

June 29, 2022

VIA E-MAIL AND FEDERAL EXPRESS

Mr. Steven Kahl
Executive Secretary
North Dakota Public Service Commission
600 E. Boulevard, Dept. 408
Bismarck, ND 58505-0480

**RE: Sunflower Wind Project, LLC's Request for Extension of Time to Install Light-Mitigating Technology System
Case No. PU-14-105**

Dear Mr. Kahl:

In accordance with NDCC § 49-22-03(3)(a) and Certification Provision No. 34 of the North Dakota Public Service Commission's ("Commission") Order issuing a Certificate of Site Compatibility for the Sunflower Wind Project, Sunflower Wind Project, LLC ("Sunflower") hereby files two (2) copies of this letter and the following documents:

- Certification of Jeffrey Spurgeon, with accompanying Exhibits:
 - Exhibit A – ADLS Infrastructure Map
 - Exhibit B – Negative Class III Survey Form Report
 - Exhibit C – North Dakota State Historic Preservation Office/State Historical Society of North Dakota Concurrence Letter
 - Exhibit D – Wetlands Map

Also, pursuant to Order Certification Provision No. 4, Sunflower provides two (2) copies of the following permits/licenses:

- Western Area Power Administration Letter, dated June 10, 2022;
- Federal Communications Commission Radio Station Authorization;
- Federal Aviation Administration ("FAA") Marking & Lighting Recommendation;
- FAA Determination of No Hazard to Air Navigation;
- Notice of Intent to Obtain Coverage Under NPDES General Permit (VIKOR);
- Notice of Intent to Obtain Coverage Under NPDES General Permit (Sunflower);
- Morton County Letter, dated April 19, 2022; and

Attorneys & Advisors
main 612.492.7000
fax 612.492.7077
fredlaw.com

Fredrikson & Byron, P.A.
200 South Sixth Street, Suite 4000
Minneapolis, Minnesota
55402-1425

186 PU-14-105 Filed 06/29/2022 Pages: 246
ADLS Update with Supporting Documentation and Permits - redacted
Sunflower Wind Project, LLC
Mollie Smith, Fredrikson&Byron, P.A.

Mr. Steven Kahl
June 29, 2022
Page 2

- Morton County Building Permit 22-34.

Also enclosed is a flash drive containing GIS data for the infrastructure. Electronic versions of this letter and the above-referenced documents are being filed with the Commission today via e-mail.

If you have any questions, please let me know.

Sincerely,



MOLLIE M. SMITH

MMS/ms/75092645

cc: Victor Schock (via e-mail, w/ enclosures)
Brian Johnson (via e-mail, w/ enclosures)
Stacey Fitts (via e-mail, w/ enclosures)
Bruce Kerr (via e-mail, w/ enclosures)

STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

Sunflower Wind Project, LLC
Wind Energy Conversion Facility – Stark & Morton Counties
Siting Application

Case No. PU-14-105

**CERTIFICATION OF JEFFREY SPURGEON REGARDING MODIFICATIONS FOR
AIRCRAFT DETECTION LIGHTING SYSTEM**

STATE OF COLORADO)
) ss.
COUNTY OF DENVER)

Jeffrey Spurgeon, being first duly sworn upon oath, states and alleges as follows:

1. I am an Authorized Representative for the Sunflower Wind Project (“Project”), which is owned by Sunflower Wind Project, LLC (“Sunflower”). I am Vice President of Asset Management & Commercial Operations for Onward Energy Holdings, LLC, which oversees the operation of the Project on behalf of Sunflower. I have the authority to bind Sunflower with respect to the certifications made herein.

2. I provide this Certification pursuant to NDCC § 49-22-03(3)(a) and Provision No. 34 of the Certifications Relating to Order Provisions – Energy Conversion Facility Siting, which is part of the Commission’s Findings of Fact, Conclusions of Law and Order, dated June 25, 2014 and the Supplemental Order of the Commission dated January 7, 2015 (together, the “Order”).

3. Since the Order was issued, Sunflower has finalized a design for installation of an aircraft detection lighting system (“ADLS”) that will serve the Project. The added infrastructure consists of: (1) an ADLS communication tower located within the Project; (2) underground cabling extending from the ADLS communication tower; and (3) an access road to the ADLS communication tower. A temporary laydown area will be utilized during installation. A map identifying the location of the additional ADLS infrastructure in relation to the nearest Project

turbines is provided as **Exhibit A**. The ADLS infrastructure is located wholly within the site designated for the Project.

4. The Project complies with all requirements set forth in the Order.

5. The additional ADLS infrastructure depicted in Exhibit A, as well as the associated construction activities, will not impact any National Register of Historic Places eligible, potentially eligible, or unevaluated cultural resource sites. Sunflower had a Class III cultural resource survey conducted for any areas that will be impacted by installation of the ADLS infrastructure that were not covered by previous Project cultural resource surveys, and no cultural resources were identified. A copy of the Negative Class III Survey Form Report, dated April 2022, is attached hereto as **Exhibit B**. The North Dakota State Historic Preservation Office (“SHPO”)/State Historical Society of North Dakota (“SHSND”) issued a concurrence letter for the report, dated May 20, 2022, which is attached hereto as **Exhibit C**.

6. The additional ADLS infrastructure depicted in Exhibit A will not result in any permanent or temporary impacts to wetlands or waterbodies, as shown on the wetlands map provided as **Exhibit D**.

7. The ADLS infrastructure and associated construction activities will not affect any known exclusion or avoidance areas within the sites designated for the Project.

8. The Project, including the ADLS infrastructure, will comply with the Commission Order, including applicable laws and rules designating the site.


FURTHER AFFIANT SAYETH NOT.



Jeffrey Spurgeon

State of Colorado)
)
City and County of Denver)

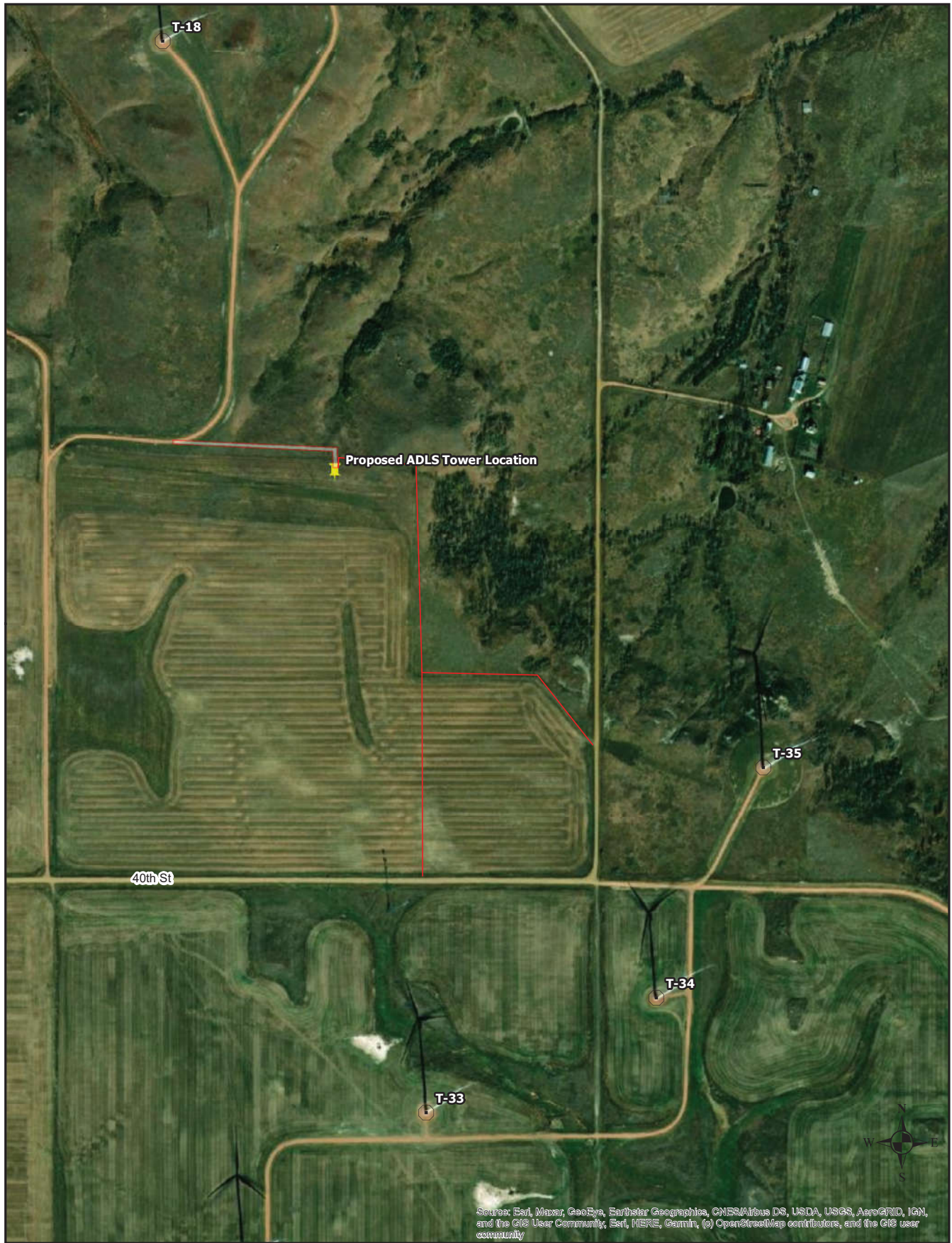
This record was acknowledged before me on the 29th of June, 2022 by Jeffrey Spurgeon as Vice President, Asset Management & Commercial Operations of Onward Energy Holdings, LLC, a Delaware, a limited liability company (“Company”), on behalf of the Company.



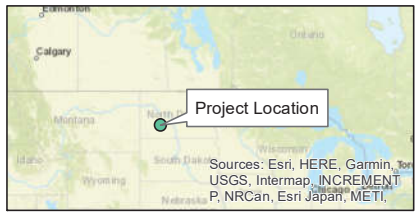
Notary Public

KRISTEN JANETTE BERG
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20154024780
MY COMMISSION EXPIRES 06/24/2023

75691527 v1



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community



Legend

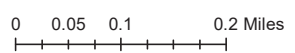
- Existing Turbines
- Proposed ADLS Tower Location
- Proposed Underground Lines
- Proposed Access Road

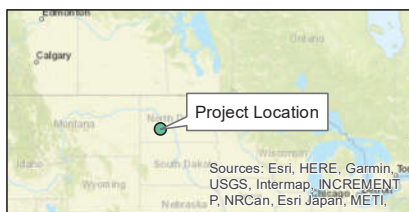
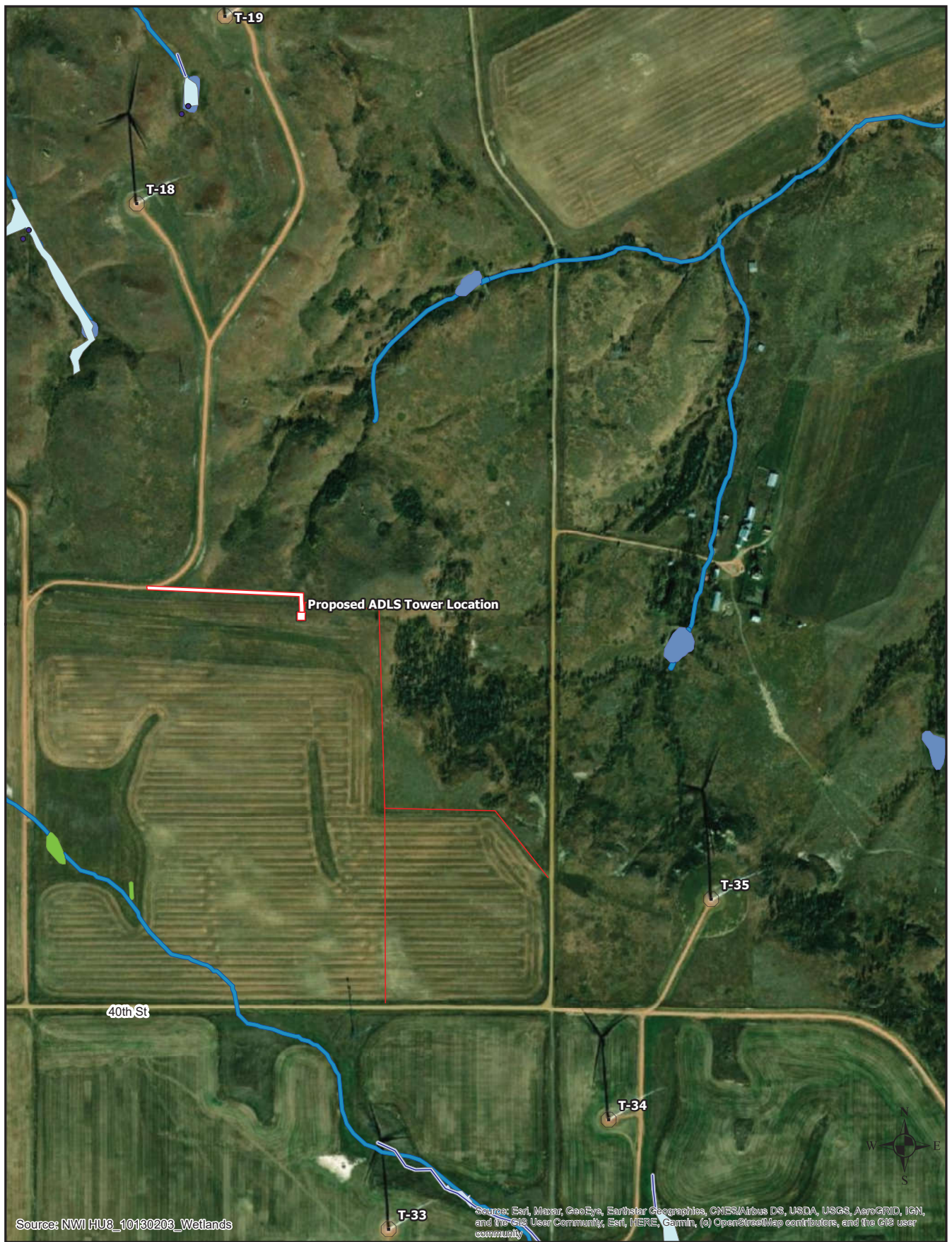
Proposed Tower Location Coordinates: 46.838985, -102.038749

Sunflower Wind Project

Figure 1: Proposed ADLS Tower Location

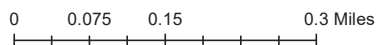
Prepared by:
Solas Energy Consulting US, Inc
Date: 2022-03-28





Legend

- Existing Turbines
 - Proposed Underground Lines
 - Proposed Access Road
 - Field Wetland Point
 - Field Stream Line
 - Field Delineated Stream
 - Field Delineated Wetland
- | NWI Wetland Type | |
|--------------------------------|-----------------------------------|
| Estuarine and Marine Deepwater | Estuarine and Marine Wetland |
| Freshwater Emergent Wetland | Freshwater Forested/Shrub Wetland |
| Freshwater Pond | Lake |
| Other | Riverine |



Field Delineated Source: Stantec Wetland Aquatic Resource Inventory 2015-06-21

Sunflower Wind Project

Figure 3: Wetlands Map

Prepared by:
Solias Energy Consulting US, Inc
Date: 2022-03-28





Department of Energy
Western Area Power Administration
Upper Great Plains Customer Service Region
P.O. Box 35800
Billings, MT 59107-5800

6/10/22

B0401.BL

Ms. Christine Felz
Environmental Project Manager
Solas Energy Consulting US Inc.
430 N. College Avenue, Suite 425
Fort Collins, CO 80524

Dear Ms. Felz:

This letter responds to your correspondence from April 4th, 2022, regarding proposed facility updates to the Sunflower Wind Energy Project (Project), an operational 104-megawatt wind facility located in Morton and Stark Counties, North Dakota, and currently interconnected at Western Area Power Administration's (WAPA) Dickinson to Mandan 230-kilovolt (kV) transmission line.

In accordance with the National Environmental Policy Act (NEPA) and other applicable environmental regulations, WAPA prepared an Environmental Assessment (EA) entitled *Sunflower Wind Project Environmental Assessment* (DOE/EA-1966) to consider the interconnection request and analyze the potential environmental impacts of the proposed Project. The EA identified no significant impacts to environmental resources resulting from either WAPA's federal action or the proposed Project. On October 7, 2014, WAPA issued a Finding of No Significant Impact (FONSI) and approved the Final EA. The Project began commercial operations in December 2016.

Sunflower is proposing changes to the Project from what was analyzed in the Final EA. Specifically, Sunflower is proposing to install an Aircraft Detection Lighting System (ADLS). The ADLS is a requirement of the North Dakota Century Code (NDCC) section 49-22-16.4(3).

When changes are proposed to a previously analyzed proposed action or new information relevant to the action becomes available, WAPA must determine whether new environmental analysis is required or whether the prior analysis is adequate. Criteria for determining the need for supplemental analysis are specified in the Council on Environmental Quality regulations for implementing NEPA (40 CFR 1502.9(d)) and in the Department of Energy NEPA regulations (10 CFR 1021.314).

Changes in the proposed action

Sunflower is proposing to install an ADLS at the Project. This system would meet the NDCC's requirements by detecting and tracking targets (aircraft) but would only activate lighting when aircraft are detected in the vicinity of the Project. The ADLS would include the following infrastructure:

- One 8-foot-wide antenna mounted up-mast on a 147-foot-tall tower.
- A 744-foot-long access road, constructed off the existing access road for Turbines 18-20.
- Underground power and communication cables trenched within the former crane path for Turbine 35.
- A 2-acre temporary laydown area to accommodate equipment and materials.

New circumstances or information


WAPA has reviewed the comparison of impacts, as presented in Table 3 of your April correspondence. Additionally, on May 20, 2022, WAPA received a letter of concurrence from the North Dakota State Historic Preservation Officer regarding WAPA's determination of "No Historic Properties Affected." WAPA understands that Sunflower remains committed to avoiding impacts to nesting birds and will complete preconstruction surveys, as described in your May 20, 2022, correspondence.

Conclusion

WAPA has reviewed the proposed changes to the Project and determined the changes are not substantial relevant to environmental concerns and there are no new significant circumstances or information relevant to environmental concerns or having bearing on the proposed action. Thus, a supplemental analysis is not required and no further NEPA analysis will be completed.

Thank you for your diligence in protecting the environment and complying with relevant environmental regulations. If you have questions or wish to discuss this matter further, please contact Christina Gomer, NEPA Coordinator, at (406) 255-2811 or gomer@wapa.gov.

Sincerely,

**CHRISTINA
GOMER**  Digitally signed by
CHRISTINA GOMER
Date: 2022.06.10
07:52:49 -06'00'

Christina Gomer
NEPA Coordinator

(Letter sent via email)

CC:

Stacey Fitts, Senior Director
Asset Management – Renewables
Sunflower Wind Project, LLC
c/o Onward Energy, LLC
767 Third Avenue, 17th Floor
New York, NY 10017

Ian Fudalski
Sunflower Wind Project, LLC
c/o Onward Energy, LLC
767 Third Avenue, 17th Floor
New York, NY 10017

Lindsey Remakel
200 S Sixth Street, Suite 4000
Minneapolis, MN 55402



Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: SUNFLOWER WIND PROJECT, LLC

ATTN: RAUL GARCIA
SUNFLOWER WIND PROJECT, LLC
767 THIRD AVE, 17TH FLOOR
NEW YORK, NY 10017

Call Sign WRTA660	File Number 0009957221
Radio Service RS - Land Mobile Radiolocation	
Regulatory Status PMRS	
Frequency Coordination Number	

FCC Registration Number (FRN): 0031802317

Grant Date 05-26-2022	Effective Date 05-26-2022	Expiration Date 05-26-2032	Print Date 05-27-2022
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STATION TECHNICAL SPECIFICATIONS

Fixed Location Address or Mobile Area of Operation

Loc. 1 Address: 0.5 miles NW of 75th Ave. & 40th St.
City: Hebron County: MORTON State: ND
Lat (NAD83): 46-50-20.3 N Long (NAD83): 102-02-19.5 W ASR No.: Ground Elev: 775.1

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meters	Construct Deadline Date
1	1	009000.00000000-009500.00000000		1		292MV7N	70.000	138070.000	45.1		05-26-2023

Control Points

Control Pt. No. 1
Address: 16680 West Bernardo Dr.
City: San Diego County: SAN DIEGO State: CA Telephone Number: (888)701-7658

Associated Call Signs

Conditions:

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

Licensee Name: SUNFLOWER WIND PROJECT, LLC

Call Sign: WRTA660

File Number: 0009957221

Print Date: 05-27-2022

<NA>

Waivers/Conditions:

NONE

Official Copy



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

Aeronautical Study No.
2016-WTE-6527-OE
Prior Study No.
2014-WTE-5806-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 1
Location:	Hebron, ND
Latitude:	46-49-17.02N NAD 83
Longitude:	102-08-05.39W
Heights:	2446 feet site elevation (SE) 426 feet above ground level (AGL) 2872 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-6527-OE.

Signature Control No: 303816031-517989595

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

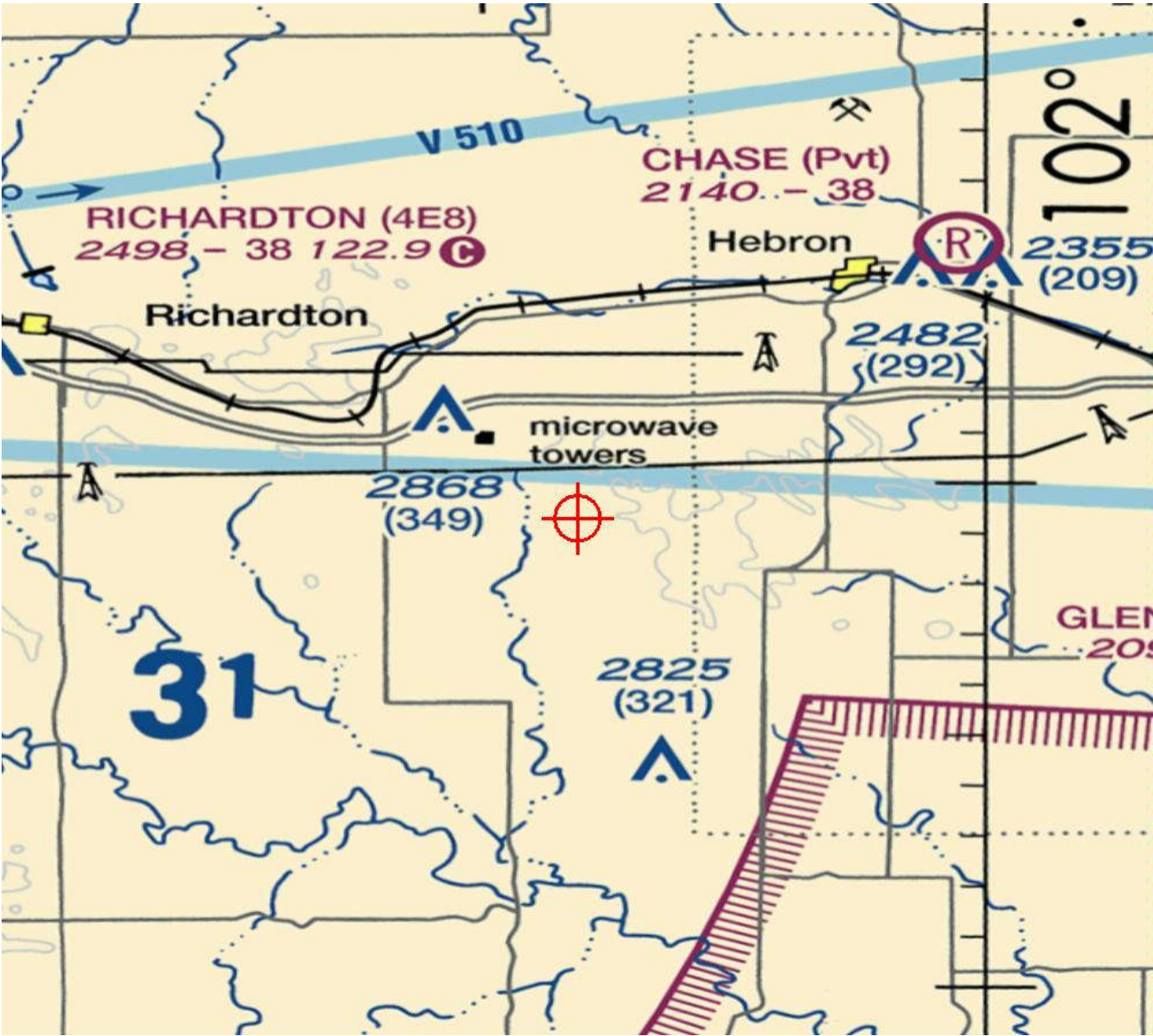
Additional Information

Map(s)

Additional information for ASN 2016-WTE-6527-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-6463-OE
Prior Study No.
2014-WTE-5807-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 2
Location:	Hebron, ND
Latitude:	46-49-16.92N NAD 83
Longitude:	102-07-44.23W
Heights:	2465 feet site elevation (SE) 426 feet above ground level (AGL) 2891 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-6463-OE.

Signature Control No: 303713571-517988640

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

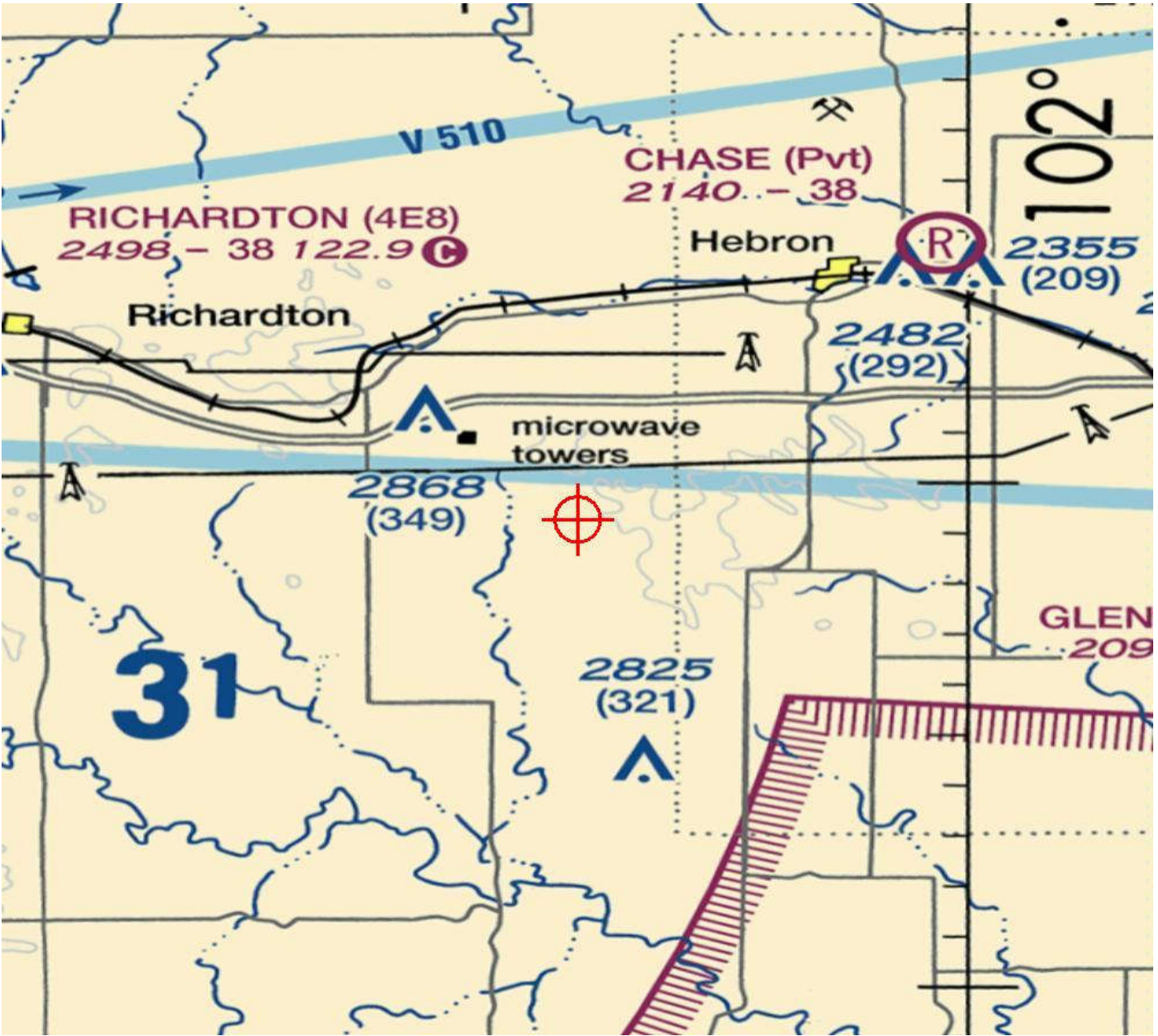
Map(s)

Additional information for ASN 2016-WTE-6463-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oecaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-6456-OE
Prior Study No.
2014-WTE-5808-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 3
Location:	Hebron, ND
Latitude:	46-49-23.40N NAD 83
Longitude:	102-07-27.14W
Heights:	2501 feet site elevation (SE) 426 feet above ground level (AGL) 2927 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

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This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-6456-OE.

Signature Control No: 303557796-517989602

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

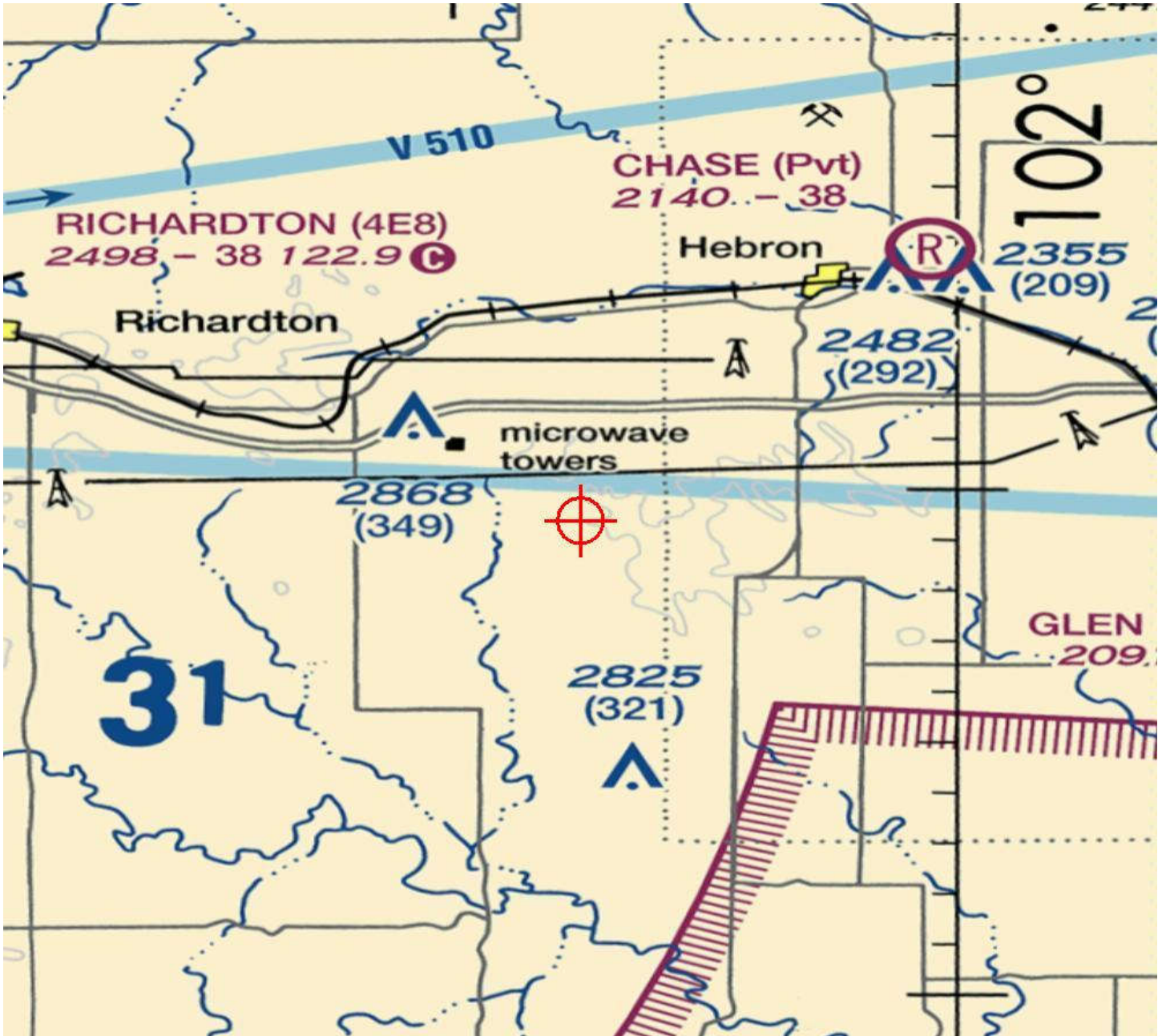
Additional Information

Map(s)

Additional information for ASN 2016-WTE-6456-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2016-WTE-6540-OE
Prior Study No.
2014-WTE-5809-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 4
Location:	Hebron, ND
Latitude:	46-49-46.15N NAD 83
Longitude:	102-07-15.80W
Heights:	2492 feet site elevation (SE) 426 feet above ground level (AGL) 2918 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-6540-OE.

Signature Control No: 304192175-517989600

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

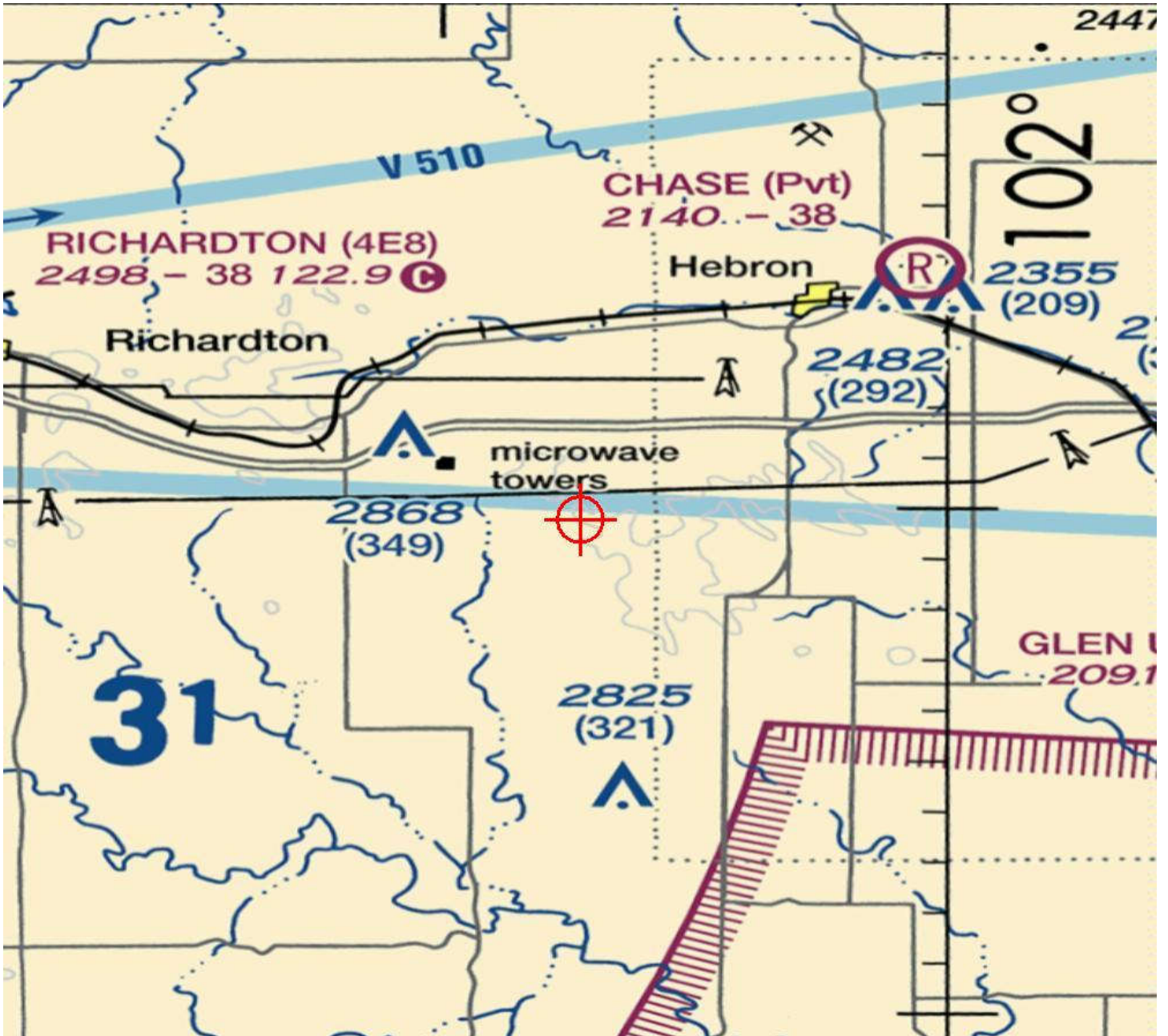
Additional Information

Map(s)

Additional information for ASN 2016-WTE-6540-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-6546-OE
Prior Study No.
2014-WTE-5810-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 5
Location:	Hebron, ND
Latitude:	46-49-46.06N NAD 83
Longitude:	102-06-54.84W
Heights:	2525 feet site elevation (SE) 426 feet above ground level (AGL) 2951 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-6546-OE.

Signature Control No: 304431124-517988645

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-6546-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oecaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-6560-OE
Prior Study No.
2014-WTE-5811-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 6
Location:	Hebron, ND
Latitude:	46-49-47.19N NAD 83
Longitude:	102-06-35.64W
Heights:	2480 feet site elevation (SE) 426 feet above ground level (AGL) 2906 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-6560-OE.

Signature Control No: 304607362-517989597

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-6560-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-6561-OE
Prior Study No.
2014-WTE-5812-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 7
Location:	Hebron, ND
Latitude:	46-49-55.18N NAD 83
Longitude:	102-06-23.59W
Heights:	2470 feet site elevation (SE) 426 feet above ground level (AGL) 2896 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-6561-OE.

Signature Control No: 304608115-517988646

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-6561-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oiaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-6656-OE
Prior Study No.
2014-WTE-5813-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 8
Location:	Hebron, ND
Latitude:	46-50-10.67N NAD 83
Longitude:	102-06-21.45W
Heights:	2421 feet site elevation (SE) 426 feet above ground level (AGL) 2847 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-6656-OE.

Signature Control No: 305008238-517989603

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

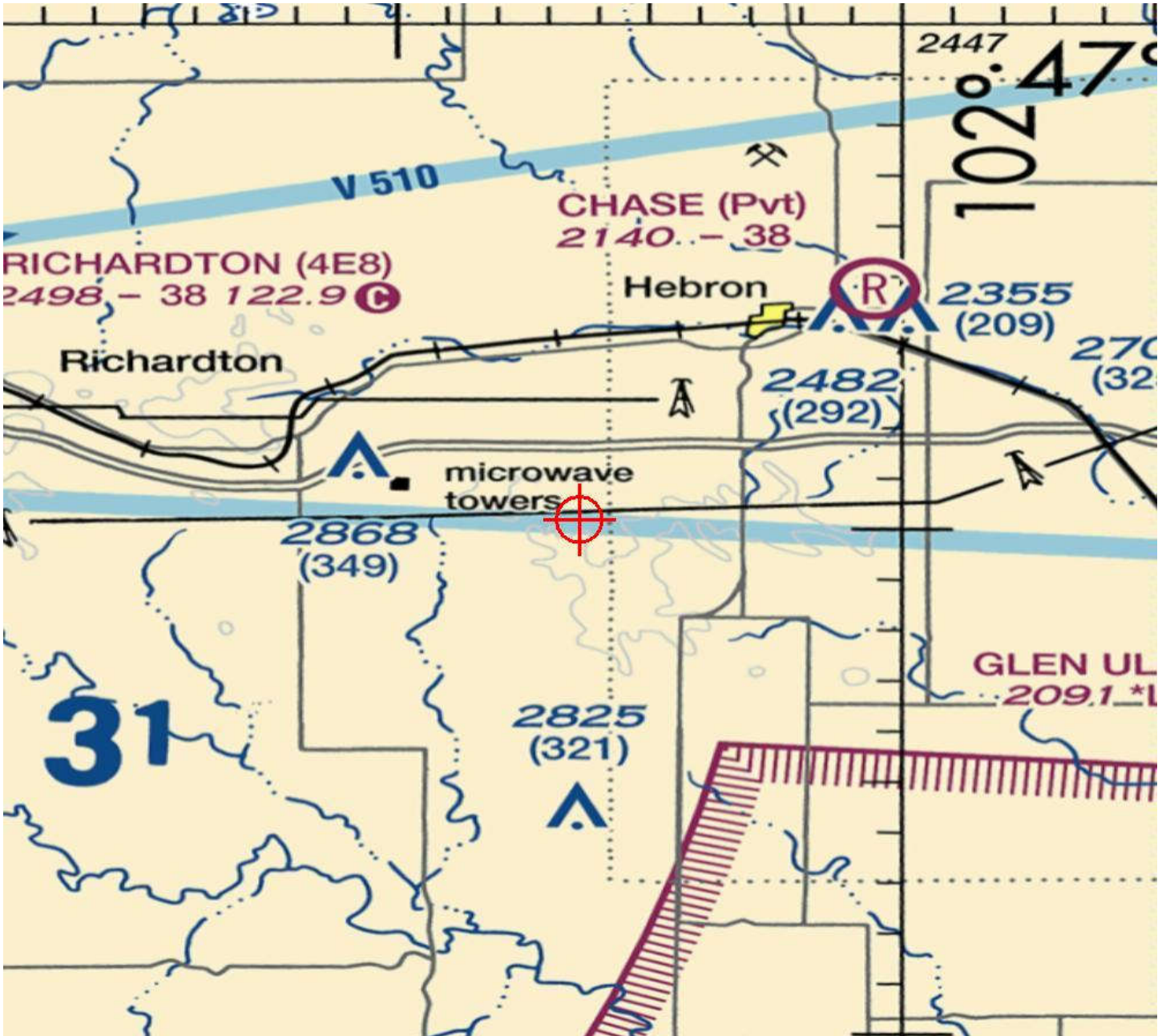
Additional Information

Map(s)

Additional information for ASN 2016-WTE-6656-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-6657-OE
Prior Study No.
2014-WTE-5816-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 11
Location:	Hebron, ND
Latitude:	46-50-10.24N NAD 83
Longitude:	102-05-34.99W
Heights:	2478 feet site elevation (SE) 426 feet above ground level (AGL) 2904 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-6657-OE.

Signature Control No: 305008333-517989611

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

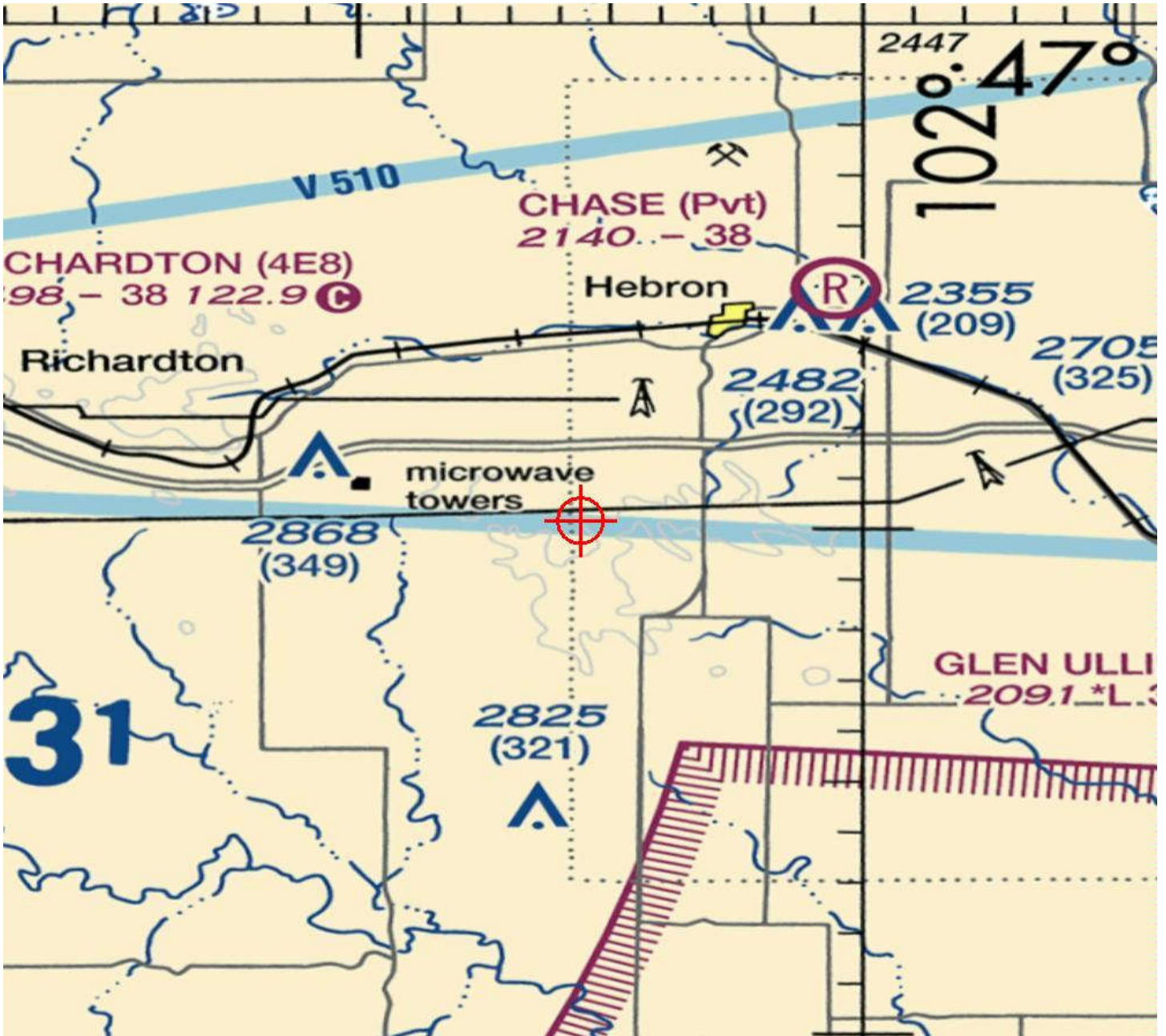
Additional Information

Map(s)

Additional information for ASN 2016-WTE-6657-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-6705-OE
Prior Study No.
2014-WTE-5817-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 12
Location:	Hebron, ND
Latitude:	46-50-12.06N NAD 83
Longitude:	102-05-18.18W
Heights:	2509 feet site elevation (SE) 426 feet above ground level (AGL) 2935 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-6705-OE.

Signature Control No: 305256427-517988647

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-6705-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oecaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-6706-OE
Prior Study No.
2014-WTE-5818-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 13
Location:	Hebron, ND
Latitude:	46-50-15.21N NAD 83
Longitude:	102-04-55.48W
Heights:	2498 feet site elevation (SE) 426 feet above ground level (AGL) 2924 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-6706-OE.

Signature Control No: 305256491-517989605

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

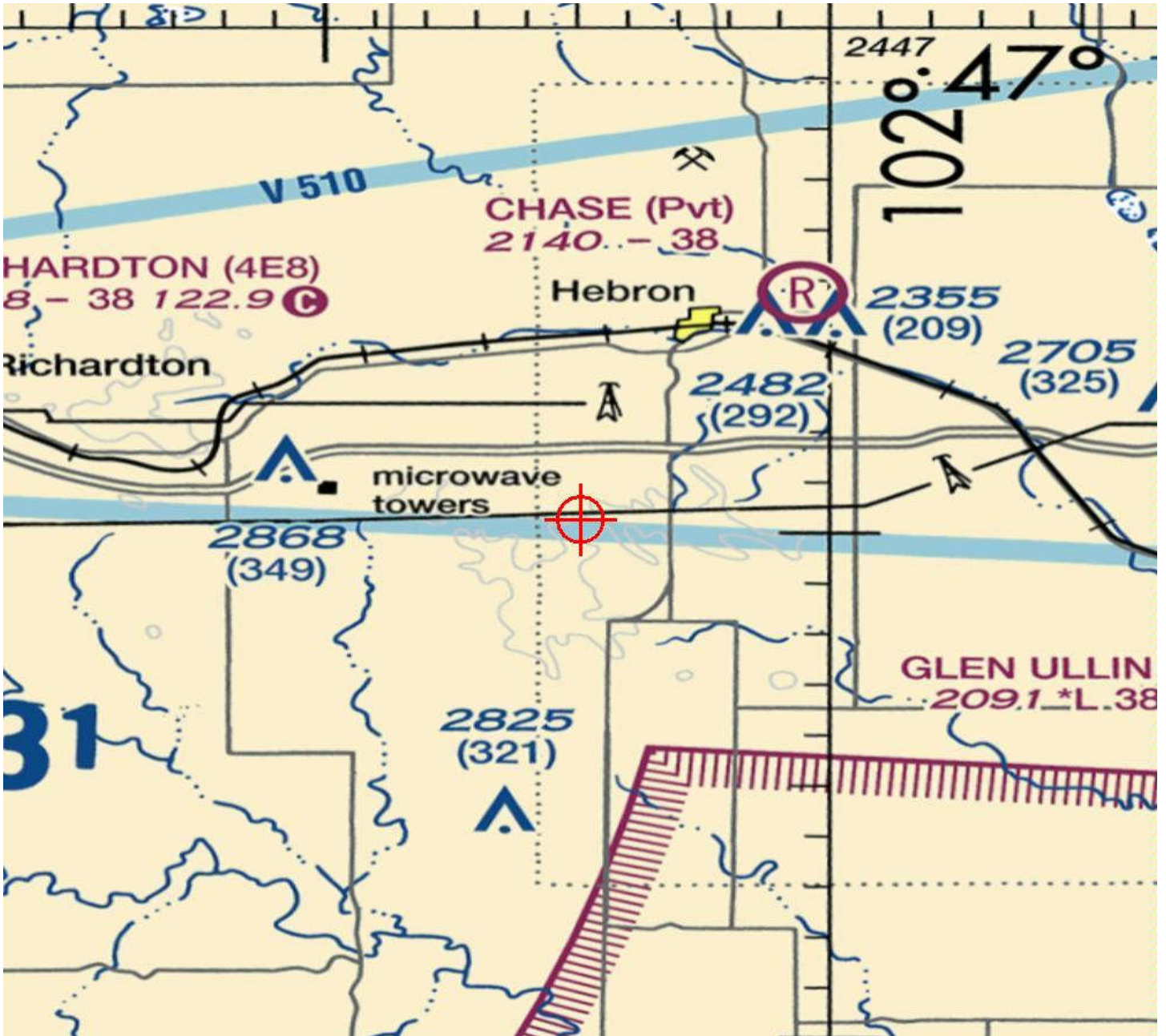
Additional Information

Map(s)

Additional information for ASN 2016-WTE-6706-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-6707-OE
Prior Study No.
2014-WTE-5819-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 14
Location:	Hebron, ND
Latitude:	46-50-17.38N NAD 83
Longitude:	102-04-40.53W
Heights:	2505 feet site elevation (SE) 426 feet above ground level (AGL) 2931 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-6707-OE.

Signature Control No: 305256529-517988637

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

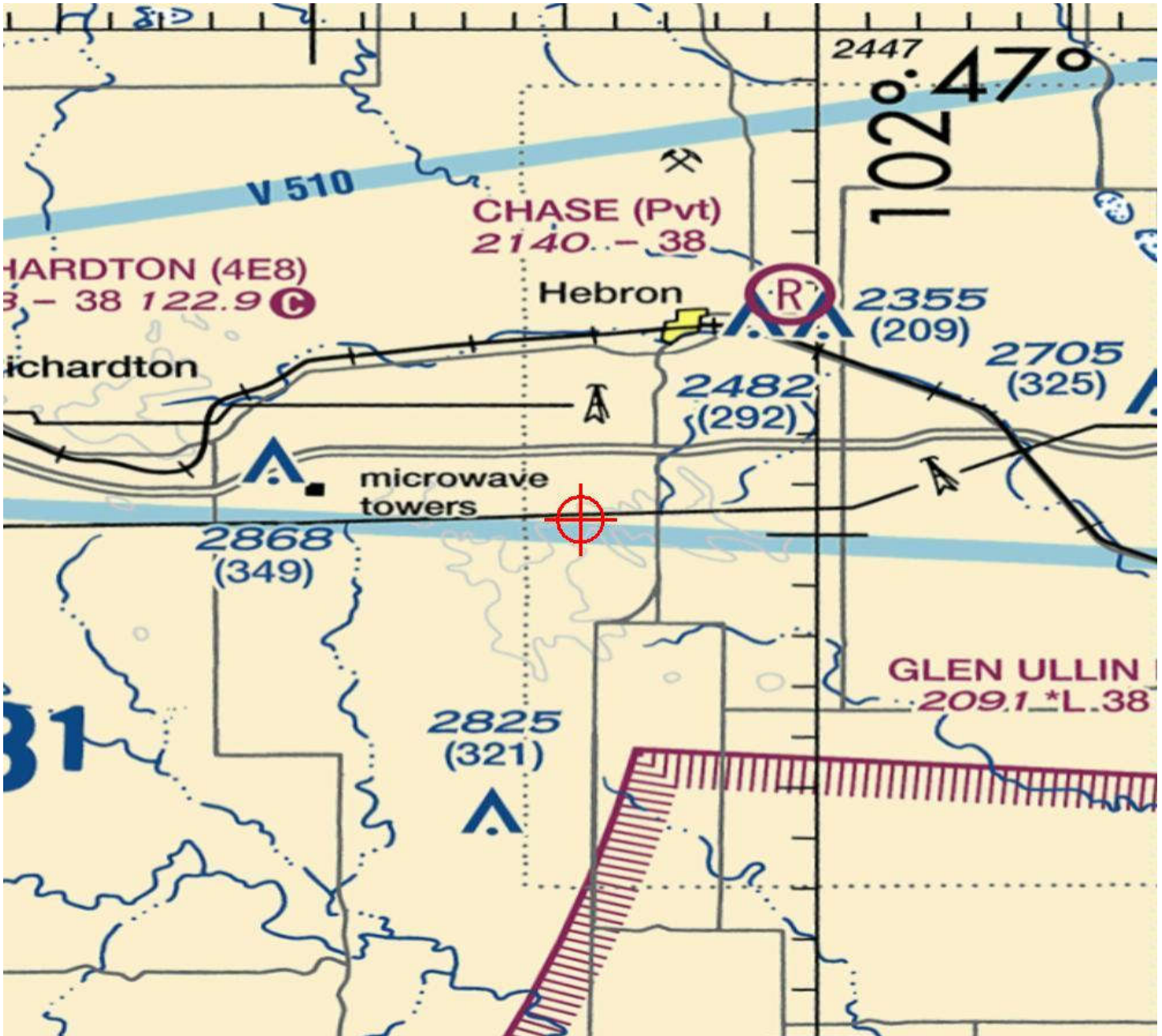
Map(s)

Additional information for ASN 2016-WTE-6707-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oeaaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8721-OE
Prior Study No.
2014-WTE-5820-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 15
Location:	Hebron, ND
Latitude:	46-50-18.80N NAD 83
Longitude:	102-04-15.10W
Heights:	2514 feet site elevation (SE) 426 feet above ground level (AGL) 2940 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8721-OE.

Signature Control No: 308801020-517989832

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

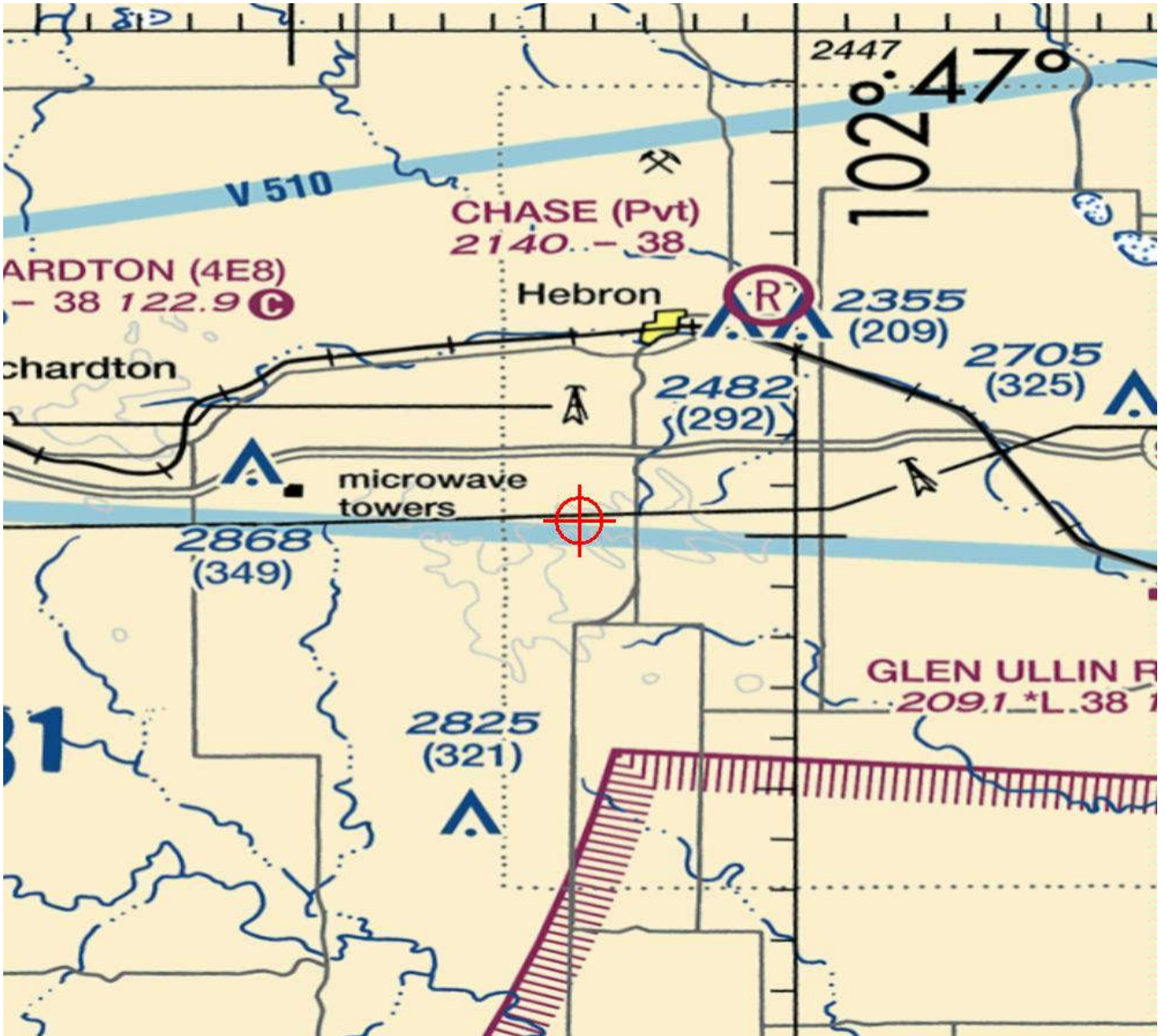
Additional Information

Map(s)

Additional information for ASN 2016-WTE-8721-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8719-OE
Prior Study No.
2014-WTE-5821-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 16
Location:	Hebron, ND
Latitude:	46-50-18.82N NAD 83
Longitude:	102-03-51.10W
Heights:	2518 feet site elevation (SE) 426 feet above ground level (AGL) 2944 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8719-OE.

Signature Control No: 308763288-517988648

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

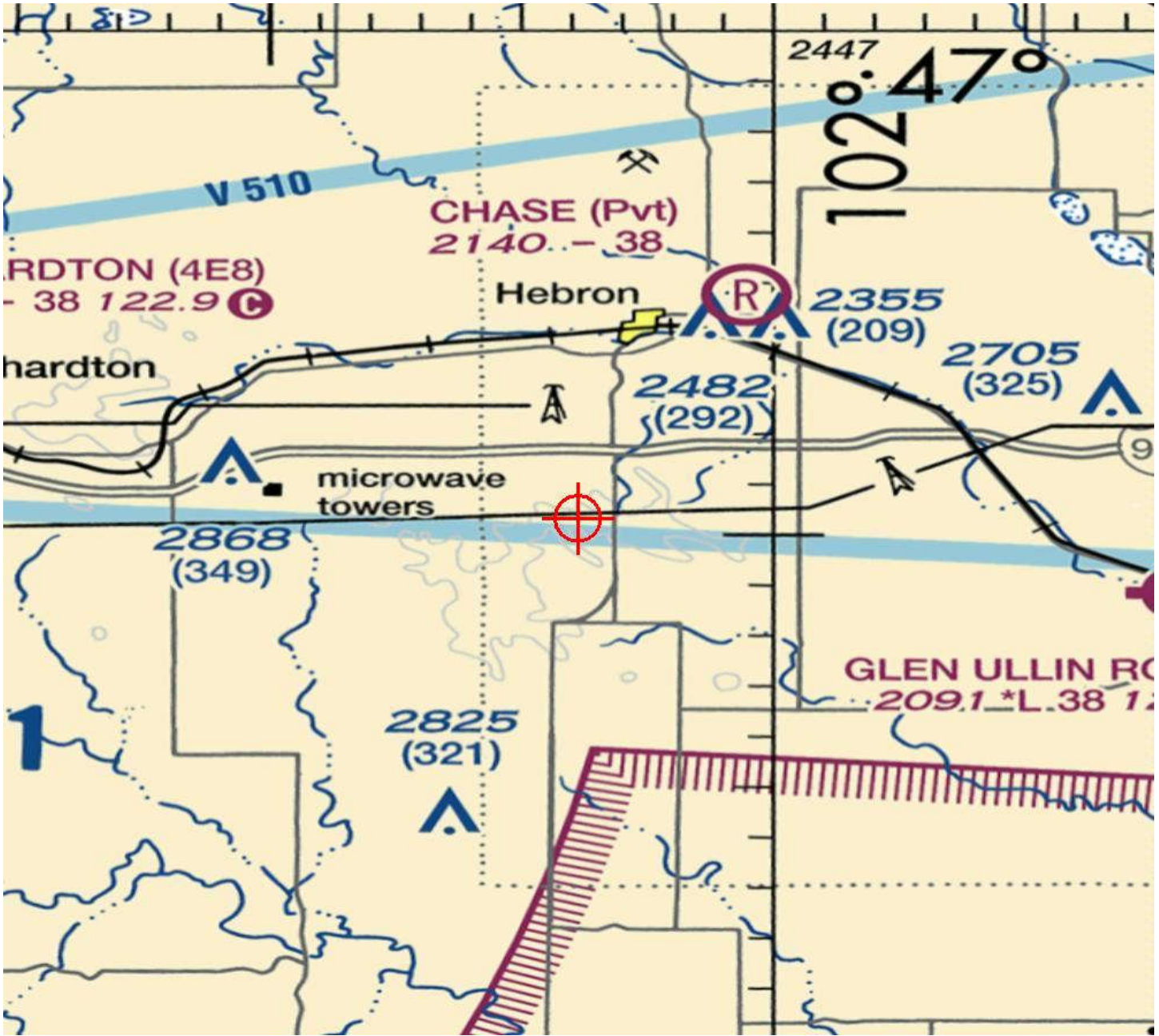
Map(s)

Additional information for ASN 2016-WTE-8719-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oiaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8717-OE
Prior Study No.
2014-WTE-5822-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 17
Location:	Hebron, ND
Latitude:	46-50-18.47N NAD 83
Longitude:	102-03-28.49W
Heights:	2510 feet site elevation (SE) 426 feet above ground level (AGL) 2936 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8717-OE.

Signature Control No: 308763063-517989830

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

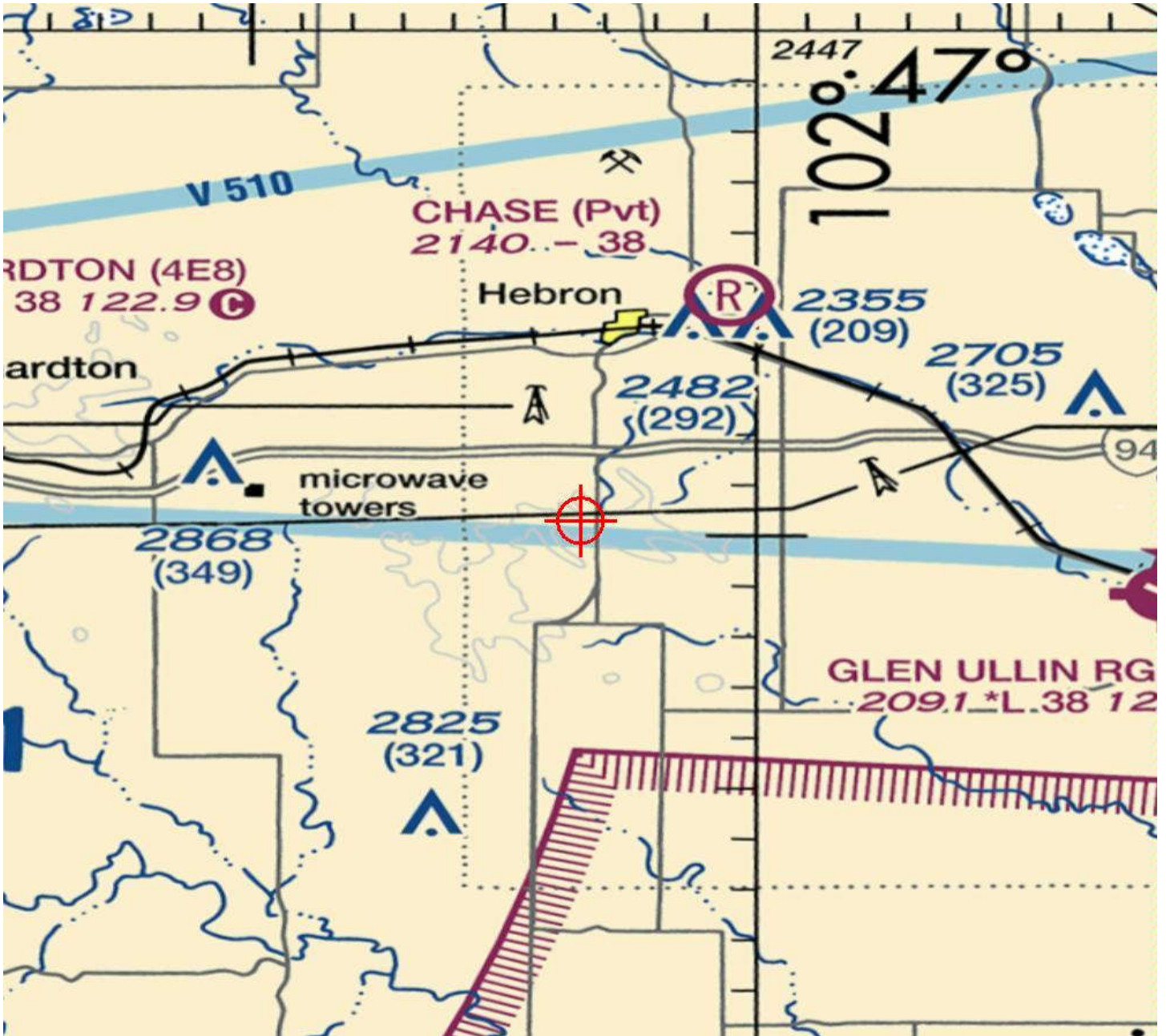
Additional Information

Map(s)

Additional information for ASN 2016-WTE-8717-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8715-OE
Prior Study No.
2014-WTE-5823-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 18
Location:	Hebron, ND
Latitude:	46-50-16.08N NAD 83
Longitude:	102-03-04.42W
Heights:	2511 feet site elevation (SE) 426 feet above ground level (AGL) 2937 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8715-OE.

Signature Control No: 308762657-517989824

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

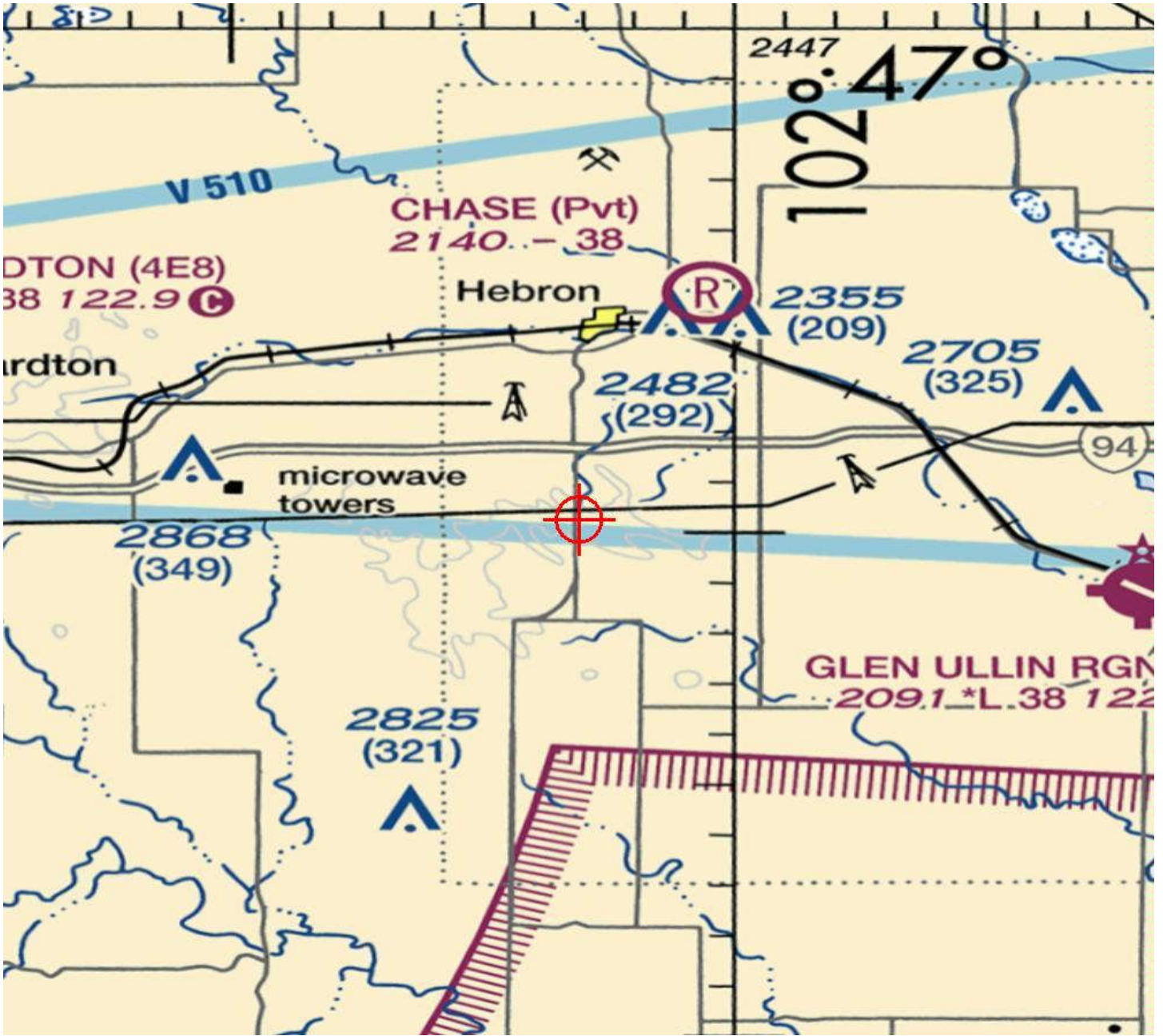
Additional Information

Map(s)

Additional information for ASN 2016-WTE-8715-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8903-OE
Prior Study No.
2014-WTE-5824-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 19
Location:	Hebron, ND
Latitude:	46-50-35.86N NAD 83
Longitude:	102-02-50.90W
Heights:	2481 feet site elevation (SE) 426 feet above ground level (AGL) 2907 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8903-OE.

Signature Control No: 309331140-517989834

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

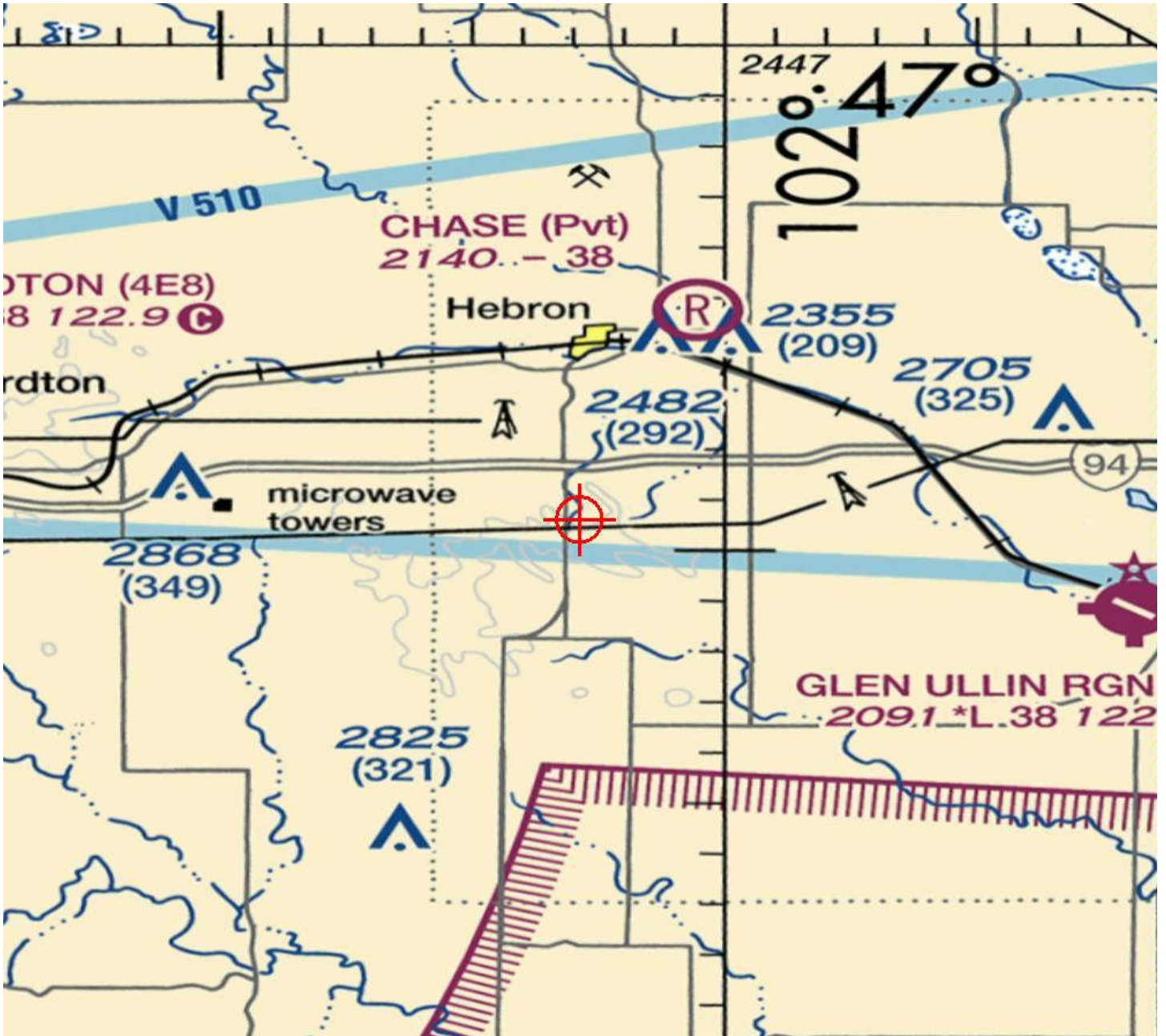
Additional Information

Map(s)

Additional information for ASN 2016-WTE-8903-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8904-OE
Prior Study No.
2014-WTE-5825-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 20
Location:	Hebron, ND
Latitude:	46-50-40.83N NAD 83
Longitude:	102-02-32.07W
Heights:	2495 feet site elevation (SE) 426 feet above ground level (AGL) 2921 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8904-OE.

Signature Control No: 309332213-517989835

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

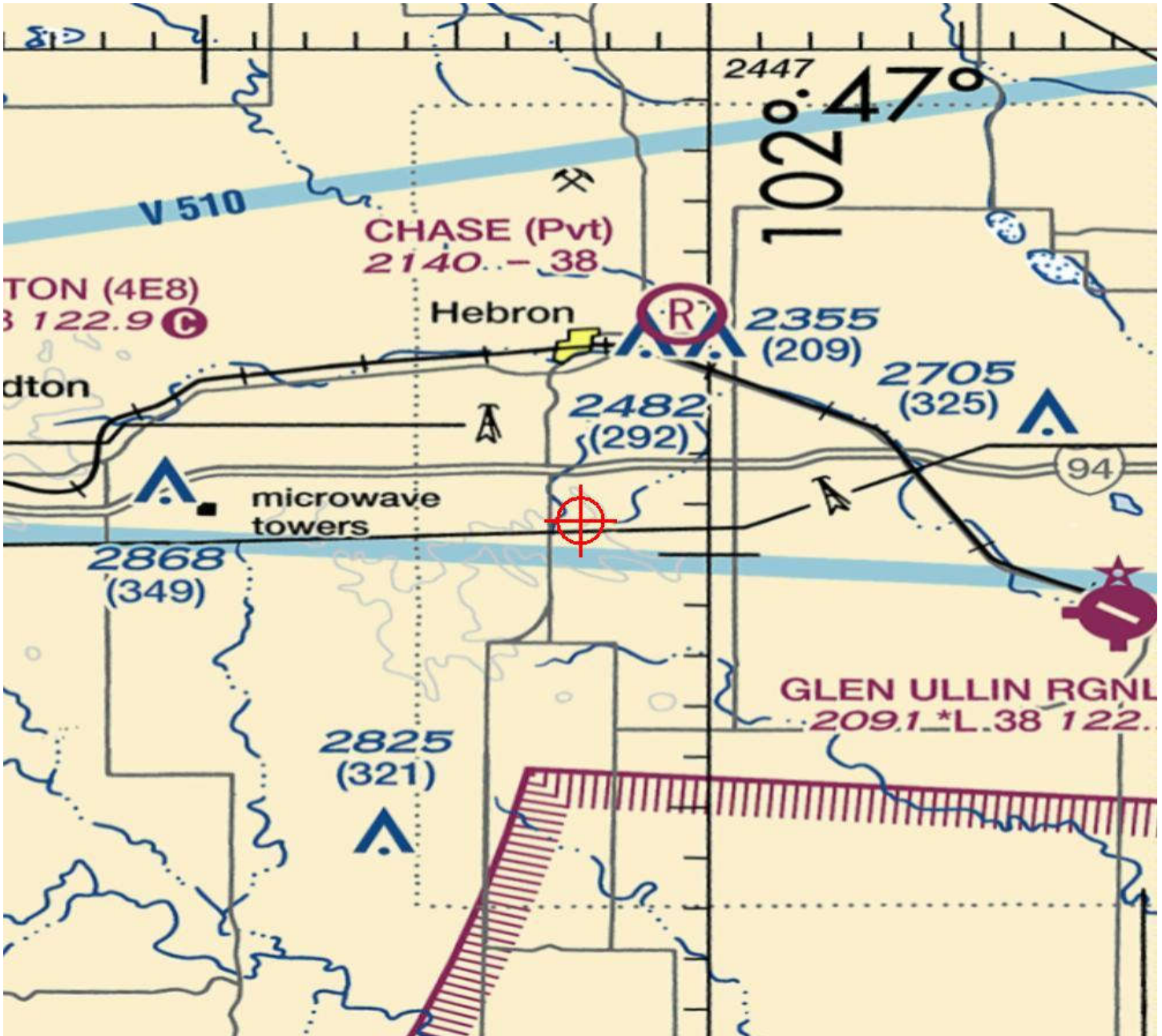
Additional Information

Map(s)

Additional information for ASN 2016-WTE-8904-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8905-OE
Prior Study No.
2014-WTE-5826-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 21
Location:	Hebron, ND
Latitude:	46-50-50.40N NAD 83
Longitude:	102-02-24.43W
Heights:	2480 feet site elevation (SE) 426 feet above ground level (AGL) 2906 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8905-OE.

Signature Control No: 309333163-517988653

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

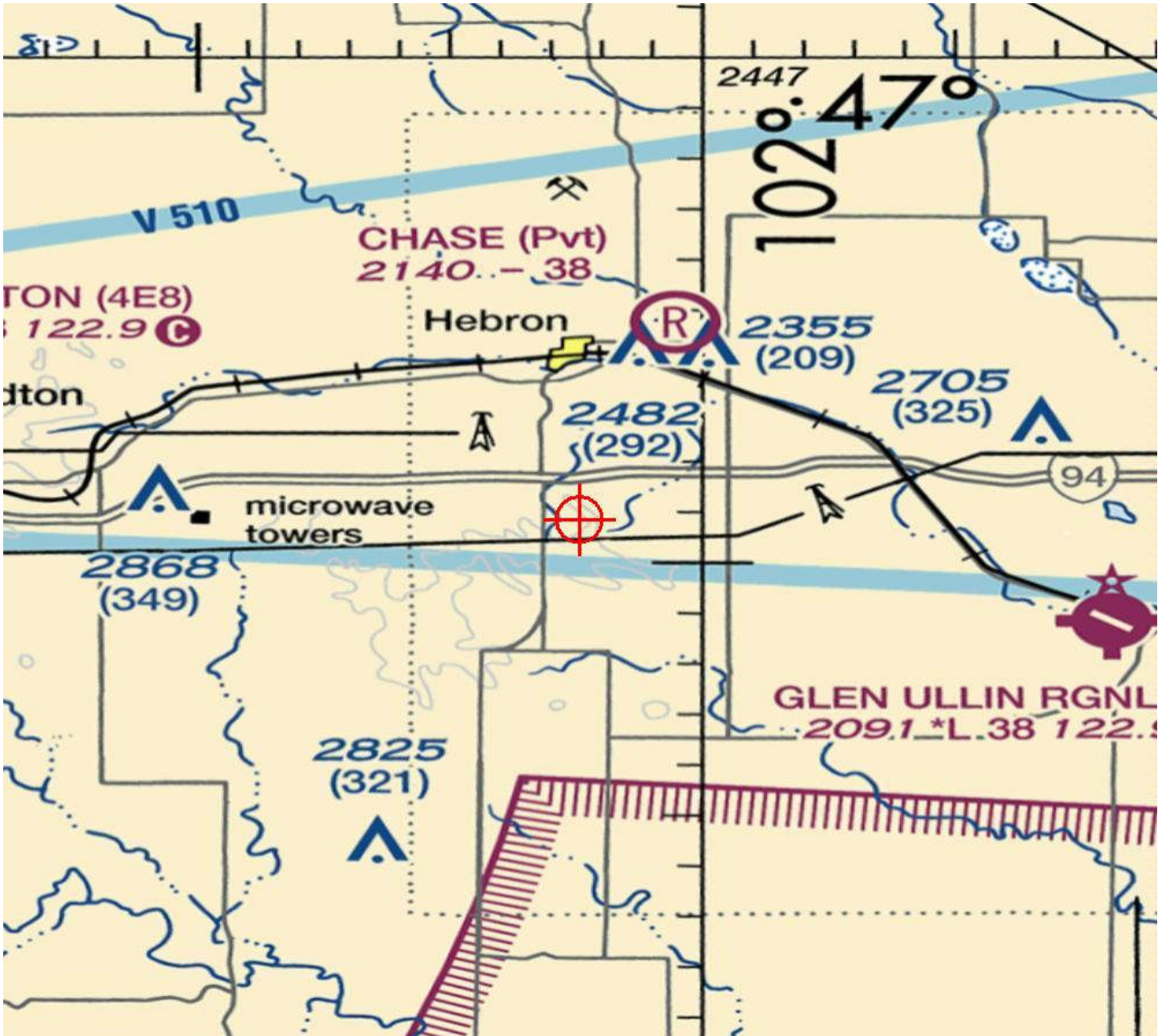
Map(s)

Additional information for ASN 2016-WTE-8905-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oecaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-9082-OE
Prior Study No.
2014-WTE-5827-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 22
Location:	Hebron, ND
Latitude:	46-51-02.72N NAD 83
Longitude:	102-02-20.72W
Heights:	2472 feet site elevation (SE) 426 feet above ground level (AGL) 2898 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-9082-OE.

Signature Control No: 309389038-517989836

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

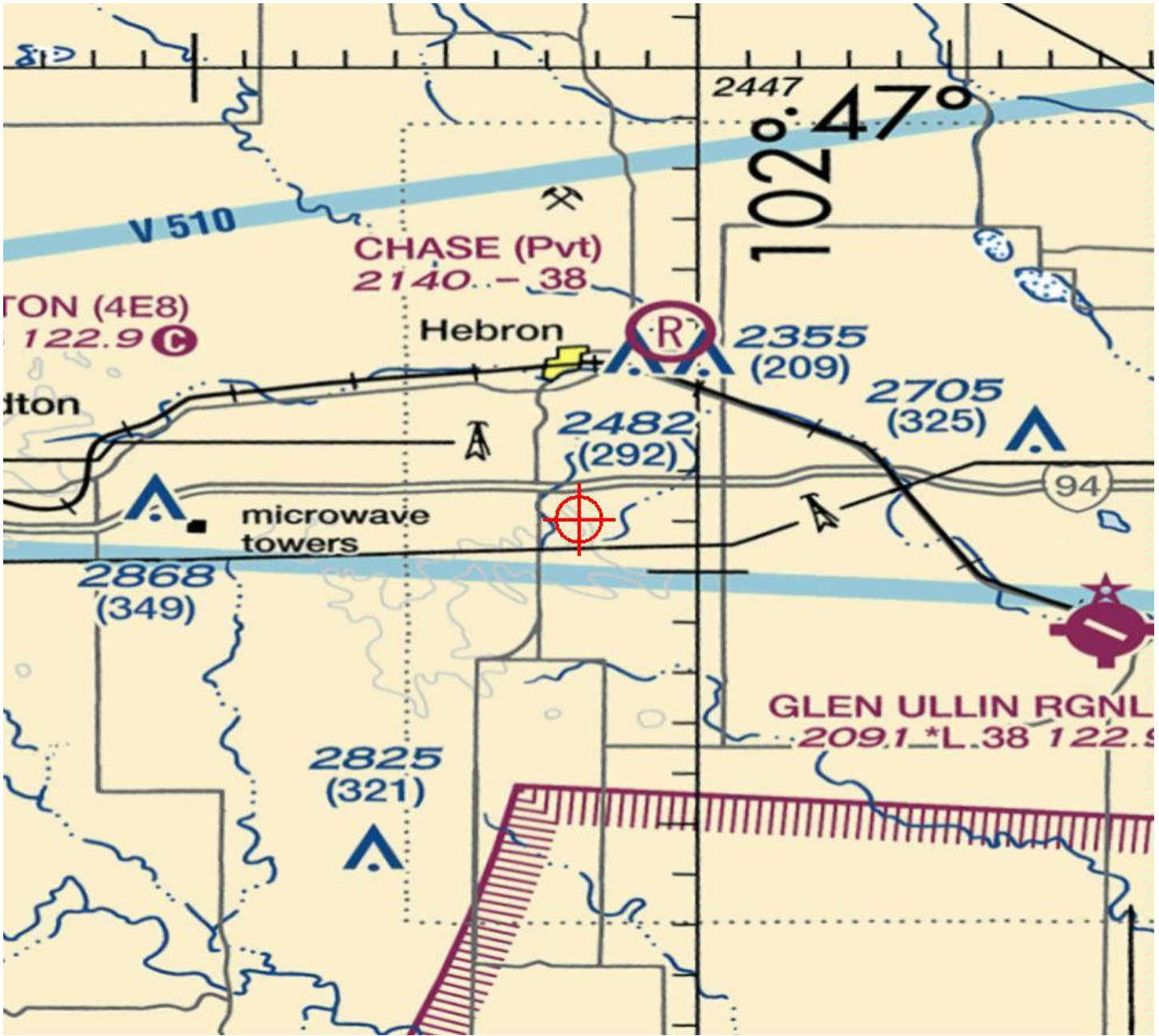
Additional Information

Map(s)

Additional information for ASN 2016-WTE-9082-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-7769-OE
Prior Study No.
2014-WTE-5829-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 24
Location:	Hebron, ND
Latitude:	46-49-12.07N NAD 83
Longitude:	102-05-42.93W
Heights:	2520 feet site elevation (SE) 426 feet above ground level (AGL) 2946 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

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This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-7769-OE.

Signature Control No: 306090053-517989601

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-7769-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-7767-OE
Prior Study No.
2014-WTE-5830-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 25
Location:	Hebron, ND
Latitude:	46-49-24.33N NAD 83
Longitude:	102-05-34.69W
Heights:	2507 feet site elevation (SE) 426 feet above ground level (AGL) 2933 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-7767-OE.

Signature Control No: 306089572-517988639

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

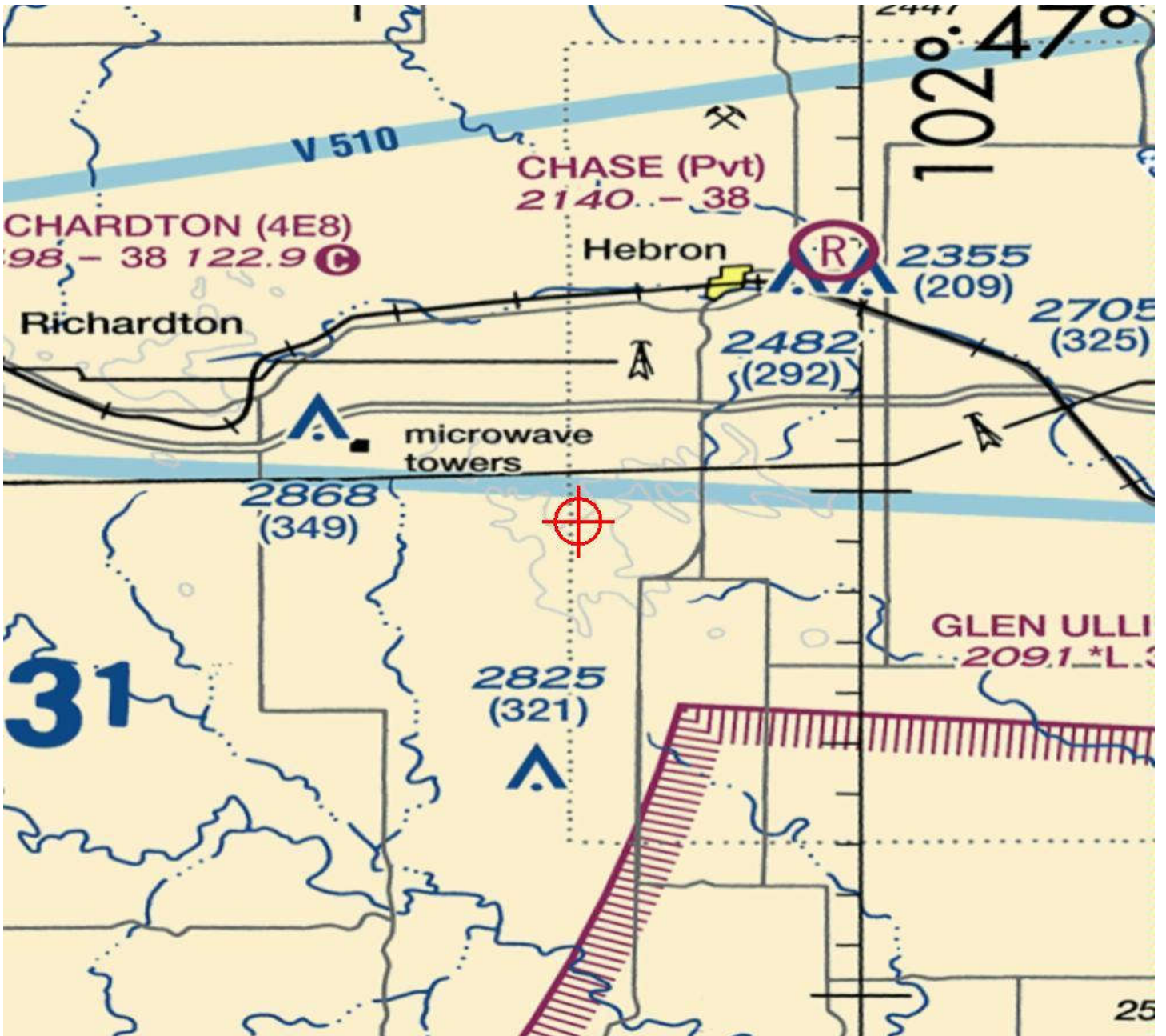
Map(s)

Additional information for ASN 2016-WTE-7767-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oecaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-7651-OE
Prior Study No.
2014-WTE-5831-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 26
Location:	Hebron, ND
Latitude:	46-49-29.20N NAD 83
Longitude:	102-05-20.19W
Heights:	2498 feet site elevation (SE) 426 feet above ground level (AGL) 2924 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-7651-OE.

Signature Control No: 305829270-517989606

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

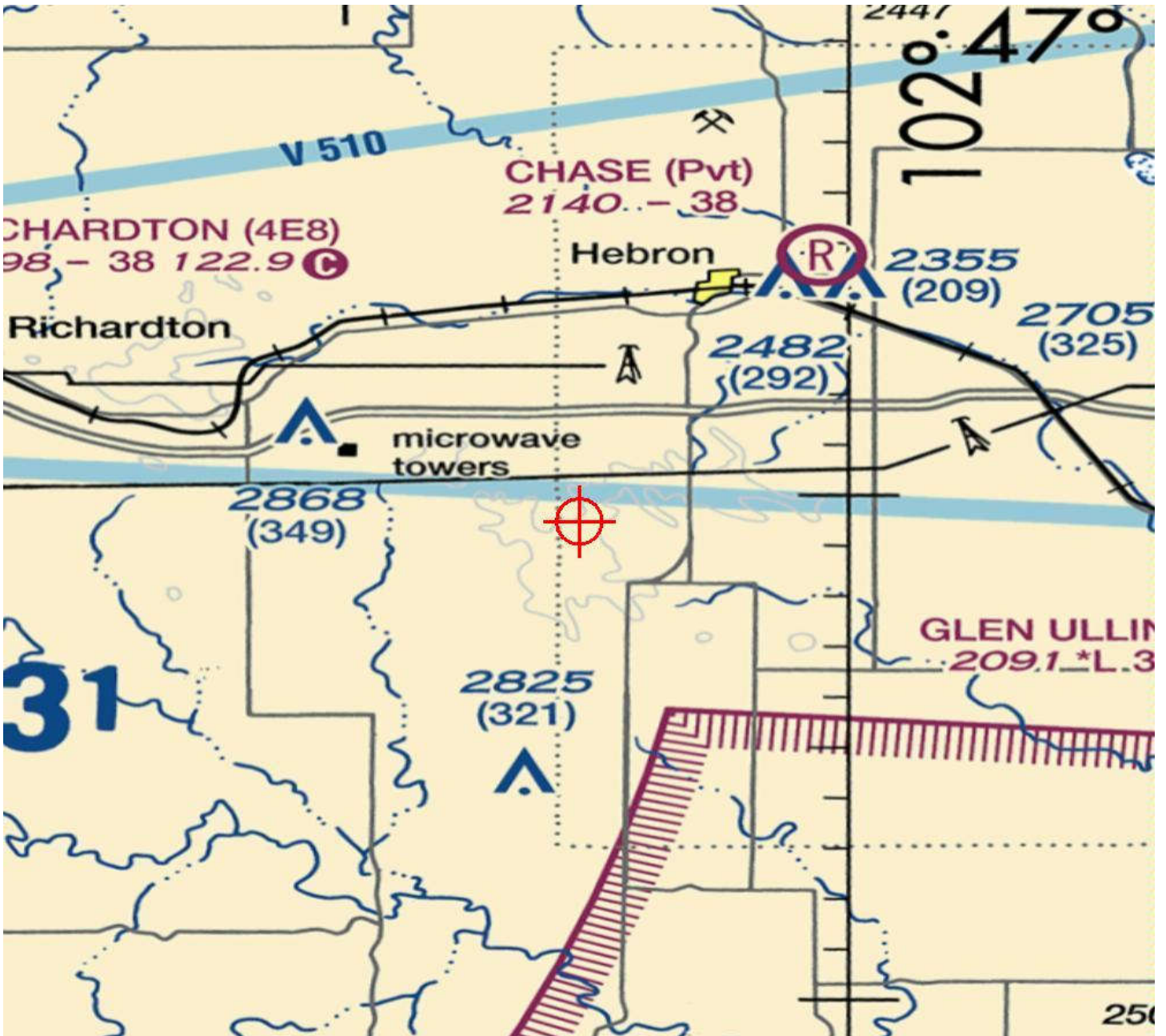
Additional Information

Map(s)

Additional information for ASN 2016-WTE-7651-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-7653-OE
Prior Study No.
2014-WTE-5832-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 27
Location:	Hebron, ND
Latitude:	46-49-35.48N NAD 83
Longitude:	102-05-06.85W
Heights:	2493 feet site elevation (SE) 426 feet above ground level (AGL) 2919 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-7653-OE.

Signature Control No: 305829391-517988633

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-7653-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oecaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-7557-OE
Prior Study No.
2014-WTE-5833-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 28
Location:	Hebron, ND
Latitude:	46-49-43.40N NAD 83
Longitude:	102-04-46.28W
Heights:	2471 feet site elevation (SE) 426 feet above ground level (AGL) 2897 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-7557-OE.

Signature Control No: 305651324-517989598

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-7557-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-7869-OE
Prior Study No.
2014-WTE-5834-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 29
Location:	Hebron, ND
Latitude:	46-48-25.53N NAD 83
Longitude:	102-06-20.44W
Heights:	2521 feet site elevation (SE) 426 feet above ground level (AGL) 2947 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-7869-OE.

Signature Control No: 306388884-517989613

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-7869-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-7870-OE
Prior Study No.
2014-WTE-5835-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 30
Location:	Hebron, ND
Latitude:	46-48-29.32N NAD 83
Longitude:	102-06-01.77W
Heights:	2519 feet site elevation (SE) 426 feet above ground level (AGL) 2945 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-7870-OE.

Signature Control No: 306389845-517988638

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-7870-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oecaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-7871-OE
Prior Study No.
2014-WTE-5836-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 31
Location:	Hebron, ND
Latitude:	46-48-33.41N NAD 83
Longitude:	102-05-40.41W
Heights:	2529 feet site elevation (SE) 426 feet above ground level (AGL) 2955 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-7871-OE.

Signature Control No: 306390314-517989599

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-7871-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-7872-OE
Prior Study No.
2014-WTE-5837-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 32
Location:	Hebron, ND
Latitude:	46-48-48.40N NAD 83
Longitude:	102-05-26.20W
Heights:	2521 feet site elevation (SE) 426 feet above ground level (AGL) 2947 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-7872-OE.

Signature Control No: 306390644-517988641

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

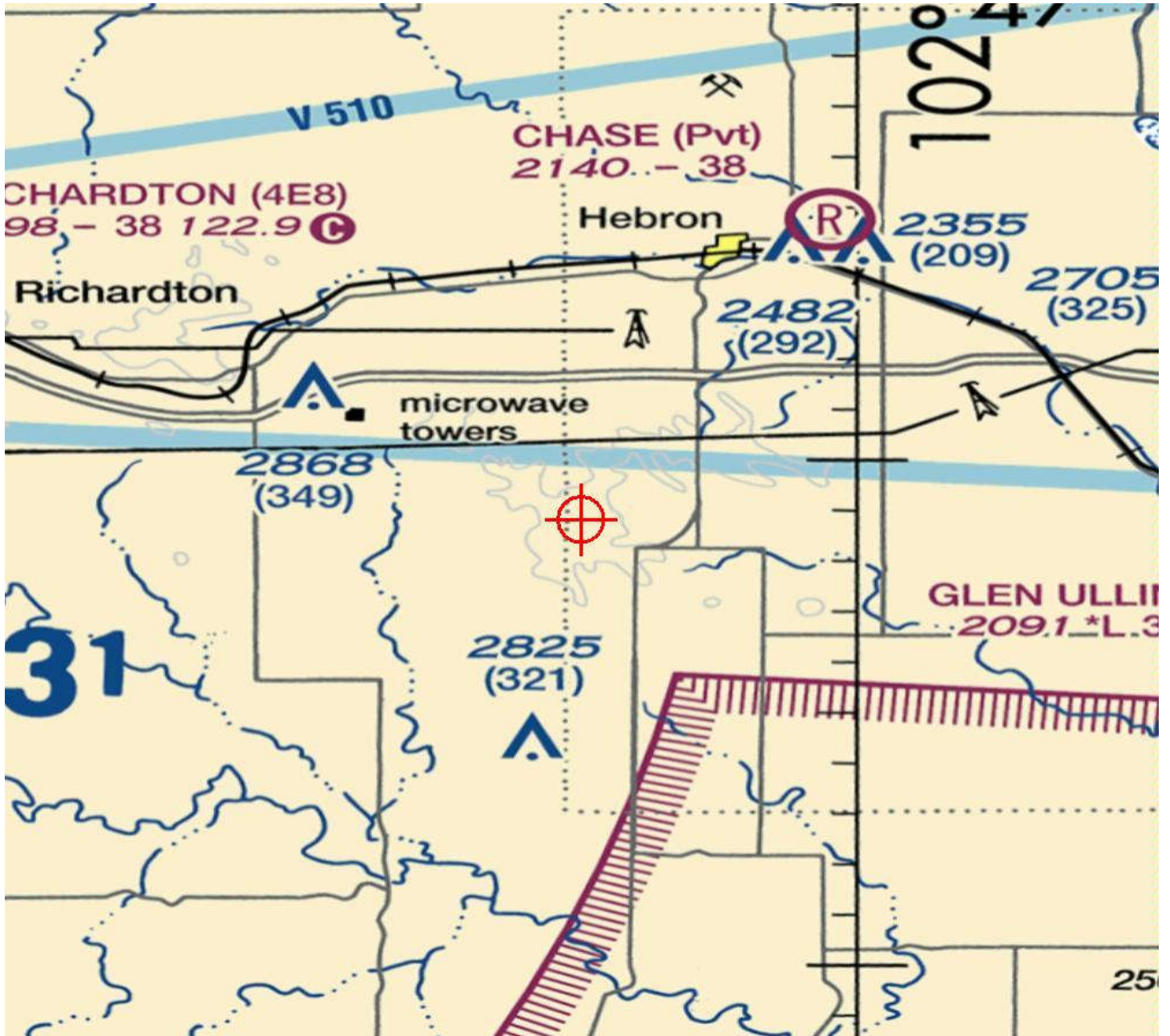
Map(s)

Additional information for ASN 2016-WTE-7872-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oecaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-7770-OE
Prior Study No.
2014-WTE-5838-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 33
Location:	Hebron, ND
Latitude:	46-48-52.19N NAD 83
Longitude:	102-05-09.82W
Heights:	2533 feet site elevation (SE) 426 feet above ground level (AGL) 2959 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-7770-OE.

Signature Control No: 306090812-517989607

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-7770-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8127-OE
Prior Study No.
2014-WTE-5841-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 36
Location:	Hebron, ND
Latitude:	46-49-11.24N NAD 83
Longitude:	102-04-17.87W
Heights:	2448 feet site elevation (SE) 426 feet above ground level (AGL) 2874 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8127-OE.

Signature Control No: 306947233-517989614

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-8127-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2016-WTE-8128-OE
Prior Study No.
2014-WTE-5842-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 37
Location:	Hebron, ND
Latitude:	46-49-21.81N NAD 83
Longitude:	102-04-08.31W
Heights:	2464 feet site elevation (SE) 426 feet above ground level (AGL) 2890 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8128-OE.

Signature Control No: 306947282-517989608

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-8128-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2016-WTE-8129-OE
Prior Study No.
2014-WTE-5843-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 38
Location:	Hebron, ND
Latitude:	46-49-29.57N NAD 83
Longitude:	102-03-45.86W
Heights:	2433 feet site elevation (SE) 426 feet above ground level (AGL) 2859 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8129-OE.

Signature Control No: 306947294-517988636

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-8129-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oecaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8634-OE
Prior Study No.
2014-WTE-5844-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 39
Location:	Hebron, ND
Latitude:	46-49-23.55N NAD 83
Longitude:	102-02-44.68W
Heights:	2432 feet site elevation (SE) 426 feet above ground level (AGL) 2858 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8634-OE.

Signature Control No: 308167160-517989821

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-8634-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2014-WTE-5845-OE
Prior Study No.
2012-WTE-3781-OE

Issued Date: 03/15/2022

Casey Willis
Sunflower Wind Project, LLC
3760 State Street
Suite 200
Santa Barbara, CA 93105

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure: Wind Turbine 40
Location: Hebron, ND
Latitude: 46-49-32.50N NAD 83
Longitude: 102-02-34.79W
Heights: 2447 feet site elevation (SE)
426 feet above ground level (AGL)
2873 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting

configuration is turned on. As the height of the structure continues to increase, the temporary lighting should be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2014-WTE-5845-OE.

Signature Control No: 232652593-517988634

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

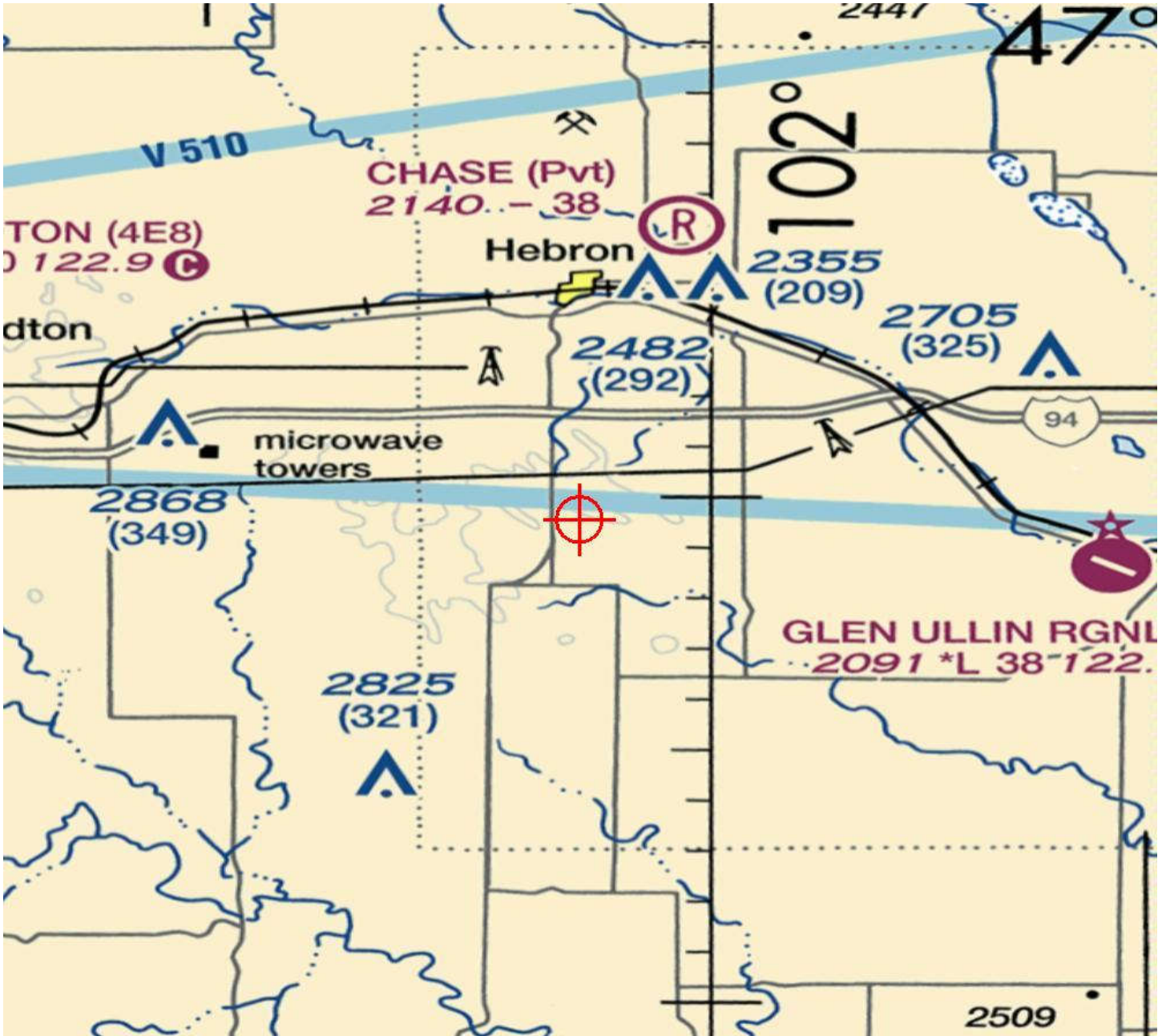
Map(s)

Additional information for ASN 2014-WTE-5845-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oecaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8650-OE
Prior Study No.
2014-WTE-5846-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 41
Location:	Hebron, ND
Latitude:	46-49-42.55N NAD 83
Longitude:	102-02-25.77W
Heights:	2478 feet site elevation (SE) 426 feet above ground level (AGL) 2904 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8650-OE.

Signature Control No: 308392854-517989819

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

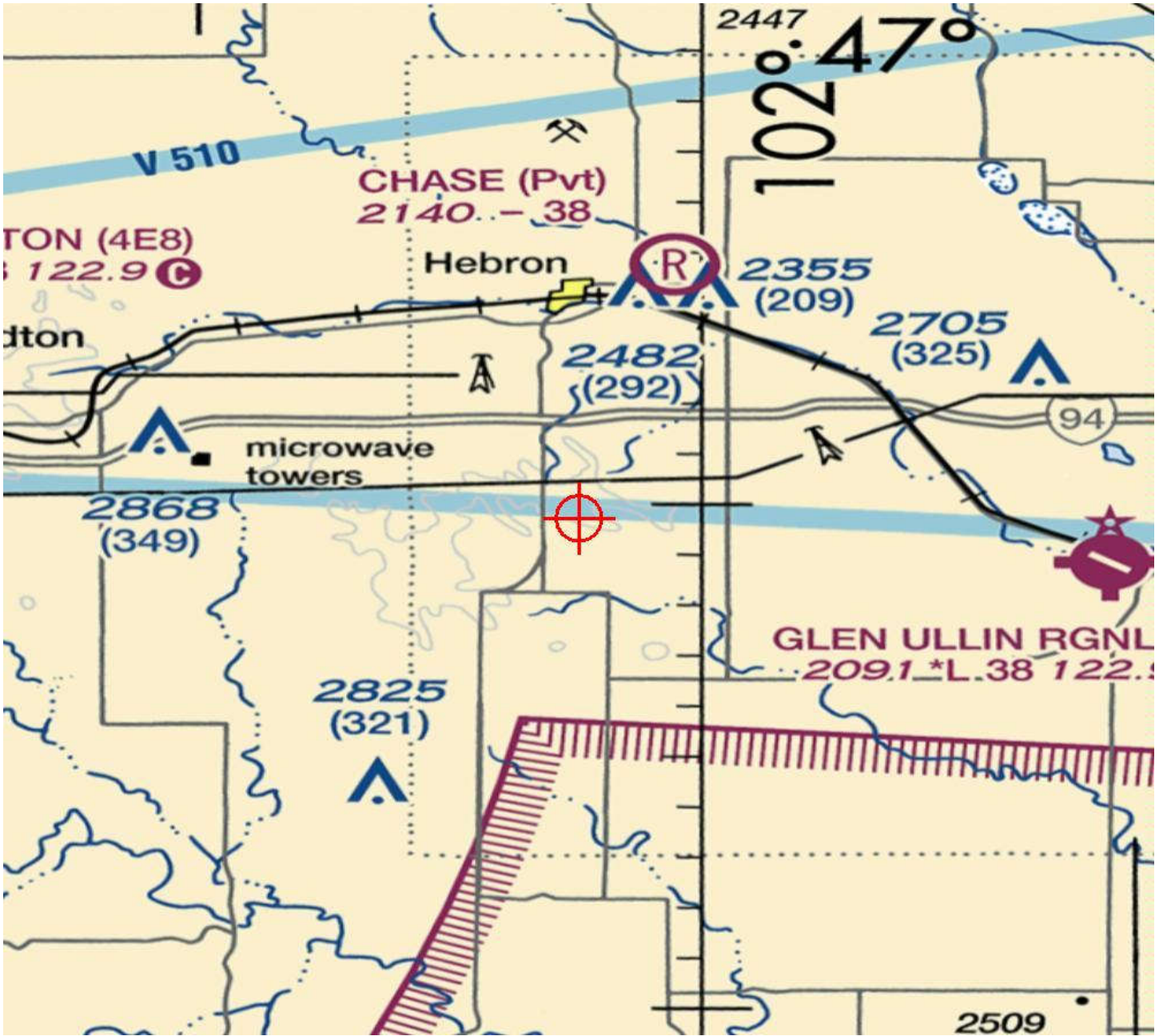
Additional Information

Map(s)

Additional information for ASN 2016-WTE-8650-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8651-OE
Prior Study No.
2014-WTE-5847-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 42
Location:	Hebron, ND
Latitude:	46-49-49.74N NAD 83
Longitude:	102-02-13.09W
Heights:	2467 feet site elevation (SE) 426 feet above ground level (AGL) 2893 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8651-OE.

Signature Control No: 308393052-517988654

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

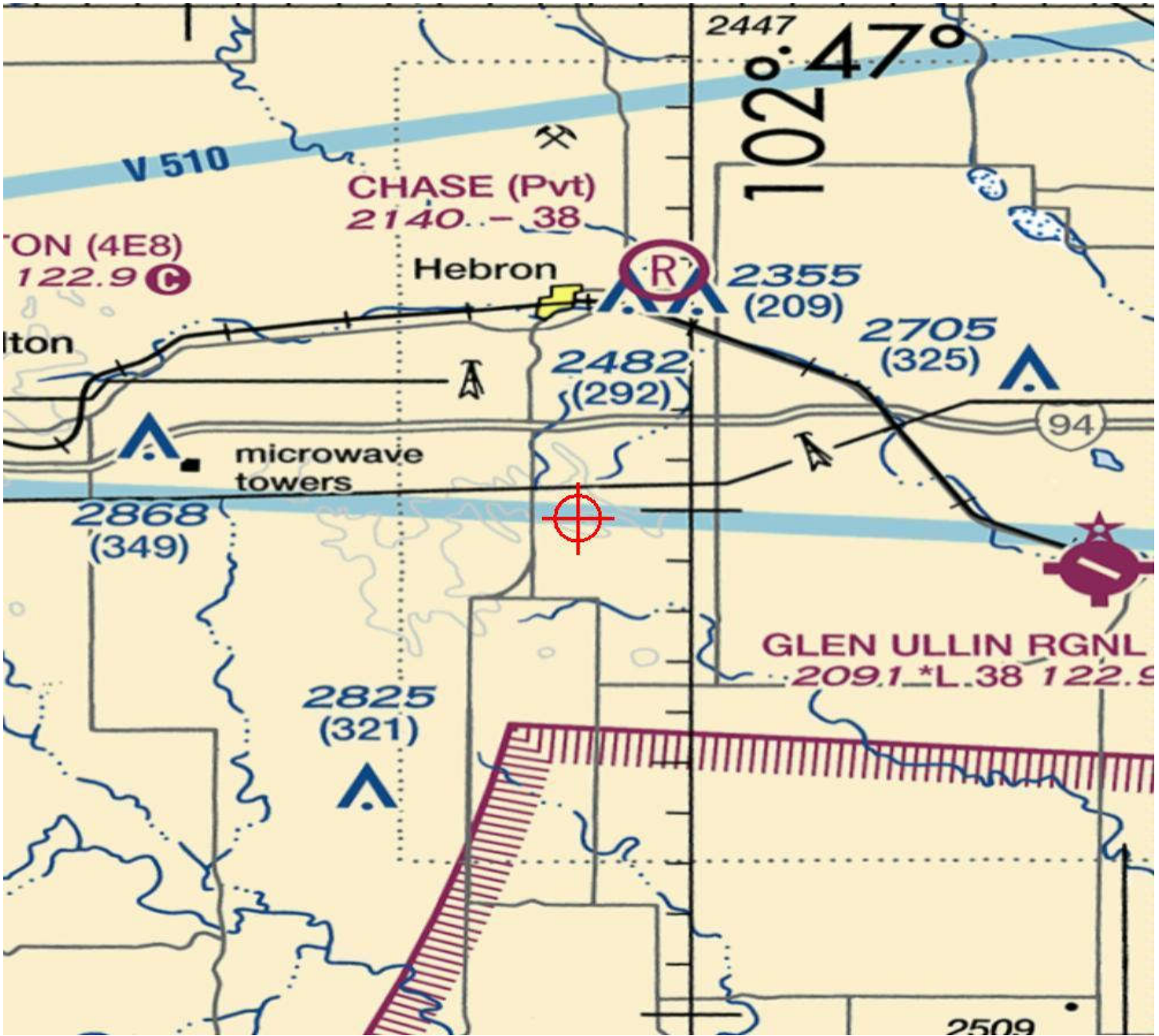
Map(s)

Additional information for ASN 2016-WTE-8651-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oaaaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8679-OE
Prior Study No.
2014-WTE-5848-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 43
Location:	Hebron, ND
Latitude:	46-49-55.22N NAD 83
Longitude:	102-01-57.01W
Heights:	2471 feet site elevation (SE) 426 feet above ground level (AGL) 2897 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8679-OE.

Signature Control No: 308547424-517989820

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

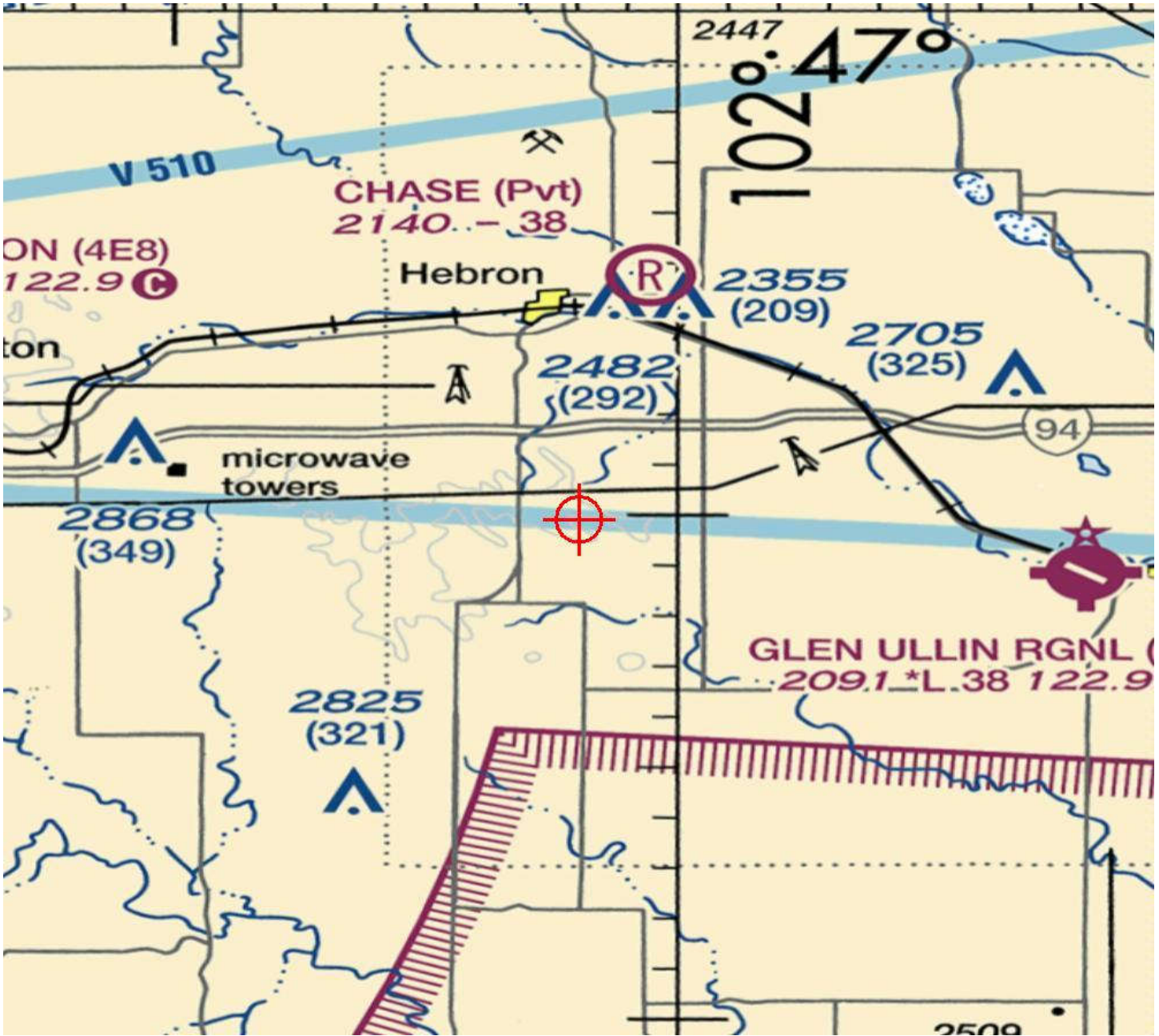
Additional Information

Map(s)

Additional information for ASN 2016-WTE-8679-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8680-OE
Prior Study No.
2014-WTE-5849-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure: Wind Turbine Wind Turbine 44
Location: Hebron, ND
Latitude: 46-50-06.57N NAD 83
Longitude: 102-01-49.25W
Heights: 2497 feet site elevation (SE)
426 feet above ground level (AGL)
2923 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8680-OE.

Signature Control No: 308547450-517989823

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

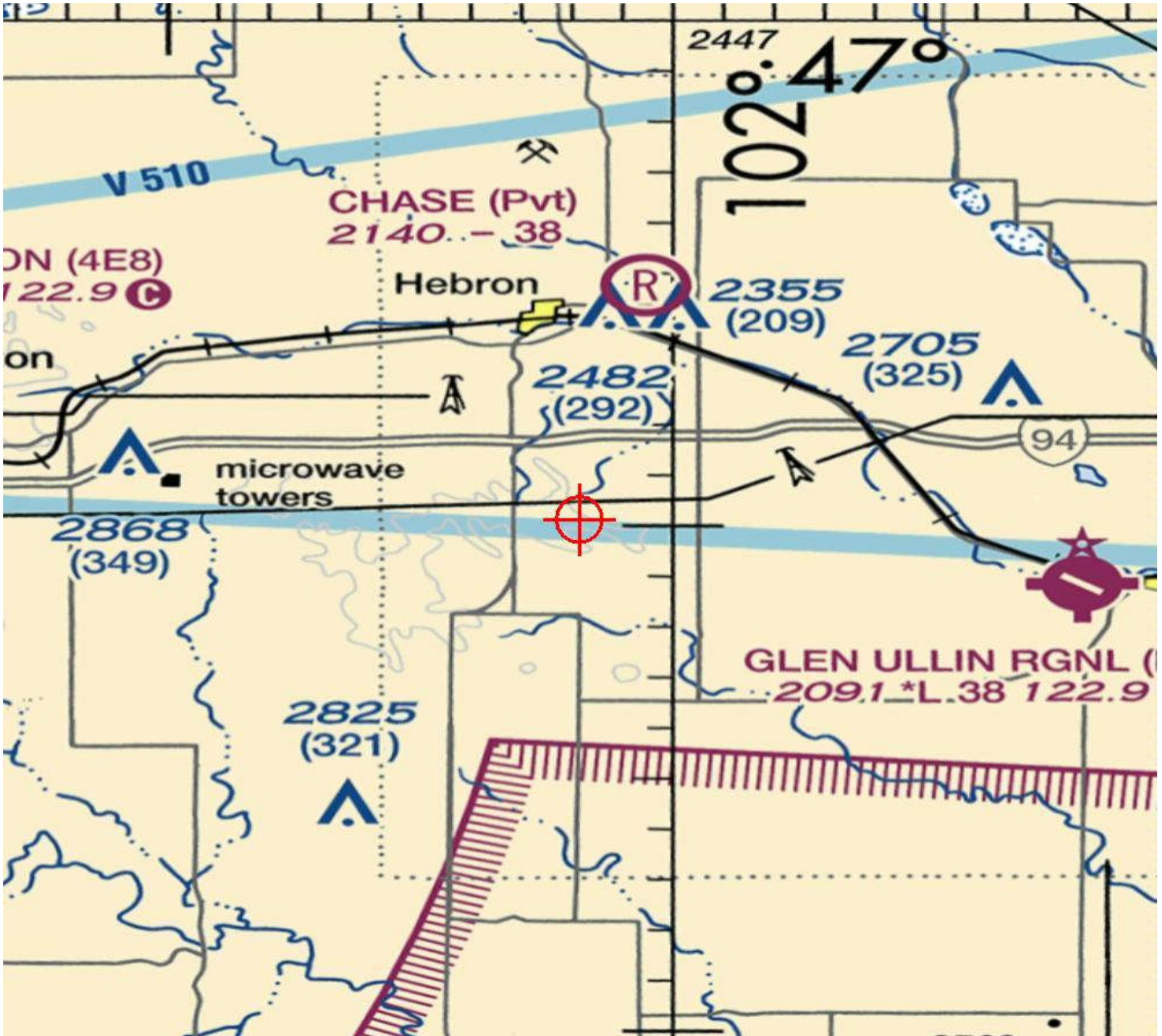
Additional Information

Map(s)

Additional information for ASN 2016-WTE-8680-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2014-WTE-5850-OE
Prior Study No.
2012-WTE-3786-OE

Issued Date: 03/15/2022

Casey Willis
Sunflower Wind Project, LLC
3760 State Street
Suite 200
Santa Barbara, CA 93105

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine 45
Location:	Hebron, ND
Latitude:	46-49-22.58N NAD 83
Longitude:	102-01-27.37W
Heights:	2424 feet site elevation (SE) 426 feet above ground level (AGL) 2850 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting

configuration is turned on. As the height of the structure continues to increase, the temporary lighting should be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2014-WTE-5850-OE.

Signature Control No: 232652598-517989596

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2014-WTE-5850-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8630-OE
Prior Study No.
2014-WTE-5851-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 46
Location:	Hebron, ND
Latitude:	46-49-38.28N NAD 83
Longitude:	102-01-17.15W
Heights:	2467 feet site elevation (SE) 426 feet above ground level (AGL) 2893 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8630-OE.

Signature Control No: 308117452-517988650

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-8630-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oecaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8631-OE
Prior Study No.
2014-WTE-5852-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 47
Location:	Hebron, ND
Latitude:	46-49-44.75N NAD 83
Longitude:	102-01-07.94W
Heights:	2484 feet site elevation (SE) 426 feet above ground level (AGL) 2910 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8631-OE.

Signature Control No: 308117690-517989817

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

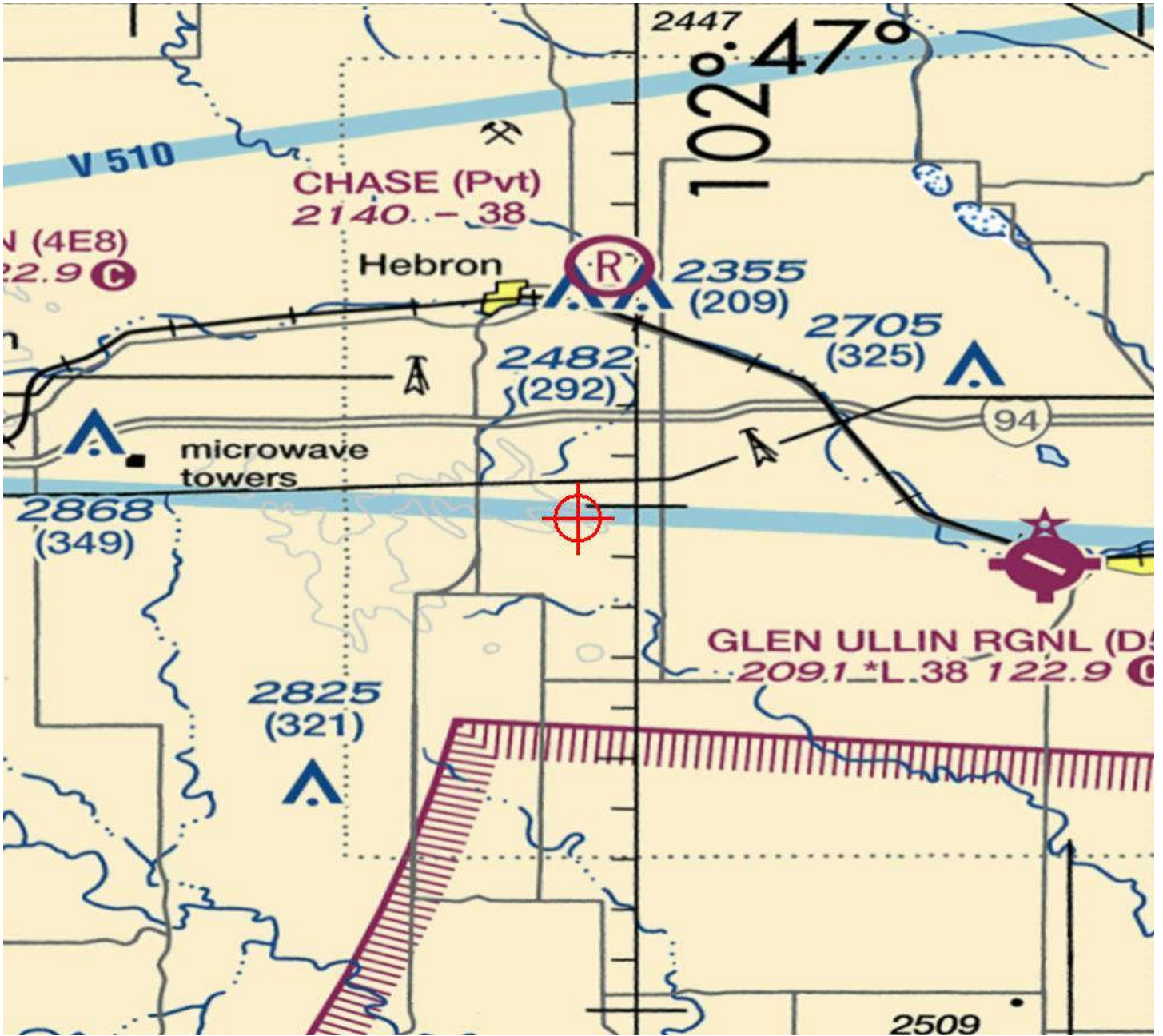
Additional Information

Map(s)

Additional information for ASN 2016-WTE-8631-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8622-OE
Prior Study No.
2014-WTE-5853-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 48
Location:	Hebron, ND
Latitude:	46-49-57.17N NAD 83
Longitude:	102-00-52.48W
Heights:	2461 feet site elevation (SE) 426 feet above ground level (AGL) 2887 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8622-OE.

Signature Control No: 307954591-517988663

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-8622-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oiaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8620-OE
Prior Study No.
2014-WTE-5854-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 49
Location:	Hebron, ND
Latitude:	46-50-03.47N NAD 83
Longitude:	102-00-41.32W
Heights:	2454 feet site elevation (SE) 426 feet above ground level (AGL) 2880 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8620-OE.

Signature Control No: 307949430-517989815

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-8620-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8621-OE
Prior Study No.
2014-WTE-5855-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 50
Location:	Hebron, ND
Latitude:	46-50-15.17N NAD 83
Longitude:	102-00-21.51W
Heights:	2387 feet site elevation (SE) 426 feet above ground level (AGL) 2813 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8621-OE.

Signature Control No: 307951926-517989816

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-8621-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8443-OE
Prior Study No.
2014-WTE-5856-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 51
Location:	Hebron, ND
Latitude:	46-49-32.48N NAD 83
Longitude:	102-00-22.52W
Heights:	2420 feet site elevation (SE) 426 feet above ground level (AGL) 2846 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8443-OE.

Signature Control No: 307507035-517989813

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-8443-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8442-OE
Prior Study No.
2014-WTE-5857-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 52
Location:	Hebron, ND
Latitude:	46-49-40.70N NAD 83
Longitude:	102-00-04.11W
Heights:	2417 feet site elevation (SE) 426 feet above ground level (AGL) 2843 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8442-OE.

Signature Control No: 307507026-517989612

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-8442-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8444-OE
Prior Study No.
2014-WTE-5858-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine 53
Location:	Hebron, ND
Latitude:	46-49-43.02N NAD 83
Longitude:	101-59-50.87W
Heights:	2437 feet site elevation (SE) 426 feet above ground level (AGL) 2863 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8444-OE.

Signature Control No: 307507044-517989814

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-8444-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8130-OE
Prior Study No.
2014-WTE-5865-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine A07
Location:	Hebron, ND
Latitude:	46-49-32.45N NAD 83
Longitude:	102-03-25.82W
Heights:	2432 feet site elevation (SE) 426 feet above ground level (AGL) 2858 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8130-OE.

Signature Control No: 306947310-517989610

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-8130-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8193-OE
Prior Study No.
2014-WTE-5866-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine A08
Location:	Hebron, ND
Latitude:	46-49-22.00N NAD 83
Longitude:	102-01-45.74W
Heights:	2441 feet site elevation (SE) 426 feet above ground level (AGL) 2867 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8193-OE.

Signature Control No: 307199822-517989604

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-8193-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8441-OE
Prior Study No.
2014-WTE-5870-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine A12
Location:	Hebron, ND
Latitude:	46-49-14.23N NAD 83
Longitude:	102-00-49.06W
Heights:	2439 feet site elevation (SE) 426 feet above ground level (AGL) 2865 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint/synchronized red lights-Chapters 4,13(Turbines),&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8441-OE.

Signature Control No: 307507015-517989609

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

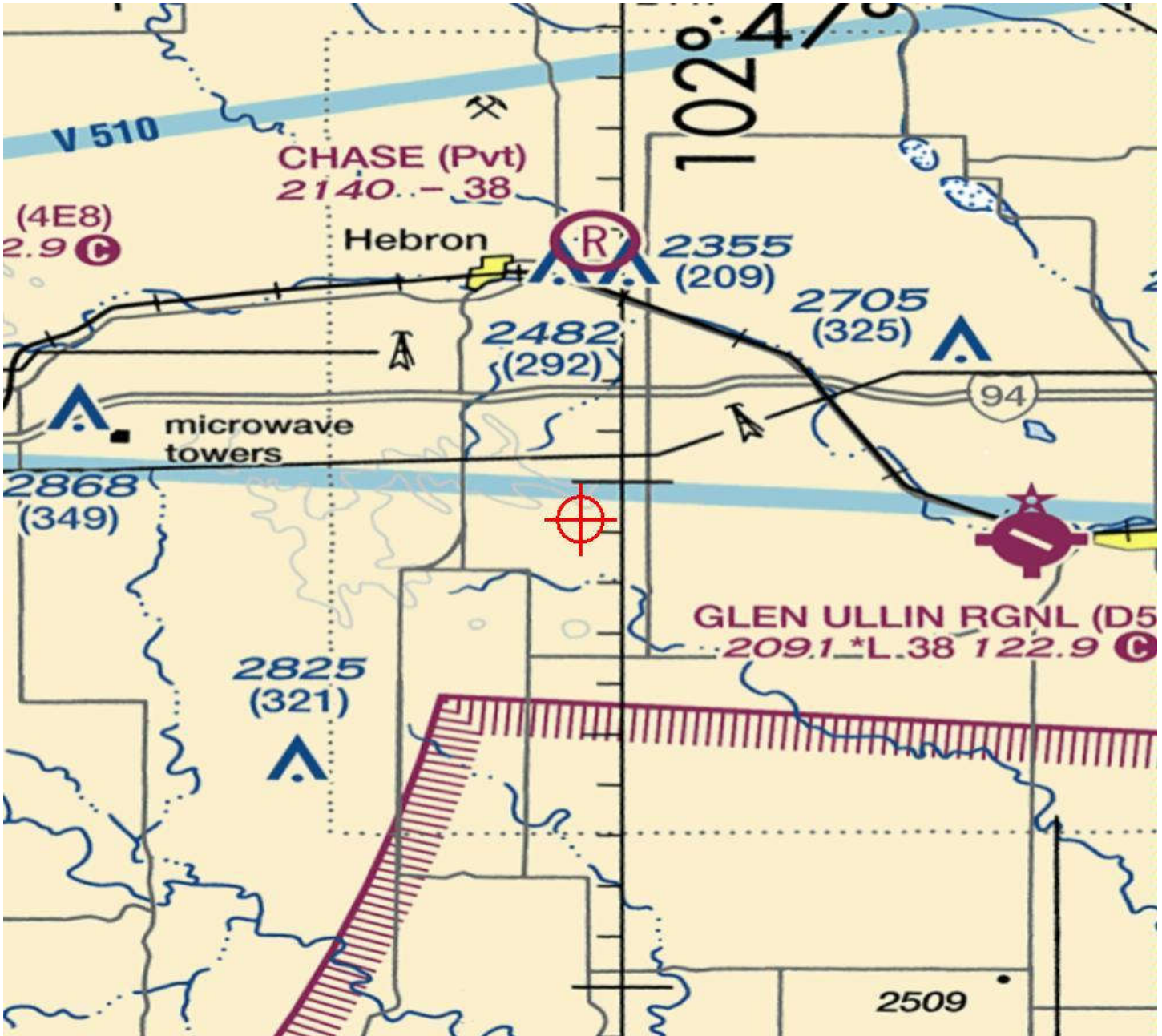
Additional Information

Map(s)

Additional information for ASN 2016-WTE-8441-OE

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
2016-WTE-8440-OE
Prior Study No.
2014-WTE-5871-OE

Issued Date: 03/15/2022

Cindy Whitney
Solas Energy Consulting
430 North College Avenue, Suite 440
Fort Collins, CO 80524

**** MARKING & LIGHTING RECOMMENDATION ****

The Federal Aviation Administration has completed an evaluation of your request concerning:

Structure:	Wind Turbine Wind Turbine A13
Location:	Hebron, ND
Latitude:	46-49-23.09N NAD 83
Longitude:	102-00-33.95W
Heights:	2421 feet site elevation (SE) 426 feet above ground level (AGL) 2847 feet above mean sea level (AMSL)

Based on this evaluation, we have no objection to the change provided the structure is marked/lighted in accordance with FAA Advisory Circular 70/7460-1, M , Obstruction Marking and Lighting, white paint only- Chapters 13(Turbines)&15.

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.

So that aeronautical charts and records can be updated, it is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed when the new system is installed and operational.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should

be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This evaluation concerns the effect of the marking/lighting changes 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.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-WTE-8440-OE.

Signature Control No: 307507006-517988651

(MAL -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2016-WTE-8440-OE

As a condition to this Determination, the structure must continue to be marked, at a minimum, with "White Paint Only". The adjacent structures must continue to be obstruction marked and lighted as specified in their FAA determinations. If at any point in the future, the adjacent structures are unlighted, reduced in height, relocated, dismantled or abandoned, resulting in an unlighted gap greater than 0.5 statute mile (2640 ft. / 804.67 m.) between lighted turbines, lighting of this structure will be immediately required. The proponent for this study is responsible for monitoring the situation and will promptly initiate a marking and lighting study by E-filing FAA form 7460-1, "Notice of Proposed Construction or Alteration" at the FAA public website <https://oecaa.faa.gov>.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

Our review of your request to utilize an ADLS to operate the lights for this wind farm was conducted without regard to whether the final lighting plan includes lighting this structure. Unless changed or amended, this determination, as it applies to the use of an ADLS, is valid for this structure whether it requires a light now or at some point in the future.





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

Aeronautical Study No.
 2022-WTE-43-OE

Issued Date: 03/15/2022

Stacey Fitts
 Sunflower Wind Project, LLC
 767 Third Avenue
 17th Floor
 New York, NY 10017

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Met Tower (w/WT Farm) ADLS Radar
 Location: Hebron, ND
 Latitude: 46-50-20.35N NAD 83
 Longitude: 102-02-19.50W
 Heights: 2543 feet site elevation (SE)
 148 feet above ground level (AGL)
 2691 feet above mean sea level (AMSL)

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

As a condition to this Determination, the structure is to be marked/lighted with * SEE PAGE 4 *.

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.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
- Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

See attachment for additional condition(s) or information.

Your request for consideration to utilize an Aircraft Detection Lighting System to operate the recommended lighting is approved. See attached for additional condition(s) or information.

This determination expires on 09/15/2023 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates and heights. This determination is valid for coordinates within one (1) second latitude/longitude and up to the approved AMSL height listed above (provided the AGL height does not exceed 499 feet). If a certified 1A or 2C accuracy survey was required to mitigate an adverse effect, any change in coordinates or increase in height will require a new certified accuracy survey and may require a new aeronautical study.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

Additional wind turbines or met towers proposed in the future may cause a cumulative effect on the national airspace system. All information from submission of Supplemental Notice (7460-2 Part 2) will be considered the final data (including heights) for this structure. Any future construction or alteration, including but not limited to changes in heights, requires separate notice to the FAA.

Obstruction marking and lighting recommendations for wind turbine farms are based on the scheme for the entire project. ANY change to the height, location or number of turbines within this project will require a reanalysis of the marking and lighting recommendation for the entire project. In particular, the removal of previously planned or built turbines/turbine locations from the project will often result in a change in the marking/lighting recommendation for other turbines within the project. It is the proponent's responsibility to contact the FAA to discuss the process for developing a revised obstruction marking and lighting plan should this occur.

In order to ensure proper conspicuity of turbines at night during construction, all turbines should be lit with temporary lighting once they reach a height of 200 feet or greater until such time the permanent lighting configuration is turned on. As the height of the structure continues to increase, the temporary lighting should be relocated to the uppermost part of the structure. The temporary lighting may be turned off for periods when they would interfere with construction personnel. If practical, permanent obstruction lights should be installed and operated at each level as construction progresses. An FAA Type L-810 steady red light fixture shall be used to light the structure during the construction phase. If power is not available, turbines shall be lit with self-contained, solar powered LED steady red light fixture that meets the photometric requirements of an FAA Type L-810 lighting system. The lights should be positioned to ensure that a pilot has an unobstructed view of at least one light at each level. The use of a NOTAM (D) to not light turbines within a project until the entire project has been completed is prohibited.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact Lan Norris, at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-WTE-43-OE.

Signature Control No: 507315163-517984092

(DNE -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Case Description

Frequency Data

Map(s)

Additional information for ASN 2022-WTE-43-OE

Based on this evaluation, marking and lighting of this structure are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory Circular 70/7460-1M.

There is no objection to the use of an Aircraft Detection Lighting System (ADLS) to operate the obstruction lighting for this structure and/or the associated wind farm, so as long as the system meets the specifications of the latest technical note. The sponsor is responsible for ensuring the ADLS is continuously monitored and meets the aircraft detection capabilities for the volume of airspace defined in the current version of FAA Advisory Circular 70/7460-1. The sponsor will ensure this responsibility is specifically transferred to any subsequent owners of the wind farm.

NOTE: 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 - If applicable, 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.

Case Description for ASN 2022-WTE-43-OE

Filing is for ADLS radar tower for existing wind farm; Hebron, ND.

Frequency Data for ASN 2022-WTE-43-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
9	9.5	GHz	138	kW





MORTON COUNTY

STATE OF NORTH DAKOTA

PLANNING AND ZONING DEPARTMENT
Natalie Pierce, CFM, Director

701.667.3361 • natalie.pierce@mortonnd.org

April 19, 2022

Stacey Fitts
Sr. Director, Asset Management - Renewables
7621 Little Ave Suite 350
Charlotte, NC 28226-8162

Dear Ms. Fitts,

A Ms. Christine Felz with Solas Energy Consulting requested a zoning determination from the Morton County Planning & Zoning Department regarding the addition of an aircraft detection lighting system surveillance tower within the Sunflower Wind Energy Project area. Specifically, the tower is proposed to be located at 46.838985/-102.038749 in the SE¼ of Section 21, Township 139N, Range 90W, Morton County.

I have completed an administrative review of the proposed addition of an aircraft detection lighting system surveillance (ADLS) tower at the above described location and have determined that as long as the tower is no taller than the proposed 147 feet, construction of said ADLS control tower is approved as part of PZ14-SU-A for the Sunflower Wind Energy Project. The proposed ADLS tower will not require any further zoning entitlement beyond the original Special Use Permit that was already issued by Morton County. This determination does not supersede any applicable FAA requirements.

Contact me directly if you have any further questions.

Sincerely,

Natalie Pierce
Director of Planning and Zoning
Morton County



**APPLICATION (NOTICE OF INTENT) TO OBTAIN
 COVERAGE UNDER NDPDES GENERAL PERMIT
 FOR STORMWATER DISCHARGES ASSOCIATED
 WITH CONSTRUCTION ACTIVITY (NDR11-0000)**
 NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY
 DIVISION OF WATER QUALITY
 SFN 19145 (08/21)

FOR DEPT. USE ONLY

Date Received
Application No.
NOI ID: SW_NOI_20220613120923417

New Project

GENERAL INFORMATION

1. Name of Owner of Construction Project Sunflower Wind Project, LLC	2. Contact First Name Stacey	3. Contact Last Name Fitts	4. Contact Phone No. (631) 552-5907
5. Contact E-mail Address Stacey.Fitts@onwardenergy.com	6. Mailing Address 7621 Little Ave Suite 350		
7. City Charlotte	8. State/Province NC	9. Zip Code 28226	
10. Name of Operator Working at Site Vikor Teleconstruction	11. Contact First Name Nicholas	12. Contact Last Name Hauck	13. Contact Phone No. (605) 691-4623
14. Contact E-mail Address nhauck@vikor.com	15. Mailing Address 4300 N Northview Ave		
16. City Sioux Falls	17. State/Province SD	18. Zip Code 57107	

PROJECT INFORMATION

19. Name of Construction Project Sunflower ADLS Tower			
20. Brief Description of Construction Activity Sunflower Wind is installing a radar tower on a concrete pad, access road and underground utility lines at the existing project site. The construction will include a temporary laydown area to stage equipment and materials.			
21. Project Start Date 06/27/2022	22. Estimated Completion Date 08/31/2022	23. Estimated Total Acres of Site 0.3	24. Estimated Acres of Disturbance 3.17
Project Location	25. Physical Address 7687 40th St		26. City Hebron
	27. Township 139	28. Range 90	29. Section 21
	30. Quarter Section (ABCD Format) SE		31. County Morton
32. Latitude (Decimal Degrees) 46.83898		33. Longitude (Decimal Degrees) -102.03874	
Receiving Waters	34. Name of Municipal Storm Sewer System or Description of Receiving Water Unnamed tributary to Heart Butte Creek		

35. A SWPPP must be prepared and available for review at the time of application. You are not required to submit the SWPPP with the application unless otherwise notified by the department. The SWPPP must be completed prior to the start of construction (or the applicable construction phase). Please refer to Part I(D)(2)(c) of the permit.

<p>Submit by E-mail</p> <p>AFTER SUBMITTING BY E-MAIL PRINT AND SEND COMPLETED APPLICATION WITH "WET" INK SIGNATURE TO:</p> <p>North Dakota Dept. of Env. Quality Division of Water Quality 4201 Normandy Street Bismarck, ND 58503-1324 Telephone: (701) 328-5210</p>	I certify under penalty of law that I have personally examined and am familiar with the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.	
	36. Printed Name of Owner(s)	37. Title
	38. Signature of Owner(s)	39. Date
	40. Printed Name of Operator(s) Jonathan Eastman	41. Title President
	42. Signature of Operator(s)	43. Date 6-21-22

Print Form

Instructions

Submission of this application is notice that the owner(s) and operator(s) identified on the application intend to discharge stormwater associated from construction activity to waters of the state in accordance with conditions set forth in North Dakota Pollution Discharge Elimination System general permit NDR11-0000.

Permit coverage becomes effective seven (7) days after a complete application is submitted (refer to the **Submittal Process** section) unless otherwise notified by the department.

This application is a fillable pdf and must be downloaded to the applicants computer and opened using Adobe® Reader for all functions to work correctly.

General Information

1. Name of Owner of Construction Project. Enter the individual, company, organization, or state agency who owns the property where the construction project is to take place. "Owner" means the person or party possessing the title of the land on which the construction activities will occur; or for a lease holder, the party or individual identified as the lease holder; or the contracting government agency responsible for the construction activity.

2-3. Contact Person. Provide the contact person for the owner. If the contact person is an agent of the owner, such as a consultant, provide this information on a separate page.

4. Contact Phone No. Provide a valid phone number for the contact person.

5. E-mail Address. Provide a valid e-mail address for the contact.

6-9. Mailing Address. Provide a valid mailing address for the owner.

10. Name of Operator Working at Site (attach additional, if needed). List the operator(s) who will be responsible for the construction activities at the site. The operator is someone who has day to day supervision of construction activities and is jointly responsible with the owner for compliance with the permit conditions as they pertain to the construction activities delegated to the operator.

11-12. Contact Person Name. State the contact person who will be responsible for overseeing construction activities at the site for the operator.

13. Contact Phone No. Provide a valid phone number for the contact person.

14. E-mail Address. Provide a valid e-mail address for the contact.

15-18. Mailing Address. Provide a valid mailing address for the operator.

Project Information

19. Name of Construction Project. Provide a descriptive, but brief, name of the construction project. Limit the name to 75 characters.

20. Brief Description of Construction Activity. Provide a brief description of the scope of work for the construction project.

21. Project Start Date. Provide the estimated project start date.

22. Project Completion Date. Provide the estimated project end date, if known. The date provided does not imply that the permit will expire on the projected end date. The permit will be terminated only after a notice of termination is submitted to the department.

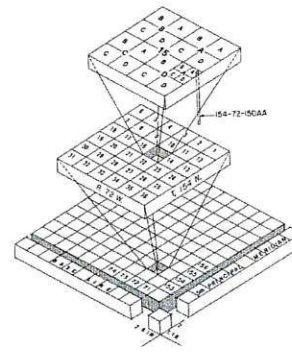
23. Estimated Total Area of Site. Enter the estimated acreage of the site/property in acres.

24. Estimated Area of Disturbance. Enter the estimated total acreage of land to be disturbed by construction activity.

25. Physical Address. Enter a physical address if one is available. For residential construction, do not use a recorded plat survey, such as lot and block number. If a street address is not available, please use an alternative project location description (boxes 27 through 33).

26. City. Enter city in which project is located. If the project is located in a rural area, enter the nearest city.

27-30. Township, Range, Section, Quarter Section. Provide the numerical township, range and section of the construction project. Provide the quarter section in the ABCD format. See image in next column.



31. County. Provide the county in which the project is occurring.

32-33. Latitude and Longitude. Provide the latitude and longitude in decimal degrees at the center of the site.

34. Municipal Storm Sewer System or Description of Receiving Water. If the project is located within city limits, enter the name of the city along with receiving water of the city storm sewer. Provide the name of the receiving body of water if outside city limits (e.g. Red River, unnamed tributary to Cherry Creek, wetlands, etc.).

Signature Information

36-39. Owner Information. The signatory must be a responsible corporate officer, general partner, principal executive officer, or ranking elected official as required in Part IV(6)(a) of the permit number NDR11-0000.

40-43. Operator Information. The signatory must be a responsible corporate officer, general partner, principal executive officer, or ranking elected official as required in Part IV(6)(a) of the permit number NDR11-0000.

Submittal Process

Once the data fields are filled out, click the "Submit by E-mail" button. This will create an email and attach a xml document to the email. The xml document contains the information entered into each field of the application. To assist with faster processing, copy and paste the Project Name (Box 19) into the email subject line of your email. **If the email button does not function properly, ensure that the application is downloaded to the computer and opened using Adobe® Reader.**

After the e-mail has been sent, print a paper copy of the application, sign and **submit the original copy with the "wet" signature** to the department. Failure to do so is considered a violation.

THE ELECTRONIC APPLICATION MUST BE SUBMITTED FIRST.

Paper applications which are received prior to the electronic application being received will be returned. Permit coverage will not be obtained until the electronic application can be paired with a paper application utilizing the NOI ID on the top right of the form. **Note: THE NOI ID IS NOT THE PERMIT COVERAGE NUMBER.**

A copy of the NOI may be saved and the NOI ID will remain the same as the submitted NOI. To submit an NOI for a new project, click on the new NOI ID button, update the project information and save as a new file name.

Please Note: This application is a fillable pdf and must be downloaded to the applicants computer and opened using Adobe® Reader for all functions to work correctly.

Some internet browsers may not display the form properly and some features of the form may not be available or displayed. If you experience issues viewing the form, please read the following options for possible solutions:

In Firefox® browser: Go to the tools menu>options>applications. Under the actions column for Portable Document Format, change to Use Adobe® Reader in the drop down menu.

In Google Chrome™ Browser: Go to the address bar and type in chrome://plugins/ and click enter. Once in the plugin menu, go to the Chrome pdf viewer and click disable. Then go to the Adobe® Reader viewer and click enable. Once these changes are made, refresh the document.

In Microsoft Edge browser: Save a copy of the application to your local computer and open in Adobe® Reader.



**APPLICATION (NOTICE OF INTENT) TO OBTAIN
 COVERAGE UNDER NDPDES GENERAL PERMIT
 FOR STORMWATER DISCHARGES ASSOCIATED
 WITH CONSTRUCTION ACTIVITY (NDR11-0000)**
 NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY
 DIVISION OF WATER QUALITY
 SFN 19145 (08/21)

FOR DEPT. USE ONLY

Date Received
Application No.
NOI ID:
SW_NOI_20220613120923417

New Project

GENERAL INFORMATION

1. Name of Owner of Construction Project Sunflower Wind Project, LLC	2. Contact First Name Stacey	3. Contact Last Name Fitts	4. Contact Phone No. (631) 552-5907
5. Contact E-mail Address Stacey.Fitts@onwardenergy.com	6. Mailing Address 7621 Little Ave Suite 350		
7. City Charlotte	8. State/Province NC	9. Zip Code 28226	
10. Name of Operator Working at Site Vikor Teleconstruction	11. Contact First Name Nicholas	12. Contact Last Name Hauck	13. Contact Phone No. (605) 691-4623
14. Contact E-mail Address nhauck@vikor.com	15. Mailing Address 4300 N Northview Ave		
16. City Sioux Falls	17. State/Province SD	18. Zip Code 57107	

PROJECT INFORMATION

19. Name of Construction Project Sunflower ADLS Tower			
20. Brief Description of Construction Activity Sunflower Wind is installing a radar tower on a concrete pad, access road and underground utility lines at the existing project site. The construction will include a temporary laydown area to stage equipment and materials.			
21. Project Start Date 06/27/2022	22. Estimated Completion Date 08/31/2022	23. Estimated Total Acres of Site 0.3	24. Estimated Acres of Disturbance 3.17
Project Location	25. Physical Address 7687 40th St		26. City Hebron
	27. Township 139	28. Range 90	29. Section 21
	30. Quarter Section (ABCD Format) SE		31. County Morton
32. Latitude (Decimal Degrees) 46.83898		33. Longitude (Decimal Degrees) -102.03874	
Receiving Waters	34. Name of Municipal Storm Sewer System or Description of Receiving Water Unnamed tributary to Heart Butte Creek		

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	36. Printed Name of Owner(s) David Rhodes	37. Title Sr. Vice President - Asst Mgt & Operations
	38. Signature of Owner(s) 	39. Date 6/15/2022
	40. Printed Name of Operator(s)	41. Title
	42. Signature of Operator(s)	43. Date

MORTON COUNTY

STATE OF NORTH DAKOTA



210 2nd Ave NW
Mandan, North Dakota 58554

Phone: 701-667-3325

DATE: June 20, 2022

TO: VIKOR TELECONSTRUCTION
STACEY FITTS
7621 LITTLE AVE SUITE 350
CHARLOTTE SC 28226

RE: BUILDING PERMIT

LOCATION: 7687 40TH ST
HEBRON ND 58638

PERMIT: 22-34

PERMIT FEE:

RADAR TOWER

\$500.00

TOTAL

\$500.00

Please make check payable to:
Morton County Treasurer
210 2nd Ave NW
Mandan ND 58554



MORTON COUNTY

STATE OF NORTH DAKOTA

BUILDING DEPARTMENT
Building Inspector

701.667.3325 • mortoncountytax@mortonnd.org

Permit: 22-34	Parcel ID: 500084000	Date: 06/14/2022
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SITE ADDRESS: 7687 40th Street Hebron, ND	LEGAL DESCRIPTION: 139N 90W Section 21
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OWNER: Sunflower Wind Project, LLC	PHONE: (631) 552-5907	ZONING CODE: A
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BUILDING CONTRACTOR: VIKOR Teleconstruction	CONTRACTOR PHONE: (605) 691-4623
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BILLING NAME AND ADDRESS: Stacey Fitts 7621 Little Ave Suite 350 Charlotte, NC 28226	EMAIL ADDRESS: stacey.fitts@onwardenergy.com	DESCRIPTION OF BUILDING: Radar tower <i>(IE: HOUSE, GARAGE, SHOP, ECT)</i>
--------------------------------------------------------------------------------------------	----------------------------------------------	-------------------------------------------------------------------------------

TYPE OF CONSTRUCTION: Steel <i>(IE: WOOD, STEEL, POLE, ECT)</i>	TYPE OF FOUNDATION: Concrete
--------------------------------------------------------------------	------------------------------

APPROACH PERMIT NUMBER: N/A	SEPTIC PERMIT: N/A	FLOOR PLANS: N/A
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CLASS OF WORK: NEW ADDITION ALTERATION REPLACEMENT

Property located in Flood plain, if yes Elevation Certificate Required: YES NO

OTHER INSTALLATIONS NEEDED (PLBG, HTG, ELEC, GAS)* YES NO

*Separate applications are required; Plumbing & Electrical inspections are to be done by the State Of ND Board of Inspections
Plumbing- 701-328-9979 Electrical - 701-328-9522

APPLICANT MUST COMPLY WITH SUBDIVISION COVENANTS CERTIFICATE OF OCCUPANCY IS NOT REQUIRED FOR ADDITIONS, ALTERATIONS, GARAGES OR SHOPS. NO SURVEY OF THE PLOT BEFORE CONSTRUCTION IS REQUIRED BUT THE CONTRACTOR AND/OR THE PROPERTY OWNER IS RESPONSIBLE TO MEET ALL OF THE SETBACK REQUIREMENTS PER ZONING OR PLAT REGULATIONS. THE PLOT MUST BE SURVEYED BEFORE CONSTRUCTION IF THE PROPERTY LINES CAN NOT BE ESTABLISHED TO THE SATISFACTION OF THE BUILDING INSPECTOR.

FEE SCHEDULE

BUILDING PERMIT FEES ARE BASED ON TOTAL VALUE OF: NEW CONSTRUCTION, ADDITIONS, ALTERATIONS, & REPLACEMENT INCLUDING BASEMENT AND ATTACHED GARAGES. FLOOR PLANS MUST BE INCLUDED.

BASEMENT SQ. FT. UNFINISHED/FINISHED	1 ST FLOOR SQ. FT.	2 ND FLOOR SQ. FT.	GARAGE SQ. FT. ATT/DET	TOTAL SQ. FT.	DECK SQ. FT.	OUT/OTHER BLDG
N/A	N/A	N/A	N/A	N/A	N/A	N/A

FEE

Construction Value	N/A
Permit Fees	\$500

THIS PERMIT IS NULL & VOID IF CONSTRUCTION AS AUTHORIZED IS NOT STARTED WITHIN 180 DAYS OR IF CONSTRUCTION IS SUSPENDED FOR A PERIOD OF 180 DAYS AFTER CONSTRUCTION IS STARTED.

THE UNDERSIGNED HEREBY MAKES APPLICATION FOR A PERMIT FOR THE CONSTRUCTION, INSTALLATION, REPLACEMENT, ALTERATION OF A BUILDING AS HEREIN SPECIFIED, AGREEING THAT ALL SUCH CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH APPLICABLE COUNTY AND/OR STATE REGULATIONS AND/OR ORDINANCES AND TO SAVE MORTON COUNTY HARMLESS FROM ANY AND ALL DAMAGES.

SIGNATURE OF OWNER/CONTRACTOR/OR AUTHORIZED AGENT: Stacey Fitts DATE: 6/15/2022

PRINTED NAME OF OWNER/CONTRACTOR/AUTHORIZED AGENT: Stacey Fitts

SIGNATURE OF COUNTY OFFICIAL: Samuel J. Fitts DATE: 6-16-2022

BUILDING INSPECTIONS

ONCE CONSTRUCTION BEGINS, THE FOLLOWING INSPECTIONS ARE MANDATORY. IT IS THE OBLIGATION OF THE PERMIT HOLDER OR THEIR AGENT TO CONTACT OUR OFFICE TO ARRANGE FOR THESE INSPECTIONS. IF THE STRUCTURE IS COMPLETED WITHOUT THE PROPER INSPECTIONS, THE HOLDER OF THE PERMIT WILL BE ASSESSED A PENALTY FEE.

ARRANGEMENT TO BE MADE DAY BEFORE NEEDED INSPECTION

CALLING OUR OFFICE AT 667-3325.

1. **FOOTING INSPECTION:** SHALL BE MADE PRIOR TO THE POURING OF ANY CONCRETE FOOTING. TRENCH, RAILS AND REINFORCING BARS (REBAR) SHALL BE IN PLACE AT THE TIME OF INSPECTION.
2. **FOUNDATION INSPECTION:** SHALL BE MADE PRIOR TO THE POURING OF FOUNDATION WALLS OR PIERS IF REINFORCING (REBAR) IS PRESENT. REBAR SHALL BE IN PLACE AT THE TIME OF INSPECTION.
3. **STRUCTURAL (FRAMING) INSPECTION:** SHALL BE MADE AFTER COMPLETION OF STRUCTURAL WORK, BEFORE ANY INSULATION, DRYWALL, LATH OR PANELING, ETC. IS APPLIED, BUT AFTER ANY REQUIRED PLUMBING, ELECTRICAL AND/OR HEATING ROUGH-IN. ALL FRAMING SHALL BE COMPLETED WITH FIRE STOPS, COLLAR TIES, BRIDGING AND NAILERS IN PLACE.
4. **PLUMBING INSPECTION:** *ALL PLUMBING INSPECTIONS ARE MADE BY THE NORTH DAKOTA STATE PLUMBING BOARD. CALL PRIOR TO ANY WORK TO ARRANGE AN INSPECTION SCHEDULE.*
 - a. **TELEPHONE (701)328-9979.**
5. **ELECTRICAL INSPECTION:** *ALL ELECTRICAL INSPECTIONS ARE MADE BY THE NORTH DAKOTA STATE ELECTRICAL BOARD. CALL PRIOR TO ANY WORK TO ARRANGE AN INSPECTION SCHEDULE.*
 - a. **TELEPHONE (701)328-9522.**
6. **SEPTIC SYSTEMS:** *Contact Custer District Health for permit and all inspections of septic systems.*
 - a. **TELEPHONE (701)667-3370**
7. **FINAL INSPECTION:** SHALL BE MADE BEFORE MOVING INTO ANY NEW HOME. OCCUPANCY PERMIT WILL BE REQUIRED FOR THE LANDING AGENCY. NO OCCUPANCY PERMIT WILL BE GRANTED BEFORE OR WITHOUT A FINAL INSPECTION.

AN ADDITIONAL FEE MAY BE CHARGED.

ALTERED OR REMODELED RESIDENTIAL CONSTRUCTION

* PERMITTEE IS RESPONSIBLE TO NOTIFY
UTILITY COMPANIES FOR LOCATION OF
SERVICE LINES BEFORE BUILDING
CONSTRUCTION BEGINS

* ALL PERMITS MUST HAVE AN ACCURATE PLOT
PLAN OR PERMIT WILL HAVE A WAITING PERIOD
OF 24 HOURS FOR APPROVAL TO VERIFY
BUILDING SITE.

NO SURVEY OF THE PLOT BEFORE CONSTRUCTION IS REQUIRED BUT THE CONTRACTOR AND/OR THE PROPERTY OWNER IS RESPONSIBLE TO MEET ALL OF THE SETBACK REQUIREMENTS PER ZONING OR PLAT REGULATIONS. **THE PLOT MUST BE SURVEYED BEFORE CONSTRUCTION IF THE PROPERTY LINES CAN NOT BE ESTABLISHED TO THE SATISFACTION OF THE BUILDING INSPECTOR.** THE FOLLOWING IS A PARTIAL LIST OF ITEMS THE BUILDING INSPECTOR WILL BE CHECKING FOR ON YOUR BUILDING PROJECT. CONTRACTOR IS RESPONSIBLE TO MEET ALL LOCAL UBC REQUIREMENTS.

FIRST INSPECTION – FOOTINGS

1. STREET ADDRESS POSTED
2. SETBACKS
A - FRONT, SIDE AND REAR YARD
B - EASEMENTS
C - LOT LINE SURVEY STAKES
3. FOOTINGS
A - DEPTH B - WIDTH
C - REBAR

SECOND INSPECTION – FOUNDATION

1. FORMS
A - TRUE & PLUMB
B - ADEQUATELY BRACED
2. CONDITION OF FOOTINGS
3. REINFORCING BARS

THIRD INSPECTION – FRAMING


1. BACKFILL OF BUILDING
2. LUMBER
A - SPECIES B - GRADE C - GIRDS
3. SILLS
4. FLOOR, WALLS, CEILING & ROOF
5. STAIRS
A - RISE AND RUN B - HEADROOM
6. ATTIC/CRAWL SPACE VENTILATION
7. CUTS, NOTCHES AND BORED HOLES FOR:
8. PLUMBING, MECHANICAL AND ELECTRICAL
9. WINDOW SIZE, TYPE AND LOCATION
10. FIREPLACE CLEARANCE, FLUE SIZE AND HEIGHT

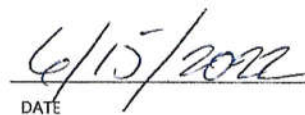
FOURTH INSPECTION – FINAL

1. EXTERIOR GRADING
2. EXTERIOR STOOP AND STEPS, RISE & RUN
3. DOORS: SIZE AND SWING

ARRANGEMENT SHOULD BE MADE DAY PRIOR BY CALLING OUR OFFICE AT 667-3325.

I CERTIFY THAT I HAVE READ AND EXAMINED THIS APPLICATION AND KNOW THE SAME TO BE TRUE AND CORRECT. ALL PROVISIONS OF LAWS AND REGULATIONS GOVERNING THIS TYPE OF WORK WILL BE COMPLIED WITH WHETHER SPECIFIED HEREIN OR NOT. THE GRANTING OF THIS PERMIT DOES NOT PRESUME TO GIVE AUTHORITY TO VIOLATE OR CANCEL THE PROVISIONS OF ANY OTHER STATE OR LOCAL LAW REGULATING CONSTRUCTION OR THE PERFORMANCE OF CONSTRUCTION.


SIGNATURE OF OWNER, CONTRACTOR OR AGENT


DATE