, the Applicant may request a new declaratory ruling pursuant to Section 1.5000(a) of the Commission's Rules, 47 CFR § 1.5000 (a). Petitions for declaratory ruling may be filed electronication on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).	ne
If checked, and if the Applicant is relying on an affiliate's ruling for purposes of filing this application, include in the attachment required by Ite 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, a statement that the Applicant is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rule The Applicant must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in 47 CFF 1.5004(b). See Main Form Instructions for Items 47 or 48a, as applicable.	nd es.
The Applicant has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under 47 CFF 1.5004(b) in a petition filed contemporaneously with the Commission.	§
If checked, include in the attachment required by Item 47 or 48a a copy of the petition for declaratory ruling filed contemporaneously with to Commission pursuant to 47 CFR § 1.5004(b). Petitions for declaratory ruling may be filed electronically on the Internet through the Internation Bureau Filing System (IBFS) (with a copy attached hereto).	

Basic Qualification Questions			
49) Has the Applicant or any party to this application had any FCC station authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construct permit denied by the Commission?	ion (	) <u>Y</u> •	es <u>N</u> o
50) Has the Applicant or any party to this application, or any party directly or indirectly controlling the Applicant, ever been convicted of a felony by any state or federal court?	(	( ) <u>Y</u>	es <u>N</u> o
51) Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?		( <u>)Y</u>	es <u>N</u> o
Note: If the answer to any of 49-51 is 'Y', attach an exhibit explaining the circumstances.			
Aeronautical Advisory Station (Unicom) Certification			
52) ( ) I certify that the station will be located on property of the airport to be served, and, in cases where the airport does not he tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations low within ten days prior to application.			oort
Broadband Radio Service and Educational Broadband Service Cable Cross-Ownership			
53a) Will the requested facilities be used to provide multichannel video programming service?	(	( ) <u>Y</u>	es <u>N</u> o
53b) If the answer to question 53a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in 47 CFR § 27.1202) in a cable television system whose franchise area is located within the geographic service area of the requested facilities?	(	<u>(</u> ) <u>Y</u>	es <u>N</u> o
Note: If the answer to question 53b is 'Y', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1202 or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.			
Broadband Radio Service and Educational Broadband Service (Part 27)			
54) (For EBS only) Does the Applicant comply with the programming requirements contained in 47 CFR § 27.1203?	(	) <u>Y</u> e	es <u>N</u> o
Note: If the answer to item 54 is 'N', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must answered 'Y'.	t be		
55) (For BRS and EBS) Does the Applicant comply with 47 CFR §§ 27.50, 27.55, and 27.1221?	(	) <u>Y</u> (	es <u>N</u> o
<b>Note:</b> If the answer to item 55 is 'N', attach an exhibit justifying a waiver of that rule(s). If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.	s		
For Applicants Who Participated in an Auction			
56) Is the Applicant a qualifying rural wireless partnership or a member of a qualifying rural wireless partnership?		( )	Yes <u>N</u> o
Note: If the answer to item 56 is 'Y', attach an exhibit listing all members of the qualifying rural wireless partnership, including FRN numbers.	their		
For Renewal Applicants			
57) Operation/Performance Requirement Certification	1		
For a site-based license]: Applicant certifies that it is continuing to operate consistent with its most recently filed construction obtification (or most recent authorization, if no construction notification was required).	(	) <u>Y</u> es <u>N</u>	<u>l</u> o
For a geographic license, commercial service - licensee in its initial license term with an interim performance	(	) <u>Y</u> es <u>N</u>	lo
requirement]: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term ollowing the interim performance requirement, it continues to use its facilities to provide at least the level of service required by its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term.	,	<i>,</i> – –	•
For a geographic license, commercial service - licensee in its initial license term with no interim performance equirement]: Applicant certifies that it has met its final performance requirement and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term. [Note: licensee nust provide a showing demonstrating that the final performance requirement has been met, either separately in a timely	(	) <u>Y</u> es <u>N</u>	lo
application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]			
For a geographic license, commercial service - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> es <u>N</u>	<u>l</u> o
For a geographic license, private systems - licensee in its initial license term with an interim performance equirement]: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term ollowing the interim performance requirement, it continues to use its facilities to further its private business or public nterest/public safety communications needs at or above the level required to meet its interim performance requirement, it has	(	) <u>Y</u> es <u>N</u>	lo
net its final performance requirement, and it continues to use its facilities to provide at least the level of operation required by its inal performance requirement through the end of the license term.			
For a geographic license, private systems - licensee in its initial license term with no interim performance equirement]: Applicant certifies that it has met its final performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs, and it continues to use its facilities to provide at least the	(	) <u>Y</u> es <u>N</u>	<u>l</u> o

level of operation required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]

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[For a geographic license, private systems - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for the first renewal application filed after effective date of the rules]: Applicant certifies that the partitioned and/or disaggregated license that is the subject of this renewal application has no separate performance requirement and that this is the first renewal of this license filed subsequent to the effective date of the rules.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for any subsequent renewal filings]: Applicant certifies that it continues to use its facilities to provide service or to further the applicant's private business or public interest/public safety needs.	(	) <u>Y</u> es <u>N</u> o
Discontinuance of Service Certification		
58) Applicant certifies that no permanent discontinuance of service or operation, as applicable, occurred during its current license term.	(	) <u>Y</u> es <u>N</u> o
Note: If the response to either item 57 or item 58 is 'N', attach an exhibit that demonstrates that over the course of the license term, the Applicant provided and continues to provide service to the public, or operated and continues to operate the license to meet the Applicant's private business or public interest/public safety communications needs. This exhibit must include a detailed description of the Applicant's provision of service or, when allowed under the relevant service rules or pursuant to waiver, use of the spectrum for private business or public interest/public safety communications needs, during the entire license period and address, as applicable: 1) the level and quality of service provided by the applicant (e.g., the population served, the area served, the number of subscribers, the services offered); (2) the date service commenced, whether service was ever interrupted, and the duration of any interruption or outage; (3) the extent to which service is provided to rural areas; (4) the extent to which service is provided to qualifying tribal land as defined in 47 CFR § 1.2110(e)(3)(i); and (5) any other factors associated with the level of service to the public. The licensee may note in its exhibit: 1) any grant(s) of waiver or extension of a performance deadline or license renewal subject to meeting a performance requirement; or 2) if the final performance deadline and/or expiration date for the license accelerated because the licensee did not meet an interim performance requirement.		
Regulatory Compliance Certification [same for all]		1
59) Applicant certifies that it has substantially complied with all applicable FCC rules, policies, and the Communications Act of 1934, as amended.	(	) <u>Y</u> es <u>N</u> o
<b>Note:</b> If the response to item 59 is 'N', attach an exhibit explaining the circumstances and demonstrating why Applicant's license should be renewed.		
Consumal Contributions Chatamagnets		
General Certification Statements  1) The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory po	wer of	the United States
because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application		and office offices

- 2) The Applicant certifies that grant of this application would not cause the Applicant to be in violation of any pertinent cross-ownership or attribution rules.\*

  \*If the Applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcome of the waiver request.
- 3) The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference are material, are part of this application, and are true, complete, correct, and made in good faith.
- 4) The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to § 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under § 1.2002(c) of the rules, 47 CFR § 1.2002(c). See 47 CFR § 1.2002(b) for the definition of "party to the" application" as used in this certification.
- 5) The Applicant certifies that it either (1) has current required ownership data on file with the Commission, (2) is filing updated ownership data simultaneously with this application, or (3) is not required to file ownership data under the Commission's Rules.
- 6) The Applicant certifies that the facilities, operations, and transmitters for which this authorization is hereby requested are either: (1) categorically excluded from routine environmental evaluation for RF exposure as set forth in 47 CFR § 1.1307(b); or, (2) have been found not to cause human exposure to levels of radiofrequency radiation in excess of the limits specified in 47 CFR §§ 1.1310 and 2.1093; or, (3) are the subject of one or more Environmental Assessments filed with the Commission.
- 7) The Applicant certifies that it has reviewed the appropriate Commission Rules defining eligibility to hold the requested license(s) and is eligible to hold the requested license(s).
- 8) The Applicant certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency
- The Applicant certifies that the Applicant and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

60)Typed	or Printed	Name of	Party Au	thorized to	Sian

First Name:	MI:	Last Name:	Suffix:
Cecil	J	Mathew	
61) Title: Assistant Secretary - Compliance	_		•
Signature:			62) Date:
Cecil J Mathew			01/13/2023

Upon grant of this license application, the Licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application.

#### REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



# **Federal Communications Commission**

**Wireless Telecommunications Bureau** 

# RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: FCC GROUP NEW CINGULAR WIRELESS PCS, LLC 208 S. AKARD ST. 20F DALLAS, TX 75202

<b>Call Sign</b> KNLH575	File Number
Radio CW - PCS	Service Broadband
CW-1CS	Broadoand

FCC Registration Number (FRN): 0003291192

		1	
<b>Grant Date</b> 04-13-2017	Effective Date 01-14-2023	Expiration Date 04-28-2027	Print Date
Market Number BTA295		nel Block E	Sub-Market Designator
	<b>Marke</b> Middlesboro		
1st Build-out Date 04-28-2002	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

# Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

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FCC 601-MB August 2021

Call Sign: KNLH575 File Number: Print Date:

700 MHz Relicensed Area Information:

Market Name Buildout Deadline Buildout Notification Status

Submitted: 01/13/2023 at 18:08:22

File Number: 0010372422

# **FCC 601**

## **Main Form**

1) Radio Service Code:

# FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau Public Safety and Homeland Security Bureau

1a) Existing Radio Service Code:

Approved by OMB

3060 - 0798

See instructions for public burden estimate

cw	
General Information	
2) (Select only one) ( AU )  NE - New MD - Modification AM - Amendment  RO - Renewal Only RM - Renewal/Modification AM - Renewal/Modification CA - Cancellation of License  RU - Administrative Update WD - Withdrawal of Application RL - Registered Location/Link  NT - Required Notification EX - Requests for Ext	
3a) If this application is for a Demonstration License or a <b>S</b> pecial Temporary Authorization (STA), enter the code and attach the required exhibit as described in the instructions. Otherwise enter ' <b>N/A</b> ' (Not Applicable).	(N) <u>MSN/A</u>
3b) If this application is for Special Temporary Authority due to an emergency situation, enter 'Y'; otherwise enter 'N'. Refer to Rule 1.915 for an explanation of situations considered to be an emergency.	( <u>)Y</u> es <u>N</u> o
4) If this application is for an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC.	File Number
5) If this application is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, , or Administrative Update, enter the call sign of the existing FCC license.  If this is a request for Registered Location/Link, enter the FCC call sign assigned to the geographic license.	Call Sign KNLH575
6a) If this application is for a New, Amendment, Renewal Only, or Renewal/Modification, enter the requested authorization expiration date (this item is optional).	MM DD
6b) If this application is for a Renewal Only or Renewal/Modification and the license is a geographic area license, is the license used to provide service to customers ( <b>C</b> ), or is the license used for private business (internal) purposes or to meet the licensee's public interest/public safety communications needs ( <b>P</b> )?	( ) <u>C</u> <u>P</u>
7) Is this application "major" as defined in § 1.929 of the Commission's Rules when read in conjunction with the applicable radio service rules found in Parts 22 and 90 of the Commission's Rules? (NOTE: This question only applies to certain site-specific applications. See the instructions for applicability and full text of § 1.929).	( <u>)Y</u> es <u>N</u> o
8) Are attachments (other than associated schedules) being filed with this application?	( <u>)Y</u> es <u>N</u> o
Fees, Waivers, and Exemptions	
9) Is the Applicant exempt from FCC application fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
10) Is the Applicant exempt from FCC regulatory fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
11) Does this application include a request for a Waiver of the Commission's Rule(s)? If 'Yes', attach an exhibit providing rule number(s) and explaining circumstances.	(N) <u>Y</u> es <u>N</u> o
12) Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station?	( <u>)Y</u> es <u>N</u> o

Applicant Information							
13) FCC Registration Number (FRN):							
0003291192							
14) Applicant/Licensee Legal Entity Type: (Select One ( )Individual ( )Unincorporated Association		ıst (	)Gover	nment Entity	( )Corporation	( X )Limited	Liability Company
( )General Partnership ( )Limited Partnersl	hip ( )L	_imited L	Liability F	Partnership	( )Consortium		
( ) Other:	-4	. I. C	41	/ <b>tf</b>	- f t 1\ - f th 1!	(-) +-	/ Voc No
15) If the Licensee name is being updated, is the upd party and for which proper Commission approve	ate a resu al has no	ot been	received	d or transfer of	notification not prov	ided?	( ) <u>Y</u> es <u>N</u> o
16) First Name (if individual):		MI:	Last Na	me:			Suffix:
17) Legal Entity Name (if other than individual):							
NEW CINGULAR WIRELESS PCS, LLC							
18) Attention To:							
FCC Group							
19) P.O. Box:	And/Or	· 20) S	Street Ad	ldress:			
		2	208 S. <i>A</i>	Akard St. 2	0F		
21) City:					22) State:	23) Zip Coo	le:
Dallas					TX	75202	
24) Telephone Number:				<u>l</u> 25) Fax:		<u> </u>	
(855)699-7073				(214)74	6-6410		
(633)699-7073 26) E-Mail Address:				(= : :/: :			
FCCMW@att.com							
27) Demographics (Optional)							
Race: (     )American Indian or Alaska Native	Ethni	,	ic or Lat	ino	Ge	nder: )Male	
American mulan of Alaska Native	(	)i iispaii	iic oi Lat	.1110	(	Jiviaie	
( )Asian	(	)Not His	spanic o	r Latino	(	)Female	
( )Black or African-American							
( )Native Hawaiian or Other Pacific Islander							
( )White							
eal Party in Interest							
28) Name of Real Party in Interest of Applicant (If diffe	erent from		2	29) FCC Reg	istration Number (FR	N) of Real Par	ty in Interest:
Applicant):							
ontact Information (If different from the Applicant)							
) Check here if same as Applicant. 30) First Name:		MI:	Last	: Name:			Suffix:
Cecil		J		thew			Guillix.
31) Company Name:							
AT&T Services, Inc.							
32) Attention To:							
FCC Group							
33) P.O. Box:	And	34) St	treet Add	dress:			
·	/Or	20	08 S. A	kard St. 20	F		
35) City:		1		36) State:		37) Zip	Code:
Dallas				TX		75	202
38) Telephone Number: (855)699-7073			3	9) Fax: <b>(214)746</b>	i-6410		
40) E-Mail Address:				-			
FCCMW@att.com							

Reg	ulatory Status											
41)	This filing is for auth	horization to provide or	use the follow	wing type(s) of ra	adio servic	e offering (ente	er all tha	t apply):				
(	) <u>C</u> ommon Carrier	( ) <u>N</u> on-Common	Carrier (	) <u>P</u> rivate, inte	ernal comm	nunications (	) <u>B</u> r	oadcast	Services	(	) <u>B</u> and <u>M</u>	anageı
Туре	e of Radio Service											
42)	This filing is for auth	horization to provide the	e following ty	oe(s) of radio se	rvice (choc	se all that app	ly):					
(	) <u>F</u> ixed	( ) <u>M</u> obile	( ) <u>R</u>	adiolocation	(	) <u>S</u> atellite (so	und)	(	) <u>B</u> roadca	ast Servic	es	
43)	Does the Applicant	propose to provide ser	vice intercon	nected to the pul	blic telepho	ne network?				(	) <u>Y</u> es	<u>N</u> o
		tions (If any answer is ions for the "Alien Ow			t explainin	g the circums	stances.	. In pre	paring the	attachm	ent, refe	er to
44)	Is the Applicant a fo	oreign government or th	ne representa	tive of any foreig	gn governn	nent?				(	) <u>Y</u> es	<u>N</u> o
45)	Is the Applicant an	alien or the representat	tive of an alie	n?						(	) <u><b>Y</b></u> es	<u>N</u> o
46)	Is the Applicant a c	orporation organized ur	nder the laws	of any foreign g	overnment	?				(	) <u>Y</u> es	<u>N</u> o
the	• • •	corporation of which mo or by a foreign governm		•				•		( a	) <u>Y</u> es	<u>N</u> o

48a) Is the Applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock ( ) Yes No is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any
corporation organized under the laws of a foreign country?
48b) If the answer to 47 or 48a is 'Y' select one of the choices below.
The Applicant is exempt from the provisions of Section 310(b).
It is not necessary to file a petition for declaratory ruling if the Applicant includes in the attachment required by Item 47 or Item 48a a showing that the requested license(s) is exempt from the provisions of Section 310(b).
The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.
If checked, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Applicant since the issuance of its ruling.
The Applicant: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specified immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/Sublessee that received a declaratory ruling(s) under 47 CFR § 1.5000(a) and is relying on the affiliate's ruling for purposes of filing this application as permitted under the affiliate's ruling and 47 CFR § 1.5004(b)
If checked, and if the Applicant received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 47 or Item 48a the citation(s) of the Applicant's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of its ruling and with the Commission's Rules.
If checked, and if the Applicant received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 48a a copy of a petition for declaratory ruling filed contemporaneously with the Commission to extend the Applicant's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s) involved in the application. Alternatively, the Applicant may request a new declaratory ruling pursuant to Section 1.5000(a) of the Commission's Rules, 47 CFR § 1.5000 (a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).
If checked, and if the Applicant is relying on an affiliate's ruling for purposes of filing this application, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rules. The Applicant must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in 47 CFR § 1.5004(b). See Main Form Instructions for Items 47 or 48a, as applicable.
The Applicant has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under 47 CFR § 1.5004(b) in a petition filed contemporaneously with the Commission.
If checked, include in the attachment required by Item 47 or 48a a copy of the petition for declaratory ruling filed contemporaneously with the Commission pursuant to 47 CFR § 1.5004(b). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).

Basic Qualification Questions			
49) Has the Applicant or any party to this application had any FCC station authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission?	( n	) <u>Y</u> es	<u>N</u> o
50) Has the Applicant or any party to this application, or any party directly or indirectly controlling the Applicant, ever been convicted of a felony by any state or federal court?	(	) <u>Y</u> es	<u>N</u> o
51) Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?	(	) <u>Y</u> es	<u>N</u> o
Note: If the answer to any of 49-51 is 'Y', attach an exhibit explaining the circumstances.			
Aeronautical Advisory Station (Unicom) Certification  52) ( ) I certify that the station will be located on property of the airport to be served, and, in cases where the airport does not hat tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations local within ten days prior to application.			t
Broadband Radio Service and Educational Broadband Service Cable Cross-Ownership			
53a) Will the requested facilities be used to provide multichannel video programming service?	(	) <u>Y</u> es	<u><b>N</b></u> o
53b) If the answer to question 53a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in 47 CFR § 27.1202) in a cable television system whose franchise area is located within the geographic service area of the requested facilities?	(	) <u>Y</u> es	<u>N</u> o
Note: If the answer to question 53b is 'Y', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1202 or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.			
Broadband Radio Service and Educational Broadband Service (Part 27)			
54) (For EBS only) Does the Applicant comply with the programming requirements contained in 47 CFR § 27.1203?	(	) <u>Y</u> es	<u>N</u> o
<b>Note:</b> If the answer to item 54 is 'N', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.	е		
55) (For BRS and EBS) Does the Applicant comply with 47 CFR §§ 27.50, 27.55, and 27.1221?	(	) <u>Y</u> es	<u>N</u> o
<b>Note:</b> If the answer to item 55 is 'N', attach an exhibit justifying a waiver of that rule(s). If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.			
For Applicants Who Participated in an Auction			
56) Is the Applicant a qualifying rural wireless partnership or a member of a qualifying rural wireless partnership?	(	) <u>Y</u> e	s <u>N</u> o
<b>Note:</b> If the answer to item 56 is 'Y', attach an exhibit listing all members of the qualifying rural wireless partnership, including the FRN numbers.	eir		
For Renewal Applicants 57) Operation/Performance Requirement Certification			
[For a site based licensel: Applicant certifies that it is continuing to operate consistent with its most recently filed construction	( )	<b>Y</b> es <u>N</u> o	
For a geographic license, commercial service - licensee in its initial license term with an interim performance	( )	Yes No	
its interim performance requirement, it continues to use its facilities to provide at least the level of service required by its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term.			
For a geographic license, commercial service - licensee in its initial license term with no interim performance	( )	<u>Y</u> es <u>N</u> o	
For a goographic license, commercial service. Ilicenses in any subsequent term? Applicant cortifies that it continues to	( )	<b>Y</b> es <u>N</u> o	
For a geographic license, private systems - licensee in its initial license term with an interim performance	( ):	<u>Y</u> es <u>N</u> o	
[For a geographic license, private systems - licensee in its initial license term with no interim performance requirement]: Applicant certifies that it has met its final performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs, and it continues to use its facilities to provide at least the level of operation required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]	) ]	<u>Y</u> es <u>N</u> o	

[For a geographic license, private systems - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for the first renewal application filed after effective date of the rules]: Applicant certifies that the partitioned and/or disaggregated license that is the subject of this renewal application has no separate performance requirement and that this is the first renewal of this license filed subsequent to the effective date of the rules.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for any subsequent renewal filings]: Applicant certifies that it continues to use its facilities to provide service or to further the applicant's private business or public interest/public safety needs.	(	) <u>Y</u> es <u>N</u> o

# **Discontinuance of Service Certification**

license term.	( ) <u>Y</u> es <u>N</u> o
Note: If the response to either item 57 or item 58 is 'N', attach an exhibit that demonstrates that over the course of the license term, the Applicant provided and continues to provide service to the public, or operated and continues to operate the license to meet the Applicant's private business or public interest/public safety communications needs. This exhibit must include a detailed description of the Applicant's provision of service or, when allowed under the relevant service rules or pursuant to waiver, use of the spectrum for private business or public interest/public safety communications needs, during the entire license period and address, as applicable: 1) the level and quality of service provided by the applicant (e.g., the population served, the area served, the number of subscribers, the services offered); (2) the date service commenced, whether service was ever interrupted, and the duration of any interruption or outage; (3) the extent to which service is provided to rural areas; (4) the extent to which service is provided to rural areas; (4) the extent to which service is provided to rural areas; (5) any other factors associated with the level of service to the public. The licensee may note in its exhibit: 1) any grant(s) of waiver or extension of a performance deadline or license renewal subject to meeting a performance requirement; or 2) if the final performance deadline and/or expiration date for the license accelerated because the licensee did not meet an interim performance requirement.	

Regulatory Compliance Certification [same for all]

regulatory compliance certification [came for an]	
59) Applicant certifies that it has substantially complied with all applicable FCC rules, policies, and the Communications Act of 1934, as amended.	( ) <u>Y</u> es <u>N</u> o
<b>Note:</b> If the response to item 59 is 'N', attach an exhibit explaining the circumstances and demonstrating why Applicant's license should be renewed.	

### **General Certification Statements**

- 1) The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application.
- 2) The Applicant certifies that grant of this application would not cause the Applicant to be in violation of any pertinent cross-ownership or attribution rules.\*

  \*If the Applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcome of the waiver request.
- 3) The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference are material, are part of this application, and are true, complete, correct, and made in good faith.
- 4) The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to § 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under § 1.2002(c) of the rules, 47 CFR § 1.2002(c). See 47 CFR § 1.2002(b) for the definition of "party to the" application" as used in this certification.
- 5) The Applicant certifies that it either (1) has current required ownership data on file with the Commission, (2) is filing updated ownership data simultaneously with this application, or (3) is not required to file ownership data under the Commission's Rules.
- 6) The Applicant certifies that the facilities, operations, and transmitters for which this authorization is hereby requested are either: (1) categorically excluded from routine environmental evaluation for RF exposure as set forth in 47 CFR § 1.1307(b); or, (2) have been found not to cause human exposure to levels of radiofrequency radiation in excess of the limits specified in 47 CFR §§ 1.1310 and 2.1093; or, (3) are the subject of one or more Environmental Assessments filed with the Commission.
- 7) The Applicant certifies that it has reviewed the appropriate Commission Rules defining eligibility to hold the requested license(s) and is eligible to hold the requested license(s).
- 8) The Applicant certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
- 9) The Applicant certifies that the Applicant and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

60)Typed or Printed Name of Party Authorized to Sign

First Name:	MI:	Last Name:	Suffix:
Cecil	J	Mathew	
61) Title: Assistant Secretary - Compliance			
Signature:		62) Dat	e:
Cecil J Mathew	01/13/2023		2023

# FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

Upon grant of this license application, the Licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application.

#### REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



# **Federal Communications Commission**

**Wireless Telecommunications Bureau** 

# RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: FCC GROUP NEW CINGULAR WIRELESS PCS, LLC 208 S. AKARD ST. 20F DALLAS, TX 75202

<b>Call Sign</b> WPOI255	File Number	
Radio Service CW - PCS Broadband		
	Dioudound	

FCC Registration Number (FRN): 0003291192

e registration rumser (11			
<b>Grant Date</b> 05-27-2015	Effective Date 01-14-2023	Expiration Date 06-23-2025	Print Date
Market Number MTA026		Channel Block A	
	Market Louisville-Lexin		
1st Build-out Date 06-23-2000	<b>2nd Build-out Date</b> 06-23-2005	3rd Build-out Date	4th Build-out Date

# Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

# **Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

FCC 601-MB August 2021

Call Sign: WPOI255 File Number: Print Date:

This license is conditioned upon compliance with the provisions of Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations, Memorandum Opinion and Order, FCC 04-255 (rel. Oct. 26, 2004).

Spectrum Lease Associated with this License. See Spectrum Leasing Arrangement Letter dated 12/06/2004 and File # 0001918558.

The Spectrum Leasing Arrangement, which became effective upon approval of application file number 0001918558, was terminated on 04/14/2005. See file number 0002135370.

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

Call Sign: WPOI255 File Number: Print Date:

700 MHz Relicensed Area Information:

Market Name Buildout Deadline Buildout Notification Status

#### FCC Application or Notification for Spectrum Leasing Arrangement/ FCC Form 608 **Notification of a Private Commons Arrangement Main Form**

**Wireless Telecommunications Bureau** 

3060-1058

Submitted: 01/23/2023 at

18:56:21

File Number: 0010338141

**Public Safety and Homeland Security Bureau** 

See 608 Main Form Instructions For public burden estimate

Gei	neral Information		
App	lication/Notification Purpose		
1a)	Purpose of Filing (Select only one):		
( <b>x</b>	) LN – New ( ) LM – Modification	( )L	U – Administrative Update
(	) LT – Transfer of Control ( ) LE – Extend the T	erm ( ) <b>L</b>	.C – Cancel
(	) LI – Light Touch Leasing Certification ( ) AM – Amendment	( ) <b>\</b>	<b>VD</b> –Withdraw
1b)	If this filing is for an Amendment (AM) or Withdrawal (WD), enter the File Nu Application/Notification currently on file with the FCC.	mber of the pending	File Number:
Clas	ssification of Filing		
For L	eases/Subleases Only		
2a)	Classification of Filing (Select only one):	2b) Type of Filing	
(	) ML – Spectrum Manager Lease	( <b>X</b> ) <b>L</b> – Lease	
()	( ) <b>TL</b> – <i>De Facto</i> Transfer Lease	( ) <b>S</b> – Sublease (Must be	filed manually)
For P	Private Commons Arrangements Only (Must be filed Manually)		
	This filing will be a Private Commons Arrangement pursuant to a (Select y one):	2d) If a Private Commons Arr Sublease, choose the legal ty	angement pursuant to a Lease or pe (Select only one):
(	) N— License	( ) <b>M</b> –Spectrum Manager	
(	) L— Lease	( ) <b>T</b> –De Facto Transfer	
(	) <b>S—</b> Sublease		
Tern	n of Lease/Sublease		
3) 1	ndicate whether the existing Lease/Sublease is: ( 🗶	) Long-Term or	( ) Short-Term
	er Wireless Licenses		
4a)	Is this filing part of a series of filings involving other wireless license(s) or affiliates of the Licensee (e.g., parents, subsidiaries, or commonly-controll are not included on this filing and for which Commission approval or notificate	ed entities), or third parties that	( <b>N</b> ) <u>Y</u> es <u>N</u> o
4b) If the answer to 4a is 'Y', is this filing the lead Application/Notification?		( ) <u>Y</u> es <u>N</u> o	
4c)	If the answer to 4a is 'Y' and the answer to 4b is 'N', provide the File Numb Application/Notification.	er of the lead	File Number:

Attachments	
5) Are attachments (other than associated schedules) being filed with this Application/Notification?	( <sub>Y</sub> ) <u>Y</u> es <u>N</u> o
Fees and Waivers	
Exemption from Application Fees	
6) Is the Applicant exempt from FCC application fees?	( N )Yes No
If the answer to 6 is 'Y', attach an exhibit demonstrating how the applicant is exempt from FCC application fees.	
Waiver/Deferral of Fees	
7) Is a waiver/deferral of the FCC application fees being requested?	( N ) <u>Y</u> es <u>N</u> o
If the answer to 7 is 'Y', attach a date-stamped copy of the request for waiver/deferral of the FCC application fees.	
Waiver of Commission Rules	
8) Does this filing include a request for waiver of the Commission's Rules (other than a request for application fee waivers)?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
If the answer to 8 is 'Y', attach an exhibit specifying the rule section(s) for which a waiver is being requested and including a justification for the waiver request.	
Regulatory Status and Offerings Radio Service Offerings	
9) The Applicant will provide the following type(s) of radio service offerings (select all that apply):	
( ) Non-common Carrier ( ) Private, internal communications All entities that are planning to use the leased spectrum for telecommunications services should select common carrier 'telecommunications service' means the offering of telecommunications (i.e., the transmission, between or among poinformation of the user's choosing, without change in the form or content of the information as sent and received) for classes of users as to be effectively available directly to the public, regardless of the facilities used. Non-common carridiscriminately for hire as carriers of communications provided by the customer. A person engaged in radio broadcaperson is so engaged, be deemed a common carrier. Thus, those entities meeting this definition would select non-contentual users are those entities that utilize telecommunications services purely for internal business purposes or public for-hire or for-profit basis. Such entities should select 'Private' for this item. The term 'Broadcast Services' shall has "broadcasting" in § 3(6) of the Communications Act of 1934, i.e., the dissemination of radio communications intended or by the intermediary of relay stations." 47 U.S.C. § 153(6).	pints specified by the user, of a fee directly to the public, or to such arriers do not hold themselves out asting shall not, insofar as such common carrier for this item. Private slic safety communications and not cave the same meaning as that for
If the Applicant is modifying the type of radio service offerings it provides, please provide an exhibit explaining the mod	lification.
Radio Service	
10) The Applicant will provide the following type(s) of radio service (select all that apply):	
( ) Fixed ( ) Mobile ( ) Radiolocation ( ) Satellite (sound)	( ) Broadcast Services
11) Does the Applicant propose to provide service interconnected to the public telephone network?	( ) <u>Y</u> es <u>N</u> o

### **Designated Entity Information** (If the answer to 12a, 12b or 12c is 'Y', Schedule A must be completed.)

#### **Bidding Credits**

12a) Does this filing involve any spectrum associated with any licenses that were awarded with bidding credits within the last five years?	( N ) <u>Y</u> es <u>N</u> o
If the response to this item is 'Y', the licenses may be subject to the FCC's unjust enrichment rules, and the Applicant should answer relevant bidding credit questions.	
Closed Bidding	
12b) Does this filing involve any spectrum associated with any licenses that were originally granted pursuant to closed bidding within the last five years?	(N) <u>Y</u> es <u>N</u> o
If the response to this item is 'Y', the Applicant should answer relevant closed bidding questions.	
Competition-Related Information	
13) Does this filing involve a license authorization or Spectrum Lease/Sublease that may be used to provide interconnected mobile voice and/or data services that would create a geographic overlap with another license authorization(s) or spectrum leasing arrangement(s), that also could be used to provide interconnected mobile voice and/or data services, in which the Applicant already holds attributable interests, as defined in Section 20.22(b) of the Commission's Rules, either as a licensee or spectrum lessee/sublessee?	( <b>Y</b> ) <u>Y</u> es <u>N</u> o
If 'Y', specify in an exhibit all geographic areas/markets (e.g., BTA, CMA, county, etc.) where there are spectrum overlaps and the total amount of spectrum that the Assignee/Transferee will hold and/or lease in each geographic area/market.	
14) If the answer to Item 13 is 'Y', would/does this application for a spectrum leasing or subleasing arrangement reduce the number of entities providing service in the affected market(s)?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
Broadband Radio Service and Educational Broadband Service Information	
15a) Will the requested facilities be used to provide multichannel video programming service?	( ) <u>Y</u> es <u>N</u> o
15b) If the answer to 15a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in Section 27.1202 of the Commission's Rules) in a cable television system whose franchise area is located within the geographic service area of the requested facilities?	( ) <u>Y</u> es <u>N</u> o
If 'Y', provide an exhibit explaining how the Applicant (Lessee/Sublessee) complies with Section 27.1202 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission's Rule(s) is	

### **Part 90 Public Safety Services**

Commission's Rules?

be answered 'Y'.

being requested, 8a must be answered 'Y'.

16) Does the Applicant comply with the programming requirements contained in Section 27.1203 of the

If 'N', provide an exhibit explaining how the Applicant complies with Section 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission's Rule(s) is being requested, 8a must

#### **Eligibility**

17) Is the Applicant a public safety entity or otherwise an entity that will use the leased spectrum to provide communications in support of public safety operations pursuant to Section 90.523 of the Commission's Rules?	( ) <u>Y</u> es <u>N</u> o

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) <u>Y</u>es <u>N</u>o

#### **600 MHz Band Information**

18) Is the spectrum leasing/subleasing arrangement for a term of one year or more (either initially or cumulatively) and involves any licenses in the 600 MHz Band initially granted in the last six years that would, if leased, create a geographic overlap with another licenses(s) in which the Lessee/Sublessee already holds attributable interests, as defined in Section 20.22(b) of the Commission's Rules, either as a licensee or spectrum Lessee/Sublessee, and that would result in the Lessee/Sublessee holding an attributable interest, as defined in Section 20.22(b) of the Commission's Rules, in one-third or more of the total suitable and available below-1-GHz spectrum as calculated on a county-by-county population-weighted basis in the relevant license area, utilizing 2010 U.S. Census data?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
The initial grant date is the date that the license was originally granted by the Commission after an auction, even if the license was acquired in the secondary market. The initial grant date is not the date on which the Commission granted an assignment or transfer of control of the license.	
If 'Y', provide an exhibit detailing the proposed spectrum leasing/subleasing exchange of 600 MHz band spectrum in the same market(s), including a list of all file numbers for applications associated with the proposed spectrum leasing arrangement exchange, or describing the <i>pro forma</i> nature of the spectrum leasing arrangement, as appropriate.	
19) Is the spectrum leasing/subleasing arrangement for a term of one year or more (either initially or cumulatively) and involves any licenses that were initially granted as reserved spectrum licenses in the 600 MHz Band in the last six years? Otherwise, enter 'N'.	( ) <u>Y</u> es <u>N</u> o
The initial grant date is the date that the license was originally granted by the Commission after an auction, even if the license was acquired in the secondary market. The initial grant date is not the date on which the Commission granted an assignment or transfer of control of the license.	
If 'Y', provide an exhibit demonstrating how the Lessee/Sublessee would have qualified to bid on that reserved spectrum license(s) in Auction 1002 as of the FCC Form 175 filing deadline (February 10, 2016) for Auction 1002, the forward auction of the Broadcast Incentive Auction.	

20) FCC Registration Number: 0003291192					
Entity					
21) Licensee is a(n) (Select One): ( )Individual ( )Unincorporated Association (	)Trust	( )Gove	rnment Entity ( )C	Corporation ( X )Limite	ed Liability Company
( )General Partnership ( )Limited Partnership	( )Limi	ted Liability	Partnership		
( )Other:					
Licensee Name					
22) Licensee Name (if entity): New Cingular Wireless PC	S, LLC				
23) Licensee Name (if individual): First:		MI:	Last:		Suffix:
24) Attention To: Cecil J. Mathew					I
Address	1 00) 04	- <b>6 A</b> - <b>1</b> - <b>1</b> - <b>2</b> - <b>2</b>	208 S. Akard Street,	DM 4046	
25) P.O. Box: And /Or	26) Stre	et Address		KW 1010	
27) City: Dallas			28) State: TX	29) Zip Code: <b>7</b>	5202
30) Telephone Number: <b>(855)699-7073</b>		31) FA	XX Number: (214)74	6-6410	
32) E-Mail Address: FCCMW@att.com					
33) Demographics (Optional):					
Race: ( )American Indian or Alaska Native	Ethnici	<b>ty:</b> lispanic or L	atino	Gender: ( )Male	
( )Asian		lot Hispanic		( )Female	
,		iot i lispanio	or Latino	( )i citiale	
( )Black or African-American					
( )Native Hawaiian or Other Pacific Islander					
( )White					
Licensee Contact Information					
Contact Name (if other than Licensee)					
( ) Check here if same as Licensee Info	rmation	NAI	Last		10.5
34) Name: First:		MI:	Last:		Suffix:
35) Company Name: AT&T Mobility LLC					

Address

37) P.O. Box: | And | 38) Street Address: 1120 20th Street NW, Suite 1000 |

39) City: Washington | 40) State: DC | 41) Zip Code: 20036 |

42) Telephone Number: (202)457-2055 | 43) FAX Number: |

44) E-Mail Address: michael.p.goggin@att.com

Lessee Information						
45) FCC Registration Number: 0030856223						
Entity						
46) Lessee is a(n) (Select One): ( )Individual ( )Unincorporated Association	,	Trust (		nment Entity ( )Co	prporation ( <b>X</b> )Limited Li	ability Company
( )General Partnership ( )Limited Partnershi	——	)LIIIIIC	u Liability	raitiieisiiip		
Lessee Name						
47) If the Lessee name is being updated, is the update which proper Commission approval has not been recei	a result	of a chan	ge in owne	ership, corporate structur	e, or entity for	( ) <u>Y</u> es <u>N</u> o
48) Lessee Name (if entity): Trace-Tek	VCG 51 P	10001 1104	loadon no	t provided:		
49) Lessee Name (if individual): First:		$\overline{}$	MI:	Last:		Suffix:
50) Attention To: licenses@trace-tek.com						
Name of Real Party in Interest						
51) Name of Real Party in Interest: Trace-Tek						
52) FCC Registration Number (FRN): 0030856223						
•••						
Address 53) P.O. Box:	And /Or	54) Stree	t Address:	2625 Commons Boule	evard	
55) City: Beavercreek	/Ui			56) State: OH	57) Zip Code: <b>45341</b>	
58) Telephone Number: (972)672-0477			59) FA	X Number:		
60) E-Mail Address: licenses@trace-tek.com		·				
61) Demographics (Optional):						
Race:	$\overline{}$	Ethnicity			Gender:	
( )American Indian or Alaska Native			spanic or L		( )Male	
( )Asian		( )Not	t Hispanic	or Latino	( )Female	
( )Black or African-American						
( )Native Hawaiian or Other Pacific Islander						
( )White						
Lessee Contact Information Contact Name (if other than Lessee) ( ) Check here if same as Lessee Info	o <u>rmati</u>	o <u>n</u>				
62) Name: First: Dan			MI:	Last: Burgess		Suffix:
63) Company Name: Trace-Tek			1			
64) Attention To: licenses@trace-tek.com						<u> </u>
Address						
65) P.O. Box:	And /Or	66) Street	t Address:	2625 Commons Boule		
67) City: Beavercreek				68) State: <b>OH</b>	69) Zip Code: <b>4534</b> 1	
70) Telephone Number: (972)672-0477			71) FA	X Number:		
72) E-Mail Address: licenses@trace-tek.com						

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### Sublessee Information

•	u	VI.	C.	Э,	9	<u> </u>	<b>G</b>	••	••	v	•		1

FRN								
73) FCC Registration Number:								
Entity								
74) Sublessee is a(n) (Select One): ( )Individual ( )Unincorporate	ed Association ( )	)Trust (		nment Entity ( )	Corporation ( )Limited	Liability Company		
( )Other:		•						
Sublessee Name  75) If the Sublessee name is being upon for which proper Commission approximately a subject to the subject to	lated, is the update a re oval has not been receiv	esult of a cha ved or prope	inge in owr r notificatio	nership, corporate stru on not provided?	cture, or entity	( ) <u>Y</u> es <u>N</u> o		
76) Sublessee Name (if entity):								
77) Sublessee Name (if individual):	First:	1	MI:	Last:		Suffix:		
78) Attention To:								
Name of Real Party in Interest								
79) Name of Real Party in Interest:								
80) FCC Registration Number (FRN):								
Address								
Address 81) P.O. Box:	And	82) Street	Address:					
•	/Or			84) State:	85) Zip Code:			
83) City:					65) Zip Code.			
86) Telephone Number:			87) FAX	( Number:				
88) E-Mail Address:								
89) Demographics (Optional):								
Race: ( )American Indian or Alaska Native		Ethnicity:	oanic or La	atino	Gender: ( )Male			
	<b>,</b>				, ,			
( )Asian		( )Not	Hispanic o	or Latino	( )Female			
( )Black or African-American								
( )Native Hawaiian or Other Pacific	Islander							
( )White								
Sublessee Contact Inforr Contact Name (if other than Subles ( ) Check here if same as	ssee)	nation						
90) Name: First:			MI:	Last:		Suffix:		
91) Company Name:			<u> </u>					
92) Attention To:								
Address						À		
93) P.O. Box:	And /Or	94) Street	Address:					
95) City:				96) State:	97) Zip Code:			
98) Telephone Number:			99) FAX	Number:				
100) F-Mail Address:	<del></del>		1					

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#### **Transferee Information** 101) FCC Registration Number: Entity 102) Transferee is a(n) (Select One): )Individual ( )Unincorporated Association ( )Trust )Government Entity )Corporation ( )Limited Liability Company ( )General Partnership )Limited Partnership )Limited Liability Partnership )Other: \_ **Transferee Name** 103) Transferee Name (if entity): 104) Transferee Name (if individual): First: MI: Last: Suffix: 105) Attention To: Name of Real Party in Interest 106) Name of Real Party in Interest: 107) FCC Registration Number (FRN): Address 108) P.O. Box: And 109) Street Address: /Or 110) City: 111) State: 112) Zip Code: 113) Telephone Number: 114) FAX Number: 115) E-Mail Address: 116) Demographics (Optional): Ethnicity: Gender: )American Indian or Alaska Native )Male )Hispanic or Latino )Not Hispanic or Latino )Asian )Female )Black or African-American )Native Hawaiian or Other Pacific Islander )White **Transferee Contact Information Contact Name** (if other than Transferee) ) Check here if same as Transferee Information MI: Suffix: 117) Name: Last: 118) Company Name: 119) Attention To: Address 120) P.O. Box: 121) Street Address: And /Or 122) City: 123) State: 124) Zip Code:

126) FAX Number:

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125) Telephone Number:

127) E-Mail Address:

ransteror Information RN							
128) FCC Registration Number:							
ntity							
129) Transferor is a(n) (Select One):							
( )Individual ( )Unincorporated As	ssociation (	)Trust (	)Governm	ent Enti	ity ( )Corpor	ration ( )Limited Lia	ability Company
	,	,	•			, ,	
( )General Partnership ( )Limited	d Partnership	( )Limit	ed Liability Par	tnership	р		
( )Other:							
ransferor Name							
130) Transferor Name (if entity):							
131) Transferor Name (if individual):	First:			MI:	Last:		Suffix:
132) Attention To:							
132) Attention 10.							
ddress							
133) P.O. Box:	And	134) Str	eet Address:				
•	/Or						
135) City:				136) S	tate:	137) Zip Code:	
138) Telephone Number:			139) FAX	Numbo	Ar-		
136) Telephone Number.			139) FAX	Numbe	;i.		
140) E-Mail Address:							
,							
39) Demographics (Optional):							
Race:		Ethnicit				Gender:	
( )American Indian or Alaska Native		( )H	ispanic or Latin	10	( )Male		
( )Asian		( )N	ot Hispanic or I	_atino	( )Female		
,		, ,				,	
( )Black or African-American							
/ Nictive Herreiter on Other Desificate							
( )Native Hawaiian or Other Pacific Isla	ridei						
( )White							
( )							
ransferor Contact Informa	tion						
ontact Name (if other than Transferor							
) Check here if same as Tra		rmation					
140) Name: First:	ansieror imo	IIIIauoii	MI:	Last:			Suffix:
THO) INGINE.   FIISL			IVII.	∟ası.			SuillX.
141) Company Name:			1 1				1
142) Attention To:							
ddress		1400 -					
143) P.O. Box:	And /Or	144) Str	eet Address:				
145) City:			1 -	146) St	tate·	147) Zip Code:	
TO, OILY.				1-TU   U	iuio.	ITI LIP OUGE.	

149) FAX Number:

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148) Telephone Number:

150) E-Mail Address:

### **Ownership Disclosure Information**

#### FCC Form 602

153a) Is the Applicant required to file FCC Form 602, Ownership Disclosure Information for the Wireless Telecommunications Services?	(ү) <u>Y</u> es <u>N</u> o
153b) If the answer to 151a is 'Y', provide the File Number of FCC Form 602 that has been filed in conjunction with application or is already on file with the FCC.	File Number: 0009774970

### **Alien Ownership Questions**

Alien Ownership (If any answer is 'Y", provide an attachment explaining the circumstances. In preparing the attachment, refer to the Main Form Instructions for the "Alien Ownership Questions".)

	Torn instructions for the Alien Ownership Questions .	т — — — — — — — — — — — — — — — — — — —		
154)	Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee a foreign government or the representative of any foreign government?	( N	) <u>Y</u> es	<u>N</u> o
155)	Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee an alien or the representative of an alien?	( N	) <u><b>Y</b></u> es	<u>N</u> o
156)	Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee a corporation organized under the laws of a foreign government?	( N	) <u>Y</u> es	<u>N</u> o
157)	Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?		) <u>Y</u> es	<u>N</u> o
158a	) Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	,	) <u>Y</u> es	<u>N</u> o

8b) If the answer to 155 or 156a is 'Y' select one of the choices below.
The Lessee/Sublessee or Post-Transfer Lessee/Sublessee is exempt from the provisions of Section 310(b).
It is not necessary to file a petition for declaratory ruling if the Lessee/Sublessee or Post-Transfer Lessee/Sublessee includes in the attachmen required by Item 155 or Item 156a a showing that the subject Lease(s) is exempt from the provisions of Section 310(b).
The Lessee/Sublessee or Post-Transfer Lessee/Sublessee has received a declaratory ruling(s) approving its foreign ownership, and the application/notification involves only the acquisition/use of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Lessee/Sublessee or Post-Transfer Lessee/Sublessee has been previously authorized.
If checked, include in the attachment required by Item 155 or Item 156a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Lessee/Sublessee or Post-Transfer Lessee/Sublessee since the issuance of its ruling.
The Lessee/Sublessee or Post-Transfer Lessee/Sublessee: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specified immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/SubLessee that received a declaratory ruling(s under Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a), and is relying on the affiliate's ruling for purposes of filing this application/notification as permitted under the affiliate's ruling and Section 1.994(b) of the Rules, 47 CFR § 1.994(b).
If checked, and if the Lessee/Sublessee or Post-Transfer Lessee/Sublessee received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 155 or Item 156a the citation(s) of the Lessee/Sublessee or Post-Transfer Lessee/Sublessee's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Lessee/Sublessee or Post-Transfe Lessee/Sublessee is in compliance with the terms and conditions of its ruling and with the Commission's Rules.
If checked, and if the Lessee/Sublessee or Post-Ttransfer Lessee/Sublessee received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 156a a copy of a petition for declaratory ruling filed contemporaneously with the Commission to extend the Lessee/Sublessee or Post-Transfer Lessee/Sublessee's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s involved in the application/notification. Alternatively, the Lessee/Sublessee or Post-Transfer Lessee/Sublessee may request a new declaratory ruling pursuant to Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).
If checked, and if the Lessee/Sublessee or Post-Transfer Lessee/Sublessee is relying on an affiliate's ruling for purposes of filing this application/notification, include in the attachment required by Item 155 or Item 156a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Lessee/Sublessee or Post-Transfe Lessee/Sublessee is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rules. The Lessee/Sublessee or Post-Transfer Lessee/Sublessee must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in Section 1.994(b) of the Rules, 47 CFR § 1.994(b). See Main Form Instructions for Items 155 or 156a, as applicable.
The Lessee/Sublessee or Post-Transfer Lessee/Sublessee has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a), in a petition filed contemporaneously with the Commission.
If checked, include in the attachment required by Item 155 or 156a a copy of the petition for declaratory ruling filed contemporaneously with the Commission pursuant to Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).
asic Qualification Information
sic Qualification Questions (If any answer is 'Y', provide an attachment explaining the circumstances)

159)	Has the Applicant or any party to this application had any FCC station authorization, license, or construction permit revoked or had any application for an initial, modification, or renewal of FCC station authorization, license, or construction permit denied by the Commission?	( <b>N</b>	) <u>Y</u> es	<u>N</u> o
160)	Has the Applicant or any party to this filing, or any party directly or indirectly controlling the Applicant or any party to this filing ever been convicted of a felony by any state or federal court?	( N	) <u>Y</u> es	<u><b>N</b></u> o
161)	Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?	( N	) <u>Y</u> es	<u>N</u> o

Spectrum Aggregation Limit Certification(s)	
162) The Licensee/Lessor/Sublessor certifies that grant of this application would not cause the Licensee/Lessor/Sublessor to be in violation of the 40 megahertz in-band spectrum aggregation limit set forth under section 96.31 of the Commission's rules for 3.5 GHz licenses, taking into consideration the spectrum attribution rules under section 20.22(b) of the Commission's rules.  If the Licensee/Lessor/Sublessor has sought a waiver of section 96.31 in connection with this application, it may make this certification subject to the outcome of the waiver request.	( ) <u>Y</u> es <u>N</u> o
163) The Licensee/Lessor/Sublessor certifies that grant of this application would not cause the Licensee/Lessor/Sublessor to be in violation of the 40 megahertz in-band spectrum aggregation limit set forth under section 27.1606 of the Commission's rules for 3.45 GHz licenses, taking into consideration the spectrum attribution rules under section 20.22(b) of the Commission's rules.  If the Licensee/Lessor/Sublessor has sought a waiver of section 27.1606 in connection with this application, it may make this certification subject to the outcome of the waiver request.	( ) <u>Y</u> es <u>N</u> o
164) The Lessee/Sublessee/Transferee certifies that grant of this application would not cause the Lessee/Sublessee/Transferee to be in violation of the 40 megahertz in-band spectrum aggregation limit set forth under section 96.31 of the Commission's rules for 3.5 GHz licenses, taking into consideration the spectrum attribution rules under section 20.22(b) of the Commission's rules.  If the Lessee/Sublessee/Transferee has sought a waiver of section 96.31 in connection with this application, it may make this certification subject to the outcome of the waiver request.	( ) <u>Y</u> es <u>N</u> o
165) The Lessee/Sublessee/Transferee certifies that grant of this application would not cause the Lessee/Sublessee/Transferee to be in violation of the 40 megahertz in-band spectrum aggregation limit set forth under section 27.1606 of the Commission's rules for 3.45 GHz licenses, taking into consideration the spectrum attribution rules under section 20.22(b) of the Commission's rules.  If the Lessee/Sublessee/Transferee has sought a waiver of section 27.1606 in connection with this application, it may make this certification subject to the outcome of the waiver request.	( ) <u>Y</u> es <u>N</u> o

#### **Licensee Certification Statements**

1)	The Licensee agrees that the Lease is not a sale or transfer of the license itself.
-	
2)	The Licensee certifies that it will not consent to assignment of the Lease except to the extent such assignment complies with the Commission's

- 3) The Licensee certifies that it holds exclusive use rights to use the licensed spectrum.
- 4) The Licensee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.

The Licensee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith.

Type or Printed Name of Party Authorized to Sign

	Type of Finited Hame of Fairly Hamerized to orgin							
166) First Name:	MI:	Last Name:	Suffix:					
Jessica	В	Lyons						
167) Title: Asst. Secretary of Manager								
168) Signature: Jessica B Lyons		165) Date: <b>01/23/2023</b>						
EALL LIDE TO SIGN THIS ADDITION MAY BE	SIII T IN DISMIS	SSAL OF THE ADDITIONAND EXPERITIBLE OF ANY FE	ES DAID					

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

Less	ee Certification Statements
1)	The Lessee agrees that the Lease is not a sale or transfer of the license itself.
2)	The Lessee acknowledges that it is required to comply with the Commission's Rules and Regulations and other applicable law at all times, and if the Lessee fails to so comply, the Lease/Sublease may be revoked, cancelled, or terminated by either the Licensee or the Commission.
3)	The Lessee certifies that neither it nor any other party to the Application/Notification is subject to a denial of Federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under Section 1.2002(c) of the Commission's Rules. See Section 1.2002(b) of the Commission's Rules for the definition of "party to the application" as used in this certification.
4)	The Lessee hereby accepts Commission oversight and enforcement consistent with the license and lease authorization. The Lessee acknowledges that it must cooperate fully with any investigation or inquiry conducted either by the Commission or the Licensee, allow the Commission or the Licensee to conduct on-site inspections of transmission facilities, and suspend operations at the direction of the Commission or the Licensee and to the extent that such suspension of operation would be consistent with applicable Commission policies.
5)	The Lessee acknowledges that in the event an authorization held by a Licensee that has associated with it a spectrum leasing arrangement that is the subject of this filing is revoked, cancelled, terminated, or otherwise ceases to be in effect, the Lessee will have no continuing authority to use the leased spectrum and will be required to terminate its operations no later than the date on which the Licensee ceases to have any authority to operate under the license, unless otherwise authorized by the Commission.
6)	The Lessee agrees the Lease shall not be assigned to any entity that is not eligible or qualified to enter into a spectrum leasing arrangement under the Commission's Rules and Regulations.
7)	The Lessee waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by spectrum lease or otherwise.
8)	The Lessee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
9)	The Lessee certifies that it and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This

U.S.C. § 309(j).

The Lessee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in

certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47

Type or Printed Name of Party Authorized to Sign

good faith.

Type of Printed Name of Party Authorized	ເບ ວາgn		
168) First Name: Dan	MI:	Last Name: Burgess	Suffix:
Dan		Dai gess	
169) Title: Manager			
,			
170) Signature: Dan Burgess		171) Date: <b>01</b>	/23/2023
FAILURE TO SIGN THIS APPLICATION MAY RESUL	_T IN DISMI	SSAL OF THE APPLICATION AND I	ORFEITURE OF ANY FEES PAID.
WILLFUL FALSE STATEMENTS MADE ON THIS FO	ORM OR AN	IY ATTACHMENTS ARE PUNISHAE	LE BY FINE AND/OR IMPRISONMENT (U.S.
Code, Title 18, Section 1001) AND/OR REVOCATION	N OF ANY	STATION LICENSE OR CONSTRUC	CTION PERMIT (U.S. Code, Title 47, Section
312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 4			, , , , , , , , , , , , , , , , , , , ,
- (-)(-)	,	/	

	essee Certification Statements
1)	The Sublessee agrees that the Lease is not a, sale or transfer of the license itself.
2)	The Sublessee acknowledges that it is required to comply with the Commission's Rules and regulations and other applicable law at all times, and if the Sublessee fails to so comply, the Lease may be revoked, cancelled, or terminated by either the licensee or the Commission.
3)	The Sublessee certifies that neither it nor any other party to the Application/Notification is subject to a denial of Federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under Section 1.2002(c) of the Commission's Rules. Section 1.2002(b) of the Commission's Rules for the definition of "party to the application" as used in this certification.
4)	The Sublessee hereby accepts Commission oversight and enforcement consistent with the license authorization. The Sublessee acknowledges that it must cooperate fully with any investigation or inquiry conducted either by the Commission or the Licensee, allow the Commission or the licensee to conduct on-site inspections of transmission facilities, and suspend operations at the direction of the Commission or the Licensee and to the extent that such suspension of operation would be consistent with the applicable Commission policies.
5)	The Sublessee acknowledges that in the event an authorization held by a Licensee that has entered into a spectrum leasing arrangement is revoked, cancelled, terminated, or otherwise ceases to be in effect, the Sublessee will have no continuing authority to use the leased spectrum and will be required to terminate its operations no later than the date on which the Licensee ceases to have any authority to operate under the license, unless otherwise authorized by the Commission.
6)	The Sublessee agrees the Lease/Sublease shall not be assigned to any entity that is not eligible or qualified to enter into a spectrum leasing arrangement under the Commission's Rules and regulations.
7)	The Sublessee waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by spectrum lease or otherwise.
8)	The Sublessee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
9)	The Sublessee certifies that it and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

The Sublessee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith.

Type or Printed Name of Party Authorized to Sign							
172) First Name:	MI:	Last Name:		Suffix:			
173) Title:							
174) Signature: 175) Date:							
FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.							

FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section

312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

# Transferee Certification Statements 1) The Transferee agrees that the Lease/Sublease is not a sale or transfer of the license itself. 2) The Transferee acknowledges that it is required to comply with the Commission's Rules and Regulations and other applicable law at all times, and if the Transferee fails to so comply, the Lease/Sublease may be revoked, cancelled, or terminated by either the licensee or the Commission. 3) The Transferee certifies that neither it nor any other party to the Application/Notification is subject to a denial of Federal benefits pursuant to Section 5304 of the Apti Drug Abuse Act of 1099 31 U.S.C. S. 962 because of a constitution for perspection or distribution of a controlled

- The Transferee certifies that neither it nor any other party to the Application/Notification is subject to a denial of Federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under Section 1.2002(c) of the Commission's Rules. See Section 1.2002(b) of the Commission's Rules for the definition of "party to the application" as used in this certification.)
- 4) The Transferee hereby accepts Commission oversight and enforcement consistent with the license authorization. The Transferee acknowledges that it must cooperate fully with any investigation or inquiry conducted either by the Commission or the Licensee, allow the Commission or the licensee to conduct on-site inspections of transmission facilities, and suspend operations at the direction of the Commission or the Licensee and to the extent that such suspension of operation would be consistent with the applicable Commission policies.
- The Transferee acknowledges that in the event an authorization held by a Licensee that has entered into a spectrum leasing arrangement is revoked, cancelled, terminated, or otherwise ceases to be in effect, the Transferee will have no continuing authority to use the leased spectrum and will be required to terminate its operations no later than the date on which the Licensee ceases to have any authority to operate under the license, unless otherwise authorized by the Commission.
- 6) The Transferee agrees the Lease shall not be assigned to any entity that is not eligible or qualified to enter into a spectrum leasing arrangement under the Commission's Rules and Regulations.
- 7) The Transferee waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by spectrum lease or otherwise.
- 8) The Transferee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
- 9) The Transferee certifies that it and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

The Transferee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith.

Type or Printed Name of Party Authorized to Sign

176) First Name:	MI:	Last Name:		Suffix:	
177) Title:					
178) Signature:			179) Date:		
FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.					

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

#### **Transferor Certification Statements**

1)	The Transferor certifies either (1) that control of the Lessee/Sublessee will not be transferred until consent of the Federal Communications
	Commission has been given, or (2) that prior Commission consent is not required because the Lease/Sublease is subject to streamlined
	notification procedures for pro forma transfers of control. See Federal Communications Bar Association's Petition for Forbearance from Section
	310(d) of the Communications Act Regarding Non-Substantial Assignments of Wireless Licenses and Transfers of Control Involving
	Telecommunications Carriers and Personal Communications Industry Association's Broadband Personal Communications Services Alliance's
	Petition for Forbearance For Broadband Personal Communications Services, Memorandum Opinion and Order, 13 FCC Rcd 6293 (1998)
2)	The Transferor certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed
	to any federal agency.

The Transferor certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith.

Type or Printed Name of Party Autl	norized to Sign			
180) First Name:	MI:	Last Name:		Suffix:
181) Title:		1		<u>'</u>
182) Signature:	9/1		183) Date:	
FAILURE TO SIGN THIS APPLICATION MA	Y RESULT IN DISM	ISSAL OF THE APPLI	ICATION AND FORFEITUR	RE OF ANY FEES PAID.
WILLFUL FALSE STATEMENTS MADE O				
Code, Title 18, Section 1001) AND/OR RE 312(a)(1)), AND/OR FORFEITURE (U.S. Cod			E OR CONSTRUCTION PE	ERMIT (U.S. Code, Title 47, Section

#### **Private Commons Manager Certification Statements**

- The Licensee/Lessee/Sublessee manager of the Private Commons certifies that it will retain *de facto* control of the use of the spectrum under the Private Commons arrangement, including that it will maintain reasonable oversight over the users' use of the spectrum under the arrangement so as to ensure that the use of the spectrum, and communications equipment employed, comply with all technical and service rules applicable under the license authorization.
- 2) The Licensee/Lessee/Sublessee manager of the Private Commons arrangement certifies that it will maintain the ability to ensure that users under the arrangement comply with all the technical and service rules applicable under the license authorization.
- The Licensee/Lessee/Sublessee manager of the Private Commons certifies that it and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

The Licensee/Lessee/Sublessee manager of the Private Commons arrangement certifies that all of its statements made in this Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Notification, and are true, complete, correct, and made in good faith.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

### License Authorization(s) or Identifiers (pertaining to Lease(s)/Sublease(s)/Private Commons) Associated with the Spectrum To Be Included in the Filing

188)	189)	190)	191)	192)	193)	194)
Call Sign(s) or	Radio Service	Location Number	Path Number	Frequency	Lower	Upper
Lease/Sublease/	Code		(Microwave only)	Number	Frequency (MHz)	Frequency (MHz)
Private Commons						
Identifier(s)						
KNLG608	CW - PCS					
KNLGOUO	Broadband					
`	Broadbana					
1411 0000	011/ 000					
KNLG639	CW - PCS Broadband					
	Broaubariu					
KNLG639	CW - PCS					
	Broadband					
KNLG690	CW - PCS					
	Broadband					
	`					
KNLG691	CW - PCS					
	Broadband					
KNLG716	CW - PCS					
KNLG716	Broadband					
	Broadbana					
1011 2221	200					
KNLG801	CW - PCS					
	Broadband					
KNLH348	CW - PCS					
	Broadband					
KNLH591	CW - PCS					
	Broadband					
KNLH591	CW - PCS					
	Broadband					
WPOI206	CW - PCS					
111 01200	Broadband					
WPOISOE	CW - PCS					
WPOI206	Broadband					
	- Causaila					
WPOI255	CW - PCS					
	Broadband					
WPOI257	CW - PCS					
	Broadband					
				`		
WPOI416	CW - PCS					
	Broadband					
	1	I	I	l		

<sup>\*</sup> Note: Items 190 – 194 are for New Leases involving spectrum associated with site-based authorizations when only a portion of the licensed locations, paths and/or frequencies will be leased.

#### FCC Form 608 Schedule A

#### **Federal Communications Commission**

Approved by OMB 3060 - 1058 See 608 Main Form Instructions for public burden estimate

# Schedule for Licensees that Received Bidding Credits or Involving Licenses Won in Closed Bidding

Designated Entity Information Bidding Credits			
Has the full amount of the bidding credits awarded with regard to each of the subject license(s) been paid as part of unjust enrichment payment(s) in previous transaction(s)?	(	) <u>Y</u> es	<u>N</u> o
If the response to Item 1 is 'Y', Items 2 and 3 are not required to be completed.			
Bidding Credits - (Spectrum Manager Leases Only)			
2a) Does the Applicant have a general partnership interest or have a direct or indirect ownership interests of ten percent or greater in the Licensee?	(	) <u>Y</u> es	<u>N</u> o
2b) Is the Applicant a "controlling interest holder" or "affiliate" of the current Licensee?	(	) <u><b>Y</b></u> es	<u><b>N</b></u> o
For purposes of determining whether the Licensee has retained the requisite degree of ownership and control over the leased spectrum in order to remain eligible for the license or for bidding credits, the <i>de jure</i> control standard in 47 CFR §1.2110 and the <i>de facto</i> control standard in 47 CFR § 1.9010 will be applied (pursuant to the conditions set forth in 47 CFR §1.9020).			
2c) Does the Applicant share office space, equipment, or other facilities with any party controlling the entity from which spectrum is being leased/subleased?	(	) <u>Y</u> es	<u>N</u> o
2d) Is the Applicant a disclosable interest holder that holds a ten percent or greater interest of any kind in the Licensee and is the Lease/Sublease for more than 25% of the spectrum capacity of the subject license(s)?	(	) <u>Y</u> es	<u>N</u> o
2e) Does the Licensee certify that the Lease/Sublease does not affect its continuing eligibility to retain bidding credit(s)?	(	) <u>Y</u> es	<u>N</u> o
Bidding Credits – (Long-Term <i>De Facto</i> Transfer Leases Only) Eligibility			
3a) With respect to each of the subject licenses, the Applicant:			
( ) qualifies for the same designated entity benefit as the current Licensee			
( ) qualifies for a different designated entity benefit than the current Licensee			
( ) does not qualify for any designated entity status			
3b) If the Applicant states in Item 3a that it qualifies for the same designated entity benefit as the current Licensee or q designated entity status than the current Licensee, the Applicant qualifies for a (select one):	ualifies for a d	lifferent	
( ) small business bidding credit (%)			

FCC Form 608 - Schedule A April 2022 - Page 1

) <u>Y</u>es <u>N</u>o

rural service provider bidding credit

3c) Is the Applicant a disclosable interest holder that holds a ten percent or greater interest of any kind in the

Licensee and is the Lease/Sublease for more than 25% of the spectrum capacity of the subject license(s)?

Closed Bidding Licenses		
4) Have construction notifications been submitted as required by the Commission's Rules for each of the subject licenses?	(	) <u>Y</u> es <u>N</u> o
If the response to Item 4 is 'Y', Items 5 and 6 are not required to be completed.		
Closed Bidding Licenses – (Spectrum Manager Leases Only)		
5a) Does the Applicant have a general partnership interest or have a direct or indirect ownership interest of ten percent or greater in the Licensee?	(	) <u>Y</u> es <u>N</u> o
5b) Is the Applicant a "controlling interest holder" or "affiliate" of the current Licensee?	(	) <u>Y</u> es <u>N</u> o
5c) Does the Applicant share office space, equipment or other facilities with any party controlling the entity from which spectrum is being leased?	(	) <u>Y</u> es <u>N</u> o
5d) Does the Licensee certify that the Lease/Sublease does not affect its continuing eligibility to retain closed bidding licenses?	(	) <u>Y</u> es <u>N</u> o
Closed Bidding Licenses – (Long-Term <i>De Facto</i> Transfer Leases Only) Eligibility		
6) With respect to each of the subject licenses, the Applicant:		
( ) a) qualifies for closed bidding		
( ) b) does not qualify for closed bidding		

7) Revenue and Asset Informat Purpose (Check Modify if filing a provided on the original filing)	on for the Applicant  n Amendment application and changing t	the Revenue and Asset Informati	on from what was	
☐ Modify				
Gross Revenue Disclosure I	ost Recent Reportable Year			
8a) Were the Applicant and any pred If 'N', explain why in an attach	ecessors-in-interest in existence for a full year lent.	of the relevant period?	( ) <u>Y</u> es	<u>N</u> o
If 'Y', provide the following infor	nation.			
8b) Gross Revenues	\$(Forma	it: 99,999.99)		
8c) Year-end Date:	(Date F	Format: MM/DD/YYYY)		
One Year Prior to Most Recent	Reportable Year			
9a) Were the Applicant and any pred If 'N', explain why in an attach	ecessors-in-interest in existence for a full year nent.	of the relevant period?	( ) <u>Y</u> es	<u>N</u> o
If 'Y', provide the following infor	nation.			
9b) Gross Revenues	\$(Forma	it: 99,999.99)		
9c) Year-end Date:	(Date F	Format: MM/DD/YYYY)		
Two Years Prior to Most Recen	Reportable Year			
10a) Were the Applicant and any pro If 'N', explain why in an attach	decessors-in-interest in existence for a full yea nent.	r of the relevant period?	( ) <u>Y</u> es	<u>N</u> o
If 'Y', provide the following infor	nation.			
10b) Gross Revenues	\$(Forma	at: 99,999.99)		
10c) Year-end Date:	(Date F	Format: MM/DD/YYYY)		
Three Years Prior to Most Rece	nt Reportable Year			
	decessors-in-interest in existence for a full year	of the relevant period? If	( ) <u>Y</u> es	<u> </u>
If 'Y', provide the following information	1.			
11b) Gross Revenues	\$(Format: 99	9,999.99)		
11c) Year-end Date:	(Date Forma	at: MM/DD/YYYY)		
Four Years Prior to Most Recer	t Reportable Year			
12a) Were the Applicant and any pre 'N', explain why in an attachme	decessors-in-interest in existence for a full year t.	of the relevant period? If	( ) <u>Y</u> es	<u>N</u> o
If 'Y', provide the following information	1.			
12b) Gross Revenues	\$(Format: 99	9,999.99)		
12c) Year-end Date:	(Date Forma	at: MM/DD/YYYY)		

FCC Form 608 - Schedule A April 2022 - Page 3

Average Gross Revenue	
13) Average Gross Revenue of Reported Years: \$(For	rmat: 99,999.99)
Asset Disclosure	
14) Total Assets as of Application Filing Date: \$	
Financial Statements	
15) Audited or Unaudited (Check One)	
The Applicant used audited financial statements.	
The Applicant used unaudited financial statements prepared in accordance with Gen certified by the Applicant's chief financial officer or the equivalent.	nerally Accepted Accounting Principles (GAAP) and





#### **Closed Bidding/Designated Entity Eligibility**

Total Gross Revenues for N	lost Recent Reportal	ole Year
36a) Gross Revenues	\$	(Format: 99,999.99)
36b) Year-end Date:		(Date Format: MM/DD/YYYY)
Total Gross Revenues for C	one Year Prior to Mos	st Recent Reportable Year
37a) Gross Revenues:	\$	(Format: 99,999.99)
37b) Year-end Date:		(Date Format: MM/DD/YYYY)
Total Gross Revenues for T	wo Years Prior to Mo	ost Recent Reportable Year
38a) Gross Revenues:	\$	(Format: 99,999.99)
38b) Year-end Date:		(Date Format: MM/DD/YYYY)
Total Gross Revenues for	or Three Years Pric	or to the Most Recent Reportable Year
39a) Gross Revenues:	\$	(Format:
39b) Year-end Date:	<del></del>	(Date Format:
40a) Gross Revenues: 40b) Year-end Date:		the Most Recent Reportable Year (Format: 99,999.99) (Date Format: MM/DD/YYYY)
Total Aggregate Average G Revenue Data)	ross Revenues for D	esignated Entity (License(s) Requiring Disclosure of Three Years of Gross
41) Aggregate Average Gross F	Revenue: \$	(Format: 99,999.99)
Total Aggregate Average G Revenue Data)	ross Revenues for De	esignated Entity (License(s) Requiring Disclosure of Five Years of Gross
41) Aggregate Average Gross	Revenue: \$	(Format: 99,999.99)
Total Aggregate Average G	ross Revenues for Cl	losed Bidding
42) Aggregate Average Gross F	Revenue: \$	(Format: 99,999.99)
Total Assets Disclosure for	Closed Bidding	
43) Total Assets: \$		(Format: 99,999.99)

36) Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?	( ) <u>Y</u> es <u>N</u> o
If the Applicant (the Lessee/Sublessee/Transferee) is seeking a rural service provider (RSP) bidding credit, provide equested in a-e.	le in an exhibit the following information
a) for the Applicant, submit the combined number of commercial communications service subscribers to wireless, that the Applicant serves and provide a list of the name(s) and the Federal Information Processing Standard (FIPS the Applicant has at least one commercial wireless, wireline, broadband, or cable subscriber; b) for each of the Applicant's Affiliates, Controlling Interests, and the Affiliates of its Controlling Interests, submit the Registration Number (FRN), its relationship to the Applicant, and its combined number of commercial communication wireline, broadband, and cable services. For each of the Applicant's Affiliates, Controlling Interests, and the Affiliates provide a list of the name(s) and the FIPS number(s) for each county in which it has at least one commercial wirelessubscriber; c) if neither the Applicant, nor any of its Affiliates, its Controlling Interests, or the Affiliates of its Controlling Interests hor adband, or cable subscriber in a market for which the Applicant is applying for a license, list the market(s) in w Controlling Interests, and the Affiliates of its Controlling Interests have no such subscribers; d) a detailed explanation demonstrating that: (i) the Applicant is in the business of providing commercial communiserves predominantly rural areas; and (iii) the primary focus of the Applicant's business activity is the provision of	S) number(s) for each county in which the individual or entity's name, its FCC tions service subscribers to wireless, ates of its Controlling Interests, also less, wireline, broadband, or cable the have at least one wireless, wireline, thich the Applicant, its Affiliates, its lications services; (ii) the Applicant
counties with a population density of 100 or fewer persons per square mile); and e) If the Applicant is an existing rural partnership that was providing service as of July 16, 2015, provide a detailed member of the partnership is independently eligible for the RSP bidding credit by providing, with respect to each r	d explanation demonstrating that each
information as is required in a-d above.	

### **Federal Communications Commission**

Approved by OMB 3060 - 1058 See 608 Main Form Instructions for public burden estimate

#### **Schedule for New Lease or New Sublease**

Term of Lease [For New Leases Only]	
1) Indicate whether the Lease is:	
( <b>x</b> ) Long-Term or ( ) Short-Term*	
* The cumulative lease period for a Short-Term Lease cannot exceed 365 days from the original commencement da	te.
2) If this filing is for a Long-Term <i>De Facto</i> Transfer Lease, have the Licensee and Lessee entered into any Short-Term <i>De Facto</i> Transfer Lease(s) with regard to any spectrum covered by the license(s) that are part of this filing or within the same geographic area(s) of the license(s) that are part of this filing?	(N )Yes No
Leased Spectrum (For Geographically-Licensed Services) [For New Leases Only]	
3a) Does this filing involve geographic-area licenses where only a portion of the licensed spectrum and/or the licensed geographic area will be leased?	(γ ) <u>Y</u> es <u>N</u> o
3b) If the answer to 3a is 'Yes', does this filing involve one or more individual point-to-point microwave links that will be leased?	(N) Yes No
If the response to 3b is 'Yes', complete Schedule H. If the response to 3b is 'No', complete Schedule F and, if applicable, Schedule G.	
Leased Spectrum (For Site-Based Services) [For New Leases Only]	
3c) Does this filing involve site-based licenses where only a portion of the licensed locations, paths and/or frequencies	
will be leased?	( ) <u>Y</u> es <u>N</u> o
If the response to 3c is 'No', complete Items 184 (Call Sign) and 185 (Radio Service Code) on the Main Form. If the response to 3c is 'Yes', in addition to Items 184 (Call Sign) and 185 (Radio Service Code), complete Items 186-190 (Location Number, Path Number, Frequency Number, Lower Frequency and Upper Frequency), as appropriate, on the Main Form.	
Type and Term of Sublease [For New Subleases Only]	
4a) If the existing Lease is a Long-Term <i>De Facto</i> Transfer Lease, are the Lessee and Sublessee entering into a Spectru	m Manager Sublease
or a Long-Term <i>De Facto</i> Transfer Sublease?	· ·
( )Spectrum Manager Sublease or ( )Long-Term <i>De Facto</i> Transfer Sublease	
4b) If the answer to 4a is 'Spectrum Manager Sublease', indicate whether the Sublease is:	
( ) Long-Term or ( ) Short-Term	
5) If the existing Lease is a Long-Term Spectrum Manager Lease, indicate whether the Spectrum Manager Sublease is:	
( ) Long-Term or ( ) Short-Term	

#### **Federal Communications Commission**

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## Schedule for Supplemental Information Pertaining to a New Lease, New Sublease, Revision to Extend the Term of an Existing Lease or Sublease, or Revision to Cancel an Existing Lease or Sublease

License Authorizations/Lease Identifiers/Sublease Identifiers (Complete as many Schedule E's as necessary)

		Capital Capita Capita Capita Capita Capita Cap	Complete as many Sci	0 00000000	<i>3 /</i>
1) Call Sign(s) or Lease/Sublease Identifier(s)	2) Radio Service Code	3) Commencement Date  (MM/DD/YYYY) OR	4) Expiration Date (MM/DD/YYYY)	5) Revised Expiration Date (MM/DD/YYYY)	6) Cancellation Date (MM/DD/YYYY) OR Check box if
		Check box for FCC Grant Date			Lease/Sublease Never Commenced
KNLG608	CW	X	09/16/2026		
KNLG639	CW	X	09/16/2026		
KNLG690	CW	X	09/16/2026		
KNLG691	CW	X	09/16/2026		
KNLG716	CW	X	09/16/2026		
KNLG801	CW	X	09/16/2026		
KNLH348	CW	X	09/16/2026		
KNLH591	CW	X	09/16/2026		
WPOI206	CW	X	06/23/2025		
WPOI255	CW	X	06/23/2025		
WPOI257	CW	X	06/23/2025		
WPOI416	CW	x	06/23/2025		

FCC Form 608 - Schedule E April 2022 - Page 1

### **Federal Communications Commission**

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00.100	(Geographically-Licensed Serv	
Call Sign		
1) Call Sign: <u>KNLG608</u>		
Geographic Area of Spectrum To Be	e Included in Lease	
2) Defined Area to be Leased	3) Undefined Area to be Lo (Complete Schedule	
	Schedule G # Attached:1	
5) Frequencies of Spectrum To Be	included in Lease (MHz)	
Spectrum Leased		
Lower Frequency/E	Bandwidth	Upper Frequency/Bandwidth

### **Federal Communications Commission**

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	(Geographically-License	ed Services)	
Call Sign			
1) Call Sign: <u>KNLG639</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased	Undefined Area (Complete S	a to be Leased	4a) Population of Leased Area
	Schedule G # Attached:2		
5) Frequencies of Spectrum To Be	ncluded in Lease (MHz)		
Spectrum Leased			
Lower Frequency/E	andwidth	Upper	Frequency/Bandwidth

### **Federal Communications Commission**

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	Geographically-Licensed Services)	-
Call Sign		
1) Call Sign: KNLG639		
Geographic Area of Spectrum To Be In	ncluded in Lease	
2) Defined Area to be Leased	3) Undefined Area to be Leased (Complete Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:3	
5) Frequencies of Spectrum To Be Inc	cluded in Lease (MHz)	
Spectrum Leased		
Lower Frequency/Bar	ndwidth Upper	Frequency/Bandwidth
_		

### **Federal Communications Commission**

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	(Geographically-Licensed Services)	
Call Sign		
1) Call Sign: <u>KNLG690</u>		
Geographic Area of Spectrum To Be	Included in Lease	
2) Defined Area to be Leased	3) Undefined Area to be Leased (Complete Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:4	
5) Frequencies of Spectrum To Be	included in Lease (MHz)	
Spectrum Leased		
Lower Frequency/E	Bandwidth Up	pper Frequency/Bandwidth

### **Federal Communications Commission**

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	(Geographically-Licensed Services)	
Call Sign		
1) Call Sign: <u>KNLG691</u>		
Geographic Area of Spectrum To Be	e Included in Lease	
2) Defined Area to be Leased	3) Undefined Area to be Leased (Complete Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:5	
5) Frequencies of Spectrum To Be	Included in Lease (MHz)	
Spectrum Leased		
Lower Frequency/E	Bandwidth Uր	pper Frequency/Bandwidth

### **Federal Communications Commission**

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Concut	(Geographically-Licensed Services)	asou .	
Call Sign			
1) Call Sign: <u>KNLG716</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased	3) Undefined Area to be Leased (Complete Schedule G)	4a) Population of Leased Area	
	Schedule G # Attached:6		
5) Frequencies of Spectrum To Be	included in Lease (MHz)		
Spectrum Leased			
Lower Frequency/E	Bandwidth Up	Upper Frequency/Bandwidth	

### **Federal Communications Commission**

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Concur	(Geographically-Licensed Services)		
Call Sign			
1) Call Sign: <u>KNLG801</u>			
Geographic Area of Spectrum To Be	e Included in Lease		
2) Defined Area to be Leased	3) Undefined Area to be Leased (Complete Schedule G)	4a) Population of Leased Area	
	Schedule G # Attached:7		
5) Frequencies of Spectrum To Be	Included in Lease (MHz)		
Spectrum Leased			
Lower Frequency/E	Bandwidth Up	Upper Frequency/Bandwidth	

### **Federal Communications Commission**

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Collidat	(Geographically-Licens		•
Call Sign			
1) Call Sign: KNLH348			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased	Undefined Are	B) ea to be Leased Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:8		
5) Frequencies of Spectrum To Be	ncluded in Lease (MHz)	1	
Spectrum Leased			
Lower Frequency/Bandwidth		Upper Frequency/Bandwidth	

### **Federal Communications Commission**

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	(Geographically-Licensed Services)		
Call Sign			
1) Call Sign: <u>KNLH591</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased	3) Undefined Area to be Leased (Complete Schedule G)	4a) Population of Leased Area	
	Schedule G # Attached:9		
5) Frequencies of Spectrum To Be	included in Lease (MHz)		
Spectrum Leased			
Lower Frequency/E	Bandwidth Up	Upper Frequency/Bandwidth	

#### **Federal Communications Commission**

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	Geographically-Licens	ed Services)	
Call Sign			
1) Call Sign: KNLH591			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased	Undefined Are	B) ea to be Leased Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:	10	
5) Frequencies of Spectrum To Be In	cluded in Lease (MHz)	,	
Spectrum Leased			
Lower Frequency/Ba	andwidth	Upper	Frequency/Bandwidth

#### **Federal Communications Commission**

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	Geographically-Licensed Se	ervices)	
Call Sign			
1) Call Sign: <u>wPOI206</u>			
Geographic Area of Spectrum To Be I	ncluded in Lease		
2) Defined Area to be Leased	3) Undefined Area to be (Complete Schedu		4a) Population of Leased Area
	Schedule G # Attached:11		
5) Frequencies of Spectrum To Be In	cluded in Lease (MHz)	,	
Spectrum Leased			
Lower Frequency/Ba	ndwidth	Upper F	Frequency/Bandwidth

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	(Geographically-Licen	sed Services)	
Call Sign			
1) Call Sign: <u>WPOI206</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased		3) rea to be Leased s Schedule G)	4a) Population of Leased Area
	Schedule G # Attached	:12	
5) Frequencies of Spectrum To Be	Included in Lease (MHz)	'	
Spectrum Leased			
Lower Frequency/E	Bandwidth	Uppe	r Frequency/Bandwidth

#### **Federal Communications Commission**

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	(Geographically-Licens	ed Services)	
Call Sign			
1) Call Sign: <u>wPOI255</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased	Undefined Are	B) ea to be Leased Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:	13	
5) Frequencies of Spectrum To Be Ir	ncluded in Lease (MHz)	,	
Spectrum Leased			
Lower Frequency/Ba	andwidth	Upper	Frequency/Bandwidth

#### **Federal Communications Commission**

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## Schedule for Defined Geographic Area To Be Leased (Geographically-Licensed Services)

	(Geographically-Licens	sed Services)	
Call Sign			
1) Call Sign: <u>wPOI257</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased	Undefined Ar	3) ea to be Leased Schedule G)	4a) Population of Leased Area
	Schedule G # Attached	14	
5) Frequencies of Spectrum To Be In	ncluded in Lease (MHz)	1	
Spectrum Leased			
Lower Frequency/Ba	andwidth	Upper	Frequency/Bandwidth

#### **Federal Communications Commission**

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	Geographically-Licens	ed Services)	
Call Sign			
1) Call Sign: <u>wP0I416</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased	Undefined Are	B) ra to be Leased Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:	15	
5) Frequencies of Spectrum To Be Ir	ncluded in Lease (MHz)		
Spectrum Leased			
Lower Frequency/Ba	andwidth	Upper	Frequency/Bandwidth

FCC	608
Sche	dule G

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Number:	1	

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

31-28-20.6 N	092-27-03.8 W
31-28-20.4 N	092-25-59.5 W
31-27-39.4 N	092-26-05.1 W
31-27-41.9 N	092-27-06.3 W
31-28-20.6 N	092-27-03.8 W
3	1-28-20.4 N 1-27-39.4 N 1-27-41.9 N

FCC	608
Sche	dule G

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Number:	2	

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	32-43-31.6 N	081-15-29.8 W	
2	32-43-28.5 N	081-14-56.8 W	
3	32-43-01.5 N	081-14-59.6 W	
4	32-43-04.3 N	081-15-33.8 W	
5	32-43-31.6 N	081-15-29.8 W	

<b>FCC</b>	60	8
Sched	lule	G

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Number:	3

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	31-33-55.8 N	081-54-19.2 W
2	31-33-56.7 N	081-54-11.4 W
3	31-33-52.0 N	081-53-55.9 W
4	31-33-45.5 N	081-53-55.0 W
5	31-33-43.7 N	081-54-18.2 W
6	31-33-55.8 N	081-54-19.2 W

FCC	608
Sche	dule G

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Number:	4

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	39-23-07.6 N	075-09-51.9 W
2	39-23-15.7 N	075-09-29.3 W
3	39-22-58.0 N	075-09-18.1 W
4	39-22-55.9 N	075-09-23.1 W
5	39-22-55.1 N	075-09-44.0 W
6	39-23-07.6 N	075-09-51.9 W

F	CC	60	8
S	ched	lule	G

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Number:	5	

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	40-44-09.6 N	076-21-11.0 W
2	40-44-06.8 N	076-20-19.5 W
3	40-43-43.4 N	076-20-17.2 W
4	40-43-41.9 N	076-21-08.8 W
5	40-44-09.6 N	076-21-11.0 W

FCC	60	8
<b>Sched</b>	ule	G

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Number:	6	

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	35-32-11.2 N	098-00-32.1 W
2	35-32-11.0 N	098-00-07.9 W
3	35-31-52.8 N	098-00-07.8 W
4	35-31-53.1 N	098-00-29.4 W
5	35-32-11.2 N	098-00-32.1 W

<b>FCC</b>	60	8
Sched	lule	G

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Numl	oer:	7	

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	40-46-13.4 N	080-42-25.5 W
2	40-46-19.4 N	080-42-28.9 W
3	40-46-26.9 N	080-42-23.0 W
4	40-46-28.2 N	080-42-17.8 W
5	40-46-24.8 N	080-42-06.9 W
6	40-46-18.7 N	080-42-03.9 W
7	40-46-15.2 N	080-42-13.6 W
8	40-46-14.5 N	080-42-16.6 W
9	40-46-13.4 N	080-42-25.5 W

FCC	608
Sche	dule G

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Number:	8		
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	38-52-15.4 N	089-24-33.8 W
2	38-52-15.4 N	089-24-23.5 W
3	38-51-59.9 N	089-24-19.2 W
4	38-51-51.5 N	089-24-26.0 W
5	38-51-51.5 N	089-24-43.2 W
6	38-52-00.8 N	089-24-43.2 W
7	38-52-15.4 N	089-24-33.8 W

FCC	60	8
<b>Sched</b>	ule	G

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Number:	9	

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	37-17-51.7 N	077-20-56.5 W
2	37-17-59.2 N	077-21-01.2 W
3	37-18-03.8 N	077-20-51.0 W
4	37-18-04.5 N	077-20-39.0 W
5	37-17-58.5 N	077-20-37.3 W
6	37-17-51.7 N	077-20-56.5 W

FCC	60	8
<b>Sched</b>	ule	G

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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	37-18-24.8 N	077-20-56.0 W	
2	37-18-25.7 N	077-20-42.1 W	
3	37-18-16.5 N	077-20-39.5 W	
4	37-18-05.9 N	077-20-40.3 W	
5	37-18-05.3 N	077-20-48.4 W	
6	37-18-11.7 N	077-20-55.7 W	
7	37-18-24.8 N	077-20-56.0 W	

FCC	60	8
<b>Sched</b>	ule	G

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Number:	11		
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	37-17-51.7 N	077-20-56.5 W
2	37-17-59.2 N	077-21-01.2 W
3	37-18-03.8 N	077-20-51.0 W
4	37-18-04.5 N	077-20-39.0 W
5	37-17-58.5 N	077-20-37.3 W
6	37-17-51.7 N	077-20-56.5 W

<b>FCC</b>	60	8
Sched	lule	G

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Number:	12	
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

37-18-24.8 N	077-20-56.0 W
37-18-25.7 N	077-20-42.1 W
37-18-16.5 N	077-20-39.5 W
37-18-05.9 N	077-20-40.3 W
37-18-05.3 N	077-20-48.4 W
37-18-11.7 N	077-20-55.7 W
37-18-24.8 N	077-20-56.0 W
	37-18-25.7 N  37-18-16.5 N  37-18-05.9 N  37-18-05.3 N

<b>FCC</b>	60	8
Sched	lule	G

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Number: 13
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	37-10-52.2 N	083-47-34.4 W
2	37-10-55.7 N	083-47-29.6 W
3	37-10-50.5 N	083-47-15.2 W
4	37-10-44.4 N	083-47-12.3 W
5	37-10-38.8 N	083-47-16.8 W
6	37-10-37.7 N	083-47-24.1 W
7	37-10-41.2 N	083-47-28.2 W
8	37-10-52.2 N	083-47-34.4 W

FCC	608
Sche	dule G

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Number:	14	

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	32-53-41.3 N	090-27-04.6 W
2	32-53-44.5 N	090-25-39.4 W
3	32-52-45.6 N	090-25-38.1 W
4	32-52-47.0 N	090-27-01.3 W
5	32-53-41.3 N	090-27-04.6 W

FCC	60	8
Sched	ule	G

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Number:	15	

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	39-23-07.6 N	075-09-51.9 W
2	39-23-15.7 N	075-09-29.3 W
3	39-22-58.0 N	075-09-18.1 W
4	39-22-55.9 N	075-09-23.1 W
5	39-22-55.1 N	075-09-44.0 W
6	39-23-07.6 N	075-09-51.9 W

### Attachment(s):

Туре	Description	Date Entered
0	Exhibit 3 - Site Information	01/04/2023
0	Exhibit 2 - Description of Licenses	01/04/2023
0	Exhibit 1 - Description of Transaction	01/04/2023

#### REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



#### **Federal Communications Commission**

#### **Wireless Telecommunications Bureau**

#### RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: FCC GROUP NEW CINGULAR WIRELESS PCS, LLC 208 S AKARD ST. RM 2100 DALLAS, TX 75202

<b>Call Sign</b> WQGA823	<b>File Number</b> 0009696753
<b>Radio</b> AW - AWS (171 2110-21	

FCC Registration Number (FRN): 0003291192

<b>Grant Date</b> 05-08-2023	Effective Date 05-08-2023	Expiration Date 11-29-2036	<b>Print Date</b> 05-09-2023		
Market Number CMA452		nel Block A	Sub-Market Designator 0		
	Market Kentucky I	Name 0 - Powell			
1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date		

#### Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

#### **Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

700 MHz Relicensed Area Information:

Market Name Buildout Deadline Buildout Notification Status

## Reference Copy Only. Do Not Mail to the FCC as an Application.

Submitted: 05/01/2023 at 11:47:30

File Number: 0009696753

#### **FCC 601**

#### **Main Form**

# FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau Public Safety and Homeland Security Bureau

Approved by OMB

3060 - 0798

See instructions for public burden estimate

	-	
Radio Service Code:	1a) Existing Radio Service Code:	
AW		

#### **General Information**

	d Notifications s for Extension of Time
3a) If this application is for a Demonstration License or a <u>Special Temporary Authorization (STA)</u> , enter the code ar attach the required exhibit as described in the instructions. Otherwise enter ' <u>N/A</u> ' (Not Applicable).	nd (N) <u>MSN/A</u>
3b) If this application is for Special Temporary Authority due to an emergency situation, enter 'Y'; otherwise enter Refer to Rule 1.915 for an explanation of situations considered to be an emergency.	'N'. ( ) <u>Y</u> es <u>N</u> o
4) If this application is for an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC.	File Number <b>0009696753</b>
5) If this application is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, , or Administrative Update, enter the call sign of the existing FCC license. If this is a request for Registered Location/Link, enter the FCC call sign assigned to the geographic license.	Call Sign WQGA823
6a) If this application is for a New, Amendment, Renewal Only, or Renewal/Modification, enter the requested authorization expiration date (this item is optional).	MM DD
6b) If this application is for a Renewal Only or Renewal/Modification and the license is a geographic area license, is the license used to provide service to customers ( <b>C</b> ), or is the license used for private business (internal) purposes or to meet the licensee's public interest/public safety communications needs ( <b>P</b> )?	( ) <u>C</u> <u>P</u>
7) Is this application "major" as defined in § 1.929 of the Commission's Rules when read in conjunction with the application service rules found in Parts 22 and 90 of the Commission's Rules? (NOTE: This question only applied certain site-specific applications. See the instructions for applicability and full text of § 1.929).	
8) Are attachments (other than associated schedules) being filed with this application?	( <b>Y</b> ) <u>Y</u> es <u>N</u> o

Fees, Waivers, and Exemptions

1 ccs, viaivers, and Exemptions	
9) Is the Applicant exempt from FCC application fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
10) Is the Applicant exempt from FCC regulatory fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
11) Does this application include a request for a Waiver of the Commission's Rule(s)? If 'Yes', attach an exhibit providing rule number(s) and explaining circumstances.	( <b>N</b> ) <u>Y</u> es <u>N</u> o
12) Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station?	( <b>N</b> ) <u>Y</u> es <u>N</u> o

FCC 601 – Main Form April 2022 – Page 1

pplicant Information								
13) FCC Registration Number (FRN): 0003291192								
14) Applicant/Licensee Legal Entity Type: (Select One) ( )Individual ( )Unincorporated Association (		ust (	)Govern	nment Entity	( )Corpor	ation (	X )Limited	d Liability Company
)General Partnership ( )Limited Partnership	p ( )l	_imited Li	iability F	artnership	( )Consor	tium		
) Other:								
<ol> <li>If the Licensee name is being updated, is the updated party and for which proper Commission approval</li> </ol>								( ) <u>Y</u> es <u>N</u> o
6) First Name (if individual):		MI: L	₋ast Nar	ne:				Suffix:
7) Legal Entity Name (if other than individual):								
New Cingular Wireless PCS, LLC								
8) Attention To:								
FCC Group								
9) P.O. Box:	And/Or	r 20) St	treet Ad	dress:				
		1 ′		kard St. R	M 2100			
21) City:					22) State:		23) Zip Co	de:
Dallas					TX		75202	
4) Telephone Number:			2	25) Fax:		I		
(855)699-7073								
6) E-Mail Address:								
FCCMW@att.com								
7) Demographics (Optional)								
Race:	Ethni	icity:				Gend	er:	
)American Indian or Alaska Native	(	)Hispani	c or Lati	no		( )	Male	
)Asian	(	)Not His	panic or	nic or Latino ( )Female				
)Black or African-American								
)Native Hawaiian or Other Pacific Islander								
)White								
al Party in Interest								
(If different policient):  (S) Name of Real Party in Interest of Applicant (If different policient):	ent from	1	2	9) FCC Reg	istration Numb	er (FRN)	of Real Pa	rty in Interest:
ontact Information (If different from the Applicant) ) Check here if same as Applicant.								
0) First Name:		MI:		Name:				Suffix:
Cecil		J	Ma	thew				
1) Company Name: AT&T Services, Inc.								•
2) Attention To:								
(3) P.O. Box:	And	34) Str	reet Add	ress:				
-,	/Or			ard St. RN	1 2100			
55) City: Dallas	1	<u> </u>		36) State:		-		p Code: 5 <b>202</b>
88) Telephone Number: (855)699-7073			39	)) Fax:				
40) E-Mail Address: FCCMW@att.com			1					

Regulatory Status										
41) This filing is fo	or authorization to provid	de or use the follow	ng type(s) of ra	dio service o	offering (enter al	I that apply):				
( X ) <u>C</u> ommon Ca	arrier ( ) <u>N</u> on-Com	nmon Carrier (	) <u>P</u> rivate, inte	rnal commu	nications (	) <u>B</u> roadcast	Services	( ) <u>B</u>	and <u>M</u> a	anager
Type of Radio Ser	rvice									
42) This filing is fo	or authorization to provid	de the following type	e(s) of radio ser	vice (choose	all that apply):					
( <u>)</u> <b>F</b> ixed	( <b>X</b> ) <u>M</u> obile	( ) <u>R</u> a	diolocation	( )	<u>S</u> atellite (sound	) (	) <u>B</u> roadcas	t Services	5	
43) Does the App	olicant propose to provid	e service interconne	ected to the pub	lic telephon	e network?			( <b>Y</b>	<u>)<b>Y</b></u> es	<u>N</u> o
	Questions (If any answ structions for the "Alie			explaining	the circumstan	ces. In pre	paring the a	ttachmer	nt, refe	r to
44) Is the Applica	int a foreign government	or the representati	ve of any foreigi	n governme	nt?			( N	) <u>Y</u> es	<u>N</u> o
45) Is the Applica	int an alien or the repres	entative of an alien	?					( N	) <u><b>Y</b></u> es	<u>N</u> o
46) Is the Applica	int a corporation organiz	ed under the laws o	of any foreign go	overnment?				( N	) <u>Y</u> es	<u>N</u> o
, , , , , , , , , , , , , , , , , , , ,	ant a corporation of whic ives, or by a foreign gov		•			•		( N	) <u>Y</u> es	<u>N</u> o

owned	the Applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock ( <b>N</b> ) Yes No is of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any ation organized under the laws of a foreign country?
48b) If	f the answer to 47 or 48a is 'Y' select one of the choices below.
	The Applicant is exempt from the provisions of Section 310(b).
	It is not necessary to file a petition for declaratory ruling if the Applicant includes in the attachment required by Item 47 or Item 48a a showing that the requested license(s) is exempt from the provisions of Section 310(b).
	The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.
	If checked, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Applicant since the issuance of its ruling.
	The Applicant: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specified immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/Sublessee that received a declaratory ruling(s) under 47 CFR § 1.5000(a) and is relying on the affiliate's ruling for purposes of filing this application as permitted under the affiliate's ruling and 47 CFR § 1.5004(b)
	If checked, and if the Applicant received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 47 or Item 48a the citation(s) of the Applicant's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of its ruling and with the Commission's Rules.
	If checked, and if the Applicant received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 48a a copy of a petition for declaratory ruling filed contemporaneously with the Commission to extend the Applicant's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s) involved in the application. Alternatively, the Applicant may request a new declaratory ruling pursuant to Section 1.5000(a) of the Commission's Rules, 47 CFR § 1.5000 (a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).
	If checked, and if the Applicant is relying on an affiliate's ruling for purposes of filing this application, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rules. The Applicant must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in 47 CFR § 1.5004(b). See Main Form Instructions for Items 47 or 48a, as applicable.
	The Applicant has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under 47 CFR § 1.5004(b) in a petition filed contemporaneously with the Commission.
	If checked, include in the attachment required by Item 47 or 48a a copy of the petition for declaratory ruling filed contemporaneously with the Commission pursuant to 47 CFR § 1.5004(b). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).

Basic Qualification Questions			18.5	
49) Has the Applicant or any party to this application had any FCC station authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission?		N	) <u>Y</u> es	<u>N</u> o
50) Has the Applicant or any party to this application, or any party directly or indirectly controlling the Applicant, ever been convicted of a felony by any state or federal court?	(	N	) <u>Y</u> es	<u>N</u> o
51) Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?		( <b>N</b>	) <u>Y</u> es	<u>N</u> o
Note: If the answer to any of 49-51 is 'Y', attach an exhibit explaining the circumstances.				
Aeronautical Advisory Station (Unicom) Certification				
52) ( ) I certify that the station will be located on property of the airport to be served, and, in cases where the airport does not tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations to within ten days prior to application.				t
Broadband Radio Service and Educational Broadband Service Cable Cross-Ownership				
53a) Will the requested facilities be used to provide multichannel video programming service?	(		<u>)Y</u> es	<u>N</u> o
53b) If the answer to question 53a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in 47 CFR § 27.1202) in a cable television system whose franchise area is located within the geographic service area of the requested facilities?	(		) <u>Y</u> es	<u>N</u> o
Note: If the answer to question 53b is 'Y', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1202 or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.				
Broadband Radio Service and Educational Broadband Service (Part 27)				
54) (For EBS only) Does the Applicant comply with the programming requirements contained in 47 CFR § 27.1203?	(		) <u>Y</u> es	<u>N</u> o
Note: If the answer to item 54 is 'N', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a mus answered 'Y'.	t be			
55) (For BRS and EBS) Does the Applicant comply with 47 CFR §§ 27.50, 27.55, and 27.1221?	(		) <u>Y</u> es	<u>N</u> o
<b>Note:</b> If the answer to item 55 is 'N', attach an exhibit justifying a waiver of that rule(s). If a waiver of the Commission Rule(s) being requested, Item 11a must be answered 'Y'.	is			
For Applicants Who Participated in an Auction				
56) Is the Applicant a qualifying rural wireless partnership or a member of a qualifying rural wireless partnership?		(	) <u>Y</u> e	s <u>N</u> o
Note: If the answer to item 56 is 'Y', attach an exhibit listing all members of the qualifying rural wireless partnership, including FRN numbers.	their			
For Renewal Applicants				
57) Operation/Performance Requirement Certification				
For a site-based license]: Applicant certifies that it is continuing to operate consistent with its most recently filed construction notification (or most recent authorization, if no construction notification was required).	(	) <u>Y</u> e	s <u>N</u> o	
For a geographic license, commercial service - licensee in its initial license term with an interim performance	(	) <b>Y</b> e	s <u>N</u> o	
requirement]: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term following the interim performance requirement, it continues to use its facilities to provide at least the level of service required by its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term.		′—	_	
For a geographic license, commercial service - licensee in its initial license term with no interim performance requirement]: Applicant certifies that it has met its final performance requirement and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely	(	) <u>Y</u> e	es <u>N</u> o	
application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]				
For a geographic license, commercial service - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> e	s <u>N</u> o	
For a geographic license, private systems - licensee in its initial license term with an interim performance equirement]: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term collowing the interim performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its interim performance requirement, it has net its final performance requirement, and it continues to use its facilities to provide at least the level of operation required by its	(	) <u>Y</u> e	es <u>N</u> o	
inal performance requirement through the end of the license term.				
For a geographic license, private systems - licensee in its initial license term with no interim performance requirement]: Applicant certifies that it has met its final performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs, and it continues to use its facilities to provide at least the	(	) <u>Y</u> e	es <u>N</u> o	

level of operation required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]

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[For a geographic license, private systems - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for the first renewal application filed after effective date of the rules]: Applicant certifies that the partitioned and/or disaggregated license that is the subject of this renewal application has no separate performance requirement and that this is the first renewal of this license filed subsequent to the effective date of the rules.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for any subsequent renewal filings]: Applicant certifies that it continues to use its facilities to provide service or to further the applicant's private business or public interest/public safety needs.	(	) <u>Y</u> es <u>N</u> o
Discontinuance of Service Certification		
58) Applicant certifies that no permanent discontinuance of service or operation, as applicable, occurred during its current license term.	(	) <u>Y</u> es <u>N</u> o
Note: If the response to either item 57 or item 58 is 'N', attach an exhibit that demonstrates that over the course of the license term, the Applicant provided and continues to provide service to the public, or operated and continues to operate the license to meet the Applicant's private business or public interest/public safety communications needs. This exhibit must include a detailed description of the Applicant's provision of service or, when allowed under the relevant service rules or pursuant to waiver, use of the spectrum for private business or public interest/public safety communications needs, during the entire license period and address, as applicable: 1) the level and quality of service provided by the applicant (e.g., the population served, the area served, the number of subscribers, the services offered); (2) the date service commenced, whether service was ever interrupted, and the duration of any interruption or outage; (3) the extent to which service is provided to rural areas; (4) the extent to which service is provided to qualifying tribal land as defined in 47 CFR § 1.2110(e)(3)(i); and (5) any other factors associated with the level of service to the public. The licensee may note in its exhibit: 1) any grant(s) of waiver or extension of a performance deadline or license renewal subject to meeting a performance requirement; or 2) if the final performance deadline and/or expiration date for the license accelerated because the licensee did not meet an interim performance requirement.		
Regulatory Compliance Certification [same for all]		
59) Applicant certifies that it has substantially complied with all applicable FCC rules, policies, and the Communications Act of 1934, as amended.	(	) <u>Y</u> es <u>N</u> o
<b>Note:</b> If the response to item 59 is 'N', attach an exhibit explaining the circumstances and demonstrating why Applicant's license should be renewed.		
General Certification Statements  1) The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory po	wor of	the United States
The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory population because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application		the Utilied States

- 2) The Applicant certifies that grant of this application would not cause the Applicant to be in violation of any pertinent cross-ownership or attribution rules.\*

  \*If the Applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcome of the waiver request.
- 3) The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference are material, are part of this application, and are true, complete, correct, and made in good faith.
- 4) The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to § 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under § 1.2002(c) of the rules, 47 CFR § 1.2002(c). See 47 CFR § 1.2002(b) for the definition of "party to the" application" as used in this certification.
- 5) The Applicant certifies that it either (1) has current required ownership data on file with the Commission, (2) is filing updated ownership data simultaneously with this application, or (3) is not required to file ownership data under the Commission's Rules.
- 6) The Applicant certifies that the facilities, operations, and transmitters for which this authorization is hereby requested are either: (1) categorically excluded from routine environmental evaluation for RF exposure as set forth in 47 CFR § 1.1307(b); or, (2) have been found not to cause human exposure to levels of radiofrequency radiation in excess of the limits specified in 47 CFR §§ 1.1310 and 2.1093; or, (3) are the subject of one or more Environmental Assessments filed with the Commission.
- 7) The Applicant certifies that it has reviewed the appropriate Commission Rules defining eligibility to hold the requested license(s) and is eligible to hold the requested license(s).
- 8) The Applicant certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency
- The Applicant certifies that the Applicant and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

#### Signature

60	))Typed	or Printed	Name	of Party	Authorized	to Sian

First Name:	MI:	Last Name:	Suffix:
Cecil	J	Mathew	
61) Title: Assistant Secretary-Complia	nce		<u>.</u>
Signature:			62) Date:
Cecil J Mathew	05/01/2023		

#### FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

Upon grant of this license application, the Licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, § 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, § 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, § 503).

### Attachment(s):

Type	Description	Date Entered
0	License Renewal Exhibit	05/01/2023

## Reference Copy Only. Do Not Mail to the FCC as an Application.

Submitted: 01/13/2023 at 18:08:22

File Number: 0010368519

#### **FCC 601**

#### **Main Form**

1) Radio Service Code:

# FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau Public Safety and Homeland Security Bureau

1a) Existing Radio Service Code:

Approved by OMB

3060 - 0798

See instructions for public burden estimate

AW	
General Information	
2) (Select only one) ( AU )  NE - New MD - Modification AM - Amendment  RO - Renewal Only RO - Renewal/Modification AM - Renewal/Modification CA - Cancellation of License  RU - Administrative Update WD - Withdrawal of Application EX - Requests for Ext	
3a) If this application is for a Demonstration License or a <u>Special Temporary Authorization (STA)</u> , enter the code and attach the required exhibit as described in the instructions. Otherwise enter ' <u>N/A</u> ' (Not Applicable).	(N) <u>MSN/A</u>
3b) If this application is for Special Temporary Authority due to an emergency situation, enter 'Y'; otherwise enter 'N'. Refer to Rule 1.915 for an explanation of situations considered to be an emergency.	( <u>)Y</u> es <u>N</u> o
If this application is for an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC.	File Number
5) If this application is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, , or Administrative Update, enter the call sign of the existing FCC license.  If this is a request for Registered Location/Link, enter the FCC call sign assigned to the geographic license.	Call Sign <b>WQGA824</b>
6a) If this application is for a New, Amendment, Renewal Only, or Renewal/Modification, enter the requested authorization expiration date (this item is optional).	MM DD
6b) If this application is for a Renewal Only or Renewal/Modification and the license is a geographic area license, is the license used to provide service to customers (C), or is the license used for private business (internal) purposes or to meet the licensee's public interest/public safety communications needs (P)?	( ) <u>C</u> <u>P</u>
7) Is this application "major" as defined in § 1.929 of the Commission's Rules when read in conjunction with the applicable radio service rules found in Parts 22 and 90 of the Commission's Rules? (NOTE: This question only applies to certain site-specific applications. See the instructions for applicability and full text of § 1.929).	( ) <u>Y</u> es <u>N</u> o
8) Are attachments (other than associated schedules) being filed with this application?	( ) <u>Y</u> es <u>N</u> o
Fees, Waivers, and Exemptions	
9) Is the Applicant exempt from FCC application fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
10) Is the Applicant exempt from FCC regulatory fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
11) Does this application include a request for a Waiver of the Commission's Rule(s)? If 'Yes', attach an exhibit providing rule number(s) and explaining circumstances.	( <b>N</b> ) <u>Y</u> es <u>N</u> o
12) Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station?	( <u>)Y</u> es <u>N</u> o

pplicant Information							
13) FCC Registration Number (FRN): 0003291192							
14) Applicant/Licensee Legal Entity Type: (Select One) ( )Individual ( )Unincorporated Association (		ıst (	)Goverr	nment Entity	( )Corporation	( <b>X</b> )Limi	ited Liability Company
)General Partnership ( )Limited Partnership	p ( )l	_imited L	iability P	artnership	( )Consortium		
) Other:							
<ol> <li>If the Licensee name is being updated, is the updated party and for which proper Commission approval</li> </ol>	e a resi has no	ult from to t been i	he sale received	(or transfer of l or proper no	control) of the lice otification not pro	ense(s) to ovided?	( ) <u>Y</u> es <u>N</u> o
6) First Name (if individual):		MI: L	_ast Nar	ne:			Suffix:
(7) Legal Entity Name (if other than individual):							
NEW CINGULAR WIRELESS PCS, LLC							
8) Attention To:							
FCC Group							
9) P.O. Box:	And/Or	20) S	treet Ad	dress:			
		2	08 S. A	kard St. 20I	=		
1) City:				2	2) State:	23) Zip (	Code:
Dallas					TX	7520	2
4) Telephone Number:			2	25) Fax:			
(855)699-7073							
6) E-Mail Address:							
FCCMW@att.com							
7) Demographics (Optional)							
Race:	Ethni	•			G	ender:	
)American Indian or Alaska Native	(	)Hispani	c or Lati	no	(	)Male	
)Asian	(	)Not His	panic or	Latino	(	)Female	
)Black or African-American							
)Native Hawaiian or Other Pacific Islander							
)White							
eal Party in Interest							
28) Name of Real Party in Interest of Applicant (If different Applicant):	ent from	1	2	9) FCC Regist	tration Number (F	RN) of Real	Party in Interest:
ontact Information (If different from the Applicant)) Check here if same as Applicant.			'				
30) First Name:		MI:		Name:			Suffix:
Cecil		J	Ma	thew			
31) Company Name: AT&T Services, Inc.							
2) Attention To:							
3) P.O. Box:	And	34) Str	reet Add	ress:			
,	/Or			kard St. 20F			
35) City: <b>Dallas</b>	1	ı		36) State:			) Zip Code: <b>75202</b>
88) Telephone Number: (855)699-7073			39	)) Fax:			
40) E-Mail Address: FCCMW@att.com			1				

	julatory Status														
41	) This filing is for	authoriza	tion to provide o	r use the f	ollowi	ng type(s) of ra	adio servic	e offering (er	nter all	that app	ly):				
(	) <u>C</u> ommon Carr	ier (	) <u>N</u> on-Commo	n Carrier	(	) <u>P</u> rivate, inte	ernal comm	nunications	(	) <u>B</u> roadc	ast S	ervices	(	) <u>B</u> and	<u>M</u> anager
Тур	e of Radio Servi	ce													
42	) This filing is for	authoriza	tion to provide th	ne followin	g type	e(s) of radio se	rvice (choc	se all that a	oply):						
(	) <u>F</u> ixed	(	) <u>M</u> obile	(	) <u>R</u> ac	diolocation	(	) <u>S</u> atellite (s	sound)		(	) <u>B</u> roadca	st Serv	rices	
43	) Does the Applic	ant propo	se to provide se	rvice inter	conne	ected to the pul	blic telepho	ne network	?				(	) <u>Y</u> e	es <u>N</u> o
	n Ownership Qu Main Form Instr						t explainin	g the circur	nstan	ces. In p	prepa	aring the	attach	ment, r	efer to
44	) Is the Applicant	a foreign	government or t	he repres	entativ	e of any foreig	gn governn	nent?					(	) <u>Y</u> (	es <u>N</u> o
45	) Is the Applicant	an alien o	or the representa	ative of an	alien	?								) <b>Y</b>	oo No
4.0	) Is the Applicant	a cornors	·										,	/	es <u>N</u> o
46	, , , , ,	a corpore	tion organized ι	under the I	aws o	f any foreign g	jovernment	?					(	· /	es <u>N</u> o es <u>N</u> o

48a) Is the Applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock ( ) Yes No is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any	
corporation organized under the laws of a foreign country?	
48b) If the answer to 47 or 48a is 'Y' select one of the choices below.	
The Applicant is exempt from the provisions of Section 310(b).	
It is not necessary to file a petition for declaratory ruling if the Applicant includes in the attachment required by Item 47 or Item 48a a show that the requested license(s) is exempt from the provisions of Section 310(b).	ing
The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.	nal
If checked, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Applications since the issuance of its ruling.	
The Applicant: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specific immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/Sublessee that received a declaratory ruling(s) under 47 CFR § 1.5000(a) is relying on the affiliate's ruling for purposes of filing this application as permitted under the affiliate's ruling and 47 CFR § 1.5004(b)	fied and
If checked, and if the Applicant received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 47 Item 48a the citation(s) of the Applicant's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, an statement that the Applicant is in compliance with the terms and conditions of its ruling and with the Commission's Rules.	
If checked, and if the Applicant received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 48a a confunction of a petition for declaratory ruling filed contemporaneously with the Commission to extend the Applicant's existing ruling(s) to cover the sa radio service(s) and geographic coverage area(s) involved in the application. Alternatively, the Applicant may request a new declaratory ruling pursuant to Section 1.5000(a) of the Commission's Rules, 47 CFR § 1.5000 (a). Petitions for declaratory ruling may be filed electronic on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).	ame
If checked, and if the Applicant is relying on an affiliate's ruling for purposes of filing this application, include in the attachment required by It 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, a statement that the Applicant is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Ru. The Applicant must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in 47 CF. 1.5004(b). See Main Form Instructions for Items 47 or 48a, as applicable.	and les.
The Applicant has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under 47 CFI 1.5004(b) in a petition filed contemporaneously with the Commission.	R§
If checked, include in the attachment required by Item 47 or 48a a copy of the petition for declaratory ruling filed contemporaneously with Commission pursuant to 47 CFR § 1.5004(b). Petitions for declaratory ruling may be filed electronically on the Internet through the Internation Bureau Filing System (IBFS) (with a copy attached hereto).	

Basic Qualification Questions			
49) Has the Applicant or any party to this application had any FCC station authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construct permit denied by the Commission?	ion (	) <u>Y</u> •	es <u>N</u> o
50) Has the Applicant or any party to this application, or any party directly or indirectly controlling the Applicant, ever been convicted of a felony by any state or federal court?	(	( ) <u>Y</u>	es <u>N</u> o
51) Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?		( <u>)Y</u>	es <u>N</u> o
Note: If the answer to any of 49-51 is 'Y', attach an exhibit explaining the circumstances.			
Aeronautical Advisory Station (Unicom) Certification			
52) ( ) I certify that the station will be located on property of the airport to be served, and, in cases where the airport does not he tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations low within ten days prior to application.			oort
Broadband Radio Service and Educational Broadband Service Cable Cross-Ownership			
53a) Will the requested facilities be used to provide multichannel video programming service?	(	( ) <u>Y</u>	es <u>N</u> o
53b) If the answer to question 53a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in 47 CFR § 27.1202) in a cable television system whose franchise area is located within the geographic service area of the requested facilities?	(	<u>(</u> ) <u>Y</u>	es <u>N</u> o
Note: If the answer to question 53b is 'Y', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1202 or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.			
Broadband Radio Service and Educational Broadband Service (Part 27)			
54) (For EBS only) Does the Applicant comply with the programming requirements contained in 47 CFR § 27.1203?	(	) <u>Y</u> e	es <u>N</u> o
Note: If the answer to item 54 is 'N', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must answered 'Y'.	t be		
55) (For BRS and EBS) Does the Applicant comply with 47 CFR §§ 27.50, 27.55, and 27.1221?	(	) <u>Y</u> (	es <u>N</u> o
<b>Note:</b> If the answer to item 55 is 'N', attach an exhibit justifying a waiver of that rule(s). If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.	s		
For Applicants Who Participated in an Auction			
56) Is the Applicant a qualifying rural wireless partnership or a member of a qualifying rural wireless partnership?		( )	Yes <u>N</u> o
Note: If the answer to item 56 is 'Y', attach an exhibit listing all members of the qualifying rural wireless partnership, including FRN numbers.	their		
For Renewal Applicants			
57) Operation/Performance Requirement Certification	1		
For a site-based license]: Applicant certifies that it is continuing to operate consistent with its most recently filed construction obtification (or most recent authorization, if no construction notification was required).	(	) <u>Y</u> es <u>N</u>	<u>l</u> o
For a geographic license, commercial service - licensee in its initial license term with an interim performance	(	) <u>Y</u> es <u>N</u>	lo
requirement]: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term ollowing the interim performance requirement, it continues to use its facilities to provide at least the level of service required by its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term.	,	<i>,</i> – –	•
For a geographic license, commercial service - licensee in its initial license term with no interim performance equirement]: Applicant certifies that it has met its final performance requirement and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term. [Note: licensee nust provide a showing demonstrating that the final performance requirement has been met, either separately in a timely	(	) <u>Y</u> es <u>N</u>	lo
application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]			
For a geographic license, commercial service - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> es <u>N</u>	<u>l</u> o
For a geographic license, private systems - licensee in its initial license term with an interim performance equirement]: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term ollowing the interim performance requirement, it continues to use its facilities to further its private business or public nterest/public safety communications needs at or above the level required to meet its interim performance requirement, it has	(	) <u>Y</u> es <u>N</u>	lo
net its final performance requirement, and it continues to use its facilities to provide at least the level of operation required by its inal performance requirement through the end of the license term.			
For a geographic license, private systems - licensee in its initial license term with no interim performance equirement]: Applicant certifies that it has met its final performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs, and it continues to use its facilities to provide at least the	(	) <u>Y</u> es <u>N</u>	<u>l</u> o

level of operation required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]

FCC 601 – Main Form April 2022 – Page 5

[For a geographic license, private systems - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for the first renewal application filed after effective date of the rules]: Applicant certifies that the partitioned and/or disaggregated license that is the subject of this renewal application has no separate performance requirement and that this is the first renewal of this license filed subsequent to the effective date of the rules.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for any subsequent renewal filings]: Applicant certifies that it continues to use its facilities to provide service or to further the applicant's private business or public interest/public safety needs.	(	) <u>Y</u> es <u>N</u> o
Discontinuance of Service Certification		
58) Applicant certifies that no permanent discontinuance of service or operation, as applicable, occurred during its current license term.	(	) <u>Y</u> es <u>N</u> o
Note: If the response to either item 57 or item 58 is 'N', attach an exhibit that demonstrates that over the course of the license term, the Applicant provided and continues to provide service to the public, or operated and continues to operate the license to meet the Applicant's private business or public interest/public safety communications needs. This exhibit must include a detailed description of the Applicant's provision of service or, when allowed under the relevant service rules or pursuant to waiver, use of the spectrum for private business or public interest/public safety communications needs, during the entire license period and address, as applicable: 1) the level and quality of service provided by the applicant (e.g., the population served, the area served, the number of subscribers, the services offered); (2) the date service commenced, whether service was ever interrupted, and the duration of any interruption or outage; (3) the extent to which service is provided to rural areas; (4) the extent to which service is provided to qualifying tribal land as defined in 47 CFR § 1.2110(e)(3)(i); and (5) any other factors associated with the level of service to the public. The licensee may note in its exhibit: 1) any grant(s) of waiver or extension of a performance deadline or license renewal subject to meeting a performance requirement; or 2) if the final performance deadline and/or expiration date for the license accelerated because the licensee did not meet an interim performance requirement.		
Regulatory Compliance Certification [same for all]		1
59) Applicant certifies that it has substantially complied with all applicable FCC rules, policies, and the Communications Act of 1934, as amended.	(	) <u>Y</u> es <u>N</u> o
<b>Note:</b> If the response to item 59 is 'N', attach an exhibit explaining the circumstances and demonstrating why Applicant's license should be renewed.		
Consumal Contributions Chatamagnets		
General Certification Statements  1) The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory po	wer of	the United States
because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application		and office offices

- 2) The Applicant certifies that grant of this application would not cause the Applicant to be in violation of any pertinent cross-ownership or attribution rules.\*

  \*If the Applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcome of the waiver request.
- 3) The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference are material, are part of this application, and are true, complete, correct, and made in good faith.
- 4) The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to § 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under § 1.2002(c) of the rules, 47 CFR § 1.2002(c). See 47 CFR § 1.2002(b) for the definition of "party to the" application" as used in this certification.
- 5) The Applicant certifies that it either (1) has current required ownership data on file with the Commission, (2) is filing updated ownership data simultaneously with this application, or (3) is not required to file ownership data under the Commission's Rules.
- 6) The Applicant certifies that the facilities, operations, and transmitters for which this authorization is hereby requested are either: (1) categorically excluded from routine environmental evaluation for RF exposure as set forth in 47 CFR § 1.1307(b); or, (2) have been found not to cause human exposure to levels of radiofrequency radiation in excess of the limits specified in 47 CFR §§ 1.1310 and 2.1093; or, (3) are the subject of one or more Environmental Assessments filed with the Commission.
- 7) The Applicant certifies that it has reviewed the appropriate Commission Rules defining eligibility to hold the requested license(s) and is eligible to hold the requested license(s).
- 8) The Applicant certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency
- The Applicant certifies that the Applicant and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

#### Signature

60)Typed	or Printed	Name of	Party Au	thorized to	Sian

First Name:	MI:	Last Name:	Suffix:
Cecil	J	Mathew	
61) Title: Assistant Secretary - Compliance	_		•
Signature:			62) Date:
Cecil J Mathew			01/13/2023

Upon grant of this license application, the Licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, § 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, § 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, § 503).

#### REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



#### **Federal Communications Commission**

**Wireless Telecommunications Bureau** 

#### RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL J MATHEW NEW CINGULAR WIRELESS PCS, LLC 208 S. AKARD ST. 20F DALLAS, TX 75202

<b>Call Sign</b> WQGA824	File Number
Radio	Service
AW - AWS (171)	0-1755 MHz and
2110-215	55 MHz)

FCC Registration Number (FRN): 0003291192

<b>Grant Date</b> 11-16-2021	Effective Date 01-14-2023	Expiration Date 11-29-2036	Print Date		
Market Number CMA453		nel Block	Sub-Market Designator 0		
	Market Kentucky				
1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date		

#### Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

#### **Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WQGA824 File Number: Print Date:

700 MHz Relicensed Area Information:

Market Name Buildout Deadline Buildout Notification Status

## Reference Copy Only. Do Not Mail to the FCC as an Application.

Submitted: 01/13/2023 at 08:55:27

File Number: 0010359795

#### **FCC 601**

#### **Main Form**

1) Radio Service Code:

# FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau Public Safety and Homeland Security Bureau

1a) Existing Radio Service Code:

Approved by OMB

3060 - 0798

See instructions for public burden estimate

AW	
General Information	
2) (Select only one) ( AU )  NE - New  MD - Modification  AM - Amendment  RM - Renewal Only  CA - Cancellation of License  RU - Administrative Update  WD - Withdrawal of Application  KL - Registered Location/Link  NT - Required Notification  EX - Requests for Ext	
3a) If this application is for a Demonstration License or a <u>Special Temporary Authorization (STA)</u> , enter the code and attach the required exhibit as described in the instructions. Otherwise enter ' <u>N/A</u> ' (Not Applicable).	(N ) <u>M S N/A</u>
3b) If this application is for Special Temporary Authority due to an emergency situation, enter 'Y'; otherwise enter 'N'. Refer to Rule 1.915 for an explanation of situations considered to be an emergency.	( <u>)Y</u> es <u>N</u> o
If this application is for an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC.	File Number
5) If this application is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, , or Administrative Update, enter the call sign of the existing FCC license.  If this is a request for Registered Location/Link, enter the FCC call sign assigned to the geographic license.	Call Sign <b>WQGA824</b>
6a) If this application is for a New, Amendment, Renewal Only, or Renewal/Modification, enter the requested authorization expiration date (this item is optional).	MM DD
6b) If this application is for a Renewal Only or Renewal/Modification and the license is a geographic area license, is the license used to provide service to customers (C), or is the license used for private business (internal) purposes or to meet the licensee's public interest/public safety communications needs (P)?	( ) <u>C</u> <u>P</u>
7) Is this application "major" as defined in § 1.929 of the Commission's Rules when read in conjunction with the applicable radio service rules found in Parts 22 and 90 of the Commission's Rules? (NOTE: This question only applies to certain site-specific applications. See the instructions for applicability and full text of § 1.929).	( ) <u>Y</u> es <u>N</u> o
8) Are attachments (other than associated schedules) being filed with this application?	( ) <u>Y</u> es <u>N</u> o
Fees, Waivers, and Exemptions	
9) Is the Applicant exempt from FCC application fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
10) Is the Applicant exempt from FCC regulatory fees?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
11) Does this application include a request for a Waiver of the Commission's Rule(s)? If 'Yes', attach an exhibit providing rule number(s) and explaining circumstances.	( <b>N</b> ) <u>Y</u> es <u>N</u> o
12) Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station?	( <u>)Y</u> es <u>N</u> o

pplicant Information								
13) FCC Registration Number (FRN): 0003291192								
14) Applicant/Licensee Legal Entity Type: (Select One) ( )Individual ( )Unincorporated Association (	)Tru	ıst (	)Govern	nment Entity	( )Corporation	on (X	)Limited L	_iability Company
)General Partnership ( )Limited Partnership	) ( ) l	_imited L	iability F	Partnership	( )Consortiur	n		
) Other:								
15) If the Licensee name is being updated, is the update party and for which proper Commission approval								( <u>)Y</u> es <u>N</u> o
6) First Name (if individual):		MI: L	_ast Nar	ne:				Suffix:
7) Legal Entity Name (if other than individual):								
NEW CINGULAR WIRELESS PCS, LLC								
8) Attention To:								
Cecil J Mathew								
9) P.O. Box:	And/Or	20) S	treet Ad	dress:				
		2	08 S. A	kard St. 20	F			
21) City:				1	22) State:	23	) Zip Code	):
Dallas					TX		75202	
4) Telephone Number:			2	25) Fax:		<u> </u>		
(855)699-7073								
6) E-Mail Address:								
FCCMW@att.com								
7) Demographics (Optional)								
Race:	Ethni	icity:				Gender:		
)American Indian or Alaska Native	(	)Hispani	c or Lati	ino		( )Ma	ale	
)Asian	(	)Not His	panic or	· Latino		( )Fe	emale	
)Black or African-American								
)Native Hawaiian or Other Pacific Islander								
)White								
eal Party in Interest								
(28) Name of Real Party in Interest of Applicant (If different Applicant):	ent from	1	2	9) FCC Regis	tration Number	(FRN) of	Real Party	y in Interest:
ontact Information (If different from the Applicant)			I					
) Check here if same as Applicant. 30) First Name:		MI:	Last	Name:				Suffix:
Cecil		J'''		thew				Julia.
31) Company Name: AT&T Services, LLC								
22) Attention To:								
,								
33) P.O. Box:	And		reet Add					
	/Or	20	8 S. AI	kard St. 20F	•			
i5) City: <b>Dallas</b>		•		36) State: TX			37) Zip <b>752</b>	
88) Telephone Number: (855)699-7073			39	9) Fax:				
40) E-Mail Address: FCCMW@att.com			1					

	julatory Status														
41	) This filing is for	authoriza	tion to provide o	r use the f	ollowii	ng type(s) of ra	adio servic	e offering (er	nter all	that appl	y):				
(	) <u>C</u> ommon Carr	ier (	) <u>N</u> on-Commo	n Carrier	(	) <u>P</u> rivate, inte	ernal comm	nunications	(	) <u>B</u> roadca	ast Ser	vices	(	) <u>B</u> and <u>M</u>	anager
Тур	e of Radio Servi	ce													
42	) This filing is for	authoriza	tion to provide th	e followin	g type	e(s) of radio se	rvice (choc	se all that a	oply):						
(	) <u>F</u> ixed	(	) <u>M</u> obile	(	) <u>R</u> ac	liolocation	(	) <u>S</u> atellite (s	sound)	(	) <u>E</u>	oadca:	st Servi	ices	
43	) Does the Applic	ant propo	se to provide se	rvice inter	conne	ected to the pul	blic telepho	one network	?				(	) <u>Y</u> es	<u>N</u> o
	n Ownership Qu Main Form Instr						t explainin	g the circur	nstan	ces. In p	repari	ng the a	attachr	nent, ref	er to
44	) Is the Applicant	a foreign	government or t	he repres	entativ	e of any foreig	gn governn	nent?					(	) <u><b>Y</b></u> es	<u>N</u> o
45	) Is the Applicant	an alien o	or the representa	ative of an	alien?	?							(	)Yes	No
4.0	) Is the Applicant	a cornors											`	7-	<u> 14</u> 0
46	, , , , ,	a corpora	tion organized ι	ınder the I	aws o	f any foreign g	jovernment	?					(	) <u>Y</u> es	<u>N</u> o

48a) Is the Applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock ( ) Yes No is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any	
corporation organized under the laws of a foreign country?	
48b) If the answer to 47 or 48a is 'Y' select one of the choices below.	
The Applicant is exempt from the provisions of Section 310(b).	
It is not necessary to file a petition for declaratory ruling if the Applicant includes in the attachment required by Item 47 or Item 48a a showi that the requested license(s) is exempt from the provisions of Section 310(b).	ng
The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.	al
If checked, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC numbers the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Applications of the issuance of its ruling.	
The Applicant: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specification immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/Sublessee that received a declaratory ruling(s) under 47 CFR § 1.5000(a) a is relying on the affiliate's ruling for purposes of filing this application as permitted under the affiliate's ruling and 47 CFR § 1.5004(b)	ed nd
If checked, and if the Applicant received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 47 Item 48a the citation(s) of the Applicant's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and statement that the Applicant is in compliance with the terms and conditions of its ruling and with the Commission's Rules.	
If checked, and if the Applicant received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 48a a confunction for declaratory ruling filed contemporaneously with the Commission to extend the Applicant's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s) involved in the application. Alternatively, the Applicant may request a new declaratory ruling pursuant to Section 1.5000(a) of the Commission's Rules, 47 CFR § 1.5000 (a). Petitions for declaratory ruling may be filed electronication on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).	ne
If checked, and if the Applicant is relying on an affiliate's ruling for purposes of filing this application, include in the attachment required by Ite 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, a statement that the Applicant is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rule The Applicant must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in 47 CFF 1.5004(b). See Main Form Instructions for Items 47 or 48a, as applicable.	nd es.
The Applicant has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under 47 CFF 1.5004(b) in a petition filed contemporaneously with the Commission.	§
If checked, include in the attachment required by Item 47 or 48a a copy of the petition for declaratory ruling filed contemporaneously with to Commission pursuant to 47 CFR § 1.5004(b). Petitions for declaratory ruling may be filed electronically on the Internet through the Internation Bureau Filing System (IBFS) (with a copy attached hereto).	

Basic Qualification Questions			
49) Has the Applicant or any party to this application had any FCC station authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construct permit denied by the Commission?	ion (	) <u>Y</u> •	es <u>N</u> o
50) Has the Applicant or any party to this application, or any party directly or indirectly controlling the Applicant, ever been convicted of a felony by any state or federal court?	(	( ) <u>Y</u>	es <u>N</u> o
51) Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?		( <u>)Y</u>	es <u>N</u> o
Note: If the answer to any of 49-51 is 'Y', attach an exhibit explaining the circumstances.			
Aeronautical Advisory Station (Unicom) Certification			
52) ( ) I certify that the station will be located on property of the airport to be served, and, in cases where the airport does not he tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations low within ten days prior to application.			oort
Broadband Radio Service and Educational Broadband Service Cable Cross-Ownership			
53a) Will the requested facilities be used to provide multichannel video programming service?	(	( ) <u>Y</u>	es <u>N</u> o
53b) If the answer to question 53a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in 47 CFR § 27.1202) in a cable television system whose franchise area is located within the geographic service area of the requested facilities?	(	<u>(</u> ) <u>Y</u>	es <u>N</u> o
Note: If the answer to question 53b is 'Y', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1202 or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.			
Broadband Radio Service and Educational Broadband Service (Part 27)			
54) (For EBS only) Does the Applicant comply with the programming requirements contained in 47 CFR § 27.1203?	(	) <u>Y</u> e	es <u>N</u> o
Note: If the answer to item 54 is 'N', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must answered 'Y'.	t be		
55) (For BRS and EBS) Does the Applicant comply with 47 CFR §§ 27.50, 27.55, and 27.1221?	(	) <u>Y</u> (	es <u>N</u> o
<b>Note:</b> If the answer to item 55 is 'N', attach an exhibit justifying a waiver of that rule(s). If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.	s		
For Applicants Who Participated in an Auction			
56) Is the Applicant a qualifying rural wireless partnership or a member of a qualifying rural wireless partnership?		( )	Yes <u>N</u> o
Note: If the answer to item 56 is 'Y', attach an exhibit listing all members of the qualifying rural wireless partnership, including FRN numbers.	their		
For Renewal Applicants			
57) Operation/Performance Requirement Certification	1		
For a site-based license]: Applicant certifies that it is continuing to operate consistent with its most recently filed construction obtification (or most recent authorization, if no construction notification was required).	(	) <u>Y</u> es <u>N</u>	<u>l</u> o
For a geographic license, commercial service - licensee in its initial license term with an interim performance	(	) <u>Y</u> es <u>N</u>	lo
requirement]: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term ollowing the interim performance requirement, it continues to use its facilities to provide at least the level of service required by its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term.	,	<i>,</i> – –	•
For a geographic license, commercial service - licensee in its initial license term with no interim performance equirement]: Applicant certifies that it has met its final performance requirement and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term. [Note: licensee nust provide a showing demonstrating that the final performance requirement has been met, either separately in a timely	(	) <u>Y</u> es <u>N</u>	lo
application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]			
For a geographic license, commercial service - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> es <u>N</u>	<u>l</u> o
For a geographic license, private systems - licensee in its initial license term with an interim performance equirement]: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term ollowing the interim performance requirement, it continues to use its facilities to further its private business or public nterest/public safety communications needs at or above the level required to meet its interim performance requirement, it has	(	) <u>Y</u> es <u>N</u>	lo
net its final performance requirement, and it continues to use its facilities to provide at least the level of operation required by its inal performance requirement through the end of the license term.			
For a geographic license, private systems - licensee in its initial license term with no interim performance equirement]: Applicant certifies that it has met its final performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs, and it continues to use its facilities to provide at least the	(	) <u>Y</u> es <u>N</u>	<u>l</u> o

level of operation required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]

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[For a geographic license, private systems - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for the first renewal application filed after effective date of the rules]: Applicant certifies that the partitioned and/or disaggregated license that is the subject of this renewal application has no separate performance requirement and that this is the first renewal of this license filed subsequent to the effective date of the rules.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for any subsequent renewal filings]: Applicant certifies that it continues to use its facilities to provide service or to further the applicant's private business or public interest/public safety needs.	(	) <u>Y</u> es <u>N</u> o
Discontinuance of Service Certification		
58) Applicant certifies that no permanent discontinuance of service or operation, as applicable, occurred during its current license term.	(	) <u>Y</u> es <u>N</u> o
Note: If the response to either item 57 or item 58 is 'N', attach an exhibit that demonstrates that over the course of the license term, the Applicant provided and continues to provide service to the public, or operated and continues to operate the license to meet the Applicant's private business or public interest/public safety communications needs. This exhibit must include a detailed description of the Applicant's provision of service or, when allowed under the relevant service rules or pursuant to waiver, use of the spectrum for private business or public interest/public safety communications needs, during the entire license period and address, as applicable: 1) the level and quality of service provided by the applicant (e.g., the population served, the area served, the number of subscribers, the services offered); (2) the date service commenced, whether service was ever interrupted, and the duration of any interruption or outage; (3) the extent to which service is provided to rural areas; (4) the extent to which service is provided to qualifying tribal land as defined in 47 CFR § 1.2110(e)(3)(i); and (5) any other factors associated with the level of service to the public. The licensee may note in its exhibit: 1) any grant(s) of waiver or extension of a performance deadline or license renewal subject to meeting a performance requirement; or 2) if the final performance deadline and/or expiration date for the license accelerated because the licensee did not meet an interim performance requirement.		
Regulatory Compliance Certification [same for all]		1
59) Applicant certifies that it has substantially complied with all applicable FCC rules, policies, and the Communications Act of 1934, as amended.	(	) <u>Y</u> es <u>N</u> o
<b>Note:</b> If the response to item 59 is 'N', attach an exhibit explaining the circumstances and demonstrating why Applicant's license should be renewed.		
Consumal Contributions Chatamagnets		
General Certification Statements  1) The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory po	wer of	the United States
because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application		and office offices

- 2) The Applicant certifies that grant of this application would not cause the Applicant to be in violation of any pertinent cross-ownership or attribution rules.\*

  \*If the Applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcome of the waiver request.
- 3) The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference are material, are part of this application, and are true, complete, correct, and made in good faith.
- 4) The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to § 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under § 1.2002(c) of the rules, 47 CFR § 1.2002(c). See 47 CFR § 1.2002(b) for the definition of "party to the" application" as used in this certification.
- 5) The Applicant certifies that it either (1) has current required ownership data on file with the Commission, (2) is filing updated ownership data simultaneously with this application, or (3) is not required to file ownership data under the Commission's Rules.
- 6) The Applicant certifies that the facilities, operations, and transmitters for which this authorization is hereby requested are either: (1) categorically excluded from routine environmental evaluation for RF exposure as set forth in 47 CFR § 1.1307(b); or, (2) have been found not to cause human exposure to levels of radiofrequency radiation in excess of the limits specified in 47 CFR §§ 1.1310 and 2.1093; or, (3) are the subject of one or more Environmental Assessments filed with the Commission.
- 7) The Applicant certifies that it has reviewed the appropriate Commission Rules defining eligibility to hold the requested license(s) and is eligible to hold the requested license(s).
- 8) The Applicant certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency
- The Applicant certifies that the Applicant and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

#### Signature

60)Typed	or Printed	Name of	Party Au	thorized to	Sian

First Name:	MI:	Last Name:	Suffix:
Cecil	J	Mathew	
61) Title: Assistant Secretary - Compliance	_		•
Signature:			62) Date:
Cecil J Mathew			01/13/2023

Upon grant of this license application, the Licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, § 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, § 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, § 503).

### Reference Copy Only. Do Not Mail to the FCC as an Application.

#### FCC Application or Notification for Spectrum Leasing Arrangement/ FCC Form 608 **Notification of a Private Commons Arrangement Main Form**

**Wireless Telecommunications Bureau** 

3060-1058

Submitted: 01/24/2023 at

10:35:53

File Number: 0010339688

**Public Safety and Homeland Security Bureau** 

See 608 Main Form Instructions For public burden estimate

Gei	neral Information						
App	lication/Notification Purpose						
1a)	Purpose of Filing (Select only one):						
( <b>x</b>	) LN – New ( ) LM – Modification	I – New ( ) LM – Modification ( ) LU					
(	) LT – Transfer of Control ( ) LE – Extend the T	( ) LE – Extend the Term ( ) LC					
(	) LI – Light Touch Leasing Certification ( ) AM – Amendment	( ) AM – Amendment ( ) <b>WD</b>					
1b)	If this filing is for an Amendment (AM) or Withdrawal (WD), enter the File No Application/Notification currently on file with the FCC.	File Number:					
Clas	ssification of Filing						
For L	eases/Subleases Only	T					
2a)	Classification of Filing (Select only one):	2b) Type of Filing					
(	) ML – Spectrum Manager Lease	(X)L-Lease					
()	( ) <b>TL</b> – <i>De Facto</i> Transfer Lease	iled manually)					
For P	Private Commons Arrangements Only (Must be filed Manually)						
2c)	This filing will be a Private Commons Arrangement pursuant to a (Select y one):	2d) If a Private Commons Arra Sublease, choose the legal typ	ingement pursuant to a Lease or see (Select only one):				
(	) N— License	( ) <b>M</b> –Spectrum Manager	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (				
(	) L— Lease	( ) <b>T</b> –De Facto Transfer					
(	) <b>S—</b> Sublease						
Tern	n of Lease/Sublease						
3) 1	ndicate whether the existing Lease/Sublease is:	) Long-Term or	( ) Short-Term				
Othe	er Wireless Licenses						
4a)	Is this filing part of a series of filings involving other wireless license(s) or affiliates of the Licensee (e.g., parents, subsidiaries, or commonly-control are not included on this filing and for which Commission approval or notifical	led entities), or third parties that	( <b>N</b> ) <u>Y</u> es <u>N</u> o				
4b)	If the answer to 4a is 'Y', is this filing the lead Application/Notification?		( ) <u>Y</u> es <u>N</u> o				
4c)	If the answer to 4a is 'Y' and the answer to 4b is 'N', provide the File Numb Application/Notification.	per of the lead	File Number:				

Attachments	
5) Are attachments (other than associated schedules) being filed with this Application/Notification?	( <sub>Y</sub> ) <u>Y</u> es <u>N</u> o
Fees and Waivers	
Exemption from Application Fees	
6) Is the Applicant exempt from FCC application fees?	( N ) Yes No
If the answer to 6 is 'Y', attach an exhibit demonstrating how the applicant is exempt from FCC application fees.	
Waiver/Deferral of Fees	
7) Is a waiver/deferral of the FCC application fees being requested?	( N ) <u>Y</u> es <u>N</u> o
If the answer to 7 is 'Y', attach a date-stamped copy of the request for waiver/deferral of the FCC application fees.	
Waiver of Commission Rules	
8) Does this filing include a request for waiver of the Commission's Rules (other than a request for application fee waivers)?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
If the answer to 8 is 'Y', attach an exhibit specifying the rule section(s) for which a waiver is being requested and including a justification for the waiver request.	
Regulatory Status and Offerings Radio Service Offerings	
9) The Applicant will provide the following type(s) of radio service offerings (select all that apply):	
( ) Non-common Carrier ( ) Private, internal communications All entities that are planning to use the leased spectrum for telecommunications services should select common carrietlecommunications service' means the offering of telecommunications (i.e., the transmission, between or among poinformation of the user's choosing, without change in the form or content of the information as sent and received) for classes of users as to be effectively available directly to the public, regardless of the facilities used. Non-common caindiscriminately for hire as carriers of communications provided by the customer. A person engaged in radio broadce person is so engaged, be deemed a common carrier. Thus, those entities meeting this definition would select non-content users are those entities that utilize telecommunications services purely for internal business purposes or put a for-hire or for-profit basis. Such entities should select 'Private' for this item. The term 'Broadcast Services' shall he "broadcasting" in § 3(6) of the Communications Act of 1934, i.e., the dissemination of radio communications intended or by the intermediary of relay stations." 47 U.S.C. § 153(6).	points specified by the user, of a fee directly to the public, or to such arriers do not hold themselves out asting shall not, insofar as such common carrier for this item. Private blic safety communications and not cave the same meaning as that for
If the Applicant is modifying the type of radio service offerings it provides, please provide an exhibit explaining the mod	dification.
Radio Service	
10) The Applicant will provide the following type(s) of radio service (select all that apply):	
( ) Fixed ( ) Mobile ( ) Radiolocation ( ) Satellite (sound)	( ) Broadcast Services
11) Does the Applicant propose to provide service interconnected to the public telephone network?	( ) <u>Y</u> es <u>N</u> o

#### Designated Entity Information (If the answer to 12a, 12b or 12c is 'Y', Schedule A must be completed.) **Bidding Credits** 12a) Does this filing involve any spectrum associated with any licenses that were awarded with bidding credits (N)Yes No within the last five years? If the response to this item is 'Y', the licenses may be subject to the FCC's unjust enrichment rules, and the Applicant should answer relevant bidding credit questions. Closed Bidding 12b) Does this filing involve any spectrum associated with any licenses that were originally granted pursuant to closed bidding within the last five years? ) Yes No If the response to this item is 'Y', the Applicant should answer relevant closed bidding questions. Competition-Related Information 13) Does this filing involve a license authorization or Spectrum Lease/Sublease that may be used to provide (γ) <u>Y</u>es <u>N</u>o interconnected mobile voice and/or data services that would create a geographic overlap with another license authorization(s) or spectrum leasing arrangement(s), that also could be used to provide interconnected mobile voice and/or data services, in which the Applicant already holds attributable interests, as defined in Section 20.22(b) of the Commission's Rules, either as a licensee or spectrum lessee/sublessee? If 'Y', specify in an exhibit all geographic areas/markets (e.g., BTA, CMA, county, etc.) where there are spectrum overlaps and the total amount of spectrum that the Assignee/Transferee will hold and/or lease in each geographic area/market. 14) If the answer to Item 13 is 'Y', would/does this application for a spectrum leasing or subleasing arrangement ) <u>Y</u>es <u>N</u>o reduce the number of entities providing service in the affected market(s)? Broadband Radio Service and Educational Broadband Service Information 15a) Will the requested facilities be used to provide multichannel video programming service? ) <u>Y</u>es <u>N</u>o 15b) If the answer to 15a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in ) <u>Y</u>es <u>N</u>o Section 27.1202 of the Commission's Rules) in a cable television system whose franchise area is located within the geographic service area of the requested facilities? If 'Y', provide an exhibit explaining how the Applicant (Lessee/Sublessee) complies with Section 27.1202 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission's Rule(s) is being requested, 8a must be answered 'Y'. 16) Does the Applicant comply with the programming requirements contained in Section 27.1203 of the ) Yes No Commission's Rules?

#### Part 90 Public Safety Services

be answered 'Y'.

17) Is the Applicant a public safety entity or otherwise an entity that will use the leased spectrum to provide communications in support of public safety operations pursuant to Section 90.523 of the Commission's Rules?	( ) <u>Y</u> es <u>N</u> o

If 'N', provide an exhibit explaining how the Applicant complies with Section 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission's Rule(s) is being requested, 8a must

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#### **600 MHz Band Information**

18) Is the spectrum leasing/subleasing arrangement for a term of one year or more (either initially or cumulatively) and involves any licenses in the 600 MHz Band initially granted in the last six years that would, if leased, create a geographic overlap with another licenses(s) in which the Lessee/Sublessee already holds attributable interests, as defined in Section 20.22(b) of the Commission's Rules, either as a licensee or spectrum Lessee/Sublessee, and that would result in the Lessee/Sublessee holding an attributable interest, as defined in Section 20.22(b) of the Commission's Rules, in one-third or more of the total suitable and available below-1-GHz spectrum as calculated on a county-by-county population-weighted basis in the relevant license area, utilizing 2010 U.S. Census data?	( <b>N</b> ) <u>Y</u> es <u>N</u> o
The initial grant date is the date that the license was originally granted by the Commission after an auction, even if the license was acquired in the secondary market. The initial grant date is not the date on which the Commission granted an assignment or transfer of control of the license.	
If 'Y', provide an exhibit detailing the proposed spectrum leasing/subleasing exchange of 600 MHz band spectrum in the same market(s), including a list of all file numbers for applications associated with the proposed spectrum leasing arrangement exchange, or describing the <i>pro forma</i> nature of the spectrum leasing arrangement, as appropriate.	
19) Is the spectrum leasing/subleasing arrangement for a term of one year or more (either initially or cumulatively) and involves any licenses that were initially granted as reserved spectrum licenses in the 600 MHz Band in the last six years? Otherwise, enter 'N'.	( ) <u>Y</u> es <u>N</u> o
The initial grant date is the date that the license was originally granted by the Commission after an auction, even if the license was acquired in the secondary market. The initial grant date is not the date on which the Commission granted an assignment or transfer of control of the license.	
If 'Y', provide an exhibit demonstrating how the Lessee/Sublessee would have qualified to bid on that reserved spectrum license(s) in Auction 1002 as of the FCC Form 175 filing deadline (February 10, 2016) for Auction 1002, the forward auction of the Broadcast Incentive Auction.	

20) FCC Registration Number: 0003291192					
Entity					
21) Licensee is a(n) (Select One): ( )Individual ( )Unincorporated Association (	)Trust	( )Gove	rnment Entity ( )C	Corporation ( X )Limite	ed Liability Company
( )General Partnership ( )Limited Partnership	( )Limi	ted Liability	Partnership		
( )Other:					
Licensee Name					
22) Licensee Name (if entity): New Cingular Wireless PC	S, LLC				
23) Licensee Name (if individual): First:		MI:	Last:		Suffix:
24) Attention To: Cecil J. Mathew					I
Address	1 00) 04	- <b>6 A</b> - <b>1</b> - <b>1</b> - <b>2</b> - <b>2</b>	208 S. Akard Street,	DM 4046	
25) P.O. Box: And /Or	26) Stre	et Address		KW 1010	
27) City: Dallas			28) State: TX	29) Zip Code: <b>7</b> 9	5202
30) Telephone Number: <b>(855)699-7073</b>		31) FA	XX Number: (214)74	6-6410	
32) E-Mail Address: FCCMW@att.com					
33) Demographics (Optional):					
Race: ( )American Indian or Alaska Native	Ethnici	<b>ty:</b> lispanic or L	atino	Gender: ( )Male	
( )Asian		lot Hispanic		( )Female	
,		iot i lispanio	of Latino	( )i citiale	
( )Black or African-American					
( )Native Hawaiian or Other Pacific Islander					
( )White					
Licensee Contact Information					
Contact Name (if other than Licensee)					
( ) Check here if same as Licensee Info	rmation	NAI	Last		10.5
34) Name: First:		MI:	Last:		Suffix:
35) Company Name: AT&T Mobility LLC					

Address

37) P.O. Box: | And | 38) Street Address: 1120 20th Street NW, Suite 1000 |

39) City: Washington | 40) State: DC | 41) Zip Code: 20036 |

42) Telephone Number: (202)457-2055 | 43) FAX Number: |

44) E-Mail Address: michael.p.goggin@att.com

Lessee Information						
45) FCC Registration Number: 0030856223						
Entity						
46) Lessee is a(n) (Select One): ( )Individual ( )Unincorporated Association	,	Trust (		nment Entity ( )Co	prporation ( <b>X</b> )Limited Li	ability Company
( )General Partnership ( )Limited Partnershi	——	)LIIIIIC	u Liability	raitiieisiiip		
Lessee Name						
47) If the Lessee name is being updated, is the update which proper Commission approval has not been recei	a result	of a chan	ge in owne	ership, corporate structur	e, or entity for	( ) <u>Y</u> es <u>N</u> o
48) Lessee Name (if entity): Trace-Tek	VCG 51 P	10001 1104	loadon no	t provided:		
49) Lessee Name (if individual): First:		$\overline{}$	MI:	Last:		Suffix:
50) Attention To: licenses@trace-tek.com						
Name of Real Party in Interest						
51) Name of Real Party in Interest: Trace-Tek						
52) FCC Registration Number (FRN): 0030856223						
•••						
Address 53) P.O. Box:	And /Or	54) Stree	t Address:	2625 Commons Boule	evard	
55) City: Beavercreek	/Ui			56) State: OH	57) Zip Code: <b>45341</b>	
58) Telephone Number: (972)672-0477			59) FA	X Number:		
60) E-Mail Address: licenses@trace-tek.com		·				
61) Demographics (Optional):						
Race:	$\overline{}$	Ethnicity			Gender:	
( )American Indian or Alaska Native		( )Hispanic or Latino			( )Male	
( )Asian		( )Not	t Hispanic	or Latino	( )Female	
( )Black or African-American						
( )Native Hawaiian or Other Pacific Islander						
( )White						
Lessee Contact Information Contact Name (if other than Lessee) ( ) Check here if same as Lessee Info	o <u>rmati</u>	o <u>n</u>				
62) Name: First: Dan			MI:	Last: Burgess		Suffix:
63) Company Name: Trace-Tek			1			
64) Attention To: licenses@trace-tek.com						<u> </u>
Address						
65) P.O. Box:	And /Or	66) Street	t Address:	2625 Commons Boule		
67) City: Beavercreek				68) State: <b>OH</b>	69) Zip Code: <b>4534</b> 1	
70) Telephone Number: (972)672-0477			71) FA	X Number:		
72) E-Mail Address: licenses@trace-tek.com						

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### Sublessee Information

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-,	140						

FRN					
73) FCC Registration Number:					
Entity  74) Sublement is a(n) (Salast One):					
74) Sublessee is a(n) (Select One): ( )Individual ( )Unincorporated Association (	)Trust (	( )Gove	rnment Entity ( )	Corporation ( )Limited Li	ability Company
( )General Partnership ( )Limited Partnership	( )Limit	ted Liability	Partnership		
( )Other:					
Sublessee Name					
75) If the Sublessee name is being updated, is the updated for which proper Commission approval has not been	e a result of a c received or pro	hange in ov per notificat	vnership, corporate struion not provided?	ucture, or entity	( ) <u>Y</u> es <u>N</u> o
76) Sublessee Name (if entity):					
77) Sublessee Name (if individual): First:		MI:	Last:		Suffix:
78) Attention To:			,		
Name of Real Party in Interest					
79) Name of Real Party in Interest:					
80) FCC Registration Number (FRN):					
Address					
	nd 82) Stre	et Address:			
83) City:	J1		84) State:	85) Zip Code:	
86) Telephone Number:		87) FA	X Number:		
88) E-Mail Address:					
90) Demographics (Ontional):					-
89) Demographics (Optional):	Ethnicit	tv:		Gender:	
( )American Indian or Alaska Native		ispanic or L	atino	( )Male	
( )Asian	( )N	ot Hispanic	or Latino	( )Female	
( )Black or African-American					
( )Native Hawaiian or Other Pacific Islander					
( )White					
Sublessee Contact Information Contact Name (if other than Sublessee) ( ) Check here if same as Sublessee In	formation				
90) Name: First:		MI:	Last:		Suffix:
91) Company Name:					
92) Attention To:					
Address					
	and 94) Stre	et Address:			
95) City:	<u> </u>		96) State:	97) Zip Code:	
98) Telephone Number:		99) FA	X Number:		
100) F-Mail Address:					

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#### **Transferee Information** 101) FCC Registration Number: Entity 102) Transferee is a(n) (Select One): )Individual ( )Unincorporated Association ( )Trust )Government Entity )Corporation ( )Limited Liability Company ( )General Partnership )Limited Partnership )Limited Liability Partnership )Other: \_ **Transferee Name** 103) Transferee Name (if entity): 104) Transferee Name (if individual): First: MI: Last: Suffix: 105) Attention To: Name of Real Party in Interest 106) Name of Real Party in Interest: 107) FCC Registration Number (FRN): Address 108) P.O. Box: And 109) Street Address: /Or 110) City: 111) State: 112) Zip Code: 113) Telephone Number: 114) FAX Number: 115) E-Mail Address: 116) Demographics (Optional): Ethnicity: Gender: )American Indian or Alaska Native )Male )Hispanic or Latino )Not Hispanic or Latino )Asian )Female )Black or African-American )Native Hawaiian or Other Pacific Islander )White **Transferee Contact Information Contact Name** (if other than Transferee) ) Check here if same as Transferee Information MI: Suffix: 117) Name: Last: 118) Company Name: 119) Attention To: Address 120) P.O. Box: 121) Street Address: And /Or 122) City: 123) State: 124) Zip Code:

126) FAX Number:

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125) Telephone Number:

127) E-Mail Address:

ransteror Information RN							
128) FCC Registration Number:							
ntity							
129) Transferor is a(n) (Select One):							
( )Individual ( )Unincorporated As	ssociation (	)Trust (	)Governm	ent Enti	ity ( )Corpor	ration ( )Limited Lia	ability Company
	,	,	•			, ,	
( )General Partnership ( )Limited	d Partnership	( )Limit	ed Liability Par	tnership	р		
( )Other:							
ransferor Name							
130) Transferor Name (if entity):							
131) Transferor Name (if individual):	First:			MI:	Last:		Suffix:
132) Attention To:							
132) Attention 10.							
ddress							
133) P.O. Box:	And	134) Str	eet Address:				
•	/Or						
135) City:				136) S	tate:	137) Zip Code:	
138) Telephone Number:			139) FAX	Numbo	Ar-		
136) Telephone Number.			139) FAX	Numbe	;i.		
140) E-Mail Address:							
,							
39) Demographics (Optional):							
Race:		Ethnicit				Gender:	
( )American Indian or Alaska Native		( )Hispanic or Latino			( )Male		
( )Asian		( )N	( )Not Hispanic or Latino			( )Female	
,		, ,				,	
( )Black or African-American							
/ Nictive Herreiter on Other Desificate							
( )Native Hawaiian or Other Pacific Isla	ridei						
( )White							
( )							
ransferor Contact Informa	tion						
ontact Name (if other than Transferor							
) Check here if same as Tra		rmation					
140) Name: First:	ansieror imo	IIIIauoii	MI:	Last:			Suffix:
THO) INGINE.   FIISL			IVII.	∟ası.			SuillX.
141) Company Name:			1 1				1
142) Attention To:							
ddress		1400 -					
143) P.O. Box:	And /Or	144) Str	eet Address:				
145) City:			1 -	146) St	tate·	147) Zip Code:	
TO, OILY.				1-TU   U	iuio.	ITI LIP OUGE.	

149) FAX Number:

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148) Telephone Number:

150) E-Mail Address:

#### **Ownership Disclosure Information**

#### FCC Form 602

153a) Is the Applicant required to file FCC Form 602, Ownership Disclosure Information for the Wireless Telecommunications Services?	(ү) <u>Y</u> es <u>N</u> o
153b) If the answer to 151a is 'Y', provide the File Number of FCC Form 602 that has been filed in conjunction with application or is already on file with the FCC.	File Number: 0009774970

#### **Alien Ownership Questions**

Alien Ownership (If any answer is 'Y", provide an attachment explaining the circumstances. In preparing the attachment, refer to the Main Form Instructions for the "Alien Ownership Questions".)

	Torn instructions for the Alien Ownership Questions .	т — — — — — — — — — — — — — — — — — — —		
154)	Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee a foreign government or the representative of any foreign government?	( N	) <u>Y</u> es	<u>N</u> o
155)	Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee an alien or the representative of an alien?	( N	) <u><b>Y</b></u> es	<u>N</u> o
156)	Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee a corporation organized under the laws of a foreign government?	( N	) <u>Y</u> es	<u>N</u> o
157)	Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?		) <u>Y</u> es	<u>N</u> o
158a	) Is the Lessee/Sublessee or Post-Transfer Lessee/Sublessee directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?	,	) <u>Y</u> es	<u>N</u> o

58b) If the answer to 155 or 156a is 'Y' select one of the choices below.
The Lessee/Sublessee or Post-Transfer Lessee/Sublessee is exempt from the provisions of Section 310(b).
It is not necessary to file a petition for declaratory ruling if the Lessee/Sublessee or Post-Transfer Lessee/Sublessee includes in the attachmen required by Item 155 or Item 156a a showing that the subject Lease(s) is exempt from the provisions of Section 310(b).
The Lessee/Sublessee or Post-Transfer Lessee/Sublessee has received a declaratory ruling(s) approving its foreign ownership, and the application/notification involves only the acquisition/use of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Lessee/Sublessee or Post-Transfer Lessee/Sublessee has been previously authorized.
If checked, include in the attachment required by Item 155 or Item 156a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Lessee/Sublessee or Post-Transfer Lessee/Sublessee since the issuance of its ruling.
The Lessee/Sublessee or Post-Transfer Lessee/Sublessee: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specified immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/SubLessee that received a declaratory ruling(s under Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a), and is relying on the affiliate's ruling for purposes of filing this application/notification as permitted under the affiliate's ruling and Section 1.994(b) of the Rules, 47 CFR § 1.994(b).
If checked, and if the Lessee/Sublessee or Post-Transfer Lessee/Sublessee received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 155 or Item 156a the citation(s) of the Lessee/Sublessee or Post-Transfer Lessee/Sublessee's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Lessee/Sublessee or Post-Transfe Lessee/Sublessee is in compliance with the terms and conditions of its ruling and with the Commission's Rules.
If checked, and if the Lessee/Sublessee or Post-Ttransfer Lessee/Sublessee received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 156a a copy of a petition for declaratory ruling filed contemporaneously with the Commission to extend the Lessee/Sublessee or Post-Transfer Lessee/Sublessee's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s involved in the application/notification. Alternatively, the Lessee/Sublessee or Post-Transfer Lessee/Sublessee may request a new declaratory ruling pursuant to Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).
If checked, and if the Lessee/Sublessee or Post-Transfer Lessee/Sublessee is relying on an affiliate's ruling for purposes of filing this application/notification, include in the attachment required by Item 155 or Item 156a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Lessee/Sublessee or Post-Transfe Lessee/Sublessee is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rules. The Lessee/Sublessee or Post-Transfer Lessee/Sublessee must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in Section 1.994(b) of the Rules, 47 CFR § 1.994(b). See Main Form Instructions for Items 155 or 156a, as applicable.
The Lessee/Sublessee or Post-Transfer Lessee/Sublessee has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a), in a petition filed contemporaneously with the Commission.
If checked, include in the attachment required by Item 155 or 156a a copy of the petition for declaratory ruling filed contemporaneously with the Commission pursuant to Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).
asic Qualification Information asic Qualification Questions (If any answer is 'Y', provide an attachment explaining the circumstances)
50) He de Auliente anno de la disconsideration for the formation for the first of the formation for th

159)	Has the Applicant or any party to this application had any FCC station authorization, license, or construction permit revoked or had any application for an initial, modification, or renewal of FCC station authorization, license, or construction permit denied by the Commission?	( <b>N</b>	) <u>Y</u> es	<u>N</u> o
160)	Has the Applicant or any party to this filing, or any party directly or indirectly controlling the Applicant or any party to this filing ever been convicted of a felony by any state or federal court?	( N	) <u>Y</u> es	<u><b>N</b></u> o
161)	Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?	( N	) <u>Y</u> es	<u>N</u> o

Spectrum Aggregation Limit Certification(s)	
162) The Licensee/Lessor/Sublessor certifies that grant of this application would not cause the Licensee/Lessor/Sublessor to be in violation of the 40 megahertz in-band spectrum aggregation limit set forth under section 96.31 of the Commission's rules for 3.5 GHz licenses, taking into consideration the spectrum attribution rules under section 20.22(b) of the Commission's rules.  If the Licensee/Lessor/Sublessor has sought a waiver of section 96.31 in connection with this application, it may make this certification subject to the outcome of the waiver request.	( ) <u>Y</u> es <u>N</u> o
163) The Licensee/Lessor/Sublessor certifies that grant of this application would not cause the Licensee/Lessor/Sublessor to be in violation of the 40 megahertz in-band spectrum aggregation limit set forth under section 27.1606 of the Commission's rules for 3.45 GHz licenses, taking into consideration the spectrum attribution rules under section 20.22(b) of the Commission's rules.  If the Licensee/Lessor/Sublessor has sought a waiver of section 27.1606 in connection with this application, it may make this certification subject to the outcome of the waiver request.	( ) <u>Y</u> es <u>N</u> o
164) The Lessee/Sublessee/Transferee certifies that grant of this application would not cause the Lessee/Sublessee/Transferee to be in violation of the 40 megahertz in-band spectrum aggregation limit set forth under section 96.31 of the Commission's rules for 3.5 GHz licenses, taking into consideration the spectrum attribution rules under section 20.22(b) of the Commission's rules.  If the Lessee/Sublessee/Transferee has sought a waiver of section 96.31 in connection with this application, it may make this certification subject to the outcome of the waiver request.	( ) <u>Y</u> es <u>N</u> o
165) The Lessee/Sublessee/Transferee certifies that grant of this application would not cause the Lessee/Sublessee/Transferee to be in violation of the 40 megahertz in-band spectrum aggregation limit set forth under section 27.1606 of the Commission's rules for 3.45 GHz licenses, taking into consideration the spectrum attribution rules under section 20.22(b) of the Commission's rules.  If the Lessee/Sublessee/Transferee has sought a waiver of section 27.1606 in connection with this application, it may make this certification subject to the outcome of the waiver request.	( ) <u>Y</u> es <u>N</u> o

#### **Licensee Certification Statements**

')	The Electrode agrees that the Escape is not a sale of transfer of the hostise tools.
2)	The Licensee certifies that it will not consent to assignment of the Lease except to the extent such assignment complies with the Commission's

Rules and Regulations.

3) The Licensee certifies that it holds exclusive use rights to use the licensed spectrum.

The Licensee agrees that the Lease is not a sale or transfer of the license itself

4) The Licensee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.

The Licensee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith.

Type or Printed Name of Party Authorized to Sign

Type of I fillited Name of Farty Additionized	to oign			
166) First Name:	MI:	Last Name:	Suffix:	
Jessica	В	Lyons		
167) Title: Asst. Secretary of Manager				
168) Signature: Jessica B Lyons	8	165) Date: <b>01/24/2023</b>		
FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.				

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

	ee Certification Statements
1)	The Lessee agrees that the Lease is not a sale or transfer of the license itself.
2)	The Lessee acknowledges that it is required to comply with the Commission's Rules and Regulations and other applicable law at all times, and if the Lessee fails to so comply, the Lease/Sublease may be revoked, cancelled, or terminated by either the Licensee or the Commission.
3)	The Lessee certifies that neither it nor any other party to the Application/Notification is subject to a denial of Federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under Section 1.2002(c) of the Commission's Rules. See Section 1.2002(b) of the Commission's Rules for the definition of "party to the application" as used in this certification.
4)	The Lessee hereby accepts Commission oversight and enforcement consistent with the license and lease authorization. The Lessee acknowledges that it must cooperate fully with any investigation or inquiry conducted either by the Commission or the Licensee, allow the Commission or the Licensee to conduct on-site inspections of transmission facilities, and suspend operations at the direction of the Commission or the Licensee and to the extent that such suspension of operation would be consistent with applicable Commission policies.
5)	The Lessee acknowledges that in the event an authorization held by a Licensee that has associated with it a spectrum leasing arrangement that is the subject of this filing is revoked, cancelled, terminated, or otherwise ceases to be in effect, the Lessee will have no continuing authority to use the leased spectrum and will be required to terminate its operations no later than the date on which the Licensee ceases to have any authority to operate under the license, unless otherwise authorized by the Commission.
6)	The Lessee agrees the Lease shall not be assigned to any entity that is not eligible or qualified to enter into a spectrum leasing arrangement under the Commission's Rules and Regulations.
7)	The Lessee waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by spectrum lease or otherwise.
8)	The Lessee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
9)	The Lessee certifies that it and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national society berned by any general of the Federal Covernment from hidding on a contract, participating in an auction, or receiving a grant. This

The Lessee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith.

certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47

Type or Printed Name of Party Authorize	d to Sign			
168) First Name: Dan	MI:	Last Name: Burges:		Suffix:
169) Title: Manager				
170) Signature: Dan Burgess			171) Date: <b>01/24/2023</b>	
FAILURE TO SIGN THIS APPLICATION MAY RESU	ILT IN DISN	IISSAL OF THE APPL	CATION AND FORFEITURE OF A	NY FEES PAID.
WILLFUL FALSE STATEMENTS MADE ON THIS F Code, Title 18, Section 1001) AND/OR REVOCATI 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title	ON OF AN'	Y STATION LICENSE		

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U.S.C. § 309(j).

	essee Certification Statements
1)	The Sublessee agrees that the Lease is not a, sale or transfer of the license itself.
2)	The Sublessee acknowledges that it is required to comply with the Commission's Rules and regulations and other applicable law at all times, and if the Sublessee fails to so comply, the Lease may be revoked, cancelled, or terminated by either the licensee or the Commission.
3)	The Sublessee certifies that neither it nor any other party to the Application/Notification is subject to a denial of Federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under Section 1.2002(c) of the Commission's Rules. Section 1.2002(b) of the Commission's Rules for the definition of "party to the application" as used in this certification.
4)	The Sublessee hereby accepts Commission oversight and enforcement consistent with the license authorization. The Sublessee acknowledges that it must cooperate fully with any investigation or inquiry conducted either by the Commission or the Licensee, allow the Commission or the licensee to conduct on-site inspections of transmission facilities, and suspend operations at the direction of the Commission or the Licensee and to the extent that such suspension of operation would be consistent with the applicable Commission policies.
5)	The Sublessee acknowledges that in the event an authorization held by a Licensee that has entered into a spectrum leasing arrangement is revoked, cancelled, terminated, or otherwise ceases to be in effect, the Sublessee will have no continuing authority to use the leased spectrum and will be required to terminate its operations no later than the date on which the Licensee ceases to have any authority to operate under the license, unless otherwise authorized by the Commission.
6)	The Sublessee agrees the Lease/Sublease shall not be assigned to any entity that is not eligible or qualified to enter into a spectrum leasing arrangement under the Commission's Rules and regulations.
7)	The Sublessee waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by spectrum lease or otherwise.
8)	The Sublessee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
9)	The Sublessee certifies that it and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

The Sublessee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith.

Type or Printed Name of Party Authorized to Sign				
172) First Name:	MI:	Last Name:		Suffix:
173) Title:				
174) Signature:			175) Date:	
FAILURE TO SIGN THIS APPLICATION MAY RESUL	FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.			

FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section

312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

# Transferee Certification Statements 1) The Transferee agrees that the Lease/Sublease is not a sale or transfer of the license itself. 2) The Transferee acknowledges that it is required to comply with the Commission's Rules and Regulations and other applicable law at all times, and if the Transferee fails to so comply, the Lease/Sublease may be revoked, cancelled, or terminated by either the licensee or the Commission. 3) The Transferee certifies that neither it nor any other party to the Application/Notification is subject to a denial of Federal benefits pursuant to Section 5304 of the Apti Drug Abuse Act of 1099 31 U.S.C. S. 962 because of a constitution for perspection or distribution of a controlled

- The Transferee certifies that neither it nor any other party to the Application/Notification is subject to a denial of Federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under Section 1.2002(c) of the Commission's Rules. See Section 1.2002(b) of the Commission's Rules for the definition of "party to the application" as used in this certification.)
- 4) The Transferee hereby accepts Commission oversight and enforcement consistent with the license authorization. The Transferee acknowledges that it must cooperate fully with any investigation or inquiry conducted either by the Commission or the Licensee, allow the Commission or the licensee to conduct on-site inspections of transmission facilities, and suspend operations at the direction of the Commission or the Licensee and to the extent that such suspension of operation would be consistent with the applicable Commission policies.
- The Transferee acknowledges that in the event an authorization held by a Licensee that has entered into a spectrum leasing arrangement is revoked, cancelled, terminated, or otherwise ceases to be in effect, the Transferee will have no continuing authority to use the leased spectrum and will be required to terminate its operations no later than the date on which the Licensee ceases to have any authority to operate under the license, unless otherwise authorized by the Commission.
- 6) The Transferee agrees the Lease shall not be assigned to any entity that is not eligible or qualified to enter into a spectrum leasing arrangement under the Commission's Rules and Regulations.
- 7) The Transferee waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by spectrum lease or otherwise.
- 8) The Transferee certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
- 9) The Transferee certifies that it and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

The Transferee certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith.

Type or Printed Name of Party Authorized to Sign

176) First Name:	MI:	Last Name:		Suffix:
177) Title:				
178) Signature:			179) Date:	
FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.				

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

#### **Transferor Certification Statements**

1)	The Transferor certifies either (1) that control of the Lessee/Sublessee will not be transferred until consent of the Federal Communications
	Commission has been given, or (2) that prior Commission consent is not required because the Lease/Sublease is subject to streamlined
	notification procedures for pro forma transfers of control. See Federal Communications Bar Association's Petition for Forbearance from Section
	310(d) of the Communications Act Regarding Non-Substantial Assignments of Wireless Licenses and Transfers of Control Involving
	Telecommunications Carriers and Personal Communications Industry Association's Broadband Personal Communications Services Alliance's
	Petition for Forbearance For Broadband Personal Communications Services, Memorandum Opinion and Order, 13 FCC Rcd 6293 (1998)
2)	The Transferor certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed
	to any federal agency.

The Transferor certifies that all of its statements made in this Application/Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Application/Notification, and are true, complete, correct, and made in good faith.

Type or Printed Name of Party Aut	horized to Sign				
180) First Name:	MI:	Last Name:		Suffix:	
181) Title:				1	
182) Signature:			183) Date:		
FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.					
WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S.					
Code, Title 18, Section 1001) AND/OR R			E OR CONSTRUCTION F	PERMIT (U.S. Code, Title 47, Section	
312(a)(1)), AND/OR FORFEITURE (U.S. Co	de, Title 47, Section	503).			

#### **Private Commons Manager Certification Statements**

- The Licensee/Lessee/Sublessee manager of the Private Commons certifies that it will retain *de facto* control of the use of the spectrum under the Private Commons arrangement, including that it will maintain reasonable oversight over the users' use of the spectrum under the arrangement so as to ensure that the use of the spectrum, and communications equipment employed, comply with all technical and service rules applicable under the license authorization.
- 2) The Licensee/Lessee/Sublessee manager of the Private Commons arrangement certifies that it will maintain the ability to ensure that users under the arrangement comply with all the technical and service rules applicable under the license authorization.
- The Licensee/Lessee/Sublessee manager of the Private Commons certifies that it and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

The Licensee/Lessee/Sublessee manager of the Private Commons arrangement certifies that all of its statements made in this Notification and in the schedules, exhibits, attachments, or documents incorporated by reference are material, are part of this Notification, and are true, complete, correct, and made in good faith.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

## License Authorization(s) or Identifiers (pertaining to Lease(s)/Sublease(s)/Private Commons) Associated with the Spectrum To Be Included in the Filing

Call Sign(s) or Lease/Sublease/Private Commons Identifier(s)   Radio Service   Code   Location Number   Path Number   Frequency   Frequency   Number   Frequency   Number   Frequency   Number   Frequency   Number   Frequency   Frequency   Number   Frequency   Fre	188)	189)	190)	191)	192)	193)	194)
Private Commons Identifier(s)  WGGA766	Call Sign(s) or	Radio Service			Frequency		Upper
WQGA766		Code		(Microwave only)	Number	Frequency (MHz)	Frequency (MHz)
WGGA766  AW - AWS (1710-1755 MHz and 2110-2155  WGGA769  AW - AWS (1710-1755 MHz and 2110-2155  WGGA789  AW - AWS (1710-1755 MHz and 2110-2155  WGGA787  AW - AWS (1710-1755 MHz and 2110-2155  WGGA789  AW - AWS (1710-1755 MHz and 2110-2155  WGGA814  AW - AWS (1710-1755 MHz and 2110-2155  WGGA824  AW - AWS (1710-1755 MHz and 2110-2155  WGGD594  AW - AWS (1710-1755 MHz and 2110-2155							
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und 2110-2133							
		and 2110-2133					7

<sup>\*</sup> Note: Items 190 – 194 are for New Leases involving spectrum associated with site-based authorizations when only a portion of the licensed locations, paths and/or frequencies will be leased.

#### FCC Form 608 Schedule A

#### **Federal Communications Commission**

Approved by OMB 3060 - 1058 See 608 Main Form Instructions for public burden estimate

# Schedule for Licensees that Received Bidding Credits or Involving Licenses Won in Closed Bidding

Designated Entity Information Bidding Credits			
Has the full amount of the bidding credits awarded with regard to each of the subject license(s) been paid as part of unjust enrichment payment(s) in previous transaction(s)?	(	) <u>Y</u> es	<u>N</u> o
If the response to Item 1 is 'Y', Items 2 and 3 are not required to be completed.			
Bidding Credits - (Spectrum Manager Leases Only)			
2a) Does the Applicant have a general partnership interest or have a direct or indirect ownership interests of ten percent or greater in the Licensee?	(	) <u>Y</u> es	<u>N</u> o
2b) Is the Applicant a "controlling interest holder" or "affiliate" of the current Licensee?	(	) <u><b>Y</b></u> es	<u><b>N</b></u> o
For purposes of determining whether the Licensee has retained the requisite degree of ownership and control over the leased spectrum in order to remain eligible for the license or for bidding credits, the <i>de jure</i> control standard in 47 CFR §1.2110 and the <i>de facto</i> control standard in 47 CFR § 1.9010 will be applied (pursuant to the conditions set forth in 47 CFR §1.9020).			
2c) Does the Applicant share office space, equipment, or other facilities with any party controlling the entity from which spectrum is being leased/subleased?	(	) <u>Y</u> es	<u>N</u> o
2d) Is the Applicant a disclosable interest holder that holds a ten percent or greater interest of any kind in the Licensee and is the Lease/Sublease for more than 25% of the spectrum capacity of the subject license(s)?	(	) <u>Y</u> es	<u>N</u> o
2e) Does the Licensee certify that the Lease/Sublease does not affect its continuing eligibility to retain bidding credit(s)?	(	) <u>Y</u> es	<u>N</u> o
Bidding Credits – (Long-Term <i>De Facto</i> Transfer Leases Only) Eligibility			
3a) With respect to each of the subject licenses, the Applicant:			
( ) qualifies for the same designated entity benefit as the current Licensee			
( ) qualifies for a different designated entity benefit than the current Licensee			
( ) does not qualify for any designated entity status			
3b) If the Applicant states in Item 3a that it qualifies for the same designated entity benefit as the current Licensee or q designated entity status than the current Licensee, the Applicant qualifies for a (select one):	ualifies for a d	lifferent	
( ) small business bidding credit (%)			

FCC Form 608 - Schedule A April 2022 - Page 1

) <u>Y</u>es <u>N</u>o

rural service provider bidding credit

3c) Is the Applicant a disclosable interest holder that holds a ten percent or greater interest of any kind in the

Licensee and is the Lease/Sublease for more than 25% of the spectrum capacity of the subject license(s)?

Closed Bidding Licenses		
4) Have construction notifications been submitted as required by the Commission's Rules for each of the subject licenses?	(	) <u>Y</u> es <u>N</u> o
If the response to Item 4 is 'Y', Items 5 and 6 are not required to be completed.		
Closed Bidding Licenses – (Spectrum Manager Leases Only)		
5a) Does the Applicant have a general partnership interest or have a direct or indirect ownership interest of ten percent or greater in the Licensee?	(	) <u>Y</u> es <u>N</u> o
5b) Is the Applicant a "controlling interest holder" or "affiliate" of the current Licensee?	(	) <u>Y</u> es <u>N</u> o
5c) Does the Applicant share office space, equipment or other facilities with any party controlling the entity from which spectrum is being leased?	(	) <u>Y</u> es <u>N</u> o
5d) Does the Licensee certify that the Lease/Sublease does not affect its continuing eligibility to retain closed bidding licenses?		
Closed Bidding Licenses – (Long-Term <i>De Facto</i> Transfer Leases Only) Eligibility		
6) With respect to each of the subject licenses, the Applicant:		
( ) a) qualifies for closed bidding		
( ) b) does not qualify for closed bidding		

7) Revenue and Asset Informat Purpose (Check Modify if filing a provided on the original filing)	on for the Applicant  n Amendment application and changing t	he Revenue and Asset Informati	on from what wa	as
☐ Modify				
Gross Revenue Disclosure I	ost Recent Reportable Year			
8a) Were the Applicant and any pred If 'N', explain why in an attach	ecessors-in-interest in existence for a full year lent.	of the relevant period?	( )	) <u>Y</u> es <u>N</u> o
If 'Y', provide the following infor	nation.			
8b) Gross Revenues	\$(Format	t: 99,999.99)		
8c) Year-end Date:	(Date Format: MM/DD/YYYY)			
One Year Prior to Most Recent	Reportable Year			
9a) Were the Applicant and any pred If 'N', explain why in an attach	ecessors-in-interest in existence for a full year nent.	of the relevant period?	( )	Yes No
If 'Y', provide the following infor	nation.			
9b) Gross Revenues	\$(Format	t: 99,999.99)		
9c) Year-end Date:	(Date F	ormat: MM/DD/YYYY)		
Two Years Prior to Most Recen	Reportable Year			
10a) Were the Applicant and any pro If 'N', explain why in an attach	decessors-in-interest in existence for a full year ent.	r of the relevant period?	(	) <u>Y</u> es <u>N</u> o
If 'Y', provide the following infor	nation.			
10b) Gross Revenues	\$(Format	t: 99,999.99)		
10c) Year-end Date:	(Date F	ormat: MM/DD/YYYY)		
Three Years Prior to Most Rece	nt Reportable Year			
	decessors-in-interest in existence for a full year	of the relevant period? If	(	) <u>Y</u> es <u>N</u> o
If 'Y', provide the following information	1.			
11b) Gross Revenues	\$(Format: 99	9,999.99)		
11c) Year-end Date:	(Date Forma	at: MM/DD/YYYY)		
Four Years Prior to Most Recer	t Reportable Year			
	decessors-in-interest in existence for a full year	of the relevant period? If		) <u>Y</u> es <u>N</u> o
If 'Y', provide the following information	1.			
12b) Gross Revenues	\$(Format: 99	9,999.99)		
12c) Year-end Date:	(Date Forma	at: MM/DD/YYYY)		

FCC Form 608 - Schedule A April 2022 - Page 3

Average Gross Revenue	
13) Average Gross Revenue of Reported Years: \$(For	mat: 99,999.99)
Asset Disclosure	
14) Total Assets as of Application Filing Date: \$	
Financial Statements	
15) Audited or Unaudited (Check One)	
The Applicant used audited financial statements.	
The Applicant used unaudited financial statements prepared in accordance with Gencertified by the Applicant's chief financial officer or the equivalent.	erally Accepted Accounting Principles (GAAP) and





#### **Closed Bidding/Designated Entity Eligibility**

36a) Gross Revenues	\$	(Format: 99,999.99)	
36b) Year-end Date:	(Date Format: MM/DD/YYYY)		
Total Gross Revenues for On	e Year Prior to Mos	st Recent Reportable Year	
37a) Gross Revenues:	\$	(Format: 99,999.99)	
37b) Year-end Date:		(Date Format: MM/DD/YYYY)	
Total Gross Revenues for Tw	o Years Prior to Mo	ost Recent Reportable Year	
38a) Gross Revenues:	\$	(Format: 99,999.99)	
38b) Year-end Date:		(Date Format: MM/DD/YYYY)	
Total Gross Revenues for	Three Years Price	or to the Most Recent Reportable Year	
39a) Gross Revenues:	\$	(Format:	
39b) Year-end Date:		(Date Format:	
otal Gross Revenues for Fo	our Years Prior to	the Most Recent Reportable Year	
40a) Gross Revenues:	\$	(Format: 99,999.99)	
10b) Year-end Date:		(Date Format: MM/DD/YYYY)	
Fotal Aggregate Average Gro Revenue Data)	ess Revenues for De	esignated Entity (License(s) Requiring Disclosure of Three Years of Gross	
41) Aggregate Average Gross Re	venue: \$	(Format: 99,999.99)	
Fotal Aggregate Average Gro Revenue Data)	ss Revenues for De	esignated Entity (License(s) Requiring Disclosure of Five Years of Gross	
41) Aggregate Average Gross Re	evenue: \$	(Format: 99,999.99)	
Total Aggregate Average Gro	ss Revenues for CI	osed Bidding	
42) Aggregate Average Gross Re	venue: \$	(Format: 99,999.99)	
Fotal Assets Disclosure for C	losed Bidding		
43) Total Assets: \$		(Format: 99,999.99)	

36) Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?	( ) <u>Y</u> es <u>N</u> o
If the Applicant (the Lessee/Sublessee/Transferee) is seeking a rural service provider (RSP) bidding credit, provide equested in a-e.	le in an exhibit the following information
a) for the Applicant, submit the combined number of commercial communications service subscribers to wireless, that the Applicant serves and provide a list of the name(s) and the Federal Information Processing Standard (FIPS the Applicant has at least one commercial wireless, wireline, broadband, or cable subscriber; b) for each of the Applicant's Affiliates, Controlling Interests, and the Affiliates of its Controlling Interests, submit the Registration Number (FRN), its relationship to the Applicant, and its combined number of commercial communication wireline, broadband, and cable services. For each of the Applicant's Affiliates, Controlling Interests, and the Affiliates provide a list of the name(s) and the FIPS number(s) for each county in which it has at least one commercial wirelessubscriber; c) if neither the Applicant, nor any of its Affiliates, its Controlling Interests, or the Affiliates of its Controlling Interests hor adband, or cable subscriber in a market for which the Applicant is applying for a license, list the market(s) in w Controlling Interests, and the Affiliates of its Controlling Interests have no such subscribers; d) a detailed explanation demonstrating that: (i) the Applicant is in the business of providing commercial communiserves predominantly rural areas; and (iii) the primary focus of the Applicant's business activity is the provision of	S) number(s) for each county in which the individual or entity's name, its FCC tions service subscribers to wireless, ates of its Controlling Interests, also less, wireline, broadband, or cable the have at least one wireless, wireline, thich the Applicant, its Affiliates, its lications services; (ii) the Applicant
counties with a population density of 100 or fewer persons per square mile); and e) If the Applicant is an existing rural partnership that was providing service as of July 16, 2015, provide a detailed member of the partnership is independently eligible for the RSP bidding credit by providing, with respect to each r	d explanation demonstrating that each
information as is required in a-d above.	

#### **Federal Communications Commission**

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#### Schedule for New Lease or New Sublease

Term of Lease [For New Leases Only]	
1) Indicate whether the Lease is:	
( <b>x</b> )Long-Term      or     (  )Short-Term*	
* The cumulative lease period for a Short-Term Lease cannot exceed 365 days from the original commencement da	ite.
2) If this filing is for a Long-Term <i>De Facto</i> Transfer Lease, have the Licensee and Lessee entered into any Short-Term <i>De Facto</i> Transfer Lease(s) with regard to any spectrum covered by the license(s) that are part of this filing or within the same geographic area(s) of the license(s) that are part of this filing?	(N ) <u>Y</u> es <u>N</u> o
Leased Spectrum (For Geographically-Licensed Services) [For New Leases Only]	
3a) Does this filing involve geographic-area licenses where only a portion of the licensed spectrum and/or the licensed geographic area will be leased?	(γ ) <u>Y</u> es <u>N</u> o
3b) If the answer to 3a is 'Yes', does this filing involve one or more individual point-to-point microwave links that will be leased?	( N ) Yes No
If the response to 3b is 'Yes', complete Schedule H. If the response to 3b is 'No', complete Schedule F and, if applicable, Schedule G.	
Leased Spectrum (For Site-Based Services) [For New Leases Only]	
3c) Does this filing involve site-based licenses where only a portion of the licensed locations, paths and/or frequencies will be leased?	( ) <u>Y</u> es <u>N</u> o
If the response to 3c is 'No', complete Items 184 (Call Sign) and 185 (Radio Service Code) on the Main Form. If the response to 3c is 'Yes', in addition to Items 184 (Call Sign) and 185 (Radio Service Code), complete Items 186-190 (Location Number, Path Number, Frequency Number, Lower Frequency and Upper Frequency), as appropriate, on the Main Form.	
Type and Term of Sublease [For New Subleases Only]	
4a) If the existing Lease is a Long-Term <i>De Facto</i> Transfer Lease, are the Lessee and Sublessee entering into a Spectru or a Long-Term <i>De Facto</i> Transfer Sublease?	ım Manager Sublease
( ) Spectrum Manager Sublease or ( ) Long-Term <i>De Facto</i> Transfer Sublease	
4b) If the answer to 4a is 'Spectrum Manager Sublease', indicate whether the Sublease is:	
( ) Long-Term or ( ) Short-Term	
5) If the existing Lease is a Long-Term Spectrum Manager Lease, indicate whether the Spectrum Manager Sublease is:	
( ) Long-Term or ( ) Short-Term	

#### **Federal Communications Commission**

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# Schedule for Supplemental Information Pertaining to a New Lease, New Sublease, Revision to Extend the Term of an Existing Lease or Sublease, or Revision to Cancel an Existing Lease or Sublease

License Authorizations/Lease Identifiers/Sublease Identifiers (Complete as many Schedule E's as necessary)

License Authorization	ons/Lease identiliers/s	Sublease luentillers (	Complete as many Sch	ledule E's as fiecessar	у)
1) Call Sign(s) or Lease/Sublease Identifier(s)	2) Radio Service Code	3) Commencement Date  (MM/DD/YYYY) OR Check box for FCC Grant Date	4) Expiration Date (MM/DD/YYYY)	5) Revised Expiration Date (MM/DD/YYYY)	6) Cancellation Date  (MM/DD/YYYY) OR Check box if Lease/Sublease Never Commenced
WQGA766	AW	X	09/16/2026		
WQGA769	AW	X	09/16/2026		
WQGA787	AW	X	09/16/2026		
WQGA795	AW	X	09/16/2026		
WQGA814	AW	X	09/16/2026		
WQGA822	AW	X	09/16/2026		
WQGA824	AW	X	09/16/2026		
WQGA838	AW	X	09/16/2026		
WQGD505	AW	X	09/16/2026		
WQGD594	AW	X	09/16/2026		
WQGD703	AW	X	09/16/2026		

#### **Federal Communications Commission**

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	(Geographically-Licensed	Services)	
Call Sign			
1) Call Sign: <u>wqqA766</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased	3) Undefined Area to (Complete Sch		4a) Population of Leased Area
	Schedule G # Attached:1		
5) Frequencies of Spectrum To Be	ncluded in Lease (MHz)		
Spectrum Leased			
Lower Frequency/E	andwidth	Uppei	Frequency/Bandwidth

#### **Federal Communications Commission**

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	Geographically-Licensed Sei	vices)	
Call Sign			
1) Call Sign: <u>WQGA766</u>			
Geographic Area of Spectrum To Be I	ncluded in Lease		
2) Defined Area to be Leased	3) Undefined Area to be (Complete Schedul		4a) Population of Leased Area
	Schedule G # Attached:2		
5) Frequencies of Spectrum To Be Inc.	cluded in Lease (MHz)	'	
Spectrum Leased			
Lower Frequency/Bar	ndwidth	Upper	Frequency/Bandwidth

#### **Federal Communications Commission**

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	(Geographically-Licens	ed Services)	
Call Sign			
1) Call Sign: <u>WQGA769</u>			
Geographic Area of Spectrum To Be	e Included in Lease		
2) Defined Area to be Leased	Undefined Are	3) ea to be Leased Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:	3	
5) Frequencies of Spectrum To Be	Included in Lease (MHz)	,	
Spectrum Leased			
Lower Frequency/E	Bandwidth	Upper	Frequency/Bandwidth

#### **Federal Communications Commission**

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	(Geographically-Licen	sed Services)	
Call Sign			
1) Call Sign: <u>WQGA787</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased		3) rea to be Leased e Schedule G)	4a) Population of Leased Area
	Schedule G # Attached	d:4	
5) Frequencies of Spectrum To Be I	ncluded in Lease (MHz)	·	
Spectrum Leased			
Lower Frequency/B	andwidth	Upper	Frequency/Bandwidth

#### **Federal Communications Commission**

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	(Geographically-Lice	nsed Services)	
Call Sign			
1) Call Sign: <u>WQGA787</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased		3) Area to be Leased te Schedule G)	4a) Population of Leased Area
	Schedule G # Attache	d:5	
5) Frequencies of Spectrum To Be	Included in Lease (MHz)		
Spectrum Leased			
Lower Frequency/E	Bandwidth	Upper	Frequency/Bandwidth

#### **Federal Communications Commission**

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	(Geographically-Licensed Services)	
Call Sign		
1) Call Sign: <u>wqqa787</u>		
Geographic Area of Spectrum To Be	Included in Lease	
2) Defined Area to be Leased	3) Undefined Area to be Leased (Complete Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:6	
5) Frequencies of Spectrum To Be I	ncluded in Lease (MHz)	
Spectrum Leased		
Lower Frequency/B	andwidth Upp	per Frequency/Bandwidth

#### **Federal Communications Commission**

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	(Geographically-License	ed Services)	
Call Sign			
1) Call Sign: <u>wqqa795</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased	Undefined Are (Complete S	a to be Leased	4a) Population of Leased Area
	Schedule G # Attached:7		
5) Frequencies of Spectrum To Be I	ncluded in Lease (MHz)		
Spectrum Leased			
Lower Frequency/B	andwidth	Upper	Frequency/Bandwidth

#### **Federal Communications Commission**

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	(Geographically-Licensed Services)	
Call Sign		
1) Call Sign: <u>WQGA814</u>		
Geographic Area of Spectrum To Be	Included in Lease	
2) Defined Area to be Leased	3) Undefined Area to be Leased (Complete Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:8	
5) Frequencies of Spectrum To Be I	ncluded in Lease (MHz)	
Spectrum Leased		
Lower Frequency/B	andwidth Upp	per Frequency/Bandwidth

#### **Federal Communications Commission**

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	(Geographically-License	ed Services)	
Call Sign			
1) Call Sign: <u>WQGA822</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased	Undefined Are (Complete S	a to be Leased	4a) Population of Leased Area
	Schedule G # Attached:9		
5) Frequencies of Spectrum To Be I	ncluded in Lease (MHz)		
Spectrum Leased			
Lower Frequency/B	andwidth	Upper	Frequency/Bandwidth

#### **Federal Communications Commission**

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	(Geographically-Licensed Se	ervices)	
Call Sign			
1) Call Sign: <u>WQGA824</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased	3) Undefined Area to be (Complete Schedu		4a) Population of Leased Area
	Schedule G # Attached:10		
5) Frequencies of Spectrum To Be I	ncluded in Lease (MHz)	,	
Spectrum Leased			
Lower Frequency/E	andwidth	Upper	Frequency/Bandwidth

#### **Federal Communications Commission**

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	Geographically-Licens	ed Services)	
Call Sign			
1) Call Sign: <u>wqqA838</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased	Undefined Are	B) ea to be Leased Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:	11	
5) Frequencies of Spectrum To Be Ir	cluded in Lease (MHz)		
Spectrum Leased			
Lower Frequency/Ba	andwidth	Upper	Frequency/Bandwidth

#### **Federal Communications Commission**

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	Geographically-Licens	ed Services)	
Call Sign			
1) Call Sign: <u>wQGD505</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased	Undefined Are	B) ea to be Leased Schedule G)	4a) Population of Leased Area
	Schedule G # Attached:	12	
5) Frequencies of Spectrum To Be Ir	cluded in Lease (MHz)		
Spectrum Leased			
Lower Frequency/Ba	nndwidth	Upper	Frequency/Bandwidth

#### **Federal Communications Commission**

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	(Geographically-Lice	nsed Services)	
Call Sign			
1) Call Sign: <u>WQGD594</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased		3) Area to be Leased te Schedule G)	4a) Population of Leased Area
	Schedule G # Attache	d:13	
5) Frequencies of Spectrum To Be	Included in Lease (MHz)		
Spectrum Leased			
Lower Frequency/E	Bandwidth	Upper	Frequency/Bandwidth

#### **Federal Communications Commission**

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	(Geographically-Licensed Ser	vices)	
Call Sign			
1) Call Sign: <u>wQGD594</u>			
Geographic Area of Spectrum To Be	Included in Lease		
2) Defined Area to be Leased	3) Undefined Area to be I (Complete Schedule		4a) Population of Leased Area
	Schedule G # Attached:14		
5) Frequencies of Spectrum To Be I	ncluded in Lease (MHz)		
Spectrum Leased			
Lower Frequency/E	andwidth	Upper Fre	equency/Bandwidth

#### **Federal Communications Commission**

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	(Geographically-Lice	nsed Services)	
Call Sign			
1) Call Sign: <u>WQGD703</u>			
Geographic Area of Spectrum To Be	e Included in Lease		
2) Defined Area to be Leased		3) Area to be Leased ete Schedule G)	4a) Population of Leased Area
	Schedule G # Attache	ed:15	
5) Frequencies of Spectrum To Be	Included in Lease (MHz)	·	
Spectrum Leased			
Lower Frequency/E	Bandwidth	Uppe	r Frequency/Bandwidth

<b>FCC</b>	60	8
Sched	lule	G

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Number:	1	

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	37-17-51.7 N	077-20-56.5 W
2	37-17-59.2 N	077-21-01.2 W
3	37-18-03.8 N	077-20-51.0 W
4	37-18-04.5 N	077-20-39.0 W
5	37-17-58.5 N	077-20-37.3 W
6	37-17-51.7 N	077-20-56.5 W

FCC	608
Sche	dule G

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Number: 2	Number: 2	
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	37-18-24.8 N	077-20-56.0 W
2	37-18-25.7 N	077-20-42.1 W
3	37-18-16.5 N	077-20-39.5 W
4	37-18-05.9 N	077-20-40.3 W
5	37-18-05.3 N	077-20-48.4 W
6	37-18-11.7 N	077-20-55.7 W
7	37-18-24.8 N	077-20-56.0 W

<b>FCC</b>	60	8
Sched	lule	G

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Number:	3

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	25-37-06.5 N	080-24-48.7 W
2	25-37-14.5 N	080-24-41.2 W
3	25-37-07.9 N	080-24-28.2 W
4	25-36-59.4 N	080-24-27.9 W
5	25-36-58.9 N	080-24-39.8 W
6	25-37-06.5 N	080-24-48.7 W

FCC	608
Sche	dule G

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Number:	4

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	39-38-38.4 N	105-06-31.9 W	
2	39-38-38.7 N	105-06-14.9 W	
3	39-38-20.8 N	105-06-15.4 W	
4	39-38-21.4 N	105-06-24.6 W	
5	39-38-33.6 N	105-06-32.2 W	
6	39-38-38.4 N	105-06-31.9 W	

FCC	60	8
Sched	ule	G

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Number:	5	

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	29-58-31.1 N	094-05-17.5 W
2	29-58-31.9 N	094-04-17.4 W
3	29-57-25.9 N	094-04-15.5 W
4	29-57-25.2 N	094-05-16.7 W
5	29-58-31.1 N	094-05-17.5 W

FCC	60	8
Sched	ule	G

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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

31-28-20.6 N	092-27-03.8 W
31-28-20.4 N	092-25-59.5 W
31-27-39.4 N	092-26-05.1 W
31-27-41.9 N	092-27-06.3 W
31-28-20.6 N	092-27-03.8 W
3	1-28-20.4 N 1-27-39.4 N 1-27-41.9 N

<b>FCC</b>	60	8
Sched	lule	G

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Number:	7		

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	38-26-13.5 N	082-42-26.7 W
2	38-26-12.8 N	082-42-08.2 W
3	38-26-05.8 N	082-42-06.6 W
4	38-26-00.5 N	082-42-13.5 W
5	38-26-00.7 N	082-42-25.2 W
6	38-26-13.5 N	082-42-26.7 W

F	CC	60	8
S	ched	lule	G

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Numbe	r: 8	

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

35-51.9 N	078-45-55.2 W 078-45-51.3 W
	078-45-51.3 W
35-52.0 N	078-45-39.9 W
35-49.2 N	078-45-34.0 W
35-38.6 N	078-45-33.5 W
35-35.7 N	078-45-36.0 W
35-34.6 N	078-45-41.1 W
35-37.4 N	078-45-48.0 W
35-46 2 N	078-45-56.0 W
,	

FCC	608
Sche	dule G

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Number:	9
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	37-46-10.2 N	082-38-52.2 W
2	37-46-15.5 N	082-38-53.1 W
3	37-46-21.7 N	082-38-50.9 W
4	37-46-25.1 N	082-38-46.3 W
5	37-46-24.4 N	082-38-38.8 W
6	37-46-09.9 N	082-38-40.5 W
7	37-46-10.2 N	082-38-52.2 W

FCC	60	8
<b>Sched</b>	ule	G

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Number:	10	
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	37-10-52.2 N	083-47-34.4 W
2	37-10-55.7 N	083-47-29.6 W
3	37-10-50.5 N	083-47-15.2 W
4	37-10-44.4 N	083-47-12.3 W
5	37-10-38.8 N	083-47-16.8 W
6	37-10-37.7 N	083-47-24.1 W
7	37-10-41.2 N	083-47-28.2 W
8	37-10-52.2 N	083-47-34.4 W

#### FEDERAL COMMUNICATIONS COMMISSION

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Number:	11		
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	40-46-13.4 N	080-42-25.5 W
2	40-46-19.4 N	080-42-28.9 W
3	40-46-26.9 N	080-42-23.0 W
4	40-46-28.2 N	080-42-17.8 W
5	40-46-24.8 N	080-42-06.9 W
6	40-46-18.7 N	080-42-03.9 W
7	40-46-15.2 N	080-42-13.6 W
8	40-46-14.5 N	080-42-16.6 W
9	40-46-13.4 N	080-42-25.5 W

FCC	60	8
<b>Sched</b>	ule	G

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Number: 12	Number: 12	
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	39-23-07.6 N	075-09-51.9 W
2	39-23-15.7 N	075-09-29.3 W
3	39-22-58.0 N	075-09-18.1 W
4	39-22-55.9 N	075-09-23.1 W
5	39-22-55.1 N	075-09-44.0 W
6	39-23-07.6 N	075-09-51.9 W

FCC	608
Sche	dule G

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Number:	13	
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	32-43-31.6 N	081-15-29.8 W	
2	32-43-28.5 N	081-14-56.8 W	
3	32-43-01.5 N	081-14-59.6 W	
4	32-43-04.3 N	081-15-33.8 W	
5	32-43-31.6 N	081-15-29.8 W	

FCC	60	8
<b>Sched</b>	ule	G

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Number:	14	
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#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	31-33-55.8 N	081-54-19.2 W
2	31-33-56.7 N	081-54-11.4 W
3	31-33-52.0 N	081-53-55.9 W
4	31-33-45.5 N	081-53-55.0 W
5	31-33-43.7 N	081-54-18.2 W
6	31-33-55.8 N	081-54-19.2 W

FCC	60	8
Sched	ule	G

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Number:	15	

#### Schedule for Leases that Involve an Undefined Geographic Area

For each undefined geographic area, complete up to 300 Latitude/Longitude combinations for every 3 degrees azimuth, using NAD83 Datum.

#### Latitude (DD-MM-SS.S-D)

1	37-17-51.7 N	077-20-56.5 W
2	37-17-59.2 N	077-21-01.2 W
3	37-18-03.8 N	077-20-51.0 W
4	37-18-04.5 N	077-20-39.0 W
5	37-17-58.5 N	077-20-37.3 W
6	37-17-51.7 N	077-20-56.5 W

### Attachment(s):

Туре	Description	Date Entered
0	Exhibit 3 - Site Information	01/04/2023
0	Exhibit 2 - Description of Licenses	01/04/2023
0	Exhibit 1 - Description of Transaction	01/04/2023

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## **Federal Communications Commission**

**Wireless Telecommunications Bureau** 

## RADIO STATION AUTHORIZATION

LICENSEE: NEW CINGULAR WIRELESS PCS, LLC

ATTN: CECIL J MATHEW NEW CINGULAR WIRELESS PCS, LLC 208 S AKARD ST., RM 1015 DALLAS, TX 75202

<b>Call Sign</b> WQGA852	File Number					
Radio Service						
AW - AWS (1710-1755 MHz and						
2110-2155 MHz)						

FCC Registration Number (FRN): 0003291192

registration (tambér (1 re					
<b>Grant Date</b> 11-29-2006	Effective Butte		Print Date		
Market Number CMA681		nel Block A	Sub-Market Designator		
	<b>Market</b> Virginia				
1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date		

#### Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

## **Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

Licensee Name: NEW CINGULAR WIRELESS PCS, LLC

Call Sign: WQGA852 File Number: Print Date:

700 MHz Relicensed Area Information:

Market Name Buildout Deadline Buildout Notification Status

## Reference Copy Only. Do Not Mail to the FCC as an Application.

Submitted: 05/27/2021 at 16:00:24

File Number: 0009567304

## FCC 601 Main Form

# FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau Public Safety and Homeland Security Bureau

Approved by OMB 3060 - 0798 See instructions for public burden estimate

1) F	Radio Service Code 1a) I	Existing Radio Service Code		
	AW			
en	eral Information			
2)	(Select only one) (NT)  NE - New  MD - Modification  AM - Amendment  RO - Renewal Only  RM - Renewal/Modification  CA - Cancellation of Licens		NT - Required No EX - Requests for RL – Registered I	Extension of Time
3a)	If this application is for a Demonstration License of and attach the required exhibit as described in the i			( N ) <u>M S N/A</u>
3b)	If this application is for Special Temporary Authority Refer to Rule 1.915 for an explanation of situations of		'Y'; otherwise enter 'N'.	( ) <u>Y</u> es <u>N</u> o
4)	If this application is for an Amendment or Withdrawa on file with the FCC.	al, enter the file number of the pendir	ng application currently	File Number
5)	If this application is for a Modification, Renewal Onl License, or Administrative Update, enter the call sign If this is a request for Registered Location/Link, enter	of the existing FCC license.	·	Call Sign
6a)	If this application is for a New, Amendment, Renew authorization expiration date (this item is optional).	al Only, or Renewal/Modification, ent	er the requested	MM DD
6b)	If this application is for a Renewal Only or Renewal the license used to provide service to customers ( <b>C</b> ) purposes or to meet the licensee's public interest/pu	, or is the license used for private bus	siness (internal)	( ) <u>C</u> <u>P</u>
7) I	s this application "major" as defined in § 1.929 of applicable radio service rules found in Parts 22 and applies to certain site-specific applications. See the i	d 90 of the Commission's Rules? (N	OTE: This question only	
8)	Are attachments (other than associated schedules) b	eing filed with this application?		( <b>Y</b> ) <u>Y</u> es <u>N</u> o
ees	, Waivers, and Exemptions			
9) I:	s the Applicant exempt from FCC application fees?			( <b>N</b> ) <u>Y</u> es <u>N</u> o
10)	Is the Applicant exempt from FCC regulatory fees?			( ) <u>Y</u> es <u>N</u> o
11a	Does this application include a request for a Waiver of Yes', attach an exhibit providing rule number(s) and the state of the stat	of the Commission's Rule(s)? nd explaining circumstances.		( N ) <u>Y</u> es <u>N</u> o
	) If 11a is 'Y', and a feeable waiver request is attached	d, enter the number of rule sections in	volved.	Number of Rule Section(s):
11b				

pplicant Information								
13) FCC Registration Number (FRN): 0003291192								
14) Applicant/Licensee Legal Entity Type: (Select One ( )Individual ( )Unincorporated Association		ıst (	)Govern	ment Entity	( )Corporat	tion (X	)Limited Liabi	lity Company
)General Partnership ( )Limited Partnersh	nip ( )L	imited L	iability Pa	artnership	( )Consortiu	um		
) Other:								
<ol><li>If the Licensee name is being updated, is the updated party and for which proper Commission approva</li></ol>							to (	) <u>Y</u> es <u>N</u> o
6) First Name (if individual):		MI: L	ast Nam	e:			Sut	fix:
7) Legal Entity Name (if other than individual):								
New Cingular Wireless PCS, LLC								
8) Attention To:								
Cecil J Mathew								
9) P.O. Box:	And/Or	20) S	treet Add	ress:				
		2	08 S Ak	ard St., RN	1 1015			
1) City:				2	22) State:	23)	Zip Code:	
Dallas					TX	7	75202	
4) Telephone Number:			2	5) Fax:				
(855)699-7073				(214)746-	6410			
6) E-Mail Address:								
FCCMW@att.com								
7) Demographics (Optional)								
Race:	Ethni					Gender:		
)American Indian or Alaska Native	(	)Hispani	c or Latir	10		( )Ma	le	
)Asian	(	)Not His	panic or	Latino		( )Fe	male	
)Black or African-American								
)Native Hawaiian or Other Pacific Islander								
)White								
and Douby in Interest								
eal Party in Interest 28) Name of Real Party in Interest of Applicant (If diffe Applicant):	erent from	l	29	) FCC Regist	tration Number	r (FRN) of	Real Party in I	nterest:
ontact Information (If different from the Applicant)			l					
) Check here if same as Applicant.		MI:	Lacti	Name:				Suffix:
Cecil		J	Mat					Julia.
31) Company Name: AT&T Mobility LLC		<u> </u>						
32) Attention To:								
Michael P. Goggin								
3) P.O. Box:	And /Or		reet Addr 8 S Aka	ess: ard St., RM	1015			_
35) City: <b>Dallas</b>	1	•		36) State: <b>TX</b>			37) Zip Cod <b>75202</b>	e:
8) Telephone Number: (855)699-7073			39	) Fax: <b>(214)746-</b> 6	6410			
40) E-Mail Address: FCCMW@att.com			•					

	julatory Status														
41	) This filing is for	authoriza	tion to provide o	r use the f	ollowii	ng type(s) of ra	adio servic	e offering (er	nter all	that appl	y):				
(	) <u>C</u> ommon Carr	ier (	) <u>N</u> on-Commo	n Carrier	(	) <u>P</u> rivate, inte	ernal comm	nunications	(	) <u>B</u> roadca	ast Ser	vices	(	) <u>B</u> and <u>M</u>	anager
Тур	e of Radio Servi	ce													
42	) This filing is for	authoriza	tion to provide th	e followin	g type	e(s) of radio se	rvice (choc	se all that a	oply):						
(	) <u>F</u> ixed	(	) <u>M</u> obile	(	) <u>R</u> ac	liolocation	(	) <u>S</u> atellite (s	sound)	(	) <u>E</u>	oadca:	st Servi	ices	
43	) Does the Applic	ant propo	se to provide se	rvice inter	conne	ected to the pul	blic telepho	one network	?				(	) <u>Y</u> es	<u>N</u> o
	n Ownership Qu Main Form Instr						t explainin	g the circur	nstan	ces. In p	repari	ng the a	attachr	nent, ref	er to
44	) Is the Applicant	a foreign	government or t	he repres	entativ	e of any foreig	gn governn	nent?					(	) <u><b>Y</b></u> es	<u>N</u> o
45	) Is the Applicant	an alien o	or the representa	ative of an	alien?	?							(	)Yes	No
4.0	) Is the Applicant	a cornors											`	7-	<u> 14</u> 0
46	, , , , ,	a corpora	tion organized ι	ınder the I	aws o	f any foreign g	jovernment	?					(	) <u>Y</u> es	<u>N</u> o

is own	the Applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock ( ) $\underline{\mathbf{Y}}$ es $\underline{\mathbf{N}}$ o ed of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any
•	ation organized under the laws of a foreign country?
48b) It	f the answer to 47 or 48a is 'Y' select one of the choices below.
	The Applicant is exempt from the provisions of Section 310(b).
	It is not necessary to file a petition for declaratory ruling if the Applicant includes in the attachment required by Item 47 or Item 48a a showing that the requested license(s) is exempt from the provisions of Section 310(b).
	The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.
	If checked, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Applicant since the issuance of its ruling.
	The Applicant: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specified immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/Sublessee that received a declaratory ruling(s) under 47 CFR § 1.990(a) and is relying on the affiliate's ruling for purposes of filing this application as permitted under the affiliate's ruling and 47 CFR § 1.994(b).
	If checked, and if the Applicant received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 47 or Item 48a the citation(s) of the Applicant's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of its ruling and with the Commission's Rules.
	If checked, and if the Applicant received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 48a a copy of a petition for declaratory ruling filed contemporaneously with the Commission to extend the Applicant's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s) involved in the application. Alternatively, the Applicant may request a new declaratory ruling pursuant to Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).
	If checked, and if the Applicant is relying on an affiliate's ruling for purposes of filing this application, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rules. The Applicant must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in 47 CFR § 1.994(b). See Main Form Instructions for Items 47 or 48a, as applicable.
	The Applicant has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under 47 CFR § 1.990(a) in a petition filed contemporaneously with the Commission.
	If checked, include in the attachment required by Item 47 or 48a a copy of the petition for declaratory ruling filed contemporaneously with the Commission pursuant to 47 CFR § 1.990(a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).

Basic Qualification Questions			
49) Has the Applicant or any party to this application had any FCC station authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construct permit denied by the Commission?	ion (	) <u>Y</u> •	es <u>N</u> o
50) Has the Applicant or any party to this application, or any party directly or indirectly controlling the Applicant, ever been convicted of a felony by any state or federal court?	(	( ) <u>Y</u>	es <u>N</u> o
51) Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?		( <u>)Y</u>	es <u>N</u> o
Note: If the answer to any of 49-51 is 'Y', attach an exhibit explaining the circumstances.			
Aeronautical Advisory Station (Unicom) Certification			
52) ( ) I certify that the station will be located on property of the airport to be served, and, in cases where the airport does not he tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations low within ten days prior to application.			oort
Broadband Radio Service and Educational Broadband Service Cable Cross-Ownership			
53a) Will the requested facilities be used to provide multichannel video programming service?	(	( ) <u>Y</u>	es <u>N</u> o
53b) If the answer to question 53a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in 47 CFR § 27.1202) in a cable television system whose franchise area is located within the geographic service area of the requested facilities?	(	<u>(</u> ) <u>Y</u>	es <u>N</u> o
Note: If the answer to question 53b is 'Y', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1202 or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.			
Broadband Radio Service and Educational Broadband Service (Part 27)			
54) (For EBS only) Does the Applicant comply with the programming requirements contained in 47 CFR § 27.1203?	(	) <u>Y</u> e	es <u>N</u> o
Note: If the answer to item 54 is 'N', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must answered 'Y'.	t be		
55) (For BRS and EBS) Does the Applicant comply with 47 CFR §§ 27.50, 27.55, and 27.1221?	(	) <u>Y</u> (	es <u>N</u> o
<b>Note:</b> If the answer to item 55 is 'N', attach an exhibit justifying a waiver of that rule(s). If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.	s		
For Applicants Who Participated in an Auction			
56) Is the Applicant a qualifying rural wireless partnership or a member of a qualifying rural wireless partnership?		( )	Yes <u>N</u> o
Note: If the answer to item 56 is 'Y', attach an exhibit listing all members of the qualifying rural wireless partnership, including FRN numbers.	their		
For Renewal Applicants			
57) Operation/Performance Requirement Certification	1		
For a site-based license]: Applicant certifies that it is continuing to operate consistent with its most recently filed construction obtification (or most recent authorization, if no construction notification was required).	(	) <u>Y</u> es <u>N</u>	<u>l</u> o
For a geographic license, commercial service - licensee in its initial license term with an interim performance	(	) <u>Y</u> es <u>N</u>	lo
requirement]: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term ollowing the interim performance requirement, it continues to use its facilities to provide at least the level of service required by its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term.	,	<i>,</i> – –	•
For a geographic license, commercial service - licensee in its initial license term with no interim performance equirement]: Applicant certifies that it has met its final performance requirement and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term. [Note: licensee nust provide a showing demonstrating that the final performance requirement has been met, either separately in a timely	(	) <u>Y</u> es <u>N</u>	lo
application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]			
For a geographic license, commercial service - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> es <u>N</u>	<u>l</u> o
For a geographic license, private systems - licensee in its initial license term with an interim performance equirement]: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term ollowing the interim performance requirement, it continues to use its facilities to further its private business or public nterest/public safety communications needs at or above the level required to meet its interim performance requirement, it has	(	) <u>Y</u> es <u>N</u>	lo
net its final performance requirement, and it continues to use its facilities to provide at least the level of operation required by its inal performance requirement through the end of the license term.			
For a geographic license, private systems - licensee in its initial license term with no interim performance equirement]: Applicant certifies that it has met its final performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs, and it continues to use its facilities to provide at least the	(	) <u>Y</u> es <u>N</u>	<u>l</u> o

level of operation required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]

FCC 601 – Main Form May 2021 – Page 5

[For a geographic license, private systems - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for the first renewal application filed after effective date of the rules]: Applicant certifies that the partitioned and/or disaggregated license that is the subject of this renewal application has no separate performance requirement and that this is the first renewal of this license filed subsequent to the effective date of the rules.	(	) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for any subsequent renewal filings]:  Applicant certifies that it continues to use its facilities to provide service or to further the applicant's private business or public interest/public safety needs.	(	) <u>Y</u> es <u>N</u> o
Discontinuance of Service Certification		
58) Applicant certifies that no permanent discontinuance of service or operation, as applicable, occurred during its current license term.	(	) <u>Y</u> es <u>N</u> o
Note: If the response to either item 57 or item 58 is 'N', attach an exhibit that demonstrates that over the course of the license term, the Applicant provided and continues to provide service to the public, or operated and continues to operate the license to meet the Applicant's private business or public interest/public safety communications needs. This exhibit must include a detailed description of the Applicant's provision of service or, when allowed under the relevant service rules or pursuant to waiver, use of the spectrum for private business or public interest/public safety communications needs, during the entire license period and address, as applicable: 1) the level and quality of service provided by the applicant (e.g., the population served, the area served, the number of subscribers, the services offered); (2) the date service commenced, whether service was ever interrupted, and the duration of any interruption or outage; (3) the extent to which service is provided to rural areas; (4) the extent to which service is provided to qualifying tribal land as defined in 47 CFR § 1.2110(e)(3)(i); and (5) any other factors associated with the level of service to the public. The licensee may note in its exhibit: 1) any grant(s) of waiver or extension of a performance deadline or license renewal subject to meeting a performance requirement; or 2) if the final performance deadline and/or expiration date for the license accelerated because the licensee did not meet an interim performance requirement.		
Regulatory Compliance Certification [same for all]		
59) Applicant certifies that it has substantially complied with all applicable FCC rules, policies, and the Communications Act of 1934, as amended.	(	) <u>Y</u> es <u>N</u> o
<b>Note:</b> If the response to item 59 is 'N', attach an exhibit explaining the circumstances and demonstrating why Applicant's license should be renewed.		
General Certification Statements  1) The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory po	ower of	the United States
<ol> <li>The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory population because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application</li> </ol>		the Officed States
2) The Applicant certifies that grant of this application would not cause the Applicant to be in violation of any pertinent cross-ownership or attrib *If the Applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcom		

- 3) The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference are material, are part of this application, and are true, complete, correct, and made in good faith.
- 4) The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to § 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under § 1.2002(c) of the rules, 47 CFR § 1.2002(c). See 47 CFR § 1.2002(b) for the definition of "party to the application" as used in this certification.
- 5) The Applicant certifies that it either (1) has current required ownership data on file with the Commission, (2) is filing updated ownership data simultaneously with this application, or (3) is not required to file ownership data under the Commission's Rules.
- 6) The Applicant certifies that the facilities, operations, and transmitters for which this authorization is hereby requested are either: (1) categorically excluded from routine environmental evaluation for RF exposure as set forth in 47 CFR § 1.1307(b); or, (2) have been found not to cause human exposure to levels of radiofrequency radiation in excess of the limits specified in 47 CFR §§ 1.1310 and 2.1093; or, (3) are the subject of one or more Environmental Assessments filed with the Commission.
- 7) The Applicant certifies that it has reviewed the appropriate Commission Rules defining eligibility to hold the requested license(s) and is eligible to hold the requested license(s).
- 8) The Applicant certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
- The Applicant certifies that the Applicant and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

## Signature

60) Typed of Printed Name of Party Authorized to Sign			
First Name:	MI:	Last Name:	Suffix:
Mike		Hargrove	

61) Title: VP-Access-Construction & Engineering

Signature: 62) Date:
Mike Hargrove 05/27/2021

#### FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

Upon grant of this license application, the Licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, § 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, § 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, § 503).

## FCC 601 Schedule K

## Schedule for Required Notifications for Wireless Services

Approved by OMB 3060 – 0798
See 601 Main Form Instructions
For public burden estimate

## 1) Purpose

The purpose of this submission: Enter one purpose only - 1, 2, 3, 4, T, S, G or H (2) See below and refer to instructions.

#### Satisfaction of Buildout/Coverage Requirements (Market-based services and State License Radio Service (SL) only)

- 1 st buildout/coverage requirements for the referenced system have been met. (List call signs in 2a)
- 2 2nd buildout/coverage requirements for the referenced system have been met. (List call signs in 2a)
- 3 and buildout/coverage requirements for the referenced system have been met. (List call signs in 2a)
- 4th buildout/coverage requirements for the referenced system have been met. (List call signs in 2a)
- Tribal lands buildout/coverage requirements for the referenced system have been met. (List call signs in 2a)

#### Satisfaction of Construction Requirements (Site-licensed services only)

S Construction requirements for the referenced parameters have been met. (List, as applicable, call signs, locations or paths, frequencies, actual date of construction and mobile units in Item 2.)

## Extended Implementation (Slow Growth) (Land Mobile Services only)

- Notification of compliance with yearly station construction commitments for Licensees with approved extended implementation plans. (List call signs in Item 2a.)
- H Final notification that construction requirements have been met for the referenced system with approved extended implementation plan. (List, as applicable, call signs, locations, frequencies, actual date of construction and mobile units in Item 2.)

### 2) Call Signs/Locations or Paths/Frequencies

2a) Call Sign	2b) Location Number	2c) Path Number (Microwave only)	2d) Center (Assigned) or Lower Frequency (MHz)	2e) Upper Frequency (MHz)	2f) Actual Date of Construction (mm/dd/yy)	2g) Number of Operational Mobiles (see instructions)
WQGA852						instructions)

#### 3) Certification

By signing the Main Form, the applicant certifies, as set forth in 47 C.F.R. §1.946(c) of the Commission's rules, that it has commenced service or operations by the expiration of its construction period, or met its coverage or substantial service obligations by the expiration of its coverage period.

## Attachment(s):

Туре	Description	Date Entered
0	Confidentiality Exhibit	05/27/2021
0	Exhibit	05/27/2021
0	<u>Map</u>	05/27/2021

## Reference Copy Only. Do Not Mail to the FCC as an Application.

Submitted: 09/08/2021 at 09:49:51

File Number: 0009696511

## FCC 601 Main Form

# FCC Application for Radio Service Authorization: Wireless Telecommunications Bureau Public Safety and Homeland Security Bureau

Approved by OMB 3060 - 0798 See instructions for

1)	Radio Service Code: 1a) Existing Radio Service Code:	public burden estimate
1 ′	AW	
Gen	eral Information	
2)	(Select only one) AM )	
	NE - New RO - Renewal Only AU - Administrative Update NT - Required Notif	
	MD - Modification AM - Amendment  RM - Renewal/Modification CA - Cancellation of License  CA - Cancellation of License  CA - Requests for EX - Requests for	extension of Time
3a)	f this application is for a Demonstration License or a Special Temporary Authorization (STA), enter the code	( N ) <u>M S N/A</u>
	and attach the required exhibit as described in the instructions. Otherwise enter 'N/A' (Not Applicable).	
2h)	If this application is for Special Temporary Authority due to an emergency situation, enter 'Y'; otherwise enter 'N'.	( ) <u>Y</u> es <u>N</u> o
30)	Refer to Rule 1.915 for an explanation of situations considered to be an emergency.	( <u>)1</u> 03 <u>R</u> 0
4)	If this application is for an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC.	File Number <b>0009696511</b>
5)	If this application is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, , or	Call Sign
	Administrative Update, enter the call sign of the existing FCC license.  If this is a request for Registered Location/Link, enter the FCC call sign assigned to the geographic license.	WQGA852
6a)	If this application is for a New, Amendment, Renewal Only, or Renewal/Modification, enter the requested	144 55
	authorization expiration date (this item is optional).	MM DD /
6b)	If this application is for a Renewal Only or Renewal/Modification and the license is a geographic area license, is the license used to provide service to customers ( <b>C</b> ), or is the license used for private business (internal) purposes or to meet the licensee's public interest/public safety communications needs ( <b>P</b> )?	( <u>)C P</u>
7) Is	this application "major" as defined in § 1.929 of the Commission's Rules when read in conjunction with the applicable radio service rules found in Parts 22 and 90 of the Commission's Rules? (NOTE: This question only applies to certain site-specific applications. See the instructions for applicability and full text of § 1.929).	( ) <u>Y</u> es <u>N</u> o
8)	Are attachments (other than associated schedules) being filed with this application?	( <b>Y</b> ) <u>Y</u> es <u>N</u> o
	, Waivers, and Exemptions	
9) I	s the Applicant exempt from FCC application fees?	(n) <u>)Y</u> es <u>N</u> o
10)	Is the Applicant exempt from FCC regulatory fees?	(N) <u>Y</u> es <u>N</u> o
11a	) Does this application include a request for a Waiver of the Commission's Rule(s)?	(N) <u>)Y</u> es <u>N</u> o
	If 'Yes', attach an exhibit providing rule number(s) and explaining circumstances.	
11b	) If 11a is 'Y', and a feeable waiver request is attached, enter the number of rule sections involved.	Number of Rule Section(s):
12)	Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station?	(i) <u>Y</u> es <u>N</u> o

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pplicant Information						
13) FCC Registration Number (FRN): 0003291192						
14) Applicant/Licensee Legal Entity Type: (Select One Unincorporated Association		ıst (	)Government Entit	y ( )Corporatio	on (X)Limite	d Liability Company
)General Partnership ( )Limited Partnersh	nip ( )L	imited L	iability Partnership	( )Consortiur	n	
) Other:						
<ol> <li>If the Licensee name is being updated, is the updated party and for which proper Commission approva</li> </ol>						( ) <u>Y</u> es <u>N</u> o
6) First Name (if individual):		MI: L	ast Name:			Suffix:
7) Legal Entity Name (if other than individual):						
New Cingular Wireless PCS, LLC						
8) Attention To:						
FCC Group						
9) P.O. Box:	And/Or	20) St	treet Address:			
		2	08 S Akard St.,	RM 2100		
1) City:				22) State:	23) Zip Co	ode:
Dallas				TX	75202	
4) Telephone Number:			25) Fax:	•		
(855)699-7073						
6) E-Mail Address:						
FCCMW@att.com						
7) Demographics (Optional)						
Race:	Ethni	•			Gender:	
)American Indian or Alaska Native	(	)Hispani	c or Latino		( )Male	
)Asian	(	)Not His	panic or Latino		( )Female	
)Black or African-American						
)Native Hawaiian or Other Pacific Islander						
)White						
eal Party in Interest						
(lf diffe Applicant):	erent from	ı	29) FCC Re	gistration Number	(FRN) of Real Pa	arty in Interest:
ontact Information (If different from the Applicant)						
) Check here if same as Applicant.		MI:	Last Name:			Suffix:
Cecil		J	Mathew			Guilla.
1) Company Name: AT&T Services, Inc.			1			
2) Attention To:						
•						
3) P.O. Box:	And /Or		eet Address: 8 S Akard St., R	M 2100		
5) City: <b>Dallas</b>	ı	1	36) State	): :		ip Code: <b>5202</b>
8) Telephone Number: (855)699-7073			39) Fax:			
i0) E-Mail Address: FCCMW@att.com			<u>.</u>			

	S									
41) This filing is for	or authorization to	provide or use the fo	ollowing type(s) of	radio service offering (	enter all that	apply):				
( X )Common Ca	arrier ( <u>)</u> Non	-Common Carrier	( <u>)<b>P</b>rivate, ii</u>	nternal communications	s ( ) <u>B</u> ro	oadcast S	ervices	( ) <u>E</u>	and M	anager
Type of Radio Ser										
42) This filing is for	for authorization to p	provide the following	g type(s) of radio	service (choose all that	apply):					
( <u>)</u> <b>F</b> ixed	( <b>X</b> ) <u>M</u> ob	le (	) <u>R</u> adiolocation	( ) <u>S</u> atellite	(sound)	(	) <u>B</u> roadcast	Service	s	
43) Does the App	olicant propose to p	rovide service inter	connected to the p	oublic telephone netwo	k?			( <b>Y</b>	<u>)<b>Y</b></u> es	<u>N</u> o
	Questions (If any structions for the			ent explaining the circ	umstances.	In prepa	aring the at	tachme	nt, refe	r to
44) Is the Applica	ant a foreign govern	ment or the represe	entative of any for	eign government?				( N	) <u>Y</u> es	<u>N</u> o
45) Is the Applica	ant an alien or the re	nresentative of an	1: 0							
		presentative of an	alien?					( N	) <u>Y</u> es	<u>N</u> o
46) Is the Applica	ant a corporation or			government?				( N		

is owne	the Applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock (N) <u>Y</u> es <u>N</u> o ed of record or voted by aliens or their representatives, or by a foreign government or representative thereof, or by any ation organized under the laws of a foreign country?
•	the answer to 47 or 48a is 'Y' select one of the choices below.
	The Applicant is exempt from the provisions of Section 310(b).
Ш	It is not necessary to file a petition for declaratory ruling if the Applicant includes in the attachment required by Item 47 or Item 48a a showing
	that the requested license(s) is exempt from the provisions of Section 310(b).
	The Applicant has received a declaratory ruling(s) approving its foreign ownership, and the application involves only the acquisition of additional spectrum for the provision of a wireless service in a geographic coverage area for which the Applicant has been previously authorized.
	If checked, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that there has been no change in the foreign ownership of the Applicant since the issuance of its ruling.
	The Applicant: (i) has received a declaratory ruling(s) approving its foreign ownership, but is not able to make the certification specified immediately above; or (ii) is an "affiliate" of a Licensee or Lessee/Sublessee that received a declaratory ruling(s) under 47 CFR § 1.990(a) and is relying on the affiliate's ruling for purposes of filing this application as permitted under the affiliate's ruling and 47 CFR § 1.994(b).
	If checked, and if the Applicant received its declaratory ruling(s) on or after August 9, 2013, include in the attachment required by Item 47 or Item 48a the citation(s) of the Applicant's declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of its ruling and with the Commission's Rules.
	If checked, and if the Applicant received its declaratory ruling(s) prior to August 9, 2013, include in the attachment required by Item 48a a copy of a petition for declaratory ruling filed contemporaneously with the Commission to extend the Applicant's existing ruling(s) to cover the same radio service(s) and geographic coverage area(s) involved in the application. Alternatively, the Applicant may request a new declaratory ruling pursuant to Section 1.990(a) of the Commission's Rules, 47 CFR § 1.990(a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).
	If checked, and if the Applicant is relying on an affiliate's ruling for purposes of filing this application, include in the attachment required by Item 47 or Item 48a the citation(s) of the applicable declaratory ruling(s) by DA/FCC number, the FCC Record citation, if available, release date, and a statement that the Applicant is in compliance with the terms and conditions of the named affiliate's ruling and with the Commission's Rules. The Applicant must also include a certification of compliance signed by the named affiliate or other qualified entity as specified in 47 CFR § 1.994(b). See Main Form Instructions for Items 47 or 48a, as applicable.
	The Applicant has not received a declaratory ruling approving its foreign ownership and is requesting a declaratory ruling under 47 CFR § 1.990(a) in a petition filed contemporaneously with the Commission.
	If checked, include in the attachment required by Item 47 or 48a a copy of the petition for declaratory ruling filed contemporaneously with the Commission pursuant to 47 CFR § 1.990(a). Petitions for declaratory ruling may be filed electronically on the Internet through the International Bureau Filing System (IBFS) (with a copy attached hereto).

Basic Qualification Questions				
49) Has the Applicant or any party to this application had any FCC station authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construct permit denied by the Commission?	ion (	N	) <u>Y</u> es	<u>N</u> o
50) Has the Applicant or any party to this application, or any party directly or indirectly controlling the Applicant, ever been convicted of a felony by any state or federal court?		N	) <u>Y</u> es	<u>N</u> o
51) Has any court finally adjudged the Applicant or any party directly or indirectly controlling the Applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?		( N	) <u>Y</u> es	. <u>N</u> o
Note: If the answer to any of 49-51 is 'Y', attach an exhibit explaining the circumstances.				
Aeronautical Advisory Station (Unicom) Certification				
52) ( ) I certify that the station will be located on property of the airport to be served, and, in cases where the airport does not I tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations lo within ten days prior to application.				rt
Broadband Radio Service and Educational Broadband Service Cable Cross-Ownership				
53a) Will the requested facilities be used to provide multichannel video programming service?	1	(	) <u>Y</u> es	<u>N</u> o
53b) If the answer to question 53a is 'Y', does the Applicant operate, control or have an attributable interest (as defined in 47 CFR § 27.1202) in a cable television system whose franchise area is located within the geographic service area of the requested facilities?	(		) <u>Y</u> es	<u> <b>N</b></u> о
Note: If the answer to question 53b is 'Y', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1202 or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.				
Broadband Radio Service and Educational Broadband Service (Part 27)				
54) (For EBS only) Does the Applicant comply with the programming requirements contained in 47 CFR § 27.1203?	(		) <u>Y</u> es	<u>N</u> o
Note: If the answer to item 54 is 'N', attach an exhibit explaining how the Applicant complies with 47 CFR § 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must answered 'Y'.	t be			
55) (For BRS and EBS) Does the Applicant comply with 47 CFR §§ 27.50, 27.55, and 27.1221?	(		) <u>Y</u> es	<u>N</u> o
Note: If the answer to item 55 is 'N', attach an exhibit justifying a waiver of that rule(s). If a waiver of the Commission Rule(s) being requested, Item 11a must be answered 'Y'.	s			
For Applicants Who Participated in an Auction				
56) Is the Applicant a qualifying rural wireless partnership or a member of a qualifying rural wireless partnership?		(	) <u><b>Y</b></u> e	s <u>N</u> o
Note: If the answer to item 56 is 'Y', attach an exhibit listing all members of the qualifying rural wireless partnership, including FRN numbers.	their			
For Renewal Applicants				
57) Operation/Performance Requirement Certification				
<b>[For a site-based license]</b> : Applicant certifies that it is continuing to operate consistent with its most recently filed construction notification (or most recent authorization, if no construction notification was required).	(	) <u>Y</u>	es <u>N</u> o	
[For a geographic license, commercial service - licensee in its initial license term with an interim performance	(	) Y	es <u>N</u> o	
<b>requirement]</b> : Applicant certifies that it has met its interim performance requirement, that over the portion of the license term following the interim performance requirement, it continues to use its facilities to provide at least the level of service required by its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term.	,	´ <b>-</b>	-	
[For a geographic license, commercial service - licensee in its initial license term with no interim performance requirement]: Applicant certifies that it has met its final performance requirement and it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely	(	) <u>Y</u>	es <u>N</u> o	
application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]				
[For a geographic license, commercial service - licensee in any subsequent term]: Applicant certifies that it continues to use its facilities to provide at least the level of service required by its final performance requirement through the end of any subsequent license terms.	(	) <u>Y</u> (	es <u>N</u> o	
[For a geographic license, private systems - licensee in its initial license term with an interim performance requirement]: Applicant certifies that it has met its interim performance requirement, that over the portion of the license term following the interim performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its interim performance requirement, it has met its final performance requirement, and it continues to use its facilities to provide at least the level of operation required by its	(	) <u>Y</u> (	es <u>N</u> o	
final performance requirement through the end of the license term.  [For a geographic license, private systems - licensee in its initial license term with no interim performance				
requirement]: Applicant certifies that it has met its final performance requirement, it continues to use its facilities to further its private business or public interest/public safety communications needs, and it continues to use its facilities to provide at least the	(	) <u>Y</u>	es <u>N</u> o	

level of operation required by its final performance requirement through the end of the license term. [Note: licensee must provide a showing demonstrating that the final performance requirement has been met, either separately in a timely application for notification of completion of construction, or as part of its renewal application, depending on the radio service.]

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[For a geographic license, private systems - licensee in any subsequent term]: Applicant certifies that it continues to use ts facilities to further its private business or public interest/public safety communications needs at or above the level required to meet its final performance requirement through the end of any subsequent license terms.	( ) <u>Y</u> es <u>N</u> o
For a partitioned or disaggregated license without a performance requirement, for the first renewal application filed after effective date of the rules]: Applicant certifies that the partitioned and/or disaggregated license that is the subject of this renewal application has no separate performance requirement and that this is the first renewal of this license filed subsequent to the effective date of the rules.	( ) <u>Y</u> es <u>N</u> o
[For a partitioned or disaggregated license without a performance requirement, for any subsequent renewal filings]: Applicant certifies that it continues to use its facilities to provide service or to further the applicant's private business or public interest/public safety needs.	( ) <u>Y</u> es <u>N</u> o
Discontinuance of Service Certification	
58) Applicant certifies that no permanent discontinuance of service or operation, as applicable, occurred during its current license term.	( ) <u>Y</u> es <u>N</u> o
Note: If the response to either item 57 or item 58 is 'N', attach an exhibit that demonstrates that over the course of the license term, the Applicant provided and continues to provide service to the public, or operated and continues to operate the license to meet the Applicant's private business or public interest/public safety communications needs. This exhibit must include a detailed description of the Applicant's provision of service or, when allowed under the relevant service rules or pursuant to waiver, use of the spectrum for private business or public interest/public safety communications needs, during the entire license period and address, as applicable: 1) the level and quality of service provided by the applicant (e.g., the population served, the area served, the number of subscribers, the services offered); (2) the date service commenced, whether service was ever interrupted, and the duration of any interruption or outage; (3) the extent to which service is provided to rural areas; (4) the extent to which service is provided to qualifying tribal land as defined in 47 CFR § 1.2110(e)(3)(i); and (5) any other factors associated with the level of service to the public. The licensee may note in its exhibit: 1) any grant(s) of waiver or extension of a performance deadline or license renewal subject to meeting a performance requirement; or 2) if the final performance deadline and/or expiration date for the license accelerated because the licensee did not meet an interim performance requirement.	
Regulatory Compliance Certification [same for all]	
59) Applicant certifies that it has substantially complied with all applicable FCC rules, policies, and the Communications Act of 1934, as amended.	( ) <u>Y</u> es <u>N</u> o
<b>Note:</b> If the response to item 59 is 'N', attach an exhibit explaining the circumstances and demonstrating why Applicant's license should be renewed.	
<ul> <li>General Certification Statements</li> <li>The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory posterause of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application</li> </ul>	ower of the United States
The Applicant certifies that grant of this application would not cause the Applicant to be in violation of any pertinent cross-ownership or attrib *If the Applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcom	
3) The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference this application, and are true, complete, correct, and made in good faith.	e are material, are part of
4) The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursual Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance. This certification of filed in services exempted under § 1.2002(c) of the rules, 47 CFR § 1.2002(c). See 47 CFR § 1.2002(b) for the definition of "party to the certification.	loes not apply to applications application" as used in this
5) The Applicant certifies that it either (1) has current required ownership data on file with the Commission, (2) is filing updated ownership data	a simultaneously with this

- 5) The Applicant certifies that it either (1) has current required ownership data on file with the Commission, (2) is filing updated ownership data simultaneously with this application, or (3) is not required to file ownership data under the Commission's Rules.
- 6) The Applicant certifies that the facilities, operations, and transmitters for which this authorization is hereby requested are either: (1) categorically excluded from routine environmental evaluation for RF exposure as set forth in 47 CFR § 1.1307(b); or, (2) have been found not to cause human exposure to levels of radiofrequency radiation in excess of the limits specified in 47 CFR §§ 1.1310 and 2.1093; or, (3) are the subject of one or more Environmental Assessments filed with the Commission.
- 7) The Applicant certifies that it has reviewed the appropriate Commission Rules defining eligibility to hold the requested license(s) and is eligible to hold the requested license(s).
- 8) The Applicant certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.
- The Applicant certifies that the Applicant and all of the related individuals and entities required to be disclosed on this application and FCC Form 602 (FCC Ownership Disclosure Information for the Wireless Telecommunications Services) are not person(s) who have been, for reasons of national security, barred by any agency of the Federal Government from bidding on a contract, participating in an auction, or receiving a grant. This certification applies only to applications for licenses for spectrum that is required by Sections 6103, 6401-6403 of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. §§ 309, 1413, 1451-1452, to be assigned by a system of competitive bidding under 47 U.S.C. § 309(j).

## Signature

Signature:

Mike

Hargrove

60)Typed or Printed Name of Party Authorized to Sign			
First Name:	MI:	Last Name:	Suffix:
Mike		Hargrove	
61) Title: VP-Access-Construction & Engineering			

## FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

Upon grant of this license application, the Licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license requested in this application.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, § 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, § 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, § 503).

62) Date:

09/08/2021

## Attachment(s):

Type	Description	Date Entered
0	License Renewal Exhibit	09/08/2021

## **EXHIBIT B**

## **SITE DEVELOPMENT PLAN:**

500' VICINITY MAP
LEGAL DESCRIPTIONS
FLOOD PLAIN CERTIFICATION
SITE PLAN
VERTICAL TOWER PROFILE

### **BUILDING CODES**

- 2018 INTERNATIONAL BUILDING CODE
- 2015 INTERNATIONAL EXISTING BUILDING CODE
- 2015 INTERNATIONAL FIRE CODE
- 2015 INTERNATIONAL MECHANICAL CODE
- 2018 INTERNATIONAL RESIDENTIAL CODE
- 2012 INTERNATIONAL ENERGY CONSERVATION CODE

HANDICAP REQUIREMENTS

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

## PLUMBING REQUIREMENTS

FACILITY HAS NO SANITARY OR POTABLE WATER.

## **VICINITY MAP**









## RAWLAND CONSTRUCTION DRAWINGS

175'-0" SELF-SUPPORT TOWER

SITE NAME

CLOVER FORK (15724961)

SITE ID TI-OPP- 22295

## SITE COORDINATES

36° 50' 08.82"N, 83° 19' 39.46"W 36.835783, -83.327628

Know what's below.

Call before you dig.

## SITE ADDRESS 227 INDUSTRIAL PARK ROAD HARLAN, KY 40831

#### FLOOD PLAIN NOTE

PER THE FEMA FLOOD PLAIN MAPS, THE SITE IS LOCATED IN AN AREA DESIGNATED AS ZONE "AE" (AREA WITH BASE FLOOD ELEVATION 1184 FEET) COMMUNITY PANEL # 21095C0279F. DATED 08/10/2021.

							_ 1
PROJE	CT SUMMARY		CONTACTS	G-2	EQUIPMENT GROUNDING PLAN & RISER DIAGRAM	0	]
TYPE OF OCCUPANCY:	TELECOMMUNICATIONS	LAND OWNER:	HARLAN COUNTIANS	G-3	FENCE GROUNDING DETAILS	0	╢
		E WE OWNER.	FOR PROGRESS, LLC	G-4	GROUNDING DETAILS & NOTES	0	$\ \cdot\ $
SITE TYPE:	RAWLAND	TOWER OWNER:	TILLMAN INFRASTRUCTURE, LLC	G-5	GROUNDING DETAILS	0	11
TOWER TYPE:	SELF-SUPPORT		152 WEST 57TH STREET, 27TH FLOOR	ST-1.1	STRUCTURAL DETAILS (BY OTHERS)	0	11
LAT/LONG(DMS):	36° 50' 08.82"N, 83° 19' 39.46"W		NY, NY 10019	ST-1.2	FOUNDATION DETAILS	0	1[
LAT/LONG(DEC):	36.835783, -83.327628	ENGINEER:	TOWEDCOURGE	ST-2	STRUCTURAL DETAILS (BY OTHERS)	0	╢
JURISDICTION:	HARLAN COUNTY	ENGINEER:	TOWERSOURCE 1355 WINDWARD CONCOURSE	ST-3	STRUCTURAL DETAILS (BY OTHERS)	0	$\  \cdot \ $
COUNTY:	HARLAN		SUITE 410 ALPHARETTA, GA 30005	ST-4	STRUCTURAL DETAILS (BY OTHERS)	0	11
DEED BOOK & PAGE:	479, PAGE 151		(678) 990-2338	ST-5	STRUCTURAL DETAILS (BY OTHERS)	0	11
PARCEL ID:	069-40-00-230.00	MUNICIPALITY:	HARLAN COUNTY 210 E. CENTRAL STREET	ST-6	STRUCTURAL DETAILS (BY OTHERS)	0	$\parallel$
ZONED:	NONE		HARLAN, KY 40831	ST-7	STRUCTURAL DETAILS (BY OTHERS)	0	
		POWER COMPANY:	KENTUCKY UTILITY COMPANY	DC1	DC/FIBER SYSTEM DIAGRAM	0	11
		TELCO COMPANY:	TBD	DC2	DC WIRING DIAGRAM	0	11
	SITE DIF	RECTIONS		T&F	TOWER AND FOUNDATION DESIGN (BY OTHERS)		$\parallel$

0.1 MI

210 EAST CENTRAL ST., HARLAN, KY 40831

HEAD WEST ON E CENTRAL ST. TOWARD N 1ST ST

TURN RIGHT ONTO INDUSTRIAL PARK RD.

0.25 MI TURN LEFT ONTO US-421 S / S US HWY 421 0.75 MI.

TURN RIGHT TO STAY ON INDUSTRIAL PARK RD.

MIKE THOMAS (813) 997-2376

THE SITE WILL BE ON THE LEFT. DIRECTIONS PREPARED BY:

0.1 MI

INSTALL NEW 60' x 60' FENCED TELECOMMUNICATION COMPOUND WITHIN NEW 7,888 SQ. FT. LEASE PREMISES

SCOPE

SHEET INDEX

SHEET

T1

GN1

GN2

C1

C1.1

C1.2

C1.3

C2

C3

C4

C5

C6

C7

C8

C9

C10

C11

E1

E2

E3

E4

E5

56

G-1

SHEET TITLE

TITLE SHEET

SURVEY (BY OTHERS)

GENERAL NOTES

**GENERAL NOTES** 

FLOODPLAIN MAP

SETBACKS PLAN

TOWER ELEVATION

SITE PLAN

OVERALL SITE PLAN

FLOOD ELEVATION CERTIFICATE

EQUIPMENT LAYOUT AND DETAILS

UTILITY BACKBOARD H-FRAME

ANTENNA PLAN AND SCHEDULE

**EROSION CONTROL DETAILS** 

OVERALL UTILITY SERVICE PLAN

**ENLARGED UTILITY SERVICE PLAN** 

**ELECTRICAL SINGLE-LINE DIAGRAM** 

GENERATOR SPECIFICATIONS (BY OTHERS)

GENERATOR SPECIFICATIONS (BY OTHERS)

SITE SIGNAGE

**GROUNDING PLAN** 

GRADING AND EROSION CONTROL PLAN

GRADING AND EROSION CONTROL NOTES

ELECTRICAL PANEL SCHEDULE, DIAGRAM & NOTES

**CONSTRUCTION DETAILS** 

- INSTALL NEW 600A. 120/240V, 1Ø MULTI TENANT METER CENTER ON NEW ELEVATED STEEL PLATFORM
- INSTALL NEW 175'-0" SELF-SUPPORT TOWER

REV ILLMAN 0

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NFRASTRUCTURE A&E FIRM:



1355 WINDWARD CONCOURSE SUITE 410 ALPHARETTA, GA 30005 TEL: 678-990-2338

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CLIENT IS STRICTLY

PROJECT INFORMATION:

**CLOVER FORK** 15724961 22295

DRAWN BY:	SJH
CHECKED BY:	MAT
APPROVED BY:	PJN

		REVISIONS
REV.	DATE	DESCRIPTION
0	09/06/23	ISSUED FOR FINALS



**COVER SHEET** 

REVISION

## GPS NOTES

THE FOLLOWING GPS STATISTICS UPON WHICH THIS SURVEY IS BASED HAVE BEEN PRODUCED AT THE 95% CONFIDENCE LEVEL"

POSITIONAL ACCURACY: 0.02 FEET (HORZ) D:24 FEET (VERT)
TYPE OF EQUIPMENT: GEOMAX ZENITH35 PRO BASE AND ROVER, DUAL FREQUENCY
TYPE OF GPS FIELD PROCEDURE: ONLINE POSITION USER INTERFACE
DATES OF SURVEY: 03/21/2022
DATUM / EPOCH: NAD\_83(2011)(EPOCH:2010.0000)
PUBLISHED / FIXED CONTROL USE: N/A
GFOID MODEL: 18
COMBINED GRID FACTOR(\$): 1.00001669 CENTERED ON THE GPS BASE POINT AS SHOWN HEREON.
CONVERGENCE ANGLE: 1.48713889
ERCHMARKS USED: 0.19534 0.19532 DN7506

BENCHMARKS USED: DJ9534, DJ9532, DN7506

## PARENT PARCEL

OWNER: HARLAN COUNTIANS FOR PROGRESS, LLC

SITE ADDRESS: 227 INDUSTRIAL PARK RD. HARLAN, KY 40831

PARCEL ID: 069-40-00-230.00

AREA: 3.1 ACRES (PER TAX ASSESSOR)

ZONING: NO ZONING IN HARLAN COUNTY

ALL ZONING INFORMATION SHOULD BE VERIFIED WITH THE PROPER ZONING OFFICIALS

REFERENCE: DEED BOOK 479 PAGE 151

## SURVEYOR'S CERTIFICATE

THAT THE INFORMATION SHOWN HEREON WAS COMPILED USING DATA FROM AN ACTUAL FIELD SURVEY MADE UNDER MY DIRECT SUPERVISION BY METHOD OF RANDOM TRAVERSE WITH SIDE SHOTS. THE UNADJUSTED PRECISION RATIO OF THE TRAVERSE EXCEEDED 1:10,000 AND WAS NOT ADJUSTED FOR CLOSURE. THIS SURVEY MEETS OR EXCEEDS THE MINIMUM STANDARDS FOR AN URBAN SURVEY AS ESTABLISHED BY THE STATE OF KENTUCKY, PER 201 KAR 18:150 AND IN EFFECT ON THE DATE OF THIS SURVEY.

04/05/2022

C. DARRELL TAYLOR, PLS 4179

DATE

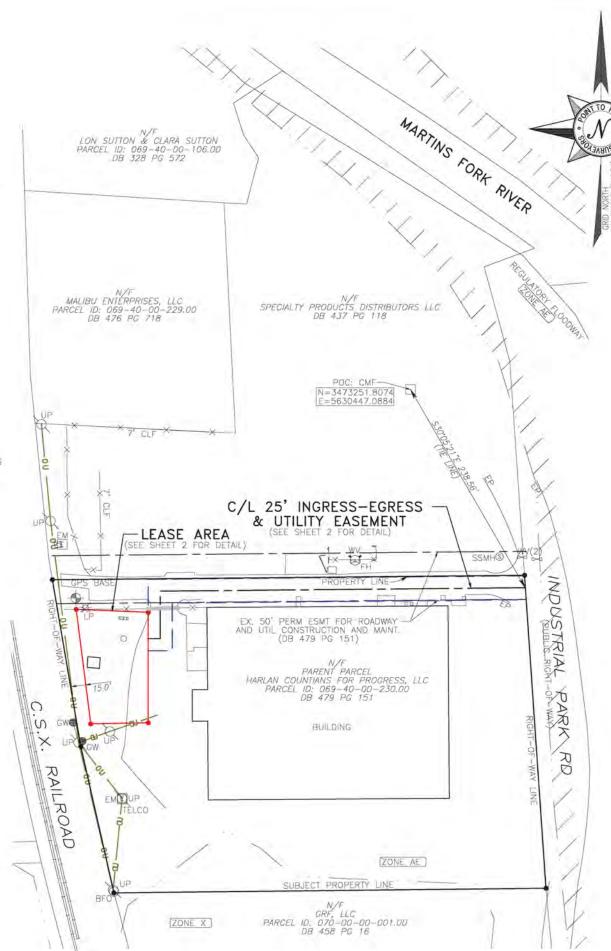
## TITLE EXCEPTIONS

THIS SURVEY WAS COMPLETED WITH THE AID OF TITLE WORK PREPARED BY WESTCOR LAND TITLE INSURANCE COMPANY, COMMITMENT DATE OF FEBRUARY 22, 2022, BEING COMMITMENT NO. TIL—127601—C, FOR THE PARENT PARCEL, TO DETERMINE THE IMPACTS OF EXISTING TITLE EXCEPTIONS.

10. TERMS AND CONDITIONS CONTAINED IN THAT DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS DATED MAY 27, 1994 AND RECORDED JUNE 22, 1994 IN (BOOK) 21 (PAGE) 110 (INSTRUMENT) 09390 IN HARLAN COUNTY, KENTUCKY, ITHIS ITEM IS APPLICABLE TO THE PARENT PARCEL AND IS BLANKET

POINT OF BEGINNING POINT OF COMMENCEMENT CONCRETE MONUMENT FOUND UTILITY POLE LIGHT POLE LIGHT POLE
SANTARY SEWER MANHOLE
INVERT
FIRE HYDRANT
EDGE OF PAVEMENT
BACK OF CURB
OVERHEAD UTILITY
CORRUGATED POLYETHYLENE PIPE
GUY WIRE ANCHOR
TRANSFORMER
CHAIN LINK FENCE
WATER VALVE
CONCRETE PAD
NOW OR FORMERLY
AIR CONDITIONER
DROP INLET

OVERHEAD UTILITY LINE
UNDERGROUND TELECOMMUNICATIONS L TO UNDERGROUND FIBEROPIC LINE
UNDERGROUND GAS LINE
UNDERGROUND SEWER LINE
UNDERGROUND SELECTRIC LINE
UNDERGROUND ELECTRIC LINE





VICINITY MAP

## GENERAL NOTES

\* THIS SPECIFIC PURPOSE SURVEY IS FOR THE LEASED PREMISES AND EASEMENTS ONLY. THIS SPECIFIC PURPOSE SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF FILLMAN INFRASTRUCTURE, LLC AND EXCLUSIVELY FOR THE TRANSFERRAL OF THE LEASED PREMISES AND THE RIGHTS OF EASEMENT SHOWN HEREON AND SHALL NOT BE USED AS AN EXHIBIT OR EVIDENCE IN THE FEE SIMPLE TRANSFERRAL OF THE PARENT PARCEL NOR ANY PORTION OR PORTIONS THEREOF, BOUNDARY INFORMATION SHOWN HEREON HAS BEEN COMPILED FROM TAX MAPS AND DEED DESCRIPTIONS ONLY. NO BOUNDARY SURVEY OF THE PARENT PARCEL WAS PERFORMED.

THIS DRAWING DOES NOT REPRESENT A BOUNDARY SURVEY.

THE FIELD DATA UPON WHICH THIS SPECIFIC PURPOSE SURVEY IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 10,000+ FEET AND AN ANGULAR ERROR OF 5.0" PER ANGLE POINT AND WAS NOT ADJUSTED FOR CLOSURE.

EQUIPMENT USED FOR ANGULAR & LINEAR MEASUREMENTS; LEICA TPS 1200 ROBOTIC & GEOMAX ZENITH 35. [DATE OF LAST FIELD VISIT: 03/21/2022]

THE I' CONTOURS AND SPOT ELEVATIONS SHOWN ON THIS SPECIFIC PURPOSE SURVEY ARE ADJUSTED TO NAVD 88 DATUM (COMPUTED USING GEOID18) AND HAVE A VERTICAL ACCURACY OF  $\pm$  0.5'. CONTOURS OUTSIDE THE IMMEDIATE SITE AREA ARE

BEARINGS SHOWN ON THIS SPECIFIC PURPOSE SURVEY ARE BASED ON KENTUCKY GRID NORTH (NAD 83) SINGLE ZONE.

PER THE FEMA FLOODPLAIN MAPS, THE SITE IS LOCATED IN AN AREA DESIGNATED AS ZONE AE (AREA WITH BASE FLOOD ELEVATION 1185 FEET). COMMUNITY PANEL NO. : 21095C0279F DATED: 08/10/2021

NO WETLAND AREAS HAVE BEEN INVESTIGATED BY THIS SPECIFIC PURPOSE SURVEY

ALL ZONING INFORMATION SHOULD BE VERIFIED WITH THE PROPER ZONING OFFICIALS

ANY UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM ABOVE GROUND FIELD SURVEY INFORMATION. THE SURVEYOR MAKES NO GUARANTEES THAT ANY UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT ANY UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE, THE SURVEYER HAS AND ALCOSTED AND LINDERGROUND UTILITIES. SURVEYOR HAS NOT PHYSICALLY LOCATED ANY UNDERGROUND UTILITIES.

THIS MAP IS NOT A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS. THIS MAP IS ONLY INTENDED FOR THE PARTIES AND PURPOSES SHOWN





SURVEY NOT VALID WITHOUT SHEETS 2 & 3

Know what's below. Call before you dig.

STATE of KENTUCKY G. DARRELL TAYLOR 4179 LICENSED **PROFESSIONAL** LAND SURVEYOR Tullillillillillillillillillilli

NO.	DATE	REVISION
2	5-10-22	ING/EGR. ESMT.
3	3-1-23	FEMA BFE
4	8-4-23	500' RADIUS
5	8-29-23	COMMENTS

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SPECIFIC PURPOSE SURVEY PREPARED FOR:



TILLMAN INFRASTRUCTURE, LLC 152 W 57TH STREET, 27TH FLOOR NEW YORK, NY 10019

15724961

HARLAN COUNTY, KENTUCKY

CHECKED BY: DMM APPROVED: D. MILLER

DATE: APRIL 05, 2022

2P JOB #: 220384KY

# SITE INFORMATION LEASE AREA = 7888 SQ.FT. (0.1811 ACRES) LATITUDE = 36'50'08.82" (NAD 83) (36.835783') LONGITUDE = -83'19'39.46" (NAD 83) (-83.327628') AT CENTER OF PROPOSED TOWER ELEVATION AT CENTER OF PROPOSED TOWER = 1181.6' A.M.S.L.

## PARENT PARCEL

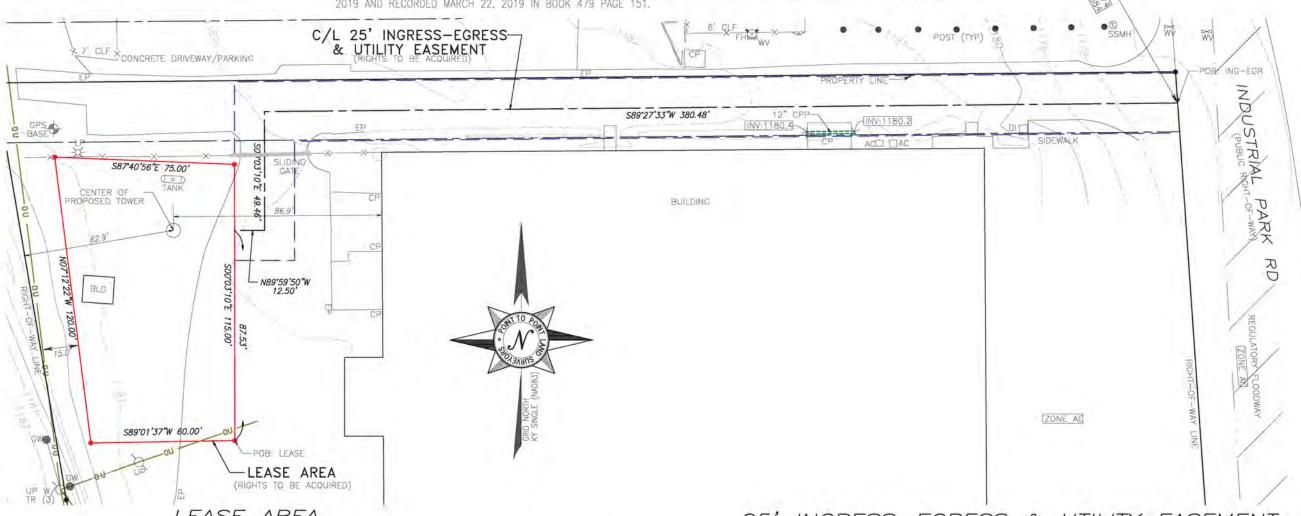
PER WESTCOR LAND TITLE INSURANCE COMPANY COMMITMENT NO. TIL-127601-C

BEGINNING AT AN IRON PIN THE EAST RIGHT-OF-WAY OF THE C.H.X. RAILROAD AT THE NORTHWEST CORNER OF THE DAISY CAWOOD HEIRS PROPERTY; THENCE WITH SAID RIGHT-OF-WAY N 07' 24. 19. W 77.91 FEET TO AN IRON PIN; THENCE N 04' 42. 27. W 176.15 FEET TO AN IRON PIN AT THE SOUTHWEST CORNER OF TRACT 3 BEING THAT TRACT B. SHOWN ON THE DECEMBER 30, 1993, SURVEY BY LEE MILLER & ASSOCIATES, INC., HARLAN KENTUCKY; THENCE WITH THE SOUTH LINE OF SAID TRACT 3, S 85' 32. 58. E 483.88 FEET TO AN IRON PIN THE WEST SIDE OF THE INDUSTRIAL PARK ROAD; THENCE, WITH THE WEST LINE OF SAID ROAD S 01' 03. 43. W 348.37 FEET TO AN IRON PIN IN THE NORTH LINE OF THE DAISY CAWOOD HEIRS PROPERTY, THENCE, WITH SAID LINE N 76' 19. 24. W 473.23 FEET TO THE BEGINNING, CONTAINING APPROXIMATELY 3.534 ACRES, MORE OR LESS, AS SURVEYED DECEMBER 30, 1993, BY LEE MILLER & ASSOCIATES, INC., HARLAN KENTUCKY, WHICH IS INCORPORATED HEREIN BY REFERENCE.

THE 50 FOOT WIDE PERMANENT EASEMENT FOR ROADWAY AND UTILITY CONSTRUCTION AND MAINTENANCE ALONG THE NORTH LINE OF THIS TRACT IS COMMON PROPERTY FOR ALL IDA PROPERTY AND AS EXCEPTED FROM THIS DESCRIPTION.

PARCEL ID #069-40-00-230.00

THIS BEING THE SAME PROPERTY CONVEYED TO HARLAN COUNTIANS FOR PROGRESS LLC. A KENTUCKY LIMITED LIABILITY COMPANY, FROM HARLAN COUNTY INDUSTRIAL DEVELOPMENT AUTHORITY INC., A KENTUCKY CORPORATION, IN A DEED OF CONVEYANCE, DATED MARCH 22, 2019 AND RECORDED MARCH 22, 2019 IN BOOK 479 PAGE 151.



## LEASE AREA

POINT OF BEGINNING
POINT OF COMMENCEMENT
CONCRETE MONUMENT FOUND
UTILITY POLE
UGHT POLE
SANITARY SEWER MANHOLE
INVERT
FIRE HYDRANT
EDGE OF PAVEMENT
BACK OF CURB
OVERHEAD UTILITY
CORRUGATED POLYETHYLENE PIPE
GUY WIRE ANCHOR
TRANSFORMER
CHAIN LINK FENCE
WATER VALVE
CONCRETE PAD
NOW OR FORMERLY
AIR CONDITIONER
DROP INLET

UTILITY LEGEND

OVERHEAD UTILITY LINE
UNDERGROUND TELECOMMUNICATIONS LI

UNDERGROUND FIBERORISTIC LINE
UNDERGROUND GAS LINE
UNDERGROUND SEWER LINE

ALL THE TRACT OR PARCEL OF LAND LYING AND BEING IN HARLAN COUNTY, KENTUCKY, AND BEING A PORTION OF THE LANDS OF HARLAN COUNTIANS FOR PROGRESS, LLC, AS RECORDED IN DEED BOOK 479 PAGE 151, HARLAN COUNTY RECORDS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TO FIND THE POINT OF BEGINNING, COMMENCE AT A RIGHT-OF-WAY CONCRETE MONUMENT, SAID MONUMENT HAVING A KENTUCKY GRID NORTH, NAD 83, SINGLE ZONE VALUE OF N: 3473251.8074 E: 5630447.0884; THENCE RUNNING ALONG A TIE LINE, SOUTH 30"05'21" EAST, 238.56 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF INDUSTRIAL PARK ROAD; THENCE LEAVING SAID ON THE WESTERLY RIGHT-OF-WAY LINE OF INDUSTRIAL PARK ROAD; THENCE LEAVING SAID

O'03'10" EAST, 49.46 FEET TO A POINT; THENCE, NORTH 89'29'30" WEST, 12.50 FEET TO THE A

POINT ON THE LEASE AREA; THENCE RUNNING ALONG SAID LEASE AREA, SOUTH 00'03'10" EAST, 87.53

FEET TO A POINT AND THE TRUE POINT OF BEGINNING; THENCE, SOUTH 89'01'37" WEST, 60.00 FEET

TO A POINT; THENCE, NORTH 07'12'22" WEST, 120.00 FEET TO A POINT; THENCE, SOUTH 87'40'56"

EAST, 75.00 FEET TO A POINT; THENCE, SOUTH 00'03'10" EAST, 115.00 FEET TO A POINT AND THE POINT OF BEGINNING.

BEARINGS BASED ON KENTUCKY GRID NORTH, NAD 83, SINGLE ZONE.

SAID TRACT CONTAINS 0.1811 ACRES (7,888 SQUARE FEET), MORE OR LESS.

## 25' INGRESS-EGRESS & UTILITY EASEMENT

TOGETHER WITH A 25-FOOT INGRESS-EGRESS AND UTILITY EASEMENT, MEASURING 12.5 FEET EACH SIDE OF CENTERLINE, LYING AND BEING IN HARLAN COUNTY, KENTUCKY, AND BEING A PORTION OF THE LANDS OF HARLAN COUNTIANS FOR PROGRESS, LLC, AS RECORDED IN DEED BOOK 479 PAGE 151, HARLAN COUNTY RECORDS, AND BEING MORE PARTICULARLY DESCRIBED BY THE FOLLOWING CENTERLINE DATA:

TO FIND THE POINT OF BEGINNING, COMMENCE AT A RIGHT-OF-WAY CONCRETE MONUMENT, SAID MONUMENT HAVING A KENTUCKY GRID NORTH, NAD 83, SINGLE ZONE VALUE OF N: 3473251.8074 E: 5630447.0884; THENCE RUNNING ALONG A TIE LINE, SOUTH 30°05'21" EAST, 238.56 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF INDUSTRIAL PARK ROAD, AND THE TRUE POINT OF BEGINNING; THENCE LEAVING SAID. RIGHT-OF-WAY LINE AND RUNNING, SOUTH 89'27'33" WEST, 380.48 FEET TO A POINT; THENCE, SOUTH 00'03'10" EAST, 49.46 FEET TO A POINT; THENCE, NORTH 89'59'50" WEST, 12.50 FEET TO THE ENDING AT A POINT ON THE LEASE AREA.

BEARINGS BASED ON KENTUCKY GRID NORTH, NAD 83, SINGLE ZONE,



(SURVEY NOT VALID WITHOUT SHEET 1 & 3)

YIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII STATE of KENTUCKY G. DARRELL TAYLOR 4179 LICENSED PROFESSIONAL LAND SURVEYOR VIIIIIIIIIIIIIIIIIIIIIIIIIIIIII

NO.	DATE	REVISION
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3	3-1-23	FEMA BFE
4	8-4-23	500' RADIUS
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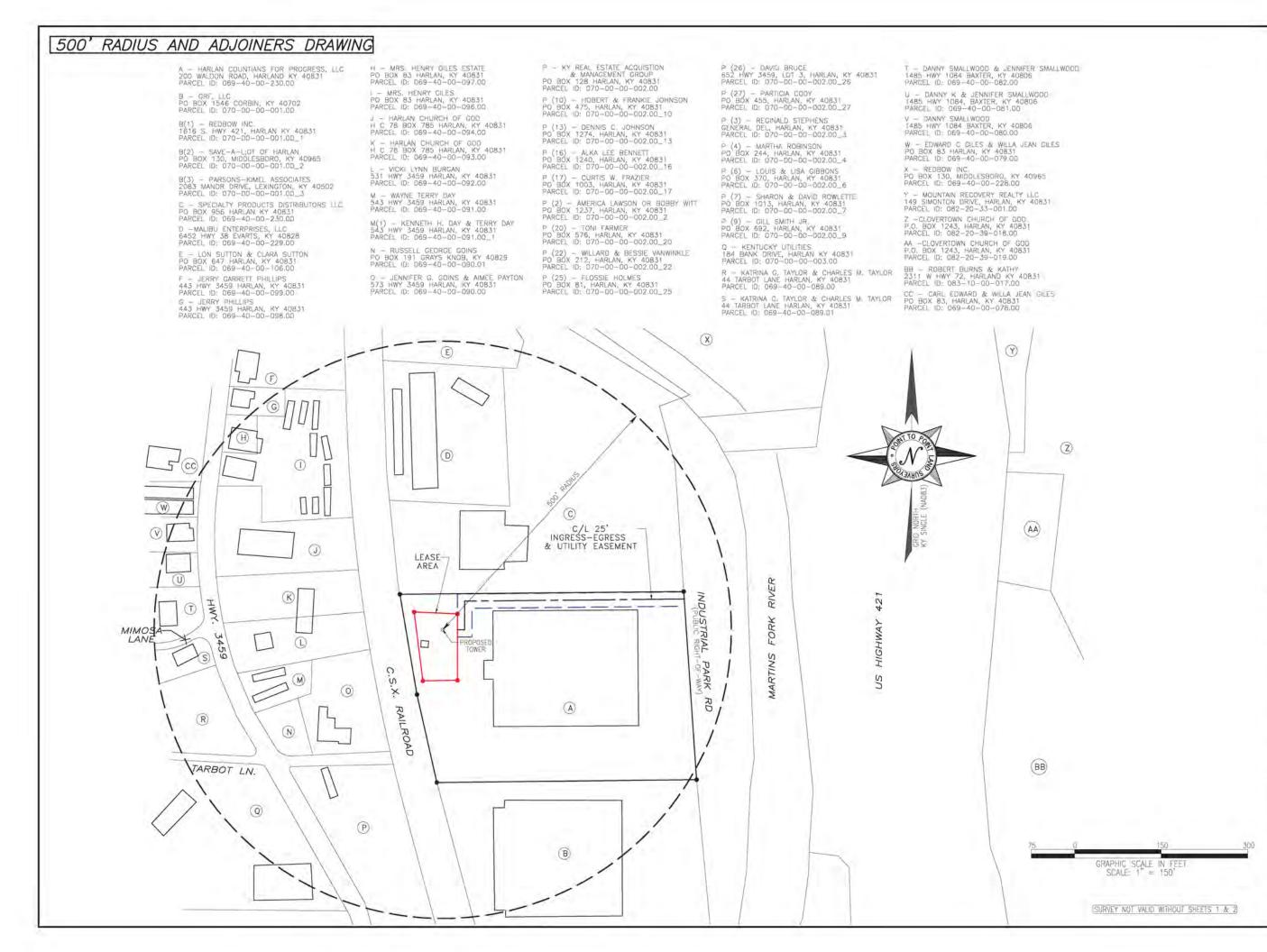


TILLMAN INFRASTRUCTURE, LLC 52 W 57TH STREET, 27TH FLOOR NEW YORK, NY 10019

15724961

HARLAN COUNTY, KENTUCKY

CHECKED BY: DMM APPROVED: D. MILLER ATE: APRIL 05, 2022



STATE of KENTUCKY G. DARRELL TAYLOR 4179 LICENSED **PROFESSIONAL** LAND SURVEYOR 

NO.	DATE	REVISION
2	5-10-22	ING/EGR. ESMT.
3	3-1-23	FEMA BFE
4	8-4-23	500' RADIUS
5	8-29-23	COMMENTS

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PREPARED FOR:



TILLMAN INFRASTRUCTURE, LLC 152 W 57TH STREET, 27TH FLOOR NEW YORK, NY 10019

15724961

HARLAN COUNTY, KENTUCKY

HECKED BY: DMM PPROVED: D. MILLER

DATE: APRIL 05, 2022

#### SITE WORK GENERAL NOTES:

- THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR IS TO POT HOLE UTILITY LOCATES POST MARKING TO VERIFY
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR/SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES.
- ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- 4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF THE CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
- 6. THE OWNER SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE (TO BE INSTALLED BY CONTRACTOR).
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- 10. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE PROJECT SPECIFICATIONS.
- 11. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL
- 12. CONTRACTOR SHALL NOT INSTALL EQUIPMENT THAT WILL IMPEDE DOOR OR ACCESS PANELS.

#### STRUCTURAL STEEL NOTES:

- ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH ASTM A36 UNLESS NOTED OTHERWISE.
- ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC, WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP
- BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"Ø) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8"Ø ASTM A307 BOLTS UNLESS
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.

#### CONCRETE AND REINFORCING STEEL NOTES:

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. SLAB FOUNDATION DESIGN ASSUMING ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD,
- 4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS
- 4.1. CONCRETE CAST AGAINST EARTH 3 IN
- CONCRETE EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:

4.2.1. #6 AND LARGER

- 4.2.2. #5 AND SMALLER & WWF 1 1/2 IN
- 4.3.1. SLAB AND WALLS 3/4 IN. 4.3.2. BEAMS AND COLUMNS
- 1 1/2 IN.
- 5. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UND. IN ACCORDANCE WITH ACI 301 SECTION 4.2.4

CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:

#### MASONRY NOTES:

- HOLLOW CONCRETE MASONRY UNITS SHALL MEET A.S.T.M. SPECIFICATION C90. GRADE N. TYPE 1 THE SPECIFIED DESIGN COMPRESSIVE STRENGTH OF CONCRETE MASONRY (F'm) SHALL BE 1500 PSI.
- MORTAR SHALL MEET THE PROPERTY SPECIFICATION OF A.S.T.M. C270 TYP. "S" MORTAR AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI.
- GROUT SHALL MEET A S.T.M. SPECIFICATION C475 AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2000 PSI
- CONCRETE MASONRY SHALL BE LAID IN RUNNING (COMMON) BOND.
- WALL SHALL RECEIVE TEMPORARY BRACING, TEMPORARY BRACING SHALL NOT BE REMOVED UNTIL

#### **GENERAL NOTES:**

FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:

GENERAL CONTRACTOR CONTRACTOR

SUBCONTRACTOR -SUBCONTRACTOR HIRED BY GENERAL CONTRACTOR OWNER -TILL MAN INFRASTRUCTURE

ORIGINAL EQUIPMENT MANUFACTURER OEM -

- PRIOR TO THE SUBMISSION OF BID, THE CONTRACTOR SHALL VISIT THE SITE TO FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- DRAWINGS PROVIDED WERE DESIGNED AND SCALED TO 11x17 FORMAT
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE
- THE CONTRACTOR SHALL INSTALL ALL FOLIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE
- IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE OWNER.
- CONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND TELCO CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWINGS.
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE
- 10. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE FACILITY.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION
- CONSTRUCTION SHALL COMPLY WITH TILLMAN INFRASTRUCTURE MASTER SPECIFICATIONS AND THESE DRAWINGS: WHERE A CONFLICT EXISTS IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY
- 13 NOTHING CONTAINED IN THESE DRAWINGS SHALL CREATE ANY CONTRACTUAL RELATIONSHIP BETWEEN ANY SUBCONTRACTOR(S) AND TILL MAN INFRASTRUCTURE
- CONTRACTOR SHALL HOLD HARMLESS TILLMAN INFRASTRUCTURE AND ITS REPRESENTATIVES FROM ALL SUITS, ACTIONS, OR CLAIMS OF ANY KIND BROUGHT ABOUT AS A RESULT OF ANY INJURIES OR DAMAGES SUSTAINED BY PERSON(S) OR PROPERTY DURING THE CONSTRUCTION OF
- CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS FOR ANY AND ALL PERSONS, INCLUDING SUBCONTRACTORS, ON SITE AS REQUIRED BY CURRENT OSHA STANDARDS; INCLUDING BUT NOT LIMITED TO:
- PERSONAL PROTECTIVE & LIFE SAVING EQUIPMENT
- SIGNS, SIGNALS, AND BARRICADES
- TOOLS HAND AND POWER
- FI FCTRICAL
- FALL PROTECTION
- **EXCAVATIONS**
- CONCRETE AND MASONRY CONSTRUCTION STEEL ERECTION
- POWER TRANSMISSION AND DISTRIBUTION
- CRANES AND DERRICKS IN CONSTRUCTION.

## **ABBREVIATIONS**

ABOVE GRADE LEVEL BASE TRANSCEIVER STATION BTS **EXISTING** MINIMUM

NTS NOT TO SCALE REF REFERENCE RADIO FREQUENCY TBD TO BE DETERMINED

TO BE RESOLVED TBR TYP TYPICAL REQ. REQUIRED

EGR **EQUIPMENT GROUND RING** AWG AMERICAN WIRE GAUGE MGB MASTER GROUND BUSS EG FOUIPMENT GROUND

**BCW** BARE COPPER WIRE SMART INTEGRATED ACCESS DEVICE SIAD GEN **GENERATOR** 

IGR INTERIOR GROUND RING (HALO) RADIO BASE STATION U.N.O. UNLESS NOTED OTHERWISE

## SYMBOLS

SOLID GROUND BUSS BAR

S/N SOLID NEUTRAL BUSS BAR

SUPPLEMENTAL GROUND CONDUCTOR

2-POLE THERMAL-MAGNETIC CIRCUIT BREAKER

SINGLE-POLE THERMAL-MAGNETIC CIRCUIT BREAKER

CHEMICAL GROUND ROD  $\Box$ DISCONNECT SWITCH

 $\bigcirc$ 

- EXOTHERMIC WELD (CADWELD) (UNLESS NOTED OTHERWISE)
- MECHANICAL WELD
- 3/4"Ø x 10'-0" COPPER CLAD STEEL GROUND ROD
- 3/4"Ø x 10'-0" COPPER CLAD STEEL ◉ GROUND ROD w/ INSPECTION SLEEVE
- G— GROUNDING WIRE

## THE INFORMATION CONTAINED IN THIS SET OF

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PROJECT INFORMATION:

PREPARED FOR

ILLMAN

NFRASTRUCTURE

A&E FIRM:

1355 WINDWARD CONCOURSE

SUITE 410 ALPHARETTA, GA 30005

TEL: 678-990-2338

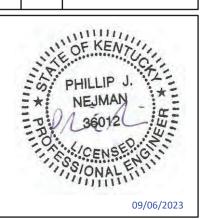
towersource

A NextEdge Company

## **CLOVER FORK** 15724961 22295

l	DRAWN BY:	SJH
l	CHECKED BY:	MAT
l	APPROVED BY:	PJN

		REVISIONS
REV.	DATE	DESCRIPTION
0	09/06/23	ISSUED FOR FINALS



**GENERAL NOTES** 

REVISION

### **ELECTRICAL INSTALLATION NOTES:**

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. NEC AND ALL APPLICABLE LOCAL CODES.
- 2. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO FOLIPMENT IS NOT BLOCKED.
- 3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
- 4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
- 5. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
- EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E. HOTS), GROUNDING AND T1
  CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL
  TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE
  IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH PLASTIC TAPE PER COLOR SCHEDULE. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, BRANCH CIRCUIT ID NUMBERS (I.E. PANEL BOARD AND CIRCUIT ID'S).
- 8. PANEL BOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
- 9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- 10. POWER, CONTROL AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET & DRY) OPERATION LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED UNLESS OTHERWISE SPECIFIED.
- 11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET & DRY) OPERATION LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM UNLESS OTHERWISE SPECIFIED.
- 12. POWER, CONTROL AND EQUIPMENT GROUND WIRING NOT IN TUBING OR CONDUIT SHALL BE MULTI-,CONDUCTOR, TYPE TC CABLE (#14 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET & DRY) OPERATION WITH OUTER JACKET LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED UNLESS OTHERWISE SPECIFIED.
- 13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75° C (90° C IF AVAILABLE).
- 14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA. UL. ANSI/IEEE AND NEC.
- ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E. RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT) OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS
- 17. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
- 18. RIGID NONMETALLIC CONDUIT (I.E. RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
- LIQUID-TITE FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS. WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- 20. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- 22. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER).

### **ELECTRICAL INSTALLATION NOTES CONTINUED:**

- 23. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND RATED NEMA 1 (OR BETTER) INDOORS OR NEMA 3 (OR BETTER) OUTDOORS.
- 24. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EOPOXY-COATED OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS
- 26. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- 27. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY
- 28. INSTALL PLASTIC LABEL ON THE METER CENTER IDENTIFYING SPECIFIC CARRIER.

#### KEY NOTES: (SEE GROUNDING PLAN DIAGRAM - SHEET G1)

- TOWER GROUNDING: EXTEND #2 SOLID TINNED CU WIRE FROM BURIED GROUND RING TO TOWER AND MAKE EXOTHERMIC CONNECTION.
- 2. GROUND ROD: COPPER CLAD STEEL, 3/4"Ø X TEN (10) FEET LONG.
- 3. ICE BRIDGE SUPPORT POST GROUNDING: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING TO ALL ICE BRIDGE SUPPORT POST WITH CADWELD CONNECTION WELD.
- FENCE GROUNDING: IF FENCE IS WITHIN 6' OF GROUNDING RING, EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING TO FENCE CORNER POSTS AND EXOTHERMICALLY WELDED. BOND INTERMEDIATE POST IF REQUIRED TO MAINTAIN 25' MAX. SPACING.
- 5. TOWER GROUNDING BAR: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING UP TO THE TOWER GROUND BAR AND MAKE A MECHANICAL CONNECTION. SECURE GROUND BAR DIRECTLY TO TOWER WITH ISOLATOR KIT USING STAINLESS STEEL MOUNTING MATERIAL.
- 6. MULTI TENANT UTILITY FRAME: BOND METER, TELCO BOX AND FRAME POST TO COMPOUND GROUND RING WITH MECHANICAL CONNECTION AT CABINET AND EXOTHERMIC WELD AT GROUND RING.
- ANTENNA GROUND BAR: MOUNT GROUND BAR DIRECTLY TO THE TOWER AT TOP OF COAX RUNS. SECURE TO TOWER WITH ISOLATOR KIT USING STAINLESS STEEL MOUNTING MATERIAL.
- 8. <u>FENCE/GATE:</u> BOND ALL FENCE POSTS AND GATES TO COMPOUND GROUND RING WITH FXOTHERMIC WELDS
- 9. EXTERIOR GFCI RECEPTACLE GROUNDING: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING TO THE EXTERIOR GFCI RECEPTACLE AND MAKE A MECHANICAL CONNECTION.

## **GREENFIELD GROUNDING NOTES:**

- ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
- THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH
  TESTING (PER IEEE 11000 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE SUBCONTRACTOR
  SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A
  TEXT RESULT OF 5 OHMS OR LESS.
- 3. THE SUBCONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
- 4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR.
   STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
- 6. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS: 32 AWG SOLID TINNED COPPER FOR OUTDOOR BTS

- ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 AWG SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
- 8. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- 9. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN  $45^\circ$  BENDS CAN BE ADEQUATELY SUPPORTED.
- 10. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- 11. ALL GROUND CONNECTION ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
- 12. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
- 13. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR
- 14. APPROVED ANTIOXIDANT COATINGS (I.E. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- 15. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL
- 16. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- 17. BOND ALL METALLIC OBJECTS WITHIN 6 FT. OF MAIN GROUND WIRES WITH (1) #2 AWG TIN-PLATED COPPER GROUND CONDUCTOR.
- 18. GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALL OR FLOORS, WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OF LOCAL CONDITIONS, NON-METALIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G. NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.

PREPARED FOR



A&E FIRM:



1355 WINDWARD CONCOURSE SUITE 410 ALPHARETTA, GA 30005 TEL: 678-990-2338

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PROJECT INFORMATION:

CLOVER FORK 15724961 22295

DRAWN BY:	SJH
CHECKED BY:	MAT
APPROVED BY:	PJN

		REVISIONS
REV.	DATE	DESCRIPTION
0	09/06/23	ISSUED FOR FINALS



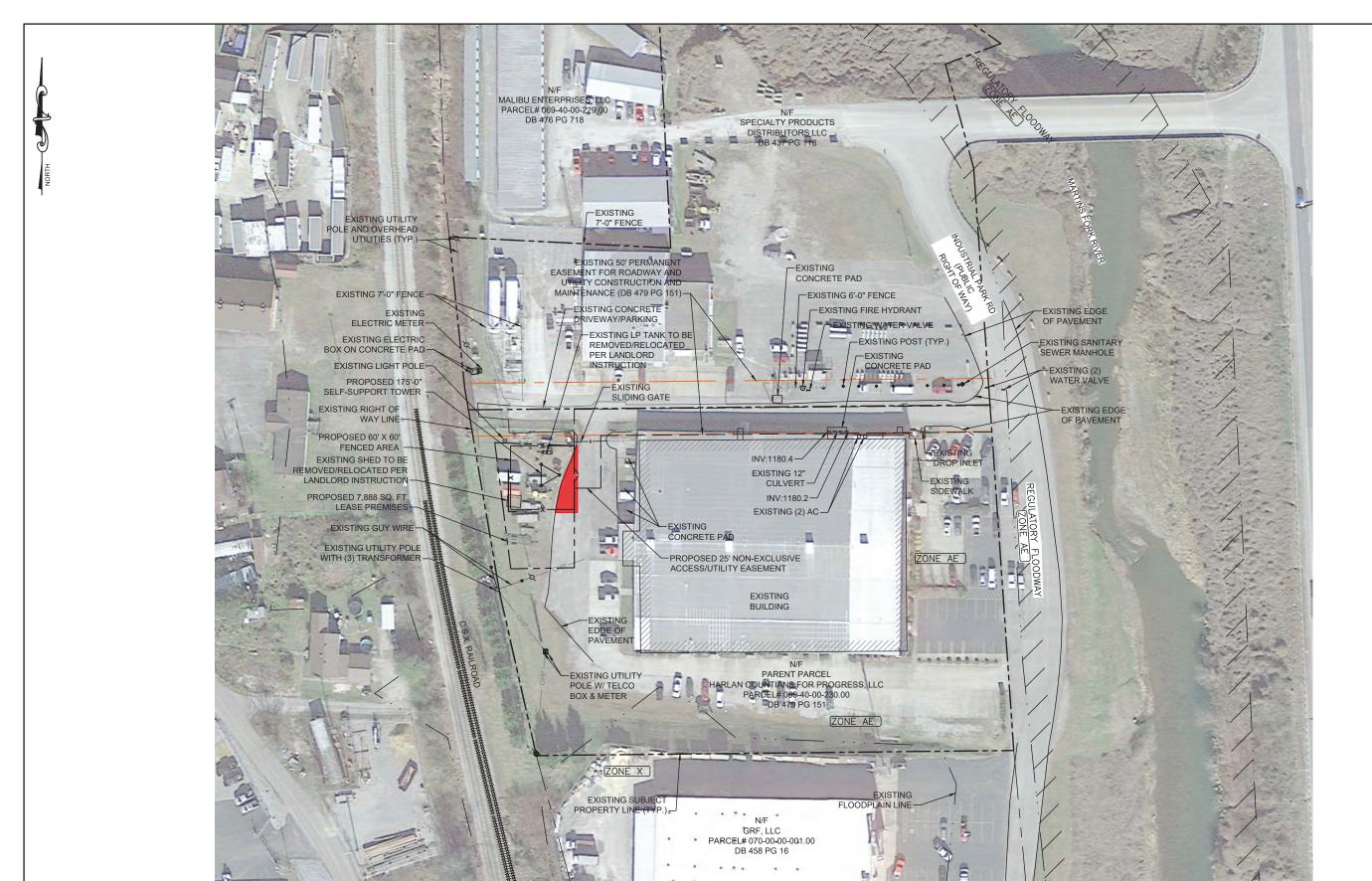
SHEET TITLE:

GENERAL NOTES

HEET#:

REVISION:

(



1. TILLMAN INFRASTRUCTURE STAFF SHALL COORDINATE WITH THE PROPERTY OWNER TO OBTAIN THE PROPER EASEMENT AGREEMENTS TO CONSTRUCT AND MAINTAIN EQUIPMENT IN AND AROUND THE TOWER COMPOUND.

2. PROPOSED COMPOUND LAYOUT BASED ON SURVEY PROVIDED BY POINT TO POINT LAND SURVEYORS DATED 03/01/2023 AND SITE VISIT ON 03/08/2022.

**OVERALL SITE PLAN** C1 SCALE: 1" =90'

SITE DESIGN HAS NOT BEEN COORDINATED WITH FINAL STAMPED TOWER FABRICATION DRAWINGS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ANGLES ON THIS SITE DESIGN WITH FINAL STAMPED TOWER DRAWINGS PRIOR TO BEGINNING CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE DISCOVERED

PREPARED FOR:



A&E FIRM: **towersource** 

A NextEdge Company

1355 WINDWARD CONCOURSE SUITE 410 ALPHARETTA, GA 30005 TEL: 678-990-2338

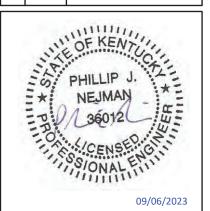
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OVERALL SITE PLAN

## U.S. DEPARTMENT OF HOMELAND SECURITY Federal Emergency Management Agency

National Flood Insurance Program

OMB No. 1660-0008 Expiration Date: November 30, 2022

Form Page 1 of 6

# **ELEVATION CERTIFICATE**Important: Follow the instructions on pages 1–9.

Copy all pages of this Elevation Certificate and all attachments for (1) community official. (2) insurance agent/company, and (3) building owner.

DISCONDENSE SERVICE PROPERTY AND ADDRESS.		TION A - PROPERT	Y INFOR	MATION		1 3-5-20-00	RANCE COMPANY US
A1. Building Owner's Name Tillman Infrastructure						Policy Nun	nber;
<ul> <li>A2. Building Street Address (including Apt., Unit, Suite, and/o Box No.</li> <li>227 Industrial Park Road</li> </ul>				r Bldg. No.) or P.O. Route and Compar		Company t	y NAIC Number:
City	4401 04004			State		ZIP Code	
Harlan				Kentuck	у	40831	
		nd Block Numbers, eed Book 479 ,Page		l Number, Le	gal Description, e	tc.)	
4. Building Us	e (e.g., Residen	ntial, Non-Residentia	l, Addition	, Accessory,	etc.) Telecom	munication	
5. Latitude/Lor	ngitude: Lat. 36	6.835783	Long8	33.327628	Horizont	al Datum: 🔲 NAD	1927 🗵 NAD 1983
6. Attach at lea	ast 2 photograp	hs of the building if t	he Certific	ate is being	used to obtain flo	od insurance.	
7. Building Dia	gram Number	5					
8. For a buildir	ng with a crawls	pace or enclosure(s	):				
a) Square f	ootage of crawl	space or enclosure(	s)		N/A sq ft		
b) Number of	of permanent flo	ood openings in the	crawlspace	e or enclosur		ot above adjacent or	ade N/A
and the second	Physical Act	penings in A8.b	71,31110 (0.25)	N/A sq i			500
		The state of the s	Paris I	140.1			
d) Engineer	ed flood openir	MCC W					
d) Engineer	ea flood openir	ngs?	No				
			No				
.9. For a buildin		ned garage:		N/A sq f			
9. For a buildin a) Square fo	g with an attach	ned garage:	A32	durant property		ljacent grade N/A	
9. For a buildin a) Square fo b) Number o	g with an attach potage of attach of permanent flo	ned garage: ned garage	A32	arage within	1.0 foot above ac	ljacent grade N/A	
<ul><li>9. For a buildin</li><li>a) Square for</li><li>b) Number of</li><li>c) Total net</li></ul>	g with an attach ootage of attach of permanent flo area of flood op	ned garage: ned garage ood openings in the a	attached g	durant property	1.0 foot above ac	ljacent grade N/A	
9. For a buildin  a) Square for  b) Number of  c) Total net	g with an attach potage of attach of permanent flo area of flood op ed flood openin	ned garage: ned garage  pood openings in the a penings in A9.b  ngs?	attached g	arage within	1.0 foot above ac		
<ul><li>9. For a building</li><li>a) Square for</li><li>b) Number of</li><li>c) Total net</li><li>d) Engineer</li></ul>	g with an attach potage of attach of permanent flo area of flood op ed flood openin	ned garage: ned garage ood openings in the a penings in A9,b ngs?	attached g	arage within  N/A so	1.0 foot above ac		P2 Ctate
A9. For a buildin  a) Square for  b) Number of  c) Total net  d) Engineer	g with an attach potage of attach of permanent flo area of flood op ed flood openin SE unity Name & C 210098	ned garage: ned garage pod openings in the a penings in A9,b gs?	attached g	arage within	1.0 foot above action in  MAP (FIRM) IN Name		B3. State Kentucky
A9. For a buildin  a) Square for  b) Number of  c) Total net  d) Engineer  31. NFIP Communication County -	g with an attach potage of attach of permanent floarea of flood opening the second sec	ned garage: ned garage pod openings in the appenings in A9,b ngs?	No DINSURA  B7. FIF Effe	N/A so  N/CE RATE  B2. County Harlan Cou	1.0 foot above action  MAP (FIRM) IN  Name  nty  B8. Flood Zone(s)	B9. Base Flood B (Zone AO, us	Kentucky
9. For a buildin  a) Square for  b) Number of  c) Total net  d) Engineer  1. NFIP Commitment of County -	g with an attach potage of attach of permanent flo area of flood op ed flood openin SE unity Name & C 210098	ned garage: ned garage pood openings in the appenings in A9.b ngs?	No  No  INSURA	N/A so  N/CE RATE  B2. County Harlan Cou	1.0 foot above action  MAP (FIRM) IN  Name  nty  B8. Flood	FORMATION  B9. Base Flood 6	Kentucky Elevation(s)
9. For a buildin a) Square for b) Number of c) Total net d) Engineer 1. NFIP Commitarian County - Map/Panel Number 095C0279	g with an attach potage of attach of permanent floarea of flood opening of the second	ned garage: ned garage pod openings in the appenings in A9,b ngs?	No DINSURA B7. FIF Effe Re 08-10-2	N/A so N/	1.0 foot above action  MAP (FIRM) IN  Name  nty  B8. Flood Zone(s)  AE	B9. Base Flood B (Zone AO, us	Kentucky Elevation(s)
9. For a buildin a) Square for b) Number of c) Total net d) Engineer  1. NFIP Commarian County - Map/Panel Number  095C0279	g with an attach cotage of attach of permanent flo area of flood openin  SE unity Name & C 210098  B5. Suffix F	ned garage: ned garage pod openings in the appenings in A9,b ngs? Yes X  CCTION B – FLOOD Community Number  B6, FIRM Index Date  08-10-2021	No DINSURA  B7. FIF Effe Rev 08-10-2	N/A so  N/E RATE  B2. County Harlan Cou RM Panel ective/ vised Date 2021  ata or base f	1.0 foot above action  MAP (FIRM) IN  Name  nty  B8. Flood Zone(s)  AE	B9. Base Flood B (Zone AO, us	Kentucky Elevation(s)
9. For a buildin a) Square for b) Number of c) Total net d) Engineer  1. NFIP Communication County - Map/Panel Number  095C0279  10. Indicate th	g with an attach potage of attach of permanent floarea of flood opening area of flood opening the second se	ned garage: ned garage pod openings in the appenings in A9.b ngs? Yes X  ECTION B – FLOOD Community Number  B6, FIRM Index Date 08-10-2021  Base Flood Elevation	No DINSURA  B7. FIF Effe Rev 08-10-2 on (BFE) de	B2. County Harlan Cou RM Panel ective/ vised Date 2021 ata or base f	MAP (FIRM) IN Name nty  B8. Flood Zone(s)  AE	B9, Base Flood B (Zone AO, us 1185.0 d in Item B9;	Kentucky Elevation(s) se Base Flood Depth)
9. For a buildin a) Square for b) Number of c) Total net d) Engineer  1. NFIP Commitarian County - Map/Panel Number  095C0279  10. Indicate th  FIS Pro	g with an attach potage of attach of permanent floarea of flood opening ed flood opening with the second se	ned garage: ned garage pod openings in the appenings in A9,b ngs?	B7. FIF Effe Re 08-10-2	ANCE RATE B2. County Harlan Cou RM Panel ective/ vised Date 2021 ata or base f County Other/Soi	1.0 foot above action  MAP (FIRM) IN  Name Inty  B8. Flood Zone(s)  AE  Lood depth entereurce:  INAVD 1988	B9. Base Flood 6 (Zone AO, us 1185.0 d in Item B9:	Kentucky Elevation(s) se Base Flood Depth)



A&E FIRM:



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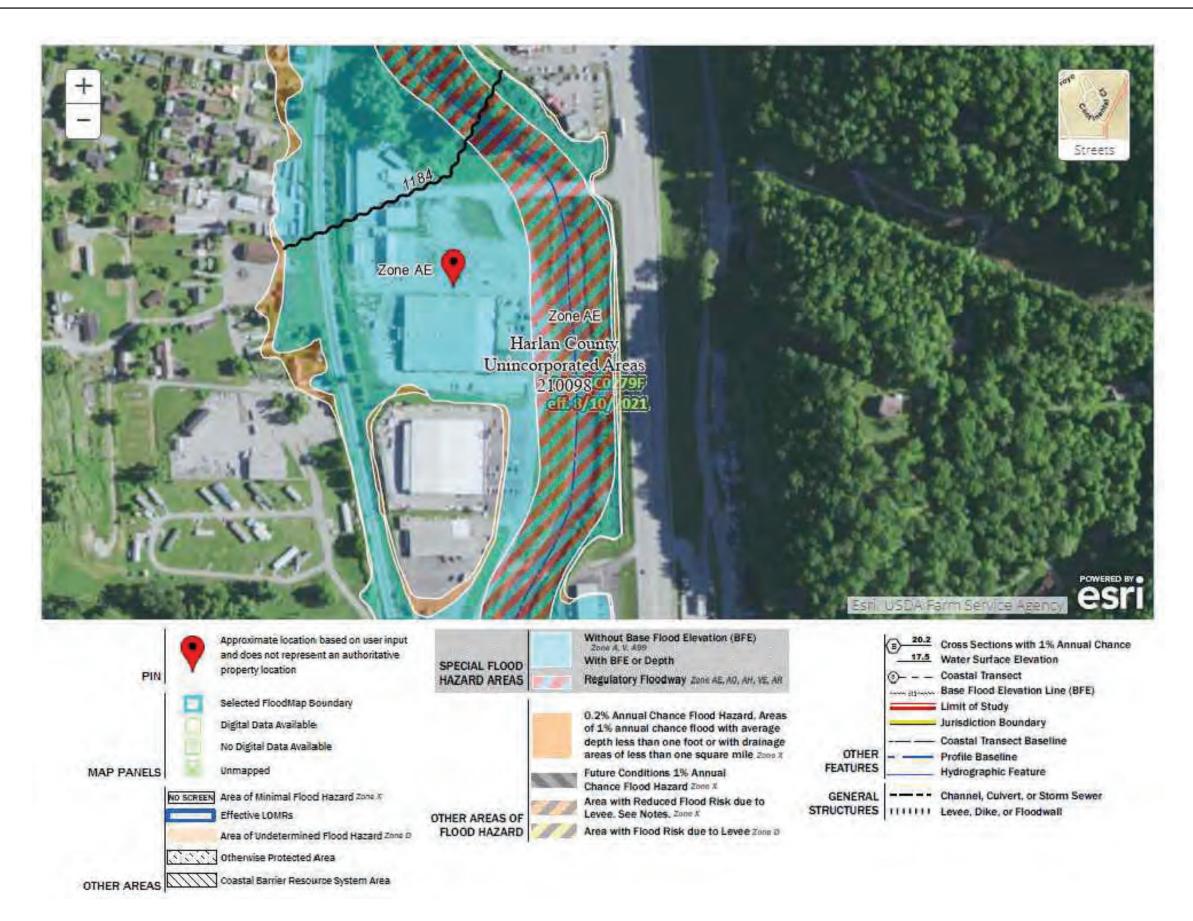
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- 1			



FLOOD ELEVATION CERTIFICATE



C1.2

FLOODPLAIN MAP

NOT TO SCALE



A&E FIRM: **towersource** 

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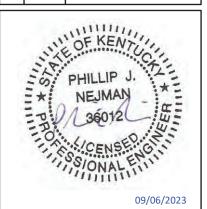
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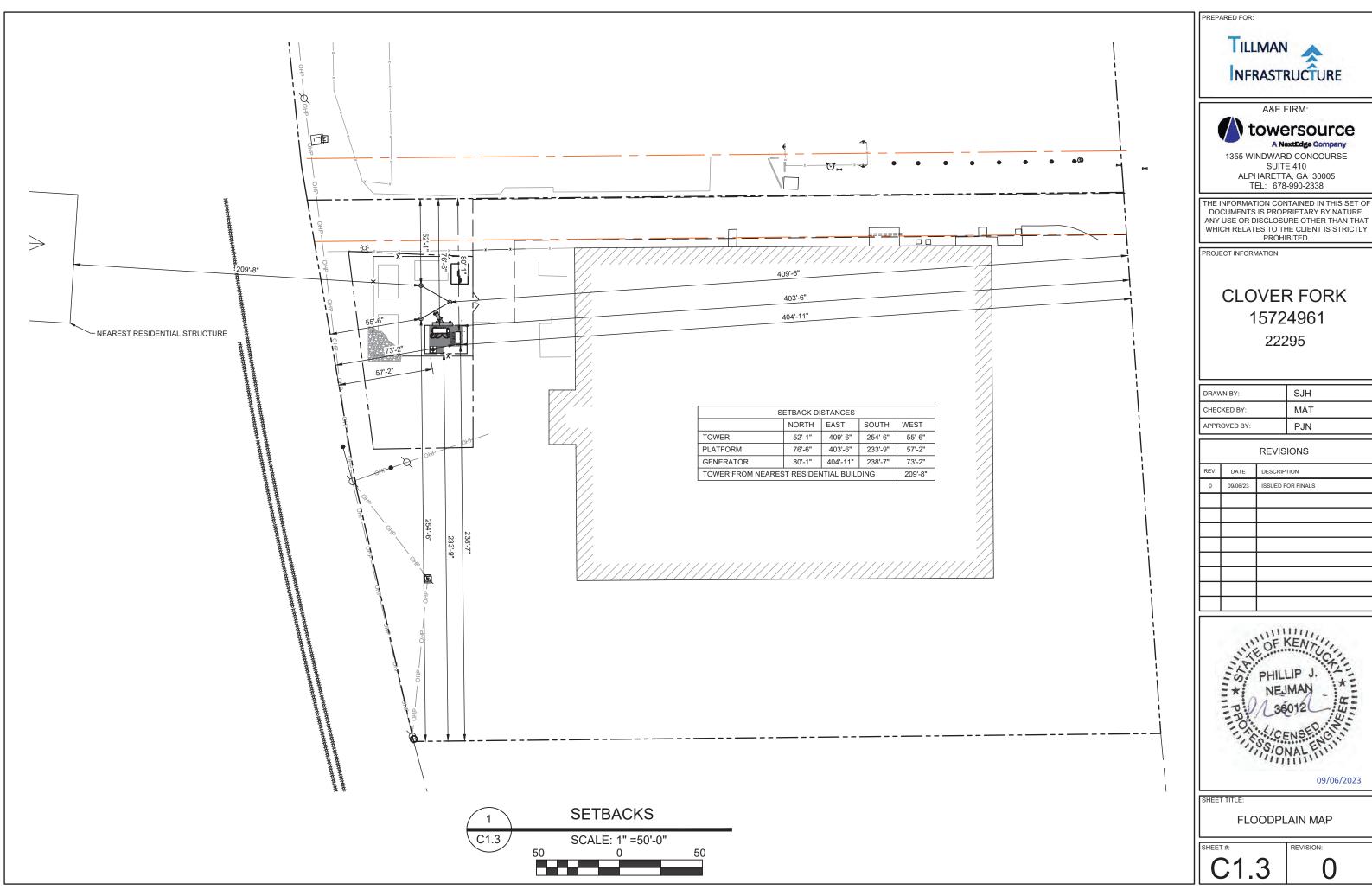
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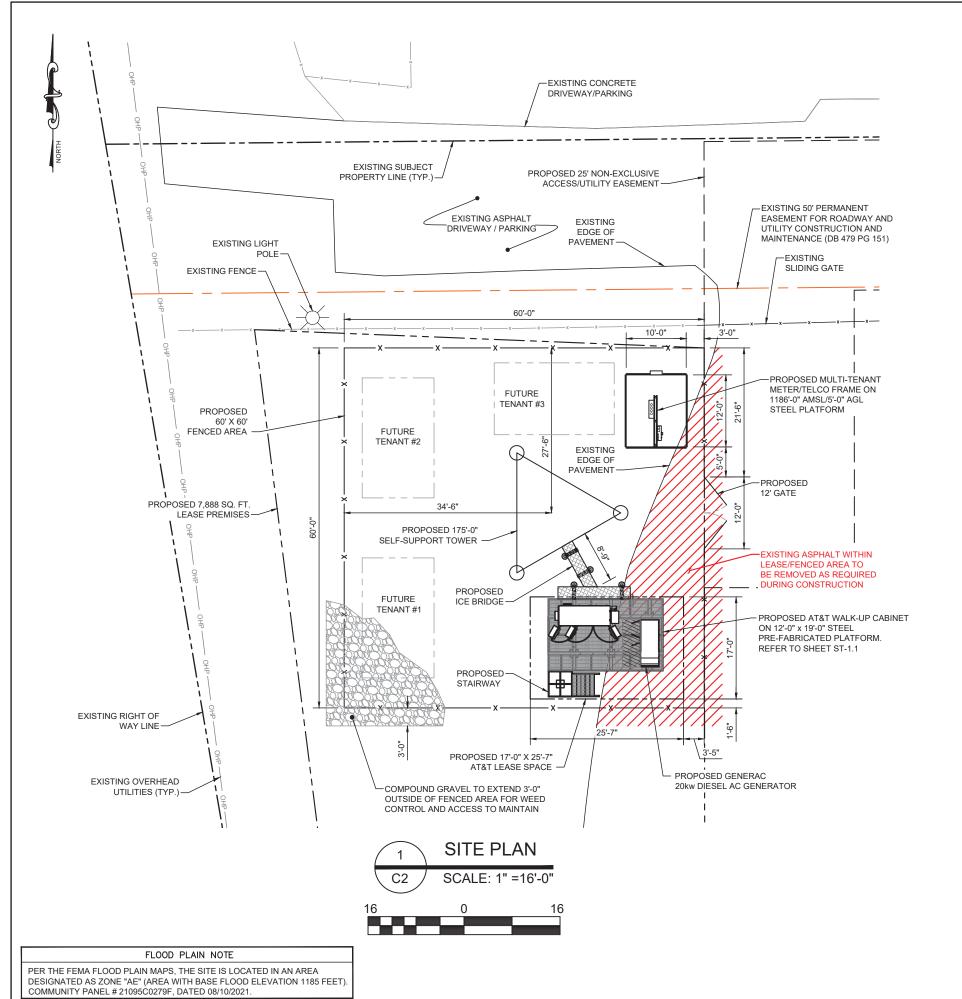
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FLOODPLAIN MAP



	REVISIONS			
REV.	DATE	DESCRIPTION		
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### GENERAL NOTES:

- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND SPECIFICATIONS. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE, LOCAL AND NATIONAL CODES, ORDINANCES AND OR REGULATIONS APPLICABLE TO THIS PROJECT.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE TILLMAN INFRASTRUCTURE CONSTRUCTION MANAGER AND/OR ENGINEER AND BE RESOLVED BEFORE PROCEEDING WITH WORK. WHERE THERE IS A CONFLICT BETWEEN DRAWING AND TILLMAN INFRASTRUCTURE SPECIFICATIONS, THE TILLMAN INFRASTRUCTURE CONSTRUCTION MANAGER SHOULD BE CONTACTED FOR CLARIFICATION.
- ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE TILLMAN INFRASTRUCTURE CONSTRUCTION MANAGER AND/OR ENGINEER SO THAT PROPER REVISIONS MAY BE MADE. MODIFICATION OF DETAILS OF CONSTRUCTION SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE CONSTRUCTION MANAGER AND/OR ENGINEER
- 4. CONTRACTOR SHALL REVIEW AND BE FAMILIAR WITH SITE CONDITIONS AS SHOWN ON THE ATTACHED SITE PLAN AND/OR SURVEY DRAWINGS.
- ALL FINISHED GRADES SHALL SLOPE MINIMUM 1/4 IN./FT. AWAY FROM EQUIPMENT IN ALL DIRECTIONS. CONTRACTOR SHALL SLOPE SWALES AS REQUIRED ALONG EXISTING TERRAIN TO DRAIN AWAY FROM COMPOUND AND ACCESS DRIVE.
- THE PROPOSED TOWER AND TOWER FOUNDATIONS WERE DESIGNED BY OTHERS.
  TOWER INFORMATION PROVIDED ON THESE PLANS ARE PROVIDED FOR REFERENCE
  PURPOSES ONLY, TOWER DIMENSIONS SHOWN ON THIS PLAN ARE FOR TOWER
  CENTER LOCATION. DO NOT SCALE. NOTIFY ENGINEER OR TILLMAN
  INFRASTRUCTURE CONSTRUCTION MANAGER OF ANY CONFLICTS OR
  DISCREPANCIES.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE EXCAVATION SLOPING, SHORING, BRACING, AND GUYS IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.
- UPON COMPLETION OF CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES TO THE EXISTING ACCESS ROAD AND COMPOUND GRAVEL AREAS. ANY NEW FILL MATERIALS SHALL BE COMPACTED.
- D. THE CONTRACTOR IS HEREBY NOTIFIED THAT PRIOR TO COMMENCING CONSTRUCTION, HE IS RESPONSIBLE FOR CONTACTING THE UTILITY COMPANIES INVOLVED AND SHALL REQUEST A VERIFICATION AT THE CONSTRUCTION SITE OF THE LOCATIONS OF THEIR UNDERGROUND UTILITIES AND WHERE THEY MAY POSSIBLY CONFLICT WITH THE PLACEMENT OF IMPROVEMENTS AS SHOWN ON THESE PLANS. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT WILL BE REQUIRED TO NOTIFY "STATE 811" 48 HOURS IN ADVANCE OF PERFORMING ANY WORK. ANY UTILITIES DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR, AT NO EXPENSE TO THE OWNER.
- 10. CONTRACTOR TO PROVIDE DUMPSTER AND PORTABLE TOILET FACILITY DURING CONSTRUCTION.
- 11. CONTRACTOR TO PROVIDE STYMIE LOCK OR EQUIVALENT AS APPROVED BY TILLMAN INFRASTRUCTURE CONSTRUCTION MANAGER.

#### SURVEY NOTE:

- TILLMAN INFRASTRUCTURE STAFF SHALL COORDINATE WITH THE PROPERTY OWNER
   TO OBTAIN THE PROPER EASEMENT AGREEMENTS TO CONSTRUCT AND MAINTAIN
   EQUIPMENT IN AND AROUND THE TOWER COMPOUND.
- 2. PROPOSED COMPOUND LAYOUT BASED ON SURVEY PROVIDED BY POINT TO POINT LAND SURVEYORS DATED 03/01/2023 AND SITE VISIT ON 03/08/2022.

NOTE:

THERE WILL BE ONE OR TWO TRIPS PER MONTH FOR MAINTENANCE PURPOSES TO THIS SITE (ONCE CONSTRUCTION IS COMPLETED).

## NOTES:

- CONTRACTOR TO CLEAR AND GRUB EXISTING
   VEGETATION AND REMOVE TREES AS NEEDED
   WITHIN ACCESS ROAD AND TURNAROUND AREA
- CONTRACTOR TO VERIFY WITH TILLMAN CM IF THE EXTENT OF CLEARING AND GRUBBING AND THE TREE REMOVAL IS THE LEASE AREA, FENCED AREA OR A SPECIFIC DISTANCE BEYOND FENCED AREA.

PREPARED FOR



A&E FIRM:



1355 WINDWARD CONCOURSE SUITE 410 ALPHARETTA, GA 30005 TEL: 678-990-2338

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CLIENT IS STRICTLY PROHIBITED.

PROJECT INFORMATION:

CLOVER FORK 15724961 22295

DRAWN BY:	SJH
CHECKED BY:	MAT
APPROVED BY:	PJN

	REVISIONS			
REV.	DATE DESCRIPTION			
0	09/06/23 ISSUED FOR FINALS			



SHEET TITLE:

SITE PLAN

SHEET #: REVISION

2

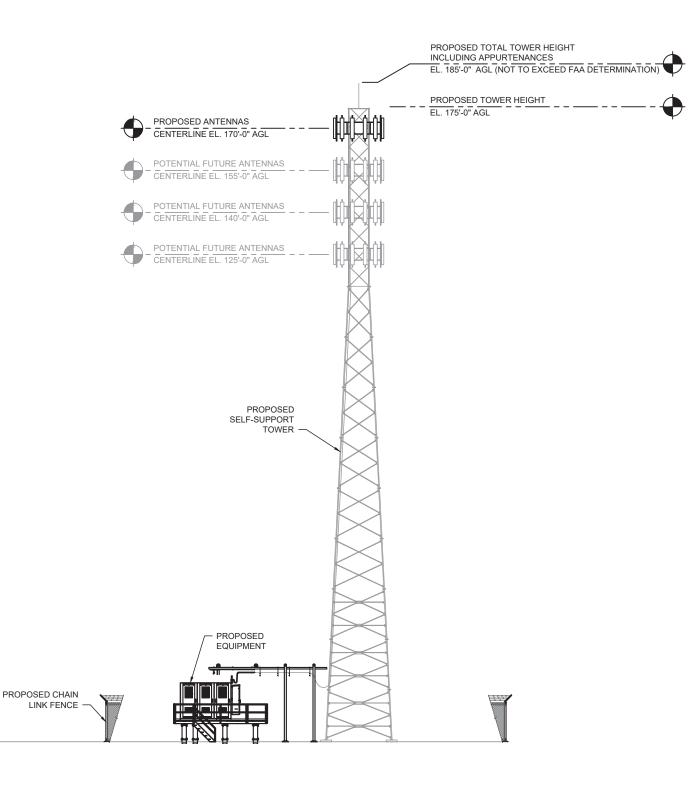
## NOTES:

- 1. CALCULATIONS FOR THE STRUCTURE AND THE ANTENNA MOUNTS WERE PREPARED BY OTHERS AND THOSE CALCULATIONS CERTIFY THE CAPACITY OF THE STRUCTURE TO SUPPORT THE NEW EQUIPMENT.
- 2. CABLES NOT SHOWN FOR CLARITY.

NOTE: SITE DESIGN HAS NOT BEEN COORDINATED WITH FINAL STAMPED TOWER FABRICATION DRAWINGS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ANGLES ON THIS SITE DESIGN WITH FINAL STAMPED TOWER DRAWINGS PRIOR TO BEGINNING CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE DISCOVERED.

BOTTOM OF PLATFORM 1185'-5" AMSL/4'-5" AGL

T/GRADE \_\_\_\_\_ ELEV. = 1181'-0" AMSL \_\_\_\_



**TOWER ELEVATION** C3 NOT TO SCALE

PREPARED FOR:



A&E FIRM:

**towersource** A NextEdge Company

1355 WINDWARD CONCOURSE SUITE 410 ALPHARETTA, GA 30005 TEL: 678-990-2338

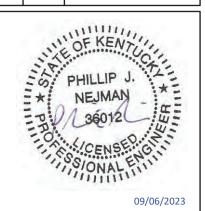
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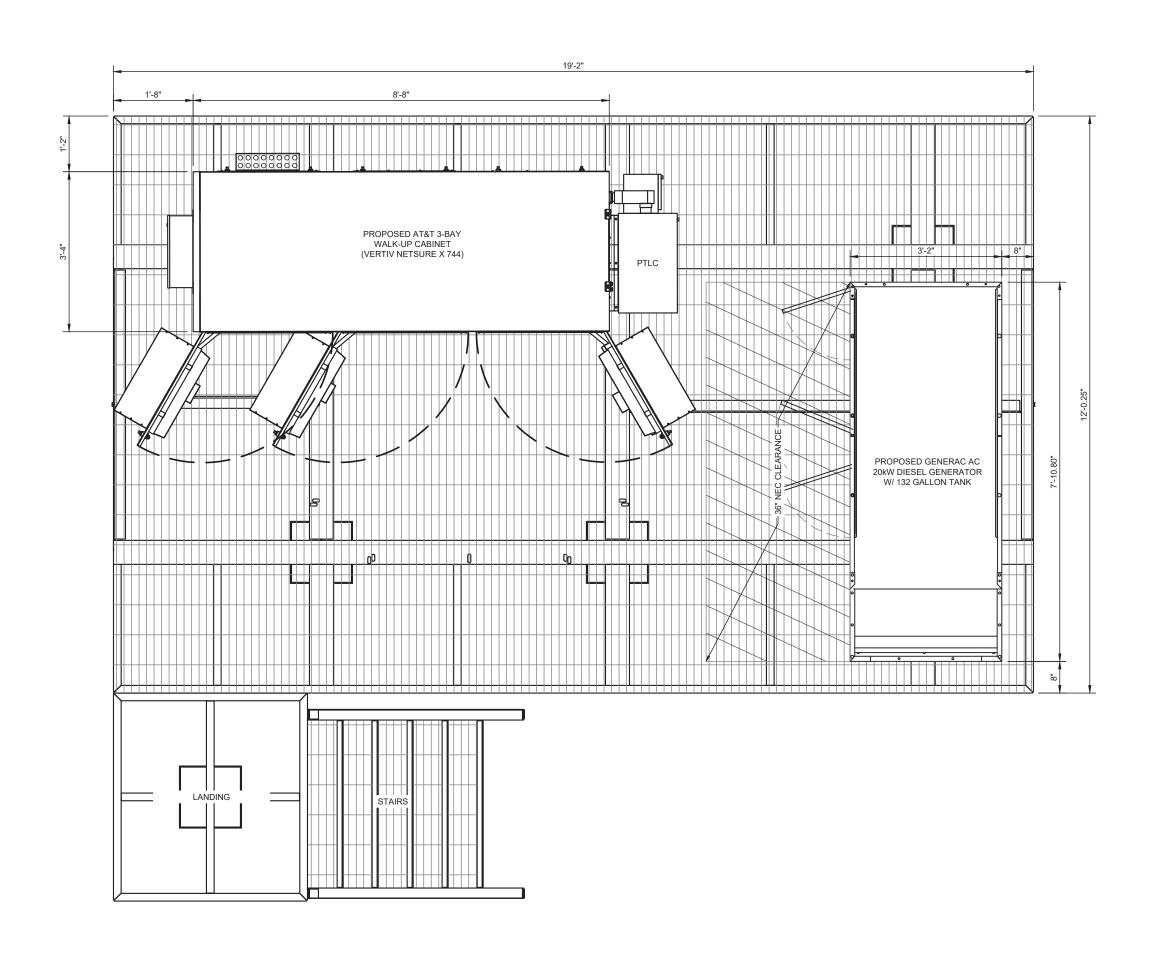
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**TOWER ELEVATION** 

REVISION:



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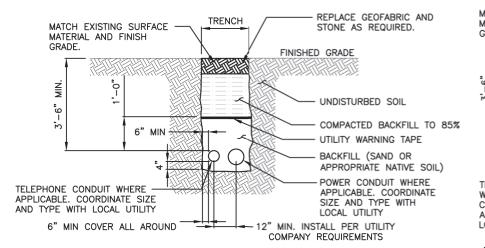
SHEET TITLE

EQUIPMENT LAYOUT
AND DETAILS

SHEET#:

REVISION:

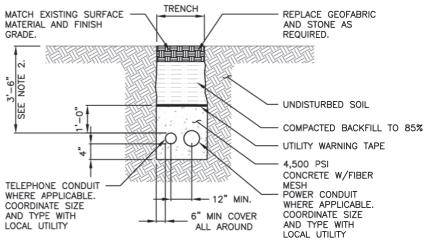
**C4** 



## NOTES:

- 1. CONDUITS TO BE BURIED 6"BELOW FROST DEPTH WHERE APPLICABLE.
- 2. SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS.



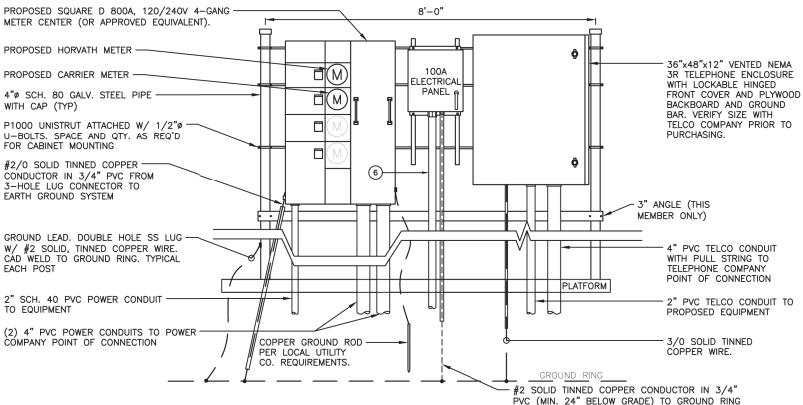


#### NOTES:

- ENCASE ALL PVC CONDUITS/PIPES IN CONCRETE WHEN INSTALLED UNDER ACCESS ROADS OR HIGH TRAFFIC AREAS
- CONDUITS TO BE BURIED 6" BELOW FROST DEPTH WHERE APPLICABLE.

## CONCRETE ENCASED UTILITY TRENCH DETAIL SCALE: N.T.S.

8'-0" \_\_\_\_\_





#### NOTES:

PROPOSED GROUND RING

- 1. STEEL SHALL BE HOT-DIPPED GALVANIZED.
- 2. CONTRACTOR TO SUPPLY ALL MATERIAL UNLESS OTHERWISE NOTED.

- 1/2" U-BOLT (TYP)

4" SCH 80 CONDUIT

W/ (3) INNER DUCTS

TO EQUIPMENT (TYP)

- 3. ALL HARDWARE TO BE STAINLESS STEEL.
- 4. CONTRACTOR TO PROVIDE AND INSTALL LUG CONNECTION AT METER CENTER.
- 5. ADD NAMEPLATES TO INDICATE METERS. COORDINATE TO MATCH METER WITH BREAKER SWITCH. UNUSED METER SOCKETS SHALL BE COVERED W/ LEXAN METER COVER.

1/2" U-BOLT

(TYP)

6. CONTRACTOR TO ATTACH H-FRAME TO PLATFORM PER MANUFACTURER'S SPECIFICATIONS.

PROPOSED
P-1000 1-5/8"
UNISTRUT (TYP)

The information contained in this set of documents is proprietary by nature.
Any use or disclosure other than that which relates to the client is strictly prohibited.

PROJECT INFORMATION:

- 4" SCH 80

TELCO

SERVICE DEMARC

PLATFORM

CONDUIT W/

(3) INNER DUCTS FROM

NEMA 3R TELCO

ENCLOSURE WITH

3"ø GALVANIZED

STEEL PIPE (TYP)

HINGED DOOR AND

LOCKABLE HANDLE

CLOVER FORK 15724961 22295

PREPARED FOR

ILLMAN

NFRASTRUCTURE

A&E FIRM:

1355 WINDWARD CONCOURSE

SUITE 410

towersource

A NextEdge Company

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 SJH

 CHECKED BY:
 MAT

 APPROVED BY:
 PJN

REVISIONS				

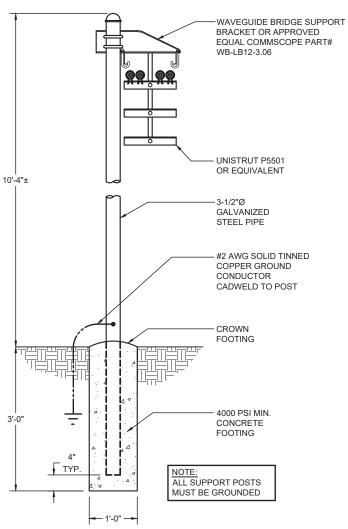


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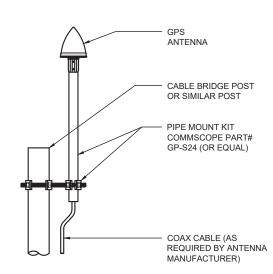
UTILITY BACKBOARD H-FRAME

SHEET#: REVISION

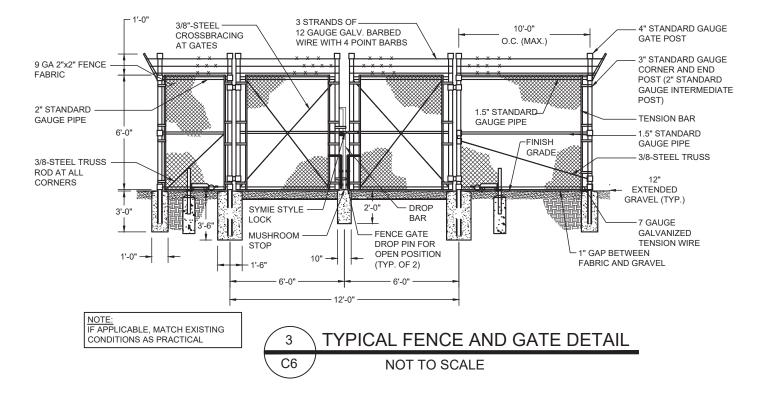
3 H-FRAME DETAIL (FRONT)
SCALE: N.T.S.

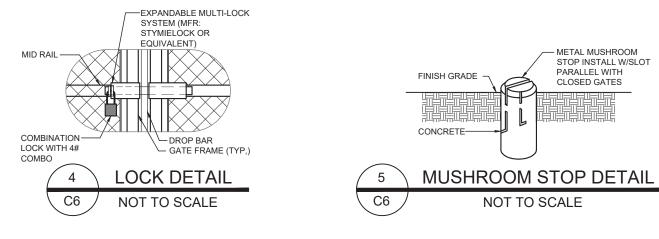






2 GPS ANTENNA MOUNTING DETAIL
C6 NOT TO SCALE





PREPARED FOR:





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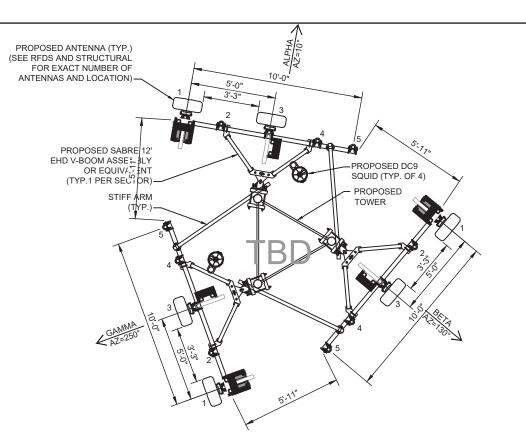
SHEET TITLE:

CONSTRUCTION DETAILS

C6

REVISION:

0



TOWERSOURCE HAS NOT ANALYZED THE PROPOSED MOUNT FOR THE PROPOSED CONFIGURATION.

AN ANTENNA MOUNT ANALYSIS HAS NOT BEEN PERFORMED FOR THE

CABLE COUNT

TRUNK CABLE TYPE

CONDUCTOR (3 PR) 6AWG DC CABLE

FIBER (24 PR) 10MM FIBER

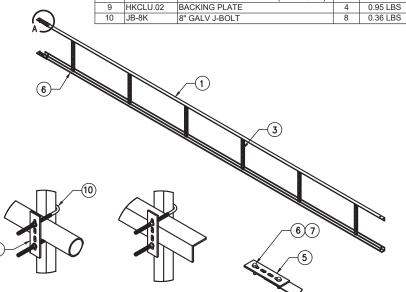
DC9-48-60-24-EV

PROPOSED ANTENNA MOUNTS. TOWERSOURCE ACCEPTS NO RESPONSIBILITY FOR THE ANTENNA MOUNTS TO SUPPORT THE PROPOSED LOADS OR THE PROPER INSTALLATION OF THE ANTENNA MOUNT. CONTRACTOR TO INSTALL MOUNT PER MANUFACTURER'S SPECIFICATIONS.

NOTE: ANTENNA INFO BASED ON RFDS V. 1.00 DATED 01/26/2023.



DETAIL A



CABLE LADDER DETAIL SCALE: N.T.S.

ANGLE MEMBER

**ROUND MEMBER** 

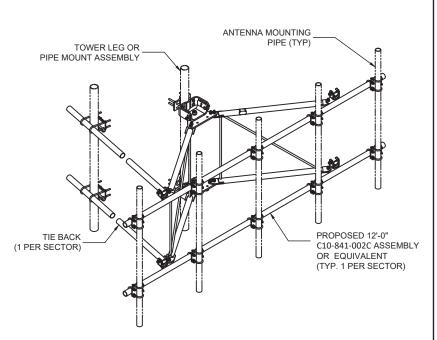


ANTENNA MOUNTING PLAN

SCALE: 1" = 5'-0"



ANTENNA AND RRH SCHEDULE							
SECTOR	ANTENNA MODEL	TECHNOLOGY	AZIMUTH	ANTENNA €	RRH MODEL	DIPLEXER	QUANTITY
l ∟	NNH4-65D-R6	850/1900/AWS	10	170'-0"	4478 B5 / 4415 B25 / 4426 B66	-	6
L	-	-	-	-	-	-	2
ALPHA	NNH4-65D-R6	700	10	170'-0"	4478 B14	-	<u> </u>
	-	-	-	-	-	-	2
	-	-	-	-	-	-	]
							4
L	NNH4-65D-R6	850/1900/AWS	130	170'-0"	4478 B5 / 4415 B25 / 4426 B66	-	]
l L	-	-	-	-	-	-	
ВЕТА	NNH4-65D-R6	700	130	170'-0"	4478 B14	-	
ΙГ	-	-	-	-	-	-	
ΙГ	-	-	-	-	-	-	
							1
l L	NNH4-65D-R6	850/1900/AWS	250	170'-0"	4478 B5 / 4415 B25 / 4426 B66	-	
ΙГ	-	-	-	-	-	-	
GAMMA	NNH4-65D-R6	700	250	170'-0"	4478 B14	-	
	-	-	-	-	-	-	1
	-	-	-	-	-	-	1



ANTENNA MOUNT FRAME DETAIL SCALE: N.T.S. C7



A&E FIRM:



1355 WINDWARD CONCOURSE SUITE 410 ALPHARETTA, GA 30005 TEL: 678-990-2338

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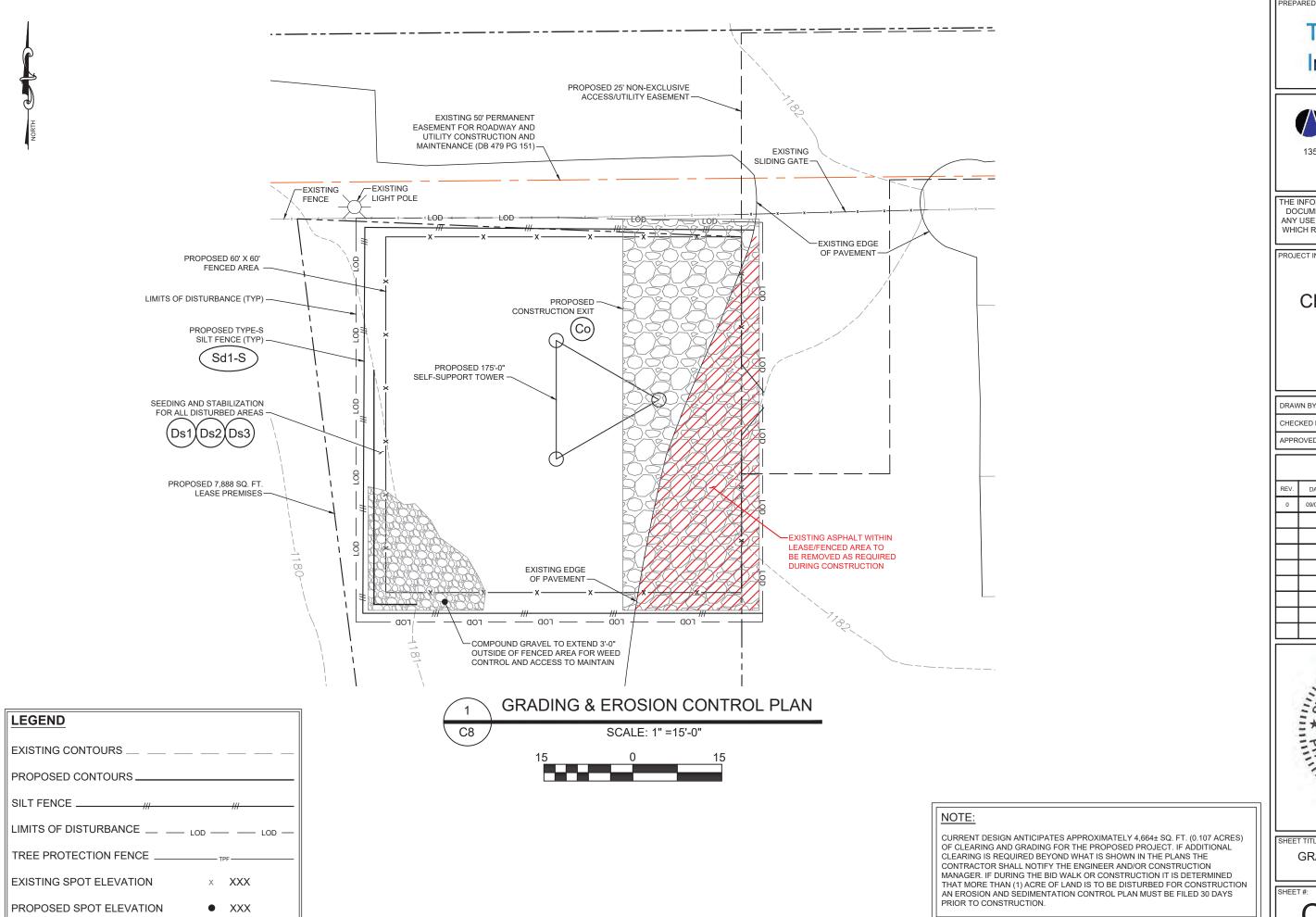
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ANTENNA PLAN AND SCHEDULE



PREPARED FOR:



A&E FIRM:

**towersource** A NextEdge Company

1355 WINDWARD CONCOURSE SUITE 410 ALPHARETTA, GA 30005 TEL: 678-990-2338

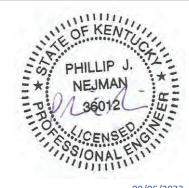
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GRADING AND EROSION CONTROL PLAN

#### **EXCAVATION & GRADING NOTES:**

- ALL EXCAVATIONS ON WHICH CONCRETE IS TO BE PLACED SHALL BE SUBSTANTIALLY HORIZONTAL ON UNDISTURBED AND UNFROZEN SOIL AND BE FREE FROM LOOSE MATERIAL AND EXCESS GROUNDWATER, DEWATERING FOR EXCESS GROUNDWATER SHALL BE PROVIDED IF
- 2. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC MATERIAL. IF SOUND SOIL IS NOT REACHED AT THE DESIGNATED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION BE FILLED WITH CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION.
- 3. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. STONE, IF USED, SHALL NOT BE USED AS COMPILING CONCRETE THICKNESS.
- 4. ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH DEBRIS AND SO FORTH BEFORE AND AFTER COMPLETION OF THE FOUNDATION AND OTHER CONSTRUCTION BELOW GRADE, AND BEFORE BACKFILLING.
- 5. BACKFILLING SHALL:
  - -USE APPROVED MATERIALS CONSISTING OF EARTH, LOAM, SANDY CLAY, SAND AND GRAVEL OR SOFT SHALE:
  - -BE FREE FROM CLODS OR STONES OVER 2-1/2" MAXIMUM DIMENSIONS -BE PLACED IN 6" LAYERS AND COMPACTED TO 95% STANDARD PROCTOR EXCEPT IN GRASSED/LANDSCAPED AREAS, WHERE 90% STANDARD PROCTOR IS REQUIRED.
- 6. FILL PREPARATION
  - REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACING FILLS. PLOW, STRIP, OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4  $\,$ HORIZONTAL SO FILL MATERIAL WILL BOND WITH EXISTING SURFACE. WHEN SUBGRADE OR EXISTING GROUND SURFACE TO RECEIVE FILL HAS A DENSITY LESS THAN THAT REQUIRED FOR FILL, BREAK UP GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION OR AERATE SOIL AND RECOMPACT TO REQUIRED DENSITY.
- 7. PROTECT EXISTING GRAVEL SURFACING AND SUBGRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE LISE PLANKING OR OTHER SUITABLE MATERIALS DESIGNED TO SPREAD EQUIPMENT LOADS. REPAIR DAMAGE TO EXISTING GRAVEL SURFACING OR SUBGRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTOR'S OPERATIONS. DAMAGED GRAVEL SURFACING SHALL BE RESTORED TO MATCH THE ADJACENT UNDAMAGED GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS.
- 8 REPLACE EXISTING GRAVEL SURFACING ON AREAS FROM WHICH GRAVEL SURFACING IS REMOVED DURING CONSTRUCTION OPERATIONS. GRAVEL SURFACING SHALL BE REPLACED TO MATCH EXISTING ADJACENT GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS. SURFACES OF GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES. EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED IF INJURIOUS AMOUNTS OF EARTH, ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ALL ADDITIONAL GRAVEL RESURFACING MATERIAL AS REQUIRED. BEFORE GRAVEL SURFACING IS REPLACED. SUBGRADE SHALL BE GRADED TO CONFORM TO REQUIRED SUBGRADE ELEVATIONS, AND LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED. DEPRESSIONS IN THE SUBGRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL MAY BE USED FOR FILLING DEPRESSIONS IN THE SUBGRADE, SUBJECT TO ENGINEER'S APPROVAL
- 9. DAMAGE TO EXISTING STRUCTURES AND UTILITIES RESULTING FROM CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED / REPLACED TO OWNER'S SATISFACTION AT CONTRACTOR'S
- 10. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH PROPERTY OWNER SO AS TO AVOID INTERRUPTIONS TO PROPERTY OWNER'S OPERATIONS
- 11. ENSURE POSITIVE DRAINAGE DURING AND AFTER COMPLETION OF CONSTRUCTION.
- 12. ALL CUT AND FILL SLOPES SHALL BE 2 HORIZONTAL TO 1 VERTICAL MAXIMUM
- 13. REMOVE ALL ORGANICS, ROCKS GREATER THAN 3", UNUSED FILL AND OTHER DEBRIS TO AN AREA OFF SITE IN A LEGAL MANNER
- 14. CONTRACTOR SHALL ENSURE THAT SOILS ARE SUITABLE TO PREVENT SETTLING OF PLATFORM AND EQUIPMENT

ACTIVITY SCHEDULE	
WORK DESCRIPTION	WORKING DAYS
INSTALLATION OF EROSION CONTROL MEASURES	1-2
CLEARING, GRUBBING, AND GRADING	3-5
MAINTAINING EROSION CONTROL MEASURES	6-8
TEMPORARY GRASSING	9-12
BUILDING CONSTRUCTION	13-19
FINAL LANDSCAPING, GRASSING	20-23
REMOVING EROSION CONTROL MEASURES	24-26

THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES. SHALL TAKE PLACE PRIOR TO OR CONCURRENT WITH LAND DISTURBING ACTIVITIES.

#### GENERAL NOTES:

- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND SPECIFICATIONS. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE, LOCAL AND NATIONAL CODES, ORDINANCES AND OR REGULATIONS APPLICABLE TO THE PROJECT
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES. AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE TILLMAN CONSTRUCTION MANAGER AND/OR ENGINEER AND BE RESOLVED BEFORE PROCEEDING WITH WORK. WHERE THERE IS A CONFLICT BETWEEN DRAWING AND TILLMAN SPECIFICATIONS. THE TILLMAN INFRASTRUCTURE CONSTRUCTION MANAGER SHOULD BE CONTACTED FOR CLARIFICATION.
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- 7. THE CONTRACTOR SHALL PROVIDE ADEQUATE EXCAVATION SLOPING SHORING, BRAVING, AND GUYS IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINATES
- UPON COMPLETION OF CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES TO THE EXISTING ACCESS ROAD AND COMPOUND GRAVEL AREAS. ANY NEW FILL MATERIAL SHALL BE COMPACTED.
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- 10. CONTRACTOR TO PROVIDE DUMPSTER AND PORTABLE TOILET FACILITY DURING CONSTRUCTION.
- 11. CONTRACTOR TO PROVIDE STYMIE LOCK OR EQUIVALENT AS APPROVED BY TILLMAN INFRASTRUCTURE CONSTRUCTION MANAGER



## DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)

(WITH TEMPORARY SEEDING)



Ds1



DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)

#### GENERAL EROSION & SEDIMENT CONTROL NOTES:

- ADDITIONAL EROSION CONTROL MEASURES WILL BE EMPLOYED WHERE DETERMINED NECESSARY BY ACTUAL SITE CONDITIONS
- 2. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE
- 3. THE CONSTRUCTION OF THE SITE WILL INITIATE WITH THE INSTALLATION OF EROSION CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION CONTRACTOR SHALL CALL APPROPRIATE COUNTY FOR AN INSPECTION OF SOIL EROSION CONTROL MEASURES PRIOR TO BEGINNING GRADING ACTIVITY. ALL SEDIMENT CONTROL WILL BE MAINTAINED UNTIL ALL LIPSTREAM GROUND WITHIN THE CONSTRUCTION AREA HAS BEEN COMPLETELY STABILIZED.
- 4. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY
- 5. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES.IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR ELECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE
- 6. THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT IS WITHIN 12" OF THE TOP OF THE SILT FENCE.
- 7. FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED.
- 8. SILT BARRIERS TO BE PLACED AT DOWNSTREAM TOE OF ALL CUT AND FILL SLOPES
- 9. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 7 DAYS SHALL BE STABILIZED
- - (CONVENTIONAL SEEDING ON SLOPES LESS THAN 3:1) A. SEEDING WITH MULCH HYDRAULIC SEEDING EQUIPMENT ON SLOPES 3:1 AND STEEPER)

AGRICULTURAL LIMESTONE 4000 LBS./acre FERTILIZER, 5-10-15 1500 lbs./acre MULCH STRAW OR HAY 5000 lbs /arce

SEED SPECIES	APPLICATION RATE/ACRE	PLANNING <u>DATES</u>
HULLED COMMON BERMUDA GRASS	10lbs.	3/1 - 6/15
FESCUE	50lbs.	9/1 - 10/31
FESCUE RYE GRASS	50lbs. 50lbs.	11/1 -2/28

HAY MULCH FOR TEMPORARY COVER 5000lbs. 6/15 -8/31

B. TOPDRESSING: APPLY WHEN PLANTS ARE 2 TO 4 INCHES TALL FERTILIZER (AMMONIUM NITRATE 33.5%)

C. SECOND-YEAR-FERTILIZER: (5-10-15 OR EQUIVALENT) 800 lbs./acre

HYDRAULIC SEEDING EQUIPMENT WHEN HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS USED. NO GRADING AND SHAPING OR SEEDBED PREPARATION WILL BE REQUIRED. THE FERTILIZER, SEED AND WOOD CELLULOSE FIBER MULCH WILL BE MIXED WITH WATER AND APPLIED IN A SLURRY. ALL SLURRY INGREDIENTS MUST BE COMBINED TO FORM A HOMOGENEOUS MIXTURE, AND SPREAD UNIFORMLY OVER THE AREA WITHIN ONE HOUR AFTER MIXTURE IS MADE. STRAW OR HAY MULCH AND ASPHALT EMULSION WILL BE APPLIED WITH BLOWER-TYPE MULCH SPREADING EQUIPMENT WITHIN 24 HOURS AFTER SEEDING, THE MULCH WILL BE SPREAD UNIFORMLY OVER THE AREA, LEAVING ABOUT 25 PERCENT OF THE GROUND SURFACE EXPOSED.

300 lbs./acre

CONVENTIONAL SEEDING EQUIPMENT GRADE, SHAPE AND SMOOTH WHERE NEEDED TO PROVIDE FOR SAFE EQUIPMENT OPERATION AT SEEDING TIME AND FOR MAINTENANCE PURPOSES. THE LIME AND FERTILIZER IN DRY FORM WILL BE SPREAD UNIFORMLY OVER THE AREA IMMEDIATELY BEFORE SEEDBED PREPARATION A SEEDBED WILL BE PREPARED BY SCARIFYING TO A DEPTH OF 1 TO 4 INCHES AS DETERMINED ON SITE. THE SEEDBED MUST BE WELL PULVERIZED, SMOOTHED AND FIRMED. SEEDING WILL BE DONE WITH CULTIPACKER-SEEDER, DRILL, ROTARY SEEDER OR OTHER MECHANICAL OR HAND SEEDER. SEED WILL BE DISTRIBUTED UNIFORMLY OVER A FRESHLY PREPARED SEEDBED AND COVERED LIGHTLY. WITHIN 24 HOURS AFTER SEEDING, STRAW OR HAY MULCH WILL BE SPREAD UNIFORMLY OVER THE AREA, LEAVING ABOUT 25 PERCENT OF THE GROUND SURFACE EXPOSED. MULCH WILL BE SPREAD WITH BLOWER-TYPE MULCH EQUIPMENT OR BY HAND AND ANCHORED IMMEDIATELY AFTER IT IS SPREAD. A DISK HARROW WITH THE DISK SET STRAIGHT OR A SPECIAL PACKER DISK MAY BE USED TO PRESS THE MULCH INTO THE SOIL

- 11. CONTRACTOR SHALL REMOVE ALL EROSION & SEDIMENT CONTROL MEASURES AFTER COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER.
- 12. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO OR CONCURRENT WITH LAND-DISTURBING ACTIVITIES.
- 13. ALL CUT AND FILL SLOPES MUST BE SURFACED ROUGHENED AND VEGETATED WITHIN SEVEN (7) DAYS OF THEIR CONSTRUCTION.
- 14. ALL FILL SLOPES WILL HAVE SILT FENCE AT TOE OF SLOPES.
- 15. ALL SEDIMENT AND EROSION CONTROL MEASURES WILL BE CHECKED DAILY AND ANY DEFICIENCIES NOTED WILL BE CORRECTED BY THE END OF EACH DAY. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY AFTER ON-SITE INSPECTION BY THE SSUING AUTHORITY
- 16. THE ONLY MATERIAL TO BE BURIED ON-SITE IS VEGETATIVE MATERIAL. CONSTRUCTION WASTE MAY NEITHER BE BURNED NOR BURIED AND MUST BE TAKEN TO A STATE APPROVED LANDFILL
- 17. A 25' MIN UNDISTURBED VEGETATIVE BUFFER ADJACENT TO ALL RUNNING STREAMS AND CREEKS WILL BE LEFT AND MAINTAINED.

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PROJECT INFORMATION

**CLOVER FORK** 15724961 22295

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	CHECKED BY:	MAT
	APPROVED BY:	PJN

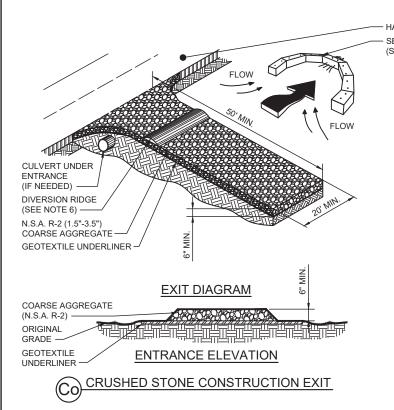
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GRADING AND EROSION **CONTROL NOTES** 

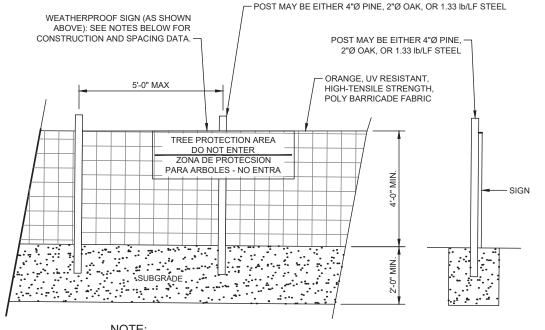
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HARD SURFACE PUBLIC ROAD SEDIMENT TRAP (SEE NOTE 8)

- AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
- REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
- AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
- GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6". PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS
- OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
- A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%... INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO
- MAINTAIN DRAINAGE DITCHES. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE
- ENTRANCE TO A SEDIMENT CONTROL DEVICE). WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIR
- 0. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.



#### NOTE:

INSTALL TREE PROTECTION FENCE AND SIGNAGE PRIOR TO CALLING FOR SITE INSPECTION. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT. ADDITIONAL SIGNS MAY BE REQUIRED BASED ON ACTUAL FIELD CONDITIONS.



TREE PROTECTION FENCE

NOT TO SCALE

## **CONSTRUCTION EXIT** NOT TO SCALE

### SEEDING SCHEDULE FOR WINTER / SPRING CONSTRUCTION ACTIVITIES

SEEDING MIXTURE

RATE (LB/ACRE) SPECIES RYE (GRAIN)

ANNUAL LESPEDEZA (KOBE IN

PIEDMONT AND COASTAL PLAIN, KOREAN IN MOUNTAINS)

OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE.

MOUNTAINS -- ABOVE 2500 FT: FEB 15 - MAY 15

BELOW 2500 FT.: FEB. 1 - MAY 1

PIEDMONT -JAN 1 - MAY 1 COASTAL PLAIN --DEC. 1 - APR. 15

SOIL AMENDMENTS
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

APPLY 4 000 LB/ACRE STRAW ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL

REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE

### SEEDING SCHEDULE FOR SUMMER CONSTRUCTION ACTIVITIES

## SEEDING MIXTURE

SPECIES

COMMON BERMUDAGRASS 40-80 (1-2 LB/1,000 SQ. FT.)

RATE (LB/ACRE)

APR. 1 - JULY PIEDMONT --APR. 15 - JUNE 30

#### SOIL AMENDMENTS

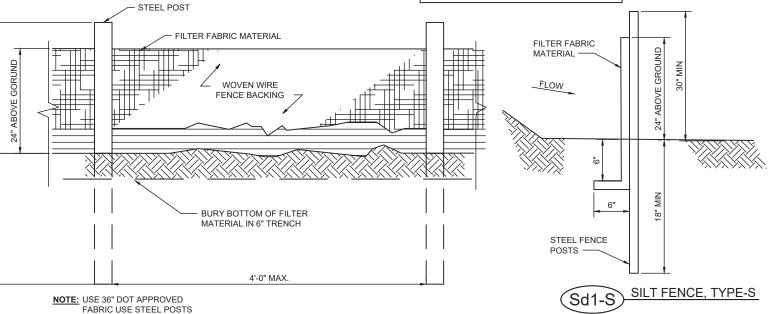
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 3,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 500 LB/ACRE 10-10-10 FERTILIZER

USE JUTE, EXCELSIOR MATTING, OR OTHER EFFECTIVE CHANNEL LINING MATERIAL TO COVER THE BOTTOM OF CHANNELS AND DITCHES. THE LINING SHOULD EXTEND ABOVE THE HIGHEST CALCULATED DEPTH OF FLOW. ON CHANNEL SIDE SLOPES ABOVE THIS HEIGHT, AND IN DRAINAGES NOT REQUIRING TEMPORARY LINING, APPLY 4,000 LB/ACRE GRAIN STRAW AND ANCHOR STRAW BY STAPLING NETTING OVER THE TOP.

A MINIMUM OF 3 WEEKS IS REQUIRED FOR ESTABLISHMENT. INSPECT AND REPAIR MULCH FREQUENTLY. REFERTILIZE THE FOLLOWING APR. WITH 50 CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION. INSTALL SILT FENCE AS SHOWN HERE ADDITIONALLY REQUIRED FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS,

C10

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION CONTROL AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.



**EROSION CONTROL DETAILS** 

PREPARED FOR

ILLMAN

NFRASTRUCTURE

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**CLOVER FORK** 

15724961

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**REVISIONS** 

DESCRIPTION

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PROJECT INFORMATION:

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APPROVED BY

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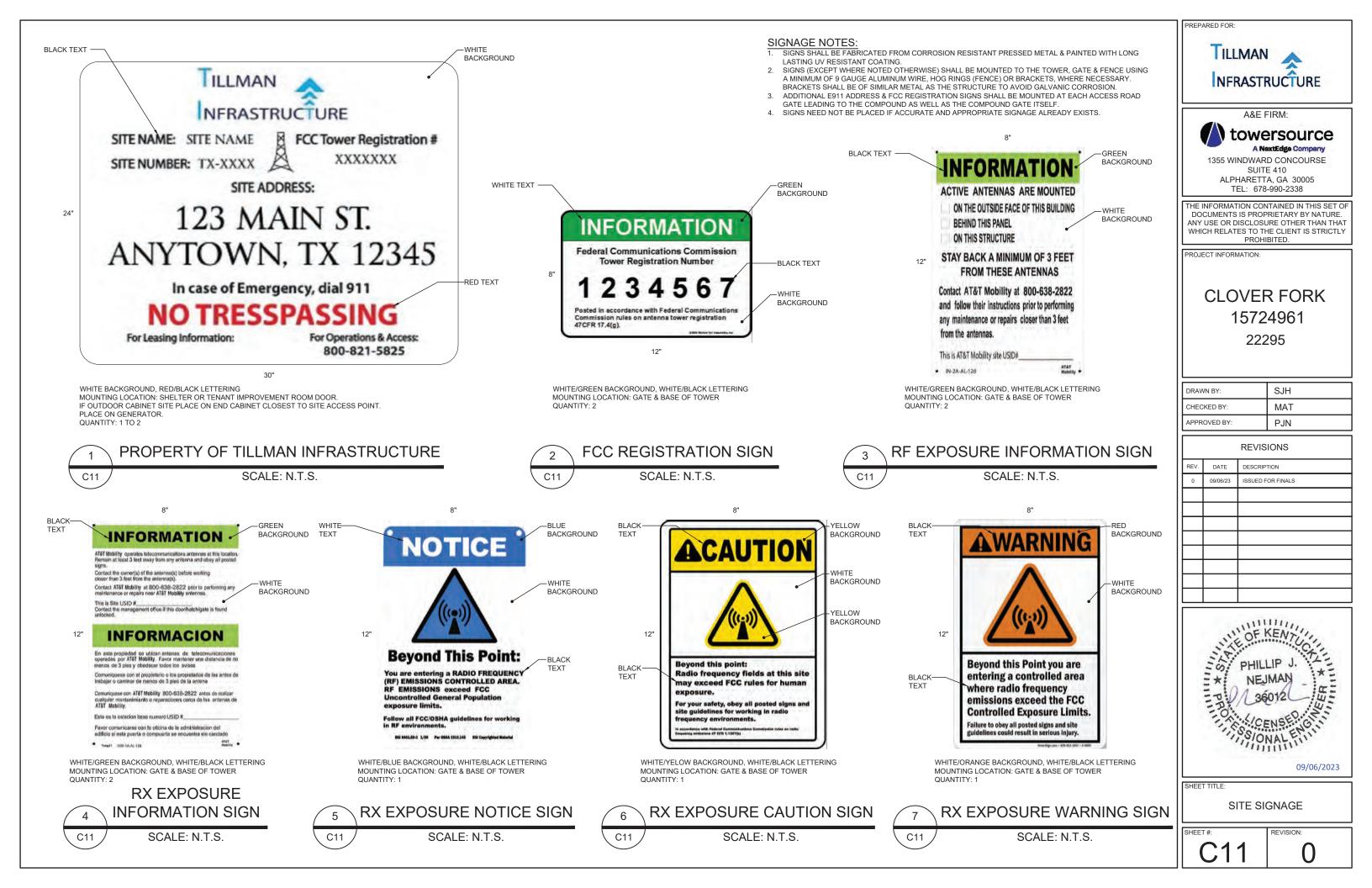
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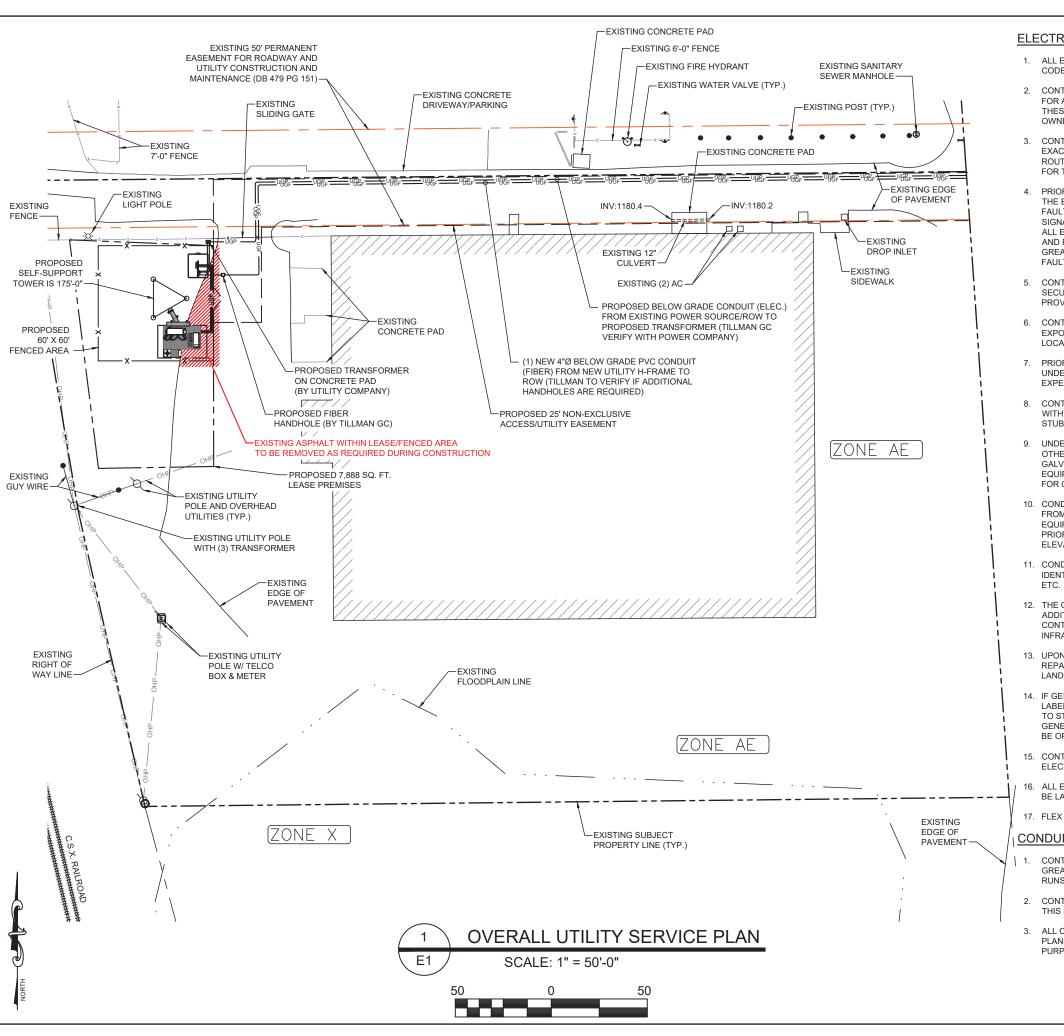
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SEDIMENT FENCE (SILT FENCE)

NOT TO SCALE

AND WATERWAYS.





### **ELECTRICAL NOTES AND SPECIFICATIONS:**

- ALL ELECTRICAL WORK SHALL COMPLY WITH NEC, STATE, AND LOCAL CODES.
- CONTRACTOR SHALL OBTAIN OWNER/TENANT SPECIFICATIONS AND REVIEW FOR ADDITIONAL DETAILS AND REQUIREMENTS THAT MAY NOT BE SHOWN IN THESE DRAWINGS. CONTRACTOR SHALL COMPLY WITH ANY ADDITIONAL OWNER/TENANT SPECIFICATIONS AND REQUIREMENTS.
- CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL UTILITY FOR THE EXACT TRANSFORMER LOCATION, METERING REQUIREMENTS, AND SERVICE ROUTING. CONTRACTOR SHALL COORDINATE WITH THE TELEPHONE UTILITY FOR THE EXACT TELEPHONE REQUIREMENTS AND SERVICE ROUTING.
- PRIOR TO PURCHASING EQUIPMENT, THE CONTRACTORS SHALL CONTACT THE ELECTRIC UTILITY AND LOCATION IN WRITING THE MAXIMUM AVAILABLE FAULT CURRENT AT THE UTILITY SERVICE POINT. PROVIDE MAX AFC SIGNAGE AS REQUIRED PER NEC 110.24. THE CONTRACTOR SHALL ENSURE ALL ELECTRICAL EQUIPMENT, CIRCUIT BREAKERS, DISCONNECTS, FUSES, AND PANEL BOARDS HAVE A FAULT CURRENT INTERRUPTING RATING GREATER THAN THE AVAILABLE FAULT CURRENT. IN NO CASE SHALL THE FAULT CURRENT INTERRUPTING RATING BE LESS THAN 10.000 AMPS.
- CONTRACTOR TO PROVIDE 2-200 LB TEST POLYETHYLENE PULL CORDS SECURELY FASTENED AT EACH END OF POWER AND TELCO CONDUIT. PROVIDE CAPS ON ENDS OF UNUSED CONDUIT.
- CONTRACTOR TO PROVIDE A REBAR MARKER WITH AT LEAST 2 FEET EXPOSED ABOVE GRADE AND PAINTED BRIGHT ORANGE TO INDICATE LOCATION OF CONDUIT CAPPED BELOW GRADE.
- 7. PRIOR TO TRENCHING, CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES. CONTRACTOR SHALL REPAIR AT CONTRACTOR'S EXPENSE ANY DAMAGE TO EXISTING UTILITIES.
- 8. CONTRACTOR TO VERIFY EXACT ROUTING OF POWER AND TELCO CONDUIT WITH LOCAL UTILITIES AND OWENR/TENANT. ENSURE ALL CONDUIT STUB-UPS ACCOMMODATE EQUIPMENT REQUIREMENTS.
- UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC UNLESS NOTED
  OTHERWISE. USE SCHEDULE 80 PVC UNDER ROADS. USE LONG-SWEP RIGID
  GALVANIZED STEEL (RGS) FOR ELBOWS. USE RGS FOR RISERS TO
  EQUIPMENT. MANUFACTURED BENDS SHALL HAVE A MINIMUM RADIUS OF 36"
  FOR CONDUIT.
- 10. CONDUIT RUNS SHALL HAVE A CONTINUOUS SLOPE DOWNWARD AND AWAY FROM THE EQUIPMENT TO ALLOW WATER TO FLOW AWAY FROM THE EQUIPMENT AND SHELTER. EXCAVATE TRENCHES ALONG STRAIGHT LINES PRIOR TO INSTALLING CONDUIT TO ACCOMMODATE ADJUSTING THE ELEVATION. AS NEEDED.
- 11. CONDUIT ENTERING EQUIPMENT SHALL BE SEALED WITH A SEALANT THAT IS IDENTIFIED FOR USE WITH THE CABLE. CONDUCTOR INSULATION, SHIELDING, ETC.
- 12. THE OWNER SHALL FURNISH AND THE CONTRACTOR SHALL INSTALL ADDITIONAL SIGNAGE TO BE LOCATED AT THE COMPOUND FENCE. CONTRACTOR SHALL COORDINATE WITH OWNER/TENANT TILLMAN INFRASTRUCTURE CONSTRUCTION MANAGER FOR PLACEMENT OF SIGNAGE.
- 13. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES TO THE LANDSCAPING AREA.
- 14. IF GENERATOR/FUEL CELL IS INSTALLED, CONTRACTOR SHALL PROVIDE A LABEL TO READ: "OPENING THE DISCONNECT WILL CAUSE THE GENERATOR TO START. TO REMOVE POWER ENTIRELY FROM THE EQUIPMENT, THE GENERATOR MUST BE TURNED OFF AND THE GENERATOR BREAKER MUST BE OPENIED."
- 15. CONTRACTORS SHALL ENSURE A MINIMUM 3' CLEARANCE IN FRONT OF ELECTRICAL PANELS PER NEC.
- 16. ALL ELECTRICAL MATERIALS, DEVISES, APPLIANCES AND EQUIPMENT SHALL BE LABEL LISTED BY AN APPROVED THIRD PARTY TESTING AGENCY.
- 17. FLEX CONDUIT RUNS NOT TO EXCEED 36" WITHOUT PRIOR TMO APPROVAL.

### CONDUIT ROUTING NOTE:

- CONTRACTOR TO PROVIDE PULL BOXES AS NEEDED TO ENSURE NO GREATER THAN 360 DEGREES OF BENDS BETWEEN PULL POINTS IN CONDUIT RUNS.
- 2. CONTRACTOR COORDINATE WITH LOCAL UTILITY COMPANY FOR SERVICE TO THIS POINT.
- ALL CONDUIT TO BE RUN WITHIN 2' UTILITY BUFFER AS SHOWN ON CIVIL PLANS. CONDUIT SHOWN OUTSIDE OF 2' UTILITY BUFFER FOR CLARITY PURPOSES ONLY.

PREPARED FOR:



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	CHECKED BY:	MAT
	APPROVED BY:	PJN

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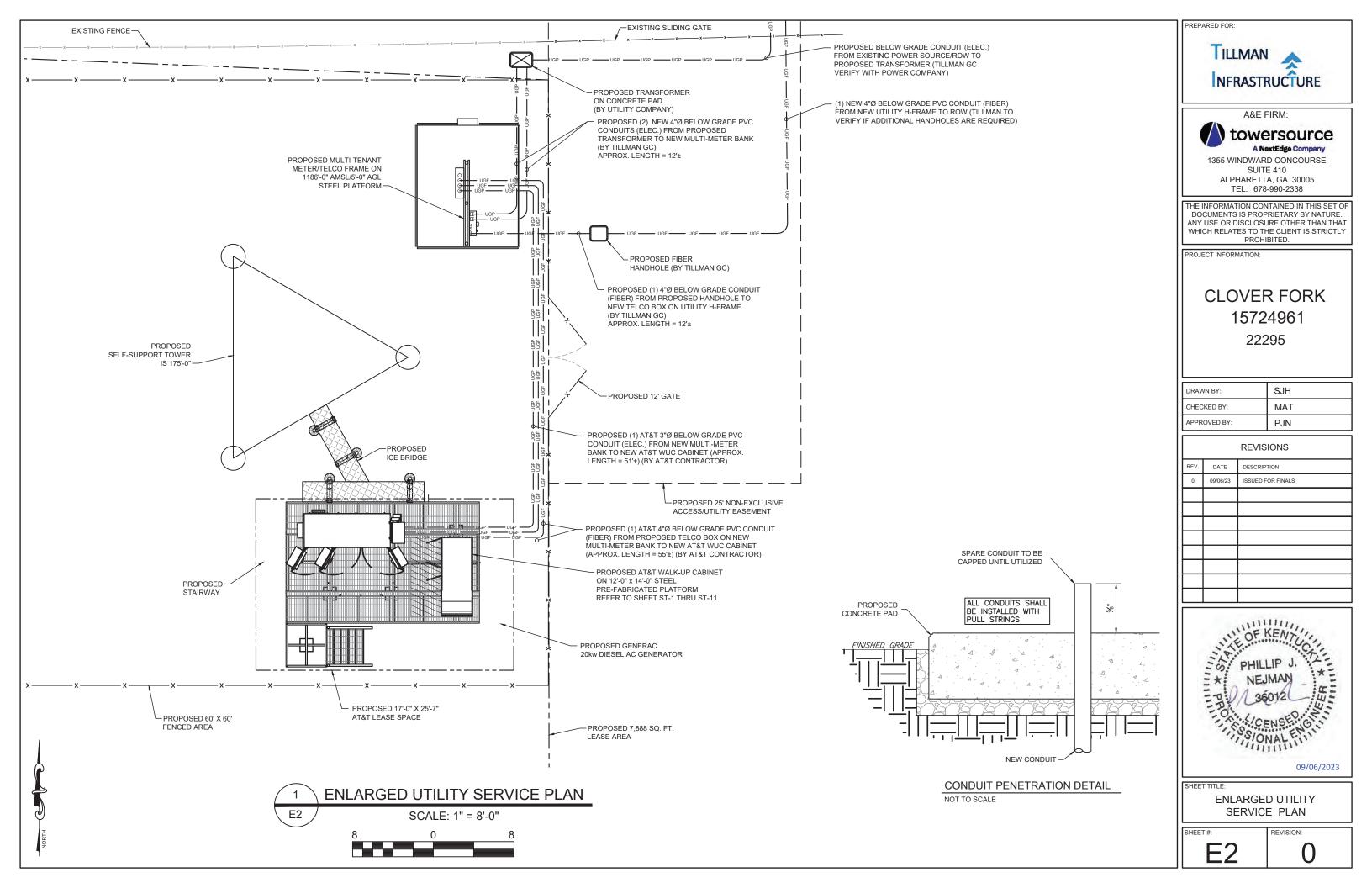
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OVERALL UTILITY SERVICE PLAN

REVISION

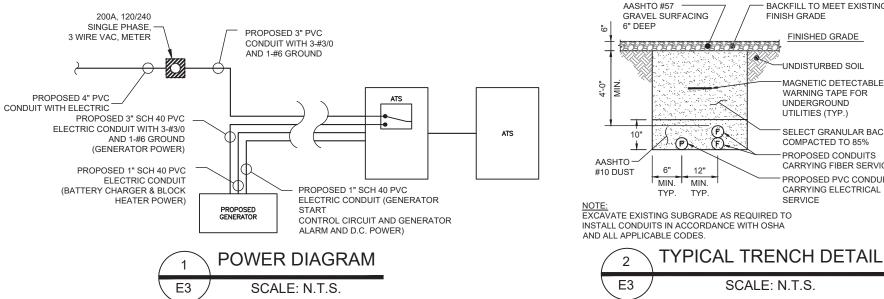
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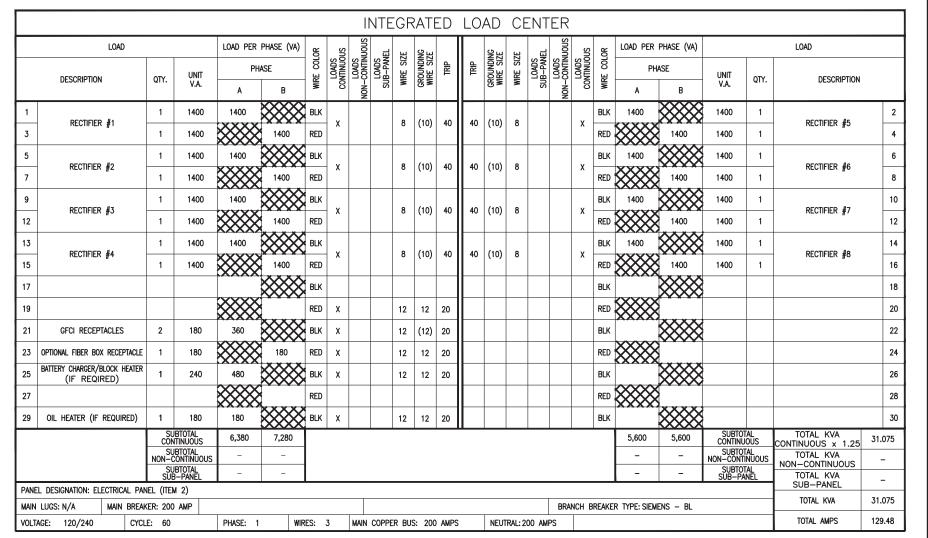
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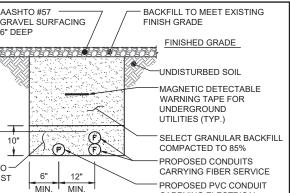
## **ELECTRICAL NOTES**

- SUBMITTAL OF BID INDICATES THAT THE CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
- CONTRACTOR SHALL PERFORM ALL VERIFICATIONS OBSERVATION TESTS AND EXAMINATION WORK PRIOR TO ORDERING OF ANY EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT MANAGER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
- VERIFY HEIGHTS WITH PROJECT MANAGER PRIOR TO INSTALLATION.
- THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE
- CONTRACTOR SHALL COORDINATE ALL WORK BETWEEN TRADES AND ALL OTHER SCHEDULING AND PROVISIONARY CIRCUMSTANCES SURROUNDING THE PROJECT
- CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT INSTALLATION CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR COMPLETE AND FUNCTIONALLY OPERATING SYSTEMS ENERGIZED AND READY FOR USE THROUGHOUT AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
- ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. ELECTRICAL MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORIES AND SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION OVER THE CONSTRUCTION MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH ALL CURRENT APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU. ALL MATERIALS AND EQUIPMENT SHALL BE APPROVED FOR THEIR INTENDED USE AND
- ALL WORK SHALL COMPLY WITH ALL APPLICABLE GOVERNING STATE, COUNTY AND CITY
- CODES AND OSHA, NFPA, NEC & ASHRAE REQUIREMENTS.
  ENTIRE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE. ALL WORK, MATERIAL AND EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
- 10. PROPERLY SEAL ALL PENETRATIONS. PROVIDE UL LISTED FIRE-STOPS WHERE PENETRATIONS ARE MADE THROUGH FIRE-RATED ASSEMBLIES. WATER-TIGHT USING SILICONE SEALANT
- 11. DELIVER ALL BROCHURES, OPERATING MANUALS, CATALOGS AND SHOP DRAWINGS TO THE PROJECT MANAGER AT JOB COMPLETION. PROVIDE MAINTENANCE MANUALS FOR MECHANICAL EQUIPMENT. AFFIX MAINTENANCE LABELS TO MECHANICAL EQUIPMENT
- 12. ALL CONDUCTORS SHALL BE COPPER. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG. UNLESS OTHERWISE NOTED. CONDUCTORS SHALL BE TYPE THHW, RATED IN ACCORDANCE WITH NEC 110-14(C).
- 13. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM INTERRUPTING CURRENT TO WHICH THEY MAY BE SUBJECTED.
- 14. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE; ARTICLES 250 & 810 AND THE UTILITY COMPANY STANDARDS
- 15. CONDUIT:
  - RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
  - ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL, FITTINGS SHALL BE GLAND RING COMPRESSION TYPE, EMT SHALL BE USED ONLY FOR INTERIOR RUNS.
  - C. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE U.L. LISTED AND SHALL BE USED AT FINAL CONNECTIONS TO MECHANICAL EQUIPMENT & RECTIFIERS AND WHERE PERMITTED BY CODE. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL CONTAIN A FULL-SIZE GROUND CONDUCTOR.
  - CONDUIT RUNS SHALL BE SURFACE MOUNTED ON CEILINGS OR WALLS UNLESS NOTED OTHERWISE, ALL CONDUIT SHALL RUN PARALLEL OR PERPENDICULAR TO WALLS, FLOOR, CEILING, OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH THE PROJECT MANAGER PRIOR TO INSTALLING.
  - PVC CONDUIT MAY BE PROVIDED ONLY WHERE SHOWN, OR IN UNDERGROUND INSTALLATIONS. PROVIDE UV-RESISTANT CONDUIT WHERE EXPOSED TO THE ATMOSPHERE. PROVIDE GROUND CONDUCTOR IN ALL PVC RUNS; EXCEPT WHERE PERMITTED BY CODE TO OMIT
- 17. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS. BACKGROUND SHALL BE BLACK WITH WHITE LETTERS; EXCEPT AS REQUIRED BY CODE TO FOLLOW A DIFFERENT SCHEME.
- 18. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL OF POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE PROJECT MANAGER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE.
- 19. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION. LEGALLY DISPOSE OF ALL REMOVED, UNUSED AND EXCESS MATERIAL GENERATED BY THE WORK OF THIS CONTRACT. DELIVER ITEMS INDICATED ON THE DRAWINGS TO THE OWNER IN GOOD CONDITION. OBTAIN SIGNED RECEIPT UPON DELIVERY.
- 20. COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS SHALL BE PAID BY THE CONTRACTOR.
- VERIFY ALL EXISTING CIRCUITRY PRIOR TO REMOVAL AND NEW WORK. MAINTAIN POWER TO ALL OTHER AREAS & CIRCUITS NOT SCHEDULED FOR REMOVAL
- 22. RED LINED AS-BUILT PLANS SHALL BE PROVIDED TO THE CONSTRUCTION MANAGER









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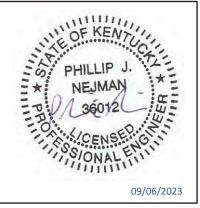
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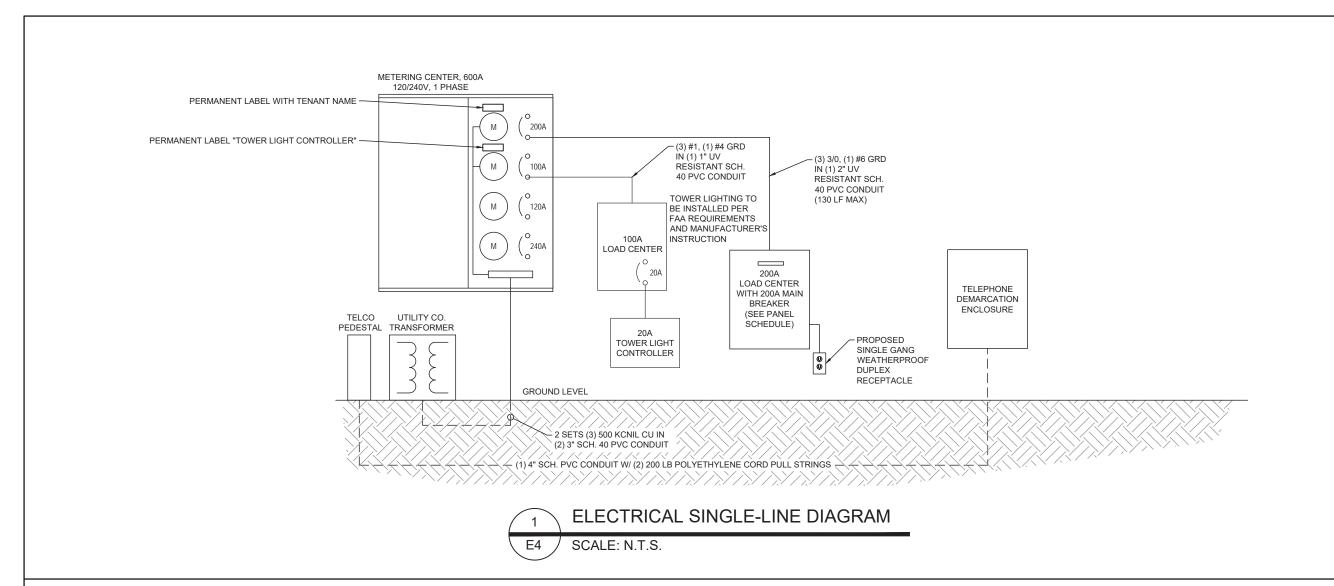
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**ELECTRICAL PANEL** SCHEDULE, DIAGRAM.

AND NOTES



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PREPARED FOR:



A&E FIRM:

towersource
A NextEdge Company

1355 WINDWARD CONCOURSE SUITE 410 ALPHARETTA, GA 30005 TEL: 678-990-2338

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PROJECT INFORMATION:

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	DRAWN BY:	SJH
	CHECKED BY:	MAT
	APPROVED BY:	PJN

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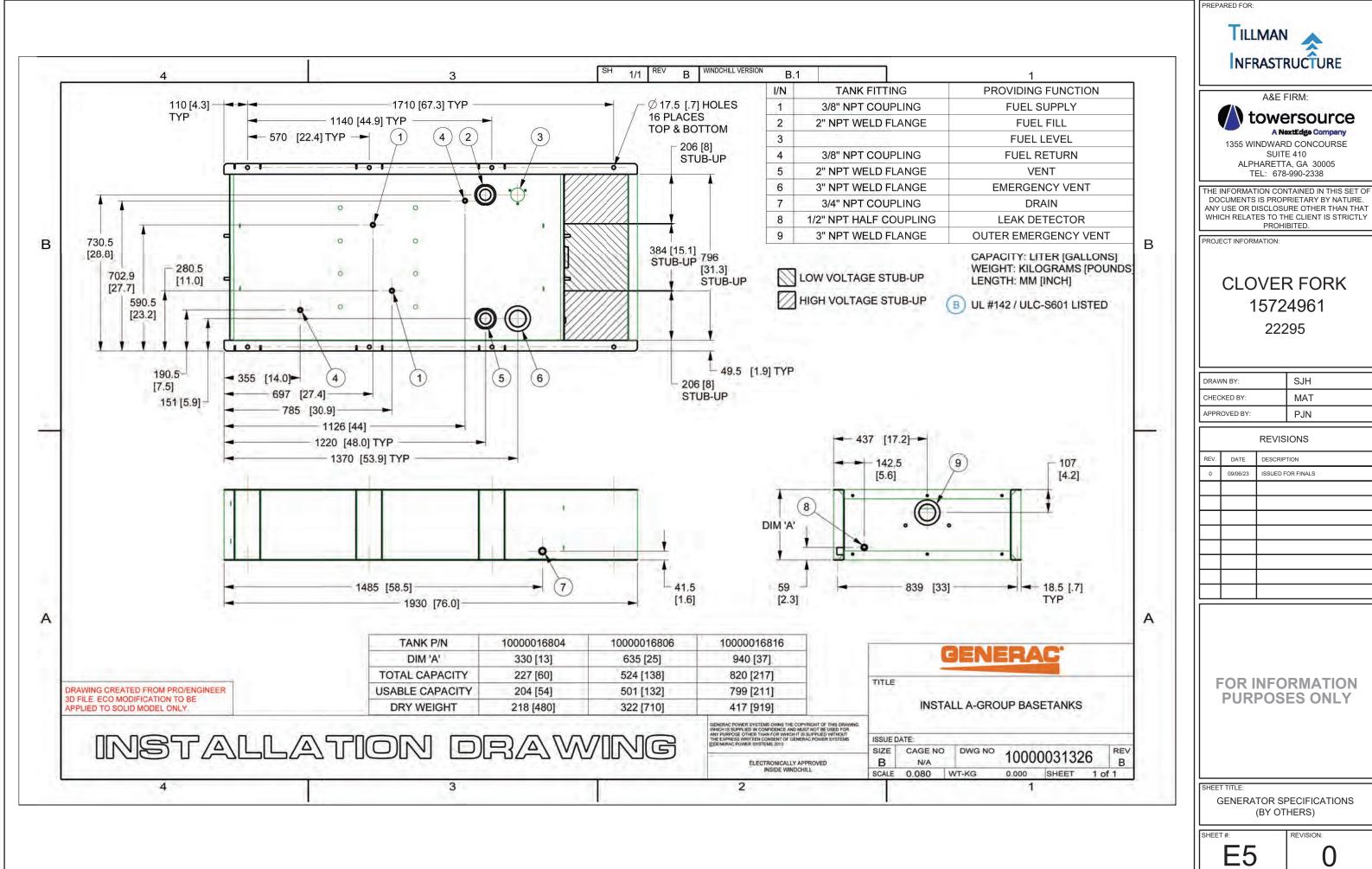
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ELECTRICAL SINGLE-LINE DIAGRAM

E4

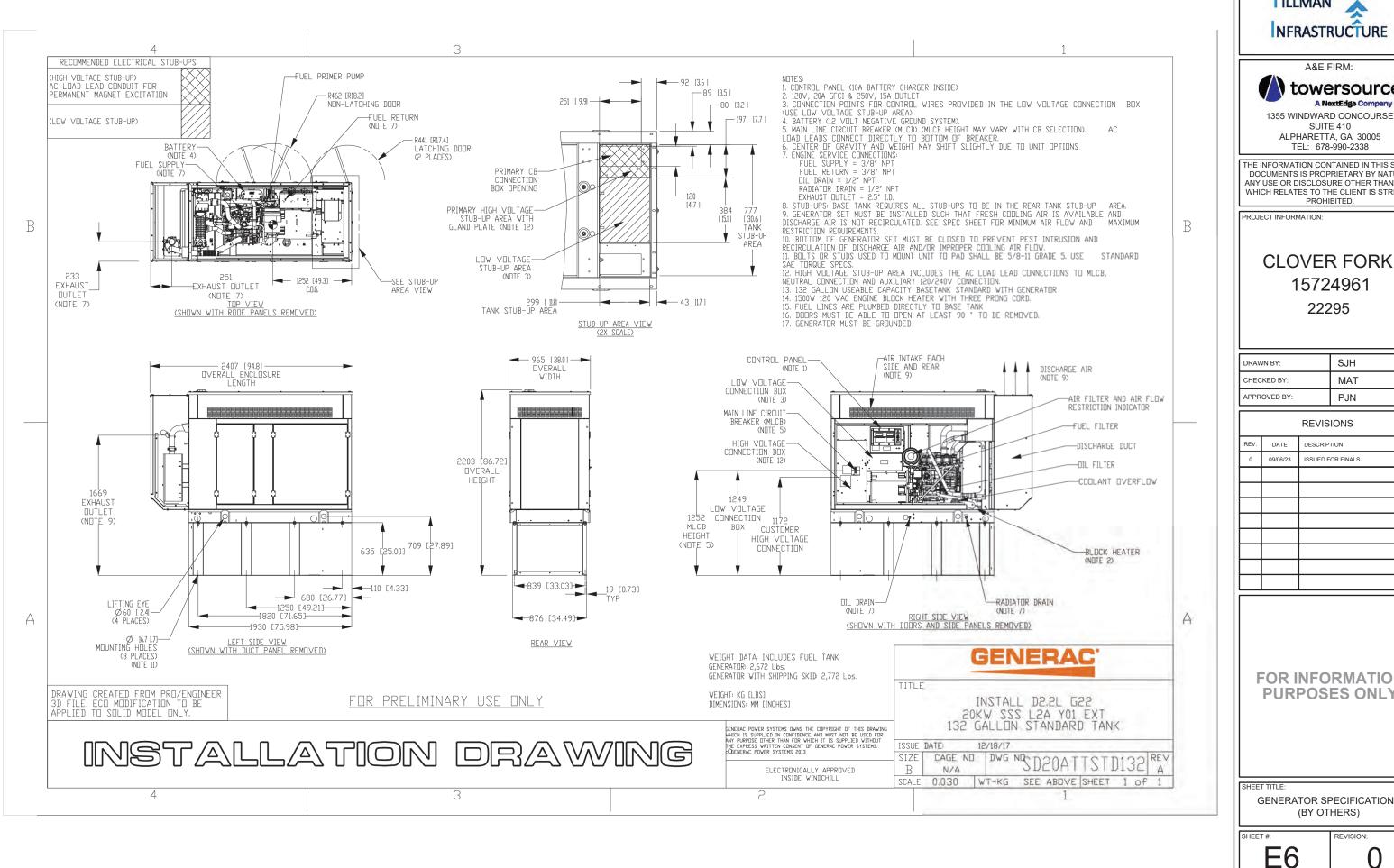
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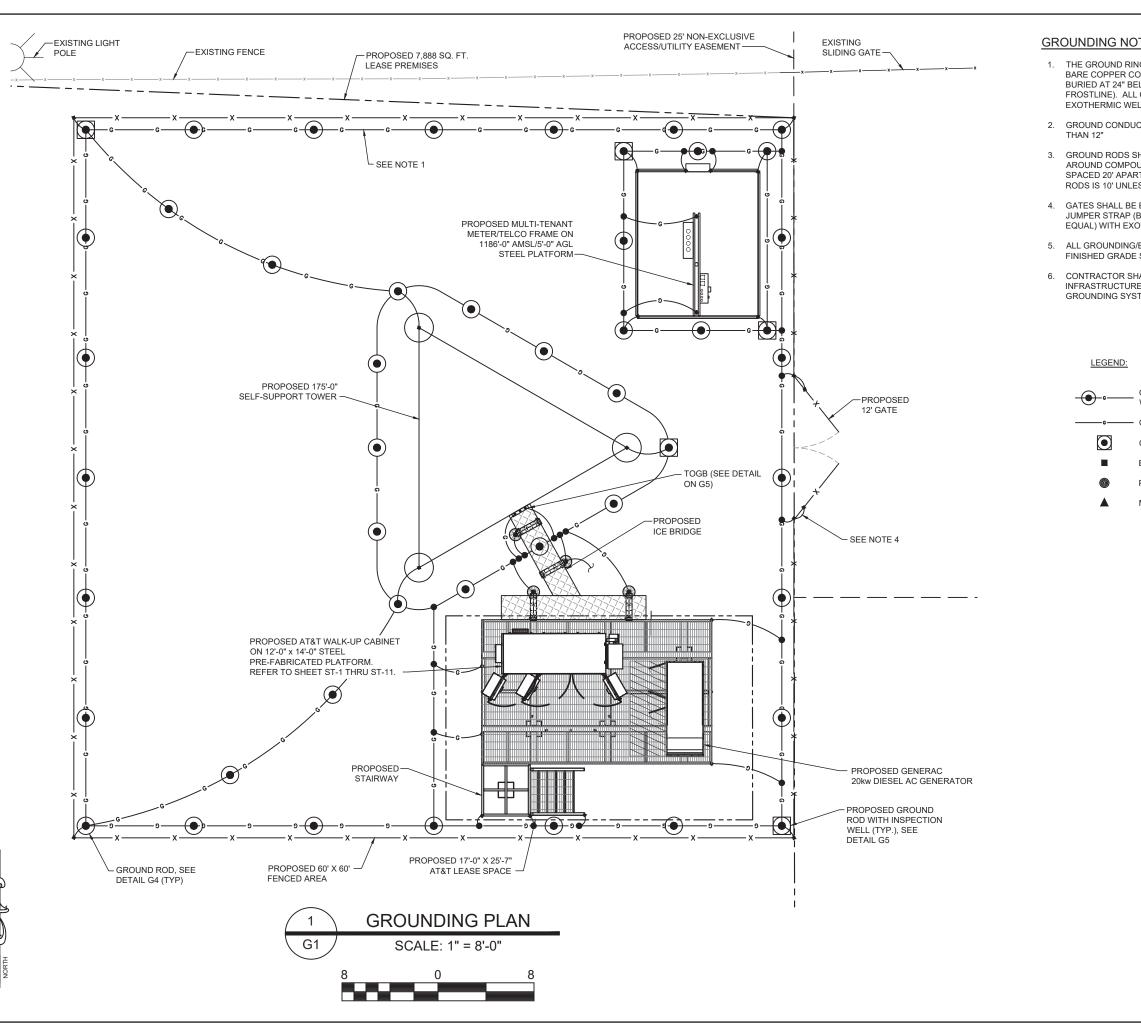
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**GENERATOR SPECIFICATIONS** (BY OTHERS)



## GROUNDING NOTES AND SPECIFICATIONS:

- 1. THE GROUND RING SHALL CONSIST OF 2 AWG TINNED SOLID BARE COPPER CONDUCTOR, UNLESS NOTED OTHERWISE, BURIED AT 24" BELOW FINISHED GRADE ( OR 6" BELOW FROSTLINE). ALL CONNECTIONS SHALL BE MADE USING AN EXOTHERMIC WELD, UNLESS NOTED OTHERWISE.
- 2. GROUND CONDUCTOR BEND RADIUS SHALL NOT BE LESS
- GROUND RODS SHOULD BE SPACED 2X HEIGHT APART AROUND COMPOUND GROUND RING. (EX. 10' ROD SHOULD BE SPACED 20' APART). MINIMUM SPACING BETWEEN GROUND RODS IS 10' UNLESS NOTED OTHERWISE.
- 4. GATES SHALL BE BONDED TO GATE POSTS USING FLEXIBLE JUMPER STRAP (BELDEN 8662 FLAT BRAID TINNED COPPER OR EQUAL) WITH EXOTHERMIC WELDS.
- 5. ALL GROUNDING/BONDING CONDUCTORS LOCATED ABOVE FINISHED GRADE SHALL BE RUN IN 1/2" FLEX CONDUIT.
- 6. CONTRACTOR SHALL NOTIFY THE OWNER/TENANT TILLMAN INFRASTRUCTURE CONSTRUCTION MANAGER TO INSPECT THE GROUNDING SYSTEM PRIOR TO BACKFILLING.

GROUND ROD EXOTHERMICALLY WELDED TO GROUND RING

GROUND RING

GROUND ROD INSPECTION WELL

■ EXOTHERMIC WELD TYPE CONNECTION

PARALLEL CADWELD

MECHANICAL CONNECTION

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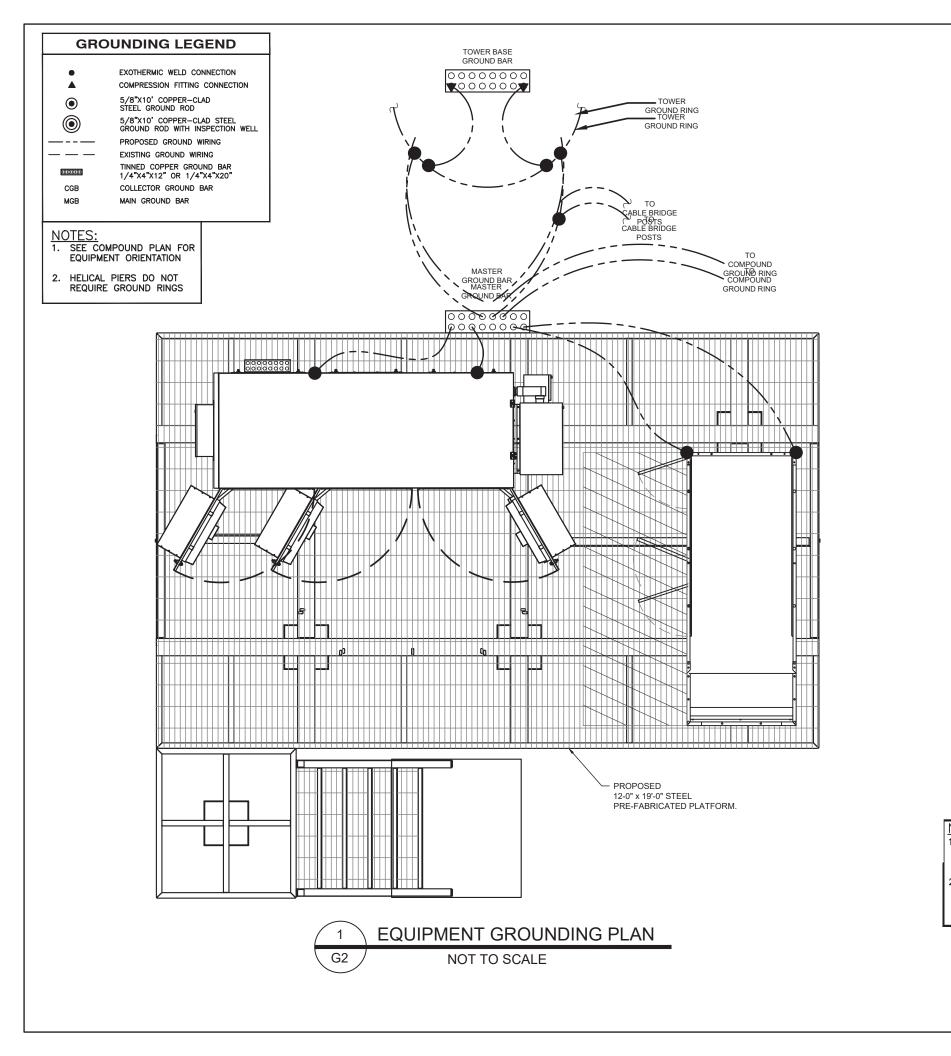
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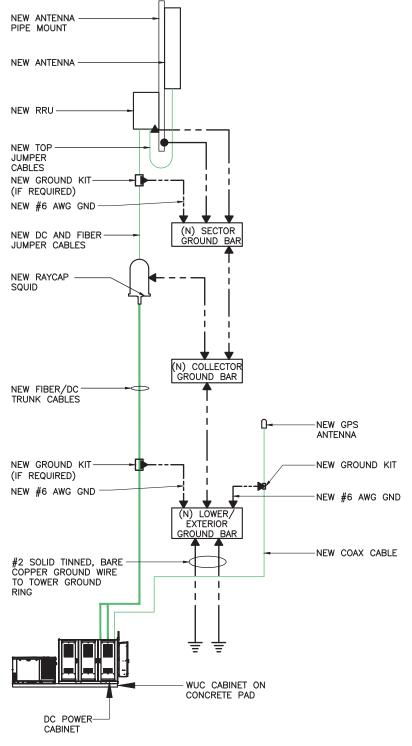
**GROUNDING PLAN** 

SHEET#:

REVISION:

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- (1) ANTENNA/RRU/ RAYCAP SHOWN FOR CLARITY.

  GROUNDING IS TYPICAL FOR
  EACH ADDITIONAL
  ADDITIONAL CABLE GROUND KIT
  REQUIRED AT MIDPOINT FOR
- CABLE LENGTHS GREATER THAN 200 FT.
- LEGEND: EXOTHERMIC CONNECTION
- MECHANICAL CONNECTION GROUND KIT
- #2 GREEN STRANDED INSULATED COPPER GND WIRE (SUNLIGHT RESISTANT) U.N.O.

TYPICAL RISER DIAGRAM G2 NOT TO SCALE

PREPARED FOR:





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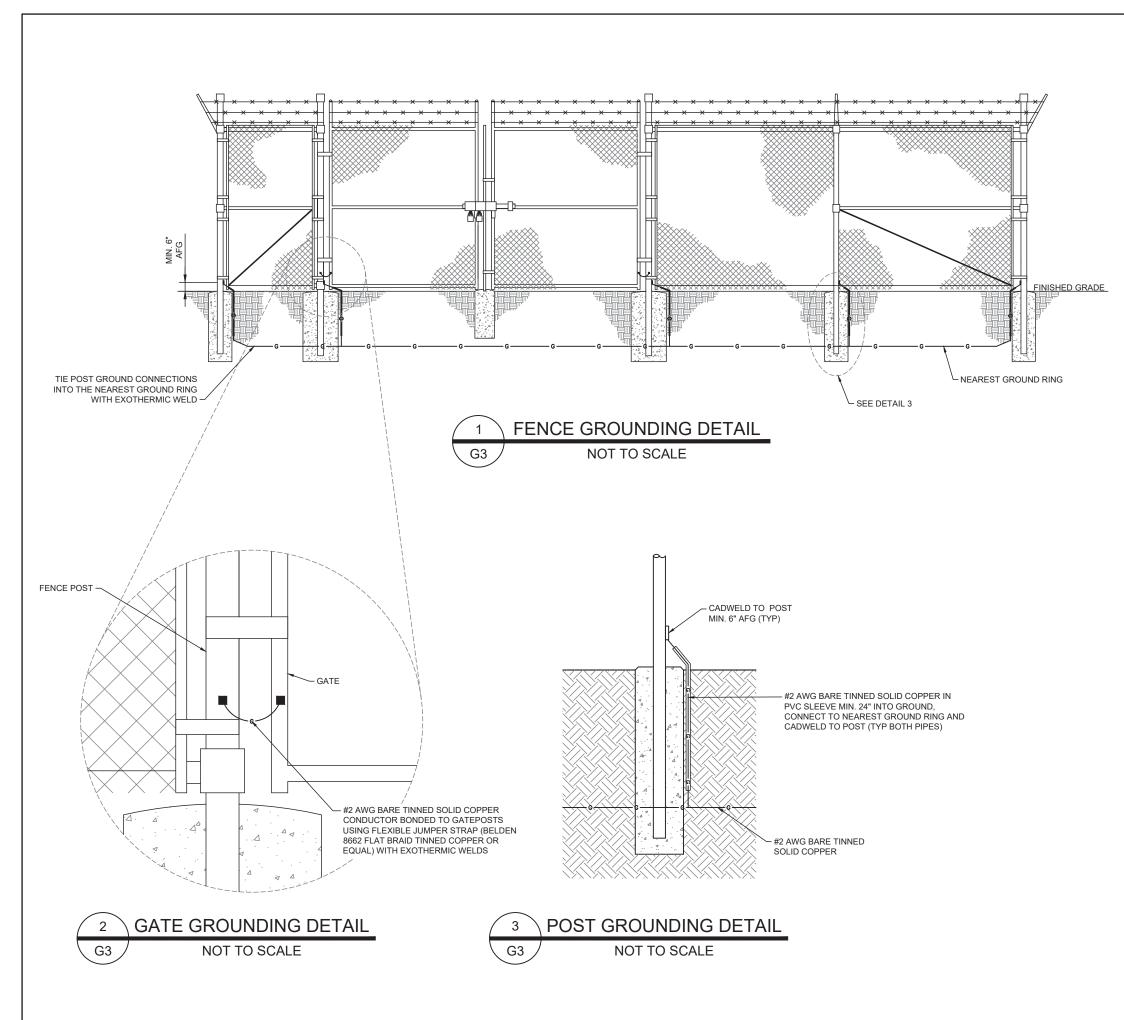
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**EQUIPMENT GROUNDING** PLAN AND RISER DIAGRAM

G2



GUY ANCHOR CONNECTION NOTES:

- THE USE OF WIRE ROPE CLIPS AS DEAD END SLEEVES IS PROHIBITED.
- THE PREFERRED SAFETY LOOP IS A FIGURE 8
   CONFIGURATION. IN SOME CASES A SINGLE LOOP
   MAY BE REQUIRED AND IS PERMITTED WITH CROWN
   CASTLE APPROVAL.
- 3. THE TURNBUCKLE SAFETY LOOP SHALL BE ROUTED THROUGH THE THIMBLES AS SHOWN. THE SAFETY WIRE ROPE MAY BE ROUTED THROUGH A TURNBUCKLE EYEJAW IF IT IS THE PATH OF LEAST RESISTANCE AS LONG AS THE CONDITION DECREASES THE RISK OF DAMAGING THE PRE-FORM OR OTHER GUY ASSEMBLY HARDWARE.
- 4. THE TAG END OF GUY WIRES SHALL NOT TOUCH THE GROUND.
- 5. DEAD END SLEEVES SHALL BE INSTALLED SO FULLY EVEN WITH THE SHORT TAIL SIDE OF THE PRE-FORM.
- ALL EXISTING SCREW TYPE SHACKLES AT THE FAN PLATE SHALL HAVE MOUSING INSTALLED AS PART OF THE MODIFICATION.

#### FAN PLATE DIMENSION NOTES:

- CONTRACTOR TO OBTAIN DURING PRE-SITE
  CONSTRUCTION WALK AND SUBMIT TO THE EOR THE
  FOLLOWING DIMENSIONS: A, B, C, D, E AND F. PRIOR
  TO INSTALLATION OF THE NEW HARDWARE.
- NOTE: THERE ARE (5) HOLES IN EXISTING FAN INNER PLATE, NUMBER HOLE 1 THROUGH 5 STARTING AT BOTTOM AND (5) HOLES IN EXISTING FAN OUTER PLATE, NUMBER HOLES 1 THROUGH 5 STARTING AT BOTTOM END.

PREPARED FOR:



A&E FIRM:



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SHEET TITLE:

FENCE GROUNDING DETAILS

G3

REVISION:

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#### **GROUNDING NOTES:**

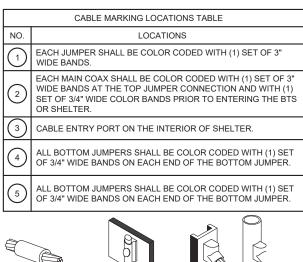
- GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE
- ALL GROUNDING DEVICES SHALL BE U.L. APPROVED OR LISTED FOR THEIR INTENDED USE.
- ALL WIRES SHALL BE AWG THHN/THWN COPPER UNLESS NOTED
- GROUNDING CONNECTIONS TO GROUND RODS, GROUND RING WIRE TOWER BASE AND FENCE POSTS SHALL BE EXOTHERMIC ("CADWELDS") UNLESS NOTED OTHERWISE. CLEAN SURFACES TO SHINY METAL. WHERE GROUND WIRES ARE CADWELDED TO GALVANIZED SURFACES. SPRAY CADWELD WITH GALVANIZING PAINT.
- GROUNDING CONNECTIONS TO GROUND BARS ARE TO BE TWO-HOLE BRASS MECHANICAL CONNECTORS WITH STAINLESS STEEL HARDWARE (INCLUDING SCREW SET) CLEAN GROUND BAR TO SHINY METAL. AFTER MECHANICAL CONNECTION, TREAT WITH PROTECTIVE ANTIOXIDANT COATING
- GROUND COAXIAL CABLE SHIELDS AT BOTH ENDS WITH MANUFACTURER'S GROUNDING KITS.
- ROUTE GROUNDING CONDUCTORS THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. BEND GROUNDING LEADS WITH A MINIMUM 12" RADIUS.
- INSTALL #2 AWG GREEN-INSULATED STRANDED WIRE FOR ABOVE GRADE GROUNDING AND #2 BARE TINNED COPPER WIRE FOR BELOW GRADE GROUNDING UNLESS OTHERWISE NOTED
- REFER TO GROUNDING PLAN FOR GROUND BAR LOCATIONS. GROUNDING CONNECTIONS SHALL BE EXOTHERMIC TYPE ("CADWELDS") TO ANTENNA MOUNTS AND GROUND RING. REMAINING GROUNDING CONNECTIONS SHALL BE COMPRESSION FITTINGS. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO-HOLE LUGS.
- 10. THE GROUND ELECTRODE SYSTEM SHALL CONSIST OF DRIVEN GROUND RODS POSITION ACCORDING TO GROUNDING PLAN. THE GROUND RODS SHALL BE 5/8"X10'-0" COPPER CLAD STEEL INTERCONNECTED WITH #2 BARE TINNED COPPER WIRE BURIED 36" BELOW GRADE BURY GROUND RODS A MAXIMUM OF 15' APART, AND A MINIMUM OF 8' APART
- 11. IF ROCK IS ENCOUNTERED GROUND RODS SHALL BE PLACED AT AN OBLIQUE ANGLE NOT TO EXCEED 45°
- 12. EXOTHERMIC WELDS SHALL BE MADE IN ACCORDANCE WITH ERICO PRODUCTS BULLETIN A-AT.
- 13. CONSTRUCTION OF GROUND RING AND CONNECTIONS TO EXISTING GROUND RING SYSTEM SHALL BE DOCUMENTED WITH PHOTOGRAPHS PRIOR TO BACKFILLING SITE, PROVIDE PHOTOS TO THE CARRIER CONSTRUCTION MANAGER.
- 14. ALL GROUND LEADS EXCEPT THOSE TO THE EQUIPMENT ARE TO BE #2 BARE TINNED COPPER WIRE. ALL EXTERIOR GROUND BARS TINNED
- 15. PRIOR TO INSTALLING LUGS ON GROUND WIRES, APPLY THOMAS & BETTS KOPR-SHIELD (TM OF JET LUBE INC.). PRIOR TO BOLTING GROUND WIRE LUGS TO GROUND BARS, APPLY KOPR-SHIELD OR EQUAL
- 16 ENGAGE AN INDEPENDENT FLECTRICAL TESTING FIRM TO TEST AND VERIFY THAT IMPEDANCE DOES NOT EXCEED FIVE OHMS TO GROUND BY MEANS OF "FALL OF POTENTIAL TEST". TEST SHALL BE WITNESSED BY A CARRIER REPRESENTATIVE, AND RECORDED ON THE "GROUND
- 17. WHERE BARE COPPER GROUND WIRES ARE ROUTED FROM ANY CONNECTION ABOVE GRADE TO GROUND RING, INSTALL WIRE IN 3/4" PVC SLEEVE, FROM 1' BELOW GRADE AND SEAL TOP WITH SILICONE
- 18. PREPARE ALL BONDING SURFACES FOR GROUNDING CONNECTIONS BY REMOVING ALL PAINT AND CORROSION DOWN TO SHINY METAL. FOLLOWING CONNECTION, APPLY APPROPRIATE ANTI-OXIDIZATION
- ANY SITE WHERE THE EQUIPMENT (BTS, CABLE BRIDGE, PPC, GENERATOR, ETC.) IS LOCATED WITHIN 6 FEET OF METAL FENCING, THE GROUND RING SHALL BE BONDED TO THE NEAREST FENCE POST USING (3) RUNS OF #2 BARE TINNED COPPER WIRE

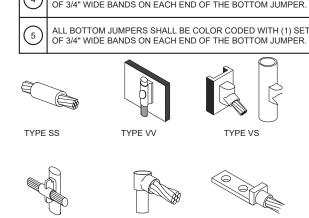
#### CABLE COLOR CODING NOTES:

- SECTOR ORIENTATION/AZIMUTH WILL VARY FROM REGION AND IS SITE SPECIFIC REFER TO BE REPORT FOR EACH SITE TO DETERMINE THE ANTENNA LOCATION AND FUNCTION OF EACH TOWER SECTOR FACE.
- THE ANTENNA SYSTEM CABLES SHALL BE LABELED WITH VINYL TAPE EXCEPT IN LOCATIONS WHERE ENVIRONMENTAL CONDITIONS CAUSE PHYSICAL DAMAGE, THEN PHYSICAL TAGS ARE PREFERRED.
- THE STANDARD IS BASED ON EIGHT COLORED TAPES RED, BLUE, GREEN, YELLOW, ORANGE, BROWN, WHITE & VIOLET. THESE TAPES MUST BE 3/4" WIDE & UV RESISTANT SUCH AS SCOTCH 35 VINYL ELECTRICAL COLOR CODING TAPE AND SHOULD BE READILY AVAILABLE TO THE ELECTRICIAN OR SUBCONTRACTOR ON SITE.
- USING COLOR BANDS ON THE CABLES, MARK ALL RF CABLES BY SECTOR AND NUMBER AS SHOWN ON "CABLE MARKING COLOR CONVENTION
- WHEN AN EXISTING COAXIAL LINE THAT IS INTENDED TO BE A SHARED LINE BETWEEN GSM/3G AND IS-136 TDMA IS ENCOUNTERED. THE SUBCONTRACTOR SHALL REMOVE THE EXISTING COLOR CODING SCHEME AND REPLACE IT WITH THE COLOR CODING AND TAGGING STANDARD THAT IS OUTLINED IN THE CURRENT VERSION OF ND-00027. IN THE ABSENCE OF AN EXISTING COLOR CODING TAGGING SCHEME, OR WHEN INSTALLING PROPOSED COAXIAL CABLES, THIS GUIDELINE SHALL BE IMPLEMENTED AT THAT SITE REGARDLESS OF TECHNOLOGY.
- ALL COLOR CODE TAPE SHALL BE 3M-35 AND SHALL BE A MINIMUM OR (3) WRAPS OF TAPE AND SHALL BE NEATLY TRIMMED AND SMOOTHED OUT SO AS TO AVOID UNRAVELING.
- ALL COLOR BANDS INSTALLED AT THE TOP OF TOWER SHALL BE A MINIMUM OF 3" WIDE AND SHALL HAVE A MINIMUM OF 3/4" OF SPACE IN BETWEEN
- ALL COLOR CODES SHALL BE INSTALLED AS TO ALIGN NEATLY WITH ONE ANOTHER FROM SIDE TO SIDE.
- IF EXISTING CABLES AT THE SITE ALREADY HAVE A COLOR CODING SCHEME AND THEY ARE NOT INTENDED TO BE REUSED OR SHARED WITH THE GSM TECHNOLOGY, THE EXISTING COLOR CODING SCHEME SHALL REMAIN UNTOUCHED.

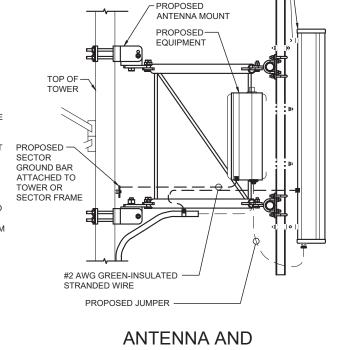
## CABLE MARKING TAGS:

WHEN USING THE ALTERNATIVE LABELING METHOD, EACH RF CABLE SHALL BE IDENTIFIED WITH A METAL ID TAG MADE OF STAINLESS STEEL OR BRASS. THE TAG SHALL BE 1-1/2" IN DIAMETER WITH 1/4" STAMPED LETTERS AND NUMBERS INDICATION THE SECTOR, ANTENNA POSITION AND CABLE NUMBER. ID MARKING LOCATIONS SHOULD BE AS PER "CABLE MARKING LOCATIONS TABLE" THE TAG SHOULD BE ATTACHED WITH CORROSION PROOF WIRE AROUND THE CABLE AT THE SAME LOCATION AS DEFINED ABOVE. THE TAG SHOULD BE LABELED AS SHOWN ON THE "GSM AND UMTS LINE TAG" DETAIL.





TYPE GR

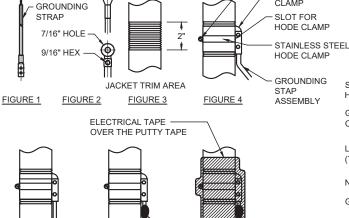


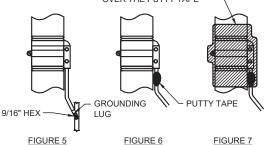
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ANTENNA

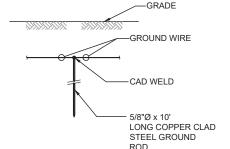








**GROUNDING STRAP** WEATHERPROOFING DETAILS



## GROUNDING ROD DETAIL SCALE: N.T.S. S/S BELLEVILLE WASHER S/S FLAT WASHER HEAT SHRINK (CLEAR S/S NUT - COPPER - LABEL S/S BOLT HEAT S/S FLAT WASHER (CLEAR)

#### NOTES:

15/16" HEX

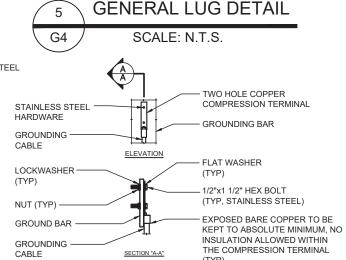
CLAMP

GROUNDING

- ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH ANTI-OXIDATION COMPOUND BEFORE MATING.
- FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH ANTI-OXIDATION COMPOUND.
- COAT ALL BARRELS WITH ANTI-OXIDATION COMPOUND BEFORE

"DO NOT DISCONNECT" TAG ON

ALL GROUND BAR INTERCONNECTS



1. "DOUBLING UP" OR "STACKING" OF CONNECTIONS IS NOT PERMITTED. 2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.



ILLMAN

NFRASTRUCTURE

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**GROUNDING DETAILS AND NOTES** 

G4

G4

TYPE PT

TYPE VB

TYPE NC

TYPE GT

SCALE: N.T.S.

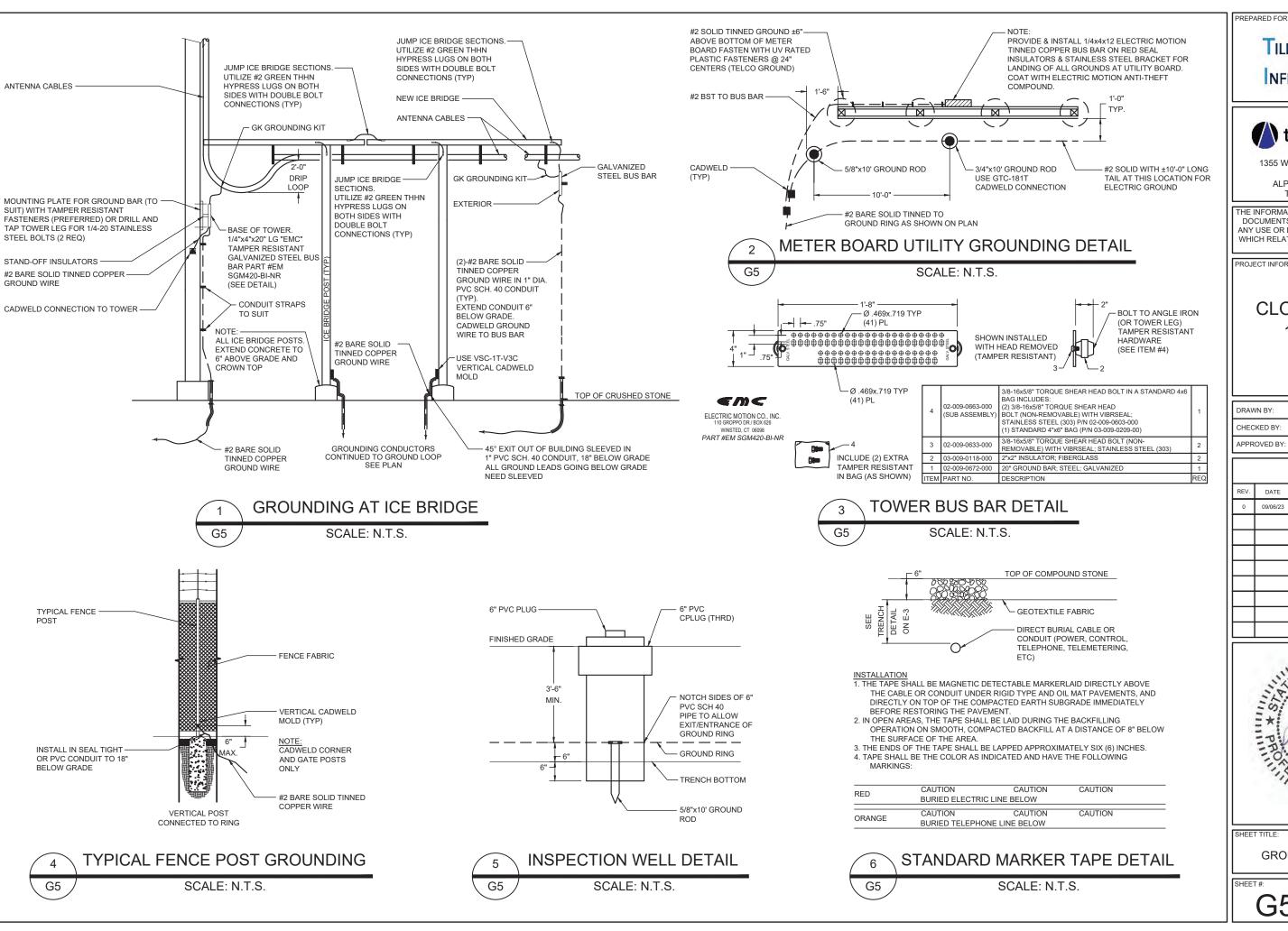
CADWELD GROUNDING CONNECTION DETAILS

TYPE GY

G4

TYPE GL

SCALE: N.T.S.





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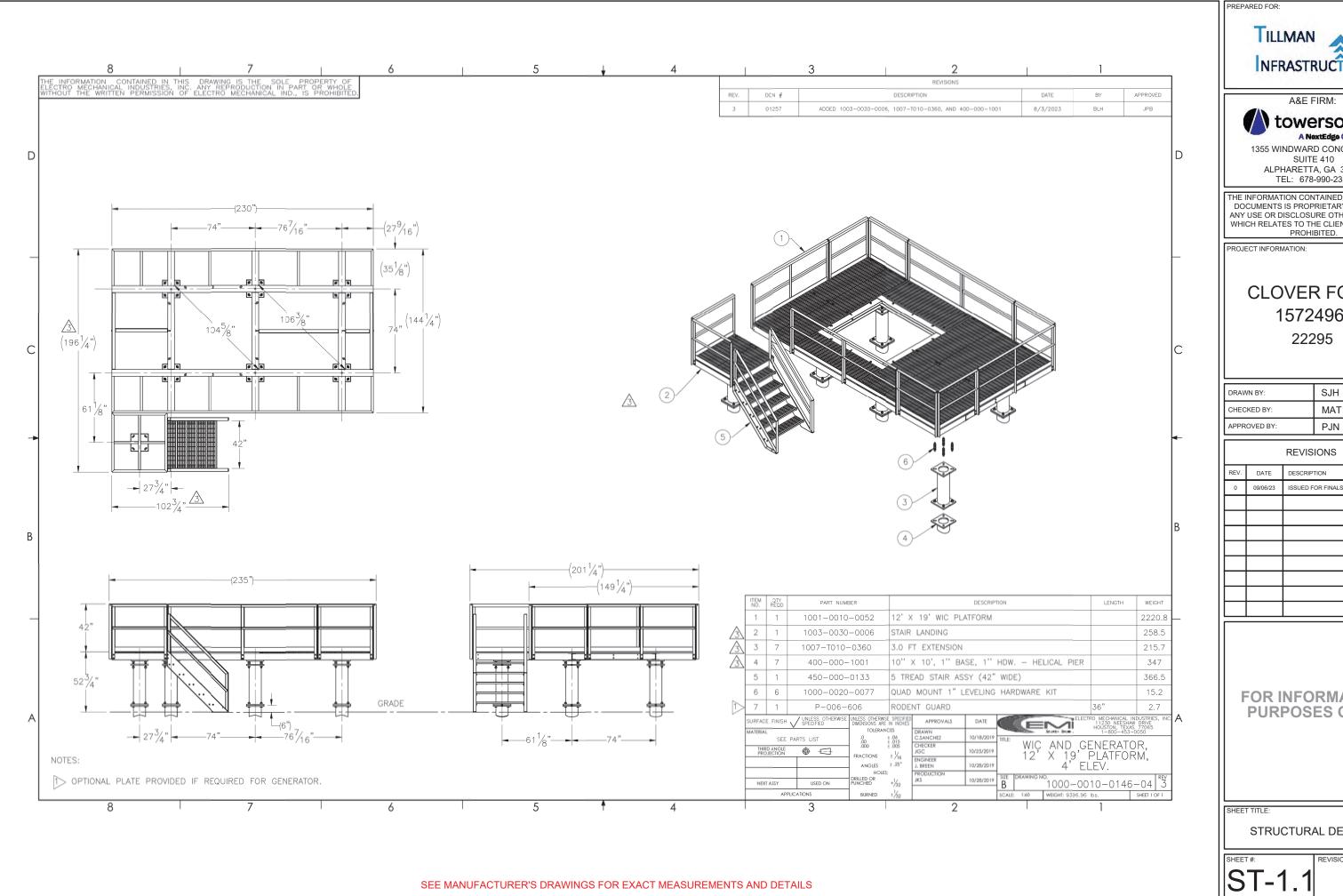
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**GROUNDING DETAILS** 

G5

REVISION





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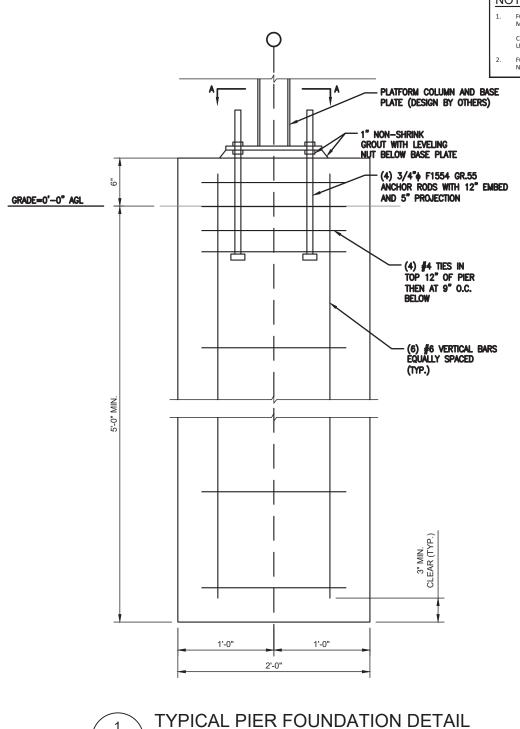
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STRUCTURAL DETAILS



SCALE: 1" =1'-0"

NOTES:

FOUNDATION DESIGN BASED ON THE FOLLOWING BASE DESIGN REACTIONS PROVIDED BY THE PRE-ENGINEERED PLATFORM MANUFACTURER (ELECTRO MECHANICAL INDUSTRIES, INC):

COMPRESSION (ASD LEVEL): AXIAL = 8.34 KIPS, SHEAR = 3.33 KIPS, MOMENT = 4.15 K-FT UPLIFT (ASD LEVEL): AXIAL = 1.31 KIPS, SHEAR = 6.45 KIPS, MOMENT = 19.35 K-FT

FOUNDATION DESIGN BASED ON THE GEOTECHNICAL REPORT BY ENVIRONMENTAL CORPORATION OF AMERICAN, PROJECT NO. 23-00518, DATED 03/15/2023.

PREPARED FOR:



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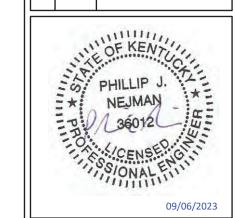
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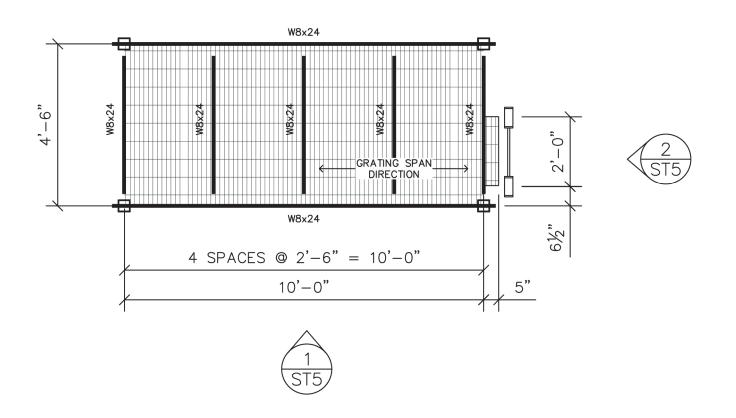
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FOUNDATION DETAILS



METER RACK PLATFORM FRAMING/GRATING PLAN
SCALE: 3/8" = 1'-0"

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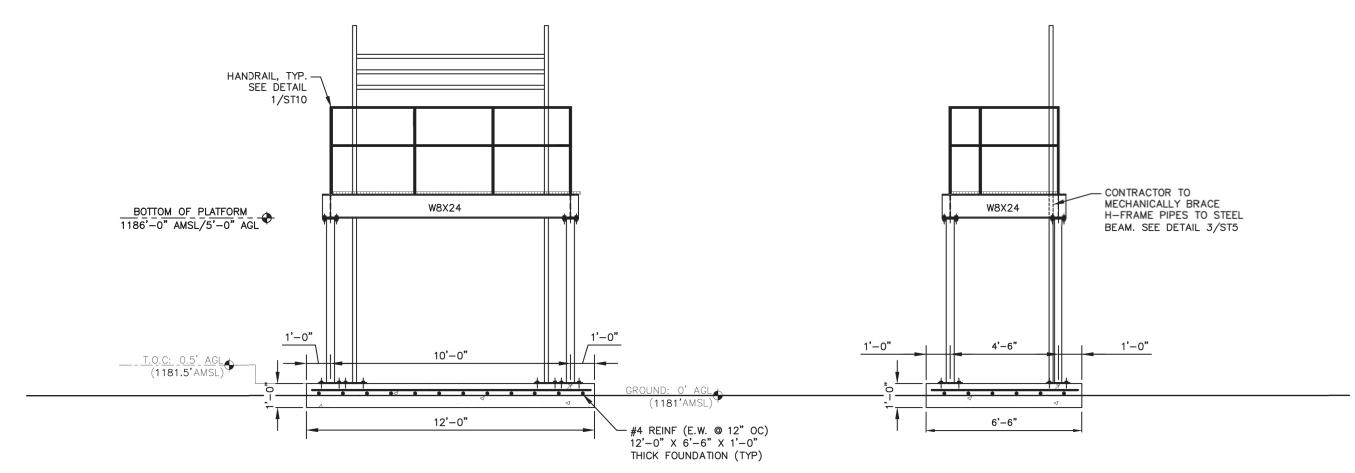
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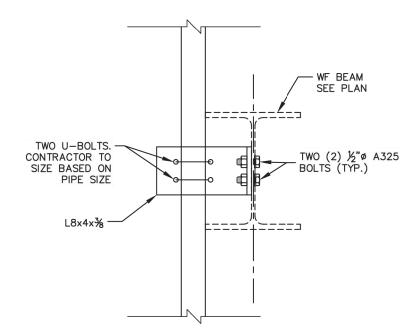
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STRUCTURAL DETAILS



METER RACK PLATFORM FRONT VIEW SCALE: 1/4" = 1'-0"

METER RACK PLATFORM SIDE VIEW SCALE: 1/4" = 1'-0"



METER RACK PLATFORM CONNECTION DETAIL

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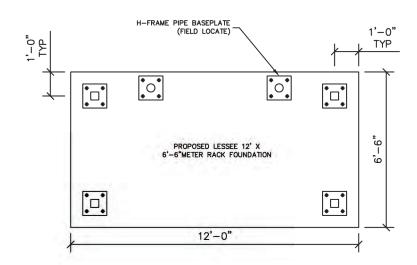
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STRUCTURAL DETAILS

SEE MANUFACTURER'S DRAWINGS FOR EXACT MEASUREMENTS AND DETAILS



METER RACK PLATFORM FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

PREPARED FOR:



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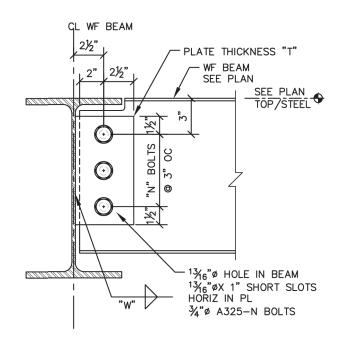
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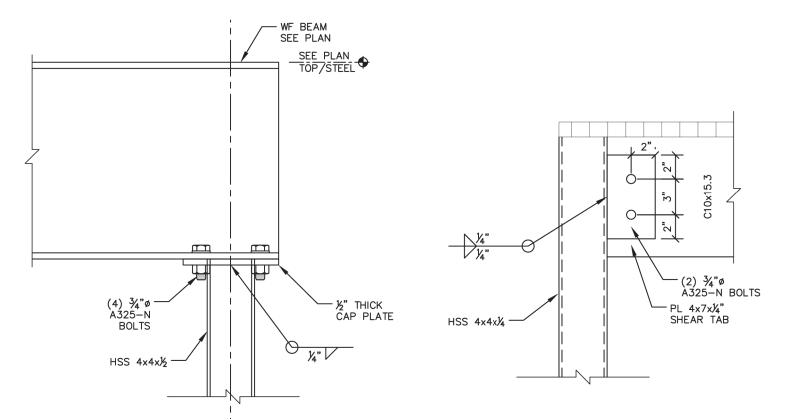
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**FOR INFORMATION PURPOSES ONLY** 

STRUCTURAL DETAILS

CONNECTION SCHEDULE			
BEAM SIZE "N" NO. OF "T" PLATE THICKNESS "W" WEL			
W8	2	1/4"	3/16"
W10	2	1/4"	3/16"

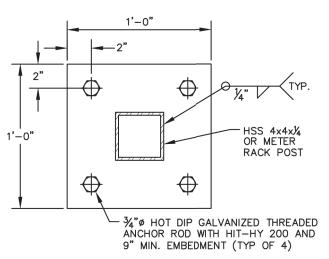




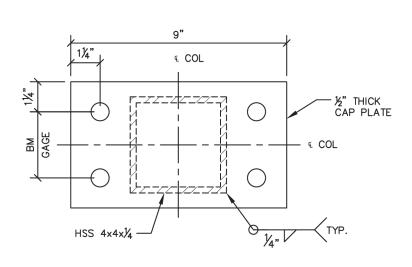
BEAM OVER EXTERIOR COLUMN

3 BEAM TO COLUMN CONN. (LANDING)
SCALE: 1-1/2" = 1'-0"

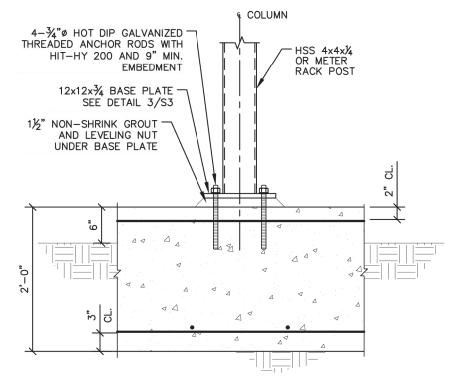
# BEAM TO BEAM CONNECTION SCALE: 1-1/2" = 1'-0"







5 CAP PLATE DETAIL
ST-7 SCALE: 3" = 1'-0"



6 COLUMN CONNECTION TO MAT FOUNDATION
SCALE: 3/4" = 1'-0"

PREPARED FOR:



A&E FIRM:



1355 WINDWARD CONCOURSE SUITE 410 ALPHARETTA, GA 30005 TEL: 678-990-2338

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PROJECT INFORMATION:

CLOVER FORK 15724961 22295

ı		
	DRAWN BY:	SJH
	CHECKED BY:	MAT
	APPROVED BY:	PJN

	REVISIONS		
REV.	DATE	DESCRIPTION	
0	09/06/23	ISSUED FOR FINALS	

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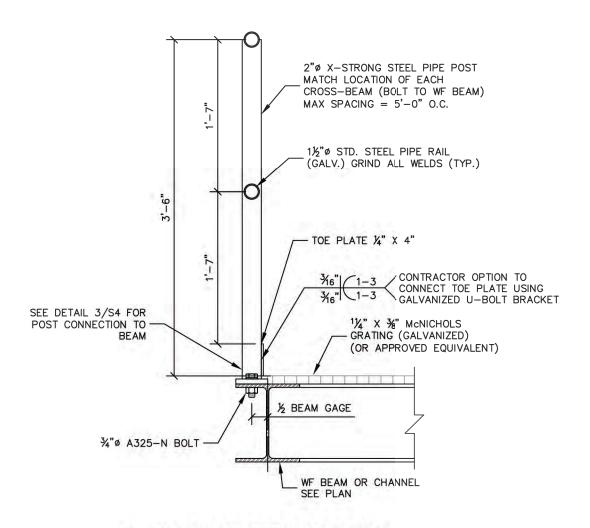
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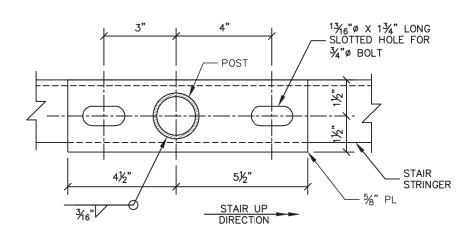
STRUCTURAL DETAILS

HEET#:

REVISION:

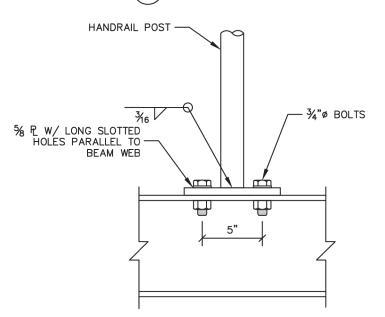
ST-7

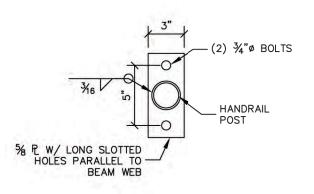


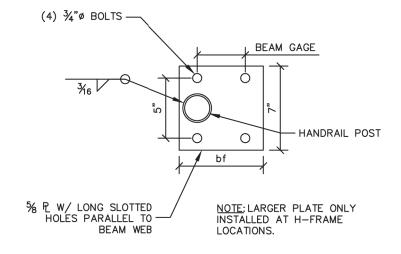


# 2 HANDRAIL ON STRINGER DETAIL SCALE: 3" = 1'-0"

# HANDRAIL ON BEAM DETAIL SCALE: 1" = 1'-0"







4 F ST-10 S

3 HANDRAIL ON BEAM DETAIL
SCALE: 1-1/2" = 1'-0"

HANDRAIL TO BEAM CONNECTION DETAILS

SCALE: 1-1/2" = 1'-0"

PREPARED FOR:



A&E FIRM:



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	REV.	DATE	DESCRIPTION
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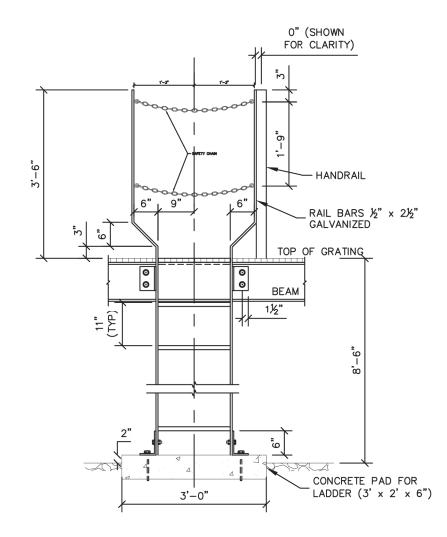
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STRUCTURAL DETAILS

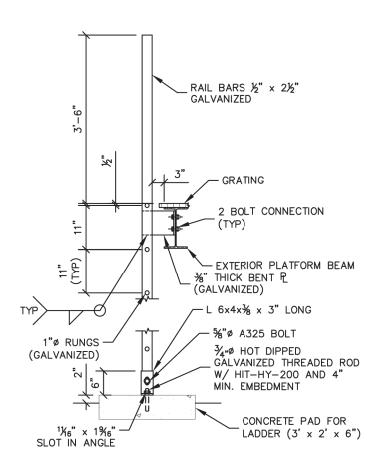
SHEET#:

REVISION:

T-10



CLIMBING LADDER DETAIL
SCALE: 1/2" = 1'-0"



CLIMBING LADDER SECTION
SCALE: 1/2" = 1'-0"

PREPARED FOR:





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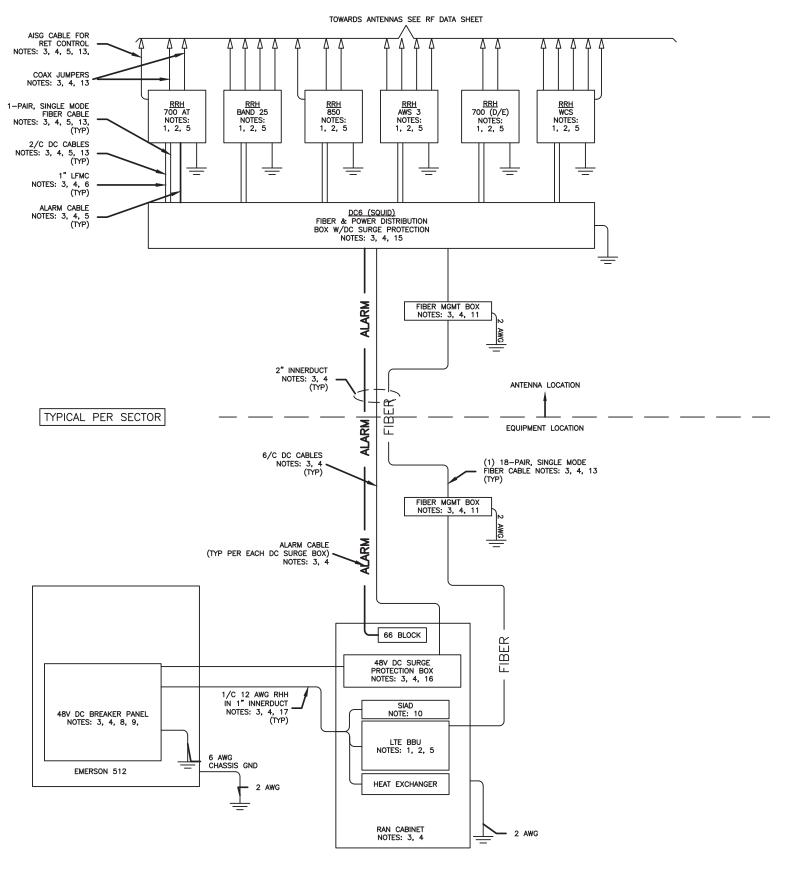
SHEET TITLE

STRUCTURAL DETAILS

SHEET#:

REVISION

ST-11



NOTES:

- FURNISHED BY OFM/AT&T.
- INSTALLED BY OEM OR AS SCOPED BY MARKET.
- FURNISHED BY OTHERS INSTALLED BY OTHERS

- FINAL CONNECTION BY OEM OR AS SCOPED BY MARKET.

  OPEN END OF LFMC TO BE LEFT WEATHERPROOFED UNTIL TERMINATED.
- DELETED.
  BREAKERS SPECIFIED SOLD SEPERATELY.
  BREAKERS TO BE TAGGED AND LOCKED OUT.
- SIAD IS FURNISHED AND INSTALLED BY OTHERS AND INCLUDES
   POWER CONNECTIONS AND FIBER TO THE UNIT OR AS SCOPED BY
   MARKET. INSTALL 10 AWG CHASSIS GROUND, PROVIDE (2) 10A BREAKERS FROM A 24V DC POWER SOURCE OR (2) 5A BREAKERS FROM A 48V DC POWER SOURCE AND CONNECT USING MFR POWER CABLE WITH SPECIAL CONNECTOR.
- 11. FIBER MANAGEMENT BOX IS J-SOURCE MODEL 12126FM4SEC
- LEC TO FURNISH AND INSTALL NETWORK INTERFACE DEVICE.
   LEAVE COILED AND PROTECTED UNTIL TERMINATED.
   SEE DETAIL 1408 FOR DC POWER CABLE SIZES.
- 15. FIBER AND POWER DISTRIBUTION BOX 4/48V SURGE SHALL BE
- RAYCAP MODEL DC6-48-60-18-8F.

  16. POWER DISTRIBUTION W/DC SURGE PROTECTION BOX SHALL BE RAYCAP MODEL DC6-48-60-0-18.
- KAYCAP MODEL DIC-48-80-0-18.

  7. SINGLE-CONDUCTOR DC POWER CABLES SHALL BE TELCOFLEX OR KS24194, COPPER, UL LISTED RHH NON-HALOGEN, LOW SMOKE WITH BRAIDED COVER, TYPE TC (1/0 AND LARGER). UNLESS OTHERWISE NOTED, STRANDING SHALL BE CLASS B (TYPE III) FOR CABLES SIZES 14, 12 & 10 AWG AND CLASS 1 (TYPE IV) FOR SIZES 8 AWG AND LARGER. CABLES SHALL BE COLOR CODED RED FOR +24V, BLUE FOR -48V AND GRAY FOR 24V AND 48V RETURN CONDUCTORS. MULTI-CONDUCTOR DC POWER CABLES SHALL COPPER, CLASS B STRANDED WITH FLAME RETARDANT PVC JACKET, TYPE TC, UL LISTED FOR 90°C DRY/ 75°C WET
- INSTALLATION.

  18. 10A FUSE FOR HEAT EXCHANGER FURNISHED AND INSTALLED BY OTHERS.
- 19. DELETED
- GROUNDING WIRES SHALL BE COPPER, GREEN THHN/THWN UL LISTED FOR 90°C DRY/75°C WET INSTALLATION. MINIMUM SIZE IS 6 AWG UNLESS NOTED OTHERWISE.
- RET CONTROL FROM THE RRH IS AN OPTIONAL METHOD OF CONNECTION. REFER TO RF DATA SHEET FOR APPLICABILITY
- 22. DELETED.
- 23. FIBER AND POWER DISTRIBUTION BOX 4/48V SURGE SHALL BE
- RAYCAP MODEL DG6-48-60-0-1E.

  24. FIBER MANAGEMENT BOX IS COMMSCOPE MODEL FB 18188.
- 25. FIBER AND POWER DISTRIBUTION BOX 4/48V SURGE SHALL BE RAYCAP MODEL DC12-48-60-0-25E.

PREPARED FOR:



A&E FIRM:



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APPROVED BY:	PJN

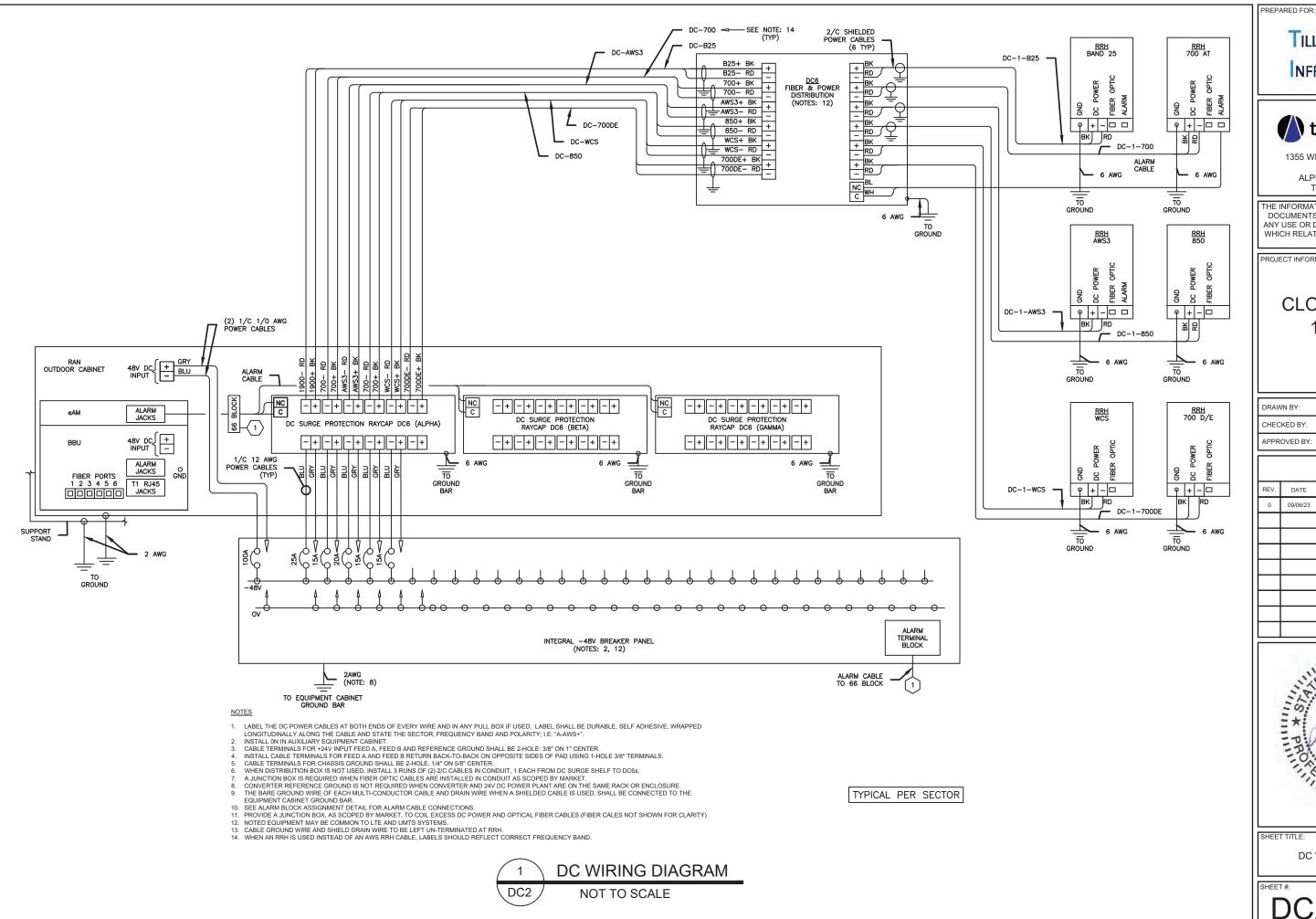
	REVISIONS		
	REV.	DATE	DESCRIPTION
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DC/FIBER SYSTEM DIAGRAM

REVISION





TILLMAN NFRASTRUCTURE

A&E FIRM:



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DC WIRING DIAGRAM

REVISION

TBD

(FOR INFORMATION PURPOSES ONLY)



A&E FIRM: **towersource** 

A NextEdge Company

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PROJECT INFORMATION:

**CLOVER FORK** 15724961 22295

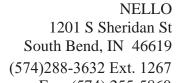
DRAWN BY:	SJH
CHECKED BY:	MAT
APPROVED BY:	PJN

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REV.	DATE	DESCRIPTION			
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TOWER AND FOUNDATION DESIGN (BY OTHERS)

T&F



Fax: (574) 255-5860 www.nelloinc.com



## **Tower and Foundation Drawing Package**

Sales Order: SO30980

Drawing Number(s)

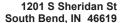
Tower: 633549 Foundation: 633550

Site Name: TI-OPP-22295 / Clover Fork

Location: Harlan County, KY

Prepared for: Tillman Infrastructure

Date: 08/28/2023





Phone: 574-288-3632 Fax: 574-288-5860 www.nelloinc.com

August 24, 2023

Tillman Infrastructure 152 W 57th Street New York, NY 10019

Re: Nello Tower Fall Radius – Nello 175' NSX Lattice Self-Support Tower

Project Name: TI-OPP-22295/Clover Fork

Nello Job #: SO30980 Tower Drawing #: 633549

To Whom It May Concern:

This letter is regarding your inquiry about the expected performance of your proposed tower designed by Nello based on site-specific criteria.

Our towers are designed to meet or exceed industry standards defined by TIA-222-H, "Structural Standards for Antenna Supporting Structures and Antennas" (TIA Standard). It is our opinion that the possibility of a tower collapse is very unlikely. The tower is designed using extreme wind and ice conditions. In fact, wind speeds specified by the TIA Standard are 50-year wind speeds. That is, they have only a 2% statistical chance of occurring in any given year.

This tower has been designed using the following wind conditions as a minimum: a 105 mph 3-second gust ultimate wind speed with no ice and a 30 mph 3-second gust wind with 1" ice. The TIA Standard specifies 105 mph as the ultimate wind speed required for this site in Harlan County, KY. The "3-second gust wind speed" refers to a wind measured at 33 feet above the ground. Equations in the TIA Standard take into account that wind speed escalates with increasing height of the tower.

Although we cannot guarantee exactly how a tower would fall if it were to fail, the most likely mode of failure would be a buckling failure of one of the tower sections due to excessive wind loading. The tower leg with the highest stress ratio is located at the 120' – 140' level. The stress ratio in that leg is calculated to be 100% of the code-permitted design loading. Given that the tower section with the highest stress ratio will most likely fail first, the proposed tower would fail at the 120' level with the top 55' of the tower collapsing. Depending on the conditions at the time of failure and the stress levels in structural material below, the top 55' of the tower would likely fall within a 0' fall radius.

The fall radius statement above assumes proper foundation construction and tower installation. The foundation design should be reviewed to ensure that no foundation limit state governs the entire structural system and negates the fall radius design. The fall radius expectancy requires that the foundation be designed with a capacity greater than that of the tower capacity. If the foundation design used in association with this tower is performed by a third party then Nello must be provided the opportunity to review the design in order to confirm that the fall radius remains satisfactory. If for some reason Nello does not provide the tower design or is not given the opportunity to design or review the foundation for this specific project then the content of this letter becomes void.

If you have any other questions or concerns regarding the design of your site-specific tower, please contact our engineering or sales department.

Sincerely,

Jason M. Lambert, PE Vice President of Engineering



175.3' <del>-</del>	$\boxtimes$
160' —	
140' —	
120' —	
100'—	
80'-	
60' —	
40'-	
20'-	
0'-	

#### Self-Supporting Tower Section Data

Section Number	Bottom Elevation (ft)	Top Elevation (ft)	Model	Bottom Face Width (ft)	Top Face Width (ft)	Number of Panels	Leg Size (in)	Diagonal Size (in)	Girt Size (in)	Mid-Horizontal Size (in)	Redundant Horizontal Size (in)	Redundant Diagonal Size (in)
9	160	175.3	NSX	6.5	6.5	3	P2x.154	L1 3/4x1 3/4x1/8	L2x2x1/8			
8	140	160	NSX	8.0	6.5	3	P3x.216	L2x2x3/16				
7	120	140	NSX	9.5	8.0	3	P4x.237	L2 1/2x2 1/2x3/16				
6	100	120	NSX	11.0	9.5	3	P6x.28	L2 1/2x2 1/2x3/16				
5	80	100	NSX	12.5	11.0	3	P8x.322	L2 1/2x2 1/2x1/4				
4	60	80	NSX	14.0	12.5	3	P8x.322	L3x3x3/16				
3	40	60	NSX	16.0	14.0	3	P8x.322	L3x3x3/16				
2	20	40	NSX	18.0	16.0	3	P8x.322	L3x3x3/16				
1	0	20	NSX	20.0	18.0	3	P10x.365	L3 1/2x3 1/2x1/4				

#### Tower Reactions

No Ice

Shear: 51.6 kips Moment: 5967.55 ft-kips Weight: 53.3 kips

With Ice

Shear: 6.0 kips Moment: 710.66 ft-kips Weight: 99.3 kips

Leg Reactions

Compression: 362.3 kips Uplift: -321.4 kips Shear: 33.2 kips

DATE	DESCRIPTION	

OF KEN
JASON
MARK
LAMBERT
No. 2821

TITLE:

Tillman Infrastructure NSX 20' X 175.3'

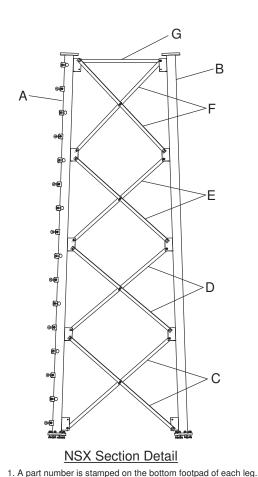
TI-OPP-22295 / Clover Fork

Harlan Co., KY



Fork 1201 S. Sheridan St. South Bend, IN 46619 Bus: (574)288-3632 Fax: (574)288-5860

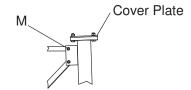
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	DWG. PROG: v2.05	SHEET: 1 OF 6		





## One plain nut and one lookwasher per bolt. Detail A: NSX Top Connection

\*Applicable to all 20 ft Sections. \*Applicable to all Sections Shorter than 20 ft and are Straight.



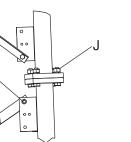
One plain nut and one lockwasher per bolt.

## Detail B: NSX Top Connection \*Applicable to all Sections Shorter than 20 ft

that are Tapered Sections.

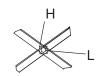
NSX Section Legend:

- A. Climbing Leg
- B. Non-Climbing Leg
- C. Diag., Panel 1
- D. Diag., Panel 2
- E. Diag., Panel 3
- F. Diag., Panel 4
- G. Top Girt
- H. Spacer
- J. Leg Bolts
- K. Diagonal Bolts
- L. Stitch Bolts
- M. Top Girt Bolts



One plain nut and one lockwasher per bolt.

## **NSX Leg Connection**



**NSX Spacer Detail** 



One plain nut and one lockwasher per bolt.

## **NSX Bracing Detail**



TITLE:

Tillman Infrastructure

NSX 20' X 175.3'

TI-OPP-22295 / Clover Fork



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2. A part number is stamped and /or labeled on the bottom end of each angle. 3. Be sure to place diagonal bracing angles in correct positions, angles in the

top panel may be longer than they are in the middle panel.

4. The bolt head must bear against the angle bracing.

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ORIG. DATE: 8/28/2023 DWG NO: 633549 DWG. PROG: v2.05 SHEET: 2 OF 6 Harlan Co., KY

#### **NSX Section Part Numbers**

Item	Elevation	Climbing Leg (A)	Non-Climbing Leg (B)	Diagonal - Panel 1 (C)	Diagonal - Panel 2 (D)	Diagonal - Panel 3 (E)	Diagonal - Panel 4 (F)	Top Girt (G)	Spacer (H)
9	160' - 175.3'	141418		167539	167540	167539		167279	132233
8	140' - 160'	141279		167274	167275	167276			132233
7	120' - 140'	141259		166883	166884	166885			132233
6	100' - 120'	129729		167243	167244	167245			132233
5	80' - 100'	129695		169691	169692	169693			132233
4	60' - 80'	187754		166874	166875	166876			132233
3	40' - 60'	129695		167990	167991	167992			132233
2	20' - 40'	129705		167984	167985	167986			132233
1	0' - 20'	190037		168462	168463	168464			132233

#### **NSX Section Hardware**

Item	Elevation	Leg Bolts (J)	Diagonal Bolts (K)	Stitch Bolts (L)	Top Girt Bolts (M)	Section Weight (Lbs.)
9	160' - 175.3'	(12) 3/4" x 3-1/2"	(36) 1/2" x 1-1/2"	(9) 1/2" x 1-1/2"	(6) 1/2" x 1-1/2"	670
8	140' - 160'	(24) 3/4" x 3-1/2"	(36) 1/2" x 1-1/2"	(9) 1/2" x 1-3/4"		1220
7	120' - 140'	(24) 3/4" x 3-1/2"	(36) 5/8" x 2-1/2"	(9) 5/8" x 2-1/2"		1650
6	100' - 120'	(24) 1" x 3-3/4"	(36) 5/8" x 2-1/2"	(9) 5/8" x 2-1/2"		2280
5	80' - 100'	(24) 1" x 3-3/4"	(36) 3/4" x 2-1/4"	(9) 3/4" x 2-1/4"		3260
4	60' - 80'	(24) 1" x 3-3/4"	(36) 3/4" x 2-1/4"	(9) 3/4" x 2-1/4"		3280
3	40' - 60'	(24) 1" x 3-3/4"	(36) 3/4" x 2-1/4"	(9) 3/4" x 2-1/4"		3400
2	20' - 40'	(30) 1" x 3-3/4"	(36) 3/4" x 2-1/4"	(9) 3/4" x 2-1/4"		3620
1	0' - 20'	0	(36) 3/4" x 2-1/4"	(9) 3/4" x 2-1/4"		5300



TITLE:

Tillman Infrastructure

NSX 20' X 175.3'

TI-OPP-22295 / Clover Fork

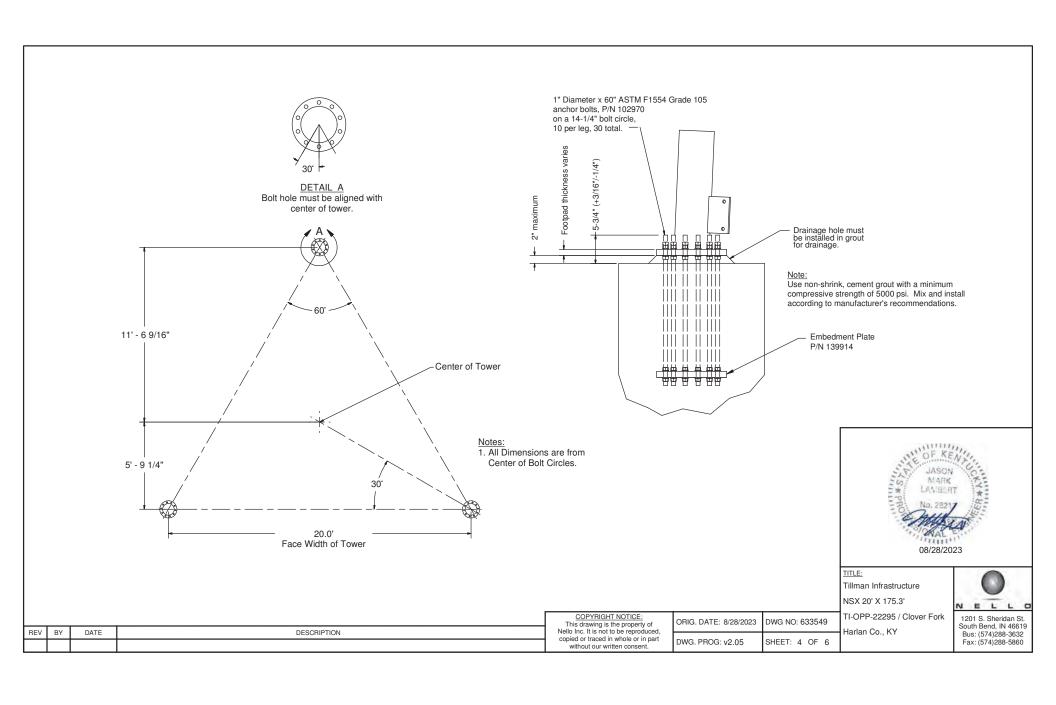


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1201 S. Sheridan St. South Bend, IN 46619 Bus: (574)288-3632 Fax: (574)288-5860 Harlan Co., KY



#### **Antenna Loading**

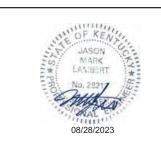
Height	Qty.	Description
170'	1	40,000 sq in CaAa (6,000 lbs)
155'	1	40,000 sq in CaAa (6,000 lbs)
140'	1	30,000 sq in CaAa (4,000 lbs)
125'	1	Dish Pipe Mount
115'	1	Dish Pipe Mount

#### Feedline Loading

Height	Qty.	Description
0' - 175'	2	Waveguide Ladder (need qty of 2)
0' - 170'	9	LDF7-50A (1-5/8 FOAM)
0' - 155'	2	Waveguide Ladder (need qty of 2)
0' - 155'	9	LDF7-50A (1-5/8 FOAM)
0' - 140'	2	Waveguide Ladder (need qty of 2)
0' - 140'	9	LDF7-50A (1-5/8 FOAM)
0' - 125'	1	EW63
0' - 115'	1	EW63
	•	

#### Dish Loading

Height	Qty.	Description
125'	1	8' Solid Dish
115'	1	8' Solid Dish



TITLE:

Tillman Infrastructure

NSX 20' X 175.3'

TI-OPP-22295 / Clover Fork



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1201 S. Sheridan St. South Bend, IN 46619 Bus: (574)288-3632 Fax: (574)288-5860 Harlan Co., KY

#### **Tower Notes:**

1. Tower is designed per TIA-222-H, "Structural Standard for Antenna Supporting Structures, Anennas and Small Wind Turbine Support Structures," for the following loading conditions:

105 mph 3-second gust ultimate wind speed with no ice per ASCE 7-16

30 mph 3-second gust basic wind speed with 1 inch basic ice thickness per ASCE 7-16

Risk Category: II Exposure Category: C Topographic Category: 1 Crest Height: 0 feet

- 2. A tower field inspection shall be performed in order to verify that design exposure and topographic parameters are consistent with the existing tower site conditions.
- 3. Tower design includes the antennas, dishes, and/or lines listed in the appurtenance loading tables on sheet 5.
- 4. Antenna mounting pipes may need to be field cut to match the lengths listed in the appurtenance loading tables on sheet 5.
- 5. Tower member design does not include stresses due to erection since erection equipment and procedures are unknown. Tower installation shall be performed by competent and qualified erectors in accordance with TIA-222-H and OSHA standards and all applicable building codes.
- 6. Field connections shall be bolted. No field welds shall be allowed unless otherwise noted.
- 7. Structural bolts shall conform to ASTM A325, except for 1/2 inch diameter and smaller bolts, which shall conform to ASTM A449 or SAE J429 Grade 5.
- 8. Structural steel and connection bolts shall be galvanized after fabrication in accordance with TIA-222-H.
- 9. All high strength bolts shall be tightened to a "snug tight" condition as defined in the RCSC "Specification for Structural Joints Using ASTM A325 or A490 Bolts."
- 10. Tower shall be marked and lighted in conformance with local building codes, FAA regulations, and TIA-222-H.
- 11. Tower shall be grounded in conformance with local building codes and TIA-222-H. Evaluation of protective grounding and consideration for special grounding systems shall be performed by others.
- 12. Allowable tolerance on as-built tower steel height is plus 1% or minus 1/2%.
- 13. Maintenance and inspection shall be performed over the life of the structure in accordance with TIA-222-H.
- 14. Material specifications:

Self Supporting Pipe Legs - ASTM A500 Grade 50

Angle Bracing - ASTM A529 Grade 50

Leg Footpads - ASTM A572 Grade 50 Leg Side Plates - ASTM A36 (Min)

- 15. Remove anchor bolt template before erecting tower. Place non-shrink grout under base section footpads after leveling tower.
- 16. Concrete contractor shall be responsible for properly aligning anchor bolts and materials before and after placing concrete, regardless of whether an anchor bolt template is provided.



TITLE:

Tillman Infrastructure

NSX 20' X 175.3'

Harlan Co., KY

TI-OPP-22295 / Clover Fork 1201 S. Sheridan St.

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South Bend, IN 46619
Bus: (574)288-3632
Fax: (574)288-5860

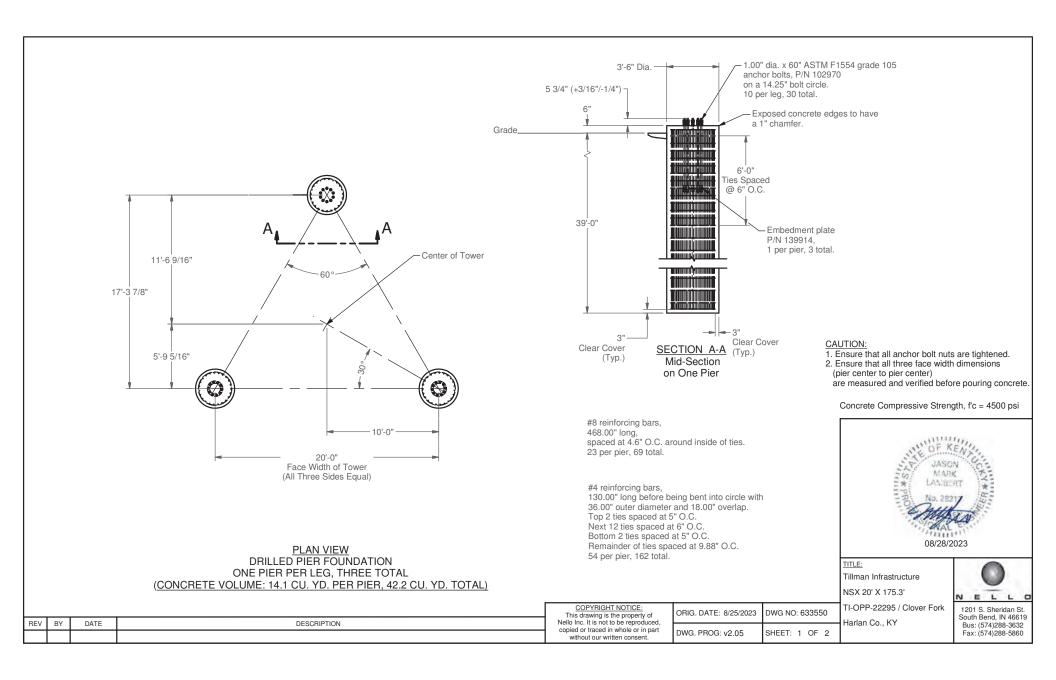
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DWG. PROG: v2.05 SHEET: 6 OF 6

ORIG. DATE: 8/28/2023

DWG NO: 633549

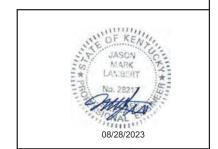


#### **Foundation Notes:**

1. This foundation has been designed for the following tower reactions:

Leg Compression: 362.3 Kips 321.4 Kips Leg Uplift: Leg Shear: 33.2 Kips Tower Shear: 51.6 Kips 5967.5 ft-Kips Tower Moment: Tower Weight: 53.3 Kips

- 2. Foundation design is based on the Geotechnical Report dated 03/15/2023, by Environmental Corporation of America; Project No. 23-000518.
- 3. A field inspection shall be performed in order to verify that the actual site soil parameters meet or exceed the assumed soil parameters and that the depth of standard foundations are adequate based on the frost penetration and groundwater depth. Local frost depth must be no deeper than the bottom of the base foundation or the top of the anchor.
- 4. Reinforcement shall be deformed and conform to the requirements of ASTM A615 Grade 60 unless otherwise noted. Splices in reinforcement shall not be allowed unless otherwise indicated.
- 5. Welding is prohibited on reinforcing steel and anchorage.
- 6. Backfill above foundation should be compacted to 95% of maximum dry density at water content within 2 percent of optimum. Backfill must be clean and free of organic and frozen soils and foreign materials.
- 7. Finished grade shall be leveled over the entire foundation footprint. Backfill is recommended to slope to native grade using a 2:1 (H:V) slope.
- 8. Loose material shall be removed from bottom of excavation prior to concrete placement.
- 9. Concrete cover from exposed surface of concrete to surface of reinforcement shall not be less than 3".
- 10. Concrete and reinforcement installation must conform to ACI 318. "Building Code Requirements for Structural Concrete."
- 11. Concrete shall develop a minimum compressive strength of 4500 psi at 28 days.
- 12. Concrete shall be placed as soon as practical after excavating to avoid disturbance of bearing and side wall surfaces
- 13. Concrete contractor shall be responsible for properly aligning anchor bolts before and after placing concrete, regardless of whether an anchor bolt template is provided.
- 14. Positive drainage shall be maintained during construction and throughout the life of the facility to minimize the potential for surface water infiltration.
- 15. It shall be the contractor's responsibility to locate and prevent damage to any existing underground utilities, foundations or other buried objects that might be damaged or interfered with during construction of the foundation.
- 16. It is permissible for the top of the vertical reinforcement cage alignment to fluctuate slightly, allowing for a minimum clear cover of 2" to a maximum clear cover of 3" over the top of any individual vertical bar.
- 17. Earthwork operations and foundation installation methods shall be in accordance with the geotechnical report and all applicable American Concrete Institute (ACI) Standards.
- 18. Temporary steel casing or drilling slurry techniques may be required for installation of the drilled pier foundation. Permanent casing on drilled piers may not be used.
- 19. Concrete shall be placed by tremie methods if drilling slurry is used or if there is more than 1 inch of water at the bottom of the shaft excavation.
- 20. Groundwater may be encountered at 38.5 feet bgs at this site based on the geotechnical investigation. The need for dewatering should be anticipated below this depth.
- 21. Rock conditions were encountered about 28.5 feet bgs in the geotechnical investigation.



TITLE: Tillman Infrastructure NSX 20' X 175.3'

DWG NO: 633550

SHEET: 2 OF 2



I-OPF	-222	95/	Clove	r Fork
larlan	Co.,	ΚY		

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outh Be			
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	DWG. PROG: v2.05	



# **Design Supporting Calculations**

Sales Order: SO30980

Drawing Number(s)

Tower: 633549 Foundation: 633550

Order Description: NSX 20' x 175.3'

Site Name: TI-OPP-22295 / Clover Fork

Location: Harlan County, KY

Prepared For:

Customer: Tillman Infrastructure

Contact: Chelsea Reeves

Date: 8/28/2023



## **Table of Contents**

Tower Analysis - Short form

Tower Analysis - Long form

Foundation Analysis

Seismic Analysis

Section	Т9	87	11		J.	T5	T4	T3	12	ī
Legs	P10x.365			P8x.322			P6x.28	P4x.237	P3x.216	P2x.154
Leg Grade						A500-50				
Diagonals	L3 1/2x3 1/2x1/4		L3x3x3/16			L2 1/2x2 1/2x1/4	L2 1/2x2	L2 1/2x2 1/2x3/16	L2x2x3/16	L1 3/4x1 3/4x1/8
Diagonal Grade						A529-50				
Top Girts					Z	N.A.				L2x2x1/8
Face Width (ft) 20	18		16	14	12.5	17	9.5		- 80	6.5
# Panels @ (ft)					24 @ (	24 @ 6.66667				3 @ 5.1
Weight (lb) 22057.2	4971.8	3230.7	3095.2		2977.5	2971.4	1997.9	1382.3	7.578	454.8
0.0 ft		<u>20.0 ft</u>	40.0 ft	60.0 ft		<u>80.0 ft</u>	100.0 ft	120.0 ft	<u>140.0 ft</u>	175.3 ft 160.0 ft

#### **DESIGNED APPURTENANCE LOADING**

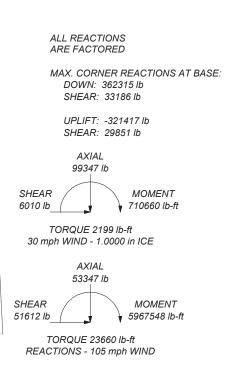
TYPE	ELEVATION	TYPE	ELEVATION
40,000 sq in CaAa (6,000 lbs)	170	8' Solid Dish	125
40,000 sq in CaAa (6,000 lbs)	155	Dish Pipe Mount	115
30,000 sq in CaAa (4,000 lbs)	140	8' Solid Dish	115
Dish Pipe Mount	125		

#### **MATERIAL STRENGTH**

GRADE	Fy	Fu	GRADE	Fy	Fu
A500-50	50 ksi	62 ksi	A529-50	50 ksi	65 ksi

#### **TOWER DESIGN NOTES**

- 1. Tower designed for Exposure C to the TIA-222-H Standard.
- 2. Tower designed for a 105 mph ultimate wind in accordance with the TIA-222-H Standard.
- 3. Tower is also designed for a 30 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
- 4. Deflections are based upon a 60 mph wind.
- 4. Defections are based upon a 60 mph white.
  5. Tower Risk Category II.
  6. Topographic Category 1 with Crest Height of 0.00 ft
  7. TOWER RATING: 99.9%



Nello Corporation 1201 S. Sheridan Street South Bend, IN. 46619 Phone: 800-806-3556 Path: N:\eri\6335\633549.eri FAX:

<sup>Job:</sup> SO30980; Tower 6	33549; Fo	undation 63355
Project: NS 175' - TI-OPP-22	295 / Clover	Fork - Harlan Co., K
Client: Tillman Infrastructure	Drawn by: AG	App'd:
Code: TIA-222-H	Date: 08/28/23	Scale: NTS
Path: N:\eri\6335\633549.eri		Dwg No. E-1

Nello Corporation 1201 S. Sheridan Street South Bend, IN. 46619

Phone: 800-806-3556 FAX:

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NS 175' - TI-OPP-22295 / Clover Fork - Harlan Co., KY	10:41:48 08/28/23
Client	Designed by
Tillman Infrastructure	AG

#### **Tower Input Data**

The main tower is a 3x free standing tower with an overall height of 175.30 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 6.50 ft at the top and 20.00 ft at the base.

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

The following design criteria apply:

Tower base elevation above sea level: 0.00 ft.

Ultimate wind speed of 105 mph.

Risk Category II.

Exposure Category C.

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 30 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

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

Pressures are calculated at each section.

Stress ratio used in tower member design is 1.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

#### **Options**

Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification Use Code Stress Ratios

- ✓ Use Code Safety Factors Guys
   Escalate Ice
   Always Use Max Kz
   Use Special Wind Profile
   Include Bolts In Member Capacity
   Leg Bolts Are At Top Of Section
- √ Secondary Horizontal Braces Leg
   Use Diamond Inner Bracing (4 Sided)
- √ SR Members Have Cut Ends SR Members Are Concentric

- Distribute Leg Loads As Uniform Assume Legs Pinned
- √ Assume Rigid Index Plate
- √ Use Clear Spans For Wind Area
- √ Use Clear Spans For KL/r
- √ Retension Guys To Initial Tension Bypass Mast Stability Checks
- √ Use Azimuth Dish Coefficients
- √ Project Wind Area of Appurt.
- √ Autocalc Torque Arm Areas
   Add IBC .6D+W Combination
   Sort Capacity Reports By Component
- √ Triangulate Diamond Inner Bracing Treat Feed Line Bundles As Cylinder Ignore KL/ry For 60 Deg. Angle Legs

- Use ASCE 10 X-Brace Ly Rules
- √ Calculate Redundant Bracing Forces
- √ Ignore Redundant Members in FEA
- √ SR Leg Bolts Resist Compression
- √ All Leg Panels Have Same Allowable Offset Girt At Foundation
- √ Consider Feed Line Torque Include Angle Block Shear Check Use TIA-222-H Bracing Resist. Exemption Use TIA-222-H Tension Splice Exemption

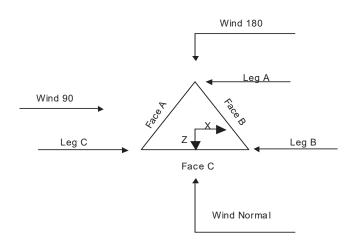
Poles

✓ Include Shear-Torsion Interaction
 Always Use Sub-Critical Flow
 Use Top Mounted Sockets
 Pole Without Linear Attachments
 Pole With Shroud Or No Appurtenances
 Outside and Inside Corner Radii Are
 Known

4	
tnv	<i>Sower</i>

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Triangular Tower

<b>Tower Section Geometry</b>
-------------------------------

Tower	Tower	Assembly	Description	Section	Number	Section
Section	Elevation	Database		Width	of	Length
					Sections	
	ft			ft		ft
T1	175.30-160.00			6.50	1	15.30
T2	160.00-140.00			6.50	1	20.00
T3	140.00-120.00			8.00	1	20.00
T4	120.00-100.00			9.50	1	20.00
T5	100.00-80.00			11.00	1	20.00
Т6	80.00-60.00			12.50	1	20.00
T7	60.00-40.00			14.00	1	20.00
Т8	40.00-20.00			16.00	1	20.00
Т9	20.00-0.00			18.00	1	20.00

## Tower Section Geometry (cont'd)

Tower	Tower	Diagonal	Bracing	Has	Has	Top Girt	Bottom Gir
Section	Elevation	Spacing	Type	K Brace	Horizontals	Offset	Offset
				End			
	ft	ft		Panels		in	in
T1	175.30-160.00	5.10	X Brace	No	No	0.0000	0.0000
T2	160.00-140.00	6.67	X Brace	No	No	0.0000	0.0000
T3	140.00-120.00	6.67	X Brace	No	No	0.0000	0.0000
T4	120.00-100.00	6.67	X Brace	No	No	0.0000	0.0000
T5	100.00-80.00	6.67	X Brace	No	No	0.0000	0.0000
T6	80.00-60.00	6.67	X Brace	No	No	0.0000	0.0000

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Tillman Infrastructure	AG

Tower	Tower	Diagonal	Bracing	Has	Has	Top Girt	Bottom Girt
Section	Elevation	Spacing	Type	K Brace	Horizontals	Offset	Offset
				End			
	ft	ft		Panels		in	in
T7	60.00-40.00	6.67	X Brace	No	No	0.0000	0.0000
T8	40.00-20.00	6.67	X Brace	No	No	0.0000	0.0000
Т9	20.00-0.00	6.67	X Brace	No	No	0.0000	0.0000

Tower	<b>Section</b>	Geometry	(cont'd)
-------	----------------	----------	----------

Tower	Leg	Leg	Leg	Diagonal	Diagonal	Diagonal
Elevation	Type	Size	Grade	Type	Size	Grade
ft						
T1 175.30-160.00	Pipe	P2x.154	A500-50	Equal Angle	L1 3/4x1 3/4x1/8	A529-50
			(50 ksi)			(50 ksi)
T2 160.00-140.00	Pipe	P3x.216	A500-50	Equal Angle	L2x2x3/16	A529-50
			(50 ksi)			(50 ksi)
T3 140.00-120.00	Pipe	P4x.237	A500-50	Equal Angle	L2 1/2x2 1/2x3/16	A529-50
			(50 ksi)			(50 ksi)
T4 120.00-100.00	Pipe	P6x.28	A500-50	Equal Angle	L2 1/2x2 1/2x3/16	A529-50
			(50 ksi)			(50 ksi)
T5 100.00-80.00	Pipe	P8x.322	A500-50	Equal Angle	L2 1/2x2 1/2x1/4	A529-50
			(50 ksi)			(50 ksi)
T6 80.00-60.00	Pipe	P8x.322	A500-50	Equal Angle	L3x3x3/16	A529-50
			(50 ksi)			(50 ksi)
T7 60.00-40.00	Pipe	P8x.322	A500-50	Equal Angle	L3x3x3/16	A529-50
			(50 ksi)			(50 ksi)
T8 40.00-20.00	Pipe	P8x.322	A500-50	Equal Angle	L3x3x3/16	A529-50
			(50 ksi)			(50 ksi)
T9 20.00-0.00	Pipe	P10x.365	A500-50	Equal Angle	L3 1/2x3 1/2x1/4	A529-50
			(50 ksi)			(50 ksi)

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 175.30-160.00	Equal Angle	L2x2x1/8	A529-50 (50 ksi)	Solid Round		A529-50 (50 ksi)

# Tower Section Geometry (cont'd)

Tower	Gusset	Gusset	Gusset Grade	Adjust. Factor	Adjust.	Weight Mult.	Double Angle	Double Angle	Double Angle
Elevation	Area	Thickness		$A_f$	Factor		Stitch Bolt	Stitch Bolt	Stitch Bolt
	(per face)				$A_r$		Spacing	Spacing	Spacing
							Diagonals	Horizontals	Redundants
ft	ft <sup>2</sup>	in					in	in	in
T1	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
175.30-160.00			(36 ksi)						
T2	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
160.00-140.00			(36 ksi)						

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Tower Elevation	Gusset Area	Gusset Thickness	Gusset Grade	$Adjust.\ Factor \ A_f$	Adjust. Factor	Weight Mult.	Double Angle Stitch Bolt	Double Angle Stitch Bolt	Double Angle Stitch Bolt
	(per face)				$A_r$		Spacing	Spacing	Spacing
							Diagonals	Horizontals	Redundants
ft	ft <sup>2</sup>	in					in	in	in
Т3	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
140.00-120.00			(36 ksi)						
T4	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
120.00-100.00			(36 ksi)						
T5	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
100.00-80.00			(36 ksi)						
T6 80.00-60.00	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
			(36 ksi)						
T7 60.00-40.00	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
			(36 ksi)						
T8 40.00-20.00	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
			(36 ksi)						
T9 20.00-0.00	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
			(36 ksi)						

#### **Tower Section Geometry** (cont'd)

						K Fa	ctors <sup>1</sup>			
Tower Elevation	Calc K Single	Calc K Solid	Legs	X Brace Diags	K Brace Diags	Single Diags	Girts	Horiz.	Sec. Horiz.	Inner Brace
	Angles	Rounds		$X^{\circ}$	X	X	X	X	X	X
ft				Y	Y	Y	Y	Y	Y	Y
T1	No	Yes	1	1	1	1	1	1	1	1
175.30-160.00				1	1	1	1	1	1	1
T2	No	Yes	1	1	1	1	1	1	1	1
160.00-140.00				1	1	1	1	1	1	1
T3	No	Yes	1	1	1	1	1	1	1	1
140.00-120.00				1	1	1	1	1	1	1
T4	No	Yes	1	1	1	1	1	1	1	1
120.00-100.00				1	1	1	1	1	1	1
T5	No	Yes	1	1	1	1	1	1	1	1
100.00-80.00				1	1	1	1	1	1	1
T6	No	Yes	1	1	1	1	1	1	1	1
80.00-60.00				1	1	1	1	1	1	1
T7	No	Yes	1	1	1	1	1	1	1	1
60.00-40.00				1	1	1	1	1	1	1
T8	No	Yes	1	1	1	1	1	1	1	1
40.00-20.00				1	1	1	1	1	1	1
T9 20.00-0.00	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1

<sup>&</sup>lt;sup>1</sup>Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.

#### **Tower Section Geometry** (cont'd)

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Tower Elevation ft	Leg		Diagonal		Top G	irt	Botton	ı Girt	Mid Girt		Long Horizontal		Short Ho	rizontal
	Net Width	U	Net Width	U	Net Width	U	Net	U	Net	U	Net	U	Net	$\overline{U}$
	Deduct		Deduct		Deduct		Width		Width		Width		Width	
	in		in		in		Deduct		Deduct		Deduct		Deduct	
							in		in		in		in	
T1	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
175.30-160.00														
T2	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
160.00-140.00														
T3	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
140.00-120.00														
T4	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
120.00-100.00														
T5	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
100.00-80.00														
T6 80.00-60.00		1	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 60.00-40.00	0.0000	1	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 40.00-20.00	0.0000	1	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 20.00-0.00	0.0000	1	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 Elevation ft	Reduna Horizo		Redundant Diagonal			Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		int Hip onal
J	Net Width	U	Net Width	U	Net Width	U	Net	U	Net	U	Net	U	Net	$\overline{U}$
	Deduct		Deduct		Deduct		Width		Width		Width		Width	
	in		in		in		Deduct		Deduct		Deduct		Deduct	
							in		in		in		in	
T1	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
175.30-160.00														
T2	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
160.00-140.00														
T3	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
140.00-120.00														
T4	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
120.00-100.00														
T5	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
100.00-80.00														
T6 80.00-60.00		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 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
T8 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
T9 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

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

Description	Face or	Allow Shield	Exclude From	Component Type	Placement	Total Number	Number Per Row	Clear Spacing	Width or Diameter	Perimeter	Weight
	Leg		Torque		ft			in	in	in	plf
			Calculation								
Waveguide Ladder (need qty of 2)	С	No	No	Af (CaAa)	175.00 - 0.00	2	2	30.0000 0.0000	1.7500		2.27
LDF7-50A (1-5/8 FOAM)	С	No	No	Ar (CaAa)	170.00 - 0.00	9	5	$0.2700 \\ 0.0000$	1.9800		0.82
Waveguide Ladder (need qty of 2)	В	No	No	Af (CaAa)	155.00 - 0.00	2	2	30.0000 0.0000	1.7500		2.27
LDF7-50A (1-5/8	В	No	No	Ar (CaAa)	155.00 - 0.00	9	5	0.2700	1.9800		0.82

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Description	Face or	Allow Shield	Exclude From	Component Type	Placement	Total Number	Number Per Row	Clear Spacing	Width or Diameter	Perimeter	Weight
	Leg		Torque Calculation		ft			in	in	in	plf
FOAM)								0.0000			
Waveguide Ladder (need qty of 2)	A	No	No	Af (CaAa)	140.00 - 0.00	2	2	30.0000 0.0000	1.7500		2.27
LDF7-50A (1-5/8 FOAM)	A	No	No	Ar (CaAa)	140.00 - 0.00	9	5	$0.2700 \\ 0.0000$	1.9800		0.82
EW63	С	No	No	Ar (CaAa)	125.00 - 0.00	1	1	0.6758 0.0000	1.5742		0.51
EW63	В	No	No	Ar (CaAa)	115.00 - 0.00	1	1	$0.6758 \\ 0.0000$	1.5742		0.51

## Feed Line/Linear Appurtenances Section Areas

Tower	Tower	Face	$A_R$	$A_F$	$C_A A_A$	$C_A A_A$	Weight
Section	Elevation		$ft^2$	$ft^2$	In Face	Out Face	11
	ft				ft <sup>2</sup>	ft²	<u>lb</u>
T1	175.30-160.00	A	0.000	0.000	0.000	0.000	0.00
		В	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	26.570	0.000	142.05
T2	160.00-140.00	A	0.000	0.000	0.000	0.000	0.00
		В	0.000	0.000	35.480	0.000	178.95
		C	0.000	0.000	47.307	0.000	238.60
T3	140.00-120.00	A	0.000	0.000	47.307	0.000	238.60
		В	0.000	0.000	47.307	0.000	238.60
		C	0.000	0.000	48.094	0.000	241.15
T4	120.00-100.00	A	0.000	0.000	47.307	0.000	238.60
		В	0.000	0.000	49.668	0.000	246.25
		C	0.000	0.000	50.455	0.000	248.80
T5	100.00-80.00	A	0.000	0.000	47.307	0.000	238.60
		В	0.000	0.000	50.455	0.000	248.80
		C	0.000	0.000	50.455	0.000	248.80
T6	80.00-60.00	A	0.000	0.000	47.307	0.000	238.60
		В	0.000	0.000	50.455	0.000	248.80
		C	0.000	0.000	50.455	0.000	248.80
T7	60.00-40.00	A	0.000	0.000	47.307	0.000	238.60
		В	0.000	0.000	50.455	0.000	248.80
		C	0.000	0.000	50.455	0.000	248.80
T8	40.00-20.00	A	0.000	0.000	47.307	0.000	238.60
		В	0.000	0.000	50.455	0.000	248.80
		C	0.000	0.000	50.455	0.000	248.80
T9	20.00-0.00	A	0.000	0.000	47.307	0.000	238.60
		В	0.000	0.000	50.455	0.000	248.80
		C	0.000	0.000	50.455	0.000	248.80

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

Tower	Tower	Face	Ice	$A_R$	$A_F$	$C_A A_A$	$C_A A_A$	Weight
Section	Elevation	or	Thickness			In Face	Out Face	
	ft	Leg	in	$ft^2$	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>	lb
T1	175.30-160.00	A	1.176	0.000	0.000	0.000	0.000	0.00
		В		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	34.249	0.000	455.06
T2	160.00-140.00	A	1.163	0.000	0.000	0.000	0.000	0.00
		В		0.000	0.000	43.326	0.000	575.36
		C		0.000	0.000	57.768	0.000	767.14

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Tower	Tower	Face	Ice	$A_R$	$A_F$	$C_A A_A$	$C_A A_A$	Weight
Section	Elevation	or	Thickness	. 2	. 2	In Face	Out Face	
	ft	Leg	in	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>	lb
T3	140.00-120.00	A	1.147	0.000	0.000	57.526	0.000	759.04
		В		0.000	0.000	57.526	0.000	759.04
		C		0.000	0.000	59.460	0.000	780.66
T4	120.00-100.00	A	1.128	0.000	0.000	57.247	0.000	749.79
		В		0.000	0.000	62.992	0.000	813.29
		C		0.000	0.000	64.907	0.000	834.46
T5	100.00-80.00	A	1.106	0.000	0.000	56.919	0.000	738.94
		В		0.000	0.000	64.489	0.000	821.53
		C		0.000	0.000	64.489	0.000	821.53
T6	80.00-60.00	A	1.078	0.000	0.000	56.517	0.000	725.78
		В		0.000	0.000	63.978	0.000	805.85
		C		0.000	0.000	63.978	0.000	805.85
T7	60.00-40.00	A	1.042	0.000	0.000	55.995	0.000	708.85
		В		0.000	0.000	63.313	0.000	785.70
		C		0.000	0.000	63.313	0.000	785.70
T8	40.00-20.00	A	0.991	0.000	0.000	55.235	0.000	684.59
		В		0.000	0.000	62.346	0.000	756.86
		C		0.000	0.000	62.346	0.000	756.86
Т9	20.00-0.00	A	0.887	0.000	0.000	53.729	0.000	637.73
-		В		0.000	0.000	60.427	0.000	701.31
		C		0.000	0.000	60.427	0.000	701.31

## **Feed Line Center of Pressure**

Section	Elevation	$CP_X$	$CP_Z$	$CP_X$	$CP_Z$
				Ice	Ice
	ft	in	in	in	in
T1	175.30-160.00	0.0000	5.2065	0.0000	5.4352
T2	160.00-140.00	3.4114	1.8263	3.6928	2.5575
T3	140.00-120.00	-0.0000	-2.2086	-0.0000	-1.3634
T4	120.00-100.00	0.3620	-2.1251	0.5985	-1.0775
T5	100.00-80.00	0.5065	-2.3335	0.8217	-1.2589
T6	80.00-60.00	0.5164	-2.3950	0.8523	-1.3367
T7	60.00-40.00	0.5554	-2.5797	0.9083	-1.4623
T8	40.00-20.00	0.5919	-2.7534	0.9596	-1.6078
Т9	20.00-0.00	0.5733	-2.6766	0.9178	-1.6733

## Shielding Factor Ka

Tower	Feed Line	Description	Feed Line	$K_a$	$K_a$
Section	Record No.		Segment Elev.	No Ice	Ice
T1	1	Waveguide Ladder (need qty	160.00 -	0.6000	0.6000
		of 2)	175.00		
T1	2	LDF7-50A (1-5/8 FOAM)	160.00 -	0.6000	0.6000
			170.00		
T2	1	Waveguide Ladder (need qty	140.00 -	0.6000	0.6000
		of 2)	160.00		
T2	2	LDF7-50A (1-5/8 FOAM)	140.00 -	0.6000	0.6000
			160.00		
T2	3	Waveguide Ladder (need qty	140.00 -	0.6000	0.6000
<b>I</b>		of 2)	155.00		

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T2	Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K <sub>a</sub> No Ice	K <sub>a</sub> Ice
T3			LDF7-50A (1-5/8 FOAM)	U		0.6000
T3			***		0.6000	0.6000
T3	13	1		l .	0.6000	0.6000
140,00	Т3	2	,		0.6000	0.6000
T3						
T3	T3	3			0.6000	0.6000
T3	Т3	4	,		0.6000	0.6000
T3			· · · · · · · · · · · · · · · · · · ·			
T3	Т3	5			0.6000	0.6000
T3	Т3	6	/	l .	0.6000	0.6000
T4						
T4	T3	7	EW63		0.6000	0.6000
T4	Т4	1	Wayeauide Ladder (need atv	l .	0.6000	0.6000
T4	17	1	( 1,		0.0000	0.0000
T4	T4	2	LDF7-50A (1-5/8 FOAM)		0.6000	0.6000
T4	Τ4	2	W1-1-1-44(4	l .	0.6000	0.6000
T4	14	3			0.0000	0.0000
T4	T4	4	,		0.6000	0.6000
T4		_		l .		
T4	T4	5			0.6000	0.6000
T4	T4	6	,		0.6000	0.6000
T4 8 EW63 100.00			,	120.00		
T4	T4	7	EW63		0.6000	0.6000
T5	T4	8	EW63		0.6000	0.6000
T5		_		115.00		
T5	T5	1		80.00 - 100.00	0.6000	0.6000
T5	Т5	2	,	80.00 - 100.00	0.6000	0.6000
T5		3				0.6000
T5	m.s		,	00.00 100.00	0.6000	0.6000
T5						
T5 T5 T6 EW63 80.00 - 100.00 0.6000 0	13	3		80.00 - 100.00	0.0000	0.0000
T5			` '			0.6000
T6				l .		
T6				l .		
T6	10	•		00.00	0.0000	0.0000
T6				l .		0.6000
T6	16	3	( 1,	60.00 - 80.00	0.6000	0.6000
T6	Т6	4	,	60.00 - 80.00	0.6000	0.6000
T6	T6	5		60.00 - 80.00	0.6000	0.6000
T6 T	Т6	6		60.00 80.00	0.6000	0.6000
T6 T7 T7 T8						
T7 2 LDF7-50A (1-5/8 FOAM) 40.00 - 60.00 0.6000 0.6	Т6	8	EW63	60.00 - 80.00	0.6000	0.6000
T7 2 LDF7-50A (1-5/8 FOAM) 40.00 - 60.00 0.6000 0.6	T7	1		40.00 - 60.00	0.6000	0.6000
T7 3 Waveguide Ladder (need qty of 2) 40.00 - 60.00 0.6000 0.6000 0.6000 T7 4 LDF7-50A (1-5/8 FOAM) 40.00 - 60.00 0.60000	T7	2		40.00 - 60.00	0.6000	0.6000
T7 4 LDF7-50A (1-5/8 FOAM) 40.00 - 60.00 0.6000 0.6000 T7 5 Waveguide Ladder (need qty 40.00 - 60.00 0.6000 0.6000						0.6000
T7 5 Waveguide Ladder (need qty   40.00 - 60.00   0.6000   0.6000	T. a.			40.00 (0.00	0.6000	0.6000
• • • • • • • • • • • • • • • • • • •	1 /	3	of 2)		0.0000	2.0000

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Tower	Feed Line	Description	Feed Line	$K_a$	$K_a$
Section	Record No.	•	Segment Elev.	No Ice	Ice
T7	6	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T7	7	EW63	40.00 - 60.00	0.6000	0.6000
T7	8	EW63	40.00 - 60.00	0.6000	0.6000
Т8	1	Waveguide Ladder (need qty of 2)	20.00 - 40.00	0.6000	0.6000
Т8	2	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
Т8	3	Waveguide Ladder (need qty of 2)	20.00 - 40.00	0.6000	0.6000
Т8	4	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
Т8	5	Waveguide Ladder (need qty of 2)	20.00 - 40.00	0.6000	0.6000
Т8	6	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
Т8	7	EW63	20.00 - 40.00	0.6000	0.6000
Т8	8	EW63	20.00 - 40.00	0.6000	0.6000
Т9	1	Waveguide Ladder (need qty of 2)	0.00 - 20.00	0.6000	0.6000
T9	2	LDF7-50A (1-5/8 FOAM)	0.00 - 20.00	0.6000	0.6000
Т9	3	Waveguide Ladder (need qty of 2)	0.00 - 20.00	0.6000	0.6000
Т9	4	LDF7-50A (1-5/8 FOAM)	0.00 - 20.00	0.6000	0.6000
Т9	5	Waveguide Ladder (need qty of 2)	0.00 - 20.00	0.6000	0.6000
Т9	6	LDF7-50A (1-5/8 FOAM)	0.00 - 20.00	0.6000	0.6000
T9	7	EW63	0.00 - 20.00	0.6000	0.6000
Т9	8	EW63	0.00 - 20.00	0.6000	0.6000

#### **Discrete Tower Loads**

Description	Face or Leg	Offset Type	Offsets: Horz Lateral	Azimuth Adjustment	Placement		C <sub>A</sub> A <sub>A</sub> Front	$C_AA_A$ Side	Weight
			Vert ft ft ft	0	ft		ft²	ft²	lb
40,000 sq in CaAa (6,000 lbs)	С	None	J	0.0000	170.00	No Ice 1/2" Ice 1" Ice	278.00 334.00 390.00	278.00 334.00 390.00	6000.00 8040.00 10080.00
40,000 sq in CaAa (6,000 lbs)	В	None		0.0000	155.00	No Ice 1/2" Ice	278.00 334.00	278.00 334.00	6000.00 8040.00
30,000 sq in CaAa (4,000 lbs)	A	None		0.0000	140.00	1" Ice No Ice 1/2" Ice 1" Ice	390.00 208.00 250.00 292.00	390.00 208.00 250.00 292.00	10080.00 4000.00 5360.00 6720.00
Dish Pipe Mount	С	From Leg	0.00 0.00 0.00	0.0000	125.00	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	1.80 2.10 2.40	103.00 119.00 135.00
Dish Pipe Mount	В	From Leg	0.00 0.00 0.00 0.00	0.0000	115.00	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00 0.00	1.80 2.10 2.40	103.00 103.00 119.00 135.00

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Or   Type   Type   Horz   Adjustment   Beam   Width   Width   Wert   Ft   O   O   O   O   O   O   O   O   O	Dishes											
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Description	or			Horz Lateral		Beam	Elevation			* .	Weight
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$						0	0	ft	ft		ft <sup>2</sup>	lb
8' Solid Dish B Paraboloid w/o From 0.00 60.0000 115.00 8.00 No Ice 50.27 250	8' Solid Dish	С			0.00	60.0000		125.00	8.00	1/2" Ice	51.32	250.00 535.00 820.00
$oldsymbol{arepsilon}$	8' Solid Dish	В	Paraboloid w/o Radome		0.00	60.0000		115.00	8.00	No Ice 1/2" Ice	50.27 51.32	250.00 250.00 535.00 820.00

#### **Tower Pressures - No Ice**

 $G_H = 0.850$ 

Section	Z.	$K_{Z}$	$q_z$	$A_G$	F	$A_F$	$A_R$	$A_{leg}$	Leg	$C_A A_A$	$C_A A_A$
Elevation	~	-	10	· ·	а			8	%	In	Out
					С					Face	Face
ft	ft		psf	$ft^2$	e	ft <sup>2</sup>	$ft^2$	ft <sup>2</sup>		ft <sup>2</sup>	$ft^2$
T1	167.65	1.411	34	102.478	Α	8.059	6.056	6.056	42.90	0.000	0.000
175.30-160.00					В	8.059	6.056		42.90	0.000	0.000
					С	8.059	6.056		42.90	26.570	0.000
T2	150.00	1.378	33	150.837	Α	9.457	11.678	11.678	55.25	0.000	0.000
160.00-140.00					В	9.457	11.678		55.25	35.480	0.000
					С	9.457	11.678		55.25	47.307	0.000
T3	130.00	1.337	32	182.505	Α	13.165	15.014	15.014	53.28	47.307	0.000
140.00-120.00					В	13.165	15.014		53.28	47.307	0.000
					C	13.165	15.014		53.28	48.094	0.000
T4	110.00	1.291	31	216.049	Α	14.464	22.104	22.104	60.45	47.307	0.000
120.00-100.00					В	14.464	22.104		60.45	49.668	0.000
					C	14.464	22.104		60.45	50.455	0.000
T5	90.00	1.238	30	249.385	Α	15.856	28.777	28.777	64.47	47.307	0.000
100.00-80.00					В	15.856	28.777		64.47	50.455	0.000
					С	15.856	28.777		64.47	50.455	0.000
T6 80.00-60.00	70.00	1.174	28	279.385	Α	21.044	28.777	28.777	57.76	47.307	0.000
					В	21.044	28.777		57.76	50.455	0.000
					С	21.044	28.777		57.76	50.455	0.000
T7 60.00-40.00	50.00	1.094	26	314.393	Α	23.446	28.798	28.798	55.12	47.307	0.000
					В	23.446	28.798		55.12	50.455	0.000
					С	23.446	28.798		55.12	50.455	0.000
T8 40.00-20.00	30.00	0.982	24	354.393	Α	26.236	28.798	28.798	52.33	47.307	0.000
					В	26.236	28.798		52.33	50.455	0.000
					С	26.236	28.798		52.33	50.455	0.000
T9 20.00-0.00	10.00	0.85	20	397.939	Α	33.579	35.893	35.893	51.67	47.307	0.000
					В	33.579	35.893		51.67	50.455	0.000
					С	33.579	35.893		51.67	50.455	0.000

#### **Tower Pressure - With Ice**

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Section	z	$K_Z$	$q_z$	$t_Z$	$A_G$	F	$A_F$	$A_R$	$A_{leg}$	Leg	$C_AA_A$	$C_AA_A$
Elevation						a				%	In	Out
						c					Face	Face
ft	ft		psf	in	$ft^2$	e	$ft^2$	$ft^2$	$ft^2$		$ft^2$	$ft^2$
T1	167.65	1.411	3	1.1765	105.478	Α	8.059	22.716	12.056	39.17	0.000	0.000
175.30-160.00						В	8.059	22.716		39.17	0.000	0.000
						C	8.059	22.716		39.17	34.249	0.000
T2	150.00	1.378	3	1.1635	154.718	A	9.457	30.445	19.441	48.72	0.000	0.000
160.00-140.00						В	9.457	30.445		48.72	43.326	0.000
						C	9.457	30.445		48.72	57.768	0.000
T3	130.00	1.337	3	1.1469	186.331	A	13.165	34.747	22.668	47.31	57.526	0.000
140.00-120.00						В	13.165	34.747		47.31	57.526	0.000
						C	13.165	34.747		47.31	59.460	0.000
T4	110.00	1.291	3	1.1279	219.812	Α	14.464	42.682	29.631	51.85	57.247	0.000
120.00-100.00						В	14.464	42.682		51.85	62.992	0.000
						C	14.464	42.682		51.85	64.907	0.000
T5 100.00-80.00	90.00	1.238	2	1.1055	253.073	A	15.856	50.178	36.154	54.75	56.919	0.000
						В	15.856	50.178		54.75	64.489	0.000
						C	15.856	50.178		54.75	64.489	0.000
T6 80.00-60.00	70.00	1.174	2	1.0781	282.981	A	21.044	51.096	35.971	49.86	56.517	0.000
						В	21.044	51.096		49.86	63.978	0.000
						C	21.044	51.096		49.86	63.978	0.000
T7 60.00-40.00	50.00	1.094	2	1.0424	317.872	A	23.446	52.053	35.759	47.36	55.995	0.000
						В	23.446	52.053		47.36	63.313	0.000
						C	23.446	52.053		47.36	63.313	0.000
T8 40.00-20.00	30.00	0.982	2	0.9905	357.699	A	26.236	52.737	35.412	44.84	55.235	0.000
						В	26.236	52.737		44.84	62.346	0.000
						C	26.236	52.737		44.84	62.346	0.000
T9 20.00-0.00	10.00	0.85	2	0.8875	400.901	A	33.579	58.848	41.819	45.25	53.729	0.000
						В	33.579	58.848		45.25	60.427	0.000
						С	33.579	58.848		45.25	60.427	0.000

#### **Tower Pressure - Service**

 $G_H = 0.850$ 

Section	Z	$K_Z$	$q_z$	$A_G$	F	$A_F$	$A_R$	$A_{leg}$	Leg	$C_A A_A$	$C_A A_A$
Elevation					а			_	%	In	Out
					С					Face	Face
ft	ft		psf	$ft^2$	e	$ft^2$	$ft^2$	$ft^2$		$ft^2$	ft <sup>2</sup>
T1	167.65	1.411	11	102.478	Α	8.059	6.056	6.056	42.90	0.000	0.000
175.30-160.00					В	8.059	6.056		42.90	0.000	0.000
					С	8.059	6.056		42.90	26.570	0.000
T2	150.00	1.378	11	150.837	Α	9.457	11.678	11.678	55.25	0.000	0.000
160.00-140.00					В	9.457	11.678		55.25	35.480	0.000
					С	9.457	11.678		55.25	47.307	0.000
Т3	130.00	1.337	10	182.505	Α	13.165	15.014	15.014	53.28	47.307	0.000
140.00-120.00					В	13.165	15.014		53.28	47.307	0.000
					C	13.165	15.014		53.28	48.094	0.000
T4	110.00	1.291	10	216.049	Α	14.464	22.104	22.104	60.45	47.307	0.000
120.00-100.00					В	14.464	22.104		60.45	49.668	0.000
					С	14.464	22.104		60.45	50.455	0.000
T5	90.00	1.238	10	249.385	Α	15.856	28.777	28.777	64.47	47.307	0.000
100.00-80.00					В	15.856	28.777		64.47	50.455	0.000
					C	15.856	28.777		64.47	50.455	0.000
T6 80.00-60.00	70.00	1.174	9	279.385	Α	21.044	28.777	28.777	57.76	47.307	0.000
					В	21.044	28.777		57.76	50.455	0.000
					C	21.044	28.777		57.76	50.455	0.000
T7 60.00-40.00	50.00	1.094	9	314.393	Α	23.446	28.798	28.798	55.12	47.307	0.000

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Section	Z	$K_Z$	$q_z$	$A_G$	F	$A_F$	$A_R$	$A_{leg}$	Leg	$C_AA_A$	$C_A A_A$
Elevation					a				%	In	Out
					$\mathcal{C}$					Face	Face
ft	ft		psf	$ft^2$	e	$ft^2$	ft <sup>2</sup>	$ft^2$		ft <sup>2</sup>	$ft^2$
					В	23.446	28.798		55.12	50.455	0.000
					C	23.446	28.798		55.12	50.455	0.000
T8 40.00-20.00	30.00	0.982	8	354.393	A	26.236	28.798	28.798	52.33	47.307	0.000
					В	26.236	28.798		52.33	50.455	0.000
					C	26.236	28.798		52.33	50.455	0.000
T9 20.00-0.00	10.00	0.85	7	397.939	A	33.579	35.893	35.893	51.67	47.307	0.000
					В	33.579	35.893		51.67	50.455	0.000
					C	33.579	35.893		51.67	50.455	0.000

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

Elevation ft	Weight lb	Weight	а			$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
ft	116		и									Face
ft	112		С			psf						
		lb	е						ft <sup>2</sup>	lb	plf	
T1	142.05	454.80	Α	0.138	2.817	34	1	1	11.490	1319.38	86.23	С
175.30-160.00			В	0.138	2.817		1	1	11.490			
			С	0.138	2.817		1	1	11.490			
T2	417.55	975.66	Α	0.14	2.808	33	1	1	16.074	2256.74	112.84	С
160.00-140.00			В	0.14	2.808		1	1	16.074			
			С	0.14	2.808		1	1	16.074			
T3	718.35	1382.25	Α	0.154	2.755	32	1	1	21.323	3104.87	155.24	С
140.00-120.00			В	0.154	2.755		1	1	21.323			
			C	0.154	2.755		1	1	21.323			
T4	733.65	1997.92	Α	0.169	2.702	31	1	1	24.910	3297.37	164.87	С
120.00-100.00			В	0.169	2.702		1	1	24.910			
			C	0.169	2.702		1	1	24.910			
T5	736.20	2971.44	Α	0.179	2.668	30	1	1	28.345	3382.72	169.14	С
100.00-80.00			В	0.179	2.668		1	1	28.345			
			С	0.179	2.668		1	1	28.345			
T6	736.20	2977.54	Α	0.178	2.67	28	1	1	33.523	3540.92	177.05	С
80.00-60.00			В	0.178	2.67		1	1	33.523			
			С	0.178	2.67		1	1	33.523			
T7	736.20	3095.16	Α	0.166	2.713	26	1	1	35.745	3465.30	173.26	С
60.00-40.00			В	0.166	2.713		1	1	35.745			
			С	0.166	2.713		1	1	35.745			
Т8	736.20	3230.67	Α	0.155	2.752	24	1	1	38.718	3303.95	165.20	С
40.00-20.00			В	0.155	2.752		1	1	38.718			
			С	0.155	2.752		1	1	38.718			
T9 20.00-0.00	736.20	4971.79	Α	0.175	2.683	20	1	1	49.070	3294.21	164.71	С
			В	0.175	2.683		1	1	49.070			
			C	0.175	2.683		1	1	49.070			
Sum Weight:	5692.60	22057.23						OTM	2183683.1	26965.46		
	=								4 lb-ft			

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

Ī	Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
ı	Elevation	Weight	Weight	а									Face
ı				С			psf						
۱	ft	lb	lb	e						ft <sup>2</sup>	lb	plf	

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Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а			_						Face
			С			psf						
ft	lb	lb	e						$ft^2$	lb	plf	
T1	142.05	454.80	Α	0.138	2.817	34	0.8	1	9.878	1188.72	77.69	A
175.30-160.00			В	0.138	2.817		0.8	1	9.878			
			С	0.138	2.817		0.8	1	9.878			
T2	417.55	975.66	Α	0.14	2.808	33	0.8	1	14.182	2107.44	105.37	A
160.00-140.00			В	0.14	2.808		0.8	1	14.182			
			С	0.14	2.808		0.8	1	14.182			
T3	718.35	1382.25	Α	0.154	2.755	32	0.8	1	18.690	2907.00	145.35	С
140.00-120.00			В	0.154	2.755		0.8	1	18.690			
			C	0.154	2.755		0.8	1	18.690			
T4	733.65	1997.92	Α	0.169	2.702	31	0.8	1	22.018	3091.56	154.58	С
120.00-100.00			В	0.169	2.702		0.8	1	22.018			
			С	0.169	2.702		0.8	1	22.018			
T5	736.20	2971.44	Α	0.179	2.668	30	0.8	1	25.174	3169.17	158.46	С
100.00-80.00			В	0.179	2.668		0.8	1	25.174			
			С	0.179	2.668		0.8	1	25.174			
T6	736.20	2977.54	Α	0.178	2.67	28	0.8	1	29.314	3271.88	163.59	С
80.00-60.00			В	0.178	2.67		0.8	1	29.314			
			С	0.178	2.67		0.8	1	29.314			
T7	736.20	3095.16	Α	0.166	2.713	26	0.8	1	31.056	3181.56	159.08	С
60.00-40.00			В	0.166	2.713		0.8	1	31.056			
			С	0.166	2.713		0.8	1	31.056			
Т8	736.20	3230.67	Α	0.155	2.752	24	0.8	1	33.471	3014.71	150.74	С
40.00-20.00			В	0.155	2.752		0.8	1	33.471			
			С	0.155	2.752		0.8	1	33.471			
T9 20.00-0.00	736.20	4971.79	Α	0.175	2.683	20	0.8	1	42.355	2981.89	149.09	С
			В	0.175	2.683		0.8	1	42.355			
			С	0.175	2.683		0.8	1	42.355			
Sum Weight:	5692.60	22057.23						OTM	2026981.1	24913.92		
									7 lb-ft			

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

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf						
ft	lb	lb	e						$ft^2$	lb	plf	
T1	142.05	454.80	Α	0.138	2.817	34	0.85	1	10.281	1183.51	77.35	В
175.30-160.00			В	0.138	2.817		0.85	1	10.281			
			С	0.138	2.817		0.85	1	10.281			
T2	417.55	975.66	Α	0.14	2.808	33	0.85	1	14.655	2181.76	109.09	A
160.00-140.00			В	0.14	2.808		0.85	1	14.655			
			C	0.14	2.808		0.85	1	14.655			
T3	718.35	1382.25	Α	0.154	2.755	32	0.85	1	19.348	2956.46	147.82	С
140.00-120.00			В	0.154	2.755		0.85	1	19.348			
			C	0.154	2.755		0.85	1	19.348			
T4	733.65	1997.92	Α	0.169	2.702	31	0.85	1	22.741	3143.01	157.15	С
120.00-100.00			В	0.169	2.702		0.85	1	22.741			
			C	0.169	2.702		0.85	1	22.741			
T5	736.20	2971.44	Α	0.179	2.668	30	0.85	1	25.967	3222.56	161.13	С
100.00-80.00			В	0.179	2.668		0.85	1	25.967			
			C	0.179	2.668		0.85	1	25.967			
T6	736.20	2977.54	Α	0.178	2.67	28	0.85	1	30.367	3339.14	166.96	С
80.00-60.00			В	0.178	2.67		0.85	1	30.367			
			C	0.178	2.67		0.85	1	30.367			

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Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf						
ft	lb	lb	e						$ft^2$	lb	plf	
T7	736.20	3095.16	Α	0.166	2.713	26	0.85	1	32.229	3252.50	162.62	С
60.00-40.00			В	0.166	2.713		0.85	1	32.229			
			С	0.166	2.713		0.85	1	32.229			
T8	736.20	3230.67	Α	0.155	2.752	24	0.85	1	34.783	3087.02	154.35	С
40.00-20.00			В	0.155	2.752		0.85	1	34.783			
			С	0.155	2.752		0.85	1	34.783			
T9 20.00-0.00	736.20	4971.79	Α	0.175	2.683	20	0.85	1	44.033	3059.97	153.00	C
			В	0.175	2.683		0.85	1	44.033			
			С	0.175	2.683		0.85	1	44.033			
Sum Weight:	5692.60	22057.23						OTM	2065356.6	25425.93		
									9 lb-ft			

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

Section	Add	Self	F	е	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf						
ft	lb	lb	е						ft <sup>2</sup>	lb	plf	
T1	455.06	1581.87	Α	0.292	2.318	3	1	1	21.607	163.42	10.68	С
175.30-160.00			В	0.292	2.318		1	1	21.607			
			C	0.292	2.318		1	1	21.607			
T2	1342.50	2380.24	Α	0.258	2.414	3	1	1	27.328	268.46	13.42	С
160.00-140.00			В	0.258	2.414		1	1	27.328			
			С	0.258	2.414		1	1	27.328			
T3	2298.74	3157.10	Α	0.257	2.416	3	1	1	33.554	364.45	18.22	C
140.00-120.00			В	0.257	2.416		1	1	33.554			
			С	0.257	2.416		1	1	33.554			
T4	2397.53	4054.30	Α	0.26	2.408	3	1	1	39.540	396.07	19.80	С
120.00-100.00			В	0.26	2.408		1	1	39.540			
			С	0.26	2.408		1	1	39.540			
T5	2382.01	5285.32	Α	0.261	2.405	2	1	1	45.349	409.31	20.47	С
100.00-80.00			В	0.261	2.405		1	1	45.349			
			С	0.261	2.405		1	1	45.349			
Т6	2337.48	5616.41	Α	0.255	2.423	2	1	1	50.998	415.02	20.75	С
80.00-60.00			В	0.255	2.423		1	1	50.998			
			С	0.255	2.423		1	1	50.998			
T7	2280.26	5824.18	Α	0.238	2.475	2	1	1	53.743	402.07	20.10	С
60.00-40.00			В	0.238	2.475		1	1	53.743			
			C	0.238	2.475		1	1	53.743			
T8	2198.32	6011.77	A	0.221	2.528	2	1	1	56.740	375.69	18.78	С
40.00-20.00			В	0.221	2.528	_	1	1	56.740			_
10.00 20.00			C	0.221	2.528		1	1	56.740			
T9 20.00-0.00	2040.35	8024.18	A	0.231	2.497	2	1	1	67.739	357.38	17.87	С
2.20.00 0.00	20.0.55	00210	В	0.231	2.497		1	1	67.739	227.30	1,.57	Ĭ
			C	0.231	2.497		1	1	67.739			
Sum Weight:	17732.26	41935.37	~	0.231	2.17/		1	OTM	259450.53	3151.88		
Sum Weight.	17732.20	11/33.37						011/1	257430.55 lb-ft	3131.00		
				I					10 11			

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

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Client	Designed by
Tillman Infrastructure	AG

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
	· ·		С			psf						
ft	lb	lb	e						ft <sup>2</sup>	lb	plf	
T1	455.06	1581.87	Α	0.292	2.318	3	0.8	1	19.996	154.65	10.11	A
175.30-160.00			В	0.292	2.318		0.8	1	19.996			
			С	0.292	2.318		0.8	1	19.996			
T2	1342.50	2380.24	Α	0.258	2.414	3	0.8	1	25.436	257.98	12.90	Α
160.00-140.00			В	0.258	2.414		0.8	1	25.436			
			С	0.258	2.414		0.8	1	25.436			
T3	2298.74	3157.10	Α	0.257	2.416	3	0.8	1	30.921	350.28	17.51	С
140.00-120.00			В	0.257	2.416		0.8	1	30.921			
			С	0.257	2.416		0.8	1	30.921			
T4	2397.53	4054.30	Α	0.26	2.408	3	0.8	1	36.648	381.10	19.05	С
120.00-100.00			В	0.26	2.408		0.8	1	36.648			
			С	0.26	2.408		0.8	1	36.648			
T5	2382.01	5285.32	Α	0.261	2.405	2	0.8	1	42.178	393.59	19.68	С
100.00-80.00			В	0.261	2.405		0.8	1	42.178			
			С	0.261	2.405		0.8	1	42.178			
T6	2337.48	5616.41	Α	0.255	2.423	2	0.8	1	46.790	395.09	19.75	С
80.00-60.00			В	0.255	2.423		0.8	1	46.790			
			С	0.255	2.423		0.8	1	46.790			
T7	2280.26	5824.18	Α	0.238	2.475	2	0.8	1	49.054	380.94	19.05	С
60.00-40.00			В	0.238	2.475		0.8	1	49.054			
			С	0.238	2.475		0.8	1	49.054			
Т8	2198.32	6011.77	Α	0.221	2.528	2	0.8	1	51.493	354.00	17.70	С
40.00-20.00			В	0.221	2.528		0.8	1	51.493			
			С	0.221	2.528		0.8	1	51.493			
T9 20.00-0.00	2040.35	8024.18	A	0.231	2.497	2	0.8	1	61.024	333.65	16.68	С
			В	0.231	2.497		0.8	1	61.024			
			C	0.231	2.497		0.8	1	61.024			
Sum Weight:	17732.26	41935.37						OTM	248164.87	3001.29		
		,							lb-ft			

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

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf						
ft	lb	lb	е						ft <sup>2</sup>	lb	plf	
T1	455.06	1581.87	Α	0.292	2.318	3	0.85	1	20.399	153.75	10.05	В
175.30-160.00			В	0.292	2.318		0.85	1	20.399			
			С	0.292	2.318		0.85	1	20.399			
T2	1342.50	2380.24	Α	0.258	2.414	3	0.85	1	25.909	263.62	13.18	A
160.00-140.00			В	0.258	2.414		0.85	1	25.909			
			C	0.258	2.414		0.85	1	25.909			
T3	2298.74	3157.10	Α	0.257	2.416	3	0.85	1	31.580	353.82	17.69	C
140.00-120.00			В	0.257	2.416		0.85	1	31.580			
			C	0.257	2.416		0.85	1	31.580			
T4	2397.53	4054.30	Α	0.26	2.408	3	0.85	1	37.371	384.84	19.24	C
120.00-100.00			В	0.26	2.408		0.85	1	37.371			
			С	0.26	2.408		0.85	1	37.371			
T5	2382.01	5285.32	Α	0.261	2.405	2	0.85	1	42.970	397.52	19.88	C
100.00-80.00			В	0.261	2.405		0.85	1	42.970			
			С	0.261	2.405		0.85	1	42.970			
T6	2337.48	5616.41	Α	0.255	2.423	2	0.85	1	47.842	400.08	20.00	С
80.00-60.00			В	0.255	2.423		0.85	1	47.842			

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Client	Designed by
Tillman Infrastructure	AG

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf						
ft	lb	lb	е						$ft^2$	lb	plf	
			С	0.255	2.423		0.85	1	47.842			
T7	2280.26	5824.18	Α	0.238	2.475	2	0.85	1	50.226	386.22	19.31	C
60.00-40.00			В	0.238	2.475		0.85	1	50.226			
			С	0.238	2.475		0.85	1	50.226			
T8	2198.32	6011.77	Α	0.221	2.528	2	0.85	1	52.805	359.43	17.97	C
40.00-20.00			В	0.221	2.528		0.85	1	52.805			
			С	0.221	2.528		0.85	1	52.805			
T9 20.00-0.00	2040.35	8024.18	Α	0.231	2.497	2	0.85	1	62.703	339.58	16.98	C
			В	0.231	2.497		0.85	1	62.703			
			С	0.231	2.497		0.85	1	62.703			
Sum Weight:	17732.26	41935.37						OTM	250920.98	3038.87		
									lb-ft			

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

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf			.2			
ft	lb	lb	е						ft <sup>2</sup>	lb	plf	
T1	142.05	454.80	Α	0.138	2.817	11	1	1	11.490	430.82	28.16	С
175.30-160.00			В	0.138	2.817		1	1	11.490			
			С	0.138	2.817		1	1	11.490			
T2	417.55	975.66	Α	0.14	2.808	11	1	1	16.074	736.89	36.84	C
160.00-140.00			В	0.14	2.808		1	1	16.074			
			С	0.14	2.808		1	1	16.074			
T3	718.35	1382.25	Α	0.154	2.755	10	1	1	21.693	1022.92	51.15	C
140.00-120.00			В	0.154	2.755		1	1	21.693			
			С	0.154	2.755		1	1	21.693			
T4	733.65	1997.92	Α	0.169	2.702	10	1	1	27.058	1126.59	56.33	C
120.00-100.00			В	0.169	2.702		1	1	27.058			
			C	0.169	2.702		1	1	27.058			
T5	736.20	2971.44	Α	0.179	2.668	10	1	1	31.383	1171.35	58.57	C
100.00-80.00			В	0.179	2.668		1	1	31.383			
			C	0.179	2.668		1	1	31.383			
T6	736.20	2977.54	Α	0.178	2.67	9	1	1	36.693	1222.39	61.12	C
80.00-60.00			В	0.178	2.67		1	1	36.693			
			С	0.178	2.67		1	1	36.693			
T7	736.20	3095.16	Α	0.166	2.713	9	1	1	39.202	1199.82	59.99	C
60.00-40.00			В	0.166	2.713		1	1	39.202			
			С	0.166	2.713		1	1	39.202			
T8	736.20	3230.67	Α	0.155	2.752	8	1	1	42.190	1141.34	57.07	C
40.00-20.00			В	0.155	2.752		1	1	42.190			
			С	0.155	2.752		1	1	42.190			
T9 20.00-0.00	736.20	4971.79	Α	0.175	2.683	7	1	1	52.706	1130.88	56.54	С
			В	0.175	2.683		1	1	52.706			
			C	0.175	2.683		1	1	52.706			
Sum Weight:	5692.60	22057.23		31170				OTM	736193.31	9182.99		
	2 0 2 = 1 0 0							/-	lb-ft	2 - 2 - 12 2		

tnx <sub>T</sub>	'ower

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

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а			_						Face
			С			psf						
ft	lb	lb	e						ft <sup>2</sup>	lb	plf	
T1	142.05	454.80	Α	0.138	2.817	11	0.8	1	9.878	388.15	25.37	A
175.30-160.00			В	0.138	2.817		0.8	1	9.878			
			С	0.138	2.817		0.8	1	9.878			
T2	417.55	975.66	Α	0.14	2.808	11	0.8	1	14.182	688.14	34.41	A
160.00-140.00			В	0.14	2.808		0.8	1	14.182			
			С	0.14	2.808		0.8	1	14.182			
Т3	718.35	1382.25	Α	0.154	2.755	10	0.8	1	19.060	958.30	47.92	С
140.00-120.00			В	0.154	2.755		0.8	1	19.060			
			С	0.154	2.755		0.8	1	19.060			
T4	733.65	1997.92	Α	0.169	2.702	10	0.8	1	24.166	1059.39	52.97	С
120.00-100.00			В	0.169	2.702		0.8	1	24.166			
			С	0.169	2.702		0.8	1	24.166			
T5	736.20	2971.44	Α	0.179	2.668	10	0.8	1	28.211	1101.62	55.08	С
100.00-80.00			В	0.179	2.668		0.8	1	28.211			
			С	0.179	2.668		0.8	1	28.211			
Т6	736.20	2977.54	Α	0.178	2.67	9	0.8	1	32.484	1134.54	56.73	С
80.00-60.00			В	0.178	2.67		0.8	1	32.484			
			С	0.178	2.67		0.8	1	32.484			
T7	736.20	3095.16	Α	0.166	2.713	9	0.8	1	34.513	1107.17	55.36	С
60.00-40.00			В	0.166	2.713		0.8	1	34.513			
			С	0.166	2.713		0.8	1	34.513			
Т8	736.20	3230.67	Α	0.155	2.752	8	0.8	1	36.943	1046.89	52.34	С
40.00-20.00			В	0.155	2.752		0.8	1	36.943			
			С	0.155	2.752		0.8	1	36.943			
T9 20.00-0.00	736.20	4971.79	A	0.175	2.683	7	0.8	1	45.991	1028.89	51.44	С
			В	0.175	2.683		0.8	1	45.991			
			C	0.175	2.683		0.8	1	45.991			
Sum Weight:	5692.60	22057.23						OTM	685025.32	8513.10		
	2 0 2 = 1 0 0							/-	lb-ft			

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

Section	Add	Self	F	е	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а			_						Face
			С			psf						
ft	lb	lb	е						$ft^2$	lb	plf	
T1	142.05	454.80	Α	0.138	2.817	11	0.85	1	10.281	386.45	25.26	В
175.30-160.00			В	0.138	2.817		0.85	1	10.281			
			С	0.138	2.817		0.85	1	10.281			
T2	417.55	975.66	Α	0.14	2.808	11	0.85	1	14.655	712.41	35.62	A
160.00-140.00			В	0.14	2.808		0.85	1	14.655			
			C	0.14	2.808		0.85	1	14.655			
T3	718.35	1382.25	Α	0.154	2.755	10	0.85	1	19.718	974.46	48.72	C
140.00-120.00			В	0.154	2.755		0.85	1	19.718			
			С	0.154	2.755		0.85	1	19.718			
T4	733.65	1997.92	Α	0.169	2.702	10	0.85	1	24.889	1076.19	53.81	C
120.00-100.00			В	0.169	2.702		0.85	1	24.889			
			C	0.169	2.702		0.85	1	24.889			
T5	736.20	2971.44	Α	0.179	2.668	10	0.85	1	29.004	1119.05	55.95	C
100.00-80.00			В	0.179	2.668		0.85	1	29.004			
			С	0.179	2.668		0.85	1	29.004			

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Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf						
ft	lb	lb	e						ft <sup>2</sup>	lb	plf	
T6	736.20	2977.54	Α	0.178	2.67	9	0.85	1	33.537	1156.50	57.82	С
80.00-60.00			В	0.178	2.67		0.85	1	33.537			
			С	0.178	2.67		0.85	1	33.537			
T7	736.20	3095.16	Α	0.166	2.713	9	0.85	1	35.685	1130.33	56.52	C
60.00-40.00			В	0.166	2.713		0.85	1	35.685			
			С	0.166	2.713		0.85	1	35.685			
Т8	736.20	3230.67	Α	0.155	2.752	8	0.85	1	38.255	1070.51	53.53	C
40.00-20.00			В	0.155	2.752		0.85	1	38.255			
			С	0.155	2.752		0.85	1	38.255			
T9 20.00-0.00	736.20	4971.79	Α	0.175	2.683	7	0.85	1	47.669	1054.39	52.72	C
			В	0.175	2.683		0.85	1	47.669			
			С	0.175	2.683		0.85	1	47.669			
Sum Weight:	5692.60	22057.23						OTM	697556.10	8680.29		
									lb-ft			

## **Mast Vectors - No Ice**

Section	Section	Wind	Directionality	F	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
No.	Elevation	Azimuth							
	ft	0		lb	lb	lb	lb-ft	lb-ft	lb-ft
T1	175.30-160.00	0	Wind Normal	1319.38	0.00	-1319.38	-220912.07	0.00	0.00
		30	Wind 90	1183.51	591.75	-1024.95	-171551.08	-99207.62	348.07
		60	Wind 60	1075.10	931.06	-537.55	-89838.35	-156092.27	468.96
		90	Wind 90	1069.89	1069.89	0.00	281.56	-179366.53	464.20
		120	Wind Normal	1205.76	1044.21	602.88	101354.02	-175062.64	468.96
		150	Wind 90	1183.51	591.75	1024.95	172114.19	-99207.62	348.07
		180	Wind 60	1188.72	0.00	1188.72	199570.09	0.00	0.00
		210	Wind 90	1183.51	-591.75	1024.95	172114.19	99207.62	-348.07
		240	Wind Normal	1205.76	-1044.21	602.88	101354.02	175062.64	-468.96
		270	Wind 90	1069.89	-1069.89	0.00	281.56	179366.53	-464.20
		300	Wind 60	1075.10	-931.06	-537.55	-89838.35	156092.27	-468.96
		330	Wind 90	1183.51	-591.75	-1024.95	-171551.08	99207.62	-348.07
T2	160.00-140.00	0	Wind Normal	2256.74	0.00	-2256.74	-338186.23	-351.01	641.55
		30	Wind 90	2181.76	1090.88	-1889.46	-283094.67	-163983.35	1147.79
		60	Wind 60	2051.95	1777.04	-1025.97	-153571.17	-266906.74	834.88
		90	Wind 90	1959.78	1959.78	0.00	324.85	-294318.15	298.26
		120	Wind Normal	2034.76	1762.15	1017.38	152931.62	-264673.69	193.33
		150	Wind 90	2015.28	1007.64	1745.28	262116.99	-151496.77	36.60
		180	Wind 60	2107.44	0.00	2107.44	316441.27	-351.01	-641.55
		210	Wind 90	2181.76	-1090.88	1889.46	283744.37	163281.32	-1147.79
		240	Wind Normal	2201.24	-1906.33	1100.62	165418.19	285599.05	-834.88
		270	Wind 90	1959.78	-1959.78	0.00	324.85	293616.13	-298.26
		300	Wind 60	1885.46	-1632.86	-942.73	-141084.60	244577.33	-193.33
		330	Wind 90	2015.28	-1007.64	-1745.28	-261467.29	150794.75	-36.60
T3	140.00-120.00	0	Wind Normal	3104.87	0.00	-3104.87	-403625.82	0.00	-0.00
		30	Wind 90	2956.46	1478.23	-2560.37	-332841.52	-192170.19	597.35
		60	Wind 60	2907.00	2517.53	-1453.50	-188947.76	-327279.29	30.72
		90	Wind 90	2956.46	2956.46	0.00	7.02	-384340.39	-544.14
		120	Wind Normal	3104.87	2688.89	1552.43	201823.45	-349556.30	30.72
		150	Wind 90	2956.46	1478.23	2560.37	332855.56	-192170.19	597.35
		180	Wind 60	2907.00	0.00	2907.00	377916.59	0.00	0.00
		210	Wind 90	2956.46	-1478.23	2560.37	332855.56	192170.19	-597.35
		240	Wind Normal	3104.87	-2688.89	1552.43	201823.45	349556.30	-30.72
		270	Wind 90	2956.46	-2956.46	0.00	7.02	384340.39	544.14

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CI	ient	Designed by
	Tillman Infrastructure	AG

Section	Section	Wind	Directionality	F	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
No.	Elevation ft	Azimuth °		lb	lb	lb	lb-ft	lb-ft	lb-ft
	J.	300	Wind 60	2907.00	-2517.53	-1453.50	-188947.76	327279.29	-30.72
		330	Wind 90	2956.46	-1478.23	-2560.37	-332841.52	192170.19	-597.35
T4	120.00-100.00	0	Wind Normal	3297.37	0.00	-3297.37	-362691.63	-20.40	99.46
		30	Wind 90	3143.01	1571.51	-2721.93	-299393.31	-172886.22	782.27
		60	Wind 60	3091.56	2677.37	-1545.78	-170016.90	-294531.34	130.29
		90	Wind 90	3143.01	3143.01	0.00	19.07	-345752.03	-556.61
		120	Wind Normal	3297.37	2855.61	1648.69	181374.43	-314137.08	30.82
		150	Wind 90	3143.01	1571.51	2721.93	299431.46	-172886.22	610.00
		180	Wind 60	3091.56	0.00	3091.56	340091.02	-20.40	-99.46
		210	Wind 90	3143.01	-1571.51	2721.93	299431.46	172845.42	-782.27
		240	Wind Normal	3297.37	-2855.61	1648.69	181374.43	314096.29	-130.29
		270	Wind 90	3143.01	-3143.01	0.00	19.07	345711.24	556.61
		300	Wind 60	3091.56	-2677.37	-1545.78	-170016.90	294490.55	-30.82
		330	Wind 90	3143.01	-1571.51	-2721.93	-299393.31	172845.42	-610.00
T5	100.00-80.00	0	Wind Normal	3382.72	0.00	-3382.72	-304427.16	-30.54	142.78
		30	Wind 90	3222.56	1611.28	-2790.82	-251155.80	-145045.59	873.94
		60	Wind 60	3169.17	2744.58	-1584.58	-142594.96	-247042.81	142.78
		90	Wind 90	3222.56	3222.56	0.00	17.63	-290060.64	-626.64
		120	Wind Normal	3382.72	2929.52	1691.36	152240.03	-263687.47 -145045.59	0.00
		150	Wind 90 Wind 60	3222.56	1611.28	2790.82 3169.17	251191.06		626.64
		180 210	Wind 90	3169.17 3222.56	0.00	2790.82	285242.83	-30.54	-142.78
		240	Wind Normal	3382.72	-1611.28 -2929.52	1691.36	251191.06 152240.03	144984.51 263626.39	-873.94 -142.78
		270	Wind 90	3222.56	-3222.56	0.00	17.63	289999.55	626.64
		300	Wind 60	3169.17	-2744.58	-1584.58	-142594.96	246981.72	0.00
		330	Wind 90	3222.56	-1611.28	-2790.82	-251155.80	144984.51	-626.64
T6	80.00-60.00	0	Wind Normal	3540.92	0.00	-3540.92	-247844.67	-34.37	152.38
10	00.00 00.00	30	Wind 90	3339.14	1669.57	-2891.78	-202404.59	-116904.17	930.36
		60	Wind 60	3271.88	2833.53	-1635.94	-114495.80	-198381.28	152.38
		90	Wind 90	3339.14	3339.14	0.00	19.84	-233773.96	-666.43
		120	Wind Normal	3540.92	3066.53	1770.46	123952.10	-214691.33	0.00
		150	Wind 90	3339.14	1669.57	2891.78	202444.27	-116904.17	666.43
		180	Wind 60	3271.88	0.00	3271.88	229051.13	-34.37	-152.38
		210	Wind 90	3339.14	-1669.57	2891.78	202444.27	116835.43	-930.36
		240	Wind Normal	3540.92	-3066.53	1770.46	123952.10	214622.60	-152.38
		270	Wind 90	3339.14	-3339.14	0.00	19.84	233705.23	666.43
		300	Wind 60	3271.88	-2833.53	-1635.94	-114495.80	198312.55	0.00
		330	Wind 90	3339.14	-1669.57	-2891.78	-202404.59	116835.43	-666.43
T7	60.00-40.00	0	Wind Normal	3465.30	0.00	-3465.30	-173242.42	-38.83	160.39
		30	Wind 90	3252.50	1626.25	-2816.74	-140814.81	-81351.24	977.01
		60	Wind 60	3181.56	2755.31	-1590.78	-79516.66	-137804.56	160.39
		90	Wind 90	3252.50	3252.50	0.00	22.42	-162663.66	-699.20
		120	Wind Normal	3465.30	3001.04	1732.65	86654.84	-150090.58	0.00
		150	Wind 90	3252.50	1626.25	2816.74	140859.65	-81351.24	699.20
		180	Wind 60	3181.56	0.00	3181.56	159100.58	-38.83	-160.39
		210	Wind 90	3252.50	-1626.25	2816.74	140859.65	81273.59	-977.01
		240	Wind Normal	3465.30	-3001.04	1732.65	86654.84	150012.92	-160.39
		270	Wind 90	3252.50	-3252.50	0.00	22.42	162586.00	699.20
		300	Wind 60	3181.56	-2755.31	-1590.78	-79516.66	137726.90	0.00
то	40.00.20.00	330	Wind Normal	3252.50	-1626.25	-2816.74	-140814.82	81273.59	-699.20
Т8	40.00-20.00	30	Wind Normal Wind 90	3303.95	0.00	-3303.95 -2673.44	-99093.23	-43.93 46340.20	162.96 990.57
		60	Wind 90 Wind 60	3087.02 3014.71	1543.51 2610.81	-26/3.44 -1507.35	-80177.72 -45195.23	-46349.20 -78368.29	990.57 162.96
		90	Wind 90	3014.71	3087.02	0.00	25.36	-78368.29 -92654.47	-708.31
		120	Wind Normal	3087.02	2861.31	1651.98	49584.66	-92634.47 -85883.15	0.00
		150	Wind 90	3087.02	1543.51	2673.44	80228.44	-63663.13 -46349.20	708.31
		180	Wind 60	3014.71	0.00	3014.71	90466.55	-40349.20	-162.96
		210	Wind 90	3014.71	-1543.51	2673.44	80228.44	46261.34	-990.57
		240	Wind Normal	3303.95	-1343.31	1651.98	49584.66	85795.29	-162.96
		270	Wind 90	3087.02	-3087.02	0.00	25.36	92566.61	708.31
		300	Wind 60	3014.71	-2610.81	-1507.35	-45195.23	78280.44	0.00
Į.	1							. 5200.111	0.00

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Project	Date
NS 175' - TI-OPP-22295 / Clover Fork - Harlan Co., KY	10:41:48 08/28/23
Client	Designed by
Tillman Infrastructure	AG

Section	Section	Wind	Directionality	F	$V_x$	$V_z$	$OTM_{x}$	$OTM_z$	Torque
No.	Elevation	Azimuth							
	ft	0		lb	lb	lb	lb-ft	lb-ft	lb-ft
		330	Wind 90	3087.02	-1543.51	-2673.44	-80177.72	46261.34	-708.31
Т9	20.00-0.00	0	Wind Normal	3294.21	0.00	-3294.21	-32913.83	-49.03	157.39
		30	Wind 90	3059.97	1529.98	-2650.01	-26471.81	-15348.88	955.13
		60	Wind 60	2981.89	2582.39	-1490.94	-14881.13	-25872.94	157.39
		90	Wind 90	3059.97	3059.97	0.00	28.31	-30648.72	-682.52
		120	Wind Normal	3294.21	2852.87	1647.11	16499.38	-28577.76	0.00
		150	Wind 90	3059.97	1529.98	2650.01	26528.42	-15348.88	682.52
		180	Wind 60	2981.89	0.00	2981.89	29847.19	-49.03	-157.39
		210	Wind 90	3059.97	-1529.98	2650.01	26528.42	15250.82	-955.13
		240	Wind Normal	3294.21	-2852.87	1647.11	16499.38	28479.70	-157.39
		270	Wind 90	3059.97	-3059.97	0.00	28.31	30550.67	682.52
		300	Wind 60	2981.89	-2582.39	-1490.94	-14881.13	25774.88	0.00
		330	Wind 90	3059.97	-1529.98	-2650.01	-26471.81	15250.82	-682.52

#### Mast Totals - No Ice

Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	0.00	-26965.46	-2182937.08	-568.11	1516.92
30	12712.97	-22019.50	-1787905.29	-1033246.45	7602.49
60	21429.63	-12372.40	-999057.98	-1732279.51	2240.75
90	25090.32	0.00	746.07	-2013578.56	-3721.39
120	23062.13	13314.93	1066414.52	-1846360.02	723.84
150	12629.72	21875.32	1767770.05	-1020759.88	4975.12
180	0.00	24913.92	2027727.24	-568.11	-1516.92
210	-12712.97	22019.50	1789397.43	1032110.24	-7602.49
240	-23206.31	13398.17	1078901.10	1866851.18	-2240.75
270	-25090.32	0.00	746.07	2012442.35	3721.39
300	-21285.45	-12289.16	-986571.40	1709515.92	-723.84
330	-12629.72	-21875.32	-1766277.91	1019623.66	-4975.12

#### Mast Vectors - With Ice

Section	Section	Wind	Directionality	F	$V_x$	$V_z$	$OTM_{x}$	$OTM_z$	Torque
No.	Elevation	Azimuth							
	ft	0		lb	lb	lb	lb-ft	lb-ft	lb-ft
T1	175.30-160.00	0	Wind Normal	163.42	0.00	-163.42	-26494.08	0.00	0.00
		30	Wind 90	153.75	76.87	-133.15	-21418.87	-12887.93	42.19
		60	Wind 60	145.37	125.89	-72.69	-11281.99	-21106.19	62.14
		90	Wind 90	144.47	144.47	0.00	903.67	-24220.85	65.44
		120	Wind Normal	154.15	133.50	77.07	13825.05	-22380.49	62.14
		150	Wind 90	153.75	76.87	133.15	23226.22	-12887.93	42.19
		180	Wind 60	154.65	0.00	154.65	26830.00	0.00	0.00
		210	Wind 90	153.75	-76.87	133.15	23226.22	12887.93	-42.19
		240	Wind Normal	154.15	-133.50	77.07	13825.05	22380.49	-62.14
		270	Wind 90	144.47	-144.47	0.00	903.67	24220.85	-65.44
		300	Wind 60	145.37	-125.89	-72.69	-11281.99	21106.19	-62.14
		330	Wind 90	153.75	-76.87	-133.15	-21418.87	12887.93	-42.19
T2	160.00-140.00	0	Wind Normal	268.46	0.00	-268.46	-39222.90	-1130.37	82.61
1		30	Wind 90	263.62	131.81	-228.30	-33199.47	-20902.10	133.88
		60	Wind 60	253.45	219.50	-126.73	-17962.84	-34054.94	107.50

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Project	Date
NS 175' - TI-OPP-22295 / Clover Fork - Harlan Co., KY	10:41:48 08/28/23
Client	Designed by
Tillman Infrastructure	AG

Section	Section	Wind	Directionality	F	$V_x$	$V_z$	$OTM_{\scriptscriptstyle X}$	$OTM_z$	Torque
No.	Elevation ft	Azimuth °		lb	lb	lb	lb-ft	lb-ft	lb-ft
		90	Wind 90	245.50	245.50	0.00	1046.17	-37955.67	52.32
		120	Wind Normal	250.34	216.80	125.17	19821.63	-33650.41	24.89
		150	Wind 90	250.03	125.02	216.53	33526.32	-19882.79	-9.22
		180	Wind 60	257.98	0.00	257.98	39743.73	-1130.37	-82.61
		210	Wind 90	263.62	-131.81	228.30	35291.82	18641.37	-133.88
		240	Wind Normal	263.93	-228.57	131.97	20840.94	33155.18	-107.50
		270	Wind 90	245.50	-245.50	0.00	1046.17	35694.93	-52.32
		300	Wind 60	239.86	-207.73	-119.93	-16943.52	30028.70	-24.89
		330	Wind 90	250.03	-125.02	-216.53	-31433.97	17622.05	9.22
T3	140.00-120.00	0	Wind Normal	364.45	0.00	-364.45	-47318.49	0.00	-0.00
		30	Wind 90	353.82	176.91	-306.42	-39774.99	-22998.47	50.87
		60	Wind 60	350.28	303.35	-175.14	-22708.77	-39435.84	6.16
		90	Wind 90	353.82	353.82	0.00	59.53	-45996.94	-40.20
		120	Wind Normal	364.45	315.62	182.22	23748.53	-41030.56	6.16
		150	Wind 90	353.82	176.91	306.42	39894.04	-22998.47	50.87
		180 210	Wind 60 Wind 90	350.28 353.82	0.00 -176.91	350.28 306.42	45596.11 39894.04	0.00 22998.47	0.00 -50.87
		240	Wind Normal	364.45	-315.62	182.22	23748.53	41030.56	-50.87 -6.16
		270	Wind 90	353.82	-313.02	0.00	59.53	45996.94	40.20
		300	Wind 60	350.28	-303.35	-175.14	-22708.77	39435.84	-6.16
		330	Wind 90	353.82	-176.91	-306.42	-39774.99	22998.47	-50.87
T4	120.00-100.00	0	Wind Normal	396.07	0.00	-396.07	-43409.40	-169.32	19.76
	120.00 100.00	30	Wind 90	384.84	192.42	-333.28	-36502.68	-21335.57	79.38
		60	Wind 60	381.10	330.04	-190.55	-20802.04	-36473.76	25.88
		90	Wind 90	384.84	384.84	0.00	158.34	-42501.82	-34.56
		120	Wind Normal	396.07	343.01	198.04	21942.21	-37900.08	6.12
		150	Wind 90	384.84	192.42	333.28	36819.37	-21335.57	45.16
		180	Wind 60	381.10	0.00	381.10	42079.10	-169.32	-19.76
		210	Wind 90	384.84	-192.42	333.28	36819.37	20996.94	-79.38
		240	Wind Normal	396.07	-343.01	198.04	21942.21	37561.45	-25.88
		270	Wind 90	384.84	-384.84	0.00	158.34	42163.19	34.56
		300	Wind 60	381.10	-330.04	-190.55	-20802.04	36135.13	-6.12
		330	Wind 90	384.84	-192.42	-333.28	-36502.68	20996.94	-45.16
T5	100.00-80.00	0	Wind Normal	409.31	0.00	-409.31	-36695.22	-247.30	28.03
		30	Wind 90	397.52	198.76	-344.27	-30841.12	-18135.86	90.25
		60	Wind 60	393.59	340.86	-196.80	-17568.97	-30924.95	28.03
		90	Wind 90	397.52	397.52	0.00	142.78	-36024.42	-41.70
		120	Wind Normal	409.31	354.47	204.66	18561.78	-32149.94	0.00
		150	Wind 90	397.52	198.76	344.27	31126.68	-18135.86	41.70
		180	Wind 60	393.59	0.00	393.59	35566.28	-247.30	-28.03
		210	Wind 90	397.52	-198.76	344.27	31126.68	17641.27	-90.25
		240	Wind Normal	409.31	-354.47	204.66	18561.78	31655.35	-28.03
		270	Wind 90	397.52	-397.52	0.00	142.78	35529.83	41.70
		300	Wind 60	393.59	-340.86	-196.80	-17568.97	30430.36	0.00
т(	90.00.00	330	Wind 90	397.52	-198.76	-344.27	-30841.12	17641.27	-41.70
Т6	80.00-60.00	30	Wind Normal Wind 90	415.02	0.00	-415.02 -346.48	-28895.88	-269.78	29.48 95.62
		60	Wind 60	400.08 395.09	200.04 342.16	-346.48	-24097.58 -13672.53	-14272.45 -24221.07	95.62 29.48
		90	Wind 90	400.08	400.08	0.00	155.76	-28275.11	-44.57
		120	Wind Normal	415.02	359.42	207.51	14681.57	-25429.23	0.00
		150	Wind 90	400.08	200.04	346.48	24409.09	-14272.45	44.57
		180	Wind 60	395.09	0.00	395.09	27812.33	-269.78	-29.48
		210	Wind 90	400.08	-200.04	346.48	24409.09	13732.89	-95.62
		240	Wind Normal	415.02	-359.42	207.51	14681.57	24889.67	-29.48
		270	Wind 90	400.08	-400.08	0.00	155.76	27735.56	44.57
		300	Wind 60	395.09	-342.16	-197.55	-13672.53	23681.51	0.00
		330	Wind 90	400.08	-200.04	-346.48	-24097.58	13732.89	-44.57
T7	60.00-40.00	0	Wind Normal	402.07	0.00	-402.07	-19934.83	-292.55	30.43
		30	Wind 90	386.22	193.11	-334.48	-16555.05	-9948.13	99.78
		60	Wind 60	380.94	329.90	-190.47	-9354.58	-16787.71	30.43
	i e	90	Wind 90	386.22	386.22	0.00	168.90	-19603.71	-47.07

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Project	Date
NS 175' - TI-OPP-22295 / Clover Fork - Harlan Co., KY	10:41:48 08/28/23
Client	Designed by
Tillman Infrastructure	AG

Section	Section	Wind	Directionality	F	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
No.	Elevation	Azimuth							
	ft	0		lb	lb	lb	lb-ft	lb-ft	lb-ft
		120	Wind Normal	402.07	348.21	201.04	10220.77	-17702.89	0.00
		150	Wind 90	386.22	193.11	334.48	16892.86	-9948.13	47.07
		180	Wind 60	380.94	0.00	380.94	19215.87	-292.55	-30.43
		210	Wind 90	386.22	-193.11	334.48	16892.86	9363.03	-99.78
		240	Wind Normal	402.07	-348.21	201.04	10220.77	17117.79	-30.43
		270	Wind 90	386.22	-386.22	0.00	168.90	19018.61	47.07
		300	Wind 60	380.94	-329.90	-190.47	-9354.58	16202.61	0.00
		330	Wind 90	386.22	-193.11	-334.48	-16555.05	9363.03	-47.07
T8	40.00-20.00	0	Wind Normal	375.69	0.00	-375.69	-11091.08	-311.27	30.04
		30	Wind 90	359.43	179.71	-311.27	-9158.44	-5702.65	100.19
		60	Wind 60	354.00	306.58	-177.00	-5130.34	-9508.54	30.04
		90	Wind 90	359.43	359.43	0.00	179.71	-11094.04	-48.16
		120	Wind Normal	375.69	325.36	187.85	5815.10	-10072.06	0.00
		150	Wind 90	359.43	179.71	311.27	9517.86	-5702.65	48.16
		180	Wind 60	354.00	0.00	354.00	10799.81	-311.27	-30.04
		210	Wind 90	359.43	-179.71	311.27	9517.86	5080.12	-100.19
		240	Wind Normal	375.69	-325.36	187.85	5815.10	9449.52	-30.04
		270	Wind 90	359.43	-359.43	0.00	179.71	10471.50	48.16
		300	Wind 60	354.00	-306.58	-177.00	-5130.34	8886.01	0.00
		330	Wind 90	359.43	-179.71	-311.27	-9158.44	5080.12	-48.16
T9	20.00-0.00	0	Wind Normal	357.38	0.00	-357.38	-3397.34	-305.62	27.33
		30	Wind 90	339.58	169.79	-294.09	-2764.42	-2003.53	94.70
		60	Wind 60	333.65	288.95	-166.83	-1491.80	-3195.12	27.33
		90	Wind 90	339.58	339.58	0.00	176.45	-3701.45	-47.35
		120	Wind Normal	357.38	309.50	178.69	1963.35	-3400.61	0.00
		150	Wind 90	339.58	169.79	294.09	3117.32	-2003.53	47.35
		180	Wind 60	333.65	0.00	333.65	3512.95	-305.62	-27.33
		210	Wind 90	339.58	-169.79	294.09	3117.32	1392.29	-94.70
		240	Wind Normal	357.38	-309.50	178.69	1963.35	2789.38	-27.33
		270	Wind 90	339.58	-339.58	0.00	176.45	3090.21	47.35
		300	Wind 60	333.65	-288.95	-166.83	-1491.80	2583.88	0.00
		330	Wind 90	339.58	-169.79	-294.09	-2764.42	1392.29	-47.35

#### Mast Totals - With Ice

Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	0.00	-3151.88	-256459.22	-2726.20	247.69
30	1519.43	-2631.74	-214312.63	-128186.69	786.85
60	2587.24	-1493.74	-119973.85	-215708.11	346.99
90	3011.47	0.00	2991.31	-249374.02	-185.84
120	2705.88	1562.24	130580.00	-223716.28	99.31
150	1512.64	2619.97	218529.76	-127167.38	357.84
180	0.00	3001.29	251156.18	-2726.20	-247.69
210	-1519.43	2631.74	220295.26	122734.29	-786.85
240	-2717.65	1569.04	131599.31	220029.39	-346.99
270	-3011.47	0.00	2991.31	243921.62	185.84
300	-2575.47	-1486.95	-118954.54	208490.22	-99.31
330	-1512.64	-2619.97	-212547.13	121714.98	-357.84

#### **Mast Vectors - Service**

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SO30980; Tower 633549; Foundation 633550	23 of 47
Project NS 175' - TI-OPP-22295 / Clover Fork - Harlan Co., KY	Date 10:41:48 08/28/23
Client Tillman Infrastructure	Designed by AG

Section	Section	Wind	Directionality	F	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
No.	Elevation	Azimuth	,					~	1
	ft	٥		lb	lb	lb	lb-ft	lb-ft	lb-ft
T1	175.30-160.00	0	Wind Normal	430.82	0.00	-430.82	-71944.93	0.00	0.00
		30	Wind 90	386.45	193.23	-334.68	-55827.06	-32394.32	113.66
		60 90	Wind 60 Wind 90	351.05 349.35	304.02 349.35	-175.53 0.00	-29145.35 281.56	-50968.90 -58568.66	153.13 151.57
		120	Wind Normal	393.72	340.97	196.86	33284.81	-57163.31	153.13
		150	Wind 90	386.45	193.23	334.68	56390.17	-32394.32	113.66
		180	Wind 60	388.15	0.00	388.15	65355.36	0.00	0.00
		210	Wind 90	386.45	-193.23	334.68	56390.17	32394.32	-113.66
		240	Wind Normal	393.72	-340.97	196.86	33284.81	57163.31	-153.13
		270	Wind 90	349.35	-349.35	0.00	281.56	58568.66	-151.57
		300	Wind 60	351.05	-304.02	-175.53	-29145.35	50968.90	-153.13
		330	Wind 90	386.45	-193.23	-334.68	-55827.06	32394.32	-113.66
T2	160.00-140.00	0	Wind Normal	736.89	0.00	-736.89	-110209.38	-351.01	209.48
		30	Wind 90	712.41	356.21	-616.97	-92220.30	-53781.98	374.79
		60	Wind 60	670.02	580.26	-335.01	-49926.91	-87389.62	272.61
		90	Wind 90	639.93	639.93	0.00	324.85	-96340.28	97.39
		120 150	Wind Normal Wind 90	664.41 658.05	575.40 329.02	332.21 569.89	50155.63 85808.00	-86660.46 -49704.73	63.13 11.95
		180	Wind 60	688.14	0.00	688.14	103546.54	-49704.73	-209.48
		210	Wind 90	712.41	-356.21	616.97	92870.00	53079.95	-374.79
		240	Wind Normal	718.77	-622.48	359.39	54232.88	93020.44	-272.61
		270	Wind 90	639.93	-639.93	0.00	324.85	95638.26	-97.39
		300	Wind 60	615.66	-533.18	-307.83	-45849.66	79625.59	-63.13
		330	Wind 90	658.05	-329.02	-569.89	-85158.30	49002.70	-11.95
T3	140.00-120.00	0	Wind Normal	1022.92	0.00	-1022.92	-132972.02	0.00	-0.00
		30	Wind 90	974.46	487.23	-843.90	-109700.61	-63339.73	195.05
		60	Wind 60	958.30	829.92	-479.15	-62282.78	-107889.10	10.03
		90	Wind 90	974.46	974.46	0.00	7.02	-126679.46	-177.68
		120	Wind Normal	1022.92	885.87	511.46	66496.54	-115163.23	10.03
		150	Wind 90	974.46	487.23	843.90	109714.66	-63339.73	195.05
		180	Wind 60	958.30	0.00	958.30	124586.63	0.00	0.00
		210	Wind 90	974.46	-487.23	843.90	109714.66	63339.73	-195.05
		240 270	Wind Normal Wind 90	1022.92 974.46	-885.87 -974.46	511.46 0.00	66496.54	115163.23 126679.46	-10.03 177.68
		300	Wind 60	958.30	-829.92	-479.15	7.02 -62282.78	120079.40	-10.03
		330	Wind 90	974.46	-487.23	-843.90	-109700.61	63339.73	-195.05
T4	120.00-100.00	0	Wind Normal	1126.59	0.00	-1126.59	-123906.18	-20.40	32.48
	120.00 100.00	30	Wind 90	1076.19	538.10	-932.01	-102501.94	-59210.93	255.44
		60	Wind 60	1059.39	917.46	-529.70	-58247.43	-100940.94	42.54
		90	Wind 90	1076.19	1076.19	0.00	19.07	-118401.46	-181.75
		120	Wind Normal	1126.59	975.66	563.30	61981.70	-107342.81	10.06
		150	Wind 90	1076.19	538.10	932.01	102540.08	-59210.93	199.18
		180	Wind 60	1059.39	0.00	1059.39	116552.08	-20.40	-32.48
		210	Wind 90	1076.19	-538.10	932.01	102540.08	59170.14	-255.44
		240	Wind Normal	1126.59	-975.66	563.30	61981.70		-42.54
		270	Wind 90	1076.19	-1076.19	0.00	19.07	118360.67	181.75
		300	Wind 60	1059.39	-917.46	-529.70	-58247.43	100900.14	-10.06
Т5	100 00 90 00	330	Wind 90 Wind Normal	1076.19	-538.10	-932.01	-102501.94	59170.14	-199.18
T5	100.00-80.00	0 30	Wind Normal Wind 90	1171.35 1119.05	0.00 559.52	-1171.35 -969.13	-105403.68 -87203.66	-30.54 -50387.78	46.62 285.37
		60	Wind 60	1101.62	954.03	-550.81	-49555.13	-85893.08	46.62
		90	Wind 90	1119.05	1119.05	0.00	17.63	-100745.01	-204.62
		120	Wind Normal	1171.35	1014.42	585.67	52728.29	-91328.07	0.00
		150	Wind 90	1119.05	559.52	969.13	87238.92	-50387.78	204.62
		180	Wind 60	1101.62	0.00	1101.62	99163.16	-30.54	-46.62
		210	Wind 90	1119.05	-559.52	969.13	87238.92	50326.69	-285.37
		240	Wind Normal	1171.35	-1014.42	585.67	52728.29	91266.99	-46.62
		270	Wind 90	1119.05	-1119.05	0.00	17.63	100683.93	204.62
		300	Wind 60	1101.62	-954.03	-550.81	-49555.13	85832.00	0.00
_		330	Wind 90	1119.05	-559.52	-969.13	-87203.66	50326.69	-204.62
T6	80.00-60.00	0	Wind Normal	1222.39	0.00	-1222.39	-85547.35	-34.37	49.76

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Section No.	Section	Wind	Directionality	F	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
NO.	Elevation ft	Azimuth °		lb	lb	lb	lb-ft	lb-ft	lb-ft
		30	Wind 90	1156.50	578.25	-1001.56	-70089.22	-40511.85	303.79
		60	Wind 60	1134.54	982.54	-567.27	-39688.94	-68812.00	49.76
		90	Wind 90	1156.50	1156.50	0.00	19.84	-80989.34	-217.61
		120	Wind Normal	1222.39	1058.62	611.19	42803.44	-74137.73	0.00
		150	Wind 90	1156.50	578.25	1001.56	70128.90	-40511.85	217.61
		180	Wind 60	1134.54	0.00	1134.54	79437.41	-34.37	-49.76
		210	Wind 90	1156.50	-578.25	1001.56	70128.90	40443.12	-303.79
		240	Wind Normal	1222.39	-1058.62	611.19	42803.44	74068.99	-49.76
		270	Wind 90	1156.50	-1156.50	0.00	19.84	80920.60	217.61
		300	Wind 60	1134.54	-982.54	-567.27	-39688.94	68743.26	0.00
		330	Wind 90	1156.50	-578.25	-1001.56	-70089.22	40443.12	-217.61
T7	60.00-40.00	0	Wind Normal	1199.82	0.00	-1199.82	-59968.37	-38.83	52.37
1,	00.00 10.00	30	Wind 90	1130.33	565.16	-978.89	-48922.30	-28297.08	319.02
		60	Wind 60	1107.17	958.84	-553.58	-27656.78	-47980.61	52.37
		90	Wind 90	1130.33	1130.33	0.00	22.42	-56555.33	-228.31
		120	Wind Normal	1199.82	1039.07	599.91	30017.81	-51992.37	0.00
		150	Wind 90	1130.33	565.16	978.89	48967.14	-28297.08	228.31
		180	Wind 60	1107.17	0.00	1107.17	55380.82	-38.83	-52.37
		210	Wind 90	1130.33	-565.16	978.89	48967.14	28219.42	-319.02
		240	Wind Normal	1199.82	-1039.07	599.91	30017.81	51914.71	-52.37
		270	Wind 90	1130.33	-1130.33	0.00	22.42	56477.67	228.31
		300	Wind 60	1107.17	-958.84	-553.58	-27656.78	47902.95	0.00
		330	Wind 90	1130.33	-565.16	-978.89	-48922.30	28219.42	-228.31
Т8	40.00-20.00	0	Wind Normal	1141.34	0.00	-1141.34	-34214.88	-43.93	53.21
10	40.00-20.00	30	Wind 90	1070.51	535.25	-927.08	-27787.18	-16101.51	323.45
		60	Wind 60	1076.31	906.64	-523.45	-15678.04	-27243.02	53.21
		90	Wind 90	1070.51	1070.51	0.00	25.36	-32159.09	-231.29
		120	Wind Normal	1141.34	988.43	570.67	17145.48	-29696.85	0.00
		150	Wind 90	1070.51	535.25	927.08	27837.91	-16101.51	231.29
		180	Wind 60	1076.31	0.00	1046.89	31432.17	-43.93	-53.21
		210	Wind 90	1070.51	-535.25	927.08	27837.91	16013.65	-323.45
		240	Wind Normal	1141.34	-988.43	570.67	17145.48	29608.99	-53.21
		270	Wind 90	1070.51	-1070.51	0.00	25.36	32071.23	231.29
		300	Wind 60	1076.31	-906.64	-523.45	-15678.04	27155.16	0.00
		330	Wind 90	1070.51	-535.25	-927.08	-27787.18	16013.65	-231.29
Т9	20.00-0.00	0	Wind Normal	1130.88	0.00	-1130.88	-11280.46	-49.03	51.39
19	20.00-0.00	30	Wind 90	1054.39	527.19	-913.13	-9102.97	-5320.98	311.88
		60	Wind 60	1028.89	891.05	-514.45	-5116.16	-8959.51	51.39
		90	Wind 90	1028.89	1054.39	0.00	28.31	-10592.92	-222.86
		120	Wind Normal	1130.88	979.37				
		150	Wind Normal Wind 90	1054.39	527.19	565.44 913.13	5682.69 9159.59	-9842.71 -5320.98	0.00 222.86
			Wind 60	1034.39		1028.89			
		180	Wind 90		0.00		10317.24	-49.03	-51.39
		210		1054.39	-527.19 -979.37	913.13	9159.59	5222.92 9744.65	-311.88
		240	Wind Normal	1130.88		565.44	5682.69		-51.39
		270	Wind 90	1054.39	-1054.39	0.00	28.31	10494.86	222.86
		300	Wind 60	1028.89	-891.05	-514.45	-5116.16	8861.45	0.00
	1	330	Wind 90	1054.39	-527.19	-913.13	-9102.97	5222.92	-222.86

#### Mast Totals - Service

Wind $V_x$		$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	0.00	-9182.99	-735447.25	-568.11	495.32
30	4340.14	-7517.35	-603355.24	-349346.16	2482.45
60	7324.74	-4228.94	-337297.52	-586076.77	731.67
90	8570.70	0.00	746.07	-681031.56	-1215.15

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Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
120	7857.80	4536.70	360296.40	-623327.55	236.36
150	4312.96	7470.27	597785.37	-345268.91	1624.53
180	0.00	8513.10	685771.39	-568.11	-495.32
210	-4340.14	7517.35	604847.37	348209.94	-2482.45
240	-7904.88	4563.88	364373.65	629253.34	-731.67
270	-8570.70	0.00	746.07	679895.35	1215.15
300	-7277.66	-4201.76	-333220.27	577878.56	-236.36
330	-4312.96	-7470.27	-596293.24	344132.70	-1624.53

#### **Discrete Appurtenance Pressures - No Ice** $G_H = 0.850$

Description	Aiming	Weight	$Offset_x$	$Offset_z$	z	$K_z$	$q_z$	$C_AA_C$	$C_AA_C$
	Azimuth							Front	Side
	٥	lb	ft	ft	ft		psf	$ft^2$	ft <sup>2</sup>
40,000 sq in CaAa (6,000	0.0000	6000.00	0.00	0.00	170.00	1.415	34	278.00	278.00
lbs)									
40,000 sq in CaAa (6,000	0.0000	6000.00	0.00	0.00	155.00	1.388	33	278.00	278.00
lbs)									
30,000 sq in CaAa (4,000	0.0000	4000.00	0.00	0.00	140.00	1.359	33	208.00	208.00
lbs)									
Dish Pipe Mount	240.0000	103.00	-4.56	2.63	125.00	1.326	32	0.00	1.80
Dish Pipe Mount	120.0000	103.00	4.94	2.85	115.00	1.303	31	0.00	1.80
	Sum	16206.00							
	Weight:								

## **Discrete Appurtenance Vectors - No Ice**

		4	10,000 sq in CaAa (6,	,000 lbs) - Elevation	170 - None C		
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth							
۰	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
0	8022.68	0.00	0.00	-8022.68	-1363856.23	0.00	0.00
30	8022.68	0.00	4011.34	-6947.85	-1181134.14	-681928.12	0.00
60	8022.68	0.00	6947.85	-4011.34	-681928.12	-1181134.14	0.00
90	8022.68	0.00	8022.68	0.00	0.00	-1363856.23	0.00
120	8022.68	0.00	6947.85	4011.34	681928.12	-1181134.14	0.00
150	8022.68	0.00	4011.34	6947.85	1181134.14	-681928.12	0.00
180	8022.68	0.00	0.00	8022.68	1363856.23	0.00	0.00
210	8022.68	0.00	-4011.34	6947.85	1181134.14	681928.12	0.00
240	8022.68	0.00	-6947.85	4011.34	681928.12	1181134.14	0.00
270	8022.68	0.00	-8022.68	0.00	0.00	1363856.23	0.00
300	8022.68	0.00	-6947.85	-4011.34	-681928.12	1181134.14	0.00
330	8022.68	0.00	-4011.34	-6947.85	-1181134.14	681928.12	0.00

	40,000 sq in CaAa (6,000 lbs) - Elevation 155 - None B											
Wind Azimuth	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque					
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft					
0	7868.17	0.00	0.00	-7868.17	-1219566.93	0.00	0.00					
30	7868.17	0.00	3934.09	-6814.04	-1056175.94	-609783.46	0.00					
60	7868.17	0.00	6814.04	-3934.09	-609783.46	-1056175.94	0.00					
90	7868.17	0.00	7868.17	0.00	0.00	-1219566.93	0.00					

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		4	10,000 sq in CaAa (6	,000 lbs) - Elevation	155 - None B		
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth							
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
120	7868.17	0.00	6814.04	3934.09	609783.46	-1056175.94	0.00
150	7868.17	0.00	3934.09	6814.04	1056175.94	-609783.46	0.00
180	7868.17	0.00	0.00	7868.17	1219566.93	0.00	0.00
210	7868.17	0.00	-3934.09	6814.04	1056175.94	609783.46	0.00
240	7868.17	0.00	-6814.04	3934.09	609783.46	1056175.94	0.00
270	7868.17	0.00	-7868.17	0.00	0.00	1219566.93	0.00
300	7868.17	0.00	-6814.04	-3934.09	-609783.46	1056175.94	0.00
330	7868.17	0.00	-3934.09	-6814.04	-1056175.94	609783.46	0.00

		3	0,000 sq in CaAa (4	,000 lbs) - Elevation	140 - None A		
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth							
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
0	5762.18	0.00	0.00	-5762.18	-806704.50	0.00	0.00
30	5762.18	0.00	2881.09	-4990.19	-698626.59	-403352.25	0.00
60	5762.18	0.00	4990.19	-2881.09	-403352.25	-698626.59	0.00
90	5762.18	0.00	5762.18	0.00	0.00	-806704.50	0.00
120	5762.18	0.00	4990.19	2881.09	403352.25	-698626.59	0.00
150	5762.18	0.00	2881.09	4990.19	698626.59	-403352.25	0.00
180	5762.18	0.00	0.00	5762.18	806704.50	0.00	0.00
210	5762.18	0.00	-2881.09	4990.19	698626.59	403352.25	0.00
240	5762.18	0.00	-4990.19	2881.09	403352.25	698626.59	0.00
270	5762.18	0.00	-5762.18	0.00	0.00	806704.50	0.00
300	5762.18	0.00	-4990.19	-2881.09	-403352.25	698626.59	0.00
330	5762.18	0.00	-2881.09	-4990.19	-698626.59	403352.25	0.00

			Dish Pipe Mount	- Elevation 125 - Fr	om Leg C		
Wind	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth							
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
0	0.00	42.17	-21.08	-36.52	-4293.31	3105.33	-222.15
30	0.00	24.34	-12.17	-21.08	-2364.07	1991.48	-128.26
60	0.00	0.00	0.00	0.00	271.32	469.94	0.00
90	0.00	24.34	12.17	21.08	2906.71	-1051.60	128.26
120	0.00	42.17	21.08	36.52	4835.94	-2165.45	222.15
150	0.00	48.69	24.34	42.17	5542.09	-2573.15	256.51
180	0.00	42.17	21.08	36.52	4835.94	-2165.45	222.15
210	0.00	24.34	12.17	21.08	2906.71	-1051.60	128.26
240	0.00	0.00	0.00	0.00	271.32	469.94	0.00
270	0.00	24.34	-12.17	-21.08	-2364.07	1991.48	-128.26
300	0.00	42.17	-21.08	-36.52	-4293.31	3105.33	-222.15
330	0.00	48.69	-24.34	-42.17	-4999.46	3513.02	-256.51

			Dish Pipe Mount	- Elevation 115 - Fro	om Leg B		
Wind	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth							
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
0	0.00	41.43	20.72	-35.88	-3832.76	-2890.93	236.22
30	0.00	47.84	23.92	-41.43	-4471.12	-3259.48	272.76
60	0.00	41.43	20.72	-35.88	-3832.76	-2890.93	236.22
90	0.00	23.92	11.96	-20.72	-2088.75	-1884.02	136.38
120	0.00	0.00	0.00	0.00	293.62	-508.56	0.00
150	0.00	23.92	-11.96	20.72	2675.99	866.90	-136.38
180	0.00	41.43	-20.72	35.88	4420.00	1873.81	-236.22

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	Dish Pipe Mount - Elevation 115 - From Leg B											
Wind	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque					
Azimuth							^					
0	lb	lb	lb lb		lb-ft	lb-ft	lb-ft					
210	0.00	47.84	-23.92	41.43	5058.35	2242.36	-272.76					
240	0.00	41.43	-20.72	35.88	4420.00	1873.81	-236.22					
270	0.00	23.92	-11.96	20.72	2675.99	866.90	-136.38					
300	0.00	0.00	0.00	0.00	293.62	-508.56	0.00					
330	0.00	23.92	11.96	-20.72	-2088.75	-1884.02	136.38					

#### Discrete Appurtenance Totals - No Ice

Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	-0.37	-21725.43	-3398253.73	214.40	14.08
30	10838.26	-18814.59	-2942771.86	-1696331.83	144.51
60	18772.79	-10862.40	-1698625.27	-2938357.67	236.22
90	21677.17	0.37	817.96	-3393063.28	264.64
120	18773.16	10863.03	1700193.39	-2938610.69	222.15
150	10838.90	18814.96	2944154.75	-1696770.08	120.13
180	0.37	21725.43	3399383.60	-291.65	-14.08
210	-10838.26	18814.59	2943901.73	1696254.58	-144.51
240	-18772.79	10862.40	1699755.15	2938280.42	-236.22
270	-21677.17	-0.37	311.92	3392986.03	-264.64
300	-18773.16	-10863.03	-1699063.52	2938533.44	-222.15
330	-10838.90	-18814.96	-2943024.88	1696692.83	-120.13

#### **Discrete Appurtenance Pressures - With Ice** $G_H = 0.850$

Description	Aiming	Weight	$Offset_x$	$Offset_z$	Z	$K_z$	$q_z$	$C_AA_C$	$C_AA_C$	$t_z$
	Azimuth							Front	Side	
	0	lb	ft	ft	ft		psf	$ft^2$	$ft^2$	in
40,000 sq in CaAa (6,000	0.0000	10806.77	0.00	0.00	170.00	1.415	3	409.95	409.95	1.1781
lbs)										
40,000 sq in CaAa (6,000	0.0000	10762.58	0.00	0.00	155.00	1.388	3	408.74	408.74	1.1673
lbs)										
30,000 sq in CaAa (4,000	0.0000	7142.90	0.00	0.00	140.00	1.359	3	305.06	305.06	1.1555
lbs)										
Dish Pipe Mount	240.0000	139.56	-4.56	2.63	125.00	1.326	3	0.00	2.49	1.1425
Dish Pipe Mount	120.0000	139.26	4.94	2.85	115.00	1.303	3	0.00	2.48	1.1330
	Sum	28991.06								
	Weight:									

#### **Discrete Appurtenance Vectors - With Ice**

	40,000 sq in CaAa (6,000 lbs) - Elevation 170 - None C								
Wind	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque		
Azimuth									
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft		
0	965.76	0.00	0.00	-965.76	-164179.63	0.00	0.00		
30	965.76	0.00	482.88	-836.37	-142183.73	-82089.82	0.00		
60	965.76	0.00	836.37	-482.88	-82089.82	-142183.73	0.00		

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	40,000 sq in CaAa (6,000 lbs) - Elevation 170 - None C									
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque			
Azimuth										
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft			
90	965.76	0.00	965.76	0.00	0.00	-164179.63	0.00			
120	965.76	0.00	836.37	482.88	82089.82	-142183.73	0.00			
150	965.76	0.00	482.88	836.37	142183.73	-82089.82	0.00			
180	965.76	0.00	0.00	965.76	164179.63	0.00	0.00			
210	965.76	0.00	-482.88	836.37	142183.73	82089.82	0.00			
240	965.76	0.00	-836.37	482.88	82089.82	142183.73	0.00			
270	965.76	0.00	-965.76	0.00	0.00	164179.63	0.00			
300	965.76	0.00	-836.37	-482.88	-82089.82	142183.73	0.00			
330	965.76	0.00	-482.88	-836.37	-142183.73	82089.82	0.00			

		40	),000 sq in CaAa (6,	000 lbs) - Elevation	155 - None B		
Wind	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_{x}$	$OTM_z$	Torque
Azimuth	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
					9	,	,
0	944.36	0.00	0.00	-944.36	-146375.74	0.00	0.00
30	944.36	0.00	472.18	-817.84	-126765.11	-73187.87	0.00
60	944.36	0.00	817.84	-472.18	-73187.87	-126765.11	0.00
90	944.36	0.00	944.36	0.00	0.00	-146375.74	0.00
120	944.36	0.00	817.84	472.18	73187.87	-126765.11	0.00
150	944.36	0.00	472.18	817.84	126765.11	-73187.87	0.00
180	944.36	0.00	0.00	944.36	146375.74	0.00	0.00
210	944.36	0.00	-472.18	817.84	126765.11	73187.87	0.00
240	944.36	0.00	-817.84	472.18	73187.87	126765.11	0.00
270	944.36	0.00	-944.36	0.00	0.00	146375.74	0.00
300	944.36	0.00	-817.84	-472.18	-73187.87	126765.11	0.00
330	944.36	0.00	-472.18	-817.84	-126765.11	73187.87	0.00

		30,	000 sq in CaAa (4,0	000 lbs) - Elevation .	140 - None A		
Wind Azimuth	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
0	689.88	0.00	0.00	-689.88	-96582.95	0.00	0.00
30	689.88	0.00	344.94	-597.45	-83643.29	-48291.47	0.00
60	689.88	0.00	597.45	-344.94	-48291.47	-83643.29	0.00
90	689.88	0.00	689.88	0.00	0.00	-96582.95	0.00
120	689.88	0.00	597.45	344.94	48291.47	-83643.29	0.00
150	689.88	0.00	344.94	597.45	83643.29	-48291.47	0.00
180	689.88	0.00	0.00	689.88	96582.95	0.00	0.00
210	689.88	0.00	-344.94	597.45	83643.29	48291.47	0.00
240	689.88	0.00	-597.45	344.94	48291.47	83643.29	0.00
270	689.88	0.00	-689.88	0.00	0.00	96582.95	0.00
300	689.88	0.00	-597.45	-344.94	-48291.47	83643.29	0.00
330	689.88	0.00	-344.94	-597.45	-83643.29	48291.47	0.00

Dish Pipe Mount - Elevation 125 - From Leg C									
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque		
Azimuth									
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft		
0	0.00	4.75	-2.38	-4.12	-146.90	933.80	-25.04		
30	0.00	2.74	-1.37	-2.38	70.56	808.24	-14.46		
60	0.00	0.00	0.00	0.00	367.62	636.74	0.00		
90	0.00	2.74	1.37	2.38	664.68	465.23	14.46		
120	0.00	4.75	2.38	4.12	882.14	339.68	25.04		
150	0.00	5.49	2.74	4.75	961.74	293.72	28.91		

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	Dish Pipe Mount - Elevation 125 - From Leg C								
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque		
Azimuth									
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft		
180	0.00	4.75	2.38	4.12	882.14	339.68	25.04		
210	0.00	2.74	1.37	2.38	664.68	465.23	14.46		
240	0.00	0.00	0.00	0.00	367.62	636.74	0.00		
270	0.00	2.74	-1.37	-2.38	70.56	808.24	-14.46		
300	0.00	4.75	-2.38	-4.12	-146.90	933.80	-25.04		
330	0.00	5.49	-2.74	-4.75	-226.50	979.75	-28.91		

	Dish Pipe Mount - Elevation 115 - From Leg B									
Wind Azimuth	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque			
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft			
0	0.00	4.66	2.33	-4.04	-67.09	-955.50	26.57			
30	0.00	5.38	2.69	-4.66	-138.88	-996.95	30.68			
60	0.00	4.66	2.33	-4.04	-67.09	-955.50	26.57			
90	0.00	2.69	1.35	-2.33	129.04	-842.26	15.34			
120	0.00	0.00	0.00	0.00	396.97	-687.57	0.00			
150	0.00	2.69	-1.35	2.33	664.89	-532.88	-15.34			
180	0.00	4.66	-2.33	4.04	861.03	-419.65	-26.57			
210	0.00	5.38	-2.69	4.66	932.82	-378.20	-30.68			
240	0.00	4.66	-2.33	4.04	861.03	-419.65	-26.57			
270	0.00	2.69	-1.35	2.33	664.89	-532.88	-15.34			
300	0.00	0.00	0.00	0.00	396.97	-687.57	0.00			
330	0.00	2.69	1.35	-2.33	129.04	-842.26	15.34			

## **Discrete Appurtenance Totals - With Ice**

Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	-0.05	-2608.15	-407352.32	-21.70	1.53
30	1301.32	-2258.70	-352660.45	-203757.86	16.22
60	2254.00	-1304.04	-203268.63	-352910.89	26.57
90	2602.72	0.05	793.72	-407515.36	29.79
120	2254.04	1304.12	204848.28	-352940.03	25.04
150	1301.40	2258.75	354218.77	-203808.33	13.58
180	0.05	2608.15	408881.50	-79.97	-1.53
210	-1301.32	2258.70	354189.63	203656.19	-16.22
240	-2254.00	1304.04	204797.81	352809.22	-26.57
270	-2602.72	-0.05	735.45	407413.68	-29.79
300	-2254.04	-1304.12	-203319.10	352838.36	-25.04
330	-1301.40	-2258.75	-352689.59	203706.66	-13.58

## **Discrete Appurtenance Pressures - Service** $G_H = 0.850$

Description	Aiming	Weight	$Offset_x$	$Offset_z$	z	$K_z$	$q_z$	$C_AA_C$	$C_A A_C$
	Azimuth							Front	Side
	٥	lb	ft	ft	ft		psf	$ft^2$	$ft^2$
40,000 sq in CaAa (6,000	0.0000	6000.00	0.00	0.00	170.00	1.415	11	278.00	278.00
lbs)									
40,000 sq in CaAa (6,000	0.0000	6000.00	0.00	0.00	155.00	1.388	11	278.00	278.00

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Description	Aiming Azimuth	Weight	$Offset_x$	$Offset_z$	z	$K_z$	$q_z$	$C_AA_C$ Front	$C_AA_C$ Side
	0	lb	ft	ft	ft		psf	$ft^2$	ft <sup>2</sup>
lbs)			-	-					
30,000 sq in CaAa (4,000	0.0000	4000.00	0.00	0.00	140.00	1.359	11	208.00	208.00
lbs)									
Dish Pipe Mount	240.0000	103.00	-4.56	2.63	125.00	1.326	10	0.00	1.80
Dish Pipe Mount	120.0000	103.00	4.94	2.85	115.00	1.303	10	0.00	1.80
	Sum	16206.00							
	Weight:								

# **Discrete Appurtenance Vectors - Service**

	40,000 sq in CaAa (6,000 lbs) - Elevation 170 - None C								
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque		
Azimuth									
۰	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft		
0	2619.65	0.00	0.00	-2619.65	-445340.81	0.00	0.00		
30	2619.65	0.00	1309.83	-2268.69	-385676.45	-222670.41	0.00		
60	2619.65	0.00	2268.69	-1309.83	-222670.41	-385676.45	0.00		
90	2619.65	0.00	2619.65	0.00	0.00	-445340.81	0.00		
120	2619.65	0.00	2268.69	1309.83	222670.41	-385676.45	0.00		
150	2619.65	0.00	1309.83	2268.69	385676.45	-222670.41	0.00		
180	2619.65	0.00	0.00	2619.65	445340.81	0.00	0.00		
210	2619.65	0.00	-1309.83	2268.69	385676.45	222670.41	0.00		
240	2619.65	0.00	-2268.69	1309.83	222670.41	385676.45	0.00		
270	2619.65	0.00	-2619.65	0.00	0.00	445340.81	0.00		
300	2619.65	0.00	-2268.69	-1309.83	-222670.41	385676.45	0.00		
330	2619.65	0.00	-1309.83	-2268.69	-385676.45	222670.41	0.00		

		4	0,000 sq in CaAa (6,	000 lbs) - Elevation	155 - None B		
Wind	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth							
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
0	2569.20	0.00	0.00	-2569.20	-398225.93	0.00	0.00
30	2569.20	0.00	1284.60	-2224.99	-344873.78	-199112.97	0.00
60	2569.20	0.00	2224.99	-1284.60	-199112.97	-344873.78	0.00
90	2569.20	0.00	2569.20	0.00	0.00	-398225.93	0.00
120	2569.20	0.00	2224.99	1284.60	199112.97	-344873.78	0.00
150	2569.20	0.00	1284.60	2224.99	344873.78	-199112.97	0.00
180	2569.20	0.00	0.00	2569.20	398225.93	0.00	0.00
210	2569.20	0.00	-1284.60	2224.99	344873.78	199112.97	0.00
240	2569.20	0.00	-2224.99	1284.60	199112.97	344873.78	0.00
270	2569.20	0.00	-2569.20	0.00	0.00	398225.93	0.00
300	2569.20	0.00	-2224.99	-1284.60	-199112.97	344873.78	0.00
330	2569.20	0.00	-1284.60	-2224.99	-344873.78	199112.97	0.00

	30,000 sq in CaAa (4,000 lbs) - Elevation 140 - None A								
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_{\scriptscriptstyle X}$	$OTM_z$	Torque		
Azimuth						_	•		
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft		
0	1881.53	0.00	0.00	-1881.53	-263413.71	0.00	0.00		
30	1881.53	0.00	940.76	-1629.45	-228122.97	-131706.86	0.00		
60	1881.53	0.00	1629.45	-940.76	-131706.86	-228122.97	0.00		
90	1881.53	0.00	1881.53	0.00	0.00	-263413.71	0.00		
120	1881.53	0.00	1629.45	940.76	131706.86	-228122.97	0.00		
150	1881.53	0.00	940.76	1629.45	228122.97	-131706.86	0.00		

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	30,000 sq in CaAa (4,000 lbs) - Elevation 140 - None A								
Wind	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque		
Azimuth									
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft		
180	1881.53	0.00	0.00	1881.53	263413.71	0.00	0.00		
210	1881.53	0.00	-940.76	1629.45	228122.97	131706.86	0.00		
240	1881.53	0.00	-1629.45	940.76	131706.86	228122.97	0.00		
270	1881.53	0.00	-1881.53	0.00	0.00	263413.71	0.00		
300	1881.53	0.00	-1629.45	-940.76	-131706.86	228122.97	0.00		
330	1881.53	0.00	-940.76	-1629.45	-228122.97	131706.86	0.00		

	Dish Pipe Mount - Elevation 125 - From Leg C								
Wind	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque		
Azimuth									
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft		
0	0.00	13.77	-6.88	-11.92	-1219.17	1330.47	-72.54		
30	0.00	7.95	-3.97	-6.88	-589.22	966.77	-41.88		
60	0.00	0.00	0.00	0.00	271.32	469.94	0.00		
90	0.00	7.95	3.97	6.88	1131.85	-26.89	41.88		
120	0.00	13.77	6.88	11.92	1761.81	-390.60	72.54		
150	0.00	15.90	7.95	13.77	1992.39	-523.72	83.76		
180	0.00	13.77	6.88	11.92	1761.81	-390.60	72.54		
210	0.00	7.95	3.97	6.88	1131.85	-26.89	41.88		
240	0.00	0.00	0.00	0.00	271.32	469.94	0.00		
270	0.00	7.95	-3.97	-6.88	-589.22	966.77	-41.88		
300	0.00	13.77	-6.88	-11.92	-1219.17	1330.47	-72.54		
330	0.00	15.90	-7.95	-13.77	-1449.75	1463.60	-83.76		

	Dish Pipe Mount - Elevation 115 - From Leg B								
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque		
Azimuth									
٥	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft		
0	0.00	13.53	6.76	-11.72	-1053.77	-1286.48	77.13		
30	0.00	15.62	7.81	-13.53	-1262.21	-1406.82	89.07		
60	0.00	13.53	6.76	-11.72	-1053.77	-1286.48	77.13		
90	0.00	7.81	3.91	-6.76	-484.30	-957.69	44.53		
120	0.00	0.00	0.00	0.00	293.62	-508.56	0.00		
150	0.00	7.81	-3.91	6.76	1071.53	-59.43	-44.53		
180	0.00	13.53	-6.76	11.72	1641.01	269.35	-77.13		
210	0.00	15.62	-7.81	13.53	1849.45	389.70	-89.07		
240	0.00	13.53	-6.76	11.72	1641.01	269.35	-77.13		
270	0.00	7.81	-3.91	6.76	1071.53	-59.43	-44.53		
300	0.00	0.00	0.00	0.00	293.62	-508.56	0.00		
330	0.00	7.81	3.91	-6.76	-484.30	-957.69	44.53		

# **Discrete Appurtenance Totals - Service**

Wind	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	-0.12	-7094.02	-1109253.40	43.99	4.60
30	3539.03	-6143.54	-960524.63	-553930.28	47.19
60	6129.89	-3546.91	-554272.68	-959489.74	77.13
90	7078.26	0.12	647.56	-1107965.04	86.41
120	6130.01	3547.11	555545.66	-959572.36	72.54
150	3539.23	6143.66	961737.12	-554073.38	39.23

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Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
180	0.12	7094.02	1110383.28	-121.24	-4.60
210	-3539.03	6143.54	961654.50	553853.03	-47.19
240	-6129.89	3546.91	555402.56	959412.49	-77.13
270	-7078.26	-0.12	482.32	1107887.79	-86.41
300	-6130.01	-3547.11	-554415.78	959495.11	-72.54
330	-3539.23	-6143.66	-960607.25	553996.13	-39.23

#### Dish Pressures - No Ice

Elevation ft	Dish Description	Aiming Azimuth	Weight lb	$Offset_x$ $ft$	$Offset_z$ $ft$	$K_z$	$A_A$ $ft^2$	$q_z \ psf$
,		0		J	,		J.	r~3
125.00	8' Solid Dish	300.0000	250.00	-4.56	2.63	1.326	50.27	32
115.00	8' Solid Dish	180.0000	250.00	4.94	2.85	1.303	50.27	31
		Sum	500.00					
		Weight:						

#### **Dish Vectors - No Ice**

	8' Solid Dish - Elevation 125 - From Leg C													
Wind	$C_A$	$C_S$	$C_M$	$F_A$	$F_S$	$F_M$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque			
Azimuth														
0				lb	lb	lb-ft	lb	lb	lb-ft	lb-ft	lb-ft			
0	-0.001170	-0.001170	-0.000366	-621.46	-621.46	-1555.25	-227.47	-848.94	-105458.47	29574.59	-6027.72			
30	-0.000030	-0.000880	-0.000336	-15.93	-467.43	-1427.77	219.91	-412.77	-50937.76	-26348.50	-2731.75			
60	0.004220	-0.000620	0.000223	2241.52	-329.32	947.60	2105.88	835.56	105103.34	-262093.82	10307.05			
90	0.003980	0.000080	0.000108	2114.04	42.49	458.93	1809.57	1093.82	137386.14	-225055.20	10216.17			
120	0.003970	-0.000000	-0.000000	2108.73	0.00	0.00	1826.21	1054.36	132454.13	-227136.03	9621.08			
150	0.003980	-0.000080	-0.000108	2114.04	-42.49	-458.93	1852.06	1020.22	128186.07	-230366.86	9074.45			
180	0.004220	0.000620	-0.000223	2241.52	329.32	-947.60	1776.55	1405.96	176403.85	-220928.44	10146.83			
210	-0.000030	0.000880	0.000336	-15.93	467.43	1427.77	-247.51	396.84	50262.97	32079.77	2586.35			
240	-0.001170	0.001170	0.000366	-621.46	621.46	1555.25	-848.94	227.47	29092.51	107257.63	356.86			
270	-0.001980	0.001000	0.000278	-1051.71	531.17	1181.31	-1176.39	-65.85	-7572.85	148189.33	-2217.93			
300	-0.002700	-0.000000	-0.000000	-1434.15	0.00	0.00	-1242.01	-717.07	-88975.74	156391.75	-6543.30			
330	-0.001980	-0.001000	-0.000278	-1051.71	-531.17	-1181.31	-645.22	-985.86	-122573.68	81793.57	-7378.91			

	8' Solid Dish - Elevation 115 - From Leg B														
Wind	$C_A$	$C_S$	$C_M$	$F_A$	$F_S$	$F_M$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque				
Azimuth															
0				lb	lb	lb-ft	lb	lb	lb-ft	lb-ft	lb-ft				
0	0.003970	0.000000	0.000000	2072.04	0.00	0.00	0.00	-2072.04	-237571.44	-1234.37	10230.68				
30	0.003980	-0.000080	-0.000108	2077.25	-41.75	-450.94	-41.75	-2077.25	-238171.65	3567.32	9686.48				
60	0.004220	0.000620	-0.000223	2202.52	323.59	-931.11	323.59	-2202.52	-252576.73	-38447.51	10866.27				
90	-0.000030	0.000880	0.000336	-15.66	459.29	1402.93	459.29	15.66	2513.30	-54053.02	2634.91				
120	-0.001170	0.001170	0.000366	-610.65	610.65	1528.19	610.65	610.65	70937.45	-71459.16	253.87				
150	-0.001980	0.001000	0.000278	-1033.41	521.92	1160.76	521.92	1033.41	119554.61	-61255.56	-2453.87				
180	-0.002700	0.000000	0.000000	-1409.19	0.00	0.00	0.00	1409.19	162769.87	-1234.37	-6957.89				
210	-0.001980	-0.001000	-0.000278	-1033.41	-521.92	-1160.76	-521.92	1033.41	119554.61	58786.81	-7751.04				
240	-0.001170	-0.001170	-0.000366	-610.65	-610.65	-1528.19	-610.65	610.65	70937.45	68990.41	-6284.04				
270	-0.000030	-0.000880	-0.000336	-15.66	-459.29	-1402.93	-459.29	15.66	2513.30	51584.27	-2789.53				
300	0.004220	-0.000620	0.000223	2202.52	-323.59	931.11	-323.59	-2202.52	-252576.73	35978.76	10883.58				
330	0.003980	0.000080	0.000108	2077.25	41.75	450.94	41.75	-2077.25	-238171.65	-6036.07	10826.41				

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#### Dish Totals - No Ice

Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	-227.47	-2920.97	-343029.90	28340.22	4202.95
30	178.16	-2490.03	-289109.41	-22781.18	6954.72
60	2429.47	-1366.96	-147473.40	-300541.33	21173.32
90	2268.86	1109.48	139899.44	-279108.22	12851.08
120	2436.86	1665.02	203391.58	-298595.19	9874.94
150	2373.98	2053.63	247740.68	-291622.42	6620.58
180	1776.55	2815.16	339173.72	-222162.82	3188.94
210	-769.44	1430.24	169817.58	90866.58	-5164.69
240	-1459.59	838.12	100029.96	176248.04	-5927.18
270	-1635.68	-50.19	-5059.55	199773.60	-5007.46
300	-1565.60	-2919.59	-341552.47	192370.51	4340.28
330	-603.47	-3063.11	-360745.33	75757.50	3447.50

#### **Dish Pressures - With Ice**

Elevation ft	Dish Description	Aiming Azimuth	Weight lb	Offset <sub>x</sub> ft	Offset <sub>z</sub> ft	$K_z$	$rac{A_A}{ft^2}$	q <sub>z</sub> psf	t <sub>z</sub> in
	8' Solid Dish 8' Solid Dish	300.0000 180.0000 Sum Weight:	901.20 895.79 1796.99	4.94	2.63 2.85			_	1.1425 1.1330

#### **Dish Vectors - With Ice**

	8' Solid Dish - Elevation 125 - From Leg C													
Wind	$C_A$	$C_S$	$C_M$	$F_A$	$F_S$	$F_M$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque			
Azimuth														
0				lb	lb	lb-ft	lb	lb	lb-ft	lb-ft	lb-ft			
0	-0.001170	-0.001170	-0.000366	-53.15	-53.15	-133.02	-19.46	-72.61	-6702.38	6543.71	-515.56			
30	-0.000030	-0.000880	-0.000336	-1.36	-39.98	-122.12	18.81	-35.30	-2039.17	1760.56	-233.65			
60	0.004220	-0.000620	0.000223	191.72	-28.17	81.05	180.12	71.47	11307.17	-18402.96	881.57			
90	0.003980	0.000080	0.000108	180.82	3.63	39.25	154.77	93.56	14068.34	-15235.01	873.80			
120	0.003970	-0.000000	-0.000000	180.36	0.00	0.00	156.20	90.18	13646.50	-15412.99	822.90			
150	0.003980	-0.000080	-0.000108	180.82	-3.63	-39.25	158.41	87.26	13281.45	-15689.32	776.15			
180	0.004220	0.000620	-0.000223	191.72	28.17	-81.05	151.95	120.25	17405.56	-14882.05	867.87			
210	-0.000030	0.000880	0.000336	-1.36	39.98	122.12	-21.17	33.94	6616.62	6757.98	221.21			
240	-0.001170	0.001170	0.000366	-53.15	53.15	133.02	-72.61	19.46	4805.89	13188.01	30.52			
270	-0.001980	0.001000	0.000278	-89.95	45.43	101.04	-100.62	-5.63	1669.87	16688.94	-189.70			
300	-0.002700	-0.000000	-0.000000	-122.66	0.00	0.00	-106.23	-61.33	-5292.60	17390.50	-559.65			
330	-0.001980	-0.001000	-0.000278	-89.95	-45.43	-101.04	-55.19	-84.32	-8166.26	11010.05	-631.13			

	8' Solid Dish - Elevation 115 - From Leg B														
Wind	$C_A$	$C_S$	$C_M$	$F_A$	$F_S$	$F_M$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque				
Azimuth															
0				lb	lb	lb-ft	lb	lb	lb-ft	lb-ft	lb-ft				
0	0.003970	0.000000	0.000000	177.16	0.00	0.00	0.00	-177.16	-17819.31	-4422.98	874.71				
30	0.003980	-0.000080	-0.000108	177.60	-3.57	-38.55	-3.57	-177.60	-17870.62	-4012.44	828.18				
60	0.004220	0.000620	-0.000223	188.31	27.67	-79.61	27.67	-188.31	-19102.24	-7604.64	929.05				
90	-0.000030	0.000880	0.000336	-1.34	39.27	119.95	39.27	1.34	2707.56	-8938.89	225.28				
120	-0.001170	0.001170	0.000366	-52.21	52.21	130.66	52.21	52.21	8557.72	-10427.09	21.71				
150	-0.001980	0.001000	0.000278	-88.35	44.62	99.24	44.62	88.35	12714.41	-9554.69	-209.80				
180	-0.002700	0.000000	0.000000	-120.48	0.00	0.00	0.00	120.48	16409.24	-4422.98	-594.89				

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				8' Solid I	Dish - Elevati	on 115 - Fro	m Leg B				
Wind	$C_A$	$C_S$	$C_M$	$F_A$	$F_S$	$F_M$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth											
0				lb	lb	lb-ft	lb	lb	lb-ft	lb-ft	lb-ft
210	-0.001980	-0.001000	-0.000278	-88.35	-44.62	-99.24	-44.62	88.35	12714.41	708.74	-662.70
240	-0.001170	-0.001170	-0.000366	-52.21	-52.21	-130.66	-52.21	52.21	8557.72	1581.13	-537.28
270	-0.000030	-0.000880	-0.000336	-1.34	-39.27	-119.95	-39.27	1.34	2707.56	92.93	-238.50
300	0.004220	-0.000620	0.000223	188.31	-27.67	79.61	-27.67	-188.31	-19102.24	-1241.31	930.53
330	0.003980	0.000080	0.000108	177.60	3.57	38.55	3.57	-177.60	-17870.62	-4833.51	925.64

### Dish Totals - With Ice

Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	-19.46	-249.77	-24521.69	2120.73	359.15
30	15.24	-212.91	-19909.80	-2251.88	594.53
60	207.78	-116.85	-7795.07	-26007.60	1810.62
90	194.04	94.89	16775.90	-24173.90	1099.08
120	208.41	142.39	22204.22	-25840.07	844.60
150	203.03	175.62	25995.86	-25244.02	566.34
180	151.95	240.74	33814.81	-19305.02	272.98
210	-65.79	122.30	19331.02	7466.72	-441.49
240	-124.82	71.67	13363.60	14769.14	-506.75
270	-139.89	-4.29	4377.43	16781.87	-428.20
300	-133.90	-249.64	-24394.83	16149.18	370.87
330	-51.62	-261.92	-26036.88	6176.53	294.52

### **Dish Pressures - Service**

Elevation ft	Dish Description	Aiming Azimuth	Weight lb	Offset <sub>x</sub> ft	Offset <sub>z</sub> ft	$K_z$	$rac{A_A}{ft^2}$	q <sub>z</sub> psf
	8' Solid Dish 8' Solid Dish	300.0000 180.0000 Sum Weight:	250.00 500.00	-4.56 4.94	2.63 2.85	1.326 1.303		10 10

### **Dish Vectors - Service**

				8' Solid I	Dish - Elevat	on 125 - Fro	m Leg C				
Wind	$C_A$	$C_S$	$C_M$	$F_A$	$F_S$	$F_M$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth											
0				lb	lb	lb-ft	lb	lb	lb-ft	lb-ft	lb-ft
0	-0.001170	-0.001170	-0.000366	-202.93	-202.93	-507.84	-74.28	-277.20	-33991.91	10425.19	-1968.24
30	-0.000030	-0.000880	-0.000336	-5.20	-152.63	-466.21	71.81	-134.78	-16189.23	-7835.42	-892.00
60	0.004220	-0.000620	0.000223	731.93	-107.53	309.42	687.63	272.84	34762.96	-84813.48	3365.57
90	0.003980	0.000080	0.000108	690.30	13.88	149.85	590.88	357.17	45304.29	-72719.24	3335.89
120	0.003970	-0.000000	-0.000000	688.56	0.00	0.00	596.31	344.28	43693.83	-73398.69	3141.58
150	0.003980	-0.000080	-0.000108	690.30	-13.88	-149.85	604.75	333.13	42300.18	-74453.66	2963.09
180	0.004220	0.000620	-0.000223	731.93	107.53	-309.42	580.10	459.09	58044.76	-71371.72	3313.25
210	-0.000030	0.000880	0.000336	-5.20	152.63	466.21	-80.82	129.58	16855.90	11243.20	844.52
240	-0.001170	0.001170	0.000366	-202.93	202.93	507.84	-277.20	74.28	9943.10	35791.08	116.53
270	-0.001980	0.001000	0.000278	-343.42	173.44	385.73	-384.13	-21.50	-2029.26	49156.53	-724.22
300	-0.002700	-0.000000	-0.000000	-468.29	0.00	0.00	-405.55	-234.15	-28609.80	51834.87	-2136.59
330	-0.001980	-0.001000	-0.000278	-343.42	-173.44	-385.73	-210.69	-321.91	-39580.55	27476.28	-2409.44

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				8' Solid I	Dish - Elevati	on 115 - Fro	m Leg B				
Wind	$C_A$	$C_S$	$C_M$	$F_A$	$F_S$	$F_M$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth											
0				lb	lb	lb-ft	lb	lb	lb-ft	lb-ft	lb-ft
0	0.003970	0.000000	0.000000	676.58	0.00	0.00	0.00	-676.58	-77094.39	-1234.37	3340.63
30	0.003980	-0.000080	-0.000108	678.29	-13.63	-147.25	-13.63	-678.29	-77290.38	333.53	3162.93
60	0.004220	0.000620	-0.000223	719.19	105.66	-304.04	105.66	-719.19	-81994.08	-13385.60	3548.17
90	-0.000030	0.000880	0.000336	-5.11	149.97	458.10	149.97	5.11	1300.63	-18481.28	860.38
120	-0.001170	0.001170	0.000366	-199.40	199.40	499.00	199.40	199.40	23643.21	-24164.92	82.90
150	-0.001980	0.001000	0.000278	-337.44	170.42	379.02	170.42	337.44	39518.20	-20833.13	-801.26
180	-0.002700	0.000000	0.000000	-460.14	0.00	0.00	0.00	460.14	53629.30	-1234.37	-2271.96
210	-0.001980	-0.001000	-0.000278	-337.44	-170.42	-379.02	-170.42	337.44	39518.20	18364.38	-2530.95
240	-0.001170	-0.001170	-0.000366	-199.40	-199.40	-499.00	-199.40	199.40	23643.21	21696.17	-2051.93
270	-0.000030	-0.000880	-0.000336	-5.11	-149.97	-458.10	-149.97	5.11	1300.63	16012.53	-910.87
300	0.004220	-0.000620	0.000223	719.19	-105.66	304.04	-105.66	-719.19	-81994.08	10916.85	3553.82
330	0.003980	0.000080	0.000108	678.29	13.63	147.25	13.63	-678.29	-77290.38	-2802.28	3535.16

### Dish Totals - Service

Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	-74.28	-953.79	-111086.30	9190.81	1372.39
30	58.17	-813.07	-93479.61	-7501.89	2270.93
60	793.30	-446.35	-47231.11	-98199.08	6913.74
90	740.85	362.28	46604.92	-91200.51	4196.27
120	795.71	543.68	67337.04	-97563.61	3224.47
150	775.18	670.57	81818.38	-95286.79	2161.82
180	580.10	919.23	111674.07	-72606.10	1041.29
210	-251.24	467.02	56374.10	29607.58	-1686.43
240	-476.60	273.67	33586.31	57487.24	-1935.40
270	-534.10	-16.39	-728.63	65169.06	-1635.09
300	-511.22	-953.34	-110603.87	62751.72	1417.23
330	-197.05	-1000.20	-116870.93	24674.00	1125.72

### **Force Totals**

Load	Vertical	Sum of	Sum of	Sum of	Sum of	Sum of Torques
Case	Forces	Forces	Forces	Overturning	Overturning	v 1
		X	Z	Moments, $M_x$	Moments, $M_z$	
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Leg Weight	12887.78					
Bracing Weight	9169.45					
Total Member Self-Weight	22057.23			2682.21	-700.48	
Total Weight	44455.83			2682.21	-700.48	
Wind 0 deg - No Ice		-227.84	-51611.86	-5924220.71	27986.50	5733.95
Wind 30 deg - No Ice		23729.39	-43324.12	-5019786.56	-2752359.46	14701.73
Wind 60 deg - No Ice		42631.89	-24601.76	-2845156.65	-4971178.50	23650.29
Wind 90 deg - No Ice		49036.35	1109.85	141463.46	-5685750.06	9394.33
Wind 120 deg - No Ice		44272.15	25842.98	2969999.49	-5083565.89	10820.93
Wind 150 deg - No Ice		25842.60	42743.91	4959665.48	-3009152.37	11715.83
Wind 180 deg - No Ice		1776.92	49454.51	5766284.56	-223022.57	1657.95
Wind 210 deg - No Ice		-24320.67	42264.34	4903116.74	2819231.40	-12911.69
Wind 240 deg - No Ice		-43438.69	25098.69	2878686.20	4981379.64	-8404.15
Wind 270 deg - No Ice		-48403.17	-50.56	-4001.56	5605201.98	-1550.71
Wind 300 deg - No Ice		-41624.21	-26071.78	-3027187.39	4840419.86	3394.30

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Load	Vertical	Sum of	Sum of	Sum of	Sum of	Sum of Torques
Case	Forces	Forces	Forces	Overturning	Overturning	
		X	Z	Moments, $M_x$	Moments, $M_z$	
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Wind 330 deg - No Ice		-24072.09	-43753.39	-5070048.12	2792073.99	-1647.74
Member Ice	19878.14					
Total Weight Ice	90455.68			8683.41	-3088.28	
Wind 0 deg - Ice		-19.50	-6009.80	-688333.22	-627.17	608.36
Wind 30 deg - Ice		2835.99	-5103.34	-586882.88	-334196.44	1397.60
Wind 60 deg - Ice		5049.02	-2914.62	-331037.56	-594626.61	2184.18
Wind 90 deg - Ice		5808.23	94.94	20560.94	-681063.27	943.03
Wind 120 deg - Ice		5168.33	3008.75	357632.49	-602496.38	968.95
Wind 150 deg - Ice		3017.07	5054.33	598744.38	-356219.72	937.76
Wind 180 deg - Ice		152.00	5850.18	693852.49	-22111.19	23.77
Wind 210 deg - Ice		-2886.54	5012.73	593815.91	333857.20	-1244.55
Wind 240 deg - Ice		-5096.47	2944.74	349760.72	587607.75	-880.31
Wind 270 deg - Ice		-5754.07	-4.34	8104.19	668117.18	-272.16
Wind 300 deg - Ice		-4963.41	-3040.71	-346668.47	577477.76	246.53
Wind 330 deg - Ice		-2865.65	-5140.64	-591273.60	331598.17	-76.90
Total Weight	44455.83			2682.21	-700.48	
Wind 0 deg - Service		-74.40	-17230.80	-1956533.01	9234.80	1872.31
Wind 30 deg - Service		7937.34	-14473.96	-1658105.54	-910210.23	4800.56
Wind 60 deg - Service		14247.93	-8222.20	-939547.38	-1643197.49	7722.54
Wind 90 deg - Service		16389.81	362.40	47252.47	-1879629.01	3067.54
Wind 120 deg - Service		14783.52	8627.49	982433.03	-1679895.41	3533.36
Wind 150 deg - Service		8627.37	14284.50	1640594.81	-994060.97	3825.58
Wind 180 deg - Service		580.22	16526.35	1907082.67	-72727.34	541.37
Wind 210 deg - Service		-8130.41	14127.91	1622129.91	932238.67	-4216.06
Wind 240 deg - Service		-14511.37	8384.46	952616.45	1646721.18	-2744.21
Wind 270 deg - Service		-16183.06	-16.51	-246.31	1853520.31	-506.35
Wind 300 deg - Service		-13918.89	-8702.21	-998985.99	1600693.50	1108.34
Wind 330 deg - Service		-8049.25	-14614.13	-1674517.48	923370.94	-538.04

### **Load Combinations**

Comb.	Description
No.	·
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

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Comb.	Description	
No.		
24	1.2 Dead+1.0 Wind 330 deg - No Ice	
25	0.9 Dead+1.0 Wind 330 deg - No Ice	
26	1.2 Dead+1.0 Ice+1.0 Temp	
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	
39	Dead+Wind 0 deg - Service	
40	Dead+Wind 30 deg - Service	
41	Dead+Wind 60 deg - Service	
42	Dead+Wind 90 deg - Service	
43	Dead+Wind 120 deg - Service	
44	Dead+Wind 150 deg - Service	
45	Dead+Wind 180 deg - Service	
46	Dead+Wind 210 deg - Service	
47	Dead+Wind 240 deg - Service	
48	Dead+Wind 270 deg - Service	
49	Dead+Wind 300 deg - Service	
50	Dead+Wind 330 deg - Service	

### **Maximum Member Forces**

Section	Elevation	Component	Condition	Gov.	Axial	Major Axis	Minor Axis
No.	ft	Туре		Load		Moment	Moment
				Comb.	lb	lb-ft	lb-ft
T1	175.3 - 160	Leg	Max Tension	15	10483.66	2.18	-14.21
			Max. Compression	2	-14979.46	4.42	340.84
			Max. Mx	20	-2509.07	404.89	-8.08
			Max. My	2	3655.77	-23.14	397.66
			Max. Vy	8	-2688.93	-258.18	-23.55
			Max. Vx	2	2693.19	0.43	274.30
		Diagonal	Max Tension	8	3799.71	0.00	0.00
			Max. Compression	20	-3834.53	0.00	0.00
			Max. Mx	35	471.49	16.43	0.13
			Max. My	20	-3620.93	1.82	7.94
			Max. Vy	35	-15.61	16.43	0.13
			Max. Vx	20	-1.92	1.82	7.94
		Top Girt	Max Tension	14	862.84	0.00	0.00
			Max. Compression	18	-911.39	0.00	0.00
			Max. Mx	26	-26.17	-41.89	0.00
			Max. My	6	-448.89	0.00	0.00
			Max. Vy	26	25.78	0.00	0.00
			Max. Vx	6	-0.00	0.00	0.00
T2	160 - 140	Leg	Max Tension	15	48720.61	406.77	28.08
			Max. Compression	2	-58686.51	479.46	2.73
			Max. Mx	22	15258.82	2160.35	2.73
			Max. My	8	-4764.82	-55.53	-2377.10
			Max. Vy	22	2316.72	-1688.87	2.73
			Max. Vx	16	-2175.61	-52.93	1232.61
		Diagonal	Max Tension	8	7626.73	0.00	0.00
			Max. Compression	20	-7628.56	0.00	0.00

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Section No.	Elevation ft	Component Type	Condition	Gov. Load	Axial	Major Axis Moment	Minor Axis Moment
	-			Comb.	lb	lb-ft	lb-ft
			Max. Mx	12	3448.16	42.02	1.85
			Max. My	8	-7571.79	-4.55	-27.45
			Max. Vy	32	-22.75	30.03	2.79
			Max. Vx	8	5.93	0.00	0.00
T3	140 - 120	Leg	Max Tension	15	101238.90	-630.48	-86.91
			Max. Compression	2	-116142.54	525.93	54.97
			Max. Mx	10	-97490.42	752.52	-256.38
			Max. My	12	-8076.48	-186.53	-1344.88
			Max. Vy	22	-2118.49	-480.78	11.81
		D: 1	Max. Vx	12	-1880.94	1.64	159.97
		Diagonal	Max Tension	8	9353.33	0.00	0.00
			Max. Compression	8	-9863.46	0.00	0.00
			Max. Mx	10 8	7956.43	63.83	-1.85 26.25
			Max. My	35	-9062.12	-17.70	-26.35
			Max. Vy Max. Vx	8	-32.30 5.34	46.60	-3.37 0.00
T4	120 - 100	Leg	Max Tension	15	153265.82	0.00 -550.34	-8.34
14	120 - 100	Leg	Max. Compression	2	-170904.62	1702.01	-43.36
			Max. Mx	2	-170904.62	1702.01	-43.36
			Max. My	24	-7899.40	-3.30	1357.30
			Max. Vy	2	-738.47	1557.84	-216.97
			Max. Vx	24	995.31	-1099.49	-584.57
		Diagonal	Max Tension	8	9936.99	0.00	0.00
		Diagonar	Max. Compression	8	-9977.81	0.00	0.00
			Max. Mx	2	7612.28	51.84	-1.24
			Max. My	6	-9327.18	2.88	-21.03
			Max. Vy	33	36.20	47.71	-4.90
			Max. Vx	6	3.78	0.00	0.00
T5	100 - 80	Leg	Max Tension	15	198802.82	-1716.94	61.00
			Max. Compression	2	-220545.11	1566.86	4.97
			Max. Mx	2	-204508.66	1756.53	-9.92
			Max. My	12	-6815.85	-37.64	-1869.64
			Max. Vy	3	93.45	1753.95	-10.01
			Max. Vx	16	-122.15	-1.76	1834.00
		Diagonal	Max Tension	8	9476.86	0.00	0.00
			Max. Compression	8	-9633.24	0.00	0.00
			Max. Mx	31	921.42	65.49	-6.05
			Max. My	6	-8919.75	13.06	-13.92
			Max. Vy	33	45.45	65.09	-6.30
			Max. Vx	6	2.49	0.00	0.00
T6	80 - 60	Leg	Max Tension	15	239354.21	-1522.42	86.64
			Max. Compression	2	-265228.56	2987.45	-15.75
			Max. Mx	2	-265228.56	2987.45	-15.75
			Max. My	12	-6959.05	-114.18	-2323.12
			Max. Vy	2	-303.31	2987.45	-15.75
		D: 1	Max. Vx	8	180.75	-118.26	2289.10
		Diagonal	Max Tension	8	9216.74	0.00	0.00
			Max. Compression	8	-9407.59	0.00	0.00
			Max. Mx	31	935.56	84.00	7.36
			Max. My	6	-8804.38	11.18	-15.03
			Max. Vy	33	52.27	82.45	-7.90
Т7	60 - 40	Lac	Max. Vx	6 15	2.46	0.00	0.00 67.40
1 /	00 - 40	Leg	Max Tension		269450.57	-1917.21	
			Max. Compression	2	-299629.52	1790.08	-7.16 15.86
			Max. Mx	2	-277818.06	2987.45	-15.86
			Max. My	12	-7179.65	-114.79 2087.45	-2309.18 -15.86
			Max. Vy Max. Vx	2 8	293.07 -175.73	2987.45 -118.95	-13.86 2275.79
		Diagonal	Max. vx Max Tension	8	7195.58	0.00	0.00
		Diagonal	IVIGA I CHSIUH	O	1173.30	0.00	0.00
		Ö	Max. Compression	8	-7504.83	0.00	0.00

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Section No.	Elevation ft	Component Type	Condition	Gov. Load	Axial	Major Axis Moment	Minor Axis Moment
				Comb.	lb	lb-ft	lb-ft
			Max. My	6	-6849.84	17.75	-16.42
			Max. Vy	33	58.16	101.39	-12.34
			Max. Vx	29	-2.94	0.00	0.00
T8	40 - 20	Leg	Max Tension	15	294857.08	-1387.00	77.96
			Max. Compression	2	-329326.04	3342.07	-63.90
			Max. Mx	2	-329326.04	3342.07	-63.90
			Max. My	12	-8639.79	-41.11	-2805.99
			Max. Vy	2	-357.66	3342.07	-63.90
			Max. Vx	5	194.73	-52.59	-2791.74
		Diagonal	Max Tension	8	7260.57	0.00	0.00
			Max. Compression	8	-7476.42	0.00	0.00
			Max. Mx	33	425.17	120.99	-14.82
			Max. My	29	702.79	115.55	-15.06
			Max. Vy	33	63.09	120.99	-14.82
			Max. Vx	29	-3.13	0.00	0.00
T9	20 - 0	Leg	Max Tension	15	317792.66	-2633.17	167.27
			Max. Compression	2	-357671.52	0.00	-0.46
			Max. Mx	31	-75390.02	8800.69	7.91
			Max. My	12	-9780.06	-203.33	-4318.49
			Max. Vy	33	-1953.36	-4776.08	9.34
			Max. Vx	12	-709.44	-203.36	-4318.49
		Diagonal	Max Tension	8	7982.03	0.00	0.00
			Max. Compression	8	-8305.46	0.00	0.00
			Max. Mx	33	-1820.49	199.32	26.09
			Max. My	29	-2792.54	182.50	-26.62
			Max. Vy	33	86.70	199.32	26.09
			Max. Vx	29	4.67	0.00	0.00

### **Maximum Reactions**

Location	Condition	Gov.	Vertical	Horizontal, X	Horizontal, Z
		Load	lb	lb	lb
		Comb.			
Leg C	Max. Vert	18	352428.12	28088.47	-15944.72
_	Max. H <sub>x</sub>	18	352428.12	28088.47	-15944.72
	Max. H <sub>z</sub>	7	-319197.95	-26057.86	14252.38
	Min. Vert	7	-319197.95	-26057.86	14252.38
	Min. H <sub>x</sub>	7	-319197.95	-26057.86	14252.38
	Min. Hz	18	352428.12	28088.47	-15944.72
Leg B	Max. Vert	10	360235.78	-28705.48	-16233.47
	Max. H <sub>x</sub>	23	-317913.72	25539.24	14964.46
	Max. H <sub>z</sub>	23	-317913.72	25539.24	14964.46
	Min. Vert	23	-317913.72	25539.24	14964.46
	Min. H <sub>x</sub>	10	360235.78	-28705.48	-16233.47
	Min. Hz	10	360235.78	-28705.48	-16233.47
Leg A	Max. Vert	2	362315.11	167.49	33185.81
	Max. H <sub>x</sub>	21	13583.20	2194.92	1077.60
	Max. H <sub>z</sub>	2	362315.11	167.49	33185.81
	Min. Vert	15	-321417.09	-19.22	-29851.42
	Min. H <sub>x</sub>	9	5140.20	-1993.44	352.06
	Min. H <sub>z</sub>	15	-321417.09	-19.22	-29851.42

# **Tower Mast Reaction Summary**

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Load Combination	Vertical	Shear <sub>x</sub>	Shear <sub>z</sub>	Overturning Moment, $M_x$	Overturning Moment, $M_z$	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Dead Only 1.2 Dead+1.0 Wind 0 deg - No	44455.83 53346.99	-0.00 -227.84	-0.00 -51611.86	2682.08 -5967482.86	-700.36 27980.12	0.00 5745.01
Ice 0.9 Dead+1.0 Wind 0 deg - No Ice	40010.24	-227.84	-51611.86	-5957184.72	28149.05	5743.10
1.2 Dead+1.0 Wind 30 deg - No Ice	53346.99	23729.41	-43324.10	-5056473.21	-2773248.37	14734.04
0.9 Dead+1.0 Wind 30 deg - No Ice	40010.24	23729.39	-43324.12	-5047832.84	-2767795.55	14721.33
1.2 Dead+1.0 Wind 60 deg - No Ice	53346.99	42631.89	-24601.76	-2865575.65	-5008497.57	23660.29
0.9 Dead+1.0 Wind 60 deg - No Ice	40010.24	42631.89	-24601.76	-2861036.15	-4998873.94	23648.55
1.2 Dead+1.0 Wind 90 deg - No Ice	53346.99	49036.35	1109.84	143014.35	-5728266.26	9412.07
0.9 Dead+1.0 Wind 90 deg - No Ice	40009.72	49036.22	1110.45	141965.29	-5717303.65	9414.42
1.2 Dead+1.0 Wind 120 deg - No Ice	53346.99	44272.15	25842.98	2992569.74	-5121308.11	10861.67
0.9 Dead+1.0 Wind 120 deg - No Ice	40010.24	44272.15	25842.98	2986182.11	-5111550.57	10852.04
1.2 Dead+1.0 Wind 150 deg - No Ice 0.9 Dead+1.0 Wind 150 deg -	53346.99 40010.24	25842.60 25842.61	42743.91 42743.91	4997198.63 4987008.32	-3031517.83 -3025653.31	11763.39 11747.46
No Ice 1.2 Dead+1.0 Wind 180 deg -	53346.99	1776.92	49454.51	5809832.16	-224634.04	1674.16
No Ice 0.9 Dead+1.0 Wind 180 deg -	40010.24	1776.92	49454.51	5798106.55	-224047.89	1675.68
No Ice 1.2 Dead+1.0 Wind 210 deg -	53346.99	-24320.67	42264.34	4940324.81	2840068.86	-12957.83
No Ice 0.9 Dead+1.0 Wind 210 deg -	40010.24	-24320.67	42264.34	4930220.18	2834942.15	-12938.47
No Ice 1.2 Dead+1.0 Wind 240 deg -	53346.99	-43438.69	25098.69	2900665.08	5018215.97	-8455.42
No Ice 0.9 Dead+1.0 Wind 240 deg -	40010.24	-43438.69	25098.69	2894425.72	5009038.77	-8443.40
No Ice 1.2 Dead+1.0 Wind 270 deg - No Ice	53346.99	-48403.17	-50.56	-3461.36	5646905.23	-1583.62
0.9 Dead+1.0 Wind 270 deg - No Ice	40010.70	-48403.34	-51.13	-4266.11	5636499.53	-1578.33
1.2 Dead+1.0 Wind 300 deg - No Ice	53346.99	-41624.21	-26071.78	-3048957.20	4876457.55	3367.78
0.9 Dead+1.0 Wind 300 deg - No Ice	40010.24	-41624.21	-26071.78	-3044117.38	4867487.31	3377.13
1.2 Dead+1.0 Wind 330 deg - No Ice	53346.99	-24072.09	-43753.39	-5107079.08	2812835.05	-1672.80
0.9 Dead+1.0 Wind 330 deg - No Ice	40010.24	-24072.09	-43753.39	-5098361.87	2807742.53	-1655.99
1.2 Dead+1.0 Ice+1.0 Temp 1.2 Dead+1.0 Wind 0 deg+1.0	99346.83 99346.83	-0.00 -19.50	-0.00 -6009.78	9241.63 -697095.35	-3232.72 -784.33	0.21 611.62
Ice+1.0 Temp 1.2 Dead+1.0 Wind 30 deg+1.0	99346.83	2835.98	-5103.33	-594280.33	-338948.64	1408.06
Ice+1.0 Temp 1.2 Dead+1.0 Wind 60 deg+1.0	99346.83	5049.00	-2914.62	-334928.14	-602932.69	2199.00
Ice+1.0 Temp 1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	99346.83	5808.21	94.94	21457.82	-690549.23	958.78
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	99346.83	5168.32	3008.74	363145.17	-610871.34	981.27

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Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, $M_x$	Overturning Moment, $M_z$	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
1.2 Dead+1.0 Wind 150	99346.83	3017.06	5054.32	607586.53	-361228.42	943.15
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 180	99346.83	152.00	5850.16	704001.53	-22528.68	21.00
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 210	99346.83	-2886.54	5012.72	602603.39	338299.38	-1255.20
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 240	99346.83	-5096.46	2944.73	355180.59	595508.86	-895.90
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 270	99346.83	-5754.06	-4.34	8849.30	677147.65	-288.14
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 300	99346.83	-4963.39	-3040.70	-350747.39	585270.27	234.23
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 330	99346.83	-2865.65	-5140.62	-598719.85	336016.74	-81.99
deg+1.0 Ice+1.0 Temp						
Dead+Wind 0 deg - Service	44455.83	-74.40	-17230.80	-1967830.77	8709.92	1874.83
Dead+Wind 30 deg - Service	44455.88	7937.54	-14473.87	-1667597.04	-916477.68	4806.17
Dead+Wind 60 deg - Service	44455.83	14247.93	-8222.20	-944574.28	-1653985.23	7731.24
Dead+Wind 90 deg - Service	44455.83	16389.81	362.40	48285.39	-1891864.17	3078.52
Dead+Wind 120 deg - Service	44455.83	14783.52	8627.49	989253.24	-1690828.17	3544.50
Dead+Wind 150 deg - Service	44455.88	8627.19	14284.63	1651537.19	-1000760.33	3830.28
Dead+Wind 180 deg - Service	44455.83	580.22	16526.35	1919682.57	-73700.04	542.02
Dead+Wind 210 deg - Service	44455.83	-8130.41	14127.91	1632979.59	937456.58	-4225.02
Dead+Wind 240 deg - Service	44455.83	-14511.37	8384.46	959274.75	1656336.04	-2757.47
Dead+Wind 270 deg - Service	44455.83	-16183.06	-16.51	517.61	1864466.45	-518.79
Dead+Wind 300 deg - Service	44455.83	-13918.89	-8702.21	-1004353.24	1610081.25	1099.34
Dead+Wind 330 deg - Service	44455.89	-8049.46	-14614.03	-1684094.78	928553.42	-540.04

### **Solution Summary**

	Sur	n of Applied Forces	5		Sum of Reaction	S	
Load	PX	PY	PZ	PX	PY	PZ	% Error
Comb.	lb	lb	lb	lb	lb	lb	
1	-0.00	-44455.83	-0.00	0.00	44455.83	0.00	0.000%
2	-227.84	-53346.99	-51611.86	227.84	53346.99	51611.86	0.000%
3	-227.84	-40010.24	-51611.86	227.84	40010.24	51611.86	0.000%
4	23729.39	-53346.99	-43324.12	-23729.41	53346.99	43324.10	0.000%
5	23729.39	-40010.24	-43324.12	-23729.39	40010.24	43324.12	0.000%
6	42631.89	-53346.99	-24601.76	-42631.89	53346.99	24601.76	0.000%
7	42631.89	-40010.24	-24601.76	-42631.89	40010.24	24601.76	0.000%
8	49036.35	-53346.99	1109.85	-49036.35	53346.99	-1109.84	0.000%
9	49036.35	-40010.24	1109.85	-49036.22	40009.72	-1110.45	0.001%
10	44272.15	-53346.99	25842.98	-44272.15	53346.99	-25842.98	0.000%
11	44272.15	-40010.24	25842.98	-44272.15	40010.24	-25842.98	0.000%
12	25842.60	-53346.99	42743.91	-25842.60	53346.99	-42743.91	0.000%
13	25842.60	-40010.24	42743.91	-25842.61	40010.24	-42743.91	0.000%
14	1776.92	-53346.99	49454.51	-1776.92	53346.99	-49454.51	0.000%
15	1776.92	-40010.24	49454.51	-1776.92	40010.24	-49454.51	0.000%
16	-24320.67	-53346.99	42264.34	24320.67	53346.99	-42264.34	0.000%
17	-24320.67	-40010.24	42264.34	24320.67	40010.24	-42264.34	0.000%
18	-43438.69	-53346.99	25098.69	43438.69	53346.99	-25098.69	0.000%
19	-43438.69	-40010.24	25098.69	43438.69	40010.24	-25098.69	0.000%
20	-48403.17	-53346.99	-50.56	48403.17	53346.99	50.56	0.000%
21	-48403.17	-40010.24	-50.56	48403.34	40010.70	51.13	0.001%
22	-41624.21	-53346.99	-26071.78	41624.21	53346.99	26071.78	0.000%
23	-41624.21	-40010.24	-26071.78	41624.21	40010.24	26071.78	0.000%
24	-24072.09	-53346.99	-43753.39	24072.09	53346.99	43753.39	0.000%
25	-24072.09	-40010.24	-43753.39	24072.09	40010.24	43753.39	0.000%
26	-0.00	-99346.84	-0.00	0.00	99346.83	0.00	0.000%

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	Sur	n of Applied Force.	S		Sum of Reaction	ıs	
Load	PX	PY	PZ	PX	PY	PZ	% Error
Comb.	lb	lb	lb	lb	lb	lb	
27	-19.50	-99346.84	-6009.80	19.50	99346.83	6009.78	0.000%
28	2835.99	-99346.84	-5103.34	-2835.98	99346.83	5103.33	0.000%
29	5049.02	-99346.84	-2914.62	-5049.00	99346.83	2914.62	0.000%
30	5808.23	-99346.84	94.94	-5808.21	99346.83	-94.94	0.000%
31	5168.33	-99346.84	3008.75	-5168.32	99346.83	-3008.74	0.000%
32	3017.07	-99346.84	5054.33	-3017.06	99346.83	-5054.32	0.000%
33	152.00	-99346.84	5850.18	-152.00	99346.83	-5850.16	0.000%
34	-2886.54	-99346.84	5012.73	2886.54	99346.83	-5012.72	0.000%
35	-5096.47	-99346.84	2944.74	5096.46	99346.83	-2944.73	0.000%
36	-5754.07	-99346.84	-4.34	5754.06	99346.83	4.34	0.000%
37	-4963.41	-99346.84	-3040.71	4963.39	99346.83	3040.70	0.000%
38	-2865.65	-99346.84	-5140.64	2865.65	99346.83	5140.62	0.000%
39	-74.40	-44455.83	-17230.80	74.40	44455.83	17230.80	0.000%
40	7937.34	-44455.83	-14473.96	-7937.54	44455.88	14473.87	0.000%
41	14247.93	-44455.83	-8222.20	-14247.93	44455.83	8222.20	0.000%
42	16389.81	-44455.83	362.40	-16389.81	44455.83	-362.40	0.000%
43	14783.52	-44455.83	8627.49	-14783.52	44455.83	-8627.49	0.000%
44	8627.37	-44455.83	14284.50	-8627.19	44455.88	-14284.63	0.000%
45	580.22	-44455.83	16526.35	-580.22	44455.83	-16526.35	0.000%
46	-8130.41	-44455.83	14127.91	8130.41	44455.83	-14127.91	0.000%
47	-14511.37	-44455.83	8384.46	14511.37	44455.83	-8384.46	0.000%
48	-16183.06	-44455.83	-16.51	16183.06	44455.83	16.51	0.000%
49	-13918.89	-44455.83	-8702.21	13918.89	44455.83	8702.21	0.000%
50	-8049.25	-44455.83	-14614.13	8049.46	44455.89	14614.03	0.001%

# **Non-Linear Convergence Results**

Load	Converged?	Number	Displacement	Force
Combination		of Cycles	Tolerance	Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00000140
3	Yes	4	0.00000001	0.00000139
4	Yes	4	0.00000001	0.00000300
5	Yes	4	0.00000001	0.00000261
6	Yes	4	0.00000001	0.00000376
7	Yes	4	0.00000001	0.00000322
8	Yes	4	0.00000001	0.00000271
9	Yes	4	0.00000001	0.00000246
10	Yes	4	0.00000001	0.00000146
11	Yes	4	0.00000001	0.00000146
12	Yes	4	0.00000001	0.00000290
13	Yes	4	0.00000001	0.00000255
14	Yes	4	0.00000001	0.00000376
15	Yes	4	0.00000001	0.00000322
16	Yes	4	0.00000001	0.00000300
17	Yes	4	0.00000001	0.00000261
18	Yes	4	0.00000001	0.00000142
19	Yes	4	0.00000001	0.00000140
20	Yes	4	0.00000001	0.00000282
21	Yes	4	0.00000001	0.00000252
22	Yes	4	0.00000001	0.00000369
23	Yes	4	0.00000001	0.00000315
24	Yes	4	0.00000001	0.00000279
25	Yes	4	0.00000001	0.00000241
26	Yes	4	0.00000001	0.00000001
27	Yes	4	0.00000001	0.00000583

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28	Yes	4	0.00000001	0.00000584
29	Yes	4	0.00000001	0.00000591
30	Yes	4	0.00000001	0.00000591
31	Yes	4	0.00000001	0.00000596
32	Yes	4	0.00000001	0.00000601
33	Yes	4	0.00000001	0.00000604
34	Yes	4	0.00000001	0.00000597
35	Yes	4	0.00000001	0.00000591
36	Yes	4	0.00000001	0.00000587
37	Yes	4	0.00000001	0.00000588
38	Yes	4	0.00000001	0.00000584
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

### **Maximum Tower Deflections - Service Wind**

Section	Elevation	Horz.	Gov.	Tilt	Twist
No.		Deflection	Load		
	ft	in	Comb.	0	0
T1	175.3 - 160	7.719	39	0.3985	0.0551
T2	160 - 140	6.424	39	0.3862	0.0545
T3	140 - 120	4.842	39	0.3390	0.0528
T4	120 - 100	3.499	39	0.2694	0.0496
T5	100 - 80	2.420	39	0.2155	0.0352
T6	80 - 60	1.556	39	0.1731	0.0255
T7	60 - 40	0.871	39	0.1265	0.0168
T8	40 - 20	0.392	39	0.0788	0.0095
T9	20 - 0	0.106	39	0.0321	0.0034

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

Elevation	Appurtenance	Gov.	Deflection	Tilt	Twist	Radius of
		Load				Curvature
ft		Comb.	in	٥	0	ft
170.00	40,000 sq in CaAa (6,000 lbs)	39	7.267	0.3956	0.0550	116721
155.00	40,000 sq in CaAa (6,000 lbs)	39	6.012	0.3780	0.0541	31344
140.00	30,000 sq in CaAa (4,000 lbs)	39	4.842	0.3390	0.0528	18856
125.00	8' Solid Dish	39	3.810	0.2864	0.0514	17339
115.00	8' Solid Dish	39	3.206	0.2539	0.0466	18132

### **Maximum Tower Deflections - Design Wind**

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Section	Elevation	Horz.	Gov.	Tilt	Twist
No.		Deflection	Load		
	ft	in	Comb.	0	0
T1	175.3 - 160	23.585	2	1.2214	0.1691
T2	160 - 140	19.615	2	1.1836	0.1671
T3	140 - 120	14.769	2	1.0381	0.1621
T4	120 - 100	10.659	2	0.8240	0.1520
T5	100 - 80	7.361	2	0.6583	0.1081
T6	80 - 60	4.724	2	0.5280	0.0781
T7	60 - 40	2.639	2	0.3854	0.0514
T8	40 - 20	1.184	2	0.2397	0.0291
T9	20 - 0	0.319	2	0.0976	0.0106

# Critical Deflections and Radius of Curvature - Design Wind

Elevation	Appurtenance	Gov. Load	Deflection	Tilt	Twist	Radius of Curvature
ft		Comb.	in	0	0	ft
170.00	40,000 sq in CaAa (6,000 lbs)	2	22.199	1.2124	0.1686	38050
155.00	40,000 sq in CaAa (6,000 lbs)	2	18.353	1.1583	0.1658	10240
140.00	30,000 sq in CaAa (4,000 lbs)	2	14.769	1.0381	0.1621	6120
125.00	8' Solid Dish	2	11.608	0.8764	0.1576	5663
115.00	8' Solid Dish	2	9.762	0.7764	0.1430	5929

### Compression Checks

### Leg Design Data (Compression)

Section No.	Elevation	Size	L	$L_u$	Kl/r	A	$P_u$	$\phi P_n$	$Ratio$ $P_u$
	ft		ft	ft		$in^2$	lb	lb	$\phi P_n$
T1	175.3 - 160	P2x.154	15.30	5.10	77.8 K=1.00	1.0745	-14979.50	31079.10	0.482 1
T2	160 - 140	P3x.216	20.02	6.67	68.8 K=1.00	2.2285	-58686.50	70930.60	0.827 1
Т3	140 - 120	P4x.237	20.02	6.67	53.0 K=1.00	3.1741	-116143.00	116271.00	0.999 1
T4	120 - 100	P6x.28	20.02	6.67	35.7 K=1.00	5.5813	-170905.00	228860.00	0.747 1
T5	100 - 80	P8x.322	20.02	6.67	27.3 K=1.00	8.3993	-220545.00	357982.00	0.616 <sup>1</sup>
Т6	80 - 60	P8x.322	20.02	6.67	27.3 K=1.00	8.3993	-265229.00	357982.00	0.741 1
T7	60 - 40	P8x.322	20.03	6.68	27.3 K=1.00	8.3993	-299630.00	357954.00	0.837 1
Т8	40 - 20	P8x.322	20.03	6.68	27.3 K=1.00	8.3993	-329326.00	357954.00	0.920 1
Т9	20 - 0	P10x.365	20.03	6.68	21.8 K=1.00	11.9083	-357672.00	517553.00	0.691 1

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<sup>&</sup>lt;sup>1</sup>  $P_u$  /  $\phi P_n$  controls

Section No.	Elevation	Size	L	$L_u$	Kl/r	A	$P_u$	$\phi P_n$	Ratio P <sub>u</sub>
1,0.	ft		ft	ft		$in^2$	lb	lb	$\frac{1}{\phi P_n}$
T1	175.3 - 160	L1 3/4x1 3/4x1/8	8.26	4.01	138.6 K=1.00	0.4219	-3834.53	6287.27	0.610 1
T2	160 - 140	L2x2x3/16	9.85	4.90	149.3 K=1.00	0.7150	-7628.56	9178.64	0.831 1
Т3	140 - 120	L2 1/2x2 1/2x3/16	11.40	5.62	136.4 K=1.00	0.9020	-9863.46	13886.40	0.710 1
T4	120 - 100	L2 1/2x2 1/2x3/16	12.65	6.15	149.0 K=1.00	0.9020	-9735.43	11624.40	0.837 1
T5	100 - 80	L2 1/2x2 1/2x1/4	13.95	6.71	163.9 K=1.00	1.1900	-9505.04	12676.80	0.750 1
T6	80 - 60	L3x3x3/16	15.28	7.38	148.6 K=1.00	1.0900	-9407.59	14128.60	0.666 1
T7	60 - 40	L3x3x3/16	17.03	8.30	167.2 K=1.00	1.0900	-7417.12	11159.90	0.665 1
Т8	40 - 20	L3x3x3/16	18.88	9.24	186.0 K=1.00	1.0900	-7317.73	9021.92	0.811 1
Т9	20 - 0	L3 1/2x3 1/2x1/4	20.77	10.09	174.4 K=1.00	1.6900	-8305.46	15902.50	0.522 1

<sup>&</sup>lt;sup>1</sup>  $P_u$  /  $\phi P_n$  controls

	Top Girt Design Data (Compression)								
Section No.	Elevation	Size	L	$L_u$	Kl/r	A	$P_u$	$\phi P_n$	$Ratio$ $P_u$
	ft		ft	ft		$in^2$	lb	lb	$\phi P_n$
T1	175.3 - 160	L2x2x1/8	6.50	6.30	190.2 K=1.00	0.4844	-911.39	3831.03	0.238 1

<sup>&</sup>lt;sup>1</sup>  $P_u$  /  $\phi P_n$  controls

### Tension Checks

	Leg Design Data (Tension)									
Section	Elevation	Size	L	$L_u$	Kl/r	A	$P_u$	$\phi P_n$	Ratio	
No.	ft		ft	ft		$in^2$	lb	lb	$\frac{P_u}{\phi P_n}$	

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Section No.	Elevation	Size	L	$L_u$	Kl/r	A	$P_u$	$\phi P_n$	$Ratio$ $P_u$
	ft		ft	ft		$in^2$	lb	lb	$\phi P_n$
T1	175.3 - 160	P2x.154	15.30	5.10	77.8	1.0745	10483.70	48353.90	0.217
T2	160 - 140	P3x.216	20.02	6.67	68.8	2.2285	48720.60	100281.00	0.486
T3	140 - 120	P4x.237	20.02	6.67	53.0	3.1741	101239.00	142832.00	0.709
T4	120 - 100	P6x.28	20.02	6.67	35.7	5.5813	153266.00	251161.00	0.610
T5	100 - 80	P8x.322	20.02	6.67	27.3	8.3993	198803.00	377967.00	0.526
Т6	80 - 60	P8x.322	20.02	6.67	27.3	8.3993	239354.00	377967.00	0.633
T7	60 - 40	P8x.322	20.03	6.68	27.3	8.3993	269451.00	377967.00	0.713
Т8	40 - 20	P8x.322	20.03	6.68	27.3	8.3993	294857.00	377967.00	0.780
Т9	20 - 0	P10x.365	20.03	6.68	21.8	11.9083	317793.00	535873.00	0.593

<sup>&</sup>lt;sup>1</sup>  $P_u$  /  $\phi P_n$  controls

Diagonal Design Data (	Tension)
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Section No.	Elevation	Size	L	$L_u$	Kl/r	A	$P_u$	$\phi P_n$	Ratio P <sub>u</sub>
	ft		ft	ft		$in^2$	lb	lb	$\phi P_n$
T1	175.3 - 160	L1 3/4x1 3/4x1/8	8.26	4.01	88.1	0.3164	3799.71	15424.80	0.246 1
T2	160 - 140	L2x2x3/16	9.85	4.90	95.4	0.5363	7626.73	26142.20	0.292 1
Т3	140 - 120	L2 1/2x2 1/2x3/16	11.40	5.62	86.8	0.6765	9353.33	32979.40	0.284 1
T4	120 - 100	L2 1/2x2 1/2x3/16	11.81	5.73	88.4	0.6765	9936.99	32979.40	0.301 1
T5	100 - 80	L2 1/2x2 1/2x1/4	13.08	6.28	97.9	0.8925	9476.86	43509.40	0.218 1
T6	80 - 60	L3x3x3/16	14.83	7.16	91.5	0.8175	9216.74	39853.10	0.231 1
T7	60 - 40	L3x3x3/16	16.42	8.00	102.2	0.8175	7195.58	39853.10	0.181 1
T8	40 - 20	L3x3x3/16	18.26	8.93	114.1	0.8175	7260.57	39853.10	0.182 1
Т9	20 - 0	L3 1/2x3 1/2x1/4	20.77	10.09	111.0	1.2675	7982.03	61790.60	0.129 1

<sup>&</sup>lt;sup>1</sup>  $P_u$  /  $\phi P_n$  controls

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	Top Girt Design Data (Tension)										
Section No.	Elevation	Size	L	$L_u$	Kl/r	A	$P_u$	$\phi P_n$	Ratio		
140.	ft		ft	ft		$in^2$	lb	lb	$\frac{P_u}{\phi P_n}$		
T1	175.3 - 160	L2x2x1/8	6.50	6.30	120.8	0.3633	862.84	17710.00	0.049 1		

<sup>&</sup>lt;sup>1</sup>  $P_u$  /  $\phi P_n$  controls

# **Section Capacity Table**

Section	Elevation	Component	Size	Critical	P	$\phi P_{allow}$	%	Pass
No.	ft	Type		Element	lb	lb	Capacity	Fail
T1	175.3 - 160	Leg	P2x.154	3	-14979.50	31079.10	48.2	Pass
		Diagonal	L1 3/4x1 3/4x1/8	7	-3834.53	6287.27	61.0	Pass
		Top Girt	L2x2x1/8	5	-911.39	3831.03	23.8	Pass
T2	160 - 140	Leg	P3x.216	27	-58686.50	70930.60	82.7	Pass
		Diagonal	L2x2x3/16	34	-7628.56	9178.64	83.1	Pass
T3	140 - 120	Leg	P4x.237	48	-116143.00	116271.00	99.9	Pass
		Diagonal	L2 1/2x2 1/2x3/16	50	-9863.46	13886.40	71.0	Pass
T4	120 - 100	Leg	P6x.28	69	-170905.00	228860.00	74.7	Pass
		Diagonal	L2 1/2x2 1/2x3/16	71	-9735.43	11624.40	83.7	Pass
T5	100 - 80	Leg	P8x.322	90	-220545.00	357982.00	61.6	Pass
		Diagonal	L2 1/2x2 1/2x1/4	92	-9505.04	12676.80	75.0	Pass
T6	80 - 60	Leg	P8x.322	111	-265229.00	357982.00	74.1	Pass
		Diagonal	L3x3x3/16	113	-9407.59	14128.60	66.6	Pass
T7	60 - 40	Leg	P8x.322	132	-299630.00	357954.00	83.7	Pass
		Diagonal	L3x3x3/16	134	-7417.12	11159.90	66.5	Pass
T8	40 - 20	Leg	P8x.322	153	-329326.00	357954.00	92.0	Pass
		Diagonal	L3x3x3/16	155	-7317.73	9021.92	81.1	Pass
T9	20 - 0	Leg	P10x.365	174	-357672.00	517553.00	69.1	Pass
		Diagonal	L3 1/2x3 1/2x1/4	176	-8305.46	15902.50	52.2	Pass
		C					Summary	
						Leg (T3)	99.9	Pass
						Diagonal	83.7	Pass
						(T4)		
						Top Girt	23.8	Pass
						(T1)		
						RATING =	99.9	Pass

Program Version 8.1.1.0 - 6/3/2021 File:N:/eri/6335/633549.eri

#### **Drilled Pier Foundation Design**

Order/Quote Number: Part Number: Tower Model: Company: Site: SO30980 633550 NSX 20' x 175.3'
Tillman Infrastructure
NS 175' - TI-OPP-22295 / Clover Fork - Harlan Co., KY



Tower Reactions (Factored)		
Leg Compression:	362.315	kips
Leg Uplift:	321.417	kips
Leg Shear:	33.186	kips
Tower Shear:	51.612	kips
Tower Moment:	5967.548	ft-kips

Foundation Dimensions
Pier Diameter:

Pier Extension:	0.5	ft
Pier Depth:	39	ft
Total Pier Length:	39.5	ft
Volume per Pier:	14.1	yd <sup>3</sup>
Total Volume:	42.2	yd <sup>3</sup>
Site Details		
Rock Depth:	28.5	ft
Frost Depth:	1.67	ft
Water Depth:	38.5	ft
Upper Pier Neglected:	3.5	ft
Minimum Pier Depth:		ft
Soil Induced Uplift Load:		kips
Seismic Site Class:	С	TIA-222-H 2-10
Mapped Response Acc., S <sub>s</sub> :	0.353	g
Design Response Acc., S <sub>DS</sub> :	0.306	g
Design Response Acc., S <sub>D1</sub> :	0.100	g
Seismic Design Category:	В	
Soil Corrosion Risk:		
Soil Weight:	110	pcf

Foundation Design Reactions													
Additional Load Factor:	1.00												
Compression:	362.315 kips												
Uplift:	321.417 kips												
Shear:	33.186 kips												

vided by Φ <sub>ε</sub> )	
44,248	lb
0	lb-in
483,087	lb
	44,248

Tower Dimensions		
Tower Base Width:	20	ft
Base Leg Diameter (Nom.):	10	in
Base Leg Member:	Pipe	-
Bracing System:	X-Braced	•
Material Specifications		
Concrete Strength:	4500	psi
Concrete Weight:	150	pcf
Rebar Yield Strength:	60	ksi

Clear Cover	(Top of Pier):	3 in	
Geotechnical R	Report.		-
Company:	Environmenta	Corporation of Am	erica
Date:	3/15/2023		
Droject:	23,000518		

Uplift Resistance Factor, Phi:	0.75
Compressive Resistance Factor, Phi:	0.75
Bearing Capacity Resistance, Phi:	0.75
Lateral Resistance Factor, Phi:	0.75

Uplift:	OK	94.0%
Uplift Cone Check:	OK	15.3%
Compression:	OK	76.8%
Minimum 3 Pier Diameter Spacing:	ок	
Max Pier Length / Diameter Ratio:	OK	
Neglect Frost Depth:	OK	
Neglect Top Portion of Pier:	OK	
Minimum Depth:	OK	
Pier Compressive Strength:	ок	12.1%
Pier Tensile Strength:	OK	32.8%
Minimum Vertical Reinforcement:	OK	
Rebar Strength:	ОК	
Rebar Spacing:	OK	
Compressive Shear:	ок	
Anchor Bolt Strength:	ОК	60.0%
Anchor Bolt Development:	ОК	1
Embedment Plate Fit:	ОК	
Seismic Lateral Restraint:	ОК	

Max. Foundation Capacity Rating 94.0%

Compression	/Uplift Resistance	e Design		•															
						Allowable S	Skin Friction		Ultimate Skin Friction					Concrete Weig	ht <sup>(1)</sup>			Friction Re	esistance
Layer	Depth	Depth	Length	Diameter	Up	olift	Compression		Uplift		Compression		Weight Compression Uplift		Uplift	Ultimate Bearing		Uplift	Comp.
	(ft)	(ft)	(ft)	(ft)	(ksf)	Safety	(ksf)	Safety	(ksf)	(kips)	(ksf)	(kips)	(pcf)	(kips)	(kips)	(ksf)	(kips)	(kips)	(kips)
1	-0.5	0	0.5	3.5	0.000	Factor	0.000	Factor	0.000	0.00	0.000	0.00	150	0.72	0.72	Allowable	FS	0.00	0.00
2	0	3.5	3.5	3.5	0.000	2.0	0.000	2.0	0.000	0.00	0.000	0.00	150	1.35	5.05	12.00	3.0	0.00	0.00
3	3.5	8.5	5	3.5	0.539	2.0	0.539	2.0	1.078	59.27	1.078	59.27	150	1.92	7.22	0.00	0.00	59.27	59.27
4	8.5	13.5	5	3.5	0.270	2.0	0.270	2.0	0.540	29.69	0.540	29.69	150	1.92	7.22	0.00	0.00	29.69	29.69
5	13.5	18.5	5	3.5	0.113	2.0	0.113	2.0	0.226	12.42	0.226	12.42	150	1.92	7.22	0.00	0.00	12.42	12.42
6	18.5	23.5	5	3.5	0.056	2.0	0.056	2.0	0.112	6.16	0.112	6.16	150	1.92	7.22	0.00	0.00	6.16	6.16
7	23.5	28.5	5	3.5	0.580	2.0	0.580	2.0	1.160	63.77	1.160	63.77	150	1.92	7.22	0.00	0.00	63.77	63.77
8	28.5	39	10.5	3.5	0.937	2.0	0.937	2.0	1.874	216.36	1.874	144.24	87.6	4.04	14.85	0.00	0.00	216.36	144.24
9	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
10	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
11	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
12	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
13	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
14	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
15	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
16	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
17	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
18	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
19	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
20	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
21	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
22	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	36.00	346.36	0.00	346.36
Total										387.67		315.55		15.73	56.71		346.36	341.79	496.43

Extended Pier: 76.8% 94.0%

Uplift Cone R	erial Type:	Cohesionless Soil /	Rock •										
Pier	Pier	Pier	Pier	Pier	Friction	Soil		Cone F	rustum		Soil	Soil	Uplift
Depth	Depth	Diameter	Volume	Weight	Angle	Weight	Height	Radius	Radius	Volume	Volume	Weight	Capacity
(ft)	(ft)	(ft)	(ft^3)	(kips)	(deg)	(kcf)	(ft)	(ft)	(ft)	(ft^3)	(ft^3)	(kips)	(kips)
0	3.5	3.5	33.67	5.05	0	0.110	3.50	22.25	22.25	5442	5408	594.86	449.93
3.5	39	3.5	341.55	51.23	30	0.110	35.50	1.75	22.25	19959	19617	2157.87	1656.83
39	39	3.5	0.00	0.00	30	0.110	0.00	1.75	1.75	0	0	0.00	0.00
												ОК	2106.76

		OK 2106.76																
Vertical Reinf	ical Reinforcement Design 15%																	
					Total			Minimum	Rebar			Equivalent Pipe						
Number	Bar	Bar	Bar	Bar	Bar	Bar	Total	Bar Area	Circle	Ctr-Ctr	Clear	Outer	Inner		Section	Induced	Induced	Design
of Bars	Size	Length	Diameter	Weight	Weight	Area	Bar Area	Required	Diameter	Spacing	Spacing	Diameter	Diameter	Thickness	Modulus	Moment	Stress	Stress
		(in)	(in)	(lb/ft)	(lb)	(sq in)	(sq in)	(sq in)	(in)	(in)	(in)	(in)	(in)	(in)	(in ^ 3)	(ft-kips)*	(ksi)	(ksi)
23	8	468	1.000	2.670	2395	0.79	18.17	6.93	34.000	4.6	3.6	34.17	33.83	0.340	153.7	404.43	49.27	54
							OK	TIA-222 H-0 4 :			OK						OK	91 2%

Pier Axial St	Pier Axial Strength - Compression and Tension										
		Compressive			Check	Nominal	Tensile	Design	Check		
Pier Gross	Nominal	Strength	Design	Mislocation	Compressive	Tensile	Strength	Tensile	Tensile		
Area	Compressive	Reduction	Compressive	Overload	Strength	Strength	Reduction	Strength	Strength		
(in <sup>2</sup> )	Strength (kip)	Factor	Strength (kip)	Factor	Ratio	(kip)	Factor	(kip)	Ratio		
1385.44	6320.02	0.65	3286.41	1.10	0.121	1090.20	0.90	981.18	0.328		
	ACI-318-14 22.4.2.2	-318-14 Table 21	CI-318-14 22.4.2.	1	OK	CI-318-14 22.4.3.	1-318-14 Table 21.	2.2	OK		

Development Length - Vertical Rebar									
Bar Size	Reinf. Location Factor, α	Coating Factor, β	Reinf. Size Factor, y	Lightwt. Aggregate Factor, λ	Spacing or Cover,	Transverse Reinf. Index, K <sub>tr</sub>	Develop. Length		
					(in)		(in)		
8	1.0	1.0	1.0	1.0	2.32	0.0	28.9		

Tie Reinforce	ment Design														
				Total					Maximum		Number	Actual	Number		
Number	Bar	Bar	Bar	Bar	Bar	Overlap	Total		Tie	Zone	of Tie	Tie	of Ties		
of Bars	Size	Diameter	Weight	Weight	Area	Length	Length	Zone	Spacing	Distance	Spaces	Spacing	per Zone	Standard	Confinement
		(in)	(lb/ft)	(lb)	(sa in)	(in)	(in)		(in)	(in)		(in)		Ar Ar	pplied

								End	5	5	1	5	2
54	4	0.500	0.668	391	0.20	18.0	130.0	Тор	6	72	12	6	12
34	4	0.300	0.008	391	0.20	10.0	130.0	Middle	10	385.5	39	9 7/8	38
								End	5	5	1	5	2

-

Shear (Uplift)
Factored Nom. Shear
Axial Force Concrete Axial Force Bar Area V (kip)  $A_{vmin}\,(in^2)$  $A_v$  (in<sup>2</sup>) V<sub>s</sub> (kip)  $\varphi V_n(kip)$ N<sub>u</sub>(lb) V<sub>c</sub> (kip)  $\varphi V_n(kip)$ 0.400 **OK** 281.527 321417 101.484 197.073 OK ACF-318-14 22 OK 11.8% 33.19 0.352 161.280 OK OK 16.8%

ACI-318-14 22 5 10 6 ACI-318-14 22 9 3 1 ACI-318-14 22 9 3 1

### Splice Length - Ties

Splice Length	1 - 1162								
	Reinf.		Reinf.	Lightwt.	Spacing	Transverse	Development	Splice	Splice
Bar Size	Location Factor, α	Coating Factor, β	Size Factor, y	Aggregate Factor, λ	or Cover,	Reinf. Index, K <sub>tr</sub>	Length	Length Tolerance	Length 1.3 * ( d
	,			,	(in)	, ,	(in)	(in)	(in)
4	1.0	1.0	0.8	1.0	3.25	0.0	12.0	1.0	18.0

ACI-318-14 25.4.2.4318-14 Table 25.4CI-408-03-4.5.2318-14 Table 25.4.2.4 ACI-318-14 25.4.2.318-14 Table 25.4.2.2 ACI-318-14 Table 25.4.2.4

#### Anchor Rolle and Embedment Plate

Number of Bolts	Bolt Diameter (in)	Bolt Length (in)	Anchor Bolt P/N	Bolt Projection (in)	Projection Tolerance Above (in)	Projection Tolerance Below (in)	Plate PN	Plate O.D. / Width	Plate I.D.	Bolt Circle Diameter (in)	Plate Thickness (in)
10	1.00	60	102970	5.75	0.1875	-0.25	139914	16.75	0	14.25	0.5

Std. Pattern

Bolt Threads per Inch	(in <sup>2</sup> )	Bolt Net Area (in <sup>2</sup> )	Strength (ksi)	Ultimate Tensile Stress (ksi)	Factor	Bolt Nominal Tensile Strength (kip)	Tensile Strength (kip)	Nominal Shear Rupture Strength (kip)	Strength (kip)	Shear Yield Strength (kip)	Equation	Embedded Length (in)	Engaged by Bolts (in)	Required (in)	Gap Between Rebar & Plate (in)
8	0.785	0.606	105	125	0.75	75.718	56.788	49.087	63.603	19.081	0.600	54.06	38.19	28.89	8.13

0.600 OK 60.0%

Notes

- Foundation design is based on the Geotechnical Report dated 03/15/2023, by Environmental Corporation of America; Project No. 23-000518.

- Groundwater may be encountered at 38.5 feet bgs at this site based on the geotechnical investigation. The need for dewatering should be anticipated below this depth.

- Rock conditions were encountered about 28.5 feet bgs in the geotechnical investigation.

### **SST Drilled Pier Foundation Design Summary**

Max. Foundation Capacity Rating:	94.0%
INIAX. FUULIUALIUH CAPACILY MALIHY.	94.0 /0

FOUNDATION DIMENSIONS									
Tower Width:	20	ft							
Pier Extension:	0.5	ft							
Pier Depth:	39	ft							
Pier Diameter:	3.5	ft							
Clear Cover:	3	in							
Clear Cover (Top of Pier):	3	in							
Volume per Pier:	14.1	yd <sup>3</sup>							
Total Volume:	42.2	yd <sup>3</sup>							

PIER REINFORCEMENT								
Bar Size:	8							
Bar Length:	468	in						
On Center Spacing:	4.6	in						
Quantity per Pier:	23							
Total Quantity:	69							
Weight per Pier:	2395	lbs						
Total Weight:	7185	lbs						

<u>TIE REINFORCEMENT</u>									
Bar Size:	4								
Bar Length:	130	in							
Circular Tie Outer Diameter:	36	in							
Overlap:	18	in							
Tie Termination Type:	Ove	erlap							
Quantity per Pier:	54								
Total Quantity:	162								
Top Zone - Quantity:	2								
Top Zone - Spacing:	5	in							
Anchor Zone - Quantity:	12								
Anchor Zone - Spacing:	6	in							
Middle Zone - Quantity:	38								
Middle Zone - Spacing:	9.875	in							
Bottom Zone - Quantity:	2								
Bottom Zone - Spacing:	5	in							
Weight per Pier:	391	lbs							
Total Weight:	1173	lbs							

TOWER REACTIONS								
Leg Compression:	362.3	kip						
Leg Uplift:	321.4	kip						
Leg Shear:	33.2	kip						
Tower Shear:	51.6	kip						
Tower Moment:	5967.5	ft-kip						
Tower Weight:	53.3	kip						

MATERIAL SPECIFICATIONS					
Concrete Strength:	4500	psi			
Concrete Weight:	150	pcf			
Rebar Yield Strength:	60	ksi			

ANCHORING DETAILS					
Anchor P/N:	102970				
Anchor Diameter:	1	in			
Anchor Length:	60	in			
Anchor Quantity per Leg:	10				
	Std. F	attern			
Anchor Projection:	5.75	in			
	+ 0.1875"	-0.25"			
Bolt Circle Diameter:	14.25	in			
Template P/N	139	914			

BACKFILL CRITERIA (NON-STRUCTURAL)						
Loose Lift Thickness:	8	in				
Percent Compaction:	95%					
ASTM Standard:	D698					
Optimum Moisture	2%					
Content:	-2%					

	Į.	ECO
ADDITIONAL NOTES		

- Foundation design is based on the Geotechnical Report dated 03/15/2023, by Environmental Corporation of America; Project No. 23-000518.
- Groundwater may be encountered at 38.5 feet bgs at this site based on the geotechnical investigation. The need for dewatering should be anticipated below this depth.

- Rock conditions were encountered about 28.5 feet bgs in the geotechnical investigation.

▲ This is a beta release of the new ATC Hazards by Location website. Please <u>contact us</u> with feedback.

1 The ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.



### **Search Information**

Coordinates: 36.835783, -83.327628

Elevation: 1184 ft

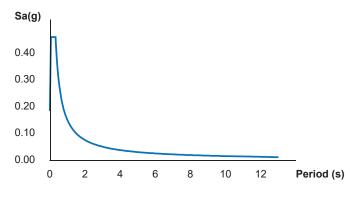
**Timestamp:** 2023-08-24T19:18:58.874Z

Hazard Type: Seismic

Reference Document: ASCE7-16

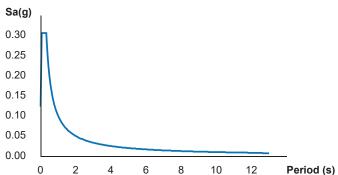
Risk Category: II
Site Class: C

### **MCER Horizontal Response Spectrum**





### **Design Horizontal Response Spectrum**



#### **Basic Parameters**

Name	Value	Description
S <sub>S</sub>	0.353	MCE <sub>R</sub> ground motion (period=0.2s)
S <sub>1</sub>	0.1	MCE <sub>R</sub> ground motion (period=1.0s)
S <sub>MS</sub>	0.46	Site-modified spectral acceleration value
S <sub>M1</sub>	0.15	Site-modified spectral acceleration value
S <sub>DS</sub>	0.306	Numeric seismic design value at 0.2s SA
S <sub>D1</sub>	0.1	Numeric seismic design value at 1.0s SA

### **▼**Additional Information

Name	Value	Description
SDC	В	Seismic design category
Fa	1.3	Site amplification factor at 0.2s
F <sub>v</sub>	1.5	Site amplification factor at 1.0s
CR <sub>S</sub>	0.932	Coefficient of risk (0.2s)
CR <sub>1</sub>	0.924	Coefficient of risk (1.0s)

PGA	0.218	MCE <sub>G</sub> peak ground acceleration
F <sub>PGA</sub>	1.2	Site amplification factor at PGA
PGA <sub>M</sub>	0.262	Site modified peak ground acceleration
TL	12	Long-period transition period (s)
SsRT	0.353	Probabilistic risk-targeted ground motion (0.2s)
SsUH	0.379	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	1.5	Factored deterministic acceleration value (0.2s)
S1RT	0.1	Probabilistic risk-targeted ground motion (1.0s)
S1UH	0.108	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	0.6	Factored deterministic acceleration value (1.0s)
PGAd	0.5	Factored deterministic acceleration value (PGA)

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Please note that the ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.

#### Disclaimer

Hazard loads are provided by the U.S. Geological Survey Seismic Design Web Services.

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# **EXHIBIT C TOWER AND FOUNDATION DESIGN**

### **Clover Fork – List of Qualified Professionals**

Phillip J. Nejman
Professional Engineer
Kentucky License 36012
Tower Source LLC
1355 Windward Concourse
Suite 410
Alpharetta, GA 30005

Jason Mark Lambert
Professional Engineer
Kentucky License No. 28217
Nello Inc.
1201 S Sheridan Street
South Bend, IN 46619

Hèctor A. Acosta M.S.C.E., P.E. Kentucky License 31144 1375 Union Hill Industrial Court, Suite A Alpharetta, GA 30004

Athulya Balakrishnan P.E. Project Engineer 1375 Union Hill Industrial Court, Suite A Alpharetta, GA 30004

G. Darrell Taylor Licensed Professional Land Surveyor License No. 4179 Point to Point Land Surveyors 100 Governors Trace, Ste. 103 Peachtree, GA 30269

John Lounsbury Construction Manager 152 W 57th Street New York, NY 10019

Sherri Lewis RF Engineer 1025 Lenox Park Blvd. NE, 3rd Floor Atlanta, GA 30319



August 21, 2023

Kentucky Public Service Commission 211 Sower Blvd. P.O. Box 615 Frankfort, KY 40602-0615

RE: Site Name – Clover Fork / TI-OPP-22295 Proposed Cell Tower 36° 50′ 08.82″ (36.835783°) -83° 19′ 39.46″ (-83.327628°)

### **Dear Commissioners:**

The Project / Construction Manager for the proposed new communications facility will be John Lounsbury. His contact information is (770) 865-2254 or <a href="mailto:jounsbury@Tillmaninfrastructure.com">jounsbury@Tillmaninfrastructure.com</a>

John has been in the industry completing civil construction and constructing towers since 1996. He has worked at Tillman Infrastructures since 2018 completing project and construction management on new site build projects.

Thank you,

Kendra Morehead

Kendra Moorhead

Director of Construction East Region - Tillman Infrastructure

770-714-9771



NELLO 1201 S Sheridan St South Bend, IN 46619 (574)288-3632 Ext. 1267

Fax: (574) 255-5860 www.nelloinc.com

# **Tower and Foundation Drawing Package**

Sales Order: SO30980

Drawing Number(s)

Tower: 633549 Foundation: 633550

Site Name: TI-OPP-22295 / Clover Fork

Location: Harlan County, KY

Prepared for: Tillman Infrastructure

Date: 08/28/2023





Phone: 574-288-3632 Fax: 574-288-5860 www.nelloinc.com

August 24, 2023

Tillman Infrastructure 152 W 57th Street New York, NY 10019

Re: Nello Tower Fall Radius – Nello 175' NSX Lattice Self-Support Tower

Project Name: TI-OPP-22295/Clover Fork

Nello Job #: SO30980 Tower Drawing #: 633549

To Whom It May Concern:

This letter is regarding your inquiry about the expected performance of your proposed tower designed by Nello based on site-specific criteria.

Our towers are designed to meet or exceed industry standards defined by TIA-222-H, "Structural Standards for Antenna Supporting Structures and Antennas" (TIA Standard). It is our opinion that the possibility of a tower collapse is very unlikely. The tower is designed using extreme wind and ice conditions. In fact, wind speeds specified by the TIA Standard are 50-year wind speeds. That is, they have only a 2% statistical chance of occurring in any given year.

This tower has been designed using the following wind conditions as a minimum: a 105 mph 3-second gust ultimate wind speed with no ice and a 30 mph 3-second gust wind with 1" ice. The TIA Standard specifies 105 mph as the ultimate wind speed required for this site in Harlan County, KY. The "3-second gust wind speed" refers to a wind measured at 33 feet above the ground. Equations in the TIA Standard take into account that wind speed escalates with increasing height of the tower.

Although we cannot guarantee exactly how a tower would fall if it were to fail, the most likely mode of failure would be a buckling failure of one of the tower sections due to excessive wind loading. The tower leg with the highest stress ratio is located at the 120' – 140' level. The stress ratio in that leg is calculated to be 100% of the code-permitted design loading. Given that the tower section with the highest stress ratio will most likely fail first, the proposed tower would fail at the 120' level with the top 55' of the tower collapsing. Depending on the conditions at the time of failure and the stress levels in structural material below, the top 55' of the tower would likely fall within a 0' fall radius.

The fall radius statement above assumes proper foundation construction and tower installation. The foundation design should be reviewed to ensure that no foundation limit state governs the entire structural system and negates the fall radius design. The fall radius expectancy requires that the foundation be designed with a capacity greater than that of the tower capacity. If the foundation design used in association with this tower is performed by a third party then Nello must be provided the opportunity to review the design in order to confirm that the fall radius remains satisfactory. If for some reason Nello does not provide the tower design or is not given the opportunity to design or review the foundation for this specific project then the content of this letter becomes void.

If you have any other questions or concerns regarding the design of your site-specific tower, please contact our engineering or sales department.

Sincerely,

Jason M. Lambert, PE Vice President of Engineering



175.3' <del>-</del>	$\boxtimes$
160' —	
140' —	
120' —	
100'—	
80'-	
60' —	
40'-	
20'-	
0'-	

DATE

#### Self-Supporting Tower Section Data

Section Number	Bottom Elevation (ft)	Top Elevation (ft)	Model	Bottom Face Width (ft)	Top Face Width (ft)	Number of Panels	Leg Size (in)	Diagonal Size (in)	Girt Size (in)	Mid-Horizontal Size (in)	Redundant Horizontal Size (in)	Redundant Diagonal Size (in)
9	160	175.3	NSX	6.5	6.5	3	P2x.154	L1 3/4x1 3/4x1/8	L2x2x1/8			
8	140	160	NSX	8.0	6.5	3	P3x.216	L2x2x3/16				
7	120	140	NSX	9.5	8.0	3	P4x.237	L2 1/2x2 1/2x3/16				
6	100	120	NSX	11.0	9.5	3	P6x.28	L2 1/2x2 1/2x3/16				
5	80	100	NSX	12.5	11.0	3	P8x.322	L2 1/2x2 1/2x1/4				
4	60	80	NSX	14.0	12.5	3	P8x.322	L3x3x3/16				
3	40	60	NSX	16.0	14.0	3	P8x.322	L3x3x3/16				
2	20	40	NSX	18.0	16.0	3	P8x.322	L3x3x3/16				
1	0	20	NSX	20.0	18.0	3	P10x.365	L3 1/2x3 1/2x1/4				

#### Tower Reactions

No Ice

Shear: 51.6 kips Moment: 5967.55 ft-kips Weight: 53.3 kips

With Ice

Shear: 6.0 kips Moment: 710.66 ft-kips Weight: 99.3 kips

Leg Reactions

Compression: 362.3 kips Uplift: -321.4 kips Shear: 33.2 kips

Snear: 33.2 KIDS	
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TITLE:

DWG NO: 633549

SHEET: 1 OF 6

ORIG. DATE: 8/28/2023

DWG. PROG: v2.05

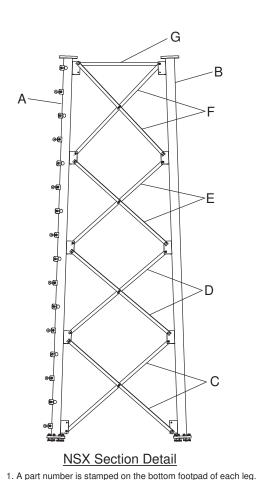
Tillman Infrastructure

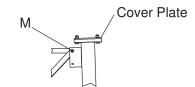
NSX 20' X 175.3'

TI-OPP-22295 / Clover Fork Harlan Co., KY



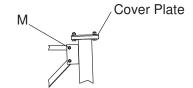
1201 S. Sheridan St. South Bend, IN 46619 Bus: (574)288-3632 Fax: (574)288-5860





### One plain nut and one lookwasher per bolt. Detail A: NSX Top Connection

\*Applicable to all 20 ft Sections. \*Applicable to all Sections Shorter than 20 ft and are Straight.



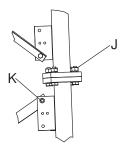
One plain nut and one lockwasher per bolt.

### Detail B: NSX Top Connection

\*Applicable to all Sections Shorter than 20 ft that are Tapered Sections.

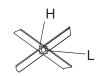
NSX Section Legend:

- A. Climbing Leg
- B. Non-Climbing Leg
- C. Diag., Panel 1
- D. Diag., Panel 2
- E. Diag., Panel 3
- F. Diag., Panel 4
  G. Top Girt
- H. Spacer
- J. Leg Bolts
- K. Diagonal Bolts
- L. Stitch Bolts
- M. Top Girt Bolts



One plain nut and one lockwasher per bolt.

### **NSX Leg Connection**



**NSX Spacer Detail** 



One plain nut and one lockwasher per bolt.

### **NSX Bracing Detail**



TITLE:

Tillman Infrastructure

NSX 20' X 175.3'

Harlan Co., KY

TI-OPP-22295 / Clover Fork



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2. A part number is stamped and /or labeled on the bottom end of each angle. 3. Be sure to place diagonal bracing angles in correct positions, angles in the

top panel may be longer than they are in the middle panel.

4. The bolt head must bear against the angle bracing.

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ORIG. DATE: 8/28/2023 DWG NO: 633549 DWG. PROG: v2.05 SHEET: 2 OF 6

#### **NSX Section Part Numbers**

Ite	em	Elevation	Climbing Leg (A)	Non-Climbing Leg (B)	Diagonal - Panel 1 (C)	Diagonal - Panel 2 (D)	Diagonal - Panel 3 (E)	Diagonal - Panel 4 (F)	Top Girt (G)	Spacer (H)
6	9	160' - 175.3'	141418		167539	167540	167539		167279	132233
8	3	140' - 160'	141279		167274	167275	167276			132233
7	7	120' - 140'	141259		166883	166884	166885			132233
6	6	100' - 120'	129729		167243	167244	167245			132233
5	5	80' - 100'	129695		169691	169692	169693			132233
4	1	60' - 80'	187754		166874	166875	166876			132233
3	3	40' - 60'	129695		167990	167991	167992			132233
2	2	20' - 40'	129705		167984	167985	167986			132233
1	l	0' - 20'	190037		168462	168463	168464			132233

#### **NSX Section Hardware**

Item	Elevation	Leg Bolts (J)	Diagonal Bolts (K)	Stitch Bolts (L)	Top Girt Bolts (M)	Section Weight (Lbs.)
9	160' - 175.3'	(12) 3/4" x 3-1/2"	(36) 1/2" x 1-1/2"	(9) 1/2" x 1-1/2"	(6) 1/2" x 1-1/2"	670
8	140' - 160'	(24) 3/4" x 3-1/2"	(36) 1/2" x 1-1/2"	(9) 1/2" x 1-3/4"		1220
7	120' - 140'	(24) 3/4" x 3-1/2"	(36) 5/8" x 2-1/2"	(9) 5/8" x 2-1/2"		1650
6	100' - 120'	(24) 1" x 3-3/4"	(36) 5/8" x 2-1/2"	(9) 5/8" x 2-1/2"		2280
5	80' - 100'	(24) 1" x 3-3/4"	(36) 3/4" x 2-1/4"	(9) 3/4" x 2-1/4"		3260
4	60' - 80'	(24) 1" x 3-3/4"	(36) 3/4" x 2-1/4"	(9) 3/4" x 2-1/4"		3280
3	40' - 60'	(24) 1" x 3-3/4"	(36) 3/4" x 2-1/4"	(9) 3/4" x 2-1/4"		3400
2	20' - 40'	(30) 1" x 3-3/4"	(36) 3/4" x 2-1/4"	(9) 3/4" x 2-1/4"		3620
1	0' - 20'	0	(36) 3/4" x 2-1/4"	(9) 3/4" x 2-1/4"		5300



TITLE:

Tillman Infrastructure

NSX 20' X 175.3'

TI-OPP-22295 / Clover Fork

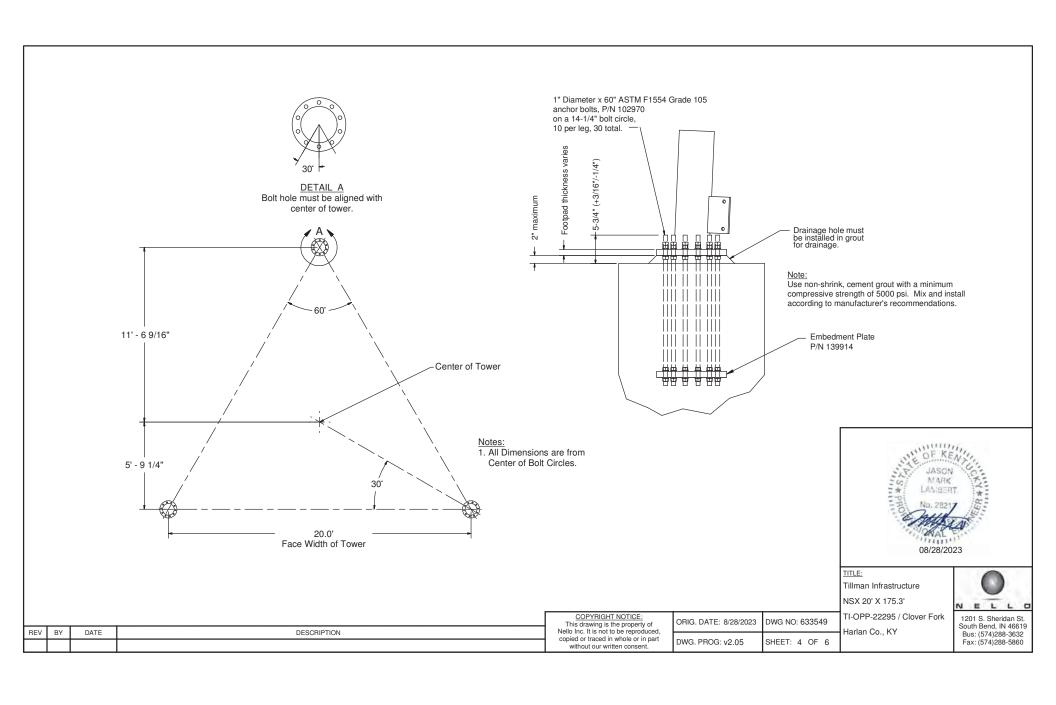


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#### Antenna Loading

Height	Qty.	Description		
170'	1	40,000 sq in CaAa (6,000 lbs)		
155'	1	40,000 sq in CaAa (6,000 lbs)		
140'	1	30,000 sq in CaAa (4,000 lbs)		
125'	1	Dish Pipe Mount		
115'	1	Dish Pipe Mount		

#### Feedline Loading

Height	Qty.	Description
0' - 175'	2	Waveguide Ladder (need qty of 2)
0' - 170'	9	LDF7-50A (1-5/8 FOAM)
0' - 155'	2	Waveguide Ladder (need qty of 2)
0' - 155'	9	LDF7-50A (1-5/8 FOAM)
0' - 140'	2	Waveguide Ladder (need qty of 2)
0' - 140'	9	LDF7-50A (1-5/8 FOAM)
0' - 125'	1	EW63
0' - 115'	1	EW63
	•	

#### Dish Loading

Height	Qty.	Description
125'	1	8' Solid Dish
115'	1	8' Solid Dish



TITLE:

Tillman Infrastructure

NSX 20' X 175.3'

TI-OPP-22295 / Clover Fork



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ORIG. DATE: 8/28/2023 DWG NO: 633549 DWG. PROG: v2.05 SHEET: 5 OF 6 Harlan Co., KY

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#### **Tower Notes:**

1. Tower is designed per TIA-222-H, "Structural Standard for Antenna Supporting Structures, Anennas and Small Wind Turbine Support Structures," for the following loading conditions:

105 mph 3-second gust ultimate wind speed with no ice per ASCE 7-16

30 mph 3-second gust basic wind speed with 1 inch basic ice thickness per ASCE 7-16

Risk Category: II Exposure Category: C Topographic Category: 1 Crest Height: 0 feet

- 2. A tower field inspection shall be performed in order to verify that design exposure and topographic parameters are consistent with the existing tower site conditions.
- 3. Tower design includes the antennas, dishes, and/or lines listed in the appurtenance loading tables on sheet 5.
- 4. Antenna mounting pipes may need to be field cut to match the lengths listed in the appurtenance loading tables on sheet 5.
- 5. Tower member design does not include stresses due to erection since erection equipment and procedures are unknown. Tower installation shall be performed by competent and qualified erectors in accordance with TIA-222-H and OSHA standards and all applicable building codes.
- 6. Field connections shall be bolted. No field welds shall be allowed unless otherwise noted.
- 7. Structural bolts shall conform to ASTM A325, except for 1/2 inch diameter and smaller bolts, which shall conform to ASTM A449 or SAE J429 Grade 5.
- 8. Structural steel and connection bolts shall be galvanized after fabrication in accordance with TIA-222-H.
- 9. All high strength bolts shall be tightened to a "snug tight" condition as defined in the RCSC "Specification for Structural Joints Using ASTM A325 or A490 Bolts."
- 10. Tower shall be marked and lighted in conformance with local building codes, FAA regulations, and TIA-222-H.
- 11. Tower shall be grounded in conformance with local building codes and TIA-222-H. Evaluation of protective grounding and consideration for special grounding systems shall be performed by others.
- 12. Allowable tolerance on as-built tower steel height is plus 1% or minus 1/2%.
- 13. Maintenance and inspection shall be performed over the life of the structure in accordance with TIA-222-H.
- 14. Material specifications:

Self Supporting Pipe Legs - ASTM A500 Grade 50

Angle Bracing - ASTM A529 Grade 50

Leg Footpads - ASTM A572 Grade 50

Leg Side Plates - ASTM A36 (Min)

- 15. Remove anchor bolt template before erecting tower. Place non-shrink grout under base section footpads after leveling tower.
- 16. Concrete contractor shall be responsible for properly aligning anchor bolts and materials before and after placing concrete, regardless of whether an anchor bolt template is provided.



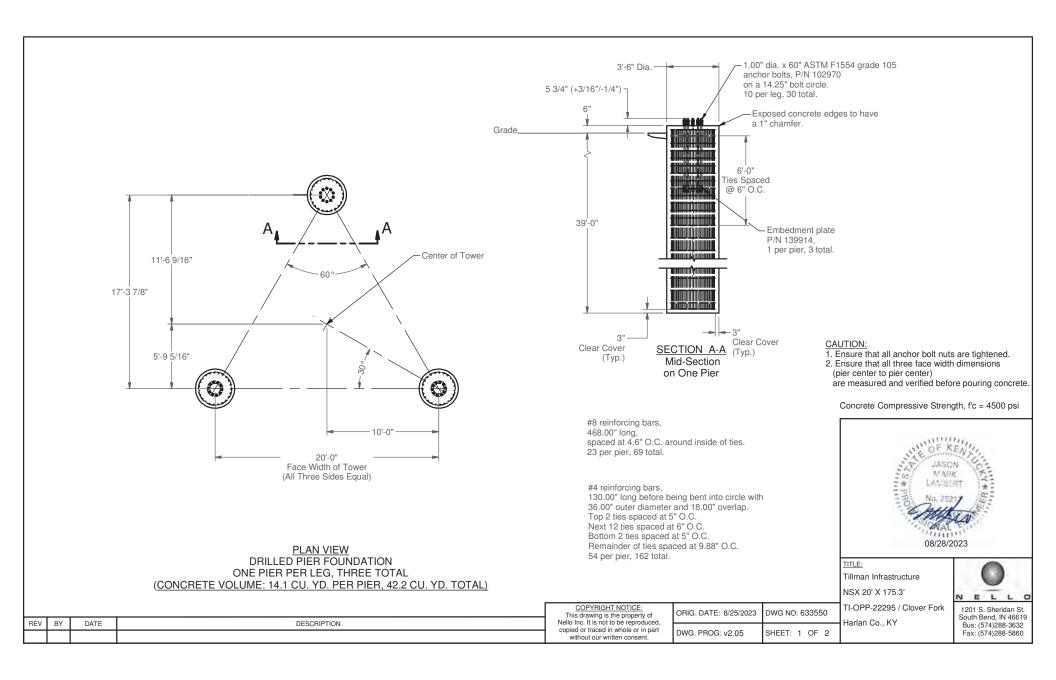
TITLE:

Tillman Infrastructure

NSX 20' X 175.3'



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#### **Foundation Notes:**

1. This foundation has been designed for the following tower reactions:

 Leg Compression:
 362.3 Kips

 Leg Uplift:
 321.4 Kips

 Leg Shear:
 33.2 Kips

 Tower Shear:
 51.6 Kips

 Tower Moment:
 5967.5 ft-Kips

 Tower Weight:
 53.3 Kips

- 2. Foundation design is based on the Geotechnical Report dated 03/15/2023, by Environmental Corporation of America; Project No. 23-000518.
- 3. A field inspection shall be performed in order to verify that the actual site soil parameters meet or exceed the assumed soil parameters and that the depth of standard foundations are adequate based on the frost penetration and groundwater depth. Local frost depth must be no deeper than the bottom of the base foundation or the top of the anchor.
- 4. Reinforcement shall be deformed and conform to the requirements of ASTM A615 Grade 60 unless otherwise noted. Splices in reinforcement shall not be allowed unless otherwise indicated.
- 5. Welding is prohibited on reinforcing steel and anchorage.
- 6. Backfill above foundation should be compacted to 95% of maximum dry density at water content within 2 percent of optimum. Backfill must be clean and free of organic and frozen soils and foreign materials.
- 7. Finished grade shall be leveled over the entire foundation footprint. Backfill is recommended to slope to native grade using a 2:1 (H:V) slope.
- 8. Loose material shall be removed from bottom of excavation prior to concrete placement.
- 9. Concrete cover from exposed surface of concrete to surface of reinforcement shall not be less than 3".
- 10. Concrete and reinforcement installation must conform to ACI 318, "Building Code Requirements for Structural Concrete."
- 11. Concrete shall develop a minimum compressive strength of 4500 psi at 28 days.
- 12. Concrete shall be placed as soon as practical after excavating to avoid disturbance of bearing and side wall surfaces
- 13. Concrete contractor shall be responsible for properly aligning anchor bolts before and after placing concrete, regardless of whether an anchor bolt template is provided.
- 14. Positive drainage shall be maintained during construction and throughout the life of the facility to minimize the potential for surface water infiltration.
- 15. It shall be the contractor's responsibility to locate and prevent damage to any existing underground utilities, foundations or other buried objects that might be damaged or interfered with during construction of the foundation.
- 16. It is permissible for the top of the vertical reinforcement cage alignment to fluctuate slightly, allowing for a minimum clear cover of 2" to a maximum clear cover of 3" over the top of any individual vertical bar.
- 17. Earthwork operations and foundation installation methods shall be in accordance with the geotechnical report and all applicable American Concrete Institute (ACI) Standards.
- 18. Temporary steel casing or drilling slurry techniques may be required for installation of the drilled pier foundation. Permanent casing on drilled piers may not be used.
- 19. Concrete shall be placed by tremie methods if drilling slurry is used or if there is more than 1 inch of water at the bottom of the shaft excavation.
- 20. Groundwater may be encountered at 38.5 feet bgs at this site based on the geotechnical investigation. The need for dewatering should be anticipated below this depth.
- 21. Rock conditions were encountered about 28.5 feet bgs in the geotechnical investigation.



TITLE:
Tillman Infrastructure
NSX 20' X 175.3'

ISX 20° X 175.3°

DWG NO: 633550

SHEET: 2 OF 2

TI-OPP-22295 / Clover Fork Harlan Co., KY

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# **Design Supporting Calculations**

Sales Order: SO30980

Drawing Number(s)

Tower: 633549 Foundation: 633550

Order Description: NSX 20' x 175.3'

Site Name: TI-OPP-22295 / Clover Fork

Location: Harlan County, KY

Prepared For:

Customer: Tillman Infrastructure

Contact: Chelsea Reeves

Date: 8/28/2023



### **Table of Contents**

Tower Analysis - Short form

Tower Analysis - Long form

Foundation Analysis

Seismic Analysis

Section	19	81	44		T6	T5	T4	E	12	1	
Legs	P10x.365			P8x.322			P6x.28	P4x.237	P3x.216	P2x.154	
Leg Grade						A500-50					
Diagonals	L3 1/2x3 1/2x1/4		L3x3x3/16			L2 1/2x2 1/2x1/4	L2 1/2x2	L2 1/2x2 1/2x3/16	L2x2x3/16	L1 3/4x1 3/4x1/8	
Diagonal Grade						A529-50					
Top Girts						N.A.				L2x2x1/8	
Face Width (ft) 20	18		16	14	12.5	11	9.5	10	80	6.	6.5
# Panels @ (ft)					24 @	24 @ 6.66667				3 @ 5.1	
Weight (lb) 22057.2	4971.8	3230.7	3095.2		2977.5	2971.4	1997.9	1382.3	975.7	454.8	
0.0 ft		<u>20.0 ft</u>	40.0 ft	60.0 ft		80.0 ft_	<u>100.0 ft</u>	<u>120.0 ft</u>	140.0 ft	160.0 ft	175.3 ft

#### **DESIGNED APPURTENANCE LOADING**

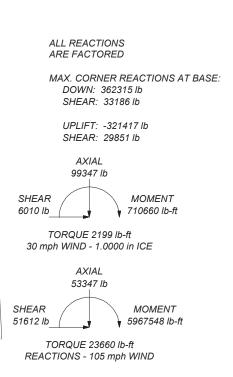
TYPE	ELEVATION	TYPE	ELEVATION
40,000 sq in CaAa (6,000 lbs)	170	8' Solid Dish	125
40,000 sq in CaAa (6,000 lbs)	155	Dish Pipe Mount	115
30,000 sq in CaAa (4,000 lbs)	140	8' Solid Dish	115
Dish Pipe Mount	125		

#### **MATERIAL STRENGTH**

GRADE	Fy	Fu	GRADE	Fy	Fu
A500-50	50 ksi	62 ksi	A529-50	50 ksi	65 ksi

#### **TOWER DESIGN NOTES**

- 1. Tower designed for Exposure C to the TIA-222-H Standard.
- 2. Tower designed for a 105 mph ultimate wind in accordance with the TIA-222-H Standard.
- 3. Tower is also designed for a 30 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
- 4. Deflections are based upon a 60 mph wind.
- Deflections are based upon a 60 mph wind.
   Tower Risk Category II.
   Topographic Category 1 with Crest Height of 0.00 ft
   TOWER RATING: 99.9%



Nello Corporation	<sup>Job:</sup> SO30980; Tower 6	33549; Fo	undation 633550
1201 S. Sheridan Street	Project: NS 175' - TI-OPP-22	295 / Clover	Fork - Harlan Co., KY
South Bend, IN. 46619	<sup>Client:</sup> Tillman Infrastructure	Drawn by: AG	App'd:
Phone: 800-806-3556	Code: TIA-222-H	Date: 08/28/23	Scale: NTS
FAX:	Path: N:\eri\6335\633549.eri		Dwg No. E-1

**Nello Corporation** 1201 S. Sheridan Street South Bend, IN. 46619

Job		Page	
	SO30980; Tower 633549; Foundation 633550	1 of 47	
Project		Date	
NS	S 175' - TI-OPP-22295 / Clover Fork - Harlan Co., KY	10:41:48 08/28/23	
Client		Designed by	
	Tillman Infrastructure	AG	

Phone: 800-806-3556 FAX:

#### **Tower Input Data**

The main tower is a 3x free standing tower with an overall height of 175.30 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 6.50 ft at the top and 20.00 ft at the base.

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

The following design criteria apply:

Tower base elevation above sea level: 0.00 ft.

Ultimate wind speed of 105 mph.

Risk Category II.

Exposure Category C.

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 30 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

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

Pressures are calculated at each section.

Stress ratio used in tower member design is 1.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

#### **Options**

Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification Use Code Stress Ratios

- √ Use Code Safety Factors Guys
   Escalate Ice
   Always Use Max Kz
   Use Special Wind Profile
   Include Bolts In Member Capacity
   Leg Bolts Are At Top Of Section
- √ Secondary Horizontal Braces Leg
   Use Diamond Inner Bracing (4 Sided)
- √ SR Members Have Cut Ends SR Members Are Concentric

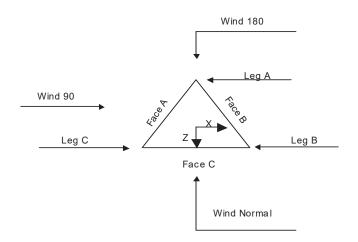
- Distribute Leg Loads As Uniform Assume Legs Pinned
- √ Assume Rigid Index Plate
- √ Use Clear Spans For Wind Area
- √ Use Clear Spans For KL/r
- √ Retension Guys To Initial Tension Bypass Mast Stability Checks
- √ Use Azimuth Dish Coefficients
- √ Project Wind Area of Appurt.
- ✓ Autocalc Torque Arm Areas
   Add IBC .6D+W Combination
   Sort Capacity Reports By Component
- √ Triangulate Diamond Inner Bracing Treat Feed Line Bundles As Cylinder Ignore KL/ry For 60 Deg. Angle Legs

- Use ASCE 10 X-Brace Ly Rules
- √ Calculate Redundant Bracing Forces
- √ Ignore Redundant Members in FEA
- √ SR Leg Bolts Resist Compression
- √ All Leg Panels Have Same Allowable Offset Girt At Foundation
- √ Consider Feed Line Torque Include Angle Block Shear Check Use TIA-222-H Bracing Resist. Exemption Use TIA-222-H Tension Splice Exemption
- √ Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets Pole Without Linear Attachments Pole With Shroud Or No Appurtenances Outside and Inside Corner Radii Are Known

4 17	
tnv	<i>Sower</i>

Nello Corporation 1201 S. Sheridan Street South Bend, IN. 46619 Phone: 800-806-3556 FAX:

Job	Page
SO30980; Tower 633549; Foundation 633550	2 of 47
Project	Date
NS 175' - TI-OPP-22295 / Clover Fork - Harlan Co., KY	10:41:48 08/28/23
Client	Designed by
Tillman Infrastructure	AG



Triangular Tower

<b>Tower Section Geometry</b>
-------------------------------

Tower	Tower	Assembly	Description	Section	Number	Section
Section	Elevation	Database		Width	of	Length
					Sections	
	ft			ft		ft
T1	175.30-160.00			6.50	1	15.30
T2	160.00-140.00			6.50	1	20.00
Т3	140.00-120.00			8.00	1	20.00
T4	120.00-100.00			9.50	1	20.00
T5	100.00-80.00			11.00	1	20.00
T6	80.00-60.00			12.50	1	20.00
T7	60.00-40.00			14.00	1	20.00
T8	40.00-20.00			16.00	1	20.00
Т9	20.00-0.00			18.00	1	20.00

## **Tower Section Geometry** (cont'd)

Tower	Tower	Diagonal	Bracing	Has	Has	Top Girt	Bottom Girt
Section	Elevation	Spacing	Type	K Brace	Horizontals	Offset	Offset
				End			
	ft	ft		Panels		in	in
T1	175.30-160.00	5.10	X Brace	No	No	0.0000	0.0000
T2	160.00-140.00	6.67	X Brace	No	No	0.0000	0.0000
T3	140.00-120.00	6.67	X Brace	No	No	0.0000	0.0000
T4	120.00-100.00	6.67	X Brace	No	No	0.0000	0.0000
T5	100.00-80.00	6.67	X Brace	No	No	0.0000	0.0000
T6	80.00-60.00	6.67	X Brace	No	No	0.0000	0.0000

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Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace	Has Horizontals	Top Girt Offset	Bottom Girt Offset
				End			
	ft	ft		Panels		in	in
T7	60.00-40.00	6.67	X Brace	No	No	0.0000	0.0000
T8	40.00-20.00	6.67	X Brace	No	No	0.0000	0.0000
Т9	20.00-0.00	6.67	X Brace	No	No	0.0000	0.0000

## Tower Section Geometry (cont'd)

Tower	Leg	Leg	Leg	Diagonal	Diagonal	Diagonal
Elevation	Type	Size	Grade	Type	Size	Grade
ft						
T1 175.30-160.00	Pipe	P2x.154	A500-50	Equal Angle	L1 3/4x1 3/4x1/8	A529-50
			(50 ksi)			(50 ksi)
T2 160.00-140.00	Pipe	P3x.216	A500-50	Equal Angle	L2x2x3/16	A529-50
			(50 ksi)			(50 ksi)
T3 140.00-120.00	Pipe	P4x.237	A500-50	Equal Angle	L2 1/2x2 1/2x3/16	A529-50
			(50 ksi)			(50 ksi)
T4 120.00-100.00	Pipe	P6x.28	A500-50	Equal Angle	L2 1/2x2 1/2x3/16	A529-50
			(50 ksi)			(50 ksi)
T5 100.00-80.00	Pipe	P8x.322	A500-50	Equal Angle	L2 1/2x2 1/2x1/4	A529-50
			(50 ksi)			(50 ksi)
T6 80.00-60.00	Pipe	P8x.322	A500-50	Equal Angle	L3x3x3/16	A529-50
			(50 ksi)			(50 ksi)
T7 60.00-40.00	Pipe	P8x.322	A500-50	Equal Angle	L3x3x3/16	A529-50
			(50 ksi)			(50 ksi)
T8 40.00-20.00	Pipe	P8x.322	A500-50	Equal Angle	L3x3x3/16	A529-50
			(50 ksi)			(50 ksi)
T9 20.00-0.00	Pipe	P10x.365	A500-50	Equal Angle	L3 1/2x3 1/2x1/4	A529-50
			(50 ksi)			(50 ksi)

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 175.30-160.00	Equal Angle	L2x2x1/8	A529-50 (50 ksi)	Solid Round		A529-50 (50 ksi)

## **Tower Section Geometry** (cont'd)

Tower	Gusset	Gusset	Gusset Grade	Adjust. Factor	Adjust.	Weight Mult.	Double Angle	Double Angle	Double Angle
Elevation	Area	Thickness		$A_f$	Factor		Stitch Bolt	Stitch Bolt	Stitch Bolt
	(per face)				$A_r$		Spacing	Spacing	Spacing
							Diagonals	Horizontals	Redundants
ft	ft <sup>2</sup>	in					in	in	in
T1	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
175.30-160.00			(36 ksi)						
T2	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
160.00-140.00			(36 ksi)						

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Tower Elevation	Gusset Area	Gusset Thickness	Gusset Grade	$Adjust.\ Factor \ A_f$	Adjust. Factor	Weight Mult.	Double Angle Stitch Bolt	Double Angle Stitch Bolt	Double Angle Stitch Bolt
	(per face)				$A_r$		Spacing	Spacing	Spacing
							Diagonals	Horizontals	Redundants
ft	ft <sup>2</sup>	in					in	in	in
T3	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
140.00-120.00			(36 ksi)						
T4	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
120.00-100.00			(36 ksi)						
T5	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
100.00-80.00			(36 ksi)						
T6 80.00-60.00	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
			(36 ksi)						
T7 60.00-40.00	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
			(36 ksi)						
T8 40.00-20.00	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
			(36 ksi)						
T9 20.00-0.00	0.00	0.0000	A36	1	1	1.1	36.0000	36.0000	36.0000
			(36 ksi)						

#### **Tower Section Geometry** (cont'd)

						K Fa	ctors1			
Tower Elevation	Calc K Single	Calc K Solid	Legs	X Brace Diags	K Brace Diags	Single Diags	Girts	Horiz.	Sec. Horiz.	Inner Brace
	Angles	Rounds		X	X	X	X	X	X	X
ft	· ·			Y	Y	Y	Y	Y	Y	Y
T1	No	Yes	1	1	1	1	1	1	1	1
175.30-160.00				1	1	1	1	1	1	1
T2	No	Yes	1	1	1	1	1	1	1	1
160.00-140.00				1	1	1	1	1	1	1
T3	No	Yes	1	1	1	1	1	1	1	1
140.00-120.00				1	1	1	1	1	1	1
T4	No	Yes	1	1	1	1	1	1	1	1
120.00-100.00				1	1	1	1	1	1	1
T5	No	Yes	1	1	1	1	1	1	1	1
100.00-80.00				1	1	1	1	1	1	1
T6	No	Yes	1	1	1	1	1	1	1	1
80.00-60.00				1	1	1	1	1	1	1
T7	No	Yes	1	1	1	1	1	1	1	1
60.00-40.00				1	1	1	1	1	1	1
T8	No	Yes	1	1	1	1	1	1	1	1
40.00-20.00				1	1	1	1	1	1	1
T9 20.00-0.00	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1

<sup>&</sup>lt;sup>1</sup>Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.

#### **Tower Section Geometry** (cont'd)

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Tower Elevation ft	Leg		Diago	nal	Top G	irt	Botton	ı Girt	Mid	Girt	Long Ho	rizontal	Short Ho	rizontal
•	Net Width	U	Net Width	U	Net Width	U	Net	U	Net	U	Net	U	Net	$\overline{U}$
	Deduct		Deduct		Deduct		Width		Width		Width		Width	
	in		in		in		Deduct		Deduct		Deduct		Deduct	
							in		in		in		in	
T1	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
175.30-160.00														
T2	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
160.00-140.00														
T3	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
140.00-120.00														
T4	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
120.00-100.00														
T5	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
100.00-80.00														
T6 80.00-60.00		1	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 60.00-40.00	0.0000	1	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 40.00-20.00	0.0000	1	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 20.00-0.00	0.0000	1	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 Elevation ft	Reduna Horizo		Redund Diago		Redund Sub-Diag		Redur Sub-Hor		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
<i>J</i> -	Net Width	U	Net Width	U	Net Width	U	Net	U	Net	U	Net	U	Net	$\overline{U}$
	Deduct		Deduct		Deduct		Width		Width		Width		Width	
	in		in		in		Deduct		Deduct		Deduct		Deduct	
							in		in		in		in	
T1	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
175.30-160.00														
T2	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
160.00-140.00														
T3	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
140.00-120.00														
T4	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
120.00-100.00														
T5	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
100.00-80.00														
T6 80.00-60.00		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 60.00-40.00		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 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
T9 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

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

Description	Face or	Allow Shield	Exclude From	Component Type	Placement	Total Number	Number Per Row	Clear Spacing	Width or Diameter	Perimeter	Weight
	Leg	Smera	Torque	1)10	ft	1,00000	10, 10,	in	in	in	plf
			Calculation								
Waveguide Ladder	С	No	No	Af (CaAa)	175.00 - 0.00	2	2	30.0000	1.7500		2.27
(need qty of 2)								0.0000			
LDF7-50A (1-5/8	C	No	No	Ar (CaAa)	170.00 - 0.00	9	5	0.2700	1.9800		0.82
FOAM)								0.0000			
Waveguide Ladder	В	No	No	Af (CaAa)	155.00 - 0.00	2	2	30.0000	1.7500		2.27
(need qty of 2)								0.0000			
LDF7-50A (1-5/8	В	No	No	Ar (CaAa)	155.00 - 0.00	9	5	0.2700	1.9800		0.82

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Description	Face or	Allow Shield	Exclude From	Component Type	Placement	Total Number	Number Per Row	Clear Spacing	Width or Diameter	Perimeter	Weight
	Leg		Torque Calculation		ft			in	in	in	plf
FOAM)			Caremanon					0.0000			
Waveguide Ladder (need qty of 2)	A	No	No	Af (CaAa)	140.00 - 0.00	2	2	30.0000 0.0000	1.7500		2.27
LDF7-50A (1-5/8 FOAM)	A	No	No	Ar (CaAa)	140.00 - 0.00	9	5	$0.2700 \\ 0.0000$	1.9800		0.82
EW63	C	No	No	Ar (CaAa)	125.00 - 0.00	1	1	0.6758 0.0000	1.5742		0.51
EW63	В	No	No	Ar (CaAa)	115.00 - 0.00	1	1	0.6758 0.0000	1.5742		0.51

## Feed Line/Linear Appurtenances Section Areas

Tower	Tower	Face	$A_R$	$A_F$	$C_A A_A$	$C_A A_A$	Weight
Section	Elevation		0.2	0.2	In Face	Out Face	
	ft		$ft^2$	ft <sup>2</sup>	ft²	ft²	lb
T1	175.30-160.00	A	0.000	0.000	0.000	0.000	0.00
		В	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	26.570	0.000	142.05
T2	160.00-140.00	A	0.000	0.000	0.000	0.000	0.00
		В	0.000	0.000	35.480	0.000	178.95
		C	0.000	0.000	47.307	0.000	238.60
Т3	140.00-120.00	A	0.000	0.000	47.307	0.000	238.60
		В	0.000	0.000	47.307	0.000	238.60
		C	0.000	0.000	48.094	0.000	241.15
T4	120.00-100.00	A	0.000	0.000	47.307	0.000	238.60
		В	0.000	0.000	49.668	0.000	246.25
		C	0.000	0.000	50.455	0.000	248.80
T5	100.00-80.00	A	0.000	0.000	47.307	0.000	238.60
		В	0.000	0.000	50.455	0.000	248.80
		C	0.000	0.000	50.455	0.000	248.80
T6	80.00-60.00	A	0.000	0.000	47.307	0.000	238.60
		В	0.000	0.000	50.455	0.000	248.80
		C	0.000	0.000	50.455	0.000	248.80
T7	60.00-40.00	A	0.000	0.000	47.307	0.000	238.60
		В	0.000	0.000	50.455	0.000	248.80
		C	0.000	0.000	50.455	0.000	248.80
T8	40.00-20.00	A	0.000	0.000	47.307	0.000	238.60
		В	0.000	0.000	50.455	0.000	248.80
		C	0.000	0.000	50.455	0.000	248.80
T9	20.00-0.00	A	0.000	0.000	47.307	0.000	238.60
		В	0.000	0.000	50.455	0.000	248.80
		С	0.000	0.000	50.455	0.000	248.80

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

Tower	Tower	Face	Ice	$A_R$	$A_F$	$C_A A_A$	$C_A A_A$	Weight
Section	Elevation	or	Thickness			In Face	Out Face	
	ft	Leg	in	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>	lb
T1	175.30-160.00	A	1.176	0.000	0.000	0.000	0.000	0.00
		В		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	34.249	0.000	455.06
T2	160.00-140.00	A	1.163	0.000	0.000	0.000	0.000	0.00
		В		0.000	0.000	43.326	0.000	575.36
		C		0.000	0.000	57.768	0.000	767.14

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Tower Section	Tower Elevation	Face or	Ice Thickness	$A_R$	$A_F$	$C_AA_A$ In Face	C <sub>A</sub> A <sub>A</sub> Out Face	Weight
	ft	Leg	in	ft <sup>2</sup>	$ft^2$	$ft^2$	ft <sup>2</sup>	lb
T3	140.00-120.00	A	1.147	0.000	0.000	57.526	0.000	759.04
		В		0.000	0.000	57.526	0.000	759.04
		C		0.000	0.000	59.460	0.000	780.66
T4	120.00-100.00	A	1.128	0.000	0.000	57.247	0.000	749.79
		В		0.000	0.000	62.992	0.000	813.29
		C		0.000	0.000	64.907	0.000	834.46
T5	100.00-80.00	A	1.106	0.000	0.000	56.919	0.000	738.94
		В		0.000	0.000	64.489	0.000	821.53
		C		0.000	0.000	64.489	0.000	821.53
T6	80.00-60.00	A	1.078	0.000	0.000	56.517	0.000	725.78
		В		0.000	0.000	63.978	0.000	805.85
		C		0.000	0.000	63.978	0.000	805.85
T7	60.00-40.00	A	1.042	0.000	0.000	55.995	0.000	708.85
		В		0.000	0.000	63.313	0.000	785.70
		C		0.000	0.000	63.313	0.000	785.70
T8	40.00-20.00	A	0.991	0.000	0.000	55.235	0.000	684.59
		В		0.000	0.000	62.346	0.000	756.86
		C		0.000	0.000	62.346	0.000	756.86
T9	20.00-0.00	A	0.887	0.000	0.000	53.729	0.000	637.73
		В		0.000	0.000	60.427	0.000	701.31
		C		0.000	0.000	60.427	0.000	701.31

## **Feed Line Center of Pressure**

Section	Elevation	$CP_X$	$CP_Z$	$CP_X$	$CP_Z$
				Ice	Ice
	ft	in	in	in	in
T1	175.30-160.00	0.0000	5.2065	0.0000	5.4352
T2	160.00-140.00	3.4114	1.8263	3.6928	2.5575
T3	140.00-120.00	-0.0000	-2.2086	-0.0000	-1.3634
T4	120.00-100.00	0.3620	-2.1251	0.5985	-1.0775
T5	100.00-80.00	0.5065	-2.3335	0.8217	-1.2589
T6	80.00-60.00	0.5164	-2.3950	0.8523	-1.3367
T7	60.00-40.00	0.5554	-2.5797	0.9083	-1.4623
T8	40.00-20.00	0.5919	-2.7534	0.9596	-1.6078
Т9	20.00-0.00	0.5733	-2.6766	0.9178	-1.6733

## **Shielding Factor Ka**

Tower	Feed Line	Description	Feed Line	$K_a$	$K_a$
Section	Record No.		Segment Elev.	No Ice	Ice
T1	1	Waveguide Ladder (need qty	160.00 -	0.6000	0.6000
		of 2)	175.00		
T1	2	LDF7-50A (1-5/8 FOAM)	160.00 -	0.6000	0.6000
			170.00		
T2	1	Waveguide Ladder (need qty	140.00 -	0.6000	0.6000
		of 2)	160.00		
T2	2	LDF7-50A (1-5/8 FOAM)	140.00 -	0.6000	0.6000
			160.00		
T2	3	Waveguide Ladder (need qty	140.00 -	0.6000	0.6000
		of 2)	155.00		

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Tower	Feed Line	Description	Feed Line	$K_a$	$K_a$
Section	Record No.	7	Segment Elev.	No Ice	Ice
T2	4	LDF7-50A (1-5/8 FOAM)	140.00 -	0.6000	0.6000
T-2		W	155.00	0.6000	0.6000
T3	1	Waveguide Ladder (need qty	120.00 -	0.6000	0.6000
Т2	2	of 2)	140.00	0.6000	0.6000
Т3	2	LDF7-50A (1-5/8 FOAM)	120.00 - 140.00	0.6000	0.6000
Т3	3	Waveguide Ladder (need qty	120.00 -	0.6000	0.6000
13	3	of 2)	140.00	0.0000	0.0000
Т3	4	LDF7-50A (1-5/8 FOAM)	120.00 -	0.6000	0.6000
13	- 1	EDI / 30/1 (1 3/01 O/11vi)	140.00	0.0000	0.0000
Т3	5	Waveguide Ladder (need qty	120.00 -	0.6000	0.6000
10	ا ا	of 2)	140.00	0.0000	0.0000
Т3	6	LDF7-50A (1-5/8 FOAM)	120.00 -	0.6000	0.6000
		,	140.00		
Т3	7	EW63	120.00 -	0.6000	0.6000
			125.00		
T4	1	Waveguide Ladder (need qty	100.00 -	0.6000	0.6000
		of 2)	120.00		
T4	2	LDF7-50A (1-5/8 FOAM)	100.00 -	0.6000	0.6000
			120.00		
T4	3	Waveguide Ladder (need qty	100.00 -	0.6000	0.6000
		of 2)	120.00		
T4	4	LDF7-50A (1-5/8 FOAM)	100.00 -	0.6000	0.6000
			120.00		
T4	5	Waveguide Ladder (need qty	100.00 -	0.6000	0.6000
		of 2)	120.00		
T4	6	LDF7-50A (1-5/8 FOAM)	100.00 -	0.6000	0.6000
			120.00		
T4	7	EW63	100.00 -	0.6000	0.6000
T. 4	0	EW/62	120.00	0.6000	0.6000
T4	8	EW63	100.00 -	0.6000	0.6000
Т.5		Waveguide Ladder (need qty	115.00	0.6000	0.6000
T5	1	of 2)	80.00 - 100.00	0.6000	0.6000
T5	2	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T5	3	Waveguide Ladder (need qty	80.00 - 100.00	0.6000	0.6000
13	٦	of 2)	00.00 100.00	0.0000	0.0000
T5	4	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T5	5	Waveguide Ladder (need qty	80.00 - 100.00	0.6000	0.6000
10	ا ا	of 2)	100.00	0.0000	0.0000
T5	6	LDF7-50A (1-5/8 FOAM)	80.00 - 100.00	0.6000	0.6000
T5	7	EW63		0.6000	0.6000
T5	8	EW63	80.00 - 100.00	0.6000	0.6000
Т6	1	Waveguide Ladder (need qty	60.00 - 80.00	0.6000	0.6000
		of 2)			
Т6	2	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
Т6	3	Waveguide Ladder (need qty	60.00 - 80.00	0.6000	0.6000
		of 2)		0.000	0
T6	4	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
Т6	5	Waveguide Ladder (need qty	60.00 - 80.00	0.6000	0.6000
	_	of 2)	(0.00, 00.00	0.6000	0.6000
T6	6	LDF7-50A (1-5/8 FOAM)	60.00 - 80.00	0.6000	0.6000
T6	7	EW63	60.00 - 80.00	0.6000 0.6000	0.6000 0.6000
T6	8	EW63	60.00 - 80.00 40.00 - 60.00		
T7	1	Waveguide Ladder (need qty of 2)	40.00 - 60.00	0.6000	0.6000
Т7	2	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T7	3	Waveguide Ladder (need qty	40.00 - 60.00	0.6000	0.6000
1 /	3	of 2)	-10.00 - 00.00	0.0000	0.0000
Т7	4	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T7	5	Waveguide Ladder (need qty	40.00 - 60.00	0.6000	0.6000
1 /	٦	of 2)		3.0000	0.0000
. '	ı	01 2)	1	ı	

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Tower	Feed Line	Description	Feed Line	$K_a$	$K_a$
Section	Record No.		Segment Elev.	No Ice	Ice
T7	6	LDF7-50A (1-5/8 FOAM)	40.00 - 60.00	0.6000	0.6000
T7	7	EW63	40.00 - 60.00	0.6000	0.6000
T7	8	EW63	40.00 - 60.00	0.6000	0.6000
Т8	1	Waveguide Ladder (need qty of 2)	20.00 - 40.00	0.6000	0.6000
Т8	2	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
Т8	3	Waveguide Ladder (need qty of 2)	20.00 - 40.00	0.6000	0.6000
Т8	4	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
Т8	5	Waveguide Ladder (need qty of 2)	20.00 - 40.00	0.6000	0.6000
Т8	6	LDF7-50A (1-5/8 FOAM)	20.00 - 40.00	0.6000	0.6000
T8	7	EW63	20.00 - 40.00		0.6000
Т8	8	EW63	20.00 - 40.00		0.6000
Т9	1	Waveguide Ladder (need qty	0.00 - 20.00	0.6000	0.6000
		of 2)			
Т9	2	LDF7-50A (1-5/8 FOAM)	0.00 - 20.00	0.6000	0.6000
Т9	3	Waveguide Ladder (need qty of 2)	0.00 - 20.00	0.6000	0.6000
Т9	4	LDF7-50A (1-5/8 FOAM)	0.00 - 20.00	0.6000	0.6000
Т9	5	Waveguide Ladder (need qty	0.00 - 20.00	0.6000	0.6000
		of 2)			
T9	6	LDF7-50A (1-5/8 FOAM)	0.00 - 20.00	0.6000	0.6000
T9	7	EW63	0.00 - 20.00	0.6000	0.6000
Т9	8	EW63	0.00 - 20.00	0.6000	0.6000

 scre	01110		
 61-14			
 3616			

Description	Face or Leg	Offset Type	Offsets: Horz Lateral	Azimuth Adjustment	Placement		C <sub>A</sub> A <sub>A</sub> Front	$C_AA_A$ Side	Weight
			Vert ft ft ft	0	ft		ft²	ft²	lb
40,000 sq in CaAa (6,000 lbs)	С	None	J	0.0000	170.00	No Ice 1/2" Ice	278.00 334.00	278.00 334.00	6000.00 8040.00
40,000 sq in CaAa (6,000 lbs)	В	None		0.0000	155.00	1" Ice No Ice 1/2" Ice	390.00 278.00 334.00	390.00 278.00 334.00	10080.00 6000.00 8040.00
30,000 sq in CaAa (4,000 lbs)	A	None		0.0000	140.00	1" Ice No Ice 1/2" Ice 1" Ice	390.00 208.00 250.00 292.00	390.00 208.00 250.00 292.00	10080.00 4000.00 5360.00 6720.00
Dish Pipe Mount	С	From Leg	0.00 0.00 0.00	0.0000	125.00	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00 0.00	1.80 2.10 2.40	103.00 119.00 135.00
Dish Pipe Mount	В	From Leg	0.00 0.00 0.00 0.00	0.0000	115.00	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00 0.00	1.80 2.10 2.40	103.00 103.00 119.00 135.00

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Dishes											
Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral	Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter		Aperture Area	Weight
				Vert ft	0	0	ft	ft		ft²	lb
8' Solid Dish	С	Paraboloid w/o Radome	From Leg	0.00 0.00 0.00	60.0000		125.00	8.00	No Ice 1/2" Ice 1" Ice	50.27 51.32 52.37	250.00 535.00 820.00
8' Solid Dish	В	Paraboloid w/o Radome	From Leg	0.00 0.00 0.00	60.0000		115.00	8.00	No Ice 1/2" Ice 1" Ice	50.27 51.32 52.37	250.00 535.00 820.00

#### **Tower Pressures - No Ice**

 $G_H = 0.850$ 

Section	z	$K_Z$	$q_z$	$A_G$	F	$A_F$	$A_R$	$A_{leg}$	Leg	$C_A A_A$	$C_A A_A$
Elevation			_		а				%	In	Out
					c					Face	Face
ft	ft		psf	$ft^2$	e	ft <sup>2</sup>	ft <sup>2</sup>	$ft^2$		$ft^2$	$ft^2$
T1	167.65	1.411	34	102.478	Α	8.059	6.056	6.056	42.90	0.000	0.000
175.30-160.00					В	8.059	6.056		42.90	0.000	0.000
					C	8.059	6.056		42.90	26.570	0.000
T2	150.00	1.378	33	150.837	Α	9.457	11.678	11.678	55.25	0.000	0.000
160.00-140.00					В	9.457	11.678		55.25	35.480	0.000
					C	9.457	11.678		55.25	47.307	0.000
Т3	130.00	1.337	32	182.505	A	13.165	15.014	15.014	53.28	47.307	0.000
140.00-120.00					В	13.165	15.014		53.28	47.307	0.000
					C	13.165	15.014		53.28	48.094	0.000
T4	110.00	1.291	31	216.049	Α	14.464	22.104	22.104	60.45	47.307	0.000
120.00-100.00					В	14.464	22.104		60.45	49.668	0.000
					C	14.464	22.104		60.45	50.455	0.000
T5	90.00	1.238	30	249.385	Α	15.856	28.777	28.777	64.47	47.307	0.000
100.00-80.00					В	15.856	28.777		64.47	50.455	0.000
					C	15.856	28.777		64.47	50.455	0.000
T6 80.00-60.00	70.00	1.174	28	279.385	Α	21.044	28.777	28.777	57.76	47.307	0.000
					В	21.044	28.777		57.76	50.455	0.000
					C	21.044	28.777		57.76	50.455	0.000
T7 60.00-40.00	50.00	1.094	26	314.393	Α	23.446	28.798	28.798	55.12	47.307	0.000
					В	23.446	28.798		55.12	50.455	0.000
					C	23.446	28.798		55.12	50.455	0.000
T8 40.00-20.00	30.00	0.982	24	354.393	Α	26.236	28.798	28.798	52.33	47.307	0.000
					В	26.236	28.798		52.33	50.455	0.000
					C	26.236	28.798		52.33	50.455	0.000
T9 20.00-0.00	10.00	0.85	20	397.939	Α	33.579	35.893	35.893	51.67	47.307	0.000
					В	33.579	35.893		51.67	50.455	0.000
					C	33.579	35.893		51.67	50.455	0.000

#### **Tower Pressure - With Ice**

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Section	z	$K_Z$	$q_z$	$t_Z$	$A_G$	F	$A_F$	$A_R$	$A_{leg}$	Leg	$C_AA_A$	$C_AA_A$
Elevation						a				%	In	Out
						C					Face	Face
ft	ft		psf	in	$ft^2$	e	ft <sup>2</sup>	$ft^2$	$ft^2$		$ft^2$	ft <sup>2</sup>
T1	167.65	1.411	3	1.1765	105.478	A	8.059	22.716	12.056	39.17	0.000	0.000
175.30-160.00						В	8.059	22.716		39.17	0.000	0.000
						C	8.059	22.716		39.17	34.249	0.000
T2	150.00	1.378	3	1.1635	154.718	A	9.457	30.445	19.441	48.72	0.000	0.000
160.00-140.00						В	9.457	30.445		48.72	43.326	0.000
						C	9.457	30.445		48.72	57.768	0.000
T3	130.00	1.337	3	1.1469	186.331	Α	13.165	34.747	22.668	47.31	57.526	0.000
140.00-120.00						В	13.165	34.747		47.31	57.526	0.000
						C	13.165	34.747		47.31	59.460	0.000
T4	110.00	1.291	3	1.1279	219.812	A	14.464	42.682	29.631	51.85	57.247	0.000
120.00-100.00						В	14.464	42.682		51.85	62.992	0.000
						C	14.464	42.682		51.85	64.907	0.000
T5 100.00-80.00	90.00	1.238	2	1.1055	253.073	Α	15.856	50.178	36.154	54.75	56.919	0.000
						В	15.856	50.178		54.75	64.489	0.000
						C	15.856	50.178		54.75	64.489	0.000
T6 80.00-60.00	70.00	1.174	2	1.0781	282.981	A	21.044	51.096	35.971	49.86	56.517	0.000
						В	21.044	51.096		49.86	63.978	0.000
						C	21.044	51.096		49.86	63.978	0.000
T7 60.00-40.00	50.00	1.094	2	1.0424	317.872	A	23.446	52.053	35.759	47.36	55.995	0.000
						В	23.446	52.053		47.36	63.313	0.000
						C	23.446	52.053		47.36	63.313	0.000
T8 40.00-20.00	30.00	0.982	2	0.9905	357.699	Α	26.236	52.737	35.412	44.84	55.235	0.000
						В	26.236	52.737		44.84	62.346	0.000
						C	26.236	52.737		44.84	62.346	0.000
T9 20.00-0.00	10.00	0.85	2	0.8875	400.901	A	33.579	58.848	41.819	45.25	53.729	0.000
						В	33.579	58.848		45.25	60.427	0.000
						C	33.579	58.848		45.25	60.427	0.000

## Tower Pressure - Service

 $G_H=0.850$ 

Section	z	$K_Z$	$q_z$	$A_G$	F	$A_F$	$A_R$	$A_{leg}$	Leg	$C_A A_A$	$C_A A_A$
Elevation					а			_	%	In	Out
					С					Face	Face
ft	ft		psf	$ft^2$	e	$ft^2$	$ft^2$	$ft^2$		$ft^2$	ft <sup>2</sup>
T1	167.65	1.411	11	102.478	Α	8.059	6.056	6.056	42.90	0.000	0.000
175.30-160.00					В	8.059	6.056		42.90	0.000	0.000
					С	8.059	6.056		42.90	26.570	0.000
T2	150.00	1.378	11	150.837	Α	9.457	11.678	11.678	55.25	0.000	0.000
160.00-140.00					В	9.457	11.678		55.25	35.480	0.000
					С	9.457	11.678		55.25	47.307	0.000
Т3	130.00	1.337	10	182.505	Α	13.165	15.014	15.014	53.28	47.307	0.000
140.00-120.00					В	13.165	15.014		53.28	47.307	0.000
					С	13.165	15.014		53.28	48.094	0.000
T4	110.00	1.291	10	216.049	Α	14.464	22.104	22.104	60.45	47.307	0.000
120.00-100.00					В	14.464	22.104		60.45	49.668	0.000
					С	14.464	22.104		60.45	50.455	0.000
T5	90.00	1.238	10	249.385	Α	15.856	28.777	28.777	64.47	47.307	0.000
100.00-80.00					В	15.856	28.777		64.47	50.455	0.000
					С	15.856	28.777		64.47	50.455	0.000
T6 80.00-60.00	70.00	1.174	9	279.385	Α	21.044	28.777	28.777	57.76	47.307	0.000
					В	21.044	28.777		57.76	50.455	0.000
					С	21.044	28.777		57.76	50.455	0.000
T7 60.00-40.00	50.00	1.094	9	314.393	Α	23.446	28.798	28.798	55.12	47.307	0.000

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Section	Z	$K_Z$	$q_z$	$A_G$	F	$A_F$	$A_R$	$A_{leg}$	Leg	$C_AA_A$	$C_AA_A$
Elevation					а				%	In	Out
					С					Face	Face
ft	ft		psf	$ft^2$	e	$ft^2$	ft <sup>2</sup>	$ft^2$		$ft^2$	$ft^2$
					В	23.446	28.798		55.12	50.455	0.000
					C	23.446	28.798		55.12	50.455	0.000
T8 40.00-20.00	30.00	0.982	8	354.393	Α	26.236	28.798	28.798	52.33	47.307	0.000
					В	26.236	28.798		52.33	50.455	0.000
					C	26.236	28.798		52.33	50.455	0.000
T9 20.00-0.00	10.00	0.85	7	397.939	A	33.579	35.893	35.893	51.67	47.307	0.000
					В	33.579	35.893		51.67	50.455	0.000
					C	33.579	35.893		51.67	50.455	0.000

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

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf						
ft	lb	lb	e						ft <sup>2</sup>	lb	plf	
T1	142.05	454.80	Α	0.138	2.817	34	1	1	11.490	1319.38	86.23	C
175.30-160.00			В	0.138	2.817		1	1	11.490			
			С	0.138	2.817		1	1	11.490			
T2	417.55	975.66	Α	0.14	2.808	33	1	1	16.074	2256.74	112.84	C
160.00-140.00			В	0.14	2.808		1	1	16.074			
			С	0.14	2.808		1	1	16.074			
T3	718.35	1382.25	Α	0.154	2.755	32	1	1	21.323	3104.87	155.24	C
140.00-120.00			В	0.154	2.755		1	1	21.323			
			C	0.154	2.755		1	1	21.323			
T4	733.65	1997.92	Α	0.169	2.702	31	1	1	24.910	3297.37	164.87	C
120.00-100.00			В	0.169	2.702		1	1	24.910			
			C	0.169	2.702		1	1	24.910			
T5	736.20	2971.44	Α	0.179	2.668	30	1	1	28.345	3382.72	169.14	C
100.00-80.00			В	0.179	2.668		1	1	28.345			
			С	0.179	2.668		1	1	28.345			
T6	736.20	2977.54	Α	0.178	2.67	28	1	1	33.523	3540.92	177.05	C
80.00-60.00			В	0.178	2.67		1	1	33.523			
			C	0.178	2.67		1	1	33.523			
T7	736.20	3095.16	Α	0.166	2.713	26	1	1	35.745	3465.30	173.26	C
60.00-40.00			В	0.166	2.713		1	1	35.745			
			С	0.166	2.713		1	1	35.745			
T8	736.20	3230.67	Α	0.155	2.752	24	1	1	38.718	3303.95	165.20	C
40.00-20.00			В	0.155	2.752		1	1	38.718			
			С	0.155	2.752		1	1	38.718			
T9 20.00-0.00	736.20	4971.79	Α	0.175	2.683	20	1	1	49.070	3294.21	164.71	C
			В	0.175	2.683		1	1	49.070			
			С	0.175	2.683		1	1	49.070			
Sum Weight:	5692.60	22057.23						OTM	2183683.1	26965.46		
									4 lb-ft			

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

Ī	Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
ı	Elevation	Weight	Weight	а									Face
ı				С			psf						
ı	ft	lb	lb	e						ft <sup>2</sup>	lb	plf	

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Tillman Infrastructure	AG

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf						
ft	lb	lb	e						$ft^2$	lb	plf	
T1	142.05	454.80	Α	0.138	2.817	34	0.8	1	9.878	1188.72	77.69	A
175.30-160.00			В	0.138	2.817		0.8	1	9.878			
			С	0.138	2.817		0.8	1	9.878			
T2	417.55	975.66	Α	0.14	2.808	33	0.8	1	14.182	2107.44	105.37	A
160.00-140.00			В	0.14	2.808		0.8	1	14.182			
			C	0.14	2.808		0.8	1	14.182			
T3	718.35	1382.25	Α	0.154	2.755	32	0.8	1	18.690	2907.00	145.35	С
140.00-120.00			В	0.154	2.755		0.8	1	18.690			
			C	0.154	2.755		0.8	1	18.690			
T4	733.65	1997.92	Α	0.169	2.702	31	0.8	1	22.018	3091.56	154.58	C
120.00-100.00			В	0.169	2.702		0.8	1	22.018			
			С	0.169	2.702		0.8	1	22.018			
T5	736.20	2971.44	Α	0.179	2.668	30	0.8	1	25.174	3169.17	158.46	С
100.00-80.00			В	0.179	2.668		0.8	1	25.174			
			C	0.179	2.668		0.8	1	25.174			
T6	736.20	2977.54	Α	0.178	2.67	28	0.8	1	29.314	3271.88	163.59	С
80.00-60.00			В	0.178	2.67		0.8	1	29.314			
			C	0.178	2.67		0.8	1	29.314			
T7	736.20	3095.16	Α	0.166	2.713	26	0.8	1	31.056	3181.56	159.08	С
60.00-40.00			В	0.166	2.713		0.8	1	31.056			
			C	0.166	2.713		0.8	1	31.056			
Т8	736.20	3230.67	Α	0.155	2.752	24	0.8	1	33.471	3014.71	150.74	С
40.00-20.00			В	0.155	2.752		0.8	1	33.471			
			С	0.155	2.752		0.8	1	33.471			
T9 20.00-0.00	736.20	4971.79	Α	0.175	2.683	20	0.8	1	42.355	2981.89	149.09	С
			В	0.175	2.683		0.8	1	42.355			
			С	0.175	2.683		0.8	1	42.355			
Sum Weight:	5692.60	22057.23						OTM	2026981.1	24913.92		
3									7 lb-ft			

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

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf						
ft	lb	lb	е						$ft^2$	lb	plf	
T1	142.05	454.80	Α	0.138	2.817	34	0.85	1	10.281	1183.51	77.35	В
175.30-160.00			В	0.138	2.817		0.85	1	10.281			
			C	0.138	2.817		0.85	1	10.281			
T2	417.55	975.66	Α	0.14	2.808	33	0.85	1	14.655	2181.76	109.09	Α
160.00-140.00			В	0.14	2.808		0.85	1	14.655			
			C	0.14	2.808		0.85	1	14.655			
T3	718.35	1382.25	Α	0.154	2.755	32	0.85	1	19.348	2956.46	147.82	C
140.00-120.00			В	0.154	2.755		0.85	1	19.348			
			C	0.154	2.755		0.85	1	19.348			
T4	733.65	1997.92	Α	0.169	2.702	31	0.85	1	22.741	3143.01	157.15	С
120.00-100.00			В	0.169	2.702		0.85	1	22.741			
			C	0.169	2.702		0.85	1	22.741			
T5	736.20	2971.44	Α	0.179	2.668	30	0.85	1	25.967	3222.56	161.13	С
100.00-80.00			В	0.179	2.668		0.85	1	25.967			
			C	0.179	2.668		0.85	1	25.967			
T6	736.20	2977.54	Α	0.178	2.67	28	0.85	1	30.367	3339.14	166.96	С
80.00-60.00			В	0.178	2.67		0.85	1	30.367			
			C	0.178	2.67		0.85	1	30.367			

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Client	Designed by
Tillman Infrastructure	AG

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf						
ft	lb	lb	e						ft <sup>2</sup>	lb	plf	
T7	736.20	3095.16	Α	0.166	2.713	26	0.85	1	32.229	3252.50	162.62	С
60.00-40.00			В	0.166	2.713		0.85	1	32.229			
			С	0.166	2.713		0.85	1	32.229			
T8	736.20	3230.67	Α	0.155	2.752	24	0.85	1	34.783	3087.02	154.35	C
40.00-20.00			В	0.155	2.752		0.85	1	34.783			
			С	0.155	2.752		0.85	1	34.783			
T9 20.00-0.00	736.20	4971.79	Α	0.175	2.683	20	0.85	1	44.033	3059.97	153.00	C
			В	0.175	2.683		0.85	1	44.033			
			С	0.175	2.683		0.85	1	44.033			
Sum Weight:	5692.60	22057.23						OTM	2065356.6	25425.93		
									9 lb-ft			

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

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf						
ft	lb	lb	e						$ft^2$	lb	plf	
T1	455.06	1581.87	Α	0.292	2.318	3	1	1	21.607	163.42	10.68	C
175.30-160.00			В	0.292	2.318		1	1	21.607			
			С	0.292	2.318		1	1	21.607			
T2	1342.50	2380.24	Α	0.258	2.414	3	1	1	27.328	268.46	13.42	C
160.00-140.00			В	0.258	2.414		1	1	27.328			
			С	0.258	2.414		1	1	27.328			
T3	2298.74	3157.10	Α	0.257	2.416	3	1	1	33.554	364.45	18.22	C
140.00-120.00			В	0.257	2.416		1	1	33.554			
			С	0.257	2.416		1	1	33.554			
T4	2397.53	4054.30	Α	0.26	2.408	3	1	1	39.540	396.07	19.80	C
120.00-100.00			В	0.26	2.408		1	1	39.540			
			С	0.26	2.408		1	1	39.540			
T5	2382.01	5285.32	Α	0.261	2.405	2	1	1	45.349	409.31	20.47	C
100.00-80.00			В	0.261	2.405		1	1	45.349			
			С	0.261	2.405		1	1	45.349			
T6	2337.48	5616.41	Α	0.255	2.423	2	1	1	50.998	415.02	20.75	C
80.00-60.00			В	0.255	2.423		1	1	50.998			
			С	0.255	2.423		1	1	50.998			
T7	2280.26	5824.18	Α	0.238	2.475	2	1	1	53.743	402.07	20.10	C
60.00-40.00			В	0.238	2.475		1	1	53.743			
			С	0.238	2.475		1	1	53.743			
T8	2198.32	6011.77	Α	0.221	2.528	2	1	1	56.740	375.69	18.78	C
40.00-20.00			В	0.221	2.528		1	1	56.740			
			С	0.221	2.528		1	1	56.740			
T9 20.00-0.00	2040.35	8024.18	Α	0.231	2.497	2	1	1	67.739	357.38	17.87	C
			В	0.231	2.497		1	1	67.739			
			С	0.231	2.497		1	1	67.739			
Sum Weight:	17732.26	41935.37						OTM	259450.53	3151.88		
									lb-ft			

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

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Project	Date
NS 175' - TI-OPP-22295 / Clover Fork - Harlan Co., KY	10:41:48 08/28/23
Client	Designed by
Tillman Infrastructure	AG

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf						
ft	lb	lb	e						ft <sup>2</sup>	lb	plf	
T1	455.06	1581.87	Α	0.292	2.318	3	0.8	1	19.996	154.65	10.11	Α
175.30-160.00			В	0.292	2.318		0.8	1	19.996			
			C	0.292	2.318		0.8	1	19.996			
T2	1342.50	2380.24	Α	0.258	2.414	3	0.8	1	25.436	257.98	12.90	A
160.00-140.00			В	0.258	2.414		0.8	1	25.436			
			C	0.258	2.414		0.8	1	25.436			
T3	2298.74	3157.10	Α	0.257	2.416	3	0.8	1	30.921	350.28	17.51	С
140.00-120.00			В	0.257	2.416		0.8	1	30.921			
			С	0.257	2.416		0.8	1	30.921			
T4	2397.53	4054.30	Α	0.26	2.408	3	0.8	1	36.648	381.10	19.05	С
120.00-100.00			В	0.26	2.408		0.8	1	36.648			
			С	0.26	2.408		0.8	1	36.648			
T5	2382.01	5285.32	Α	0.261	2.405	2	0.8	1	42.178	393.59	19.68	С
100.00-80.00			В	0.261	2.405		0.8	1	42.178			
			C	0.261	2.405		0.8	1	42.178			
T6	2337.48	5616.41	Α	0.255	2.423	2	0.8	1	46.790	395.09	19.75	С
80.00-60.00			В	0.255	2.423		0.8	1	46.790			
			C	0.255	2.423		0.8	1	46.790			
T7	2280.26	5824.18	A	0.238	2.475	2	0.8	1	49.054	380.94	19.05	С
60.00-40.00			В	0.238	2.475		0.8	1	49.054			
			C	0.238	2.475		0.8	1	49.054			
T8	2198.32	6011.77	A	0.221	2.528	2	0.8	1	51.493	354.00	17.70	С
40.00-20.00			В	0.221	2.528		0.8	1	51.493			
TO 20 00 0 00	20405-	000410	C	0.221	2.528		0.8	1	51.493	222	16.60	_
T9 20.00-0.00	2040.35	8024.18	A	0.231	2.497	2	0.8	1	61.024	333.65	16.68	С
			В	0.231	2.497		0.8	1	61.024			
	1,550,000	44005.5	С	0.231	2.497		0.8	1	61.024	2001 -		
Sum Weight:	17732.26	41935.37						OTM	248164.87	3001.29		
			l						lb-ft			

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

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf						
ft	lb	lb	е						$ft^2$	lb	plf	
T1	455.06	1581.87	A	0.292	2.318	3	0.85	1	20.399	153.75	10.05	В
175.30-160.00			В	0.292	2.318		0.85	1	20.399			
			C	0.292	2.318		0.85	1	20.399			
T2	1342.50	2380.24	A	0.258	2.414	3	0.85	1	25.909	263.62	13.18	A
160.00-140.00			В	0.258	2.414		0.85	1	25.909			
			C	0.258	2.414		0.85	1	25.909			
T3	2298.74	3157.10	Α	0.257	2.416	3	0.85	1	31.580	353.82	17.69	С
140.00-120.00			В	0.257	2.416		0.85	1	31.580			
			C	0.257	2.416		0.85	1	31.580			
T4	2397.53	4054.30	A	0.26	2.408	3	0.85	1	37.371	384.84	19.24	C
120.00-100.00			В	0.26	2.408		0.85	1	37.371			
			C	0.26	2.408		0.85	1	37.371			
T5	2382.01	5285.32	Α	0.261	2.405	2	0.85	1	42.970	397.52	19.88	C
100.00-80.00			В	0.261	2.405		0.85	1	42.970			
			С	0.261	2.405		0.85	1	42.970			
T6	2337.48	5616.41	Α	0.255	2.423	2	0.85	1	47.842	400.08	20.00	C
80.00-60.00			В	0.255	2.423		0.85	1	47.842			

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Client	<del>-</del>	Designed by
	Tillman Infrastructure	AG

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf						
ft	lb	lb	e						$ft^2$	lb	plf	
			С	0.255	2.423		0.85	1	47.842			
T7	2280.26	5824.18	Α	0.238	2.475	2	0.85	1	50.226	386.22	19.31	C
60.00-40.00			В	0.238	2.475		0.85	1	50.226			
			С	0.238	2.475		0.85	1	50.226			
T8	2198.32	6011.77	Α	0.221	2.528	2	0.85	1	52.805	359.43	17.97	С
40.00-20.00			В	0.221	2.528		0.85	1	52.805			
			С	0.221	2.528		0.85	1	52.805			
T9 20.00-0.00	2040.35	8024.18	Α	0.231	2.497	2	0.85	1	62.703	339.58	16.98	C
			В	0.231	2.497		0.85	1	62.703			
			С	0.231	2.497		0.85	1	62.703			
Sum Weight:	17732.26	41935.37						OTM	250920.98	3038.87		
									lb-ft			

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

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf			- 2			
ft	lb	lb	е						$ft^2$	lb	plf	
T1	142.05	454.80	Α	0.138	2.817	11	1	1	11.490	430.82	28.16	C
175.30-160.00			В	0.138	2.817		1	1	11.490			
			С	0.138	2.817		1	1	11.490			
T2	417.55	975.66	Α	0.14	2.808	11	1	1	16.074	736.89	36.84	C
160.00-140.00			В	0.14	2.808		1	1	16.074			
			С	0.14	2.808		1	1	16.074			
T3	718.35	1382.25	Α	0.154	2.755	10	1	1	21.693	1022.92	51.15	C
140.00-120.00			В	0.154	2.755		1	1	21.693			
			С	0.154	2.755		1	1	21.693			
T4	733.65	1997.92	Α	0.169	2.702	10	1	1	27.058	1126.59	56.33	C
120.00-100.00			В	0.169	2.702		1	1	27.058			
			С	0.169	2.702		1	1	27.058			
T5	736.20	2971.44	Α	0.179	2.668	10	1	1	31.383	1171.35	58.57	C
100.00-80.00			В	0.179	2.668		1	1	31.383			
			С	0.179	2.668		1	1	31.383			
T6	736.20	2977.54	Α	0.178	2.67	9	1	1	36.693	1222.39	61.12	С
80.00-60.00			В	0.178	2.67		1	1	36.693			
			С	0.178	2.67		1	1	36.693			
T7	736.20	3095.16	Α	0.166	2.713	9	1	1	39.202	1199.82	59.99	C
60.00-40.00			В	0.166	2.713		1	1	39.202			
			С	0.166	2.713		1	1	39.202			
T8	736.20	3230.67	Α	0.155	2.752	8	1	1	42.190	1141.34	57.07	С
40.00-20.00			В	0.155	2.752	_	1	1	42.190	_		
			С	0.155	2.752		1	1	42.190			
T9 20.00-0.00	736.20	4971.79	A	0.175	2.683	7	1	1	52.706	1130.88	56.54	С
29 20.00 0.00	, 20.20	.,,,,	В	0.175	2.683	,	1	1	52.706			
			C	0.175	2.683		1	1	52.706			
Sum Weight:	5692.60	22057.23		31170			-	OTM	736193.31	9182.99		
Juni Jugitti	20,2.00	22007.20						011/1	lb-ft	,102.,,,		

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Project	Date
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Client	Designed by
Tillman Infrastructure	AG

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

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а		-	1.	-		_			Face
	ŭ.		С			psf						
ft	lb	lb	e			1 0			ft <sup>2</sup>	lb	plf	
T1	142.05	454.80	Α	0.138	2.817	11	0.8	1	9.878	388.15	25.37	Α
175.30-160.00			В	0.138	2.817		0.8	1	9.878			
			C	0.138	2.817		0.8	1	9.878			
T2	417.55	975.66	Α	0.14	2.808	11	0.8	1	14.182	688.14	34.41	A
160.00-140.00			В	0.14	2.808		0.8	1	14.182			
			С	0.14	2.808		0.8	1	14.182			
T3	718.35	1382.25	Α	0.154	2.755	10	0.8	1	19.060	958.30	47.92	C
140.00-120.00			В	0.154	2.755		0.8	1	19.060			
			С	0.154	2.755		0.8	1	19.060			
T4	733.65	1997.92	Α	0.169	2.702	10	0.8	1	24.166	1059.39	52.97	C
120.00-100.00			В	0.169	2.702		0.8	1	24.166			
			С	0.169	2.702		0.8	1	24.166			
T5	736.20	2971.44	Α	0.179	2.668	10	0.8	1	28.211	1101.62	55.08	C
100.00-80.00			В	0.179	2.668		0.8	1	28.211			
			С	0.179	2.668		0.8	1	28.211			
T6	736.20	2977.54	Α	0.178	2.67	9	0.8	1	32.484	1134.54	56.73	C
80.00-60.00			В	0.178	2.67		0.8	1	32.484			
			С	0.178	2.67		0.8	1	32.484			
T7	736.20	3095.16	Α	0.166	2.713	9	0.8	1	34.513	1107.17	55.36	C
60.00-40.00			В	0.166	2.713		0.8	1	34.513			
			С	0.166	2.713		0.8	1	34.513			
Т8	736.20	3230.67	Α	0.155	2.752	8	0.8	1	36.943	1046.89	52.34	C
40.00-20.00			В	0.155	2.752		0.8	1	36.943			
			С	0.155	2.752		0.8	1	36.943			
T9 20.00-0.00	736.20	4971.79	Α	0.175	2.683	7	0.8	1	45.991	1028.89	51.44	С
			В	0.175	2.683		0.8	1	45.991			
			C	0.175	2.683		0.8	1	45.991			
Sum Weight:	5692.60	22057.23						OTM	685025.32	8513.10		
3									lb-ft			

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

Section	Add	Self	F	е	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf						
ft	lb	lb	e						ft <sup>2</sup>	lb	plf	
T1	142.05	454.80	Α	0.138	2.817	11	0.85	1	10.281	386.45	25.26	В
175.30-160.00			В	0.138	2.817		0.85	1	10.281			
			С	0.138	2.817		0.85	1	10.281			
T2	417.55	975.66	Α	0.14	2.808	11	0.85	1	14.655	712.41	35.62	A
160.00-140.00			В	0.14	2.808		0.85	1	14.655			
			С	0.14	2.808		0.85	1	14.655			
T3	718.35	1382.25	Α	0.154	2.755	10	0.85	1	19.718	974.46	48.72	C
140.00-120.00			В	0.154	2.755		0.85	1	19.718			
			С	0.154	2.755		0.85	1	19.718			
T4	733.65	1997.92	Α	0.169	2.702	10	0.85	1	24.889	1076.19	53.81	C
120.00-100.00			В	0.169	2.702		0.85	1	24.889			
			С	0.169	2.702		0.85	1	24.889			
T5	736.20	2971.44	Α	0.179	2.668	10	0.85	1	29.004	1119.05	55.95	С
100.00-80.00			В	0.179	2.668		0.85	1	29.004			
			С	0.179	2.668		0.85	1	29.004			

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Client	Designed by
Tillman Infrastructure	AG

Section	Add	Self	F	e	$C_F$	$q_z$	$D_F$	$D_R$	$A_E$	F	w	Ctrl.
Elevation	Weight	Weight	а									Face
			С			psf						
ft	lb	lb	e						ft <sup>2</sup>	lb	plf	
T6	736.20	2977.54	Α	0.178	2.67	9	0.85	1	33.537	1156.50	57.82	С
80.00-60.00			В	0.178	2.67		0.85	1	33.537			
			С	0.178	2.67		0.85	1	33.537			
T7	736.20	3095.16	Α	0.166	2.713	9	0.85	1	35.685	1130.33	56.52	C
60.00-40.00			В	0.166	2.713		0.85	1	35.685			
			С	0.166	2.713		0.85	1	35.685			
Т8	736.20	3230.67	Α	0.155	2.752	8	0.85	1	38.255	1070.51	53.53	C
40.00-20.00			В	0.155	2.752		0.85	1	38.255			
			С	0.155	2.752		0.85	1	38.255			
T9 20.00-0.00	736.20	4971.79	Α	0.175	2.683	7	0.85	1	47.669	1054.39	52.72	C
			В	0.175	2.683		0.85	1	47.669			
			С	0.175	2.683		0.85	1	47.669			
Sum Weight:	5692.60	22057.23						OTM	697556.10	8680.29		
									lb-ft			

## **Mast Vectors - No Ice**

Section	Section	Wind	Directionality	F	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
No.	Elevation	Azimuth							
	ft	0		lb	lb	lb	lb-ft	lb-ft	lb-ft
T1	175.30-160.00	0	Wind Normal	1319.38	0.00	-1319.38	-220912.07	0.00	0.00
		30	Wind 90	1183.51	591.75	-1024.95	-171551.08	-99207.62	348.07
		60	Wind 60	1075.10	931.06	-537.55	-89838.35	-156092.27	468.96
		90	Wind 90	1069.89	1069.89	0.00	281.56	-179366.53	464.20
		120	Wind Normal	1205.76	1044.21	602.88	101354.02	-175062.64	468.96
		150	Wind 90	1183.51	591.75	1024.95	172114.19	-99207.62	348.07
		180	Wind 60	1188.72	0.00	1188.72	199570.09	0.00	0.00
		210	Wind 90	1183.51	-591.75	1024.95	172114.19	99207.62	-348.07
		240	Wind Normal	1205.76	-1044.21	602.88	101354.02	175062.64	-468.96
		270	Wind 90	1069.89	-1069.89	0.00	281.56	179366.53	-464.20
		300	Wind 60	1075.10	-931.06	-537.55	-89838.35	156092.27	-468.96
		330	Wind 90	1183.51	-591.75	-1024.95	-171551.08	99207.62	-348.07
T2	160.00-140.00	0	Wind Normal	2256.74	0.00	-2256.74	-338186.23	-351.01	641.55
		30	Wind 90	2181.76	1090.88	-1889.46	-283094.67	-163983.35	1147.79
		60	Wind 60	2051.95	1777.04	-1025.97	-153571.17	-266906.74	834.88
		90	Wind 90	1959.78	1959.78	0.00	324.85	-294318.15	298.26
		120	Wind Normal	2034.76	1762.15	1017.38	152931.62	-264673.69	193.33
		150	Wind 90	2015.28	1007.64	1745.28	262116.99	-151496.77	36.60
		180	Wind 60	2107.44	0.00	2107.44	316441.27	-351.01	-641.55
		210	Wind 90	2181.76	-1090.88	1889.46	283744.37	163281.32	-1147.79
		240	Wind Normal	2201.24	-1906.33	1100.62	165418.19	285599.05	-834.88
		270	Wind 90	1959.78	-1959.78	0.00	324.85	293616.13	-298.26
		300	Wind 60	1885.46	-1632.86	-942.73	-141084.60	244577.33	-193.33
		330	Wind 90	2015.28	-1007.64	-1745.28	-261467.29	150794.75	-36.60
Т3	140.00-120.00	0	Wind Normal	3104.87	0.00	-3104.87	-403625.82	0.00	-0.00
		30	Wind 90	2956.46	1478.23	-2560.37	-332841.52	-192170.19	597.35
		60	Wind 60	2907.00	2517.53	-1453.50	-188947.76	-327279.29	30.72
		90	Wind 90	2956.46	2956.46	0.00	7.02	-384340.39	-544.14
		120	Wind Normal	3104.87	2688.89	1552.43	201823.45	-349556.30	30.72
		150	Wind 90	2956.46	1478.23	2560.37	332855.56	-192170.19	597.35
		180	Wind 60	2907.00	0.00	2907.00	377916.59	0.00	0.00
		210	Wind 90	2956.46	-1478.23	2560.37	332855.56	192170.19	-597.35
		240	Wind Normal	3104.87	-2688.89	1552.43	201823.45	349556.30	-30.72
		270	Wind 90	2956.46	-2956.46	0.00	7.02	384340.39	544.14

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Client Tillman Infrastructure	Designed by AG

Section No.	Section Elevation	Wind Azimuth	Directionality	F	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
NO.	ft Elevation	Azımuın o		lb	lb	lb	lb-ft	lb-ft	lb-ft
	,	300	Wind 60	2907.00	-2517.53	-1453.50	-188947.76	327279.29	-30.72
		330	Wind 90	2956.46	-1478.23	-2560.37	-332841.52	192170.19	-597.35
T4	120.00-100.00	0	Wind Normal	3297.37	0.00	-3297.37	-362691.63	-20.40	99.46
		30	Wind 90	3143.01	1571.51	-2721.93	-299393.31	-172886.22	782.27
		60	Wind 60	3091.56	2677.37	-1545.78	-170016.90	-294531.34	130.29
		90	Wind 90	3143.01	3143.01	0.00	19.07	-345752.03	-556.61
		120	Wind Normal	3297.37	2855.61	1648.69	181374.43	-314137.08	30.82
		150 180	Wind 90 Wind 60	3143.01 3091.56	1571.51 0.00	2721.93 3091.56	299431.46 340091.02	-172886.22 -20.40	610.00 -99.46
		210	Wind 90	3143.01	-1571.51	2721.93	299431.46	172845.42	-782.27
		240	Wind Normal	3297.37	-2855.61	1648.69	181374.43	314096.29	-130.29
		270	Wind 90	3143.01	-3143.01	0.00	19.07	345711.24	556.61
		300	Wind 60	3091.56	-2677.37	-1545.78	-170016.90	294490.55	-30.82
		330	Wind 90	3143.01	-1571.51	-2721.93	-299393.31	172845.42	-610.00
T5	100.00-80.00	0	Wind Normal	3382.72	0.00	-3382.72	-304427.16	-30.54	142.78
		30	Wind 90	3222.56	1611.28	-2790.82	-251155.80	-145045.59	873.94
		60	Wind 60	3169.17	2744.58	-1584.58	-142594.96	-247042.81	142.78
		90	Wind 90	3222.56	3222.56	0.00	17.63	-290060.64	-626.64
		120	Wind Normal Wind 90	3382.72	2929.52	1691.36 2790.82	152240.03 251191.06	-263687.47	0.00 626.64
		150 180	Wind 60	3222.56 3169.17	1611.28 0.00	3169.17	285242.83	-145045.59 -30.54	-142.78
		210	Wind 90	3222.56	-1611.28	2790.82	251191.06	144984.51	-873.94
		240	Wind Normal	3382.72	-2929.52	1691.36	152240.03	263626.39	-142.78
		270	Wind 90	3222.56	-3222.56	0.00	17.63	289999.55	626.64
		300	Wind 60	3169.17	-2744.58	-1584.58	-142594.96	246981.72	0.00
		330	Wind 90	3222.56	-1611.28	-2790.82	-251155.80	144984.51	-626.64
T6	80.00-60.00	0	Wind Normal	3540.92	0.00	-3540.92	-247844.67	-34.37	152.38
		30	Wind 90	3339.14	1669.57	-2891.78	-202404.59	-116904.17	930.36
		60	Wind 60	3271.88	2833.53	-1635.94	-114495.80	-198381.28	152.38
		90 120	Wind 90 Wind Normal	3339.14 3540.92	3339.14 3066.53	0.00 1770.46	19.84 123952.10	-233773.96 -214691.33	-666.43 0.00
		150	Wind 90	3339.14	1669.57	2891.78	202444.27	-214091.33	666.43
		180	Wind 60	3271.88	0.00	3271.88	229051.13	-34.37	-152.38
		210	Wind 90	3339.14	-1669.57	2891.78	202444.27	116835.43	-930.36
		240	Wind Normal	3540.92	-3066.53	1770.46	123952.10	214622.60	-152.38
		270	Wind 90	3339.14	-3339.14	0.00	19.84	233705.23	666.43
		300	Wind 60	3271.88	-2833.53	-1635.94	-114495.80	198312.55	0.00
		330	Wind 90	3339.14	-1669.57	-2891.78	-202404.59	116835.43	-666.43
T7	60.00-40.00	0	Wind Normal	3465.30	0.00	-3465.30	-173242.42	-38.83	160.39
		30 60	Wind 90 Wind 60	3252.50 3181.56	1626.25 2755.31	-2816.74 -1590.78	-140814.81 -79516.66	-81351.24 -137804.56	977.01 160.39
		90	Wind 90	3252.50	3252.50	0.00	22.42	-162663.66	-699.20
		120	Wind Normal	3465.30	3001.04	1732.65	86654.84	-150090.58	0.00
		150	Wind 90	3252.50	1626.25	2816.74	140859.65	-81351.24	699.20
		180	Wind 60	3181.56	0.00	3181.56	159100.58	-38.83	-160.39
		210	Wind 90	3252.50	-1626.25	2816.74	140859.65	81273.59	-977.01
		240	Wind Normal	3465.30	-3001.04	1732.65	86654.84	150012.92	-160.39
		270	Wind 90	3252.50	-3252.50	0.00	22.42	162586.00	699.20
		300	Wind 60	3181.56	-2755.31	-1590.78	-79516.66	137726.90	0.00
Т8	40.00-20.00	330	Wind 90 Wind Normal	3252.50 3303.95	-1626.25 0.00	-2816.74 -3303.95	-140814.82 -99093.23	81273.59 -43.93	-699.20 162.96
10	+0.00-∠0.00	30	Wind 90	3087.02	1543.51	-2673.44	-80177.72	-46349.20	990.57
		60	Wind 60	3014.71	2610.81	-1507.35	-45195.23	-78368.29	162.96
		90	Wind 90	3087.02	3087.02	0.00	25.36	-92654.47	-708.31
		120	Wind Normal	3303.95	2861.31	1651.98	49584.66	-85883.15	0.00
		150	Wind 90	3087.02	1543.51	2673.44	80228.44	-46349.20	708.31
		180	Wind 60	3014.71	0.00	3014.71	90466.55	-43.93	-162.96
		210	Wind 90	3087.02	-1543.51	2673.44	80228.44	46261.34	-990.57
		240	Wind Normal	3303.95	-2861.31	1651.98	49584.66	85795.29	-162.96
		270 300	Wind 90 Wind 60	3087.02 3014.71	-3087.02 -2610.81	0.00 -1507.35	25.36 -45195.23	92566.61 78280.44	708.31 0.00
		300	wina 60	3014./1	-2010.81	-1307.33	-43193.23	/0280.44	0.00

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Project	Date
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Client	Designed by
Tillman Infrastructure	AG

Section	Section	Wind	Directionality	F	$V_x$	$V_z$	$OTM_{x}$	$OTM_z$	Torque
No.	Elevation	Azimuth							_
	ft	0		lb	lb	lb	lb-ft	lb-ft	lb-ft
		330	Wind 90	3087.02	-1543.51	-2673.44	-80177.72	46261.34	-708.31
Т9	20.00-0.00	0	Wind Normal	3294.21	0.00	-3294.21	-32913.83	-49.03	157.39
		30	Wind 90	3059.97	1529.98	-2650.01	-26471.81	-15348.88	955.13
		60	Wind 60	2981.89	2582.39	-1490.94	-14881.13	-25872.94	157.39
		90	Wind 90	3059.97	3059.97	0.00	28.31	-30648.72	-682.52
		120	Wind Normal	3294.21	2852.87	1647.11	16499.38	-28577.76	0.00
		150	Wind 90	3059.97	1529.98	2650.01	26528.42	-15348.88	682.52
		180	Wind 60	2981.89	0.00	2981.89	29847.19	-49.03	-157.39
		210	Wind 90	3059.97	-1529.98	2650.01	26528.42	15250.82	-955.13
		240	Wind Normal	3294.21	-2852.87	1647.11	16499.38	28479.70	-157.39
		270	Wind 90	3059.97	-3059.97	0.00	28.31	30550.67	682.52
		300	Wind 60	2981.89	-2582.39	-1490.94	-14881.13	25774.88	0.00
		330	Wind 90	3059.97	-1529.98	-2650.01	-26471.81	15250.82	-682.52

#### Mast Totals - No Ice

Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	0.00	-26965.46	-2182937.08	-568.11	1516.92
30	12712.97	-22019.50	-1787905.29	-1033246.45	7602.49
60	21429.63	-12372.40	-999057.98	-1732279.51	2240.75
90	25090.32	0.00	746.07	-2013578.56	-3721.39
120	23062.13	13314.93	1066414.52	-1846360.02	723.84
150	12629.72	21875.32	1767770.05	-1020759.88	4975.12
180	0.00	24913.92	2027727.24	-568.11	-1516.92
210	-12712.97	22019.50	1789397.43	1032110.24	-7602.49
240	-23206.31	13398.17	1078901.10	1866851.18	-2240.75
270	-25090.32	0.00	746.07	2012442.35	3721.39
300	-21285.45	-12289.16	-986571.40	1709515.92	-723.84
330	-12629.72	-21875.32	-1766277.91	1019623.66	-4975.12

#### Mast Vectors - With Ice

Section	Section	Wind	Directionality	F	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
No.	Elevation	Azimuth	-						î
	ft	0		lb	lb	lb	lb-ft	lb-ft	lb-ft
T1	175.30-160.00	0	Wind Normal	163.42	0.00	-163.42	-26494.08	0.00	0.00
		30	Wind 90	153.75	76.87	-133.15	-21418.87	-12887.93	42.19
		60	Wind 60	145.37	125.89	-72.69	-11281.99	-21106.19	62.14
		90	Wind 90	144.47	144.47	0.00	903.67	-24220.85	65.44
		120	Wind Normal	154.15	133.50	77.07	13825.05	-22380.49	62.14
		150	Wind 90	153.75	76.87	133.15	23226.22	-12887.93	42.19
		180	Wind 60	154.65	0.00	154.65	26830.00	0.00	0.00
		210	Wind 90	153.75	-76.87	133.15	23226.22	12887.93	-42.19
		240	Wind Normal	154.15	-133.50	77.07	13825.05	22380.49	-62.14
		270	Wind 90	144.47	-144.47	0.00	903.67	24220.85	-65.44
		300	Wind 60	145.37	-125.89	-72.69	-11281.99	21106.19	-62.14
		330	Wind 90	153.75	-76.87	-133.15	-21418.87	12887.93	-42.19
T2	160.00-140.00	0	Wind Normal	268.46	0.00	-268.46	-39222.90	-1130.37	82.61
		30	Wind 90	263.62	131.81	-228.30	-33199.47	-20902.10	133.88
		60	Wind 60	253.45	219.50	-126.73	-17962.84	-34054.94	107.50

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Project	Date
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Client	Designed by
Tillman Infrastructure	AG

Section	Section	Wind	Directionality	F	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
No.	Elevation ft	Azimuth °		lb	lb	lb	lb-ft	lb-ft	lb-ft
		90	Wind 90	245.50	245.50	0.00	1046.17	-37955.67	52.32
		120	Wind Normal	250.34	216.80	125.17	19821.63	-33650.41	24.89
		150	Wind 90	250.03	125.02	216.53	33526.32	-19882.79	-9.22
		180	Wind 60	257.98	0.00	257.98	39743.73	-1130.37	-82.6
		210	Wind 90	263.62	-131.81	228.30	35291.82	18641.37	-133.88
		240	Wind Normal	263.93	-228.57	131.97	20840.94	33155.18	-107.50
		270	Wind 90	245.50	-245.50	0.00	1046.17	35694.93	-52.32
		300	Wind 60	239.86	-207.73	-119.93	-16943.52	30028.70	-24.8
		330	Wind 90	250.03	-125.02	-216.53	-31433.97	17622.05	9.2
Т3	140.00-120.00	0	Wind Normal	364.45	0.00	-364.45	-47318.49	0.00	-0.0
		30	Wind 90	353.82	176.91	-306.42	-39774.99	-22998.47	50.8
		60	Wind 60	350.28	303.35	-175.14	-22708.77	-39435.84	6.1
		90	Wind 90	353.82	353.82	0.00	59.53	-45996.94	-40.2
		120	Wind Normal	364.45	315.62	182.22	23748.53	-41030.56	6.1
		150	Wind 90	353.82	176.91	306.42	39894.04	-22998.47	50.8
		180	Wind 60	350.28	0.00	350.28	45596.11	0.00	0.0
		210	Wind 90	353.82	-176.91	306.42	39894.04	22998.47	-50.8
		240	Wind Normal	364.45	-315.62	182.22	23748.53	41030.56	-6.1
		270	Wind 90	353.82	-353.82	0.00	59.53	45996.94	40.2
		300	Wind 60	350.28	-303.35	-175.14	-22708.77	39435.84	-6.1
т.	120 00 100 00	330	Wind 90	353.82	-176.91	-306.42	-39774.99	22998.47	-50.8
T4	120.00-100.00	0	Wind Normal	396.07	0.00	-396.07	-43409.40	-169.32	19.7
		30	Wind 90	384.84	192.42	-333.28	-36502.68	-21335.57	79.3
		60	Wind 60	381.10	330.04	-190.55	-20802.04	-36473.76	25.8
		90	Wind 90	384.84	384.84	0.00	158.34	-42501.82	-34.5
		120	Wind Normal	396.07	343.01	198.04	21942.21	-37900.08	6.1
		150	Wind 90	384.84	192.42	333.28	36819.37	-21335.57	45.1
		180 210	Wind 60 Wind 90	381.10	0.00 -192.42	381.10 333.28	42079.10	-169.32 20996.94	-19.76 -79.3
		1	Wind Normal	384.84 396.07	-343.01	198.04	36819.37 21942.21		-79.3 -25.8
		240 270	Wind 90	384.84	-343.01	0.00	158.34	37561.45 42163.19	-23.8 34.5
		300	Wind 60	381.10	-330.04	-190.55	-20802.04	36135.13	-6.1
		330	Wind 90	384.84	-192.42	-333.28	-36502.68	20996.94	-0.1 -45.1
T5	100.00-80.00	0	Wind Normal	409.31	0.00	-409.31	-36695.22	-247.30	28.0
13	100.00-00.00	30	Wind 90	397.52	198.76	-344.27	-30841.12	-18135.86	90.2
		60	Wind 60	393.59	340.86	-196.80	-17568.97	-30924.95	28.0
		90	Wind 90	397.52	397.52	0.00	142.78	-36024.42	-41.7
		120	Wind Normal	409.31	354.47	204.66	18561.78	-32149.94	0.0
		150	Wind 90	397.52	198.76	344.27	31126.68	-18135.86	41.7
		180	Wind 60	393.59	0.00	393.59	35566.28	-247.30	-28.0
		210	Wind 90	397.52	-198.76	344.27	31126.68	17641.27	-90.2
		240	Wind Normal	409.31	-354.47	204.66	18561.78	31655.35	-28.0
		270	Wind 90	397.52	-397.52	0.00	142.78	35529.83	41.7
		300	Wind 60	393.59	-340.86	-196.80	-17568.97	30430.36	0.0
		330	Wind 90	397.52	-198.76	-344.27	-30841.12	17641.27	-41.7
T6	80.00-60.00	0	Wind Normal	415.02	0.00	-415.02	-28895.88	-269.78	29.4
		30	Wind 90	400.08	200.04	-346.48	-24097.58	-14272.45	95.6
		60	Wind 60	395.09	342.16	-197.55	-13672.53	-24221.07	29.4
		90	Wind 90	400.08	400.08	0.00	155.76	-28275.11	-44.5
		120	Wind Normal	415.02	359.42	207.51	14681.57	-25429.23	0.0
		150	Wind 90	400.08	200.04	346.48	24409.09	-14272.45	44.5
		180	Wind 60	395.09	0.00	395.09	27812.33	-269.78	-29.4
		210	Wind 90	400.08	-200.04	346.48	24409.09	13732.89	-95.6
		240	Wind Normal	415.02	-359.42	207.51	14681.57	24889.67	-29.4
		270	Wind 90	400.08	-400.08	0.00	155.76	27735.56	44.5
		300	Wind 60	395.09	-342.16	-197.55	-13672.53	23681.51	0.0
		330	Wind 90	400.08	-200.04	-346.48	-24097.58	13732.89	-44.5
T7	60.00-40.00	0	Wind Normal	402.07	0.00	-402.07	-19934.83	-292.55	30.4
		30	Wind 90	386.22	193.11	-334.48	-16555.05	-9948.13	99.7
		60	Wind 60	380.94	329.90	-190.47	-9354.58	-16787.71	30.4
		90	Wind 90	386.22	386.22	0.00	168.90		-47.0

Nello Corporation 1201 S. Sheridan Street South Bend, IN. 46619 Phone: 800-806-3556 FAX:

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SO30980; Tower 633549; Foundation 633550	22 of 47
Project	Date
NS 175' - TI-OPP-22295 / Clover Fork - Harlan Co., KY	10:41:48 08/28/23
Client	Designed by
Tillman Infrastructure	AG

Section	Section	Wind	Directionality	F	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
No.	Elevation	Azimuth							
	ft	٥		lb	lb	lb	lb-ft	lb-ft	lb-ft
		120	Wind Normal	402.07	348.21	201.04	10220.77	-17702.89	0.00
		150	Wind 90	386.22	193.11	334.48	16892.86	-9948.13	47.07
		180	Wind 60	380.94	0.00	380.94	19215.87	-292.55	-30.43
		210	Wind 90	386.22	-193.11	334.48	16892.86	9363.03	-99.78
		240	Wind Normal	402.07	-348.21	201.04	10220.77	17117.79	-30.43
		270	Wind 90	386.22	-386.22	0.00	168.90	19018.61	47.07
		300	Wind 60	380.94	-329.90	-190.47	-9354.58	16202.61	0.00
		330	Wind 90	386.22	-193.11	-334.48	-16555.05	9363.03	-47.07
T8	40.00-20.00	0	Wind Normal	375.69	0.00	-375.69	-11091.08	-311.27	30.04
		30	Wind 90	359.43	179.71	-311.27	-9158.44	-5702.65	100.19
		60	Wind 60	354.00	306.58	-177.00	-5130.34	-9508.54	30.04
		90	Wind 90	359.43	359.43	0.00	179.71	-11094.04	-48.16
		120	Wind Normal	375.69	325.36	187.85	5815.10	-10072.06	0.00
		150	Wind 90	359.43	179.71	311.27	9517.86	-5702.65	48.16
		180	Wind 60	354.00	0.00	354.00	10799.81	-311.27	-30.04
		210	Wind 90	359.43	-179.71	311.27	9517.86	5080.12	-100.19
		240	Wind Normal	375.69	-325.36	187.85	5815.10	9449.52	-30.04
		270	Wind 90	359.43	-359.43	0.00	179.71	10471.50	48.16
		300	Wind 60	354.00	-306.58	-177.00	-5130.34	8886.01	0.00
		330	Wind 90	359.43	-179.71	-311.27	-9158.44	5080.12	-48.16
T9	20.00-0.00	0	Wind Normal	357.38	0.00	-357.38	-3397.34	-305.62	27.33
		30	Wind 90	339.58	169.79	-294.09	-2764.42	-2003.53	94.70
		60	Wind 60	333.65	288.95	-166.83	-1491.80	-3195.12	27.33
		90	Wind 90	339.58	339.58	0.00	176.45	-3701.45	-47.35
		120	Wind Normal	357.38	309.50	178.69	1963.35	-3400.61	0.00
		150	Wind 90	339.58	169.79	294.09	3117.32	-2003.53	47.35
		180	Wind 60	333.65	0.00	333.65	3512.95	-305.62	-27.33
		210	Wind 90	339.58	-169.79	294.09	3117.32	1392.29	-94.70
		240	Wind Normal	357.38	-309.50	178.69	1963.35	2789.38	-27.33
		270	Wind 90	339.58	-339.58	0.00	176.45	3090.21	47.35
		300	Wind 60	333.65	-288.95	-166.83	-1491.80	2583.88	0.00
		330	Wind 90	339.58	-169.79	-294.09	-2764.42	1392.29	-47.35

#### Mast Totals - With Ice

Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	0.00	-3151.88	-256459.22	-2726.20	247.69
30	1519.43	-2631.74	-214312.63	-128186.69	786.85
60	2587.24	-1493.74	-119973.85	-215708.11	346.99
90	3011.47	0.00	2991.31	-249374.02	-185.84
120	2705.88	1562.24	130580.00	-223716.28	99.31
150	1512.64	2619.97	218529.76	-127167.38	357.84
180	0.00	3001.29	251156.18	-2726.20	-247.69
210	-1519.43	2631.74	220295.26	122734.29	-786.85
240	-2717.65	1569.04	131599.31	220029.39	-346.99
270	-3011.47	0.00	2991.31	243921.62	185.84
300	-2575.47	-1486.95	-118954.54	208490.22	-99.31
330	-1512.64	-2619.97	-212547.13	121714.98	-357.84

#### **Mast Vectors - Service**

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Project	Date
NS 175' - TI-OPP-22295 / Clover Fork - Harlan Co., KY	10:41:48 08/28/23
Client	Designed by
Tillman Infrastructure	AG

Section	Section	Wind	Directionality	F	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
No.	Elevation	Azimuth	Ž					~	1
	ft	0		lb	lb	lb	lb-ft	lb-ft	lb-ft
T1	175.30-160.00	0	Wind Normal	430.82	0.00	-430.82	-71944.93	0.00	0.00
		30	Wind 90	386.45	193.23	-334.68	-55827.06	-32394.32	113.66
		60	Wind 60	351.05	304.02	-175.53	-29145.35	-50968.90	153.13
		90	Wind 90	349.35	349.35	0.00	281.56	-58568.66	151.57
		120	Wind Normal	393.72	340.97	196.86	33284.81	-57163.31	153.13
		150	Wind 90	386.45	193.23	334.68	56390.17	-32394.32	113.66
		180	Wind 60	388.15	0.00	388.15	65355.36	0.00	0.00
		210	Wind 90	386.45	-193.23	334.68	56390.17	32394.32	-113.66
		240	Wind Normal	393.72	-340.97	196.86	33284.81	57163.31	-153.13
		270	Wind 90	349.35	-349.35	0.00	281.56	58568.66	-151.57
		300	Wind 60	351.05	-304.02	-175.53	-29145.35	50968.90	-153.13
	160 00 140 00	330	Wind 90	386.45	-193.23	-334.68	-55827.06	32394.32	-113.66
T2	160.00-140.00	0	Wind Normal	736.89	0.00	-736.89	-110209.38	-351.01	209.48
		30	Wind 90	712.41	356.21	-616.97	-92220.30	-53781.98	374.79
		60	Wind 60	670.02	580.26	-335.01	-49926.91	-87389.62	272.61
		90	Wind 90	639.93	639.93	0.00	324.85	-96340.28	97.39
		120	Wind Normal	664.41	575.40	332.21	50155.63	-86660.46	63.13
		150	Wind 90	658.05	329.02	569.89	85808.00	-49704.73	11.95
		180	Wind 60	688.14	0.00	688.14	103546.54	-351.01	-209.48
		210	Wind 90 Wind Normal	712.41	-356.21	616.97	92870.00	53079.95	-374.79
		240		718.77	-622.48	359.39	54232.88	93020.44	-272.61
		270 300	Wind 90 Wind 60	639.93 615.66	-639.93 -533.18	0.00 -307.83	324.85 -45849.66	95638.26 79625.59	-97.39 -63.13
		330	Wind 90	658.05	-333.18	-569.89	-85158.30	49002.70	-03.13
Т3	140.00-120.00	0	Wind Normal	1022.92	0.00	-309.89	-83138.30	0.00	-0.00
13	140.00-120.00	30	Wind 90	974.46	487.23	-843.90	-109700.61	-63339.73	195.05
		60	Wind 60	958.30	829.92	-479.15	-62282.78	-03339.73	193.03
		90	Wind 90	974.46	974.46	0.00	7.02	-126679.46	-177.68
		120	Wind Normal	1022.92	885.87	511.46	66496.54	-115163.23	10.03
		150	Wind 90	974.46	487.23	843.90	109714.66	-63339.73	195.05
		180	Wind 60	958.30	0.00	958.30	124586.63	0.00	0.00
		210	Wind 90	974.46	-487.23	843.90	109714.66	63339.73	-195.05
		240	Wind Normal	1022.92	-885.87	511.46	66496.54	115163.23	-10.03
		270	Wind 90	974.46	-974.46	0.00	7.02	126679.46	177.68
		300	Wind 60	958.30	-829.92	-479.15	-62282.78	107889.10	-10.03
		330	Wind 90	974.46	-487.23	-843.90	-109700.61	63339.73	-195.05
T4	120.00-100.00	0	Wind Normal	1126.59	0.00	-1126.59	-123906.18	-20.40	32.48
		30	Wind 90	1076.19	538.10	-932.01	-102501.94	-59210.93	255.44
		60	Wind 60	1059.39	917.46	-529.70	-58247.43	-100940.94	42.54
		90	Wind 90	1076.19	1076.19	0.00	19.07	-118401.46	-181.75
		120	Wind Normal	1126.59	975.66	563.30	61981.70	-107342.81	10.06
		150	Wind 90	1076.19	538.10	932.01	102540.08	-59210.93	199.18
		180	Wind 60	1059.39	0.00	1059.39	116552.08	-20.40	-32.48
		210	Wind 90	1076.19	-538.10	932.01	102540.08	59170.14	-255.44
		240	Wind Normal	1126.59	-975.66	563.30	61981.70	107302.02	-42.54
		270	Wind 90	1076.19	-1076.19	0.00	19.07	118360.67	181.75
		300	Wind 60	1059.39	-917.46	-529.70	-58247.43	100900.14	-10.06
		330	Wind 90	1076.19	-538.10	-932.01	-102501.94	59170.14	-199.18
T5	100.00-80.00	0	Wind Normal	1171.35	0.00	-1171.35	-105403.68	-30.54	46.62
		30	Wind 90	1119.05	559.52	-969.13	-87203.66	-50387.78	285.37
		60	Wind 60	1101.62	954.03	-550.81	-49555.13	-85893.08	46.62
		90	Wind 90	1119.05	1119.05	0.00	17.63	-100745.01	-204.62
		120	Wind Normal	1171.35	1014.42	585.67	52728.29	-91328.07	0.00
		150	Wind 90	1119.05	559.52	969.13	87238.92	-50387.78	204.62
		180	Wind 60	1101.62	0.00	1101.62	99163.16	-30.54	-46.62
		210	Wind 90	1119.05	-559.52	969.13	87238.92	50326.69	-285.37
		240	Wind Normal	1171.35	-1014.42	585.67	52728.29	91266.99	-46.62
		270	Wind 90	1119.05	-1119.05	0.00	17.63	100683.93	204.62
		300	Wind 60	1101.62	-954.03	-550.81	-49555.13	85832.00	0.00
		330	Wind 90	1119.05	-559.52	-969.13	-87203.66	50326.69	-204.62
Т6	80.00-60.00	0	Wind Normal	1222.39		-1222.39	-85547.35		

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Project	Date
NS 175' - TI-OPP-22295 / Clover Fork - Harlan Co., KY	10:41:48 08/28/23
Client	Designed by
Tillman Infrastructure	AG

Section No.	Section	Wind	Directionality	F	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
IVO.	Elevation ft	Azimuth °		lb	lb	lb	lb-ft	lb-ft	lb-ft
		30	Wind 90	1156.50	578.25	-1001.56	-70089.22	-40511.85	303.79
		60	Wind 60	1134.54	982.54	-567.27	-39688.94	-68812.00	49.76
		90	Wind 90	1156.50	1156.50	0.00	19.84	-80989.34	-217.61
		120	Wind Normal	1222.39	1058.62	611.19	42803.44	-74137.73	0.00
		150	Wind 90	1156.50	578.25	1001.56	70128.90	-40511.85	217.61
		180	Wind 60	1134.54	0.00	1134.54	79437.41	-34.37	-49.76
		210	Wind 90	1156.50	-578.25	1001.56	70128.90	40443.12	-303.79
		240	Wind Normal	1222.39	-1058.62	611.19	42803.44	74068.99	-49.76
		270	Wind 90	1156.50	-1156.50	0.00	19.84	80920.60	217.61
		300	Wind 60	1134.54	-982.54	-567.27	-39688.94	68743.26	0.00
		330	Wind 90	1156.50	-578.25	-1001.56	-70089.22	40443.12	-217.61
T7	60.00-40.00	0	Wind Normal	1199.82	0.00	-1199.82	-59968.37	-38.83	52.37
		30	Wind 90	1130.33	565.16	-978.89	-48922.30	-28297.08	319.02
		60	Wind 60	1107.17	958.84	-553.58	-27656.78	-47980.61	52.37
		90	Wind 90	1130.33	1130.33	0.00	22.42	-56555.33	-228.31
		120	Wind Normal	1199.82	1039.07	599.91	30017.81	-51992.37	0.00
		150	Wind 90	1130.33	565.16	978.89	48967.14	-28297.08	228.31
		180	Wind 60	1107.17	0.00	1107.17	55380.82	-38.83	-52.37
		210	Wind 90	1130.33	-565.16	978.89	48967.14	28219.42	-319.02
		240	Wind Normal	1199.82	-1039.07	599.91	30017.81	51914.71	-52.37
		270	Wind 90	1130.33	-1130.33	0.00	22.42	56477.67	228.31
		300	Wind 60	1107.17	-958.84	-553.58	-27656.78	47902.95	0.00
		330	Wind 90	1130.33	-565.16	-978.89	-48922.30	28219.42	-228.31
T8	40.00-20.00	0	Wind Normal	1141.34	0.00	-1141.34	-34214.88	-43.93	53.21
		30	Wind 90	1070.51	535.25	-927.08	-27787.18	-16101.51	323.45
		60	Wind 60	1046.89	906.64	-523.45	-15678.04	-27243.02	53.21
		90	Wind 90	1070.51	1070.51	0.00	25.36	-32159.09	-231.29
		120	Wind Normal	1141.34	988.43	570.67	17145.48	-29696.85	0.00
		150	Wind 90	1070.51	535.25	927.08	27837.91	-16101.51	231.29
		180	Wind 60	1046.89	0.00	1046.89	31432.17	-43.93	-53.21
		210	Wind 90	1070.51	-535.25	927.08	27837.91	16013.65	-323.45
		240	Wind Normal	1141.34	-988.43	570.67	17145.48	29608.99	-53.21
		270	Wind 90	1070.51	-1070.51	0.00	25.36	32071.23	231.29
		300	Wind 60	1046.89	-906.64	-523.45	-15678.04	27155.16	0.00
		330	Wind 90	1070.51	-535.25	-927.08	-27787.18	16013.65	-231.29
Т9	20.00-0.00	0	Wind Normal	1130.88	0.00	-1130.88	-11280.46	-49.03	51.39
		30	Wind 90	1054.39	527.19	-913.13	-9102.97	-5320.98	311.88
		60	Wind 60	1028.89	891.05	-514.45	-5116.16	-8959.51	51.39
		90	Wind 90	1054.39	1054.39	0.00	28.31	-10592.92	-222.86
		120	Wind Normal	1130.88	979.37	565.44	5682.69	-9842.71	0.00
		150	Wind 90	1054.39	527.19	913.13	9159.59	-5320.98	222.86
		180	Wind 60	1028.89	0.00	1028.89	10317.24	-49.03	-51.39
		210	Wind 90	1054.39	-527.19	913.13	9159.59	5222.92	-311.88
		240	Wind Normal	1130.88	-979.37	565.44	5682.69	9744.65	-51.39
		270	Wind 90	1054.39	-1054.39	0.00	28.31	10494.86	222.86
		300	Wind 60	1028.89	-891.05	-514.45	-5116.16	8861.45	0.00
		330	Wind 90	1054.39	-527.19	-913.13	-9102.97	5222.92	-222.86

#### Mast Totals - Service

Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	0.00	-9182.99	-735447.25	-568.11	495.32
30	4340.14	-7517.35	-603355.24	-349346.16	2482.45
60	7324.74	-4228.94	-337297.52	-586076.77	731.67
90	8570.70	0.00	746.07	-681031.56	-1215.15

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Project	Date
NS 175' - TI-OPP-22295 / Clover Fork - Harlan Co., KY	10:41:48 08/28/23
Client	Designed by
Tillman Infrastructure	AG

Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth			** 0	** 0	** 0
Ü	lb	lb	lb-ft	lb-ft	lb-ft
120	7857.80	4536.70	360296.40	-623327.55	236.36
150	4312.96	7470.27	597785.37	-345268.91	1624.53
180	0.00	8513.10	685771.39	-568.11	-495.32
210	-4340.14	7517.35	604847.37	348209.94	-2482.45
240	-7904.88	4563.88	364373.65	629253.34	-731.67
270	-8570.70	0.00	746.07	679895.35	1215.15
300	-7277.66	-4201.76	-333220.27	577878.56	-236.36
330	-4312.96	-7470.27	-596293.24	344132.70	-1624.53

#### **Discrete Appurtenance Pressures - No Ice** $G_H = 0.850$

Description	Aiming	Weight	$Offset_x$	$Offset_z$	Z	$K_z$	$q_z$	$C_AA_C$	$C_AA_C$
	Azimuth							Front	Side
	۰	lb	ft	ft	ft		psf	$ft^2$	$ft^2$
40,000 sq in CaAa (6,000	0.0000	6000.00	0.00	0.00	170.00	1.415	34	278.00	278.00
lbs)									
40,000 sq in CaAa (6,000	0.0000	6000.00	0.00	0.00	155.00	1.388	33	278.00	278.00
lbs)									
30,000 sq in CaAa (4,000	0.0000	4000.00	0.00	0.00	140.00	1.359	33	208.00	208.00
lbs)									
Dish Pipe Mount	240.0000	103.00	-4.56	2.63	125.00	1.326	32	0.00	1.80
Dish Pipe Mount	120.0000	103.00	4.94	2.85	115.00	1.303	31	0.00	1.80
	Sum	16206.00							
	Weight:								

## **Discrete Appurtenance Vectors - No Ice**

		4	10,000 sq in CaAa (6,	,000 lbs) - Elevation	170 - None C		
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth							
۰	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
0	8022.68	0.00	0.00	-8022.68	-1363856.23	0.00	0.00
30	8022.68	0.00	4011.34	-6947.85	-1181134.14	-681928.12	0.00
60	8022.68	0.00	6947.85	-4011.34	-681928.12	-1181134.14	0.00
90	8022.68	0.00	8022.68	0.00	0.00	-1363856.23	0.00
120	8022.68	0.00	6947.85	4011.34	681928.12	-1181134.14	0.00
150	8022.68	0.00	4011.34	6947.85	1181134.14	-681928.12	0.00
180	8022.68	0.00	0.00	8022.68	1363856.23	0.00	0.00
210	8022.68	0.00	-4011.34	6947.85	1181134.14	681928.12	0.00
240	8022.68	0.00	-6947.85	4011.34	681928.12	1181134.14	0.00
270	8022.68	0.00	-8022.68	0.00	0.00	1363856.23	0.00
300	8022.68	0.00	-6947.85	-4011.34	-681928.12	1181134.14	0.00
330	8022.68	0.00	-4011.34	-6947.85	-1181134.14	681928.12	0.00

	40,000 sq in CaAa (6,000 lbs) - Elevation 155 - None B										
Wind Azimuth	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque				
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft				
0	7868.17	0.00	0.00	-7868.17	-1219566.93	0.00	0.00				
30	7868.17	0.00	3934.09	-6814.04	-1056175.94	-609783.46	0.00				
60	7868.17	0.00	6814.04	-3934.09	-609783.46	-1056175.94	0.00				
90	7868.17	0.00	7868.17	0.00	0.00	-1219566.93	0.00				

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	40,000 sq in CaAa (6,000 lbs) - Elevation 155 - None B										
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque				
Azimuth											
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft				
120	7868.17	0.00	6814.04	3934.09	609783.46	-1056175.94	0.00				
150	7868.17	0.00	3934.09	6814.04	1056175.94	-609783.46	0.00				
180	7868.17	0.00	0.00	7868.17	1219566.93	0.00	0.00				
210	7868.17	0.00	-3934.09	6814.04	1056175.94	609783.46	0.00				
240	7868.17	0.00	-6814.04	3934.09	609783.46	1056175.94	0.00				
270	7868.17	0.00	-7868.17	0.00	0.00	1219566.93	0.00				
300	7868.17	0.00	-6814.04	-3934.09	-609783.46	1056175.94	0.00				
330	7868.17	0.00	-3934.09	-6814.04	-1056175.94	609783.46	0.00				

		3	0,000 sq in CaAa (4	,000 lbs) - Elevation	140 - None A		
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth							
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
0	5762.18	0.00	0.00	-5762.18	-806704.50	0.00	0.00
30	5762.18	0.00	2881.09	-4990.19	-698626.59	-403352.25	0.00
60	5762.18	0.00	4990.19	-2881.09	-403352.25	-698626.59	0.00
90	5762.18	0.00	5762.18	0.00	0.00	-806704.50	0.00
120	5762.18	0.00	4990.19	2881.09	403352.25	-698626.59	0.00
150	5762.18	0.00	2881.09	4990.19	698626.59	-403352.25	0.00
180	5762.18	0.00	0.00	5762.18	806704.50	0.00	0.00
210	5762.18	0.00	-2881.09	4990.19	698626.59	403352.25	0.00
240	5762.18	0.00	-4990.19	2881.09	403352.25	698626.59	0.00
270	5762.18	0.00	-5762.18	0.00	0.00	806704.50	0.00
300	5762.18	0.00	-4990.19	-2881.09	-403352.25	698626.59	0.00
330	5762.18	0.00	-2881.09	-4990.19	-698626.59	403352.25	0.00

			Dish Pipe Mount	- Elevation 125 - Fr	om Leg C		
Wind	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_{x}$	$OTM_z$	Torque
Azimuth							
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
0	0.00	42.17	-21.08	-36.52	-4293.31	3105.33	-222.15
30	0.00	24.34	-12.17	-21.08	-2364.07	1991.48	-128.26
60	0.00	0.00	0.00	0.00	271.32	469.94	0.00
90	0.00	24.34	12.17	21.08	2906.71	-1051.60	128.26
120	0.00	42.17	21.08	36.52	4835.94	-2165.45	222.15
150	0.00	48.69	24.34	42.17	5542.09	-2573.15	256.51
180	0.00	42.17	21.08	36.52	4835.94	-2165.45	222.15
210	0.00	24.34	12.17	21.08	2906.71	-1051.60	128.26
240	0.00	0.00	0.00	0.00	271.32	469.94	0.00
270	0.00	24.34	-12.17	-21.08	-2364.07	1991.48	-128.26
300	0.00	42.17	-21.08	-36.52	-4293.31	3105.33	-222.15
330	0.00	48.69	-24.34	-42.17	-4999.46	3513.02	-256.51

	Dish Pipe Mount - Elevation 115 - From Leg B											
Wind	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque					
Azimuth												
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft					
0	0.00	41.43	20.72	-35.88	-3832.76	-2890.93	236.22					
30	0.00	47.84	23.92	-41.43	-4471.12	-3259.48	272.70					
60	0.00	41.43	20.72	-35.88	-3832.76	-2890.93	236.22					
90	0.00	23.92	11.96	-20.72	-2088.75	-1884.02	136.38					
120	0.00	0.00	0.00	0.00	293.62	-508.56	0.00					
150	0.00	23.92	-11.96	20.72	2675.99	866.90	-136.3					
180	0.00	41.43	-20.72	35.88	4420.00	1873.81	-236.2					

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	Dish Pipe Mount - Elevation 115 - From Leg B										
Wind	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque				
Azimuth							_				
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft				
210	0.00	47.84	-23.92	41.43	5058.35	2242.36	-272.76				
240	0.00	41.43	-20.72	35.88	4420.00	1873.81	-236.22				
270	0.00	23.92	-11.96	20.72	2675.99	866.90	-136.38				
300	0.00	0.00	0.00	0.00	293.62	-508.56	0.00				
330	0.00	23.92	11.96	-20.72	-2088.75	-1884.02	136.38				

#### Discrete Appurtenance Totals - No Ice

Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	-0.37	-21725.43	-3398253.73	214.40	14.08
30	10838.26	-18814.59	-2942771.86	-1696331.83	144.51
60	18772.79	-10862.40	-1698625.27	-2938357.67	236.22
90	21677.17	0.37	817.96	-3393063.28	264.64
120	18773.16	10863.03	1700193.39	-2938610.69	222.15
150	10838.90	18814.96	2944154.75	-1696770.08	120.13
180	0.37	21725.43	3399383.60	-291.65	-14.08
210	-10838.26	18814.59	2943901.73	1696254.58	-144.51
240	-18772.79	10862.40	1699755.15	2938280.42	-236.22
270	-21677.17	-0.37	311.92	3392986.03	-264.64
300	-18773.16	-10863.03	-1699063.52	2938533.44	-222.15
330	-10838.90	-18814.96	-2943024.88	1696692.83	-120.13

#### **Discrete Appurtenance Pressures - With Ice** $G_H = 0.850$

Description	Aiming	Weight	$Offset_x$	$Offset_z$	Z	$K_z$	$q_z$	$C_AA_C$	$C_AA_C$	$t_z$
	Azimuth							Front	Side	
	0	lb	ft	ft	ft		psf	$ft^2$	$ft^2$	in
40,000 sq in CaAa (6,000	0.0000	10806.77	0.00	0.00	170.00	1.415	3	409.95	409.95	1.1781
lbs)										
40,000 sq in CaAa (6,000	0.0000	10762.58	0.00	0.00	155.00	1.388	3	408.74	408.74	1.1673
lbs)										
30,000 sq in CaAa (4,000	0.0000	7142.90	0.00	0.00	140.00	1.359	3	305.06	305.06	1.1555
lbs)										
Dish Pipe Mount	240.0000	139.56	-4.56	2.63	125.00	1.326	3	0.00	2.49	1.1425
Dish Pipe Mount	120.0000	139.26	4.94	2.85	115.00	1.303	3	0.00	2.48	1.1330
	Sum	28991.06								
	Weight:									

#### **Discrete Appurtenance Vectors - With Ice**

	40,000 sq in CaAa (6,000 lbs) - Elevation 170 - None C										
Wind	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque				
Azimuth											
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft				
0	965.76	0.00	0.00	-965.76	-164179.63	0.00	0.00				
30	965.76	0.00	482.88	-836.37	-142183.73	-82089.82	0.00				
60	965.76	0.00	836.37	-482.88	-82089.82	-142183.73	0.00				

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	40,000 sq in CaAa (6,000 lbs) - Elevation 170 - None C								
Wind	$F_a$ $F_s$		$F_a$ $F_s$		$V_{x}$	$V_x$ $V_z$		$OTM_x$ $OTM_z$	
Azimuth									
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft		
90	965.76	0.00	965.76	0.00	0.00	-164179.63	0.00		
120	965.76	0.00	836.37	482.88	82089.82	-142183.73	0.00		
150	965.76	0.00	482.88	836.37	142183.73	-82089.82	0.00		
180	965.76	0.00	0.00	965.76	164179.63	0.00	0.00		
210	965.76	0.00	-482.88	836.37	142183.73	82089.82	0.00		
240	965.76	0.00	-836.37	482.88	82089.82	142183.73	0.00		
270	965.76	0.00	-965.76	0.00	0.00	164179.63	0.00		
300	965.76	0.00	-836.37	-482.88	-82089.82	142183.73	0.00		
330	965.76	0.00	-482.88	-836.37	-142183.73	82089.82	0.00		

40,000 sq in CaAa (6,000 lbs) - Elevation 155 - None B							
Wind	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth °	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
0	944.36	0.00	0.00	-944.36	-146375.74	0.00	0.00
30	944.36	0.00	472.18	-817.84	-126765.11	-73187.87	0.00
60	944.36	0.00	817.84	-472.18	-73187.87	-126765.11	0.00
90	944.36	0.00	944.36	0.00	0.00	-146375.74	0.00
120	944.36	0.00	817.84	472.18	73187.87	-126765.11	0.00
150	944.36	0.00	472.18	817.84	126765.11	-73187.87	0.00
180	944.36	0.00	0.00	944.36	146375.74	0.00	0.00
210	944.36	0.00	-472.18	817.84	126765.11	73187.87	0.00
240	944.36	0.00	-817.84	472.18	73187.87	126765.11	0.00
270	944.36	0.00	-944.36	0.00	0.00	146375.74	0.00
300	944.36	0.00	-817.84	-472.18	-73187.87	126765.11	0.00
330	944.36	0.00	-472.18	-817.84	-126765.11	73187.87	0.00

30,000 sq in CaAa (4,000 lbs) - Elevation 140 - None A							
Wind	Wind $F_a$ $F_s$		$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth							
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
0	689.88	0.00	0.00	-689.88	-96582.95	0.00	0.00
30	689.88	0.00	344.94	-597.45	-83643.29	-48291.47	0.00
60	689.88	0.00	597.45	-344.94	-48291.47	-83643.29	0.00
90	689.88	0.00	689.88	0.00	0.00	-96582.95	0.00
120	689.88	0.00	597.45	344.94	48291.47	-83643.29	0.00
150	689.88	0.00	344.94	597.45	83643.29	-48291.47	0.00
180	689.88	0.00	0.00	689.88	96582.95	0.00	0.00
210	689.88	0.00	-344.94	597.45	83643.29	48291.47	0.00
240	689.88	0.00	-597.45	344.94	48291.47	83643.29	0.00
270	689.88	0.00	-689.88	0.00	0.00	96582.95	0.00
300	689.88	0.00	-597.45	-344.94	-48291.47	83643.29	0.00
330	689.88	0.00	-344.94	-597.45	-83643.29	48291.47	0.00

	Dish Pipe Mount - Elevation 125 - From Leg C							
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque	
Azimuth							_	
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft	
0	0.00	4.75	-2.38	-4.12	-146.90	933.80	-25.04	
30	0.00	2.74	-1.37	-2.38	70.56	808.24	-14.46	
60	0.00	0.00	0.00	0.00	367.62	636.74	0.00	
90	0.00	2.74	1.37	2.38	664.68	465.23	14.46	
120	0.00	4.75	2.38	4.12	882.14	339.68	25.04	
150	0.00	5.49	2.74	4.75	961.74	293.72	28.91	

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Tillman Infrastructure	AG

Dish Pipe Mount - Elevation 125 - From Leg C							
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth							
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
180	0.00	4.75	2.38	4.12	882.14	339.68	25.04
210	0.00	2.74	1.37	2.38	664.68	465.23	14.46
240	0.00	0.00	0.00	0.00	367.62	636.74	0.00
270	0.00	2.74	-1.37	-2.38	70.56	808.24	-14.46
300	0.00	4.75	-2.38	-4.12	-146.90	933.80	-25.04
330	0.00	5.49	-2.74	-4.75	-226.50	979.75	-28.91

Dish Pipe Mount - Elevation 115 - From Leg B								
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque	
Azimuth								
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft	
0	0.00	4.66	2.33	-4.04	-67.09	-955.50	26.57	
30	0.00	5.38	2.69	-4.66	-138.88	-996.95	30.68	
60	0.00	4.66	2.33	-4.04	-67.09	-955.50	26.57	
90	0.00	2.69	1.35	-2.33	129.04	-842.26	15.34	
120	0.00	0.00	0.00	0.00	396.97	-687.57	0.00	
150	0.00	2.69	-1.35	2.33	664.89	-532.88	-15.34	
180	0.00	4.66	-2.33	4.04	861.03	-419.65	-26.57	
210	0.00	5.38	-2.69	4.66	932.82	-378.20	-30.68	
240	0.00	4.66	-2.33	4.04	861.03	-419.65	-26.57	
270	0.00	2.69	-1.35	2.33	664.89	-532.88	-15.34	
300	0.00	0.00	0.00	0.00	396.97	-687.57	0.00	
330	0.00	2.69	1.35	-2.33	129.04	-842.26	15.34	

## **Discrete Appurtenance Totals - With Ice**

Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	-0.05	-2608.15	-407352.32	-21.70	1.53
30	1301.32	-2258.70	-352660.45	-203757.86	16.22
60	2254.00	-1304.04	-203268.63	-352910.89	26.57
90	2602.72	0.05	793.72	-407515.36	29.79
120	2254.04	1304.12	204848.28	-352940.03	25.04
150	1301.40	2258.75	354218.77	-203808.33	13.58
180	0.05	2608.15	408881.50	-79.97	-1.53
210	-1301.32	2258.70	354189.63	203656.19	-16.22
240	-2254.00	1304.04	204797.81	352809.22	-26.57
270	-2602.72	-0.05	735.45	407413.68	-29.79
300	-2254.04	-1304.12	-203319.10	352838.36	-25.04
330	-1301.40	-2258.75	-352689.59	203706.66	-13.58

## **Discrete Appurtenance Pressures - Service** $G_H = 0.850$

Description	Aiming	Weight	$Offset_x$	$Offset_z$	z	$K_z$	$q_z$	$C_AA_C$	$C_A A_C$
1	Azimuth							Front	Side
	٥	lb	ft	ft	ft		psf	$ft^2$	$ft^2$
40,000 sq in CaAa (6,000	0.0000	6000.00	0.00	0.00	170.00	1.415	11	278.00	278.00
lbs)									
40,000 sq in CaAa (6,000	0.0000	6000.00	0.00	0.00	155.00	1.388	11	278.00	278.00

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Description	Aiming Azimuth	Weight	$Offset_x$	$Offset_z$	Z	$K_z$	$q_z$	$C_AA_C$ Front	$C_AA_C$ Side
	0	lb	ft	ft	ft		psf	$ft^2$	$ft^2$
lbs)									
30,000 sq in CaAa (4,000	0.0000	4000.00	0.00	0.00	140.00	1.359	11	208.00	208.00
lbs)									
Dish Pipe Mount	240.0000	103.00	-4.56	2.63	125.00	1.326	10	0.00	1.80
Dish Pipe Mount	120.0000	103.00	4.94	2.85	115.00	1.303	10	0.00	1.80
	Sum	16206.00							
	Weight:								

# **Discrete Appurtenance Vectors - Service**

		4	10,000 sq in CaAa (6	,000 lbs) - Elevation	170 - None C		
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth							
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
0	2619.65	0.00	0.00	-2619.65	-445340.81	0.00	0.00
30	2619.65	0.00	1309.83	-2268.69	-385676.45	-222670.41	0.00
60	2619.65	0.00	2268.69	-1309.83	-222670.41	-385676.45	0.00
90	2619.65	0.00	2619.65	0.00	0.00	-445340.81	0.00
120	2619.65	0.00	2268.69	1309.83	222670.41	-385676.45	0.00
150	2619.65	0.00	1309.83	2268.69	385676.45	-222670.41	0.00
180	2619.65	0.00	0.00	2619.65	445340.81	0.00	0.00
210	2619.65	0.00	-1309.83	2268.69	385676.45	222670.41	0.00
240	2619.65	0.00	-2268.69	1309.83	222670.41	385676.45	0.00
270	2619.65	0.00	-2619.65	0.00	0.00	445340.81	0.00
300	2619.65	0.00	-2268.69	-1309.83	-222670.41	385676.45	0.00
330	2619.65	0.00	-1309.83	-2268.69	-385676.45	222670.41	0.00

		4	10,000 sq in CaAa (6,	000 lbs) - Elevation	155 - None B		
Wind	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth							
٥	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
0	2569.20	0.00	0.00	-2569.20	-398225.93	0.00	0.00
30	2569.20	0.00	1284.60	-2224.99	-344873.78	-199112.97	0.00
60	2569.20	0.00	2224.99	-1284.60	-199112.97	-344873.78	0.00
90	2569.20	0.00	2569.20	0.00	0.00	-398225.93	0.00
120	2569.20	0.00	2224.99	1284.60	199112.97	-344873.78	0.00
150	2569.20	0.00	1284.60	2224.99	344873.78	-199112.97	0.00
180	2569.20	0.00	0.00	2569.20	398225.93	0.00	0.00
210	2569.20	0.00	-1284.60	2224.99	344873.78	199112.97	0.00
240	2569.20	0.00	-2224.99	1284.60	199112.97	344873.78	0.00
270	2569.20	0.00	-2569.20	0.00	0.00	398225.93	0.00
300	2569.20	0.00	-2224.99	-1284.60	-199112.97	344873.78	0.00
330	2569.20	0.00	-1284.60	-2224.99	-344873.78	199112.97	0.00

	30,000 sq in CaAa (4,000 lbs) - Elevation 140 - None A									
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque			
Azimuth							_			
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft			
0	1881.53	0.00	0.00	-1881.53	-263413.71	0.00	0.00			
30	1881.53	0.00	940.76	-1629.45	-228122.97	-131706.86	0.00			
60	1881.53	0.00	1629.45	-940.76	-131706.86	-228122.97	0.00			
90	1881.53	0.00	1881.53	0.00	0.00	-263413.71	0.00			
120	1881.53	0.00	1629.45	940.76	131706.86	-228122.97	0.00			
150	1881.53	0.00	940.76	1629.45	228122.97	-131706.86	0.00			

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	30,000 sq in CaAa (4,000 lbs) - Elevation 140 - None A										
Wind	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque				
Azimuth											
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft				
180	1881.53	0.00	0.00	1881.53	263413.71	0.00	0.00				
210	1881.53	0.00	-940.76	1629.45	228122.97	131706.86	0.00				
240	1881.53	0.00	-1629.45	940.76	131706.86	228122.97	0.00				
270	1881.53	0.00	-1881.53	0.00	0.00	263413.71	0.00				
300	1881.53	0.00	-1629.45	-940.76	-131706.86	228122.97	0.00				
330	1881.53	0.00	-940.76	-1629.45	-228122.97	131706.86	0.00				

			Dish Pipe Mount	- Elevation 125 - Fr	om Leg C		
Wind Azimuth	$F_a$	$F_s$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
0	0.00	13.77	-6.88	-11.92	-1219.17	1330.47	-72.54
30	0.00	7.95	-3.97	-6.88	-589.22	966.77	-41.88
60	0.00	0.00	0.00	0.00	271.32	469.94	0.00
90	0.00	7.95	3.97	6.88	1131.85	-26.89	41.88
120	0.00	13.77	6.88	11.92	1761.81	-390.60	72.54
150	0.00	15.90	7.95	13.77	1992.39	-523.72	83.76
180	0.00	13.77	6.88	11.92	1761.81	-390.60	72.54
210	0.00	7.95	3.97	6.88	1131.85	-26.89	41.88
240	0.00	0.00	0.00	0.00	271.32	469.94	0.00
270	0.00	7.95	-3.97	-6.88	-589.22	966.77	-41.88
300	0.00	13.77	-6.88	-11.92	-1219.17	1330.47	-72.54
330	0.00	15.90	-7.95	-13.77	-1449.75	1463.60	-83.76

			Dish Pipe Mount	- Elevation 115 - Fr	om Leg B		
Wind	$F_a$	$F_s$	$V_{\scriptscriptstyle X}$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth							
0	lb	lb	lb	lb	lb-ft	lb-ft	lb-ft
0	0.00	13.53	6.76	-11.72	-1053.77	-1286.48	77.13
30	0.00	15.62	7.81	-13.53	-1262.21	-1406.82	89.07
60	0.00	13.53	6.76	-11.72	-1053.77	-1286.48	77.13
90	0.00	7.81	3.91	-6.76	-484.30	-957.69	44.53
120	0.00	0.00	0.00	0.00	293.62	-508.56	0.00
150	0.00	7.81	-3.91	6.76	1071.53	-59.43	-44.53
180	0.00	13.53	-6.76	11.72	1641.01	269.35	-77.13
210	0.00	15.62	-7.81	13.53	1849.45	389.70	-89.07
240	0.00	13.53	-6.76	11.72	1641.01	269.35	-77.13
270	0.00	7.81	-3.91	6.76	1071.53	-59.43	-44.53
300	0.00	0.00	0.00	0.00	293.62	-508.56	0.00
330	0.00	7.81	3.91	-6.76	-484.30	-957.69	44.53

# **Discrete Appurtenance Totals - Service**

Wind	$V_x$ $V_z$		$OTM_x$	$OTM_z$	Torque	
Azimuth						
۰	lb	lb	lb-ft	lb-ft	lb-ft	
0	-0.12	-7094.02	-1109253.40	43.99	4.60	
30	3539.03	-6143.54	-960524.63	-553930.28	47.19	
60	6129.89	-3546.91	-554272.68	-959489.74	77.13	
90	7078.26	0.12	647.56	-1107965.04	86.41	
120	6130.01	3547.11	555545.66	-959572.36	72.54	
150	3539.23	6143.66	961737.12	-554073.38	39.23	

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Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque	
Azimuth						
0	lb	lb	lb-ft	lb-ft	lb-ft	
180	0.12	7094.02	1110383.28	-121.24	-4.60	
210	-3539.03	6143.54	961654.50	553853.03	-47.19	
240	-6129.89	3546.91	555402.56	959412.49	-77.13	
270	-7078.26	-0.12	482.32	1107887.79	-86.41	
300	-6130.01	-3547.11	-554415.78	959495.11	-72.54	
330	-3539.23	-6143.66	-960607.25	553996.13	-39.23	

#### Dish Pressures - No Ice

Elevation ft	Dish Description	Aiming Azimuth	Weight lb	$Offset_x$ $ft$	$Offset_z$ $ft$	$K_z$	$A_A$ $ft^2$	$q_z \ psf$
,		0		J	,		J.	r~3
125.00	8' Solid Dish	300.0000	250.00	-4.56	2.63	1.326	50.27	32
115.00	8' Solid Dish	180.0000	250.00	4.94	2.85	1.303	50.27	31
		Sum	500.00					
		Weight:						

#### **Dish Vectors - No Ice**

				8' Solid I	Dish - Elevati	on 125 - Fro	m Leg C				
Wind	$C_A$	$C_S$	$C_M$	$F_A$	$F_S$	$F_M$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth											
0				lb	lb	lb-ft	lb	lb	lb-ft	lb-ft	lb-ft
0	-0.001170	-0.001170	-0.000366	-621.46	-621.46	-1555.25	-227.47	-848.94	-105458.47	29574.59	-6027.72
30	-0.000030	-0.000880	-0.000336	-15.93	-467.43	-1427.77	219.91	-412.77	-50937.76	-26348.50	-2731.75
60	0.004220	-0.000620	0.000223	2241.52	-329.32	947.60	2105.88	835.56	105103.34	-262093.82	10307.05
90	0.003980	0.000080	0.000108	2114.04	42.49	458.93	1809.57	1093.82	137386.14	-225055.20	10216.17
120	0.003970	-0.000000	-0.000000	2108.73	0.00	0.00	1826.21	1054.36	132454.13	-227136.03	9621.08
150	0.003980	-0.000080	-0.000108	2114.04	-42.49	-458.93	1852.06	1020.22	128186.07	-230366.86	9074.45
180	0.004220	0.000620	-0.000223	2241.52	329.32	-947.60	1776.55	1405.96	176403.85	-220928.44	10146.83
210	-0.000030	0.000880	0.000336	-15.93	467.43	1427.77	-247.51	396.84	50262.97	32079.77	2586.35
240	-0.001170	0.001170	0.000366	-621.46	621.46	1555.25	-848.94	227.47	29092.51	107257.63	356.86
270	-0.001980	0.001000	0.000278	-1051.71	531.17	1181.31	-1176.39	-65.85	-7572.85	148189.33	-2217.93
300	-0.002700	-0.000000	-0.000000	-1434.15	0.00	0.00	-1242.01	-717.07	-88975.74	156391.75	-6543.30
330	-0.001980	-0.001000	-0.000278	-1051.71	-531.17	-1181.31	-645.22	-985.86	-122573.68	81793.57	-7378.91

				8' Solid 1	Dish - Elevati	on 115 - Fro	m Leg B				
Wind	$C_A$	$C_S$	$C_M$	$F_A$	$F_S$	$F_M$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth											
0				lb	lb	lb-ft	lb	lb	lb-ft	lb-ft	lb-ft
0	0.003970	0.000000	0.000000	2072.04	0.00	0.00	0.00	-2072.04	-237571.44	-1234.37	10230.68
30	0.003980	-0.000080	-0.000108	2077.25	-41.75	-450.94	-41.75	-2077.25	-238171.65	3567.32	9686.48
60	0.004220	0.000620	-0.000223	2202.52	323.59	-931.11	323.59	-2202.52	-252576.73	-38447.51	10866.27
90	-0.000030	0.000880	0.000336	-15.66	459.29	1402.93	459.29	15.66	2513.30	-54053.02	2634.91
120	-0.001170	0.001170	0.000366	-610.65	610.65	1528.19	610.65	610.65	70937.45	-71459.16	253.87
150	-0.001980	0.001000	0.000278	-1033.41	521.92	1160.76	521.92	1033.41	119554.61	-61255.56	-2453.87
180	-0.002700	0.000000	0.000000	-1409.19	0.00	0.00	0.00	1409.19	162769.87	-1234.37	-6957.89
210	-0.001980	-0.001000	-0.000278	-1033.41	-521.92	-1160.76	-521.92	1033.41	119554.61	58786.81	-7751.04
240	-0.001170	-0.001170	-0.000366	-610.65	-610.65	-1528.19	-610.65	610.65	70937.45	68990.41	-6284.04
270	-0.000030	-0.000880	-0.000336	-15.66	-459.29	-1402.93	-459.29	15.66	2513.30	51584.27	-2789.53
300	0.004220	-0.000620	0.000223	2202.52	-323.59	931.11	-323.59	-2202.52	-252576.73	35978.76	10883.58
330	0.003980	0.000080	0.000108	2077.25	41.75	450.94	41.75	-2077.25	-238171.65	-6036.07	10826.41

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Tillman Infrastructure	AG

#### Dish Totals - No Ice

Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	-227.47	-2920.97	-343029.90	28340.22	4202.95
30	178.16	-2490.03	-289109.41	-22781.18	6954.72
60	2429.47	-1366.96	-147473.40	-300541.33	21173.32
90	2268.86	1109.48	139899.44	-279108.22	12851.08
120	2436.86	1665.02	203391.58	-298595.19	9874.94
150	2373.98	2053.63	247740.68	-291622.42	6620.58
180	1776.55	2815.16	339173.72	-222162.82	3188.94
210	-769.44	1430.24	169817.58	90866.58	-5164.69
240	-1459.59	838.12	100029.96	176248.04	-5927.18
270	-1635.68	-50.19	-5059.55	199773.60	-5007.46
300	-1565.60	-2919.59	-341552.47	192370.51	4340.28
330	-603.47	-3063.11	-360745.33	75757.50	3447.50

#### **Dish Pressures - With Ice**

Elevation ft	Dish Description	Aiming Azimuth	Weight lb	Offset <sub>x</sub> ft	$Offset_z$ $ft$	$K_z$	$egin{aligned} A_A \ ft^2 \end{aligned}$	$q_z \ psf$	t <sub>z</sub> in
125.00	8' Solid Dish	300.0000	901.20	-4.56	2.63	1.326	52.67	3	1.1425
115.00	8' Solid Dish	180.0000	895.79	4.94	2.85	1.303	52.65	3	1.1330
		Sum	1796.99						
		Weight:							

#### **Dish Vectors - With Ice**

				8' Solid I	Dish - Elevati	on 125 - Fro	m Leg C				
Wind	$C_A$	$C_S$	$C_M$	$F_A$	$F_S$	$F_M$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth											
0				lb	lb	lb-ft	lb	lb	lb-ft	lb-ft	lb-ft
0	-0.001170	-0.001170	-0.000366	-53.15	-53.15	-133.02	-19.46	-72.61	-6702.38	6543.71	-515.56
30	-0.000030	-0.000880	-0.000336	-1.36	-39.98	-122.12	18.81	-35.30	-2039.17	1760.56	-233.65
60	0.004220	-0.000620	0.000223	191.72	-28.17	81.05	180.12	71.47	11307.17	-18402.96	881.57
90	0.003980	0.000080	0.000108	180.82	3.63	39.25	154.77	93.56	14068.34	-15235.01	873.80
120	0.003970	-0.000000	-0.000000	180.36	0.00	0.00	156.20	90.18	13646.50	-15412.99	822.90
150	0.003980	-0.000080	-0.000108	180.82	-3.63	-39.25	158.41	87.26	13281.45	-15689.32	776.15
180	0.004220	0.000620	-0.000223	191.72	28.17	-81.05	151.95	120.25	17405.56	-14882.05	867.87
210	-0.000030	0.000880	0.000336	-1.36	39.98	122.12	-21.17	33.94	6616.62	6757.98	221.21
240	-0.001170	0.001170	0.000366	-53.15	53.15	133.02	-72.61	19.46	4805.89	13188.01	30.52
270	-0.001980	0.001000	0.000278	-89.95	45.43	101.04	-100.62	-5.63	1669.87	16688.94	-189.70
300	-0.002700	-0.000000	-0.000000	-122.66	0.00	0.00	-106.23	-61.33	-5292.60	17390.50	-559.65
330	-0.001980	-0.001000	-0.000278	-89.95	-45.43	-101.04	-55.19	-84.32	-8166.26	11010.05	-631.13

				8' Solid I	Dish - Elevati	on 115 - Fro	m Leg B				
Wind	$C_A$	$C_S$	$C_M$	$F_A$	$F_S$	$F_M$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth											
٥				lb	lb	lb-ft	lb	lb	lb-ft	lb-ft	lb-ft
0	0.003970	0.000000	0.000000	177.16	0.00	0.00	0.00	-177.16	-17819.31	-4422.98	874.71
30	0.003980	-0.000080	-0.000108	177.60	-3.57	-38.55	-3.57	-177.60	-17870.62	-4012.44	828.18
60	0.004220	0.000620	-0.000223	188.31	27.67	-79.61	27.67	-188.31	-19102.24	-7604.64	929.05
90	-0.000030	0.000880	0.000336	-1.34	39.27	119.95	39.27	1.34	2707.56	-8938.89	225.28
120	-0.001170	0.001170	0.000366	-52.21	52.21	130.66	52.21	52.21	8557.72	-10427.09	21.71
150	-0.001980	0.001000	0.000278	-88.35	44.62	99.24	44.62	88.35	12714.41	-9554.69	-209.80
180	-0.002700	0.000000	0.000000	-120.48	0.00	0.00	0.00	120.48	16409.24	-4422.98	-594.89

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	8' Solid Dish - Elevation 115 - From Leg B												
Wind	$C_A$	$C_S$	$C_M$	$F_A$	$F_S$	$F_M$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque		
Azimuth													
0				lb	lb	lb-ft	lb	lb	lb-ft	lb-ft	lb-ft		
210	-0.001980	-0.001000	-0.000278	-88.35	-44.62	-99.24	-44.62	88.35	12714.41	708.74	-662.70		
240	-0.001170	-0.001170	-0.000366	-52.21	-52.21	-130.66	-52.21	52.21	8557.72	1581.13	-537.28		
270	-0.000030	-0.000880	-0.000336	-1.34	-39.27	-119.95	-39.27	1.34	2707.56	92.93	-238.50		
300	0.004220	-0.000620	0.000223	188.31	-27.67	79.61	-27.67	-188.31	-19102.24	-1241.31	930.53		
330	0.003980	0.000080	0.000108	177.60	3.57	38.55	3.57	-177.60	-17870.62	-4833.51	925.64		

#### Dish Totals - With Ice

Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	-19.46	-249.77	-24521.69	2120.73	359.15
30	15.24	-212.91	-19909.80	-2251.88	594.53
60	207.78	-116.85	-7795.07	-26007.60	1810.62
90	194.04	94.89	16775.90	-24173.90	1099.08
120	208.41	142.39	22204.22	-25840.07	844.60
150	203.03	175.62	25995.86	-25244.02	566.34
180	151.95	240.74	33814.81	-19305.02	272.98
210	-65.79	122.30	19331.02	7466.72	-441.49
240	-124.82	71.67	13363.60	14769.14	-506.75
270	-139.89	-4.29	4377.43	16781.87	-428.20
300	-133.90	-249.64	-24394.83	16149.18	370.87
330	-51.62	-261.92	-26036.88	6176.53	294.52

#### **Dish Pressures - Service**

Elevation ft	Dish Description	Aiming Azimuth	Weight lb	Offset <sub>x</sub> ft	Offset <sub>z</sub> ft	$K_z$	$rac{A_A}{ft^2}$	$q_z$ $psf$
	8' Solid Dish 8' Solid Dish	300.0000 180.0000 Sum Weight:	250.00 500.00	-4.56 4.94	2.63 2.85	1.326 1.303	50.27 50.27	

#### **Dish Vectors - Service**

				8' Solid I	Dish - Elevat	ion 125 - Fra	m Leg C				
Wind	$C_A$	$C_S$	$C_M$	$F_A$	$F_S$	$F_M$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth											
0				lb	lb	lb-ft	lb	lb	lb-ft	lb-ft	lb-ft
0	-0.001170	-0.001170	-0.000366	-202.93	-202.93	-507.84	-74.28	-277.20	-33991.91	10425.19	-1968.24
30	-0.000030	-0.000880	-0.000336	-5.20	-152.63	-466.21	71.81	-134.78	-16189.23	-7835.42	-892.00
60	0.004220	-0.000620	0.000223	731.93	-107.53	309.42	687.63	272.84	34762.96	-84813.48	3365.57
90	0.003980	0.000080	0.000108	690.30	13.88	149.85	590.88	357.17	45304.29	-72719.24	3335.89
120	0.003970	-0.000000	-0.000000	688.56	0.00	0.00	596.31	344.28	43693.83	-73398.69	3141.58
150	0.003980	-0.000080	-0.000108	690.30	-13.88	-149.85	604.75	333.13	42300.18	-74453.66	2963.09
180	0.004220	0.000620	-0.000223	731.93	107.53	-309.42	580.10	459.09	58044.76	-71371.72	3313.25
210	-0.000030	0.000880	0.000336	-5.20	152.63	466.21	-80.82	129.58	16855.90	11243.20	844.52
240	-0.001170	0.001170	0.000366	-202.93	202.93	507.84	-277.20	74.28	9943.10	35791.08	116.53
270	-0.001980	0.001000	0.000278	-343.42	173.44	385.73	-384.13	-21.50	-2029.26	49156.53	-724.22
300	-0.002700	-0.000000	-0.000000	-468.29	0.00	0.00	-405.55	-234.15	-28609.80	51834.87	-2136.59
330	-0.001980	-0.001000	-0.000278	-343.42	-173.44	-385.73	-210.69	-321.91	-39580.55	27476.28	-2409.44

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8' Solid Dish - Elevation 115 - From Leg B											
Wind	$C_A$	$C_S$	$C_M$	$F_A$	$F_S$	$F_M$	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth											
0				lb	lb	lb-ft	lb	lb	lb-ft	lb-ft	lb-ft
0	0.003970	0.000000	0.000000	676.58	0.00	0.00	0.00	-676.58	-77094.39	-1234.37	3340.63
30	0.003980	-0.000080	-0.000108	678.29	-13.63	-147.25	-13.63	-678.29	-77290.38	333.53	3162.93
60	0.004220	0.000620	-0.000223	719.19	105.66	-304.04	105.66	-719.19	-81994.08	-13385.60	3548.17
90	-0.000030	0.000880	0.000336	-5.11	149.97	458.10	149.97	5.11	1300.63	-18481.28	860.38
120	-0.001170	0.001170	0.000366	-199.40	199.40	499.00	199.40	199.40	23643.21	-24164.92	82.90
150	-0.001980	0.001000	0.000278	-337.44	170.42	379.02	170.42	337.44	39518.20	-20833.13	-801.26
180	-0.002700	0.000000	0.000000	-460.14	0.00	0.00	0.00	460.14	53629.30	-1234.37	-2271.96
210	-0.001980	-0.001000	-0.000278	-337.44	-170.42	-379.02	-170.42	337.44	39518.20	18364.38	-2530.95
240	-0.001170	-0.001170	-0.000366	-199.40	-199.40	-499.00	-199.40	199.40	23643.21	21696.17	-2051.93
270	-0.000030	-0.000880	-0.000336	-5.11	-149.97	-458.10	-149.97	5.11	1300.63	16012.53	-910.87
300	0.004220	-0.000620	0.000223	719.19	-105.66	304.04	-105.66	-719.19	-81994.08	10916.85	3553.82
330	0.003980	0.000080	0.000108	678.29	13.63	147.25	13.63	-678.29	-77290.38	-2802.28	3535.16

#### Dish Totals - Service

Wind	$V_x$	$V_z$	$OTM_x$	$OTM_z$	Torque
Azimuth					
0	lb	lb	lb-ft	lb-ft	lb-ft
0	-74.28	-953.79	-111086.30	9190.81	1372.39
30	58.17	-813.07	-93479.61	-7501.89	2270.93
60	793.30	-446.35	-47231.11	-98199.08	6913.74
90	740.85	362.28	46604.92	-91200.51	4196.27
120	795.71	543.68	67337.04	-97563.61	3224.47
150	775.18	670.57	81818.38	-95286.79	2161.82
180	580.10	919.23	111674.07	-72606.10	1041.29
210	-251.24	467.02	56374.10	29607.58	-1686.43
240	-476.60	273.67	33586.31	57487.24	-1935.40
270	-534.10	-16.39	-728.63	65169.06	-1635.09
300	-511.22	-953.34	-110603.87	62751.72	1417.23
330	-197.05	-1000.20	-116870.93	24674.00	1125.72

#### **Force Totals**

Load	Vertical	Sum of	Sum of	Sum of	Sum of	Sum of Torques
Case	Forces	Forces	Forces	Overturning	Overturning	
		X	Z	Moments, $M_x$	Moments, $M_z$	
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Leg Weight	12887.78					
Bracing Weight	9169.45					
Total Member Self-Weight	22057.23			2682.21	-700.48	
Total Weight	44455.83			2682.21	-700.48	
Wind 0 deg - No Ice		-227.84	-51611.86	-5924220.71	27986.50	5733.95
Wind 30 deg - No Ice		23729.39	-43324.12	-5019786.56	-2752359.46	14701.73
Wind 60 deg - No Ice		42631.89	-24601.76	-2845156.65	-4971178.50	23650.29
Wind 90 deg - No Ice		49036.35	1109.85	141463.46	-5685750.06	9394.33
Wind 120 deg - No Ice		44272.15	25842.98	2969999.49	-5083565.89	10820.93
Wind 150 deg - No Ice		25842.60	42743.91	4959665.48	-3009152.37	11715.83
Wind 180 deg - No Ice		1776.92	49454.51	5766284.56	-223022.57	1657.95
Wind 210 deg - No Ice		-24320.67	42264.34	4903116.74	2819231.40	-12911.69
Wind 240 deg - No Ice		-43438.69	25098.69	2878686.20	4981379.64	-8404.15
Wind 270 deg - No Ice		-48403.17	-50.56	-4001.56	5605201.98	-1550.71
Wind 300 deg - No Ice		-41624.21	-26071.78	-3027187.39	4840419.86	3394.30

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Load	Vertical	Sum of	Sum of	Sum of	Sum of	Sum of Torques
Case	Forces	Forces	Forces	Overturning	Overturning	
		X	Z	Moments, $M_x$	Moments, $M_z$	
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Wind 330 deg - No Ice		-24072.09	-43753.39	-5070048.12	2792073.99	-1647.74
Member Ice	19878.14					
Total Weight Ice	90455.68			8683.41	-3088.28	
Wind 0 deg - Ice		-19.50	-6009.80	-688333.22	-627.17	608.36
Wind 30 deg - Ice		2835.99	-5103.34	-586882.88	-334196.44	1397.60
Wind 60 deg - Ice		5049.02	-2914.62	-331037.56	-594626.61	2184.18
Wind 90 deg - Ice		5808.23	94.94	20560.94	-681063.27	943.03
Wind 120 deg - Ice		5168.33	3008.75	357632.49	-602496.38	968.95
Wind 150 deg - Ice		3017.07	5054.33	598744.38	-356219.72	937.76
Wind 180 deg - Ice		152.00	5850.18	693852.49	-22111.19	23.77
Wind 210 deg - Ice		-2886.54	5012.73	593815.91	333857.20	-1244.55
Wind 240 deg - Ice		-5096.47	2944.74	349760.72	587607.75	-880.31
Wind 270 deg - Ice		-5754.07	-4.34	8104.19	668117.18	-272.16
Wind 300 deg - Ice		-4963.41	-3040.71	-346668.47	577477.76	246.53
Wind 330 deg - Ice		-2865.65	-5140.64	-591273.60	331598.17	-76.90
Total Weight	44455.83			2682.21	-700.48	
Wind 0 deg - Service		-74.40	-17230.80	-1956533.01	9234.80	1872.31
Wind 30 deg - Service		7937.34	-14473.96	-1658105.54	-910210.23	4800.56
Wind 60 deg - Service		14247.93	-8222.20	-939547.38	-1643197.49	7722.54
Wind 90 deg - Service		16389.81	362.40	47252.47	-1879629.01	3067.54
Wind 120 deg - Service		14783.52	8627.49	982433.03	-1679895.41	3533.36
Wind 150 deg - Service		8627.37	14284.50	1640594.81	-994060.97	3825.58
Wind 180 deg - Service		580.22	16526.35	1907082.67	-72727.34	541.37
Wind 210 deg - Service		-8130.41	14127.91	1622129.91	932238.67	-4216.06
Wind 240 deg - Service		-14511.37	8384.46	952616.45	1646721.18	-2744.21
Wind 270 deg - Service		-16183.06	-16.51	-246.31	1853520.31	-506.35
Wind 300 deg - Service		-13918.89	-8702.21	-998985.99	1600693.50	1108.34
Wind 330 deg - Service		-8049.25	-14614.13	-1674517.48	923370.94	-538.04

## **Load Combinations**

Comb.	Description
No.	· · · · · · · · · · · · · · · · · · ·
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

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Comb.	Description
No.	
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

## **Maximum Member Forces**

Section	Elevation	Component	Condition	Gov.	Axial	Major Axis	Minor Axis
No.	ft	Type		Load		Moment	Moment
				Comb. lb		lb-ft	lb-ft
T1	175.3 - 160	Leg	Max Tension	15	10483.66	2.18	-14.21
			Max. Compression	2	-14979.46	4.42	340.84
			Max. Mx	20	-2509.07	404.89	-8.08
			Max. My	2	3655.77	-23.14	397.66
			Max. Vy	8	-2688.93	-258.18	-23.55
			Max. Vx	2	2693.19	0.43	274.30
		Diagonal	Max Tension	8	3799.71	0.00	0.00
			Max. Compression	20	-3834.53	0.00	0.00
			Max. Mx	35	471.49	16.43	0.13
			Max. My	20	-3620.93	1.82	7.94
			Max. Vy	35	-15.61	16.43	0.13
			Max. Vx	20	-1.92	1.82	7.94
		Top Girt	Max Tension	14	862.84	0.00	0.00
			Max. Compression	18	-911.39	0.00	0.00
			Max. Mx	26	-26.17	-41.89	0.00
			Max. My	6	-448.89	0.00	0.00
			Max. Vy	26	25.78	0.00	0.00
			Max. Vx	6	-0.00	0.00	0.00
T2	160 - 140	Leg	Max Tension	15	48720.61	406.77	28.08
			Max. Compression	2	-58686.51	479.46	2.73
			Max. Mx	22	15258.82	2160.35	2.73
			Max. My	8	-4764.82	-55.53	-2377.10
			Max. Vy	22	2316.72	-1688.87	2.73
			Max. Vx	16	-2175.61	-52.93	1232.61
		Diagonal	Max Tension	8	7626.73	0.00	0.00
			Max. Compression	20	-7628.56	0.00	0.00

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Section No.	Elevation ft	Component Type	Condition	Gov. Load	Axial	Major Axis Moment	Minor Axis Moment
				Comb.	lb	lb-ft	lb-ft
			Max. Mx	12	3448.16	42.02	1.85
			Max. My	8	-7571.79	-4.55	-27.45
			Max. Vy	32	-22.75	30.03	2.79
			Max. Vx	8	5.93	0.00	0.00
T3	140 - 120	Leg	Max Tension	15	101238.90	-630.48	-86.91
			Max. Compression	2	-116142.54	525.93	54.97
			Max. Mx	10	-97490.42	752.52	-256.38
			Max. My	12	-8076.48	-186.53	-1344.88
			Max. Vy	22	-2118.49	-480.78	11.81
			Max. Vx	12	-1880.94	1.64	159.97
		Diagonal	Max Tension	8	9353.33	0.00	0.00
			Max. Compression	8	-9863.46	0.00	0.00
			Max. Mx	10	7956.43	63.83	-1.85
			Max. My	8	-9062.12	-17.70	-26.35
			Max. Vy	35	-32.30	46.60	-3.37
			Max. Vx	8	5.34	0.00	0.00
T4	120 - 100	Leg	Max Tension	15	153265.82	-550.34	-8.34
		C	Max. Compression	2	-170904.62	1702.01	-43.36
			Max. Mx	2	-170904.62	1702.01	-43.36
			Max. My	24	-7899.40	-3.30	1357.30
			Max. Vy	2	-738.47	1557.84	-216.97
			Max. Vx	24	995.31	-1099.49	-584.57
		Diagonal	Max Tension	8	9936.99	0.00	0.00
		Diagonai	Max. Compression	8	-9977.81	0.00	0.00
			Max. Mx	2	7612.28	51.84	-1.24
			Max. My	6	-9327.18	2.88	-21.03
			Max. Vy	33	36.20	47.71	-4.90
			Max. Vx	6	3.78	0.00	0.00
T5	100 - 80	Leg	Max Tension	15	198802.82	-1716.94	61.00
10	100 00	Ece	Max. Compression	2	-220545.11	1566.86	4.97
			Max. Mx	2	-204508.66	1756.53	-9.92
			Max. My	12	-6815.85	-37.64	-1869.64
			Max. Vy	3	93.45	1753.95	-10.01
			Max. Vx	16	-122.15	-1.76	1834.00
		Diagonal	Max Tension	8	9476.86	0.00	0.00
		Diagonai	Max. Compression	8	-9633.24	0.00	0.00
			Max. Mx	31	921.42	65.49	-6.05
			Max. My	6	-8919.75	13.06	-13.92
			Max. Vy	33	45.45	65.09	-6.30
			Max. Vx	6	2.49	0.00	0.00
T6	80 - 60	Leg	Max Tension	15	239354.21	-1522.42	86.64
10	00 - 00	Leg	Max. Compression	2	-265228.56	2987.45	-15.75
			Max. Mx	2	-265228.56	2987.45	-15.75
			Max. My	12	-6959.05	-114.18	-2323.12
				2	-303.31	2987.45	-15.75
			Max. Vy Max. Vx	8	180.75	-118.26	2289.10
		Diagonal	Max Tension	8			
		Diagonai	Max. Compression	8	9216.74 -9407.59	0.00	0.00
						0.00	0.00
			Max. Mx	31	935.56	84.00	7.36
			Max. My	6	-8804.38	11.18	-15.03
			Max. Vy	33	52.27	82.45	-7.90
Т7	60 40	T	Max. Vx	6	2.46	0.00	0.00
T7	60 - 40	Leg	Max Tension	15	269450.57	-1917.21	67.40
			Max. Compression	2	-299629.52	1790.08	-7.16
			Max. Mx	2	-277818.06	2987.45	-15.86
			Max. My	12	-7179.65	-114.79	-2309.18
			Max. Vy	2	293.07	2987.45	-15.86
			Max. Vx	8	-175.73	-118.95	2275.79
		Diagonal	Max Tension	8	7195.58	0.00	0.00
		C					
		Č	Max. Compression Max. Mx	8 33	-7504.83 520.45	0.00 101.39	0.00 -12.34

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	Tillman Infrastructure	AG

Section No.	Elevation ft	Component Type	Condition	Gov. Load	Axial	Major Axis Moment	Minor Axis Moment
				Comb.	lb	lb-ft	lb-ft
			Max. My	6	-6849.84	17.75	-16.42
			Max. Vy	33	58.16	101.39	-12.34
			Max. Vx	29	-2.94	0.00	0.00
T8	40 - 20	Leg	Max Tension	15	294857.08	-1387.00	77.96
			Max. Compression	2	-329326.04	3342.07	-63.90
			Max. Mx	2	-329326.04	3342.07	-63.90
			Max. My	12	-8639.79	-41.11	-2805.99
			Max. Vy	2	-357.66	3342.07	-63.90
			Max. Vx	5	194.73	-52.59	-2791.74
		Diagonal	Max Tension	8	7260.57	0.00	0.00
		-	Max. Compression	8	-7476.42	0.00	0.00
			Max. Mx	33	425.17	120.99	-14.82
			Max. My	29	702.79	115.55	-15.06
			Max. Vy	33	63.09	120.99	-14.82
			Max. Vx	29	-3.13	0.00	0.00
T9	20 - 0	Leg	Max Tension	15	317792.66	-2633.17	167.27
			Max. Compression	2	-357671.52	0.00	-0.46
			Max. Mx	31	-75390.02	8800.69	7.91
			Max. My	12	-9780.06	-203.33	-4318.49
			Max. Vy	33	-1953.36	-4776.08	9.34
			Max. Vx	12	-709.44	-203.36	-4318.49
		Diagonal	Max Tension	8	7982.03	0.00	0.00
			Max. Compression	8	-8305.46	0.00	0.00
			Max. Mx	33	-1820.49	199.32	26.09
			Max. My	29	-2792.54	182.50	-26.62
			Max. Vy	33	86.70	199.32	26.09
			Max. Vx	29	4.67	0.00	0.00

## **Maximum Reactions**

Location	Condition	Gov.	Vertical	Horizontal, X	Horizontal, Z
		Load	lb	lb	lb
		Comb.			
Leg C	Max. Vert	18	352428.12	28088.47	-15944.72
_	Max. H <sub>x</sub>	18	352428.12	28088.47	-15944.72
	Max. H <sub>z</sub>	7	-319197.95	-26057.86	14252.38
	Min. Vert	7	-319197.95	-26057.86	14252.38
	Min. H <sub>x</sub>	7	-319197.95	-26057.86	14252.38
	Min. Hz	18	352428.12	28088.47	-15944.72
Leg B	Max. Vert	10	360235.78	-28705.48	-16233.47
	Max. H <sub>x</sub>	23	-317913.72	25539.24	14964.46
	Max. H <sub>z</sub>	23	-317913.72	25539.24	14964.46
	Min. Vert	23	-317913.72	25539.24	14964.46
	Min. H <sub>x</sub>	10	360235.78	-28705.48	-16233.47
	Min. Hz	10	360235.78	-28705.48	-16233.47
Leg A	Max. Vert	2	362315.11	167.49	33185.81
	Max. H <sub>x</sub>	21	13583.20	2194.92	1077.60
	Max. H <sub>z</sub>	2	362315.11	167.49	33185.81
	Min. Vert	15	-321417.09	-19.22	-29851.42
	Min. H <sub>x</sub>	9	5140.20	-1993.44	352.06
	Min. H <sub>z</sub>	15	-321417.09	-19.22	-29851.42

## **Tower Mast Reaction Summary**

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Load Combination	Vertical	Shear <sub>x</sub>	Shearz	Overturning Moment, $M_x$	Overturning Moment, $M_z$	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Dead Only 1.2 Dead+1.0 Wind 0 deg - No	44455.83 53346.99	-0.00 -227.84	-0.00 -51611.86	2682.08 -5967482.86	-700.36 27980.12	0.00 5745.01
Ice 0.9 Dead+1.0 Wind 0 deg - No Ice	40010.24	-227.84	-51611.86	-5957184.72	28149.05	5743.10
1.2 Dead+1.0 Wind 30 deg - No Ice	53346.99	23729.41	-43324.10	-5056473.21	-2773248.37	14734.04
0.9 Dead+1.0 Wind 30 deg - No Ice	40010.24	23729.39	-43324.12	-5047832.84	-2767795.55	14721.33
1.2 Dead+1.0 Wind 60 deg - No Ice	53346.99	42631.89	-24601.76	-2865575.65	-5008497.57	23660.29
0.9 Dead+1.0 Wind 60 deg - No Ice	40010.24	42631.89	-24601.76	-2861036.15	-4998873.94	23648.55
1.2 Dead+1.0 Wind 90 deg - No Ice	53346.99	49036.35	1109.84	143014.35	-5728266.26	9412.07
0.9 Dead+1.0 Wind 90 deg - No Ice	40009.72	49036.22	1110.45	141965.29	-5717303.65	9414.42
1.2 Dead+1.0 Wind 120 deg - No Ice	53346.99	44272.15	25842.98	2992569.74	-5121308.11	10861.67
0.9 Dead+1.0 Wind 120 deg - No Ice	40010.24	44272.15	25842.98	2986182.11	-5111550.57	10852.04
1.2 Dead+1.0 Wind 150 deg - No Ice	53346.99	25842.60	42743.91	4997198.63	-3031517.83	11763.39
0.9 Dead+1.0 Wind 150 deg - No Ice 1.2 Dead+1.0 Wind 180 deg -	40010.24 53346.99	25842.61 1776.92	42743.91 49454.51	4987008.32 5809832.16	-3025653.31 -224634.04	11747.46 1674.16
No Ice 0.9 Dead+1.0 Wind 180 deg -	40010.24	1776.92	49454.51	5798106.55	-224047.89	1675.68
No Ice 1.2 Dead+1.0 Wind 210 deg -	53346.99	-24320.67	42264.34	4940324.81	2840068.86	-12957.83
No Ice 0.9 Dead+1.0 Wind 210 deg -	40010.24	-24320.67	42264.34	4930220.18	2834942.15	-12938.47
No Ice 1.2 Dead+1.0 Wind 240 deg -	53346.99	-43438.69	25098.69	2900665.08	5018215.97	-8455.42
No Ice 0.9 Dead+1.0 Wind 240 deg -	40010.24	-43438.69	25098.69	2894425.72	5009038.77	-8443.40
No Ice 1.2 Dead+1.0 Wind 270 deg -	53346.99	-48403.17	-50.56	-3461.36	5646905.23	-1583.62
No Ice 0.9 Dead+1.0 Wind 270 deg - No Ice	40010.70	-48403.34	-51.13	-4266.11	5636499.53	-1578.33
1.2 Dead+1.0 Wind 300 deg - No Ice	53346.99	-41624.21	-26071.78	-3048957.20	4876457.55	3367.78
0.9 Dead+1.0 Wind 300 deg - No Ice	40010.24	-41624.21	-26071.78	-3044117.38	4867487.31	3377.13
1.2 Dead+1.0 Wind 330 deg - No Ice	53346.99	-24072.09	-43753.39	-5107079.08	2812835.05	-1672.80
0.9 Dead+1.0 Wind 330 deg - No Ice	40010.24	-24072.09	-43753.39	-5098361.87	2807742.53	-1655.99
1.2 Dead+1.0 Ice+1.0 Temp 1.2 Dead+1.0 Wind 0 deg+1.0	99346.83 99346.83	-0.00 -19.50	-0.00 -6009.78	9241.63 -697095.35	-3232.72 -784.33	0.21 611.62
Ice+1.0 Temp 1.2 Dead+1.0 Wind 30 deg+1.0	99346.83	2835.98	-5103.33	-594280.33	-338948.64	1408.06
Ice+1.0 Temp 1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	99346.83	5049.00	-2914.62	-334928.14	-602932.69	2199.00
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	99346.83	5808.21	94.94	21457.82	-690549.23	958.78
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	99346.83	5168.32	3008.74	363145.17	-610871.34	981.27

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Cli	ient Tillman Infrastructure	Designed by AG

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M <sub>x</sub>	Overturning Moment, M <sub>2</sub>	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
1.2 Dead+1.0 Wind 150	99346.83	3017.06	5054.32	607586.53	-361228.42	943.15
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 180	99346.83	152.00	5850.16	704001.53	-22528.68	21.00
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 210	99346.83	-2886.54	5012.72	602603.39	338299.38	-1255.20
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 240	99346.83	-5096.46	2944.73	355180.59	595508.86	-895.90
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 270	99346.83	-5754.06	-4.34	8849.30	677147.65	-288.14
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 300	99346.83	-4963.39	-3040.70	-350747.39	585270.27	234.23
deg+1.0 Ice+1.0 Temp						
1.2 Dead+1.0 Wind 330	99346.83	-2865.65	-5140.62	-598719.85	336016.74	-81.99
deg+1.0 Ice+1.0 Temp						
Dead+Wind 0 deg - Service	44455.83	-74.40	-17230.80	-1967830.77	8709.92	1874.83
Dead+Wind 30 deg - Service	44455.88	7937.54	-14473.87	-1667597.04	-916477.68	4806.17
Dead+Wind 60 deg - Service	44455.83	14247.93	-8222.20	-944574.28	-1653985.23	7731.24
Dead+Wind 90 deg - Service	44455.83	16389.81	362.40	48285.39	-1891864.17	3078.52
Dead+Wind 120 deg - Service	44455.83	14783.52	8627.49	989253.24	-1690828.17	3544.50
Dead+Wind 150 deg - Service	44455.88	8627.19	14284.63	1651537.19	-1000760.33	3830.28
Dead+Wind 180 deg - Service	44455.83	580.22	16526.35	1919682.57	-73700.04	542.02
Dead+Wind 210 deg - Service	44455.83	-8130.41	14127.91	1632979.59	937456.58	-4225.02
Dead+Wind 240 deg - Service	44455.83	-14511.37	8384.46	959274.75	1656336.04	-2757.47
Dead+Wind 270 deg - Service	44455.83	-16183.06	-16.51	517.61	1864466.45	-518.79
Dead+Wind 300 deg - Service	44455.83	-13918.89	-8702.21	-1004353.24	1610081.25	1099.34
Dead+Wind 330 deg - Service	44455.89	-8049.46	-14614.03	-1684094.78	928553.42	-540.04

## **Solution Summary**

	Sur	n of Applied Force.	s		Sum of Reaction	2S	
Load	PX	PY	PZ	PX	PY	PZ	% Error
Comb.	lb	lb	lb	lb	lb	lb	
1	-0.00	-44455.83	-0.00	0.00	44455.83	0.00	0.000%
2	-227.84	-53346.99	-51611.86	227.84	53346.99	51611.86	0.000%
3	-227.84	-40010.24	-51611.86	227.84	40010.24	51611.86	0.000%
4	23729.39	-53346.99	-43324.12	-23729.41	53346.99	43324.10	0.000%
5	23729.39	-40010.24	-43324.12	-23729.39	40010.24	43324.12	0.000%
6	42631.89	-53346.99	-24601.76	-42631.89	53346.99	24601.76	0.000%
7	42631.89	-40010.24	-24601.76	-42631.89	40010.24	24601.76	0.000%
8	49036.35	-53346.99	1109.85	-49036.35	53346.99	-1109.84	0.000%
9	49036.35	-40010.24	1109.85	-49036.22	40009.72	-1110.45	0.001%
10	44272.15	-53346.99	25842.98	-44272.15	53346.99	-25842.98	0.000%
11	44272.15	-40010.24	25842.98	-44272.15	40010.24	-25842.98	0.000%
12	25842.60	-53346.99	42743.91	-25842.60	53346.99	-42743.91	0.000%
13	25842.60	-40010.24	42743.91	-25842.61	40010.24	-42743.91	0.000%
14	1776.92	-53346.99	49454.51	-1776.92	53346.99	-49454.51	0.000%
15	1776.92	-40010.24	49454.51	-1776.92	40010.24	-49454.51	0.000%
16	-24320.67	-53346.99	42264.34	24320.67	53346.99	-42264.34	0.000%
17	-24320.67	-40010.24	42264.34	24320.67	40010.24	-42264.34	0.000%
18	-43438.69	-53346.99	25098.69	43438.69	53346.99	-25098.69	0.000%
19	-43438.69	-40010.24	25098.69	43438.69	40010.24	-25098.69	0.000%
20	-48403.17	-53346.99	-50.56	48403.17	53346.99	50.56	0.000%
21	-48403.17	-40010.24	-50.56	48403.34	40010.70	51.13	0.001%
22	-41624.21	-53346.99	-26071.78	41624.21	53346.99	26071.78	0.000%
23	-41624.21	-40010.24	-26071.78	41624.21	40010.24	26071.78	0.000%
24	-24072.09	-53346.99	-43753.39	24072.09	53346.99	43753.39	0.000%
25	-24072.09	-40010.24	-43753.39	24072.09	40010.24	43753.39	0.000%
26	-0.00	-99346.84	-0.00	0.00	99346.83	0.00	0.000%

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	Sur	n of Applied Force	s		Sum of Reaction	es.	
Load	PX	PY	PZ	PX	PY	PZ	% Erro
Comb.	lb	lb	lb	lb	lb	lb	
27	-19.50	-99346.84	-6009.80	19.50	99346.83	6009.78	0.000%
28	2835.99	-99346.84	-5103.34	-2835.98	99346.83	5103.33	0.000%
29	5049.02	-99346.84	-2914.62	-5049.00	99346.83	2914.62	0.000%
30	5808.23	-99346.84	94.94	-5808.21	99346.83	-94.94	0.000%
31	5168.33	-99346.84	3008.75	-5168.32	99346.83	-3008.74	0.000%
32	3017.07	-99346.84	5054.33	-3017.06	99346.83	-5054.32	0.000%
33	152.00	-99346.84	5850.18	-152.00	99346.83	-5850.16	0.000%
34	-2886.54	-99346.84	5012.73	2886.54	99346.83	-5012.72	0.000%
35	-5096.47	-99346.84	2944.74	5096.46	99346.83	-2944.73	0.000%
36	-5754.07	-99346.84	-4.34	5754.06	99346.83	4.34	0.000%
37	-4963.41	-99346.84	-3040.71	4963.39	99346.83	3040.70	0.000%
38	-2865.65	-99346.84	-5140.64	2865.65	99346.83	5140.62	0.000%
39	-74.40	-44455.83	-17230.80	74.40	44455.83	17230.80	0.000%
40	7937.34	-44455.83	-14473.96	-7937.54	44455.88	14473.87	0.000%
41	14247.93	-44455.83	-8222.20	-14247.93	44455.83	8222.20	0.000%
42	16389.81	-44455.83	362.40	-16389.81	44455.83	-362.40	0.000%
43	14783.52	-44455.83	8627.49	-14783.52	44455.83	-8627.49	0.000%
44	8627.37	-44455.83	14284.50	-8627.19	44455.88	-14284.63	0.000%
45	580.22	-44455.83	16526.35	-580.22	44455.83	-16526.35	0.000%
46	-8130.41	-44455.83	14127.91	8130.41	44455.83	-14127.91	0.000%
47	-14511.37	-44455.83	8384.46	14511.37	44455.83	-8384.46	0.000%
48	-16183.06	-44455.83	-16.51	16183.06	44455.83	16.51	0.000%
49	-13918.89	-44455.83	-8702.21	13918.89	44455.83	8702.21	0.000%
50	-8049.25	-44455.83	-14614.13	8049.46	44455.89	14614.03	0.001%

## **Non-Linear Convergence Results**

Load	Converged?	Number	Displacement	Force
Combination		of Cycles	Tolerance	Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00000140
3	Yes	4	0.00000001	0.00000139
4	Yes	4	0.00000001	0.00000300
5	Yes	4	0.00000001	0.00000261
6	Yes	4	0.00000001	0.00000376
7	Yes	4	0.00000001	0.00000322
8	Yes	4	0.00000001	0.00000271
9	Yes	4	0.00000001	0.00000246
10	Yes	4	0.00000001	0.00000146
11	Yes	4	0.00000001	0.00000146
12	Yes	4	0.00000001	0.00000290
13	Yes	4	0.00000001	0.00000255
14	Yes	4	0.00000001	0.00000376
15	Yes	4	0.00000001	0.00000322
16	Yes	4	0.00000001	0.00000300
17	Yes	4	0.00000001	0.00000261
18	Yes	4	0.00000001	0.00000142
19	Yes	4	0.00000001	0.00000140
20	Yes	4	0.00000001	0.00000282
21	Yes	4	0.00000001	0.00000252
22	Yes	4	0.00000001	0.00000369
23	Yes	4	0.00000001	0.00000315
24	Yes	4	0.00000001	0.00000279
25	Yes	4	0.00000001	0.00000241
26	Yes	4	0.00000001	0.00000001
27	Yes	4	0.00000001	0.00000583

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28	Yes	4	0.00000001	0.00000584
29	Yes	4	0.00000001	0.00000591
30	Yes	4	0.00000001	0.00000591
31	Yes	4	0.00000001	0.00000596
32	Yes	4	0.00000001	0.00000601
33	Yes	4	0.00000001	0.00000604
34	Yes	4	0.00000001	0.00000597
35	Yes	4	0.00000001	0.00000591
36	Yes	4	0.00000001	0.00000587
37	Yes	4	0.00000001	0.00000588
38	Yes	4	0.00000001	0.00000584
39	Yes	4	0.00000001	0.00000001
40	Yes	4	0.0000001	0.00000001
41	Yes	4	0.00000001	0.00000001
42	Yes	4	0.00000001	0.00000001
43	Yes	4	0.0000001	0.00000001
44	Yes	4	0.00000001	0.00000001
45	Yes	4	0.00000001	0.00000001
46	Yes	4	0.0000001	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

## **Maximum Tower Deflections - Service Wind**

Section	Elevation	Horz.	Gov.	Tilt	Twist
No.		Deflection	Load		
	ft	in	Comb.	0	0
T1	175.3 - 160	7.719	39	0.3985	0.0551
T2	160 - 140	6.424	39	0.3862	0.0545
T3	140 - 120	4.842	39	0.3390	0.0528
T4	120 - 100	3.499	39	0.2694	0.0496
T5	100 - 80	2.420	39	0.2155	0.0352
T6	80 - 60	1.556	39	0.1731	0.0255
T7	60 - 40	0.871	39	0.1265	0.0168
T8	40 - 20	0.392	39	0.0788	0.0095
T9	20 - 0	0.106	39	0.0321	0.0034

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

Elevation	Appurtenance	Gov.	Deflection	Tilt	Twist	Radius of
		Load				Curvature
ft		Comb.	in	0	0	ft
170.00	40,000 sq in CaAa (6,000 lbs)	39	7.267	0.3956	0.0550	116721
155.00	40,000 sq in CaAa (6,000 lbs)	39	6.012	0.3780	0.0541	31344
140.00	30,000 sq in CaAa (4,000 lbs)	39	4.842	0.3390	0.0528	18856
125.00	8' Solid Dish	39	3.810	0.2864	0.0514	17339
115.00	8' Solid Dish	39	3.206	0.2539	0.0466	18132

## **Maximum Tower Deflections - Design Wind**

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Section	Elevation	Horz.	Gov.	Tilt	Twist
No.		Deflection	Load		
	ft	in	Comb.	0	0
T1	175.3 - 160	23.585	2	1.2214	0.1691
T2	160 - 140	19.615	2	1.1836	0.1671
T3	140 - 120	14.769	2	1.0381	0.1621
T4	120 - 100	10.659	2	0.8240	0.1520
T5	100 - 80	7.361	2	0.6583	0.1081
T6	80 - 60	4.724	2	0.5280	0.0781
T7	60 - 40	2.639	2	0.3854	0.0514
T8	40 - 20	1.184	2	0.2397	0.0291
T9	20 - 0	0.319	2	0.0976	0.0106

# Critical Deflections and Radius of Curvature - Design Wind

Elevation	Appurtenance	Gov. Load	Deflection	Tilt	Twist	Radius of Curvature
ft		Comb.	in	0	۰	ft
170.00	40,000 sq in CaAa (6,000 lbs)	2	22.199	1.2124	0.1686	38050
155.00	40,000 sq in CaAa (6,000 lbs)	2	18.353	1.1583	0.1658	10240
140.00	30,000 sq in CaAa (4,000 lbs)	2	14.769	1.0381	0.1621	6120
125.00	8' Solid Dish	2	11.608	0.8764	0.1576	5663
115.00	8' Solid Dish	2	9.762	0.7764	0.1430	5929

## Compression Checks

## Leg Design Data (Compression)

Section No.	Elevation	Size	L	$L_u$	Kl/r	Α	$P_u$	$\phi P_n$	$Ratio$ $P_u$
	ft		ft	ft		$in^2$	lb	lb	$\phi P_n$
T1	175.3 - 160	P2x.154	15.30	5.10	77.8 K=1.00	1.0745	-14979.50	31079.10	0.482
T2	160 - 140	P3x.216	20.02	6.67	68.8 K=1.00	2.2285	-58686.50	70930.60	0.827
Т3	140 - 120	P4x.237	20.02	6.67	53.0 K=1.00	3.1741	-116143.00	116271.00	0.999
T4	120 - 100	P6x.28	20.02	6.67	35.7 K=1.00	5.5813	-170905.00	228860.00	0.747
T5	100 - 80	P8x.322	20.02	6.67	27.3 K=1.00	8.3993	-220545.00	357982.00	0.616
Т6	80 - 60	P8x.322	20.02	6.67	27.3 K=1.00	8.3993	-265229.00	357982.00	0.741
T7	60 - 40	P8x.322	20.03	6.68	27.3 K=1.00	8.3993	-299630.00	357954.00	0.837
Т8	40 - 20	P8x.322	20.03	6.68	27.3 K=1.00	8.3993	-329326.00	357954.00	0.920
Т9	20 - 0	P10x.365	20.03	6.68	21.8 K=1.00	11.9083	-357672.00	517553.00	0.691

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<sup>&</sup>lt;sup>1</sup>  $P_u$  /  $\phi P_n$  controls

		Diagonal Design Data (Compression)							
Section No.	Elevation	Size	L	$L_u$	Kl/r	A	$P_u$	$\phi P_n$	Ratio P <sub>u</sub>
	ft		ft	ft		$in^2$	lb	lb	$\phi P_n$
T1	175.3 - 160	L1 3/4x1 3/4x1/8	8.26	4.01	138.6 K=1.00	0.4219	-3834.53	6287.27	0.610 1
T2	160 - 140	L2x2x3/16	9.85	4.90	149.3 K=1.00	0.7150	-7628.56	9178.64	0.831 1
Т3	140 - 120	L2 1/2x2 1/2x3/16	11.40	5.62	136.4 K=1.00	0.9020	-9863.46	13886.40	0.710 1
T4	120 - 100	L2 1/2x2 1/2x3/16	12.65	6.15	149.0 K=1.00	0.9020	-9735.43	11624.40	0.837 1
T5	100 - 80	L2 1/2x2 1/2x1/4	13.95	6.71	163.9 K=1.00	1.1900	-9505.04	12676.80	0.750 <sup>1</sup>
T6	80 - 60	L3x3x3/16	15.28	7.38	148.6 K=1.00	1.0900	-9407.59	14128.60	0.666 <sup>1</sup>
T7	60 - 40	L3x3x3/16	17.03	8.30	167.2 K=1.00	1.0900	-7417.12	11159.90	0.665 1
Т8	40 - 20	L3x3x3/16	18.88	9.24	186.0 K=1.00	1.0900	-7317.73	9021.92	0.811 1
Т9	20 - 0	L3 1/2x3 1/2x1/4	20.77	10.09	174.4 K=1.00	1.6900	-8305.46	15902.50	0.522 1

<sup>&</sup>lt;sup>1</sup>  $P_u$  /  $\phi P_n$  controls

	Top Girt Design Data (Compression)								
Section No.	Elevation	Size	L	$L_u$	Kl/r	A	$P_u$	$\phi P_n$	Ratio P <sub>u</sub>
	ft		ft	ft		$in^2$	lb	lb	$\frac{P_n}{\Phi}$
T1	175.3 - 160	L2x2x1/8	6.50	6.30	190.2 K=1.00	0.4844	-911.39	3831.03	0.238 1

<sup>&</sup>lt;sup>1</sup>  $P_u$  /  $\phi P_n$  controls

## Tension Checks

	Leg Design Data (Tension)									
Section	Elevation	Size	L	$L_u$	Kl/r	A	$P_u$	$\phi P_n$	Ratio	
No.	ft		ft	ft		$in^2$	lb	lb	$\frac{P_u}{\phi P_n}$	

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Section No.	Elevation	Size	L	$L_u$	Kl/r	A	$P_u$	$\phi P_n$	$Ratio$ $P_u$
	ft	ft ft ft		$in^2$	lb	lb	$\phi P_n$		
T1	175.3 - 160	P2x.154	15.30	5.10	77.8	1.0745	10483.70	48353.90	0.217 1
T2	160 - 140	P3x.216	20.02	6.67	68.8	2.2285	48720.60	100281.00	0.486 <sup>1</sup>
T3	140 - 120	P4x.237	20.02	6.67	53.0	3.1741	101239.00	142832.00	0.709 1
T4	120 - 100	P6x.28	20.02	6.67	35.7	5.5813	153266.00	251161.00	0.610 <sup>1</sup>
T5	100 - 80	P8x.322	20.02	6.67	27.3	8.3993	198803.00	377967.00	0.526 1
Т6	80 - 60	P8x.322	20.02	6.67	27.3	8.3993	239354.00	377967.00	0.633 1
T7	60 - 40	P8x.322	20.03	6.68	27.3	8.3993	269451.00	377967.00	0.713 1
Т8	40 - 20	P8x.322	20.03	6.68	27.3	8.3993	294857.00	377967.00	0.780 1
Т9	20 - 0	P10x.365	20.03	6.68	21.8	11.9083	317793.00	535873.00	0.593 1

<sup>&</sup>lt;sup>1</sup>  $P_u$  /  $\phi P_n$  controls

Diagonal Design Data (	Tension)
------------------------	----------

Section No.	Elevation	Size	L	$L_u$	Kl/r	A	$P_u$	$\phi P_n$	$Ratio$ $P_u$	
	ft		ft	ft		$in^2$	lb	lb	$\phi P_n$	
T1	175.3 - 160	L1 3/4x1 3/4x1/8	8.26	4.01	88.1	0.3164	3799.71	15424.80	0.246 1	
T2	160 - 140	L2x2x3/16	9.85	4.90	95.4	0.5363	7626.73	26142.20	0.292 1	
Т3	140 - 120	L2 1/2x2 1/2x3/16	11.40	5.62	86.8	0.6765	9353.33	32979.40	0.284 1	
T4	120 - 100	L2 1/2x2 1/2x3/16	11.81	5.73	88.4	0.6765	9936.99	32979.40	0.301 1	
T5	100 - 80	L2 1/2x2 1/2x1/4	13.08	6.28	97.9	0.8925	9476.86	43509.40	0.218 1	
Т6	80 - 60	L3x3x3/16	14.83	7.16	91.5	0.8175	9216.74	39853.10	0.231 1	
T7	60 - 40	L3x3x3/16	16.42	8.00	102.2	0.8175	7195.58	39853.10	0.181 1	
T8	40 - 20	L3x3x3/16	18.26	8.93	114.1	0.8175	7260.57	39853.10	0.182 1	
Т9	20 - 0	L3 1/2x3 1/2x1/4	20.77	10.09	111.0	1.2675	7982.03	61790.60	0.129 1	

<sup>&</sup>lt;sup>1</sup>  $P_u$  /  $\phi P_n$  controls

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	Top Girt Design Data (Tension)											
Section No.	Elevation	Size	L	$L_u$	Kl/r	A	$P_u$	$\phi P_n$	Ratio P <sub>u</sub>			
	ft		ft	ft		$in^2$	lb	lb	$\phi P_n$			
T1	175.3 - 160	L2x2x1/8	6.50	6.30	120.8	0.3633	862.84	17710.00	0.049 1			

<sup>&</sup>lt;sup>1</sup>  $P_u$  /  $\phi P_n$  controls

## **Section Capacity Table**

Section	Elevation	Component	Size	Critical	P	$\phi P_{allow}$	%	Pass
No.	ft	Туре		Element	lb	lb	Capacity	Fail
T1	175.3 - 160	Leg	P2x.154	3	-14979.50	31079.10	48.2	Pass
		Diagonal	L1 3/4x1 3/4x1/8	7	-3834.53	6287.27	61.0	Pass
		Top Girt	L2x2x1/8	5	-911.39	3831.03	23.8	Pass
T2	160 - 140	Leg	P3x.216	27	-58686.50	70930.60	82.7	Pass
		Diagonal	L2x2x3/16	34	-7628.56	9178.64	83.1	Pass
T3	140 - 120	Leg	P4x.237	48	-116143.00	116271.00	99.9	Pass
		Diagonal	L2 1/2x2 1/2x3/16	50	-9863.46	13886.40	71.0	Pass
T4	120 - 100	Leg	P6x.28	69	-170905.00	228860.00	74.7	Pass
		Diagonal	L2 1/2x2 1/2x3/16	71	-9735.43	11624.40	83.7	Pass
T5	100 - 80	Leg	P8x.322	90	-220545.00	357982.00	61.6	Pass
		Diagonal	L2 1/2x2 1/2x1/4	92	-9505.04	12676.80	75.0	Pass
T6	80 - 60	Leg	P8x.322	111	-265229.00	357982.00	74.1	Pass
		Diagonal	L3x3x3/16	113	-9407.59	14128.60	66.6	Pass
T7	60 - 40	Leg	P8x.322	132	-299630.00	357954.00	83.7	Pass
		Diagonal	L3x3x3/16	134	-7417.12	11159.90	66.5	Pass
T8	40 - 20	Leg	P8x.322	153	-329326.00	357954.00	92.0	Pass
		Diagonal	L3x3x3/16	155	-7317.73	9021.92	81.1	Pass
Т9	20 - 0	Leg	P10x.365	174	-357672.00	517553.00	69.1	Pass
		Diagonal	L3 1/2x3 1/2x1/4	176	-8305.46	15902.50	52.2	Pass
		8					Summary	
						Leg (T3)	99.9	Pass
						Diagonal	83.7	Pass
						(T4)		
						Top Girt	23.8	Pass
						(T1)		
						RATING =	99.9	Pass

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#### **Drilled Pier Foundation Design**

Order/Quote Number: SO30980 Part Number: Tower Model: Company: 633550 NSX 20' x 175.3' Tillman Infrastructure NS 175' - TI-OPP-22295 / Clover Fork - Harlan Co., KY

Site:



ANSI/TIA-222-H - Design Factors
Uplift Resistance Factor, Phi:
Compressive Resistance Factor, Phi:

Bearing Capacity Resistance, Phi: Lateral Resistance Factor, Phi:

0.75 0.75 0.75

0.75

1201 South Sheridan St. 574-288-3632 (phone) South Bend, IN 46619 574-288-5860 (fax)

Tower Reactions (Factored)											
Leg Compression:	362.315	kips									
Leg Uplift:	321.417	kips									
Leg Shear:	33.186	kips									
Tower Shear:	51.612	kips									
Tower Moment:	5967.548	ft-kips									
Tower Weight:	53 347	kine									

Foundation Dimensions

Mapped Response Acc., S<sub>s</sub>:

Design Response Acc., S<sub>DS</sub>: Design Response Acc., S<sub>DS</sub>:

Seismic Design Category:

Soil Corrosion Risk: Soil Weight:

Pier Diameter:	3.5 ft
Pier Extension:	0.5 ft
Pier Depth:	39 ft
Total Pier Length:	39.5 ft
Volume per Pier:	14.1 yd <sup>3</sup>
Total Volume:	42.2 yd <sup>3</sup>
Site Details	
Rock Depth:	28.5 ft
Frost Depth:	1.67 ft
Water Depth:	38.5 ft
Upper Pier Neglected:	3.5 ft
Minimum Pier Depth:	ft
Soil Induced Uplift Load:	kips
Seismic Site Class:	C T/A-222-H 2-10

0.353 g 0.306 g

pcf

Foundation Design Reactions										
Additional Load Factor:	1.00									
Compression:	362.315 kips									
Uplift:	321.417 kips									
Shear:	33.186 kips									

Foundation LPILE Load	ds (Divided by Φ <sub>s</sub> )
Shear Load:	44,248 lb
Moment Load:	0 lb-in
Axial Load:	483,087 lb

Tower Dimensions					
Tower Base Width:		20	ft		
Base Leg Diameter (Nom.):		10	in		
Base Leg Member:	Pipe			-	Г
Bracing System:	X-Braced			-	1

Material Specifications

Concrete St	rength:	4500	psi							
Concrete W	eight:	150	pcf							
Rebar Yield	Strength:	60	ksi							
Clear Cover		3	in							
Clear Cover	(Top of Pier):	3	in							
Geotechnical R	eport		7.							
Company:	Environmenta	Corporation of	America							
Date:	3/15/2023	3/15/2023								
		23-000518								

4500 psi

Uplift:	OK	94.0%
Uplift Cone Check:	OK	15.3%
Compression:	ок	76.8%
Minimum 3 Pier Diameter Spacing:	OK	
Max Pier Length / Diameter Ratio:	OK	
Neglect Frost Depth:	OK	
Neglect Top Portion of Pier:	OK	
Minimum Depth:	OK	
Pier Compressive Strength:	ок	12.1%
Pier Tensile Strength:	OK	32.8%
Minimum Vertical Reinforcement:	OK	
Rebar Strength:	OK	
Rebar Spacing:	OK	
Compressive Shear:	ок	
Anchor Bolt Strength:	OK	60.0%
Anchor Bolt Development:	OK	
Embedment Plate Fit:	ок	
Seismic Lateral Restraint:	OK	

Max. Foundation Capacity Rating 94.0%

Compression	/Uplift Resistand	e Design	рсі	1															
		, , , , , , , , , , , , , , , , , , ,				Allowable S	kin Friction			Ultimate Skin Friction			Net Concrete Weight (1)					Friction R	tesistance
Layer	Depth	Depth	Length	Diameter	Up	olift	Compr	ession	U	plift	Comp	ression	Weight	Compression	Uplift	Ultimate	Bearing	Uplift	Comp.
	(ft)	(ft)	(ft)	(ft)	(ksf)	Safety	(ksf)	Safety	(ksf)	(kips)	(ksf)	(kips)	(pcf)	(kips)	(kips)	(ksf)	(kips)	(kips)	(kips)
1	-0.5	0	0.5	3.5	0.000	Factor	0.000	Factor	0.000	0.00	0.000	0.00	150	0.72	0.72	Allowable	FS	0.00	0.00
2	0	3.5	3.5	3.5	0.000	2.0	0.000	2.0	0.000	0.00	0.000	0.00	150	1.35	5.05	12.00	3.0	0.00	0.00
3	3.5	8.5	5	3.5	0.539	2.0	0.539	2.0	1.078	59.27	1.078	59.27	150	1.92	7.22	0.00	0.00	59.27	59.27
4	8.5	13.5	5	3.5	0.270	2.0	0.270	2.0	0.540	29.69	0.540	29.69	150	1.92	7.22	0.00	0.00	29.69	29.69
5	13.5	18.5	5	3.5	0.113	2.0	0.113	2.0	0.226	12.42	0.226	12.42	150	1.92	7.22	0.00	0.00	12.42	12.42
6	18.5	23.5	5	3.5	0.056	2.0	0.056	2.0	0.112	6.16	0.112	6.16	150	1.92	7.22	0.00	0.00	6.16	6.16
7	23.5	28.5	5	3.5	0.580	2.0	0.580	2.0	1.160	63.77	1.160	63.77	150	1.92	7.22	0.00	0.00	63.77	63.77
8	28.5	39	10.5	3.5	0.937	2.0	0.937	2.0	1.874	216.36	1.874	144.24	87.6	4.04	14.85	0.00	0.00	216.36	144.24
9	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
10	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
11	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
12	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
13	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
14	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
15	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
16	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
17	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
18	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
19	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
20	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
21	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	0.00	0.00	0.00	0.00
22	39	39	0	3.5		0.0	0.000	0.0	0.000	0.00	0.000	0.00	87.6	0.00	0.00	36.00	346.36	0.00	346.36
Total										387.67		315.55		15.73	56.71		346.36	341.79	496.43
																		OK	OK

Extended Pier: 94.0% 76.8%

Uplift Cone R	tesistance - Weig	ht of Soil Co	ne	Prominent Su	bsurface Mate	Cohesionless Soil /	Rock •						
Pier	Pier	Pier	Pier	Pier	Friction	Soil	Cone Frustum				Soil	Soil	Uplift
Depth	Depth	Diameter	Volume	Weight	Angle	Weight	Height	Radius	Radius	Volume	Volume	Weight	Capacity
(ft)	(ft)	(ft)	(ft^3)	(kips)	(deg)	(kcf)	(ft)	(ft)	(ft)	(ft^3)	(ft^3)	(kips)	(kips)
0	3.5	3.5	33.67	5.05	0	0.110	3.50	22.25	22.25	5442	5408	594.86	449.93
3.5	39	3.5	341.55	51.23	30	0.110	35.50	1.75	22.25	19959	19617	2157.87	1656.83
39	39	3.5	0.00	0.00	30	0.110	0.00	1.75	1.75	0	0	0.00	0.00

OK 2106.76 ertical Reinforcement Design

vertical Refilior Centerit Design																			
						Total			Minimum	Rebar				Equivalent Pipe					
	Number	Bar	Bar	Bar	Bar	Bar	Bar	Total	Bar Area	Circle	Ctr-Ctr	Clear	Outer	Inner		Section	Induced	Induced	Design
	of Bars	Size	Length	Diameter	Weight	Weight	Area	Bar Area	Required	Diameter	Spacing	Spacing	Diameter	Diameter	Thickness	Modulus	Moment	Stress	Stress
			(in)	(in)	(lb/ft)	(lb)	(sq in)	(sq in)	(sq in)	(in)	(in)	(in)	(in)	(in)	(in)	(in ^ 3)	(ft-kips)*	(ksi)	(ksi)
	23	8	468	1.000	2.670	2395	0.79	18.17	6.93	34.000	4.6	3.6	34.17	33.83	0.340	153.7	404.43	49.27	54
								OK	TIA-222 H-9.4.1			OK						OK	91.2%

Pier Axial Strength - Compression and Tension Compressiv Strength Reduction Factor 1385.44 6320.02 0.65 3286.41 1.10 0.121 1090.20 0.90 981.18 0.328

Development Length - Vertical Rebar										
	Reinf.		Reinf.	Lightwt.	Spacing	Transverse	Develop.			
Bar	Location	Coating	Size	Aggregate	or Cover,	Reinf.	Length			
Size	Factor, α	Factor, β	Factor, y	Factor, A	С	Index, K <sub>tr</sub>	l d			
					(in)		(in)			
	4.0	4.0	4.0	4.0	0.00	0.0	00.0			

Tie Reinforce	ment Design														
				Total					Maximum		Number	Actual	Number		
Number	Bar	Bar	Bar	Bar	Bar	Overlap	Total		Tie	Zone	of Tie	Tie	of Ties		
of Bars	Size	Diameter	Weight	Weight	Area	Length	Length	Zone	Spacing	Distance	Spaces	Spacing	per Zone	Standard	Confinement
		(in)	(lb/ft)	(lb)	(sq in)	(in)	(in)		(in)	(in)		(in)		Α.	pplied

								End	5	5	1	5	2
54	4	0.500	0.668	391	0.20	18.0	130.0	Тор	6	72	12	6	12
34	-4	0.300	0.008	391	0.20	10.0	130.0	Middle	10	385.5	39	9 7/8	38
								End	5	5	1	5	2

---

Shear (Uplift)
Factored Nom. Shea
Axial Force Concrete Axial Force Bar Area V (kip) N<sub>u</sub>(lb) d (in) W<sub>c</sub> (lb)  $A_g\,(in^2)$ V<sub>c</sub> (kip)  $A_{vmin}\,(in^2)$  $A_v (in^2)$ V<sub>s</sub> (kip)  $\varphi V_n(kip)$ N<sub>u</sub>(lb) V<sub>c</sub> (kip)  $\varphi V_n(kip)$ 0.400 **OK** 281.527 321417 101.484 197.073 OK ACF-318-14 22 OK 11.8% 33.19 362315 33.600 0.013 0.000 1385.442 214.089 0.352 161.280 ОК OK 16.8%

ACI-318-14 22 5 10 6 ACI-318-14 22 9 3 1 ACI-318-14 22 9 3 1

#### Splice Length - Ties

Bar Size	Reinf. Location Factor, α	Coating Factor, β	Reinf. Size Factor, γ	Lightwt. Aggregate Factor, λ	Spacing or Cover,	Transverse Reinf. Index, K <sub>tr</sub>	Development Length	Splice Length Tolerance	Splice Length 1.3 * [ d
					(in)		(in)	(in)	(in)
4	1.0	1.0	0.8	1.0	3.25	0.0	12.0	1.0	18.0

ACI-318-14 25.4.2.4 318-14 Table 25.4.CI-408-03- 4.5.2 318-14 Table 25.4.2.4 ACI-318-14 25.4.2.5318-14 Table 25.4.2.2 ACI-318-14 Table 25.4.2.5

#### Anchor Bolts and Embedment Plate

	ionor botto una Emboumont i luto											
Number of Bolts	Bolt Diameter (in)	Bolt Length (in)	Anchor Bolt P/N	Bolt Projection (in)	Projection Tolerance Above (in)	Projection Tolerance Below (in)	Plate PN	Plate O.D. / Width	Plate I.D.	Bolt Circle Diameter (in)	Plate Thickness (in)	
10	1.00	60	102970	5.75	0.1875	-0.25	139914	16.75	0	14.25	0.5	

Std. Pattern

Bolt Threads per Inch	(in <sup>2</sup> )	Bolt Net Area (in <sup>2</sup> )	Strength (ksi)	Ultimate Tensile Stress (ksi)	Resistance Factor	Bolt Nominal Tensile Strength (kip)	Bolt Design Tensile Strength (kip)	Nominal Shear Rupture Strength (kip)	(kip)	Shear Yield Strength (kip)	Interaction Equation	Length (in)	Engaged by Bolts (in)	required (in)	Plate (in)
8	0.785	0.606	105	125	0.75	75.718	56.788	49.087	63.603	19.081	0.600	54.06	38.19	28.89	8.13

0.600 OK 60.0%

Notes

- Foundation design is based on the Geotechnical Report dated 03/15/2023, by Environmental Corporation of America; Project No. 23-000518.

- Groundwater may be encountered at 38.5 feet bgs at this site based on the geotechnical investigation. The need for dewatering should be anticipated below this depth.

- Rock conditions were encountered about 28.5 feet bgs in the geotechnical investigation.

## **SST Drilled Pier Foundation Design Summary**

Max. Foundation Capacity Rating:	94.0%

FOUNDATION DIMENSIONS									
Tower Width:	20	ft							
Pier Extension:	0.5	ft							
Pier Depth:	39	ft							
Pier Diameter:	3.5	ft							
Clear Cover:	3	in							
Clear Cover (Top of Pier):	3	in							
Volume per Pier:	14.1	yd <sup>3</sup>							
Total Volume:	42.2	yd <sup>3</sup>							

PIER REINFORCEMENT									
Bar Size:	8								
Bar Length:	468	in							
On Center Spacing:	4.6	in							
Quantity per Pier:	23								
Total Quantity:	69								
Weight per Pier:	2395	lbs							
Total Weight:	7185	lbs							

TIE REINFORCEMENT									
Bar Size:	4								
Bar Length:	130	in							
Circular Tie Outer Diameter:	36	in							
Overlap:	18	in							
Tie Termination Type:	Ove	erlap							
Quantity per Pier:	54								
Total Quantity:	162								
Top Zone - Quantity:	2								
Top Zone - Spacing:	5	in							
Anchor Zone - Quantity:	12								
Anchor Zone - Spacing:	6	in							
Middle Zone - Quantity:	38								
Middle Zone - Spacing:	9.875	in							
Bottom Zone - Quantity:	2								
Bottom Zone - Spacing:	5	in							
Weight per Pier:	391	lbs							
Total Weight:	1173	lbs							

TOWER REACTIONS									
Leg Compression:	362.3	kip							
Leg Uplift:	321.4	kip							
Leg Shear:	33.2	kip							
Tower Shear:	51.6	kip							
Tower Moment:	5967.5	ft-kip							
Tower Weight:	53.3	kip							

MATERIAL SPECIFICATIONS					
Concrete Strength: 4500 psi					
Concrete Weight:	150	pcf			
Rebar Yield Strength:	60	ksi			

ANCHORING DETAILS						
Anchor P/N:	102	970				
Anchor Diameter:	1	in				
Anchor Length:	60	in				
nchor Quantity per Leg: 10						
	Std. Pattern					
Anchor Projection:	5.75	in				
	+ 0.1875"	-0.25"				
Bolt Circle Diameter:	14.25	in				
Template P/N 139914						

BACKFILL CRITERIA (NON-STRUCTURAL)					
Loose Lift Thickness:	8	in			
Percent Compaction:	95%				
ASTM Standard:	D698				
Optimum Moisture	2%				
Content:	-2%				

#### ADDITIONAL NOTES

- Foundation design is based on the Geotechnical Report dated 03/15/2023, by Environmental Corporation of America; Project No. 23-000518.

ECO#:

- Groundwater may be encountered at 38.5 feet bgs at this site based on the geotechnical investigation. The need for dewatering should be anticipated below this depth.

- Rock conditions were encountered about 28.5 feet bgs in the geotechnical investigation.

▲ This is a beta release of the new ATC Hazards by Location website. Please <u>contact us</u> with feedback.

1 The ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.

## ATC Hazards by Location

#### **Search Information**

**Coordinates:** 36.835783, -83.327628

Elevation: 1184 ft

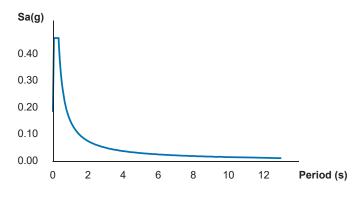
**Timestamp:** 2023-08-24T19:18:58.874Z

Hazard Type: Seismic

Reference Document: ASCE7-16

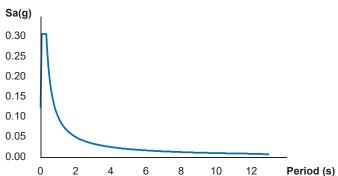
Risk Category: II
Site Class: C

#### **MCER Horizontal Response Spectrum**





#### **Design Horizontal Response Spectrum**



#### **Basic Parameters**

Name	Value	Description
S <sub>S</sub>	0.353	MCE <sub>R</sub> ground motion (period=0.2s)
S <sub>1</sub>	0.1	MCE <sub>R</sub> ground motion (period=1.0s)
S <sub>MS</sub>	0.46	Site-modified spectral acceleration value
S <sub>M1</sub>	0.15	Site-modified spectral acceleration value
S <sub>DS</sub>	0.306	Numeric seismic design value at 0.2s SA
S <sub>D1</sub>	0.1	Numeric seismic design value at 1.0s SA

#### **▼**Additional Information

Name	Value	Description
SDC	В	Seismic design category
Fa	1.3	Site amplification factor at 0.2s
F <sub>v</sub>	1.5	Site amplification factor at 1.0s
CR <sub>S</sub>	0.932	Coefficient of risk (0.2s)
CR <sub>1</sub>	0.924	Coefficient of risk (1.0s)

PGA	0.218	MCE <sub>G</sub> peak ground acceleration
F <sub>PGA</sub>	1.2	Site amplification factor at PGA
PGA <sub>M</sub>	0.262	Site modified peak ground acceleration
TL	12	Long-period transition period (s)
SsRT	0.353	Probabilistic risk-targeted ground motion (0.2s)
SsUH	0.379	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	1.5	Factored deterministic acceleration value (0.2s)
S1RT	0.1	Probabilistic risk-targeted ground motion (1.0s)
S1UH	0.108	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	0.6	Factored deterministic acceleration value (1.0s)
PGAd	0.5	Factored deterministic acceleration value (PGA)

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Please note that the ATC Hazards by Location website will not be updated to support ASCE 7-22. Find out why.

#### **Disclaimer**

Hazard loads are provided by the U.S. Geological Survey Seismic Design Web Services.

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COMPETING UTILITIES,	EXHIBIT D CORPORATIONS,	OR PERSONS LIST

## **KY** Public Service Commission

# Master Utility Search

Reports

- Search for the utility of interest by using any single or combination of criteria.
- Enter Partial names to return the closest match for Utility Name and Address/City/Contact entries.

Utility ID Utility Name Address/City/Contact Utility Type Sta	atus
---	------



✓ Active ✓

	1		1		T	
	Utility ID	Utility Name	Utility Type	Class	City	State
View	4111300	2600Hz, Inc. dba ZSWITCH	Cellular	D	Henderson	NV
View	4113600	AFNET, LLC	Cellular	С	Alpharetta	GA
View	4108300	Air Voice Wireless, LLC d/b/a AirTalk Wireless	Cellular	А	Houston	TX
View	4113150	ALLDATA COMMUNICATIONS CORP.	Cellular	D	Brooklyn	NY
View	4111900	ALLNETAIR, INC.	Cellular	D	West Palm Beach	FL
View	44451184	Alltel Corporation d/b/a Verizon Wireless	Cellular	Α	Lisle	IL
View	4110850	AltaWorx, LLC	Cellular	D	Fairhope	AL
View	4107800	American Broadband and Telecommunications Company	Cellular	D	Toledo	ОН
View	4108650	AmeriMex Communications Corp.	Cellular	Α	Safety Harbor	FL
View	4105100	AmeriVision Communications, Inc. d/b/a Affinity 4	Cellular	D	Virginia Beach	VA
View	4105700	Assurance Wireless USA, L.P.	Cellular	С	Atlanta	GA
View	4113100	BARK TECHNOLOGIES, INC.	Cellular	D	Atlanta	GA
View	4108600	BCN Telecom, Inc.	Cellular	D	Morristown	NJ
View	4106000	Best Buy Health, Inc. d/b/a GreatCall d/b/a Jitterbug	Cellular	Α	San Diego	CA
View	4111050	BlueBird Communications, LLC	Cellular	D	New York	NY
View	4107600	Boomerang Wireless, LLC	Cellular	В	Dallas	TX
View	4105500	BullsEye Telecom, Inc.	Cellular	D	Southfield	MI
View	4100700	Cellco Partnership dba Verizon Wireless	Cellular	А	Basking Ridge	NJ

View	4106600	Cintex Wireless, LLC	Cellular	D	Houston	TX
View	4112900	Clear Mobile, LLC	Cellular	D	Edmond	OK
View	4111150	Comcast OTR1, LLC	Cellular	В	Phoeniexville	PA
View	4113550	Comlink Total Solutions Corp	Cellular	С	Fort Myers	FL
View	4101900	Consumer Cellular, Incorporated	Cellular	Α	Portland	OR
View	4112700	Cox Wireless, LLC	Cellular	D	Atlanta	GA
View	4108850	Cricket Wireless, LLC	Cellular	Α	San Antonio	TX
View	4111500	CSC Wireless, LLC d/b/a Altice Wireless	Cellular	С	Long Island City	NY
View	4114000	Daywalker Mobile Inc.	Cellular		Bartlesville	OK
View	4112000	DISH Wireless L.L.C.	Cellular	Α	Englewood	CO
View	4111200	Dynalink Communications, Inc.	Cellular	С	Brooklyn	NY
View	4111800	Earthlink, LLC	Cellular	В	Atlanta	GA
View	4101000	East Kentucky Network, LLC dba Appalachian Wireless	Cellular	А	Ivel	KY
View	4002300	Easy Telephone Service Company dba Easy Wireless	Cellular	D	Ocala	FL
View	4113250	Elevate Platforms, LLC	Cellular	D	Nashville	TN
View	4109500	Enhanced Communications Group, LLC	Cellular	D	Bartlesville	ОК
View	4113800	EVOLVE WIRELESS LLC	Cellular	С	Maumee	ОН
View	4110450	Excellus Communications, LLC	Cellular	D	Harrisburg	SD
View	4112400	Excess Telecom Inc.	Cellular	D	Beverly Hills	CA
View	4104800	France Telecom Corporate Solutions L.L.C.	Cellular	D	Herndon	VA
View	4111750	Gabb Wireless, Inc.	Cellular	В	Lehi	UT
View	4109350	Global Connection Inc. of America	Cellular	D	Newport	KY
View	4102200	Globalstar USA, LLC	Cellular	С	Covington	LA
View	4112850	GO TECHNOLOGY MANAGEMENT, LLC	Cellular	D	Atlanta	GA
View	4109600	Google North America Inc.	Cellular	Α	Mountain View	CA
View	4113500	GR8 CONNECT Corp.	Cellular	С	Brooklyn	NY
View	33350363	Granite Telecommunications, LLC	Cellular	D	Quincy	MA
View	4114050	Helix Wireless Inc.	Cellular	С	Monmouth Junction	NJ
View	4111350	HELLO MOBILE TELECOM LLC	Cellular	D	Dania Beach	FL
View	4112950	Hoop Wireless, LLC	Cellular	D	Lakewood	NJ
View	4103100	i-Wireless, LLC	Cellular	В	Newport	KY
View	4112550	IDT Domestic Telecom, Inc.	Cellular	D	Newark	NJ
View	4109800	IM Telecom, LLC d/b/a Infiniti Mobile	Cellular	D	Plano	TX
View	4112650	Insight Mobile, Inc.	Cellular	D	Los Angeles	CA
View	4111950	J Rhodes Enterprises LLC	Cellular	D	Gulf Breeze	FL
View	22215360	KDDI America, Inc.	Cellular	D	Staten Island	NY
View	10872	Kentucky RSA #1 Partnership	Cellular	Α	Basking Ridge	NJ
	4112200	Lexvor Inc.	Cellular	D	Irvine	CA

View	4111250	Liberty Mobile Wireless, LLC	Cellular	A	Sunny Isles Beach	FL
View	4111400	Locus Telecommunications, LLC	Cellular	D	Fort Lee	NJ
View	4107300	Lycamobile USA, Inc.	Cellular	D	Newark	NJ
View	4112500	Marconi Wireless Holdings, LLC	Cellular	В	Westlake Village	CA
View	4113850	MAXSIP TELECOM CORPORATION	Cellular	С	Woodmere	NY
View	4108800	MetroPCS Michigan, LLC	Cellular	Α	Bellevue	WA
View	4111700	Mint Mobile, LLC	Cellular	В	Costa Mesa	CA
View	4111850	Mobi, Inc.	Cellular	D	Honolulu	HI
View	4113350	NatWireless, LLC	Cellular	D	Houston	TX
View	4202400	New Cingular Wireless PCS, LLC dba AT&T Mobility, PCS	Cellular	Α	San Antonio	TX
View	4112350	NewPhone Wireless, L.L.C.	Cellular	D	Houston	TX
View	4000800	Nextel West Corporation	Cellular	D	Overland Park	KS
View	4110700	Norcell, LLC	Cellular	D	Clayton	WA
View	4113700	Nova Labs, Inc. dba Helium Mobile	Cellular	С	Boulder	СО
View	4001300	NPCR, Inc. dba Nextel Partners	Cellular	D	Overland Park	KS
View	4110750	Onvoy Spectrum, LLC	Cellular	D	Chicago	IL
View	4109050	Patriot Mobile LLC	Cellular	С	Grapevine	TX
View	4110250	Plintron Technologies USA LLC	Cellular	D	Bellevue	WA
View	33351182	PNG Telecommunications, Inc. dba PowerNet Global Communications	Cellular	D	Cincinnati	ОН
View	4112800	Prepaid Wireless Group, LLC dba Prepaid Wireless Wholesale	Cellular	D	Rockville	MD
View	4115000	Prosper Wireless LLC	Cellular	С	Sherman Oaks	CA
View	4107700	Puretalk Holdings, Inc.	Cellular	Α	Covington	GA
View	4106700	Q Link Wireless, LLC	Cellular	Α	Dania	FL
View	4108700	Ready Wireless, LLC	Cellular	D	Cedar Rapids	IA
View	4113200	Red Pocket Inc.	Cellular	D	Thousand Oaks	CA
View	4106200	Rural Cellular Corporation	Cellular	Α	Basking Ridge	NJ
View	4108550	Sage Telecom Communications, LLC dba TruConnect	Cellular	Α	Los Angeles	CA
View	4113050	Sarver Corporation	Cellular	D	Ontario	CA
View	4109150	SelecTel, Inc. d/b/a SelecTel Wireless	Cellular	Α	Fremont	NE
View	4110150	Spectrotel of the South LLC dba Touch Base Communications	Cellular	D	Neptune	NJ
View	4111450	Spectrum Mobile, LLC	Cellular	Α	St. Louis	МО
View	4200100	Sprint Spectrum, L.P.	Cellular	Α	Atlanta	GA
View	4200500	SprintCom, LLC	Cellular	Α	Atlanta	GA
View	4111600	STX Group LLC dba Twigby	Cellular	D	Murfreesboro	TN
View	4113450	Syntegra North America, LLC	Cellular	D	Denton	TX
View	4202200	T-Mobile Central, LLC dba T- Mobile	Cellular	A	Bellevue	WA

View	4002500	TAG Mobile Bankruptcy Sale Entity, LLC	Cellular	D	Plano	TX
View	4109700	Telecom Management, Inc. dba Pioneer Telephone	Cellular	D	Saco	ME
View	4107200	Telefonica Global Solutions USA, Inc.	Cellular	D	Miami	FL
View	4112100	Tello LLC	Cellular	В	Atlanta	GA
View	4108900	Telrite Corporation	Cellular	D	Covington	GA
View	4108450	Tempo Telecom, LLC	Cellular	D	Dallas	TX
View	4113900	TERRACOM Inc. d/b/a Maxsip Tel	Cellular	С	Chattanooga	TN
View	4113950	THE LIGHT PHONE INC.	Cellular	С	Brooklyn	NY
View	4110400	Torch Wireless Corp.	Cellular	D	Jacksonville	FL
View	4103300	Touchtone Communications, Inc.	Cellular	D	Cedar Knolls	NJ
View	4104200	TracFone Wireless, Inc.	Cellular	D	Miami	FL
View	4112250	TROOMI WIRELESS, Inc.	Cellular	D	Lehi	UT
View	4002000	Truphone, Inc.	Cellular	D	Durham	NC
View	4112600	Tube Incorporated dba Reach Mobile	Cellular	D	Atlanta	GA
View	4112750	Unity Wireless, Inc.	Cellular	D	Pembroke Pines	FL
View	4110300	UVNV, Inc. d/b/a Mint Mobile	Cellular	D	Costa Mesa	CA
View	10630	Verizon Americas LLC dba Verizon Wireless	Cellular	А	Basking Ridge	NJ
View	4113300	Via Wireless, LLC	Cellular	D	Houston	TX
View	4110800	Visible Service LLC	Cellular	D	Basking Ridge	NJ
View	4113750	VOLT MOBILE Inc	Cellular	С	Delray Beach	FL
View	4113000	Whoop Connect Inc.	Cellular	D	New York	NY
View	4106500	WiMacTel, Inc.	Cellular	D	Calgary, AB	CA
View	4110950	Wing Tel Inc.	Cellular	D	New York	NY
View	4113400	Wrazzle, Inc.	Cellular	D	New Milford	СТ
View	4113650	XCHANGE TELECOM LLC	Cellular	С	Brooklyn	NY
View	4112150	Zefcom, LLC	Cellular	С	Wichita Falls	TX

## EXHIBIT E FAA



#### Archive Search Results Form 7460-1 for ASN 2022-ASO-35015-OE

Overview

Study (ASN): 2022-ASO-35015-OE

**Prior Study:** 

Determined Status: Letters: Determination 📆

Supplemental Form 7460-2: Please login to add a Supplemental Form 7460-2.

Sponsor Information **Sponsor's Representative Information** 

Sponsor: Tillman Infrastructure, LLC Attention Of: Donna-Marie Stipo Address: 152 West 57th Street

Address2: 8th Floor City: New York State: NY Postal Code: 10019 Country: US

Phone: 914-714-9065

Fax:

Notice Of:

**Construction Info Structure Summary** 

CONSTR **Duration:** PERM (Months: 0 Days: 0)

Work Schedule: Date Built:

Structure Details **Height and Elevation** 

Harlan

Harlan

12449 feet

133.52°

ΚY

135

No

Latitude (NAD 83): 36° 50' 08.82" N Longitude (NAD 83): 83° 19' 39.46" W

**Horizontal Datum: NAD 83** Survey Accuracy: 1A Marking/Lighting: None

Other Description:

Name:

**Current Marking/Lighting:** N/A Proposed Structure

**Current Marking/Lighting Other Description:** 

City: State: **Nearest County: Nearest Airport: Distance to Structure:** On Airport: **Direction to Structure:** 

**Description of Location:** 227 Industrial Park Rd., Harlan, KY 40831

Study request for a new self-support tower for communication **Description of Proposal:** 

services.

09/13/2022

09/13/2022

View Map

Representative: Tillman Infrastructure, LLC Attention Of: Donna-Marie Stipo Address: 152 West 57th Street

Address2: 8th floor City: New York NY State: 10019 Postal Code: Country: US

Received Date:

Completion Date: 06/29/2023

Expiration Date: 12/29/2024

**Entered Date:** 

Phone: 212-706-9580

Fax:

Structure Type: Antenna Tower Structure Name: Harlan KY - TI-22295

FCC Number:

**Proposed** DNE DET Site Elevation: 1182 Structure Height: 190 0 190 Total Height (AMSL): 1372 0 1372

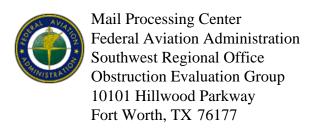
**Frequencies** 

Low Freq **High Freq** Unit ERP Unit GHz 55 dBW 6 7 6 7 GHz 42 dBW dBW 10 11.7 GHz 55 10 11.7 GHz 42 dBW 17.7 19.7 GHz 55 dBW 17.7 19.7 GHz 42 dBW 23.6 55 dBW 21.2 GHz 21.2 23.6 GHz 42 dBW 2000 698 МН 614 W 698 1000 W 614 MHz 698 806 MHz 1000 W 806 901 MHz 500 w 824 MHz 500 W 806 824 849 MHz 500 W 851 866 MHz 500 W 869 894 МН 500 w 896 901 МН 500 W 901 902 MHz w 929 932 MHz 3500 W 931 3500 W 930 MHz 931 932 3500 W MHz 932 932.5 МН 17 dBW 935 940 1000 W MHz 940 941 МН 3500 W 1670 1675 MHz 500 w 1755 500 W 1710 MHz 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	
3700	3980	MHz	3280	W	

Previous

Back to Search Next Result



Issued Date: 06/29/2023

Donna-Marie Stipo Tillman Infrastructure, LLC 152 West 57th Street 8th Floor New York, NY 10019

#### \*\* 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 Harlan KY - TI-22295

Location: Harlan, KY

Latitude: 36-50-08.82N NAD 83

Longitude: 83-19-39.46W

Heights: 1182 feet site elevation (SE)

190 feet above ground level (AGL) 1372 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.** 

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

	At least 10 days prior to start of construction (7460-2, Part 1)
X_	_ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

#### 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 expires on 12/29/2024 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

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 (206) 231-2993, or lynnette.farrell@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ASO-35015-OE.

Signature Control No: 553072013-591897338

(DNE)

Lynnette Farrell Technician

Attachment(s)
Additional Information
Frequency Data

Map(s)

cc: FCC

#### Additional information for ASN 2022-ASO-35015-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.

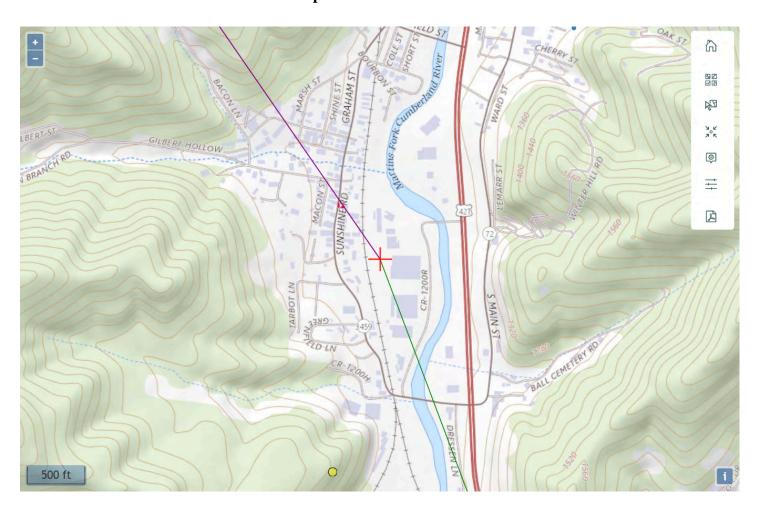
The FAA 5G C band compatibility evaluation is a data analytics system used by FAA to evaluate operational hazards related to aircraft design. The FAA 5G C band compatibility evaluation process refers to the process in which the telecommunication companies and the FAA have set parameters, such as power 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 2022-ASO-35015-OE

FREQUENCY         FREQUENCY         UNIT         ERP         UNIT           6         7         GHz         55         dBW           6         7         GHz         42         dBW           10         11.7         GHz         55         dBW	—
6 7 GHz 42 dBW	
10 11.7 CH- 55 JDW	
10 11.7 GHz 55 dBW	
10 11.7 GHz 42 dBW	
17.7 19.7 GHz 55 dBW	
17.7 19.7 GHz 42 dBW	
21.2 23.6 GHz 55 dBW	
21.2 23.6 GHz 42 dBW	
614 698 MHz 2000 W	
614 698 MHz 1000 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	
3700 3980 MHz 3280 W	

## Verified Map for ASN 2022-ASO-35015-OE



# EXHIBIT F KENTUCKY AIRPORT ZONING COMMISSION



#### KENTUCKY TRANSPORTATION CABINET

TC 55-2 Rev. 05/2017 Page 2 of 2

#### KENTUCKY AIRPORT ZONING COMMISSION

APPLICATION FOR PERMIT TO CONSTRUCT OR ALTER A STRUCTURE									
APPLICANT (name)	PHONE	FAX	KY AERONAU	TICAL STUDY #					
Tillman Infrastructure, LLC	212-706-1677								
ADDRESS (street)	CITY		STATE	ZIP					
147 West 57 <sup>th</sup> Street, 27 <sup>th</sup> Floor	New York		NY	10019					
APPLICANT'S REPRESENTATIVE (name)	PHONE	FAX							
ADDRESS (street)	CITY		STATE	ZIP					
APPLICATION FOR New Construction			WORK SCHEDULE						
	nporary (months	days )	Start 9/30/23	End 1/17/24					
TYPE Crane Building	MARKING/PAINTING/LIGHTING PREFERRED								
Antenna Tower		<del></del>		White- high intensity					
Power Line Water Tank	=	dium intensity white	Dual- red	d & high intensity white					
Landfill Other	Other								
LATITUDE	LONGITUDE		I	NAD83 NAD27					
36°50′08.82″	83 <sup>o</sup> 19'39,46"								
NEAREST KENTUCKY	1	Y PUBLIC USE OR M	ILITARY AIRPO	RT					
City Harlan County Harlan	Tucker-Guthrie Mei								
SITE ELEVATION (AMSL, feet)	TOTAL STRUCTURE HEIGHT (AGL, feet)		CURRENT (FAA aeronautical study #)						
1182	190			2022-ASO-35015					
OVERALL HEIGHT (site elevation plus total structure height, feet)  1372  PREVIOUS (FAA aeronautical study #)									
DISTANCE (from nearest Kentucky publi	ic use or Military airp	oort to structure)	PREVIOUS (K	Y aeronautical study #)					
2.3 miles from Tucker-Guthrie Memoria	al Airport								
<b>DIRECTION</b> (from nearest Kentucky pub	lic use or Military air	port to structure)							
Tower lies Southeast of Tucker-Guthrie	Memorial Airport								
<b>DESCRIPTION OF LOCATION (Attach US</b>	GS 7.5 minute quadr	angle map or an airp	oort layout dra	wing with the precise site					
marked and any certified survey.)									
Located on Industrial Park Rd, west of L	JS Hwy 421.								
DESCRIPTION OF PROPOSAL									
Installation of a telecommunications to	wer for communicat	ion services.							
FAA Form 7460-1 (Has the "Notice of Co	onstruction or Altera	tion" been filed with	the Federal Av	riation Administration?)					
Lancad No. and	the above entries m	ada huma ara trua	complete and	d correct to the hest of					
<b>CERTIFICATION</b> (I hereby certify that all the above entries, made by me, are true, complete, and correct to the best of									
my knowledge and belief.)  PENALTIES (Parsons failing to comply with KRS 183 861 to 183 000 and 603 KAR 050 are lights for fines and/or									
<b>PENALITIES</b> (Persons failing to comply with KRS 183.861 to 183.990 and 602 KAR 050 are liable for fines and/or imprisonment as set forth in KRS 183.990(3). Noncompliance with FAA regulations may result in further penalties.)									
NAME Donna-Marie Stipo TITLE National Directo Regulatory Com		rie Stipo	DATE	3-3-2023					
Chairperson, KAZC									
COMMISSION ACTION	Administrat	or, KAZC							
Approved SIGNATURE			DATE						
Disapproved									

#### **Annie Zocco**

**Subject:** FW: P-006774 /AT&T / TI-OPP-22295 / 15724961 / Clover Fork -NO need for KAZC

From: Airport Zoning Commission < <a href="mailto:AirportZoning@ky.gov">AirportZoning@ky.gov</a>>

Sent: Monday, June 26, 2023 4:58 PM

To: Compliance <compliance@consultdms.com>

**Subject:** RE: TI-OPP-22295 / Harlan KY / 2022-ASO-35015-OE

Badon,

These coordinates and height are not in KAZC jurisdiction, and no Permit is required from the KAZC.

#### **Aeronautical Study Result**

The structure is not in KAZC's jurisdiction and does not require a permit.

Call if you have questions or require additional information.

Respectfully,



#### **Anthony Adams**

AIRPORT ZONING COMMISSION, ADMINISTRATOR

Department of Aviation
90 Airport Road, Bldg 400
Frankfort, Kentucky 40601
(502) 564-0151
(502) 564-0570 Direct Line
(502) 330-4022 Mobile
Airport Zoning Commission | KYTC

From: Compliance <compliance@consultdms.com>

**Sent:** Friday, March 3, 2023 4:28 PM

**To:** Airport Zoning Commission <<u>AirportZoning@ky.gov</u>> **Cc:** DonnaMarie Stipo <<u>dmstipo@tillmaninfrastructure.com</u>> **Subject:** TI-OPP-22295 / Harlan KY / 2022-ASO-35015-OE

\*\*CAUTION\*\* PDF attachments may contain links to malicious sites. Please contact the COT Service Desk ServiceCorrespondence@ky.gov for any assistance.

Dear KY Airport Zoning Commission,

Please find attached the Application and additional information for the Boards review.

Please send us confirmation as to whether or not this will make the Commission's April 2023 meeting.

Best Regards,

Badon Delmotte

**Compliance Coordinator** 

DMS Consulting
<a href="mailto:compliance@consultdms.com">Compliance@consultdms.com</a>

# EXHIBIT G GEOTECHNICAL REPORT



# ENVIRONMENTAL CORPORATION OF AMERICA

ENVIRONMENTAL | GEOTECHNICAL | WETLANDS | ECOLOGY | CULTURAL RESOURCES



# **Geotechnical Investigation**

Clover Fork (TI-OPP-22295 / FA #15724961)

227 Industrial Park Road Harlan, Harlan County, Kentucky

ECA Project No. 23-000518



## **SUBMITTED TO:**

Tillman Infrastructure
East Region
20 Mansell Court East, Suite 375
Roswell, GA 30076

#### PREPARED BY:

Environmental Corporation of America 1375 Union Hill Industrial Court, Suite A Alpharetta, GA 30004



# ENVIRONMENTAL CORPORATION OF AMERICA

ENVIRONMENTAL | GEOTECHNICAL | WETLANDS | ECOLOGY | CULTURAL RESOURCES

March 15, 2023

Tillman Infrastructure East Region 20 Mansell Court East, Suite 375 Roswell, GA 30076

Attention: Ms. Annie Zocco, Project Manager

Subject: Geotechnical Investigation Report

Clover Fork (TI-OPP-22295 / FA #15724961)

227 Industrial Park Road

Harlan, Harlan County, Kentucky

ECA Project No. 23-000518

Dear Ms. Zocco:

Environmental Corporation of America (ECA) is pleased to submit this report of our geotechnical investigation for the proposed project. Our services were provided as authorized by TowerSource / Tillman Infrastructure, using an email approval dated February 8<sup>th</sup>, 2023.

This report presents a review of the information provided to us, a description of the site and subsurface conditions, and our recommendations. The appendices contain a Site Location Map, a Boring Location Plan, and a Boring Log.

We will be happy to discuss our recommendations with you and look forward to providing the additional studies or services necessary to complete this project. We appreciate the opportunity to be of service. Please call us with any questions at (770) 667-2040.

Sincerely,

**Environmental Corporation of America** 

Mrs. Athulya Balakrishnan, P.E.

Project Engineer

Héctor A. Acosta, M.S.C.E., P.E. Principal Geotechnical Engineer

State of Kentucky P.E. #31144

ACOSTA

# Geotechnical Investigation

# **Purpose and Scope of Work**

The purpose of this investigation was to obtain specific subsurface data at the site and to provide geotechnical related parameters for the design and construction of the foundations for a self-supported lattice tower and prefabricated telecom equipment.

Our scope of work included the following:

- One (1) soil test boring was drilled to a depth of 40 feet below the ground surface (bgs).
- Figure 1 shows the Site Location Map. Figure 2 shows the Boring Location Plan.
- Standard penetration tests (SPTs) were conducted to obtain soil samples and SPT N-values, in accordance with ASTM D-1586.
- The depth to groundwater, if any, was measured in the boring after drilling was completed.
- Natural moisture content (WC<sub>N</sub>) tests were performed on a selected number of soil samples in accordance with ASTM D-2216.
- Unconfined compressive strength (q<sub>u</sub>) index tests were performed using the pocket penetrometer test or the spring tester test (whenever possible).
- The soil samples were visually classified in accordance with ASTM D-2488 and a boring log was prepared.
- The soil conditions were evaluated by a registered professional engineer and this geotechnical report was prepared with our recommendations.

We have recommended design parameters and settlements based on the SPT N-values, an examination of the soil samples, and our experience with similar soil conditions and structures.

# **Project Information**

We were provided with a project site survey prepared by Point to Point Land Surveyors, Inc and dated May 10<sup>th</sup>, 2022. The proposed tower would be located at 227 Industrial Park Road, in Harlan, Harlan County, in Kentucky.

We understand that plans include constructing a 175-foot tall self-supported lattice tower, approximately as shown in Appendix A. We assume that the equipment building/cabinet will be a prefabricated structure supported on a perimeter grade beam, spread footing or turndown slab. The project also includes the construction of a 25-foot wide ingress/egress and utility easement.

# Field Drilling Work

The field drilling work was conducted on February 28<sup>th</sup> and March 11<sup>th</sup> of 2023. Information obtained from the boring log was used to help us evaluate the subsurface conditions and to assist in formulating our recommendations. The site was not staked at the time of our field visit.

# **Subsurface Soil Conditions (Boring B-1)**

In general, soils encountered at the site consisted of a clayey Fill material manually described as stiff to very stiff silty Clay (CL) to an approximate depth of 10 feet, underlain by soft to medium dense plastic silty Clay (CH) to an approximate depth of 23.5 feet, underlain by hard sandy Clay (CL) to an approximate depth of 28.5 feet, underlain by Weathered Shale manually described as very dense silty Gravel (Weathered Shale) to the full depth drilled of 40 feet bgs.

The following table presents a summary of the existing soil conditions.

	Profile h (ft)	Type of Soils (Soil Manual Classification)	*Soil Symbols	SPT N-Values bpf (blows per foot)
0	10	Stiff to very stiff sandy Clay	CL (Fill)	14 to 30
10	23.5	Soft to medium dense plastic silty Clay	СН	3 to 6
23.5	28.5	Hard sandy Clay	CL	50/2"
28.5	40	Weathered Shale manually descried as very dense silty Gravel	Weathered Shale	50/2" to 50/1"

<sup>\*</sup>Soil symbols are based in the Unified Soil Classification System (USCS) and the Soil and Rock Logging, Classification, and Presentation Manual (Caltrans 210 ed).

The encountered upper clayey fill soil layers are considered stiff to very stiff in consistency with estimated unconfined compressive strength (qu) measurements between 2,300 and 5,300 psf. The encountered middle plastic silty clay soil layer between 10 and 23.5 feet are considered soft to medium dense in consistency with estimated unconfined compressive strength (qu) measurements between 500 and 1,000 psf. The encountered lower sandy clay soil layer between 23.5 and 28.5 feet was considered very dense in terms of relative density.

Natural moisture (WC<sub>N</sub>) content measurements were conducted on selected soil samples and ranged between 2.0% and 36.0%. A final boring log is shown in Appendix B.

# **Groundwater Level Condition**

A groundwater level was encountered at the site at a depth of 38.5 feet bgs. It should be noted that groundwater level observations made within mostly cohesive soils during drilling could be misleading. It should be anticipated that the groundwater level will fluctuate due to seasonal climatic changes during the year. To determine actual groundwater level measurements, groundwater levels should be measured using observation wells installed for prolonged periods.

### **Foundation Construction Recommendations**

The subsurface conditions are suitable for the support of the proposed tower using a deep foundation system.

Based on our review of the subsurface soil conditions encountered in the boring, we offer the following average soil parameters for the design of a proposed drilled shaft.

De	ring epth eet)	*Unit Weight γ <sub>wet</sub> / γ <sub>b</sub> (pcf)	Friction Angle \$\phi\$ (deg)	Soil Cohesion C <sub>u</sub> (psf)	$\mathbf{K}_{p}$	Allowable Skin Friction f <sub>S</sub> (psf)	Allowable Bearing Pressure q <sub>ALL</sub> (psf)	Soil Modulus K <sub>H</sub> (pci)
0	3.5	120	0	1,700	1.00	383	-	125
3.5	8.5	120	0	2,500	1.00	539	-	125
8.5	13.5	120	0	1,200	1.00	270	-	125
13.5	18.5	105	0	500	1.00	113	-	60
18.5	23.5	105	0	250	1.00	56	-	20
23.5	28.5	125	0	3,500	1.00	580	6,000	250
28.5	40	140 / 75	41	0	4.81	937	12,000	500

Notes: A safety factor of 2 is used for allowable skin friction (fs). A safety factor of 3 is used for allowable soil bearing pressure (q<sub>ALL</sub>). \*Below the groundwater level designer should consider the buoyant unit weight ( $\gamma_b$ ) =  $\gamma_{wet} - \gamma_{water}$ .

Active earth pressure coefficient  $K_A = \tan^2(45 - \phi/2) = 1/K_P$ .

At rest earth pressure coefficient  $K_0 = 1 - \sin(\phi)$ .

The proposed drilled shaft should be designed using a combination of point bearing and friction forces. Total drilled shaft foundation settlement should not exceed 0.50 inches. Final drilled shaft diameter (D) and embedment length (L) will depend upon final tower loading conditions. For these foundations ECA recommends a minimum concrete strength (f'c) of 4,000 psi (pounds per square inch).

To prevent further settlements, ECA strongly recommends placing the bottom of foundation between 30 and 35 feet bgs.

### **Building Foundations**

The proposed equipment building can be supported on a perimeter grade beam, spread footing or turndown slab foundation. For the design of the building foundation the soils are capable of a maximum net allowable soil bearing pressure (qall) of 2,000 psf. A minimum depth of foundation (D<sub>f</sub>) of 1.5 feet below existing grades elevations should be considered. Total and differential settlements should be less than 1/2-inch and 1/4-inch, respectively.

For ground floor slabs may be designed as conventional slabs on grade over the existing soils or on engineered compacted fill using a Modulus of Subgrade Reaction (K<sub>s</sub>) of 85 pci (pounds per cubic inch). The bearing pad should be prepared and compacted prior to placing any concrete. Contractors should verify the Fill Placement section of this report.

### Soil Site Class

Based on our site evaluation and the information provided by the International Building Code (IBC 2012 / ASCE 7-10) to perform a dynamic analysis the project engineer should consider the information in the table below.

Soil Profile (feet)	*Soil Class Type
Ground level - 28.5	Soft Soil Profile and Site Class E
28.5 - 40	Very Dense Soil and Soft Rock and Site Class C
*Average properties in top 100 feet.	

#### **Foundation Excavations**

A groundwater level was encountered during foundation drilling below the expected foundation depth; therefore prospective contractor *would not need to consider* excavation dewatering.

A very dense weathered shale formation was encountered at the site in Boring B-1 at a depth of 28.5 feet bgs. The prospective contractor should consider specialized equipment for hard soil excavation or caisson drilling. Further, though we were able to drill to a depth of 40 feet bgs using a small diameter auger, drilling with large diameter foundation augers may not be possible below 28.5 feet.

To avoid softening of the shallow soils exposed at the foundation bearing level, excavations should not be left open for extended periods prior to placing reinforcing steel and concrete. If rain or freezing weather is expected, excavations should not be completed. Leaving the excavations at least 1-foot above final grade should protect the bearing soils from deterioration.

If the excavation must remain open overnight or if rainfall becomes imminent while the bearing soils are exposed, we recommend that a 2 to 4-inch thick "mud-mat" of "lean" (2,000 psi) concrete be placed on the bearing soils before the placement of reinforcing steel. If the bearing soils are softened by surface water intrusion or exposure, the softened soils must be removed from the foundation excavation bottom immediately prior to placement of concrete.

#### Fill Placement

If required, borrow materials for fill, unless otherwise specified, should consist of essentially granular material (GW, GM, GP, GC, SW, SM or SP Unified Soil Classification System); <u>A-2-4 or better</u>, AASHTO Classification, as approved by the Project Geotechnical Engineer. These should be free from vegetation and should not contain rocks greater than 6 inches in size.

The amount of fill required for this project depends on the planned final grades. Any fill or backfill required to attain finished grade should be placed in layers not exceeding 8 to 10-inch thick lifts and compacted to not less than 95% of the Standard Proctor Maximum dry density, as determined by method (ASTM D-698). The soil moisture content should be close to the optimum moisture content. All required fills should meet the specified compaction criteria.

Ms. Annie Zocco, Project Manager Page 5

ECA does not know the capability of the surficial soil to support pavements. However, we suggest that the upper soils be replaced by granular fill in areas of heavy traffic to improve the subgrade support capabilities and moisture sensitivity.

Field density tests should be conducted at routine intervals as the fill is being placed to verify that adequate compaction is achieved. Prior to placing any new fill, any soft or loose near surface soils should be removed and the area Proof-Rolled with a heavy vehicle or a heavy compaction vibratory roller to confirm that any unsuitable soil conditions have been discovered.

# Basis for Recommendations

The subsurface conditions encountered at the boring location is shown on the Boring Log in Appendix B. The Boring Log represents our interpretation of the subsurface conditions based on the field logs and visual examination of field samples by an engineer. The lines designating the interface between various strata on the Boring Log represents the approximate interface locations. In addition, the transition between strata may be gradual. The water level shown on the Boring Log, if any, represents the condition only at the time of our exploration.

The recommendations contained herein are based in part on project information provided to us and only apply to the specific project and site discussed in this report. If the project information section in this report contains incorrect information or if additional information is available, please let us know so that we may review the validity of our recommendations.

Regardless of the thoroughness of a geotechnical investigation, there is always a possibility that conditions between borings will be different from those at specific boring locations and that conditions will not be as anticipated by the designers or contractors. In addition, the construction process may itself alter soil conditions. Therefore, experienced geotechnical personnel should observe and document the construction procedures used and the conditions encountered. Unanticipated conditions and inadequate procedures should be reported to the design team along with timely recommendations to solve the problems created. ECA is best qualified to provide this service based on our familiarity with the project, the subsurface conditions, and the intent of the recommendations and design.

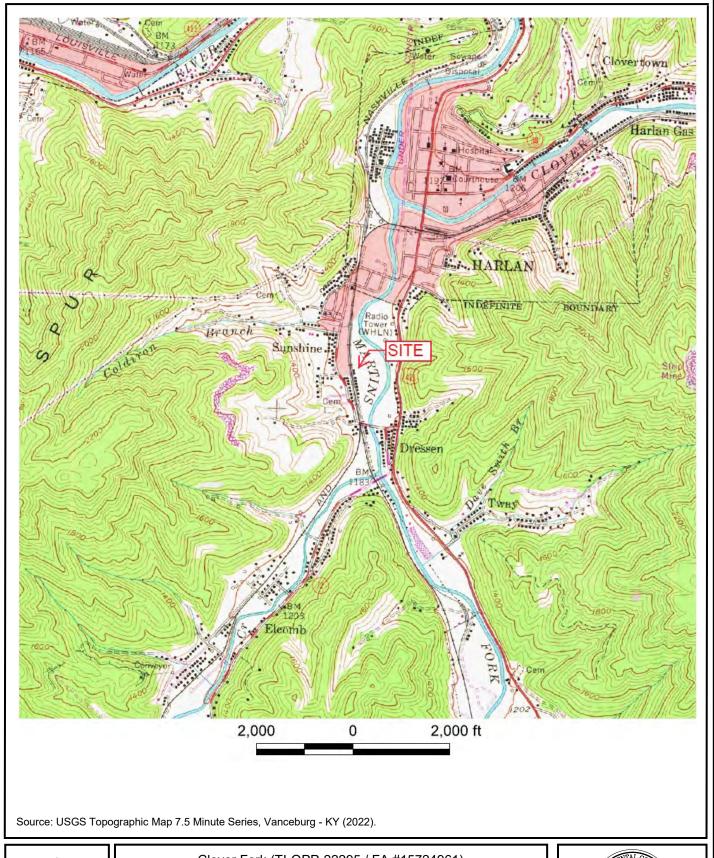
We wish to remind you that we will store the soil samples for 30 days. The samples will then be discarded unless you request otherwise.

# **APPENDICES**

Appendix A Figures
Appendix B Boring Log

# **APPENDIX A**

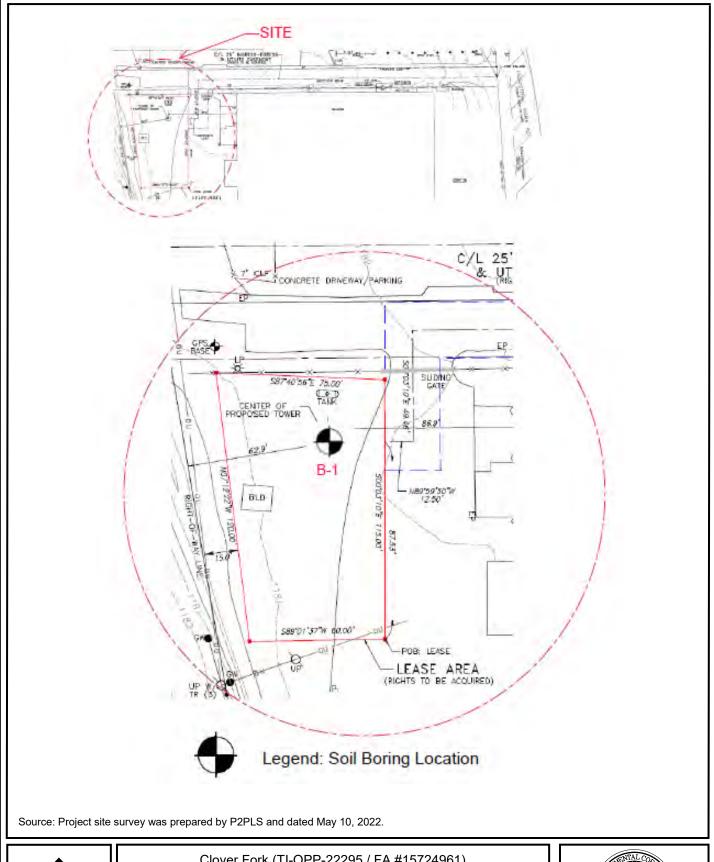
**Figures** 





Clover Fork (TI-OPP-22295 / FA #15724961)
227 Industrial Park Road
Harlan, Harlan County, Kentucky
Figure 1: Site Location Map







Clover Fork (TI-OPP-22295 / FA #15724961)
227 Industrial Park Road
Harlan, Harlan County, Kentucky
Figure 2: Boring Location Plan



# **APPENDIX B**

**Boring Log** 

# Project: Clover Fork Project Location: Harlan, KY Project Number: 23-000518

## Environmental Corp of America 1375 Union Hill Industrial Ct. Suite-A Alpharetta, GA 30004 (770) 667-2040

# Log of Boring B-1 Sheet 1 of 2

Date(s) 2/28/2023 and 3/11/2023	Logged By A. Balakrishnan	Checked By <b>H. Acosta</b>
Drilling Method HSA/Mud Drilling	Drill Bit Size/Type <b>2.25 inches</b>	Total Depth of Borehole 40 feet bgs
Drill Rig Type <b>Truck</b>	Drilling Contractor South Drilling	Approximate Surface Elevation 1,182 feet AMSL
Groundwater Level and Date Measured 38.5 feet ATD	Sampling Method(s) SPT	Hammer Data 140 Lbs hammer, rope and cathead
Borehole Rackfill Cuttings	Location Harlan, Harlan County, Ken	tucky

Backfill													=
, Depth (feet)	Sample Number	Sample Type	Sampling Resistance, blows/ft	SPT N-Values	Rec (%) / RQD (%)	MATERIAL DESCRIPTION	Material Type	USCS Symbol	Water Content (%)	qu (tsf)	qu (tsf)- Spring Tester	(%)	PI (%)
0-	. 1		6-8-12	20		6" Gravel layer Dark grey, very stiff sandy Clay, damp (Clayey Fill)	Fill		9.9	-			
5-	2		9-14-16	30		Same as above, very stiff, damp	Fill		16.2	4.0			
-	3		8-12-14	26		Same as above, very stiff, damp	Fill		16.3	4.5			
- 10 —	4		6-6-8	14		Same as above, stiff, damp	Fill		11.1	-			
K_Z3-U00518.bg4[ECA 1ef	5		2-3-3	6		- Grey, medium dense plastic silty Clay, wet	CH		36.0	-			
15 2 2 2 30 0 25 - 0.00024173-0.0001818001101811018110181101811018110	6		2-1-2	3		Same as above, soft, wet	CH		32.8	-			
	7	~~~	2-50/2"	50/2"		Dark grey, hard sandy Clay, trace roots, wet	CL		2.0	-			
30 —	8		50/2"	50/2"		- Weathered Shale manually described as grey/black, very dense silty gravel,			3.1	-			

Project: Clover Fork

Project Location: Harlan, KY

Project Number: 23-000518

**Environmental Corp of America** 1375 Union Hill Industrial Ct. Suite-A Alpharetta, GA 30004 (770) 667-2040

Log of Boring B-1 Sheet 2 of 2

පු Depth (feet) 	Sample Number	Sample Type	Sampling Resistance, blows/ft	SPT N-Values	Rec (%) / RQD (%)	MATERIAL DESCRIPTION	Material Type	USCS Symbol	Water Content (%)	qu (tsf)	qu (tsf)- Spring Tester	(%)	PI (%)
-	9	<b></b>	50/1"	50/1"		Weathered Shale manually described as grey/black, very dense silty gravel, dry		*. *. *. *. *. *. *. *. *. *. *. *. *. *	3.0	-			
35— - - -	10	222	50/1"	50/1"		- - - - - _ Same as above, very dense, dry			5.3	1			
40						End of Boring at 40 feet.							
45—													
50— - -						- - - - -							
- 55 — - -						- - - -							
60						-							

Project: Clover Fork

Project Location: Harlan, KY

Project Number: 23-000518

**Environmental Corp of America** 

1375 Union Hill Industrial Ct. Suite-A Alpharetta, GA 30004 (770) 667-2040 Key to Log of Boring
Sheet 1 of 1

Depth (feet) Sample Number	Sample Type	- Sampling Resistance, - blows/ft	SPT N-Values	Rec (%) / RQD (%)	MATERIAL DESCRIPTION	Material Type	USCS Symbol	Water Content (%)	qu (tsf)	qu (tsf)- Spring Tester	(%) TF	(%) Id
1 2	3	4	5	6	[7]	8	9	10	11	12	13	14

#### **COLUMN DESCRIPTIONS**

- 1 Depth (feet): Depth in feet below the ground surface.
- 2 Sample Number: Sample identification number.
- 3 Sample Type: Type of soil sample collected at the depth interval shown.
- 4 Sampling Resistance, blows/ft: Number of blows to advance driven sampler one foot (or distance shown) beyond seating interval using the hammer identified on the boring log.
- 5 SPT N-Values: SPT N-values
- 6 Rec (%) / RQD (%): Core Recovery (%) and RQD (%)
- MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text
- 8 Material Type: Type of material encountered.

- USCS Symbol: Graphic depiction of the subsurface material encountered.
- Water Content (%): Water content of the soil sample, expressed as percentage of dry weight of sample.
  - qu (tsf): Unconfined compression test
- 12 qu (tsf)- Spring Tester: Unconfined Compression test value from a spring tester
- **13** LL (%): Liquid Limit, expressed as a water content.
- 14 PI (%): Plasticity Index, expressed as a water content.

#### FIELD AND LABORATORY TEST ABBREVIATIONS

CHEM: Chemical tests to assess corrosivity

COMP: Compaction test

CONS: One-dimensional consolidation test

LL: Liquid Limit, percent

PI: Plasticity Index, percent

SA: Sieve analysis (percent passing No. 200 Sieve) UC: Unconfined compressive strength test, Qu, in ksf WA: Wash sieve (percent passing No. 200 Sieve)

## **MATERIAL GRAPHIC SYMBOLS**



23-000524\23-000518\Boring B1\_Clover Fork\_23-000518.bg4[ECA Temp.tpl]

Fat CLAY, CLAY w/SAND, SANDY CLAY (CH)

Lean CLAY, CLAY w/SAND, SANDY CLAY (CL)



#### **TYPICAL SAMPLER GRAPHIC SYMBOLS**

Auger sampler

Bulk Sample

3-inch-OD California w/ brass rings CME Sampler Grab Sample

HQ Rock Core

2.5-inch-OD Modified
California w/ brass liners

NQ Rock Core

Pitcher Sample

2-inch-OD unlined split spoon (SPT)

Shelby Tube (Thin-walled, fixed head)

— 

Water level (at time of drilling, ATD)

OTHER GRAPHIC SYMBOLS

—
▼ Water level (after waiting)

Minor change in material properties within a stratum

– Inferred/gradational contact between strata

-?- Queried contact between strata

#### **GENERAL NOTES**

- 1: Soil classifications are based on the Unified Soil Classification System. Descriptions and stratum lines are interpretive, and actual lithologic changes may be gradual. Field descriptions may have been modified to reflect results of lab tests.
- 2: Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced. They are not warranted to be representative of subsurface conditions at other locations or times.

# EXHIBIT H DIRECTIONS TO WCF SITE

# **Driving Directions to Proposed Tower Site**

- 1. Beginning at 210 E Central St # 111, Harlan, KY 40831, head west on E Central Street toward N 1<sup>st</sup> Street and travel approximately 0.2 miles.
- 2. Turn left onto US-421 S and travel approximately 0.7 miles.
- 3. Turn right onto Industrial Park Road and travel approximately 367 feet.
- 4. Turn left to stay on Industrial Park Road and travel approximately 285 feet.
- 5. The site is located on the right. The site address is 227 Industrial Park Road, Harlan KY 40831.
- 6. The site coordinates are:
  - a. North 36 deg 50 min 08.82 sec
  - b. West 83 deg 19 min 39.46 sec



Prepared by: Chris Shouse Pike Legal Group 1578 Highway 44 East, Suite 6 P.O. Box 396 Shepherdsville, KY 40165-3069

Telephone: 502-955-4400 or 800-516-4293

# EXHIBIT I COPY OF REAL ESTATE AGREEMENT

Market: Southeast/TN-KY
Cell Site Number: TI-OPP-22295
Cell Site Name: Clover Fork
Search Ring Name:
Fixed Asset Number: 15724961

#### OPTION AND LEASE AGREEMENT

THIS OPTION AND LEASE AGREEMENT ("Agreement"), dated as of the latter of the signature dates below (the "Effective Date"), is entered into by Harlan Countians for Progress, LLC, a Kentucky limited liability company, having a mailing address of 200 Waldon Road, Suite 1, Harlan, Kentucky 40831 ("Landlord") and Tillman Infrastructure LLC, a Delaware limited liability company, having an address at 152West 57th Street, New York, New York 10019 ("Tenant").

#### BACKGROUND

Landlord owns or controls that certain plot, parcel or tract of land, as described on **Exhibit 1**, together with all rights and privileges arising in connection therewith, located at 227 Industrial Park Road, Harlan, in the County of Harlan, State of Kentucky 40831 (collectively, the "Property"). Landlord desires to grant to Tenant the right to use a portion of the Property in accordance with this Agreement.

The parties agree as follows:

#### OPTION TO LEASE.

- (a) Landlord grants to Tenant an exclusive option (the "Option") to lease a certain portion of the Property consisting of a  $\pm 66'$  x  $\pm 120'$  parcel of property including the air space above such ground space as described on attached Exhibit 1, (the "Premises"), for the placement of a Communication Facility in accordance with the terms of this Agreement.
- (b) During the Option Term, and during the Term, Tenant and its agents, engineers, surveyors and other representatives will have the right to enter upon the Property to inspect, examine, conduct soil borings, drainage testing, material sampling, radio frequency testing and other geological or engineering tests or studies of the Property (collectively, the "Tests"), to apply for and obtain licenses, permits, approvals, or other relief required of or deemed necessary or appropriate at Tenant's sole discretion for its use of the Premises and include, without limitation, applications for zoning variances, zoning ordinances, amendments, special use permits, registrations with the Federal Communications Commissions and construction permits (collectively, the "Government Approvals"), initiate the ordering and/or scheduling of necessary utilities. Tenant will not be liable to Landlord or any third party on account of any pre-existing defect or condition on or with respect to the Property, whether or not such defect or condition is disclosed by Tenant's inspection. Tenant will restore the Property to its condition as it existed at the commencement of the Option Term, reasonable wear and tear and loss by casualty or other causes beyond Tenant's control excepted.
- (c) In consideration of Landlord granting Tenant the Options contained in this Agreement, Tenant agrees to pay Landlord the sum of within thirty (30) business days after the Effective Date. The Option may be exercised during an initial term of one (1) year commencing on the Effective Date (the "Initial Option Term"). If the Option is not exercised during the Initial Term, the term shall automatically renew for an additional one (1) year (the "Renewal Option Term"). Tenant shall pay Landlord an additional within thirty (30) business days after the start date of the Renewal Option Term. The Initial Option Term and any Renewal Option Term are collectively referred to as the "Option Term."
- (d) The Option may be sold, assigned or transferred at any time by Tenant without the written consent of Landlord. Upon notification to Landlord of such sale, assignment or transfer, Tenant shall immediately be released from any and all liability under this Agreement, including the payment of any rental or other sums due, without any further action.

- (e) During the Option Term, Tenant may exercise the Option by notifying Landlord in writing. If Tenant exercises the Option, then Landlord leases the Premises to Tenant subject to the terms and conditions of this Agreement. If Tenant does not exercise the Option during the Initial Option Term or any extension thereof, then this Agreement will terminate and the parties will have no further liability to each other.
- (f) If during the Option Term, or during the Term if the Option is exercised, Landlord decides to subdivide, sell, or change the status of the zoning of the Premises, the Property, (the "Surrounding Property"), or in the event of a threatened foreclosure on any of the foregoing, Landlord shall immediately notify Tenant in writing. Landlord agrees that during the Option Term, or during the Term if the Option is exercised, Landlord shall not initiate or consent to any change in the zoning of the Surrounding Property or impose or consent to any other use or restriction that would prevent or limit Tenant from using the Premises for the Permitted Use.
- 2. PERMITTED USE. Tenant may use the Premises for the transmission and reception of communications signals and related activities, and the installation, construction, maintenance, operation, repair, replacement and upgrade of communications fixtures and related equipment, cables, accessories and improvements, which may include a suitable tower and support structure ("Structure"), associated antennas, equipment shelters or cabinets and fencing and any other items necessary to the successful and secure use of the Premises (collectively the "Communication Facility"), as well as the right to test, survey and review title on the Property; (collectively, the ""Permitted Use"). If Exhibit 1 includes drawings of the initial installation of the Communication Facility, Landlord's execution of this Agreement will signify Landlord's approval of Exhibit 1. For a period of one hundred twenty (120) days following the start of construction, Landlord grants Tenant, its subtenants, licensees and sublicensees, the right to use such portions of the Surrounding Property as may reasonably be required during construction and installation of the Communication Facility. Tenant has the right to install and operate transmission cables from the equipment shelters or cabinets to the antennas, electric lines from the main feed to the equipment shelters or cabinets and communication lines from the Property's main entry point to the equipment shelters or cabinets, install a generator(s) and to make other improvements, additions, alterations, upgrades or additions appropriate for Tenant's Permitted Use, including the right to construct a fence around the Premises or equipment, install warning signs to make individuals aware of risks, install protective barriers, install any other control measures reasonably required by Tenant's safety procedures or applicable law. Tenant has the right to modify, supplement, replace, upgrade, expand the Communication Facility (including, for example, increasing the number of antennas or adding microwave dishes to the Structure or relocate the Communication Facility or add additional cabinets within the Premises at any time during the Term. Tenant will be allowed to make such alterations to the Property in order to ensure that the Communication Facility complies with all applicable federal, state or local laws, rules or regulations.

#### TERM.

- (a) The initial lease term will be five (5) years (the "Initial Term"), commencing on the effective date of written notification by Tenant to Landlord of Tenant's exercise of the Option (the "Term Commencement Date"). The Initial Term will terminate on the fifth (5th) anniversary of the Term Commencement Date.
- (b) This Agreement will automatically renew for seventeen (17) additional five (5) year term(s) (each additional five (5) year term shall be defined as an "Extension Term"), upon the same terms and conditions set forth herein unless Tenant notifies Landlord in writing of Tenant's intention not to renew this Agreement at least sixty (60) days prior to the expiration of the Initial Term or the then-existing Extension Term.
  - (c) The Initial Term and any Extension Terms, are collectively referred to as the "Term."

#### RENT.

(a) Commencing on the first day of the calendar month following the date that Tenant commences construction (the "Rent Commencement Date"), Tenant will pay Landlord on or before the tenth (10th) day of each calendar month in advance, (the "Rent"), at the address set forth above. In any partial month occurring after the Rent Commencement Date, the Rent will be prorated. The initial Rent payment will be forwarded by Tenant to Landlord within forty-five (45) days after the Rent Commencement Date.

- (b) Upon the commencement of each Extension Term, the monthly Rent will increase by over the Rent paid during the previous term.
- (c) All charges payable under this Agreement such as utilities and taxes shall be billed by Landlord within one (1) year from the end of the calendar year in which the charges were incurred; any charges beyond such period shall not be billed by Landlord, and shall not be payable by Tenant. The provisions of this subsection shall survive the termination or expiration of this Agreement.

# APPROVALS.

- (a) Landlord agrees that Tenant's ability to use the Premises is contingent upon the suitability of the Premises and Property for the Permitted Use and Tenant's ability to obtain and maintain all Government Approvals. Landlord authorizes Tenant to prepare, execute and file all required applications to obtain Government Approvals for the Permitted Use and agrees to reasonably assist Tenant with such applications and with obtaining and maintaining the Government Approvals.
- (b) Tenant has the right to obtain a title report or commitment for a leasehold title policy from a title insurance company of its choice and to have the Property surveyed by a surveyor of its choice.
- (c) Tenant may also perform and obtain, at Tenant's sole cost and expense, soil borings, percolation tests, engineering procedures, environmental investigation or other tests or reports on, over, and under the Property, necessary to determine if Tenant's use of the Premises will be compatible with Tenant's engineering specifications, system, design, operations or Government Approvals.
- 6. TERMINATION. This Agreement may be terminated, without penalty or further liability, as follows:
- (a) by either party on thirty (30) days prior written notice, if the other party remains in default under
   Section 15 of this Agreement after the applicable cure periods;
- (b) by Tenant upon written notice to Landlord, if Tenant is unable to obtain, or maintain, any required approval(s) or the issuance of a license or permit by any agency, board, court or other governmental authority necessary for the construction or operation of the Communication Facility as now or hereafter intended by Tenant; or if Tenant determines, in its sole discretion that the cost of or delay in obtaining or retaining the same is commercially unreasonable;
- (c) by Tenant, upon written notice to Landlord, if Tenant determines, in its sole discretion, due to the title report results or survey results, that the condition of the Premises is unsatisfactory for its intended uses;
- (d) by Tenant upon written notice to Landlord for any reason or no reason, at any time prior to commencement of construction by Tenant; or
- (e) by Tenant upon sixty (60) days' prior written notice to Landlord for any reason or no reason, so long as Tenant pays Landlord a termination fee equal to three (3) months' Rent, at the then-current rate, provided, however, that no such termination fee will be payable on account of the termination of this Agreement by Tenant under any termination provision contained in any other Section of this Agreement, including the following: Section 5 Approvals, Section 6(a) Termination, Section 6(b) Termination, Section 6(c) Termination, Section 6(d) Termination, Section 11(d) Environmental, Section 18 Condemnation or Section 19 Casualty.
- 7. <u>INSURANCE.</u> During the Option Term and throughout the Term, Tenant will purchase and maintain in full force and effect such general liability policy as Tenant may deem necessary. Said policy of general liability insurance will at a minimum provide a combined single limit of

Notwithstanding the foregoing, Tenant shall have the right to self-insure such general liability coverage or by adding this site as an endorsement on a pre-existing master policy which contains the above limit.

#### 8. INTERFERENCE.

(a) Prior to or concurrent with the execution of this Agreement, Landlord has provided or will provide Tenant with a list of radio frequency user(s) and frequencies used on the Property as of the Effective Date. Tenant warrants that its use of the Premises will not interfere with those existing radio frequency uses on the Property, as long as the existing radio frequency user(s) operate and continue to operate within their respective frequencies and in accordance with all applicable laws and regulations.

- (b) Landlord will not grant, after the Effective Date, a lease, license or any other right to any third party, if the exercise of such grant may in any way adversely affect or interfere with the Communication Facility, the operations of Tenant or the rights of Tenant under this Agreement. Landlord will notify Tenant in writing prior to granting any third party the right to install and operate communications equipment on the Property.
- (c) Landlord will not, nor will Landlord permit its employees, tenants, licensees, invitees, agents or independent contractors to interfere in any way with the Communication Facility, the operations of Tenant or the rights of Tenant under this Agreement. Landlord will cause such interference to cease within twenty-four (24) hours after receipt of notice of interference from Tenant. In the event any such interference does not cease within the aforementioned cure period, Landlord shall cease all operations which are suspected of causing interference (except for intermittent testing to determine the cause of such interference) until the interference has been corrected.
- (d) For the purposes of this Agreement, "interference" may include, but is not limited to, any use on the Property or Surrounding Property that causes electronic or physical obstruction with, or degradation of, the communications signals from the Communication Facility or degradation or damage to the Communication Facility

# 9. <u>INDEMNIFICATION.</u>

- (a) Tenant agrees to indemnify and save Landlord harmless from and against any and all liability, damage, expense, claims or judgments, including reasonable attorneys' fees, resulting from injury to person or damage to property resulting from or arising out of the use and occupancy of the Premises by Tenant if caused by the gross negligence or willful misconduct Tenant, its agents, employees, invitees, guests or arising out of the breach of any provision of this Agreement during the term of this Agreement
- (b) Landlord agrees to indemnify and save Tenant harmless from and against any and all liability, damage, expense, claims or judgments, including reasonable attorneys' fees, resulting from injury to person or damage to property resulting from or arising out of the use and occupancy of the Property by Landlord if caused by the gross negligence or willful misconduct of Landlord, its agents, employees, invitees, guests or arising out of the breach of any provision of this Agreement during the term of this Agreement

## 10. WARRANTIES.

- (a) Each of Tenant and Landlord (to the extent not a natural person) each acknowledge and represent that it is duly organized, validly existing and in good standing and has the right, power, and authority or capacity, as applicable, to enter into this Agreement and bind itself hereto through the party or individual set forth as signatory for the party below.
- (b) Landlord represents, warrants and agrees that: (i) Landlord solely owns the Property as a legal lot in fee simple, or controls the Property by lease or license; (ii) the Property is not and will not be encumbered by any liens, restrictions, mortgages, covenants, easements, leases, or any other agreements of record or not of record, which would adversely affect Tenant's Permitted Use and enjoyment of the Premises under this Agreement; (iii) Landlord grants to Tenant sole, actual, quiet and peaceful use, enjoyment and possession of the Premises in accordance with the terms of this Agreement without any persons lawfully claiming under Landlord; (iv) Landlord's execution and performance of this Agreement will not violate any laws, ordinances, covenants or the provisions of any mortgage, lease or other agreement binding on Landlord; and (v) if the Property is or becomes encumbered by a deed to secure a debt, mortgage or other security interest, then Landlord will provide promptly to Tenant a mutually agreeable subordination, non-disturbance and attornment agreement executed by Landlord and the holder of such security interest in the form attached hereto as Exhibit 2.

#### 11. ENVIRONMENTAL.

(a) Landlord represents and warrants, except as may be identified in **Exhibit 3** attached to this Agreement, (i) the Property, as of the Effective Date, is free of hazardous substances, including asbestos-containing materials and lead paint, and (ii) the Property has never been subject to any contamination or hazardous conditions resulting in any environmental investigation, inquiry or remediation. Landlord and Tenant agree that each will be responsible for compliance with any and all applicable governmental laws, rules, statutes,

regulations, codes, ordinances, or principles of common law regulating or imposing standards of liability or standards of conduct with regard to protection of the environment or worker health and safety, as may now or at any time hereafter be in effect, to the extent such apply to that party's activity conducted in or on the Property.

- (b) Landlord and Tenant agree to hold harmless and indemnify the other from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of the indemnifying party for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any action, notice, claim, order, summons, citation, directive, litigation, investigation or proceeding ("Claims"), to the extent arising from that party's breach of its obligations or representations under Section 11(a). Landlord agrees to hold harmless and indemnify Tenant from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of Landlord for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any Claims, to the extent arising from subsurface or other contamination of the Property with hazardous substances prior to the Effective Date or from such contamination caused by the acts or omissions of Landlord during the Term. Tenant agrees to hold harmless and indemnify Landlord from, and to assume all duties, responsibilities and liabilities at the sole cost and expense of Tenant for, payment of penalties, sanctions, forfeitures, losses, costs or damages, and for responding to any Claims, to the extent arising from hazardous substances brought onto the Property by Tenant.
- (c) The indemnification provisions contained in this Section 11 specifically include reasonable costs, expenses and fees incurred in connection with any investigation of Property conditions or any clean-up, remediation, removal or restoration work required by any governmental authority. The provisions of this Section 11 will survive the expiration or termination of this Agreement.
- (d) In the event Tenant becomes aware of any hazardous materials on the Property, that, in Tenant's sole determination, renders the condition of the Premises or Property unsuitable for Tenant's use, then Tenant will have the right, in addition to any other rights it may have at law or in equity, to terminate this Agreement upon written notice to Landlord.
- ACCESS. At all times throughout the Term of this Agreement, and at no additional charge to Tenant, 12. Tenant and its employees, agents, and subcontractors, will have twenty-four (24) hour per day, seven (7) day per week pedestrian and vehicular access ("Access") to and over the Property, from an open and improved public road to the Premises, for the installation, maintenance and operation of the Communication Facility and any utilities serving the Premises. As may be described more fully in Exhibit 1, Landlord grants to Tenant, it's subtenants, lessees assigns and licensees an easement for such Access and Landlord agrees to provide to Tenant such codes, keys and other instruments necessary for such Access at no additional cost to Tenant (the "Access Easement"). Upon Tenant's request, Landlord will execute a separate recordable easement evidencing this right. Landlord acknowledges that in the event Tenant cannot obtain Access to the Premises, Tenant shall incur significant damage. If Landlord fails to provide the Access granted by this Section 12, such failure shall be a default under this Agreement. If Tenant elects to utilize an Unmanned Aircraft System ("UAS") in connection with its installation, construction, monitoring, suite audits, inspections, maintenance, repair, modification, or alteration activities at the Property, Landlord hereby grants Tenant, as any UAS operator acting on Tenant's behalf, express permission to fly over the applicable Property and Premises, and consents to the use of audio and video navigation and recording in connection with the use of the UAS
- 13. REMOVAL/RESTORATION. All portions of the Communication Facility brought onto the Property by Tenant will be and remain Tenant's personal property and, at Tenant's option, may be removed by Tenant at any time during or after the Term. Landlord covenants and agrees that no part of the Communication Facility constructed, erected or placed on the Premises by Tenant will become, or be considered as being affixed to or a part of, the Property, it being the specific intention of Landlord that all improvements of every kind and nature constructed, erected or placed by Tenant on the Premises will be and remain the property of Tenant and may be removed by Tenant at any time during or after the Term. Tenant will repair any damage to the Property resulting from Tenant's removal activities. Any portions of the Communication Facility that Tenant does not remove within one hundred twenty (120) days after the later of the end of the Term and cessation of Tenant's operations at the Premises shall be deemed abandoned and owned by Landlord. Notwithstanding the foregoing, Tenant will not be responsible for the replacement of any trees, shrubs or other vegetation.

### 14. MAINTENANCE/UTILITIES.

- (a) Tenant will keep and maintain the Premises in good condition, reasonable wear and tear and damage from the elements excepted. Landlord will maintain and repair the Property and access thereto and all areas of the Premises where Tenant does not have exclusive control, in good and tenantable condition, subject to reasonable wear and tear and damage from the elements.
- (b) Tenant will be responsible for paying on a monthly or quarterly basis all utilities charges for electricity, telephone service or any other utility used or consumed by Tenant on the Premises. Landlord acknowledges that Tenant provides a communication service which requires electrical power to operate and must operate twenty-four (24) hours per day, seven (7) days per week. If the interruption is for an extended period of time, in Tenant's reasonable determination, Landlord agrees to allow Tenant the right to bring in a temporary source of power for the duration of the interruption.
- (d) Tenant will have the right to install utilities, at Tenant's expense, and to improve present utilities on the Property and the Premises. Landlord hereby grants to Tenant and any service company providing utility or similar services, including electric power and telecommunications, to Tenant an easement, in, on under and over the Property, from an open and improved public road to the Premises, and upon the Premises, for the purpose of maintaining and operating the Communication Facility and constructing, operating, upgrading and maintaining such lines, wires, circuits, and conduits, associated equipment cabinets and such appurtenances thereto, as Tenant and such service companies may from time to time require in order to provide such services to the Premises (the "Utility Easement"). Upon Tenant's or service company's request, Landlord will execute a separate recordable Utility Easement evidencing this grant, at no cost to Tenant or the service company.

# 15. DEFAULT AND RIGHT TO CURE.

- (a) The following will be deemed a default by Tenant and a breach of this Agreement: (i) non-payment of Rent if such Rent remains unpaid for more than thirty (30) days after written notice from Landlord of such failure to pay; or (ii) Tenant's failure to perform any other term or condition under this Agreement within forty-five (45) days after written notice from Landlord specifying the failure. No such failure, however, will be deemed to exist if Tenant has commenced to cure such default within such period and provided that such efforts are prosecuted to completion with reasonable diligence. Delay in curing a default will be excused if due to causes beyond the reasonable control of Tenant. If Tenant remains in default beyond any applicable cure period, then Landlord will have the right to exercise any and all rights and remedies available to it under law and equity.
- (b) The following will be deemed a default by Landlord and a breach of this Agreement: (i) Landlord's failure to provide Access to the Premises as required by Section 12 within twenty-four (24) hours after written notice of such failure; (ii) Landlord's failure to cure an interference problem as required by Section 8 within twenty-four (24) hours after written notice of such failure; or (iii) Landlord's failure to perform any term, condition or breach of any warranty or covenant under this Agreement within forty-five (45) days after written notice from Tenant specifying the failure. No such failure, however, will be deemed to exist if Landlord has commenced to cure the default within such period and provided such efforts are prosecuted to completion with reasonable diligence. If Landlord remains in default beyond any applicable cure period, Tenant will have: (i) the right to cure Landlord's default and to deduct the costs of such cure from any monies due to Landlord from Tenant including Rent, and (ii) any and all other rights available to it under law and equity.

# 16. ASSIGNMENT/SUBLEASE.

(a) Tenant will have the right to assign, sell or transfer its interest under this Agreement, in whole or part, without Landlord's consent, to: (a) Tenant's Affiliate, subsidiary, subtenant, sublicensee (b) to any entity with a net worth of at least or (c) any entity that acquires all or substantially all of the Tenant's assets in the market as defined by the Federal Communications Commission in which the Property is located. Upon notification to Landlord of such assignment, transfer or sale, Tenant will be relieved of all future performance, liabilities and obligations under this Agreement. Tenant shall have the right to sublease the Premises, in whole or in part, without Landlord's consent. Tenant may not otherwise assign this Agreement without Landlord's consent, Landlord's consent not to be unreasonably withheld, conditioned or delayed.

- (b) Subject to the terms of this Agreement, Landlord shall have the right to assign and transfer this Agreement only to a successor owner of the Property. Only upon Tenant receipt of written verification of a sale, or transfer of the Property shall Landlord be relieved of all liabilities and obligations to and Tenant shall look solely to the new landlord for performance under this Agreement. Landlord shall not attempt to assign, or otherwise transfer this Agreement separate from a transfer of ownership of the Property (the "Severance Transaction"), without the prior written consent of Tenant, which consent may be withheld or conditioned in Tenant's sole discretion. If the Tenant consents to a Severance Transaction, Landlord and its successors and assigns shall remain jointly and severally responsible for the performance of all duties and obligations of the Landlord under this Agreement.
- 17. NOTICES. All notices, requests and demands hereunder will be given by first class certified or registered mail, return receipt requested, or by a nationally recognized overnight courier, postage prepaid, to be effective when properly sent and received, refused or returned undelivered. Notices will be addressed to the parties hereto as follows:

If to Tenant: Tillman Infrastructure LLC

152 West 57th Street 27th Floor New York, New York 10019 Attn: Lease Administration

With a copy to: Tillman Infrastructure LLC

152 West 57th Street 27th Floor New York, New York 10019

Attn: Suruchi Ahuja

If to Landlord: Harlan Countians for Progress, LLC

200 Waldon Road, Suite 1

Harlan, KY 40831

Either party hereto may change the place for the giving of notice to it by thirty (30) days' prior written notice to the other party hereto as provided herein.

- 18. <u>CONDEMNATION.</u> In the event Landlord receives notification of any condemnation proceedings affecting the Property, Landlord will provide notice of the proceeding to Tenant within twenty-four (24) hours. If a condemning authority takes all of the Property, or a portion sufficient, in Tenant's sole determination, to render the Premises unsuitable for Tenant, this Agreement will terminate as of the date the title vests in the condemning authority. The parties will each be entitled to pursue their own separate awards in the condemnation proceeds, which for Tenant will include, where applicable, the value of its Structure and Communication Facility, moving expenses, prepaid Rent, and business dislocation expenses.
- 19. CASUALTY. Landlord will provide notice to Tenant of any casualty or other harm affecting the Property within twenty-four (24) hours of the casualty or other harm. If any part of the Communication Facility or the Property is damaged by casualty or other harm as to render the Premises unsuitable, in Tenant's sole determination, then Tenant may terminate this Agreement by providing written notice to Landlord, which termination will be effective as of the date of such casualty or other harm. Upon such termination, Tenant will be entitled to collect all insurance proceeds payable to Tenant on account thereof and to be reimbursed for any prepaid Rent on a pro rata basis. Landlord agrees to permit Tenant to place temporary transmission and reception facilities on the Property, but only until such time as Tenant is able to activate a replacement transmission facility at another location; notwithstanding the termination of this Agreement, such temporary facilities will be governed by all of the terms and conditions of this Agreement, including Rent. If Tenant undertakes to rebuild or restore the Communication Facility, as applicable, Landlord agrees to permit Tenant to place temporary

transmission and reception facilities on the Property at no additional Rent until the reconstruction of the Communication Facility is completed.

20. WAIVER OF LANDLORD'S LIENS. Landlord waives any and all lien rights it may have, statutory or otherwise, concerning the Communication Facility including the Structure or any portion thereof. The Communication Facility shall be deemed personal property for purposes of this Agreement, regardless of whether any portion is deemed real or personal property under applicable law; Landlord consents to Tenant's right to remove all or any portion of the Communication Facility from time to time in Tenant's sole discretion and without Landlord's consent.

# 21. TAXES.

- (a) Tenant shall have the responsibility to pay any personal property, real estate taxes, assessments, or charges owed on the Property which Landlord demonstrates is the result of Tenant's use of the Premises and/or the installation, maintenance, and operation of the Tenant's improvements, and any sales tax imposed on the rent (except to the extent that Tenant is or may become exempt from the payment of sales tax in the jurisdiction in which the Property is located), including any increase in real estate taxes at the Property which Landlord demonstrates arises from the Tenant's improvements and/or Tenant's use of the Premises. Landlord and Tenant shall each be responsible for the payment of any taxes, levies, assessments and other charges imposed including franchise and similar taxes imposed upon the business conducted by Landlord or Tenant at the Property. Notwithstanding the foregoing, tenant shall not have the obligation to pay any tax, assessment, or charge that Tenant is disputing in good faith in appropriate proceedings prior to a final determination that such tax is properly assessed provided that no lien attaches to the Property. Nothing in this Paragraph shall be construed as making Tenant liable for any portion of Landlord's income taxes in connection with any Property or otherwise. Except as set forth in this Paragraph, Landlord shall have the responsibility to pay any personal property, real estate taxes, assessments, or charges owed on the Property and shall do so prior to the imposition of any lien on the Property.
- (b) Tenant shall have the right, at its sole option and at its sole cost and expense, to appeal, challenge or seek modification of any tax assessment or billing for which Tenant is wholly or partly responsible for payment. Landlord shall reasonably cooperate with Tenant at Tenant's expense in filing, prosecuting and perfecting any appeal or challenge to taxes as set forth in the preceding sentence, including but not limited to, executing any consent, appeal or other similar document. In the event that as a result of any appeal or challenge by Tenant, there is a reduction, credit or repayment received by the Landlord for any taxes previously paid by Tenant, Landlord agrees to promptly reimburse to Tenant the amount of said reduction, credit or repayment. In the event that Tenant does not have the standing rights to pursue a good faith and reasonable dispute of any taxes under this paragraph, Landlord will pursue such dispute at Tenant's sole cost and expense upon written request of Tenant.

# 22. SALE OF PROPERTY.

- (a) Landlord may sell the Property or a portion thereof to a third party, provided: (i) the sale is made subject to the terms of this Agreement; and (ii) if the sale does not include the assignment of Landlord's full interest in this Agreement, the purchaser must agree to perform, without requiring compensation from Tenant or any subtenant, any obligation of Landlord under this Agreement, including Landlord's obligation to cooperate with Tenant as provided hereunder.
- (b) If Landlord, at any time during the Term of this Agreement, decides to rezone or sell, subdivide or otherwise transfer all or any part of the Premises, or all or any part of the Surrounding Property, to a purchaser other than Tenant, Landlord shall promptly notify Tenant in writing, and such rezoning, sale, subdivision or transfer shall be subject to this Agreement and Tenant's rights hereunder. In the event of a change in ownership, transfer or sale of the Property, within ten (10) days of such transfer, Landlord or its successor shall send the documents listed below in this Section 22(b) to Tenant. Until Tenant receives all such documents, Tenant's failure to make payments under this Agreement shall not be an event of default and Tenant reserves the right to hold payments due under this Agreement.

# i. New deed to Property

- ii. New IRS Form W-9
- iii. Completed and Signed Tenant Payment Direction Form
- iv. Full contact information for new Landlord including phone number(s)
- (c) Landlord agrees not to sell, lease or use any areas of the Property or the Surrounding Property for the installation, operation or maintenance of other wireless communication facilities if such installation, operation or maintenance would interfere with Tenant's Permitted Use or communications equipment as determined by radio propagation tests performed by Tenant in its sole discretion. If the radio frequency propagation tests demonstrate levels of interference unacceptable to Tenant, Landlord shall be prohibited from selling, leasing or using any areas of the Property or the Surrounding Property for purposes of any installation, operation or maintenance of any other wireless communication facility or equipment.
- 23. RIGHT OF FIRST REFUSAL. Notwithstanding the provisions contained in Section 22, if at any time after the Effective Date, Landlord receives a bona fide written offer from a third party seeking any sale, conveyance, assignment or transfer, whether in whole or in part, of any property interest in or related to the Premises, including without limitation any offer seeking an assignment or transfer of the Rent payments associated with this Agreement or an offer to purchase an easement with respect to the Premises ("Offer"), Landlord shall immediately furnish Tenant with a copy of the Offer. Tenant shall have the right within ninety (90) days after it receives such copy to match the financial terms of the Offer and agree in writing to match such terms of the Offer and Tenant may assign its rights to a third party. If Tenant chooses not to exercise this right or fails to provide written notice to Landlord within the ninety (90) day period, Landlord may sell, convey, assign or transfer such property interest in or related to the Premises pursuant to the Offer, subject to the terms of this Agreement. If Landlord attempts to sell, convey, assign or transfer such property interest in or related to the Premises without complying with this Section 23, the sale, conveyance, assignment or transfer shall be void. Tenant shall not be responsible for any failure to make payments under this Agreement and reserves the right to hold payments due under this Agreement until Landlord complies with this Section 23. Tenant's failure to exercise the right of first refusal shall not be deemed a waiver of the rights contained in this Section 23 with respect to any future proposed conveyances as described.
- 24. <u>ELECTRONIC SIGNATURE</u>. The parties acknowledge and agree that this Agreement may be executed by electronic signature, which shall be considered as an original signature for all purposes and shall have the same force and effect as an original signature. Without limitation, "electronic signature" shall include faxed version of an original signature or electronically scanned and transmittal version (e.g. via pdf) of an original signature.

### 25. MISCELLANEOUS.

- (a) Amendment/Waiver. This Agreement cannot be amended, modified or revised unless done in writing and signed by Landlord and Tenant. No provision may be waived except in a writing signed by both parties. The failure by a party to enforce any provision of this Agreement or to require performance by the other party will not be construed to be a waiver, or in any way affect the right of either party to enforce such provision thereafter.
- (b) Memorandum/Short Form Lease. Contemporaneously with the execution of this Agreement, the parties will execute a recordable Memorandum of Lease substantially in the form attached as Exhibit 4. Either party may record this Memorandum of Lease at any time during the Term, in its absolute discretion.
- (c) Limitation of Liability. Except for the indemnity obligations set forth in this Agreement, and otherwise notwithstanding anything to the contrary in this Agreement, Tenant and Landlord each waives any claims that each may have against the other with respect to consequential, incidental or special damages, however caused, based on any theory of liability.
- (d) Compliance with Law. Tenant agrees to comply with all federal, state and local laws, orders, rules and regulations ("Laws") applicable to Tenant's use of the Communication Facility on the Property. Landlord agrees to comply with all Laws relating to Landlord's ownership and use of the Property and any improvements on the Property.

- (e) Bind and Benefit. The terms and conditions contained in this Agreement will run with the Property and bind and inure to the benefit of the parties, their respective heirs, executors, administrators, successors and assigns.
- (f) Entire Agreement. This Agreement and the exhibits attached hereto, all being a part hereof, constitute the entire agreement of the parties hereto and will supersede all prior offers, negotiations and agreements with respect to the subject matter of this Agreement. Except as otherwise stated in this Agreement, each party shall bear its own fees and expenses (including the fees and expenses of its agents, brokers, representatives, attorneys, and accountants) incurred in connection with the negotiation, drafting, execution and performance of this Agreement and the transactions it contemplates.
- (g) Governing Law. This Agreement will be governed by the laws of the state in which the Premises are located, without regard to conflicts of law.
- (h) Interpretation. Unless otherwise specified, the following rules of construction and interpretation apply: (i) captions are for convenience and reference only and in no way define or limit the construction of the terms and conditions hereof; (ii) use of the term "including" will be interpreted to mean "including but not limited to"; (iii) whenever a party's consent is required under this Agreement, except as otherwise stated in the Agreement or as same may be duplicative, such consent will not be unreasonably withheld, conditioned or delayed; (iv) exhibits are an integral part of this Agreement and are incorporated by reference into this Agreement; (v) use of the terms "termination" or "expiration" are interchangeable; (vi) reference to a default will take into consideration any applicable notice, grace and cure periods; (vii) to the extent there is any issue with respect to any alleged, perceived or actual ambiguity in this Agreement, the ambiguity shall not be resolved on the basis of who drafted the Agreement; (viii) the singular use of words includes the plural where appropriate; and (ix) if any provision of this Agreement is held invalid, illegal or unenforceable, the remaining provisions of this Agreement shall remain in full force if the overall purpose of the Agreement is not rendered impossible and the original purpose, intent or consideration is not materially impaired.
- (i) Affiliates. All references to "Tenant" shall be deemed to include any Affiliate of Tillman Infrastructure LLC using the Premises for any Permitted Use or otherwise exercising the rights of Tenant pursuant to this Agreement. "Affiliate" means with respect to a party to this Agreement, any person or entity that (directly or indirectly) controls, is controlled by, or under common control with, that party. "Control" of a person or entity means the power (directly or indirectly) to direct the management or policies of that person or entity, whether through the ownership of voting securities, by contract, by agency or otherwise.
- (j) Survival. Any provisions of this Agreement relating to indemnification shall survive the termination or expiration hereof. In addition, any terms and conditions contained in this Agreement that by their sense and context are intended to survive the termination or expiration of this Agreement shall so survive.
- (k) W-9. As a condition precedent to payment, Landlord agrees to provide Tenant with a completed IRS Form W-9, or its equivalent, upon execution of this Agreement and at such other times as may be reasonably requested by Tenant, including any change in Landlord's name or address.
- (I) Execution/No Option. The submission of this Agreement to any party for examination or consideration does not constitute an offer, reservation of or option for the Premises based on the terms set forth herein. This Agreement will become effective as a binding Agreement only upon the handwritten legal execution, acknowledgment and delivery hereof by Landlord and Tenant. This Agreement may be executed in two (2) or more counterparts, all of which shall be considered one and the same agreement and shall become effective when one or more counterparts have been signed by each of the parties. All parties need not sign the same counterpart.
- (m) Attorneys' Fees. In the event that any dispute between the parties related to this Agreement should result in litigation, the prevailing party in such litigation shall be entitled to recover from the other party all reasonable fees and expenses of enforcing any right of the prevailing party, including reasonable attorneys' fees and expenses. Prevailing party means the party determined by the court to have most nearly prevailed even if such party did not prevail in all matters. This provision will not be construed to entitle any party other than Landlord, Tenant and their respective Affiliates to recover their fees and expenses.
- (n) WAIVER OF JURY TRIAL. EACH PARTY, TO THE EXTENT PERMITTED BY LAW, KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVES ITS RIGHT TO A TRIAL BY JURY IN ANY ACTION OR PROCEEDING UNDER ANY THEORY OF LIABILITY ARISING OUT

# OF OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR THE TRANSACTIONS IT CONTEMPLATES.

- (o) Incidental Fees. Unless specified in this Agreement, no unilateral fees or additional costs or expenses are to be applied by either party to the other party, including review of plans, structural analyses, consents, provision of documents or other communications between the parties.
- (p) Further Acts. Upon request, Landlord will cause to be promptly and duly taken, executed, acknowledged and delivered all such further acts, documents, and assurances as Tenant may request from time to time in order to effectuate, carry out and perform all of the terms, provisions and conditions of this Agreement and all transactions and permitted use contemplated by this Agreement, including any Subordination, Non-Disturbance and Attornment Agreement.
- (q) Confidentiality. The terms and conditions of this Agreement are confidential between the parties and Landlord shall not disclose the same to anyone else, except to Landlord's accountant, attorney and as agreed to by the Parties (except as to sublessees), or as is necessary to effectuate the terms of this Agreement. Any Disclosure in violation of this Section shall be deemed a material breach of this Agreement.
- (r) Estoppel. Either party will, at any time upon twenty (20) business days prior written notice from the other, execute, acknowledge and deliver to the other a statement in writing (i) certifying that this Agreement is unmodified and in full force and effect (or, if modified, stating the nature of such modification and certifying this Agreement, as so modified, is in full force and effect) and the date to which the Rent and other charges are paid in advance, if any, and (ii) acknowledging that there are not, to such party's knowledge, any uncured defaults on the part of the other party hereunder, or specifying such defaults if any are claimed.
- (s) Rules Against Perpetuities. If this Agreement or any covenants or provisions herein would otherwise be unlawful, void or voidable for violation of the Rule against Perpetuities, then the same shall continue until 20 years and 6 months after the date of death of the last survivor of the members of Congress of the United States of America (including the House of Representatives and the Senate) representing the State in which the Premises is located who are serving on the date of this Agreement
- (t) Security Interest. Tenant has the right to assign, mortgage or grant a security interest in all or a portion of Tenant's interest in and to this Agreement, Premises, the Structure, Communication Facility, equipment and Easements, and may assign such Tenant's interests to any such assignee, mortgagees, or holders of security interests, all without Landlord's consent ("Secured Party" or, collectively, "Secured Parties"). If requested, Lessor shall execute such consent to Tenant's financing as may reasonably be required by Secured Parties.

[SIGNATURE PAGES TO FOLLOW]

IN WITNESS WHEREOF, the parties have caused this Agreement to be effective as of the Effective Date.

"WITNESSES" "LANDLORD" Harlan Countians for Progress, LLC Print Name: Blanche H. Bennett DWNW LANDLORD CORPORATE ACKNOWLEDGMENT 20 23, Blanche H. Bennett personally came before me I CERTIFY that on and acknowledged under oath that he of she: [title] of Harlan Countians for Progress, LLC, the corporation (a) is the Owner named in the attached instrument, (b) was authorized to execute this instrument on behalf of the corporation and (c) executed the instrument as the act of the corporation. Notary Public: NOTARY PUBLIC My Commission Expires: Warren County

IN WITNESS WHEREOF, the parties have caused this Agreement to be effective as of the Effective Date.

"TENANT"
TILLMAN INFRASTRUCTURE LLC, a Delaware limited liability company  By:
Name: Chris Mularadelis
Its: Authorized Signatory
Date: 7-31- 2023
in the year of 2023, before me, the undersigned, a Notary  Chris Mularadelis, Authorized Signatory ited liability company, personally known to me or proved to individual whose name is subscribed to the within instrument
the same in his/her authorized capacity, and that by his/her e entity upon behalf of which the individual acted, executed
CAROLINE M SEARLES Notary Public, State of New Jersey Comm. # 0050188038 My Commission Expires 3/7/2027

#### Exhibit 1

## Description of the Premises & Access and Utility Easements:

Page 1 of 4

The Property is legally described as follows:

Beginning at an iron pin the East right-of-way of the C.H.X. Railroad at the Northwest corner of the Daisy Cawood Heirs property; thence with said right-of-way N 07° 24′ 19″ W 77.91 feet to an iron pin; thence N 04° 42′ 27″ W 176.15 feet to an iron pin at the Southwest corner of tract 3 being that "Tract B" shown on the December 30, 1993, survey by Lee Miller & Associates, Inc., Harlan Kentucky; thence with the South line of said Tract 3, S 85° 32′ 58″ E 483.88 feet to an iron pin on the West side of the industrial park road; thence, with the West line of said road S 01° 03′ 43″ W 348.37 feet to an iron pin in the North line of the Daisy Cawood Heirs property, thence, with said line N 76° 19′ 24″ W 473.23 feet to the beginning, containing approximately 3.534 acres, more or less, as surveyed December 30, 1993, by Lee Miller & Associates, Inc., Harlan Kentucky, which is incorporated herein by reference.

The 50 foot wide permanent easement for roadway and utility construction and maintenance along the North line of this tract is common property for all IDA property and as excepted from this description.

Parcel ID #069-40-00-230.00

This being the same property conveyed to Harlan Countians for Progress LLC, a Kentucky limited liability company, from Harlan County Industrial Development Authority Inc., a Kentucky corporation, in a Deed of Conveyance, dated March 22, 2019 and recorded March 22, 2019 in Book 479 Page 151.

#### Exhibit 1

# Description of the Premises & Access and Utility Easements:

Page 2 of 4

The Premises and Access and Fiber/Utility Easement are described and/or depicted as follows:

# LEASE AREA

ALL THE TRACT OR PARCEL OF LAND LYING AND BEING IN HARLAN COUNTY, KENTUCKY, AND BEING A PORTION OF THE LANDS OF HARLAN COUNTIANS FOR PROGRESS, LLC, AS RECORDED IN DEED BOOK 479 PAGE 151. HARLAN COUNTY RECORDS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TO FIND THE POINT OF BEGINNING, COMMENCE AT A RIGHT—OF—WAY CONCRETE MONUMENT, SAID MONUMENT HAVING A KENTUCKY GRID NORTH, NAD 83, SINGLE ZONE VALUE OF N: 3473251.8074 E; 5630447.0884; THENCE RUNNING ALONG A TIE LINE, SOUTH 30°05'21" EAST, 238.56 FEET TO A POINT ON THE WESTERLY RIGHT—OF—WAY LINE OF INDUSTRIAL PARK ROAD; THENCE LEAVING SAID RIGHT—OF—WAY LINE AND RUNNING. SOUTH 89°27'33" WEST, 380.48 FEET TO A POINT; THENCE, SOUTH 00°03'10" EAST, 49.46 FEET TO A POINT; THENCE, NORTH 89°59'50" WEST, 12.50 FEET TO THE A POINT ON THE LEASE AREA; THENCE RUNNING ALONG SAID LEASE AREA, SOUTH 00°03'10" EAST, 87.53 FEET TO A POINT AND THE TRUE POINT OF BEGINNING; THENCE, SOUTH 89°01'37" WEST, 60.00 FEET TO A POINT; THENCE, NORTH 07'12'22" WEST, 120.00 FEET TO A POINT; THENCE, SOUTH 87'40'56" EAST, 75.00 FEET TO A POINT; THENCE, SOUTH 00°03'10" EAST, 115.00 FEET TO A POINT AND THE POINT OF BEGINNING.

BEARINGS BASED ON KENTUCKY GRID NORTH, NAD 83, SINGLE ZONE,

SAID TRACT CONTAINS 0.1811 ACRES (7.888 SQUARE FEET), MORE OR LESS.

# 25' INGRESS-EGRESS & UTILITY EASEMENT

TOGETHER WITH A 25-FOOT INGRESS-EGRESS AND UTILITY EASEMENT, MEASURING 12.5 FEET EACH SIDE OF CENTERLINE, LYING AND BEING IN HARLAN COUNTY, KENTUCKY, AND BEING A PORTION OF THE LANDS OF HARLAN COUNTIANS FOR PROGRESS, LLC, AS RECORDED IN DEED BOOK 479 PAGE 151, HARLAN COUNTY RECORDS, AND BEING MORE PARTICULARLY DESCRIBED BY THE FOLLOWING CENTERLINE DATA:

TO FIND THE POINT OF BEGINNING, COMMENCE AT A RIGHT-OF-WAY CONCRETE MONUMENT, SAID MONUMENT HAVING A KENTUCKY GRID NORTH, NAD 83, SINGLE ZONE VALUE OF N: 3473251.8074 E: 5630447.0884; THENCE RUNNING ALONG A TIE LINE, SOUTH 30'05'21" EAST, 238.56 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY LINE OF INDUSTRIAL PARK ROAD, AND THE TRUE POINT OF BEGINNING; THENCE LEAVING SAID RIGHT-OF-WAY LINE AND RUNNING, SOUTH 89'27'33" WEST, 380.48 FEET TO A POINT; THENCE, SOUTH 00'03'10" EAST, 49.46 FEET TO A POINT; THENCE, NORTH 89'59'50" WEST, 12.50 FEET TO THE ENDING AT A POINT ON THE LEASE AREA.

BEARINGS BASED ON KENTUCKY GRID NORTH, NAD 83, SINGLE ZONE.

Exhibit 1

Description of the Premises & Access and Utility Easements:

Page 3 of 4

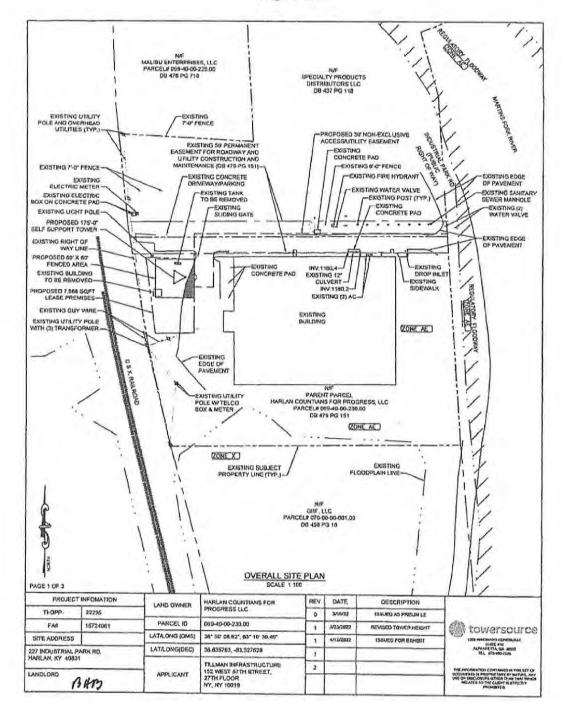
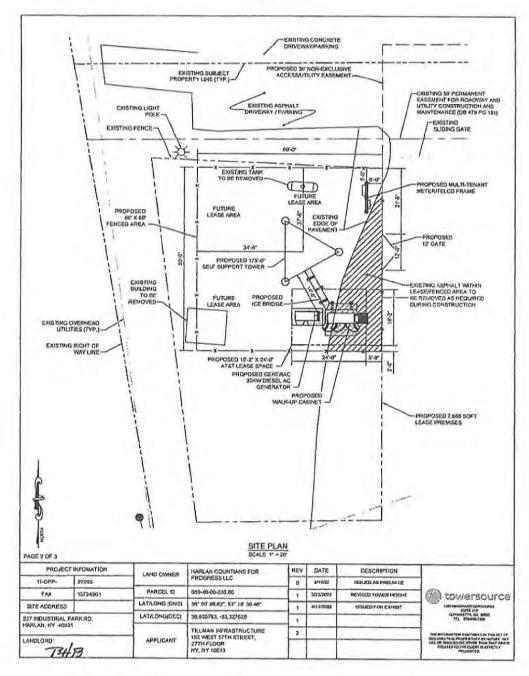


Exhibit 1

Description of the Premises & Access and Utility Easements:

Page 4 of 4



#### Notes:

- THIS EXHIBIT MAY BE REPLACED BY A LAND SURVEY AND/OR CONSTRUCTION DRAWINGS OF THE PREMISES ONCE RECEIVED BY TENANT.
- ANY SETBACK OF THE PREMISES FROM THE PROPERTY'S BOUNDARIES SHALL BE THE DISTANCE REQUIRED BY THE APPLICABLE GOVERNMENT AUTHORITIES.
- WIDTH OF ACCESS ROAD SHALL BE THE WIDTH REQUIRED BY THE APPLICABLE GOVERNMENT AUTHORITIES, INCLUDING POLICE AND FIRE DEPARTMENTS.
- 4. THE TYPE, NUMBER AND MOUNTING POSITIONS AND LOCATIONS OF ANTENNAS AND TRANSMISSION LINES ARE ILLUSTRATIVE ONLY. ACTUAL TYPES, NUMBERS AND MOUNTING POSITIONS MAY VARY FROM WHAT IS SHOWN ABOVE.

# EXHIBIT J NOTIFICATION LISTING CERTIFIED GREEN CARD RECEIPTS

#### **Clover Fork - Notice List**

HARLAN COUNTIANS FOR PROGRESS LLC 200 WALDON RD HARLAN, KY 40831

SPECIALTY PRODUCTS DIST P O BOX 128 HARLAN, KY 40831

GRF LLC P O BOX 1546 CORBIN, KY 40702

REDBOW INC 1616 S HWY 421 HARLAN, KY 40831

SAVE-A-LOT OF HARLAN P O BOX 130 MIDDLESBORO, KY 40965

PARSONS - KIMEL ASSOCIATES 2083 MANOR DRIVE LEXINGTON, KY 40502

SPECIALTY PRODUCTS DISTRIBUTORS LLC P O BOX 956 HARLAN, KY 40831

MALIBU ENTERPRISES LLC 6452 HWY 38 EVARTS, KY 40828

SUTTON LON & CLARA P O BOX 647 HARLAN, KY 40831

PHILLIPS JERRY GARRETT 443 HWY 3459 HARLAN, KY 40831

PHILLIPS JERRY 443 HWY 3459 HARLAN, KY 40831

GILES HENRY MRS ESTATE P O BOX 83 HARLAN, KY 40831 GILES HENRY MRS P O BOX 83 HARLAN, KY 40831

HARLAN CHURCH OF GOD H C 78 BOX 785 HARLAN, KY 40831

BURGAN VICKI LYNN 531 HWY 3459 HARLAN, KY 40831

DAY TERRY WAYNE 543 HWY 3459 HARLAN, KY 40831

DAY KENNETH H % TERRY DAY 543 HWY 3459 HARLAN, KY 40831

GOINS GEORGE RUSSELL P O BOX 191 GRAYS KNOB, KY 40829

GOINS JENNIFER G & PAYTON AIMEE 573 HWY 3459 HARLAN, KY 40831

KY REAL ESTATE ACQUISTION & MANAGEMENT GROUP LLC P O BOX 128 HARLAN, KY 40831

JOHNSON HOBERT & FRANKIE P O BOX 475 HARLAN, KY 40831

JOHNSON DENNIS C P O BOX 1274 HARLAN, KY 40831

BENNETT ALKA LEE P O BOX 1240 HARLAN, KY 40831

FRAZIER CURTIS W P O BOX 1003 HARLAN, KY 40831 LAWSON AMERICA OR BOBBY WITT P O BOX 1237 HARLAN, KY 40831

FARMER TONI PO BOX 576 HARLAN, KY 40831

VANWINKLE WILLARD & BESSIE P O BOX 212 BAXTER, KY 40806

HOLMES FLOSSIE PO BOX 81 GRAYS KNOB, KY 40829

BRUCE DAVID 652 HWY 3459 LOT 3 HARLAN, KY 40831

CODY PATRICIA PO BOX 455 HARLAN, KY 40831

STEPHENS REGINALD GENERAL DEL HARLAN, KY 40831

ROBINSON MARTHA P O BOX 244 HARLAN, KY 40831

GIBBONS LOUIS & LISA P O BOX 370 GRAYS KNOB, KY 40829

P O BOX 1013 HARLAN, KY 40831

SMITH GILL JR P O BOX 692 HARLAN, KY 40831

KENTUCKY UTILITIES 184 BANK DRIVE HARLAN, KY 40831 TAYLOR KATRINA G & CHARLES M 44 TARBOT LANE HARLAN, KY 40831

SMALLWOOD DANNY K & JENNIFER 1485 HWY 1084 BAXTER, KY 40806

SMALLWOOD DANNY 1485 HWY 1084 BAXTER, KY 40806 GILES CARL EDWARD & WILLA JEAN P O BOX 83 HARLAN, KY 40831

REDBOW INC P O BOX 130 MIDDLESBORO, KY 40965

MOUNTAIN RECOVERY REALTY LLC 149 SIMONTON DRIVE HARLAN, KY 40831

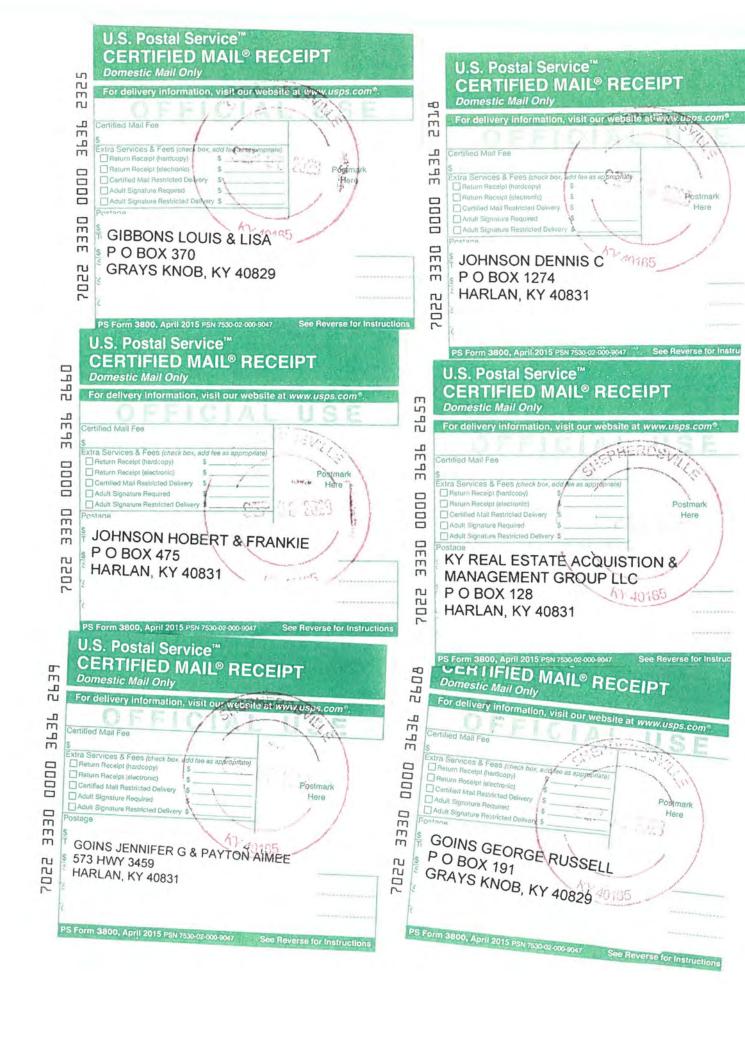
CLOVERTOWN CHURCH OF GOD P O BOX 1243 HARLAN, KY 40831

BURNS ROBERT & KATHY 2311 W HWY 72 HARLAN, KY 40831

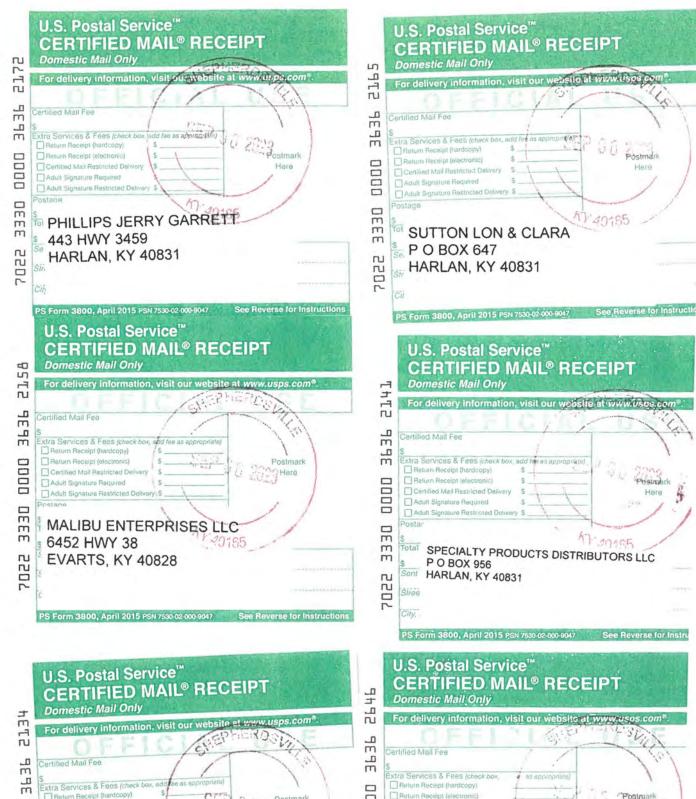
GILES CARL EDWARD & WILLA JEAN P O BOX 83 HARLAN, KY 40831













Domestic Mail Only

For delivery information, visit our website at www.usps.com\*.

Certified Mail Fee

S

Extra Services & Fees (check box, | 85 appropriate) | Postnyark |
| Return Receipt (electronic) | Postnyark |
| Certified Mail Restricted Deli | Adult Signature Recurred | Adult Signature Restricted Deli |
| Adult Signature Restricted Deli | Postage

TR SAVE-A-LOT OF HARLAN | POBOX 130 |
MIDDLESBORO, KY 40965









### EXHIBIT K COPY OF PROPERTY OWNER NOTIFICATION



1578 Highway 44 East, Unit 6 PO Box 369 Shepherdsville, KY 40165-0369

Phone: 502-955-4400

Fax: 502-543-4410

## Notice of Proposed Construction of Wireless Communications Facility Site Name: Clover Fork

#### Dear Landowner:

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Tillman Infrastructure LLC, a Delaware limited liability company have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 227 Industrial Park Road, Harlan, KY 40831 (36° 50' 08.82" North latitude, 83° 19' 39.46" West longitude). The proposed facility will include a 175-foot tall tower, with an approximately 10-foot tall lightning arrestor attached at the top, for a total height of 185-feet, plus related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

This notice is being sent to you because the County Property Valuation Administrator's records indicate that you may own property that is within a 500' radius of the proposed tower site <u>or</u> contiguous to the property on which the tower is to be constructed. You have a right to submit testimony to the Kentucky Public Service Commission ("PSC"), either in writing or to request intervention in the PSC's proceedings on the application. You may contact the PSC for additional information concerning this matter at: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2023-00296 in any correspondence sent in connection with this matter.

We have attached a map showing the site location for the proposed tower. AT&T Mobility's radio frequency engineers assisted in selecting the proposed site for the facility, and they have determined it is the proper location and elevation needed to provide quality service to wireless customers in the area. Please feel free to contact us toll free at (800) 516-4293 if you have any comments or questions about this proposal.

Sincerely, David A. Pike Attorney for Applicants

enclosures

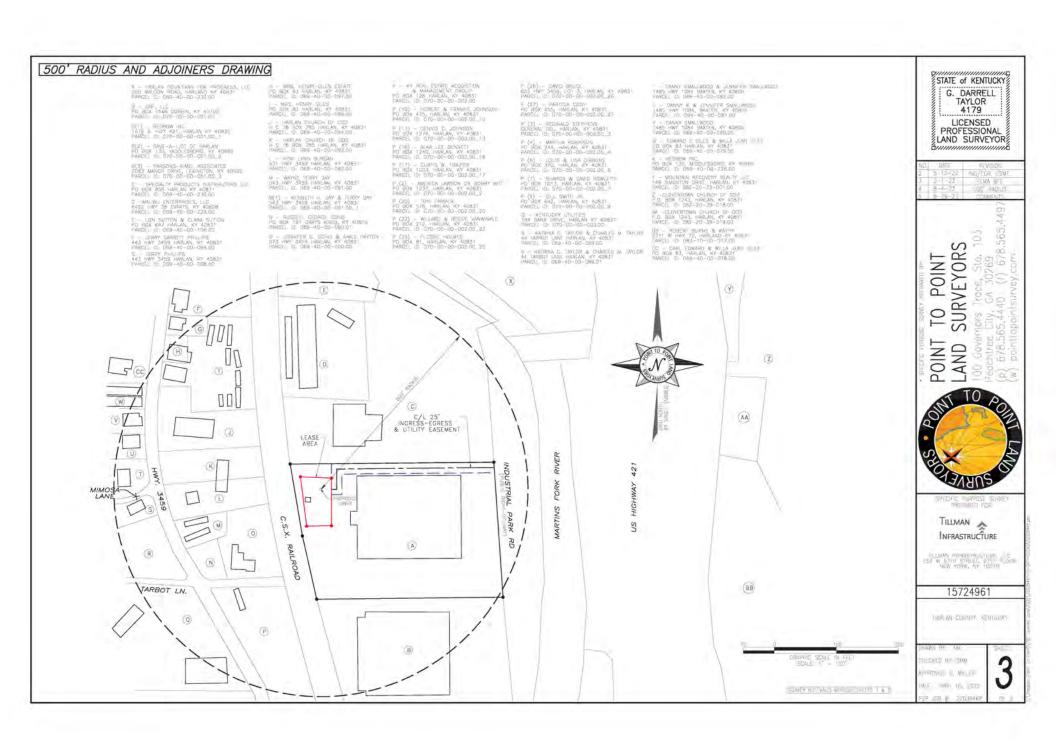
#### **Driving Directions to Proposed Tower Site**

- 1. Beginning at 210 E Central St # 111, Harlan, KY 40831, head west on E Central Street toward N 1<sup>st</sup> Street and travel approximately 0.2 miles.
- 2. Turn left onto US-421 S and travel approximately 0.7 miles.
- 3. Turn right onto Industrial Park Road and travel approximately 367 feet.
- 4. Turn left to stay on Industrial Park Road and travel approximately 285 feet.
- 5. The site is located on the right. The site address is 227 Industrial Park Road, Harlan KY 40831.
- 6. The site coordinates are:
  - a. North 36 deg 50 min 08.82 sec
  - b. West 83 deg 19 min 39.46 sec



Prepared by: Chris Shouse Pike Legal Group 1578 Highway 44 East, Suite 6 P.O. Box 396 Shepherdsville, KY 40165-3069

Telephone: 502-955-4400 or 800-516-4293



COPY OF COUNTY JUDG	EXHIBIT L E/EXECUTIVE & CI	TY MAYOR NOTICE



1578 Highway 44 East, Unit 6 PO Box 369 Shepherdsville, KY 40165-0369

Phone: 502-955-4400 Fax: 502-543-4410

#### **VIA CERTIFIED MAIL**

Dan Mosley Harlan County Judge Executive P.O. Box 956 Harlan, KY 40831

RE: Notice of Proposal to Construct Wireless Communications Facility

Kentucky Public Service Commission Docket No. 2023-00296

Site Name: Clover Fork

#### Dear Judge/Executive:

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Tillman Infrastructure LLC, a Delaware limited liability company have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 227 Industrial Park Road, Harlan, KY 40831 (36° 50' 08.82" North latitude, 83° 19' 39.46" West longitude). The proposed facility will include a 175-foot tall tower, with an approximately 10-foot tall lightning arrestor attached at the top, for a total height of 185-feet, plus related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

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Sincerely, David A. Pike Attorney for Applicants enclosures

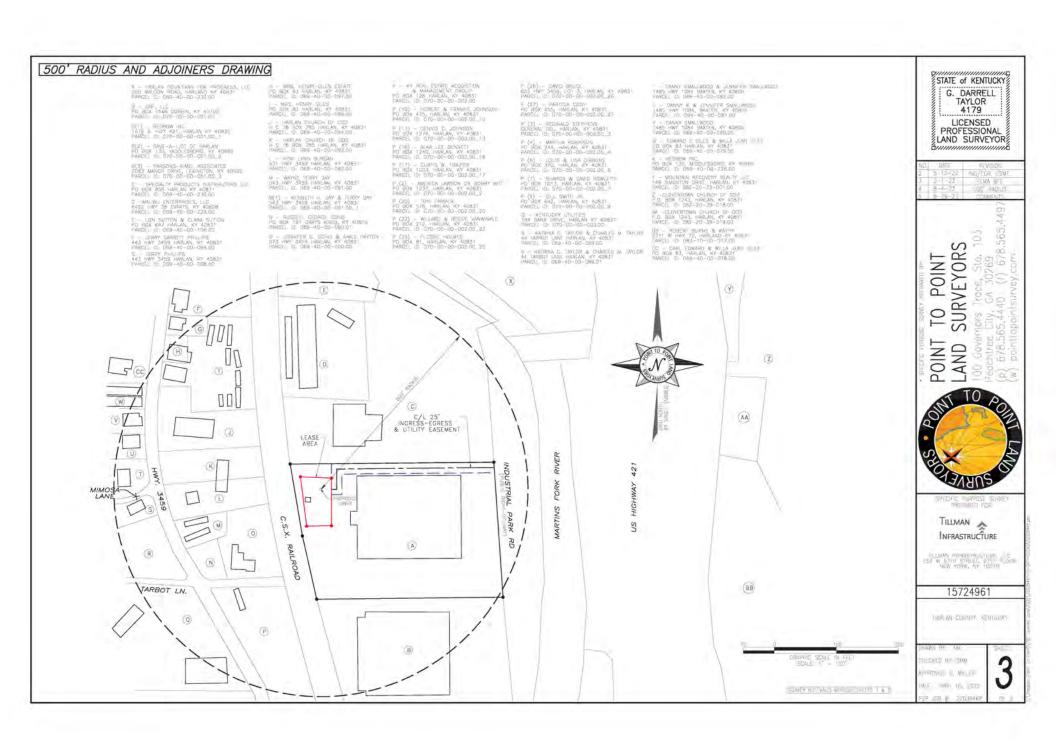
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1578 Highway 44 East, Unit 6 PO Box 369 Shepherdsville, KY 40165-0369

Snepnerasville, KY 40165-0369 Phone: 502-955-4400

Fax: 502-543-4410

### VIA CERTIFIED MAIL CC: joed.meadors@ky.gov

Joe Meadors Mayor for the City of Harlan 218 South Main Street Harlan, KY 40831

RE: Notice of Proposal to Construct Wireless Communications Facility

Kentucky Public Service Commission Docket No. 2023-00296

Site Name: Clover Fork

#### Dear Mayor:

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Tillman Infrastructure LLC, a Delaware limited liability company have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 227 Industrial Park Road, Harlan, KY 40831 (36° 50' 08.82" North latitude, 83° 19' 39.46" West longitude). The proposed facility will include a 175-foot tall tower, with an approximately 10-foot tall lightning arrestor attached at the top, for a total height of 185-feet, plus related ground facilities. This facility is needed to provide improved coverage for wireless communications in the area.

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Sincerely,
David A. Pike
Attorney for Applicants
enclosures

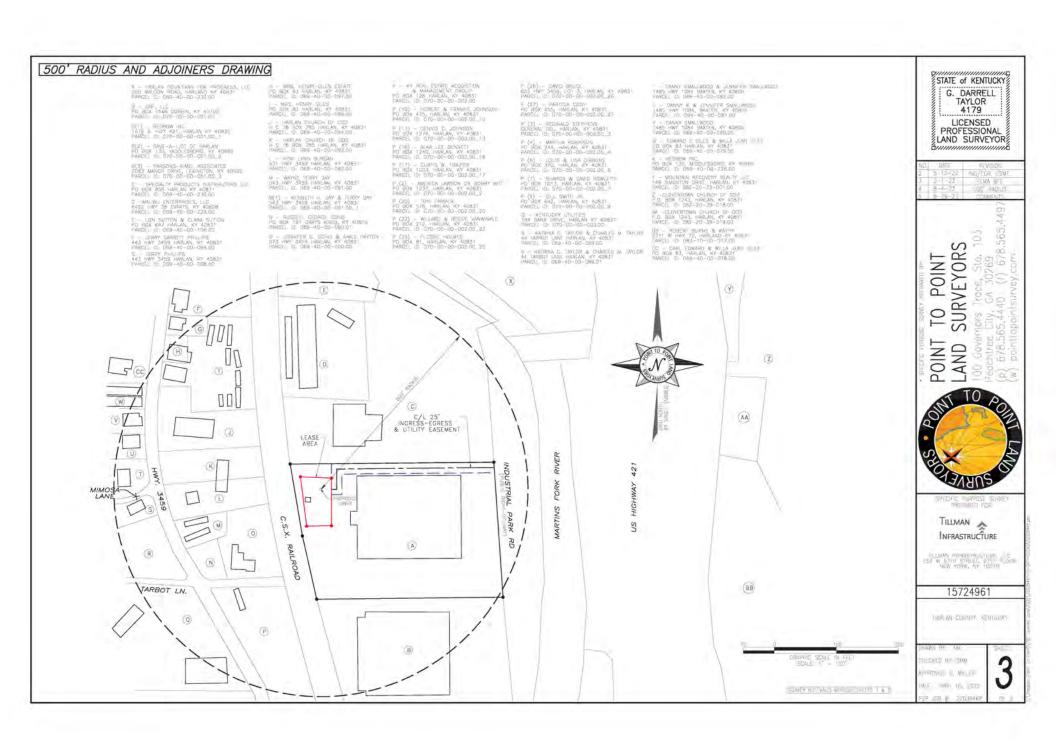
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# EXHIBIT M COPY OF POSTED NOTICES AND NEWSPAPER NOTICE ADVERTISEMENT

## SITE NAME: CLOVER FORK NOTICE SIGNS

The signs are at least (2) feet by four (4) feet in size, of durable material, with the text printed in black letters at least one (1) inch in height against a white background, except for the word "**tower**," which is at least four (4) inches in height.

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Tillman Infrastructure LLC, a Delaware limited liability company propose to construct a telecommunications **tower** on this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165; telephone: (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2023-00296 in your correspondence.

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Tillman Infrastructure LLC, a Delaware limited liability company propose to construct a telecommunications **tower** near this site. If you have questions, please contact Pike Legal Group, PLLC, P.O. Box 369, Shepherdsville, KY 40165; telephone: (800) 516-4293, or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2023-00296 in your correspondence.



1578 Highway 44 East, Unit 6 PO Box 369 Shepherdsville, KY 40165-0369

Phone: 502-955-4400

Fax: 502-543-4410

VIA EMAIL: teresa.jackson@claibornprogress.net

TELEPHONE: 606-573-4510

Harlan Enterprise 211 E. Central Street Suite 102 Harlan, KY 40831

RE: Legal Notice Advertisement

Site Name: Clover Fork

Dear Advertising Department:

Please publish the following legal notice advertisement in the next edition of *The Harlan Enterprise*:

#### NOTICE

New Cingular Wireless PCS, LLC, a Delaware limited liability company, d/b/a AT&T Mobility and Tillman Infrastructure LLC, a Delaware limited liability company have filed an application with the Kentucky Public Service Commission ("PSC") to construct a new wireless communications facility on a site located at 227 Industrial Park Road, Harlan, KY 40831 (36° 50' 08.82" North latitude, 83° 19' 39.46" West longitude). You may contact the PSC for additional information concerning this matter at: Kentucky Public Service Commission, Executive Director, 211 Sower Boulevard, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to docket number 2023-00296 in any correspondence sent in connection with this matter.

After this advertisement has been published, please forward a tearsheet copy, affidavit of publication, and invoice to Pike Legal Group, PLLC, P. O. Box 369, Shepherdsville, KY 40165. Please call me at (800) 516-4293 if you have any questions. Thank you for your assistance.

Sincerely, Chris Shouse Pike Legal Group, PLLC

## EXHIBIT N COPY OF RADIO FREQUENCY DESIGN SEARCH AREA

