



PLANNING AND ZONING Cerro Gordo County Courthouse

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Mason City, IA 50401-3254
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SPECIAL EXCEPTION STAFF REPORT FOLLOW-UP REPORT

SUMMARY OF REQUEST

Case No.: 23-6

Hearing Date: May 30, 2023

Staff Contact: John Robbins, Planning and Zoning Administrator

Applicant:

Owner

Indigo Wind, LLC
120 Garret Street, Suite 700
Charlottesville, VA 22902

Multiple (See Exhibit 1)

Property Address: Not assigned

Brief Legal Description: Multiple (See last page of report)

Zoning: A-1 Agricultural

Special Use Requested: 20.2(J) Commercial microwave, radio and television towers, public utility structures

Special Use Area: About 1 acre for each tower **Parcel Area:** 120 acres total

Special Use Description

Indigo Wind, LLC is requesting to construct three temporary, 197'-8.25"-tall meteorological towers for the purpose of measuring wind resources in the area. The proposed tower locations are located in Mount Vernon, Grimes, and Pleasant Valley Townships respectively.

Background

The Board considered the applicant's (Indigo) request at its March 28, 2023 meeting. The original staff report and packet are included in your packet, so please review to reacquaint yourself with the case. At the November hearing, the Board tabled the case for further study regarding high visibility markings on the towers, meeting pipeline requirement due to the Magellan Pipeline Company natural gas pipeline running in proximity to the proposed tower in Grimes Township, potential increased costs and impacts to aerial applications in farm operations, and soil, water, and wildlife impacts. The below follow-up review looks at these questions specifically. Otherwise, the overall analysis as applicable in the original staff report is unchanged.

FOLLOW-UP REVIEW

High-Visibility Tower Markings

During the March hearing, there was concerns for pilot/aerial safety due to the less visible nature of guyed meteorological towers under 200' in height compared to taller towers. Generally, the FAA does not require high-visibility markings for towers under 200' in height. However, in the FAA determinations provided with the application, the FAA makes specific recommendations for high-visibility tower markings that should be included on such structures for safety of agricultural flight operations—painting of the monopole tower with alternate bands of aviation orange and white paint, high visibility sleeves on the outermost guy wires, and two spherical orange balls located on each of the outermost guy wires at separate heights. The FAA does not recommend lighting to be included on these types of guyed meteorological towers. It was recommended in the original staff report to make these high-visibility markings recommended by the FAA a condition of any potential approval as a requirement of the permit.

Indigo was asked to address high visibility markings with a side-profile diagram illustrating the high visibility markings to be included on the proposed meteorological towers, which is included in your packet. This is generally consistent with the marking standards as recommended in the FAA's Advisory Circular for Obstruction Marking and Lighting. Figure A-2 from Appendix A of the Advisory Circle is also included in your packets. Staff again recommends that the FAA's recommended high visibility markings be made a condition of any approval and to also reference the FAA's Advisory Circular. Aerial applicators in the area that were consulted (discussed below) agree high visibility markings should be a requirement and will increase safety.

Pipeline Requirements

It was found during the hearing that the proposed meteorological tower in Grimes Township is in proximity to a natural gas pipeline operated by Magellan Pipeline Company, which runs north to south along the west side of Finch Avenue. The Pipeline and Hazardous Materials Safety, which generally regulates pipeline safety, does not have authority over a specific pipeline right-of-way. Bryan Ferguson with the Magellan Pipeline Company, which regulates the company's pipeline right-of-way, was consulted. He did not list a specific setback requirement from pipeline right-of-way; however, he stated the preference of the company was to have a separation at least equal to the height of the tower to ensure no impact to the pipeline. This should be made a condition of any approval, which is also addressed by the increased setback conditions as discussed below. An updated site plan was provided by Indigo for the proposed tower.

Potential Impacts and Increased Costs to Farming Operations

The Board had concern for the safe flight operation for aerial applications that provide crop dusting and seeding services to neighboring farming operations and potential increased costs for neighboring farmers. Aerial application is becoming more common and the application season is longer in recent years. In spite of potential increased costs to farmers for aerial application, State of Iowa law does not have enabling legislation that allows the county to require direct compensation for such potential increased costs in this type of situation. Any such condition attached to any potential approval would be unenforceable.

Four aerial application businesses that work within Cerro Gordo County were surveyed to gather information to better understand the potential impacts of the proposed meteorological towers to aerial application operations to neighboring fields: Flying Farmer Aerial Application in Hampton, Meyer Agri-Air, Inc. in Wellsburg, Friesenborg and Larson Custom Spraying in Buffalo Center, and Midwest Custom Ag Aviation, Inc. in Newton were consulted about policies and practices regarding flying around meteorological towers, alternative application methods, and aerial safety. Policies and options varied with each company.

As aforementioned, all four companies agreed that high visibility markings on the proposed towers increases safety so pilots are able to identify locations and see the towers. They all agree it should be a requirement for all towers. Meeting the recommendations of the FAA for high visibility tower markings should be made a condition of any potential approval.

Another factor common among the answers provided is that density of obstructions such as towers can impact safety. The more isolated a tower is located from other obstructions the less danger a tower will pose to pilots. More isolated towers will reduce the number of turns and short passes a particular pilot will have to take to apply to surrounding fields. Another factor that can be helpful is informing companies where towers are located.

The different companies have varied policies in how close they are willing to fly to a tower. However, much of the time it is dependent on the comfort level and decision of the particular pilot flying. Some alternative application methods are available for aerial application between different companies, including helicopter application, ground applications, and unmanned aerial application. Helicopter application has a bit more maneuverability but still faces similar limitations as airplanes around towers. Ground applications avoids the safety concerns but is not viable for certain types of applications. One area company provides unmanned drone applications as a method in the area, which also avoids the safety concerns; however, the technology is not as efficient or cost effective as traditional airplane applications at this point in time, though the technology continues to improve.

Each company will charge additional costs to clients in close proximity to a tower, and more particularly the immediate field on which a particular tower sits. As the concern is the potential cost impact to neighboring farming operations when discussing aerial application for this request, the companies each differ in policy on how fields neighboring a tower may be charged. Costs are generally impacted by how much extra flight time and passes may be required to complete a job. One applicator stated neighboring fields would not be impacted by increased costs under its policy for meteorological towers. Another applicator stated neighboring fields likely would be impacted by increased costs under its policy. And the other two applicators stated it would depend on the aforementioned factors because they do not have a set distance, as every field has different situations involved.

As a result, the most effective method to improve safety and mitigate potential cost impacts to neighboring fields is to increase separation distances from other obstructions, such as utilities lines, buildings, trees, and other structures, and neighboring properties. The FAA provides guidance to pilots to maintain at least a 500' distance from towers above 200' tall. Applying the same standard to any potential approval of this request is recommended.

Impacts to Soils, Water, and Wildlife

The Board also asked staff to look at potential impacts to water resources, soils, and wildlife. Regarding water resources, the proposed tower locations are not located within or near a mapped floodplain or close to any water body. None of the proposed tower sites are located within proximity to any wells or wastewater facilities. The proposed towers have no hazardous or toxic chemicals involved with operation. As a result, there are no foreseeable negative impacts to water resources.

Regarding soils, the proposed meteorological towers' impact will generally be isolated to the immediate parcel on which they will be located. Indigo has private agreements in place with the partner landowners for compensation for potential crop damage or compaction impacts from pre-construction and construction activities. The proposed towers will have only minimal soil impacts because there is no excavation for construction and has no foundation, being secured by a baseplate. The guy wire anchors will be secured to a depth of about 40". If the land is not farmed, Indigo will establish a weed abatement program with the applicable landowner in which they have entered into agreement. The proposed towers are temporary with a life of 2-5 years. Indigo has provided a summary plan of decommissioning procedures, which is included in your packets. Indigo is also voluntarily establishing a performance bond with the county as a form of financial security for landowners in case of abandonment.

Regarding wildlife impacts, the primary concern would be related to birds or bats. Joshua Brandt, Cerro Gordo County Conservation Director, was consulted on this topic. The proposed towers will be stationary, so the structures will not have the same level of impact as a wind turbine might with moving rotor blades. However, there can be some impact to birds, especially if the location is within a primary migratory route, which is unknown regarding these particular locations. The primary impact is from the guy wires, which can be difficult to see for flying creatures. However, the spherical balls recommended for high visibility markings on the guy wires will act as a means to help birds avoid the towers as it does for pilots. As a result, with a condition for the high visibility markings, the proposed towers are unlikely to have a significant impact to wildlife.

STAFF ANALYSIS AND RECOMMENDED ACTION

The Board of Adjustment reviewed a similar meteorological towers in 2015 to the ones currently being proposed by Indigo. It is intended that the proposed towers will be temporary while Indigo measures wind data to determine whether these parts of Cerro Gordo County would be appropriate for wind farm development. Since the towers will be on the premises for a short period, their impacts are also temporary.

There are no foreseeable negative impacts to water resources nor any significant impacts to wildlife. While there are some potential soil impacts, these are generally minimal and isolated to the immediate location of the parcel. Indigo has agreements in place with partner landowners to address these concerns.

The safety and potential cost and farming impacts for aerial application can be mitigated with increased setback requirements. From the information gathered from area aerial applicators, there is at least one option that does not charge more for aerial application to neighboring fields from towers and various alternative application methods that provide other options to consider. A condition for any potential approval should be increased setbacks from non-participating property lines, public-right-of-way, and pipeline right-of-way using the FAA-recommended 500' separation related to flying around towers as a means to isolate the proposed towers from other obstructions. All three proposed tower locations are generally isolated from other obstructions, and the increased setbacks will help with this. This was communicated to Indigo, and updated site plans have been provided consistent with this recommendation. High visibility tower markings as recommended by the FAA should also be made a condition of any approval.

All minimum requirements have been met. The recommended conditions should be helpful to minimize hazards to aviation safety and potential increased costs to neighboring farming operations. Approval of the SUP request is recommended, subject to the conditions suggested below.

RECOMMENDED CONDITIONS TO BE MET IF POSITIVE VOTE BY BOARD OF ADJUSTMENT

Note: In granting a Special Use Permit, the Board of Adjustment may attach conditions which it finds are necessary to carry out the purpose of the Zoning Ordinance, in conformance with what is provided in Article 20 of the Zoning Ordinance, and where reasonable and necessary may increase the required lot or yard, control the location and number of vehicular access points to the property, limit the number of signs, limit coverage or height of buildings because of obstruction to view and reduction of light and air to adjacent property, and require screening and landscaping to reduce noise and glare and maintain the property in character in keeping with the surrounding area. Special uses shall ordinarily comply with the standards of the district concerned for principal uses which are permitted therein, except as modified by the Board of Adjustment in granting a Special Use Permit.

1. This Special Use Permit may be reviewed at any time in the future upon the request of the applicants or a majority of the Board of Adjustment members.
2. The provisions and/or regulations as stated shall be minimum requirements and wherever the requirements of any other lawfully adopted rules, regulations, or ordinances are at a variance, the most restrictive shall govern.
3. It is contemplated that from time to time during the operation of temporary meteorological towers that conditions may arise which are not covered by the terms of this permit and which cannot be anticipated. In the event such conditions do arise, the Board of Adjustment of Cerro Gordo County, Iowa, may impose additional regulations to meet any new conditions. In addition, if said facility should, at any time, be operated in any manner which violates the rules and regulations of any federal or state regulatory agency, then the Board of Adjustment may impose such other conditions so as to ensure compliance with such rules and regulations.
4. This permit will be subject to revocation for operator's failure to comply with the provisions as herein set forth or such other provisions as may, from time to time, be imposed by the Board of Adjustment of Cerro Gordo County, Iowa, under the terms of this permit.

5. County representatives shall have the right to enter the premises at any time upon notification to the permit holder for the purposes of enforcing the provisions of this Special Use Permit.
6. Any other necessary permits or licenses required by federal, state, and local agencies shall be obtained by the applicant and current copies placed on file with the county Planning and Zoning Office.
7. This Special Use Permit is granted to Indigo Wind, LLC and its successors and assigns and is transferrable and applicable to any future owners of any of the meteorological towers, whether owned separately or in combined ownership.
8. The site plans as received by the Planning and Zoning Office on May 1, 2023 and operator's statement accompanying the application is hereby adopted as presented and the applicant shall adhere to said site plans and all accompanying documentation. The Board of Adjustment shall have the right to review any proposed change in or expansion of the special use and shall require an amendment to this Special Use Permit be approved.
9. All construction shall strictly comply with the site plans received by the Planning and Zoning Office on May 1, 2023. A Zoning Permit Application shall be completed and a Zoning Permit issued prior to any new construction on the site related to the special use, subject to Article 22 of the Zoning Ordinance.
10. In acknowledgement of the type of towers proposed and their temporary location on the premises, the requirement that the tower shall be constructed or easily modifiable, within thirty (30) days, to support the equipment of at least three (3) communications companies, is hereby waived.
11. The tower owner and the tower operator shall provide proof of adequate liability insurance for each tower in writing to the Administrative Officer of Cerro Gordo County for Planning and Zoning, under such further conditions and in such amounts as the Board of Adjustment or the Administrative Officer may direct, but in no event shall such proof be required more often than annually.
12. The base of each tower shall be a minimum of 500' from any public right-of-way, structure, pipeline right-of-way, or non-participating property line, except for structures owned by the applicant.
13. Any signal interference complaints associated with the towers or related equipment shall be addressed within thirty (30) days from the date of notification in accordance with Federal Communications Commission (FCC) rules and procedures.
14. Any glare caused as a result of the towers or related equipment shall be corrected within thirty (30) days from the date of notification.
15. The towers and all appurtenances shall be removed upon the end of their useful life and each site restored to their original condition prior to tower placement within one hundred eighty (180) days. Removal of the towers shall follow the procedures of MET Tower Decommission Summary on file with the Planning and Zoning Office. A decommissioning bond in the amount of \$30,000 shall be established as a means for financial security to have the towers removed in the event of abandonment.
16. No additional driveway shall be permitted for the purpose of accessing the towers. The applicant shall use existing accesses to get to the tower sites.
17. A sign shall be placed on each base station structure or at the base of either tower that identifies a name and phone number of whom to contact in case of emergency.
18. Any electrical service not generated by solar power to either tower shall be by underground service only.

19. Any roads damaged as a result of the construction of the special use shall be restored to its pre-construction condition. Costs of repair of damage to county roads or rights-of-way resulting from the construction phase of this project shall be the responsibility of the applicant.
20. If the applicant requests an E911 address for either tower, the cost for the sign and post of the address shall be at the expense of the applicant.
21. The project shall not adversely impact any duly established drainage district or private drainage facilities. Damage to drainage structures resulting from the construction of the special use shall be repaired at the applicant's expense. The applicant shall conduct a pre-construction assessment documenting the existing condition of all drainage structures within the project area.
22. The applicant shall mark each tower with highly visible markings as recommended by the FAA in the determinations of no hazard submitted with the application, including paint, high visibility sleeves, and spherical markers. The placement and location of all markings shall be consistent with Figure A-2 in Appendix A of the FAA's Advisory Circular for Obstruction Marking and Lighting. The applicant shall provide the Planning and Zoning Office with GPS coordinates for each tower location and shall make reasonable efforts to notify aerial applicators doing business in Cerro Gordo County with the specific tower locations prior to construction.
23. Refuse removal during construction shall be the responsibility of the applicant.
24. This Special Use Permit for three temporary meteorological towers is approved for research/monitoring purposes only and not as part of any conditional or final approval of a commercial wind energy project. Any additional structures, land use proposals, or site development or zoning applications related to wind turbines, utility-scale wind energy systems, or any other types of related facilities shall be considered a separate proposed land use subject to the requirements of the Cerro Gordo County Zoning Ordinance in effect at the time of application.

BOARD DECISION

The Board of Adjustment may consider the following alternatives:

Alternatives

1. Grant the requested Special Use Permit Application subject to any condition as deemed necessary by the Board (The Board reserves the right to remove, amend, or add additional conditions from those recommended as deemed necessary).
2. Deny the requested Special Use Permit Application.

The following motions are provided for the Board's consideration:

*Provided motion of **approval**:*

To adopt the staff report as the Board's findings and to grant the application, subject to the conditions recommended by staff and as modified by the Board of Adjustment, for the placement of an agricultural-commercial neighborhood business, and further, that the grant of the application be made effective immediately and on the condition that Indigo Wind, LLC shall perform all operations under the application under the specific direction of the Cerro Gordo County Zoning Administrator, consistent with the proposed conditions and recommendations approved by the Board of Adjustment, until such time as a formal resolution is drafted and adopted by the Board of Adjustment, not to exceed 60 days.

*Provided motion of **denial**:*

To adopt the staff report as the Board's findings and to deny the application for the reasons stated in the staff report as well as for the following reasons: **[STATE ADDITIONAL REASONS FOR DENIAL, IF ANY]**. Said reasons for denial shall be stated in the official transcript and minutes of the Board of Adjustment, and shall be made in writing to the applicant in letter form by the Board's secretary.

EXHIBITS

- Exhibit 1: Revised site plans received May 1, 2023
- Exhibit 2: Indigo provided side-profile illustration for highly visible tower markings
- Exhibit 3: Figure A-2 in Appendix A of the FAA's Advisory Circular for Obstruction Marking and Lighting
- Exhibit 4: Survey responses from area aerial applicators
- Exhibit 5: Indigo MET Tower Decommission Summary
- Exhibit 6: Staff Report for March 28, 2023 hearing
- Exhibit 7: Figures
- Exhibit 8: Special Use Permit Application
- Exhibit 9: Operator's statement
- Exhibit 10: Original site plans and diagram (Appendix A)
- Exhibit 11: Area maps (Appendix C)
- Exhibit 12: FAA determinations of no hazard
- Exhibit 13: Certificate of liability insurance
- Exhibit 14: Aerial photos of sites

List of Properties and Deed Owners

Parcel # 10-33-300-005-00

SE¼ of the SW¼, Section 33, Mount Vernon Township

Timothy J. & Laura A. Tracy

9716 160th Street

Swaledale, IA 50477

Parcel # 13-02-200-004-00

SE¼ of the NE¼, Section 2, Grimes Township

Larry Brandt

607 River Oak Drive

Ames, IA 50010

Parcel # 14-01-400-002-00

NE¼ of the SE¼, Section 1, Pleasant Valley Township

Calvin D. Dorenkamp

324 Lakeview Drive

Mason City, IA 50401

130220000100
Larry G. Brandt
IA-IDW-034

130220000200
Larry G. Brandt
IA-IDW-034

130110000100
Best View Farms Inc
TAR-IDW-0052



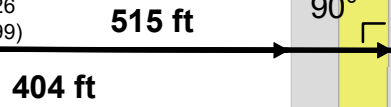
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Larry G. Brandt
IA-IDW-034

130220000400
Larry G. Brandt
IA-IDW-034

130110000300
Best View Farms Inc
TAR-IDW-0052

Finch Ave

(42,990726
-93.401099)



- Relocated Tower Proposal
- 50m Guy Wires
- Pipelines
- Pipeline - 50ft ROW
- Parcel Boundary
- Drainage Tiles and Ditches
- ▨ Road Right of Way

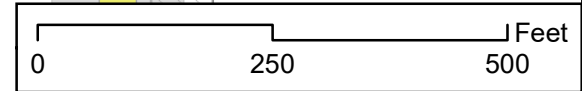
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Kenneth E Nelson
IA-IDW-0496

130240000200
Kenneth E Nelson
TAR-IDW-0496

130130000500



Location of parcel boundaries and features shown on map are approximate and subject to final survey.



Document Path: Y:\GIS\Projects\IDW\mapserver\mapserver\IDW_2018\GIS_Schema_Summary.dwg



103330000300
Karen K. Peters, Trustee, Karen K. Peters Family Trust
IA-IDW-013

103340000300
Timothy J. Tracy
IA-IDW-008

103330000500
Timothy J. Tracy
IA-IDW-008

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-93.333104)

515 ft

515 ft

90°

90°

103330000400
David E Shallberg
Melissa A Shallberg

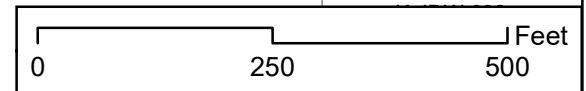
160th St

- Relocated Tower Proposal
- - - 50m Guy Wires
- Parcel Boundary
- Road Right of Way

Timothy J. Tracy

140410000200
Sierra J
Craighton

140410000300
James L Jorgensen
Doris J Jorgensen



Location of parcel boundaries and features shown on map are approximate and subject to final survey.

140120000300
Edward j caspers
TAR-IDW-1229

140120000400
Edward j caspers
TAR-IDW-1229

150610000300
Ronald j behr beverly k behr
TAR-IDW-1771



515 ft

90°

90°

(42.985871
93.263278)

140140000200
Calvin D. Dorenkamp, Trustee, Calvin D. Dorenkamp Revocable Trust
IA-IDW-023

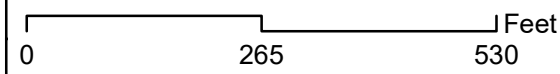
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Janice ramirez
TAR-IDW-1346

Mallard Ave

- Relocated Tower Proposal
- 50m Guy Wires
- Parcel Boundary
- ▨ Road Right of Way

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Calvin D. Dorenkamp, Trustee, Calvin D. Dorenkamp Revocable Trust
IA-IDW-023

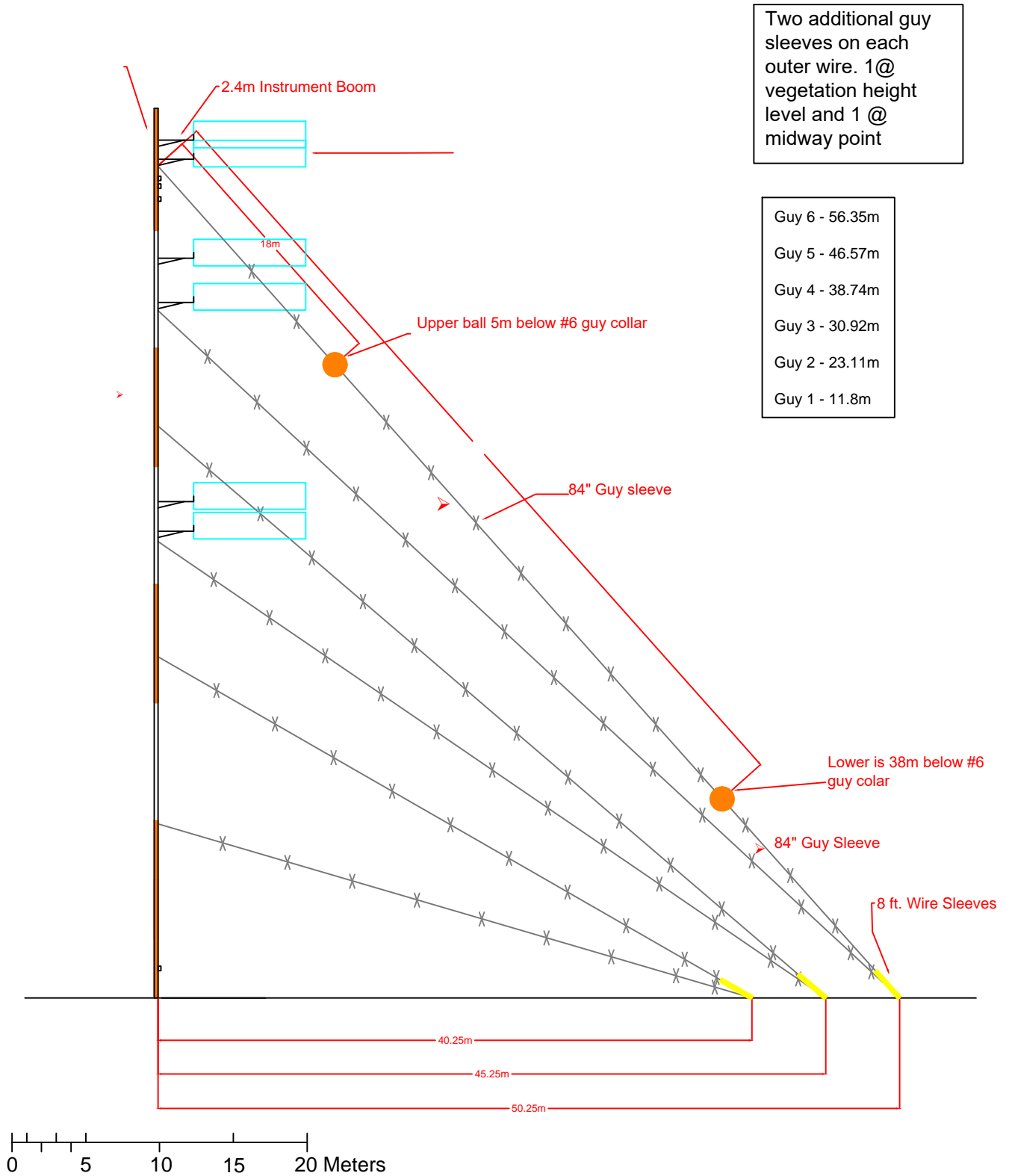
Roger colson brenda colson



Location of parcel boundaries and features shown on map are approximate and subject to final survey.

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60m Met Tower - Two Marker Ball Configuration



Two additional guy sleeves on each outer wire. 1 @ vegetation height level and 1 @ midway point

- Guy 6 - 56.35m
- Guy 5 - 46.57m
- Guy 4 - 38.74m
- Guy 3 - 30.92m
- Guy 2 - 23.11m
- Guy 1 - 11.8m

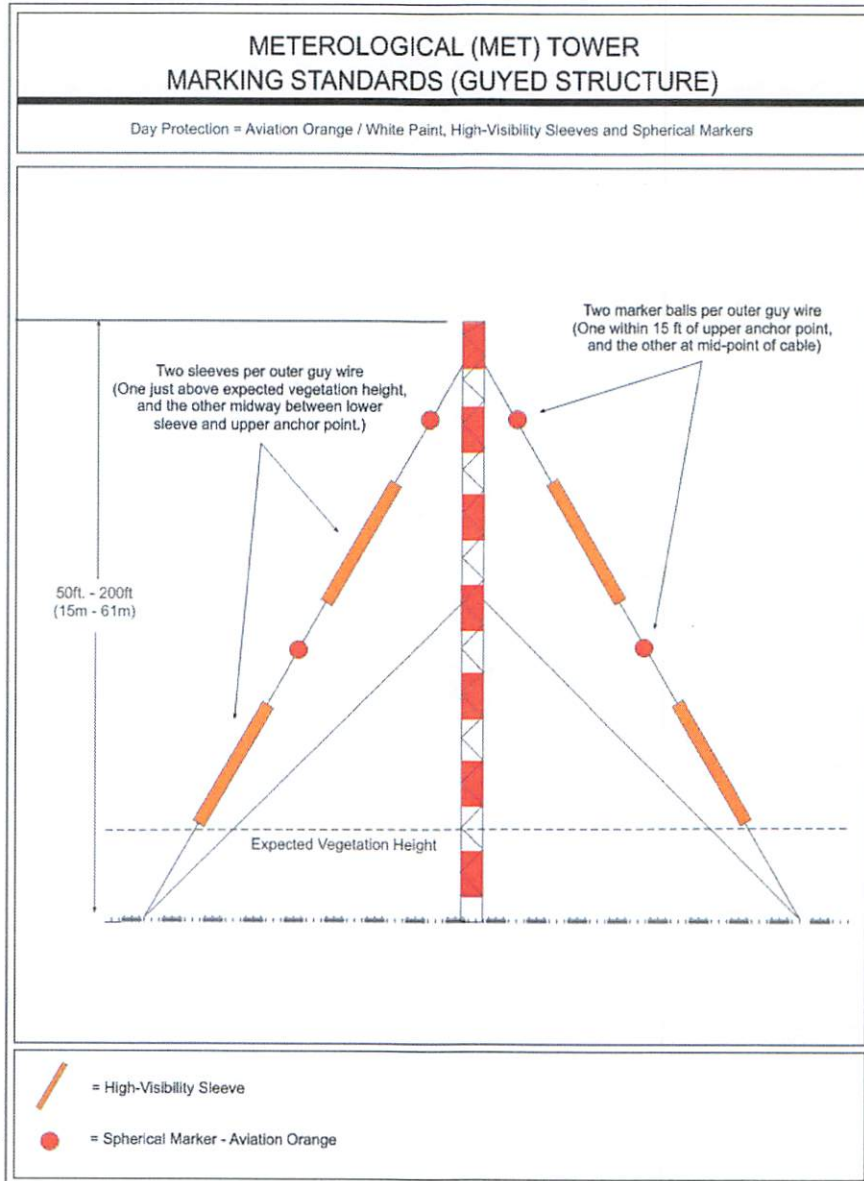


Figure A-2. Meteorological Evaluation Tower (MET) Marking Standards (Guyed Structure)

Robbins, John

From: Doug <dougpralle376@yahoo.com>
Sent: Thursday, April 27, 2023 7:12 AM
To: Robbins, John
Subject: Re: Survey regarding aerial application around meteorological towers

External Email WARNING: DO NOT open attachments or click links from unknown senders or unexpected emails. Questions? Call 3-HELP.

John,
Thanks for the reminder. My answer are below.

It really depends how much extra time it takes turning and working around the obstruction. We do not have a set distance at which we start charging.

I do believe that a 500 ft setback from non participating landowners would be a good number. That should give us time to get up out of the field we are working and fly around that obstruction.

On another note, I have seen companies put pretty weak lights on towers to mark them. Just a solar powered light from Walmart it seems. It may be worth it to hold them to standards when it comes to the quality of the tower markings.

Thanks again for allowing me to be part of the discussion and very best of luck in the new adventure!!

Doug Pralle
Flying Farmer Aerial Application
641-430-9710

On Apr 10, 2023, at 9:47 AM, Robbins, John <jrobbins@cgcounty.org> wrote:

Good morning, Doug,

I appreciate your response to the questions. I have a couple follow-up questions:

1. At what distance from a meteorological tower or similar obstruction with guyed wires do you begin to charge additional cost to a client?
2. Our primary concern is the impacts to neighbors for aerial application, as the property owner for the land on which these towers sit should understand this potential impact for their own property. The proposed setback of the towers are over 200' from any non-participating, neighboring property line. It appears that the FAA has recommendations of 500' buffers for flying around a tradition communication towers:
 1. Would the proposed setbacks of at least over 200' result in additional charges to neighboring farmers that have fields at least 200' away?
 2. If so, would a 500' setback from any non-participating property line result in any additional charges for the neighboring farmer?

Please answer as soon as possible for the purposes of providing a staff report to our Board of Adjustment.

Thank you,

John Robbins

Planning and Zoning Administrator
Cerro Gordo County
jrobbins@cgcounty.org
Office: 641-421-3075
Direct: 641-421-3110

From: Doug Pralle <dougpralle376@yahoo.com>
Sent: Sunday, April 9, 2023 8:19 PM
To: Robbins, John <jrobbins@cgcounty.org>
Subject: Re: Survey regarding aerial application around meteorological towers

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John,

Please find my responses to your questions listed below. Let me know if you would like clarification on anything.

1. Please provide a description of your business and services you provide in Cerro Gordo County.

My business is called Flying Farmer Aerial Application. We are aerial applicators that apply pesticides, seed, and fertilizer to crops for farmers in Cerro Gordo county.

1. Please describe your general practices when flying around obstructions, specifically meteorological towers or similar structures such as communication towers. What types of flight patterns do you generally take? How does this affect your ability to application for crops growing around an obstruction?

Before entering any field for an application the pilot circles that field to check for any obstacles. If an obstacle is observed the pilot will then asses how the field is laid out

and from that they will make a plan to spray the field. If the obstacle is in the field you are spraying then we usually stay away from the obstacle at least one pass or approx. 75 feet. This distance does change given each situation depending on the proximity to the edge of the field or any other obstacle that may be near by.

If the obstacle is in a neighboring field we would obviously turn away from the obstacle and avoid it when entering the target field again. This can add some distance to turn arounds in some cases.

Obviously this all is dependent on seeing the obstacle in the first place.

1. Please describe your general policy regarding flying around obstructions such as meteorological towers in a plane. How close are you able to safely fly in a plane to an obstruction? How close are you willing to fly to an obstruction, per your business policy in a plane? Are you able to adjust flight paths to accommodate applications around obstructions?

As I mentioned in the previous answer, it strongly depends on the situation. The closest that we fly to the obstacle if it is in the center of a big field would be approx. 75 feet. Again, this is dependent on the proximity of the edge of the field and other obstacles. We must always adjust our

Robbins, John

From: Joe Larson <Joe@fandlinc.com>
Sent: Monday, April 10, 2023 12:52 PM
To: Robbins, John
Subject: RE: Survey regarding aerial application around meteorological towers

External Email WARNING: DO NOT open attachments or click links from unknown senders or unexpected emails. Questions? Call 3-HELP.

From: Robbins, John <jrobbins@cgcounty.org>
Sent: Monday, April 10, 2023 9:50 AM
To: Joe Larson <Joe@fandlinc.com>
Subject: RE: Survey regarding aerial application around meteorological towers

Good morning, Joe,

I appreciate your response to the questions. I have a couple follow-up questions:

- At what distance from a meteorological tower or similar obstruction with guyed wires do you begin to charge additional cost to a client? WE DO NOT HAVE AN EXACT DISTANCE, IT ALL DEPENDS ON IF IT AFFECTS US IN ANYWAY IN WHICH IT TAKES LONGER TO SPRAY THE FIELD, FOR INSTANCE IT MAY BE RIGHT ACROSS THE ROAD TO THE EAST BUT IF WE SPRAY THE FIELD N-S AND IT DOESN'T AFFECT US THERE IS NO CHARGE BUT ON THE OTHER HAND IT COULD BE ¼ MILE AWAY AND THE FASTEST WAY TO SPRAY THE FIELD IS AFFECTED BY THE TOWER AND WE HAVE TO SPRAY IT THE SHORT WAY WITH MORE TURNS THERE IS A SURCHARGE...
- Our primary concern is the impacts to neighbors for aerial application, as the property owner for the land on which these towers sit should understand this potential impact for their own property. The proposed setback of the towers are over 200' from any non-participating, neighboring property line. It appears that the FAA has recommendations of 500' buffers for flying around a tradition communication towers:
 - Would the proposed setbacks of at least over 200' result in additional charges to neighboring farmers that have fields at least 200' away? NOT IN ALL CASES BUT IN SOME A HALF MILE WILL BE CHARGED..
 - If so, would a 500' setback from any non-participating property line result in any additional charges for the neighboring farmer? I THINK THE LAST 2 ANSWERS SHOULD ANSWER THIS FOR YOU !! WE DO NOT HAVE AN EXACT DISTANCE WE LEAVE IT UP TO EACH INDIVIDUAL PILOT TO DETERMINE IF IT CAUSED HIM TO SPRAY IN A MATTER THAT IS NOT THE MOST EFFICIENT... AND JUST AN FYI I HAVE A GUY FROM SOUTH DAKOTA COME IN TO HELP ME IN THE BUSY SEASON AND HE WILL NOT FLY WITHIN 1 MILE OF A TOWER BECAUSE HE HAD A BUISINESS PARTNER KILLED BY HITTING A WINDMILL.. SO A CERTAIN PERCENTAGE OF GUYS WILL NOT FLY AROUND THEM AT ALL...

Please answer as soon as possible for the purposes of providing a staff report to our Board of Adjustment.

Thank you,

John Robbins

Planning and Zoning Administrator
Cerro Gordo County
jrobbins@cgcounty.org

Office: 641-421-3075
Direct: 641-421-3110

From: Joe Larson <Joe@fandlinc.com>
Sent: Friday, April 7, 2023 8:41 AM
To: Robbins, John <jrobbins@cgcounty.org>
Subject: RE: Survey regarding aerial application around meteorological towers

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Questions? Call 3-HELP.

From: Robbins, John <jrobbins@cgcounty.org>
Sent: Wednesday, April 5, 2023 8:07 AM
To: Joe Larson <Joe@fandlinc.com>
Subject: Survey regarding aerial application around meteorological towers

Good morning, Joe,

Doug Pralle with Fly Farmer Aerial Application out of Hampton is assisting my office with some research. He may have been in contact with you earlier this week. Our Cerro Gordo County Board of Adjustment is considering a conditional use permit for 3 proposed meteorological towers (197'-8.25" tall) with guyed wires that are anchored located in the south portion of our county. Mr. Pralle provided me with your contact as an aerial applicator in the area.

During our first public hearing for this request, our Board found that the aerial application season is becoming longer and more common around the county. Our Board tabled the request to conduct further research regarding the impacts of such towers to aerial application and the farming operations near obstructions like met-towers. As a result, I am conducting a survey of area aerial applicators that serve our county to gather information about your operations around such towers. At a minimum, our Board intends to make high visibility markings as recommended by the FAA a condition in any potentially approved permit, which becomes a requirement of the local permit if approved.

I appreciate your willingness to participate. I have a series of questions below that I would like to gather information and your perspective, which are much of what we discussed on the phone. We will likely be having the follow-up hearing for the request during the Board's April 25th regular meeting, so I would appreciate a response by Monday morning, April 10th. I will have to draft the follow-up staff report to the Board by the end of the following week.

Please respond to the following questions/topics and feel free to provide further information as you would like that may be applicable.

1. Please provide a description of your business and services you provide in Cerro Gordo County. **WE DO AERIAL APPLIATION OF FUNGICIDES AND INSECTICIDES FOR FARMERS**
2. Please describe your general practices when flying around obstructions, specifically meteorological towers or similar structures such as communication towers. What types of flight patterns do you generally take? How does this affect your ability to application for crops growing around an obstruction? **WE CURRENTLY HAVE A \$2.25/ACRE SURRCHARGE FOR ANY FARMS WITH TOWERS OR WINDMILLS IN OR AROUND THAT CAUSE US SAFTEY CONCERNS OR TAKE US EXTRA TIME TO APPLY !!! WE ALSO CHARGE FOR THE COMPLETE FIELD AS FAR AS APPLICATION BUT CAN NOT POSSIBLY APPLY THE COMPLETE FIELD DUE TO THE OBSTICALE !!! FOR EXAMPLE IF THE FIELD IS 150 ACRES THE FARMER PAYS FOR 150 ACRESBUT WE DO NOT GUARANTEE OUR WORK AND WE MAY ONLY GET 140 ACRES APPLIED DEPENDING ON OBSTACLES ..**

3. Please describe your general policy regarding flying around obstructions such as meteorological towers in a plane. How close are you able to safely fly in a plane to an obstruction? How close are you willing to fly to an obstruction, per your business policy in a plane? Are you able to adjust flight paths to accommodate applications around obstructions? EVERY OBSTACLE IS DIFFERENT. SOME OBSTACLES YOU CAN GET RIGHT NEXT TO OTHERS YOU CANT. THE DANGEROUS THING WITH MET TOWERS IS THE WIRES AND BE ABLE TO SEE THEM. IT MAKES IT MUCH EASIER WHEN THE BASE OF THE TOWER ISNT FARMED AROUND. IF THE BASE IS FARMED AROUND I WILL LEAVE MORE ROOM JUST TO BE SAFE BECAUSE IT IS HARDER TO SEE THE WIRES
4. Are there different application options other than a plane that you use, are consider using in the future, or that others in the industry are moving to that can accommodate closer flight or applications to obstructions? Helicopter? Unmanned drones? An alternative ground application? Other options? Are there differences for different types of applications? YES THERE ARE BETTER OPTIONS, IT IS THE FARMERS CHOICE BUT UNMANNED DRONES ARE A GOOD CHOICE AS WELL AS GROUND RIGS!! THE ONLY PROBLEM IS THAT IF ITS WET GROUND RIGS ARE NOT AN OPTION AND DRONES CAN NOT POSSIBLY APPLY ALL THE ACRES THAT NEED TO GET DONE IN A SHORT TIME IF IT IS A RESCUE OR EMERGENCY TREATMENT !!!
5. Does application around obstructions increase what you charge for application? If so, what is the difference of cost between application on an obstruction-free field vs. having an obstruction? Are you able to use or able to use in the future an alternative application method that would not result in additional charges or less upcharges to clients? WE CURRENTLY CHARGE \$10.25/A FOR NORMAL APPLICATION AND ARE \$12.50 FOR FIELDS WITH TOWERS OR WIND TUBINES/ WITH NO GUARANTEE ON OUR WORK!!! THE OTHER FACTOR IS I ONLY ALLOW MY PILOTS TO SPRAY 2-3 FARMS A DAY AROUND THESE OBSTACLES DUE TO FATIGUE SO AT TIMES WE MAY BE 5-7 DAYS OUT ON APPLICATION, FARMS WITH TOWERS MAY BE A WEEK OR LONGER OUT, WHICH IS NOT IDEAL IF IT IS A RESCUE APPLICATION...
6. What are your recommendations for high visibility markings to be placed on a meteorological tower to make them as visible as possible? Attached is a determination of no hazard from the FAA, which has recommended high visibility markings for such towers with guy wires on page 4. These can be made a requirement by the county on any permit issued. What are your recommendations regarding the FAA's recommendations or anything additional that can be done to increase safety for aerial application? ANY MARKING HELPS IF THE TOWER IS PAINTED, HAS A LIGHT ON THE TOP AND THE WIRES HAVE ANY KIND OF HIGH VISIBILITY MARKER ON THEM THIS MAKES THEM MUCH EASIER TO SEE AND WORK AROUND.
7. How do you work around existing obstructions that do have high visibility markings? How about existing obstructions that do not have high visibility markings? Do you have a difference in policies or charges to clients between one with or without such markings? THEY ARE BOTH WORKED AROUND THE SAME WE TRY TO GET AS CLOSE AS EACH SITUATION ALLOWS, BUT IT IS EASIER AND SAFER WITH A MARKED TOWER COMPARED TO UNMARKED

I appreciate any responses and information that you are able to provide. Please let me know if you have any questions or would like to discuss anything. I will try to follow up with a phone call later today or tomorrow, as I will be out doing site work this morning.

Thank you,

John Robbins

Planning and Zoning Administrator
 Cerro Gordo County
jrobbins@cgccounty.org
 Office: 641-421-3075
 Direct: 641-421-3110

Robbins, John

From: Joel Meyer <joel.meyer@meyeragriair.com>
Sent: Monday, April 10, 2023 11:41 AM
To: Robbins, John
Subject: RE: Survey regarding aerial application around meteorological towers

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Questions? Call 3-HELP.

From: Robbins, John <jrobbins@cgcounty.org>
Sent: Monday, April 10, 2023 9:48 AM
To: Joel Meyer <joel.meyer@meyeragriair.com>
Subject: RE: Survey regarding aerial application around meteorological towers

Good morning, Joel,

I appreciate your response to the questions. I have a couple follow-up questions:

- At what distance from a meteorological tower or similar obstruction with guyed wires do you begin to charge additional cost to a client?
 - A. **IF THE TOWER IS IN THE CLIENT'S FIELD IT WILL BE CHARGED ACCORDINGLY. IT DOES NOT AFFECT THE NEIGHBOR'S FIELDS. IF A WIND FARM IS THE RESULTS FOLLOWING THIS STUDY, THEN IT WILL AFFECT ALL FARMS IN THE AREA.**
- Our primary concern is the impacts to neighbors for aerial application, as the property owner for the land on which these towers sit should understand this potential impact for their own property. The proposed setback of the towers are over 200' from any non-participating, neighboring property line. It appears that the FAA has recommendations of 500' buffers for flying around a tradition communication towers:
 - B. **SETBACKS HAVE NO BEARING ON AN AERIAL APPLICATION, ESPECIALLY IF THERE IS ONLY 1 MET TOWER. IF MY AIRPLANES CAN SAFELY MANEUVER AROUND 1 TOWER, IT WILL NOT AFFECT SPRAYING IN NEIGHBORING FIELDS.**
 - Would the proposed setbacks of at least over 200' result in additional charges to neighboring farmers that have fields at least 200' away?
 - If so, would a 500' setback from any non-participating property line result in any additional charges for the neighboring farmer?

Please answer as soon as possible for the purposes of providing a staff report to our Board of Adjustment.

Thank you,

John Robbins

Planning and Zoning Administrator
Cerro Gordo County
jrobbins@cgcounty.org
Office: 641-421-3075
Direct: 641-421-3110

From: Joel Meyer <joel.meyer@meyeragriair.com>
Sent: Sunday, April 9, 2023 6:06 PM
To: Robbins, John <jrobbins@cgcounty.org>
Subject: RE: Survey regarding aerial application around meteorological towers

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Questions? Call 3-HELP.

From: Robbins, John <jrobbins@cgcounty.org>
Sent: Wednesday, April 5, 2023 8:08 AM
To: Joel Meyer <joel.meyer@meyeragriair.com>
Subject: Survey regarding aerial application around meteorological towers

Good morning, Joel,

Doug Pralle with Fly Farmer Aerial Application out of Hampton is assisting my office with some research. He may have been in contact with you earlier this week. Our Cerro Gordo County Board of Adjustment is considering a conditional use permit for 3 proposed meteorological towers (197'-8.25" tall) with guyed wires that are anchored located in the south portion of our county. Mr. Pralle provided me with your contact as an aerial applicator in the area.

During our first public hearing for this request, our Board found that the aerial application season is becoming longer and more common around the county. Our Board tabled the request to conduct further research regarding the impacts of such towers to aerial application and the farming operations near obstructions like met-towers. As a result, I am conducting a survey of area aerial applicators that serve our county to gather information about your operations around such towers. At a minimum, our Board intends to make high visibility markings as recommended by the FAA a condition in any potentially approved permit, which becomes a requirement of the local permit if approved.

I appreciate your willingness to participate. I have a series of questions below that I would like to gather information and your perspective, which are much of what we discussed on the phone. We will likely be having the follow-up hearing for the request during the Board's April 25th regular meeting, so I would appreciate a response by Monday morning, April 10th. I will have to draft the follow-up staff report to the Board by the end of the following week.

Please respond to the following questions/topics and feel free to provide further information as you would like that may be applicable.

1. Please provide a description of your business and services you provide in Cerro Gordo County.
 - A. MEYER AGRI – AIR, INC. PROVIDES ALL TYPES OF AERIAL APPLICATION IN CERRO GORDO COUNTY. FERTILIZING, SPRAYING, AND SEEDING ARE OUR MAIN FORMS OF BUSINESS.
2. Please describe your general practices when flying around obstructions, specifically meteorological towers or similar structures such as communication towers. What types of flight patterns do you generally take? How does this affect your ability to application for crops growing around an obstruction?
 - B. SEEDING AND FERTILIZING ARE ACCOMPLISHED AT APPROXIMATELY 30 FEET ABOVE THE CROP WHICH PROVIDES EASY MANEUVERING AROUND AN OBSTACLE THAT IS 150 FEET OR HIGHER. IT ALSO DEPENDS ON THE AMOUNT OF GUY WIRES ATTACHED TO THE TOWER. SPRAYING IS MORE CHALLENGING SINCE THE GOAL HEIGHT IS 08 – 10 FEET ABOVE THE CROP. THIS CREATES MORE OF A CHALLENGE IN THE SAFETY ASPECT AND THE QUALITY OF THE APPLICATION.

3. Please describe your general policy regarding flying around obstructions such as meteorological towers in a plane. How close are you able to safely fly in a plane to an obstruction? How close are you willing to fly to an obstruction, per your business policy in a plane? Are you able to adjust flight paths to accommodate applications around obstructions?
- C. THE ANSWERS TO ALL THE QUESTIONS IN THIS SEGMENT ARE ALL RELATED TO ONE THING: SAFETY! MR. FARMER WANTS ALL THE FIELD SPRAYED. MR. NEIGHBOR HAS TERRACES WHICH NEED TO BE AVOIDED. MR. ACREAGE OWNER HAS A REGISTERED COMMERCIAL GARDEN WHICH NEEDS TO BE AVOIDED. IF AERIAL SPRAYING NEEDS TO BE DONE WITH 1 OR 2 OF THESE SCENARIOS IT CREATES ADDITIONAL DANGER TO THE PILOT. THERE WILL BE MORE TURNING AND ADDITIONAL SHORT PASSES TO TREAT THE WHOLE FIELD, WHICH WILL RAISE THE COST OF THE APPLICATION.
4. Are there different application options other than a plane that you use, are consider using in the future, or that others in the industry are moving to that can accommodate closer flight or applications to obstructions? Helicopter? Unmanned drones? An alternative ground application? Other options? Are there differences for different types of applications?
- D. CURRENTLY, MEYER AGRI – AIR OFFERS A SMALL AMOUNT OF HELICOPTER APPLICATION. WE DO NOT OFFER GROUND SPRAYING OR DRONE APPLICATION. HELICOPTERS ARE VERY CAPABLE OF SPRAYING AROUND OBSTRUCTIONS. THEY ALSO ARE MORE EXPENSIVE TO OPERATE, NEARLY 25 % MORE PER ACRE. GROUND APPLICATION CAN ONLY COVER 30 % OF WHAT AN AIRPLANE CAN SPRAY IN A DAY. DRONES ARE BECOMING EASIER TO OPERATE BUT THEY CAN NOT COMPETE WITH THE DEMANDS OF PROFICIENT AND ECONOMICAL AERIAL SPRAYING.
5. Does application around obstructions increase what you charge for application? If so, what is the difference of cost between application on an obstruction-free field vs. having an obstruction? Are you able to use or able to use in the future an alternative application method that would not result in additional charges or less upcharges to clients?
- E. THE COST OF APPLICATION INCREASES PER THE AMOUNT OF EXTRA TIME NEEDED TO COMPLETE THE APPLICATION. MEYER AGRI AIR'S AIRPLANES BURN APPROXIMATELY 72 GALLONS OF JET FUEL AN HOUR. IF OBSTRUCTIONS ADD 15 MINUTES MORE TO COMPLETE THE FIELD, THE COST WILL GET HANDED DOWN TO THE CUSTOMER.
6. What are your recommendations for high visibility markings to be placed on a meteorological tower to make them as visible as possible? Attached is a determination of no hazard from the FAA, which has recommended high visibility markings for such towers with guy wires on page 4. These can be made a requirement by the county on any permit issued. What are your recommendations regarding the FAA's recommendations or anything additional that can be done to increase safety for aerial application?
- F. MARKER BALLS PLACED AT ASCENDING INTERVALS TO THE TOP, WITH THE LOWER BALLS STARTING AT 30 FEET. ALSO, DIFFERENT PAINT SCHEMES ON THE TOWER ITSELF. A FLASHING BEACON ON THE TOP OF THE TOWER WOULD BE GREAT!
7. How do you work around existing obstructions that do have high visibility markings? How about existing obstructions that do not have high visibility markings? Do you have a difference in policies or charges to clients between one with or without such markings?
- G. I AM PAST PRESIDENT OF THE IOWA AGRICULTURAL AVIATION ASSOCIATION AND WE MAINTAIN A STANDING RELATIONSHIP THE IOWA DOT – AVIATION DIVISION. IF WE COME ACROSS ANY UNMARKED TOWERS OR OBSTRUCTIONS, WE REPORT THEM TO THE DOT AND THEY TAKE IT UPON THEMSELVES TO GET IT MARKED. WE WILL ALSO REFUSE AN APPLICATION IF IT CANNOT BE DONE SAFELY. MET TOWERS NEED TO BE PLACED IN AN AREA WHERE THEY CAN BE IDENTIFIED AS AN AIRPLANE CIRCLES A FIELD. CROPS SHOULD NOT BE PLANTED INSIDE THE FOOTPRINT OF A TOWER WITH GUY WIRES. IT BECOMES DIFFICULT TO IDENTIFY THE GUY WIRES.

I appreciate any responses and information that you are able to provide. Please let me know if you have any questions or would like to discuss anything. I will try to follow up with a phone call later today or tomorrow, as I will be out doing site work this morning.

Thank you,

John Robbins

Planning and Zoning Administrator
Cerro Gordo County
jrobbins@cgcounty.org
Office: 641-421-3075
Direct: 641-421-3110

Robbins, John

From: Timmer, Amanda <TimmerA@diversifiedapps.com>
Sent: Monday, April 10, 2023 10:11 AM
To: Robbins, John
Subject: RE: Survey regarding aerial application around meteorological towers

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We charge the grower an additional \$2.00 an acre for anything that is in the path of completing the work. 500' is not that far for an aerial applicator. We have always told the growers that they are not getting the crop treated within those recommendations. I also always leave the option to not spray the field at all to the pilot. If they cannot complete the job in a safe manner we will refuse the field.

Amanda Timmer
Branch Manager
Midwest Custom Ag Aviation, Inc.
Cell- [319.830.0431](tel:319.830.0431)
Email- timmera@diversifiedapps.com

From: Robbins, John [mailto:jrobbins@cgcounty.org]
Sent: Monday, April 10, 2023 9:49 AM
To: Timmer, Amanda <TimmerA@diversifiedapps.com>
Subject: RE: Survey regarding aerial application around meteorological towers

Good morning, Amanda,

I appreciate your response to the questions. I have a couple follow-up questions:

- At what distance from a meteorological tower or similar obstruction with guyed wires do you begin to charge additional cost to a client?
- Our primary concern is the impacts to neighbors for aerial application, as the property owner for the land on which these towers sit should understand this potential impact for their own property. The proposed setback of the towers are over 200' from any non-participating, neighboring property line. It appears that the FAA has recommendations of 500' buffers for flying around a traditional communication towers:
 - Would the proposed setbacks of at least over 200' result in additional charges to neighboring farmers that have fields at least 200' away?
 - If so, would a 500' setback from any non-participating property line result in any additional charges for the neighboring farmer?

Please answer as soon as possible for the purposes of providing a staff report to our Board of Adjustment.

Thank you,

John Robbins
Planning and Zoning Administrator
Cerro Gordo County
jrobbins@cgcounty.org

Office: 641-421-3075
Direct: 641-421-3110

From: Timmer, Amanda <TimmerA@diversifiedapps.com>
Sent: Monday, April 10, 2023 9:06 AM
To: Robbins, John <jrobbins@cgcounty.org>
Subject: RE: Survey regarding aerial application around meteorological towers

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Good Morning,

I have listed our answers to the questions below. If you need anything more from me I would be happy to help. Thank you for getting our opinion on this.

Amanda Timmer
Branch Manager
Midwest Custom Ag Aviation, Inc.
Cell- 319.830.0431
Email- timmera@diversifiedapps.com

From: Robbins, John [<mailto:jrobbins@cgcounty.org>]
Sent: Wednesday, April 5, 2023 8:05 AM
To: Timmer, Amanda <TimmerA@diversifiedapps.com>
Subject: Survey regarding aerial application around meteorological towers

CAUTION - EXTERNAL SENDER
Good morning, Amanda,

Mr. Doug Pralle with Fly Farmer Aerial Application out of Hampton is assisting my office with some research. He may have been in contact with you earlier this week. Our Cerro Gordo County Board of Adjustment is considering a conditional use permit for 3 proposed meteorological towers (197'-8.25" tall) with guyed wires that are anchored located in the south portion of our county. Mr. Pralle provided me with your contact as a aerial applicator in the area.

During our first public hearing for this request, our Board found that the aerial application season is becoming longer and more common around the county. Our Board tabled the request to conduct further research regarding the impacts of such towers to aerial application and the farming operations near obstructions like met-towers. As a result, I am conducting a survey of area aerial applicators that serve our county to gather information about your operations around such towers. At a minimum, our Board intends to make high visibility markings as recommended by the FAA a condition in any potentially approved permit, which becomes a requirement of the local permit if approved.

I appreciate your willingness to participate. I have a series of questions below that I would like to gather information and your perspective, which are much of what we discussed on the phone. We will likely be having the follow-up hearing for the request during the Board's April 25th regular meeting, so I would appreciate a response by Monday morning, April 10th. I will have to draft the follow-up staff report to the Board by the end of the following week.

Please respond to the following questions/topics and feel free to provide further information as you would like that may be applicable.

1. Please provide a description of your business and services you provide in Cerro Gordo County.

Midwest Custom Ag provides aerial services of both pesticide and dry fertilizer/seeding(cover crop) applications throughout this area.

2. Please describe your general practices when flying around obstructions, specifically meteorological towers or similar structures such as communication towers. What types of flight patterns do you generally take? How does this affect your ability to application for crops growing around an obstruction?

If obstructions are present, even within a half mile of the application site, this can add several factors:

Increase application time which increases costs and reduces productivity

Most importantly is the stress value added to the pilot which can lead to distraction for the task at hand.

3. Please describe your general policy regarding flying around obstructions such as meteorological towers in a plane. How close are you able to safely fly in a plane to an obstruction? How close are you willing to fly to an obstruction, per your business policy in a plane? Are you able to adjust flight paths to accommodate applications around obstructions?

As a company policy Midwest Custom Ag leaves these decisions up the pilot in command.

Flight patterns have and can be adjusted, again this is up to the pilots discretion and in some instances the job may be turned down for application for the sake of safety.

4. Are there different application options other than a plane that you use, are consider using in the future, or that others in the industry are moving to that can accommodate closer flight or applications to obstructions? Helicopter? Unmanned drones? An alternative ground application? Other options? Are there differences for different types of applications?

If jobs are not suited for aerial application, ground application is usually provided by the co-op or customer.

5. Does application around obstructions increase what you charge for application? If so, what is the difference of cost between application on an obstruction-free field vs. having an obstruction? Are you able to use or able to use in the future an alternative application method that would not result in additional charges or less upcharges to clients?

Charges can be higher in areas of congestion with wind turbines/MET towers.

6. What are your recommendations for high visibility markings to be placed on a meteorological tower to make them as visible as possible? Attached is a determination of no hazard from the FAA, which has recommended high visibility markings for such towers with guy wires on page 4. These can be made a requirement by the county on any permit issued. What are your recommendations regarding the FAA's recommendations or anything additional that can be done to increase safety for aerial application?

Alternating red and white paint

Beacons

High visibility obstruction marking sphere-cable balls

GPS coordinates loaded into various aerial data bases used by most aerial applicators

7. How do you work around existing obstructions that do have high visibility markings? How about existing obstructions that do not have high visibility markings? Do you have a difference in policies or charges to clients between one with or without such markings?

Our company equips each aircraft with navigation aids that for the most part will show towers and other obstructions. However some MET towers can be erected within a short period of time without before mentioned markings or recognition.

Our policy is pilot discretion based on safe application.

I appreciate any responses and information that you are able to provide. Please let me know if you have any questions or would like to discuss anything. I will try to follow up with a phone call later today or tomorrow, as I will be out doing site work this morning.

Thank you,

John Robbins

Planning and Zoning Administrator

Cerro Gordo County

jrobbins@cgcourt.org

Office: 641-421-3075

Direct: 641-421-3110

Met Tower Decommission Summary

The following is a summary of procedures used for the de-commission of a 60M tilt up tower:

- Complete a tailgate/safety meeting prior to entering site. PPE required at all times while onsite.
- Take 8 pre- up tower photos and 8 pre- panoramic photos. Complete necessary documentation and data archiving before lowering tower.
- Complete a site survey, checking condition of tower base and stability of all anchors and guy wires. Perform load test on winch anchors.
- Determine if any potential hazards exist around tower such as power lines, utility lines etc.
- Determine wind direction and velocity to ensure wind speed will not put an excessive amount of force on the tower while lowering.
- Clear area of all equipment, vehicles, etc. from removal area, generally 150% of the tower height in all directions.
- **Start tower removal sequence:**
 - Inspect winch cable, hydraulic lines and skid steer before lowering tower.
 - Build, and attach gin pole and all rigging to tower and winch.
 - Assign anchor point locations to crew.
 - Begin lowering tower in 10° increments. Adjust side guy wires as needed to ensure tower stays straight.
 - The two above steps will be repeated until the tower is 3° degrees from the ground.
 - Upon receiving an all clear from the Lead Technician, the technicians will begin stripping the tower of booms, sensors and sensor cables. Once tower has been stripped of all equipment, the tower is lowered to the ground and disassembled by the crew. All guy wires are rolled up and labeled and tower is palletized and tagged for storage.
 - All anchors are removed from site using a track skid steer and auger attachment. Anchor holes are backfilled if needed.
- **Post tower clean-up:**
 - After the tower and all tower components have been loaded on trailer, the crew will spread out and walk the site one final time making sure all anchors, grounding rods etc. have been removed. Crew also ensures site location is clean of all trash.
 - Lead technician will take 8 post panoramic photos of site as well as any crop damage if applicable.



PLANNING AND ZONING Cerro Gordo County Courthouse

220 N Washington Ave
Mason City, IA 50401-3254
cgcounty.org/planning

(641) 421-3075
(641) 421-3110
plz@cgcounty.org

SPECIAL EXCEPTION STAFF REPORT

SUMMARY OF REQUEST

Case No.: 23-6

Hearing Date: March 28, 2023

Staff Contact: John Robbins, Planning and Zoning Administrator

Applicant:

Indigo Wind, LLC
120 Garret Street, Suite 700
Charlottesville, VA 22902

Owner

Multiple (See Exhibit 1)

Property Address: Not assigned

Brief Legal Description: Multiple (See Exhibit 1)

Zoning: A-1 Agricultural

Special Use Requested: 20.2(J) Commercial microwave, radio and television towers, public utility structures

Special Use Area: About 1 acre for each tower **Parcel Area:** 120 acres total

Special Use Description

Indigo Wind, LLC is requesting to construct three temporary, 197'-8.25"-tall meteorological towers for the purpose of measuring wind resources in the area. The proposed tower locations are located in Mount Vernon, Grimes, and Pleasant Valley Townships respectively.

FINDINGS OF FACT

1. Timothy J. & Laura A. Tracy are the owners of the subject property in Mount Vernon Township. Larry Brandt is the owner of the subject property in Grimes Township. Calvin D. Dorenkamp is the owner of the subject property in Pleasant Valley Township.
2. Indigo Wind, LLC is the applicant for the special use request.
3. All subject properties are zoned A-1 Agricultural.
4. Indigo Wind, LLC is requesting a Special Use Permit for three proposed meteorological towers.
5. Meteorological towers are a special permitted use in the A-1 District as a public utility structure or communication tower, subject to the requirements and conditions as granted by the Board of Adjustment.
6. The application was filed on February 27, 2023 with the Planning and Zoning Office.

BACKGROUND INFORMATION

Purpose of Special Use Request

Indigo Wind, LLC (Indigo) is requesting a Special Use Permit (SUP) for the purpose of erecting three temporary meteorological towers on three separate parcels in Mount Vernon, Grimes, and Pleasant Valley Townships (See Figures 1-3). The overall height of the guyed towers, with appurtenances, is 197'-8.25". According to the narrative, the towers are intended to measure site-specific wind resource conditions for the purpose of aiding in the development of a potential wind farm. The bases of the three proposed towers are over 700 feet from the nearest residences from any respective tower (Proposed tower location in Mount Vernon Township).

Existing Land Use and Zoning Classification of Property

All three proposed tower locations are located on fields in agricultural production in the A-1 Agricultural District.

Land Use and Zoning Classification of Surrounding Property

All three proposed tower locations are surrounded by fields in agricultural production in the A-1 Agricultural District. In Mount Vernon Township, the nearest residences are 9168 160th Street (See Figure 4) and 9213 160th Street (See Figure 5) at roughly 800' to the west and 700' to the southwest respectively. In Grimes Township, there are no residences within greater than a ¼-mile from the proposed tower location. The closest buildings are an animal confinement located about 1,000' southeast from the proposed tower location (See Figure 6). In Pleasant Valley Township, the nearest residences are located greater than 2,000' southerly from the proposed tower location.

GENERAL FINDINGS

Harmony and Accord with General Principles and Proposals of the Zoning Ordinance

Section 20.2(J) of the Zoning Ordinance allows towers to be placed in any zoning district except residential. The subject properties are zoned A-1 Agricultural. The requirements are intended to promote co-location of antennas, though this is not practical for the purposes of meteorological towers. Applicants are required to provide information on why existing towers cannot be used. The ordinance discourages the location of communication towers being located within one mile of other existing communication towers. The applicant has provided aerial photographs that do not show any nearby communication towers, and it was confirmed with the county's geographic information system that there are no existing communication towers within at least several miles of any of the proposed tower locations.

The Zoning Ordinance requires that permits from other governmental entities are obtained prior to making application or the applicant must acknowledge that any SUP granted would be contingent on such permits being filed. According to the narrative, the towers are below the minimum requirement imposed by the FAA for lighting. An e-mail was received from David Sims, Mason City Airport Manager, stating that the proposed tower are far enough away from the Mason City Municipal Airport that they should not cause impediments to regular air traffic from the airport. Determinations of no hazard were received—and are included in your packet stating that none of the proposed towers will be a hazard to air traffic. Mr. Sims further

recommended that Indigo follow the recommendations of the FAA (located on page 4 of each determination) and place high visibility markers on each of the proposed towers, as these can be a safety risk for agricultural aircraft if not easily visible. This should be a condition of the SUP, if approved.

Compatibility of Use with the Appearance and Essential Character of Area

The proposed meteorological towers have a minimally visible monopole design that is supported by several guyed wires anchored into the ground (See Figure 7). From a distance, they are generally unnoticeable visually. The immediate area is comprised of agricultural production and rural residences. The closest residences are at least 700' from any of the proposed locations, so the proposed towers will not likely be apparent.

Impact on Existing and Futures Uses, Vicinity, and Community as a Whole

The towers' impact is likely to be more aesthetic on the immediate vicinity than safety oriented, so long as the tower and guyed wires have highly visible marking as recommended to mitigate hazard to agricultural aircraft, which should be a condition of any approval. The impact is localized and not something that will impact the county as a whole.

Adequacy of Public Services

(i.e., highways, streets, police, fire protection, drainage structure, refuse disposal, water and sewage facilities, or schools)

No new driveway will be needed to access the proposed tower sites as indicated in Appendix C area maps. The narrative states that only periodic maintenance (a few times per year) is needed and that the condition of the towers will be monitored by Indigo during the time the towers are on site. There should not be any noticeable increase in the average annual daily traffic count of 10 vehicles per day on 160th Street for the proposed tower location in Mount Vernon Township. The same is true for the proposed tower location in Grimes Township, which also sees 10 vehicles per day, and the proposed tower location in Pleasant Valley Township, which receives 20 vehicles per day on average. All of the roads in which the proposed tower locations are accessed are gravel-surfaced, so damage to the road is a possibility from heavy trucks transporting materials during construction. Repairing any damage to the roads resulting from said construction should be at the expense of the applicant and a condition of the SUP.

Law enforcement protection is provided for both locations by the Cerro Gordo County Sheriff's Office. Fire protection is from the Swaledale Fire Department for the proposed the tower location in Mount Vernon Township. Fire protection is provided by the Thornton Fire Department for the proposed tower location in Grimes Township. Fire protection is provided by the Rockwell Fire Department for proposed the tower location in Pleasant Valley Township. No foreseeable demand for these services will be created by the proposed towers' use.

None of the proposed tower locations are located near any regulated floodplains. The proposed tower location in Grimes Township is located within Drainage District 65. Indigo will be required to complete a review process for potential impact to public drainage infrastructure and will need to file for easement within a public drainage district right-of-way with the County Auditor's Office prior to any construction. At this time, Indigo has filed the appropriate paper work for that purpose.

Neither tower should have any impact on refuse disposal. Well or sewage facilities are not necessary to serve the tower sites. There will be no impact on schools.

Public Cost for Additional Public Facilities and Services

No upgrades are necessary to any applicable public streets to accommodate the proposed use. No other costs to the public are anticipated.

Potential Detriments to Persons, Property, or General Welfare

(i.e., excessive traffic, noise, smoke, glare, or odors)

The additional traffic generated by the proposed towers will be negligible. Excessive noise, smoke, fumes, or odors will not be created by the proposed towers. Any glare created by the towers will be the applicant's responsibility to correct. The application states the towers' lighting or markings will be consistent with FAA rules and regulations and will not be necessary since the tower will be less than 200 feet in height.

Signal interference created by the towers is the applicant's responsibility to correct. No separate permits or approvals are required by the FCC for towers under 200'; however, requiring correction of signal interference should be made a condition of the SUP, if approved.

Compatibility and Consistency with the Intent and Purpose of the Zoning Ordinance

The stated purpose of the A-1 district is to permit the continued use of agricultural land for agricultural uses. Telecommunications towers are not an agricultural use but are allowed by SUP in the A-1 district. Farming may continue around the base of the tower and the guy wire orientation. Each tower will take about an acre out of production. The applicant states the towers will be temporary, and the disturbed land will be returned back to its original condition once data collection is complete.

Compatibility with County Comprehensive Plan

The county's Comprehensive Plan Update, adopted March 2, 2004, does not specifically address communications towers and facilities. There are, however, several objectives and policy statements that relate to the proposed special use.

Objective 2.1 of the plan encourages, "A land use balance in order to promote the preservation, protection and efficient provision of appropriate land use, essential services, generation of revenues which cover the costs of those services, and a mixture of housing, shopping, and employment opportunities." Policy 2.1.5 under this objective states, "Incorporate performance standards, where appropriate, into land development regulations and criteria; particularly to encourage compatible development projects. Performance standards are a flexible method of regulating development, and are related to the effects of the development on adjacent properties or uses. The means of meeting development performance standards are flexible, and may be determined by the developer and the public representatives. Performance standards set the upper limits on those measurable effects of development, such as noise levels, water and air pollution, and other impacts on adjacent properties or upon the community area in general." A remote tower such as this is used by the wind industry to determine appropriate locations for wind farms. Where there are no regulatory reasons to deny a SUP for a tower, care must be taken to make sure the towers, which are obvious

additions to the landscape but generally have a minimal visual impact from a distance, are made as compatible with surrounding development as possible.

Objective 2.4 of the plan discourages, “Non-farm rural uses, and those uses which propose to locate outside of cities in established urban fringe areas, from locating in active agricultural areas or on productive agricultural soils or on sensitive environmental land.” Policy statement 2.4.3 under this objective states, “In order to protect and maintain the existing natural character of the land, such as topography, scenic views, existing vegetation, and waterways of the county, non-farm rural uses should be limited to areas that are appropriate for such development, and designed to blend with the natural character as much as possible through the use of screening, building placement, and scale or size of buildings.” A meteorological tower is a non-farm use, but the land around the tower and guyed wire orientations will continue to be farmed. It is nearly impossible for a 197’-8.25”-tall tower to blend in with its surroundings entirely.

COMPLIANCE WITH ADDITIONAL ARTICLE 20 REQUIREMENTS

Staff comments are in bold below. Additional requirements for the special use requested are as follows:

20.2 SPECIAL USES

- J. Commercial microwave, radio and television towers, public utility structures and accessory equipment, including their transmitting stations and towers, and wireless telecommunications facilities. Any district except residential, provided the following requirements are met:
1. Application. In making application for a Special Use Permit, the applicant shall file the following in addition to the standard application for Special Use Permit:
 - a. A site plan, drawn to scale, identifying the site boundary; tower or facility location; height of structure(s); guy wires and anchors; and existing and proposed structures including accessory structures. **The plans filed with the application materials meet this requirement.**
 - b. If the applicant is not the site owner, written authorization from the site owner. **The owner of the proposed tower location in Mount Vernon Township is Timothy J. & Laura A. Tracy. The owner of the proposed tower location in Grimes Township is Larry Brandt. The owner of the proposed tower location in Pleasant Valley Township is Calvin D. Dorenkamp. Documentation with the owners’ signatures giving Indigo permission to apply for the SUP for the towers on each property was submitted with the application.**
 - c. The applicant shall provide evidence that available public or private sites are unsuitable for operation of the facility under applicable telecommunications regulations and applicant’s technical design requirements. A new tower shall not be permitted if co-location can be found upon an existing or alternative tower structure

that meets engineering requirements of an applicant's wireless network within a one (1) mile radius of the proposed new tower site. Cost shall not be used as a reason against co-locating of antennas. **There are no other towers within one mile of the proposed tower site.**

- d. Evidence that all permits required by any other governmental entity have been obtained, or, if all such permits cannot practicably be obtained prior to the public hearing, the written acknowledgement by the applicant that any special use permit granted will be contingent upon the applicant obtaining all such permits and providing conclusive evidence thereof to the Administrative Officer, as the latter may require. **No other permits are required for the proposed towers. Indigo has provided documentation from the FAA that states none of the towers will be a hazard to air traffic.**
2. Conditions. Any applicant shall provide documentation that all of the following applicable conditions will be met for all towers:
 - a. The tower shall be constructed or easily modifiable, within thirty (30) days, to support the equipment of at least three (3) communications companies. The towers will not be able to support wireless communications carriers since they will be built only for monitoring meteorological conditions. **Meteorological towers are not designed to hold multiple antennas for communication carriers and is not applicable to this specific type of special use. This requirement should be waived by condition if the application is approved.**
 - b. Towers and telecommunications facilities shall be of camouflage design, if possible. Examples of camouflage facilities include, but are not limited to, architecturally screened roof-mounted antennas, antennas integrated into architectural elements, communications and telecommunications towers designed to blend into the surrounding environment or to look like an object other than a tower. Where camouflage design is impossible or impractical, the tower shall be built of materials that make it nearly invisible. Lighting on the tower shall be of the least conspicuous type and exist only to satisfy Federal Aviation Administration (FAA) requirements. **Due to the proposed location of the towers, camouflage design is not practical. In addition, there are no structures of significant height in proximity close to the proposed sites. According to the narrative, the towers will be narrow profile, being monopole structures. Lighting will not be required because the tower will be less than 200' in height. However, high visibility markings as recommended by the FAA and the Mason City Municipal Airport should be made a condition of any approval.**
 - c. The tower owner and the tower operator shall provide proof of adequate liability insurance in writing to the Administrative Officer of Cerro Gordo County for Planning and Zoning, under such further conditions and in such amounts as the Board of Adjustment or the Administrative Officer may direct, but in no event shall such proof be required more often than annually. **Indigo has submitted a certificate of liability insurance for the proposed towers with the application.**

- d. The base of the tower shall be at least the height of the tower from any public right-of-way and any existing principal or accessory structure, other than the base station. Guy wires, guy anchors, and base station structures shall comply with all setbacks for the zoning district in which they are located. No guy anchors, towers, or base station structures shall be located in an easement located on the property except that held by the applicant. **The scaled site plan and diagram filed with the application shows that both of the 197'-8'25'-tall meteorological towers will be more than 220 feet from the base of each tower to the closest right of way and property lines. The guyed wire anchors of the proposed tower closest to any of the applicable street right-of-way will extend approximately 164' from the base of the tower, being approximately 56' from the closest right-of-way (the proposed tower located in Mount Vernon Township from 160th Street) which meets the required 50' front yard setback in the A-1 District.**
- e. Any signal interference complaints associated with the tower or related equipment shall be addressed within thirty (30) days in accordance with Federal Communications Commission (FCC) rules and procedures. **The applicant's narrative states that they will comply with the above requirement. This should be a required condition of the SUP, if approved.**
- f. The tower and all appurtenances shall be removed upon the end of its useful life and the site restored to its condition prior to tower placement within one hundred eighty (180) days. **The narrative states that the proposed towers are intended to be on the premises temporarily. The applicant states that the tower and all appurtenances will be removed and the property restored to its original condition once the tower is no longer in use. This should be a required condition of the SUP, if approved.**
- g. Access from any public road shall be subject to the standards of the County Engineer. An access permit shall be obtained from the County Engineer prior to construction. **Documents accompanying the application state that no additional accesses are proposed. A condition that prohibits any additional accesses should be part of the SUP, if approved.**
- h. A zoning permit shall be applied for and approved, subject to Article 22 of the Zoning Ordinance, prior to any construction. **This should be a required condition of the SUP, if approved.**
- i. A sign shall be placed on the base station structure or at the base of the tower that identifies a name and phone number of whom to contact in case of emergency. No advertising device is permitted anywhere on the facility except as permitted by this Ordinance. **The applicant states in its narrative that this requirement will be complied with. This should be a required condition of the SUP, if approved.**

3. Exceptions. The Special Use Permit procedure shall not apply where:
- a. An applicant proposes to add an antenna to an existing tower and the addition of such antenna will not increase the total height of the tower.

In such cases, the applicant shall file an Application for Zoning Certificate for review by the Zoning Administrator, along with evidence that the required FAA and FCC permits have been obtained. Since this request is for new towers, this requirement does not apply.

4. Transmission lines. The routing of transmission lines shall be restricted to locations that minimize the disruption of agricultural activity and developed residential areas. **No transmission lines should be needed to power the towers. A condition of the SUP, if approved, should limit new transmission lines to be underground only.**

ZONING DISTRICT REQUIREMENTS

Requirements of the zoning district for which the proposed special use is to be located are as follows:

The property is zoned A-1 Agricultural.

- Minimum parcel size is 10 acres. **The towers will be located on parcels of more than 10 acres.**
- 7.5 Height Regulations. No building hereafter erected or structurally altered shall exceed two and one-half (2 1/2) stories or thirty-five (35) feet. **The proposed tower will be 197'-8.25" in height. Towers above district height limits may be granted at the Board of Adjustment's discretion under Article 6.27 of the Zoning Ordinance and is not a concern for special permitted uses such as this.**
- 7.6 Yard Requirements. Each lot shall have front, side and rear yards not less than the depths or widths following:
 - A. Front yard depth, fifty (50) feet.
 - B. Each side yard width, twenty-five (25) feet.
 - C. Rear yard depth, thirty (30) feet.

The site plans and diagram submitted with the application show the closest guyed wire anchors extend 164' from the base of the proposed towers. The closest setback of any of the proposed guyed wire anchors will be 56' from the closest right-of-way way (the proposed tower located in Mount Vernon Township from 160th Street), which meets the required 50' front yard setback in the A-1 District.

DEPARTMENT COMMENTS

County Engineer: Brandon Billings, the County Engineer, stated he has no concerns. No separate road use agreement or permits are required for these types of structures.

County Auditor: The parcel in Grimes Township is located within Drainage District 65. Indigo will be required to complete a review process for potential impact to public drainage infrastructure and will need to file for easement within a public drainage district right-of-way prior to any construction with the County Auditor’s Office. At this time, Indigo has filed the appropriate paper work. Being responsible to repair any damaged drainage infrastructure should be made a condition of any approval.

Mason City Municipal Airport: Airport Manager David Simms acknowledges the statements of no hazard for the proposed towers but further recommends that Indigo follow FAA recommendations to place high visibility marking, specifically painting, high visibility sleeves, and spherical markers on guyed wires. This should be made a condition of any approval.

STATUTORY REQUIREMENTS

Additional requirements under federal, state, or local law pertain to the special use applied for:

An FAA finding of no hazard to air navigation was filed with the application stating that all three proposed meteorological towers will not be a hazard to air traffic.

No other federal or state approvals are required, except there may be a possibility that oversized permits may be required by the Iowa DOT for transporting the tower to each site. It will be the applicant’s responsibility to ensure they obtain such a permit if required.

The parcel in Grimes Township is located within Drainage District 65. Indigo will be required to complete a review process for potential impact to public drainage infrastructure and will need to file for easement within a public drainage district right-of-way prior to any construction with the County Auditor’s Office. At this time, Indigo has filed the appropriate paper work. Being responsible to repair any damaged drainage infrastructure should be made a condition of any approval.

STAFF ANALYSIS AND RECOMMENDED ACTION

The Board of Adjustment reviewed similar meteorological towers in 2015 to the ones currently being proposed by Indigo (See Figure 7). Again, it is intended that the proposed towers will be temporary while Indigo measures wind data to determine whether these parts of Cerro Gordo County would be appropriate for wind farm development. Since the towers will be on the premises for a short period, their impacts are also temporary.

Indigo has filed a thorough application. In the narrative, they state intent to comply with the minimum requirements of the Zoning Ordinance, except the provision requiring towers to be easily modifiable to support the equipment of three telecommunications carriers, which is not applicable to meteorological towers. Otherwise, all minimum requirements appear to be met.

The Board of Adjustment has traditionally been a proponent of alternative energy systems, beginning with its approval of the Cerro Gordo Windfarm project in 1998, and subsequent redevelopment in 2019. Approval of the SUP request is recommended, subject to the conditions suggested below.

RECOMMENDED CONDITIONS TO BE MET IF POSITIVE VOTE BY BOARD OF ADJUSTMENT

Note: In granting a Special Use Permit, the Board of Adjustment may attach conditions which it finds are necessary to carry out the purpose of the Zoning Ordinance, in conformance with what is provided in Article 20 of the Zoning Ordinance, and where reasonable and necessary may increase the required lot or yard, control the location and number of vehicular access points to the property, limit the number of signs, limit coverage or height of buildings because of obstruction to view and reduction of light and air to adjacent property, and require screening and landscaping to reduce noise and glare and maintain the property in character in keeping with the surrounding area. Special uses shall ordinarily comply with the standards of the district concerned for principal uses which are permitted therein, except as modified by the Board of Adjustment in granting a Special Use Permit.

1. This Special Use Permit may be reviewed at any time in the future upon the request of the applicants or a majority of the Board of Adjustment members.
2. The provisions and/or regulations as stated shall be minimum requirements and wherever the requirements of any other lawfully adopted rules, regulations, or ordinances are at a variance, the most restrictive shall govern.
3. It is contemplated that from time to time during the operation of temporary meteorological towers that conditions may arise which are not covered by the terms of this permit and which cannot be anticipated. In the event such conditions do arise, the Board of Adjustment of Cerro Gordo County, Iowa, may impose additional regulations to meet any new conditions. In addition, if said facility should, at any time, be operated in any manner which violates the rules and regulations of any federal or state regulatory agency, then the Board of Adjustment may impose such other conditions so as to ensure compliance with such rules and regulations.
4. This permit will be subject to revocation for operator's failure to comply with the provisions as herein set forth or such other provisions as may, from time to time, be imposed by the Board of Adjustment of Cerro Gordo County, Iowa, under the terms of this permit.
5. County representatives shall have the right to enter the premises at any time upon notification to the permit holder for the purposes of enforcing the provisions of this Special Use Permit.
6. Any other necessary permits or licenses required by federal, state, and local agencies shall be obtained by the applicant and current copies placed on file with the county Planning and Zoning Office.
7. This Special Use Permit is granted to Indigo Wind, LLC and its successors and assigns and is transferrable and applicable to any future owners of any of the meteorological towers, whether owned separately or in combined ownership.
8. The site plan and operator's statement is hereby adopted as presented and the applicant shall adhere to said site plan and all accompanying documentation. The Board of Adjustment shall have the right to review any proposed change in or expansion of the special use and shall require an amendment to this Special Use Permit be approved.
9. All construction shall strictly comply with the site plan submitted with the application. A Zoning Permit Application shall be completed and a Zoning Permit issued prior to any new construction on the site related to the special use, subject to Article 22 of the Zoning Ordinance

10. In acknowledgement of the type of towers proposed and their temporary location on the premises, the requirement that the tower shall be constructed or easily modifiable, within thirty (30) days, to support the equipment of at least three (3) communications companies, is hereby waived.
11. The tower owner and the tower operator shall provide proof of adequate liability insurance for each tower in writing to the Administrative Officer of Cerro Gordo County for Planning and Zoning, under such further conditions and in such amounts as the Board of Adjustment or the Administrative Officer may direct, but in no event shall such proof be required more often than annually.
12. The base of each tower shall be at least the height of the respective tower, and all antennas and appurtenances, from any public right-of-way, structure or non-participating property, except for structures owned by the applicant.
13. Any signal interference complaints associated with the towers or related equipment shall be addressed within thirty (30) days from the date of notification in accordance with Federal Communications Commission (FCC) rules and procedures.
14. Any glare caused as a result of the towers or related equipment shall be corrected within thirty (30) days from the date of notification.
15. The towers and all appurtenances shall be removed upon the end of their useful life and each site restored to their original condition prior to tower placement within one hundred eighty (180) days.
16. No additional driveway shall be permitted for the purpose of accessing the towers. The applicant shall use existing accesses to get to the tower sites.
17. A sign shall be placed on each base station structure or at the base of either tower that identifies a name and phone number of whom to contact in case of emergency.
18. Any electrical service not generated by solar power to either tower shall be by underground service only.
19. Any road damaged as a result of the construction of the special use shall be restored to its pre-construction condition. Costs of repair of damage to county roads or rights-of-way resulting from the construction phase of this project shall be the responsibility of the applicant.
20. If the applicant requests an E911 address for either tower, the cost for the sign and post of the address shall be at the expense of the applicant.
21. The project shall not adversely impact any duly established drainage district or private drainage facilities. Damage to drainage structures resulting from the construction of the special use shall be repaired at the applicant's expense. The applicant shall conduct a pre-construction assessment documenting the existing condition of all drainage structures within the project area.
22. The applicant shall mark each tower with highly visible markings as recommended by the FAA in the determinations of no hazard submitted with the application.
23. Refuse removal during construction shall be the responsibility of the applicant.

BOARD DECISION

The Board of Adjustment may consider the following alternatives:

Alternatives

1. Grant the requested Special Use Permit Application subject to any condition as deemed necessary by the Board (The Board reserves the right to remove, amend, or add additional conditions from those recommended as deemed necessary).
2. Deny the requested Special Use Permit Application.

The following motions are provided for the Board's consideration:

Provided motion of **approval**:

To adopt the staff report as the Board's findings and to grant the application, subject to the conditions recommended by staff and as modified by the Board of Adjustment, for the placement of an agricultural-commercial neighborhood business, and further, that the grant of the application be made effective immediately and on the condition that Indigo Wind, LLC shall perform all operations under the application under the specific direction of the Cerro Gordo County Zoning Administrator, consistent with the proposed conditions and recommendations approved by the Board of Adjustment, until such time as a formal resolution is drafted and adopted by the Board of Adjustment, not to exceed 60 days.

Provided motion of **denial**:

To adopt the staff report as the Board's findings and to deny the application for the reasons stated in the staff report as well as for the following reasons: **[STATE ADDITIONAL REASONS FOR DENIAL, IF ANY]**. Said reasons for denial shall be stated in the official transcript and minutes of the Board of Adjustment, and shall be made in writing to the applicant in letter form by the Board's secretary.

EXHIBITS

- Exhibit 1: List of properties and deed owners
- Exhibit 2: Figures
- Exhibit 2: Special Use Permit Application
- Exhibit 3: Operator's statement
- Exhibit 4: Site plans and diagram (Appendix A)
- Exhibit 5: Area maps (Appendix C)
- Exhibit 6: FAA determination of no hazard
- Exhibit 7: Certificate of liability insurance
- Exhibit 8: Aerial photos of sites

List of Properties and Deed Owners

Parcel # 10-33-300-005-00

SE¼ of the SW¼, Section 33, Mount Vernon Township

Timothy J. & Laura A. Tracy

9716 160th Street

Swaledale, IA 50477

Parcel # 13-02-200-004-00

SE¼ of the NE¼, Section 2, Grimes Township

Larry Brandt

607 River Oak Drive

Ames, IA 50010

Parcel # 14-01-400-002-00

NE¼ of the SE¼, Section 1, Pleasant Valley Township

Calvin D. Dorenkamp

324 Lakeview Drive

Mason City, IA 50401

Figure 1

Looking at the proposed location of the meteorological tower in Mount Vernon Township from 160th Street



March 8, 2023, J. Robbins

Figure 2

Looking at the proposed location of the meteorological tower in Grimes Township from Mallard Avenue



March 8, 2023, J. Robbins

Figure 3

Looking at the proposed location of the meteorological tower in Pleasant Valley Township from Finch Avenue



March 8, 2023, J. Robbins

Figure 4

Looking at the property at 9186 160th Street, located approximately 800' west of the proposed tower location in Mount Vernon Township



March 8, 2023, J. Robbins

Figure 5

Looking at the property at 9186 160th Street, located approximately 700' southwest west of the proposed tower location in Mount Vernon Township



March 8, 2023, J. Robbins

Figure 6

Looking at the property at the animal confinement at 6221 Finch Avenue, located approximately 1,000' southeast of the proposed tower location in Grimes Township



March 8, 2023, J. Robbins

Figure 7

Looking at an existing meteorological constructed in 2015 on 190th Street in Owen Township, similar in design to the proposed towers



April 11, 2016, J. Robbins



February 23, 2023
Indigo Wind MET Application
Brandt Application
Dorenkamp Application
Tracy Application

SPECIAL USE PERMIT

APPLICATION

Date Filed 2/27/23

Date Set for Hearing 3/28/23

Case Number: 23-6

caroline.casler@apexcleanenergy.com

Applicant Name: Indigo Wind, LLC

Phone: 217-371-6639

E-Mail: _____

Mailing Address: 120 Garrett Street, Suite 700 Charlottesville, VA 22902

Property Owner Name: Larry Brandt

Phone: 515-290-3608

E-Mail: mhmayer@metronet.net

Property Owner Address: 607 River Oak Dr, Ames, IA 50010

Property Description (Not to be used on legal documents): Parcel # 130220000400 Township Grime

Property Address: 42.99071, -93.40006 Zoning: A-1 - Agricultural

Brief Legal Description:

SE NE 02-94-22

Type of Special Use Requested: Meteorological Tower

Special Use Description: Please provide a general description of the proposed special use.

Indigo Wind, LLC, applicant, on behalf of Larry Brandt, owner, is requesting approval of a Special Use Permit to install one (1) temporary meteorological tower including guy wires and anchors in the A-1 Agricultural Zone District.

The meteorological tower ("met tower") will gather meteorological data to evaluate the wind resource in the area.

***Attach all required items listed in the application checklist, including written operator's statements, site plan, filing fee, and all other materials required to be submitted with this application**

I am the Owner Contract Purchaser Other (Explain)

Applicant holds wind energy lease with property Owner.

_____ of the property affected.

I, the applicant, being duly sworn, depose and say that I am the owner or that I am authorized and empowered to make the accompanying application; and that the information provided is true and correct, and actual construction, as applicable, and operation of the proposed special use will proceed in accordance with the purposes herein stated on the application and all submitted materials. I further agree to any conditions and/or requirements the Board of Adjustment may stipulate. The Planning & Zoning staff and Board of Adjustment members are also given permission to enter the above property in reviewing this application.

Applicant Signature Caroline Casler

Date 01/05/2023

SPECIAL USE PERMIT

APPLICATION

Date Filed 2/27/23

Date Set for Hearing 3/28/23

Case Number: 23-6

caroline.casler@apexcleanenergy.com

Applicant Name: Indigo Wind, LLC

Phone: 217-371-6639

E-Mail: _____

Mailing Address: 120 Garrett Street, Suite 700 Charlottesville, VA 22902

Property Owner Name: Calvin D Dorenkamp

Phone: 641-423-2798

E-Mail: cddnyd@gmail.com

Property Owner Address: 324 LAKEVIEW DR, Mason City IA 50401

Property Description (Not to be used on legal documents): Parcel # 140140000200 Township PLVAL

Property Address: 42.9866, -93.26627 Zoning: A-1 - Agricultural

Brief Legal Description:

NE SE 01-94-21

Type of Special Use Requested: Meteorological Tower

Special Use Description: Please provide a general description of the proposed special use.

Indigo Wind, LLC, applicant, on behalf of Calvin D Dorenkamp, owner, is requesting approval of a Special Use Permit to install one (1) temporary meteorological tower including guy wires and anchors in the A-1 Agricultural Zone District.

The meteorological tower ("met tower") will gather meteorological data to evaluate the wind resource in the area.

***Attach all required items listed in the application checklist, including written operator's statements, site plan, filing fee, and all other materials required to be submitted with this application**

I am the Owner Contract Purchaser Other (Explain) Applicant holds wind energy lease with property Owner.

_____ of the property affected.

I, the applicant, being duly sworn, depose and say that I am the owner or that I am authorized and empowered to make the accompanying application; and that the information provided is true and correct, and actual construction, as applicable, and operation of the proposed special use will proceed in accordance with the purposes herein stated on the application and all submitted materials. I further agree to any conditions and/or requirements the Board of Adjustment may stipulate. The Planning & Zoning staff and Board of Adjustment members are also given permission to enter the above property in reviewing this application.

Applicant Signature Caroline Casler

Date 01/05/2023



February 23, 2023

Dear Cerro Gordo County Board of Adjustment:

Please let this letter serve as the "Written Operator's Statement" for the Special Use Permit application that Indigo Wind, LLC, is submitting on behalf of landowners.

- The Special Use Permit will be used for a meteorological tower ("met tower") that will gather meteorological data to evaluate the wind resource in the area. A team consisting of installation and remote operations employees will be on site to install the tower. We do not expect the data gathering to cause any automotive or pedestrian traffic disruptions, and employees will visit the met tower only a few times after installation. Materials include the tower itself, the steel baseplate, and guy wires. No additional permits from state or federal agencies are required.
- The met tower will be 197 feet 8 inches tall. There will be no lights on the tower, as it is less than 200 feet in height and is therefore not subject to Federal Aviation Administration (FAA) jurisdictional requirements for tower lighting. The met tower will be located on private agricultural ground away from densely populated areas. The tower should minimally impact traffic conditions and produce no noise, odors, fumes, glare, dust, or other matter pertaining to public safety, health, and general welfare.
- Addressing Section 24.4(A)(2)(b)((1)-(7)) in the Zoning Ordinance:
 1. The met tower use is in accordance with the general principles and proposals of the Cerro Gordo County Zoning Ordinance.
 2. The open farm field is suitable for the temporary met tower as it provides an unobstructed measurement of the wind profile. The tower will have a small foundation in the center, then four down guy anchors--each 90 degrees from the other--for support. Only minimal sitework is needed.
 3. The met tower poses little to no risk. The area will remain suitable for current and future agricultural practices and will have no adverse effects on the community.
 4. Existing public facilities are sufficient for use and will only be utilized during installation and removal.
 5. The met tower will not create additional public costs for public facilities and services. No additional improvements to public facilities are required.
 6. The met tower will not involve uses, activities, processes, materials, equipment, or conditions of operations that will be detrimental to any person, property, or

c/o Apex Clean Energy
120 Garrett Street, Suite 700 | Charlottesville, VA 22902
T 434.220.7595 | F 434.220.3712
apexcleanenergy.com

general welfare by reasons of excessive production of traffic, noise, smoke, fumes, glare, or odors.

7. The proposed use of the met tower is consistent with the intent and the purpose of the zoning district in which it is proposed to locate such use.
- Addressing the performance standards in subsection J of Article 20.2 in the Zoning Ordinance:
 1. Application:
 - a. The site plan is drawn to scale and identifies the site boundary, the tower and tower height, guy wires, and anchors. The site plan is included in Appendix A.
 - b. Written authorization from the site owner is included in Appendix B of the application package.
 - c. Evidence that no existing towers reside in the vicinity and no co-locating of antennas is present is included in Appendix C of the application package.
 - d. Evidence that no additional governmental permits are required is included in Appendix D of the application package.
 2. Conditions:
 - a. The met tower will be fully installed within 30 days of the start of construction.
 - b. The met tower will be built from materials that make it nearly invisible. Lighting is not required on the tower, as it is less than 200 feet tall and compliant with the FAA jurisdiction.
 - c. Indigo Wind, LLC, or Apex Clean Energy has provided proof of adequate liability insurance in the application package.
 - d. The base of the tower is at least 198 feet from any public right-of-way and any other existing structures. The guy wires, guy anchors, and base station structure comply with all zoning setbacks for agricultural districts within Cerro Gordo County. The guy anchors, towers, and base stations will all be located within a Wind Energy Easement located on the property held between Apex Clean Energy (applicant) and Owner. A memorandum of easement is provided in Appendix E of the application package.
 - e. Any signal interference complaints associated with the tower or related equipment will be addressed within 30 days in accordance with Federal Communications Commission (FCC) rules and procedures.
 - f. The met tower and all appurtenances will be removed within 180 days upon the end of its useful life, and the site will be restored to its original condition prior to tower placement.
 - g. A public road access permit has been deemed unnecessary by the County Engineer as existing driveways will be used for construction purposes.
 - h. A zoning permit will be applied for and approved, subject to Article 22 of the Cerro Gordo County Zoning Ordinance.

- i. A sign identifying a name and phone number of contact in case of emergency will be placed by the tower.
3. Exceptions:
 - a. No additional antenna to the existing tower will be proposed, so no height will be added to the tower.
4. No transmission line routing or rerouting will accompany this special use.

Please let me know if you have any questions. I can be reached at 217-371-6639 or caroline.casler@apexcleanenergy.com.

Sincerely,

Caroline Casler
Project Developer



Appendix A

093540000500

093540000600

093630000300

160th St



130220000100

130220000200

130110000100

Finch Ave




130220000300

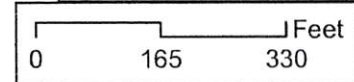
130220000400

42.99071, 90°
-93.40006 239 ft

236 ft

130110000300

-  Met Tower
-  Parcels
-  Road Right of Way



Location of parcel boundaries and features shown on map are approximate and subject to final survey.

Dimension: 1081_2166.apx_1081x2166.apx_1081x2166.apx

103330000100

103330000200

103340000100



103330000300

103330000500

103340000300

103340000400

103330000400

42.99544,
-93.33321

487 ft

90°

222 ft

160th St

140410000200

140410000300

140410000100



Location of parcel boundaries and features shown on map are approximate and subject to final survey.

140

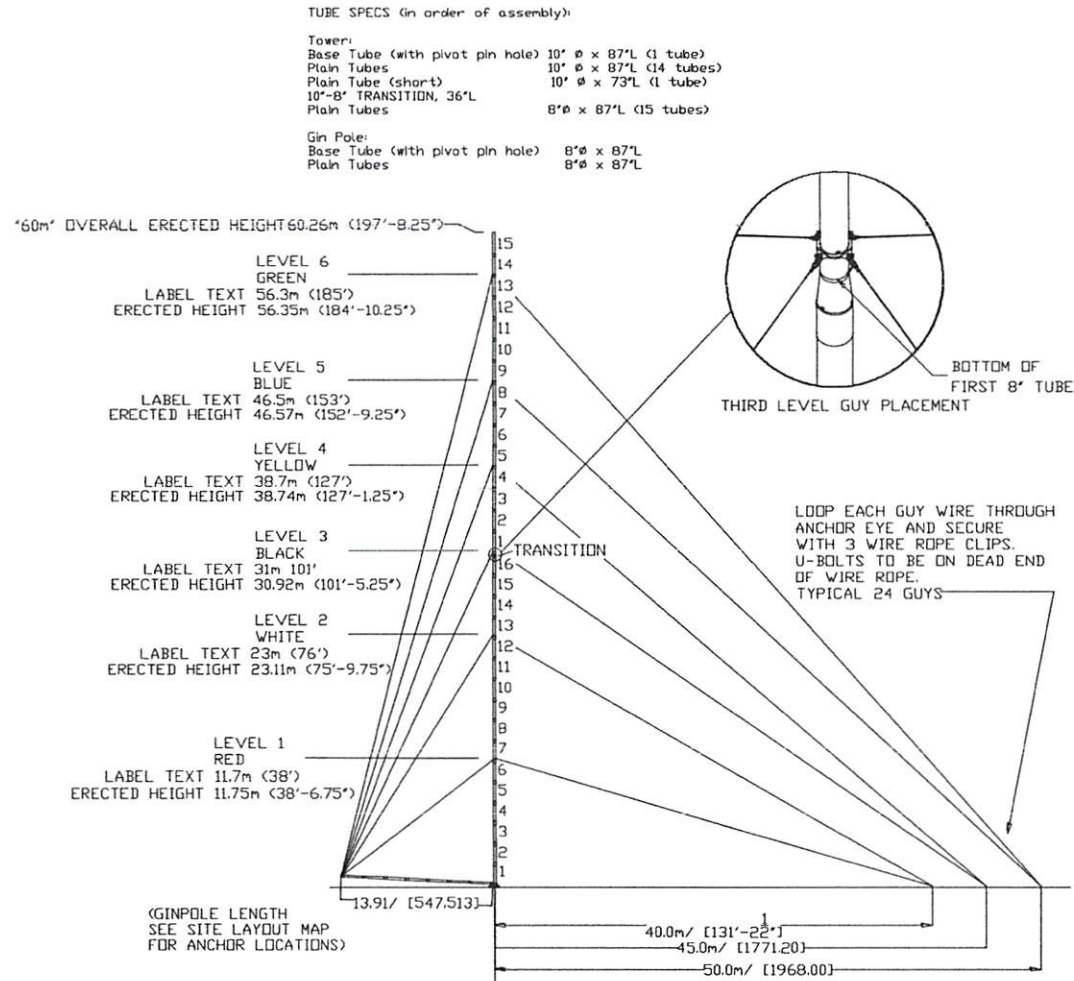
- Met Tower
- Parcels
- Road Right of Way

0 175 350 Feet

Document Path: \\GSE_Images\BID_1404100001\1404100001\1404100001.dwg

Appendix B: 60m XHD with Standard Footprint

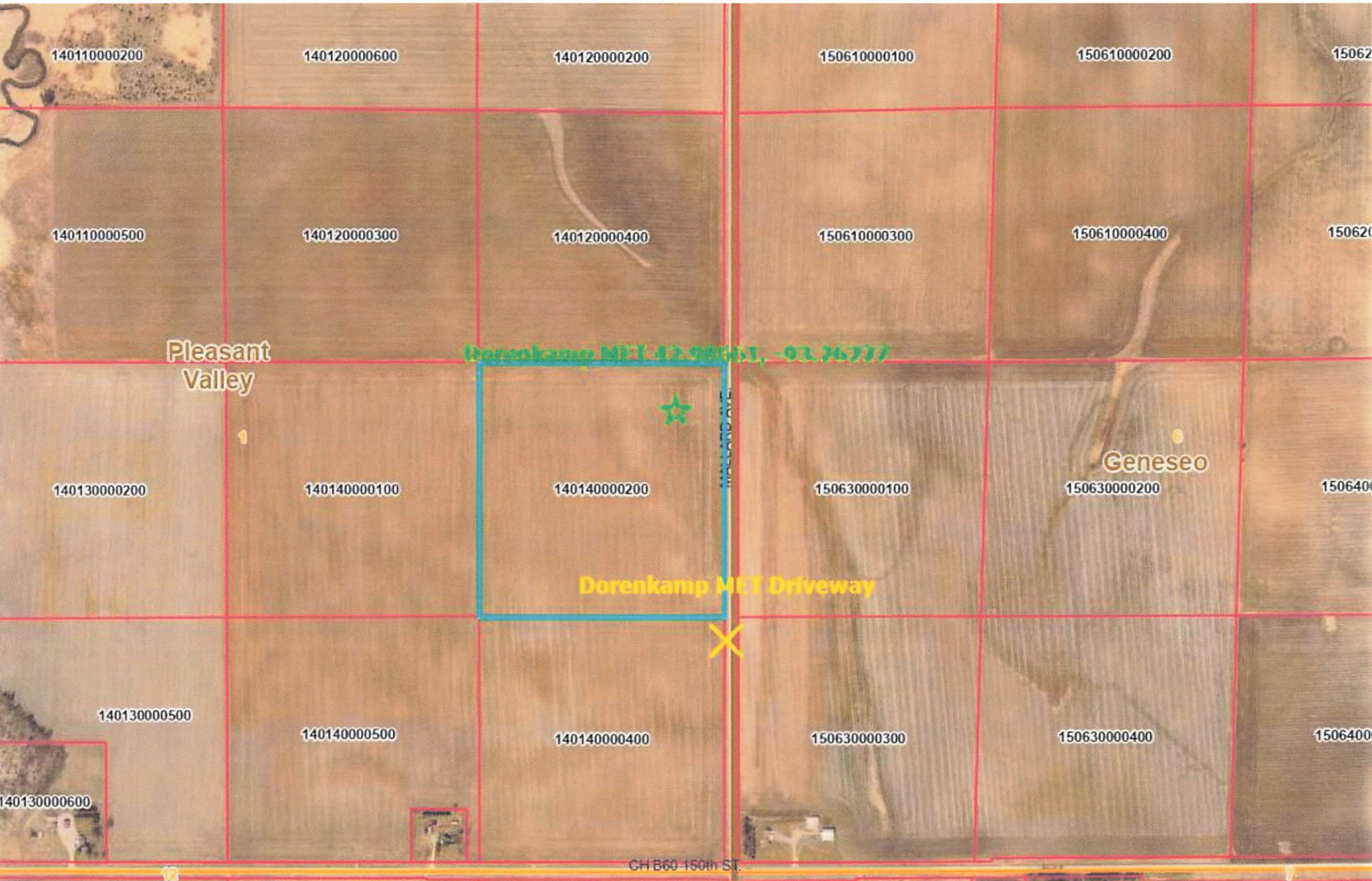
Tower Layout





Appendix C





140110000200

140120000600

140120000200

150610000100

150610000200

15062

140110000500

140120000300

140120000400

150610000300

150610000400

150620

Pleasant Valley

Horsokamp MET 42.98661, -93.26777

140130000200

140140000100

140140000200

150630000100

150630000200

1506400

Geneseo

Dorenkamp MET Driveway

140130000500

140140000500

140140000400

150630000300

150630000400

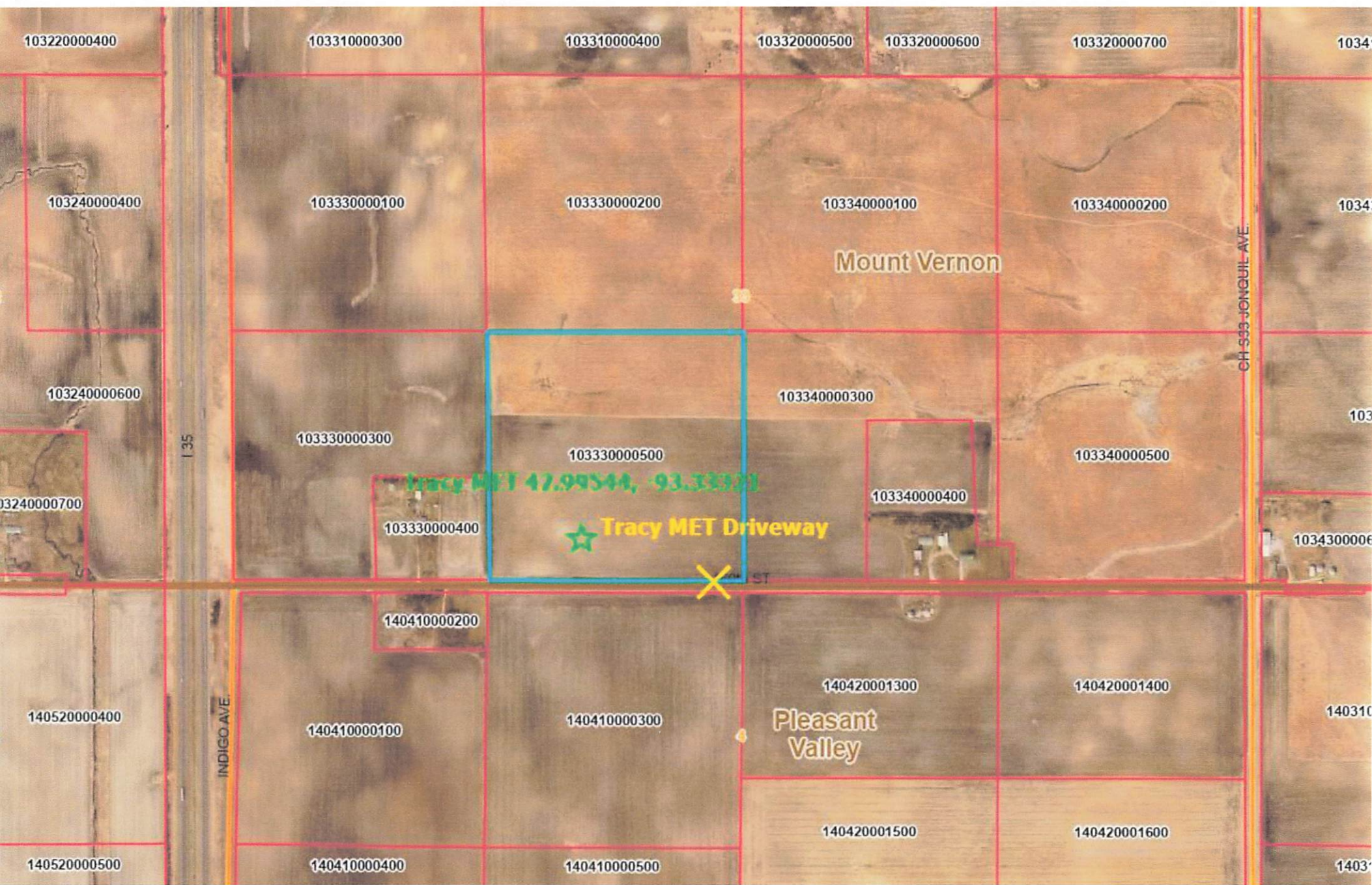
1506400

140130000600

CH B60 150th ST

12

7





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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-WTE-661-OE

Issued Date: 03/06/2023

Holly Nelson
Indigo Wind LLC
120 GARRETT STREET SUITE 700
CHARLOTTESVILLE, VA 22902

****DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE****

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:	Met Tower (w/WT Farm) IA_Tracy1214-02
Location:	Mason City, IA
Latitude:	42-59-43.58N NAD 83
Longitude:	93-19-59.54W
Heights:	1218 feet site elevation (SE) 196 feet above ground level (AGL) 1414 feet above mean sea level (AMSL)

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

****SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION****

Construction of a permanent structure at this location requires separate notice to the FAA.

This determination is based, in part, on the foregoing description which includes specific coordinates and heights. Any changes in coordinates and/or heights will void this determination. Any future construction or alteration, including increase to heights, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a 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 did not include an evaluation of the permanent structure associated with the use of this temporary structure. If the permanent structure will exceed Title 14 of the Code of Federal Regulations, part 77.9, a separate aeronautical study and FAA determination is required.

This determination concerns the effect of this temporary 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 Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Airman (NOTAM).

If you have any questions, please contact our office at (847) 294-7576, or Wayne.Reynolds@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-WTE-661-OE

Signature Control No: 573690246-575075097

(TMP -WT)

Buck Reynolds

Specialist

Additional Condition(s) or Information for ASN 2023-WTE-661-OE

Proposal: To construct and/or operate a(n) Met Tower (w/WT Farm) to a height of 196 feet above ground level, 1414 feet above mean sea level.

Location: The structure will be located 9.74 nautical miles south of MCW Airport reference point.

Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

As a condition to this Determination, the structure is to be marked/lighted with Spherical Marker and paint.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

This determination expires on 09/06/2024 unless extended, revised, or terminated by the issuing office.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed within 5 days after the temporary structure is dismantled.

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.

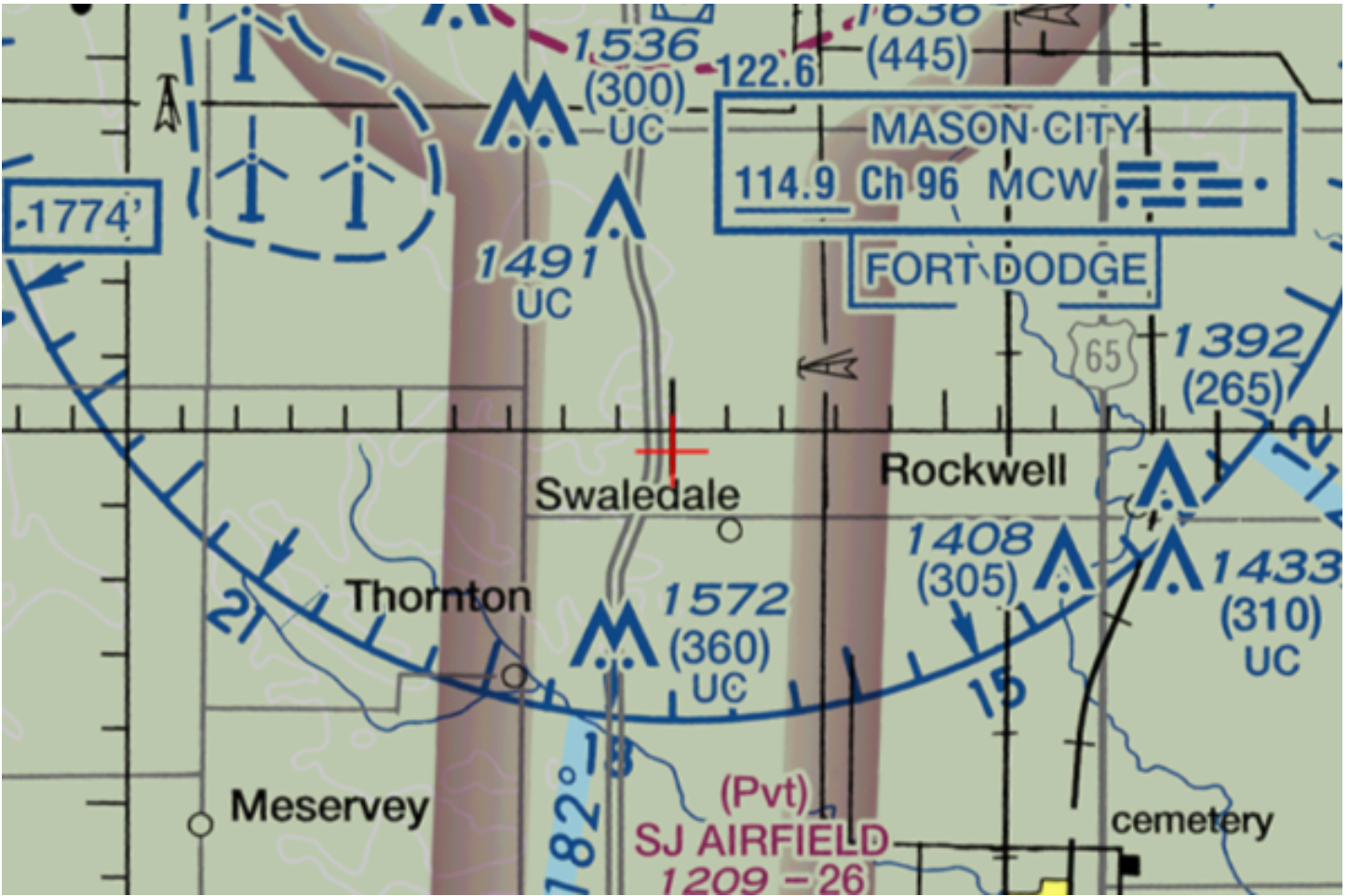
Additional information for ASN 2023-WTE-661-OE

The FAA recommends voluntary marking of Meteorological Evaluation Towers (MET) less than 200 feet (60.96 m) AGL in accordance with marking guidance contained in AC 70/7460-1. Historically, this guidance has not been applied. However, the FAA recognizes the need to address safety impacts to low-level agricultural flight operations, and it believes that voluntarily marking METs less than 200 feet (61 m) AGL in remote and rural areas enhance the conspicuity of these structures.

1. Painting - The MET should be painted in accordance with the criteria contained in Chapter 3 and Chapter 15, with alternate bands of aviation orange and white paint. In addition, paragraph 3.3.1 states that all markings should be replaced when faded or otherwise deteriorated.
2. High-visibility sleeves - If applicable, it is recommended that several high-visibility sleeves be installed on the MET's outer guy wires. One high-visibility sleeve should be installed on each guy wire, as close to the anchor point as possible, but at a height well above the crop or vegetation canopy. A second sleeve should be installed on the same outer guy wires midway between the location of the lower sleeve and the upper attachment point of the guy wire to the MET.
3. Spherical markers - If applicable, it is also recommended that high-visibility aviation orange spherical marker (or cable) balls be attached to the guy wires. Spherical markers should be installed and displayed in accordance with Chapter 11.

The FAA recognizes that various weather conditions and manufacturing placement standards may affect the placement and use of high-visibility sleeves and/or spherical markers. Thus, some flexibility is allowed when determining sleeve length and marker placement on METs.

Sectional Map for ASN 2023-WTE-661-OE





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

Aeronautical Study No.
2023-WTE-662-OE

Issued Date: 03/06/2023

Holly Nelson
Indigo Wind LLC
120 GARRETT STREET SUITE 700
CHARLOTTESVILLE, VA 22902

****DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE****

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: Met Tower (w/WT Farm) IA_Dorenkamp1214-03
Location: Mason City, IA
Latitude: 42-59-11.78N NAD 83
Longitude: 93-15-44.16W
Heights: 1103 feet site elevation (SE)
196 feet above ground level (AGL)
1299 feet above mean sea level (AMSL)

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

****SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION****

Construction of a permanent structure at this location requires separate notice to the FAA.

This determination is based, in part, on the foregoing description which includes specific coordinates and heights. Any changes in coordinates and/or heights will void this determination. Any future construction or alteration, including increase to heights, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a 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 did not include an evaluation of the permanent structure associated with the use of this temporary structure. If the permanent structure will exceed Title 14 of the Code of Federal Regulations, part 77.9, a separate aeronautical study and FAA determination is required.

This determination concerns the effect of this temporary 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 Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Airman (NOTAM).

If you have any questions, please contact our office at (847) 294-7576, or Wayne.Reynolds@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-WTE-662-OE

Signature Control No: 573692156-575075096

(TMP -WT)

Buck Reynolds

Specialist

Additional Condition(s) or Information for ASN 2023-WTE-662-OE

Proposal: To construct and/or operate a(n) Met Tower (w/WT Farm) to a height of 196 feet above ground level, 1299 feet above mean sea level.

Location: The structure will be located 10.71 nautical miles south of MCW Airport reference point.

Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

As a condition to this Determination, the structure is to be marked/lighted with Spherical Marker and paint.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

This determination expires on 09/06/2024 unless extended, revised, or terminated by the issuing office.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed within 5 days after the temporary structure is dismantled.

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.

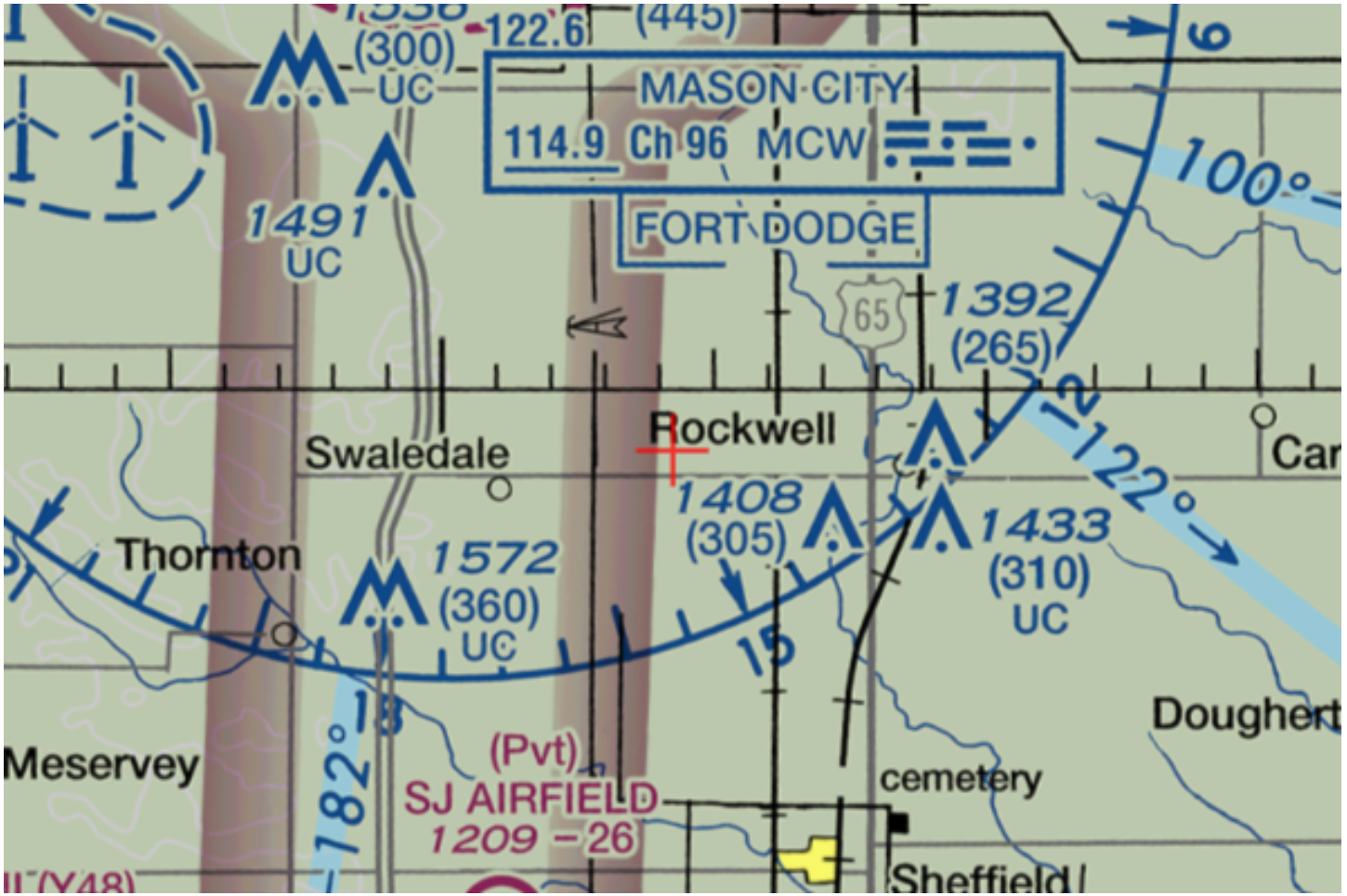
Additional information for ASN 2023-WTE-662-OE

The FAA recommends voluntary marking of Meteorological Evaluation Towers (MET) less than 200 feet (60.96 m) AGL in accordance with marking guidance contained in AC 70/7460-1. Historically, this guidance has not been applied. However, the FAA recognizes the need to address safety impacts to low-level agricultural flight operations, and it believes that voluntarily marking METs less than 200 feet (61 m) AGL in remote and rural areas enhance the conspicuity of these structures.

1. Painting - The MET should be painted in accordance with the criteria contained in Chapter 3 and Chapter 15, with alternate bands of aviation orange and white paint. In addition, paragraph 3.3.1 states that all markings should be replaced when faded or otherwise deteriorated.
2. High-visibility sleeves - If applicable, it is recommended that several high-visibility sleeves be installed on the MET's outer guy wires. One high-visibility sleeve should be installed on each guy wire, as close to the anchor point as possible, but at a height well above the crop or vegetation canopy. A second sleeve should be installed on the same outer guy wires midway between the location of the lower sleeve and the upper attachment point of the guy wire to the MET.
3. Spherical markers - If applicable, it is also recommended that high-visibility aviation orange spherical marker (or cable) balls be attached to the guy wires. Spherical markers should be installed and displayed in accordance with Chapter 11.

The FAA recognizes that various weather conditions and manufacturing placement standards may affect the placement and use of high-visibility sleeves and/or spherical markers. Thus, some flexibility is allowed when determining sleeve length and marker placement on METs.

Sectional Map for ASN 2023-WTE-662-OE





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

Aeronautical Study No.
2023-WTE-660-OE

Issued Date: 03/06/2023

Holly Nelson
Indigo Wind LLC
120 GARRETT STREET SUITE 700
CHARLOTTESVILLE, VA 22902

****DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE****

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:	Met Tower (w/WT Farm) IA_Brandt1214-01
Location:	Mason City, IA
Latitude:	42-59-26.55N NAD 83
Longitude:	93-24-00.23W
Heights:	1253 feet site elevation (SE) 196 feet above ground level (AGL) 1449 feet above mean sea level (AMSL)

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

****SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION****

Construction of a permanent structure at this location requires separate notice to the FAA.

This determination is based, in part, on the foregoing description which includes specific coordinates and heights. Any changes in coordinates and/or heights will void this determination. Any future construction or alteration, including increase to heights, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a 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 did not include an evaluation of the permanent structure associated with the use of this temporary structure. If the permanent structure will exceed Title 14 of the Code of Federal Regulations, part 77.9, a separate aeronautical study and FAA determination is required.

This determination concerns the effect of this temporary 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 Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Airman (NOTAM).

If you have any questions, please contact our office at (847) 294-7576, or Wayne.Reynolds@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-WTE-660-OE

Signature Control No: 573689800-575075095

(TMP -WT)

Buck Reynolds

Specialist

Additional Condition(s) or Information for ASN 2023-WTE-660-OE

Proposal: To construct and/or operate a(n) Met Tower (w/WT Farm) to a height of 196 feet above ground level, 1449 feet above mean sea level.

Location: The structure will be located 10.47 nautical miles south of MCW Airport reference point.

Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

As a condition to this Determination, the structure is to be marked/lighted with Spherical Marker and paint.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

This determination expires on 09/06/2024 unless extended, revised, or terminated by the issuing office.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed within 5 days after the temporary structure is dismantled.

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.

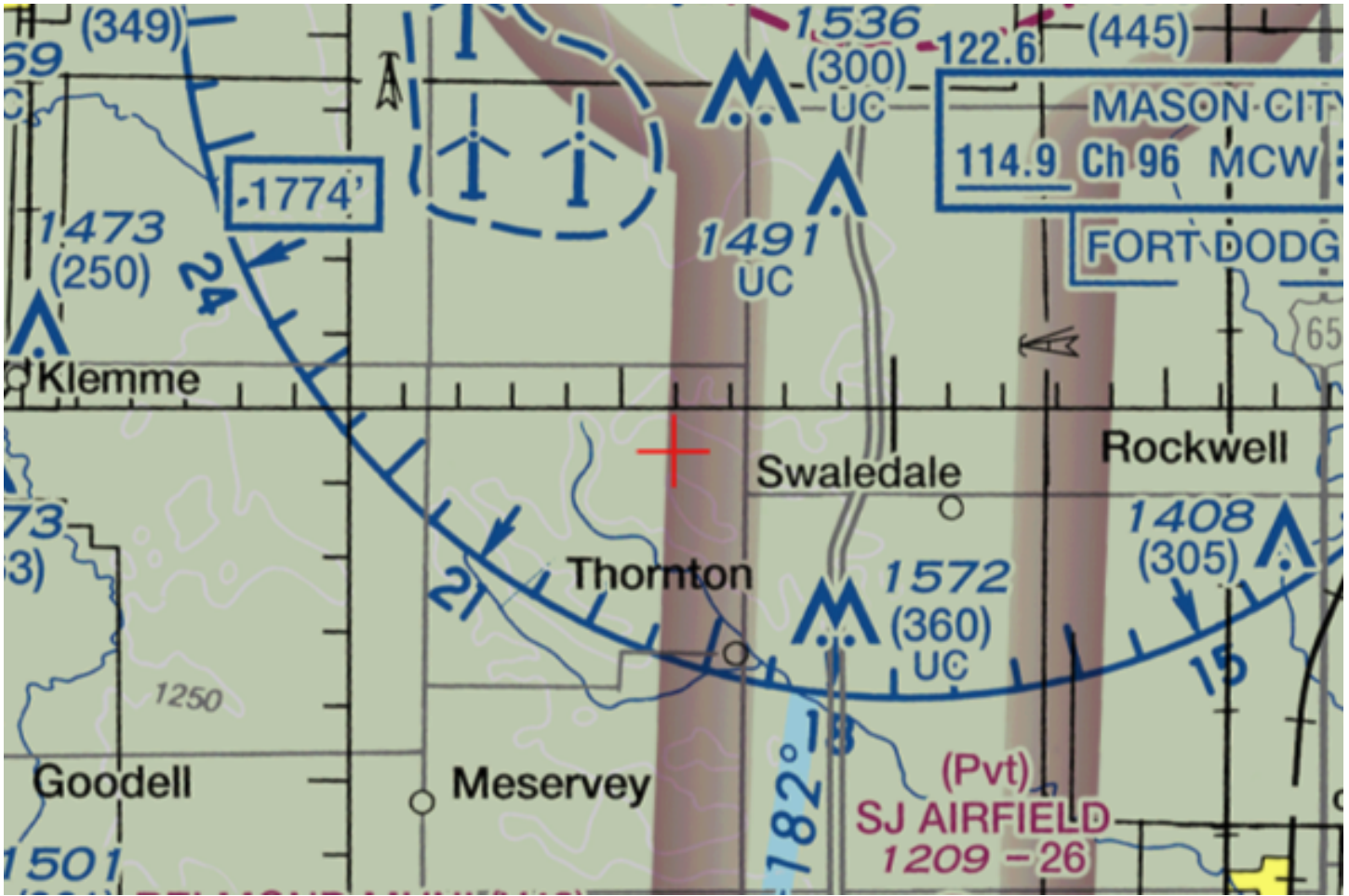
Additional information for ASN 2023-WTE-660-OE

The FAA recommends voluntary marking of Meteorological Evaluation Towers (MET) less than 200 feet (60.96 m) AGL in accordance with marking guidance contained in AC 70/7460-1. Historically, this guidance has not been applied. However, the FAA recognizes the need to address safety impacts to low-level agricultural flight operations, and it believes that voluntarily marking METs less than 200 feet (61 m) AGL in remote and rural areas enhance the conspicuity of these structures.

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The FAA recognizes that various weather conditions and manufacturing placement standards may affect the placement and use of high-visibility sleeves and/or spherical markers. Thus, some flexibility is allowed when determining sleeve length and marker placement on METs.

Sectional Map for ASN 2023-WTE-660-OE





CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

03/06/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).


PRODUCER McGriff Insurance Services, LLC P.O. Box 10265 Birmingham, AL 35202	CONTACT NAME: PHONE (A/C No. Ext): 1-800-476-2211	FAX (A/C, No):
	E-MAIL ADDRESS:	
INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A: Federal Insurance Company		20281
INSURED Apex Clean Energy, Inc. including Indigo Energy Project, LLC 120 Garrett Street Suite 700 Charlottesville, VA 22902		
INSURER B:		
INSURER C:		
INSURER D:		
INSURER E:		
INSURER F:		

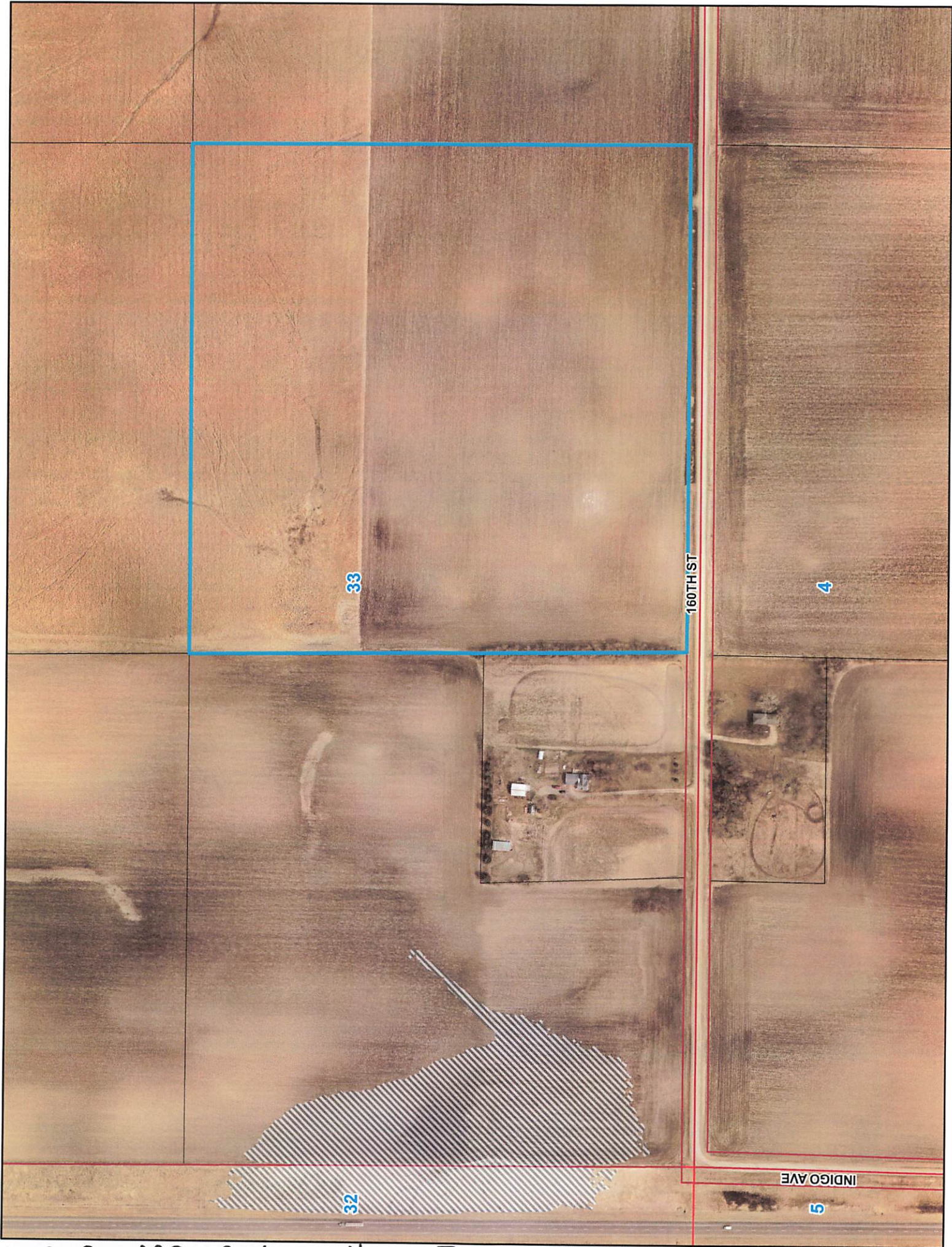
COVERAGES **CERTIFICATE NUMBER:** 5GKZTGER **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Time Element Poll \$1,000,000 Limit GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC OTHER:			36060202	03/15/2022	03/15/2023	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 Combined Total Agg: \$ 10,000,000
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input checked="" type="checkbox"/> OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY			99481129	03/15/2022	03/15/2023	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ Comp/Coll Ded \$ \$500
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$			78188883	03/15/2022	03/15/2023	EACH OCCURRENCE \$ 1,000,000 AGGREGATE \$ 1,000,000 \$ \$
A	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? <input type="checkbox"/> Y / N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		N/A	71750043 (WC not included in AL, CA, FL, KS, ND, NH, NJ, OH, WA, WY)	03/15/2022	03/15/2023	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000 \$ \$ \$ \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER EVIDENCE OF INSURANCE	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE 



10-33-300-005-00 Mount Vernon Twp

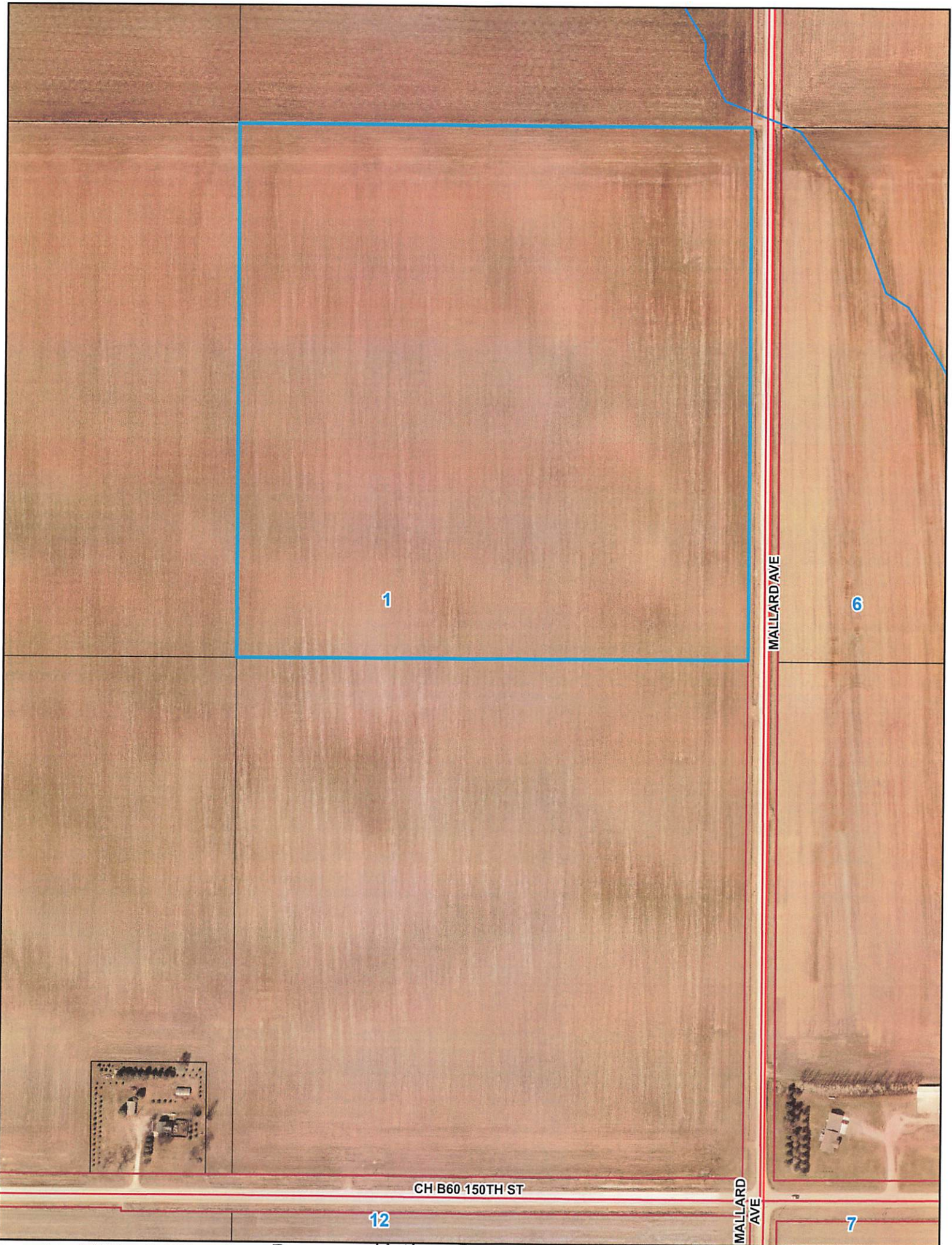
160TH ST 35

160TH ST 36

2

1

FINCH AVE



1

6

MALLARD AVE

CH B60 150TH ST

12

MALLARD AVE

7

14-01-400-002-00 - Pleasant Valley Trwp