

RIVERBEND WIND ENERGY FACILITY



Exhibit A-1.5 ALTERNATIVES

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EXHIBIT A-1.5 – ALTERNATIVES

A-1.5.a – Provide a map and description of each alternative site location, proposed site layout, or other alternatives that are or were considered, including rationale for why alternative locations were not selected for development.

If the proposed site of the energy facility is undeveloped land, the applicant must provide a description of feasible alternative developed locations, including, but not limited to, vacant industrial property and brownfields, and an explanation of why they were not chosen for the project site.

Wind project siting is guided by four primary drivers: (1) the quality of the wind resource, (2) the availability of a viable point of interconnection, (3) the ability to secure large and contiguous blocks of land, and (4) the political and regulatory environment in which development occurs. Sanilac County met the first two criteria early in the process. Beginning in 2020, the County was identified as a strong candidate for wind development due to its suitable wind resource and the presence of a 345 kV transmission line running through Fremont and Buel Townships, which offered a feasible interconnection point for a utility-scale project.

With these technical foundations in place, the Project began initial land acquisition efforts in the latter part of 2020. Land was first signed in Fremont and Buel, where the transmission line passes, and additional land was secured in Elk and Speaker to the west. A site layout considered in January 2021, provided in **Appendix 1.5-A** (Exhibit 1.5), reflects this early phase, showing potential turbine locations distributed across all four townships in Sanilac County as the Project proceeded under the assumption that each jurisdiction might ultimately form part of the wind development.

As development advanced, however, significant differences emerged in the regulatory and political environments across the four townships. Ordinances in Buel and Elk introduced considerable permitting uncertainty, including unclear processes for site plan review, variances, and appeals. These regulatory ambiguities created an environment in which achieving a timely and predictable zoning permit became increasingly unlikely. At the same time, fragmented landowner participation in both townships made it difficult to assemble the large, contiguous tracts necessary for an interconnected and economically viable project layout.

By contrast, Fremont and Speaker (then) offered a more workable combination of landowner support and regulatory clarity considering the local ordinance requirements that existed at the time. Land acquisition progressed more successfully in these two townships, allowing the Project to assemble large contiguous blocks capable of siting a wind project of sufficient scale to justify investment while meeting local ordinance requirements as they existed at the time. In addition, the permitting environments at the time in Fremont and Speaker Townships were more predictable and more conducive with renewable energy development, reducing legal and timeline risks.

By March 2021, these factors collectively directed the Project to focus exclusively on Fremont and Speaker for location of the turbines. Of the more than 31,000 acres ultimately signed, over two thirds, approximately 22,000 acres were located within these two townships. This concentration of land, coupled with clearer and more workable regulatory pathways, enabled the Project to refine and finalize a layout entirely within Fremont and Speaker, where all four key

siting drivers aligned at the time to support a feasible and community-compatible wind development.

The Project's location was not selected based on land use type, but rather on whether the land met then-applicable ordinance requirements, was suitable based on environmental considerations, and could be leased in sufficient quantity. All land types, including agricultural land, vacant industrial property, and brownfields, were considered during the leasing process. However, given that agricultural is the overwhelmingly predominant land use in the area, the Project is sited mainly on agricultural land.

The period from 2021 through 2024 was taken up with acquiring the remaining land needed and then attempting to permit the Project locally prior to the passage of PA 233. These attempts were ultimately unsuccessful, despite the Project satisfying the requirements of the local ordinances in place at the time the permit applications were filed. In 2024, both Speaker and Fremont Townships adopted amendments to their zoning ordinances that limited where wind facilities could be located. Speaker Township's zoning ordinance now only permits Wind Energy Conversion Facilities "in the southern half of Section 36 of the Township," allowing for only approximately 320 acres to be used to build a utility-scale wind energy project in their jurisdiction. See **Exhibit A-4.1**. Fremont allocates a similar area, approximately 395 acres, in Section 33 of that Township. See **Exhibit 4.1**. Notwithstanding the fact that these overlay districts were adopted more than three years after the Applicant began assembling land for a viable wind development, as part of its preparation of this Application, the Applicant evaluated whether it would be feasible to construct a utility-scale wind energy facility meeting the requirements of PA 233 within the wind overlay districts defined. It was determined that the small, discrete areas authorized under the new ordinances made utility-scale development impossible due to, among other things, a lack of adequate land area. For these reasons, the Project cannot comply with the overlay districts established by the amended ordinances, and, thus, the Applicant did not consider siting within the overlay districts to be a plausible or feasible alternative to the Project location as proposed here. For a visual depiction of this, refer to the map included as **Figure 3B – Wind Overlay Districts** within **Exhibit A-1.2**, which has superimposed on the Project Area the areas under each Township's ordinance in which wind development is permitted.

Throughout the life of the Project, numerous layouts have been considered utilizing the determined buildable areas within the final targeted area. As the design has progressed, the Applicant has been able to decrease the number of proposed turbine locations to 50. Previous layouts discussed with the associated ALUs had included up to 56 potential turbine locations. Specific turbine locations have been removed due to a number of factors, including but not limited to landowner feedback, MPSC siting requirements, and layout optimization. Refer to **Figure 2 - Alternative Layout Map** that includes all areas that have been considered for turbine locations provided in **Appendix 1.5-A** (Exhibit A-1.5).

The Project is currently considering five different turbine models, all of which enable the Project to meet the requirements of PA 233: the Nordex N169 5.5 MW turbine; the Vestas V162 6.0 MW, 6.8 MW and 7.2 MW turbines; and the Vestas V163 4.5 MW turbine. The Project Layout in **Appendix 1.1-A** within **Exhibit A-1.1** shows the setbacks required for the minimum and maximum potential turbine heights as well as the results of the sound and shadow flicker analyses using data from witness Hankard's sound study (see **Exhibit A-1.7.1**) and witness Blank's shadow flicker analysis (see **Exhibit A-1.8**). The selection of turbines that are in the size

range of the models reviewed has impacted Project siting by enabling the project to proceed feasibly with only 50 turbine pad locations. Utilizing smaller turbines would have required more pad locations to achieve a feasible project design. The specific pad locations identified for this Project have been selected to allow a wide range of turbines models to be placed in these locations while continuing to meet the requirements of PA 233.

The Project has avoided and minimized impacts to natural resources to the greatest extent practicable through extensive desktop review, numerous on-site micro-siting and site assessment activities, including wetland delineation and comprehensive avian/bat surveys, and the production of multiple alternative site layouts. The site plan avoids direct impacts to regulated wetlands and watercourses; however, crossings to accommodate the improvements for access drives and/or the installation of underground collection lines will be required, as well as temporary improvements to road intersections and temporary crossings for the cranewalks. The proposed impacts are unavoidable due to the configuration of agricultural drains and roadside ditches found within the Project Area. However, throughout the design process the Project has been able to identify alternative routes for necessary ancillary infrastructure, resulting in decreased impacts. Additionally, in coordination with EGLE as part of the permitting process, the Project has continued its efforts to minimize impacts through the identification of locations suitable for less impactful installation methods, such as directional drilling for the installation of underground collection and communication lines. This has enabled the Project to eliminate approximately 9.6 acres of impact to EGLE regulated wetlands and reduce the total project impacts to approximately 0.06 acres of permanent impact and 1.06 acres of temporary impact. Refer to **Figure 2 - Alternative Layout Map** provided in **Appendix 1.5-A** (Exhibit A-1.5) for a depiction of the previously proposed impacts now being avoided. .

Appendix 1.5-A: FIGURES

FIGURE 1 – PRELIMINARY LAYOUT MAP

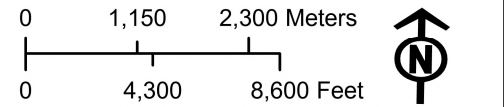
(Based on land control in January
2021, includes 40 turbines – 4x V162s
and 36x V163s)

Legend

- Layout 10 - 4 - V162
- Layout 10 - 36 x V136
- Greenwood to Banner - 345 kV

Land Status (2021/01/18)

- Signed
- In Negotiations After Review
- In Negotiations
- Township



RIVERBEND WIND

TITLE:
Figure 1
Preliminary Layout
Map

DATUM/PROJECTION: NAD 1983 UTM ZONE 17N	SCALE: 1:78,000
DRAWN BY: C TAM	DATE: DEC 2, 2025
DRAWING No. RIV - 145	REVISION No. 0

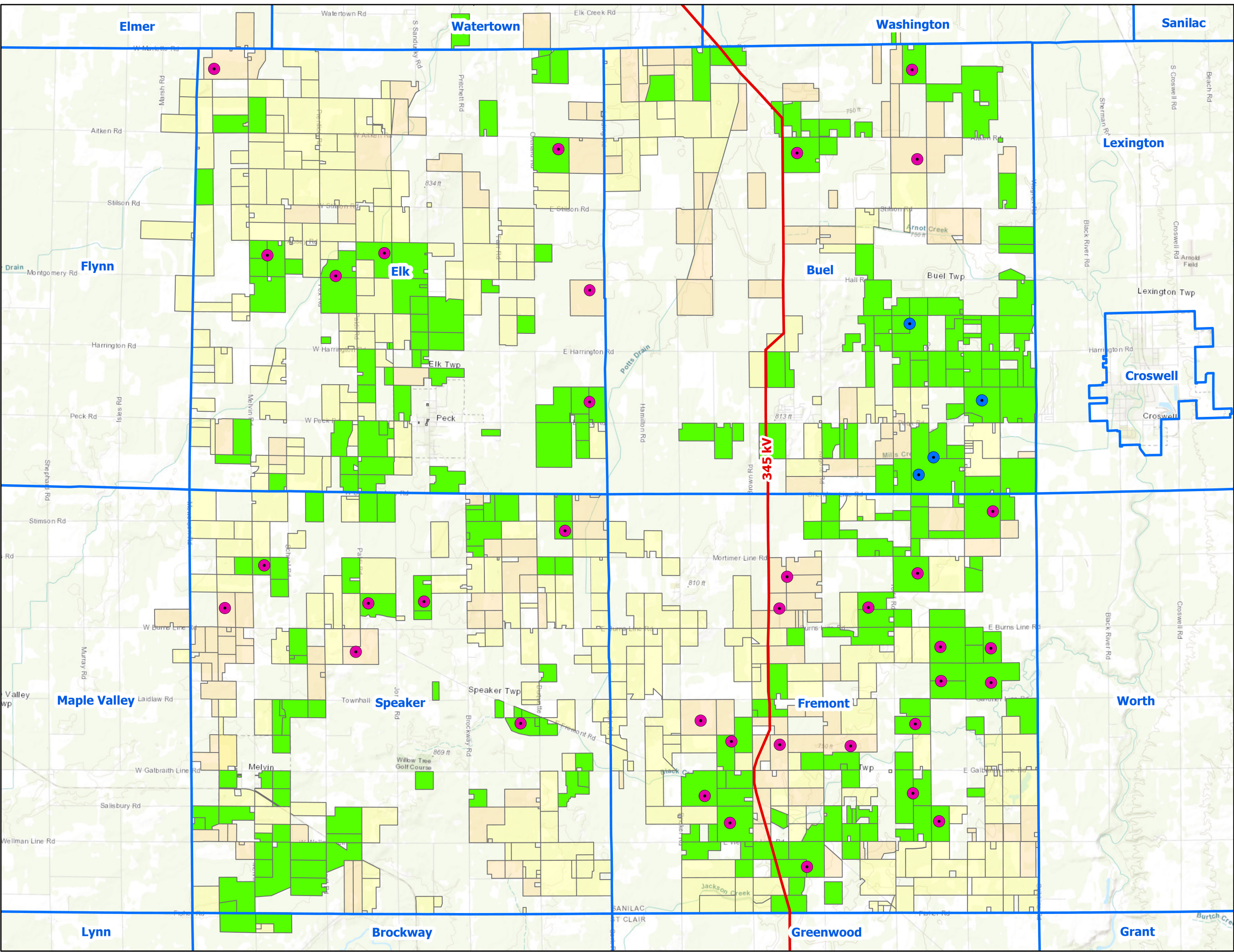


FIGURE 2 – ALTERNATIVE LAYOUT MAP
(Displays previously proposed turbine
locations within the existing Project
Area and alternative layouts for
ancillary infrastructure and
associated impact)



**Know what's below.
Call before you dig.**

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTICE:
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

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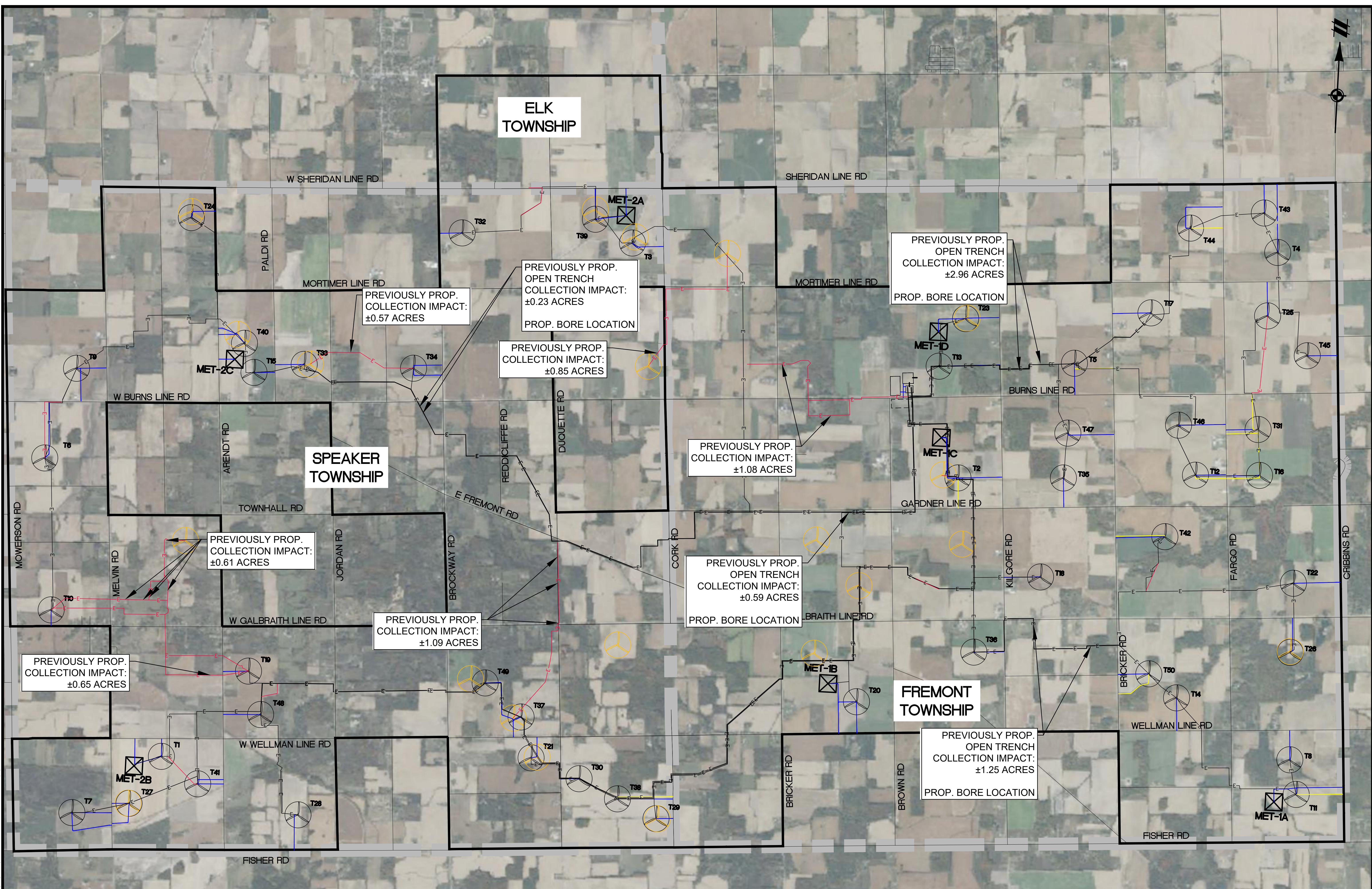
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MI ENERGY DEVELOPMENTS, LLC
RIVERBEND WIND ENERGY FACILITY
EXHIBIT A-1.5 - ALTERNATIVES
ALTERNATIVE LAYOUT MAP

DATE
04/02/2026

REVISIONS

SCALE	0	1000	2000
1" = 2000 FEET			
DR.	MB/GS	CH.	BS
P.M.	BS		
BOOK	--		
JOB	21003645		
SHEET NO.	01		



LEGEND

PROJECT BOUNDARY
TOWNSHIP BOUNDARY LIMITS

PROPOSED COLLECTION LINE ROUTE
(TO BE BURIED NO LESS THAN 5FT)

ALTERNATE COLLECTION LINE ROUTE

PROPOSED CRANEWALK

ALTERNATE TURBINE LOCATION

PROPOSED ACCESS ROAD GRAVEL

PROPOSED ACCESS ROAD GRAVEL (ALTERNATE)

PROPOSED MET TOWER

ISSUED FOR PERMITTING - NOT FOR CONSTRUCTION