



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

Aeronautical Study No.
 2017-WTE-1038-OE

Issued Date: 11/06/2017 **← FAA Approved this 8 months prior to July 2018 Lincoln Town Board meeting during which Optimum told the board 5 turbines---not 10. Page 4 lists all 10.**

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**** 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: Wind Turbine Underwood T1
 Location: Canastota, NY
 Latitude: 43-00-34.22N NAD 83
 Longitude: 75-42-06.89W
 Heights: 1447 feet site elevation (SE)
 498 feet above ground level (AGL)
 1945 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities. Therefore, pursuant to the authority delegated to me, it is hereby determined that the structure would not be a hazard to air navigation provided the following condition(s) is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 L Change 1, Obstruction Marking and Lighting, white paint/synchronized red lights Chapters 4,12&13(Turbines).

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 56 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.

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- (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 subject to review if an interested party files a petition that is received by the FAA on or before December 06, 2017. In the event a petition for review is filed, it must contain a full statement of the basis upon which it is made and be submitted to the Manager, Airspace Policy & Regulation, Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591.

This determination becomes final on December 16, 2017 unless a petition is timely filed. In which case, this determination will not become final pending disposition of the petition. Interested parties will be notified of the grant of any review. For any questions regarding your petition, please contact Airspace Regulations & ATC Procedures Group via telephone -- 202-267-8783 - or facsimile 202-267-9328.

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.

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.

This aeronautical study considered and analyzed the impact on existing and proposed arrival, departure, and en route procedures for aircraft operating under both visual flight rules and instrument flight rules; the impact on all existing and planned public-use airports, military airports and aeronautical facilities; and the cumulative impact resulting from the studied structure when combined with the impact of other existing or proposed structures. The study disclosed that the described structure would have no substantial adverse effect on air navigation.

An account of the study findings, aeronautical objections received by the FAA during the study (if any), and the basis for the FAA's decision in this matter can be found on the following page(s).

If we can be of further assistance, please contact Brian Barnes, at (816) 329-2524, or brian.a.barnes@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2017WTE-1038-OE.

Signature Control No: 322108207-348499162

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Additional information for ASN 2017-WTE-1038-OE

Abbreviations:

AGL, Above Ground Level

AMSL, Above Mean Sea Level

ASN, Aeronautical Study Number

ASR, Airport Surveillance Radar,

ATC, Air Traffic Control
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
MVA, Minimum Vectoring Altitude
NM, Nautical Mile
VFR, Visual Flight Rules

The proposed structures are part of a wind turbine farm consisting of 10 turbines. They are located approximately 18.15 NM east of the Airport Reference Point of the Syracuse Hancock International Airport (SYR), Syracuse, NY extending southeast to approximately 19.6 NM. The ASNs with AGL heights, AMSL heights, and coordinates are as follows:

ASN	/ AGL / AMSL /	Latitude /	Longitude
1-2017-WTE-1036-OE	/ 498 / 1881 /	43-00-43.39N /	75-42-11.73W
2-2017-WTE-1037-OE	/ 498 / 1816 /	43-00-43.83N /	75-42-33.04W
3-2017-WTE-1038-OE	/ 498 / 1945 /	43-00-34.22N /	75-42-06.89W
2017-WTE-1039-4-OE	/ 498 / 1898 /	43-00-34.45N /	75-42-27.02W
5-2017-WTE-1040-OE	/ 498 / 1748 /	43-01-02.53N /	75-42-50.23W
6-2017-WTE-1041-OE	/ 498 / 1676 /	43-01-12.79N /	75-42-34.17W
7-2017-WTE-1042-OE	/ 498 / 1827 /	43-00-39.69N /	75-41-30.74W
8-2017-WTE-1043-OE	/ 498 / 1700 /	43-01-03.58N /	75-41-52.59W
9-2017-WTE-1044-OE	/ 498 / 1894 /	42-59-12.13N /	75-41-50.66W
2017-WTE-1045-10-OE	/ 498 / 1837 /	42-59-00.94N /	75-41-46.29W

←TEN TURBINES—NOT FIVE

They exceed the obstruction standards of 14 CFR Part 77 as follows:

Section 77.17(a)(3): A height that increases a minimum instrument flight altitude within a terminal area.

The following would increase the SYR MVA FUS3 2016 in Area C from 2,600 feet AMSL to 2,700 feet AMSL:

2017-WTE-1040-OE
2017-WTE-1041-OE
2017-WTE-1043-OE

The studies were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review. The identified effects are to altitudes and systems that are used by ATC and not published for public use. Therefore, they are not eligible for public comment

Aeronautical study indicates that the proposed structure would be in the radar line of sight for the SYR ASR-9 Radar facility and would cause unwanted primary targets (clutter) in the immediate vicinity of the wind turbines. However, this would not cause an unacceptable adverse impact on Air Traffic Control operations at this time.

The aeronautical study disclosed that amending the MVAs in the area of the turbines would not impact a significant number of operations. The Turbines do not have a significant adverse effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the turbines do not have a substantial adverse effect on VFR traffic pattern operations at SYR or any other known public use or military airports. The turbines have no effect on existing or proposed VFR arrival or departure operations. At 498 feet AGL they do not have a substantial adverse effect on VFR en route flight operations.

The structures would be appropriately obstruction marked/lighted to make them more conspicuous to airmen should circumnavigation be necessary

The cumulative impact of the structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the structures affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the structures do not have a substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on any air navigation facility and are not be a hazard to air navigation providing the conditions set forth in this determination are met.

Additional Conditions:

As a condition of this determination it is required that Notice of Actual Construction or Alteration (7460-2 Part 1) be E-filed at least 56 full days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(s) and/or altitude(s).

NOTE: A recommendation for white paint/synchronized red lights will be made for all turbines until such time as the proponent confirms that the layout is final (no changes, no additions, no removals) and all turbines can and will be built at their determined location and height. At that time, the proponent may contact this office and request a re-evaluation of the marking and lighting recommendations for the turbines within this project and a portion of the turbines may qualify for the removal of the lighting recommendation.

Sectional Map for ASN 2017-WTE-1038-OE

