



PLANNING COMMISSION  
DATE: 4/28/14  
AGENDA ITEM: 4A – PUBLIC HEARING  
CASE #2014-07

ITEM: Verizon Wireless Telecommunications Tower Conditional Use Permit

SUBMITTED BY: Kyle Klatt, Community Development Director

REVIEWED BY: Garrett Lysiak, P.E., OWL Engineering and EMC Test Labs, Inc.  
Nick Johnson, City Planner  
Rick Chase, Building Official

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**SUMMARY AND ACTION REQUESTED:**

The Planning Commission is being asked to consider a request from Faulk and Foster Real Estate, Inc. (c/o Blake Conklin) on behalf of Verizon Wireless Communications for a Conditional Use Permit to install a new 125-foot telecommunications tower on the site of the Oakland Junior High School in Lake Elmo. The proposed tower is the first new facility that has been submitted under the new Wireless Communications Ordinance that was adopted in 2009. As per the ordinance, the City has retained the services of a consulting engineer to review the plans for compliance with these requirements. With the recommendation from the City’s consulting engineer, Staff is recommending approval of the Conditional Use Permit request.

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**GENERAL INFORMATION**

*Applicant:* Faulk and Foster Real Estate, Inc., 588 Three Mile Road NW, Suite 102, Grand Rapids, MI; on behalf of Verizon Wireless Communications

*Property Owners:* Stillwater Area Public Schools, 1875 Greeley Street, Stillwater, MN (Dennis Bloom, Director of Operations)

*Location:* 820 Manning Avenue, Oakland Junior High School. PID Number 36.029.21.11.0002

*Request:* Conditional Use Permit – Wireless Communications Facility

*Existing Land Use:* Public School and Related Accessory Uses

*Existing Zoning:* PF – Public Facility

*Surrounding Land Use:* Manufactured Home Park, Agricultural Fields, Rural Residential

*Surrounding Zoning:* MDR – Medium Density Residential, RT – Rural Transitional, and RR – Rural Residential

*Comprehensive Plan:* Public/Park

*Proposed Zoning:* No Change

*History:* Oakland Junior High School was constructed in the 1960's and the site has served as a junior high school for the Stillwater Area School District. The school serves children in the Lake Elmo/Stillwater area in grades seven through nine. The School has been expanded several times during its history, which has included ball fields, tennis courts, parking area, lighting, and other improvements.

*Deadline for Action:* Application Complete – 4/9/13  
60 Day Deadline – 6/9/13  
Extension Letter Mailed – No  
120 Day Deadline – 8/9/13

*Applicable Regulations:* 150.110 – Wireless Communications Facilities  
154.106 – Conditional Use Permits

## **REQUEST DETAILS**

The City of Lake Elmo has received a request from Verizon Wireless Communications, represented by Faulk and Foster Real Estate, for a Conditional Use Permit to construct a new 125-foot high wireless communications tower and related antenna equipment on the site of the Oakland Junior High School in Lake Elmo. The proposed tower would be located directly north of the school building and at the western edge of the school's northern parking lot. The tower site is located approximately 550 feet from Manning Avenue and over 700 feet from the 10<sup>th</sup> Street right-of-way, and would be situated in the middle portion of the school's property.

As part of its agreement with the Stillwater School District, the applicant would be leasing a 27 by 40 foot piece of land in the location described above. This space would provide room for the tower itself and an accessory building to house the equipment necessary to serve the facility. The site plan also calls for the creation of a small infiltration basin adjacent to the leased property in order to handle the additional storm water runoff from the proposed impervious surfaces. Access to the site would be gained via the existing parking area and connection to Manning Avenue.

The applicant has provided detailed drawings depicting the location of the tower and accessory equipment in addition to a statement concerning compliance with the City's Wireless Communications Facility ordinance. Because this statement of compliance includes nearly all of the text from the ordinance, Staff has not attached the City's regulations as a separate document for review by the Commission. Under the ordinance, the City may request assistance in reviewing the tower proposal by a third-party expert, which was done in this case. The City has hired Garrett Lysiak of OWL Engineering, which is a communications consulting engineering firm, to review the proposal for compliance with the City's requirements. The consultant's report is attached to this memorandum with his associated attachments and supporting documentation.

Please note that the consultant's report states that the applicant's written request and drawing details are in conflict with each other concerning the tower's proposed height (the narrative noted a 125-foot tower while the drawings depicted a 130-foot tower). The applicant agreed to revise the drawings to show a 125-foot tower, and the updated drawings are now reflected in the attached materials. This change is important because the ordinance would have required further documentation to support the additional height above 125 feet, which is the maximum height allowed across all of the City's zoning districts without such documentation.

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## **BACKGROUND**

The City of Lake Elmo updated its wireless communications ordinance in 2009 partially in response to a request to build a new communications tower in a residential area. The revised ordinance was intended to place a much higher burden on an applicant to demonstrate the need for a new tower before the City would authorize the construction of any new facilities. In addition, the ordinance gives the City the ability to hire an outside expert knowledgeable in radio frequency engineering and communications services to review proposals for consistency with the City's requirements. In this case, the applicant has provided documentation concerning the need for the tower to fulfill gaps in wireless coverage in this portion of the City, and has conducted an analysis of existing facilities in the area to determine whether or not there is a suitable site near-by that could accommodate a new facility. Based on the applicant's submissions and review by the City's consultant, the applicant has adequately address the need for a new facility.

One of the key provisions in the Wireless Communications Facility ordinance is a section that establishes location requirements for new facilities, which also includes a site ranking analysis that must be observed. In order of preference, new facilities are encouraged to be located: 1) on existing towers, 2) on existing structures, 3) on existing buildings four stories or higher, 4) on utility poles over 75 feet in height, 5) on public lands and facilities, and finally 6) on private property in the City. The applicant has stated that options 1-4 are not feasible in this part of the City (and provided documentation to support this claim), and therefore has chosen to work with the School District to build a facility on property that would be considered public property under the code.

The proposed tower location, located in roughly the middle of the School District site, would be located over 600 feet from any existing or planned residential houses. It is also located in a portion of the Oakland school property that is occupied by buildings, light poles, accessory equipment, and other facilities, but out of any traffic movement areas, parking stalls, or other activity areas. While the tower will be visible from Manning Avenue and 10<sup>th</sup> Street, views of the tower will be screened from most sides by trees, buildings, or other obstructions.

The school district has worked with the applicant to site the tower in the least obtrusive portion of its property that also met the objectives and requirements of the City's wireless tower regulations. The tower would be replacing an existing light standard, which would be added back to the tower as an attachment the structure.

In accordance with the City Code, the tower has been designed to accommodate at least two additional carriers via mounting locations lower on the tower structure. Because there could be two additional service providers using this tower, Staff is recommending that the equipment building be designed to accommodate the needs of future users in addition to Verizon Wireless.

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## **PLANNING AND ZONING ISSUES**

The City Code regulations concerning wireless communication facilities outline the requirements that must be met by an applicant in order to construct a new tower within the City. As part of the present applicant, the City's wireless communications consultant has reviewed the application materials and the ordinance for compliance with these requirements. The applicant has also provided detailed information, drawings, and diagrams to support the present request. The most significant issues that need to be considered by the Planning Commission include the following:

- **Permit Requirements.** A new wireless communications tower may only be allowed upon the issuance of a conditional use permit by the City. This type of request requires a public hearing to be conducted by the Planning Commission.
- **Proof of Need.** The applicant is required to submit a coverage/interference analysis and capacity analysis that demonstrates the need for a new facility, in addition to other information as noted in the ordinance. This documentation and analysis has been reviewed by the City's consultant, and his opinion is that the applicant has met the threshold for documenting the need for a new tower. The consultant's report is attached to this memorandum.
- **Location Requirements and Site Ranking.** As noted above, a new tower proposal must be reviewed for compliance with the City's site ranking requirements. Staff has determined that the need for service cannot be accommodated with any of the first four site preferences from the code. The applicant is placing the tower on public land, which is given preference over private property under the ordinance.
- **Prohibited Areas.** This section of the code prohibits towers from being located on smaller residential parcels, within open space or conservation easements, within airport impact zones, or in any open space preservation district. The proposed site does not fall within any of these prohibited areas.
- **Zoning Requirements.** The wireless communications ordinance specifies a maximum tower height and minimum area required for new facilities by zoning district. The proposal complies with these requirements.
- **Application and Review Procedures.** An applicant for a new tower must submit specific information as required by this section of the code. Of these requirements, the applicant has not presented a five-year plan for facilities in the community, and has not submitted a landscape plan that provides screening from the accessory equipment building. Staff is not recommending that either of these be required with the present application because Verizon is not planning for any additional facilities in the community at this time, and because the proposed site is located in the middle of existing accessory buildings and equipment that otherwise are not required to be screened under the City Code.
- **Expert Review.** The report from Garrett Lysiak is attached to this memorandum. Mr. Lysiak will be in attendance at the Planning Commission meeting and will be able to address questions from the Planning Commission or public at this time.
- **Tower Standards.** Under this section of the code, and applicant is required to address the design of the structure, adverse effects on adjacent properties, setbacks, height, lighting, landscaping, accessory buildings, and other requirements. Specific comments concerning some of these items are as follows:
  - **Design.** The proposed monopole design is required under the code, and will be constructed using a Cor-Ten weathering steel. This type of finish will take on a brownish color after a short period of time, which in Staff's opinion is preferable to a lighter blue or white color sometimes used for these facilities. A camouflage-type

design does not appear appropriate for this site given the lack of larger trees or other structures in the vicinity of the proposed tower.

- ***Adverse Effects.*** Although the tower will be visible to adjacent properties, it is located in the middle of the school district property and situated well away from any existing residential neighborhoods. There are other structures in this areas, including power poles, the Cimarron water tower, and light standards for the school ball fields that are already visible from surrounding properties.
- ***Landscaping.*** Although noted as part of the code, Staff is not recommending that landscaping be provided around the proposed site since it is located a fair distance from any adjacent properties. Because the tower is located on school district property, the school district should be able to make decisions about where screening or plantings would be appropriate around the applicant's site.
- ***Wireless Communications Tower Agreement.*** The applicant will need to enter into an agreement with the City concerning the proposed tower consistent with this section of the code. This agreement will be required before construction may begin.
- ***Minimum Conditions.*** The City Code includes several conditions as listed in the code that must be met by the applicant. Staff is recommending that these conditions be referenced as part of the Planning Commission recommendation to the City Council.

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## REVIEW AND ANALYSIS

Staff is recommending that the Planning Commission recommend approval of the request for a conditional use permit to allow the construction of a new Verizon Wireless communications tower on the Oakland Junior High School property. The applicant has provided appropriate documentation that the proposed site is needed to provide adequate wireless communications service in the City, and has also documented that there are no other suitable alternatives to provide this coverage either on an existing facility or as part of another tower in the area. The location on school district property is preferred to a private site in accordance with wireless communications ordinance, and the proposed tower site is situated on a central portion of the school site and away from any existing or future residential subdivisions.

The proposed use will be subject to the recently revised required findings for conditional uses, which include the following:

- 1) The proposed use will not be detrimental to or endanger the public health, safety, comfort, convenience or general welfare of the neighborhood or the city.
- 2) The use or development conforms to the City of Lake Elmo Comprehensive Plan.
- 3) The use or development is compatible with the existing neighborhood.
- 4) The proposed use meets all specific development standards for such use listed in Article 7 of this Chapter.
- 5) If the proposed use is in a flood plain management or shoreland area, the proposed use meets all the specific standards for such use listed in Chapter 150, §150.250 through 150.257 (Shoreland Regulations) and Chapter 152 (Flood Plain Management).

- 6) The proposed use will be designed, constructed, operated and maintained so as to be compatible in appearance with the existing or intended character of the general vicinity and will not change the essential character of that area.
- 7) The proposed use will not be hazardous or create a nuisance as defined under this Chapter to existing or future neighboring uses.
- 8) The proposed use will be served adequately by essential public facilities and services, including streets, police and fire protection, drainage structures, refuse disposal, water and sewer systems and schools or will be served adequately by such facilities and services provided by the persons or agencies responsible for the establishment of the proposed use.
- 9) The proposed use will not create excessive additional requirements at public cost for public facilities and services and will not be detrimental to the economic welfare of the community.
- 10) The proposed use will not involve uses, activities, processes, materials, equipment and conditions of operation that will be detrimental to any persons, property or the general welfare because of excessive production of traffic, noise, smoke, fumes, glare or odors.
- 11) Vehicular approaches to the property, where present, will not create traffic congestion or interfere with traffic on surrounding public thoroughfares.
- 12) The proposed use will not result in the destruction, loss or damage of a natural or scenic feature of major importance.

In reviewing this list, Staff finds that the applicant will be able to comply with the required findings in order to issue a conditional use permit. Please note that the Staff recommendation includes the following conditions of approval:

- 1) The applicant shall enter into a wireless communications tower agreement with the City prior to the issuance of a building permit for the proposed facility.
- 2) The applicant shall abide by the minimum conditions as listed in Section 150.123 of the Lake Elmo City Code concerning wireless communications facilities.
- 3) All lighting associated with the facility shall comply with the City's lighting ordinance.
- 4) The applicant shall design the accessory equipment building to accommodate any additional equipment that may be needed by additional carriers on the tower.

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### **DRAFT FINDINGS**

The Planning Commission should review the application for consistency with the Conditional Use Permit findings listed above and with the requirements of the Wireless Communication Ordinance.

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### **RECCOMENDATION:**

Staff is recommending that the Planning Commission recommend approval of request from Faulk and Foster Real Estate, Inc. (c/o Blake Conklin) on behalf of Verizon Wireless Communications for a Conditional Use Permit to install a new 125-foot telecommunications tower on the site of the Oakland Junior High School in Lake Elmo. This recommendation includes the following conditions of approval:

- 1) The applicant shall enter into a wireless communications tower agreement with the City prior to the issuance of a building permit for the proposed facility.
- 2) The applicant shall abide by the minimum conditions as listed in Section 150.123 of the Lake Elmo City Code concerning wireless communications facilities.
- 3) All lighting associated with the facility shall comply with the City’s lighting ordinance.
- 4) The applicant shall design the accessory equipment building to accommodate any additional equipment that may be needed by additional carriers on the tower.

Suggested motion:

***“Move to recommend approval of the request by Verizon Wireless Communications for a Conditional Use Permit to construct a new 125-foot high wireless communications tower and related antenna equipment on the site of the Oakland Junior High School in Lake Elmo***

**ATTACHMENTS:**

1. Report from OWL Engineering (Garrett Lysiak) with Attachments
2. Application Form
3. Legal Description
4. Application Narrative and Ordinance Review
5. Verizon Coverage Maps
6. Tower Photo Simulations
7. Co-Location Statement from Certified Engineer
8. Verizon PCS Broadband License Information
9. Letter of Authorization – Stillwater School District
10. Interference Letter from Verizon Wireless
11. Search Area Map
12. Detailed Plans and Specifications – Proposed Verizon Tower and Antenna

**ORDER OF BUSINESS:**

- Introduction.....Community Development Director
- Report by Staff.....Community Development Director
- Questions from the Commission..... Chair & Commission Members
- Open the Public Hearing .....Chair
- Close the Public Hearing.....Chair
- Discussion by the Commission ..... Chair & Commission Members
- Action by the Commission..... Chair & Commission Members



# **OWL ENGINEERING & EMC TEST LABS, INC.**

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**CONSULTING COMMUNICATIONS ENGINEERS · EMC TEST LABORATORIES**

**5844 Hamline Avenue North, Shoreview, MN 55126  
651-784-7445 • Fax 651-784-7541**

**REPORT REGARDING CONSTRUCTION  
OF A VERIZON COMMUNICATIONS TOWER  
TOWN OF LAKE ELMO, MINNESOTA**

**PREPARED BY: GARRETT G. LYSIAK, P.E.**

**MARCH 15, 2014**





# **OWL ENGINEERING & EMC TEST LABS, INC.**

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**CONSULTING COMMUNICATIONS ENGINEERS • EMC TEST LABORATORIES**

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651-784-7445 • Fax 651-784-7541

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FIGURE 6	PROPOSED COVERAGE

## ENGINEERING STATEMENT

The application for a Conditional Use Permit that was submitted by Verizon Communications to Lake Elmo, Minnesota for the proposed tower at 820 Manning Avenue North (in N ½ of the NE ¼ Section 36, Township 29N, Range 21W), was reviewed for compliance with the technical requirements of the Lake Elmo Tower Ordinance. The site was located and plotted on a USGS 7.5 minute map (Figure 1 “Site Map”). In addition, an aerial photograph is included to show the proposed site location and the surrounding area (Figure 2 “Aerial View Map”).

### Initial Review

My initial review of the application found several discrepancies. The application requested a 125-foot monopole that is proposed to be constructed on the school property. However, the drawings provided indicated a 130-foot tower (Sheet A3). Since the ordinance has a maximum allowable height of 125-feet and there was no request for a variance or any information showing the need for the increased allowable height, I requested additional information from Verizon. The changes were provided but there was no explanation concerning the added tower height. In several conversations with the applicant it was agreed that the initial height of 125-feet would be the desired height and the only change that would have to be made was to the construction drawings to show the requested 125-foot tower.

### Existing Towers

Searches of the FCC and FAA tower databases were performed and nearby towers within 5 miles were identified and are listed in Figure 3 (“FCC & FAA Tower Search”) and all are greater than 2.4 miles from the proposed site and cannot be used to provide the required coverage. Figure 4 is a map showing the location of all of the nearby existing towers. As can be seen by these figures there are no existing towers that can supply the required coverage for the Verizon Wireless system.

### Airspace Study

The proposed tower site was examined for any impact on the local airspace and airports. The tower is proposed to be under 200-feet and is therefore not usually required to get FAA approval, unless it is located near an airport. The search showed that the closest public air facility is Lake Elmo (21D) which is located more than 2.4 miles from the proposed tower site and is only 40-feet and not capable of either

supporting a new antenna or providing the needed coverage. The proposed facility is not predicted to be impacted by this tower.

The FCC TOWAIR program was used to examine the proposed tower for any FAA notification. The results show that no FAA notification is required.

### **Coverage Study**

In reviewing the submitted data it was determined that additional information for nearby Verizon Communications sites was needed in order to make a signal coverage study determination. The requested information was provided and the data was analyzed. This analysis shows how Verizon Communications has designed its communications facilities in the Lake Elmo area with several surrounding sites providing area wide coverage.

The coverage study analysis was performed using parameters for signal levels that made the display easier to understand and the parameters were maintained in all of the different examples to ensure accuracy. Figure 5 shows the results of the coverage study analysis for the present Verizon system. The existing gap in coverage is identified in this exhibit.

The study was then repeated with the proposed site included in the analysis in order to determine if the gap in coverage is eliminated. It is shown in Figure 6 and that the coverage gap is eliminated.

The study was then repeated using lower heights to determine if using these lower heights could provide the required signal coverage. The results show that this tower location does not provide the coverage needed to eliminate the gap in coverage at reduced heights and still allow for future co-location use.

### **Site Construction**

The site construction documents show the tower that is planned for this project. In my review I noted that the plans did show compliance with the requirements of EIA-222 standard which requires loading for winds of 80 mph with radial ice loading.

The proposal does satisfy the requirements for setbacks from structures and property lines.

Since the tower is less than 200-feet there is no requirement for any lighting or marking requirements by the FAA.

The proposal shows that the tower is designed to accommodate three communications systems and therefore complies with the ordinance as a potential co-location site.

### **Interference Study**

A search was performed using the FCC frequency database to determine the frequency and location of any city or county public safety facilities within one-mile from the proposed tower location. Using all the identified frequencies utilized by the county an intermodulation (interference) study was performed to determine if any predicted interference products would be generated by the proposed Verizon Communications facility. The results of the study indicate that there are no interference products predicted to be generated that would cause interference to any of the identified protected frequencies.

### **RF Radiation Analysis**

Using the data submitted by Verizon Communications, I performed a "Worst-Case" radiation analysis to determine the amount of RF energy that would be present at the base of the tower. In making my calculations I assumed that all of the RF energy generated by the facility would be directed downward. This is not the real world situation since the antennas used by PCS systems are designed to radiate towards the horizon. However, using this analysis method I am able to determine that the maximum level of RF radiation reaching the ground at the tower base is less than 10 percent of the ANSI standard value and as such is not classified as an RF radiation hazard.

Additionally, I did a sample calculation inserting three additional users on the tower and determined that the increased potential RF radiation would still be within the FCC standards. This calculation would have to be repeated when additional carriers were installed on the tower to get an exact value.

### **Summary**

My review of the proposed Verizon Communications tower indicates that:

1. It would provide the required PCS system coverage to eliminate the present existing coverage gap in the Lake Elmo area.
2. The site is not predicted to cause any interference products to any protected frequency in the area and is not predicted to be an RF radiation hazard.
3. The tower is designed to accommodate additional communications systems.



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4. The proposal is in compliance with the structural and setback requirements of the ordinance.
5. The proposed tower is not predicted to impact any Public or Private airport in the immediate vicinity.
6. The proposal meets all of the technical requirements of the Lake Elmo Tower Ordinance.

Respectfully submitted,

A handwritten signature in black ink that reads "Garrett G. Lysiak". The signature is written in a cursive style with a large, stylized initial "G".

Garrett G. Lysiak, P.E.  
March 15, 2014

(WHITE BEAR  
LAKE EAST)

093° 12' 55.96" W  
045° 20' 34.05" N

(STILLWATER)

HUDSON QUADRANGLE  
MINNESOTA  
TOPOGRAPHIC SERIES

(SOMERSET  
SOUTH)

092° 31' 06.82" W  
045° 20' 34.05" N

(LAKE ELMO)

(Unavailable)

044° 34' 45.77" N  
093° 12' 55.96" W

044° 34' 45.77" N  
092° 31' 06.82" W

(ST PAUL PARK)

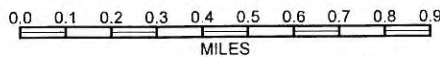
(Unavailable)

Declination



GN 0.10° E  
MN 0.08° E

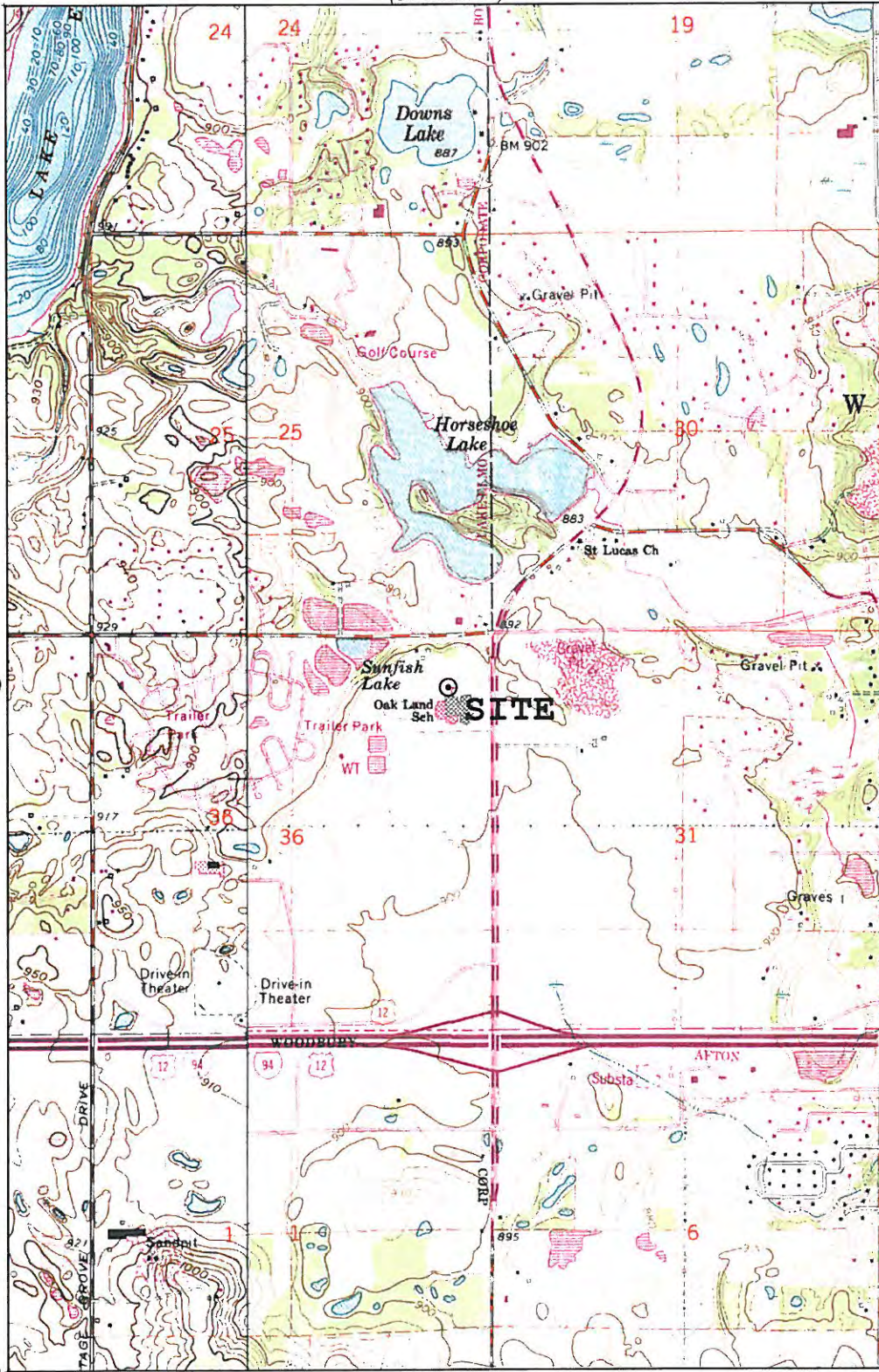
(PRESCOTT)  
SCALE 1:24000



CONTOUR INTERVAL 10 FEET  
NATIONAL GEODETIC VERTICAL DATUM 1929

HUDSON, MN  
1967

**FIGURE 1 - SITE MAP**





**FIGURE 2 - AERIAL VIEW**

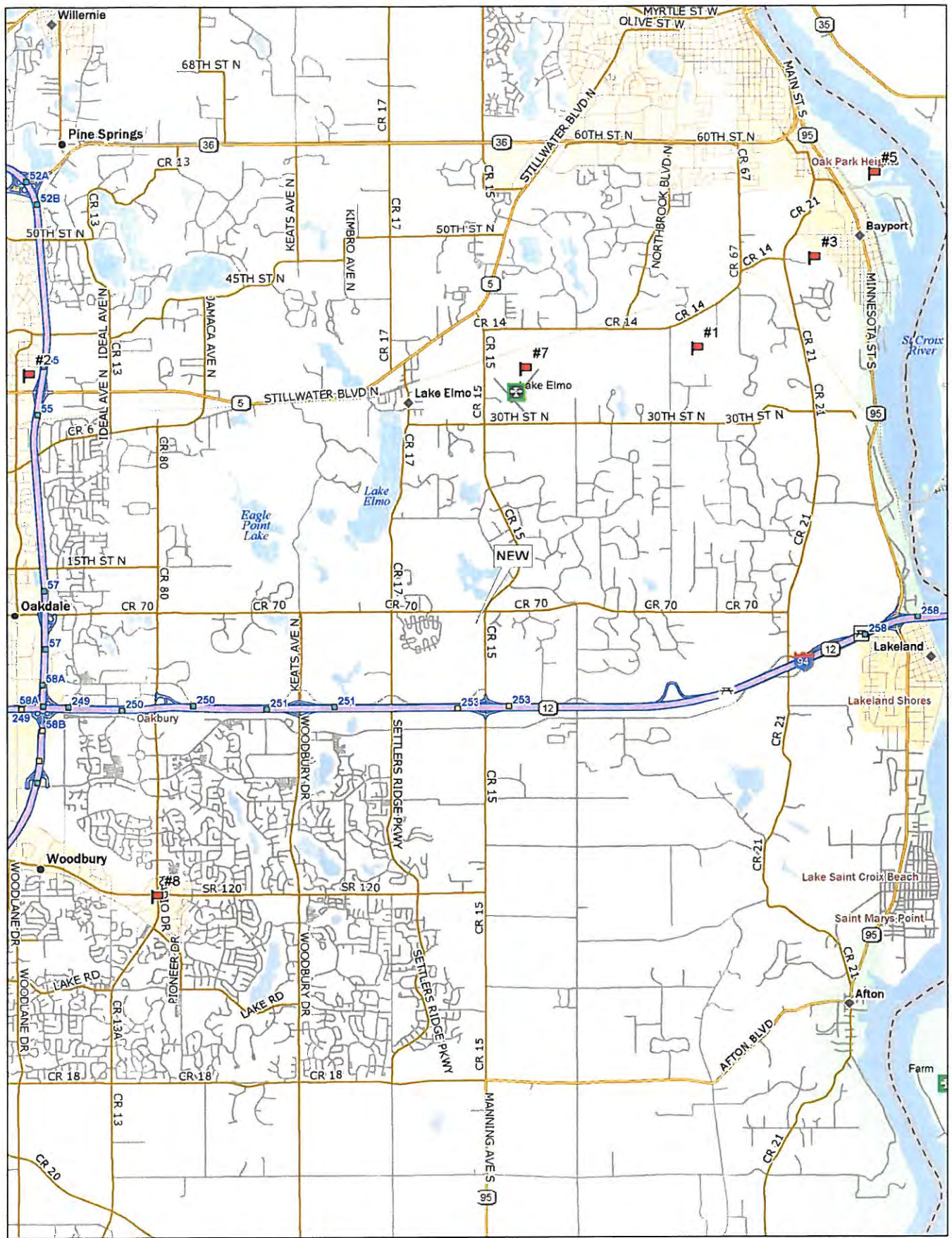
### FIGURE 3 - FCC & FAA TOWER SEARCH

**Specified Search**

Latitude='44-57-41.7 N', Longitude='92-51-53.8 W', Radius=8 Kilometers

Registration Number	Status	File Number	Owner Name	Latitude/Longitude	Structure City/State	Overall Height Above Ground (AGL)
1 1004586	Constructed	A0884146	STC Five, LLC	45-00-11.1N 092-49-03.0W	BAYTOWN, MN	33.2
2 1009660	Constructed	A0500917	MINNESOTA, STATE OF	44-59-57.0N 092-57-46.0W	OAKDALE, MN	79.2
3 1023182	Constructed	A0853087	Verizon Wireless (VAW) LLC	45-01-01.0N 092-47-31.0W	BAYTOWN, MN	50.9
4 1023184	Dismantled	A0655215	Verizon Wireless (VAW) LLC	44-54-59.0N 092-53-09.0W	WOODBURY, MN	47.5
5 1024930	Constructed	A0529189	Xcel Energy Services Inc.	45-01-48.0N 092-46-44.0W	BAYPORT, MN	239.2
6 1025302	Dismantled	A0452877	21ST CENTURY WIRELESS GROUP INC	44-53-30.0N 092-53-03.0W	NEWPORT, MN	94.5
7 1261231	Constructed	A0618383	Minnesota, State of	45-00-00.5N 092-51-17.5W	Lake Elmo, MN	11.3
8 1272246	Constructed	A0814444	SBA 2012 TC Assets, LLC	44-55-07.2N 092-56-06.1W	Saint Paul, MN	46.6





**FIGURE 4 - EXISTING TOWERS**

TN  
MN (0.1°E)

Scale 1 : 87,500  
0 1 2 3 4 mi  
0 1 2 3 4 km  
1" = 1.38 mi Data Zoom 11-2

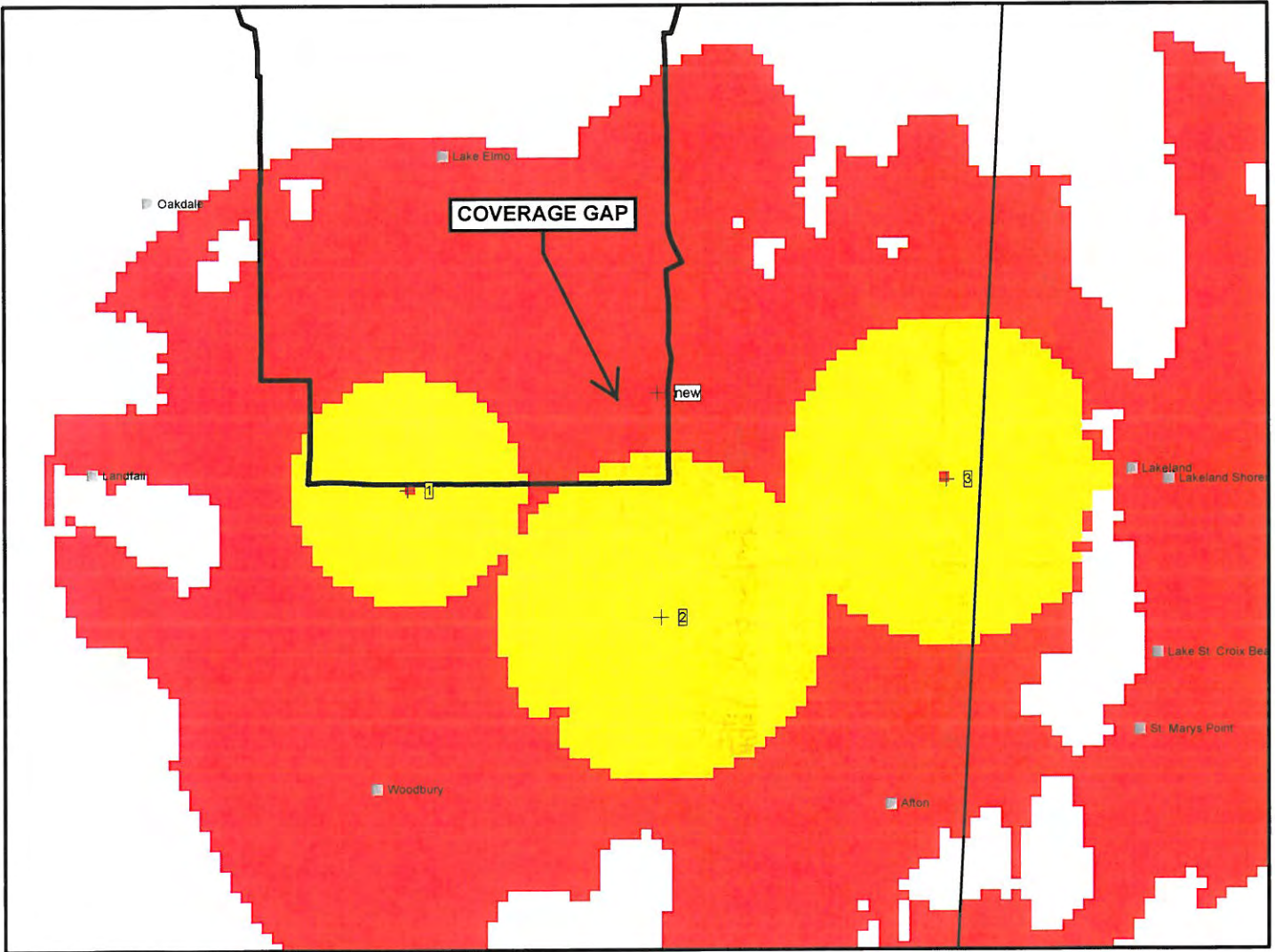


FIGURE 5 - EXISTING COVERAGE

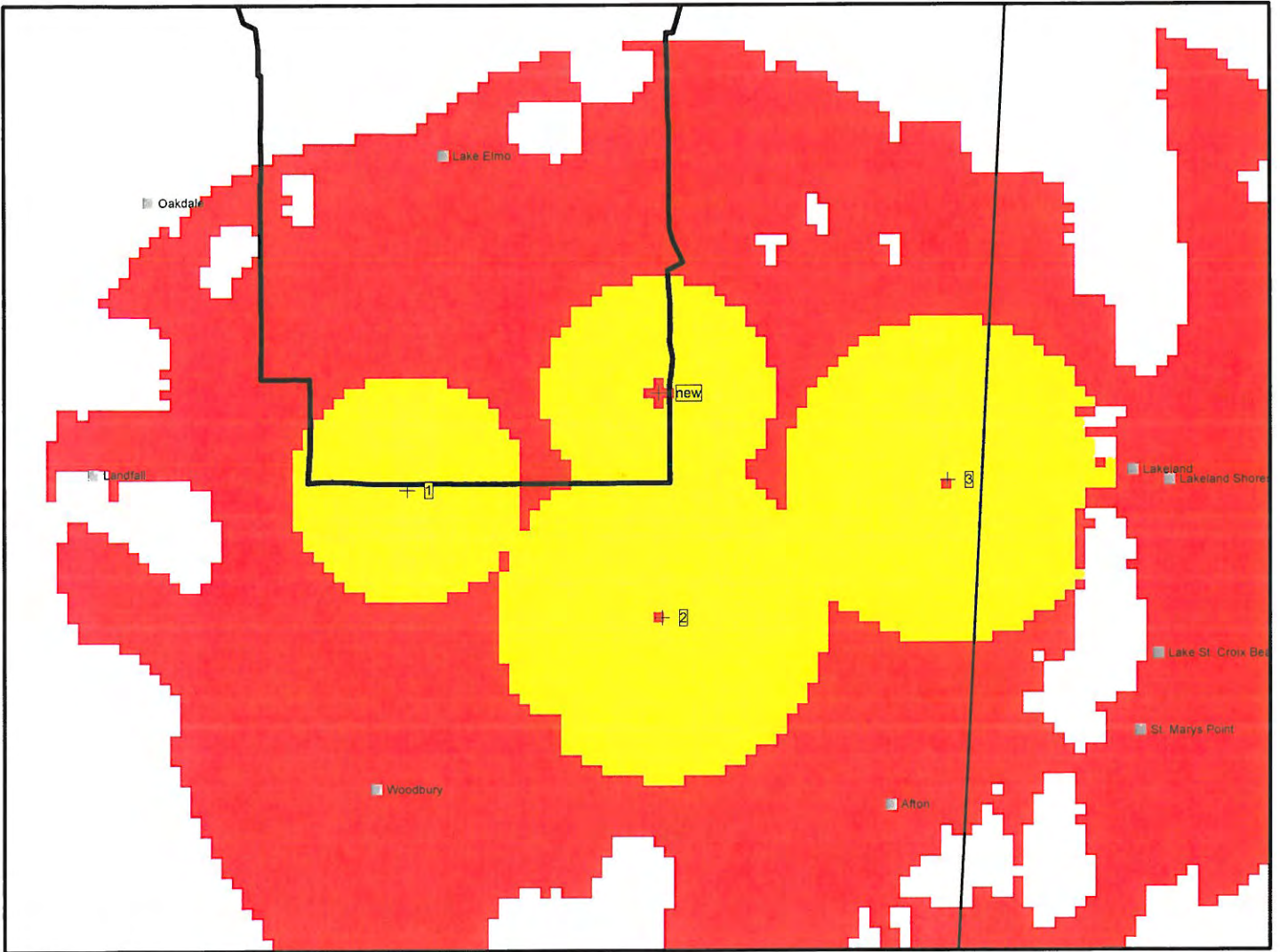


FIGURE 6 - PROPOSED COVERAGE

Date Received: \_\_\_\_\_  
Received By: \_\_\_\_\_  
Permit #: \_\_\_\_\_



651-747-3900  
3800 Laverne Avenue North  
Lake Elmo, MN 55042

### LAND USE APPLICATION

- Comprehensive Plan  Zoning District Amend  Zoning Text Amend  Variance\*(see below)  Zoning Appeal
- Conditional Use Permit (C.U.P.)  Flood Plain C.U.P.  Interim Use Permit (I.U.P.)  Excavating/Grading
- Lot Line Adjustment  Minor Subdivision

Applicant: Faulk and Foster Real Estate, Inc. o/b/o Verizon Wireless  
Address: 588 Three Mile Road NW, Suite 102 Grand Rapids, Michigan 49544   
Phone # 616-647-3720 ext. 112  
Email Address: blake.conklin@faulkandfoster.com

Fee Owner: Stillwater Area Public Schools c/o Dennis Bloom, Director of Operations  
Address: 1875 Greeley St, Stillwater, MN 55082  
Phone # 651-351-8379  
Email Address: N/A

Property Location (Address and Complete (long) Legal Description): 820 Manning Ave N Lake Elmo, MN 55042  
The East 666 feet of the said North Half of the Northeast Quarter and the West 234.9 feet of the East 900.9 feet of the South 891.8 feet, subject to public roads  
roads and utility easements containing 25 acres more or less

Detailed Reason for Request: Verizon Wireless is proposing a 125' communications tower with a 9' lightening rod. This site will serve to upgrade the wireless communications capabilities of the surrounding area.

\*Variance Requests: As outlined in Section 301.060 C. of the Lake Elmo Municipal Code, the applicant must demonstrate practical difficulties before a variance can be granted. The practical difficulties related to this application are as follows:  
No variance requested

In signing this application, I hereby acknowledge that I have read and fully understand the applicable provisions of the Zoning ordinance and current administrative procedures. I further acknowledge the fee explanation as outlined in the application procedures and hereby agree to pay all statements received from the City pertaining to additional application expense.

Signature of applicant:  o/b/o Verizon Wireless Date: 1/17/14

#### City Use Only

Planning: Zoning District: \_\_\_\_\_ Date: \_\_\_\_\_  
Reviewed by: \_\_\_\_\_  
Subject to the following conditions: \_\_\_\_\_  
Engineering: Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_  
Subject to the following conditions: \_\_\_\_\_

***QUALITY ABSTRACT, INC.***

7582 Currell Boulevard, Suite 111  
Woodbury, MN 55125  
Phone (651) 739-8597 Fax (651) 739-8492

December 27, 2013

Faulk & Foster  
588 Three Mile Road NW Suite 102  
Grand Rapids, MI 49544  
Attention: Blake Conklin

RE: Abstracter's Certificate

Legal Description: Part of the North ½ of the Northeast ¼ being the East 665 feet of said North ½ of the Northeast ¼ and the West 234.9 feet of the East 900.9 feet of the South 891.8 feet and subject to easements, all in Section 36, Township 29, Range 21, Washington County, Minnesota.

**QUALITY ABSTRACT, INC.** does hereby certify that it has made a search of the public record in Washington County, Minnesota and discloses the apparent owners and addresses of real estate within a 350 foot radius of the above referenced property and has shown them as Entries No. 1 to 17, inclusive, on Exhibit "A" attached hereto.

Dated this 27th day of December, 2013.

**QUALITY ABSTRACT, INC.**

By:   
Licensed Abstracter

A FULL SERVICE ABSTRACT COMPANY

# Verizon Wireless Conditional Use Permit Application

## GENERAL INFORMATION

Verizon Site Name: MIN Valley Ranch

Project Overview: Verizon Wireless proposes to place a 125' monopole tower with 9' lightning rod and associated 12' x 30' equipment shelter within a fenced compound on an 80' x 80' lease area. See enclosed drawings for details (Exhibit A)

Parcel Address: 820 Manning Avenue North Lake Elmo, MN 55042

Legal Description: The following parts of the N/2 of the NE/4 of Section 36, Township 29 North, Range Twenty One West described as follows: The East 666 feet of the said North Half of the NE/4 and the West 234.9 feet of the East 900.9 feet of the South 891.8 feet, subject to public roadways along the North and East side thereof and containing 25 acres more or less.

Property Owner: Stillwater Area Public Schools, Independent School District #834

Zoning: Public Facility

## Contact Information

**Applicant:**  
Faulk and Foster Real Estate, Inc.  
c/o Blake Conklin  
588 Three Mile Road NW, Suite 102  
Grand Rapids, Michigan 49544  
(616) 647-3720 ext. 112

**Property Owner:**  
Independent School District #834  
1875 Greeley Street  
Stillwater, MN 55082  
(651) 351-8379

**Architect:**  
Design 1 of Eden Prairie  
9973 Valley View Road  
Eden Prairie, MN 55344  
(952) 903-9299

**Surveyor:**  
Sunde Land Surveying  
9001 E. Bloomington Freeway,  
Suite 118  
Bloomington, MN 55420  
(952) 881-2455

## ORDINANCE COMPLIANCE STATEMENT

Verizon Wireless offers this Ordinance Compliance Statement in support of its application for a Conditional Use Permit for the above-described project. Our answers are highlighted in bold and section not requiring a response are redacted as noted:

## WIRELESS COMMUNICATIONS FACILITIES

### § 150.110 PURPOSE AND INTENT.

The purpose of this subchapter is to allow for and regulate the design, location, placement, construction, maintenance, and removal of wireless communications towers and antennae and to:

- (A) Reasonably accommodate the provision of wireless telecommunication services to the general public;
- (B) Provide safety/emergency service through the use of wireless communications facilities;
- (C) Minimize adverse visual effects of wireless telecommunication towers, antennae, or accessory equipment through careful design and siting standards;
- (D) Strictly control the location and design of wireless communications facilities so that allowed facilities will not be obtrusive or visually unpleasant and in particular, to protect residential property and neighborhoods from visually intrusive tower installations where reasonably possible;
- (E) Provide clear standards governing all aspects of such facilities;
- (F) Avoid potential damage to adjacent properties from tower failures through structural standards and setback requirements;
- (G) Maximize the use of existing and approved towers, structures, and/or buildings for the location of new wireless telecommunication towers in order to reduce the number of the structures needed to accommodate wireless telecommunication services; and
- (H) Allow new facilities only when a documented proof of need satisfactory to the city can be shown.

**The proposed site will meet the communication needs of residents and business. The site will support the general welfare of the community by providing voice and data service that is an essential part of modern infrastructure. This service will support critical communications and fast emergency response to accidents, health emergencies, crimes, fires, storms and other events impacting public health and safety.**

### § 150.111 PERMIT REQUIREMENTS.

(A) All new wireless communications facilities shall require a conditional use permit in accordance with the zoning district requirements specified in §150.115 with the exception of those facilities that are exempt from review under this chapter or that may be approved administratively with a wireless communications permit.

(1) A public hearing for a new wireless communications facility that requires a conditional use permit shall be preceded by 10 days mailed notice to record owners of property located within 1,000 feet of the parcel on which the tower will be located.

(B) *Exemptions.* The following are exempt from review under this chapter:

- (1) Television antennas, satellite dishes 1 meter (39 inches) in diameter or less;

- (2) Satellite dishes used commercially and 3 meters in diameter or less;
- (3) Receive only antennas;
- (4) Amateur radio facilities, subject to other City Code requirements;
- (5) Mobile services providing public information coverage of news events or of a temporary or emergency nature.

(C) *Administrative review.* The following shall be allowed as a permitted use subject to the issuance of a wireless communications permit in accordance with § 150.115 :

- (1) Satellite dishes more than 1 meter (39 inches) in diameter;
- (2) Ground mounted antennas not exceeding the maximum height allowed for structures in the underlying zoning district;
- (3) Building mounted antennas not exceeding 25 feet above the highest part of the building to which they are attached;
- (4) Utility pole mounted antennas not exceeding 25 feet above the highest part of the utility pole to which they are attached;
- (5) Antennas co-located on an existing wireless communications facility structure.

**Verizon Wireless is submitting a conditional-use permit application pursuant to this section.**

#### **§ 150.112 PROOF OF NEED.**

(A) As part of an application for a conditional use permit or wireless communications permit an applicant shall demonstrate proof of need by providing a coverage/interference analysis and capacity analysis, which indicates that the location and height of the tower or antennas as proposed is necessary to meet the frequency plus other spacing needs of the cellular communication system and/or to provide adequate portable radio coverage and capacity to areas which cannot be adequately served by locating the tower or antenna at another site. The proof of need for the tower or antennae must be demonstrated to the satisfaction of the city by providing the city an analysis from a qualified professional RF engineer with experience in radio frequency analysis work, which is subject to acceptance by the city prior to commencing the work.

(B) The cost of the city's review, including an analysis of the proof of need, is the applicant's responsibility. An escrow shall be established in an amount required by Council resolution for this purpose.

(C) The analysis and the material provided by the engineer shall include at least the following:

(1) *Structural capacity analysis.* Provide an analysis of the impact of the proposed facility on the tower's carrying capacity of at least 3 antenna arrays required (using a typical maximum facility) under the co-location provision of this subchapter.

(2) *Coverage/interference.* Provide an analysis for:



(a) City property and other public property with signal strength values (expressed in dBu) for on street level, in vehicle, and in building level with said interference analysis indicating the protection afforded for all the frequencies in use or which could be in use by the city or other public safety agencies.

(b) Private property with signal strength values (expressed in dBu) for on street level and in building level with said analysis indicating the protection afforded property within 1/2 mile of the proposed facility and site.

(3) *System capacity analysis.* If the system coverage analysis does not show a coverage need, provide a system capacity analysis.

(4) *Radio frequency radiation hazard analysis.* The analysis must address compliance with the most current FCC Bulletin OET 65 radiation standard.

(5) *Map of existing and proposed facilities.* A map showing the location of all existing and any proposed towers within 2 miles of the site being considered. Communications equipment and towers within this area shall be identified by type, function, ownership/users and height. The capacity of existing towers located within 2 miles (the study area) to carry additional facilities must be provided.

(6) *Map of existing buildings and structures.* A map showing the location of all existing buildings, water towers and structures 75 feet or more in height above the ground and within 2 miles of the site being considered. The potential and efforts undertaken to use these buildings and structures as a supporting base for an antenna or communications facility purpose must be described and analyzed.

(7) *Other information.* Any other information deemed necessary by the city in order to demonstrate the need for a new wireless communications facility.

(8) *Exception.* If the request is limited to adding an antenna array on an existing tower without increasing the height of the tower support structure or otherwise permitted after an administration review under § 150.111, the city may waive some or all of the proof of need requirements listed above.

**Verizon's proposed site will address both coverage and capacity objectives and allow Verizon to maintain adequate service levels in the area.**

**In terms of coverage, Exhibit B reflects Verizon's current coverage in the proposed area. The colors represent coverage as follows:**

- 1. Green = excellent coverage both in-building/vehicle and outdoors**
- 2. Yellow = excellent coverage outdoors, some in-building/in-vehicle coverage**
- 3. Red = mainly outdoor coverage**
- 4. White = poor and unreliable coverage**

**As you will notice, there are significant areas of red and white surrounding the proposed site. This includes the dense residential neighborhoods to the east and west as well as areas along Manning Avenue. Residents utilizing Verizon's network in their homes experience significantly degraded coverage in the "red area". With the increasing**

percentage of people replacing the traditional land line phone with a cell phone, network coverage inside residential homes is necessary.

Furthermore, there are numerous “white areas” reflecting coverage gaps along Manning Avenue where citizens will not receive adequate coverage even outside of their vehicles. Mobile phone coverage on heavily traveled roads is critical for emergency situations.

Exhibit C reflects the coverage remedy from the proposed site. As you will notice, the dense residential neighborhoods surrounding the school will begin to receive excellent cellular coverage. Additionally, Manning Avenue heading north will start receiving adequate coverage as well.

The proposed site will remedy capacity issues in the area as well. Briefly put, although other existing antenna sites were in the past able to serve this area, they can no longer do so efficiently because the number of customers has grown enormously over the past few years. This growth has led to “capacity issues” where there are too few antennas to accommodate the high volume of users. To illustrate the effect these capacity problems have had in the vicinity of the proposed site, Verizon has introduced before and after “best server” maps as Exhibit D and Exhibit E. The best server maps depict what antenna site provides the user with service in a particular area. As indicated on Exhibit D, users in the vicinity of the proposed site are served by a number of different antennas. This leads to inadequate service and an increase in dropped calls. The increase in usage and overcapacity problems at the existing sites led to this problem. As Exhibit E indicates, this problem will be remedied by the proposed installation.

#### § 150.113 LOCATION REQUIREMENTS AND SITE RANKING ANALYSIS.

(A) *Location requirements for new facilities.* If a new wireless communications facility is needed based on the materials and studies submitted and reviewed by the city, the following preferences, listed in ranked order, shall be followed and each preference shall be analyzed to determine the most appropriate location:

(1) *Use of existing towers.* An existing tower may be used to support the proposed facility. If no existing tower has additional capacity, a determination must be made to show if and how towers in the study area can be modified to accommodate the proposed facility. The co-location requirements specified in § 150.114 shall be used to help determine whether or not an existing tower can be used to support a proposed facility. **There are no existing towers available that could accommodate Verizon’s proposed equipment as discussed below.**

(2) *Use of existing structures.* An existing structure over 35 feet high may be used. Preference shall be given to existing light poles, high voltage utility towers and water towers. **Verizon’s proposed tower is replacing an existing light pole.**

(3) *Use of existing building 4 or more stories in height.* Public and commercial buildings or structures 4 or more stories high which can more likely accommodate facilities without obstructing views or being obtrusive to scenic views shall be given preference over shorter buildings. **There are no buildings within a two mile radius that are greater than 4 stories in height that would provide feasible collocation potential. Attached as Exhibit F is a map of**

**the two-mile radius surrounding the proposed site. It is mostly agricultural and residential buildings in nature so they do not exceeding 4 stories in height.**

(4) Within an existing easement that contains utility poles over 75 feet in height or within 100 feet of said right-of-way. **There are no utility poles over 75 feet in the two-mile radius of the proposed site.**

(5) *Public land and facilities.* In situations in which one of the 4 options listed above is not feasible, land owned by the city or other public property shall have preference to private property. **Verizon Wireless has proposed its tower on public property.**

(6) Private property within the City of Lake Elmo subject to the location and zoning requirements of this chapter and the following criteria:

(a) Less restrictive zoning districts shall be given preference over more restrictive zoning districts. For example, proposed sites in commercial or industrial districts will be given preference over sites in residential, rural residential or agricultural zoning districts.

(b) Sites with the least visual impact on residential areas and which are the most consistent with the community's rural character shall be given preference.

(B) In cases where a lower ranked alternative is proposed, the applicant shall file a written analysis demonstrating that despite diligent efforts to adhere to the established hierarchy within the potential service area, as determined by a qualified radio frequency engineer, higher ranked options are not technologically feasible. An application for a lower-ranked site shall be considered incomplete without this written documentation.

(Ord. 08-019, passed 10-4-2009)

#### **§ 150.114 CO-LOCATION REQUIREMENTS.**

(A) In accordance with the location requirements and site preferential ranking found in this chapter, wireless communication services shall be located on existing towers or structures which exceed 35 feet in height and which are located within the potential service area for the site being proposed by the applicant. In the event that co-location is not possible, the applicant must demonstrate that a good faith effort to co-locate on existing towers and structures was made but an agreement could not be reached.

(B) *Exceptions to co-location requirements.* The City Council shall waive any or all of the co-location requirements if it is determined that:

(1) The antennae and/or tower accessory equipment would cause the structural capacity of an existing or approved tower or building to be exceeded, as documented by a qualified and licensed professional engineer, and the existing or approved tower or building cannot be reinforced, modified, or replaced to accommodate the antennae or tower accessory equipment at a reasonable cost;

(2) The antennae and/or tower accessory equipment would cause interference materially impacting the usability of existing antennae or tower accessory equipment as documented by a qualified radio frequency engineer and the interference cannot be prevented at a reasonable cost,

or would otherwise prevent the use of existing antennae or related accessory equipment and structures;

(3) Existing or approved towers and buildings within the applicant's search radius cannot or will not accommodate the antennae and/or tower accessory equipment at a height necessary to function reasonably as documented by a qualified radio frequency engineer; and/or

(4) Other unforeseen reasons make it infeasible to locate the antennae and/or tower accessory equipment upon an existing or approved tower or building.

**As detailed above, there are no suitable collocation opportunities on existing towers or buildings within a two-mile radius of the proposed site. Attached as Exhibit G is a copy of the FCC tower registry for a two-mile radius surrounding the proposed site. It shows no FCC registered towers. The origin website is <http://wireless.fcc.gov/antenna/>.**

**§ 150.115 PROHIBITED AREAS.**

Wireless telecommunication towers shall not be allowed in the following areas:

(A) Residentially zoned parcels (R-1, R-2, R-3, R-4, and RE zoning districts) of less than 2.5 acres or rural residential parcels of less than 5 acres unless the wireless telecommunication tower and ground facilities accessory thereto are located within an existing public utility power line right-of-way or other public right-of-way that contains utility poles over 75 feet in height or within 100 feet of said right-of-way;

(B) Open space easements or conservation easements;

(C) Airport impact zones without consent of the F.A.A.; and/or

(D) Open space preservation zoning districts.

**Verizon's proposed facility is located on a PF-Public Facility classified property, and is not located in an open space or conservation easement, an airport impact zone, or an open space preservation district. Therefore, this provision is satisfied.**

(Ord. 08-019, passed 11-4-2009)

**§ 150.116 ZONING REQUIREMENTS.**

(A) Wireless communications facilities that require a conditional use permit, including the installation of a new tower, shall be permitted in the following districts and subject to the following height restrictions provided they meet all other requirements of this subchapter.

<i>Zoning District</i>	<i>Maximum Height (in feet)</i>	<i>Minimum Parcel Area</i>
A- Agriculture	125	10
RR - Rural Residential Zoning	125	5
R-1, R-2, R-3 and R-4 Residential	125	2.5

OP - Open Space	125	2.5
RE - Residential Estates	125	2.5
GB, LB, CB, HB - Business	125	5
BP - Business Park	125	5
PF - Public Facility	125	None

(B) The City Council may increase the maximum height of a wireless communications facility by 25 feet in all residential and open space districts and 50 feet in agriculture, business and public facility districts provided that an applicant is able to demonstrate a need for a higher facility and/or that the additional height will serve a public interest in allowing fewer towers to serve a given area.

(C) Regardless of zoning district, new facilities may be allowed within an existing public utility power line right-of-way or other public right-of-way that contains utility poles over 75 feet in height or within 100 feet of said right-of-way.

(D) *Public land exemption.* A wireless communication facility may be located on any parcel that is owned by the city or another public entity regardless of the zoning district or size of the property.

**Verizon Wireless has complied with this section.**

**§ 150.117 APPLICATION AND REVIEW PROCEDURES.**

(A) *Wireless communications permit (administrative approval).* [REDACTED]

(B) *Conditional use permit.* Wireless communications facilities that require a conditional use permit are subject to the requirements specified in the zoning code in addition to all requirements of § 150.110. Applications shall be submitted on forms provided by the city and shall include the following information.

(C) A site plan drawn to scale acceptable to the Planning Director which illustrates:

- (1) The parcel on which the tower and accessory ground facilities will be located;
- (2) The existing and proposed buildings and structures on the tower parcel;
- (3) The buildings located within 200 feet of the perimeter of the tower parcel; and
- (4) Access easements as necessary to the tower parcel.

**Complete site plan and survey are attached as Exhibit A.**

(D) A scaled drawing of the exterior of the proposed wireless communications facility, clearly showing the method of fencing, coloration, materials, and camouflage techniques being used.

**Included in the drawings attached as Exhibit A.**

(E) Photo-simulated post construction renderings of the proposed wireless communications facilities, equipment enclosures, and ancillary structures as they would look after construction from locations at the periphery of the proposed site, which shall, at a minimum, include renderings from the vantage point of any adjacent roadways and residential neighborhoods. The renderings shall also include photo- simulations of the antenna supporting structure after it has been fully developed with antenna structures (the applicant may assume for the purpose of the simulation that other antenna structures on the facility will resemble their proposed structure size and design). A minimum of 2 such renderings shall be provided; additional renderings may be required if the city determines that additional views should be considered.

**Attached as Exhibit H.**

(F) Exterior paint or finish samples of the colors to be used in the construction of the wireless communication facility.

**Included in the drawings attached as Exhibit A.**

(G) A report from a qualified and licensed professional engineer which:

(1) Describes the wireless communication tower height and design including a cross-section and elevation;

(2) Certifies the wireless communication tower's compliance with structural and electrical standards;

(3) Documents the height above grade for the mounting positions, which can be used for co-location and the minimum separation distances between the co-location positions; and

(4) Describes the wireless communication tower's capacity to support antennae, including an example of the number and type of antennas that can be accommodated on the wireless communication tower.

**The drawings attached as Exhibit A as well as the letter attached as Exhibit I will satisfy this requirement.**

(H) In conjunction with the information required to demonstrate the proof of need for a new facility under this subchapter, the applicant shall submit a 5-year plan for wireless telecommunication facilities to be located within the city. The city acknowledges that the plans are fluid and in all likelihood will change depending upon market demands for the service. The city will maintain an inventory of all existing and reasonably anticipated cell site installations. The applicant shall provide the following written information in each 5-year plan and the plan must be updated with each submittal for a new wireless communication tower permit as necessary:

(1) A description of the radio frequencies to be used for each technology;

(2) A list of all existing sites to be upgraded or replaced, and proposed cell sites within the city for these services by the applicant; and

(3) A presentation size map of the city, which shows the 5-year plan for cell sites, or if individual properties are not known, the geographic service areas of the cell sites.

(I) An application fee in an amount prescribed from time to time by City Council resolution as necessary to reimburse the city for costs incurred to process the wireless communication tower permit application along with an escrow payment as prescribed by the City Council to cover the costs associated with the city's review of the permit.

**Because of the nature of wireless communications, the industry changes so quickly that it is not possible to supply a five year plan.**

(J) Confirmation that the applicant is properly licensed by the F.C.C., or is the authorized representative of a wireless communication provider properly licensed by the F.C.C.

**Verizon Wireless is properly licensed by the F.C.C. A copy of the license to operate one of the frequencies that will be operating at the proposed site is attached as Exhibit J.**

(K) Written authorization from the property owner describing the area which will be subject to the tower lease.

**Written authorization is attached as Exhibit K.**

(L) Documentation of the steps to be taken by applicant to avoid causing destructive interference to co-located previously established public safety communications facilities; and

**Attached as Exhibit L.**

(M) A detailed landscape plan, which indicates how tower accessory equipment will be screened.

**§ 150.118 EXPERT REVIEW. [REDACTED]**

**§ 150.119 CONSTRUCTION PERMITS. [REDACTED]**

**§ 150.120 TOWER STANDARDS.**

(A) Wireless communication towers shall comply with the following standards unless the City Council grants a variance as necessary to reasonably accommodate the wireless communication tower. Variance procedures shall be processed according to the zoning code.

(B) *Design.*

(1) To blend into the surrounding environment through the use of color; and architectural treatment and techniques that softens the visual impact of the wireless communication tower on the surrounding environment;

(2) To be of a monopole design unless the City Council determines that an alternative design would better blend into the surrounding environment;

(3) All proposed wireless communication tower shall be designed, structurally, electrically, and in all respects, to accommodate both the applicant's antennas and comparable antennas for at least 2 additional users if the tower is over 100 feet in height or for at least 1 additional user if the tower is less than 100 feet in height; provided that this standard may be waived or otherwise modified by the City Council as necessary to allow the applicant to construct a wireless communication tower that better blends into the surrounding environment; and

(4) Where possible, all proposed wireless communication towers must be designed to allow for future rearrangement of antennas upon the tower and to accept antennas mounted at various heights.

(5) All facilities shall be designed to minimize the visual impact to the greatest extent feasible by means of placement, screening, landscaping with native species, whenever feasible, and camouflage, and be compatible with existing architectural element, building materials, and other site characteristics. The applicant shall use the least visible antennas possible to accomplish the coverage objectives.

**Verizon Wireless has followed design standards to minimize visual effects. The tower height has been kept below a level where FAA required lighting is necessary. The use will be buffered towards the north and south by mature tree growth. Lastly, the tower's location in the middle of a large property will minimize view shed impacts on neighboring properties.**

*(C) Adverse effects on properties.*

(1) New wireless communications facilities shall be configured and located in a manner that shall minimize adverse effects, including visual impacts on adjacent properties. The applicant shall demonstrate that alternative locations, configurations, and facility types have been examined and shall address in narrative and graphic form the feasibility of any alternatives that may have fewer adverse effects on adjacent properties than the facility, configuration and location proposed.

(2) The following attributes shall be considered from vantage points at adjacent properties, roadways and occupied structures: height and location, mass and scale, materials and color, existing and proposed vegetation and intervening structures.

(3) An applicant shall demonstrate through the photo-simulation requirements under § 150.114 that the project design employs each of these attributes in a manner that minimizes adverse effects to the greatest extent possible.

(4) All facilities that have the potential for high visibility shall be sited in such a manner as to cause the least detriment to the view shed of adjoining properties.

**The proposed location is the best available location from a sitting perspective. Verizon's search area is dictated by the radio-frequency engineer's objectives. The attached Exhibit M depicts the area where Verizon needed to place new facilities in order to remedy the coverage and capacity objectives highlighted in § 150.112 above. As you will notice, the search area is mostly filled with residential parcels, a developed golf course, and an agricultural parcel. These were not suitable candidates for this installation because the landowner's were not interested, the parcel could not meet setbacks, or the visual impact would be greater. Additionally, § 150.113 requires applicants to consider and rule out public land, such as the school, prior to considering private land. As the only public land in the search area, the school is Verizon's only feasible candidate.**



(D) *Setbacks.*

(1) No communications tower shall be located in the required front, side or rear yard setback of any parcel.

(2) No freestanding communications tower shall be located closer than 125% of the tower height from any lot lines with the following exceptions:

(a) Towers in a side or rear yard that are adjacent to parcels zoned commercial, industrial or public facility.

**Verizon's tower meets all setback requirements.**

(3) Setbacks from buildings:

(a) In residential zoning districts, wireless communications towers shall be set back a minimum of 100% of the tower height from a residential dwelling except for dwellings on the subject property.

(b) In all other zoning districts, the minimum setback between structures as required by the Building Code shall be observed.

(4) Use of existing light poles, high voltage poles or towers and other existing structures are exempt from the setback requirements provided that such pole, tower or structure is not increased in height.

(5) Wireless communications towers located within an existing public utility power line right-of-way or other public right-of-way that contains utility poles over 75 feet in height or within 100 feet of said right-of-way shall be exempt from the setbacks as herein required.

(6) A required setback may be reduced or its location in relation to a public street varied upon providing the city with a licensed professional engineer's certification that the wireless communication tower is designed to collapse or fail within a distance or zone shorter than the required setback distance.

**Verizon's tower meets all setback from building requirements.**

(E) *Height.*

(1) The maximum height of a wireless communications tower shall be determined based on the underlying zoning district and will be the amount specified in § 150.117.

**Verizon's installation meets height requirements.**

(F) *Lighting.* At night, wireless communication towers shall not be illuminated by artificial means, unless otherwise required by the Federal Aviation Administration (F.A.A.).

(1) White strobe lighting is prohibited.

(2) The applicant shall document the need for lighting as part of a new wireless communications facility application.

(3) A site that requires lighting shall only be accepted when no other suitable alternative exists. A new tower may be rejected on the grounds that lighting will be a visual nuisance to surrounding properties.

**Verizon's proposed tower will not be lit.**

(G) *Landscaping and screening.* All wireless communications towers and related building facilities shall be landscaped and screened with natural vegetation to lessen the visual impact. The natural vegetation on the site shall be documented on the site plans. Suitable existing vegetation shall be retained to the maximum extent possible based on an analysis of the site. New landscaping shall be selected that includes coniferous and deciduous plants and trees that are hardy for conditions on the site without the use of augmented water.

**Verizon will screen and landscape the proposed tower as required by the City.**

(1) Landscaping shall include ground cover, lower story, mid-story and upper story plants. Plant density shall be sufficient to provide 80% opacity year round from the ground up to a distance of 5 feet high for 60% or more of the site with the planting to be located based on an analysis of the site in relation to the surrounding area. Greater or lesser amounts and percentages may be required or allowed based on the city's review.

(H) *Signs and advertising.* The use of any portion of a wireless communications tower for signs other than warning or equipment information is prohibited.

**There will be no signs except as required by applicable state and federal regulations.**

(I) *Interference with public safety communication.* No wireless communication facility shall interfere with public safety communications. All wireless communication towers/antennas shall comply with F.C.C. regulations and licensing requirements.

(J) *Accessory utility buildings.* All utility buildings and structures accessory to a tower shall be architecturally designed to blend in with the surrounding environment and compatible with adjacent buildings, and shall be permitted in addition to the number of accessory buildings otherwise allowed in each zoning district.

(1) Ground mounted equipment shall not be visible from beyond the boundaries of the site and shall be screened by a solid wall or fence and dense landscaping materials described in division (G) above.

(2) Accessory utility buildings shall observe the minimum setback requirements for accessory buildings in the underlying zoning district as well as all other applicable zoning and building requirements for accessory buildings.

(K) *Maintenance.* All buildings and structures on the premises of the wireless communications facility shall observe the city's property maintenance standards of the city code.

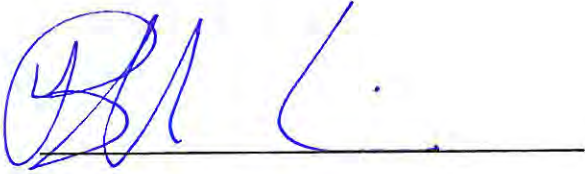
**Verizon Wireless agrees to comply with any required conditions and all provisions of this act.**

**§ 150.121 WIRELESS COMMUNICATIONS TOWER AGREEMENT. [REDACTED]**

§ 150.122 ABANDONMENT AND REMOVAL. [REDACTED]

§ 150.123 MINIMUM CONDITIONS. [REDACTED]

Respectfully Submitted,

A handwritten signature in blue ink, appearing to be 'B. Conklin', is written over a solid horizontal black line.

Blake Conklin

Exhibit B

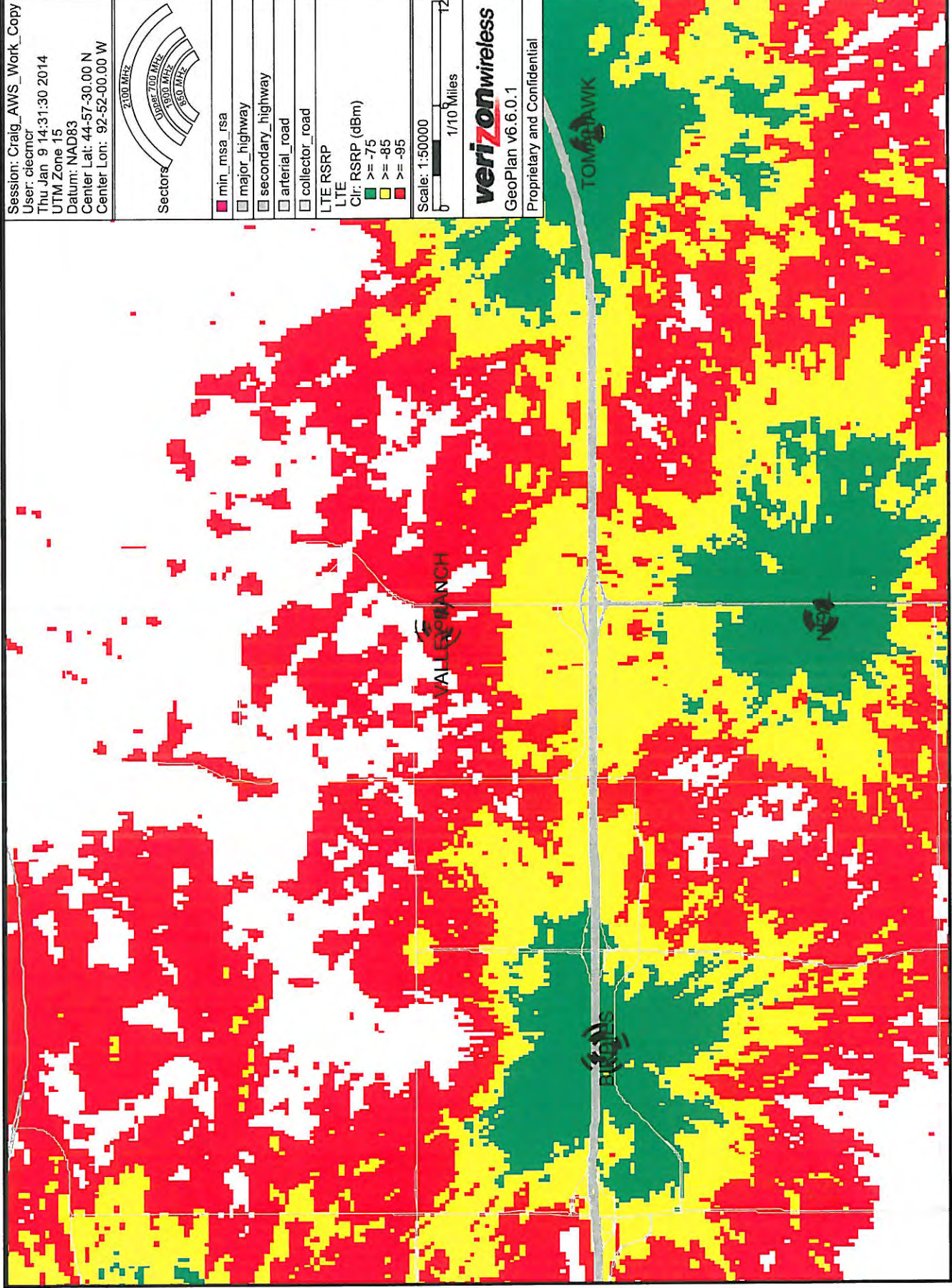
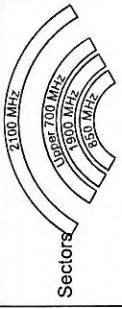


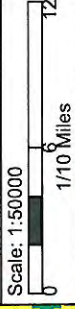
Exhibit C

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User: elecmtc  
Thu Jan 9 14:33:11 2014  
UTM Zone 15  
Datum: NAD83  
Center Lat: 44-57-30.00 N  
Center Lon: 92-52-00.00 W



- min\_msa\_rsa
- major\_highway
- secondary\_highway
- arterial\_road
- collector\_road

LTE RSRP  
LTE  
Cir: RSRP (dBm)  
 >= -75  
 >= -85  
 >= -95



**verizon**wireless  
GeoPlan v6.6.0.1  
Proprietary and Confidential

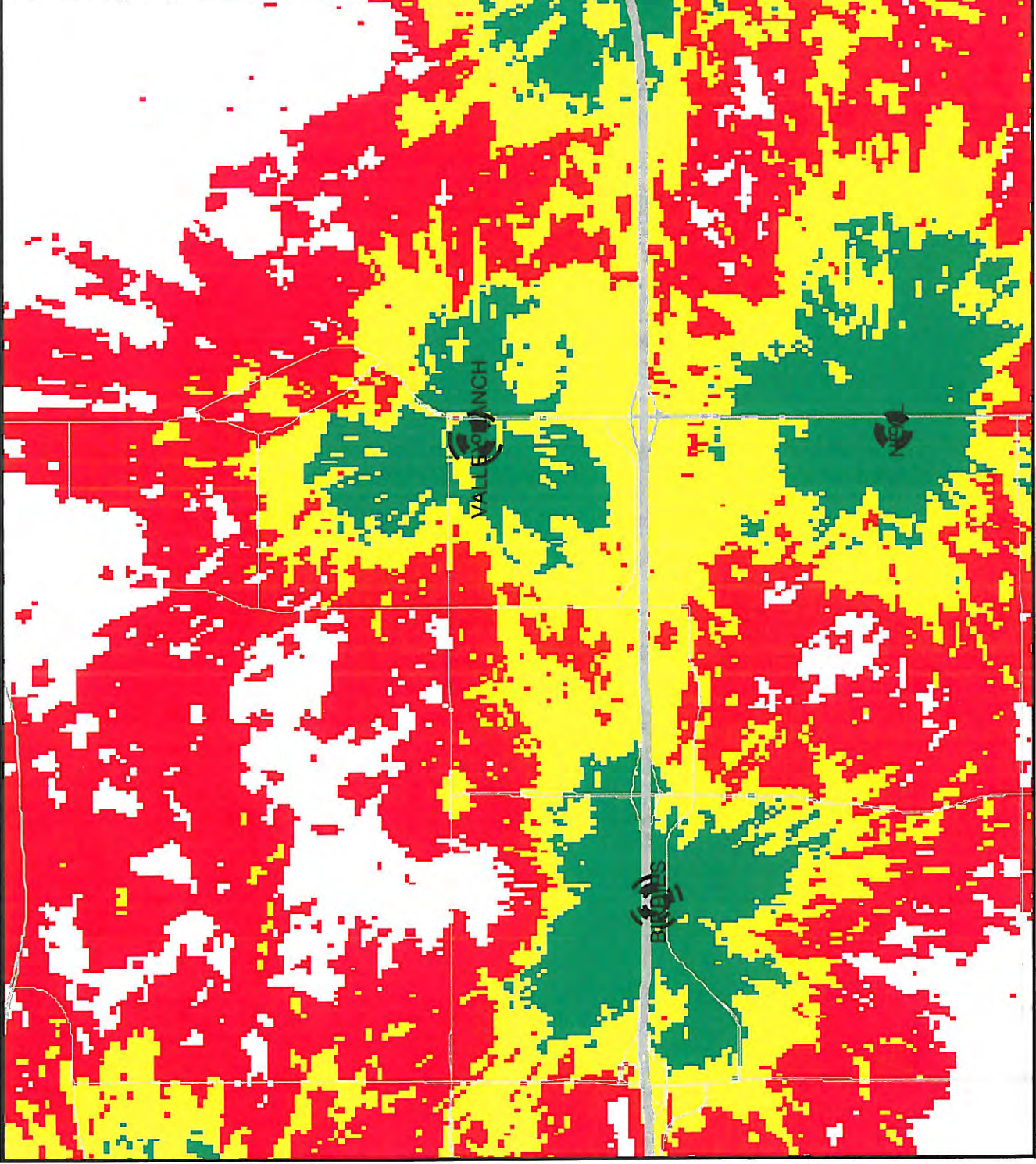


Exhibit D

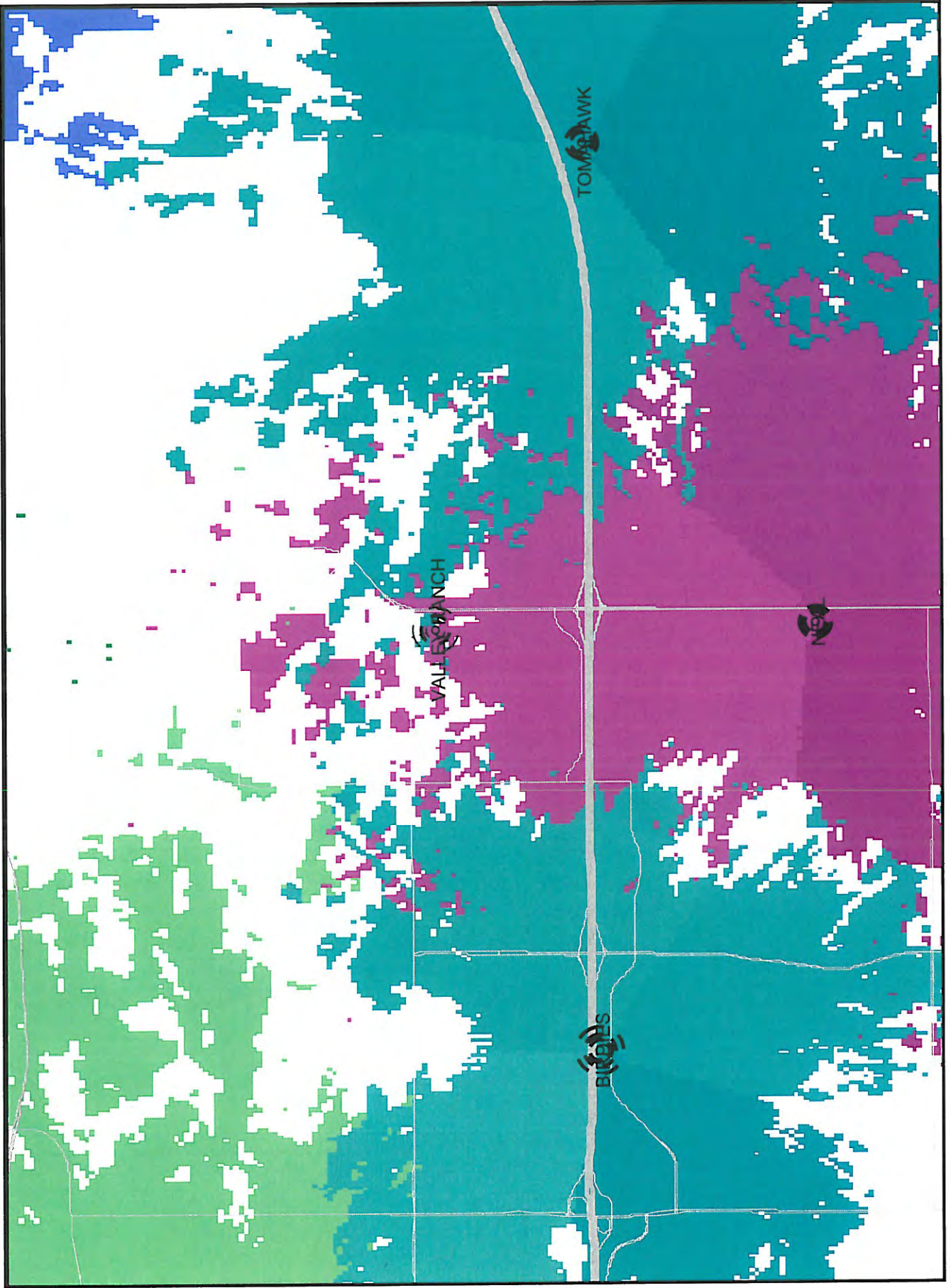
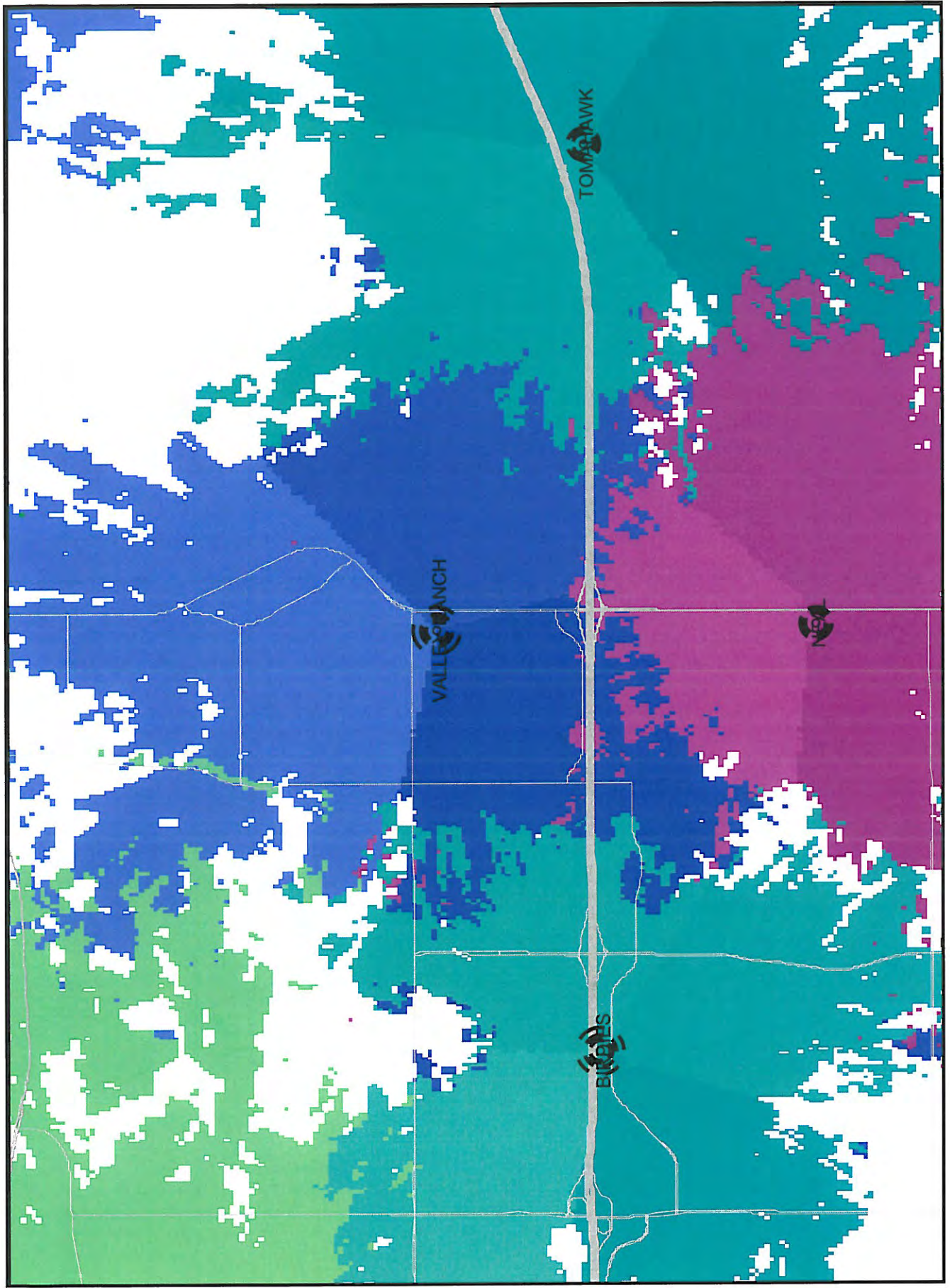


Exhibit E



ASR Registration Search

## Registration Search Results

Displayed Results

**No matches found**

**PA** = Pending Application(s)

To try again, you can perform a [new search](#) or [refine your existing search](#).

**Specified Search**

Latitude='44-57-40.7 N', Longitude='92-51-53.2 W', Radius=3.2 Kilometers

CLOSE WINDOW





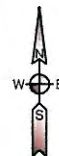
Bismark • Cedar Rapids • Denver • Detroit Lakes • Fargo • St. Paul • Sioux Falls  
4285 Lexington Ave. N.  
St. Paul, Minnesota 55126  
Phone: 651.415.3800 Fax: 651.415.2001  
Web: www.ulteig.com

# PHOTO SIMULATION

**SITE: MINC VALLEY RANCH**  
**CARRIER: VERIZON WIRELESS**  
SITE ADDRESS: 820 MANNING AVENUE NORTH, LAKE ELMO, MN



**SITE LOCATION MAP**  
NOT TO SCALE



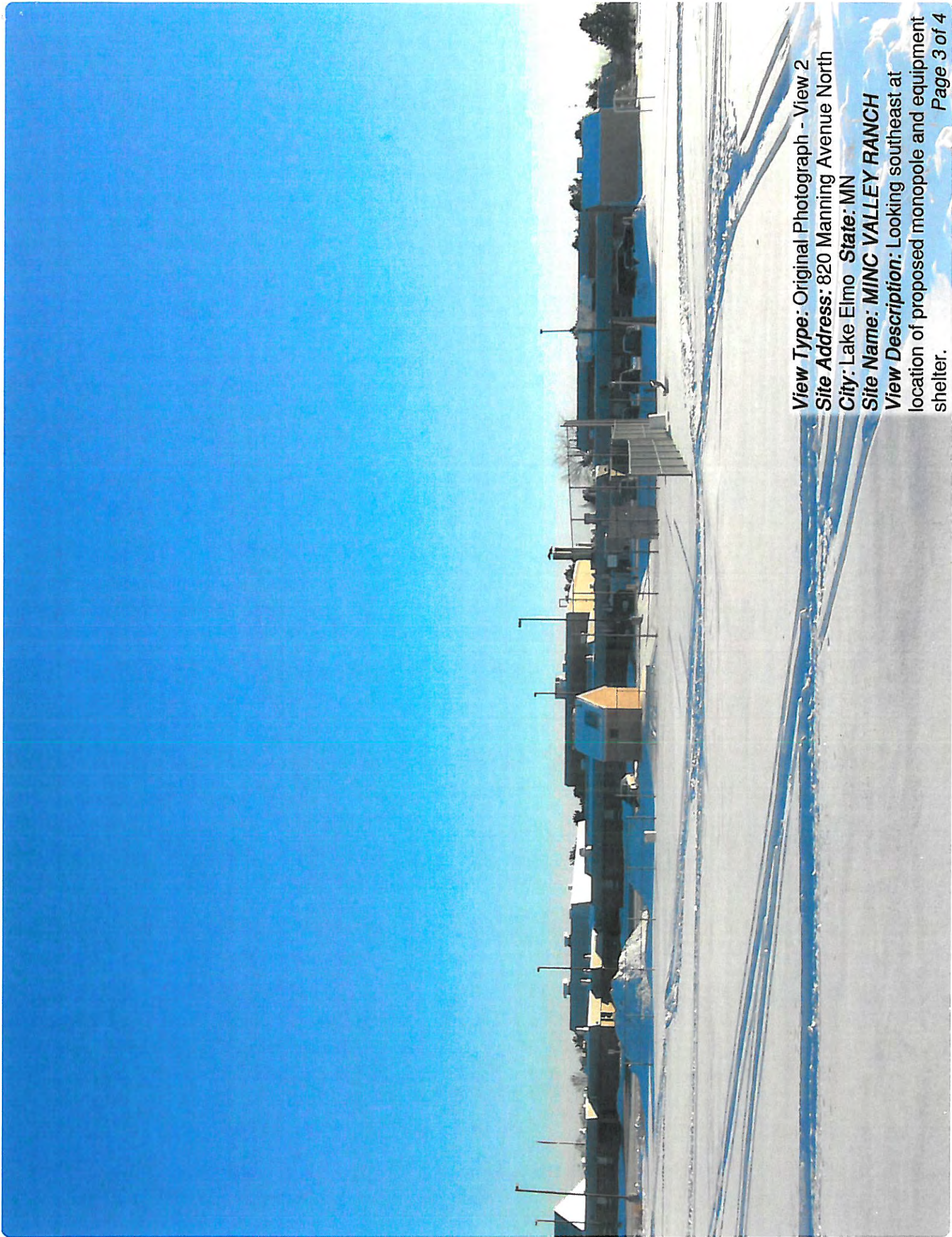


**View Type:** Original Photograph - View 1  
**Site Address:** 820 Manning Avenue North  
**City:** Lake Elmo **State:** MN  
**Site Name:** MINC VALLEY RANCH  
**View Description:** Looking west at location of proposed monopole and equipment shelter.  
Page 1 of 4



**View Type:** Simulated Photograph - View 1  
**Site Address:** 820 Manning Avenue North  
**City:** Lake Elmo **State:** MN  
**Site Name:** MINC VALLEY RANCH  
**View Description:** Looking west at location of proposed monopole and equipment shelter.

*Disclaimer: This picture is an artist's rendition of the completed site layout prior to construction. The completed construction may vary in layout, dimension, and color from the above picture.*



**View Type:** Original Photograph - View 2  
**Site Address:** 820 Manning Avenue North  
**City:** Lake Elmo **State:** MN  
**Site Name:** MINC VALLEY RANCH  
**View Description:** Looking southeast at location of proposed monopole and equipment shelter.



**View Type:** Simulated Photograph - View 2  
**Site Address:** 820 Manning Avenue North  
**City:** Lake Elmo **State:** MN  
**Site Name:** MINC VALLEY RANCH  
**View Description:** Looking southeast at location of proposed monopole and equipment shelter.

*Disclaimer: This picture is an artist's rendition of the completed site layout prior to construction. The completed construction may vary in layout, dimension, and color from the above picture.*

January 14, 2014

Mr. Michael J. Scanlan  
Design 1  
9973 Valley View Road  
Eden Prairie, MN 55344

Re: Proposed 130 ft Sabre Monopole for MINC Valley Ranch, MN

Dear Mr. Scanlan,

Upon receipt order, we propose to design and supply the above referenced Sabre monopole for a Basic Wind Speed of 90 mph with no ice and 50 mph with 3/4", Structure Class II, Exposure Category C, and Topographic Category 1, in accordance with the Telecommunications Industry Association Standard ANSI/TIA-222-G, "Structural Standard for Antenna Supporting Structures and Antennas", while supporting the following equipment:

1. Verizon array at 125'
2. Future array at 110'
3. Future array at 95'

**PROFESSIONAL ENGINEER**

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the Laws of the State of Minnesota.

Sincerely,

Robert E. Beacom, P.E.  
Design Engineer I

Print Name Robert E. Beacom

Signature 

Date 1/14/14 License #49156

ULS License

# PCS Broadband License - KNLH679 - Verizon Wireless (VAW) LLC

**PA** This license has pending applications: 0006015686

Call Sign	KNLH679	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

**Market**

Market	BTA298 - Minneapolis-St. Paul, MN	Channel Block	D
Submarket	7	Associated Frequencies (MHz)	001865.00000000-001870.00000000-001945.00000000-001950.00000000

**Dates**

Grant	07/23/2007	Expiration	06/27/2017
Effective	02/18/2011	Cancellation	

**Buildout Deadlines**

1st	06/27/2002	2nd	
-----	------------	-----	--

**Notification Dates**

1st	07/08/2002	2nd	
-----	------------	-----	--

**Licensees**

FRN	0003800307	Type	Limited Liability Company
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**Licensee**

Verizon Wireless (VAW) LLC 1120 Sanctuary Pkwy, #150 GASA5REG Alpharetta, GA 30009-7630 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
--	---

**Contact**

Verizon Wireless Licensing - Manager 1120 Sanctuary Pkwy, #150 GASA5REG Alpharetta, GA 30009-7630 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
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**Ownership and Qualifications**

Radio Service Type	Mobile
Regulatory Status	Common Carrier Interconnected Yes

**Alien Ownership**

Is the applicant a foreign government or the representative of any foreign government?	No
Is the applicant an alien or the representative of an alien?	No
Is the applicant a corporation organized under the laws of any foreign government?	No

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country? **No**

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country? **Yes**

If the answer to the above question is 'Yes', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application?

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

Race

Ethnicity

Gender



LETTER OF AUTHORIZATION

City of Lake Elmo  
Department of Planning & Zoning  
3800 Laverne Avenue North  
Lake Elmo, Minnesota 55042

**Re: Authorization to File for Any Necessary Permits or Approvals  
Associated with a Verizon Wireless Communication Project on the Parcel.**

To whom it may concern:

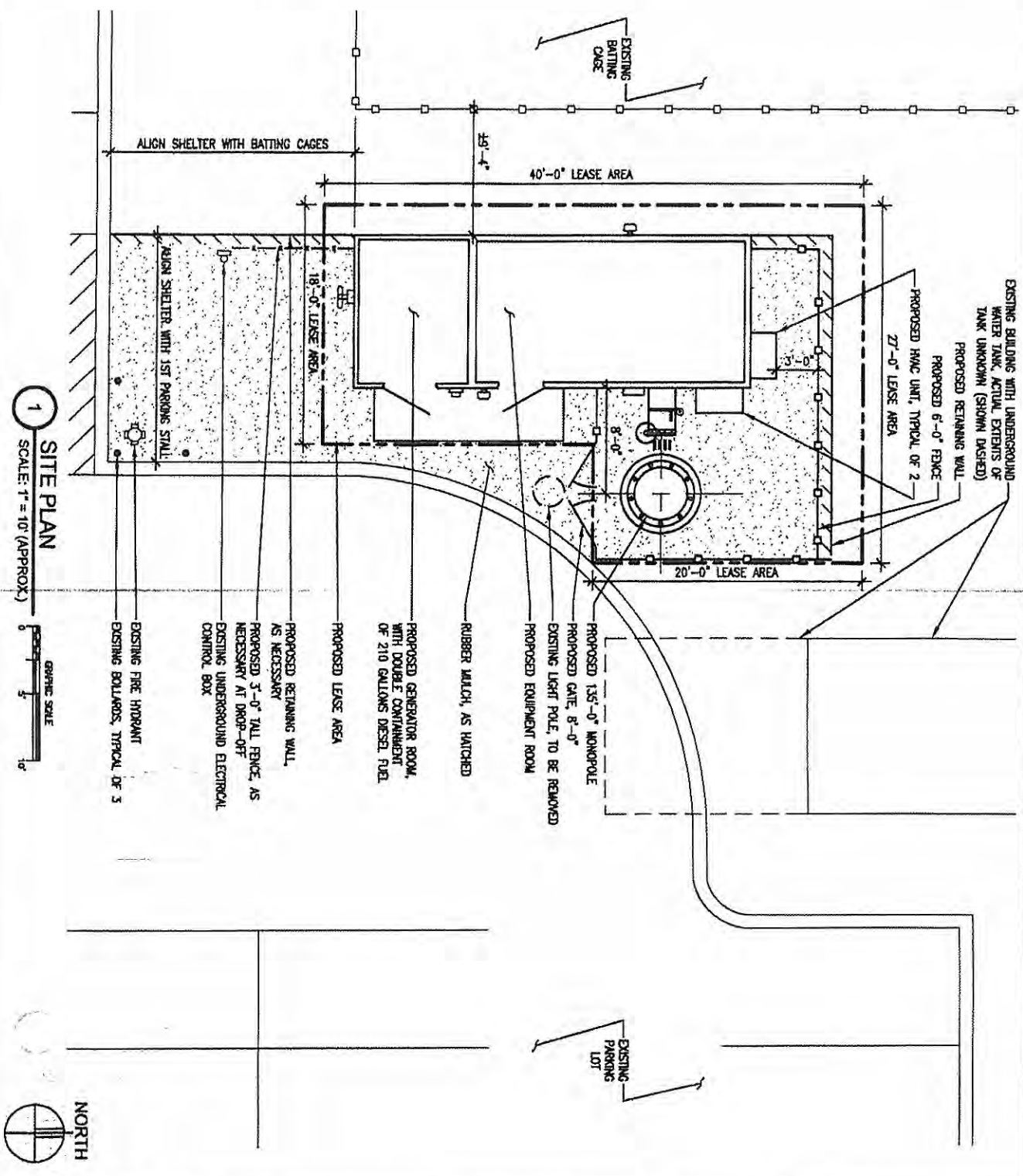
Stillwater Area Public Schools of Lake Elmo, Minnesota authorizes Faulk & Foster, its agents and employees, including but not limited to Blake Conklin and Joe Egge, to obtain any necessary permits or approvals associated with the proposal of a Verizon Wireless communication project as described on the attached Exhibit A.

Stillwater Area Public Schools

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

Its: Director of Finance

Date 12/23/13



REVISION 12

DRAWN BY: MJS

DATE: 07-02-13

SS-2

PROJECT:  
**MINC VALLEY RANCH**

MANNING AVENUE NORTH  
 LAKE ELMO, MN 55042

**VERIZON WIRELESS**

10801 BUSH LAKE ROAD  
 BLOOMINGTON, MN 55438  
 (612) 720-0030

**DESIGN 1**

8973 VALLEY VIEW ROAD  
 EDEN PRAIRIE, MN 55344  
 (952) 903-8299 FAX 903-8292

ROBERT J. DAVIS, AIA  
 ARCHITECT



December 18, 2013

City of Lake Elmo  
Department of Planning & Zoning  
3800 Laverne Avenue North  
Lake Elmo, Minnesota 55042

Re: Verizon Wireless Proposed 135' Monopole at **820 Manning Ave North**

To whom it may concern:

Verizon Wireless is aware of the interference issues that can arise while locating in proximity to other carriers; therefore, appropriate separation has been maintained between Verizon Wireless antennas and those of any other carrier to avoid any possibility of our frequency interfering with other equipment. In addition, Verizon Wireless has acquired an FCC license, which exclusively entitles the company to operate within an assigned frequency range. This in turn eliminates any interference issues from CB radios, electronic appliances, pacemakers, fire and police equipment as well as other carriers. In the highly unlikely event that interference does occur, Verizon Wireless agrees to fully cooperate with the entity experiencing interference to identify and correct, to the extent reasonably possible, any issues caused by its installation.

Sincerely,

A handwritten signature in blue ink that reads "Craig Ciecmierowski". The signature is fluid and cursive, with the first name "Craig" being more prominent than the last name.

Craig Ciecmierowski  
RF Engineer  
Verizon Wireless

