



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

Aeronautical Study No.
2018-WTE-12086-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-1
Location:	Milbank, SD
Latitude:	45-09-47.54N NAD 83
Longitude:	96-58-16.45W
Heights:	2003 feet site elevation (SE) 499 feet above ground level (AGL) 2502 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12086-OE.

Signature Control No: 393027992-397093585

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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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 CRI-2
Location:	Milbank, SD
Latitude:	45-09-44.58N NAD 83
Longitude:	96-57-42.56W
Heights:	1963 feet site elevation (SE)
	499 feet above ground level (AGL)
	2462 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, Obstruction Marking and Lighting, white paint/synchronized red lights - Chapters 4,12&13(Turbines).

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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.

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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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12087-OE.

Signature Control No: 393027993-397093589

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-3
Location:	Milbank, SD
Latitude:	45-09-20.52N NAD 83
Longitude:	96-57-05.73W
Heights:	1917 feet site elevation (SE)
	499 feet above ground level (AGL)
	2416 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, Obstruction Marking and Lighting, white paint/synchronized red lights - Chapters 4,12&13(Turbines).

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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.

This determination expires on 08/19/2020 unless:

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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.

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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.

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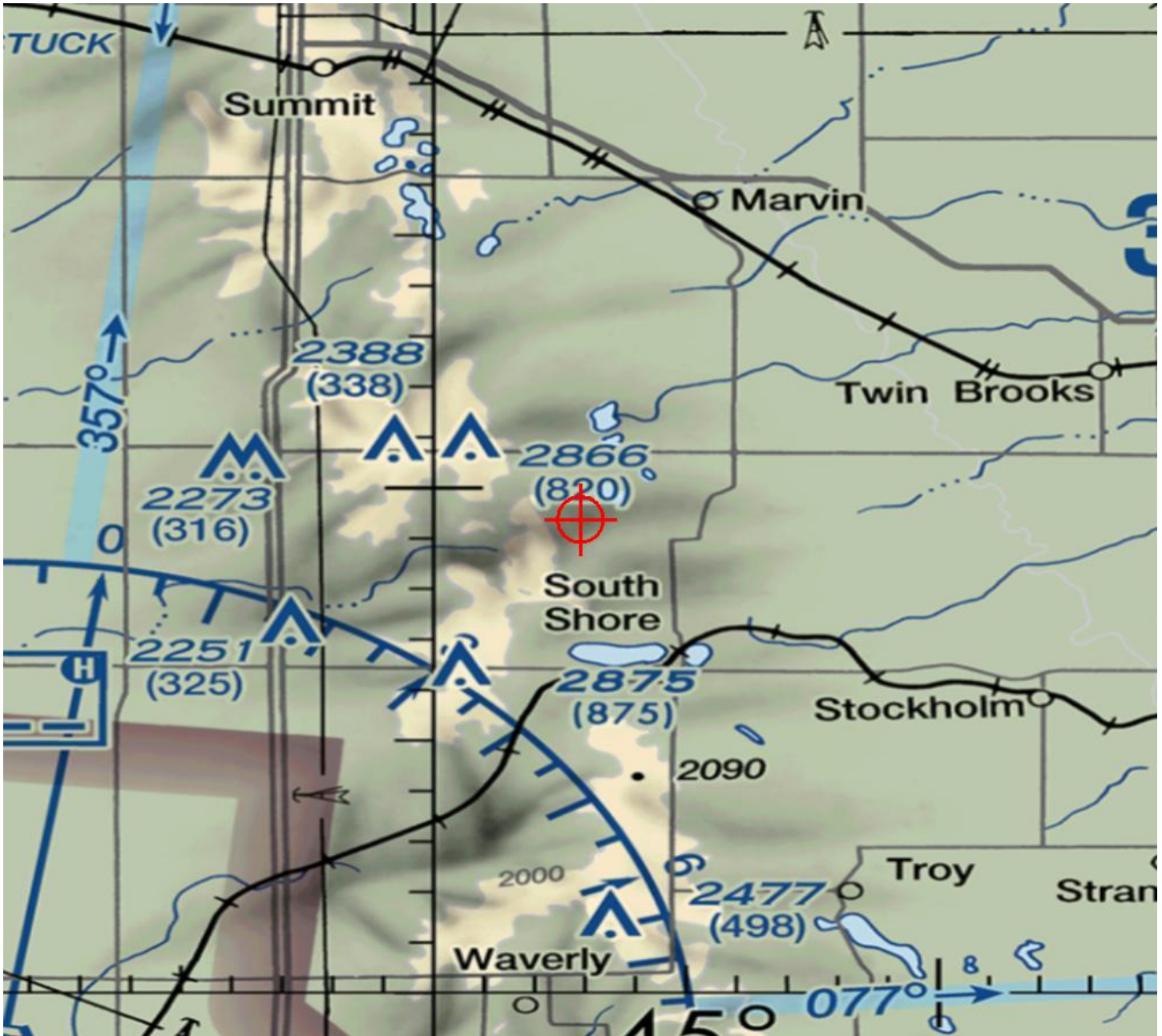
Signature Control No: 393027994-397093588

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(s)

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Juno Beach, FL 33408

**** 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 CRI-4
Location:	Milbank, SD
Latitude:	45-09-15.76N NAD 83
Longitude:	96-57-44.14W
Heights:	1976 feet site elevation (SE)
	499 feet above ground level (AGL)
	2475 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, Obstruction Marking and Lighting, white paint/synchronized red lights - Chapters 4,12&13(Turbines).

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- ☐ At least 10 days prior to start of construction (7460-2, Part 1)
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Signature Control No: 393027995-397093594

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(s)

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Tyler Wilhelm
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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 CRI-5
Location:	Milbank, SD
Latitude:	45-09-08.09N NAD 83
Longitude:	96-58-22.70W
Heights:	2001 feet site elevation (SE) 499 feet above ground level (AGL) 2500 feet above mean sea level (AMSL)

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Signature Control No: 393027996-397093587

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
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Map(s)

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Juno Beach, FL 33408

**** 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 CRI-6
Location:	Milbank, SD
Latitude:	45-08-50.13N NAD 83
Longitude:	96-57-44.14W
Heights:	2002 feet site elevation (SE) 499 feet above ground level (AGL) 2501 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12091-OE.

Signature Control No: 393027997-397093599

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12092-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-7
Location:	Milbank, SD
Latitude:	45-08-44.59N NAD 83
Longitude:	96-58-06.68W
Heights:	2026 feet site elevation (SE) 499 feet above ground level (AGL) 2525 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12092-OE.

Signature Control No: 393027998-397093590

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12093-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-8
Location:	Milbank, SD
Latitude:	45-08-15.25N NAD 83
Longitude:	96-56-51.03W
Heights:	1929 feet site elevation (SE)
	499 feet above ground level (AGL)
	2428 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12093-OE.

Signature Control No: 393027999-397093600

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12094-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-9
Location:	Milbank, SD
Latitude:	45-08-02.77N NAD 83
Longitude:	96-58-06.98W
Heights:	2011 feet site elevation (SE)
	499 feet above ground level (AGL)
	2510 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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.
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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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12094-OE.

Signature Control No: 393028000-397093596

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12095-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-10
Location:	Milbank, SD
Latitude:	45-08-01.74N NAD 83
Longitude:	96-57-41.88W
Heights:	2018 feet site elevation (SE) 499 feet above ground level (AGL) 2517 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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.

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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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12095-OE.

Signature Control No: 393028001-397093615

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12096-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-11
Location:	Milbank, SD
Latitude:	45-07-54.03N NAD 83
Longitude:	96-59-18.75W
Heights:	2004 feet site elevation (SE) 499 feet above ground level (AGL) 2503 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12096-OE.

Signature Control No: 393028002-397093586

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.



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

Aeronautical Study No.
2018-WTE-12097-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-12
Location:	Milbank, SD
Latitude:	45-07-50.86N NAD 83
Longitude:	96-58-57.16W
Heights:	2022 feet site elevation (SE) 499 feet above ground level (AGL) 2521 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12097-OE.

Signature Control No: 393028003-397093591

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12098-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-13
Location:	Milbank, SD
Latitude:	45-07-30.89N NAD 83
Longitude:	96-58-58.87W
Heights:	2015 feet site elevation (SE)
	499 feet above ground level (AGL)
	2514 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12098-OE.

Signature Control No: 393028004-397093593

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(s)

Additional information for ASN 2018-WTE-12098-OE

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.





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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12099-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-14
Location:	Milbank, SD
Latitude:	45-07-02.04N NAD 83
Longitude:	96-59-30.77W
Heights:	2028 feet site elevation (SE) 499 feet above ground level (AGL) 2527 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 10 days prior to start of construction (7460-2, Part 1)
 X Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

See attachment for additional condition(s) or information.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12099-OE.

Signature Control No: 393028005-397093597

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12100-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-15
Location:	Milbank, SD
Latitude:	45-07-01.09N NAD 83
Longitude:	96-58-56.92W
Heights:	2033 feet site elevation (SE)
	499 feet above ground level (AGL)
	2532 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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.

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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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12100-OE.

Signature Control No: 393028006-397093595

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12101-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-16
Location:	Milbank, SD
Latitude:	45-07-00.07N NAD 83
Longitude:	97-00-04.91W
Heights:	2007 feet site elevation (SE) 499 feet above ground level (AGL) 2506 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12101-OE.

Signature Control No: 393028007-397093612

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12103-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-18
Location:	Milbank, SD
Latitude:	45-06-36.52N NAD 83
Longitude:	96-59-19.33W
Heights:	2029 feet site elevation (SE) 499 feet above ground level (AGL) 2528 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12103-OE.

Signature Control No: 393028009-397093601

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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10101 Hillwood Parkway
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Aeronautical Study No.
2018-WTE-12104-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-19
Location:	Milbank, SD
Latitude:	45-05-55.40N NAD 83
Longitude:	97-01-50.07W
Heights:	1970 feet site elevation (SE) 499 feet above ground level (AGL) 2469 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12104-OE.

Signature Control No: 393028010-399662783

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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Aeronautical Study No.
2018-WTE-12105-OE

Issued Date: 02/19/2019

Tyler Wilhelm
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Juno Beach, FL 33408

**** 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 CRI-20
Location:	Milbank, SD
Latitude:	45-05-22.92N NAD 83
Longitude:	96-58-03.98W
Heights:	1951 feet site elevation (SE)
	499 feet above ground level (AGL)
	2450 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12105-OE.

Signature Control No: 393028011-397093592

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12106-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-21
Location:	Milbank, SD
Latitude:	45-05-23.63N NAD 83
Longitude:	96-59-35.24W
Heights:	2025 feet site elevation (SE) 499 feet above ground level (AGL) 2524 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12106-OE.

Signature Control No: 393028012-397093613

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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10101 Hillwood Parkway
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Aeronautical Study No.
2018-WTE-12107-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-22
Location:	Milbank, SD
Latitude:	45-05-21.49N NAD 83
Longitude:	97-00-38.54W
Heights:	2025 feet site elevation (SE) 499 feet above ground level (AGL) 2524 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12107-OE.

Signature Control No: 393028013-397093737

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12108-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-23
Location:	Milbank, SD
Latitude:	45-05-19.99N NAD 83
Longitude:	97-01-39.67W
Heights:	1958 feet site elevation (SE) 499 feet above ground level (AGL) 2457 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12108-OE.

Signature Control No: 393028014-399662765

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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10101 Hillwood Parkway
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Aeronautical Study No.
2018-WTE-12109-OE

Issued Date: 02/19/2019

Tyler Wilhelm
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Juno Beach, FL 33408

**** 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 CRI-24
Location:	Milbank, SD
Latitude:	45-05-17.38N NAD 83
Longitude:	97-01-10.30W
Heights:	2003 feet site elevation (SE) 499 feet above ground level (AGL) 2502 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12109-OE.

Signature Control No: 393028015-397093740

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12110-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-25
Location:	Milbank, SD
Latitude:	45-05-03.61N NAD 83
Longitude:	96-59-21.03W
Heights:	1984 feet site elevation (SE)
	499 feet above ground level (AGL)
	2483 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12110-OE.

Signature Control No: 393028016-397093751

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12111-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-26
Location:	Milbank, SD
Latitude:	45-04-54.64N NAD 83
Longitude:	96-53-54.11W
Heights:	1897 feet site elevation (SE)
	499 feet above ground level (AGL)
	2396 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12111-OE.

Signature Control No: 393028017-397093752

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12112-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-27
Location:	Milbank, SD
Latitude:	45-05-01.05N NAD 83
Longitude:	96-59-58.13W
Heights:	2040 feet site elevation (SE) 499 feet above ground level (AGL) 2539 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12112-OE.

Signature Control No: 393028018-397093756

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12113-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-28
Location:	Milbank, SD
Latitude:	45-04-54.64N NAD 83
Longitude:	96-54-34.73W
Heights:	1896 feet site elevation (SE) 499 feet above ground level (AGL) 2395 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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.

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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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12113-OE.

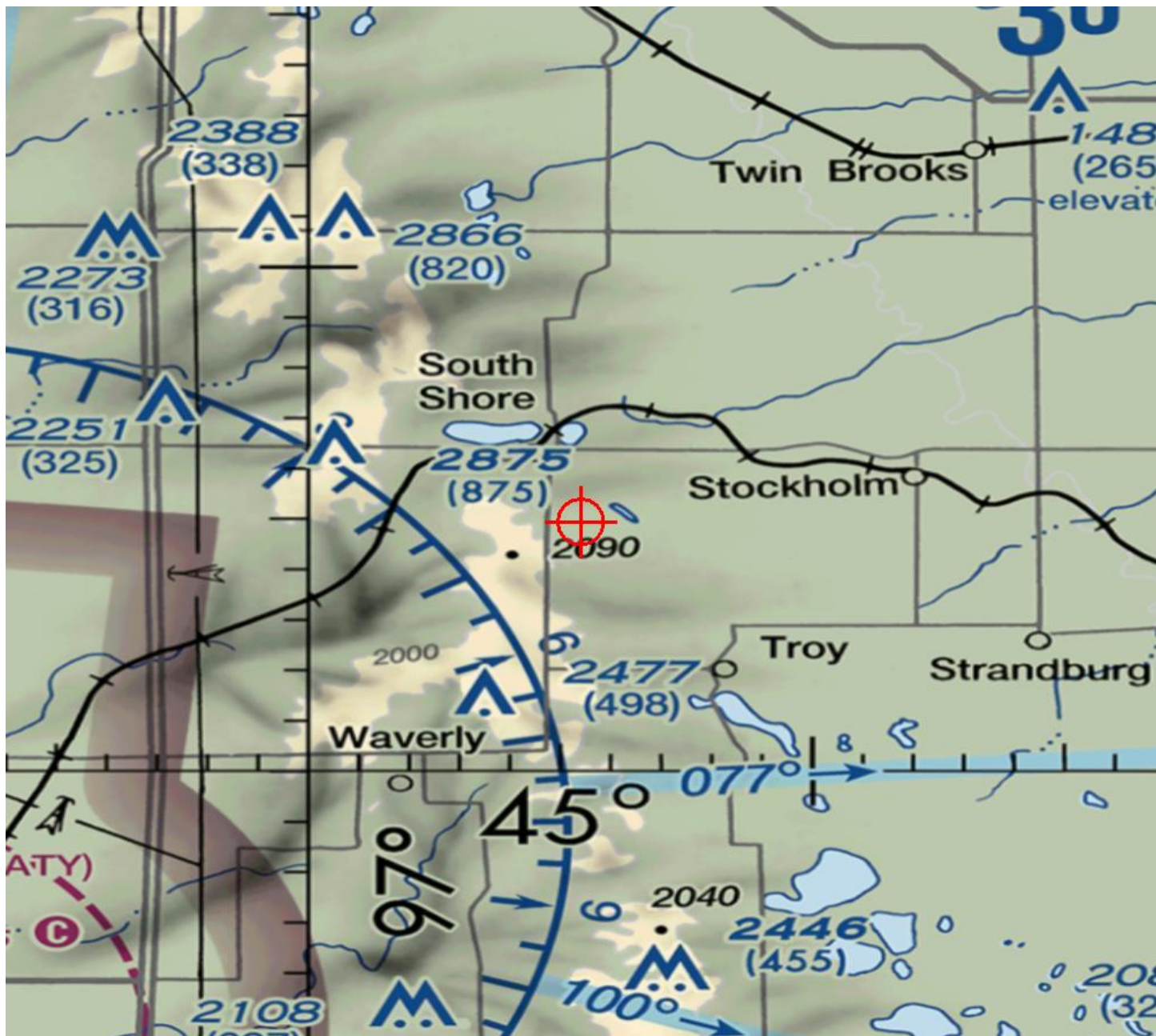
Signature Control No: 393028019-397093761

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12114-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-29
Location:	Milbank, SD
Latitude:	45-04-58.43N NAD 83
Longitude:	97-01-06.93W
Heights:	1997 feet site elevation (SE) 499 feet above ground level (AGL) 2496 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12114-OE.

Signature Control No: 393028020-399662772

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12115-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-30
Location:	Milbank, SD
Latitude:	45-04-54.73N NAD 83
Longitude:	96-58-07.23W
Heights:	1947 feet site elevation (SE)
	499 feet above ground level (AGL)
	2446 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12115-OE.

Signature Control No: 393028021-397093762

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(s)

Additional information for ASN 2018-WTE-12115-OE

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.





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

Aeronautical Study No.
2018-WTE-12116-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-31
Location:	Milbank, SD
Latitude:	45-04-58.57N NAD 83
Longitude:	97-01-48.55W
Heights:	1981 feet site elevation (SE) 499 feet above ground level (AGL) 2480 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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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.

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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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12116-OE.

Signature Control No: 393028022-399662773

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
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VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

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2018-WTE-12151-OE
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2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12117-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-32
Location:	Milbank, SD
Latitude:	45-04-52.29N NAD 83
Longitude:	96-57-29.23W
Heights:	1989 feet site elevation (SE) 499 feet above ground level (AGL) 2488 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12117-OE.

Signature Control No: 393028023-397093764

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.



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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12118-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-33
Location:	Milbank, SD
Latitude:	45-04-53.78N NAD 83
Longitude:	97-00-38.45W
Heights:	2033 feet site elevation (SE)
	499 feet above ground level (AGL)
	2532 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12118-OE.

Signature Control No: 393028024-397093775

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(s)

Additional information for ASN 2018-WTE-12118-OE

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.





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Obstruction Evaluation Group
10101 Hillwood Parkway
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Aeronautical Study No.
2018-WTE-12119-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-34
Location:	Milbank, SD
Latitude:	45-04-49.11N NAD 83
Longitude:	96-58-48.84W
Heights:	1967 feet site elevation (SE) 499 feet above ground level (AGL) 2466 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12119-OE.

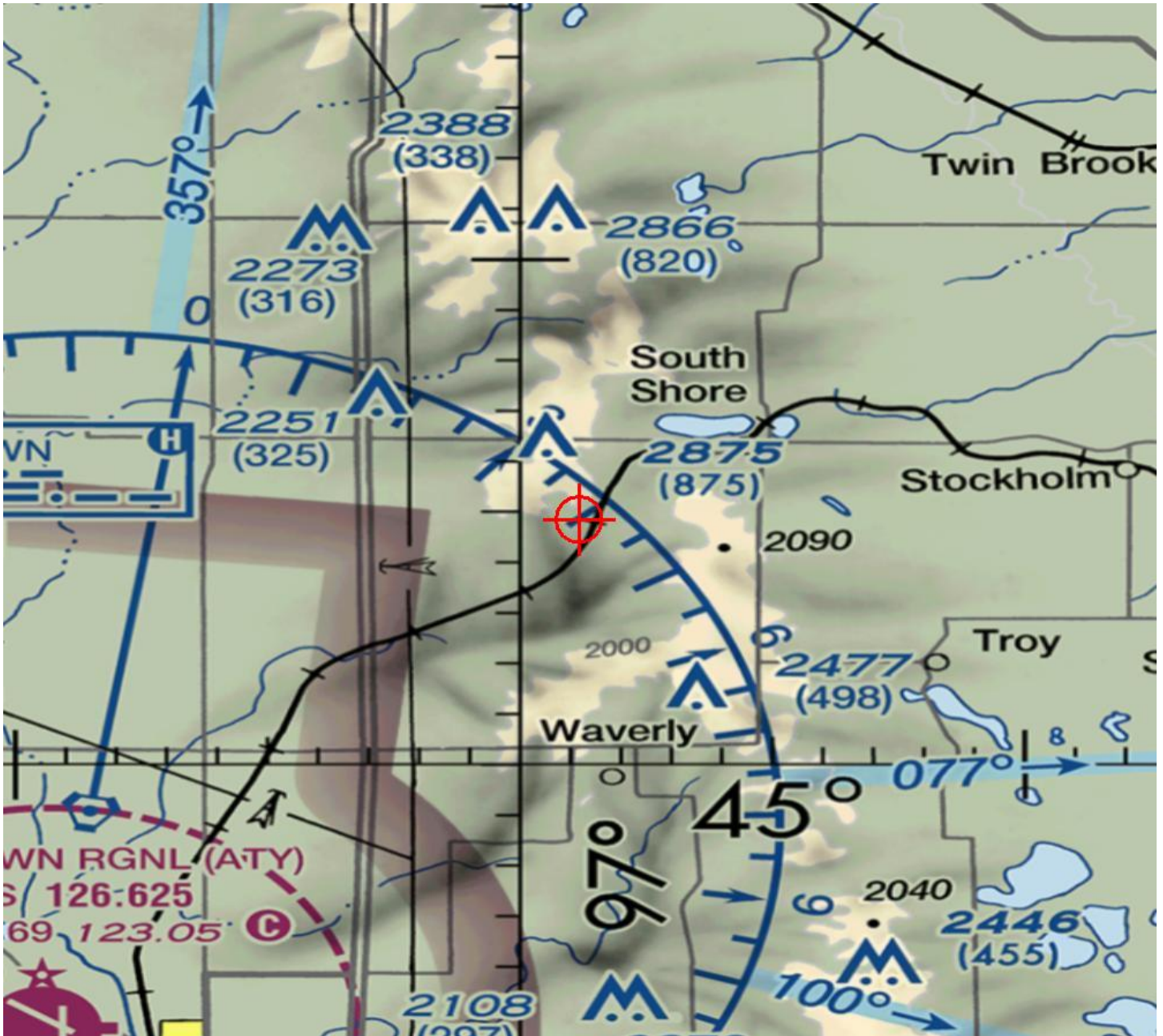
Signature Control No: 393028025-397093784

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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Aeronautical Study No.
2018-WTE-12120-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-35
Location:	Milbank, SD
Latitude:	45-04-33.72N NAD 83
Longitude:	96-59-51.76W
Heights:	1992 feet site elevation (SE) 499 feet above ground level (AGL) 2491 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12120-OE.

Signature Control No: 393028026-397093785

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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Aeronautical Study No.
2018-WTE-12121-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-36
Location:	Milbank, SD
Latitude:	45-04-30.90N NAD 83
Longitude:	96-58-03.74W
Heights:	1955 feet site elevation (SE) 499 feet above ground level (AGL) 2454 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12121-OE.

Signature Control No: 393028027-397093787

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(s)

Additional information for ASN 2018-WTE-12121-OE

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.





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

Aeronautical Study No.
2019-WTE-5071-OE
Prior Study No.
2018-WTE-12122-OE

Issued Date: 07/12/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-37
Location:	Milbank, SD
Latitude:	45-04-20.46N NAD 83
Longitude:	96-54-40.46W
Heights:	1927 feet site elevation (SE) 499 feet above ground level (AGL) 2426 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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)

This determination expires on 01/12/2021 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.

This determination cancels and supersedes prior determinations issued for this structure.

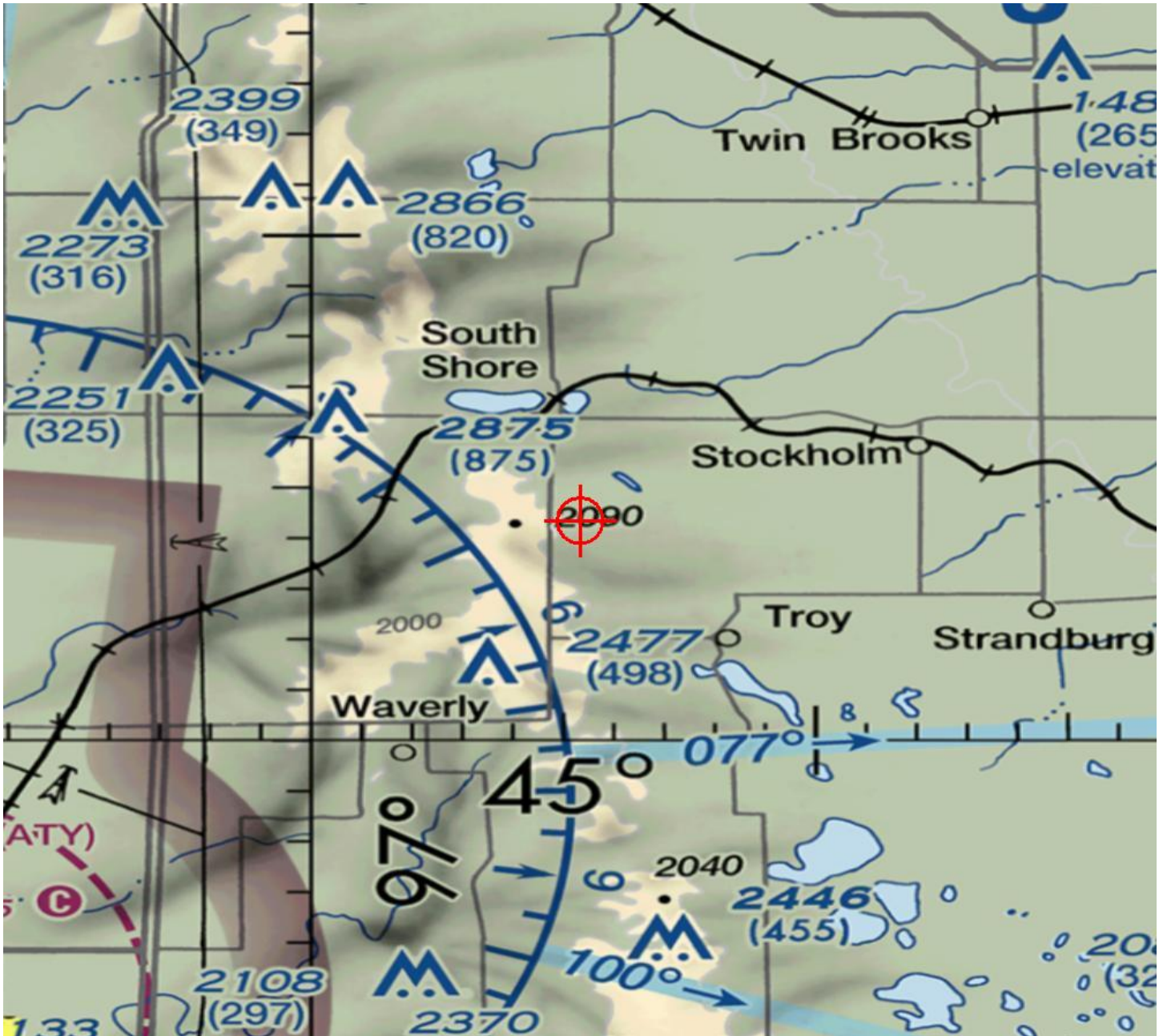
If we can be of further assistance, please contact our office at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2019-WTE-5071-OE.

Signature Control No: 406006434-411117982

(DNE -WT)

Lan Norris
Specialist

Attachment(s)
Map(s)





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

Aeronautical Study No.
2018-WTE-12123-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-38
Location:	Milbank, SD
Latitude:	45-04-21.27N NAD 83
Longitude:	96-59-18.54W
Heights:	1968 feet site elevation (SE) 499 feet above ground level (AGL) 2467 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12123-OE.

Signature Control No: 393028029-397093791

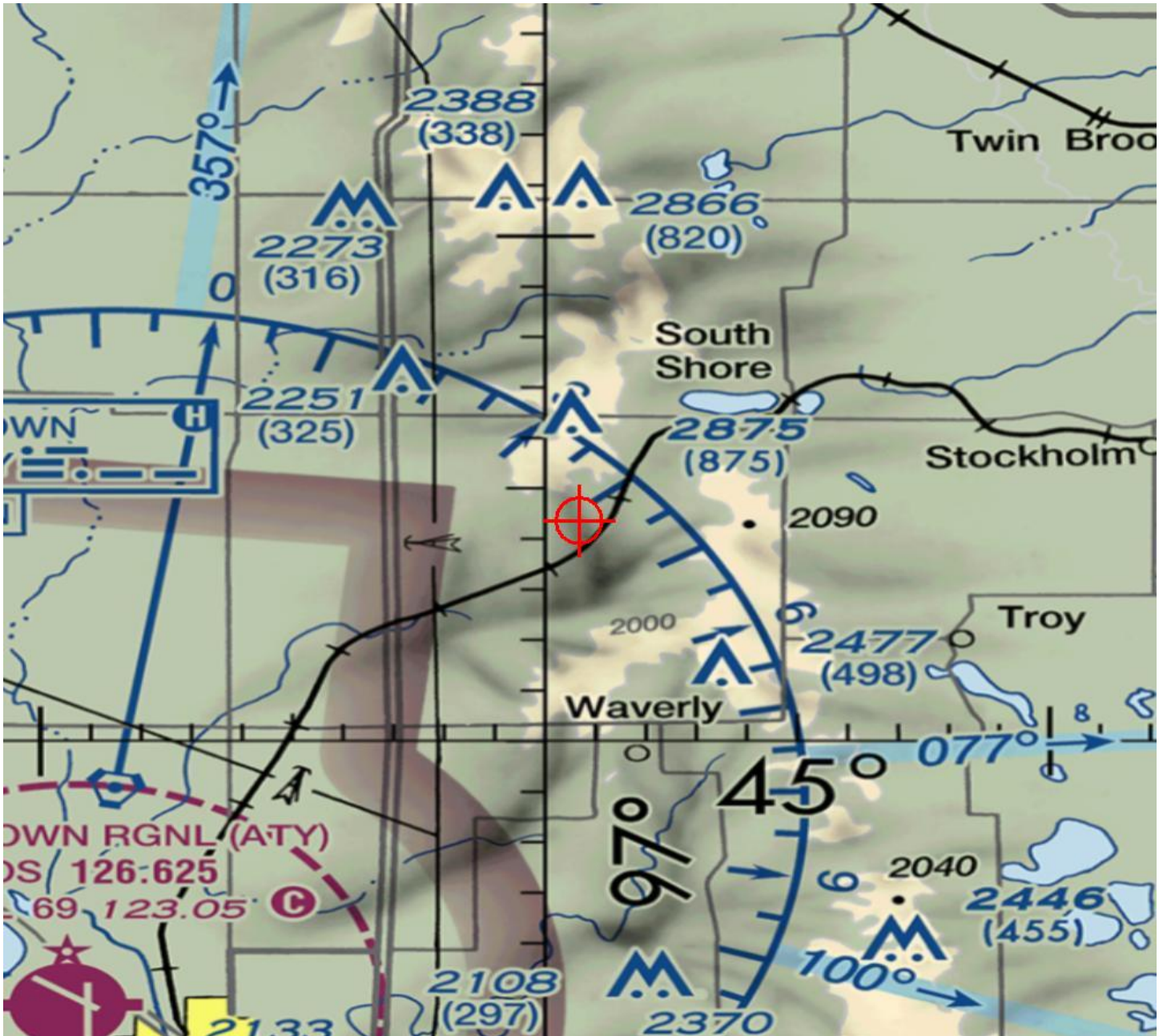
(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(s)

Additional information for ASN 2018-WTE-12123-OE

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.





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

Aeronautical Study No.
2018-WTE-12124-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-39
Location:	Milbank, SD
Latitude:	45-04-22.00N NAD 83
Longitude:	97-00-42.25W
Heights:	2002 feet site elevation (SE) 499 feet above ground level (AGL) 2501 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12124-OE.

Signature Control No: 393028030-397093792

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12126-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-41
Location:	Milbank, SD
Latitude:	45-04-13.63N NAD 83
Longitude:	96-55-09.86W
Heights:	1963 feet site elevation (SE)
	499 feet above ground level (AGL)
	2462 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12126-OE.

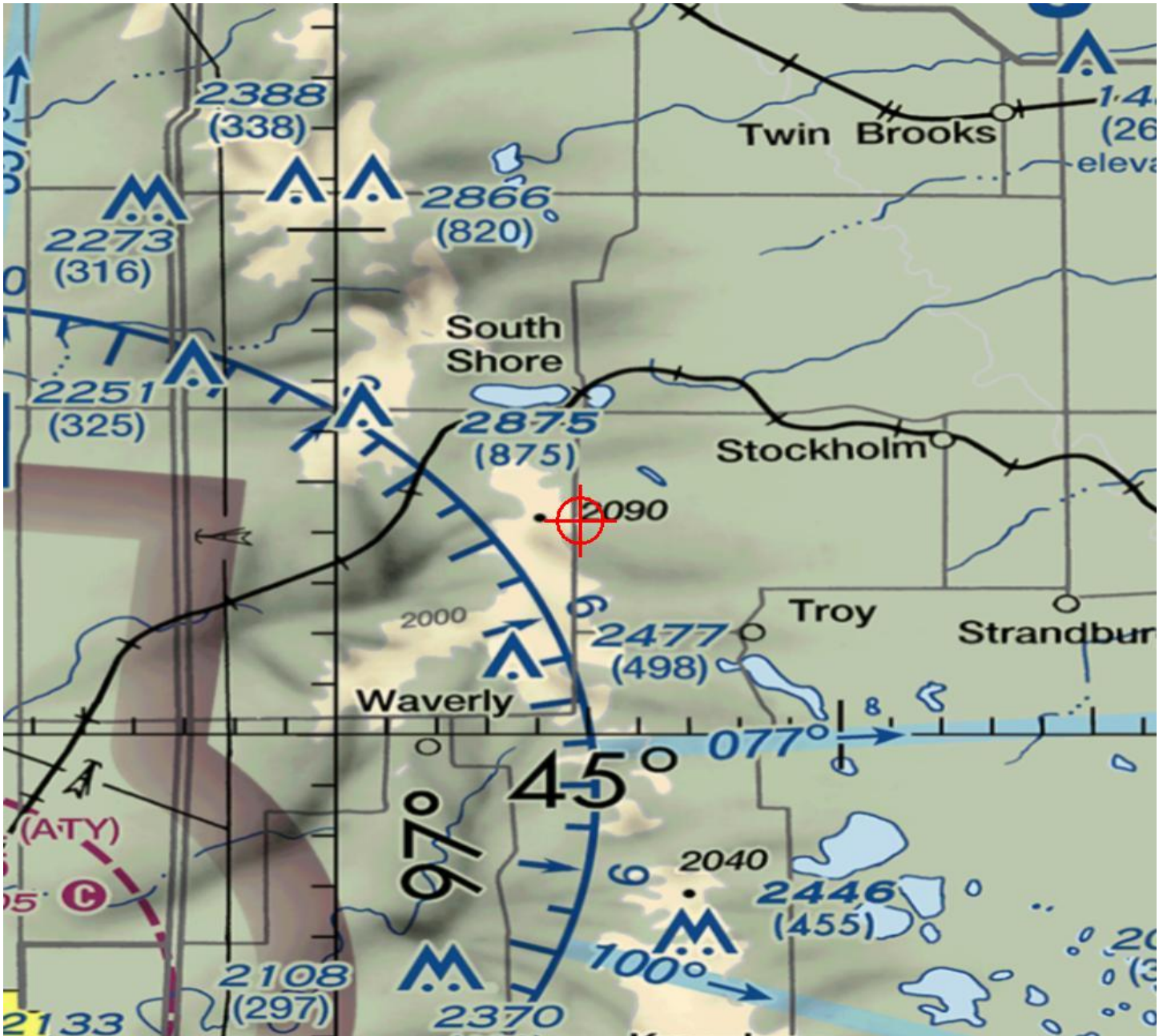
Signature Control No: 393028032-397093793

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12127-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-42
Location:	Milbank, SD
Latitude:	45-04-15.42N NAD 83
Longitude:	96-58-18.93W
Heights:	1926 feet site elevation (SE) 499 feet above ground level (AGL) 2425 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12127-OE.

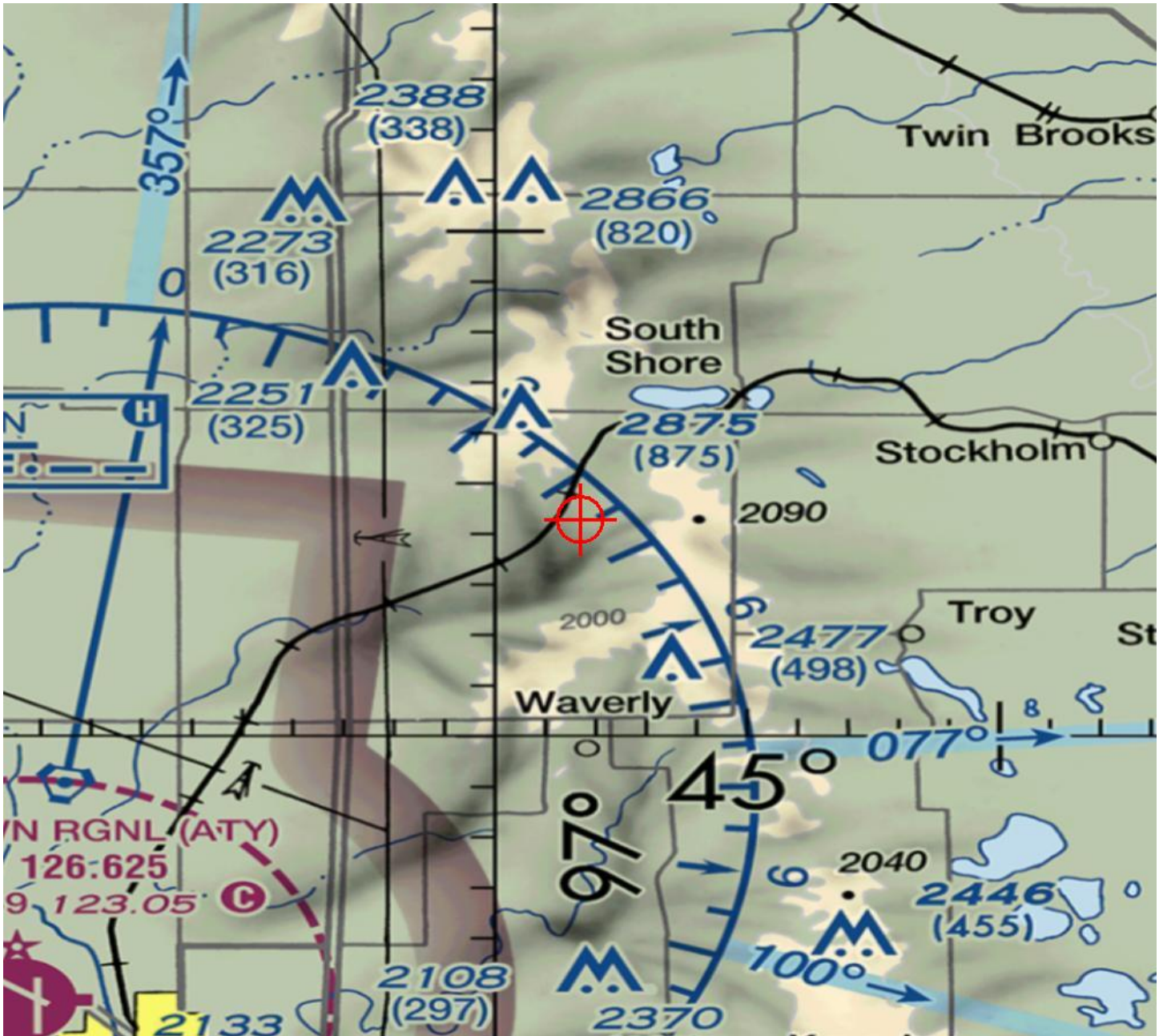
Signature Control No: 393028033-397093805

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12128-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-43
Location:	Milbank, SD
Latitude:	45-04-09.43N NAD 83
Longitude:	96-53-20.28W
Heights:	1895 feet site elevation (SE) 499 feet above ground level (AGL) 2394 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12128-OE.

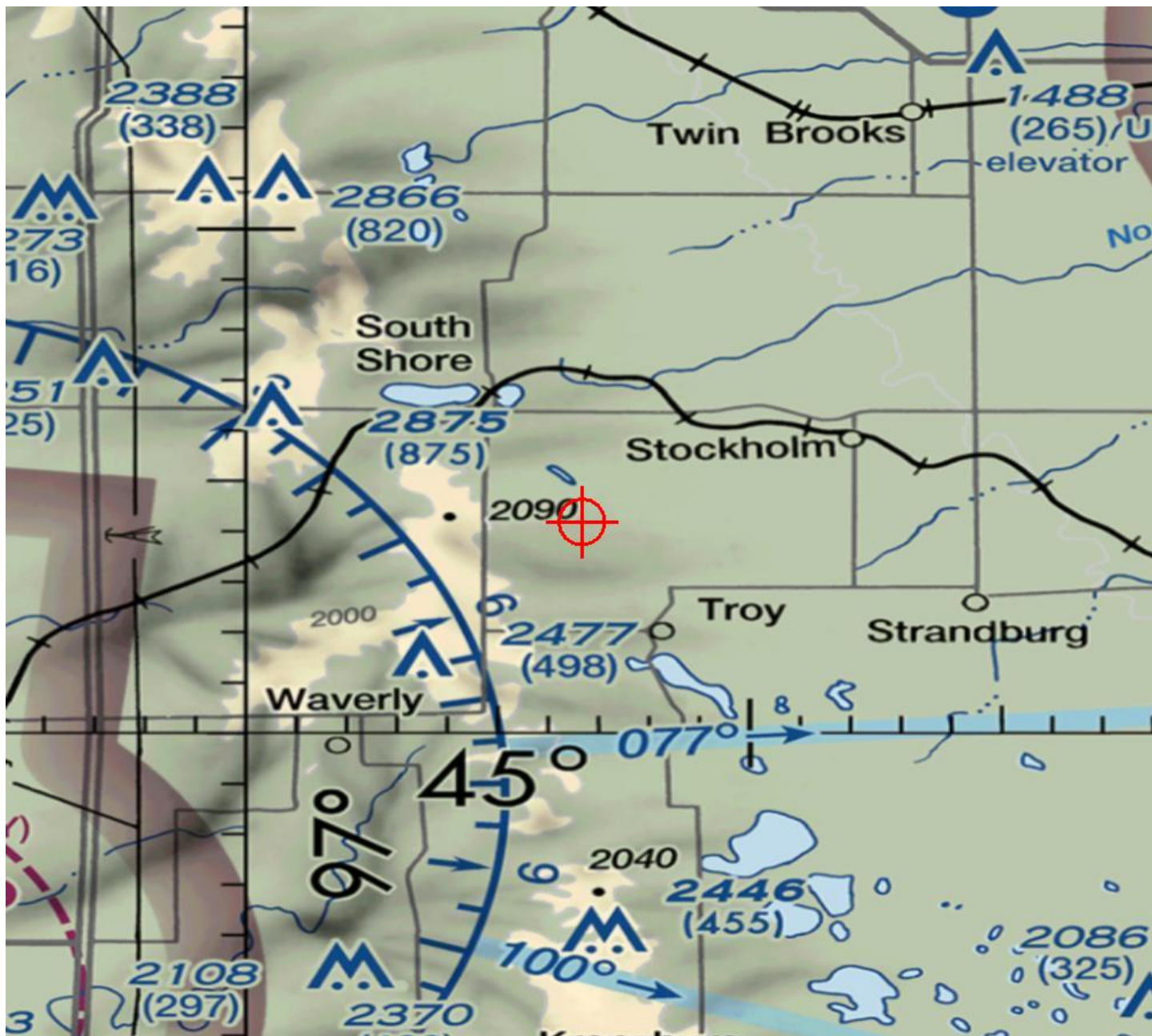
Signature Control No: 393028034-397093812

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2019-WTE-5072-OE
Prior Study No.
2018-WTE-12129-OE

Issued Date: 07/12/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-44
Location:	Milbank, SD
Latitude:	45-03-58.36N NAD 83
Longitude:	96-53-44.29W
Heights:	1890 feet site elevation (SE) 499 feet above ground level (AGL) 2389 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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)

This determination expires on 01/12/2021 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.

This determination cancels and supersedes prior determinations issued for this structure.

If we can be of further assistance, please contact our office at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2019-WTE-5072-OE.

Signature Control No: 406006435-411117980

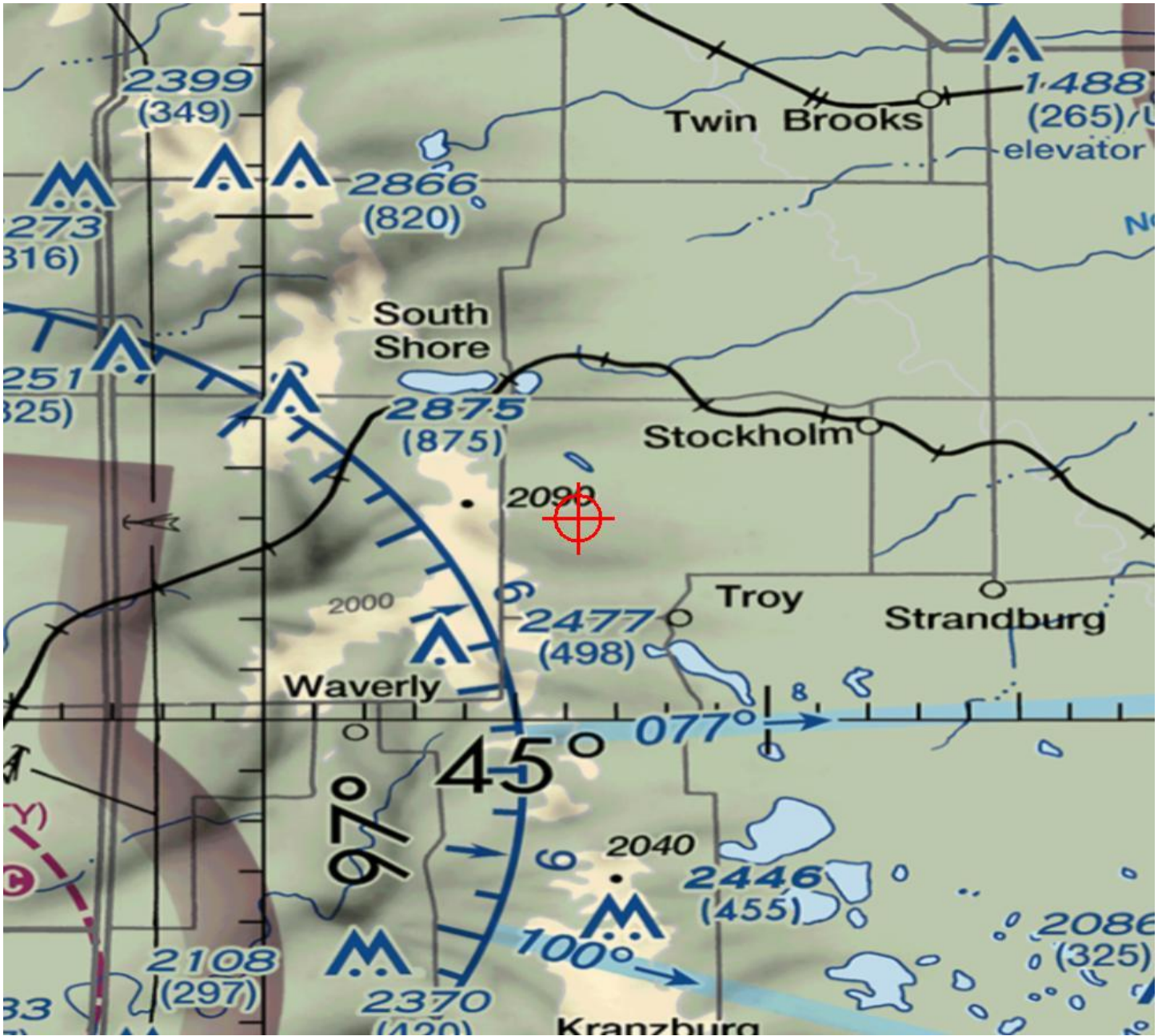
(DNE -WT)

Lan Norris

Specialist

Attachment(s)

Map(s)





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

Aeronautical Study No.
2018-WTE-12130-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-45
Location:	Milbank, SD
Latitude:	45-04-08.79N NAD 83
Longitude:	96-59-54.88W
Heights:	1967 feet site elevation (SE) 499 feet above ground level (AGL) 2466 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12130-OE.

Signature Control No: 393028036-397093822

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(s)

Additional information for ASN 2018-WTE-12130-OE

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.





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

Aeronautical Study No.
2019-WTE-5073-OE
Prior Study No.
2018-WTE-12131-OE

Issued Date: 07/12/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-46
Location:	Milbank, SD
Latitude:	45-04-00.89N NAD 83
Longitude:	96-54-42.63W
Heights:	1939 feet site elevation (SE) 499 feet above ground level (AGL) 2438 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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)

This determination expires on 01/12/2021 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.

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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 determination cancels and supersedes prior determinations issued for this structure.

If we can be of further assistance, please contact our office at (404) 305-6645, or Lan.norris@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2019-WTE-5073-OE.

Signature Control No: 406006436-411117983

(DNE -WT)

Lan Norris
Specialist

Attachment(s)
Map(s)



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

Aeronautical Study No.
2018-WTE-12133-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-48
Location:	Milbank, SD
Latitude:	45-03-37.97N NAD 83
Longitude:	96-55-10.61W
Heights:	1935 feet site elevation (SE) 499 feet above ground level (AGL) 2434 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12133-OE.

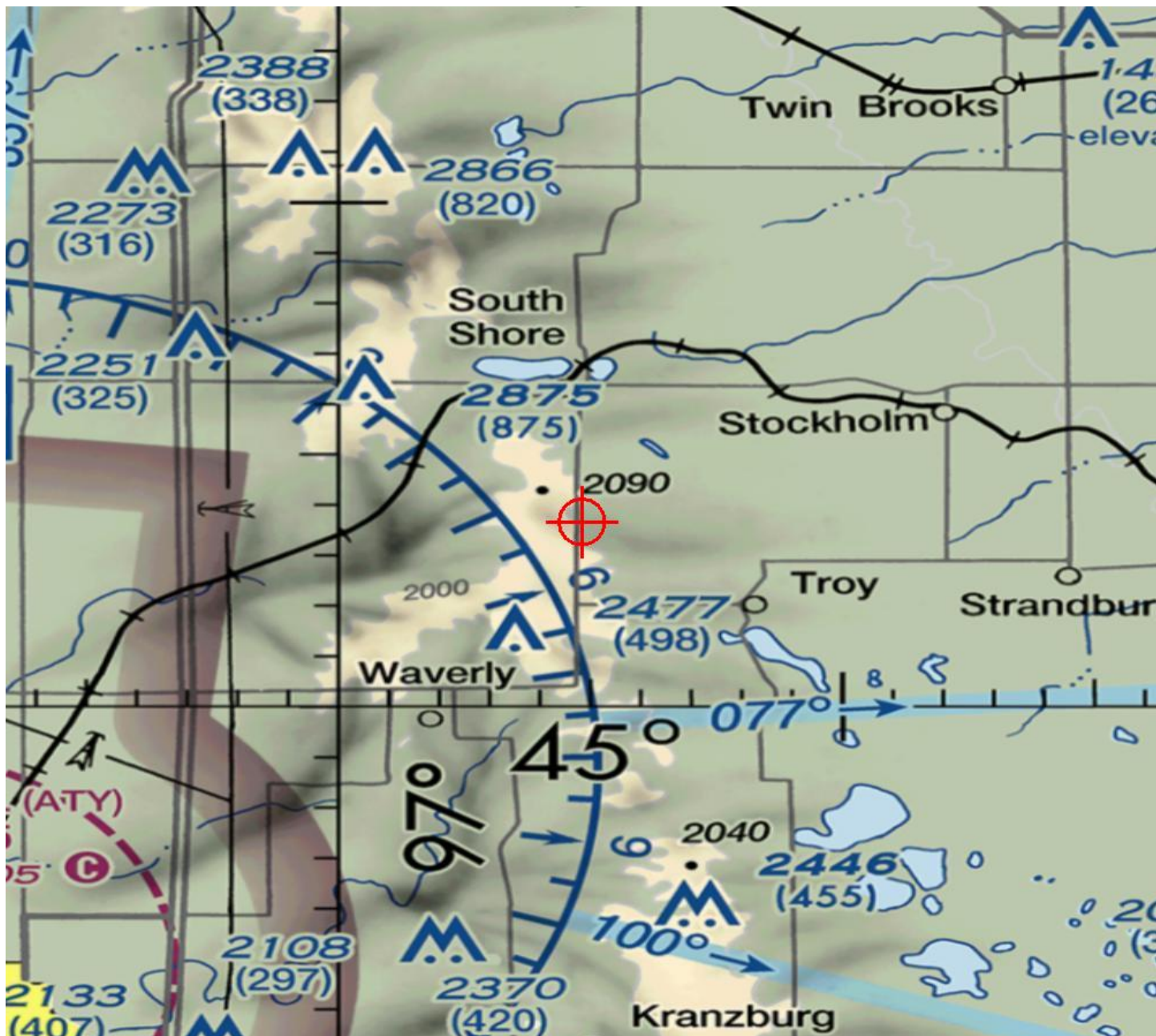
Signature Control No: 393028039-397093836

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2019-WTE-7673-OE
Prior Study No.
2019-WTE-6861-OE

Issued Date: 10/04/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-50
Location:	Milbank, SD
Latitude:	45-03-34.58N NAD 83
Longitude:	96-55-50.21W
Heights:	2013 feet site elevation (SE) 499 feet above ground level (AGL) 2512 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 2, 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 60 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.

This determination expires on 04/04/2021 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 subject to review if an interested party files a petition that is received by the FAA on or before November 03, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on November 13, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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).

This determination cancels and supersedes prior determinations issued for this structure.

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 2019-WTE-7673-OE.

Signature Control No: 415868420-418928572

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level

AMSL, Above Mean Sea Level

ASN, Aeronautical Study Number

ATC, Air Traffic Control

BC, Back Course

CFR, Code of Federal Regulations

IFR, Instrument Flight Rules

LOC, Localizer

MSA, Minimum Safe Altitude

NM, Nautical Mile RWY, Runway

VFR, Visual Flight Rules

This notice is for a previously studied and determined proposed wind turbine as a part of a wind farm project located approximately 7.99 NM - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASN with AGL height, AMSL height and coordinates for this proposal is listed on page. The proposal would exceed the obstruction standards of 14 CFR Part 77.17(a)(3); a height that increases a minimum instrument flight altitude within a terminal area;

- Increases the Watertown Regional (ATY) Watertown, SD. LOC BC RWY 17, MSA from 240 degrees inbound clockwise to 040 degrees inbound from 3500 feet AMSL to 3600 feet AMSL.

The proposal was not circularized to the public for comments, as current FAA policy exempts circularization of those proposals which only require internal FAA review. In accordance with JO 7400.2L, Chapter 6-3-17, paragraph a.2.(b), circularization is not necessary for a structure that would be located on a site in proximity to another previously studied structure, would have no greater effect on aeronautical operations and procedures, and the basis for the determination issued under the previous study could be appropriately applied.

The aeronautical study disclosed that the proposed structure would affect the IFR procedure as indicated above. An MSA is the minimum obstacle clearance altitude for emergency use only and are within a specified distance from the navigation facility upon which a procedure is predicated. The MSA altitudes are not routinely used by pilots or by ATC. Therefore, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment.

Study for possible VFR effect disclosed that the proposal would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposal would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL, the structure would have no substantial adverse effect on VFR en route flight operations.

The proposed structure would be appropriately obstruction marked/lighted to make it more conspicuous to airmen should circumnavigation be necessary.

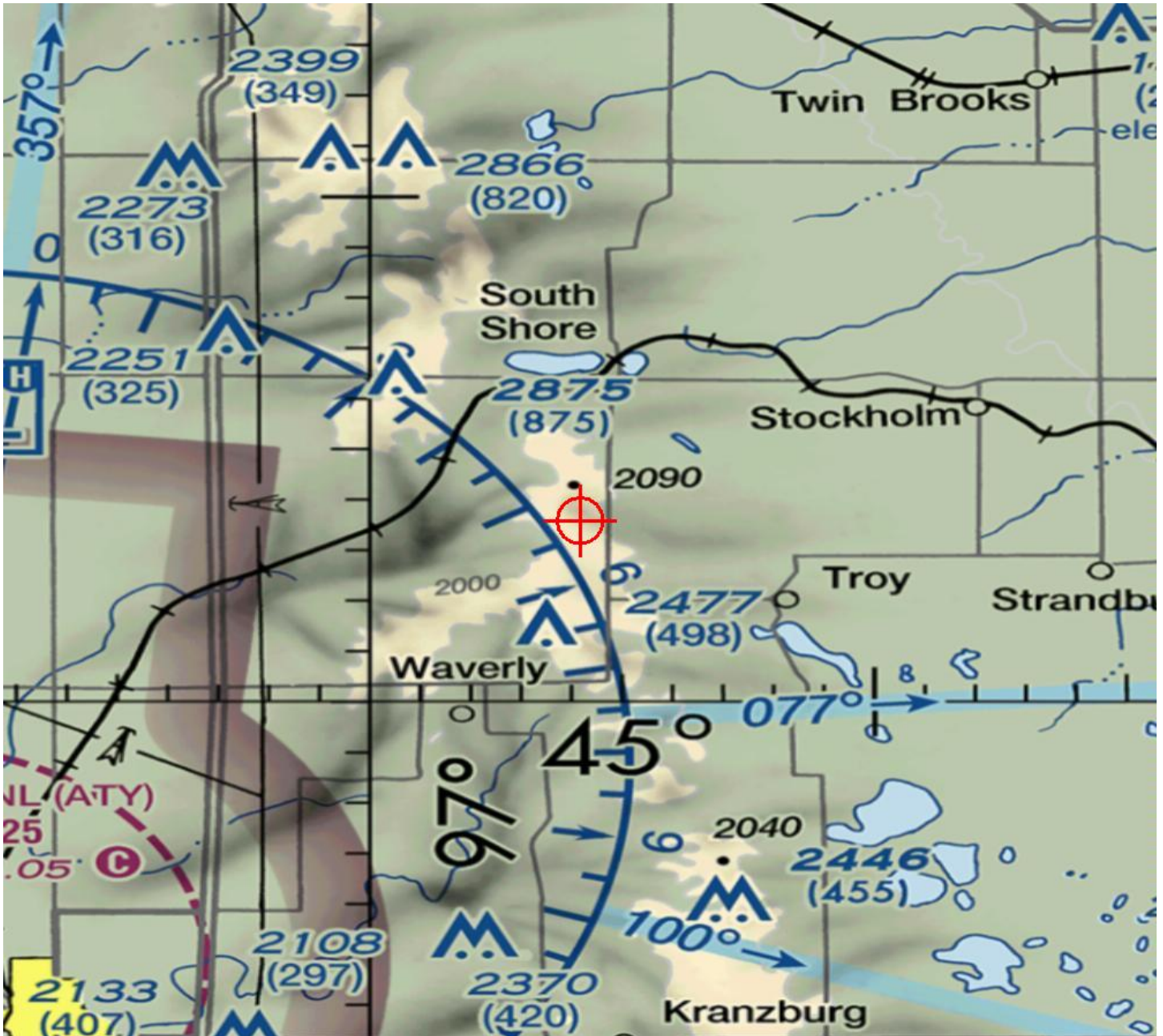
The cumulative impact of the proposed structure, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposal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

Therefore, it is determined that the proposed structure would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12136-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-51
Location:	Milbank, SD
Latitude:	45-03-33.97N NAD 83
Longitude:	96-53-16.18W
Heights:	1891 feet site elevation (SE) 499 feet above ground level (AGL) 2390 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12136-OE.

Signature Control No: 393028042-397093848

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2019-WTE-5075-OE
Prior Study No.
2018-WTE-12137-OE

Issued Date: 07/12/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-52
Location:	Milbank, SD
Latitude:	45-03-24.17N NAD 83
Longitude:	96-53-56.47W
Heights:	1894 feet site elevation (SE) 499 feet above ground level (AGL) 2393 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 2, 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 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.

This determination expires on 01/12/2021 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 subject to review if an interested party files a petition that is received by the FAA on or before August 11, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on August 21, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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).

This determination cancels and supersedes prior determinations issued for this structure.

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 2019-WTE-5075-OE.

Signature Control No: 406006438-411125053

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ASN, Aeronautical Study Number
ATC, Air Traffic Control
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
MOCA, Minimum Obstruction Clearance Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structure is part of a proposed wind farm. The wind farm would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASN with coordinates, AGL height, and AMSL height for this proposal is shown on page one. The structure would exceed the obstruction standards of 14 CFR Part 77, Section 77.17(a)(3); a height that increases a minimum instrument flight altitude within a terminal area. The proposed structure would increase the MOCA on Federal Airway V-78 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to 3400 feet AMSL.

This proposal was not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structure would affect the IFR procedures indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

Study for possible VFR effects disclosed that the proposal would have no effect on any traffic patterns, arrival procedures, departure procedures or en route operations. Therefore the proposal would not have a substantial adverse effect on VFR operations for any known existing or planned public-use or military airport.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would not be a hazard to air navigation providing the conditions set forth in this determination are met.

Additional conditions:

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.





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

Aeronautical Study No.
2018-WTE-12138-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-53
Location:	Milbank, SD
Latitude:	45-03-15.36N NAD 83
Longitude:	96-58-16.29W
Heights:	1967 feet site elevation (SE) 499 feet above ground level (AGL) 2466 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12138-OE.

Signature Control No: 393028044-399662782

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.



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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12139-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-54
Location:	Milbank, SD
Latitude:	45-03-09.07N NAD 83
Longitude:	96-53-31.74W
Heights:	1885 feet site elevation (SE) 499 feet above ground level (AGL) 2384 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12139-OE.

Signature Control No: 393028045-399662776

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

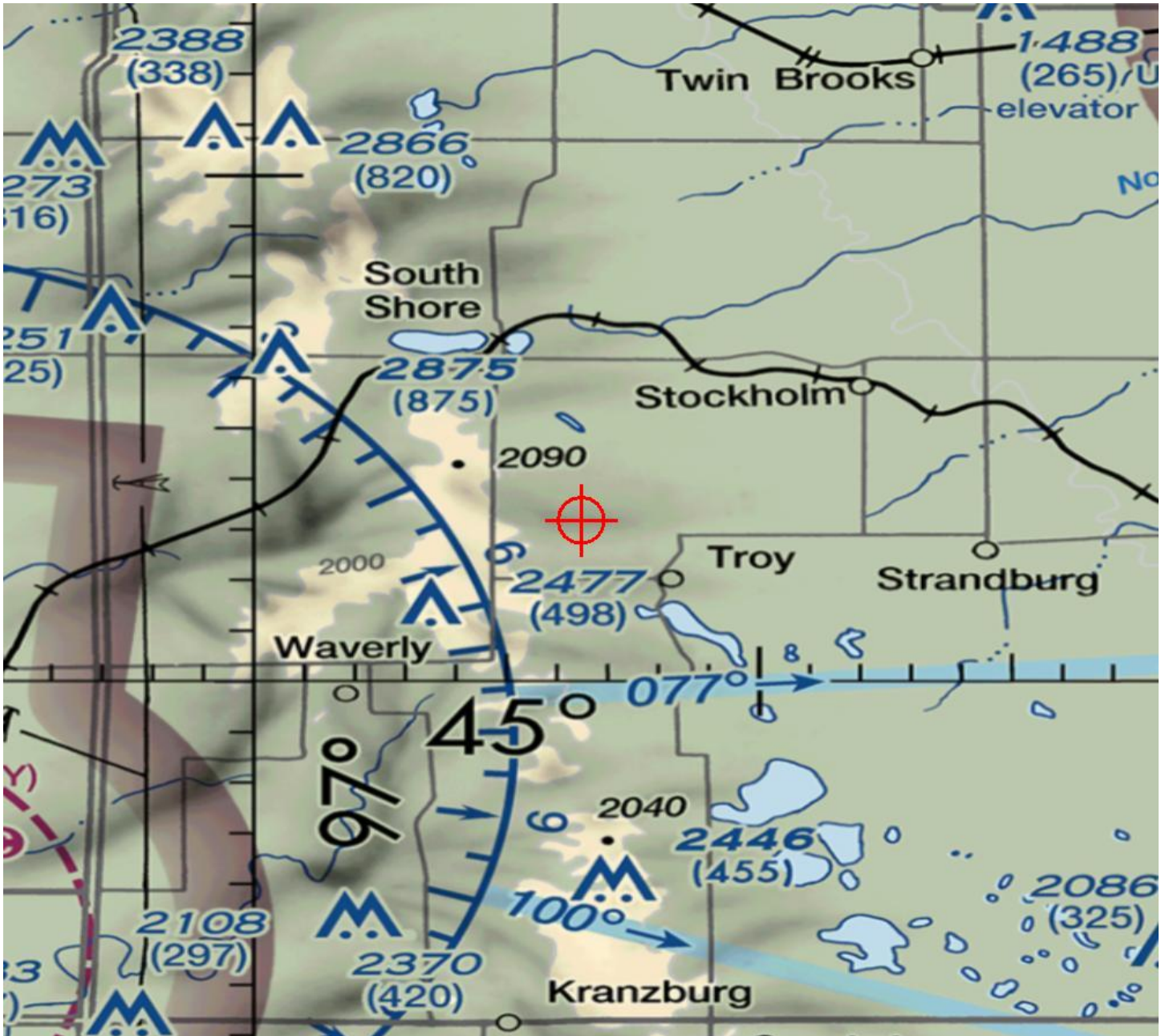
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12140-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-55
Location:	Milbank, SD
Latitude:	45-03-13.28N NAD 83
Longitude:	96-58-48.60W
Heights:	1964 feet site elevation (SE) 499 feet above ground level (AGL) 2463 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12140-OE.

Signature Control No: 393028046-399662766

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12143-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-58
Location:	Milbank, SD
Latitude:	45-02-48.51N NAD 83
Longitude:	96-53-46.94W
Heights:	1927 feet site elevation (SE) 499 feet above ground level (AGL) 2426 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12143-OE.

Signature Control No: 393028049-399662779

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12144-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-59
Location:	Milbank, SD
Latitude:	45-02-47.40N NAD 83
Longitude:	96-53-07.67W
Heights:	1881 feet site elevation (SE) 499 feet above ground level (AGL) 2380 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12144-OE.

Signature Control No: 393028050-399662777

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

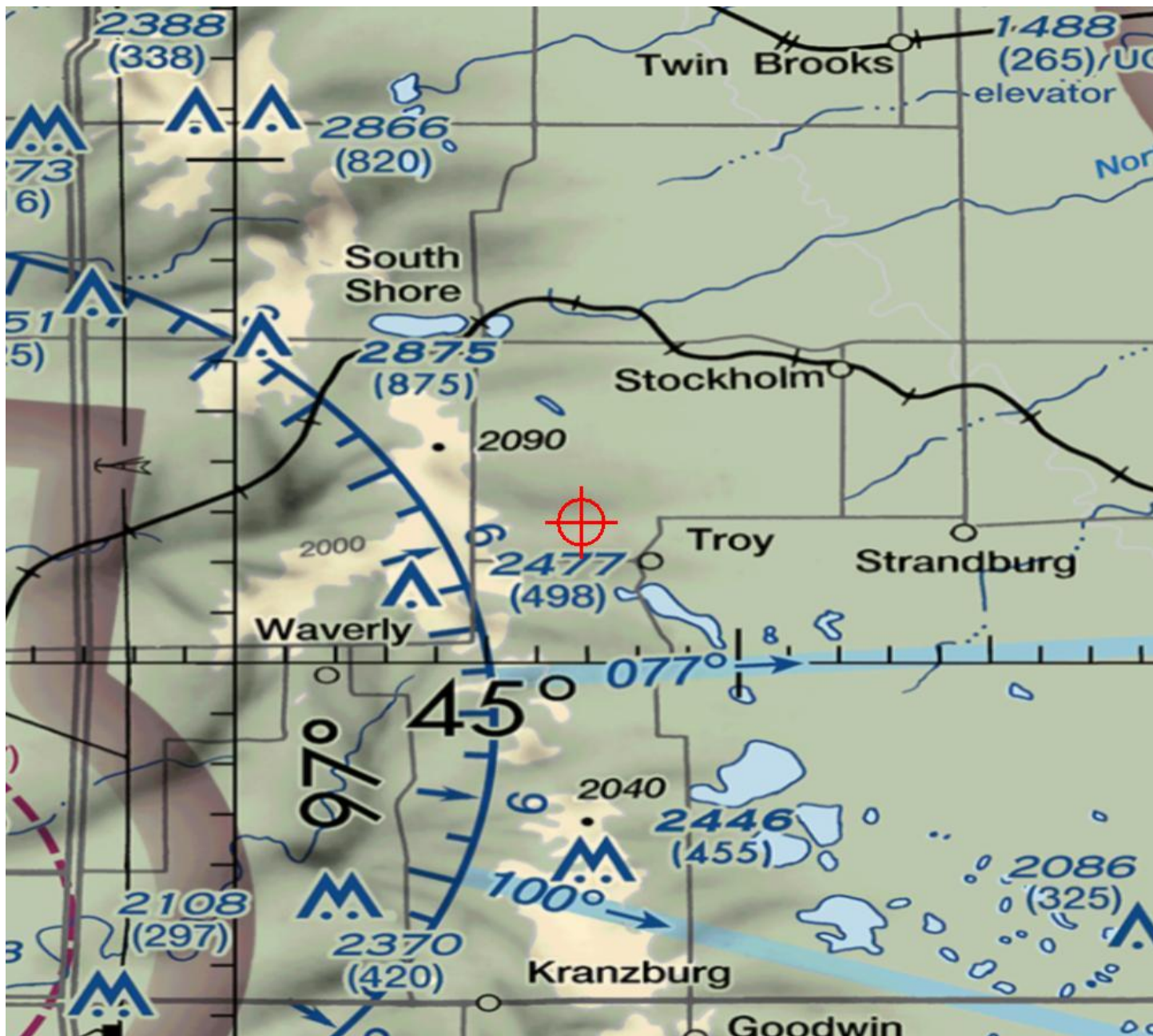
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12145-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-60
Location:	Milbank, SD
Latitude:	45-02-50.81N NAD 83
Longitude:	96-58-44.36W
Heights:	1954 feet site elevation (SE) 499 feet above ground level (AGL) 2453 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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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 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.

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If we can be of further assistance, please contact Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12145-OE.

Signature Control No: 393028051-399662769

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
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VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
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2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12146-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-61
Location:	Milbank, SD
Latitude:	45-02-46.70N NAD 83
Longitude:	96-55-49.56W
Heights:	2019 feet site elevation (SE) 499 feet above ground level (AGL) 2518 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12146-OE.

Signature Control No: 393028052-399662767

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

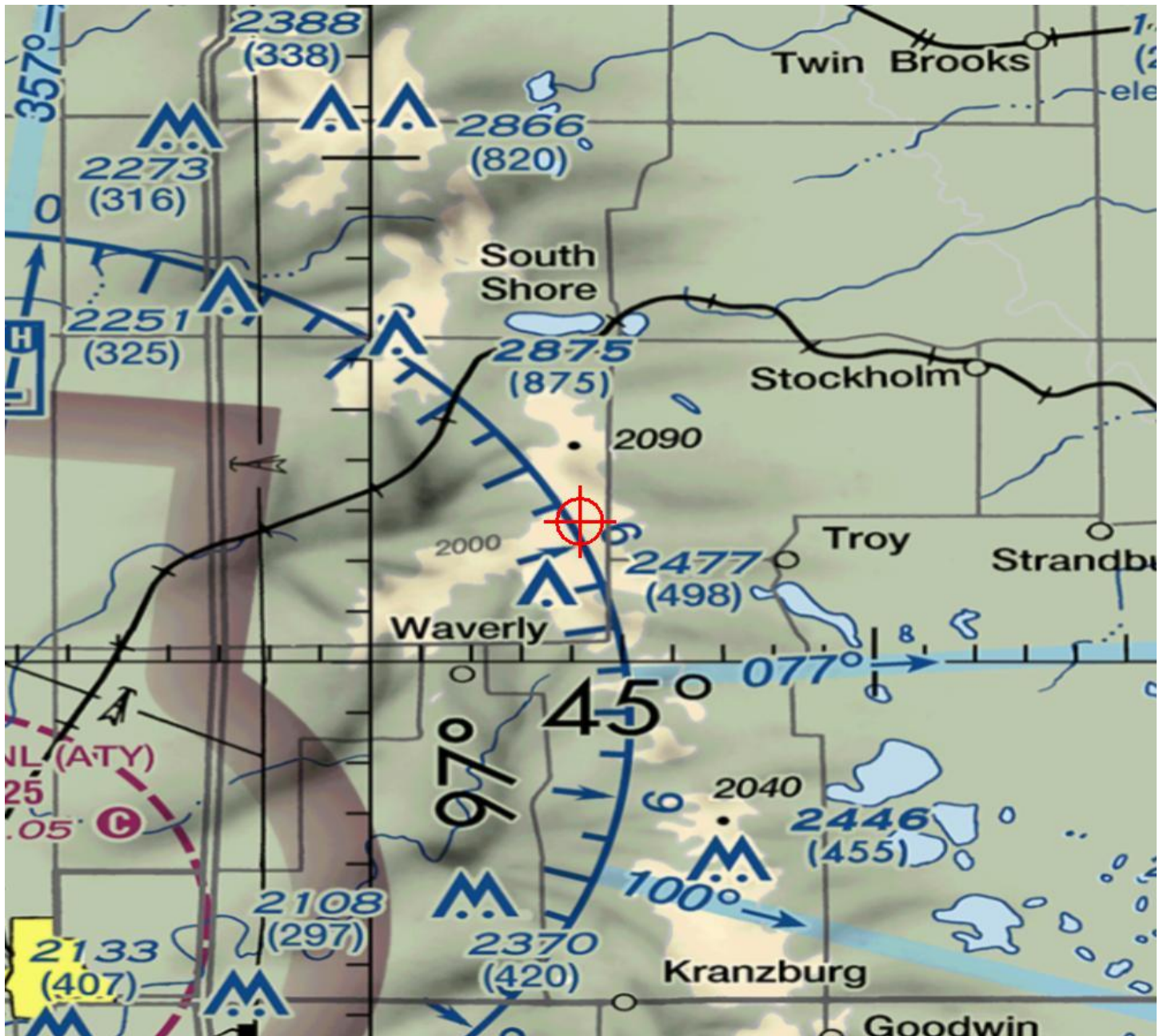
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12147-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-62
Location:	Milbank, SD
Latitude:	45-02-47.63N NAD 83
Longitude:	96-57-22.24W
Heights:	1974 feet site elevation (SE) 499 feet above ground level (AGL) 2473 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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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 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.

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Signature Control No: 393028053-399662780

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
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RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
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2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

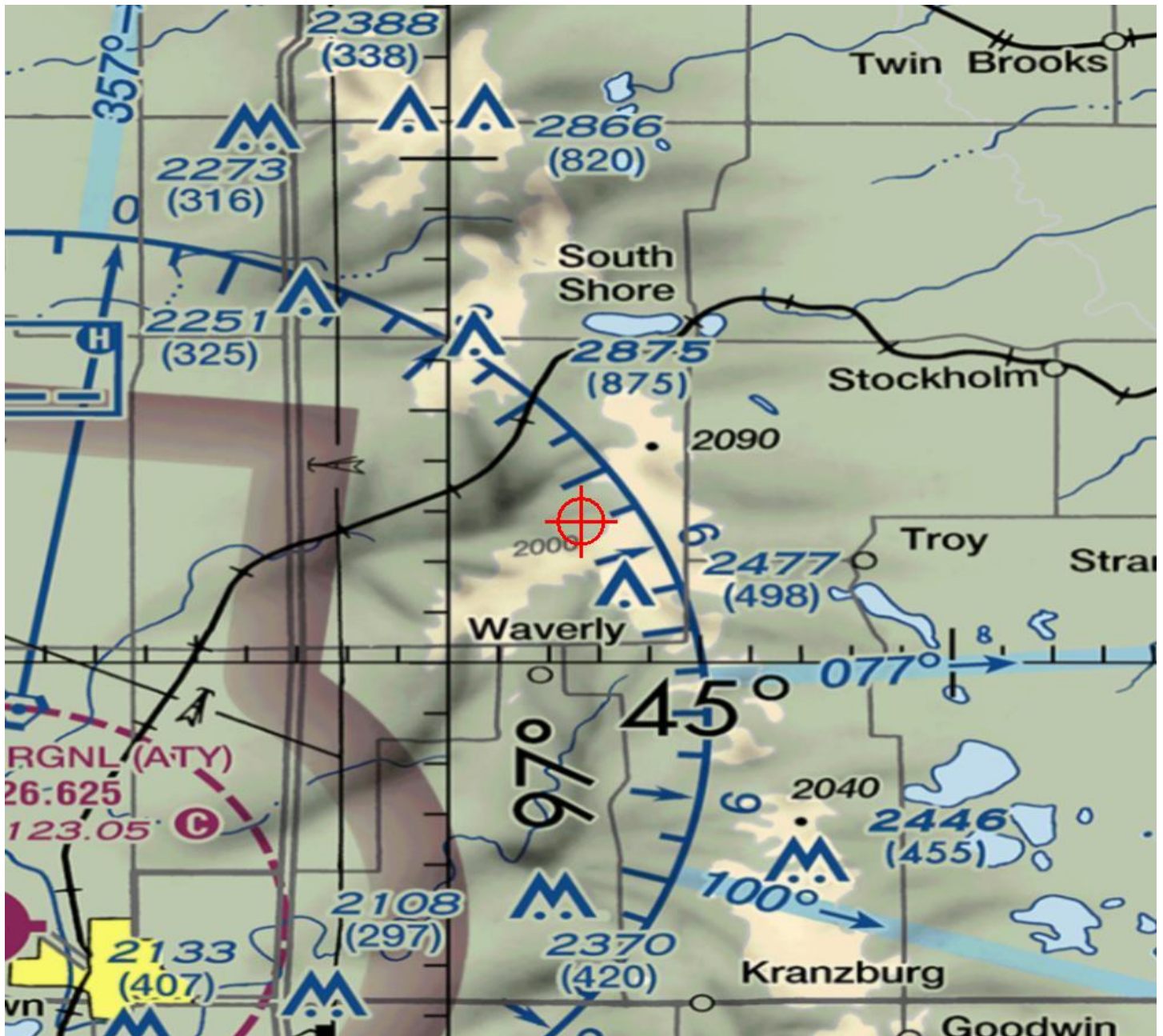
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12148-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-63
Location:	Milbank, SD
Latitude:	45-02-38.82N NAD 83
Longitude:	96-54-34.65W
Heights:	1937 feet site elevation (SE) 499 feet above ground level (AGL) 2436 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12148-OE.

Signature Control No: 393028054-399662774

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12149-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-64
Location:	Milbank, SD
Latitude:	45-02-46.30N NAD 83
Longitude:	96-55-09.53W
Heights:	1985 feet site elevation (SE) 499 feet above ground level (AGL) 2484 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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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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Signature Control No: 393028055-399662781

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
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ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
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LOC, Localizer
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MOCA, Minimum Obstruction Clearance Altitude
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Section 77.17(a)(3): A height that increases a minimum instrument flight altitude within a terminal area;

The following would increase the ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

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2018-WTE-12155-OE
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2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

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2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

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2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
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2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

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2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

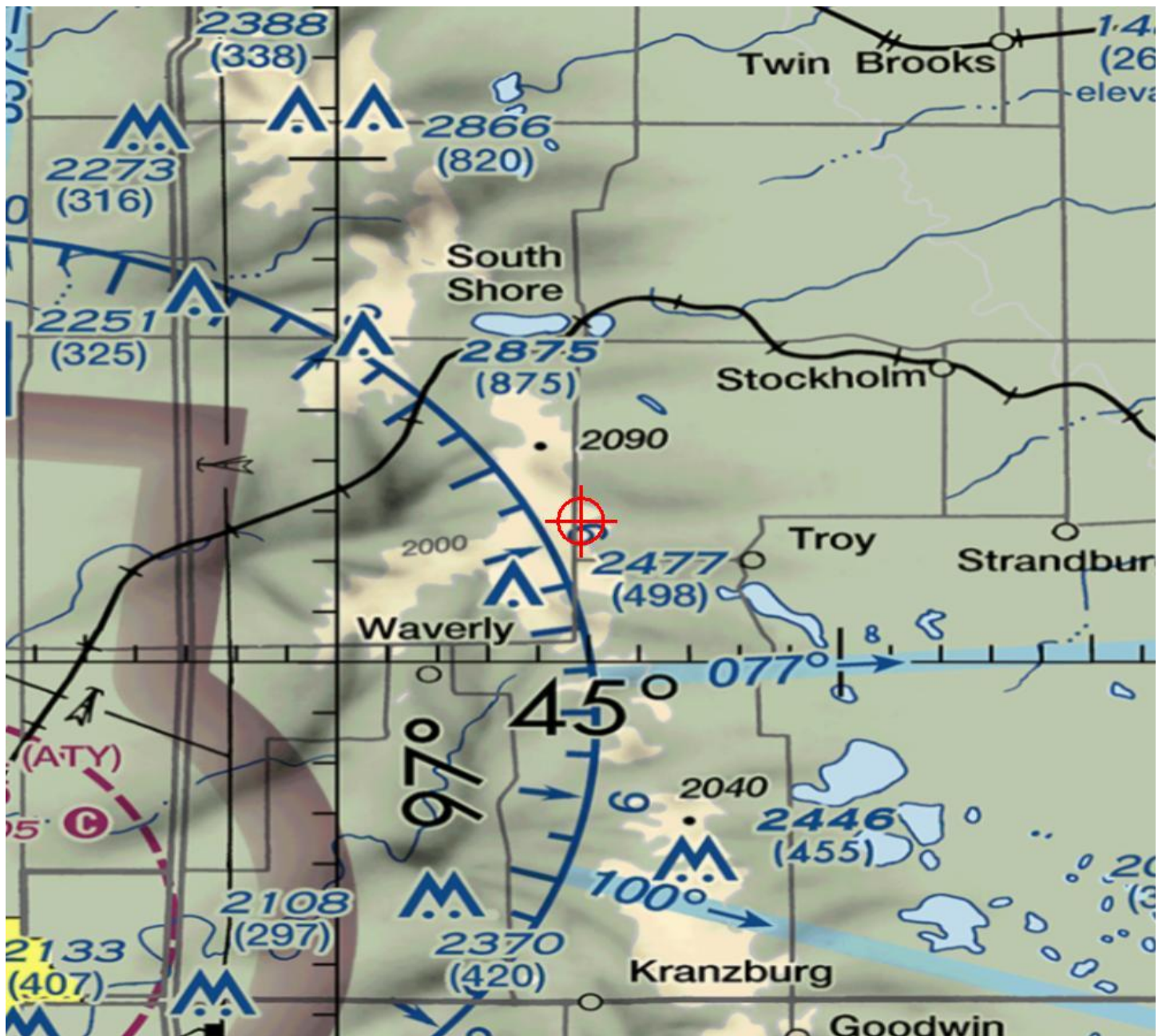
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12150-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-65
Location:	Milbank, SD
Latitude:	45-02-38.67N NAD 83
Longitude:	96-56-47.01W
Heights:	2000 feet site elevation (SE) 499 feet above ground level (AGL) 2499 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12150-OE.

Signature Control No: 393028056-399662775

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12151-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-66
Location:	Milbank, SD
Latitude:	45-02-28.25N NAD 83
Longitude:	96-55-41.86W
Heights:	2020 feet site elevation (SE) 499 feet above ground level (AGL) 2519 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12151-OE.

Signature Control No: 393028057-399662778

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

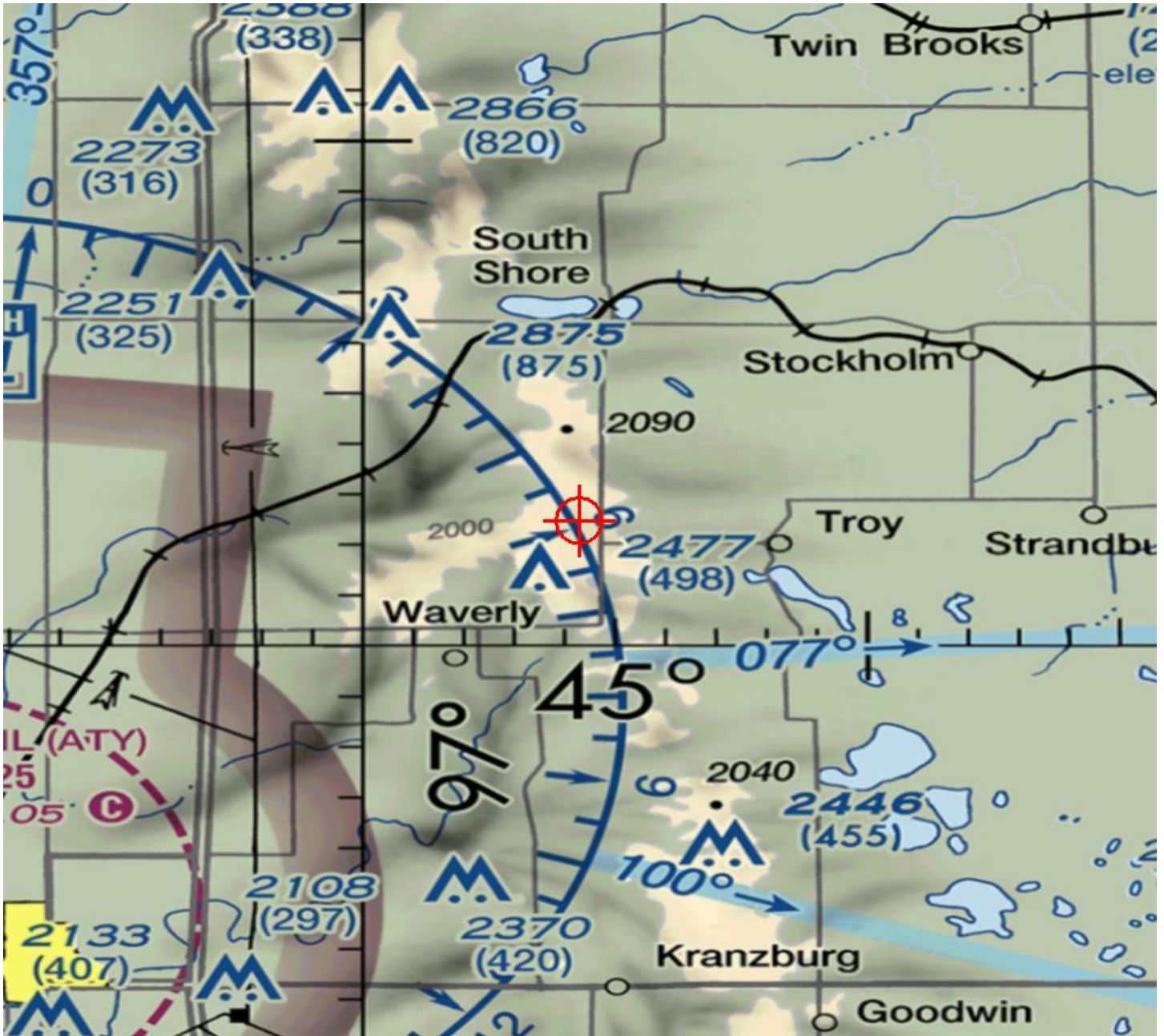
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12152-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-67
Location:	Milbank, SD
Latitude:	45-02-23.04N NAD 83
Longitude:	96-53-22.14W
Heights:	1888 feet site elevation (SE) 499 feet above ground level (AGL) 2387 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12152-OE.

Signature Control No: 393028058-399662802

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

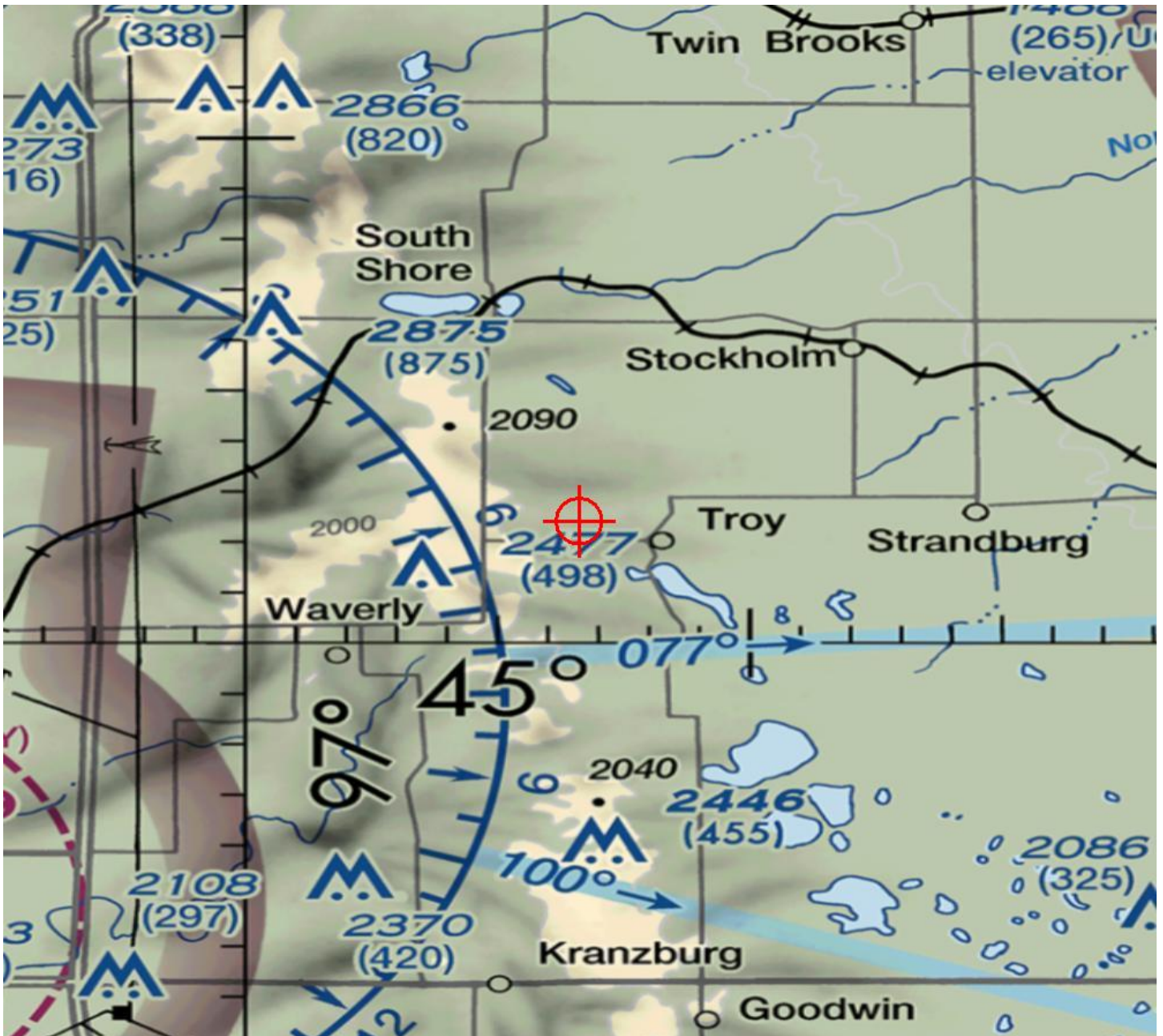
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12153-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-68
Location:	Milbank, SD
Latitude:	45-02-21.45N NAD 83
Longitude:	96-53-59.04W
Heights:	1926 feet site elevation (SE) 499 feet above ground level (AGL) 2425 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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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

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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.

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Signature Control No: 393028059-399662804

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
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VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12154-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-69
Location:	Milbank, SD
Latitude:	45-02-25.16N NAD 83
Longitude:	96-57-38.26W
Heights:	1991 feet site elevation (SE) 499 feet above ground level (AGL) 2490 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12154-OE.

Signature Control No: 393028060-399662806

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12155-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-70
Location:	Milbank, SD
Latitude:	45-02-19.54N NAD 83
Longitude:	96-56-27.61W
Heights:	2012 feet site elevation (SE) 499 feet above ground level (AGL) 2511 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12155-OE.

Signature Control No: 393028061-399662808

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12156-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-71
Location:	Milbank, SD
Latitude:	45-02-21.85N NAD 83
Longitude:	96-58-33.96W
Heights:	1997 feet site elevation (SE) 499 feet above ground level (AGL) 2496 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12156-OE.

Signature Control No: 393028062-399662809

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

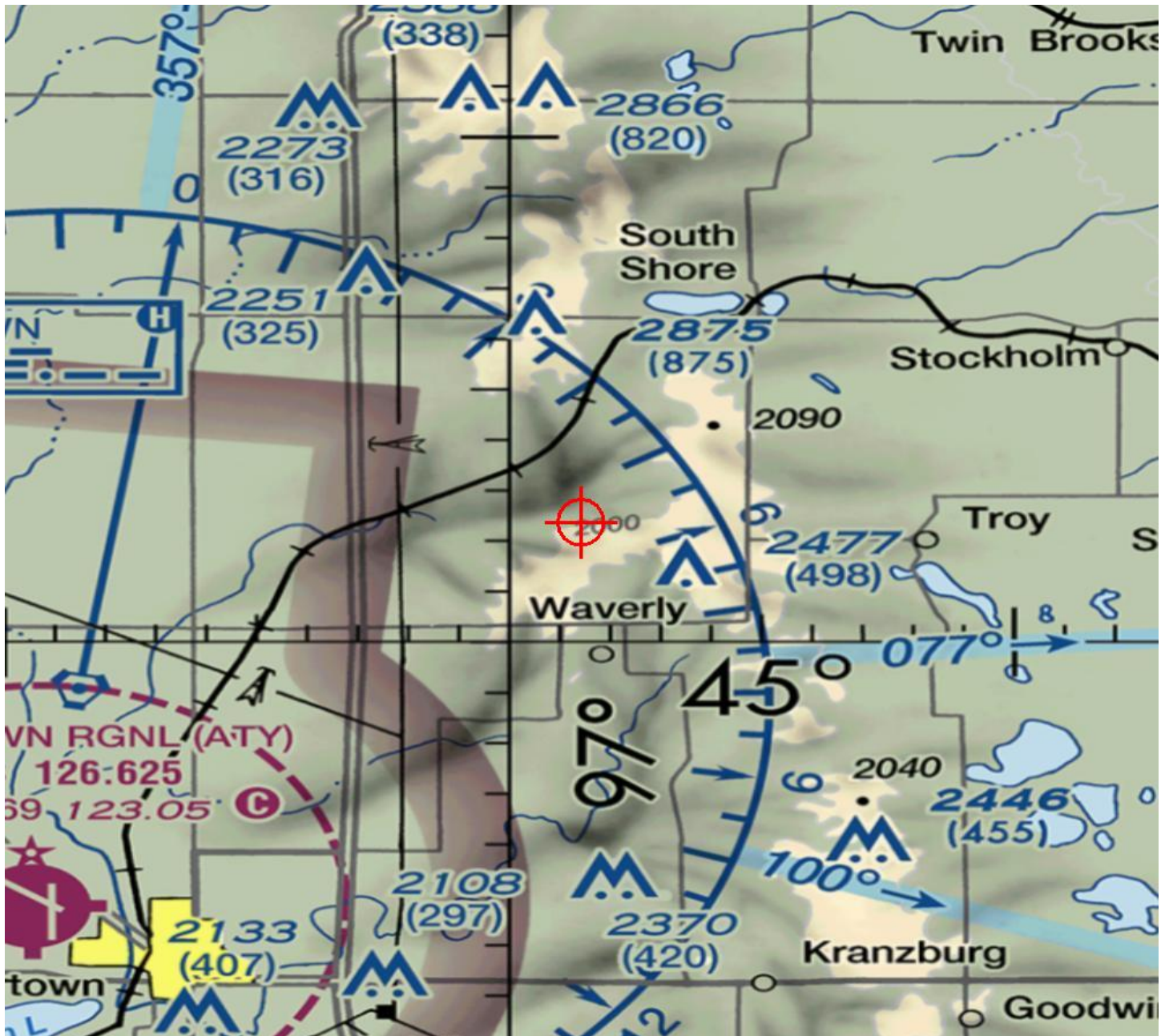
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12157-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-72
Location:	Milbank, SD
Latitude:	45-02-20.94N NAD 83
Longitude:	96-58-02.82W
Heights:	1992 feet site elevation (SE) 499 feet above ground level (AGL) 2491 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12157-OE.

Signature Control No: 393028063-399662814

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
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2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12158-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-73
Location:	Milbank, SD
Latitude:	45-02-19.52N NAD 83
Longitude:	96-57-05.41W
Heights:	2003 feet site elevation (SE) 499 feet above ground level (AGL) 2502 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12158-OE.

Signature Control No: 393028064-399662816

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

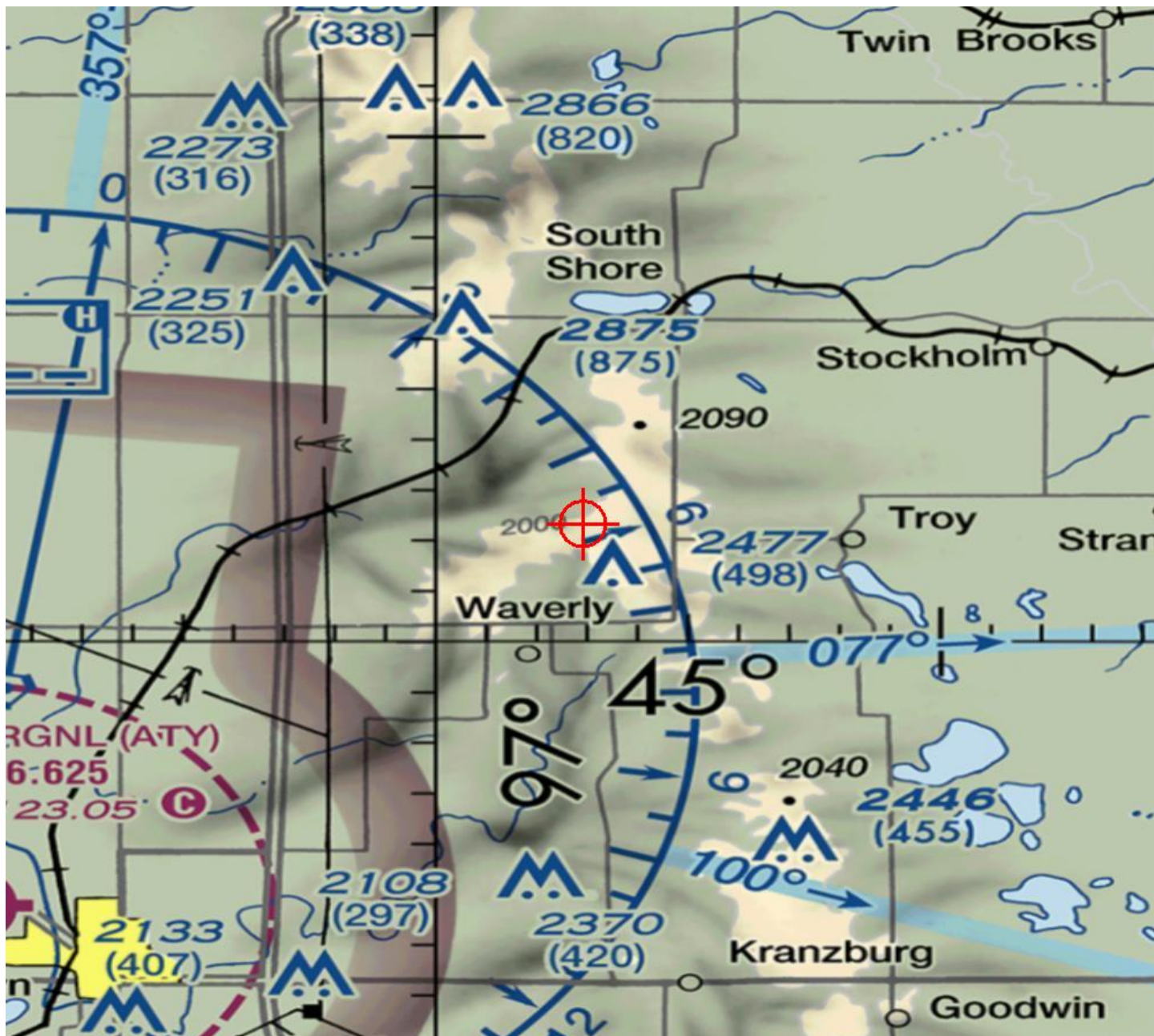
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12159-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-74
Location:	Milbank, SD
Latitude:	45-02-00.21N NAD 83
Longitude:	96-55-48.54W
Heights:	2024 feet site elevation (SE) 499 feet above ground level (AGL) 2523 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12159-OE.

Signature Control No: 393028065-399662817

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
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2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

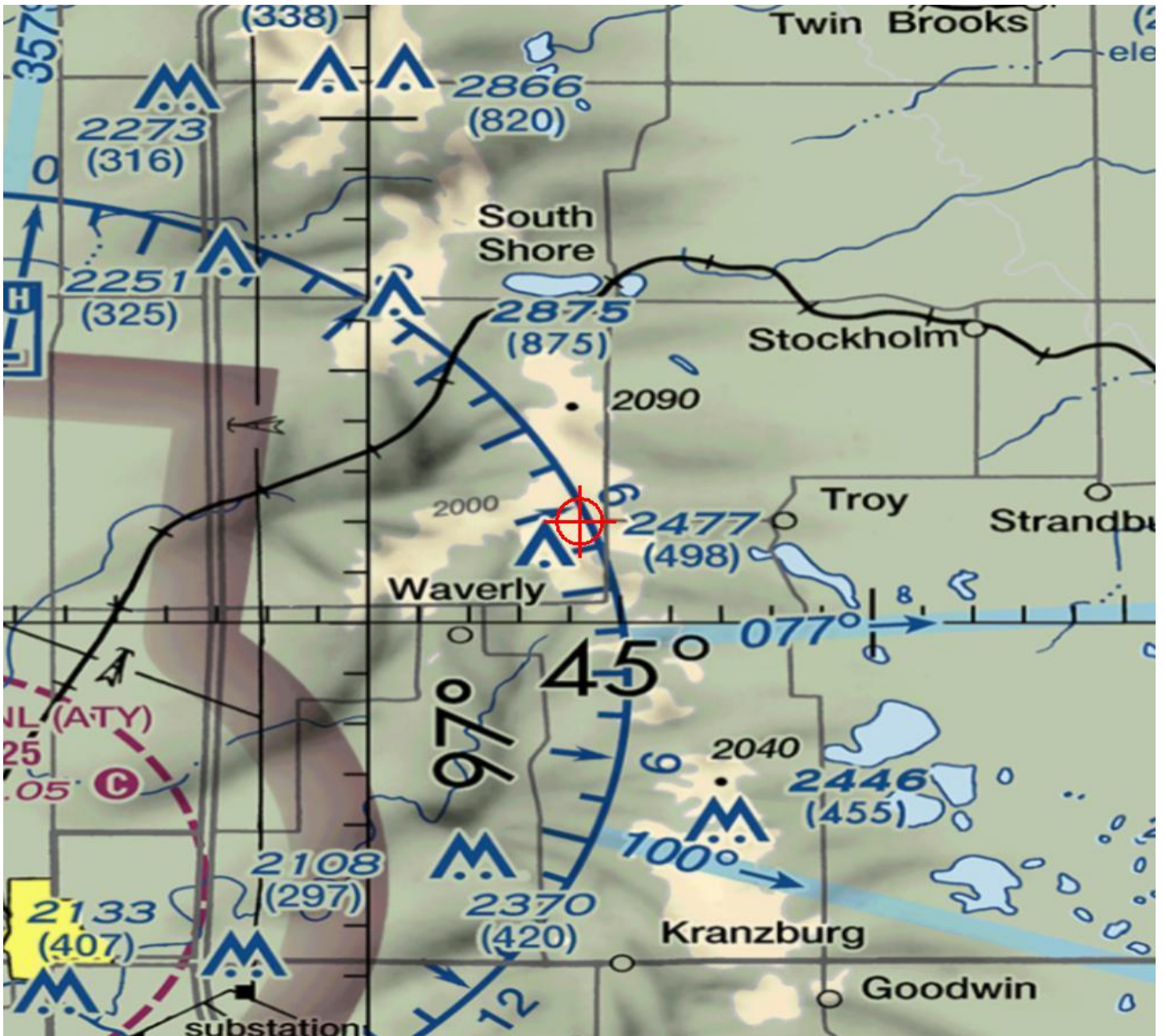
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12160-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-75
Location:	Milbank, SD
Latitude:	45-01-57.94N NAD 83
Longitude:	96-54-58.53W
Heights:	2004 feet site elevation (SE) 499 feet above ground level (AGL) 2503 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12160-OE.

Signature Control No: 393028066-399662819

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

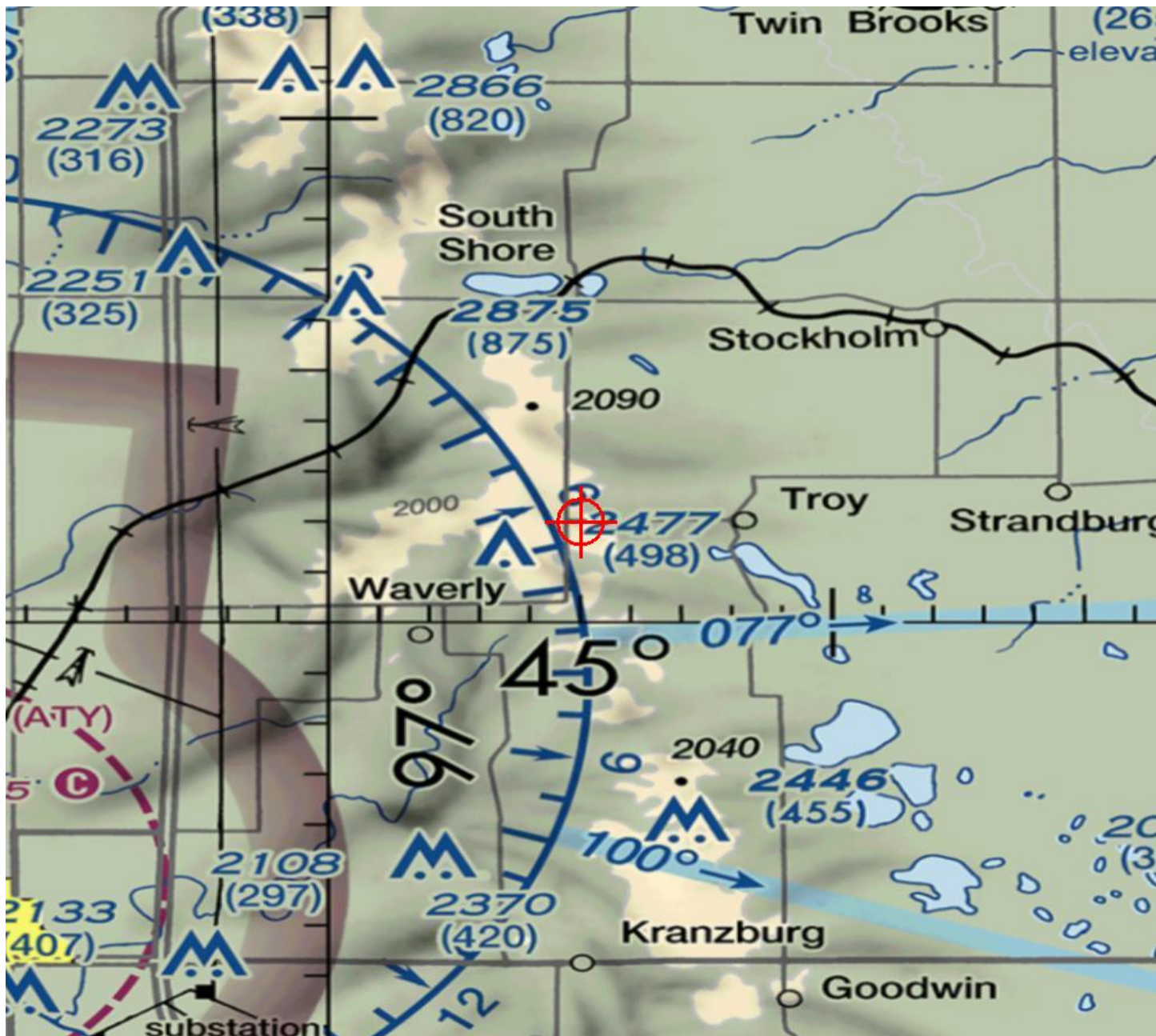
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12161-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-76
Location:	Milbank, SD
Latitude:	45-01-58.26N NAD 83
Longitude:	96-56-17.96W
Heights:	2021 feet site elevation (SE) 499 feet above ground level (AGL) 2520 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12161-OE.

Signature Control No: 393028067-399662822

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

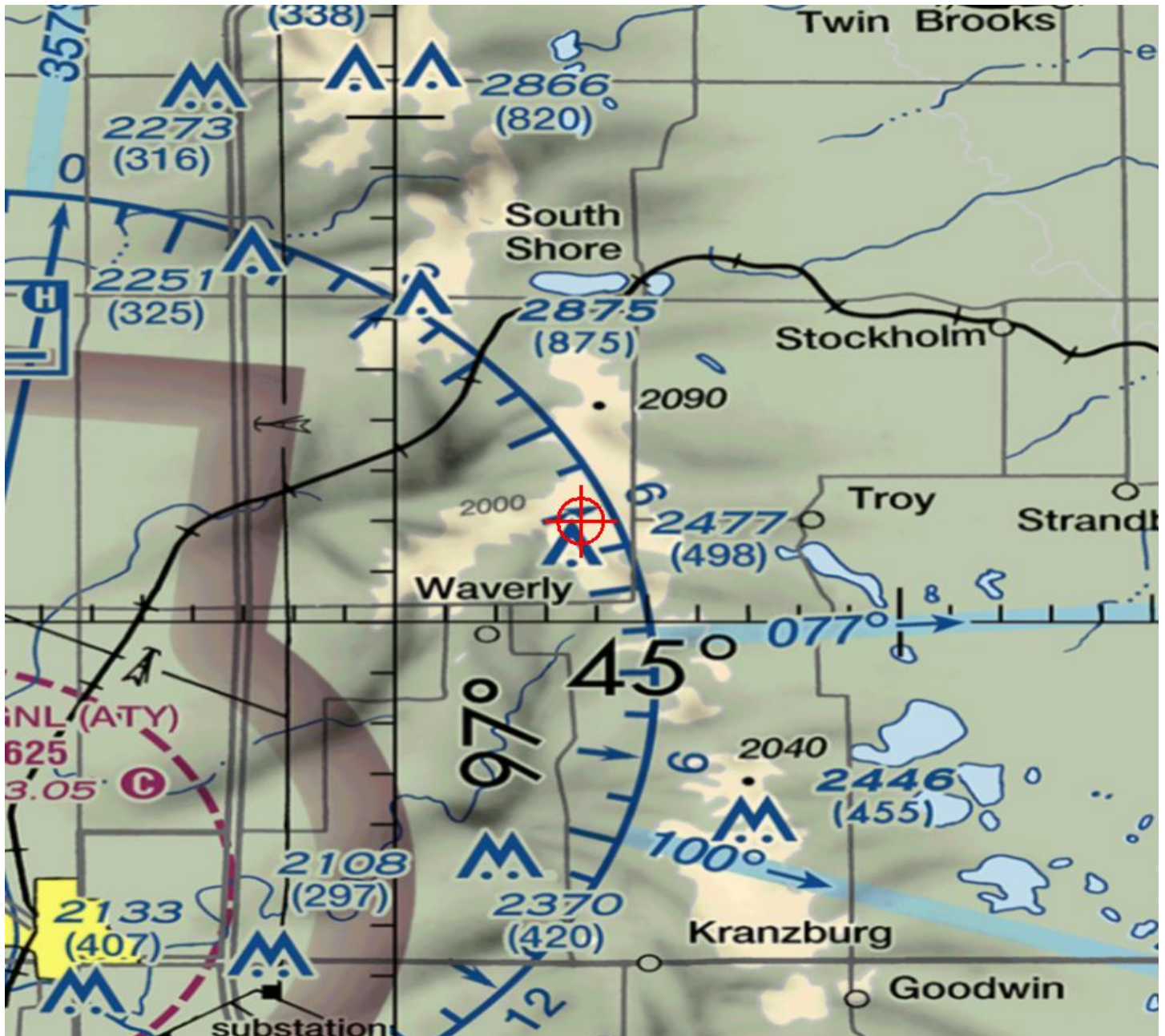
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12162-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-77
Location:	Milbank, SD
Latitude:	45-02-00.09N NAD 83
Longitude:	96-58-46.01W
Heights:	2014 feet site elevation (SE) 499 feet above ground level (AGL) 2513 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12162-OE.

Signature Control No: 393028068-399662823

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

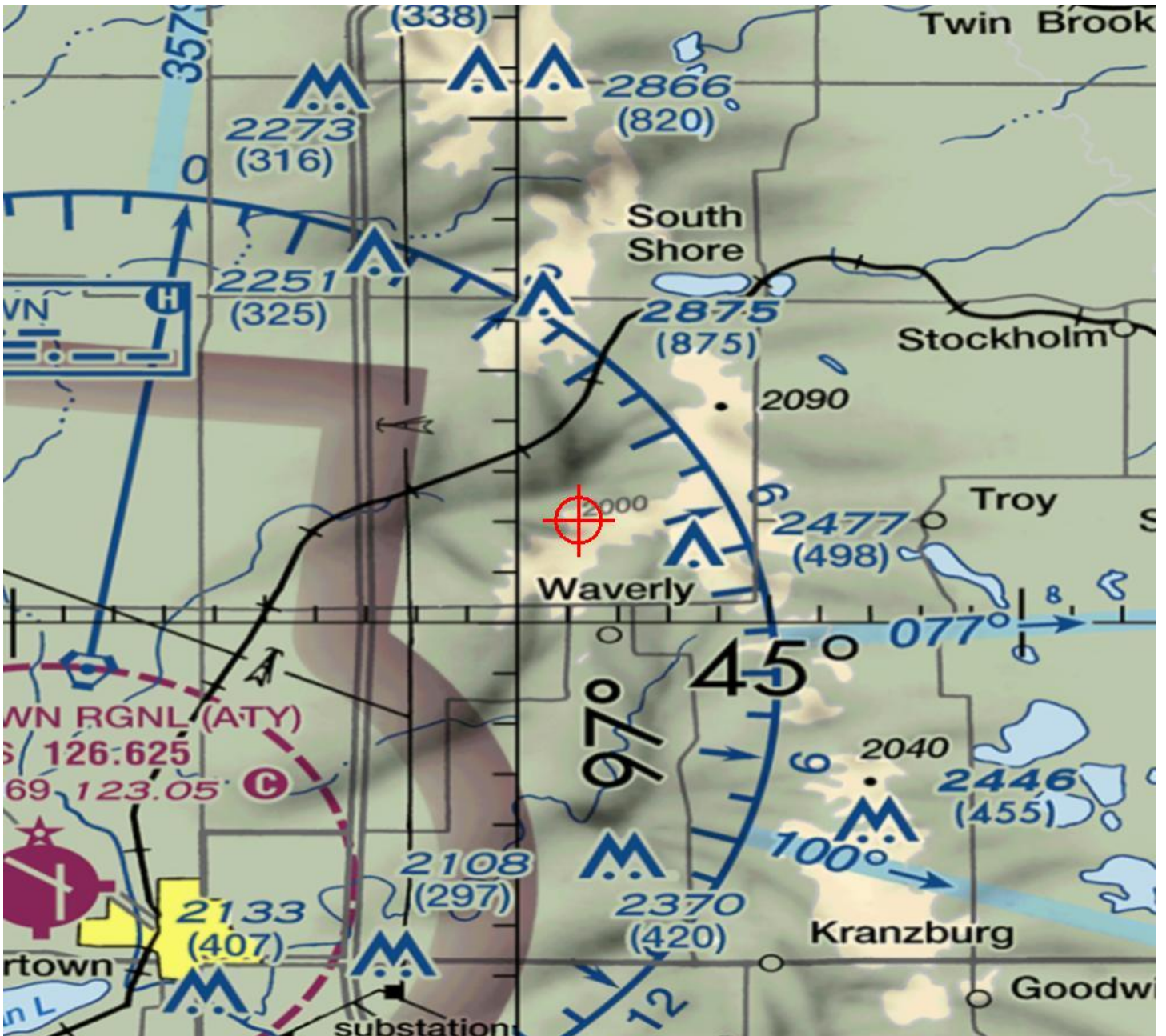
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12163-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-78
Location:	Milbank, SD
Latitude:	45-01-56.04N NAD 83
Longitude:	96-57-30.60W
Heights:	1983 feet site elevation (SE) 499 feet above ground level (AGL) 2482 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12163-OE.

Signature Control No: 393028069-399662825

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

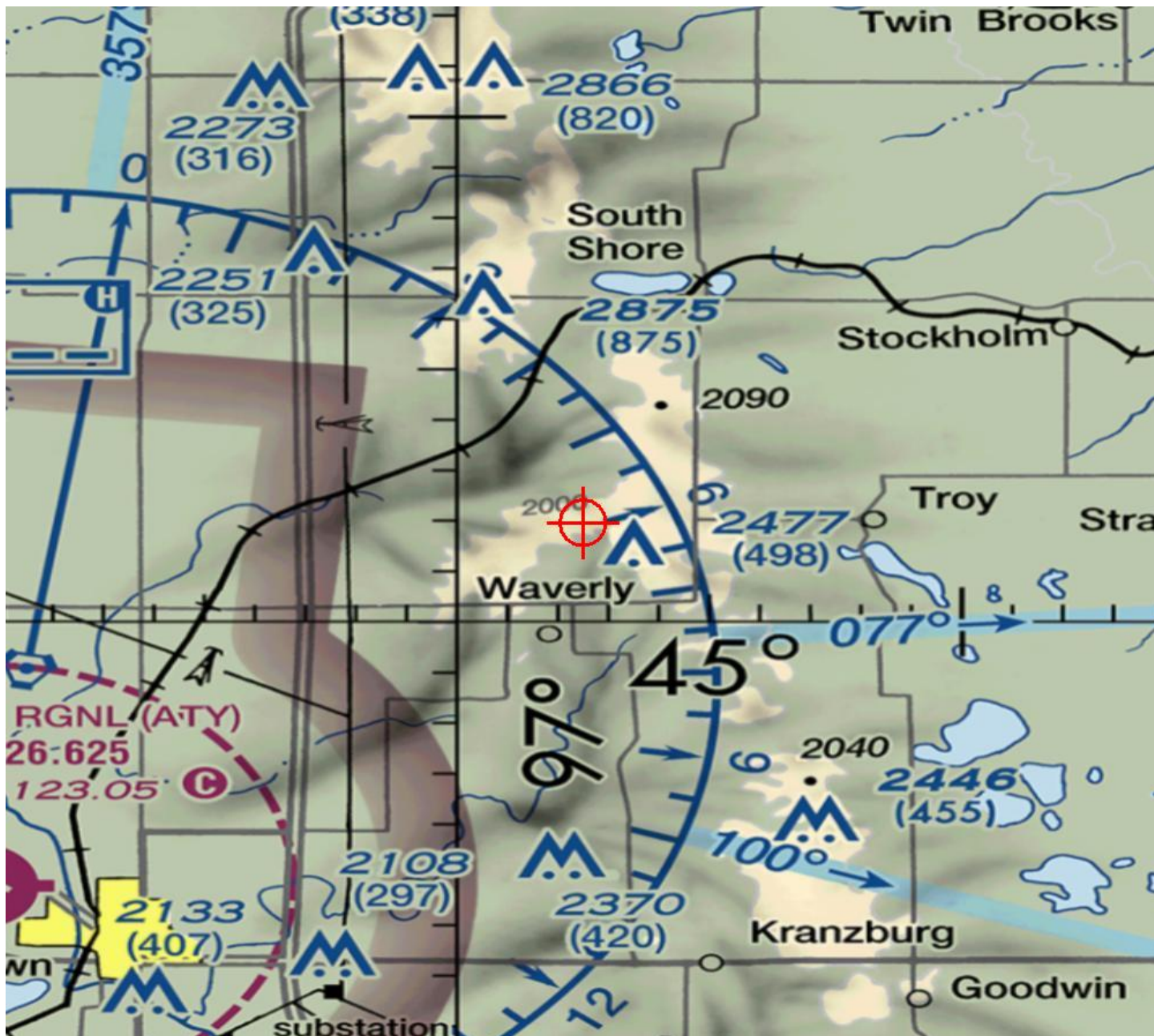
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12165-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-80
Location:	Milbank, SD
Latitude:	45-01-52.92N NAD 83
Longitude:	96-56-56.86W
Heights:	2003 feet site elevation (SE) 499 feet above ground level (AGL) 2502 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12165-OE.

Signature Control No: 393028071-399662829

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

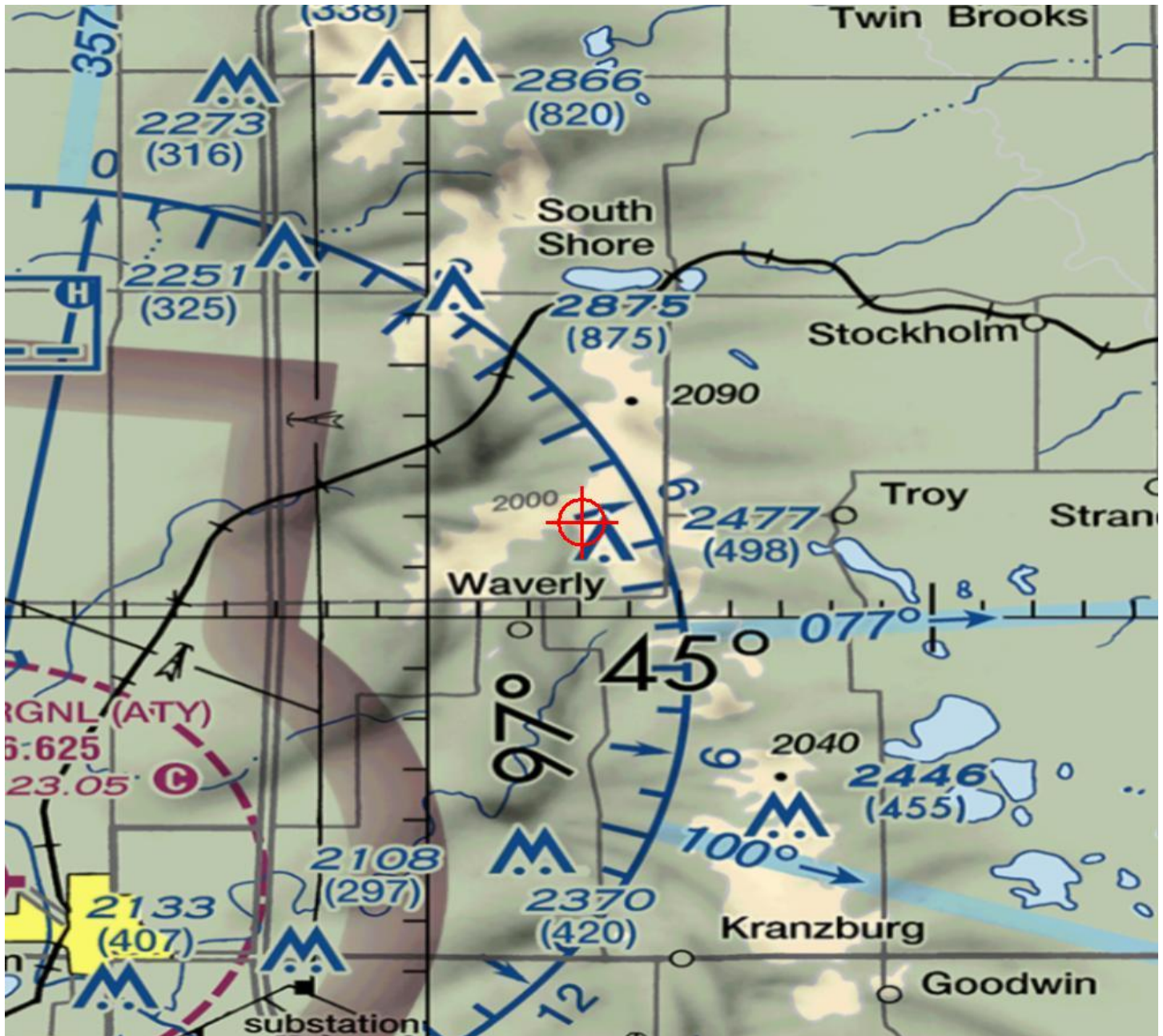
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12166-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-81
Location:	Milbank, SD
Latitude:	45-01-50.58N NAD 83
Longitude:	96-58-15.86W
Heights:	1993 feet site elevation (SE) 499 feet above ground level (AGL) 2492 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12166-OE.

Signature Control No: 393028072-399662832

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

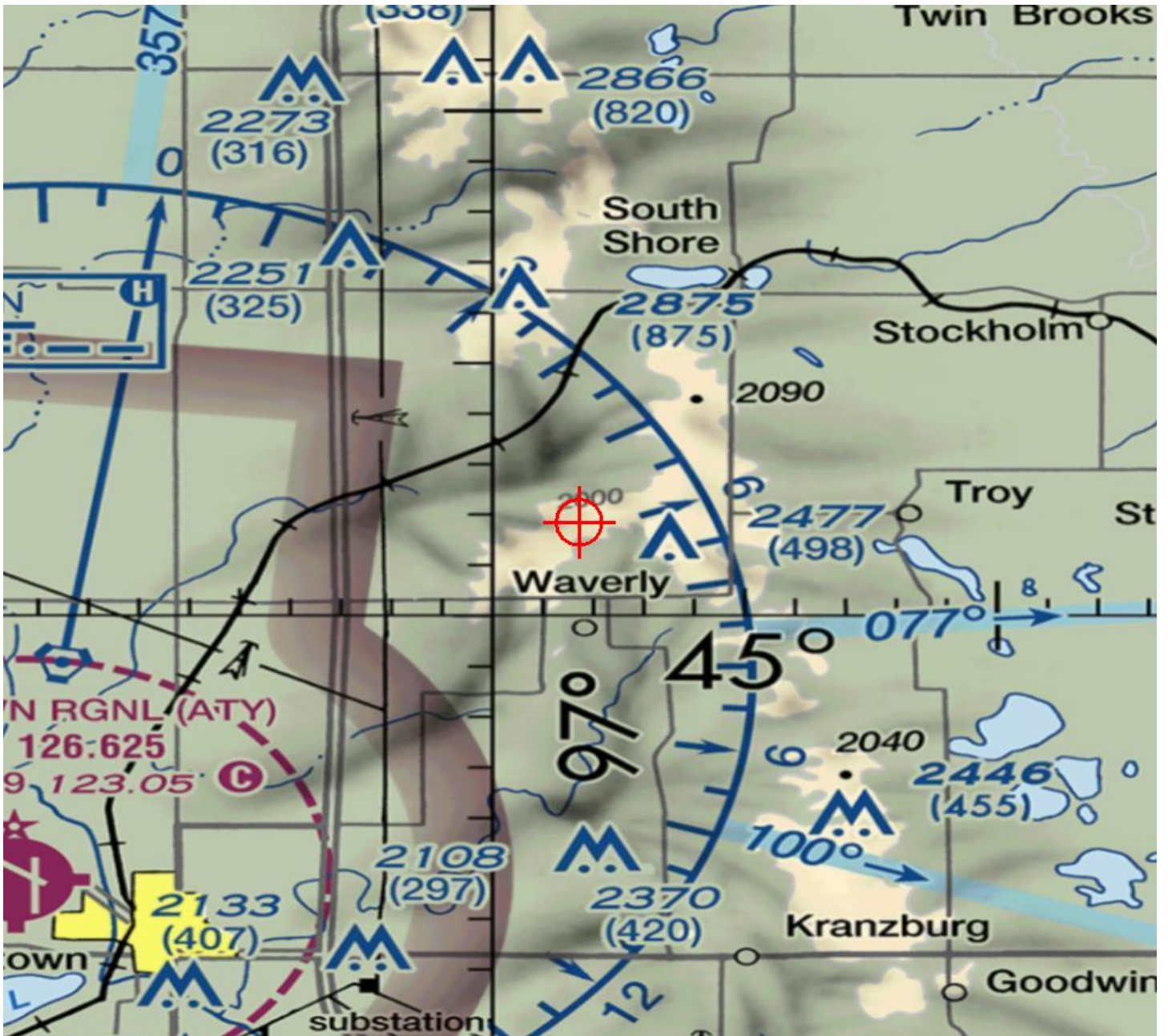
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12167-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-82
Location:	Milbank, SD
Latitude:	45-01-40.24N NAD 83
Longitude:	96-55-38.75W
Heights:	2013 feet site elevation (SE) 499 feet above ground level (AGL) 2512 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12167-OE.

Signature Control No: 393028073-399662834

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

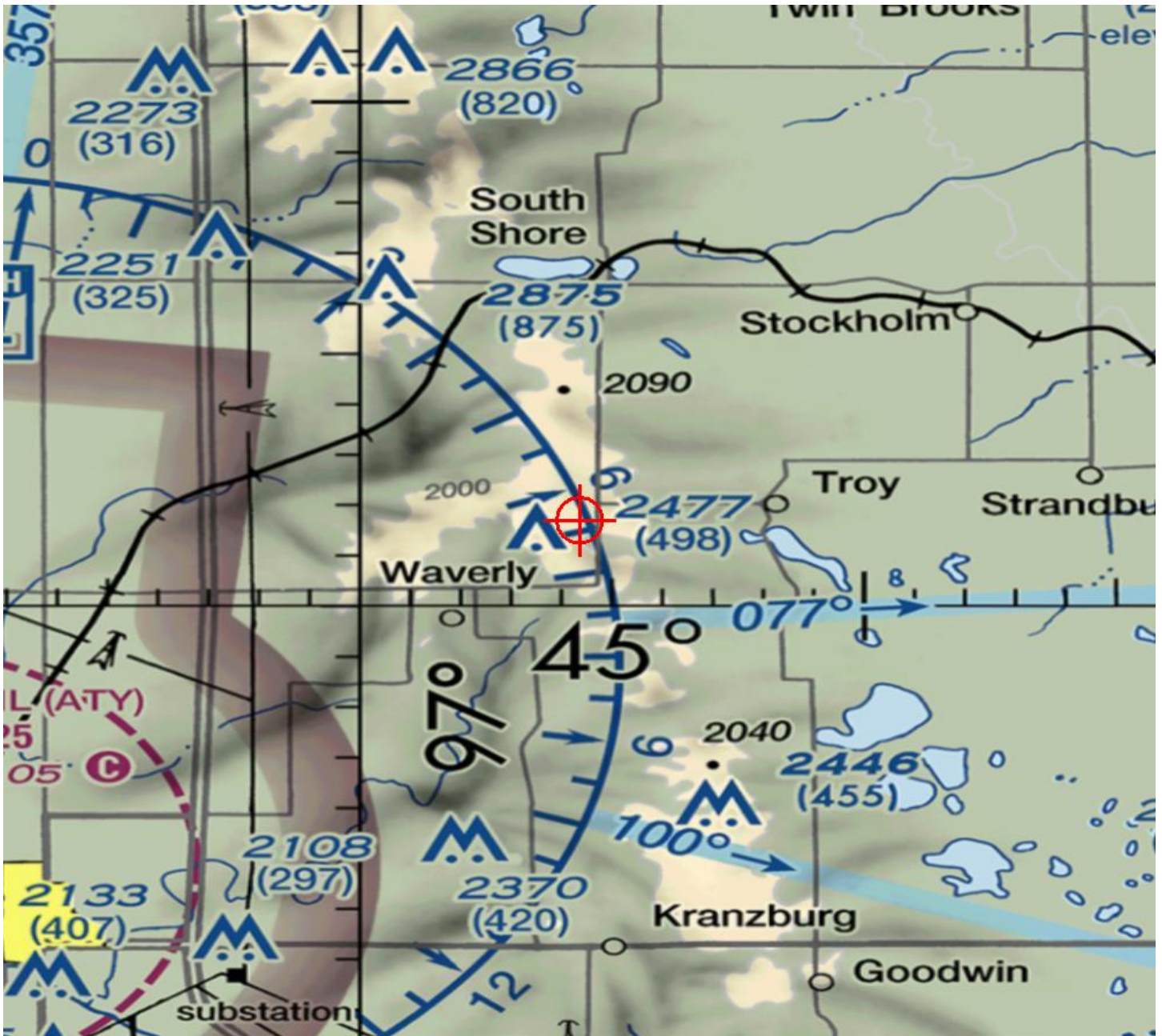
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12168-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-83
Location:	Milbank, SD
Latitude:	45-01-40.12N NAD 83
Longitude:	96-56-26.47W
Heights:	1993 feet site elevation (SE) 499 feet above ground level (AGL) 2492 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12168-OE.

Signature Control No: 393028074-399662843

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.



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

Aeronautical Study No.
2018-WTE-12169-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-84
Location:	Milbank, SD
Latitude:	45-01-34.18N NAD 83
Longitude:	96-57-37.51W
Heights:	1971 feet site elevation (SE) 499 feet above ground level (AGL) 2470 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12169-OE.

Signature Control No: 393028075-399662844

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

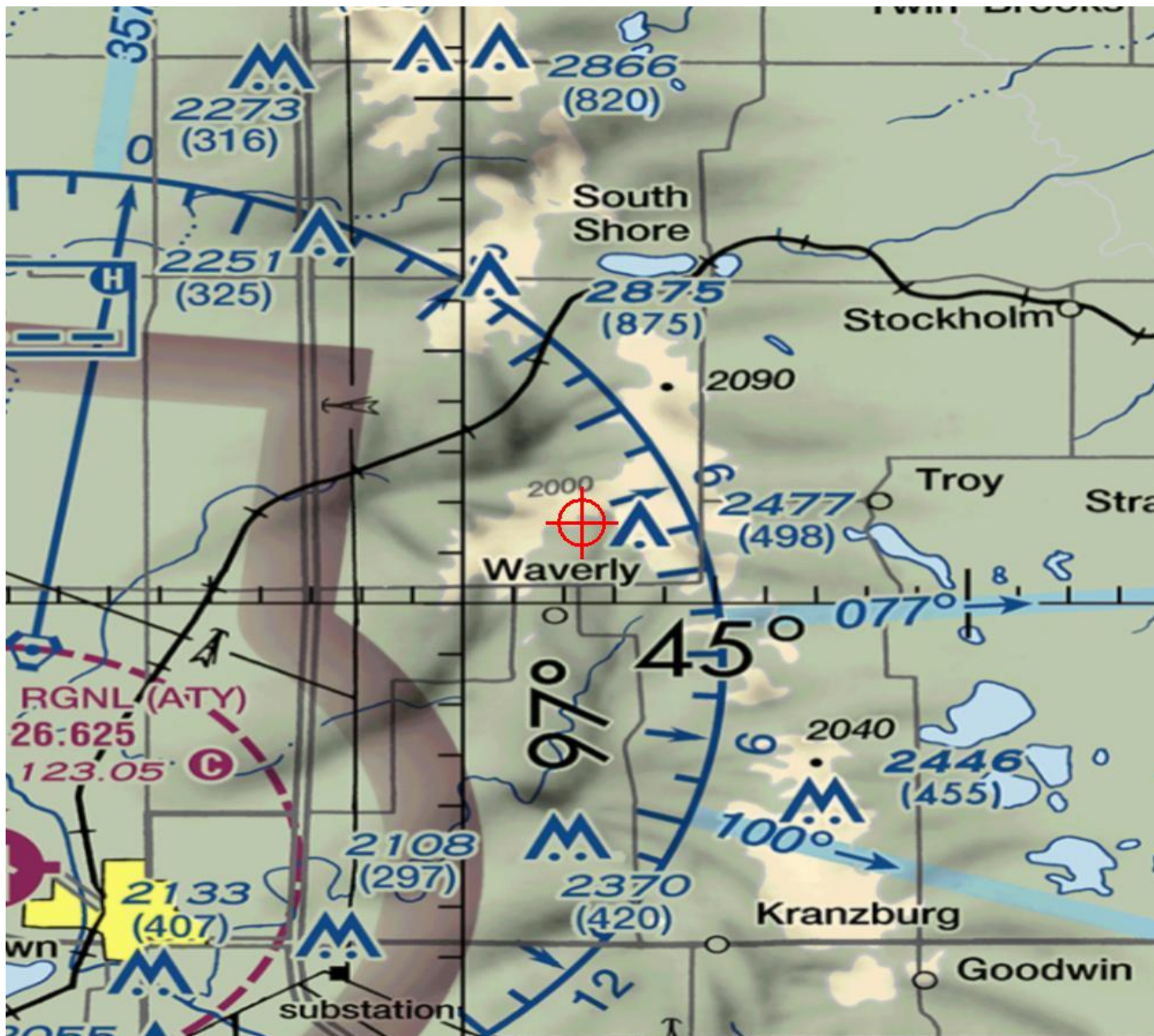
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12170-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-85
Location:	Milbank, SD
Latitude:	45-01-32.64N NAD 83
Longitude:	96-58-40.72W
Heights:	2009 feet site elevation (SE) 499 feet above ground level (AGL) 2508 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12170-OE.

Signature Control No: 393028076-399662846

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

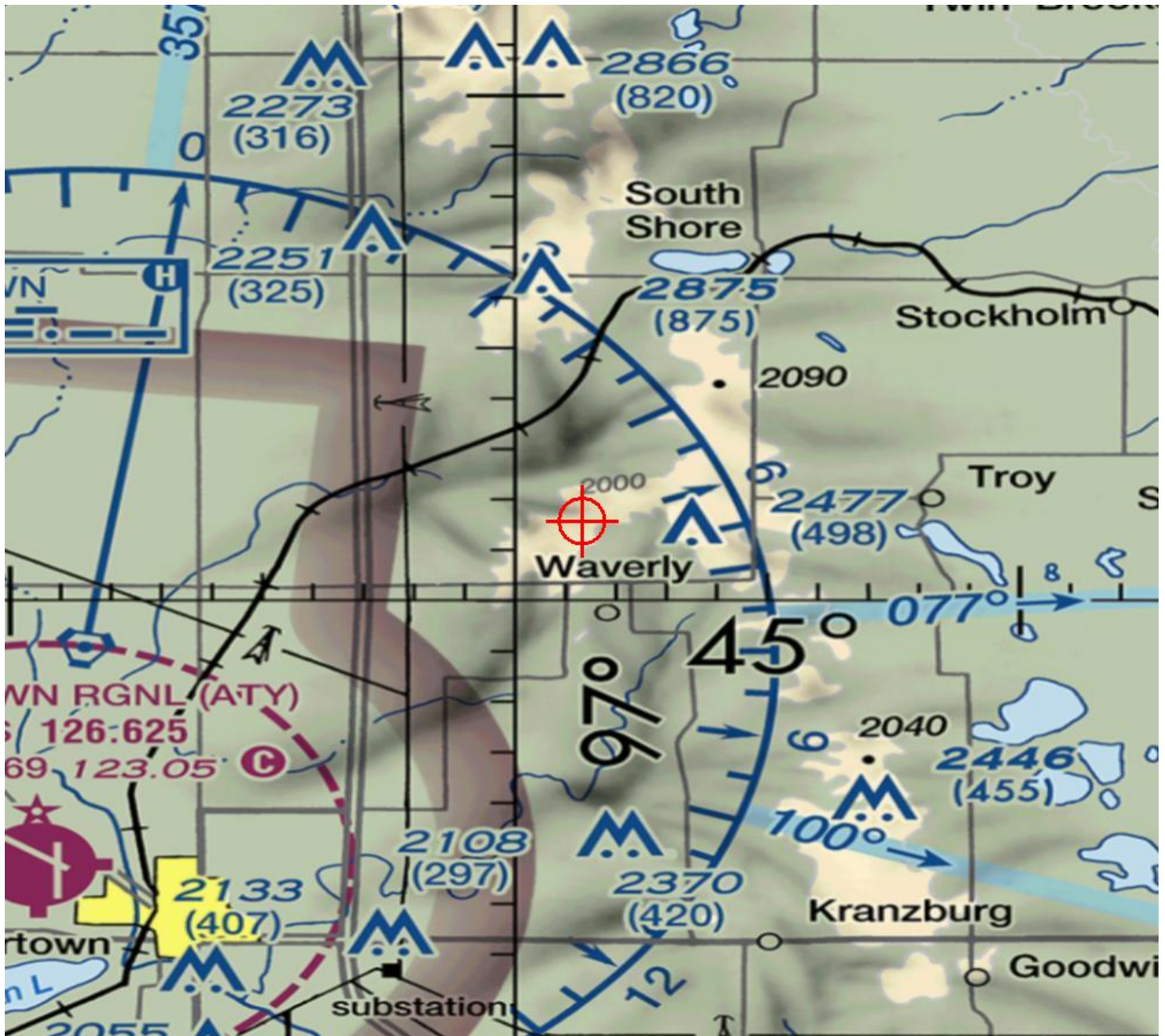
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12171-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-86
Location:	Milbank, SD
Latitude:	45-01-31.99N NAD 83
Longitude:	96-59-15.52W
Heights:	2017 feet site elevation (SE) 499 feet above ground level (AGL) 2516 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12171-OE.

Signature Control No: 393028077-399662851

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

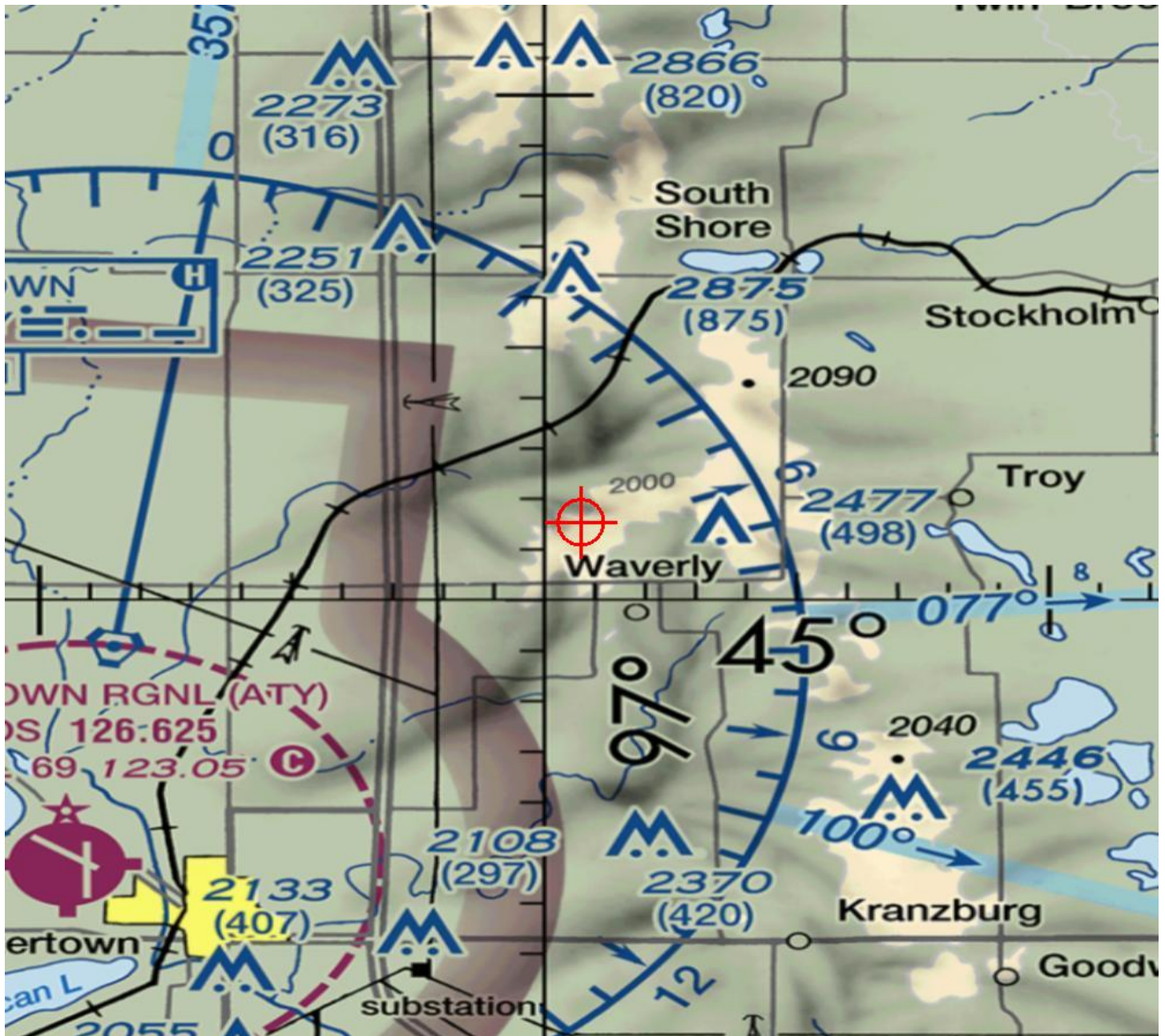
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12172-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-87
Location:	Milbank, SD
Latitude:	45-01-24.03N NAD 83
Longitude:	96-56-45.18W
Heights:	2001 feet site elevation (SE) 499 feet above ground level (AGL) 2500 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12172-OE.

Signature Control No: 393028078-399662856

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

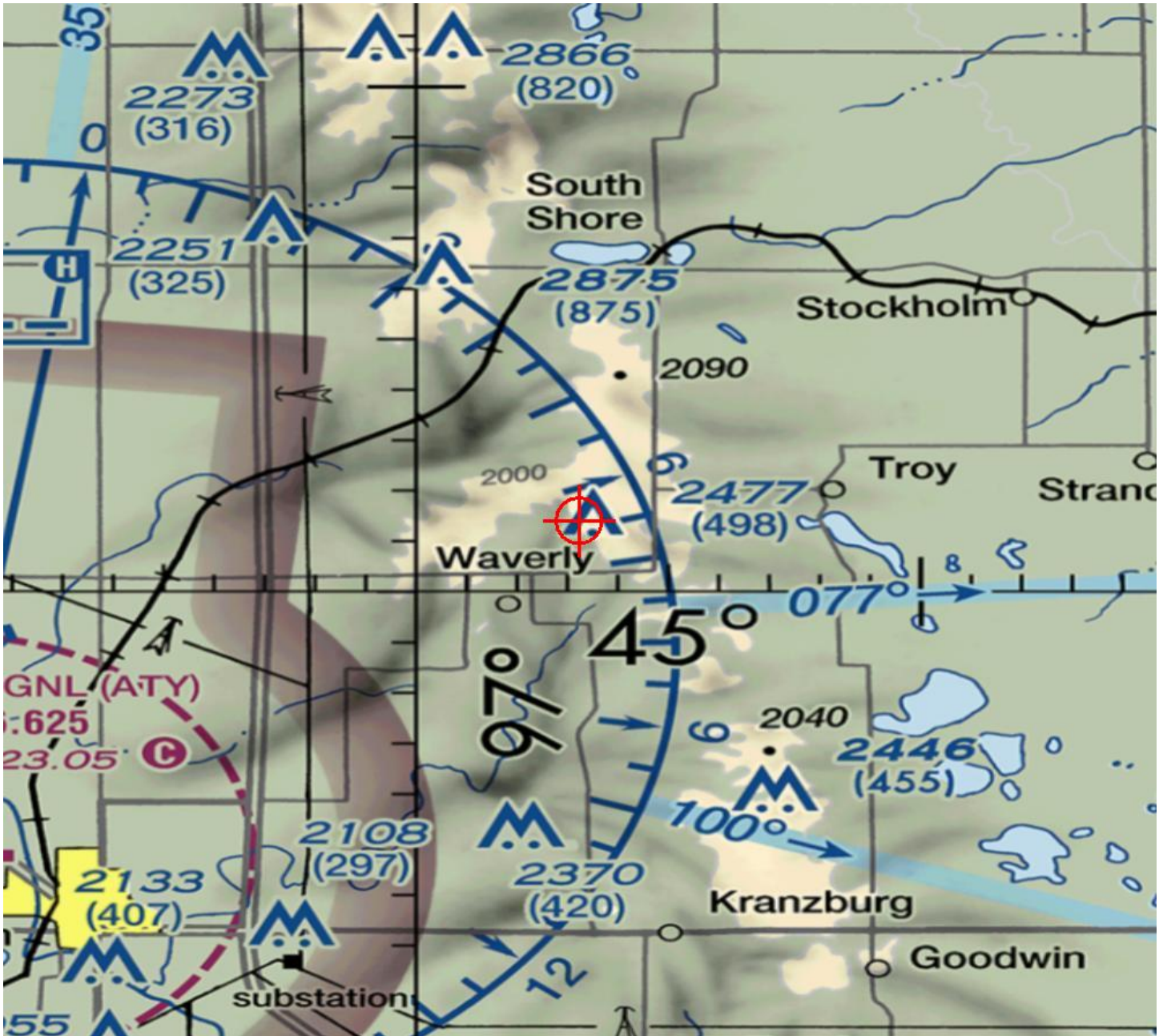
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12173-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-88
Location:	Milbank, SD
Latitude:	45-01-22.03N NAD 83
Longitude:	96-58-01.70W
Heights:	1978 feet site elevation (SE) 499 feet above ground level (AGL) 2477 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12173-OE.

Signature Control No: 393028079-399662857

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

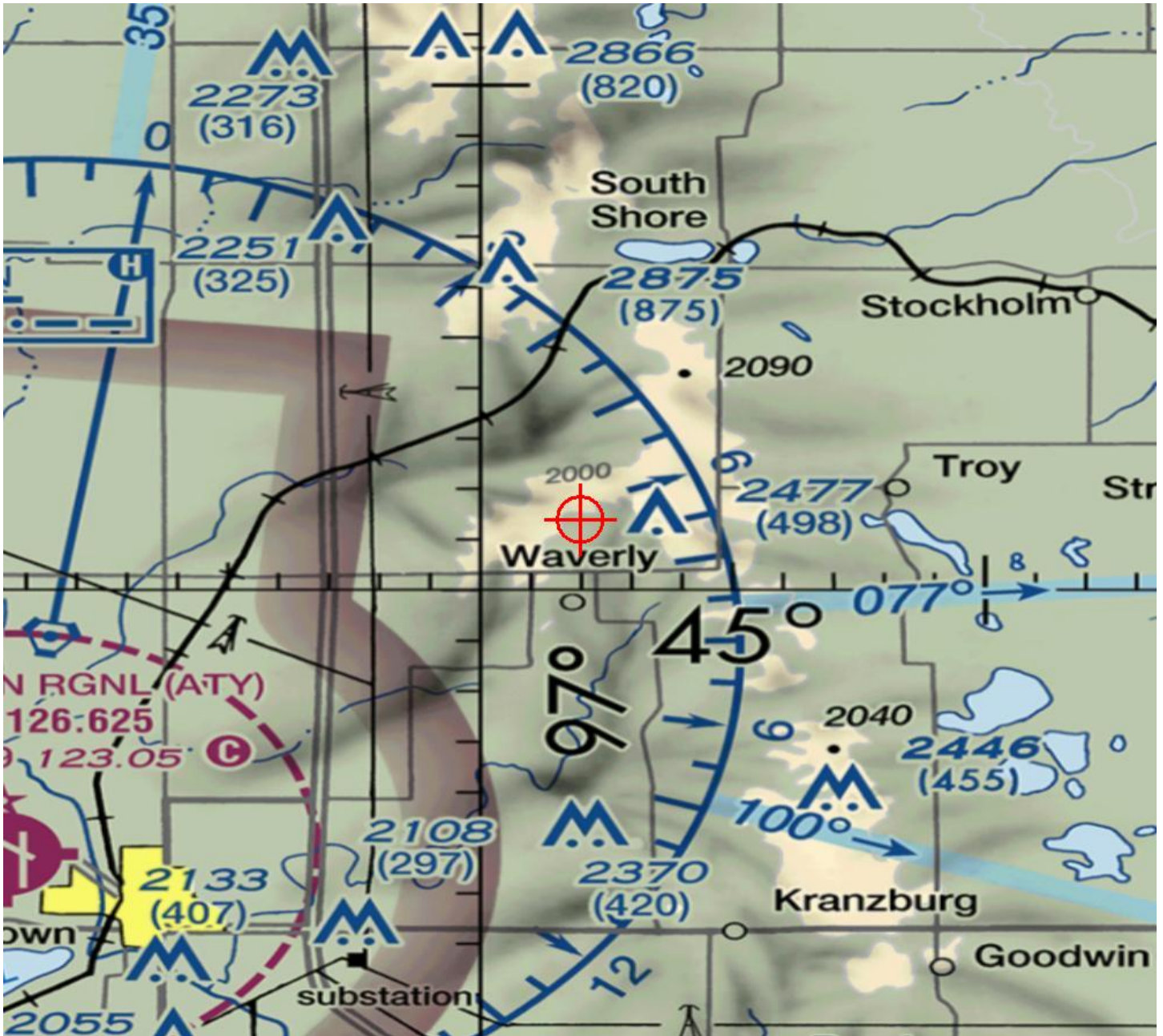
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12174-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-89
Location:	Milbank, SD
Latitude:	45-01-05.64N NAD 83
Longitude:	96-59-51.90W
Heights:	2021 feet site elevation (SE) 499 feet above ground level (AGL) 2520 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12174-OE.

Signature Control No: 393028080-399662860

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12175-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-90
Location:	Milbank, SD
Latitude:	45-01-03.55N NAD 83
Longitude:	96-59-16.01W
Heights:	2011 feet site elevation (SE) 499 feet above ground level (AGL) 2510 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12175-OE.

Signature Control No: 393028081-399662861

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12176-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-91
Location:	Milbank, SD
Latitude:	45-01-04.35N NAD 83
Longitude:	97-00-25.52W
Heights:	2011 feet site elevation (SE) 499 feet above ground level (AGL) 2510 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12176-OE.

Signature Control No: 393028082-399662863

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12177-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-92
Location:	Milbank, SD
Latitude:	45-00-59.85N NAD 83
Longitude:	96-58-07.88W
Heights:	1993 feet site elevation (SE) 499 feet above ground level (AGL) 2492 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12177-OE.

Signature Control No: 393028083-399662867

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

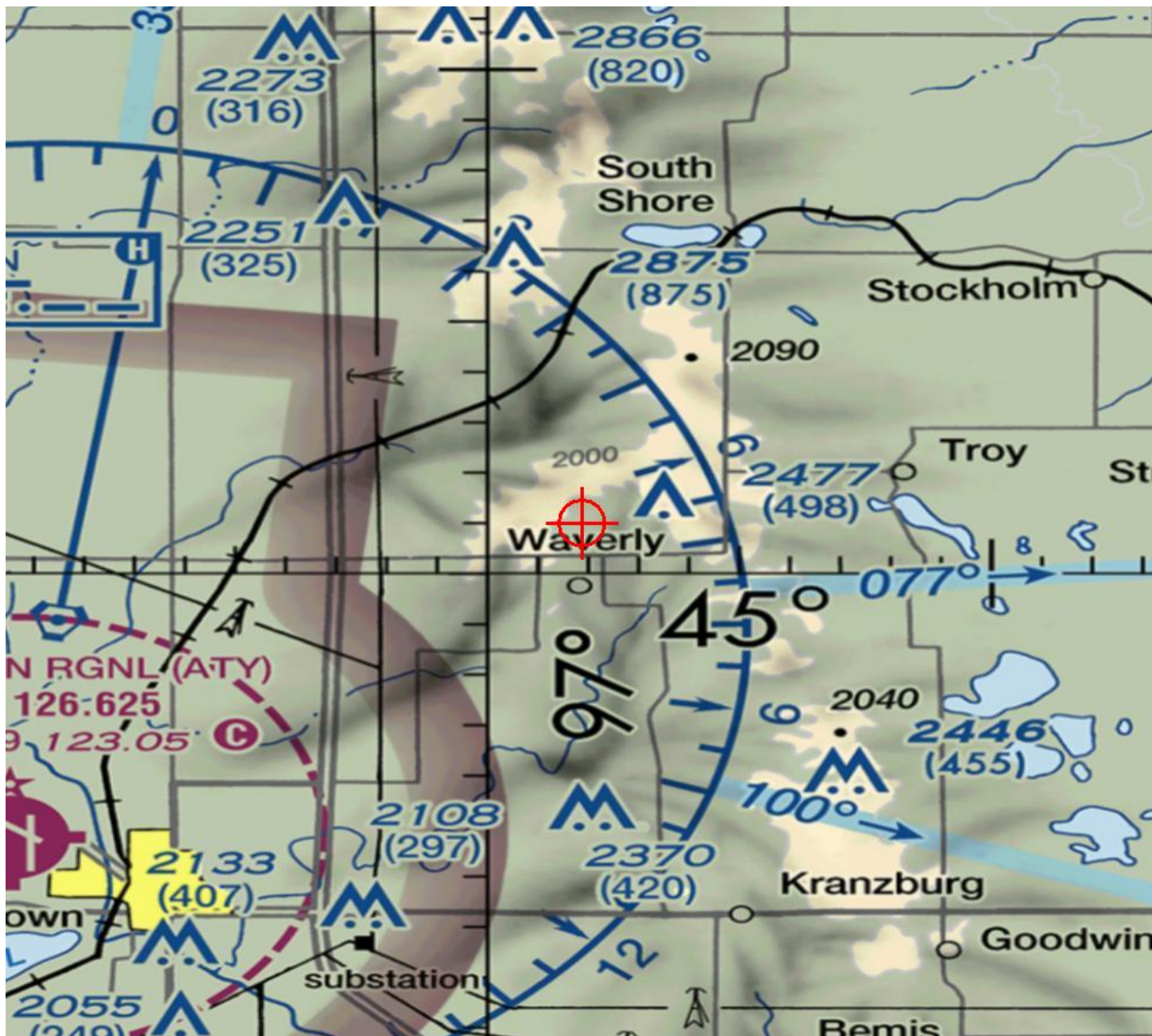
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12178-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-93
Location:	Milbank, SD
Latitude:	45-00-57.21N NAD 83
Longitude:	96-58-49.37W
Heights:	1992 feet site elevation (SE) 499 feet above ground level (AGL) 2491 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12178-OE.

Signature Control No: 393028084-399662869

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12179-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-94
Location:	Milbank, SD
Latitude:	45-00-54.63N NAD 83
Longitude:	96-57-37.13W
Heights:	1972 feet site elevation (SE) 499 feet above ground level (AGL) 2471 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12179-OE.

Signature Control No: 393028085-399662877

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

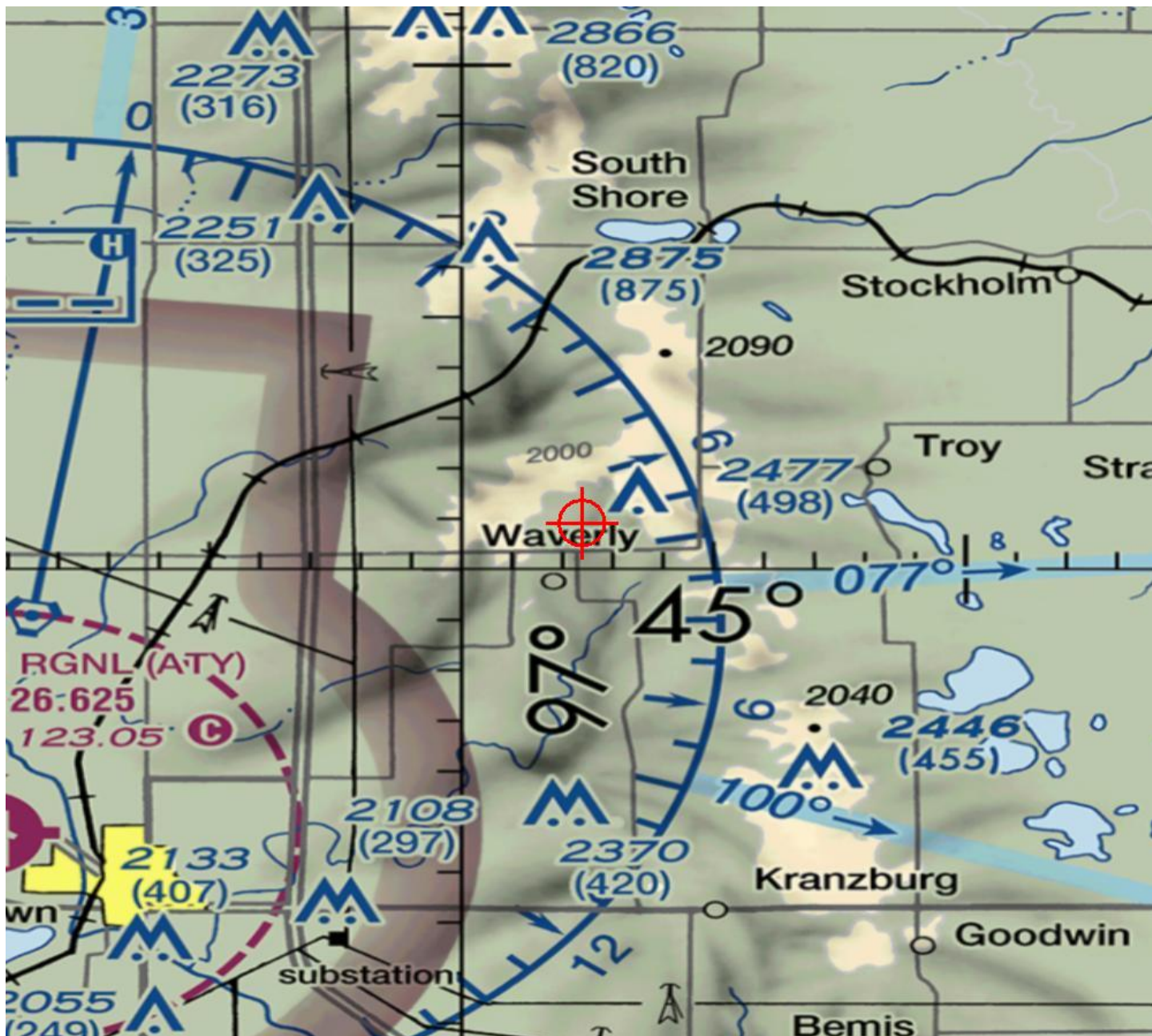
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12180-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-95
Location:	Milbank, SD
Latitude:	45-00-41.82N NAD 83
Longitude:	97-00-05.06W
Heights:	2011 feet site elevation (SE) 499 feet above ground level (AGL) 2510 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12180-OE.

Signature Control No: 393028086-399662882

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12181-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-96
Location:	Milbank, SD
Latitude:	45-00-37.66N NAD 83
Longitude:	97-00-39.20W
Heights:	2001 feet site elevation (SE) 499 feet above ground level (AGL) 2500 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12181-OE.

Signature Control No: 393028087-399662891

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12182-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-97
Location:	Milbank, SD
Latitude:	45-00-27.90N NAD 83
Longitude:	97-01-18.13W
Heights:	1946 feet site elevation (SE) 499 feet above ground level (AGL) 2445 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12182-OE.

Signature Control No: 393028088-399662892

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12183-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-98
Location:	Milbank, SD
Latitude:	45-00-10.07N NAD 83
Longitude:	97-00-27.77W
Heights:	1999 feet site elevation (SE) 499 feet above ground level (AGL) 2498 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12183-OE.

Signature Control No: 393028089-399662898

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

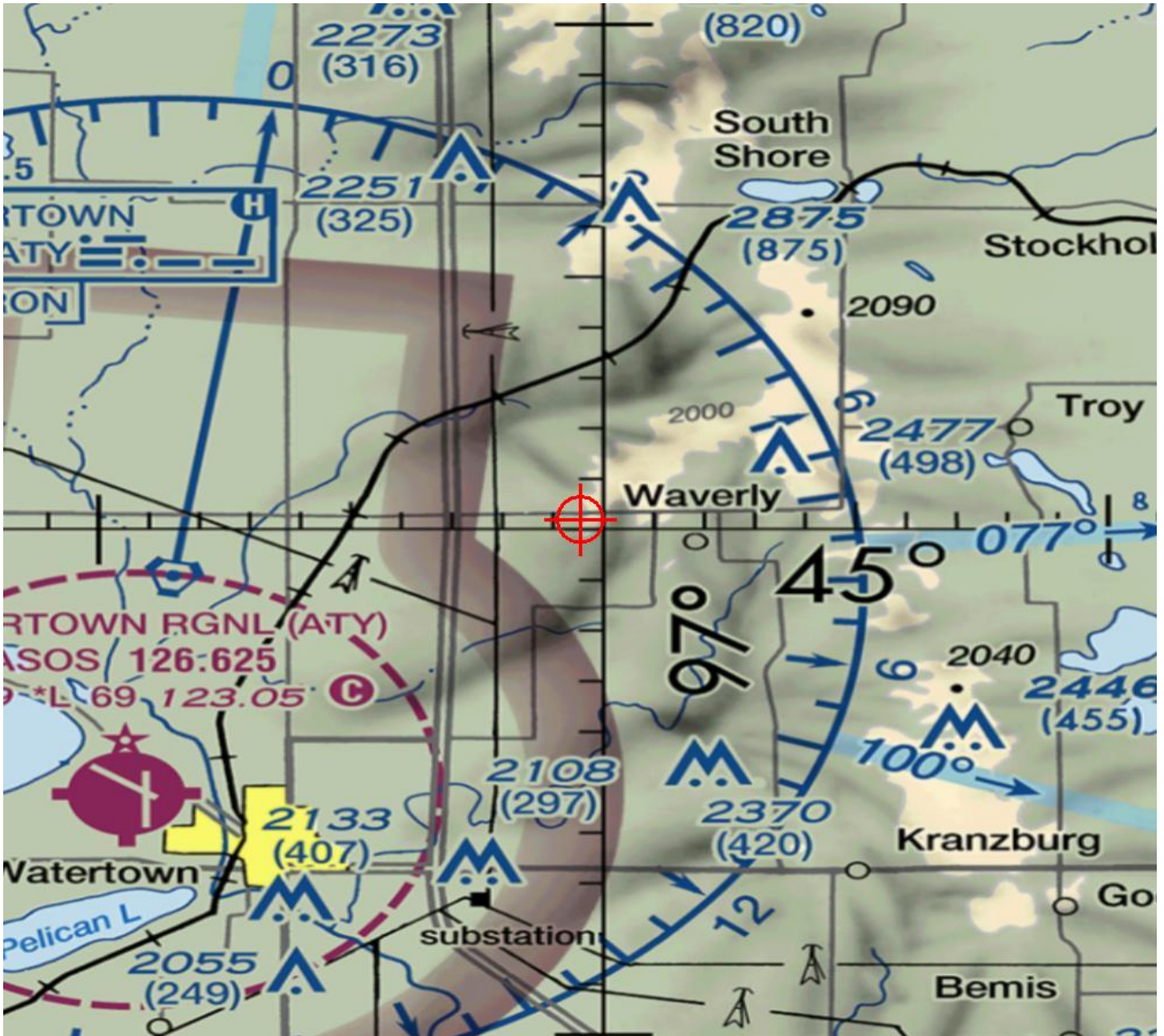
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12184-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-99
Location:	Milbank, SD
Latitude:	45-02-38.90N NAD 83
Longitude:	96-48-33.80W
Heights:	1825 feet site elevation (SE) 499 feet above ground level (AGL) 2324 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12184-OE.

Signature Control No: 393028090-399662899

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12185-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-100
Location:	Milbank, SD
Latitude:	45-02-45.22N NAD 83
Longitude:	96-51-19.77W
Heights:	1918 feet site elevation (SE) 499 feet above ground level (AGL) 2417 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12185-OE.

Signature Control No: 393028091-399662900

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12186-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-101
Location:	Milbank, SD
Latitude:	45-02-49.07N NAD 83
Longitude:	96-48-15.13W
Heights:	1790 feet site elevation (SE) 499 feet above ground level (AGL) 2289 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 10 days prior to start of construction (7460-2, Part 1)
 X Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

See attachment for additional condition(s) or information.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12186-OE.

Signature Control No: 393028092-397093855

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12187-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-102
Location:	Milbank, SD
Latitude:	45-03-09.80N NAD 83
Longitude:	96-51-56.62W
Heights:	1906 feet site elevation (SE) 499 feet above ground level (AGL) 2405 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12187-OE.

Signature Control No: 393028093-399662912

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12188-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-103
Location:	Milbank, SD
Latitude:	45-03-11.73N NAD 83
Longitude:	96-51-00.77W
Heights:	1906 feet site elevation (SE) 499 feet above ground level (AGL) 2405 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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

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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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12188-OE.

Signature Control No: 393028094-399662913

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
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VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
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2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

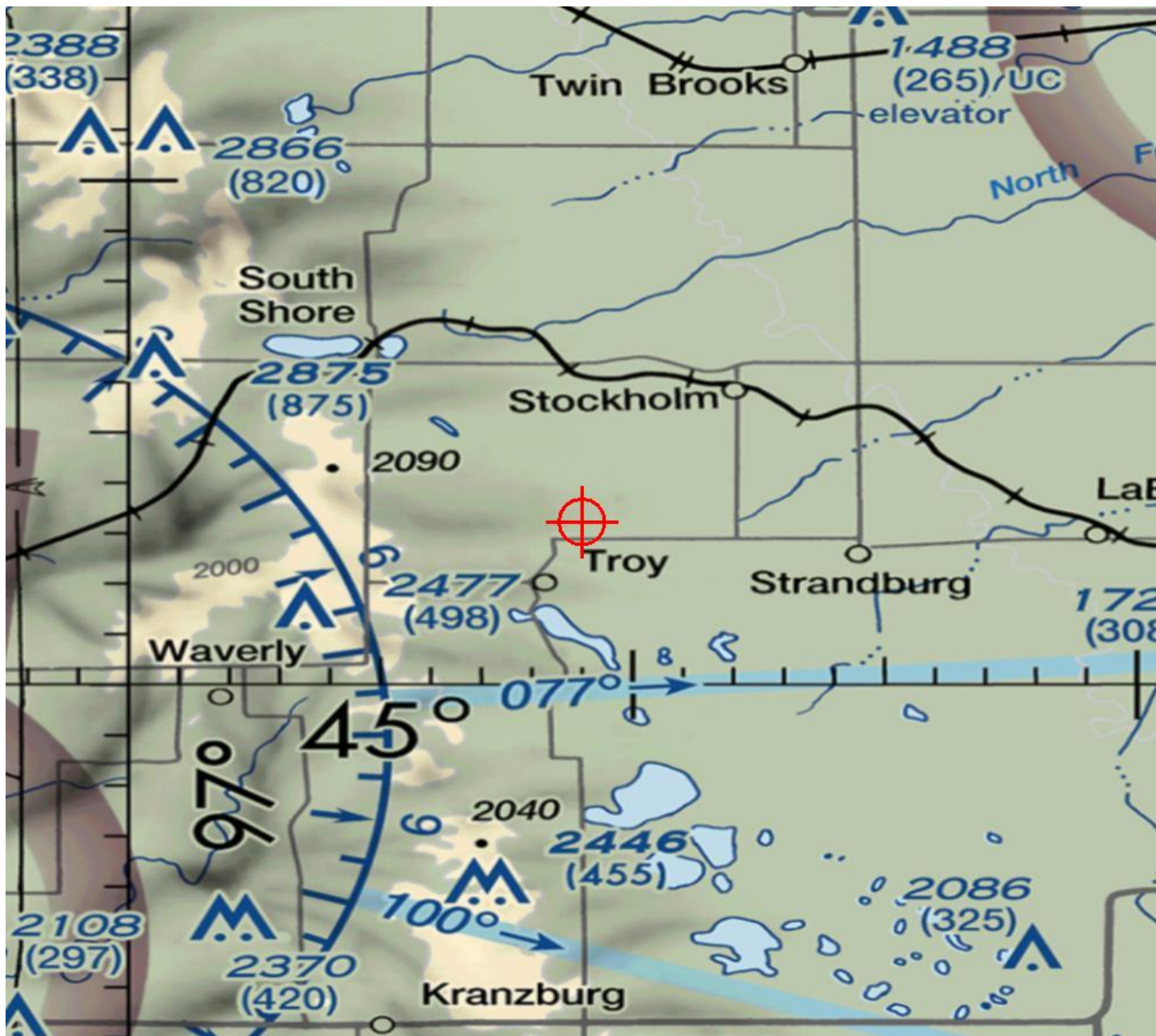
The cumulative impact of the proposed structures, when combined with other proposed and existing structures, is not considered to be significant. Study did not disclose any significant adverse effect on existing or proposed public-use or military airports or navigational facilities, nor would the proposals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

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12189-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-104
Location:	Milbank, SD
Latitude:	45-03-10.53N NAD 83
Longitude:	96-48-56.02W
Heights:	1822 feet site elevation (SE) 499 feet above ground level (AGL) 2321 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12189-OE.

Signature Control No: 393028095-399662917

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12190-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-105
Location:	Milbank, SD
Latitude:	45-03-09.92N NAD 83
Longitude:	96-50-05.58W
Heights:	1875 feet site elevation (SE) 499 feet above ground level (AGL) 2374 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12190-OE.

Signature Control No: 393028096-399662919

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
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2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
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2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12191-OE

Issued Date: 03/14/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-106
Location:	Milbank, SD
Latitude:	45-03-17.13N NAD 83
Longitude:	96-49-29.17W
Heights:	1859 feet site elevation (SE) 499 feet above ground level (AGL) 2358 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 2, 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 60 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.

This determination expires on 09/14/2020 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 subject to review if an interested party files a petition that is received by the FAA on or before April 13, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on April 23, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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 Steve Phillips, at (816) 329-2523, or steve.phillips@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12191-OE.

Signature Control No: 393028097-399662920

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ARTCC, Air Route Traffic Control Center
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MIA, Minimum IFR Altitude
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
TACAN, Tactical Air Navigation System
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

The proposed structures are part of a proposed wind farm that would be located approximately 7.99 - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with coordinates, AGL heights, and AMSL heights for the studies are as shown on page one. They would 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 ATY LOC BC RWY 17 and the VOR or TACAN RWY 17 MSA 240 inbound clockwise to 040 inbound from 3,500 feet AMSL to 3,600 feet AMSL.

2018-WTE-12146-OE
2018-WTE-12151-OE
2018-WTE-12155-OE
2018-WTE-12158-OE
2018-WTE-12159-OE

2018-WTE-12160-OE
2018-WTE-12161-OE
2018-WTE-12162-OE
2018-WTE-12165-OE
2018-WTE-12167-OE

2018-WTE-12170-OE
2018-WTE-12171-OE
2018-WTE-12174-OE

2018-WTE-12175-OE
2018-WTE-12176-OE

2018-WTE-12180-OE
2018-WTE-12234-OE
2018-WTE-12235-OE

Section 77.17(a)(4): A height that increases a minimum instrument flight altitude within an en route area;

The following would increase the MOCA on Federal Airway V-26 between ATY VORTAC and CLAPS Intersection from 3,300 feet AMSL to _____ feet AMSL.

ASN / MOCA

2018-WTE-12137-OE / 3,400
2018-WTE-12138-OE / 3,400
2018-WTE-12139-OE / 3,400
2018-WTE-12140-OE / 3,400
2018-WTE-12141-OE / 3,500

2018-WTE-12142-OE / 3,500
2018-WTE-12143-OE / 3,500
2018-WTE-12144-OE / 3,400
2018-WTE-12145-OE / 3,400
2018-WTE-12146-OE / 3,600

2018-WTE-12147-OE / 3,500
2018-WTE-12148-OE / 3,500
2018-WTE-12149-OE / 3,500
2018-WTE-12150-OE / 3,500
2018-WTE-12151-OE / 3,600

2018-WTE-12152-OE / 3,400
2018-WTE-12153-OE / 3,500
2018-WTE-12154-OE / 3,500
2018-WTE-12155-OE / 3,600
2018-WTE-12156-OE / 3,500

2018-WTE-12157-OE / 3,500
2018-WTE-12158-OE / 3,600
2018-WTE-12159-OE / 3,600
2018-WTE-12160-OE / 3,600
2018-WTE-12161-OE / 3,600

2018-WTE-12162-OE / 3,600
2018-WTE-12163-OE / 3,500
2018-WTE-12164-OE / 3,500
2018-WTE-12165-OE / 3,600
2018-WTE-12166-OE / 3,500

2018-WTE-12167-OE / 3,600
2018-WTE-12168-OE / 3,500
2018-WTE-12169-OE / 3,500
2018-WTE-12170-OE / 3,600
2018-WTE-12171-OE / 3,600

2018-WTE-12172-OE / 3,500
2018-WTE-12173-OE / 3,500
2018-WTE-12174-OE / 3,600
2018-WTE-12175-OE / 3,600
2018-WTE-12176-OE / 3,600

2018-WTE-12177-OE / 3,500
2018-WTE-12178-OE / 3,500
2018-WTE-12179-OE / 3,500
2018-WTE-12180-OE / 3,600
2018-WTE-12181-OE / 3,500

2018-WTE-12182-OE / 3,500
2018-WTE-12183-OE / 3,500
2018-WTE-12184-OE / 3,400
2018-WTE-12185-OE / 3,500
2018-WTE-12187-OE / 3,500

2018-WTE-12188-OE / 3,500
2018-WTE-12189-OE / 3,400
2018-WTE-12190-OE / 3,400
2018-WTE-12191-OE / 3,400
2018-WTE-12234-OE / 3,600

2018-WTE-12235-OE / 3,600

The following would increase the Minneapolis, MN ARTCC (ZMP) MIA for ZMP_TAV_2018 Sector PATY02 from 3,400 feet AMSL to 3,500 feet AMSL.

2018-WTE-12104-OE
2018-WTE-12108-OE
2018-WTE-12114-OE
2018-WTE-12116-OE
2018-WTE-12125-OE

2018-WTE-12164-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts from circularization those proposals which only require internal FAA review.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use within a specified distance from the navigation facility upon which a procedure is predicated. These altitudes are designed for emergency use only and are not routinely used by pilots or by ATC. Consequently, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment. MIAs are solely used by ATC and not published for public use and are not circulated for public comment. The study disclosed that increasing the MIA in the area of the turbines would not impact a significant number of operations. The proposed structures would have no other effect on any existing or proposed arrival, departure, or en route IFR operations or procedures.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.





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

Aeronautical Study No.
2018-WTE-12192-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-107
Location:	Milbank, SD
Latitude:	45-03-35.25N NAD 83
Longitude:	96-52-11.03W
Heights:	1908 feet site elevation (SE) 499 feet above ground level (AGL) 2407 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12192-OE.

Signature Control No: 393028098-397093857

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12193-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-108
Location:	Milbank, SD
Latitude:	45-03-29.95N NAD 83
Longitude:	96-48-13.76W
Heights:	1779 feet site elevation (SE)
	499 feet above ground level (AGL)
	2278 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12193-OE.

Signature Control No: 393028099-397093862

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(s)

Additional information for ASN 2018-WTE-12193-OE

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.





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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12194-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-109
Location:	Milbank, SD
Latitude:	45-03-58.94N NAD 83
Longitude:	96-49-45.01W
Heights:	1832 feet site elevation (SE) 499 feet above ground level (AGL) 2331 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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.

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☒ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

See attachment for additional condition(s) or information.

This determination expires on 08/19/2020 unless:

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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.

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If we can be of further assistance, please contact our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12194-OE.

Signature Control No: 393028100-397093867

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12195-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-111
Location:	Milbank, SD
Latitude:	45-04-28.13N NAD 83
Longitude:	96-49-29.13W
Heights:	1807 feet site elevation (SE)
	499 feet above ground level (AGL)
	2306 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12195-OE.

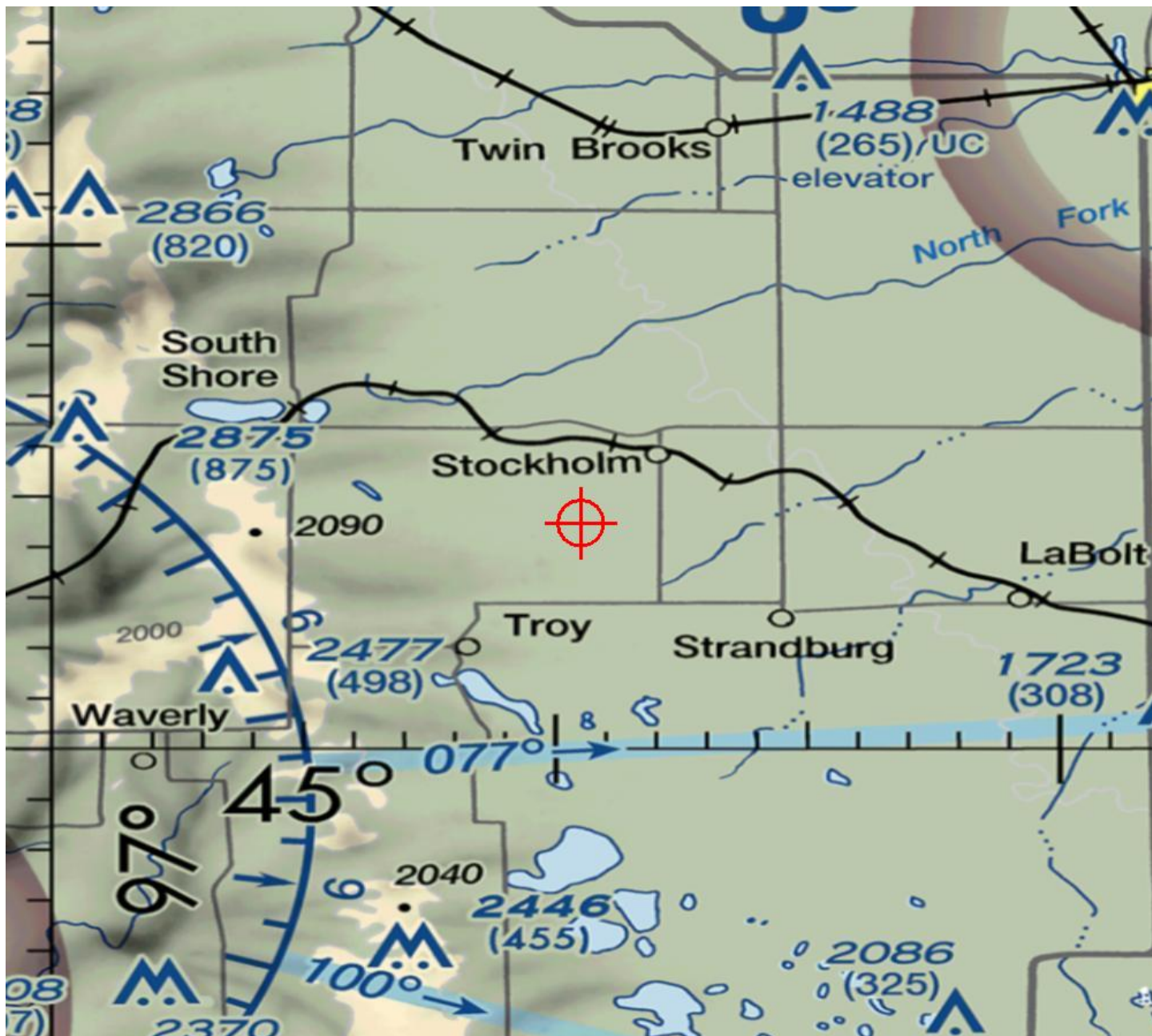
Signature Control No: 393028101-397093869

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12196-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-112
Location:	Milbank, SD
Latitude:	45-04-33.32N NAD 83
Longitude:	96-50-05.57W
Heights:	1845 feet site elevation (SE) 499 feet above ground level (AGL) 2344 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12196-OE.

Signature Control No: 393028102-397093874

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12197-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-113
Location:	Milbank, SD
Latitude:	45-04-45.31N NAD 83
Longitude:	96-46-26.39W
Heights:	1637 feet site elevation (SE) 499 feet above ground level (AGL) 2136 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12197-OE.

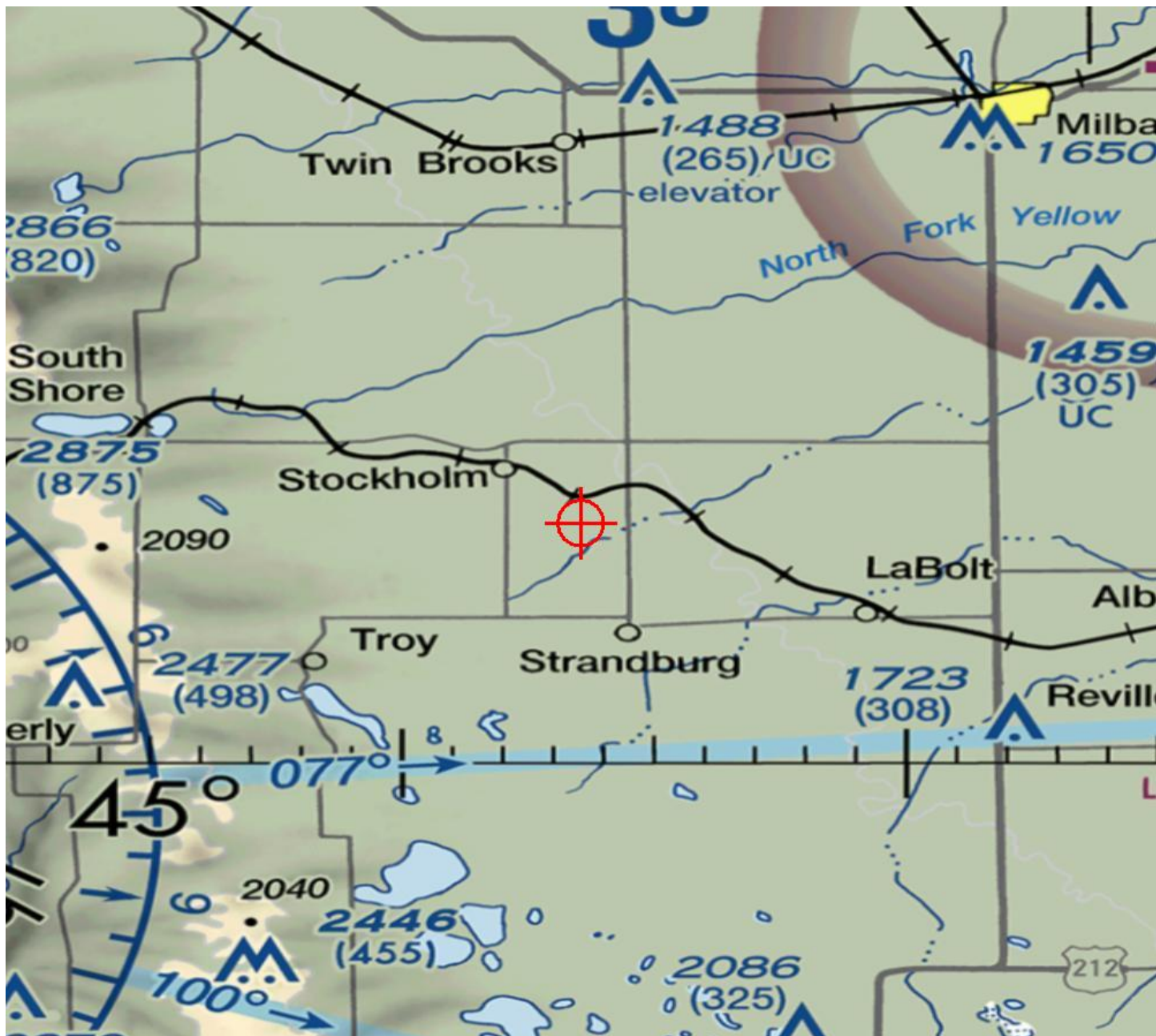
Signature Control No: 393028103-397093875

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12198-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-114
Location:	Milbank, SD
Latitude:	45-04-53.41N NAD 83
Longitude:	96-50-55.17W
Heights:	1843 feet site elevation (SE) 499 feet above ground level (AGL) 2342 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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.

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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 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12198-OE.

Signature Control No: 393028104-397093878

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12199-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-115
Location:	Milbank, SD
Latitude:	45-04-53.68N NAD 83
Longitude:	96-47-48.35W
Heights:	1702 feet site elevation (SE)
	499 feet above ground level (AGL)
	2201 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:

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See attachment for additional condition(s) or information.

This determination expires on 08/19/2020 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.
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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.

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If we can be of further assistance, please contact our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12199-OE.

Signature Control No: 393028105-397093880

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12200-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-116
Location:	Milbank, SD
Latitude:	45-05-00.17N NAD 83
Longitude:	96-49-08.61W
Heights:	1744 feet site elevation (SE) 499 feet above ground level (AGL) 2243 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12200-OE.

Signature Control No: 393028106-397093883

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12201-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-117
Location:	Milbank, SD
Latitude:	45-05-15.09N NAD 83
Longitude:	96-50-46.58W
Heights:	1790 feet site elevation (SE) 499 feet above ground level (AGL) 2289 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12201-OE.

Signature Control No: 393028107-397093887

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12202-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-118
Location:	Milbank, SD
Latitude:	45-05-21.28N NAD 83
Longitude:	96-50-24.72W
Heights:	1774 feet site elevation (SE)
	499 feet above ground level (AGL)
	2273 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12202-OE.

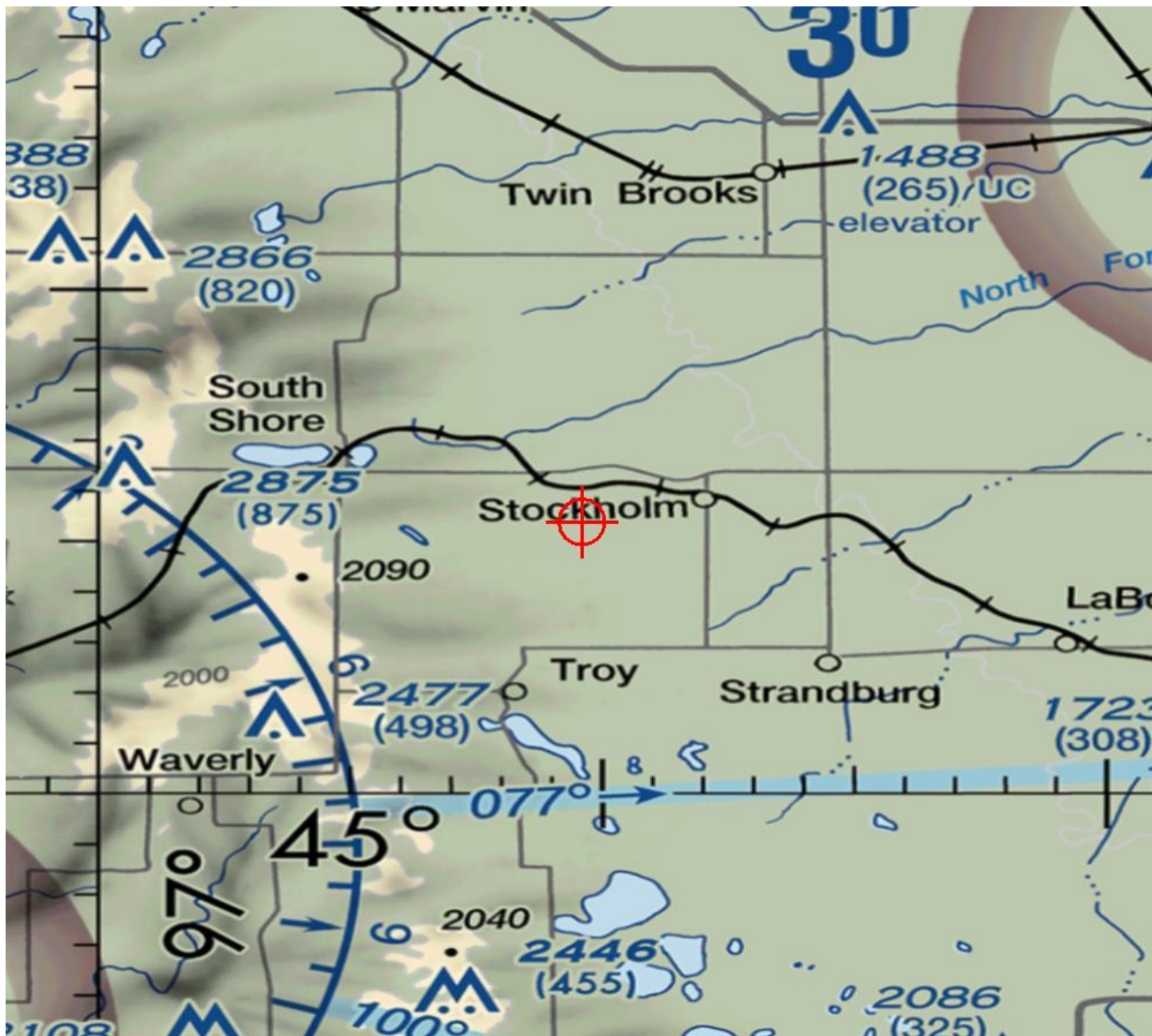
Signature Control No: 393028108-397093892

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12203-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-119
Location:	Milbank, SD
Latitude:	45-05-16.00N NAD 83
Longitude:	96-46-34.76W
Heights:	1615 feet site elevation (SE) 499 feet above ground level (AGL) 2114 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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.

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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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12203-OE.

Signature Control No: 393028109-397093893

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12204-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-120
Location:	Milbank, SD
Latitude:	45-05-21.82N NAD 83
Longitude:	96-49-35.60W
Heights:	1761 feet site elevation (SE)
	499 feet above ground level (AGL)
	2260 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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.

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- ☐ At least 10 days prior to start of construction (7460-2, Part 1)
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This determination expires on 08/19/2020 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.
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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.

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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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12204-OE.

Signature Control No: 393028110-397093911

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12205-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-121
Location:	Milbank, SD
Latitude:	45-07-01.91N NAD 83
Longitude:	96-49-50.34W
Heights:	1742 feet site elevation (SE)
	499 feet above ground level (AGL)
	2241 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12205-OE.

Signature Control No: 393028111-397093913

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12206-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-122
Location:	Milbank, SD
Latitude:	45-07-01.24N NAD 83
Longitude:	96-49-11.64W
Heights:	1701 feet site elevation (SE)
	499 feet above ground level (AGL)
	2200 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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.

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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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12206-OE.

Signature Control No: 393028112-397093930

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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10101 Hillwood Parkway
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Aeronautical Study No.
2018-WTE-12207-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-123
Location:	Milbank, SD
Latitude:	45-07-10.34N NAD 83
Longitude:	96-48-39.03W
Heights:	1659 feet site elevation (SE)
	499 feet above ground level (AGL)
	2158 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12207-OE.

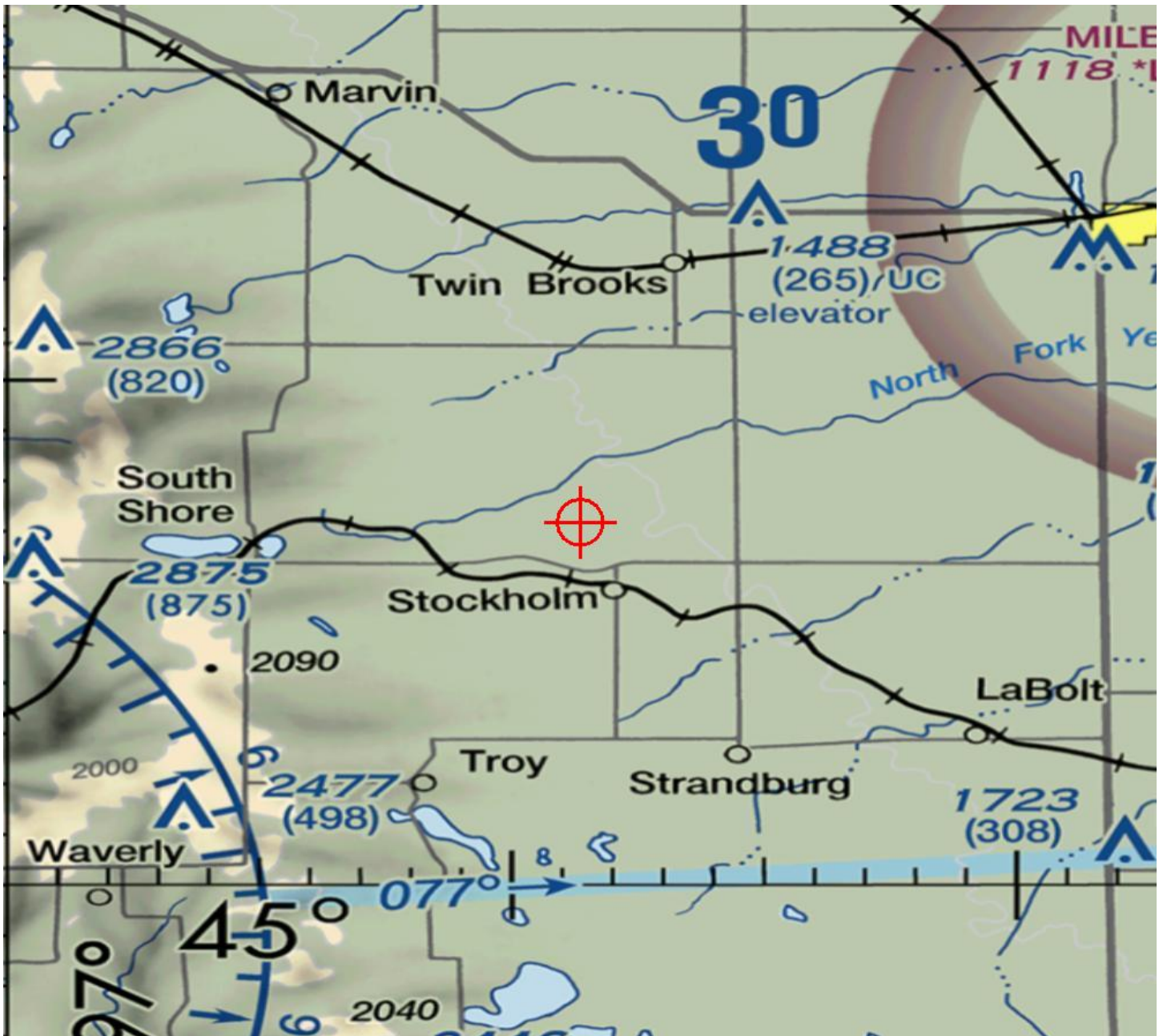
Signature Control No: 393028113-397093948

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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Aeronautical Study No.
2018-WTE-12208-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-124
Location:	Milbank, SD
Latitude:	45-07-26.81N NAD 83
Longitude:	96-49-35.80W
Heights:	1720 feet site elevation (SE)
	499 feet above ground level (AGL)
	2219 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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.

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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.

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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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12208-OE.

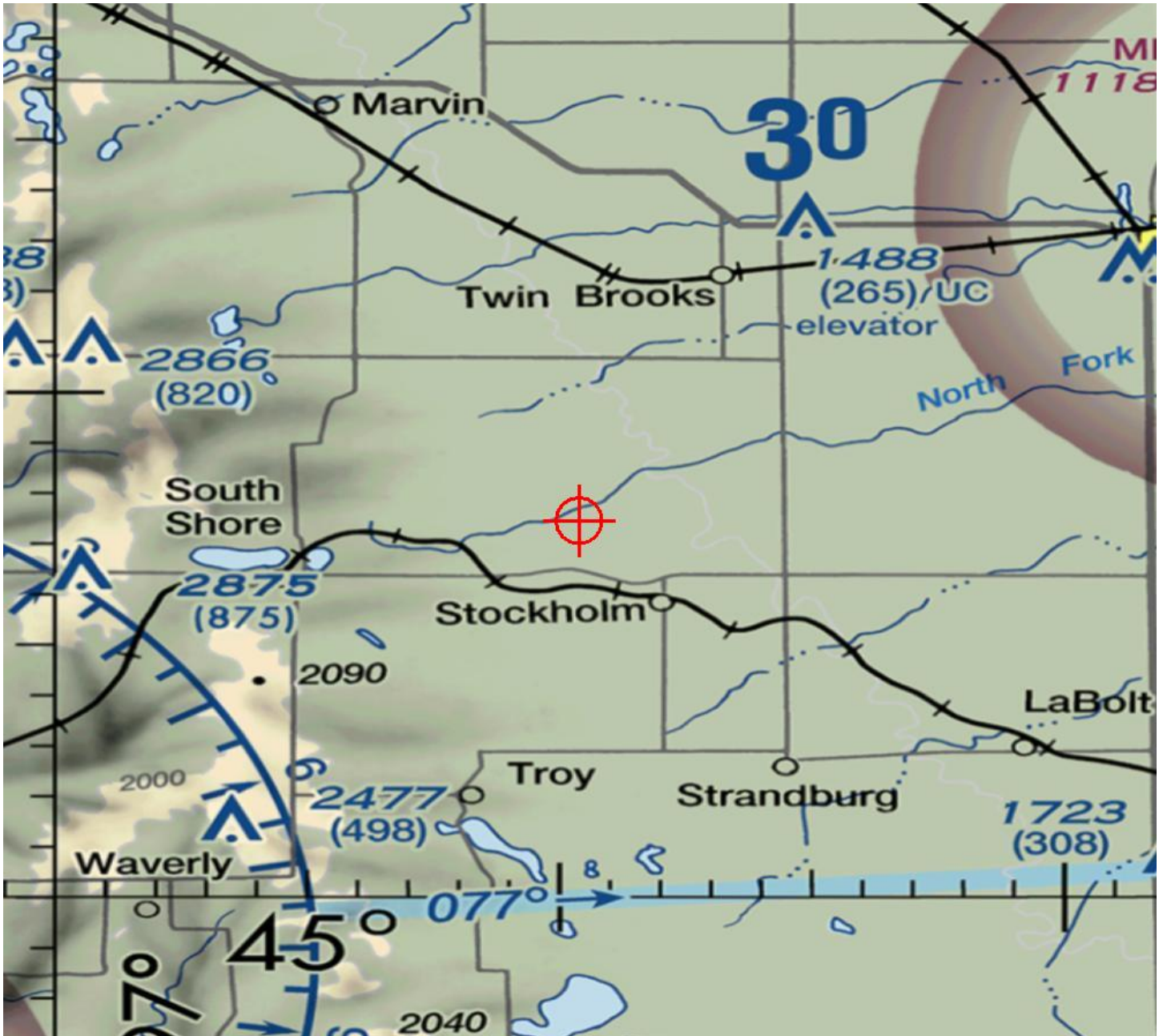
Signature Control No: 393028114-397093950

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(s)

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10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12209-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-125
Location:	Milbank, SD
Latitude:	45-07-36.09N NAD 83
Longitude:	96-49-05.51W
Heights:	1673 feet site elevation (SE) 499 feet above ground level (AGL) 2172 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, Obstruction Marking and Lighting, white paint/synchronized red lights - Chapters 4,12&13(Turbines).

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On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12209-OE.

Signature Control No: 393028115-397093953

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(s)

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10101 Hillwood Parkway
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Aeronautical Study No.
2018-WTE-12210-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-126
Location:	Milbank, SD
Latitude:	45-08-15.31N NAD 83
Longitude:	96-49-58.86W
Heights:	1693 feet site elevation (SE) 499 feet above ground level (AGL) 2192 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12210-OE.

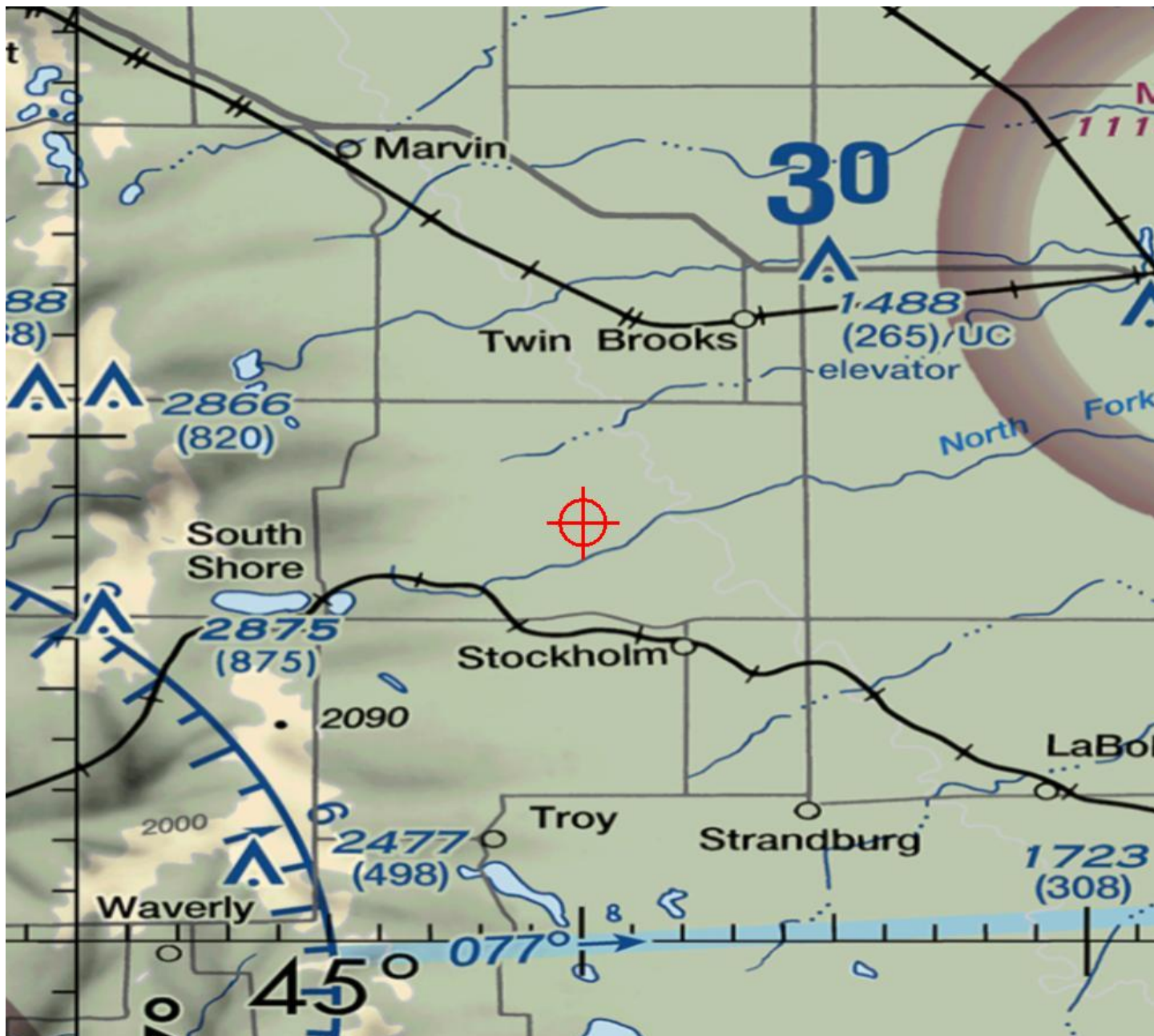
Signature Control No: 393028116-397093968

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12211-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-127
Location:	Milbank, SD
Latitude:	45-08-23.85N NAD 83
Longitude:	96-49-37.35W
Heights:	1667 feet site elevation (SE) 499 feet above ground level (AGL) 2166 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, Obstruction Marking and Lighting, white paint/synchronized red lights - Chapters 4,12&13(Turbines).

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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.

This determination expires on 08/19/2020 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.
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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 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12211-OE.

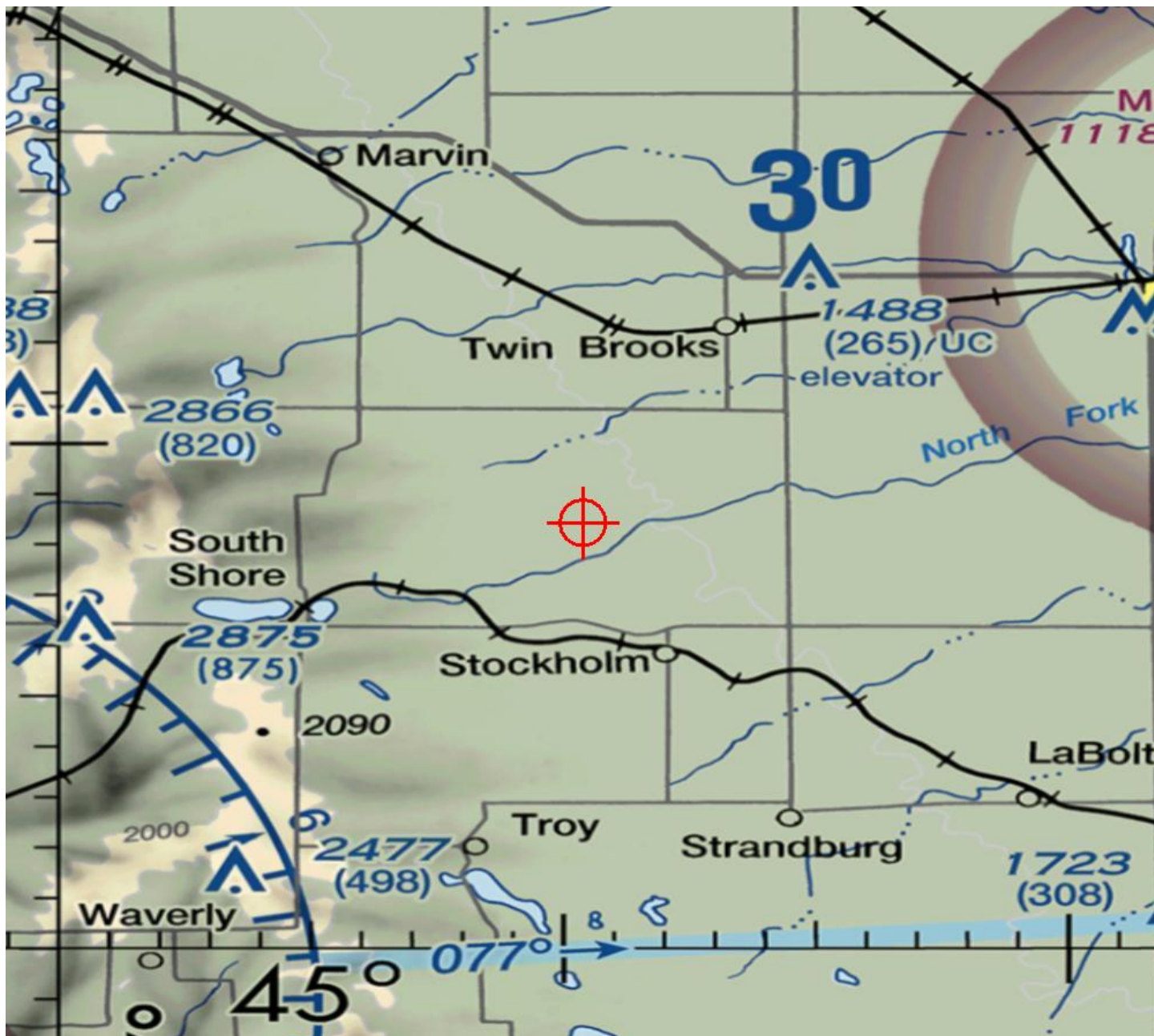
Signature Control No: 393028117-397093970

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12212-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-128
Location:	Milbank, SD
Latitude:	45-08-31.11N NAD 83
Longitude:	96-49-12.20W
Heights:	1642 feet site elevation (SE)
	499 feet above ground level (AGL)
	2141 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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.

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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 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.

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On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12212-OE.

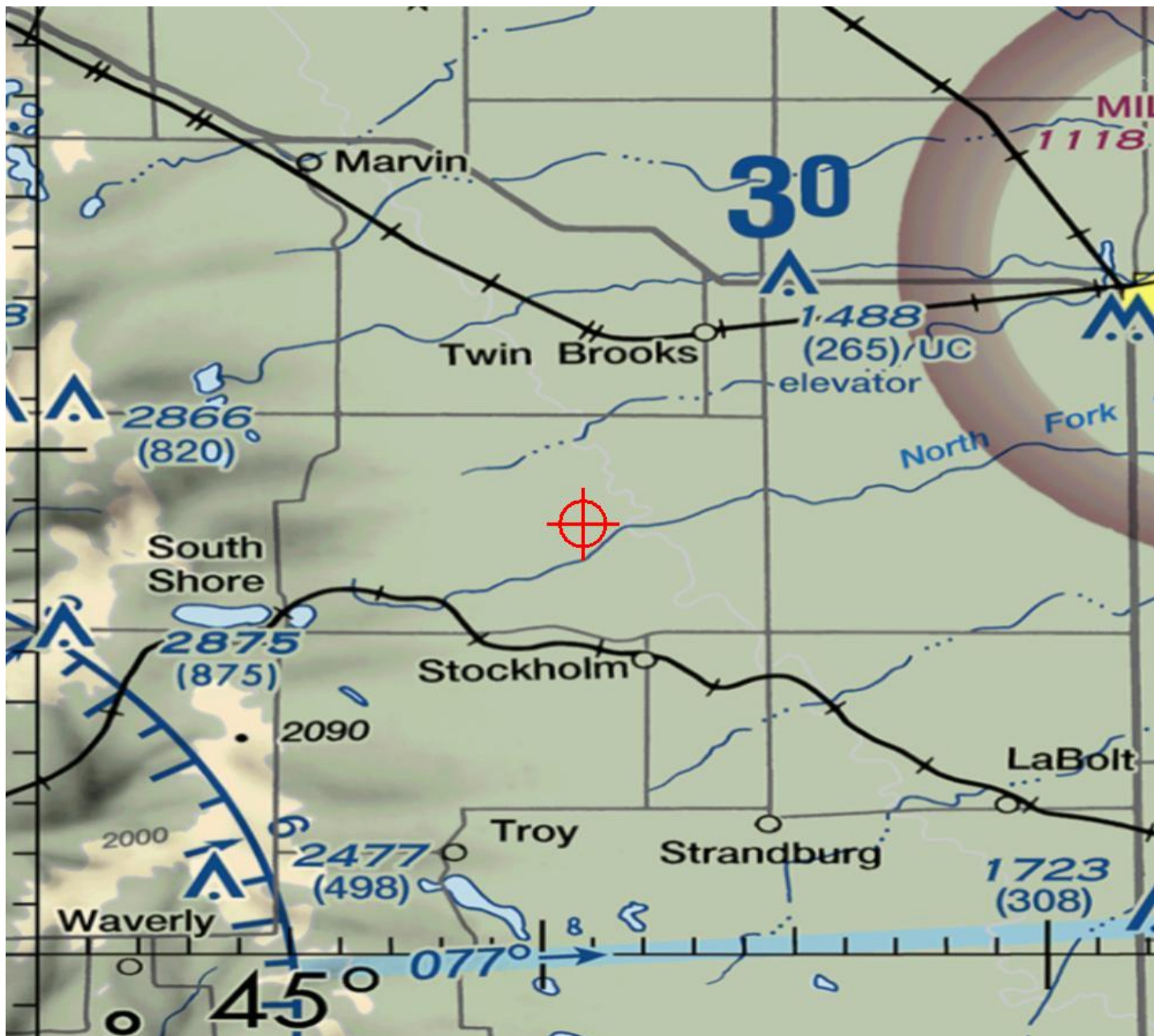
Signature Control No: 393028118-397093992

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12213-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-129
Location:	Milbank, SD
Latitude:	45-08-30.12N NAD 83
Longitude:	96-52-09.55W
Heights:	1817 feet site elevation (SE)
	499 feet above ground level (AGL)
	2316 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, Obstruction Marking and Lighting, white paint/synchronized red lights - Chapters 4,12&13(Turbines).

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- ☐ 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.

This determination expires on 08/19/2020 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.

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On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12213-OE.

Signature Control No: 393028119-397093997

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(s)

Additional information for ASN 2018-WTE-12213-OE

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10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12214-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-130
Location:	Milbank, SD
Latitude:	45-08-37.63N NAD 83
Longitude:	96-51-39.86W
Heights:	1795 feet site elevation (SE) 499 feet above ground level (AGL) 2294 feet above mean sea level (AMSL)

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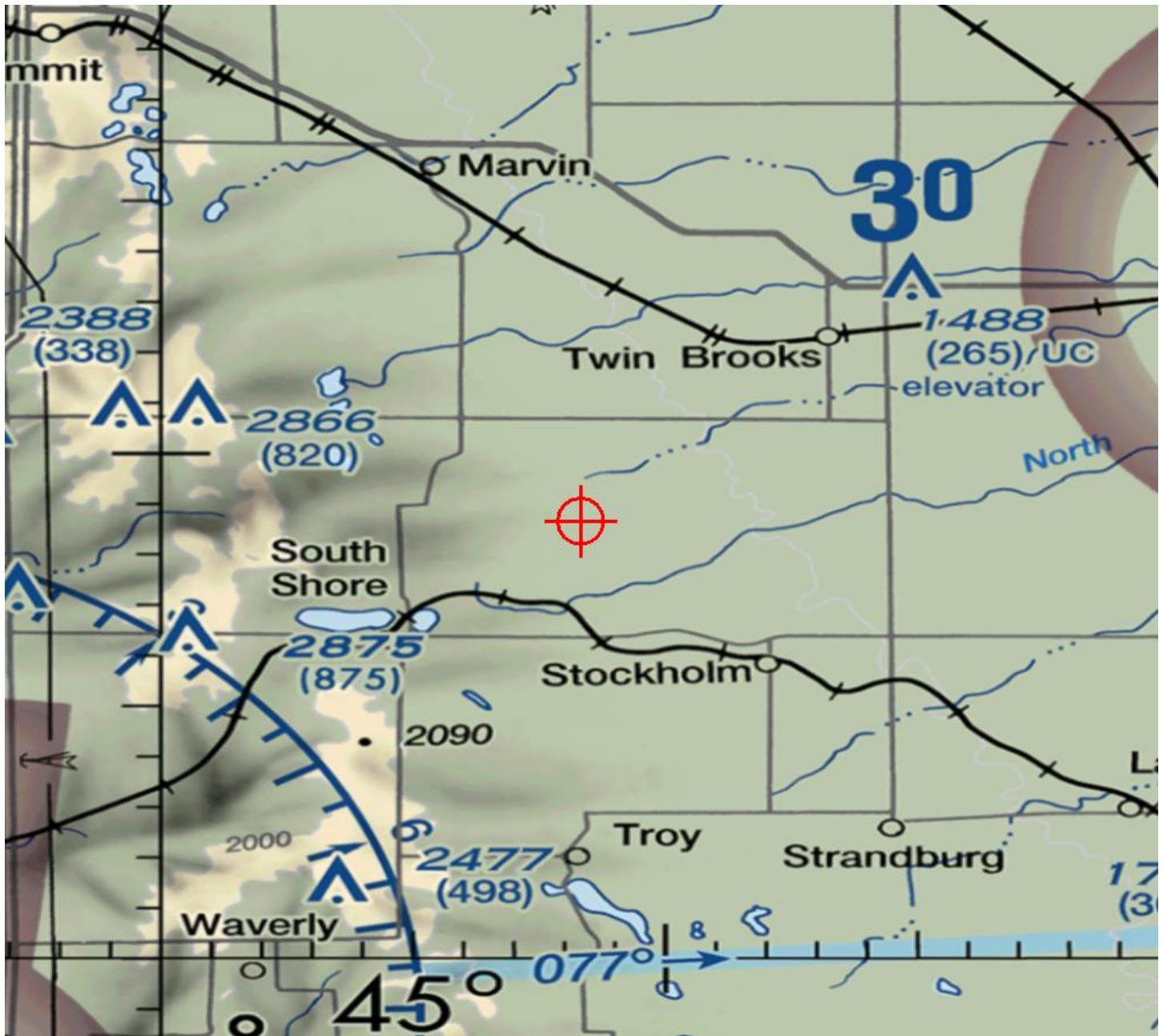
Signature Control No: 393028120-397094013

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12215-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-131
Location:	Milbank, SD
Latitude:	45-09-07.59N NAD 83
Longitude:	96-49-50.93W
Heights:	1663 feet site elevation (SE)
	499 feet above ground level (AGL)
	2162 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12215-OE.

Signature Control No: 393028121-397094018

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-WTE-12216-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-132
Location:	Milbank, SD
Latitude:	45-09-08.86N NAD 83
Longitude:	96-49-34.25W
Heights:	1639 feet site elevation (SE)
	499 feet above ground level (AGL)
	2138 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12216-OE.

Signature Control No: 393028122-397094022

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(s)

Additional information for ASN 2018-WTE-12216-OE

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.





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

Aeronautical Study No.
2018-WTE-12217-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-133
Location:	Milbank, SD
Latitude:	45-09-20.48N NAD 83
Longitude:	96-50-14.35W
Heights:	1652 feet site elevation (SE) 499 feet above ground level (AGL) 2151 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12217-OE.

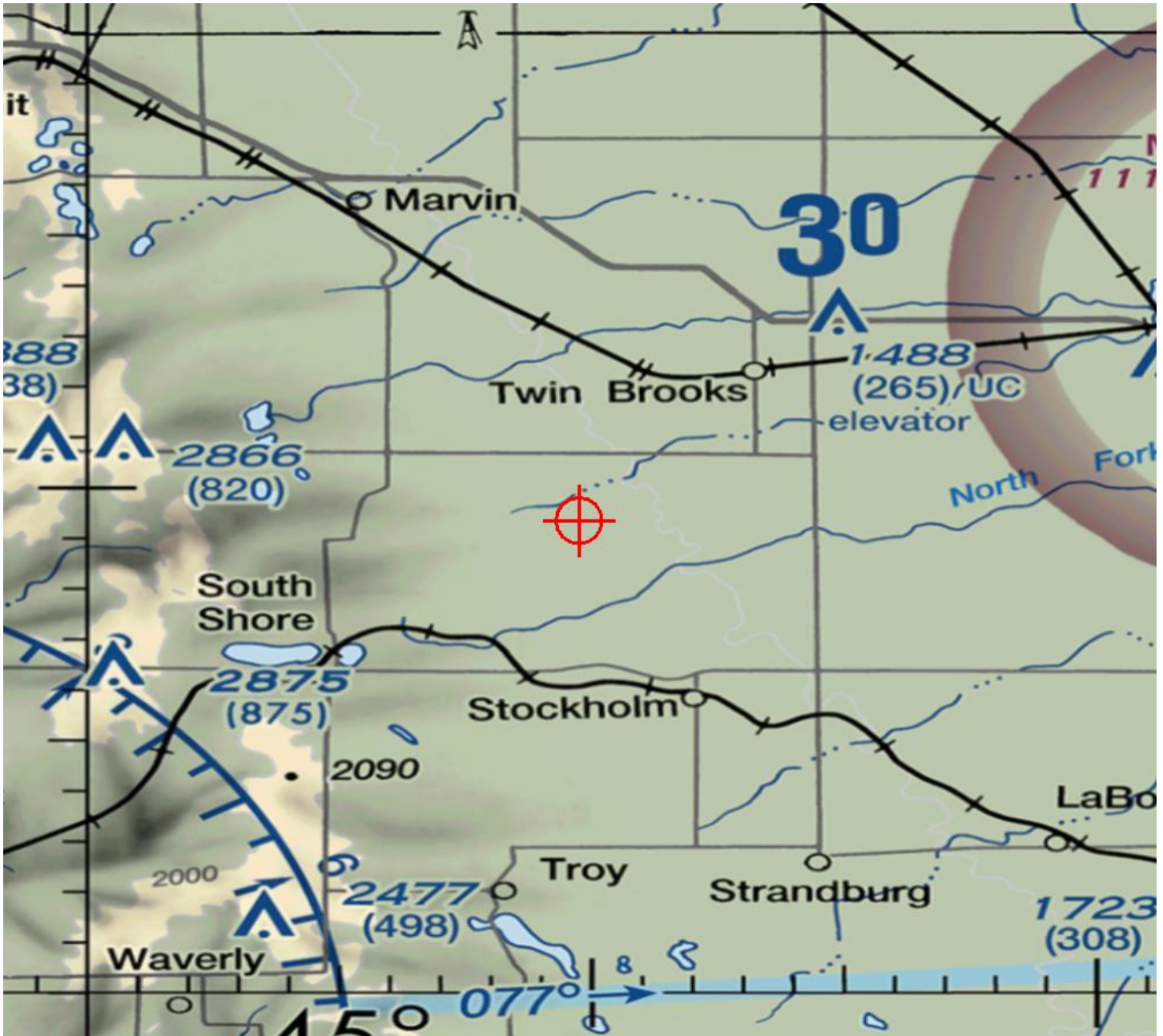
Signature Control No: 393028123-397094029

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
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Aeronautical Study No.
2018-WTE-12218-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-134
Location:	Milbank, SD
Latitude:	45-09-31.22N NAD 83
Longitude:	96-49-04.91W
Heights:	1590 feet site elevation (SE) 499 feet above ground level (AGL) 2089 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12218-OE.

Signature Control No: 393028124-397094031

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12219-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-Alt1
Location:	Milbank, SD
Latitude:	45-04-54.38N NAD 83
Longitude:	96-47-21.20W
Heights:	1675 feet site elevation (SE) 499 feet above ground level (AGL) 2174 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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.

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- ☐ 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.

This determination expires on 08/19/2020 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.
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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.

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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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12219-OE.

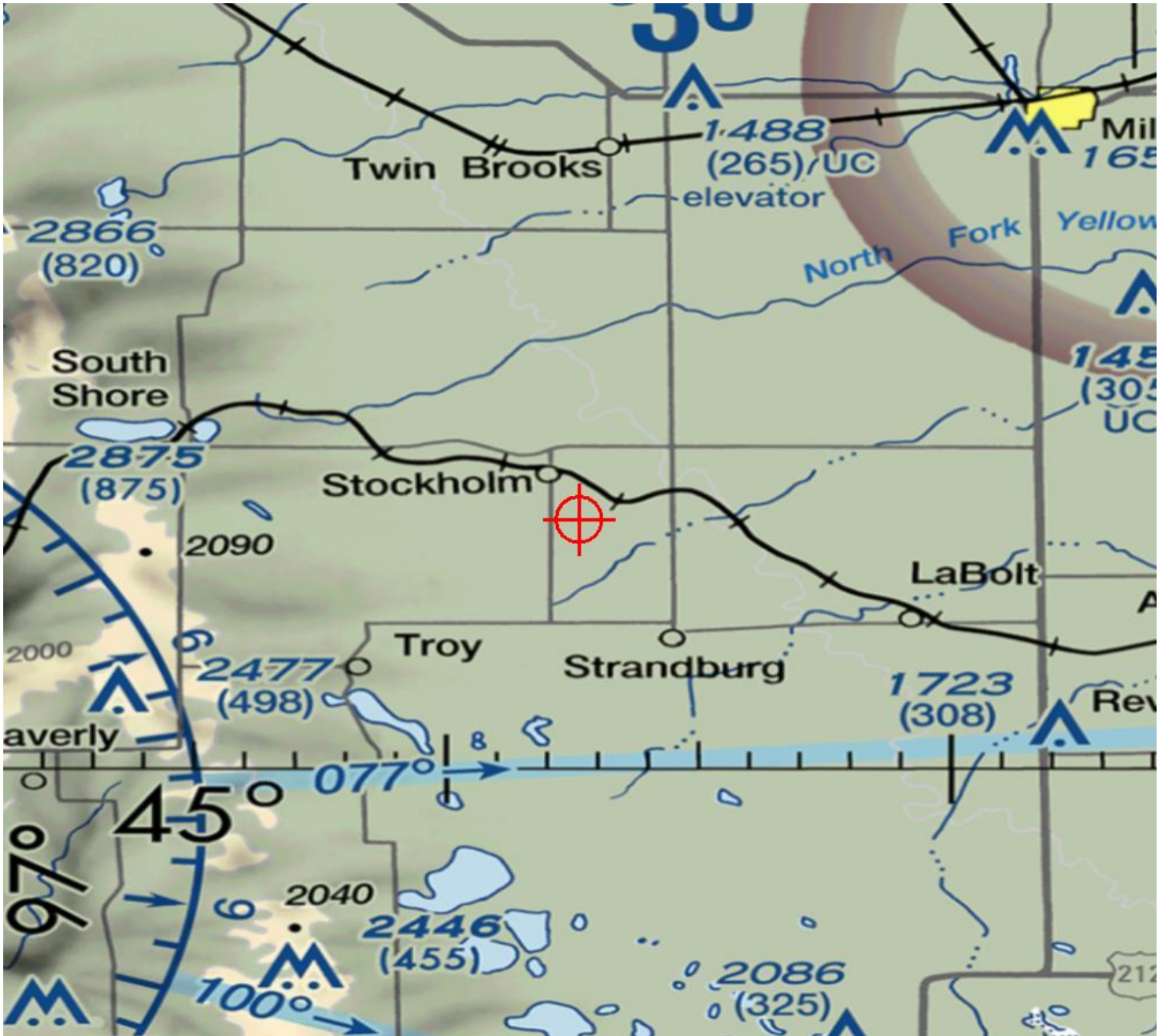
Signature Control No: 393028125-397094035

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12220-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-Alt2
Location:	Milbank, SD
Latitude:	45-04-09.56N NAD 83
Longitude:	96-50-59.93W
Heights:	1846 feet site elevation (SE)
	499 feet above ground level (AGL)
	2345 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12220-OE.

Signature Control No: 393028126-397094038

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12222-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-Alt4
Location:	Milbank, SD
Latitude:	45-09-58.70N NAD 83
Longitude:	96-50-10.29W
Heights:	1631 feet site elevation (SE) 499 feet above ground level (AGL) 2130 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12222-OE.

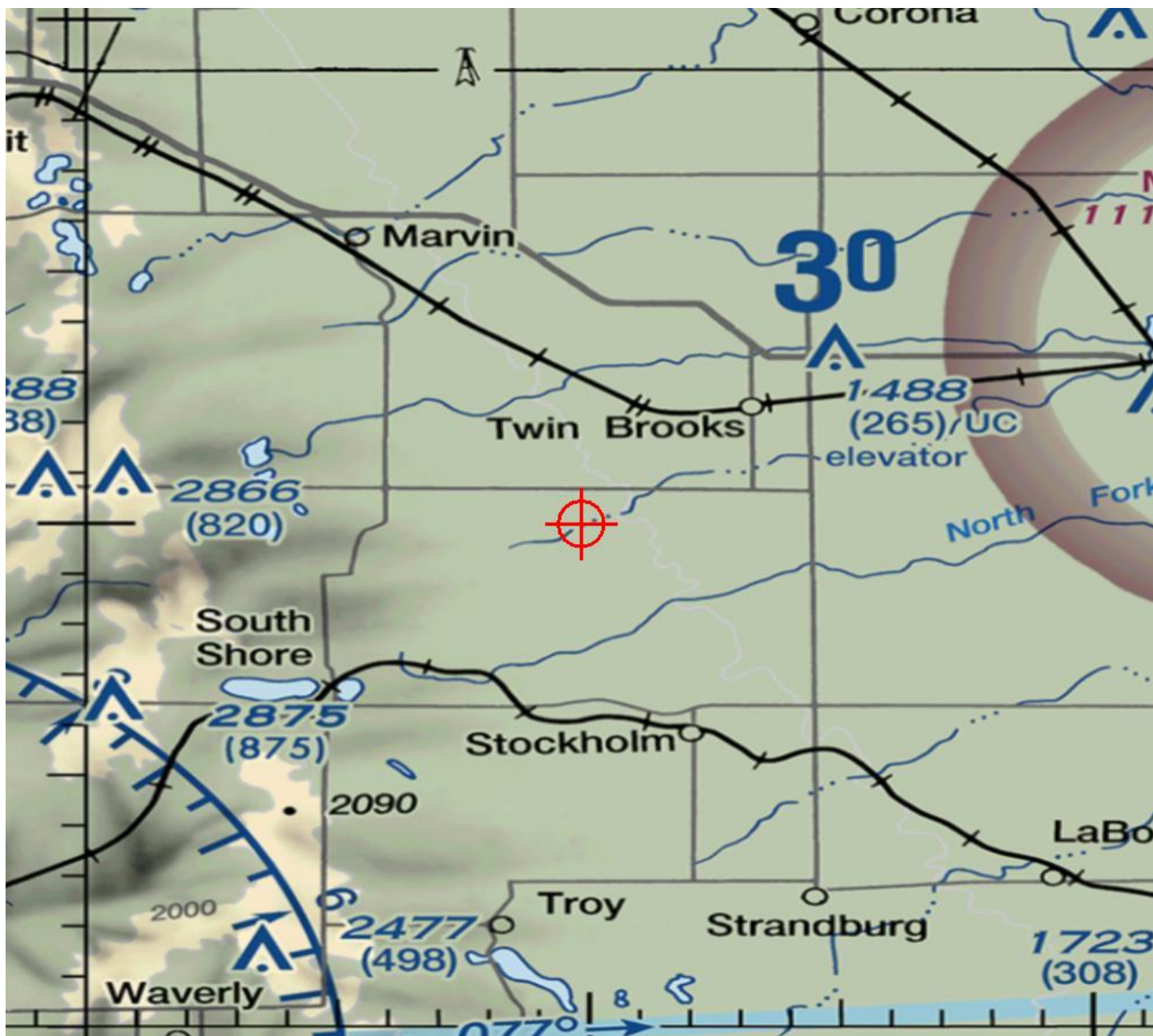
Signature Control No: 393028128-397094051

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12223-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-Alt7
Location:	Milbank, SD
Latitude:	45-10-13.57N NAD 83
Longitude:	96-50-45.55W
Heights:	1656 feet site elevation (SE)
	499 feet above ground level (AGL)
	2155 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12223-OE.

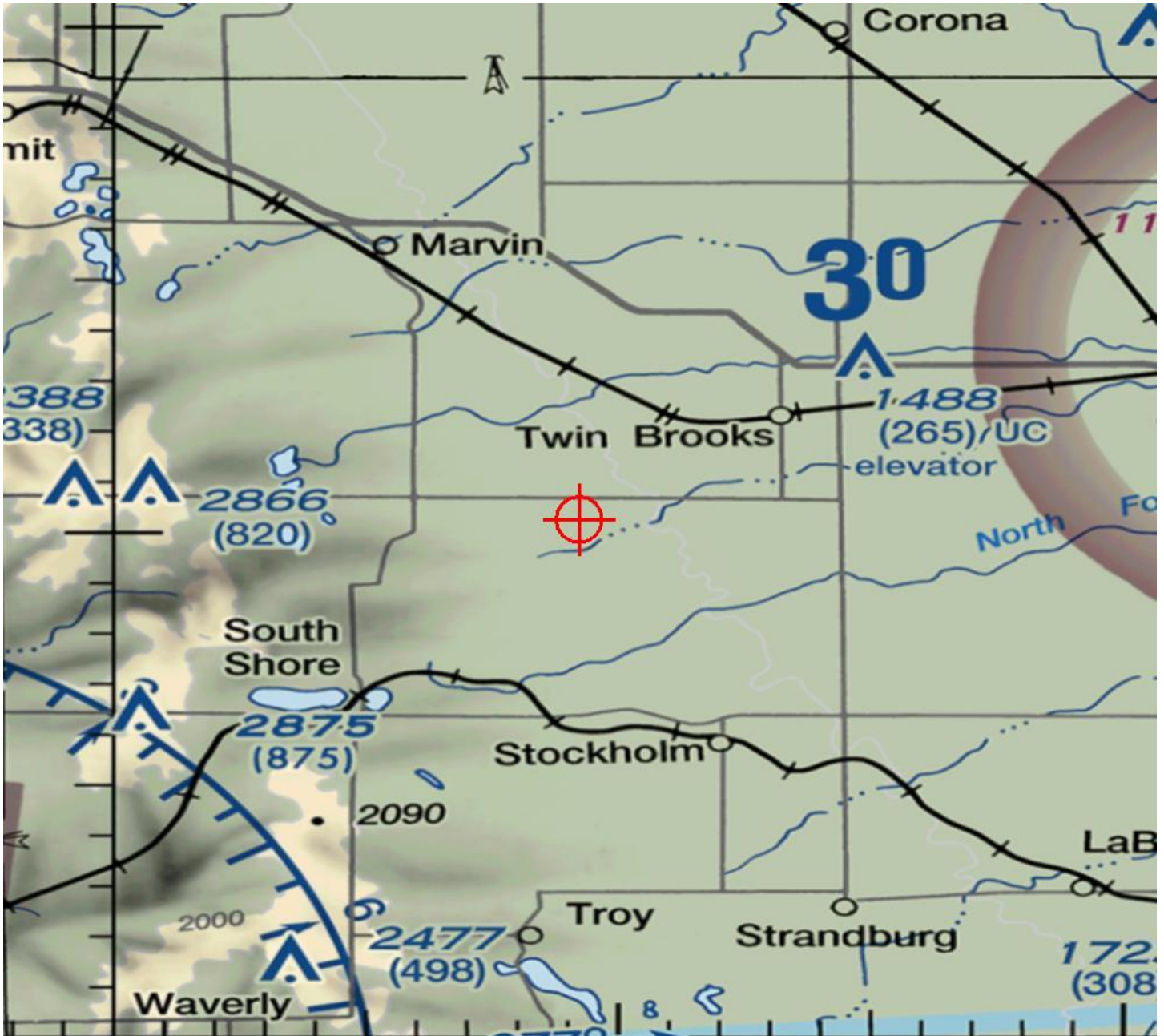
Signature Control No: 393028129-397094053

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12224-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-Alt8
Location:	Milbank, SD
Latitude:	45-10-38.14N NAD 83
Longitude:	96-52-27.85W
Heights:	1731 feet site elevation (SE)
	499 feet above ground level (AGL)
	2230 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12224-OE.

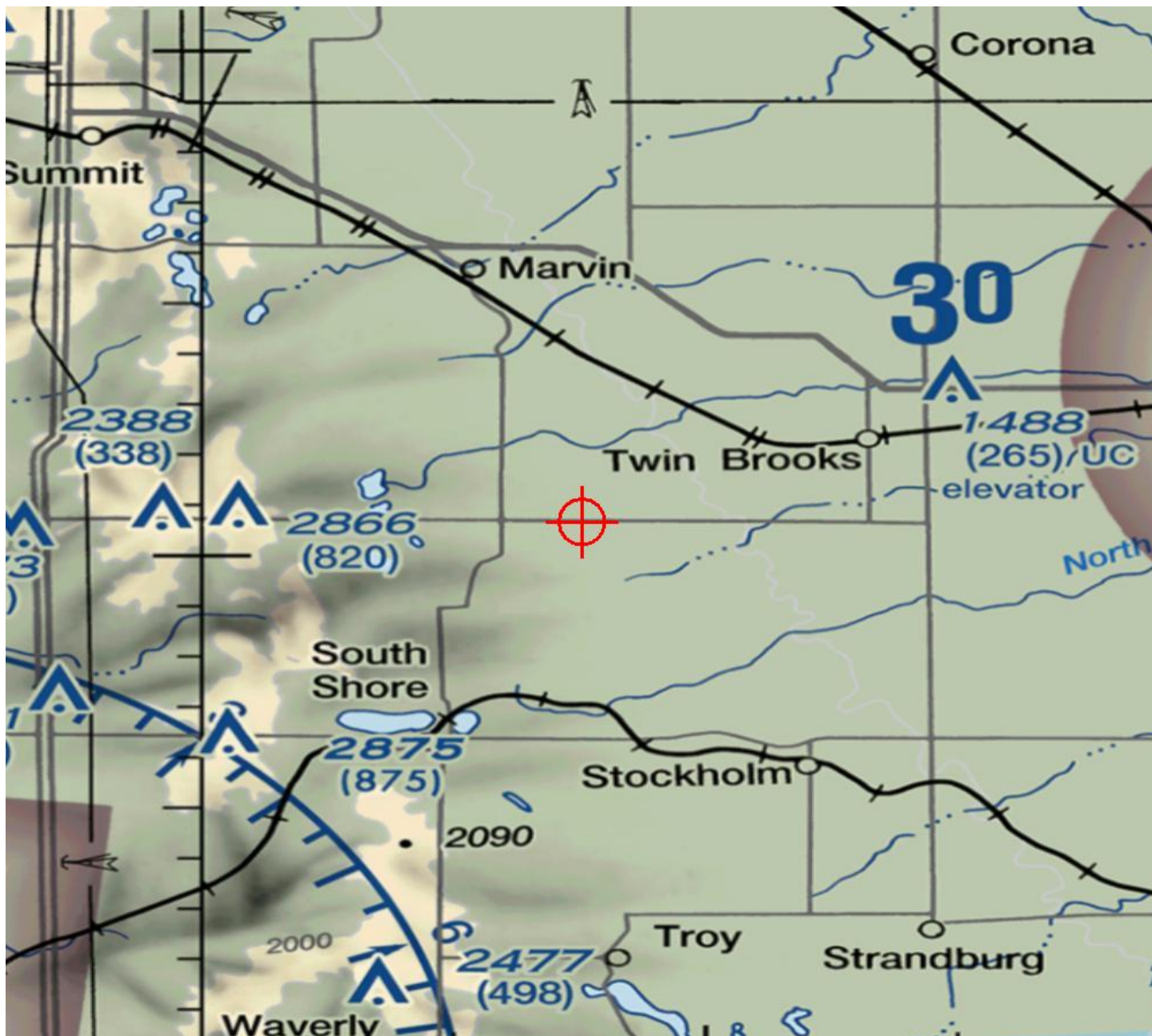
Signature Control No: 393028130-397094094

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12225-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-Alt9
Location:	Milbank, SD
Latitude:	45-10-59.82N NAD 83
Longitude:	96-51-44.29W
Heights:	1683 feet site elevation (SE) 499 feet above ground level (AGL) 2182 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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.

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- ☐ 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.

This determination expires on 08/19/2020 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.

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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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12225-OE.

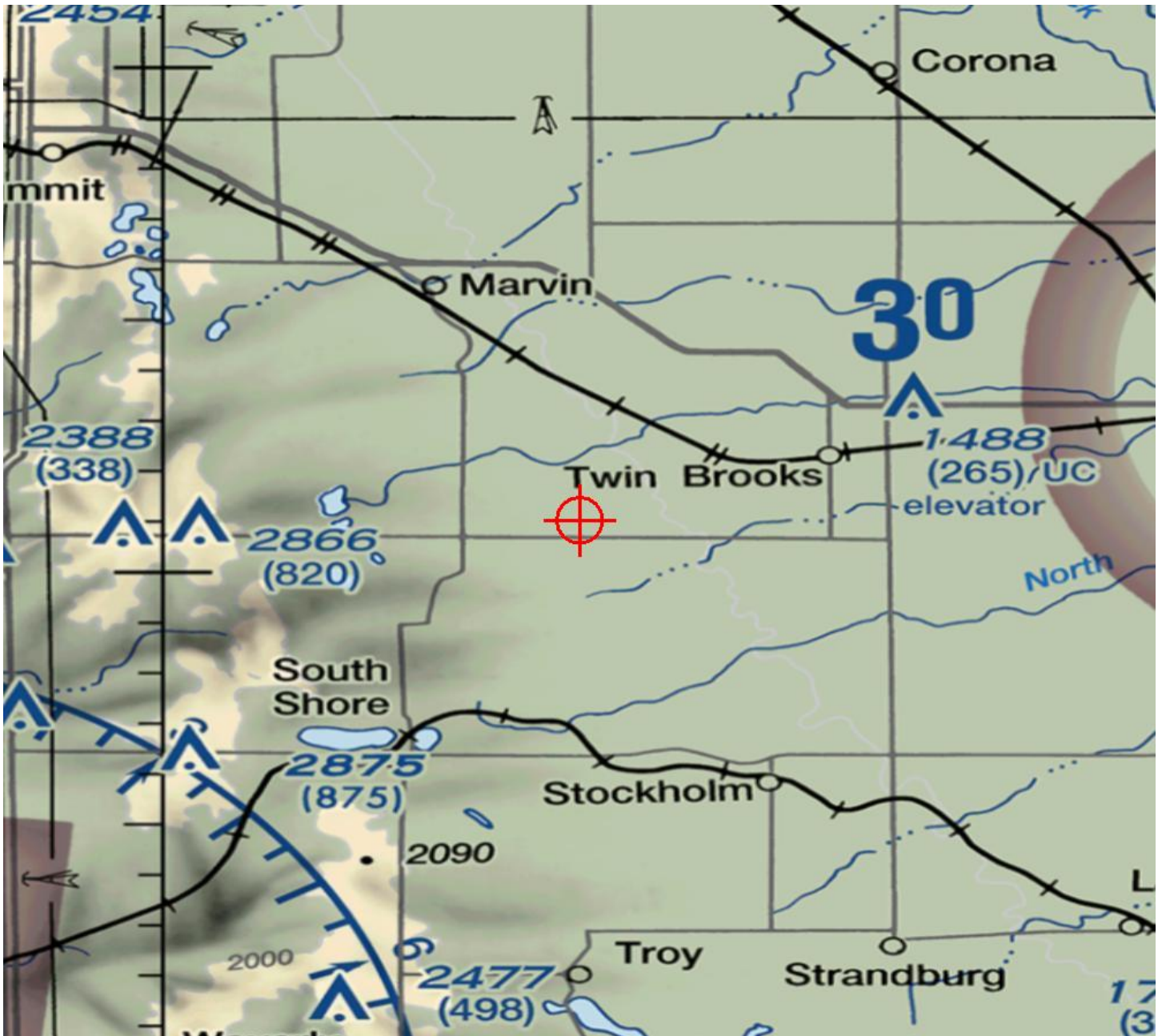
Signature Control No: 393028131-397094095

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12226-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-Alt11
Location:	Milbank, SD
Latitude:	45-11-08.30N NAD 83
Longitude:	96-51-14.65W
Heights:	1642 feet site elevation (SE)
	499 feet above ground level (AGL)
	2141 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12226-OE.

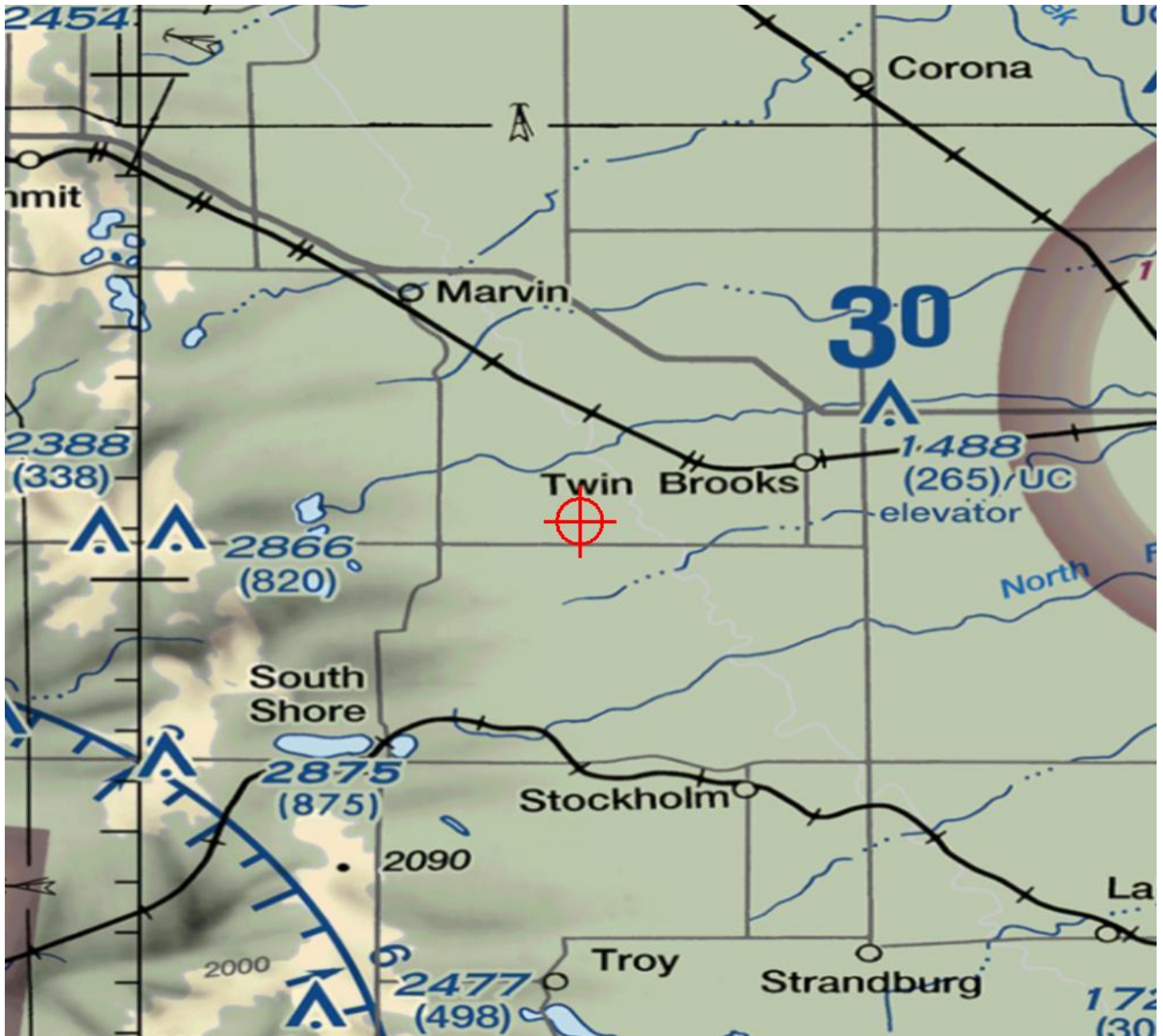
Signature Control No: 393028132-397094100

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12227-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-Alt12
Location:	Milbank, SD
Latitude:	45-11-23.70N NAD 83
Longitude:	96-53-25.46W
Heights:	1750 feet site elevation (SE)
	499 feet above ground level (AGL)
	2249 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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.

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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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12227-OE.

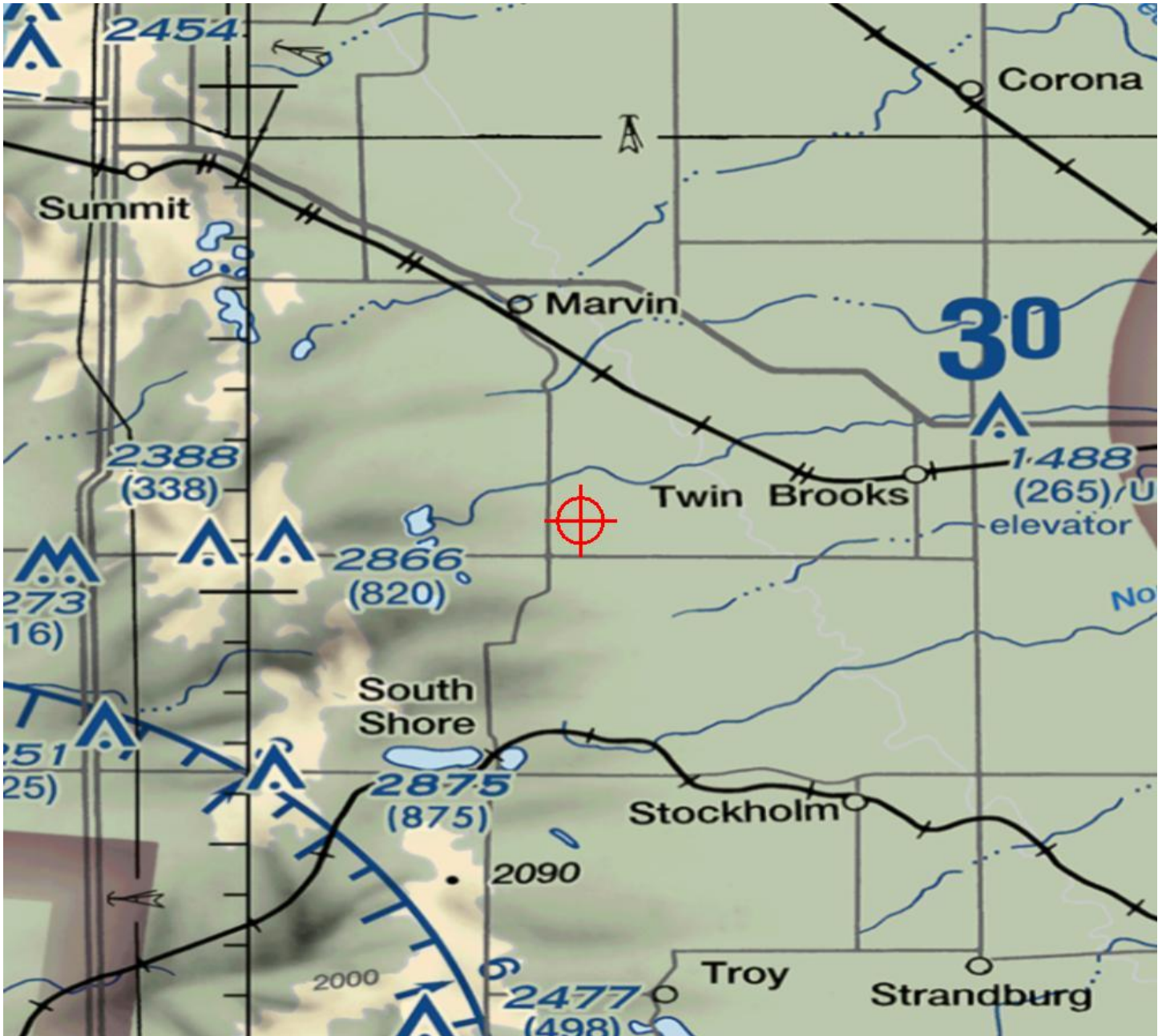
Signature Control No: 393028133-397094108

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12228-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-Alt14
Location:	Milbank, SD
Latitude:	45-11-23.97N NAD 83
Longitude:	96-52-04.47W
Heights:	1692 feet site elevation (SE)
	499 feet above ground level (AGL)
	2191 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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.
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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.

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If we can be of further assistance, please contact our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12228-OE.

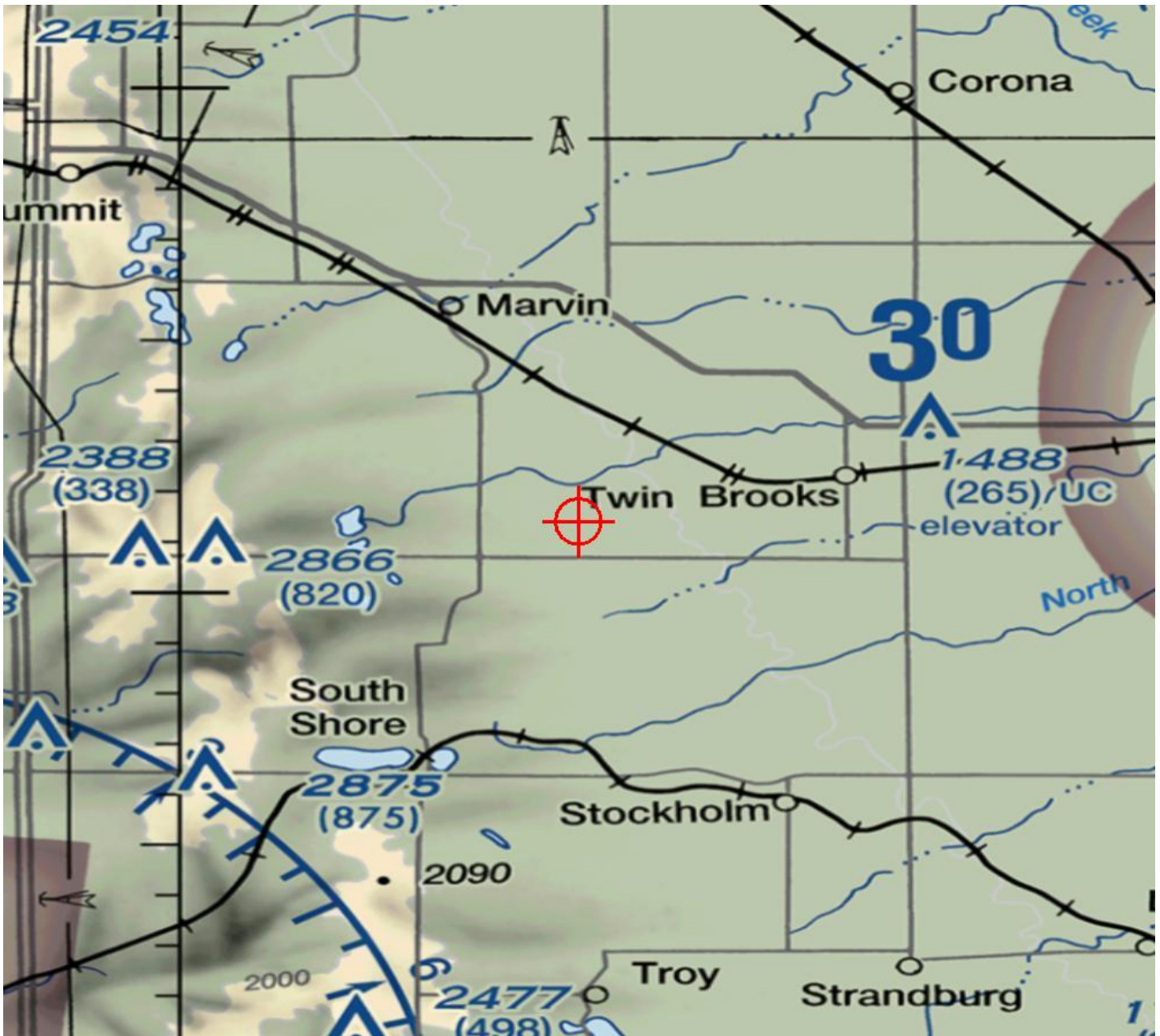
Signature Control No: 393028134-397094109

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12229-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-Alt15
Location:	Milbank, SD
Latitude:	45-11-22.98N NAD 83
Longitude:	96-50-47.10W
Heights:	1579 feet site elevation (SE) 499 feet above ground level (AGL) 2078 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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.
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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.

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On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12229-OE.

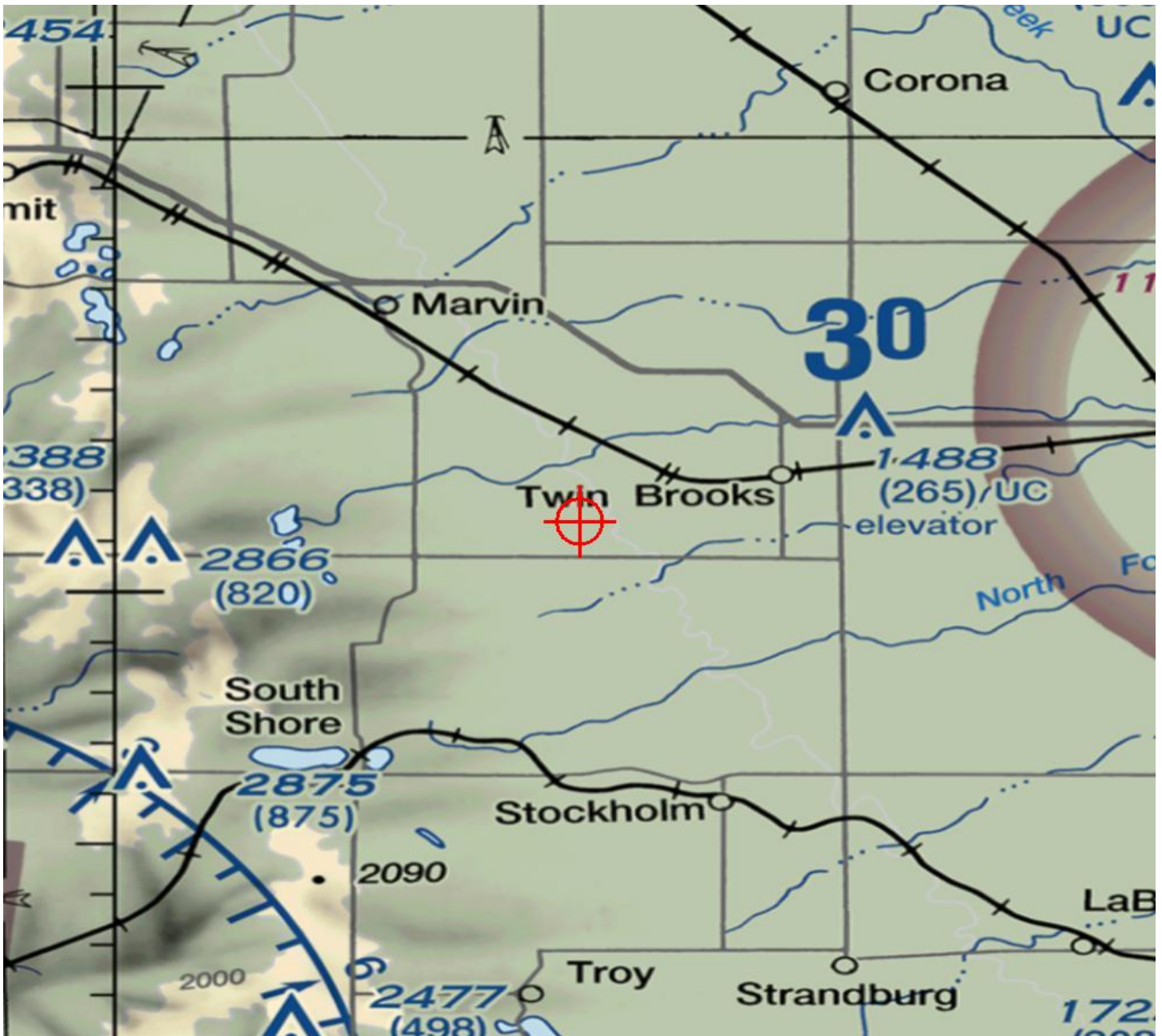
Signature Control No: 393028135-397094113

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12230-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-Alt16
Location:	Milbank, SD
Latitude:	45-11-22.39N NAD 83
Longitude:	96-53-45.58W
Heights:	1770 feet site elevation (SE)
	499 feet above ground level (AGL)
	2269 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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.

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See attachment for additional condition(s) or information.

This determination expires on 08/19/2020 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.
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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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12230-OE.

Signature Control No: 393028136-397094115

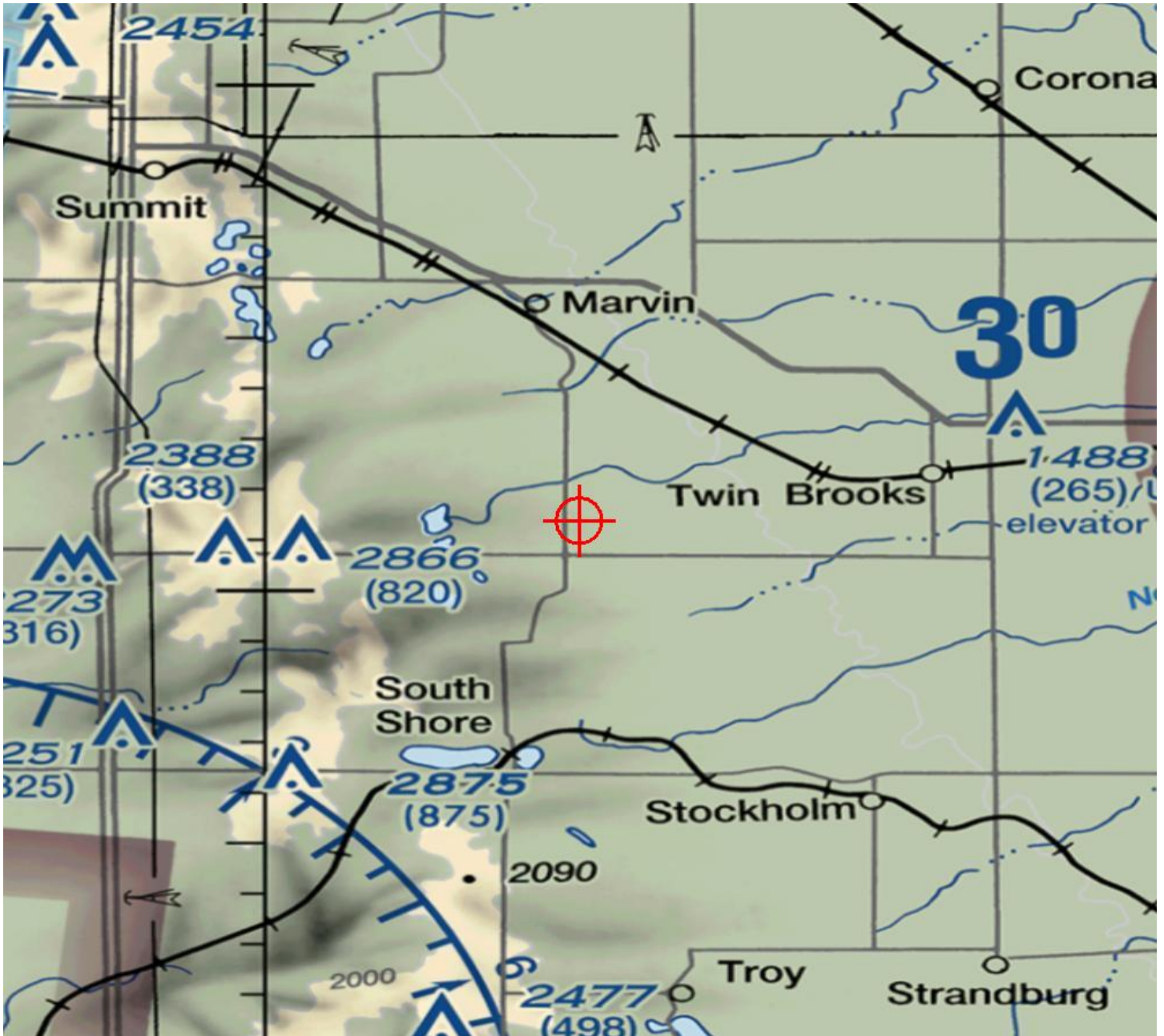
(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(s)

Additional information for ASN 2018-WTE-12230-OE

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.





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

Aeronautical Study No.
2018-WTE-12231-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-Alt17
Location:	Milbank, SD
Latitude:	45-11-55.92N NAD 83
Longitude:	96-51-34.54W
Heights:	1613 feet site elevation (SE)
	499 feet above ground level (AGL)
	2112 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12231-OE.

Signature Control No: 393028137-397094118

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2018-WTE-12232-OE

Issued Date: 02/19/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-Alt18
Location:	Milbank, SD
Latitude:	45-12-01.50N NAD 83
Longitude:	96-51-00.18W
Heights:	1559 feet site elevation (SE)
	499 feet above ground level (AGL)
	2058 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 in accordance with FAA Advisory circular 70/7460-1 L Change 2, 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 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.

This determination expires on 08/19/2020 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 our office at (816) 329-2523, or steve.phillips@faa.gov.
On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-WTE-12232-OE.

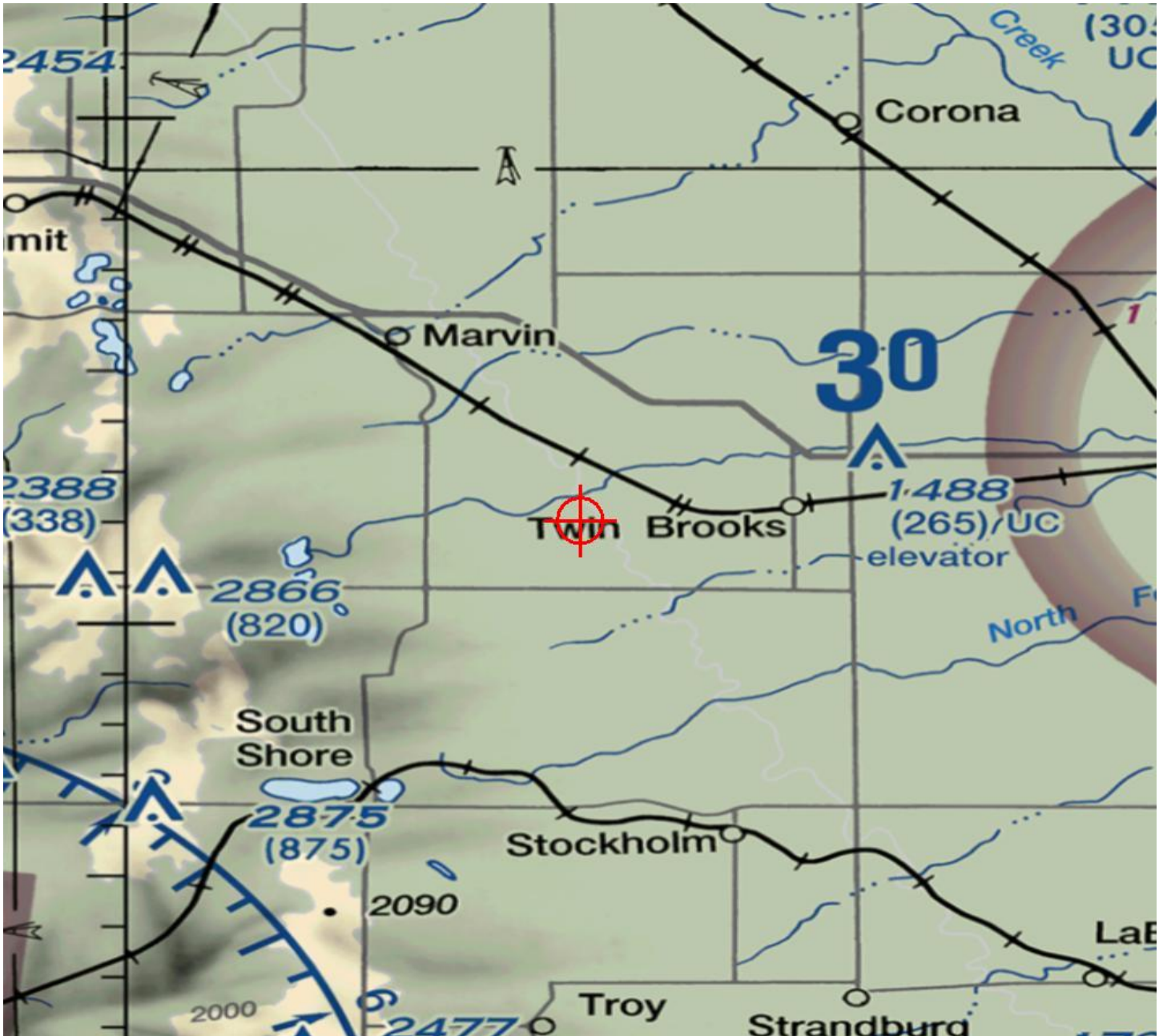
Signature Control No: 393028138-397094123

(DNE -WT)

Steve Phillips
Specialist

Attachment(s)
Additional Information
Map(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.





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

Aeronautical Study No.
2019-WTE-6862-OE
Prior Study No.
2018-WTE-12235-OE

Issued Date: 08/13/2019

Tyler Wilhelm
Crowned Ridge Wind, LLC
700 Universe Blvd.
Juno Beach, FL 33408

**** 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 CRI-Alt22
Location:	Milbank, SD
Latitude:	45-01-01.00N NAD 83
Longitude:	96-56-16.00W
Heights:	2007 feet site elevation (SE)
	499 feet above ground level (AGL)
	2506 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 2, 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 60 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.

This determination expires on 02/13/2021 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 subject to review if an interested party files a petition that is received by the FAA on or before September 12, 2019. 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 of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on September 22, 2019 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 Policy Group via telephone – 202-267-8783.

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.

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).

This determination cancels and supersedes prior determinations issued for this structure.

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 2019-WTE-6862-OE.

Signature Control No: 412154897-414214086

(DNH -WT)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Map(s)

Abbreviations:

AGL, Above Ground Level
AMSL, Above Mean Sea Level
ASN, Aeronautical Study Number
ATC, Air Traffic Control
BC, Back Course
CFR, Code of Federal Regulations
IFR, Instrument Flight Rules
LOC, Localizer
MOCA, Minimum Obstruction Clearance Altitude
MSA, Minimum Safe Altitude
NM, Nautical Mile
RWY, Runway
VFR, Visual Flight Rules
VHF, Very High Frequency
VOR, VHF Omnidirectional Radio Range System
VORTAC, VOR/TACAN System

Two wind turbines which are an addition to previously studied and determined proposed wind farm that would be located approximately 7.99 NM - 21.53 NM northeast of the Airport Reference Point for the Watertown Regional Airport (ATY), Watertown, SD. The ASNs with AGL heights, AMSL heights and coordinates for the two proposed structures are as follows:

ASN	/	AGL	/	AMSL	/	Latitude	/	Longitude
2019-WTE-6861-OE	/	499	/	2512	/	45-03-35.00N	/	96-55-49.00W
2019-WTE-6862-OE	/	499	/	2506	/	45-01-01.00N	/	96-56-16.00W

They would exceed the obstruction standards of 14 CFR Part 77.17(a)(3): A height that increases a minimum instrument flight altitude within a terminal area;

The proposed structures would increase the Watertown Regional (ATY) Watertown, SD. LOC BC RWY 17, MSA from 240 degrees inbound clockwise to 040 degrees inbound from 3500 feet AMSL to 3600 feet AMSL.

The following structure will increase the V78, MOCA from WATERTOWN (ATY) VORTAC, 077 Radial to DAWSO from 3300 feet AMSL to 3600 feet AMSL.

2019-WTE-6862-OE

The proposals were not circularized to the public for comments, as current FAA policy exempts circularization of those proposals which only require internal FAA review. In accordance with JO 7400.2L, Chapter 6-3-17, paragraph a.2.(b), circularization is not necessary for a structure that would be located on a site in proximity to another previously studied structure, would have no greater effect on aeronautical operations and procedures, and the basis for the determination issued under the previous study could be appropriately applied.

The aeronautical study disclosed that the proposed structures would affect IFR procedures as indicated above. The MOCA in this area is not routinely assigned by ATC and is therefore not considered a significant impact.

An MSA is the minimum obstacle clearance altitude for emergency use only and are within a specified distance from the navigation facility upon which a procedure is predicated. The MSA altitudes are not routinely used by pilots or by ATC. Therefore, they are not considered a factor in determining the extent of adverse effect and are not circulated to the public for comment.

Study for possible VFR effect disclosed that the proposals would have no effect on VFR traffic pattern operations at ATY or any known public use or military airports. The proposals would have no effect on existing or proposed VFR arrival or departure operations. At 499 feet AGL they would have no substantial adverse effect on VFR en route flight operations.

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

The cumulative impact of the proposed 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 proposals affect the capacity of any known existing or planned public-use or military airport.

Therefore, it is determined that the proposed structures would 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 would 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 60 days prior to the start of construction so that appropriate action can be taken to amend the effected procedure(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.

