

Dane County Conditional Use Permit Application

Application Date	C.U.P Number
09/20/2022	DCPCUP-2022-02578
Public Hearing Date	
10/25/2022	

OWNER INFORMATION		AGENT INFORMATION	
OWNER NAME BRETT LUNDE	Phone with Area Code (608) 628-1143	AGENT NAME DEREK MCGREW	Phone with Area Code (317) 507-4541
BILLING ADDRESS (Number, Street) 1576 SPRING RD		ADDRESS (Number, Street) 103 WILSHIRE COURT	
(City, State, Zip) STOUGHTON, WI 53589		(City, State, Zip) Noblesville, IN 46062	
E-MAIL ADDRESS		E-MAIL ADDRESS derek@cellusite.net	

ADDRESS/LOCATION 1		ADDRESS/LOCATION 2		ADDRESS/LOCATION 3	
ADDRESS OR LOCATION OF CUP		ADDRESS OR LOCATION OF CUP		ADDRESS OR LOCATION OF CUP	
1576 Spring Road					
TOWNSHIP DUNKIRK	SECTION 3	TOWNSHIP	SECTION	TOWNSHIP	SECTION
PARCEL NUMBERS INVOLVED		PARCEL NUMBERS INVOLVED		PARCEL NUMBERS INVOLVED	
0511-032-8100-0		---		---	

CUP DESCRIPTION
195' Self-Support Communication Tower

DANE COUNTY CODE OF ORDINANCE SECTION	ACRES
10.103(9)	3.8

DEED RESTRICTION REQUIRED? <input type="checkbox"/> Yes <input type="checkbox"/> No Applicant Initials _____	Inspectors Initials AMA1	SIGNATURE:(Owner or Agent) PRINT NAME: DATE:
	COMMENTS: 195' SELF-SUPPORT COMMUNICATION TOWER	



Dane County
Department of Planning and Development
 Zoning Division
 Room 116, City-County Building
 210 Martin Luther King Jr. Blvd.
 Madison, Wisconsin 53703
 (608) 266-4266

Application Fees	
General:	\$495
Mineral Extraction:	\$1145
Communication Tower:	\$1145 (+\$3000 RF eng review fee)
PERMIT FEES DOUBLE FOR VIOLATIONS OR WHEN WORK HAS STARTED PRIOR TO ISSUANCE OF PERMIT	

CONDITIONAL USE PERMIT APPLICATION

APPLICANT INFORMATION

Property Owner Name:	Brett Lunde	Agent Name:	Derek McGrew
Address (Number & Street):	1576 Spring Road	Address (Number & Street):	103 Wilshire Court
Address (City, State, Zip):	Stoughton, WI 53589	Address (City, State, Zip):	Noblesville, IN 46062
Email Address:		Email Address:	derek@cellusite.net
Phone#:	608-628-1143	Phone#:	317-507-4541

SITE INFORMATION

Township:	Dunkirk	Parcel Number(s):	051103281000
Section:	03	Property Address or Location:	1576 Spring Road
Existing Zoning:	Rural RR-2 <input checked="" type="checkbox"/>	Proposed Zoning:	Rural RR-2 <input checked="" type="checkbox"/>
		CUP Code Section(s):	10.103

DESCRIPTION OF PROPOSED CONDITIONAL USE

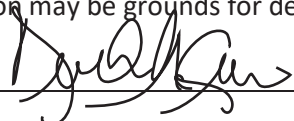
Type of conditional use permit (for example: limited family business, animal boarding, mineral extraction, or any other listed conditional use): Communication Towers	Is this application being submitted to correct a violation? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Provide a short but detailed description of the proposed conditional use: See Application Cover Letter.	

GENERAL APPLICATION REQUIREMENTS

Applications will not be accepted until the applicant has met with department staff to review the application and determined that all necessary information has been provided. Only complete applications will be accepted. All information from the checklist below must be included. Note that additional application submittal requirements apply for particular uses or as may be required by the Zoning Administrator. Applicants for significant and/or potentially controversial conditional uses are strongly encouraged to meet with staff prior to submittal.

<input checked="" type="checkbox"/> Complete attached information sheet for standards	<input checked="" type="checkbox"/> Site Plan drawn to scale	<input checked="" type="checkbox"/> Detailed operational plan	<input checked="" type="checkbox"/> Written legal description of boundaries	<input checked="" type="checkbox"/> Detailed written statement of intent	<input type="checkbox"/> Application fee (non-refundable), payable to Dane County Treasurer
---	--	---	---	--	--

I certify by my signature that all information presented herein is true and correct to the best of my knowledge. I hereby give permission for staff of the Dane County Department of Planning and Development to enter my property for the purpose of collecting information to be used as part of the review of this application. I acknowledge that submittal of false or incorrect information may be grounds for denial of this application.

Owner/Agent Signature: 

Date: 08/29/2022

STANDARDS FOR CONDITIONAL USE PERMITS

Applicants must provide adequate evidence demonstrating to the Town and Dane County Zoning & Land Regulation Committee that the proposed conditional use satisfies the following 8 standards for approval, along with any additional standards specific to the applicable zoning district or particular use found in sections [10.220\(1\)](#) and [10.103](#) of the code.

Please explain how the proposed land use will meet the following standards (attach additional pages, if necessary):

<p>1. The establishment maintenance or operation of the conditional use will not be detrimental to or endanger the public health, safety, comfort or general welfare. See Application Cover Letter.</p>
<p>2. The uses, values, and enjoyment of other property in the neighborhood for purposes already permitted shall be in no foreseeable manner substantially impaired or diminished by establishment, maintenance or operation of the conditional use. See Application Cover Letter.</p>
<p>3. The establishment of the conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district. See Application Cover Letter.</p>
<p>4. Adequate utilities, access roads, drainage and other necessary site improvements have been or are being made to accommodate the conditional use. See Application Cover Letter.</p>
<p>5. Adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets. See Application Cover Letter.</p>
<p>6. That the conditional use shall conform to all applicable regulations of the district in which it is located. See Application Cover Letter.</p>
<p>7. The conditional use is consistent with the adopted town and county comprehensive plans. See Application Cover Letter.</p>
<p>8. If the conditional use is located in a Farmland Preservation (FP) Zoning district, the conditional use is subject to the following additional standards found in section 10.220(1). Attach additional pages, if necessary.</p> <ul style="list-style-type: none">• Explain how the use and its location in the Farmland Preservation Zoning District are consistent with the purposes of the district: N/A• Explain how the use and its location in the Farmland Preservation Zoning district are reasonable and appropriate, considering alternative locations: N/A• Explain how the use is reasonably designed to minimize the conversion of land from agricultural use or open space use: N/A• Explain how the use does not substantially impair or limit the current or future agricultural use of surrounding parcels zoned for agricultural use: N/A• Explain how construction damage to land remaining in agricultural use is minimized and repaired, to the extent feasible: N/A

WRITTEN STATEMENT OF INTENT AND OPERATIONS PLAN

Applicants must provide a detailed written statement of intent describing the proposed conditional use along with an operational plan that explains how the conditional use will be operated. Please use the form below and provide responses, as applicable, to your proposed conditional use. Attach additional pages, if necessary.

<p>Describe in detail the proposed conditional use. Provide the specific location of the use(s), type of equipment used, planned property improvements, including description / size of existing or proposed new buildings to be used, and any other relevant information. For existing or proposed commercial operations, provide the name of the business and describe the nature and type of business activity.</p> <p>See Application Cover Letter.</p>
<p>List the proposed days and hours of operation.</p> <p>24/7</p>
<p>List the number of employees, including both full-time equivalents and maximum number of personnel to be on the premises at any time.</p> <p>0</p>
<p>List any anticipated noise, odors, dust, soot, runoff or pollution associated with the conditional use, along with any proposed measures that will be taken to mitigate impacts to neighboring properties.</p> <p>See Application Cover Letter.</p>
<p>Describe any materials proposed to be stored outside and any activities, processing or other operations taking place outside an enclosed building.</p> <p>None</p>
<p>For proposals involving construction of new facilities and/or infrastructure, describe, as applicable, any measures being taken to ensure compliance with county stormwater and erosion control standards under Chapter 11 of Chapter 14, Dane County Code.</p> <p>None anticipated to be required. Land is completely flat.</p>
<p>List and describe existing or proposed sanitary facilities, including adequate private onsite wastewater treatment systems, associated with the proposed conditional use. For uses involving domestic pets or livestock, list and describe measures taken to address manure storage or management.</p> <p>None required</p>
<p>List and describe any existing or proposed facilities for managing and removal of trash, solid waste and recyclable materials.</p> <p>None required</p>
<p>Describe anticipated daily traffic, types and weights of vehicles, and any provisions, intersection or road improvements or other measures proposed to accommodate increased traffic.</p> <p>See Application Cover Letter.</p>
<p>Provide a listing of any hazardous, toxic or explosive materials to be stored on site, and any spill containment, safety or pollution prevention measures.</p> <p>None</p>
<p>Describe any existing or proposed outdoor lighting along with any measures that will be taken to mitigate light-pollution impacts to neighboring properties. The Zoning Administrator may require submittal of a photometric plan for outdoor lighting if deemed necessary to determine potential impacts to neighbors.</p> <p>None</p>
<p>Describe any existing or proposed signage, including size, location, and materials, consistent with the county's sign ordinance found in s. 10.800.</p> <p>The only signage is a small 2'x1' sign to include the ASR registration as required by the FCC</p>
<p>Briefly describe the current use(s) of the property on which the conditional use is proposed.</p> <p>See Application Cover Letter.</p>
<p>Briefly describe the current uses of surrounding properties in the neighborhood.</p> <p>See Application Cover Letter.</p>

APPLICATION CHECKLIST FOR A CONDITIONAL USE PERMIT

A scaled site plan and detailed operations plan must be submitted with your Conditional Use Permit application. Please use the checklist below to ensure you are submitting all required information applicable to your request. Please attach to your application form the required maps and plans listed below, along with any additional pages.

SCALED SITE PLAN. Show sufficient detail on 11" x 17" paper. Include the following information, as applicable:

- Scale and north arrow.
- Date the site plan was created.
- Existing subject property lot lines and dimensions.
- Existing and proposed wastewater treatment systems and wells.
- All buildings and all outdoor use and/or storage areas, existing and proposed, including provisions for water and sewer.
- All dimension and required setbacks, side yards and rear yards.
- Location and width of all existing and proposed driveway entrances onto public and private roadways, and of all interior roads or driveways.
- Location and dimensions of any existing utilities, easements or rights-of-way.
- Parking lot layout in compliance with s. [10.102\(8\)](#).
- Proposed loading/unloading areas.
- Zoning district boundaries in the immediate area. All districts on the property and on all neighboring properties must be clearly labeled.
- All relevant natural features, including navigable and non-navigable waters, floodplain boundaries, delineated wetland areas, natural drainage patterns, archeological features, and slopes over 12% grade.
- Location and type of proposed screening, landscaping, berms or buffer areas if adjacent to a residential area.
- Any lighting, signs, refuse dumpsters, and possible future expansion areas.

NEIGHBORHOOD CHARACTERISTICS. Describe existing land uses on the subject and surrounding properties:

- Provide a brief written statement describing the current use(s) of the property on which the conditional use is proposed.
- Provide a brief written statement documenting the current uses of surrounding properties in the neighborhood.

OPERATIONS PLAN AND NARRATIVE. Describe in detail the following characteristics of the operation, as applicable:

- Hours of operation.
- Number of employees, including both full-time equivalents and maximum number of personnel to be on the premises at any time.
- Anticipated noise, odors, dust, soot, runoff or pollution and measures taken to mitigate impacts to neighboring properties.
- Descriptions of any materials stored outside and any activities, processing or other operations taking place outside an enclosed building.
- Compliance with county stormwater and erosion control standards under [Chapter 11](#) of [Chapter 14](#), Dane County Code.
- Sanitary facilities, including adequate private onsite wastewater treatment systems and any manure storage or management plans approved by the Madison and Dane County Public Health Agency and/or the Dane County Land and Water Resources Department.
- Facilities for managing and removal of trash, solid waste and recyclable materials.
- Anticipated daily traffic, types and weights of vehicles, and any provisions, intersection or road improvements or other measures proposed to accommodate increased traffic.
- A listing of hazardous, toxic or explosive materials stored on site, and any spill containment, safety or pollution prevention measures taken.
- Outdoor lighting and measures taken to mitigate light-pollution impacts to neighboring properties.
- Signage, consistent with section [10.800](#).

ADDITIONAL MATERIALS. Additional information is required for certain conditional uses listed in s. [10.103](#):

- Agricultural entertainment, special events, or outdoor assembly activities anticipating over 200 attendees must file an [event plan](#).
- [Domestic pet](#) or [large animal boarding](#) must provide additional information in site and operations plans.
- Communication towers must submit additional information as required in s. [10.103\(9\)](#).
- Farm residences proposed in the FP-35 district must submit additional information as required in s. [10.103\(11\)](#).
- Mineral extraction proposals must submit additional information as required in s. [10.103\(15\)](#).

Cellusite, LLC

August 29, 2022

Mr. Majid Allan
County of Dane
Department of Planning and Development
City-County Building, Room 116
210 Martin Luther King Jr. Blvd.
Madison, WI 53703

Re: Application for Conditional Use Permit – Telecommunication Tower
Property Address: 1576 Spring Road, Stoughton, WI 53589 (Town of Dunkirk)
Applicants: CelluSite, LLC, agent for Iron Mountain Towers, LLC dba TowerKing
and DISH Wireless LLC
Parcel Owner: Brett Lunde

Dear Mr. Allan:

Enclosed for consideration please find Iron Mountain Towers, LLC dba TowerKing (“**TowerKing**”) and DISH Wireless LLC’s (“**DISH**”) (TowerKing and DISH, collectively, the “**Applicants**”) Conditional Use Permit Application (the “**Application**”) to construct a multi-carrier wireless telecommunication tower and associated facilities (the “**Wireless Communications Facility**”). I serve as agent for Applicants.

The Wireless Communications Facility has been designed to accommodate additional providers (carriers, wireless internet providers and E911) interested in improving service within the greater Stoughton area. TowerKing actively markets its tower sites for collocation to all communications users and offers competitive business terms, which are attractive to its customers. We have approached this project thoughtfully, with an emphasis on blending the needs of the local citizenry with the goals of the Applicants.

The proposed facility meets the guidelines in Wis. Stat. § 66.0404 (the “**Wireless Siting Law**”).¹ It includes a 195-foot self-supporting tower, with a 4-foot lightning rod, for an overall structure height of 199 feet (the “**Tower**”).

¹ The Wireless Siting Law provides that a political subdivision may regulate the siting and construction of a new mobile service support structure and facilities only as provided in Wis. Stat. § 66.0404 and further provides that any ordinances in effect that are inconsistent with Wis. Stat. § 66.0404 may not be applied to, or enforced against, the activity. Wis. Stat. § 66.0404(h) & (i).

WIRELESS SITING LAW

The Wireless Siting Law sets forth six (6) requirements which must be included in an application to construct a new tower.² Those requirements, and the Applicants' responses to those requirements, follow. It is my belief that this information and related enclosures fulfill the requirements of the Wireless Siting Law.

1. The name and business address of, and the contact individual of, the applicant.

Applicants:	Contact Individual:
Iron Mountain Towers, LLC dba TowerKing c/o Grant Phillips 23434 Elliot Road Defiance, OH 43512 (419) 438-7587	Derek McGrew / CelluSite, LLC 103 Wilshire Court Noblesville, IN 46062 (317) 507-4541 derek@cellusite.net
DISH Wireless LLC 8040 Excelsior Drive, Suite 400 Madison, WI 53717	

2. The location of the proposed or affected support structure.

Applicants propose to construct a mobile service facility and related mobile support service structure, as defined by the Wireless Siting Law, at 1576 Spring Road, which bears Parcel ID # 0511-0328-1000 (the "**Property**").

The Tower will be constructed by TowerKing and located within a 60' x 60' leased area (the "**Leased Premises**"), of which 50' x 50' will be fenced and located in the southeastern portion of the Property and as depicted in the enclosed survey and construction drawings (the "**Construction Drawings**") marked as Exhibit A.

3. The location of the proposed mobile service facility.

² The six requirements are found at Wis. Stat. § 66.0404(2)(b).

The Wireless Siting Law defines “mobile service facility” as:

the set of equipment and network components, including antennas, transmitters, receivers, base stations, power supplies, cabling, and associated equipment, that is necessary to provide mobile service to a discrete geographic area, but does not include the underlying support structure.³

The Construction Drawings depict where the mobile service facility will be located on the Property (the mobile service facility and the Tower, collectively, the “**Installation**”). As noted on the enclosed Construction Drawings, sheet T-1, DISH will attach its equipment on the Tower at the 195-foot centerline. DISH will route its coax/cabling through the interior of the Tower and install its equipment near the base of the Tower within a fenced compound within the Leased Premises. The Installation is designed to accommodate three (3) additional wireless providers besides DISH.

- 4. If the application is to substantially modify an existing support structure, a construction plan which describes the proposed modifications to the support structure and the equipment and network components, including antennas, transmitters, receivers, base stations, power supplies, cabling, and related equipment associated with the proposed modifications.**

The application proposes installation of a new Tower; therefore, the requirements of this section are not applicable.

- 5. If the application is to construct a new mobile service support structure, a construction plan which describes the proposed mobile services support structure and the equipment and network components, including antennas, transmitters, receivers, base stations, power supplies, cabling, and related equipment to be placed on or around the new mobile service support structure.**

The Construction Drawings provide this information.

- 6. If an application is to construct a new mobile service support structure, an explanation as to why the applicant chose the proposed location and why the applicant did not choose collocation, including a sworn statement from an individual**

³ Wis. Stat. § 66.0404(1)(L).

who has responsibility over the placement of the mobile service support structure attesting that collocation within the applicant's search ring would not result in the same mobile service functionality, coverage, and capacity; is technically infeasible; or is economically burdensome to the mobile service provider.

Enclosed is a sworn statement prepared by a DISH radio frequency engineer (the “**DISH Sworn Statement**”) marked as Exhibit B. The DISH Sworn Statement includes the search ring which defines the precise geographic area where an additional cell site is needed to expand network coverage or capacity. Contributing factors for search ring placement and shape include the surrounding topography, the demographics and even whether the surrounding areas are urban, suburbs or open land.

The DISH Sworn Statement outlines why the proposed location was selected and attests there are no existing structures of sufficient height available for collocation within the search ring, making collocation technically infeasible. The proposed location for the Installation is the best candidate due to DISH’s network design needs, the nature of the surrounding area, and current use of the Property.

SETBACKS

The Tower meets the RR-2 Rural Residential Zoning District minimum front setback for structures of 63 feet from the town road center line; the minimum side yard setback of 10 feet from the lot line; and the minimum rear yard setback of 10 feet from the rear lot line (Section 10.242). There are no existing telecommunications towers within 0.5 miles of the proposed Tower.

ADDITIONAL DISCUSSION

TowerKing is a national owner and operator of wireless communications infrastructure. TowerKing proposes to operate the Installation within the Leased Premises and will own the Tower. DISH will install its equipment on the Tower and place ground equipment within the Leased Premises. It is not uncommon for wireless telecommunications service providers to partner with companies like TowerKing to site development projects.

The proposed Installation results from the needs of DISH. In 2020, DISH became a nationwide U.S. wireless carrier through the acquisition of Boost Mobile. DISH is building the

Mr. Majid Allan
Planning & Development
August 29, 2022
Page 5

nation's first virtualized, standalone 5G broadband network, and has also determined a need for coverage within the immediate area.

The Installation will include a 20-foot wide access and utility easement from the existing gravel drive off of Spring Road. The access and utility easement will require only minimal improvement.

The Installation will provide a great benefit in providing high quality, technologically advanced wireless communication services to the area. The Installation will conform to all applicable laws and regulations, including the national standard's seventh revision for Steel Antenna Towers and Antenna Supporting Structures published by the Telecommunications Industry Association (ANSI/TIA 222-G), Federal Communications Commission, and Federal Aviation Administration ("FAA"). Enclosed and marked as Exhibit C is the FAA Determination of No Hazard, which further negates any risk posed by the Tower.

The Installation will fill the void for wireless coverage within the immediate geographic area of the site. Once constructed, the Installation will negate requests for additional towers in the area.

The Property is in the RR-2 Rural Residential (2 to 4 acres) Zoning District (the "**RR-2 District**"), which is described in Section 10.242 of the County's Zoning Ordinance. The Leased Premises has been positioned upon the Property in a location to best fit with the current uses of the Property. Photo simulations are included at marked as Exhibit D. The Installation will require no public financial contribution or result in any additional expenses public facilities and services.

The communication services offered by DISH are expected to be used by the general public, providing an economic asset to the community. The Installation will enhance E-911 services, further protecting public health, safety, and welfare within the Stoughton, Dunkirk, Pleasant Spring and Lake Kegonsa areas. Besides strengthening coverage, the Tower will facilitate deployment of next generation technology.

The Installation will be unmanned and will not be lighted. No parking or employee facilities are required. DISH's technicians will visit the site periodically, typically a couple hours once per month, for the security monitoring, testing, monitoring, and maintenance of its equipment. TowerKing will also visit the site periodically to monitor the maintenance and

security of the facility. The facility will not generate recognizable traffic. Noise level is limited to periodic generator operation.

DANE COUNTY COMMUNICATION TOWER ORDINANCE

Dane County regulates wireless siting via Section 10.103(9) of its Code of Ordinances (the “**Dane County Communication Tower Ordinance**” or the “**Ordinance**”). The Application meets the applicable provisions of the Ordinance, when read in conjunction with the Wireless Siting Law.

The requirements of the Ordinance, and the Applicants’ responses to those requirements, follow. This information and related enclosures fulfill the applicable requirements of the Ordinance.

- Section 10.103(9)(b)1.a.i.
 - Contact information for the Applicants is provided above. FCC license numbers are set forth in the FCC Radio Station Authorizations enclosed with this Application and marked as Exhibit E.
- Section 10.103(9)(b)1.a.ii.
 - See the Construction Drawings, sheet S-1.
- Section 10.103(9)(b)1.a.iii.
 - See FCC Radio Station Authorizations.
- Sections 10.103(9)(b)1.b.i. and 10.103(9)(b)1.b.ii.
 - See DISH Sworn Statement.
- Section 10.103(9)(b)1.c.
 - See Search Ring, Tower Map & Existing Residences Map enclosed with this Application and marked as Exhibit F.
- Section 10.103(9)(b)1.d.
 - This information has been provided directly to the County’s third-party engineering consultant.
- Sections 10.103(9)(b)1.e. & 10.101(6)

- See the Construction Drawings and Search Ring, Tower Map & Existing Residences Map.
- Section 10.103(9)(b)1.f.
 - See the Construction Drawings
 - The Tower will not be lighted per the FAA Determination of No Hazard.
 - See Photo Simulations.
 - Notification to other carriers has been provided via email.
 - Notification to nearby airports has been provided per the FAA Determination of No Hazard.

STANDARDS FOR CONDITIONAL USE PERMITS

1. The establishment maintenance or operation of the conditional use will not be detrimental to or endanger the public health, safety, comfort or general welfare.

The proposed Tower will not be detrimental to or endanger the public health, safety, comfort or general welfare. The proposed Tower is more than 1,500 feet from the nearest residential property and is otherwise surrounded by agriculturally-zoned parcels. The Tower does not generate noise, traffic, sounds, odors, or any nuisance that would be detrimental to the residents of the County or Town. As depicted in the attached Photo Simulations, the Tower is minimally invasive from a visual standpoint and existing vegetation screens many, if not all, of the views of the residences within 0.5 miles of the proposed Tower. At the same time, the Tower will increase telecommunication connectivity, Wi-Fi, and access to emergency services.

2. The uses, values, and enjoyment of other property in the neighborhood for purposes already permitted shall be in no foreseeable manner substantially impaired or diminished by establishment, maintenance or operation of the conditional use.

The proposed use will not foreseeably substantially impair or diminish the uses, values and enjoyment of other property in the area. The properties immediately to the north, south, east and west of the Property are all Farmland Preservation, the uses of which will not be affected by the Tower.

3. The establishment of the conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.

The proposed use will not impede the normal and orderly development and improvement of the surrounding properties. The small footprint of the proposed site will allow the Property to be used as permitted and the proposed use will not impede the normal and orderly development and improvement of the surrounding agriculturally-zoned properties.

4. Adequate utilities, access roads, drainage and other necessary site improvements have been or are being made to accommodate the conditional use.

All access and utilities are provided as indicated in the Construction Drawings. The approval of this Application will add an additional utility for the surrounding public to use.

5. Adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets.

As provided in the Construction Drawings, the Tower will be accessible via an extension of an existing driveway. The use will only generate additional traffic of one vehicle per month.

6. That the conditional use shall conform to all applicable regulations of the district in which it is located.

The Tower conforms to all applicable regulations in the district in which it will be located as provided in this letter.

7. The conditional use is consistent with the adopted town and county comprehensive plans.

The Tower is consistent with the Comprehensive Plans of the Town and County.⁴ Specifically, the proposed use is consistent with the County's goal to ensure that its residents continue to enjoy high quality community services and facilities. It not only will provide the services identified as an existing need by at least one carrier but provides the infrastructure to provide for the County's and Town's future needs as telecommunications service (and wireless Internet service) have become a necessary and indispensable need for residents and businesses. Indeed, the proposed use is also consistent with the County's economic development goals as it

⁴ The Town's land use policy regarding communication towers is to "ensure that development of new cellular towers is consistent with Dane County's ordinance regarding the procedure and standards for the placement, construction, or modification of communication towers."

Mr. Majid Allan
Planning & Development
August 29, 2022
Page 9

allows residents to perform daily tasks and improves businesses opportunities. At the same time, the proposed Tower is located on a parcel that is set apart from properties with residential use and will not interfere with the surrounding agricultural uses.

8. If the conditional use is located in a Farmland Preservation (FP) Zoning district, the conditional use is subject to the following additional standards found in section 10.220(1). Attach additional pages, if necessary.

Not applicable.

CONCLUSION

We look forward to working with you to help advance wireless communications to the residents, guests, and workforce in the Stoughton, Dunkirk, Pleasant Spring and Lake Kegonsa areas. Please contact me at (317) 507-4541 or by e-mail at derek@cellusite.net if you have questions or require additional information.

Very truly yours,

CELLUSITE, LLC

By: /s/ Derek McGrew

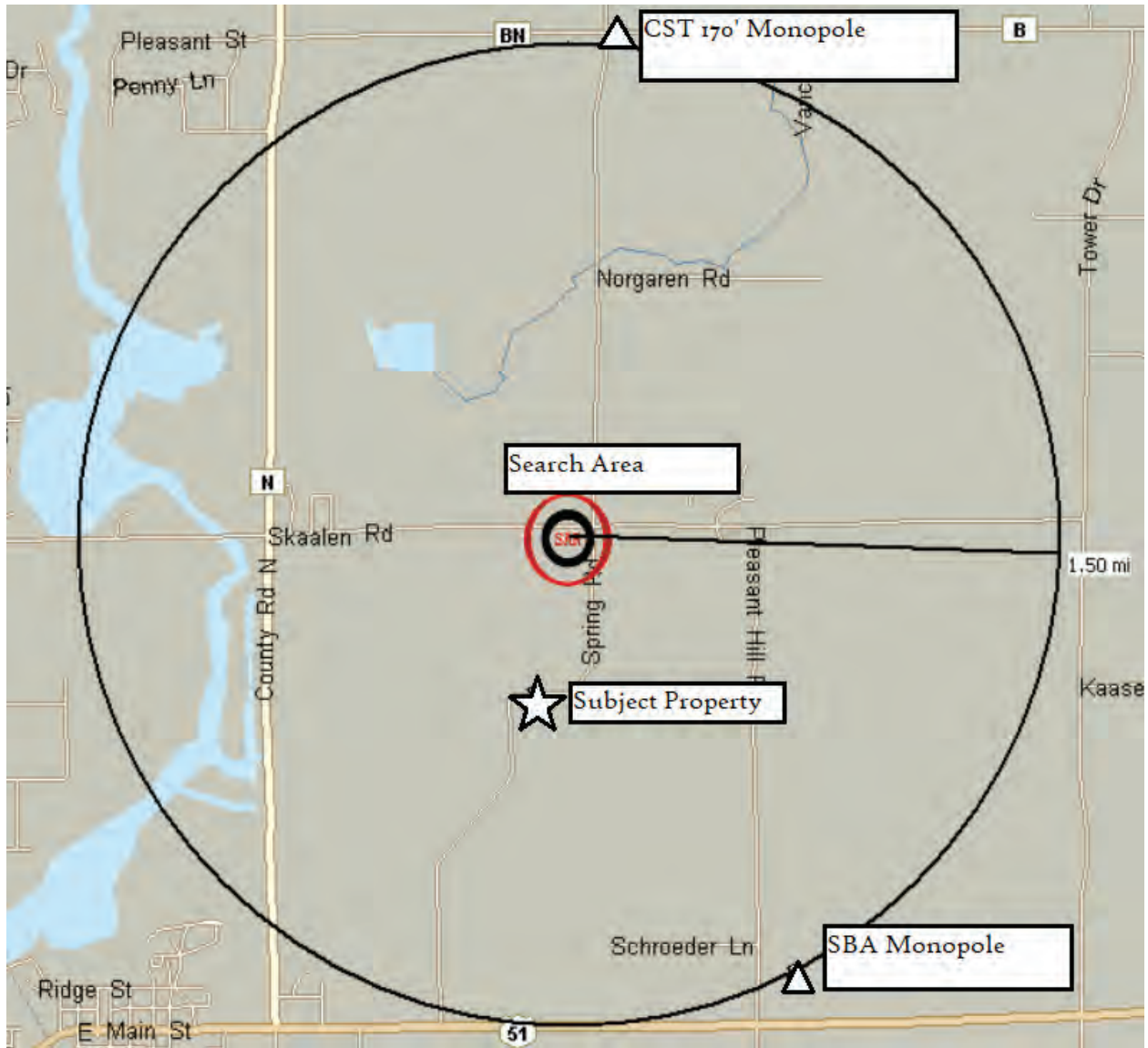
Derek McGrew

Agent for Iron Mountain Towers, LLC dba
TowerKing and DISH Wireless, LLC

Enclosures (Exhibits A-F)

cc: Attorney Jake Remington, Husch Blackwell LLP (legal counsel for Applicants)

Search Ring, Tower Map & Existing Residences Map



Search Ring, Tower Map & Existing Residences Map



EXHIBIT B

**Sworn Statement of Inga Brauneis
in Support of New Tower Construction Pursuant to Wis. Stat. §66.0404**

State of Wisconsin)
) ss.
County of Dane)

INGA BRAUNEIS, being first duly sworn on oath, deposes and says that:

1. I am an adult resident of the State of Wisconsin and serve as a Radio Frequency Engineer at DISH Wireless, LLC ("DISH").
2. My job duties at DISH include design and optimization of new and existing wireless facilities to meet DISH's network needs. I have ongoing oversight duties related to DISH's mobile service support structures in the State of Wisconsin, including the proposed mobile service support structure being proposed by DISH and Iron Mountain Towers, LLC dba TowerKing at 1576 Spring Road, Stoughton, Wisconsin which bears Parcel ID # 0511-0328-1000 (the "Proposed Communications Facility").
3. This sworn statement is made pursuant to Wis. Stat. §66.0404(2)(b)6.
4. DISH identified a genuine need for the Proposed Communications Facility, and thereafter, DISH's engineering department issued a "search ring" defining the precise geographic area where the Proposed Communications Facility was needed to address the identified need (the "Search Ring").
5. The Proposed Communications Facility is being proposed because collocation within the Search Ring is infeasible, as no existing structures of any kind are available for collocation.
6. Because no structures exist to support collocation within the Search Ring, we are requesting permission to construct the Proposed Communications Facility.
7. The minimum height needed for this site is One Hundred Ninety Five Feet (195') antenna centerline.



INGA BRAUNEIS

State of [Wisconsin])
County of Dane) ss.

This instrument was acknowledged, subscribed and sworn to before me on
08 / 26 / 2022, by INGA BRAUNEIS.

JAMAL COLEMAN
Notary Public
State of Wisconsin



NOTARY PUBLIC FOR
My Commission Expires: 10/20/2024

NOTE:
FOR SITES WHERE A CRANE IS NECESSARY, THE CONTRACTOR SHALL CONFIRM AN UNOBSTRUCTED ROUTE FOR THE CRANE FROM PUBLIC ROAD TO TOWER SITE PRIOR TO CONSTRUCTION. NO AERIAL OBSTRUCTIONS UNDER FIFTEEN FEET ABOVE GRADE, INCLUDING AERIAL UTILITY LINES, ARE ALLOWED ALONG SAID CRANE ROUTE.

EXHIBIT A



SKAALEN

DRAWING INDEX

- T-1 TITLE SHEET
- S-1 SURVEY PLAN
- S-2 ENLARGED SITE PLAN
- C-1 TOWER ELEVATION & DETAILS
- C-2 SHELTER ELEVATIONS
- C-3 FOUNDATION PLAN & DETAILS
- C-4 ICE BRIDGE & FENCE DETAILS
- C-5 GENERAL NOTES
- E-1 ELECTRICAL NOTES & DETAILS
- E-2 SINGLE LINE DIAGRAM & DETAILS
- E-3 GROUNDING DETAILS
- E-4 GROUNDING DETAILS
- E-5 GROUNDING NOTES & DETAILS

CIVIL ENGINEER

LANDTECH PROFESSIONAL SURVEYING AND ENGINEERING
1275 MCGREGOR WAY
GRAWN, MI 49637
P.O. BOX 193
PHONE: (231) 943-0050

SURVEYOR

LANDTECH PROFESSIONAL SURVEYING AND ENGINEERING
1275 MCGREGOR WAY
GRAWN, MI 49637
P.O. BOX 193
PHONE: (231) 943-0050

DIRECTIONS TO SITE:

FROM STOUGHTON, WI, PROCEED EAST ON US-51 (CR-A) (EAST), APPROXIMATELY 1.0 MILES; TURN LEFT (NORTH) ONTO SPRING RD, AND PROCEED 1.1 MILES; TURN RIGHT (EAST) ONTO ACCESS DRIVE.



VICINITY MAP
NOT TO SCALE

PROJECT INFORMATION

SCOPE OF WORK:

UNMANNED TELECOMMUNICATIONS FACILITY

TYPE OF CONSTRUCTION

PROJECT TYPE: PROPOSED 195' SELF SUPPORT

SITE ADDRESS:

1576 SPRING ROAD,
STOUGHTON, WI 53589

TOWER INFORMATION:

(LATITUDE & LONGITUDE BASED ON NAD1983)

LATITUDE: 42° 55' 56.81"N

LONGITUDE: 89° 11' 05.74"W

PROPOSED RAD CENTER HEIGHT: 195' AGL.

SQUARE FOOTAGE:

PROPOSED LEASE AREA: 3,600 SQ. FT.

PROPERTY OWNERS:

BRETT LUNDE
1576 SPRING ROAD,
STOUGHTON, WI 53589

PARCEL NUMBER (TAX I.D.):

026/0511-032-8100-0

OCCUPANT LOAD:

UNOCCUPIED

PARKING REQUIREMENTS:

ADDITIONAL PARKING REQUIRED: NONE
EXISTING PARKING MODIFICATIONS: NONE REQUIRED



Matthew T. Mokanyk
Matthew T. Mokanyk, P.S., P.E.
Wisconsin P.S. No. 3078-8
Date: 03/22/22

NOTES

CONCRETE AND REINFORCING STEEL NOTES (SEE PAGE C-5)
APPLICABLE BUILDING CODES AND STANDARDS (SEE PAGE C-5)
SITE WORK GENERAL NOTES (SEE PAGE C-5)
STRUCTURAL STEEL NOTES (SEE PAGE C-5)
GROUNDING NOTES (SEE PAGE E-5)
ELECTRICAL INSTALLATION NOTES (SEE PAGE E-1)
GENERAL NOTES (SEE PAGE C-5)



TOWER KING
23434 ELLIOTT ROAD,
DEFIANCE, OH 43512
PH: (419) 782-8591

SKAALEN
1576 SPRING RD.,
STOUGHTON, WI 53589

NO.	DATE	REVISIONS	BY	CHK	APPD
1	08/18/22	OVERALL TOWER HEIGHT	RJH	MM	MM
0	03/22/20	ISSUED FOR REVIEW	TLR	MM	MM

SCALE: AS SHOWN DESIGNED BY: MM DRAWN BY: TLR

SHEET T-1

TITLE SHEET

DRAWING NUMBER

22359002

LATITUDE & LONGITUDE

LATITUDE AND LONGITUDE OF SITE ARE BASED ON NAD 83.
 LATITUDE: 42° 55' 56.81"N
 LONGITUDE: 89° 11' 05.74"W
 GROUND ELEVATION AT TOWER BASE: 889' AMSL
 ELEVATIONS ARE BASED ON NAVD88

SITE INFORMATION

PROPERTY OWNER:
 BRETT LEUDE
 1576 SPRING ROAD,
 STOUGHTON, WI 53589

ZONING INFORMATION

SUBJECT SITE ZONING: AGRICULTURE
ADJACENT ZONING:

NORTH: AGRICULTURE
SOUTH: AGRICULTURE
EAST: AGRICULTURE
WEST: AGRICULTURE

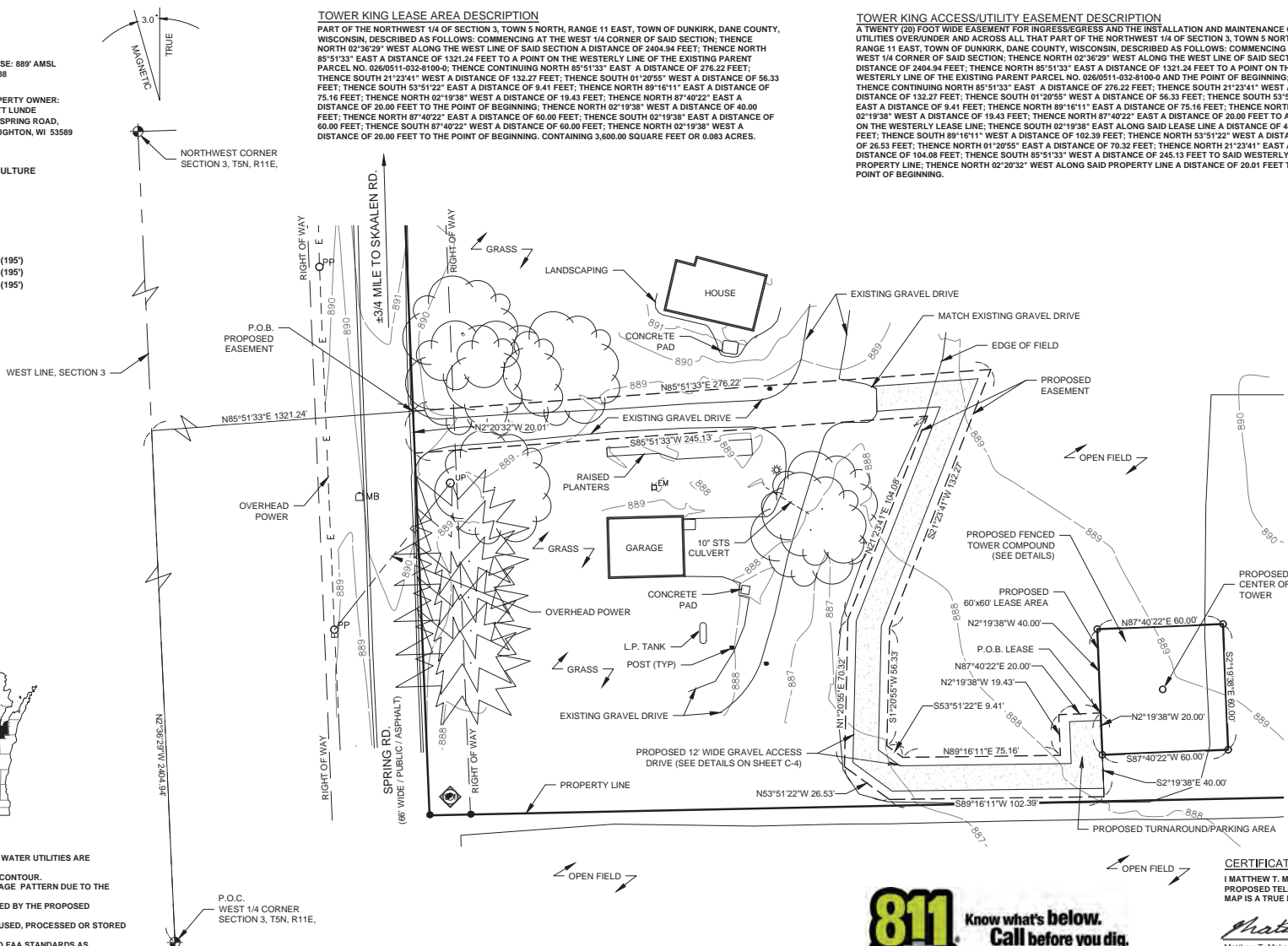
TOWER SETBACKS:
FRONT: 100% TOWER HEIGHT (195')
REAR: 100% TOWER HEIGHT (195')
SIDES: 100% TOWER HEIGHT (195')

TOWER KING LEASE AREA DESCRIPTION

PART OF THE NORTHWEST 1/4 OF SECTION 3, TOWN 5 NORTH, RANGE 11 EAST, TOWN OF DUNKIRK, DANE COUNTY, WISCONSIN, DESCRIBED AS FOLLOWS: COMMENCING AT THE WEST 1/4 CORNER OF SAID SECTION; THENCE NORTH 02°36'29" WEST ALONG THE WEST LINE OF SAID SECTION A DISTANCE OF 2404.94 FEET; THENCE NORTH 85°51'33" EAST A DISTANCE OF 1321.24 FEET TO A POINT ON THE WESTERLY LINE OF THE EXISTING PARENT PARCEL NO. 026/0511-032-8100-0; THENCE CONTINUING NORTH 85°51'33" EAST A DISTANCE OF 276.22 FEET; THENCE SOUTH 21°23'41" WEST A DISTANCE OF 132.27 FEET; THENCE SOUTH 01°20'55" WEST A DISTANCE OF 56.33 FEET; THENCE SOUTH 53°51'22" EAST A DISTANCE OF 9.41 FEET; THENCE NORTH 89°16'11" EAST A DISTANCE OF 75.16 FEET; THENCE NORTH 02°19'38" WEST A DISTANCE OF 19.43 FEET; THENCE NORTH 87°40'22" EAST A DISTANCE OF 20.00 FEET TO THE POINT OF BEGINNING; THENCE NORTH 02°19'38" WEST A DISTANCE OF 40.00 FEET; THENCE NORTH 87°40'22" EAST A DISTANCE OF 60.00 FEET; THENCE SOUTH 02°19'38" EAST A DISTANCE OF 60.00 FEET; THENCE SOUTH 87°40'22" WEST A DISTANCE OF 60.00 FEET; THENCE NORTH 02°19'38" WEST A DISTANCE OF 20.00 FEET TO THE POINT OF BEGINNING, CONTAINING 3,600.00 SQUARE FEET OR 0.083 ACRES.

TOWER KING ACCESS/UTILITY EASEMENT DESCRIPTION

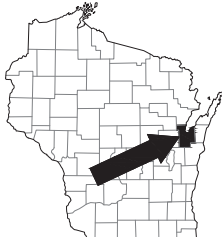
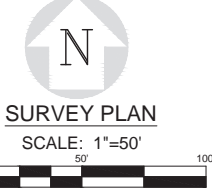
A TWENTY (20) FOOT WIDE EASEMENT FOR INGRESS/EGRESS AND THE INSTALLATION AND MAINTENANCE OF UTILITIES OVER/UNDER AND ACROSS ALL THAT PART OF THE NORTHWEST 1/4 OF SECTION 3, TOWN 5 NORTH, RANGE 11 EAST, TOWN OF DUNKIRK, DANE COUNTY, WISCONSIN, DESCRIBED AS FOLLOWS: COMMENCING AT THE WEST 1/4 CORNER OF SAID SECTION; THENCE NORTH 02°36'29" WEST ALONG THE WEST LINE OF SAID SECTION A DISTANCE OF 2404.94 FEET; THENCE NORTH 85°51'33" EAST A DISTANCE OF 1321.24 FEET TO A POINT ON THE WESTERLY LINE OF THE EXISTING PARENT PARCEL NO. 026/0511-032-8100-0 AND THE POINT OF BEGINNING; THENCE CONTINUING NORTH 85°51'33" EAST A DISTANCE OF 276.22 FEET; THENCE SOUTH 21°23'41" WEST A DISTANCE OF 132.27 FEET; THENCE SOUTH 01°20'55" WEST A DISTANCE OF 56.33 FEET; THENCE SOUTH 53°51'22" EAST A DISTANCE OF 9.41 FEET; THENCE NORTH 89°16'11" EAST A DISTANCE OF 75.16 FEET; THENCE NORTH 02°19'38" WEST A DISTANCE OF 19.43 FEET; THENCE NORTH 87°40'22" EAST A DISTANCE OF 20.00 FEET TO A POINT ON THE WESTERLY LEASE LINE; THENCE SOUTH 02°19'38" EAST ALONG SAID LEASE LINE A DISTANCE OF 40.00 FEET; THENCE SOUTH 89°16'11" WEST A DISTANCE OF 102.39 FEET; THENCE NORTH 53°51'22" WEST A DISTANCE OF 26.53 FEET; THENCE NORTH 01°20'55" EAST A DISTANCE OF 70.32 FEET; THENCE NORTH 21°23'41" EAST A DISTANCE OF 104.88 FEET; THENCE SOUTH 85°51'33" WEST A DISTANCE OF 245.13 FEET TO SAID WESTERLY PROPERTY LINE; THENCE NORTH 02°20'32" WEST ALONG SAID PROPERTY LINE A DISTANCE OF 20.01 FEET TO THE POINT OF BEGINNING.



- IRON FOUND
- IRON SET
- ▲ P.K. NAIL FOUND
- GPS MONUMENT
- ⊕ MONUMENT BOX FOUND
- ⊕ MONUMENT FOUND
- ⊕ MONUMENT SET
- (R) RECORD
- (M) MEASURED
- TM STORM MANHOLE
- ⊕ CATCH BASIN
- ⊕ SQUARE CATCH BASIN
- ⊕ SANITARY MANHOLE
- ⊕ SANITARY SUMP-OUT
- ⊕ MONITOR WELL
- ⊕ TELCO. MANHOLE
- PPF POWER POLE
- PVP GUY
- ⊕ LIGHT POLE
- ⊕ ELECTRIC TRANSFORMER
- ⊕^{EM} ELECTRIC METER
- ⊕^{EH} ELECTRIC HANDHOLE
- ⊕^{WV} WATER VALVE
- ⊕ HYDRANT
- ⊕^{GM} GAS METER
- ⊕^{GV} GAS VALVE
- ⊕^{TV} TELEPHONE PEDESTAL
- ⊕ SIGN POST
- FENCE LINE
- ⊕ BENCHMARK
- ⊕ POST

LEGEND

ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA.



GENERAL NOTES
 NO PROPOSED MUNICIPAL SEWER OR WATER UTILITIES ARE REQUIRED FOR THIS SITE.
 FINISH GRADE WILL MATCH EXISTING CONTOUR.
 THERE WILL BE NO CHANGE IN DRAINAGE PATTERN DUE TO THE PROPOSED INSTALLATION.
 NO SIGNIFICANT RUNOFF IS GENERATED BY THE PROPOSED INSTALLATION.
 NO HAZARDOUS MATERIALS WILL BE USED, PROCESSED OR STORED AT THE SITE.
 TOWER LIGHTING SHALL CONFORM TO FAA STANDARDS AS REQUIRED.
 ALL WORK SHALL CONFORM TO FAA & FCC REGULATIONS.

CERTIFICATION:
 I MATTHEW T. MOKANYK CERTIFY THAT I HAVE SURVEYED AND MARKED THE PROPOSED TELECOM INSTALLATION AND EXISTING FEATURES AND THAT THIS MAP IS A TRUE REPRESENTATION THEREOF.
 Matthew T. Mokanyk, P.S., P.E.
 Wisconsin P.S. No. 3078-8
 02/17/20
 Date



LANDTECH
 PROFESSIONAL SURVEYING & ENGINEERING
 AL, AR, AZ, CO, FL, GA, IL, IA, IN, KS, KY, MI, MN, MO, NE, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, VA, WI, WY
 231-943-0050 ph. 231-943-0051 fax 977-520-LAND toll free
 www.landtechps.com www.towersurveyors.com

TOWER KING

TOWER KING
 23434 ELLIOTT ROAD,
 DEFIANCE, OH 43512
 PH: (419) 782-8591

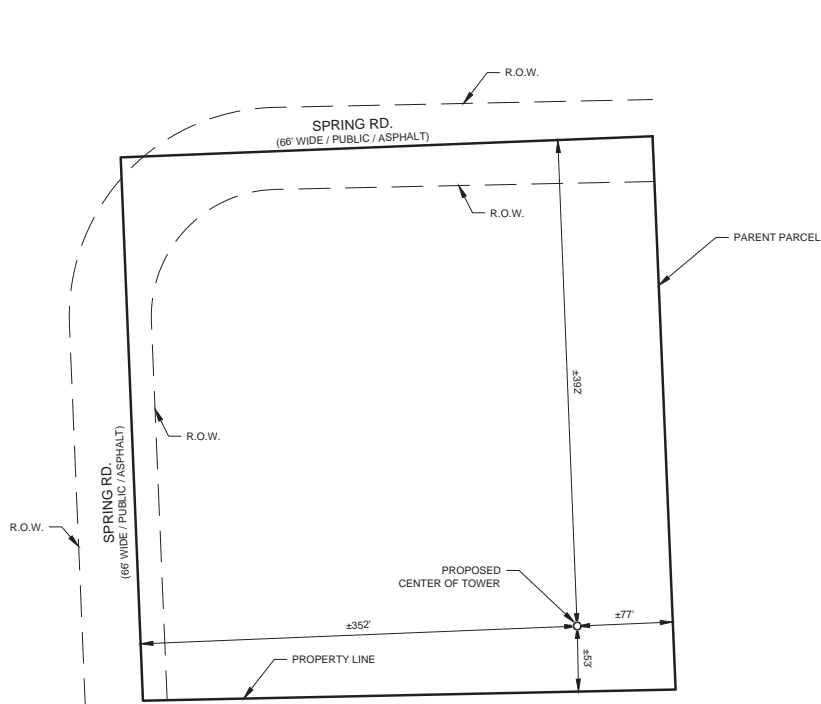
SKAALEN
 1576 SPRING RD.,
 STOUGHTON, WI 53589

1	08/18/22	OVERALL TOWER HEIGHT	RJH	MM	MM
0	03/22/20	ISSUED FOR REVIEW	TLR	MM	MM
NO.	DATE	REVISIONS	BY	CHK	APPD
SCALE: AS SHOWN		DESIGNED BY: MM	DRAWN BY: TLR		

BEARING BASIS: WISCONSIN STATE PLANE COORDINATES, SOUTH ZONE, NAD 83.
 SHEET S-1
 SURVEY PLAN
 DRAWING NUMBER
 22359002

GENERAL NOTES

1. NO PROPOSED MUNICIPAL SEWER OR WATER UTILITIES ARE REQUIRED FOR THIS SITE. FINISH GRADE WILL MATCH EXISTING CONTOURS.
2. THERE WILL BE NO CHANGE IN DRAINAGE PATTERN DUE TO THE PROPOSED INSTALLATION. NO SIGNIFICANT RUNOFF IS GENERATED BY THE PROPOSED INSTALLATION.
3. NO HAZARDOUS MATERIALS WILL BE USED, PROCESSED OR STORED AT THE SITE.
4. TOWER LIGHTING SHALL CONFORM TO FAA STANDARDS AS REQUIRED.
5. ALL WORK SHALL CONFORM TO FAA & FCC REGULATIONS.

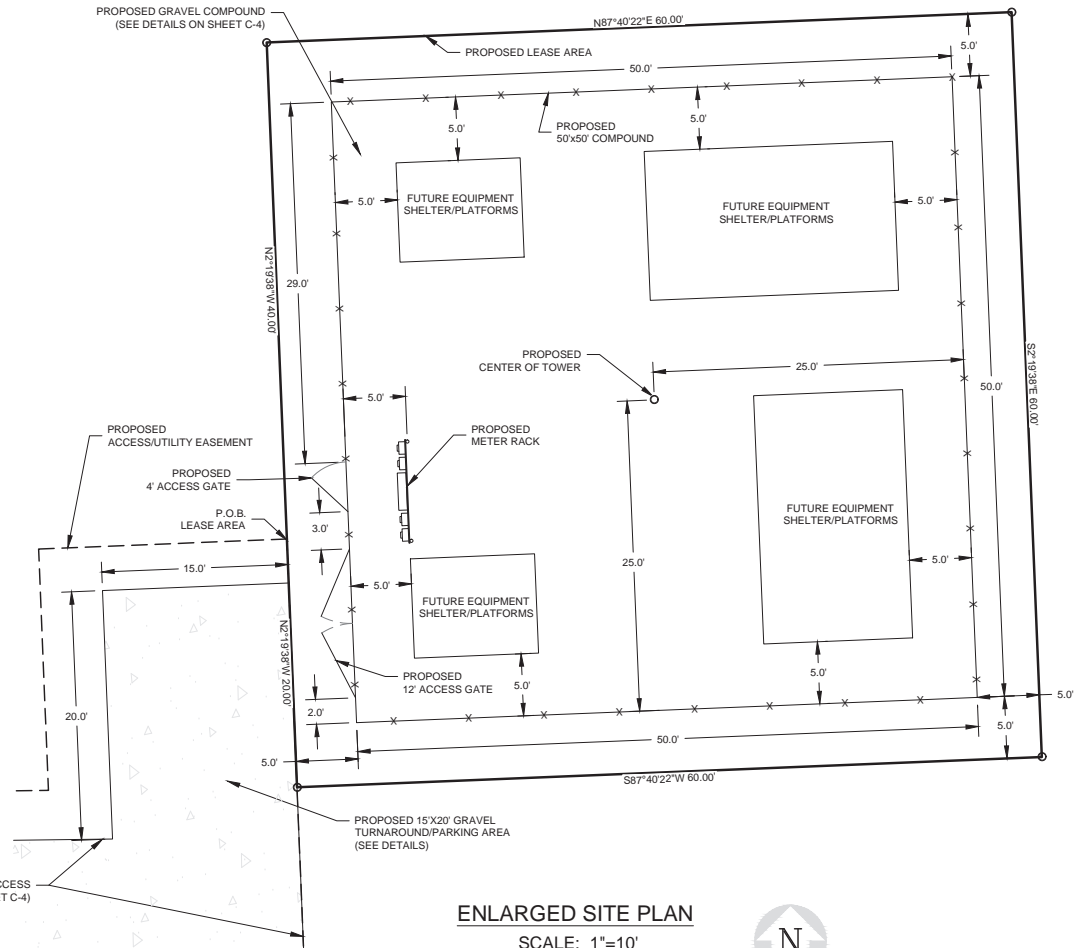


PARENT PARCEL DETAIL

SCALE: 1"=100'

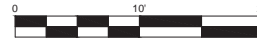


PARENT PARCEL DESCRIPTION (AS PROVIDED)
 LOT 1 CERTIFIED SURVEY MAP 11696, RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS FOR DANE COUNTY, WISCONSIN, IN VOLUME 71 OF CERTIFIED SURVEY MAPS, PAGE 271 AS DOCUMENT NO. 4170081, LOCATED IN THE TOWN OF DUNKIRK, DANE COUNTY WISCONSIN.
 TAX KEY NO. 0260511-032-8100-0
 ADDRESS: 1576 SPRING ROAD



ENLARGED SITE PLAN

SCALE: 1"=10'



NOTE:
 ACTUAL EQUIPMENT SIZE, TYPE AND LOCATION WITHIN COMPOUND WILL VARY PER CARRIER.

LANDTECH
 PROFESSIONAL SURVEYING & ENGINEERING
AL, AR, AZ, CO, FL, GA, IL, IA, IN, KS, KY, MI, MN, MO, NE, NC, ND, OH, OK, OR, PA, SC, SD, TN, TX, VA, WI, WV, WY
 231-943-6050 (ph) 231-943-9051 (fax) 877-520-LAND (toll free)
 www.landtechps.com www.towersurveyors.com

TOWER KING

TOWER KING
 23434 ELLIOTT ROAD,
 DEFIANCE, OH 43512
 PH: (419) 782-8591

SKAALEN
 1576 SPRING RD.,
 STOUGHTON, WI 53589

NO.	DATE	REVISIONS	BY	CHK	APPD
1	08/18/22	OVERALL TOWER HEIGHT	RJH	MM	MM
0	03/22/20	ISSUED FOR REVIEW	TLR	MM	MM

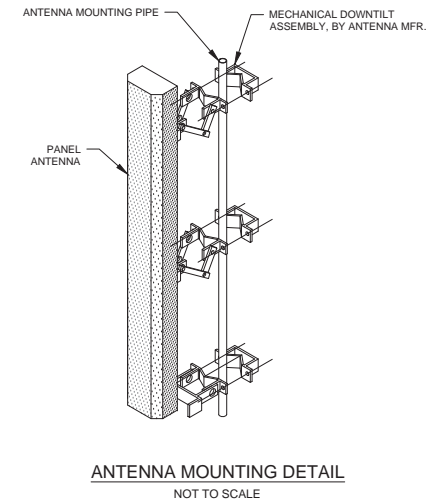
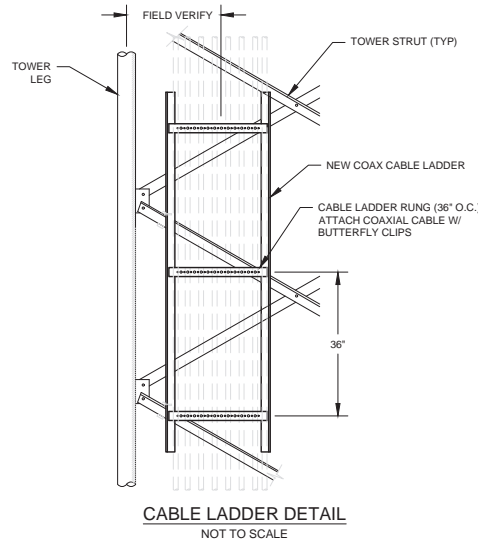
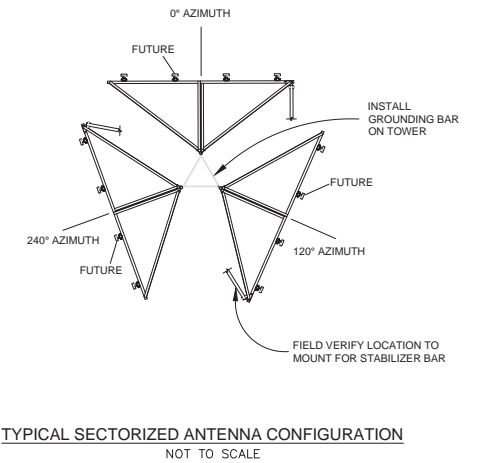
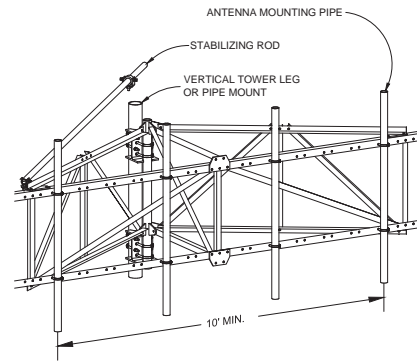
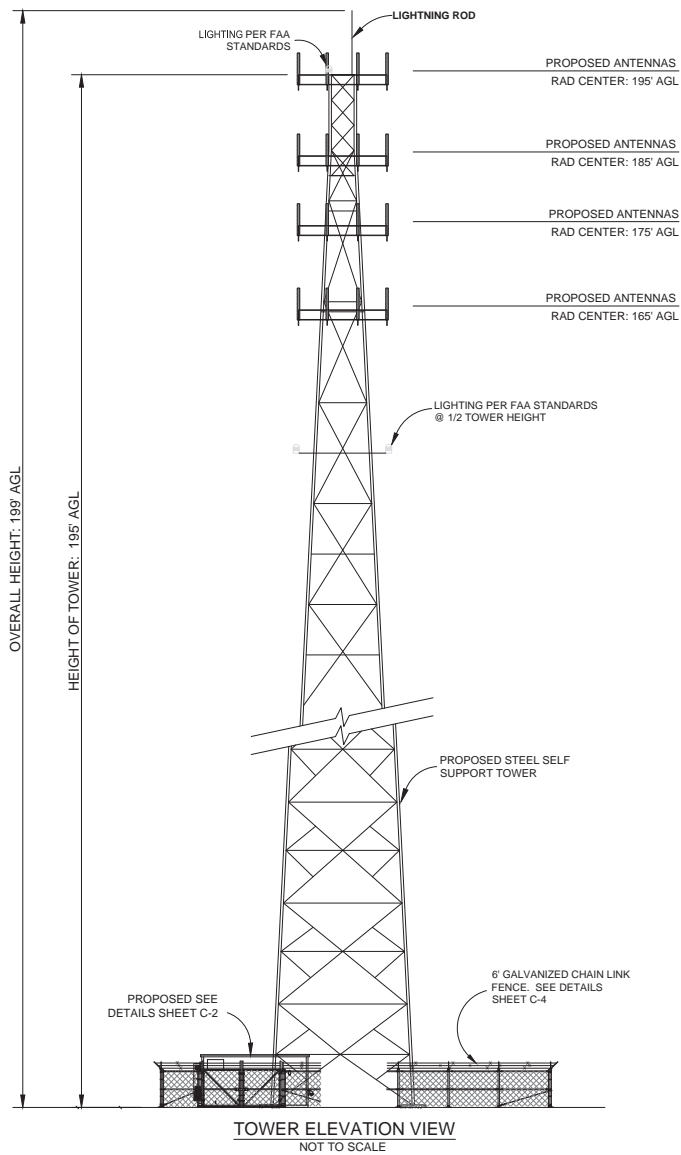
SCALE: AS SHOWN DESIGNED BY: MM DRAWN BY: TLR

SHEET S-2

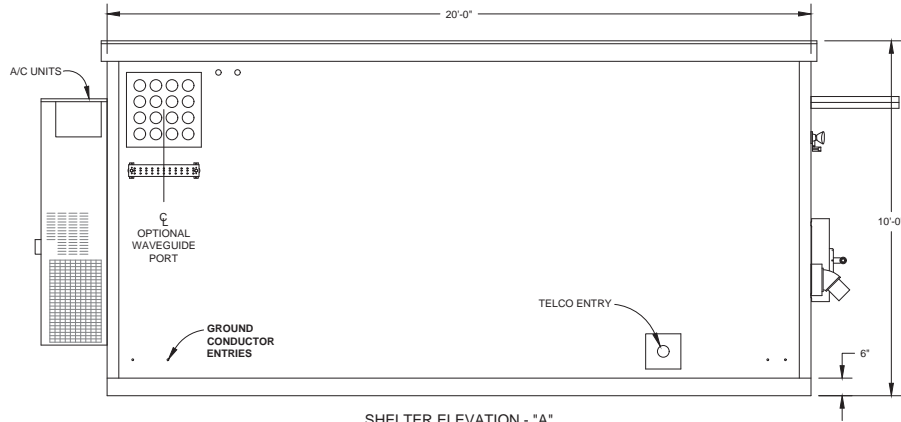
ENLARGED SITE PLAN

DRAWING NUMBER

22359002

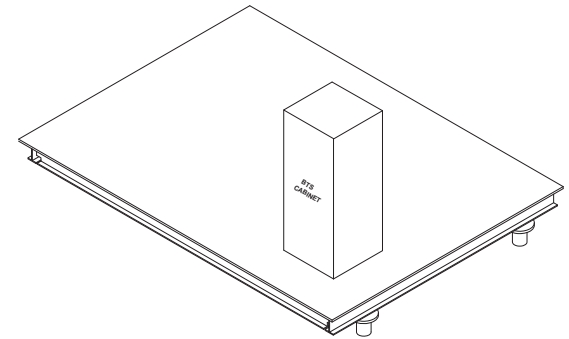
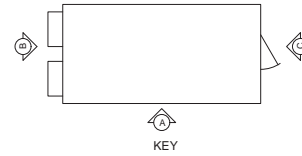


NO.	DATE	REVISIONS	BY	CHK	APPD
1	08/18/22	OVERALL TOWER HEIGHT	RJH	MM	MM
0	03/22/20	ISSUED FOR REVIEW	TLR	MM	MM
SCALE: AS SHOWN			DESIGNED BY: MM	DRAWN BY: TLR	

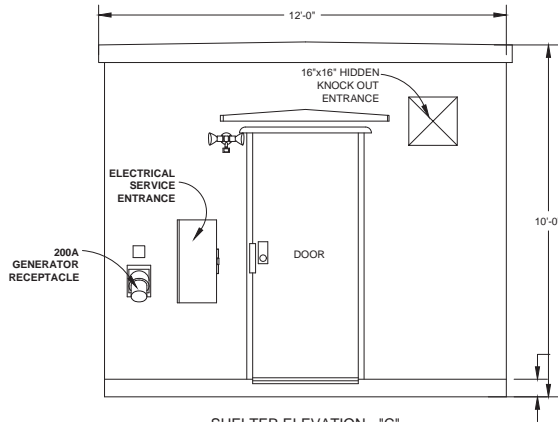


SHELTER ELEVATION - "A"
NOT TO SCALE

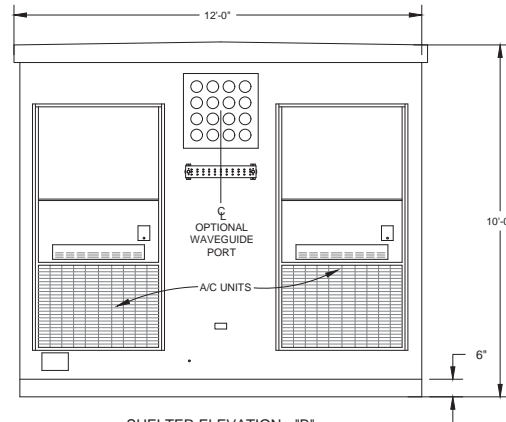
NOTE: SHELTER AND PLATFORM SHOWN ARE TYPICAL OF COMMUNICATION EQUIPMENT INSTALLATIONS AND ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. INDIVIDUAL EQUIPMENT PROVIDED BY CARRIERS MAY VARY FROM THESE DRAWINGS. DESIGN OF SUCH EQUIPMENT INSTALLATIONS AND THEIR FOUNDATIONS ARE BY OTHERS.



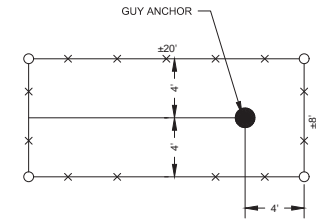
TYPICAL EQUIPMENT PLATFORM
NOT TO SCALE



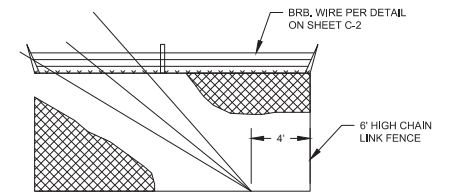
SHELTER ELEVATION - "C"
NOT TO SCALE



SHELTER ELEVATION - "B"
NOT TO SCALE



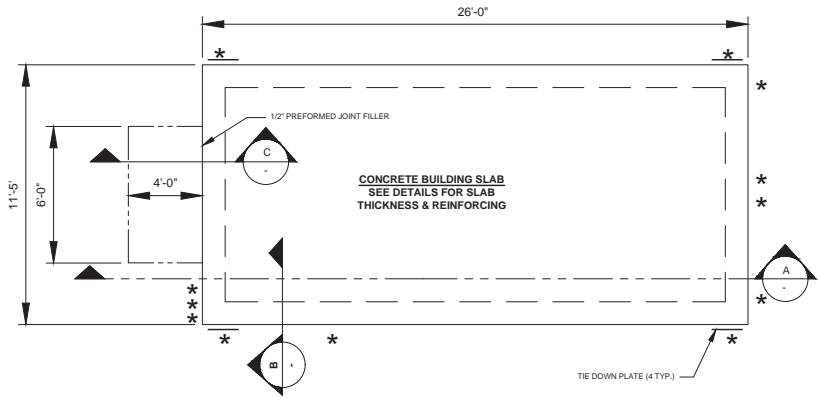
PLAN VIEW



PROFILE

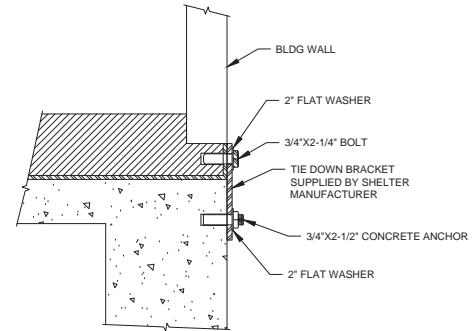
TYPICAL GUY ANCHOR ENCLOSURE
NOT TO SCALE

NO.	DATE	REVISIONS	BY	CHK	APPD
1	08/18/22	OVERALL TOWER HEIGHT	RJH	MM	MM
0	03/22/20	ISSUED FOR REVIEW	TLR	MM	MM
SCALE: AS SHOWN			DESIGNED BY: MM		DRAWN BY: TLR



SHELTER FOUNDATION PLAN
NOT TO SCALE

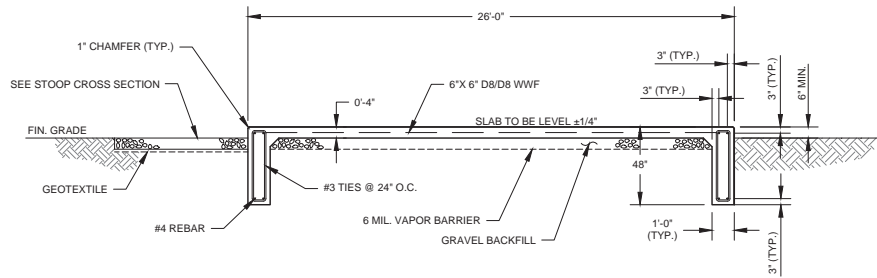
NOTE:
* #2 GROUND PIG TAIL LOCATIONS
SEE GROUNDING PLAN



BLDG/FND ATTACHMENT DETAIL B-B
NOT TO SCALE

FOUNDATION GENERAL NOTES:

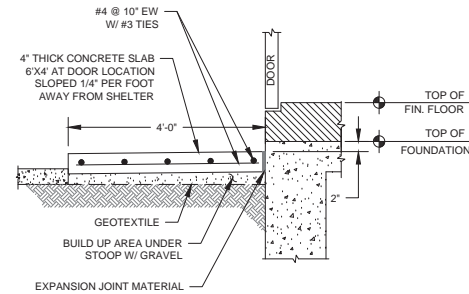
1. THE SITE SHALL BE STRIPPED OF ALL VEGETATION PRIOR TO FILL OR CONSTRUCTION OF THE FOUNDATION PAD.
2. ALL FILL SAND SHALL BE 0-15 P.I. WITH A COMPACTION TEST RUN ON EACH 6" LIFT - COMPACTED TO 90% MODIFIED PROCTOR.
3. ANY SOFT AREAS (TREE STUMP HOLES, ETC.) SHALL BE CUT OUT AND RECOMPACTED TO SAID PROCTOR.
4. THE SUBCONTRACTOR SHALL KEEP THE SITE SO IT WILL HAVE POSITIVE DRAINAGE AT ALL TIMES.
5. ALL EXCAVATIONS SHALL BE FREE OF WATER BEFORE POURING CONCRETE.
6. MINIMUM SOIL BEARING CAPACITY OF 2,000 PSF IN ALL FOUNDATION AND SLAB AREAS.



BLDG/FND ATTACHMENT SECTION A-A
NOT TO SCALE

NOTES:

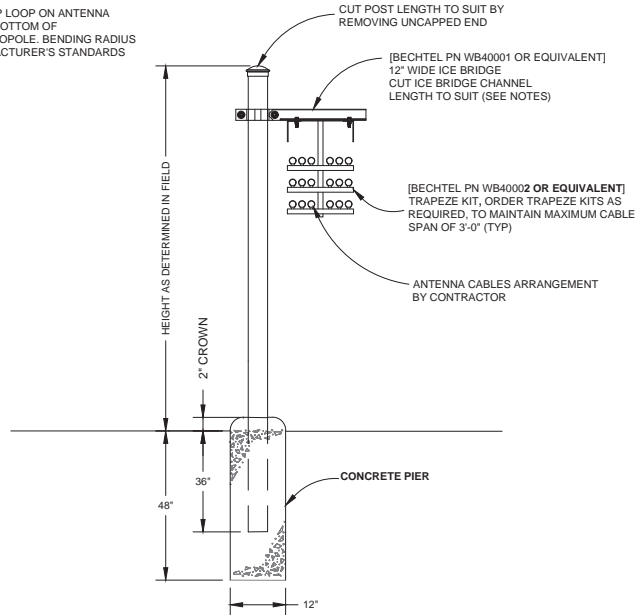
1. CONCRETE FINISH TO BE CLASS A TOLERANCE.
2. TEST FOR 3000 PSI AT 7, 14, & 28 DAYS PER POUR BY INDEPENDENT LAB.
3. ALL CONCRETE TO BE SIX SACK MIX.
4. PERFORM CONCRETE SLUMP TEST (4" MAX). NO WATER TO BE ADDED TO CONCRETE MIX AFTER 4" SLUMP HAS BEEN ESTABLISHED.



STOOP DETAIL C-C
NOT TO SCALE

NO.	DATE	REVISIONS	BY	CHK	APPD
1	08/18/22	OVERALL TOWER HEIGHT	RJH	MM	MM
0	03/22/20	ISSUED FOR REVIEW	TLR	MM	MM
SCALE: AS SHOWN		DESIGNED BY: MM	DRAWN BY: TLR		

* INSTALL DRIP LOOP ON ANTENNA CABLES AT BOTTOM OF TOWER/MONOPOLE, BENDING RADIUS PER MANUFACTURER'S STANDARDS

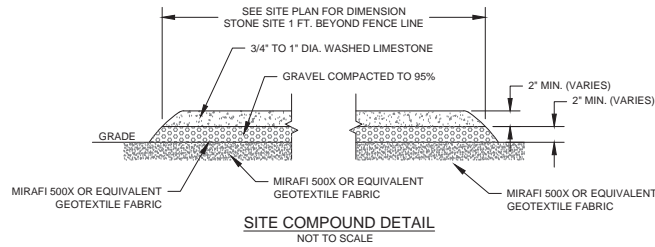


BECHTEL SC:	ROHN PN:	MTS PN:
WB40001		WB-K110-B
WB40002		WB-T12-3

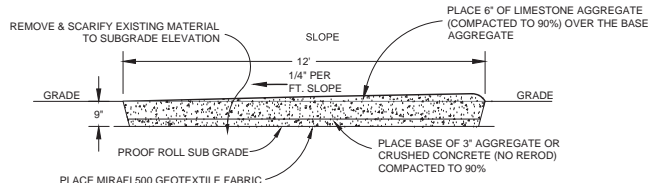
NOTES:

1. WHEN USING COMPONENTS AS SHOWN IN STANDARD DETAILS, MAXIMUM ALLOWABLE SPAN BETWEEN SUPPORTS ON A CONTINUOUS SINGLE SECTION OF BRIDGE CHANNEL SHALL BE 9 FEET FOR 10 FEET BRIDGE CHANNEL.
2. WHEN USING COMPONENTS FOR SPLICING BRIDGE CHANNEL SECTIONS, THE SPLICE SHOULD BE PROVIDED AT THE SUPPORT, IF POSSIBLE, OR AT A MAXIMUM OF 2 FEET FROM THE SUPPORT.
3. WHEN USING COMPONENTS, SUPPORT SHOULD BE PROVIDED AS CLOSE AS POSSIBLE TO THE ENDS OF ICE BRIDGES, WITH A MAXIMUM CANTILEVER DISTANCE OF 2 FEET FROM THE SUPPORT TO THE FREE END OF THE ICE BRIDGE.
4. CUT BRIDGE CHANNEL SECTIONS SHALL HAVE RAW EDGES TREATED WITH A MATERIAL TO RESTORE THESE EDGES TO THE ORIGINAL CHANNEL, OR EQUIVALENT, FINISH.
5. ICE BRIDGES MAY BE CONSTRUCTED WITH COMPONENTS FROM OTHER MANUFACTURERS, PROVIDED THE MANUFACTURER'S INSTALLATION GUIDELINES ARE FOLLOWED.
6. DEVIATIONS FROM STANDARDS FOR COMPONENT INSTALLATIONS ARE PERMITTED WITH THE RESPECTIVE MANUFACTURER'S APPROVAL.
7. DEVIATIONS FROM ICE BRIDGE FOUNDATIONS REQUIRE ENGINEERING APPROVAL.

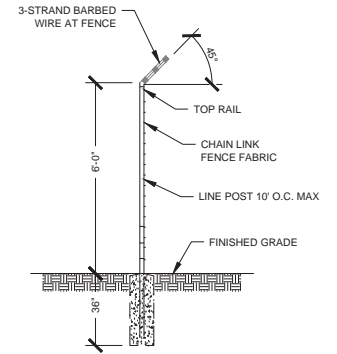
TYPICAL ICE BRIDGE DETAIL
NOT TO SCALE



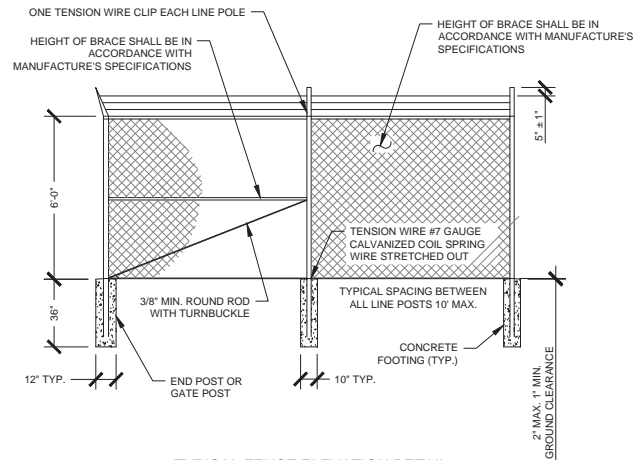
SITE COMPOUND DETAIL
NOT TO SCALE



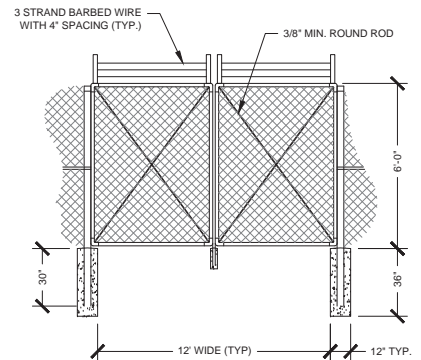
TYPICAL GRAVEL DRIVE
NOT TO SCALE



FENCE / BARBED WIRE ARM DETAIL
NOT TO SCALE



TYPICAL FENCE ELEVATION DETAIL
NOT TO SCALE



NOTE:
FENCING ELEVATIONS ARE ONLY EXAMPLES.
FOLLOW CONSTRUCTION CONTRACT.

TYPICAL SWING GATE DETAIL
NOT TO SCALE

LANDTECH
PROFESSIONAL SURVEYING & ENGINEERING
AL, AR, AZ, CO, FL, GA, IL, IA, IN, KS, KY, MI, MN, MO, NE, ND, OH, OK, OR, PA, SC, SD, TN, TX, VA, WI, WV, WY
231-943-6050 ph. 231-943-9051 fax. 877-520-LAND toll free
www.landtechps.com www.towersurveyors.com

TOWER KING

TOWER KING
23434 ELLIOTT ROAD,
DEFIANCE, OH 43512
PH: (419) 782-8591

SKAALEN
1576 SPRING RD.,
STOUGHTON, WI 53589

NO.	DATE	REVISIONS	BY	CHK	APPD
1	08/18/22	OVERALL TOWER HEIGHT	RJH	MM	MM
0	03/22/20	ISSUED FOR REVIEW	TLR	MM	MM

SCALE: AS SHOWN DESIGNED BY: MM DRAWN BY: TLR

SHEET C-4

ICE BRIDGE & FENCE DETAILS

DRAWING NUMBER

22359002

SITE WORK GENERAL NOTES:

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
2. 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 RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.
3. 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.
5. 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 CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
6. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION.
7. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE.
8. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
9. 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.
10. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
11. 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 IN THE PROJECT SPECIFICATIONS.
12. SUBCONTRACTOR 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.

CONCRETE AND REINFORCING STEEL NOTES:

1. 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.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

 CONCRETE CAST AGAINST EARTH.....3 IN.
 CONCRETE EXPOSED TO EARTH OR WEATHER:
 #6 AND LARGER2 IN.
 #5 AND SMALLER & WWF1 1/2 IN.
 CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
 SLAB AND WALL3/4 IN.
 BEAMS AND COLUMNS1 1/2 IN.
5. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
6. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN 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 ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL.

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
 CONTRACTOR -
 SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
 OWNER -
 OEM - ORIGINAL EQUIPMENT MANUFACTURE
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE 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 CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR 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.
4. DRAWINGS PROVIDED HERE ARE NOT TO SCALE AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
7. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
8. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING.
9. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
10. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
11. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

APPLICABLE BUILDING CODES AND STANDARDS:

SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES:

1. INTERNATIONAL BUILDING CODE	5. NATIONAL ELECTRICAL CODE
2. INTERNATIONAL MECHANICAL CODE	6. LOCAL BUILDING CODE
3. INTERNATIONAL RESIDENTIAL CODE	7. STATE BUILDING CODE
4. UNIFORM PLUMBING CODE	8. CITY/COUNTY ORDINANCES

Under/Writer Laboratories Approved Electrical Products
 Life Safety Code NFPA - 101

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING:

AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL,
 AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD,
 TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) EIA-222-F, STRUCTURAL STANDARD FOR STRUCTURAL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES,
 INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM,
 IEEE 1100 (2005) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC,
 IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")
 TIA 607 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELCORDIA GR-1503 COAXIAL CABLE CONNECTIONS













FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS AND SYMBOLS

ABBREVIATIONS

- AGL ABOVE GRADE LEVEL
- BTS BASE TRANSCIEVER STATION
- (E) EXISTING
- MIN MINIMUM
- N.T.S. NOT TO SCALE
- REF REFERENCE
- RF RADIO FREQUENCY
- T.B.D. TO BE DETERMINED
- T.B.R. TO BE RESOLVED
- TYP TYPICAL
- REQ REQUIRED
- EGR EQUIPMENT GROUND RING
- AWG AMERICAN WIRE GAUGE
- MGB MASTER GROUND BUS
- EG EQUIPMENT GROUND
- BCW BARE COPPER WIRE
- SIAD SMART INTEGRATED ACCESS DEVICE
- GEN GENERATOR
- IGR INTERIOR GROUND RING (HALO)
- RBS RADIO BASE STATION

SYMBOLS

-  SOLID GROUND BUS BAR
-  SOLID NEUTRAL BUS BAR
-  SUPPLEMENTAL GROUND CONDUCTOR
-  2-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
-  SINGLE-POLE THERMAL-MAGNETIC CIRCUIT BREAKER
-  CHEMICAL GROUND ROD
-  GROUND ROD
-  DISCONNECT SWITCH
-  METER
-  CADWELD TYPE CONNECTION
-  COMPRESSION TYPE CONNECTION
-  GROUNDING WIRE

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH ASTM A36 UNLESS OTHERWISE NOTED.
2. 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.
3. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"Ø) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
4. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
5. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN 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.



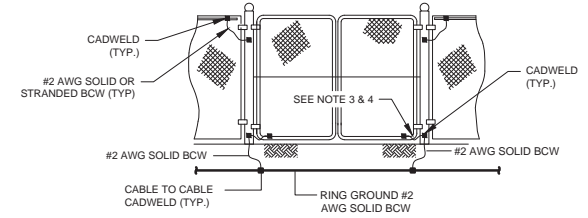
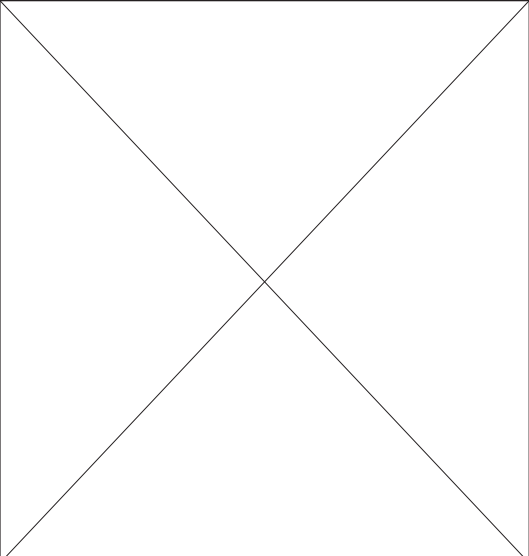
TOWER KING
 23434 ELLIOTT ROAD,
 DEFIANCE, OH 43512
 PH: (419) 782-8591

SKAALEN
 1576 SPRING RD.,
 STOUGHTON, OH 53589

				SHEET C-5			
				GENERAL NOTES			
				DRAWING NUMBER			
				22359002			
SCALE: AS SHOWN		DESIGNED BY: MM		DRAWN BY: TLR			

ELECTRICAL INSTALLATION NOTES

1. 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 EQUIPMENT IS NOT BLOCKED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
5. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
6. 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 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA.
7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT IDS).
8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID 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), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND 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), 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS 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, ANSII/IEEE, AND NEC.
15. 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.
16. 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.
19. LIQUID-TIGHT 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. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
21. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSII/IEEE, AND NEC.
22. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
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 3R (OR BETTER) OUTDOORS.
24. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-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.
25. 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.



NOTES:

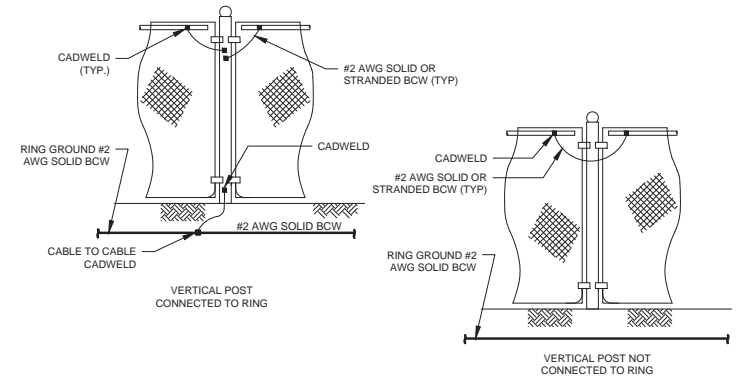
1. THE #2 AWG, BCW, FROM THE RING GROUND SHALL BE CADWELDED TO THE POST ABOVE GRADE.
2. BOND EACH HORIZONTAL POLE/BRACE TO EACH OTHER AND TO EACH VERTICAL POLE BONDED TO THE EXTERIOR GROUND RING.
3. GATE JUMPER SHALL BE #40 AWG WELDING CABLE OR FLEXIBLE COPPER BRAID BURNDY TYPE B WITH SLEEVES ON EACH END DESIGNED FOR EXOTHERMIC WELDING.
4. GATE JUMPER SHALL BE INSTALLED SO THAT IT WILL NOT BE SUBJECTED TO DAMAGING STRAIN WHEN GATE IS FULLY OPEN IN EITHER DIRECTION.

FENCE GATE GROUNDING DETAIL

NOT TO SCALE

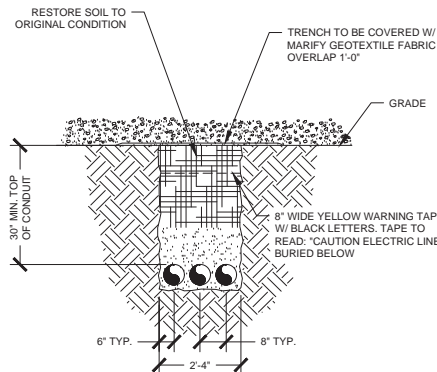
NOTES:

1. VERTICAL POSTS SHALL BE BONDED TO THE RING AT EACH CORNER AND AT EACH GATE POST. AS A MINIMUM ONE VERTICAL POST SHALL BE BONDED TO THE GROUND RING IN EVERY 100 FOOT STRAIGHT RUN OF FENCE.
2. HORIZONTAL POLES SHALL BE BONDED TO EACH OTHER.
3. BOND EACH HORIZONTAL POLE / BRACE TO EACH OTHER AND TO EACH VERTICAL POST THAT IS BONDED TO THE EXTERIOR GROUND RING



FENCE GROUNDING DETAIL

NOT TO SCALE



TYPICAL TRENCH DETAIL

NOT TO SCALE

LANDTECH
PROFESSIONAL SURVEYING & ENGINEERING
AL, AR, AZ, CO, FL, GA, IL, IA, IN, KS, KY, MI, MN, MO, NE, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, VA, WI, WV, WY
231-943-6650 (PH) 231-943-9651 (FAX) 977-520-LAND (TOLL FREE)
www.landtechps.com www.towersurveyors.com

TOWER KING

TOWER KING
23434 ELLIOTT ROAD,
DEFIANCE, OH 43512
PH: (419) 782-8591

SKAALLEN
1576 SPRING RD.,
STOUGHTON, OH 53689

NO.	DATE	REVISIONS	BY	CHK	APPD
1	08/18/22	OVERALL TOWER HEIGHT	RJH	MM	MM
0	03/22/20	ISSUED FOR REVIEW	TLR	MM	MM
SCALE: AS SHOWN			DESIGNED BY: MM		DRAWN BY: TLR

SHEET E-1

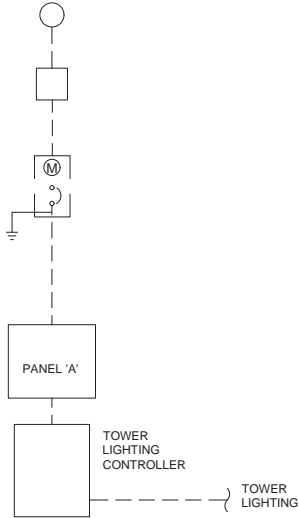
ELECTRICAL NOTES & DETAILS

DRAWING NUMBER

22359002

ELECTRICAL NOTES:

1. SUBCONTRACTOR SHALL PROVIDE 200AMP, SINGLE PHASE, 120/240 VAC, 60HZ SERVICE FOR SITE.
2. SUBCONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY BEFORE THE START OF CONSTRUCTION. POWER AND TELEPHONE CONDUIT SHALL BE PROVIDED AND INSTALLED PER UTILITY REQUIREMENTS.
3. FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT REFER TO DRAWINGS PROVIDED BY PANEL MANUFACTURER.
4. SUBCONTRACTOR SHALL INSTALL SUFFICIENT LENGTHS OF LFMC INCLUDING ALL CONDUIT FITTINGS (NUTS, REDUCING BUSHINGS, ELBOWS, COUPLINGS, ETC) NECESSARY FOR CONNECTION FROM IMC CONDUIT TO THE INTERIOR OF THE BTS CABINET.
5. SUBCONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY.
6. CUT, COIL AND TAPE A 3 FOOT PIGTAIL FROM END OF LFMC FOR TERMINATING BY BTS EQUIPMENT MANUFACTURER.
7. SUBCONTRACTOR SHALL VERIFY THAT THE MAIN BONDING JUMPER AND GROUNDING ELECTRODE CONDUCTOR IS INSTALLED PROPERLY WHEN PANEL IS SERVICE ENTRANCE EQUIPMENT.

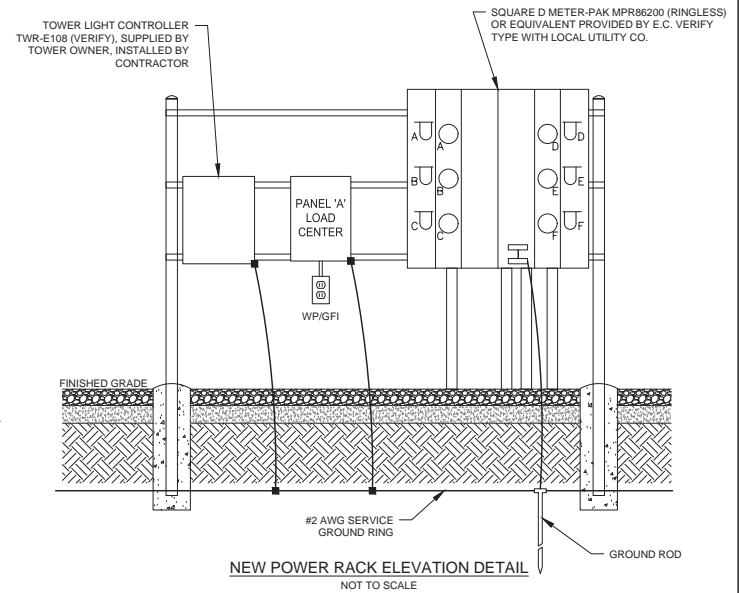


100 AMP SINGLE LINE DIAGRAM
NOT TO SCALE

PANEL 'A' SCHEDULE

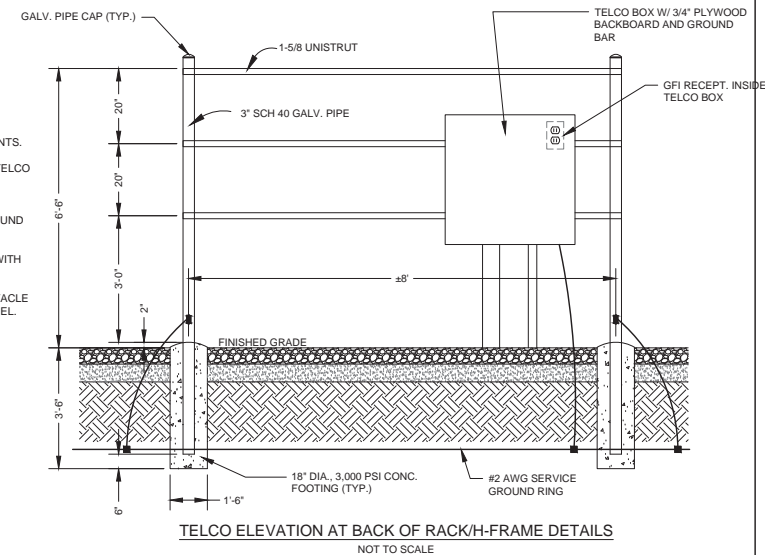
POS.	SERVING	BREAKER	WIRE SIZE AND TYPE	LOAD		POS.	SERVING	BREAKER	WIRE SIZE AND TYPE	LOAD	
				A	B					A	B
1	TOWER LIGHTING CONTROLLER	30A/2P	2-#10 / #10 GND, 2" C.		2400	2	EQUIP. RACK RECEPT.	15A/1P	2-#10 / #10 GND, 3/4" C.	180	
3						4					
5	TELCO BOX RECEPT.	15A/1P	2-#10 / #10 GND, 3/4" C.	180		6					
7						8					
9						10					
11	BLANK					12					
				TOTAL	360 2400						
				TOTAL AMPS	11.5						

1. FROM TAP BOX: THE TWO (2) FOUR-INCH (4") CONDUIT WILL RETURN TO THE LOCATION DETERMINED BY "DETROIT EDISON" AND EXTEND OUT OF THE FINISHED GRADE 12" AND 36" RESPECTIVELY (SEE DETAIL). BOTH CONDUITS SHALL BE INSTALLED WITH PULL-STRINGS AND WATERPROOF CAPS.
2. CABINET AND CONDUCTORS FURNISHED & INSTALLED BY CUSTOMER. 350 KCMIL SERVICE CONDUCTORS FURNISHED & INSTALLED BY UTILITY.
3. EQUIPMENT ASSEMBLY DRAWINGS AND RISER DIAGRAMS MUST BE SUBMITTED TO A UTILITY PLANNER FOR ACCEPTANCE PRIOR TO INSTALLATION.
4. CABINETS AND CONDUITS SHOWN SHALL CONTAIN ONLY UNMETERED LINE CONDUCTORS. CABINET SHALL BE SEALABLE WITH ACCEPTABLE SEALING HASP.
5. TRANSMISSION TOWER SERVICES WILL UTILIZE A STANDARD 200 AMP SERVICE W/ CONTINUOUS CONDUIT TO THE SOURCE.
6. SUBSTATION CELLULAR SERVICES WILL BE A SINGLE 200-AMP SERVICE OR BUILT TO THIS SPECIFICATION. NO SERVICE SHALL BE TAKEN OUT OF THE SUBSTATION HOUSE SERVICE.
7. ALL CONDUIT AND NIPPLE ENTRIES TO CABINET AND METER BOXES WILL BE MADE WITH WEATHERPROOF HUBS, CONNECTORS OR LOCKNUTS LISTED FOR THE APPLICATIONS. NON-METALLIC BUSHINGS.
8. FOR INACCESSIBLE LOCATIONS CONSULT WITH METER ENGINEERING FOR POSSIBLE ERT METER INSTALLATION.
9. ONLY ONE SERVICE ALLOWED PER LUG. ALL GROUNDING AND BONDING MUST COMPLY WITH NEC 250 REQUIRED.



- NOTES:
1. COORDINATE WITH LOCAL TELCO UTILITY PRIOR TO PROCURING AND INSTALLATION OF BOX AND COMPONENTS.
 2. ALL MATERIAL SHALL MEET REQUIREMENTS OF LOCAL TELCO UTILITY.
 3. ITEM #4 SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR. BOND SURGE PROTECTION UNIT TO GROUND BAR WITH #6 AWG INSULATED WIRE.
 4. COORDINATE SIZE, TYPE AND QUANTITY OF ITEM(S) #5 WITH LOCAL UTILITY.
- INSTALL ITEM #6 ONLY IF REQUIRED BY UTILITY. RECEPTACLE POWERED FROM SPARE BREAKER IN DISTRIBUTION PANEL.

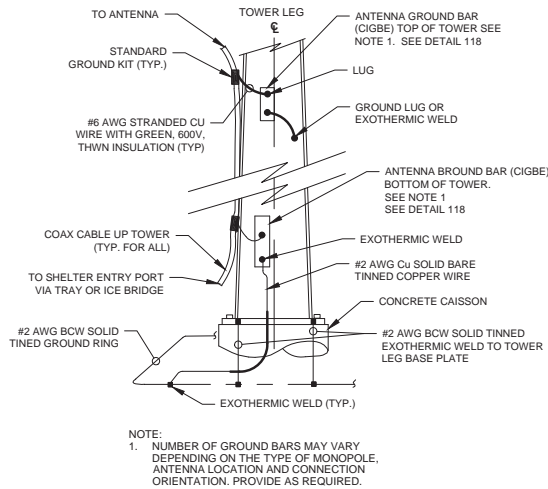
MATERIAL LIST:
 ① 36" X 36" X 10" NEMA 3R ENCLOSURE (HOFFMAN A36R3610HCR OR SIMILAR)



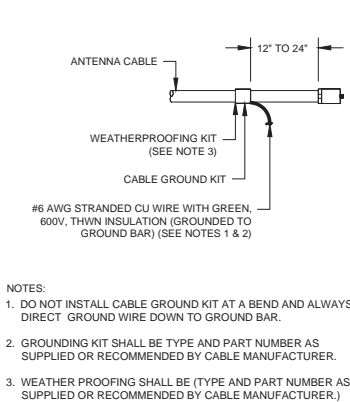
TOWER KING
 23434 ELLIOTT ROAD,
 DEFIANCE, OH 43512
 PH: (419) 782-8591

SKAALEN
 1576 SPRING RD.,
 STOUGHTON, WI 53589

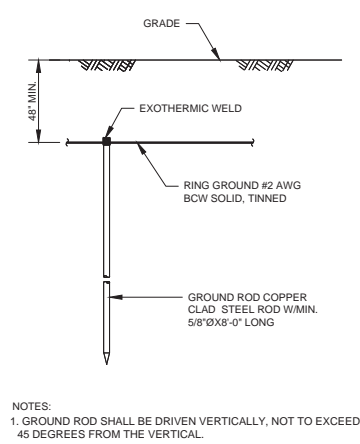
				SHEET E-2		
1	08/18/22	OVERALL TOWER HEIGHT		RJH	MM	MM
0	03/22/20	ISSUED FOR REVIEW		TLR	MM	MM
NO.	DATE	REVISIONS		BY	CHK	APPD
SCALE: AS SHOWN		DESIGNED BY: MM	DRAWN BY: TLR		DRAWING NUMBER	
						22359002



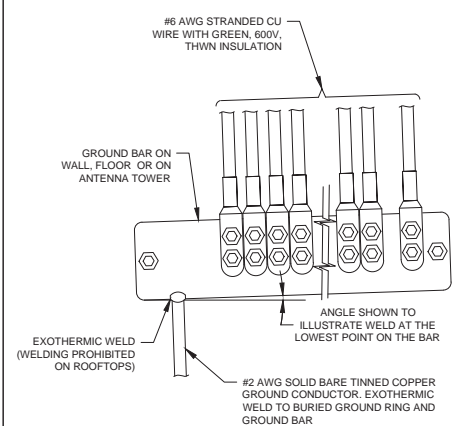
ANTENNA CABLE GROUNDING DETAIL - SS2
NOT TO SCALE



CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE DETAIL
NOT TO SCALE

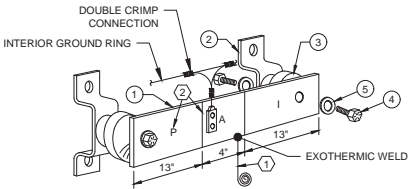


GROUND ROD DETAIL
NOT TO SCALE



INSTALLATION OF GROUND WIRE TO COAX CABLE GROUND BAR DETAIL
NOT TO SCALE

NEWTON INSTRUMENT COMPANY, INC. BUTNER, N.C.			
NO.	REQ.	PART NO.	DESCRIPTION
1	1	1/4"x4"x30"	SOLID GND. BAR
2	2	A-6056	WALL MTG. BRKT.
3	2	3061-4	INSULATORS
4	4	3012-1	5/8"-11x1" H.H.C.S.
5	4	3015-8	5/8" LOCKWASHER



(RGB) REFERENCE GROUND BAR DETAIL
NOT TO SCALE

EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PROTECTORS

- CABLE ENTRY PORTS (HATCH PLATES) (#2)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
- TELCO GROUND BAR (#2)
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
- +24V POWER SUPPLY RETURN BAR (#2)
- 48V POWER SUPPLY RETURN BAR (#2)
- RECTIFIER FRAMES.
- COAX SUPPRESSION

SECTION "A" - SURGE ABSORBERS

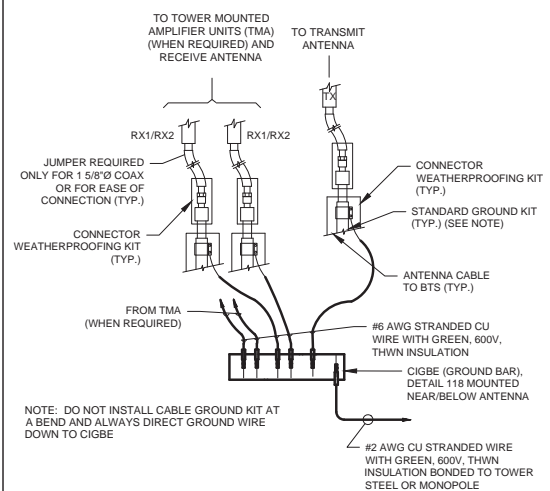
- INTERIOR GROUND RING (#2)
- EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
- METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
- BUILDING STEEL (IF AVAILABLE) (#2)

SECTION "I" - ISOLATED GROUND ZONE

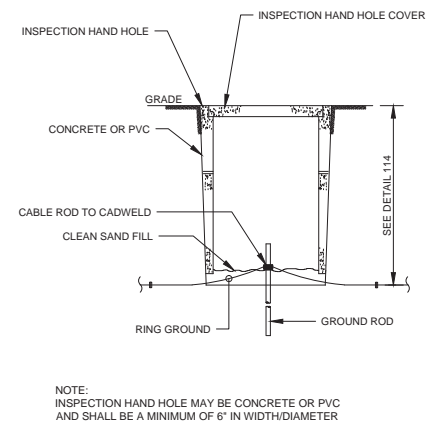
- ALL COMMUNICATIONS EQUIPMENT FRAMES.
- ISOLATED GROUND BAR - IGB (#2)

DETAIL NOTES:

- EXOTHERMICALLY WELD #2 AWG BARE TINNED SOLID COPPER CONDUCTOR TO GROUND BAR. ROUTE CONDUCTOR TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
- USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "I") WITH 1" HIGH LETTERS.



CONNECTION OF GROUND WIRE TO GROUNDING BAR (CIGBE) TOWER / MONOPOLE / ROOFTOP
NOT TO SCALE



GROUND ROD WITH ACCESS AREA DETAIL
NOT TO SCALE

NOTE: INSPECTION HAND HOLE MAY BE CONCRETE OR PVC AND SHALL BE A MINIMUM OF 6" IN WIDTH/DIAMETER

LANDTECH
PROFESSIONAL SURVEYING & ENGINEERING
AL, AR, AZ, CO, FL, GA, IL, IA, IN, KS, KY, MI, MN, MO, NE, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, VA, WI, WV, WY
231-943-6050 (PH) 231-943-9651 (FAX) 877-520-LAND (TOLL FREE)
www.landtechps.com www.towersurveyors.com

TOWER KING

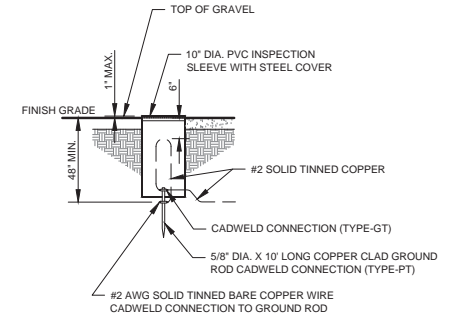
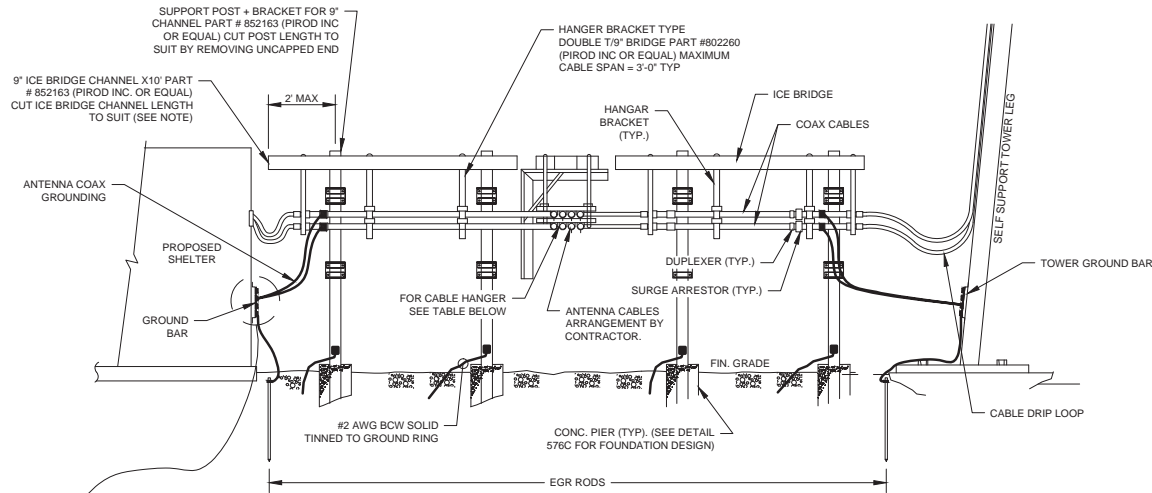
TOWER KING
23434 ELLIOTT ROAD,
DEFIANCE, OH 43512
PH: (419) 782-8591

SKAALEN
1576 SPRING RD.,
STOUGHTON, WI 53589

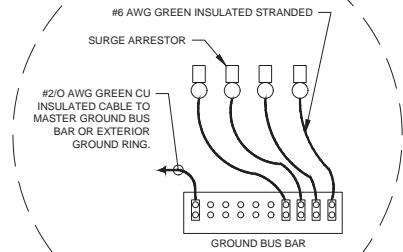
NO.	DATE	REVISIONS	BY	CHK	APPD
1	08/18/22	OVERALL TOWER HEIGHT	RJH	MM	MM
0	03/22/20	ISSUED FOR REVIEW	TLR	MM	MM

SCALE: AS SHOWN DESIGNED BY: MM DRAWN BY: TLR

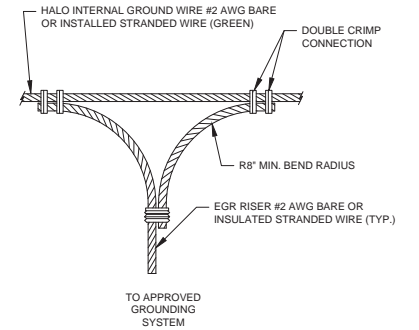
SHEET E-3	
GROUNDING DETAILS	
DRAWING NUMBER 22359002	



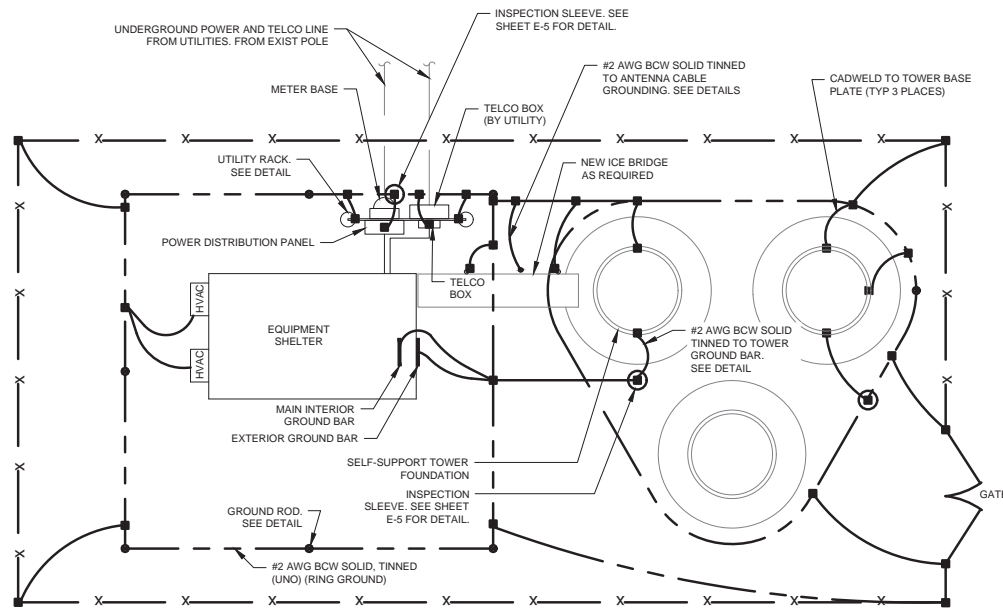
INSPECTION SLEEVE DETAIL
NOT TO SCALE



NOMINAL CABLE SIZE	CABLE TYPE NUMBER	CABLE HANGER TYPE NUMBER	MANUF. MIN. BEND RADIUS	MAX NO. OF CABLES/CND
1/2"	LDF4-50A	206706-1	5"	9
1/2"	FSJ4-50B	206706-1	1.25"	9
7/8"	LDF5-50A	206706-2	10"	3
1 1/4"	LDF6-50	206706-3	15"	1
1 5/8"	LDF7-50A	206706-4	20"	1



HALO NON-DIRECTIONAL GROUND RING SPLICE DETAIL
NOT TO SCALE



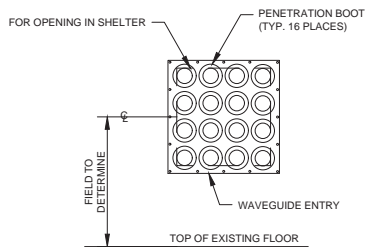
NOTE:
THIS GROUNDING PLAN IS TYPICAL. SEE SHEET
S-2 FOR ACTUAL EQUIPMENT LAYOUT.

TYPICAL SELF-SUPPORT SITE GROUNDING PLAN

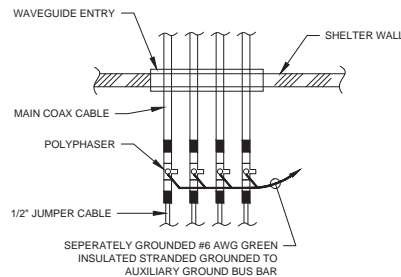
NOT TO SCALE

GROUNDING NOTES

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GE'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 10 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.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDING 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.
5. 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; 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING, SHALL BE #2 AWG SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR & EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 FT OF MAIN GROUND WIRES WITH 1-#2 AWG TIN-PLATED COPPER GROUND CONDUCTOR.
19. 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 WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NON-METALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. INSTALL GROUND RODS FOR THE NEW GROUND RING. SEPARATION BETWEEN GROUND RODS SHOULD NOT BE LESS THAN THE LENGTH OF THE RODS NOR BE MORE THAN ONE AND ONE-HALF TIMES THE LENGTH OF THE RODS. CONNECT THE NEW RING TO EXISTING GROUND RING IN AT LEAST TWO SEPARATE PLACES.



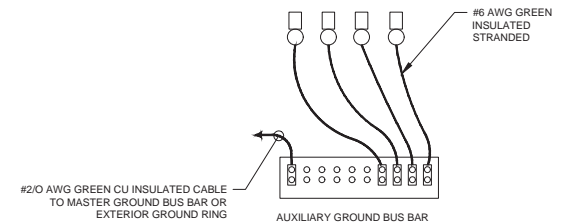
ELEVATION



PLAN

POLYPHASER GROUNDING INSIDE SHELTER

NOT TO SCALE



LANDTECH
PROFESSIONAL SURVEYING & ENGINEERING
AL, AR, AZ, CO, FL, GA, IL, IA, IN, KS, KY, MI, MN, MO, NE, ND, OH, OK, OR, PA, SC, SD, TN, TX, VA, WV, WY
231-943-5050 ph 231-943-9651 fax 977-520-LAND toll free
www.landtechps.com www.towersurveyors.com

TOWER KING

TOWER KING
23434 ELLIOTT ROAD,
DEFIANCE, OH 43512
PH: (419) 782-8591

SKAALEN
1576 SPRING RD.,
STOUGHTON, WI 53589

NO.	DATE	REVISIONS	BY	CHK	APPD
1	08/18/22	OVERALL TOWER HEIGHT	RJH	MM	MM
0	03/22/20	ISSUED FOR REVIEW	TLR	MM	MM
SCALE: AS SHOWN			DESIGNED BY: MM		DRAWN BY: TLR

SHEET E-5

GROUNDING NOTES & DETAILS

DRAWING NUMBER

22359002



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

Aeronautical Study No.
 2021-AGL-21429-OE
 Prior Study No.
 2013-AGL-12309-OE

Issued Date: 08/17/2021

EXHIBIT C

Andrew Smith
 RESCOM Environmental Corp
 PO Box 361
 Petoskey, MI 49770

**** 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 Skaalen
Location:	Pleasant Sprint, WI
Latitude:	42-56-09.86N NAD 83
Longitude:	89-10-31.53W
Heights:	944 feet site elevation (SE)
	199 feet above ground level (AGL)
	1143 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:

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 02/17/2023 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, effective 21 Nov 2007, 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 (816) 329-2525, or natalie.schmalbeck@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2021-AGL-21429-OE.

Signature Control No: 490707366-491653926

(DNE)

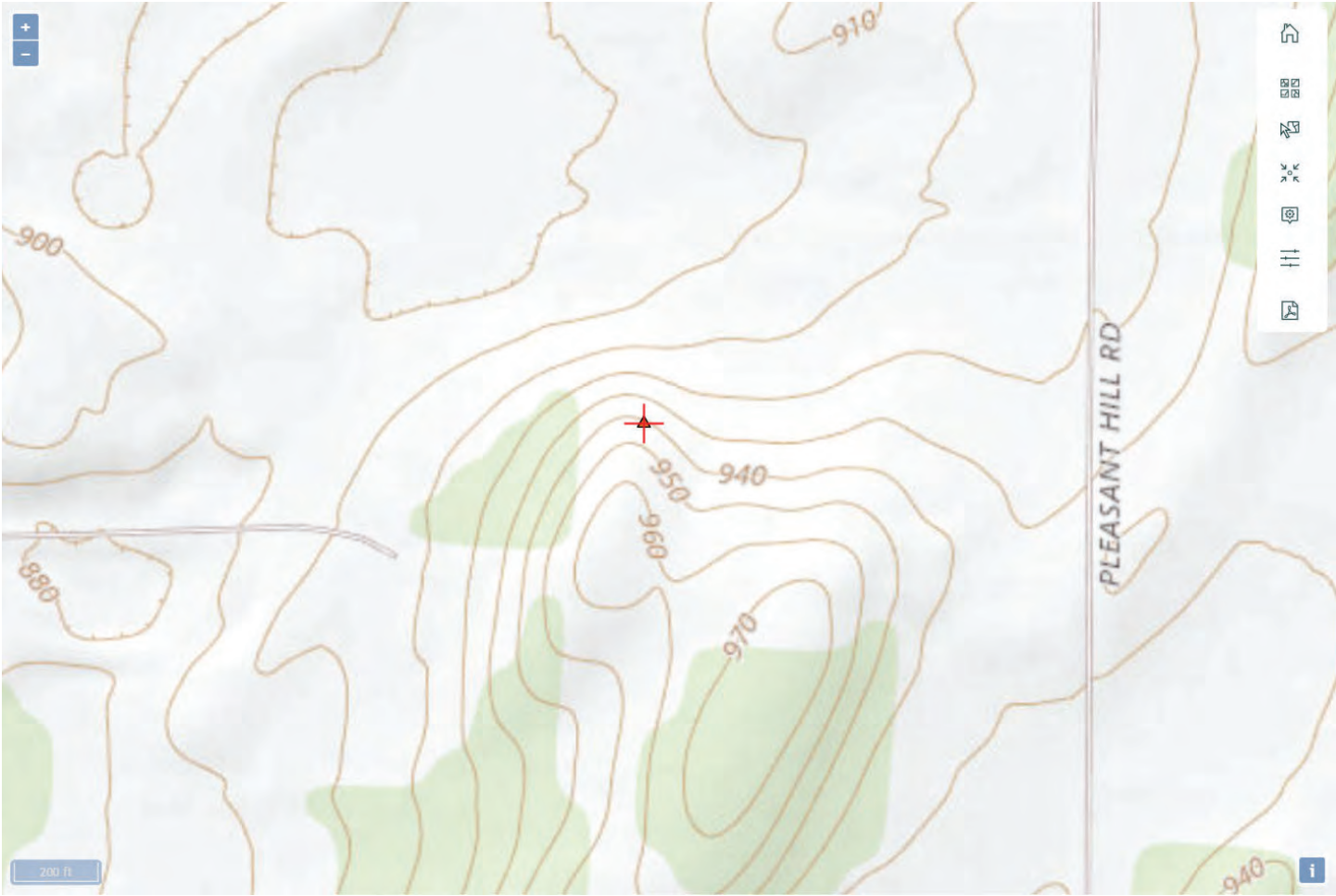
Natalie Schmalbeck
Technician

Attachment(s)
Frequency Data
Map(s)

cc: FCC

Frequency Data for ASN 2021-AGL-21429-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
6	7	GHz	55	dBW
6	7	GHz	42	dBW
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	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
806	901	MHz	500	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W



Skaalen

Towerking Proposed Self Support Tower – Photo Location Map



Photo Location Far North – {Before}



Photo Location Far North – {After}



Photo Location North {Before}



Photo Location North {After}



Photo Location Directly West – {Before}



Photo Location Directly West – {After}



Photo Location South – {Before}



Photo Location South – {After}



Photo Location 1/2 Mile North - 1 {Before}

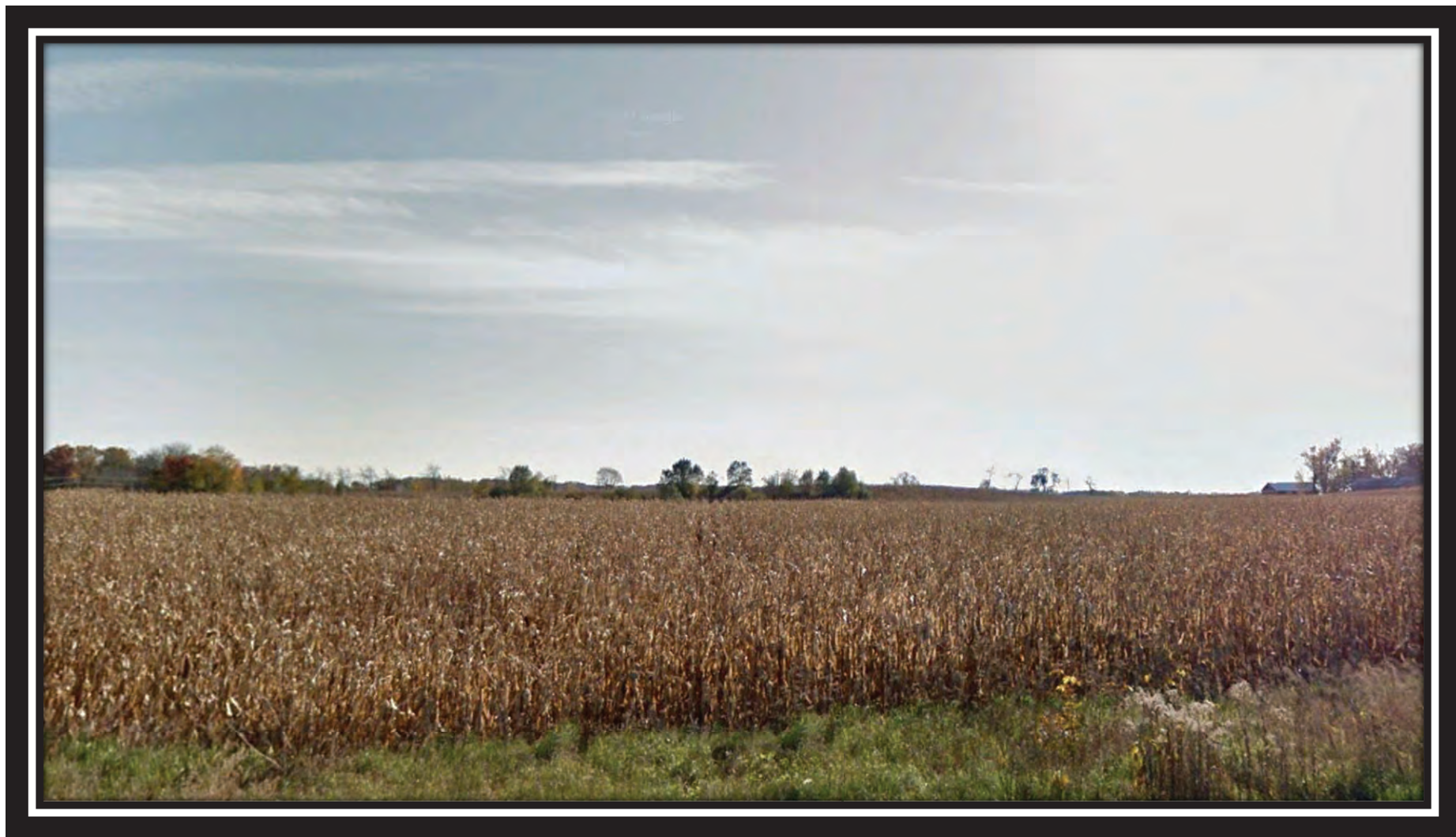


Photo Location 1/2 Mile North - 1 {After}

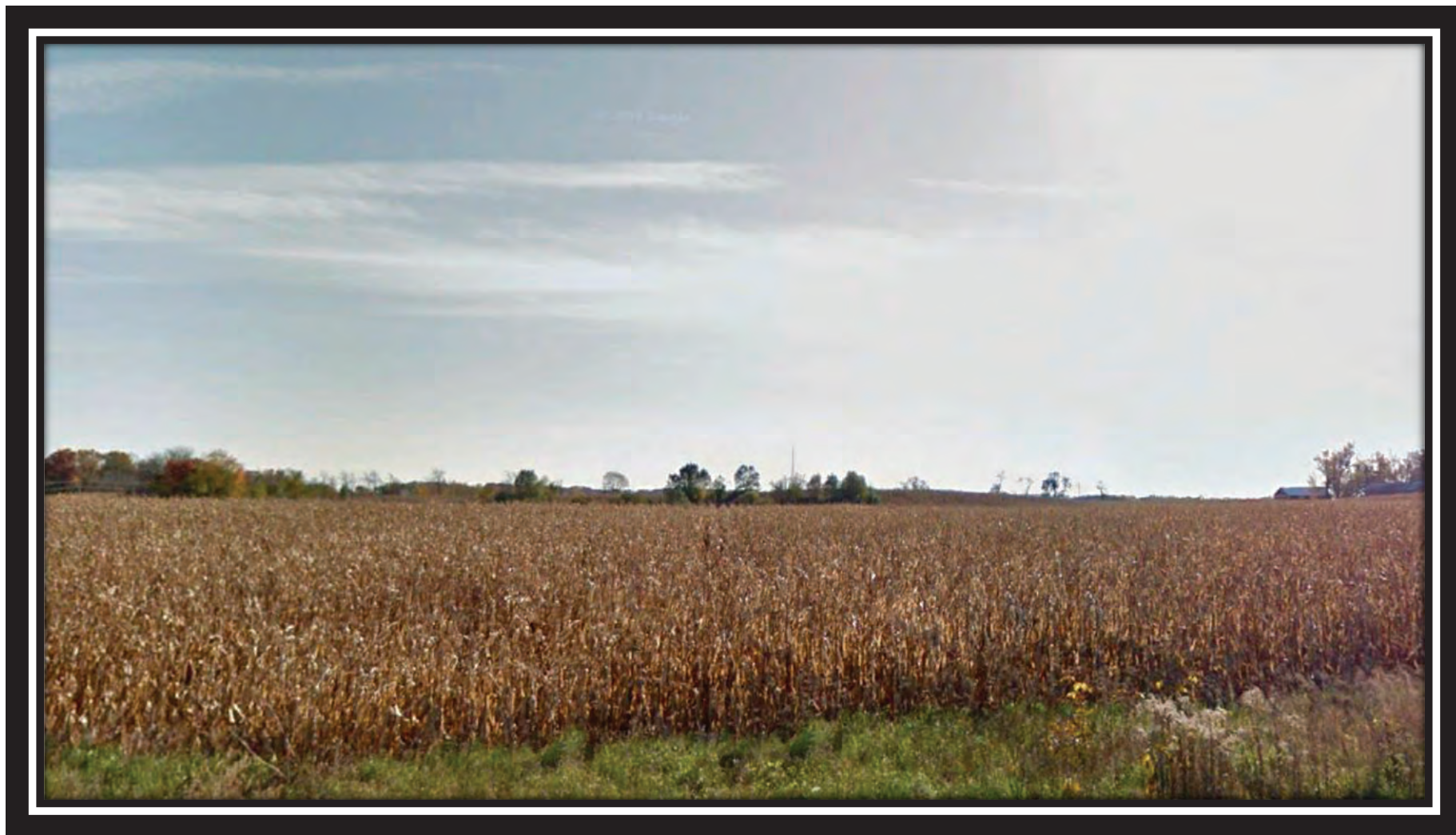


Photo Location 1/2 Mile North - 2 {Before}

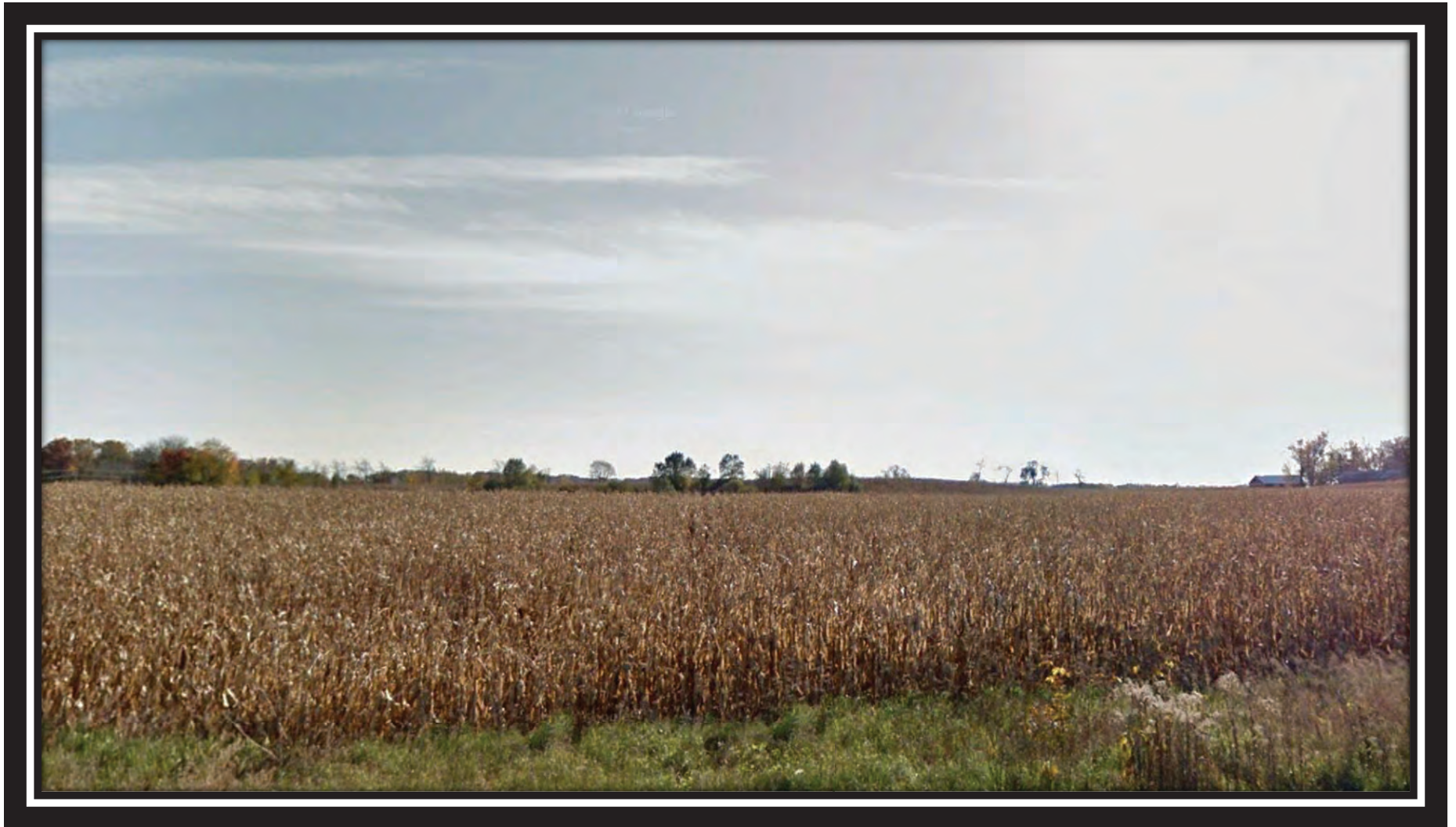
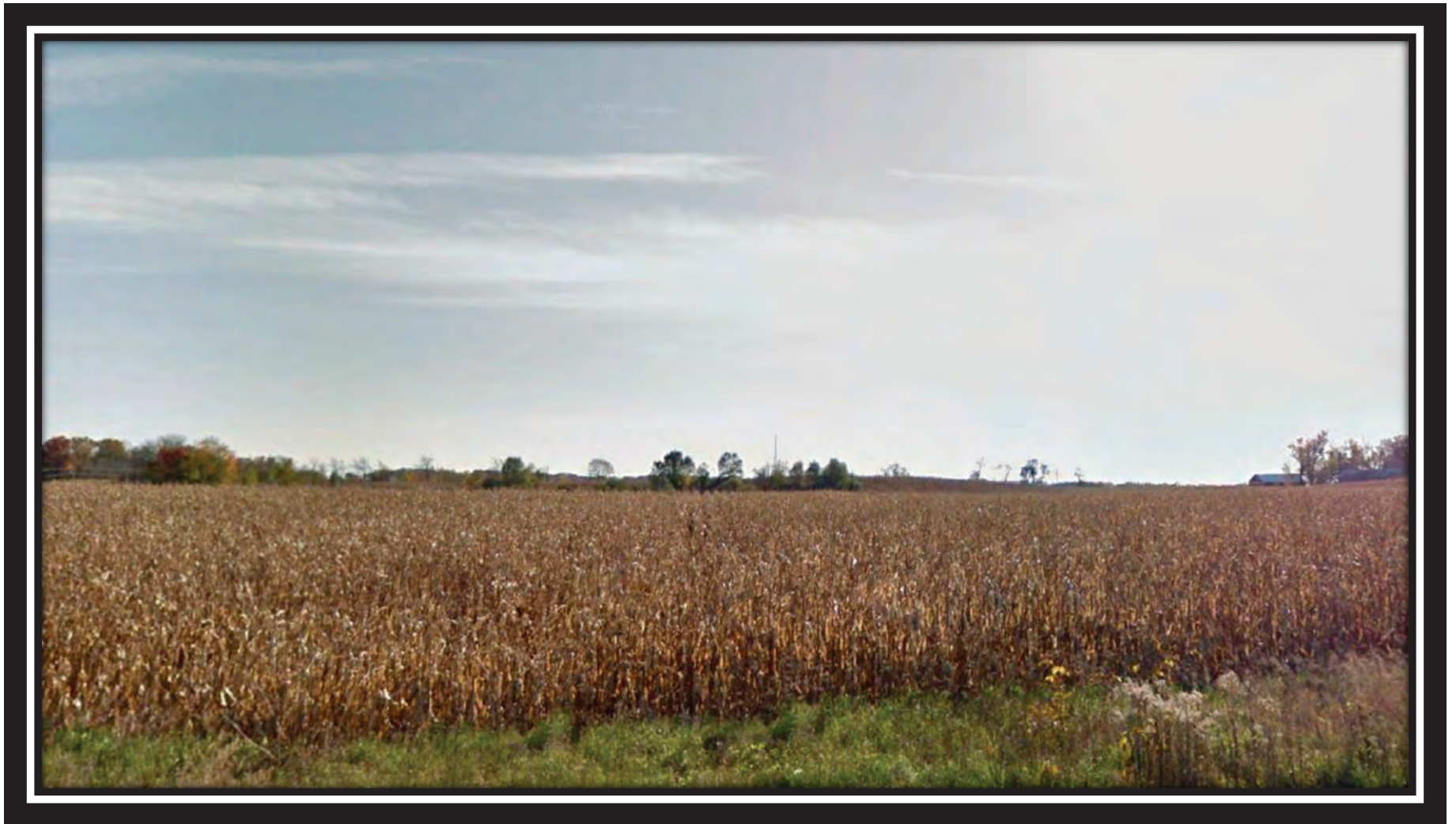


Photo Location 1/2 Mile North - 2 {After}









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

EXHIBIT E

RADIO STATION AUTHORIZATION

LICENSEE: GAMMA ACQUISITION L.L.C.

ATTN: ALISON MINEA
GAMMA ACQUISITION L.L.C.
1110 VERMONT AVENUE NW SUITE 750
WASHINGTON, DC 20005

Call Sign T060430104	File Number
Radio Service AD - AWS-4 (2000-2020 MHz and 2180-2200 MHz)	

FCC Registration Number (FRN): 0021004817

Grant Date 03-07-2013	Effective Date 09-11-2020	Expiration Date 06-14-2023	Print Date
Market Number BEA104	Channel Block A	Sub-Market Designator 0	
Market Name Madison, WI-IA-IL			
1st Build-out Date 03-07-2017	2nd Build-out Date 06-14-2023	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

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: GAMMA ACQUISITION L.L.C.

Call Sign: T060430104

File Number:

Print Date:

Special Condition 1: This license document as first issued on March 7, 2013, reflects the Order of Modification and Authorization (DA 13-231) to existing Mobile Satellite Service ("MSS") call sign E060430 to add Part 27 rights and obligations for Advanced Wireless Service-4 ("AWS-4") terrestrial operating authority with all of the attendant rights, limitations, and obligations associated with the AWS-4 service rules adopted in WT Docket No. 12-70 (FCC 12-151), and any subsequent orders. The license document issued on March 7, 2013, is not a separate authorization in and of itself. The parameters reflected in the International Bureau Filing System for the MSS authorization of the license (call sign E060430) together with the parameters reflected in the Universal Licensing System for the standalone terrestrial authorization of the license (call sign T060430001 - T060430176 derivatives) as of March 7, 2013 constitute the whole of the modified license. Except as otherwise ordered, a licensee of AWS-4 operating authority is permitted to partition, disaggregate, and lease AWS-4 spectrum as provided under the FCC's rules. See, e.g., FCC 19-103; 47 CFR Parts 1, 27. The partition, disaggregation, or lease of AWS-4 spectrum does not encompass the MSS authorization.

Special Condition 2: A licensee of AWS-4 operating authority shall comply with the specific Global Positioning System ("GPS") protection limits set forth in the September 27, 2012 letter agreement between DISH Network Corporation (parent corp. of the AWS-4 licensee under this license as issued on March 7, 2013) and the U.S. GPS Industry Council, as detailed in FCC Order 12-151. See Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands, WT Docket Nos. 12-70, 04-356, ET Docket No. 10-142, Report and Order and Order of Proposed Modification, 27 FCC Rcd 16102, 16151-53, at Paras. 118-122 (2012) (AWS-4 Report and Order), citing Letter from Jeffrey H. Blum, Deputy General Counsel, DISH Network Corporation, and F. Michael Swiek, Executive Director, The U.S. GPS Industry Council, to Marlene H. Dortch, Sec'y, Federal Communications Commission, WT Docket Nos. 12-70, 04-356, ET Docket No. 10-142 (filed Sept. 27, 2012) (a copy of this letter is attached). Further, as detailed in the AWS-4 Report and Order, an AWS-4 license shall remain subject to this Special Condition 2 in the event that the licensee assigns or otherwise transfers the license to a successor-in-interest or assignee. Id. at 16152-53, Para. 121.

Special Condition 3A: A licensee of AWS-4 operating authority shall protect Federal operations in the 2200-2290 MHz band as specified in Section 27.1134(e) of the Commission's rules and in FCC Order 12-151. 47 C.F.R. § 27.1134(e); Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands, WT Docket Nos. 12-70, 04-356, ET Docket No. 10-142, Report and Order and Order of Proposed Modification, 27 FCC Rcd 16102, 16148-51, at Paras. 107-117 (2012) (AWS-4 Report and Order).

Licensee Name: GAMMA ACQUISITION L.L.C.

Call Sign: T060430104

File Number:

Print Date:

Special Condition 3B: In December 2012, DISH Network Corporation (parent corp. of the AWS-4 licensee under this license as issued on March 7, 2013) and federal users of the 2200-2290 MHz band entered into an operator-to-operator agreement. Letter from Karl B. Nebbia, Associate Administrator, Office of Spectrum Management, National Telecommunications and Information Administration, to Julius Knapp, Chief, Office of Engineering and Technology, Federal Communications Commission, WT Docket Nos. 12-70, 04-356, ET Docket No. 10-142, at Attachment ("Operator-to-Operator Agreement between New DBSD Satellite Services G.P. and Gamma Acquisition L.L.C. and United States Federal Government Agencies Operating Earth Stations and/or Aeronautical Mobile Telemetry (AMT) Stations in the 2200-2290 MHz Band") (Dec. 11, 2012) (a copy of this letter is attached). As detailed in FCC Order 12-151, a licensee of AWS-4 operating authority shall comply with this agreement with regard to the permissible AWS-4 emissions into the 2200-2290 MHz band and/or the maximum actual AWS-4 emissions to be received at the specified sites of Federal operations in the 2200-2290 MHz band. AWS-4 Report and Order, 27 FCC Rcd at 16148-51, Paras. 107-117.

Special Condition 3C: As detailed in Section 27.1134(e)(2) of the Commission's rules and in FCC Order 12-151, a licensee of AWS-4 operating authority who is a party to a private contractual agreement between it and a Federal government entity(ies) operating in the 2200-2290 MHz band must maintain a copy of the agreement in its station files and disclose it, upon request, to prospective AWS-4 assignees, transferees, or spectrum lessees, to Federal operators, and to the Commission. 47 C.F.R. § 27.1134(e)(2); AWS-4 Report and Order, 27 FCC Rcd at 16149-50, at Para. 112.

Special Condition 4A: This license is subject to the terms of the Memorandum Opinion and Order, DA 13-2409, in WT Docket No. 13-225.

Special Condition for AU/name change (6/4/2016): Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

Special Condition 4B: On June 1, 2016, DISH Network Corporation, parent corp. of the AWS-4 licensee under this license (as issued on March 7, 2013, and to date), stated unequivocally its election applicable to all AWS-4 licenses of terrestrial downlink-not terrestrial uplink-operations at 2000-2020 MHz. See WT Docket No. 13-225, Letter from Jeffrey H. Blum, Senior Vice President & Deputy General Counsel, DISH Network Corporation, to Marlene H. Dortch, Secretary, FCC (filed Jun. 1, 2016). See also modification applications granted 6/7/2016 (Lead Call Sign T060430001/File No# 0007289841). This one-time election is binding on all AWS-4 licensees and licenses including any AWS-4 licenses issued subsequently. Use of the Lower AWS-4 Band for terrestrial downlink operations is subject to any rules that are generally applicable to AWS downlink operations except to the extent expressly waived by Memorandum Opinion and Order, DA 13-2409, in WT Docket No. 13-225. By way of reference and not limitation, see Memorandum Opinion and Order, DA 13-2409, at para. 25 for list of rules waived for downlink operations, and id. at para. 47 for list of requirements for downlink operations.

Licensee Name: GAMMA ACQUISITION L.L.C.

Call Sign: T060430104

File Number:

Print Date:

Special Condition 5 (9/11/2020): Licensee is an indirect, wholly owned subsidiary of DISH Network Corporation (DISH). This license is subject to licensee's compliance with the conditions and restrictions imposed by the Commission in MO&O, Declaratory Ruling and Order of Proposed Modification, FCC 19-103 and the commitments made by DISH in its July 26, 2019 Commitments Letter including Attachment A thereto (see, e.g., FCC 19-103 at App. H), as modified by the Commission, both of which are incorporated by reference into and made operative by Order of Modification and Extension of Time to Construct, DA 20-1072 (WTB Sept. 11, 2020). These conditions, restrictions and commitments include, but are not limited to, the following (see FCC 19-103 and DA 20-1072 for further information):

Special Condition 5a (9/11/2020): DISH is obligated to provide 5G Broadband Service over this license. DISH has waived its rights to use this license under the Commission's flexible-use policies and this license is expressly conditioned on DISH building, deploying, and offering 5G Broadband Service, which means at least 3GPP Release 15 capable of providing Enhanced Mobile Broadband (eMBB) functionality. 5G is defined as the 5G New Radio interface standard as described in 3GPP Release 15, available at <https://www.3gpp.org/release-15>, or 3GPP Release 16 within 3 years of 3GPP final approval. This condition does not preclude DISH from providing IoT as a service in addition to the 5G Broadband Service, but DISH is precluded from relying on IoT (or any other non-5G Broadband Service) operations to satisfy its buildout requirements and commitments.

Special Condition 5b (9/11/2020): Final Buildout Requirement. Licensee shall provide terrestrial 5G Broadband Service coverage and offer terrestrial 5G Broadband Service by 6/14/2023 to at least seventy (70) percent of the population in the license area in the 2000-2020 MHz and 2180-2200 MHz bands. If licensee fails to establish that it meets this Final Buildout Requirement in the license area in the 2000-2020 MHz and 2180-2200 MHz bands, its authorization for this license area shall terminate automatically without Commission action. Failure to meet this Final Buildout Requirement in an EA shall also result in the MSS protection rule in 47 CFR § 27.1136 no longer applying in this license area. See generally 47 CFR § 27.14(q)(2),(4)-(6).

Special Condition 5c (9/11/2020): Contingent extension: The Final Buildout Requirement in special condition 5b shall be extended to 6/14/2025 if licensee establishes that it is offering 5G Broadband Service with respect to its AWS-4 licenses in the 2000-2020 MHz and 2180-2200 MHz bands to 50% or more of the U.S. population by 6/14/2023.

Special condition 5d (9/11/2020): DISH has committed to make significant payments to the U.S. Treasury if it does not meet its deployment commitments and that commitment is a condition of the waiver/extension grant and modification of this license in DA 20-1072. These commitments include, but are not limited to, mandatory monetary payments for failure to meet deployment commitments (that are separate from the final buildout requirements), status reports, and verification metrics. If DISH fails to meet the conditions of these grants, it must make the payments required. In addition to mandatory monetary payments (and license cancellations), DISH continues to be subject to all of the Commission's other enforcement and regulatory powers for failing to meet an y condition of the grants and modifications made on 9/11/2020.

Licensee Name: GAMMA ACQUISITION L.L.C.

Call Sign: T060430104

File Number:

Print Date:

Special Condition 5e (9/11/2020): Until September 11, 2026, licensee shall not (1) sell this license without the advance approval of both the FCC and the U.S. Department of Justice or (2) in any 12-month period provide in the Economic Area of this license more than 35% of the capacity of its 5G network to any of the three largest wireless facilities-based providers (alone or in combination) without prior FCC approval. Sell means (i) to transfer, assign, or dispose of this license in any manner either directly or indirectly; or (ii) to transfer control of an entity holding this license; or (iii) to enter into a lease arrangement or any other arrangement that results in the transfer of de jure or de facto control of this license.

Reference Copy

Licensee Name: GAMMA ACQUISITION L.L.C.

Call Sign: T060430104

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
---------------	--------------------	--------------------------	------------------------------	---------------

Reference Copy

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: MANIFEST WIRELESS L.L.C.

ATTN: ALISON MINEA
MANIFEST WIRELESS L.L.C.
1110 VERMONT AVENUE, NW, SUITE 750
WASHINGTON, DC 20005

Table with Call Sign (WQJZ246), File Number, and Radio Service (WY - 700 MHz Lower Band (Blocks A, B & E)).

FCC Registration Number (FRN): 0017173121

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

Special Condition for AU/name change (6/4/2016): Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

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: MANIFEST WIRELESS L.L.C.

Call Sign: WQJZ246

File Number:

Print Date:

Special Condition 1 (9/11/2020): Licensee is an indirect, wholly owned subsidiary of DISH Network Corporation (DISH). This license is subject to licensee's compliance with the conditions and restrictions imposed by the Commission in MO&O, Declaratory Ruling and Order of Proposed Modification, FCC 19-103 and the commitments made by DISH in its July 26, 2019 Commitments Letter including Attachment A thereto (see, e.g., FCC 19-103 at App. H), as modified by the Commission, both of which are incorporated by reference into and made operative by Order of Modification and Extension of Time to Construct, DA 20-1072 (WTB Sept. 11, 2020). These conditions, restrictions and commitments include, but are not limited to, the following (see FCC 19-103 and DA 20-1072 for further information):

Special Condition 1a (9/11/2020): DISH is obligated to provide 5G Broadband Service over this license. DISH has waived its rights to use this license under the Commission's flexible-use policies and this license is expressly conditioned on DISH building, deploying, and offering 5G Broadband Service, which means at least 3GPP Release 15 capable of providing Enhanced Mobile Broadband (eMBB) functionality. 5G is defined as the 5G New Radio interface standard as described in 3GPP Release 15, available at <https://www.3gpp.org/release-15>, or 3GPP Release 16 within 3 years of 3GPP final approval. This condition does not preclude DISH from providing IoT as a service in addition to the 5G Broadband Service, but DISH is precluded from relying on IoT (or any other non-5G Broadband Service) operations to satisfy its buildout requirements and commitments.

Special Condition 1b (9/11/2020): Final Buildout Requirement. Licensee shall provide 5G Broadband Service coverage and offer 5G Broadband Service by 6/14/2023 to at least seventy (70) percent of the population in the license area of this license. If licensee fails to establish that it meets this Final Buildout Requirement in the license area of this license, its authorization for unserved areas shall terminate automatically without Commission action. See Public Notice, DA 19-77 (licensee keeps the areas of the license that it serves and the remaining unserved areas are returned to FCC's inventory for relicensing).

Special Condition 1c (9/11/2020): Contingent extension: The Final Buildout Requirement in Special Condition 1b shall be extended to 6/14/2025 if licensee establishes that it is offering 5G Broadband Service with respect to its Lower 700 MHz E Block licenses to 50% or more of the U.S. population covered by DISH's Lower 700 MHz E Block licenses by 6/14/2023.

Special Condition 1d (9/11/2020): DISH has committed to make significant payments to the U.S. Treasury if it does not meet its deployment commitments and that commitment is a condition of the waiver/extension grant and modification of this license in DA 20-1072. These commitments include, but are not limited to, mandatory monetary payments for failure to meet deployment commitments (that are separate from the final buildout requirements), status reports, and verification metrics. If DISH fails to meet the conditions of these grants, it must make the payments required. In addition to mandatory monetary payments (and automatic license terminations), DISH continues to be subject to all of the Commission's other enforcement and regulatory powers for failing to meet any condition of the grants and modifications made on 9/11/2020.

Licensee Name: MANIFEST WIRELESS L.L.C.

Call Sign: WQJZ246

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
--------	-------------	-------------------	-----------------------	--------

Reference Copy

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: AMERICAN H BLOCK WIRELESS L.L.C.

ATTN: OFFICE GEN. COUNSEL, LEGAL DEPT.
AMERICAN H BLOCK WIRELESS L.L.C.
PO BOX 6663
ENGLEWOOD, CO 80155-6663

Table with Call Sign (WQTX303), File Number, and Radio Service (AH - AWS-H Block).

FCC Registration Number (FRN): 0023125057

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

Special Condition 1 (9/11/2020): Licensee is an indirect, wholly owned subsidiary of DISH Network Corporation (DISH). This license is subject to licensee's compliance with the conditions and restrictions imposed by the Commission in MO&O, Declaratory Ruling and Order of Proposed Modification, FCC 19-103 and the commitments made by DISH in its July 26, 2019 Commitments Letter including Attachment A thereto...

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.

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).

Licensee Name: AMERICAN H BLOCK WIRELESS L.L.C.

Call Sign: WQTX303

File Number:

Print Date:

Special Condition 1a (9/11/2020): DISH is obligated to provide 5G Broadband Service over this license. DISH has waived its rights to use this license under the Commission's flexible-use policies and this license is expressly conditioned on DISH building, deploying, and offering 5G Broadband Service, which means at least 3GPP Release 15 capable of providing Enhanced Mobile Broadband (eMBB) functionality. 5G is defined as the 5G New Radio interface standard as described in 3GPP Release 15, available at <https://www.3gpp.org/release-15>, or 3GPP Release 16 within 3 years of 3GPP final approval. This condition does not preclude DISH from providing IoT as a service in addition to the 5G Broadband Service, but DISH is precluded from relying on IoT (or any other non-5G Broadband Service) operations to satisfy its buildout requirements and commitments.

Special Condition 1b (9/11/2020): Final Buildout Requirement. With respect to this H Block license, licensee shall provide 5G Broadband Service coverage and offer 5G Broadband Service by 6/14/2023 to at least seventy (75) percent of the population in the license area. If licensee fails to establish that it meets this Final Buildout Requirement with respect to this H Block license, this authorization shall terminate automatically without Commission action. See § 27.14(r)(3).

Special Condition 1c (9/11/2020): Contingent extension: The Final Buildout Requirement in special condition 1b shall be extended to 6/14/2025 if licensee establishes that it is offering 5G Broadband Service with respect to its AWS H Block licenses to 50% or more of the U.S. population by 6/14/2023.

Special Condition 1d (9/11/2020): DISH has committed to make significant payments to the U.S. Treasury if it does not meet its deployment commitments and that commitment is a condition of the waiver/extension grant and modification of this license in DA 20-1072. These commitments include, but are not limited to, mandatory monetary payments for failure to meet deployment commitments (that are separate from the final buildout requirements), status reports, and verification metrics. If DISH fails to meet the conditions of these grants, it must make the payments required. In addition to mandatory monetary payments (and license cancellations), DISH continues to be subject to all of the Commission's other enforcement and regulatory powers for failing to meet any condition of the grants and modifications made on 9/11/2020.

Licensee Name: AMERICAN H BLOCK WIRELESS L.L.C.

Call Sign: WQTX303

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
---------------	--------------------	--------------------------	------------------------------	---------------

Reference Copy

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: PARKERB.COM WIRELESS L.L.C.

ATTN: JEFFREY BLUM
PARKERB.COM WIRELESS L.L.C.
PO BOX 6663
ENGELWOOD, CO 80155

Table with Call Sign (WQZM344), File Number, and Radio Service (WT - 600 MHz Band).

FCC Registration Number (FRN): 0025268459

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

Special Condition 1 (9/11/2020): Licensee is an indirect, wholly owned subsidiary of DISH Network Corporation (DISH). This license is subject to licensee's compliance with the conditions and restrictions imposed by the Commission in MO&O, Declaratory Ruling and Order of Proposed Modification, FCC 19-103 and the commitments made by DISH in its July 26, 2019 Commitments Letter including Attachment A thereto (see, e.g., FCC 19-103 at App. H), as modified by the Commission, both of which are incorporated by reference into and made operative by Order of Modification and Extension of Time to Construct, DA 20-1072 (WTB Sept. 11, 2020). These conditions, restrictions and commitments include, but are not limited to, the following (see FCC 19-103 and DA 20-1072 for further information):

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: PARKERB.COM WIRELESS L.L.C.

Call Sign: WQZM344

File Number:

Print Date:

Special Condition 1a (9/11/2020): DISH is obligated to provide 5G Broadband Service over this license. DISH has waived its rights to use this license under the Commission's flexible-use policies and this license is expressly conditioned on DISH building, deploying, and offering 5G Broadband Service, which means at least 3GPP Release 15 capable of providing Enhanced Mobile Broadband (eMBB) functionality. 5G is defined as the 5G New Radio interface standard as described in 3GPP Release 15, available at <https://www.3gpp.org/release-15>, or 3GPP Release 16 within 3 years of 3GPP final approval. This condition does not preclude DISH from providing IoT as a service in addition to the 5G Broadband Service, but DISH is precluded from relying on IoT (or any other non-5G Broadband Service) operations to satisfy its buildout requirements and commitments.

Special Condition 1b (9/11/2020): Final Buildout Requirement. With respect to this 600 MHz Band license, licensee shall provide 5G Broadband Service coverage and offer 5G Broadband Service by 6/14/2025 to at least seventy (75) percent of the population in the license area. If licensee fails to establish that it meets this Final Buildout Requirement with respect to this 600 MHz Band license, this authorization shall terminate automatically without Commission action. See § 27.14(t)(4).

Special Condition 1c (9/11/2020): DISH has committed to make significant payments to the U.S. Treasury if it does not meet its deployment commitments and that commitment is a condition of the waiver/extension grant and modification of this license in DA 20-1072. These commitments include, but are not limited to, mandatory monetary payments for failure to meet deployment commitments (that are separate from the final buildout requirements), status reports, and verification metrics. If DISH fails to meet the conditions of these grants, it must make the payments required. In addition to mandatory monetary payments (and license cancellations), DISH continues to be subject to all of the Commission's other enforcement and regulatory powers for failing to meet any condition of the grants and modifications made on 9/11/2020.

Special Condition 1d (9/11/2020): Until September 11, 2026, licensee shall not (1) sell this license without the advance approval of both the FCC and the U.S. Department of Justice or (2) in any 12-month period provide in the Partial Economic Area of this license more than 35% of the capacity of its 5G network to any of the three largest wireless facilities-based providers (alone or in combination) without prior FCC approval. Sell means (i) to transfer, assign, or dispose of this license in any manner either directly or indirectly; or (ii) to transfer control of an entity holding this license; or (iii) to enter into a lease arrangement or any other arrangement that results in the transfer of de jure or de facto control of this license.

Licensee Name: PARKERB.COM WIRELESS L.L.C.

Call Sign: WQZM344

File Number:

Print Date:

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status
---------------	--------------------	--------------------------	------------------------------	---------------

Reference Copy



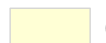
Wetland



Floodplain

Significant Soils

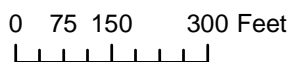
Class



Class 1



Class 2



CUP 02578
BRETT LUNDE

CUP Legal Description

Lot 1 of CSM 11696