

**Dane County, Wisconsin**  
**Telecommunications Site Review**  
**New Support Structure**

**CityScape**

C O N S U L T A N T S , I N C .

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August 27, 2018

Supervisor Mary Kolar  
Chair, Dane County Zoning & Land Regulation Committee Dane County Planning &  
Development  
210 Martin Luther King Jr., Blvd  
Madison, WI 53703

**RE: Dane County / CUP #2434**  
**Town of Dunn / Hoyos Consulting LLC**

Dear Supervisor Kolar,

At your request, on behalf of Dane County, Wisconsin (“County”), CityScape Consultants, Inc. (“CityScape”) in its capacity as telecommunications consultant for the County, has considered the merits of the above referenced application submitted by the Town of Dunn in coordination with Hoyos Consulting LLC (“Applicant”), to construct a new wireless telecommunications support structure and associated ground compound at 4156 County Road B, McFarland, Wisconsin, *see Figure 1*. This is the same property as the Dunn Town Hall. The proposed structure is less than 200 feet and does not require FAA approval or tower lighting.

This application is proposed to provide improved wireless internet service in the Dunn/McFarland area. The proposal has been evaluated from the following perspectives:

- Whether the proposed facility, as specified, is justified due to technological reasons and is essential for the Applicant to provide its telecommunications service; and,
  - Whether the proposed facility will follow the guidelines of the Telecommunications Act of 1996, the Dane County Ordinance and all other pertinent rules and regulations.
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## Dane County Ordinance Requirements

§10.194(1): CUP required

§10.194(2) CUP requirements:

- a. No existing towers exist within search area: none exist
- b. Any existing towers are of sufficient height: none exist
- c. Any existing towers are of sufficient structural strength: none exist
- d. **No electromagnetic interference will occur: not-provided (need compliance statement with respect to RF exposure and interference to other sources)**
- e. Collocation fees are unreasonable: Not Applicable
- f. Other factors deem existing tower(s) unsuitable: Not Applicable

§10.194(3): Term *reasonable* defined as 25% cost of new tower – Not Applicable

§10.194(4): Third party review – CityScape

§10.194(5): If less than 150 feet is proposed, tower must be capable of future increase to 150 feet and 2 collocations: see discussion

§10.194(6): CUP required for substantial modification: Not Applicable

§10.194(7): CUP condition requirements can be checked at later date – *defer to County*

§10.194(8): CUP not required for collocations that are non-substantial

§10.194(9): Equipment building limits: complies

§10.194(10): Unused equipment shall be removed – Not Applicable

§10.194(11): Future buildout plans may be required – Not Applicable

Additional CUP requirements for communication towers

- A. Legal Description: provided
- B. Tax Parcel number(s): provided on CUP form
- C. Completed Zoning Application Form: provided
- D. Completed Communication Tower Information Form (CTIF)
- E. Written Statement: Limited – Statement from Applicant
- F. Site Plan, Design Elevations, Site Photos and Photo Simulations: Provided
- G. CUP filing fee: *defer to County*
- H. RF Engineering Analysis: statement from Applicant and coverage maps provided

### Site Justification and Coverage

The Applicant was made aware of many residents in the Dunn/McFarland area that are currently “underserved” for broadband internet service. The Applicant has advised the County that the two providers in the area (Frontier Communications and AT&T) do not currently have any plans for either to improve service. Neither the County nor CityScape have confirmed this information. The Town of Dunn and Hoyos Consulting applied for and received grant funding from the Wisconsin Public Service Commission to help fund the broadband expansion project. The Applicant is proposing to provide a fixed wireless solution in this region. This proposal is

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one part of a 2-site operation. Another Applicant-owned facility is currently operating from the McFarland water tower. The proposed site herein will complement the McFarland water tower site and extend broadband internet service into Dunn.

Landscaping/Screening:

The Ordinance does not specifically require landscaping or screening, but the Applicant will voluntarily provide landscaping, if requested. Generally, some level of landscaping or screening should be required by the County, unless the Applicant can demonstrate that existing, dense, foliage surrounding the site exists and will remain after construction. For purposes of this Application, CityScape recommends the County consider some landscaping where the ground compound would be visible to County Road B.

Tower Height Considerations:

The Applicant proposes to construct a new sixty (60) foot lattice tower, with the ability to increase to one hundred (100) feet in the future, see *Appendix, Exhibit A*. The wider “7N” base will be used to offer the future height increase ability.

The Ordinance requires new communications towers, if less than 150 feet in height, to have structural capacity to increase height in the future to at least 150 feet to accommodate additional future users. Such new proposed towers must also be able to accommodate at least two (2) collocations (three (3) total arrays). A 60-foot structure would have minimal interest for collocations, and to construct this facility to be capable of a total elevation of 150 feet would require a substantial foundation and lower section of tower all at a substantially higher cost. The controlling entity for the height of the structure is the underlying property owner (Town of Dunn). If the property owner desires to limit the height below 150 feet, then a formal waiver of §10.194(5) should be requested by the Applicant and should be supported by the County.

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Conclusion:

For purposes of this Application herein, the Applicant has demonstrated the need for a new tower at the proposed location. CityScape Consultants, as the wireless expert for the County, recommends this Application be approved with the following conditions:

1. A formal waiver of Ordinance §10.194(5) for a height below 150 feet shall be submitted and should be subsequently approved by the County; and,
2. A structural report by a Wisconsin professional engineer shall certify that proposed tower will be structurally adequate at the proposed height; and,
3. Proposed tower shall be galvanized and not painted any other color without approval of the Town of Dunn; and,
4. Applicant shall not begin construction until Federal SHPO/NEPA requirements are met; and,
5. County may wish to require some level of landscaping for the southern edge of the compound

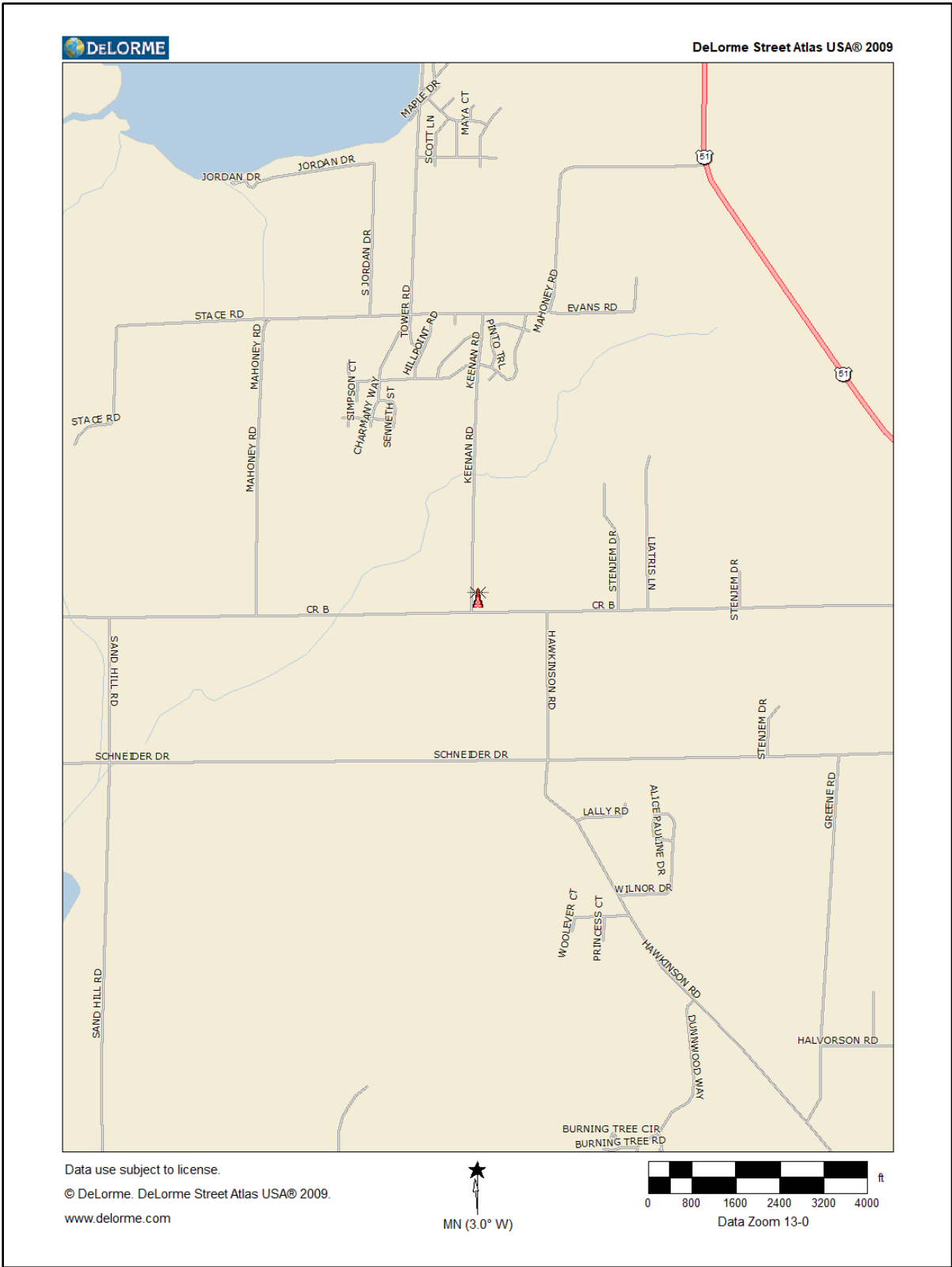
I certify that to the best of my knowledge all the information included herein is accurate at the time of this report. CityScape only consults for public entities and has unbiased opinions. All recommendations are based on technical merits without prejudice per prevailing laws and codes.

Respectfully submitted,

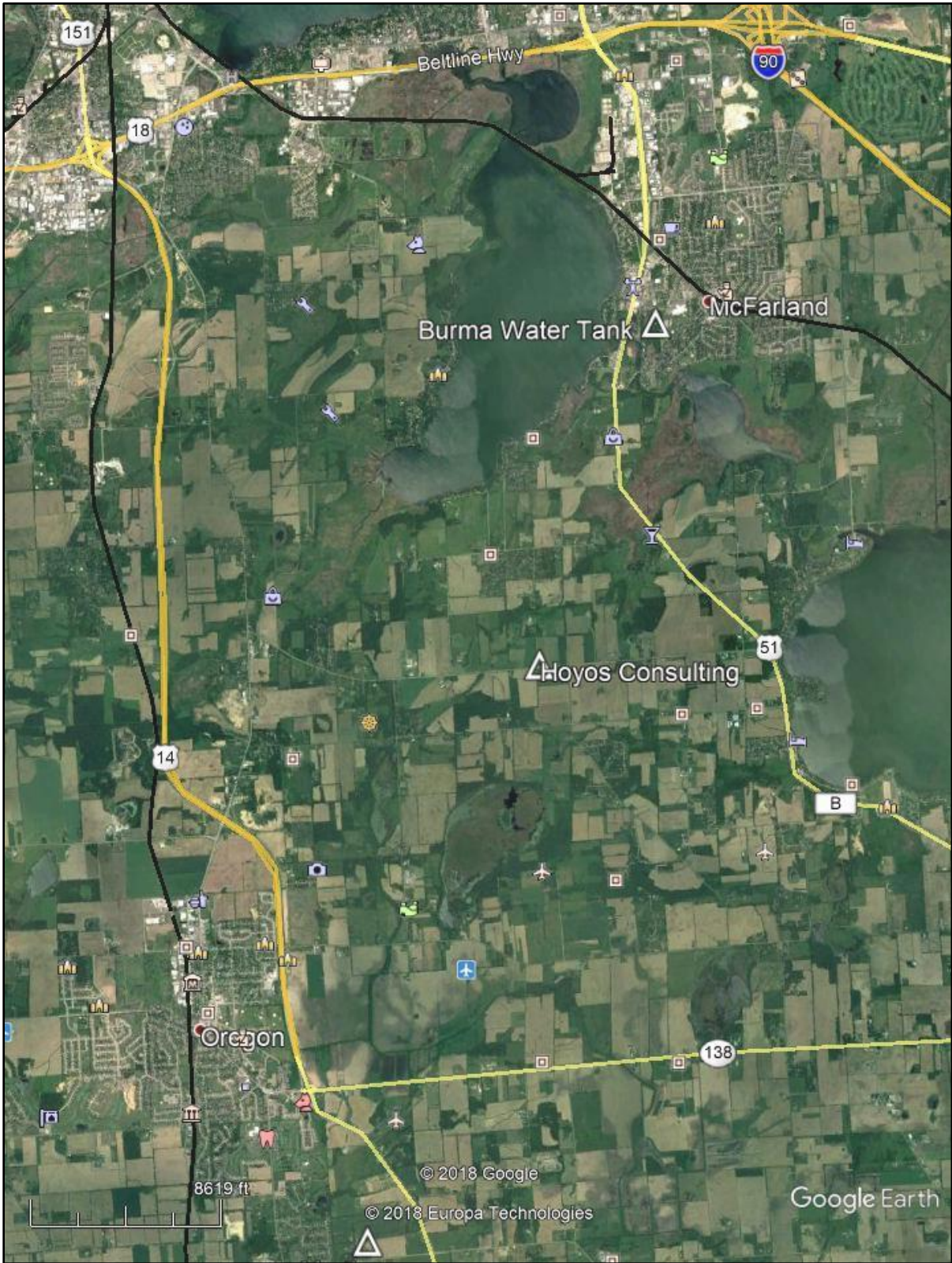


Jonathan N. Edwards, P.E.  
CityScape Consultants, Inc.

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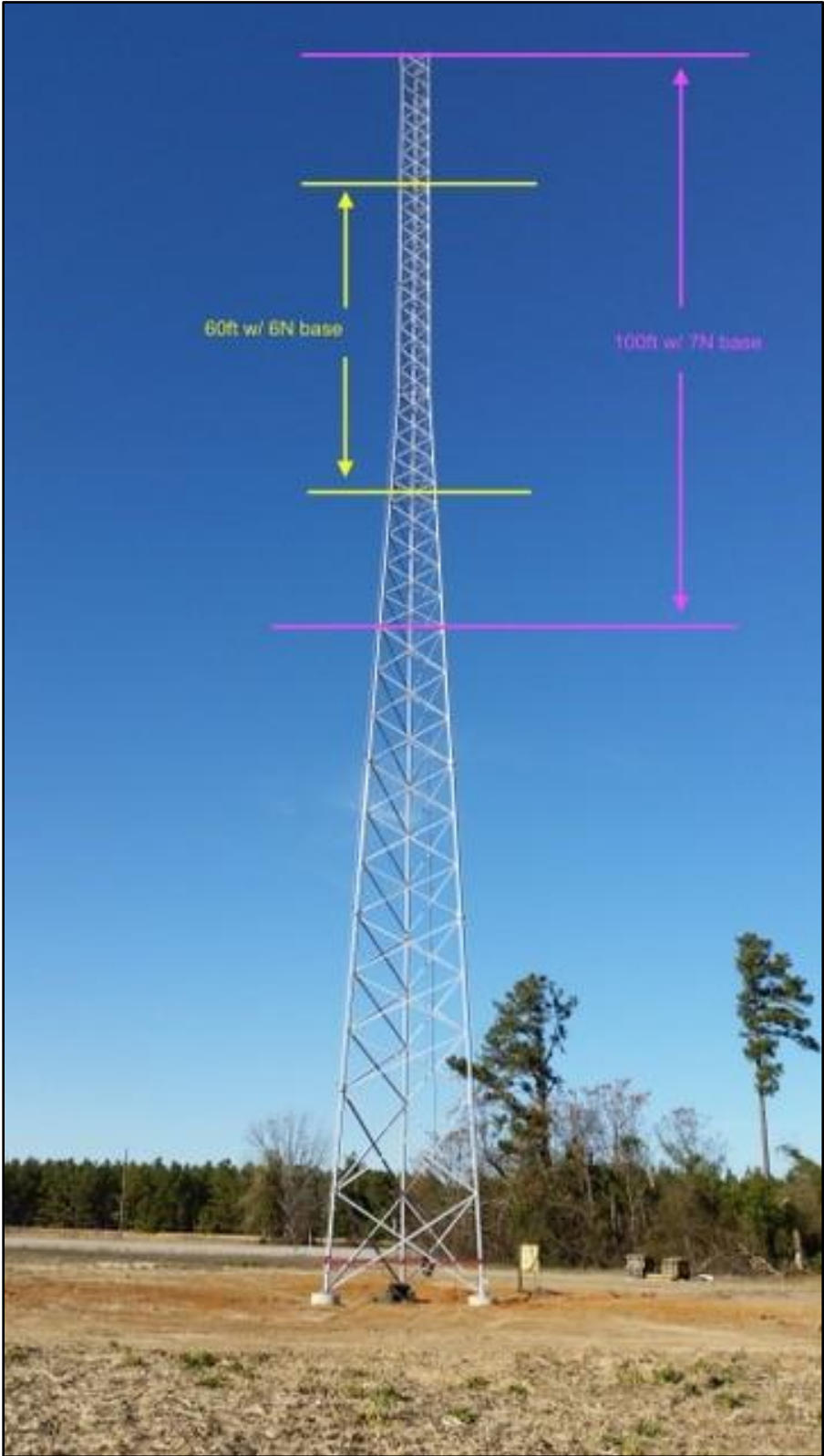
**Figure 1 – Site Location**



**Figure 2 – Aerial Site View**

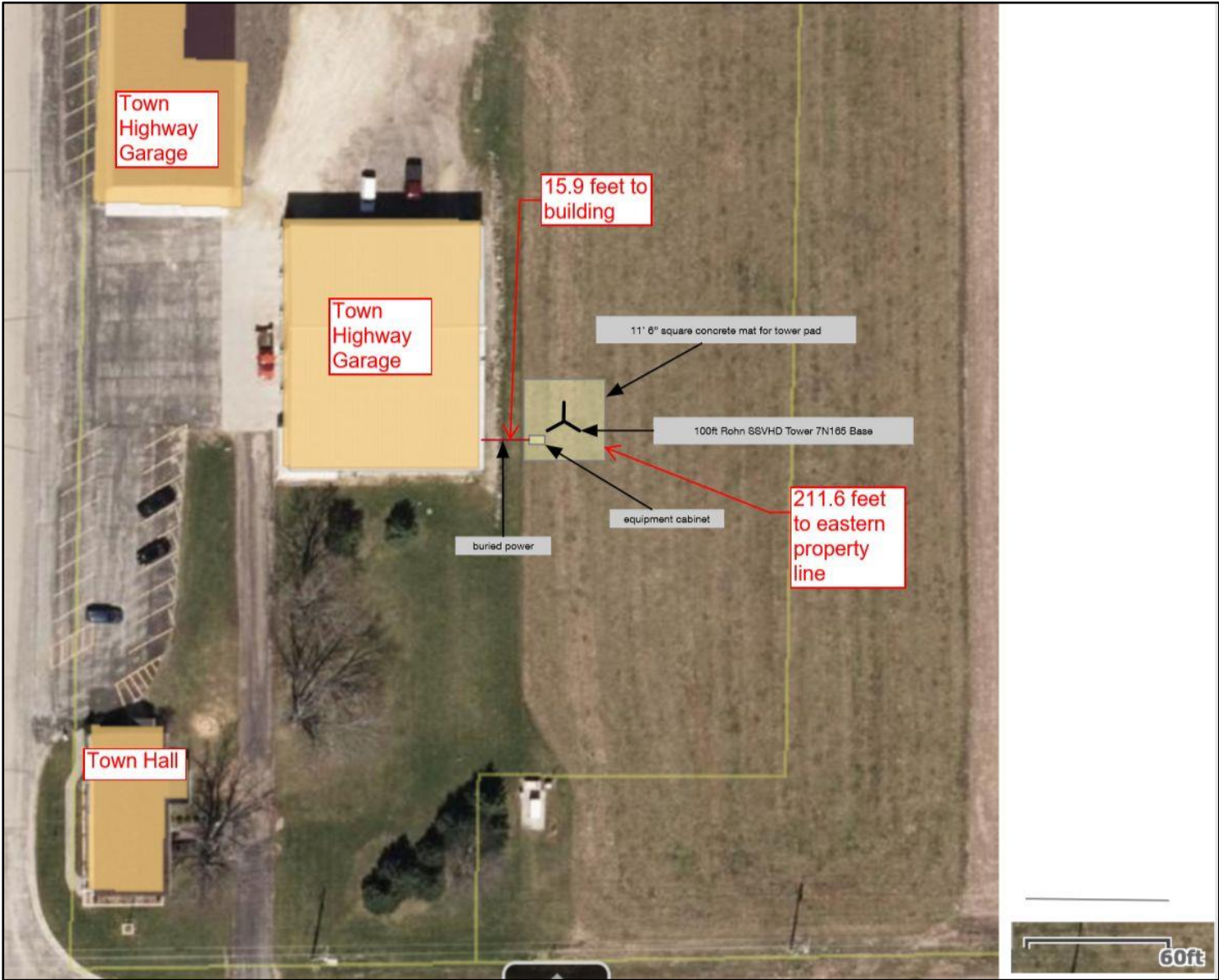
## Appendix

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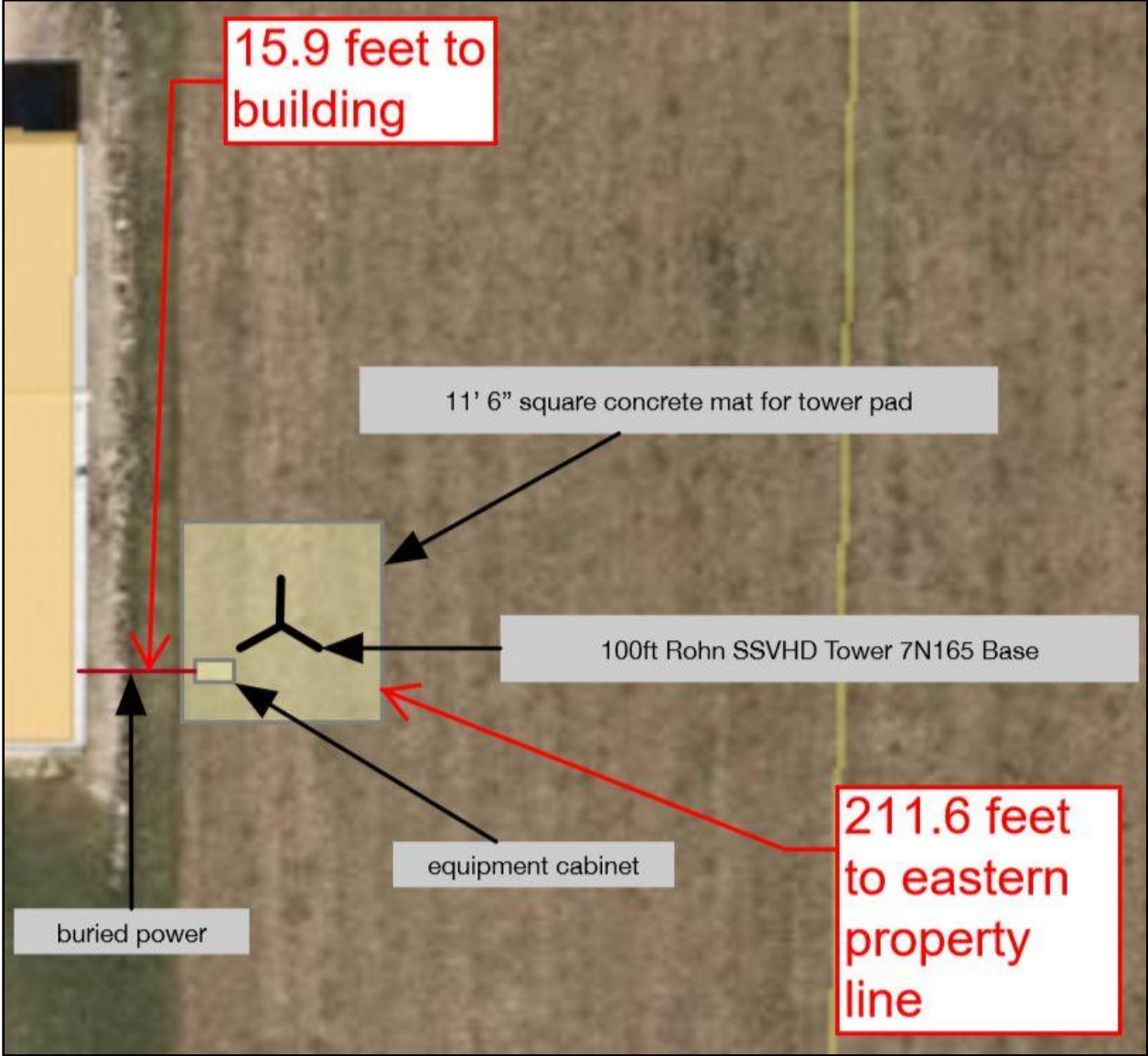


**Exhibit A - Proposed Support Structure**





**Exhibit B1 – Site Plan**



**Exhibit B2 – Site Plan**