

Large Filing Separator Sheet

Case Number : 10-369-EL-BGN

File Date : 5/14/2010

Section : 3 of 3

Number of Pages : 159

**Description of Document : Volume II:
Exhibit A – Exhibit M**

Abstract

In response to a request from Paulding Wind Farm II LLC, JFNew conducted a cultural resources records check for the proposed Timber Road II project in Paulding County, Ohio. The proposed project occurs in a rural setting in Benton and Harrison Townships, Paulding County and includes construction of up to 109 wind turbines and all associated infrastructure including access roads and underground collection lines located within the Timber Road II wind resource area measuring approximately 36,749 acres.

JFNew conducted the cultural resources records check at the Ohio Historic Preservation Office (OHPO). Due to the proximity of the project to the Indiana state line, staff also examined records on file at the Indiana Department of Natural Resources Division of Historic Preservation and Archaeology (DHPA). The records check examined a study area consisting of an 8-km (5-mi) radius around the Timber Road II wind resource area consistent with Ohio Power Siting Board (OPSB) guidelines.

Research revealed that much of the Timber Road II wind resource area has not been subjected to previous investigation. Three previous cultural resource investigations occurred within the wind resource area, including a Phase I cultural resources inventory and assessment for the proposed Timber Road I wind farm project. Additional cultural resource management surveys within the study area include three archaeological reports associated with improvements to U.S. 24, north of the current project, and one archaeological report associated with the County Road 144 widening and culvert extension project. Records show additional survey work in the study area, but these projects are located between 4.8 and 8 km (3 and 5 mi) outside the wind resource area.

The Ohio Archaeological Inventory (OAI) and Indiana State Historic Architectural and Archaeological Research Database (SHAARD) list numerous cultural resources within the study area including over 300 archaeological sites, more than 400 historic structures, and 27 cemeteries. These include 6 archaeological sites, 27 historic structures, and 6 cemeteries within the Timber Road II wind resource area.

Ohio Department of Natural Resources (ODNR) records show no state parks, state forests, or wildlife areas within 8 km (5 mi) of the Timber Road II wind resource area. The ODNR lists the Maumee River as a Scenic River within the study area. A portion of the river flows approximately 800 m (0.5 mile) northwest of the Timber Road II wind resource area. Municipal recreation areas associated with the Village of Payne (Payne Community Park, Riverside Park, and School Park) are located within the wind resource area. Municipal recreation areas associated with the Village of Antwerp (Antwerp Community Park) are located within the 8-km (5-mi) study area. The Antwerp Community Park, however, is located further than one mile from the project.

The Applicant anticipates that all project components can be placed to avoid known cultural resources within the wind resource area. JFNew will begin a Phase I cultural resource reconnaissance survey to assess the effects of the proposed project on cultural resources, including an archaeological reconnaissance to identify cultural resources that may be subject to direct project effects and historic structure inventory and assessment to identify cultural resources that may be subject to visual and/or indirect project effects. A report of investigations will be provided at a future date.

1. INTRODUCTION

In response to a request from Paulding Wind Farm II LLC, JFNew conducted a cultural resources records check for the proposed Timber Road II Project in Benton and Harrison Townships, Paulding County, Ohio. Results of the records check are presented in this report pursuant to Ohio Power Siting Board (OPSB) requirements. The proposed project involves construction of up to 109 wind turbines and all associated infrastructure including access roads and underground collection lines located within the Timber Road II wind resource area measuring approximately 36,749 acres. The project is located in a rural setting in Benton and Harrison Townships dominated by open agricultural fields (Photographs 1 and 2). The purpose of this report is to respond to the requirements of Rule 4906-17-08(D) of the Ohio Administrative Code.

JFNew conducted a records search on February 23, 2010 at the Ohio Historic Preservation Office (OHPO) in Columbus, Ohio. Research focused on an 8-km (5-mi) radius (study area) around the Timber Road II wind resource area, consistent with OPSB guidelines. For the purposes of this report the term wind resource area includes the area defined by all participating parcels in which all project-related construction and/or operation activities will occur. Since the western portion of the study area extends 8-km (5 miles) into the State of Indiana, JFNew also reviewed records on file at the Indiana Department of Natural Resources Division of Historic Preservation and Archaeology (DHPA) in Indianapolis, Indiana on February 24, 2010.

2. REQUIREMENTS OF RULE 4906-17-08(D) OF THE OHIO ADMINISTRATIVE CODE

(1) The Applicant shall indicate, on the 1:24,000 map referenced in paragraph(C)(1)(a) of this rule, any registered landmarks of historic, religious, archaeological, scenic, natural, or other cultural significance within five miles of the proposed facility.

Research was conducted at the OHPO in Columbus, Ohio and the DHPA in Indianapolis, Indiana, consulting the following resources:

- Ohio Archaeological Inventory (OAI)
- Cultural Resource Management Reports
- Ohio Historic Inventory (OHI)
- National Register of Historic Places (NRHP)
- Determination of Eligibility Files (DOE)
- National Historic Landmarks List
- Indiana Historic Sites and Structures Inventory (IHSSI)
- Indiana State Historic Architectural and Archaeological Research Database (SHAARD)

Ohio Archaeological Inventory (OAI)

Records reviewed at the OHPO revealed 85 documented archaeological sites within the 8-km (5-mi) study area (Figure 1) (Table 1). Six (6) archaeological sites occur within the Timber Road II wind resource area: 33-Pa-39 (lithic scatter); 33-Pa-41 (lithic scatter); 33-Pa-223 (Historic farmstead); 33-Pa-241 (a lithic scatter); 33-Pa-242 (Prehistoric Camp); and 33-Pa-245 (Historic debris

scatter) (Figure 1). In the opinion of JFNew, Sites 33-Pa-39, 33-Pa-41, 33-Pa-241 and 33-Pa-245 do not meet the eligibility criteria for listing in the NRHP, but additional work would be necessary to clarify the eligibility of Site 33-Pa-242 for listing in the NRHP (Favret et al. 2010). The applicant, however, plans to avoid Site 33-Pa-242.

Cultural Resource Management (CRM) Reports

Records on file at the OHPO indicate that much of the Timber Road II wind resource area has not been systematically surveyed for cultural resources (Figure 1). One project and portions of two other previous cultural resources investigations occur within the Timber Road II wind resource area. In 2009, JFNew conducted a Phase I archaeological reconnaissance and a Phase I historic structure inventory and assessment for the proposed Timber Road I wind farm project (Favret et al. 2010; Rutter 2010). A Phase I investigation for the proposed Haviland Lateral Interconnect Gas Pipeline was completed in 2004 (Demeter 2004). In the Village of Payne, a Phase I cultural resources investigation was completed for a proposed cellular telecommunications tower in 2007 (Niedermier 2007). The next nearest surveys are related to the proposed road widening of County Road 144 (Schweikart and Randall 2002) and the proposed improvements to U.S. Highway 24, approximately 600 m (0.3 mi) north of the wind resource area (Cameron and Johnson 2004; Schneider et al. 2001).

Ohio Historic Inventory (OHI)

The Ohio Historic Inventory (OHI) lists 290 historic structures within the study area. The vast majority of the historic structures identified are in the Village of Antwerp, to the north of the wind resource area (Figure 1; Table 2). A total of 27 historic structures are within or adjacent to the wind resource area. These include structures within the Village of Payne as well as numerous residences and farmsteads recorded during the 2009 survey by JFNew (Rutter 2010).

Ohio Genealogical Society (OGS) Cemetery Files

A total of 27 cemeteries are mapped within the 8-km (5-mi) radius study area (Figure 1, Table 3). This includes six (6) cemeteries within the current wind resource area: Brady-Finnan-Pleasant Valley, St. John the Baptist Catholic, Dealy [Dealey], LehmanWiltsie, Barbier, Ludwig Plot and one unmarked grave (Figure 1) (Photographs 7 and 8 show views of Dealey and Lehman cemeteries from public rights-of-way). The remaining cemeteries are well outside the wind resource area (4.8 to 8 km [3 to 5 mi]).

National Register of Historic Places (NRHP)

The NRHP lists one property within the study area, the Antwerp Norfolk and Western Depot (#80003205), located on West Water Street in the Village of Antwerp (Figure 1). The Determination of Eligibility (DOE) files list four additional properties within in the study area, also located in the Village of Antwerp. No historic districts are located within the study area.

During the Phase I historic structure inventory and assessment for the Timber Road I wind farm project, JFNew identified 72 properties. In the opinion of JFNew, this includes three historic structures that meet the eligibility criteria for

listing in the NRHP (Rutter 2010). These include the County Road 144 Bridge over South Creek (PAU-03389-04), the County Road 21 Bridge over North Creek (PAU-03416-04), and the former Worm School/Grange Hall (PAU-03409-04). The bridges are significant for their associations with transportation and engineering attributes while the school/grange hall is considered eligible for architecture and association with social contexts. It is unlikely that the Timber Road II project would alter the significant characteristics of these properties because alteration of the viewshed does not affect the attributes that qualifies each for listing in the NRHP (Rutter 2010).

No National Historic Landmarks are located within the study area. The available records do not list any other NRHP listed scenic or natural resources within the study area.

Indiana State Historic Architectural and Archaeological Research Database (SHAARD)

SHAARD lists over 200 prehistoric archaeological sites within the 8 km (5 mi) study area. Nearly all of these sites are clustered along the Maumee River. The majority of these sites were identified in 1987 as part of a Ball State University Archaeological Resource Management Service (ARMS) Survey Grant funded in part by the Indiana Division of Historic Preservation and Archaeology (Mohow 1987). The ARMS survey covered 11.2 km (7 mi) section of the Maumee River in Allen County, Indiana and identified 2,039 prehistoric artifacts and 254 prehistoric sites. All of the sites identified in Indiana are located well outside of the wind resource area and as such, the DHPA prefers not to illustrate their exact locations. Therefore, a site overview map created by the DHPA depicting the 8-km (5 mi) range of the study area located in Indiana (not for publication or distribution) is provided (Figure 2).

Indiana Historic Sites and Structures Inventory (IHSSI)

The IHSSI illustrates 184 historic structures within the 8 km (5 mi) study area (Figure 1). These properties include residences, farmsteads, bridges, commercial buildings, churches, schools, historic markers, canal-related structures, mills, cemeteries, and miscellaneous structures. In addition the towns of Monroeville, Dixon and Woodburn each contain numerous historic structures, with the town of Monroeville classified as a historic district (approximately 5 km [3 mi] southwest of the wind resource area) (Table 4).

The IHSSI provides ratings to quantify the integrity and significance of these historic structures. "Outstanding" is the highest rank and indicates that the structure is listed or is eligible for listing on the National Register of Historic Places (NRHP). A rating of "Notable" indicates that the property is above average in importance, but further investigation is necessary to determine NRHP eligibility. A rating of "Contributing" indicates the property is historic but is not currently eligible for listing on the NRHP. Within the study area 8 structures received the rating of Outstanding and 28 properties received a Notable rating.

(2) The Applicant shall estimate the impact of the proposed facility on the preservation and continued meaningfulness of these landmarks and describe plans to mitigate any adverse impact.

The cultural resources records review identified relatively few previously recorded cultural resources within the wind resource area. These include 6 archaeological sites, 27 historic structures, and 6 cemeteries. The Applicant anticipates that all project components including wind turbines, access roads, a substation, an Operations and Maintenance building, a laydown yard and underground collection lines will be located to avoid previously identified cultural resources within the wind resource area.

The literature review indicated that much of the wind resource area has not been systematically surveyed for the presence of cultural resources. Based on the prehistoric context of the area, unidentified prehistoric archaeological sites may be located in or near the Timber Road II wind resource area and may represent a range of site types and time periods. Unidentified archaeological sites may occur along slight topographic features and ridges. Prehistoric site types that could be located within the Timber Road II wind resource area range from isolated artifacts reflective of a single episode in the past, to small short term occupations, resource extraction, or other activity specific sites, or large occupation sites, and can range in date from the Paleoindian period to the Protohistoric period.

Based on the historic context of the area, any unidentified historic archaeological sites located within the Timber Road II wind resource area are likely to be related to agricultural and/or rural domestic activity associated with the historic development of Paulding County. Some common site types that may be represented include farmsteads or other residential sites, churches, cemeteries, schools, or historic dump and debris discard areas.

Based on the results of the records check, the proposed facility is not likely to have direct impacts on known cultural resources within the study area and therefore no specific mitigation plans have been developed at this time. Furthermore, the results of analyses performed for the Timber Road I wind farm indicate that the region does not warrant consideration as a significant rural historic vernacular landscape eligible for listing in the NRHP (Rutter 2010).

Because the proposed turbines would not physically alter any registered landmarks, potential impacts to NRHP-listed and NRHP-eligible structures would be limited to indirect or visual effects. Wind turbines may be visible at a distance along the horizon, in the viewshed from the local communities, however, specific locations of turbines are not known at this time (Photographs 3-6 show representative views from the Village of Antwerp). The Applicant, however, recognizes that the majority of the Timber Road II wind resource area has not been systematically surveyed for cultural resources.

JFNew anticipates performing a Phase I archaeological reconnaissance survey and Phase I historic structure inventory and assessment survey to assess the effects of the proposed project on these cultural resources in the spring of 2010. Cultural resources identified within the Timber Road II wind resource area during the Phase

I investigation will be documented and avoided. If avoidance is not possible, a Phase II investigation will take place to assess the significance of cultural resources within the Timber Road II wind resource area.

The results of the Phase I archaeological reconnaissance and historic structure inventory and assessment investigation for the Timber Road II wind resource area will be presented in a complete report of investigations to be provided at a future date following completion of the fieldwork.

- (3) Landmarks to be considered for purposes of paragraphs (D)(1) and (D)(2) of this rule are those districts, sites, buildings, structures, and objects which are recognized by, registered with, or identified as eligible for registration by the national registry of natural landmarks, the Ohio Historical Society, or the Ohio Department of Natural Resources.**

Landmarks considered in the JFNew cultural resources records check include those districts, sites, buildings, structures and objects which are recognized by, registered with or identified as eligible for listing in the National Registry of Natural Landmarks, the OHPO or the Ohio Department of Natural Resources. These landmarks are described in greater detail in section 2 above.

- (4) The Applicant shall indicate, on the 1:24,000 map referenced in paragraph (C)(1)(a) of this rule, existing and formally adopted land and water recreation areas within five miles of the proposed facility.**

The Timber Road II wind resource area is located in a portion of Paulding County that is almost exclusively agricultural fields. As such, there are no Ohio municipal golf courses or other large land recreation areas within five miles of the proposed facility. Review of ODNR records show no state parks, state forests, or wildlife areas within five miles of the proposed facility. The Maumee River, an ODNR listed Scenic River, flows north of the wind resource area, approximately 800 m (0.5 mi) northwest of the northern limits of the Timber Road II wind resource area at its closest point (Figure 1). The scenic portion of the Maumee River originates at the Ohio-Indiana state line travelling through the portions of Paulding and Defiance Counties and extends 43 miles to the U.S. 24 Bridge, west of Defiance. Three municipal recreation areas are located within the wind resource area near the Village of Payne (Payne Community Park, Riverside Park, School Park) (Table 5). Other municipal recreation areas are associated with the Village of Antwerp (Antwerp Community Park) (Table 5).

- (5) The Applicant shall describe the identified recreational areas within one mile of the proposed project area in terms of their proximity to population centers, uniqueness, topography, vegetation, hydrology, and wildlife; estimate the impact of the proposed facility on the identified recreational areas; and describe plans to avoid, minimize, or mitigate any adverse impact.**

Review of records show no state parks, state forests, or wildlife areas within one mile of the proposed facility. Three municipal recreation areas are located within the current wind resource area (Payne Community Park, Riverside Park, and School

Park), however, no other municipal recreation areas are located within one mile of the Timber Road II wind resource area. The Maumee River, a registered Scenic River, is located north of the Timber Road II wind resource area, its closest point located approximately 800 m (0.5 mi) northwest of the northern wind resource area. The Maumee River was designated a State Scenic River in 1974. The scenic portion of the river begins at the Ohio-Indiana border, traveling 43 miles northeast toward the Town of Defiance. The river flows through a healthy forested corridor characterized by relatively high valley walls compared to the broad level floodplain comprising the surrounding terrain (Ohio Department of Natural Resources – Division of Natural Areas and Preserves 2009). The Maumee River watershed as a whole drains over 5,000 square miles

Because the proposed turbines would not physically alter any recreational areas, including the Maumee River, potential impacts to the scenic portion of the Maumee River are likely limited to indirect or visual effects. Wind turbines may be visible at a distance along the horizon, in the viewshed from river and municipal parks; however, specific locations of turbines are not known at this time (Photograph 11 shows the view toward the project setting from north of the river). The Maumee River, at this location is confined to a valley below the overall grade of the landscape and the view from the river to the south consists of a steep terrace. Based on the results of the 2009 survey for the Timber Road I wind farm, turbines in the northern portion of the Timber Road II wind resource area are not likely to be an element in the viewshed from the Maumee River (Rutter 2010).

The Applicant will conduct a Phase I historic structure inventory and assessment survey to assess the indirect effects of the proposed project on the scenic portion of the Maumee River and municipal parks, as well as the additional cultural resources (NRHP-listed and NRHP-eligible resources) located outside the Timber Road II wind resource area, but within the study area. Cultural resources identified within the Timber Road II wind resource area during the Phase I investigation will be documented and avoided. If avoidance is not possible, then a Phase II investigation will take place to assess the significance of cultural resources within the Timber Road II wind resource area. The results of the Phase I (and any necessary additional) work will be presented in a complete report of investigations, which will be provided at a future date.

- (6) The applicant shall describe measures that will be taken to minimize any adverse visual impacts created by the facility, including, but not limited to, wind resource area location, lighting, and facility coloration. In no event shall these measures conflict with relevant safety requirements.***

As described in Section 4906-13-07(D)(2) of this application, no adverse visual impacts to archaeological or historical landmarks are anticipated from construction and operation of the facility, however, much of the Timber Road II wind resource area has not been systematically surveyed for cultural resources. The applicant will initiate a Phase I cultural reconnaissance survey, including archaeological reconnaissance to assess the direct effects of the proposed project and historic structure inventory and assessment survey to assess the indirect effects of the proposed project. The Phase I survey is anticipated to occur in the spring of 2010.

A complete report of investigations for the Phase I survey will be provided at a future date. No specific mitigation measures are proposed at this time.

3. SUMMARY AND CONCLUSION

Paulding Wind Farm II LLC contracted JFNew to conduct a cultural resource records check for the proposed Timber Road II project in Paulding County, Ohio. A review of records took place at the OHPO on February 23, 2010 and DHPA on February 24, 2010.

Over 400 historic structures have been recorded within the study area, with the vast majority located in communities outside the wind resource area (Figure 1, Table 2). These include 27 documented historic structures within the Timber Road II wind resource area.

The Antwerp Norfolk and Western Depot (#80003205), an NRHP-listed structure, and two additional NRHP eligible structures are located approximately 1.6 km (1 mi) north of the wind resource area, in the Village of Antwerp.

Six cemeteries (Brady-Finnan-Pleasant Valley, St. John the Baptist Catholic, Dealy, Lehman, Wiltsie, Barbier and Ludwig Plot) are located within the limits of the Timber Road II wind resource area.

The records check indicated that over 300 archaeological sites occur within the study area. Of these, six (6) previously recorded archaeological resources are located within or adjacent to the Timber Road II wind resource area.

ODNR records show no state parks, state forests, or wildlife areas within five miles of the proposed facility. Municipal parks in the communities of Antwerp and Payne are located within the 8-km (5-mi) radius of the project. Three of these features (Payne Community Park, Riverside Park, and School Park) are located within the wind resource area. ODNR records list the Maumee River as a Scenic River located approximately 800 m (0.5 mile) north of the Timber Road II wind resource area.

The proposed project is not expected to directly impact known cultural resources within the study area. However, the majority of the Timber Road II wind resource area has not been systematically surveyed for cultural resources. The Applicant will initiate a Phase I archaeological reconnaissance and historic structure inventory and assessment survey to assess the effects of the proposed project on cultural resources located within the wind resource area and study area. The Phase I survey is anticipated to begin in the spring of 2010. A complete report of investigations will be provided at a future date.

4. REFERENCES CITED

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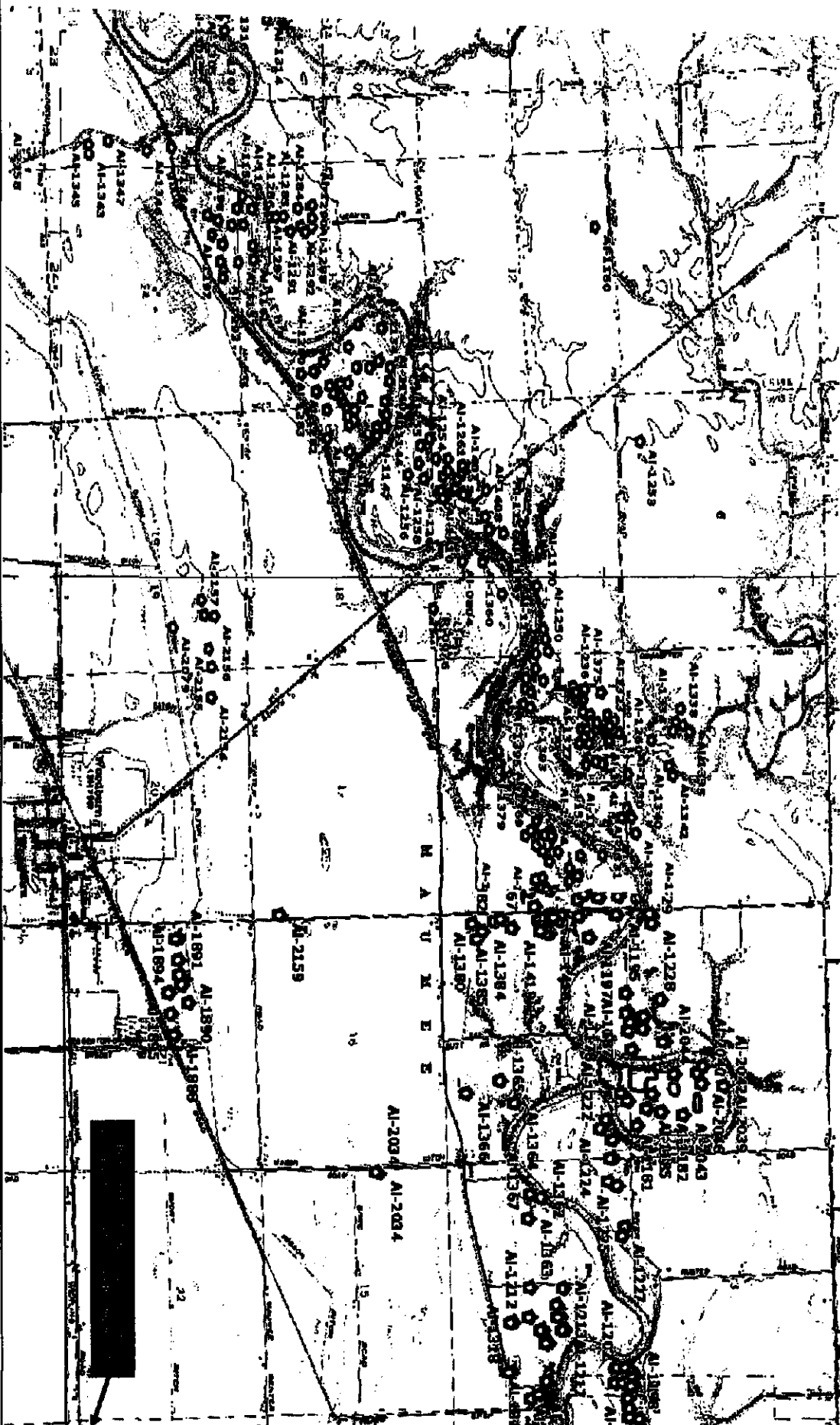


Table 1– Previously Recorded Ohio Archaeological Inventory Sites in the Study Area

Table 1: Previously Recorded Ohio Archaeological Inventory Sites in the Study Area

PA0197	16	699445	4566565		Prehistoric
PA0198	16	694920	4563530		Prehistoric
PA0164	16	698960	4564570	Antwerp	Prehistoric
PA0165	16	699220	4564700	Paulding	Prehistoric
PA0106	16	700864	4555081	Latty	Prehistoric
PA0105	16	700594	4555001	Latty	Prehistoric
PA0149	16	692350	4561040	Antwerp	Prehistoric and Historic
PA0150	16	692400	4561010	Antwerp	Prehistoric and Historic
PA0151	16	692480	4561140	Antwerp	Prehistoric
PA0152	16	692590	4561280	Antwerp	Prehistoric
PA0039	16	689827	4542189	Payne	Prehistoric
PA0040	16	694210	4544510	Payne	Prehistoric
PA0041	16	692310	4543690	Payne	Prehistoric
PA0042	16	697870	4553990	Payne	Prehistoric
PA0043	16	697783	4553815	Payne	Prehistoric
PA0044	16	694040	4543520	Payne	Prehistoric
PA0057	16	692646	4564173	Antwerp	Prehistoric
PA0058	16	690594	4563298	Antwerp	Prehistoric and Historic
VW0183	16	690220	4533320	Convoy	Historic
VW0184	16	690270	4533140	Convoy	Historic
VW0185	16	690390	4533220	Convoy	Prehistoric
VW0186	16	690130	4533180	Convoy	Prehistoric
VW0187	16	690180	4533080	Convoy	Prehistoric
VW0188	16	690320	4533100	Convoy	Prehistoric
VW0104	16	702260	4533270	Scott	Prehistoric
VW0105	16	699650	4534620	Convoy	Prehistoric
VW0106	16	699900	4534760	Convoy	Prehistoric
VW0107	16	700540	4535160	Scott	Prehistoric
PA0221	16	698995	4567085		Prehistoric
PA0193	16	695510	4565700		Prehistoric
PA0211	16	698525	4564350		Prehistoric
PA0219	16	697910	4566565		Prehistoric
PA0194	16	696160	4564240		Prehistoric
PA0195	16	697330	4566950		Prehistoric and Historic
PA0203	16	693235	4563585		Prehistoric
PA0204	16	693625	4564230		Prehistoric
PA0212	16	696105	4563650		Prehistoric
PA0206	16	695167	4565670		Prehistoric and Historic
PA0207	16	697575	4567470		Prehistoric
PA0214	16	694500	4565170		Prehistoric
PA0215	16	694880	4565210		Prehistoric
PA0201	16	692935	4563320		Prehistoric
PA0218	16	694930	4565680		Prehistoric
PA0209	16	693045	4563970		Prehistoric
PA0217	16	694930	4565680		Prehistoric
PA0210	16	699110	4566360		Prehistoric
PA0192	16	690605	4562620		Prehistoric
PA0184	16	698340	4564495	Antwerp	Historic
PA0185	16	698840	4564420	Antwerp	Prehistoric
PA0188	16	692500	4563490		Prehistoric
PA0189	16	693015	4563250		Prehistoric
PA0190	16	693385	4564010		Prehistoric
PA0191	16	693775	4564385		Prehistoric
PA0223	16	691340	4549850	Payne	Historic
PA0180	16	690230	4559790	Antwerp	Prehistoric

Table 1: Previously Recorded Ohio Archaeological Inventory Sites in the Study Area

Site Number	County	Section	Range	Township	Period
PA0199	16	694155	4563720		Prehistoric
PA0216	16	694635	4565300		Prehistoric
PA0176	16	692380	4557740	Antwerp	Historic
PA0177	16	695470	4565870	Antwerp	Prehistoric
PA0178	16	695714	4552363	Payne	Prehistoric and Historic
PA0179	16	689570	4559630	Antwerp	Prehistoric
PA0181	16	690390	4559920	Antwerp	Prehistoric
PA0182	16	691020	4560100	Antwerp	Prehistoric
PA0183	16	691140	4560045	Antwerp	Prehistoric
PA0196	16	698065	4566315		Prehistoric
PA0205	16	697650	4566740		Prehistoric
PA0142	16	685360	4558360	Woodburn North (Ind.)	Historic
PA0213	16	694650	4565025		Prehistoric
PA0143	16	686130	4558930	Woodburn North (Ind.)	Prehistoric
PA0144	16	689570	4559740	Antwerp	Prehistoric
PA0145	16	690510	4559840	Antwerp	Prehistoric
PA0146	16	690600	4559840	Antwerp	Historic
PA0147	16	691440	4560190	Antwerp	Prehistoric and Historic
PA0148	16	691630	4560340	Antwerp	Prehistoric
PA0153	16	693260	4562010	Antwerp	Historic
PA0154	16	694730	4563100	Antwerp	Prehistoric and Historic
PA0155	16	694940	4564010	Antwerp	Prehistoric and Historic
PA0156	16	695080	4563120	Antwerp	Historic
PA0157	16	695420	4563250	Antwerp	Historic
PA0158	16	696530	4563720	Antwerp	Historic
PA0159	16	697440	4564000	Antwerp	Prehistoric
PA0160	16	697630	4564090	Antwerp	Prehistoric
PA0161	16	697730	4564011	Antwerp	Prehistoric
PA0162	16	698970	4564330	Antwerp	Prehistoric and Historic
PA0163	16	698890	4564580	Antwerp	Prehistoric and Historic
PA0241	16	686868	4558819	Antwerp	Prehistoric
PA0242	16	687865	4559020	Antwerp	Prehistoric
PA0243	16	689725	4558997	Antwerp	Prehistoric
PA0244	16	689944	4555530	Antwerp	Historic
PA0245	16	688528	4556199	Antwerp	Historic

Table 2 – Previously Recorded Ohio Historic Inventory Sites in the Study Area

Table 2: Previously Recorded Ohio Historic Inventory Sites in the Study Area

PAU0034601	16	686940	4560120	Schlegel House	2660 CR 250	Vernacular	
PAU0034701	16	686950	4560140	Schlegel House	2674 CR 250	Vernacular	
PAU0000202	16	699590	4566640	Curtis House	CR 192	Federal	1825
PAU0000309	16	696482	4543288	Roy Green House	127	Vernacular	1890
PAU0003205	16	698898	4554298	No 1	SEC SR 500 & CR 87	Vernacular	1900
PAU0004901	16	689400	4560880	Church	Daggett	Late Gothic Revival	1910
PAU0005008	16	690888	4549587	Cath Church	203 W Townline St	Late Gothic Revival	1905
PAU0007501	16	688420	4565730	House	CR 230	Vernacular	1890
PAU0007701	16	690415	4566410	RL Carr House	SEC CR 45 & CR 220	Vernacular	1870
PAU0007801	16	691040	4564200		TR 53	Vernacular	1900
PAU0007901	16	689300	4564060	Dunderman House	204	Vernacular	1880
PAU0008001	16	685570	4559560	Everett Wann House	24	Vernacular	1880
PAU0008101	16	692450	4560600	House	NEC TR 162 & TR 51	Vernacular	1900
PAU0009901	16	689560	4560800		Canal St W of Main St	Vernacular	1840
PAU0010002	16	696060	4562420	House	180	Vernacular	1880
PAU0010102	16	696890	4562880	House	180	from OHI Form	1900
PAU0010202	16	697030	4563880	Chester School	Western RR	Vernacular	1900
PAU0010302	16	696040	4565630	Knoxdale Depot	SR 24 E of TR 73	Vernacular	1880
PAU0010402	16	695340	4566000	Methodist Church	TR 192 at CR 73	Vernacular	1900
PAU0010502	16	696100	4566060	Forrest House	TR 192 E of CR 73	Italianate	1880
PAU0010802	16	695400	4561060	Bridg Stone	SWC CR 176 & TR 71		1892
PAU0011902	16	698700	4564410		CR 206 E of CR 87	Vernacular	1890
PAU0012401	16	693899	4561003	Six Mile Reservoir			1840
PAU0012501	16	690597	4561040	N Hartmann House	14055 CR 43	Empire/Mansard	1880
PAU0012601	16	689360	4561220		106 Archer DR	Vernacular	1915
PAU0012701	16	689285	4564200	School	302 W Archer DR	Revival	1911
PAU0012801	16	689625	4560750		101 W Canal St	Bungalow	1915
PAU0012901	16	689440	4561140	Church	102 N Cleveland St	Late Gothic Revival	1901

Table 2: Previously Recorded Ohio Historic Inventory Sites in the Study Area

PAU0013001	16	689426	4561157	Parsonage	104 N Cleveland St	Vernacular	1948
PAU0013101	16	689745	4561020		203 E Daggett St	Vernacular	1900
PAU0013201	16	689220	4560865		404 W Daggett St	Vernacular	1910
PAU0013301	16	689140	4560825		410 W Daggett St	Vernacular	1915
PAU0013401	16	689805	4560695		203 S Erie St	Bungalow	1915
PAU0013501	16	689780	4561640		613 S Erie St	Vernacular	1890
PAU0013601	16	689220	4561360	Riverside Cemetery	Island & E River St		
PAU0013701	16	690080	4561090	Banks House	103 Kroos Dr	Queen Anne	1900
PAU0013801	16	689120	4561260		301 Madison St	Bungalow	1940
PAU0013901	16	689470	4561150	Noah Yoder Sales	101 N Main St	Vernacular	1965
PAU0014001	16	689520	4561160	Station	102 N Main St	from OHI Form	1945
PAU0014101	16	689640	4561150	Flooring	103-105 N Main St	Vernacular	1950
PAU0014201	16	689500	4561200	Carlas Cut N Curl	St	Vernacular	1905
PAU0014301	16	689460	4561200	Club	107 N Main St	Italianate	1868
PAU0014401	16	689500	4561200	Showroom	108-110 N Main St	Vernacular	1932
PAU0014501	16	689490	4561230	Hall/Ehrhart Muse	N Main St	Revival	1912
PAU0014601	16	689450	4561200	Leinards Chevrolet	109 N Main St	Vernacular	1952
PAU0014701	16	689440	4561250	Antwerp Bee-Argus	113 N Main St	Italianate	1880
PAU0014801	16	689420	4561220		201 N Main St	Vernacular	1885
PAU0014901	16	689401	4561280		203 N Main St	Queen Anne	1891
PAU0015001	16	689470	4561280		204 N Main St	Vernacular	1890
PAU0015101	16	689396	4561302	EE Downing House	205 N Main St	Queen Anne	1895
PAU0015201	16	689385	4561325	G Harris House	207 N Main St	Queen Anne	1892
PAU0015301	16	689450	4561330	E Applegate House	208 N Main St	Vernacular	1910
PAU0015401	16	689460	4561300	Garrothers House	233 N Main St	Bungalow	1925
PAU0015501	16	689440	4561350	Hertel House	245 N Main St	Revival	1915
PAU0015601	16	689380	4561370		301 N Main St	Revival	1910
PAU0015701	16	689430	4561380	MA Snyder House	302 N Main St	Vernacular	1900

Table 2: Previously Recorded Ohio Historic Inventory Sites in the Study Area

PAU0015801	16	689370	4561390		303 N Main St	Eastlake	1900
PAU0015901	16	689420	4561390	Rupert House	304 N Main St	Revival	1925
PAU0016001	16	689360	4561405	Shaffer House	305 N Main St	Bungalow	1915
PAU0016101	16	689420	4561410	J Shafer House	306 N Main St	Vernacular	1915
PAU0016201	16	689340	4561430	House	307 N Main St	Vernacular	1965
PAU0016301	16	689325	4561425		309 N Main St	Empire/Mansard	1875
PAU0016401	16	689405	4561453		310 N Main St	Crafts	1920
PAU0016501	16	689400	4561450	Langham House	312 N Main St	Prairie	1920
PAU0016601	16	689340	4561490	Dunderman House	313 N Main St	Vernacular	1885
PAU0016701	16	689400	4561470		314 N Main St	Vernacular	1945
PAU0019401	16	689540	4561030	Coffee Shop	202-204 S Main St	Romanesque	1893
PAU0019501	16	689540	4560985	Haver Furn	203 S Main St	Not Determined	1890
PAU0019601	16	689540	4560980	Bears Den	205 S Main St	Romanesque	1898
PAU0019701	16	689540	4560970	Ehrhart Studle	207 S Main St	Vernacular	1890
PAU0019801	16	689580	4561010		210 S Main St	Revival	1927
PAU0019901	16	689575	4561020	Pats Treasures	209 S Main St	Vernacular	1893
PAU0020001	16	689540	4560965	Antwerp Sales	211 S Main St	Vernacular	1890
PAU0020101	16	689590	4561010	Seslar Garage	212 S Main St	Vernacular	1912
PAU0020201	16	689585	4560980	Earls Arcade	214 S Main St	Vernacular	1895
PAU0020301	16	689520	4560990		215 S Main St	Vernacular	1880
PAU0020401	16	689585	4560950	Red Angel Pizza	302 S Main St	Italianate	1874
PAU0020501	16	689580	4560990	Masonic Temple	306-310 S Main St	Vernacular	1900
PAU0020601	16	689632	4560890	Long House	402 S Main St	Bungalow	1920
PAU0020701	16	689500	4560800	Clinton House	403 S Main St	Vernacular	1915
PAU0020801	16	689630	4566085	Herzer House	404 S Main St	Crafts	1915
PAU0020901	16	689425	4561485	Tracy House	103 Mervin St	Vernacular	1920
PAU0021001	16	689405	4561520		104 E Mervin St	Crafts	1920
PAU0021101	16	689445	4561485		105-105 1/2 Mervin St	Vernacular	1895

Table 2: Previously Recorded Ohio Historic Inventory Sites in the Study Area

PAU0021201	16	689465	4564540	Carrie Filler House	106 Mervin St	Bungalow	1925
PAU0021301	16	689485	4561485	Kralley House	107 Mervin St	Empire/Mansard	1880
PAU0021401	16	689540	4561565	Bissell House	202 E Mervin St	Vernacular	1895
PAU0021501	16	689385	4560845	Rectory	303 S Monroe St	Vernacular	1912
PAU0021601	16	689520	4561520		204 Oswalt St	Vernacular	1885
PAU0021701	16	689445	4560965	Albert Smith House	203 W Railroad St	Vernacular	1915
PAU0021801	16	689440	4560965	Peffley House	205 W Railroad St	Vernacular	1915
PAU0021901	16	689325	4560940	S Cromley House	303 W Railroad St	Vernacular	1915
PAU0022001	16	689550	4561125	House	103 E River St	Bungalow	1925
PAU0022101	16	689605	4561150		111 E River St	Queen Anne	1905
PAU0022201	16	689625	4561185	Gordon House	119 E River St	Queen Anne	1905
PAU0022301	16	689710	4561210		141 E River St	Crafts	1925
PAU0022401	16	689590	4561200	Gordon House	203 E River St	Empire/Mansard	1875
PAU0022501	16	689632	4561168	Waters House	205 E River St	Vernacular	1915
PAU0022601	16	689660	4561185		207 E River St	Vernacular	1915
PAU0022701	16	689680	4561149	Fields House	289 E River St	Colonial Revival	1945
PAU0022801	16	689380	4561105	Zuber House	208 W River St	Empire/Mansard	1880
PAU0022901	16	689360	4561100		214 W River St	Crafts	1915
PAU0023001	16	689340	4561085		220 W River St	Queen Anne	1900
PAU0023101	16	689305	4561035	PF Tom S House	301 W River St	Crafts	1920
PAU0023201	16	689180	4561005	Rice House	414 W River St	Bungalow	1920
PAU0023301	16	689165	4560745	Krider House	507 W Washington St	Vernacular	1910
PAU0023401	16	689460	4561735	J Border House	209 Wilcox	Vernacular	1915
PAU0023501	16	689485	4564365		103 E Woodcox St	Vernacular	1915
PAU0023601	16	689500	4561405	Bell House	106 Woodcox St	Crafts	1920
PAU0023701	16	689180	4561285		208 Woodcox St	Revival	1910
PAU0023801	16	689160	4561275	Ziegler House	290 Woodcox St	from OHI Form	1910
PAU0023901	16	689300	4561325	Sebert House	106 W Woodcox St	Bungalow	1920

Table 2: Previously Recorded Ohio Historic Inventory Sites in the Study Area

PAU0024001	16	689595	4561155		109 E River St	Vernacular	1900
PAU0024102	16	694935	4563080		69 (Knox Rd)	Vernacular	c. 1892
PAU0024501	16	692915	4559405		Eiters Rd		
PAU0024601	16	693770	4559765	Thomas Farmstead	13507 TR 61		
PAU0024701	16	690730	4559905		13381 TR 43	Vernacular	1905
PAU0024801	16	687987	4559237	Farmstead	3337 CR 162	Vernacular	40
PAU0025001	16	689853	4560145	Market	St)	Vernacular	1895
PAU0025101	16	689928	4560106		624 SR 49 (Main St)	Vernacular	1950
PAU0025201	16	692680	4561908	Farmstead	Rd & Wabash Rd)	Vernacular	1892
PAU0025301	16	689081	4559698		162 on Eside of Rd	Vernacular	1930
PAU0025401	16	689938	4559867	Farmstead	13390 SR 49	Vernacular	1898
PAU0025702	16	694429	4562288		Rd) (Wabash Rd)	Vernacular	50
PAU0025502	16	694331	4560995		7292 CR 176	Vernacular	1909
PAU0025602	16	699196	4564385	Stuart Farmstead	10372 CR 206		1910
PAU0025802	16	693915	4562305	Farmstead	Rd)	Vernacular	1947
PAU0025902	16	695618	4562497	Wilhelm House	Rd)	Vernacular	1950
PAU0026002	16	698619	4564428		10017 CR 206	Vernacular	1892
PAU0026602	16	694942	4562654		Rd)	Vernacular	50
PAU0026502	16	697060	4562523	J Lust House	14862 TR 83	Vernacular	1905
PAU0026802	16	697022	4563044		15311 TR 83		
PAU0031201	16	689380	4561066		205 W River St	Vernacular	35
PAU0026902	16	696930	4563815	Gallup Farmstead	15661 TR 83	Vernacular	1892
PAU0027002	16	697095	4563899	Klender Farmstead	15700 TR 83	Vernacular	1892
PAU0027602	16	694667	4562301		TR 61 - on Sside of	Vernacular	40
PAU0029204	16	684413	4554733	Keible Farmstead	(Rd 1)	Vernacular	1930
PAU0029304	16	687567	4556164	Baumert Farmstead	11080 CR 21	Vernacular	1930
PAU0029604	16	690669	4557868		12102 SR 49		
PAU0029504	16	684327	4558293	Doctors Farmstead	(Rd 1)	Vernacular	1892

Table 2: Previously Recorded Ohio Historic Inventory Sites in the Study Area

PAU0029704	16	687494	4555963	Farmstead	2890 SR 111	Vernacular	c.1940
PAU0029804	16	684774	4558344	Smith Farmstead	Rd)	Vernacular	1910
PAU0029901	16	687397	4559302		13053 CR 21	Vernacular	1930
PAU0030004	16	685638	4558377	Ferrare Farmstead	14409 TR 150	Crafts	c.1927
PAU0030102	16	694945	4564309		7761 US 24	Vernacular	1910
PAU0030301	16	689235	4561000	House	(was 403 W River)	Vernacular	1939
PAU0030201	16	689413	4561077	House	101 Cleveland	Vernacular	1900
PAU0030401	16	688989	4560891	Muir House	(was 501 W River)	Vernacular	1910
PAU0030501	16	689460	4561100	Antiques	103 W River St	Vernacular	c.1900
PAU0034401	16	691055	4562172	Davis Barn	14878 CR 43		
PAU0034501	16	687954	4560491		2485 US 24	Vernacular	50
PAU0030601	16	689240	4561000		antwerp)	Vernacular	65
PAU0030701	16	687380	4560290		2995 US 24	Vernacular	1965
PAU0030801	16	689655	4561179		201 E River St	Vernacular	1910
PAU0031101	16	689393	4561070	Orthman House	203 W River St	Vernacular	30
PAU0030901	16	689400	4561114	Home	204 W River)	Vernacular	1895
PAU0031001	16	689674	4561187		203 E River St	Vernacular	1900
PAU0031301	16	689372	4561060	House	207 W River St	Vernacular	1920
PAU0031401	16	689355	4561052	Delores Hart House	225 W River)	Greek Revival	1900
PAU0031501	16	689280	4561020	Melanie Bair House	317 W River)	Vernacular	1906
PAU0031601	16	689265	4561015	House	307 W River St	Vernacular	c.1900
PAU0031801	16	689215	4560990		403 W River St	Vernacular	1925
PAU0031701	16	689215	4561035	Steven Foust House	402 W River St	Vernacular	c.1947
PAU0031901	16	689205	4561030	House	404 W River St	Empire/Mansard	1890
PAU0032001	16	689185	4561020	House	418 W River)	Vernacular	1900
PAU0033801	16	689820	4561320	Riverside Park	of Riverside Cemetery		1888
PAU0032101	16	689185	4560980	House	417 W River)	Vernacular	c.1935
PAU0032201	16	689165	4561010	Robert Lee House	424 W River)	Colonial Revival	1941

Table 2: Previously Recorded Ohio Historic Inventory Sites in the Study Area

PAU0032301	16	689145	4561000	House	410 W River	Vernacular	1910
PAU0033001	16	688875	4560870		516 W River St	Vernacular	1910
PAU0032401	16	689150	4560960		411 W River St	Vernacular	1910
PAU0032501	16	689120	4560991	Larry Ryan House	428 W River)	Vernacular	1910
PAU0032601	16	689064	4560965	House	418 W River St	Vernacular	1945
PAU0032701	16	689043	4560955	Roland Rister House	420 W River St	Vernacular	1900
PAU0032801	16	689023	4560947		426 W River St	Vernacular	1900
PAU0032901	16	688988	4560936	James Gayle House	616 W River)	Vernacular	1900
PAU0033101	16	688781	4560813		526 W River St	Crafts	1930
PAU0033201	16	694979	4564026	Farmstead	Rd)	Vernacular	1920
PAU0033302	16	695360	4565490	House	16708 CR 73	Vernacular	1890
PAU0034801	16	689960	4561300	Station	303 E River St		1940
PAU0034901	16	687800	4560460	Kobee House	3237 US 24	Vernacular	c. 1940s
PAU0035201	16	687890	4560510		3915 CR 250	Vernacular	49
PAU0035001	16	688010	4560530	Hertel	3375 US 24	Vernacular	c. 1940s
PAU0035101	16	688320	4560680	Addie McAlexander	3585 US 24	Vernacular	1891
PAU0035301	16	690406	4561450	Hedrick House	408 E River St	Vernacular	1920
PAU0035401	16	690429	4561460	Riverside Restaurant	410 E River St	Vernacular	45
PAU0035501	16	691325	4562317	Schroeder Assc Inc	5554 US 24		pre 1950
PAU0035601	16	693000	4563323	House	6511 US 24	Vernacular	c. 1892
PAU0036001	16	690840	4562000	Maumee Cemetery	S of Maumee River		c. 1880
PAU0036101	16	691470	4562460		mi W of CR 43	Vernacular	30
PAU0035801	16	690510	4561530		Antwerp - Nside of Rd		c. 1940s
PAU0035901	16	692528	4563095	Carr Farmstead	6227 US 24	Queen Anne	1910
PAU0036202	16	698770	4566210		10140 US 24	Vernacular	1910
PAU0036602	16	693984	4563940	Lloyd House	7089 US 24	Vernacular	1910
PAU0036702	16	696030	4565620	Richart House	8446 US 24	Vernacular	1920
PAU0036802	16	697000	4565720	Farmstead	9061 US 24	Vernacular	c. 1900

Table 2: Previously Recorded Ohio Historic Inventory Sites in the Study Area

PAU0037002	16	696275	4565648	Crib Barn	US 24		
PAU0036902	16	697670	4566030	House	9435 US 24	Vernacular	1999
PAU0038205	16	695617	4552318	Reville Farmstead	CR 71 at SR 500	Vernacular	1855
PAU0038004	16	684840	4558918		1358 US 24	Vernacular	1920
PAU0016801	16	689325	4561470	Green House	348 N Main St	Queen Anne	1885
PAU0016901	16	689305	4561525	Bliss House	401 N Main St	Vernacular	1915
PAU0017001	16	689380	4561500	Cottrell House	402 N Main St	Vernacular	1900
PAU0017101	16	689300	4561550	Ely House	403 N Main St	Vernacular	1915
PAU0017201	16	689300	4561590	Hudson House	405 N Main St	Vernacular	1915
PAU0017301	16	689280	4561750	Sperry House	406 N Main St	Vernacular	1900
PAU0017401	16	689290	4561605	Smith House	407 N Main St	Revival	1915
PAU0017501	16	689260	4561720	Parrett House	411 N Main St	Bungalow	1920
PAU0017601	16	689320	4566170	Lucas House	502 N Main St	Bungalow	1925
PAU0017701	16	689330	4561620		508 N Main St	Colonial Revival	1930
PAU0017801	16	689280	4561640	Burt Smith House	538 N Main St	from OHI Form	1915
PAU0017901	16	689340	4561580	Jailor House	610 N Main St	Revival	1935
PAU0018001	16	689530	4561130	Antwerp B	102 S Main St	Vernacular	1970
PAU0018101	16	689485	4561115	Shaffer Hardware	103 S Main St	Italianate	1885
PAU0018201	16	689500	4561105	Shaffer Hardware	105 S Main St	Italianate	1875
PAU0018301	16	689485	4561110	Video Junction	106 S Main St	Italianate	1866
PAU0018401	16	689505	4561110	Discount Drug Store	107-109 S Main St	Vernacular	1950
PAU0018501	16	689530	4561130	Books/Shadow Box	108 S Main St	Colonial Revival	1900
PAU0018601	16	689530	4561430	Gift Shop	110 S Main St	Vernacular	1940
PAU0018701	16	689530	4561120	Antwerp Post Office	112 S Main St	Vernacular	1895
PAU0018801	16	689485	4561090	Oasis Bar & Grill	113 S Main St	Vernacular	1874
PAU0018901	16	689520	4561030	Ice Cream Depot	115 S Main St	Vernacular	1890
PAU0019001	16	689540	4561100	Grill	116 S Main St	Vernacular	1895
PAU0019101	16	689570	4561050	GW Bushy Bldg	120 S Main St	Italianate	1871

Table 2: Previously Recorded Ohio Historic Inventory Sites in the Study Area

PAU0019201	16	689560	4561040	H & H Cleaners	122 S Main St	Vernacular	1950
PAU0019301	16	689540	4561005	Haver Furn	201 S Main St	Renaissance	1891
PAU0003501	16	689500	4561060	Antwerp RR Station	St	Stick	1880

Table 3 – Ohio Genealogical Society Cemeteries in the Study Area

Table 3: Ohio Genealogical Society Cemeteries in the Study Area

ID	Cemetery Name	County	Area	File #	Notes
9219	BRADY-FINNAN-PLEASANT VALLEY	Paulding	16	687942	4544962
9220	CATHOLIC-SAINT JOHNS-SAINT JOHN THE BAPTIST	Paulding	16	690535	4548704
9221	DEALY-(DEALEY)	Paulding	16	691548	4541451
9222	LEHMAN	Paulding	16	689543	4547998
9224	BLUE CREEK-BLUE CREEK TOWNSHIP NORTH	Paulding	16	700857	4545535
9225	BLUE CREEK-ABBOTT	Paulding	16	701983	4546714
9238	ANTWERP-RIVERSIDE	Paulding	16	689767	4561366
9239	BANKS-COFFELT	Paulding	16	692597	4563589
9242	HIRAM BANKS-BANKS	Paulding	16	687706	4561563
9243	MAUMEE-COFFELT	Paulding	16	690817	4561993
9244	SLOUGH	Paulding	16	691635	4563708
9250	LUTHERAN	Paulding	16	698644	4564453
9261	SNELLENBARGER	Paulding	16	693761	4551534
9262	WILTSIE	Paulding	16	692428	4550951
9271	COOPER-HAINES	Paulding	16	699645	4554931
9273	SAINT PAUL	Paulding	16	699014	4553897
12054	CONVOY I.O.O.F.-(TOWNSHIP)	Van Wert	16	693483	4533419
12055	MCNEAL	Van Wert	16	688295	4538283
12056	MENTZER/METZER	Van Wert	16	688202	4533300
12057	SUGAR RIDGE	Van Wert	16	693773	4534241
12058	MCCLURE-DOWLER	Van Wert	16	699652	4531221
12059	SCOTT-(OAKLAND)	Van Wert	16	702235	4540120
14019	BARBIER	Paulding	16	690495	4551734
14020	LUDWIG PLOT	Paulding	16	690721	4555387
15110	UNMARKED GRAVE	Paulding	16	691007	4552363
15111	UNNAMED	Paulding	16	696122	4562833
15637	SLOUGH FAMILY	Paulding	16	687312	4560301

Table 4 – Previously Recorded IHSSI – Historic Structures in the Study Area

Table 4 - Previously Recorded IHSSI - Historic Structures in the Study Area

45001	Maumee	Woodburn North	Farm	Contributing	D. Kerns Farm
45002	Maumee	Grabill	Farm	Contributing	J. Perkins Farm
45003	Maumee	Woodburn North	Farm	Contributing	Knewbuhler Farm
45004	Maumee	Woodburn North	Farm	Contributing	Ashton-Hoover-Kammeyer Farm
45005	Maumee	Woodburn North	Farm	Non-Contributing	Herman Scovil Farm
45006	Maumee	Woodburn North	School	Notable	Maumee Township School No.1
45007	Maumee	Woodburn North	Cemetery	Contributing	Diehl cemetery
45008	Maumee	Woodburn North	Bridge	Contributing	State Line bridge site
45009	Maumee	Woodburn North	Fort Harrison	Contributing	Fort Harrison and Indian Village site
45010	Maumee	Woodburn North	Cemetery	Contributing	Saylor cemetery
45011	Maumee	Woodburn North	House	Notable	Saylor Canal House
45012	Maumee	Woodburn North	House	Notable	Ashley House
45013	Maumee	Woodburn North	Canal Lock	Contributing	Wabash/Erie canal lock/Saylor lock
45014	Maumee	Woodburn North	Canal Marker	Contributing	Wabash/Erie canal marker
45015	Maumee	Woodburn North	House and Orchard	Notable	James Butt Jr. House and Chapman Orchard
45016	Maumee	Woodburn North	Barn	Contributing	Herman Woebeking Barn
45017	Maumee	Woodburn North	Farm	Contributing	Roemke Farm
45018	Maumee	Woodburn North	Farm	Contributing	Grabler Farm
45019	Maumee	Grabill	Church	Contributing	Zion Lutheran Church
45020	Maumee	Grabill	Cemetery	Contributing	Zion Lutheran cemetery at Bull Rapids
45021	Maumee	Grabill	Bull Rapids Settlement	Contributing	aka Indiana City
45022	Maumee	Grabill	Park	Contributing	Shirley Park
45023	Maumee	Woodburn North	Edwardsburg Site	Contributing	Proposed Canal Town
45024	Maumee	Woodburn North	Motel	Contributing	Villas Motel
45025	Maumee	Woodburn North	Village of Bengal	Contributing	Plated Village on the Wabash-Erie Canal
45026	Maumee	Woodburn North	Blue Cast Mineral Springs	Notable	Blue Cast Mineral Springs
45027	Maumee	Woodburn North	School	Notable	Maumee Township School No.6
45028	Maumee	Woodburn North	Church	Contributing	Christ Evangelical Church
45029	Maumee	Grabill	Cemetery	Contributing	Evangelical Mennonite cemetery
45030	Maumee	Grabill	Mill	Contributing	Steam Saw Mill
45031	Maumee	Grabill	Canal House	Contributing	Canal House/Concrete Block Barn
45033	Maumee	Woodburn North	Farm	Notable	Rathage Farm
45034	Maumee	Woodburn South	House	Notable	Queen Anne style Farmhouse
45035	Maumee	Woodburn South	Farm	Contributing	Amos Schlafer Farm
45036	Maumee	Woodburn South	Farm	Contributing	M. Stuckey Farm

Table 4 - Previously Recorded IHSSI - Historic Structures in the Study Area

45037	Maumee	Woodburn South	Farm	Contributing	William Wetter Farm
45038	Maumee	Woodburn South	Farm	Notable	Binger-Nordem Farm
45039	Maumee	Woodburn South	Farm	Notable	Fred Nordem Farm
45040	Maumee	Woodburn South	Farm	Contributing	Henry Helmke Farm
45041	Maumee	Woodburn South	Farm	unknown	Historic Farm
50001	Jackson	Woodburn South	House	Contributing	Valentine Becker House
50003	Jackson	Woodburn South	Farm	Contributing	Wiesehan-Gerig Farm
50004	Jackson	Woodburn South	Farmhouse	Notable	Samuel Schmiel Farmhouse
50005	Jackson	Woodburn South	Edgerton Village	Contributing	Railroad Town
50006	Jackson	Maples	Farm	Contributing	Ementhiser Farm
50007	Jackson	Woodburn South	School	Contributing	Jackson Township School
50008	Jackson	Maples	House	Contributing	Francis Bardy House
50009	Jackson	Maples	House	Contributing	Louis Bonjour House
50010	Jackson	Woodburn South	Farm	Contributing	Vanderly Farm
50011	Jackson	Woodburn South	Farm	Notable	Victor Gnumiaux Farm
50012	Jackson	Woodburn South	Farm	Notable	Roussey Farm
50013	Jackson	Woodburn South	Farm	Contributing	Moldeney Farm
50014	Jackson	Woodburn South	Barn and Outbuildings	Contributing	Jasper Jones Barn and Outbuildings
50015	Jackson	Woodburn South	Bridge	Contributing	State Line Ditch Bridge
50016	Jackson	Woodburn South	Barn	Contributing	W.M. Smith Barn No.1
50017	Jackson	Woodburn South	School	Contributing	Jackson Township School No. 1
50018	Jackson	Woodburn South	Farm	Contributing	Benjamin Holsapple Farm
50019	Jackson	Woodburn South	Farm	Contributing	W.M. Holsapple Farm
50020	Jackson	Woodburn South	Townley Settlement	Non-Contributing	Railroad Town
50021	Jackson	Woodburn South	Barn	Notable	W.M. Smith Barn No.1
50022	Jackson	Woodburn South	Smith Mills Settlement	Non-Contributing	Railroad Town
50023	Jackson	Woodburn South	Farm	Contributing	Anthony Biasadra Farm
50024	Jackson	Woodburn South	Baldwin Settlement	Non-Contributing	Railroad Town
95001	Monroe	Woodburn South	Cemetery	Contributing	Sugar Ridge cemetery
95002	Monroe	Woodburn South	Farm	Contributing	Babe Simmons Farm
95003	Monroe	Woodburn South	Farm	Contributing	Parnim Farm
95004	Monroe	Dixon	Farm	Contributing	Sarah J. Spaulding Farm
95005	Monroe	Dixon	School	Contributing	Monroe Township School No.8
95006	Monroe	Dixon	Farm	Contributing	Daniel Sheehan Farm
95007	Monroe	Dixon	Farm	Contributing	Emanuel Krick Farm

Table 4 - Previously Recorded IHSSI - Historic Structures in the Study Area

95008	Monroe	Dixon	Farm	Notable	Margaret Row Farm
95009	Monroe	Dixon	Farm	Contributing	Samuel Clem Jr. Farm
95010	Monroe	Dixon	House	Notable	Thomas Jones House
95011	Monroe	Dixon	House	Contributing	Ben Crabill House
95012	Monroe	Dixon	House	Contributing	Ed Johnson House
95013	Monroe	Dixon	Farmhouse	Contributing	David Crabill Farmhouse
95014	Monroe	Dixon	House	Contributing	Raber House
95015	Monroe	Dixon	Farm	Contributing	Barnhart-Fuelling Farm
95016	Monroe	Dixon	House	Contributing	Hoffman House
95017	Monroe	Hoagland	Farm	Contributing	Screeton Farm
95018	Monroe	Dixon	Farm	Contributing	Fogelson-Taylor Farm
95019	Monroe	Dixon	Farm	Contributing	Jesse Straughn Farm
95020	Monroe	Dixon	Farmhouse	Contributing	Mentzer Farmhouse
95021	Monroe	Dixon	Farm	Contributing	Staurheim-Powelson Farm
95022	Monroe	Dixon	Farmhouse	Contributing	Samuel Scott Farmhouse
95023	Monroe	Dixon	Farm	Contributing	John Salway Farm
95024	Monroe	Dixon	Farmhouse	Contributing	Jonathan Hart Farmhouse
95025	Monroe	Dixon	Farm	Contributing	Clem-Bowers Farm
95026	Monroe	Dixon	Farm	Contributing	Minerd Farm
95027	Monroe	Dixon	Farm	Contributing	Lomiller Farm
95028	Monroe	Dixon	Cemetery	Contributing	Flat Rock Lutheran cemetery
95029	Monroe	Dixon	House	Contributing	Reynolds Sisters House
95030	Monroe	Dixon	Farm	Contributing	Jacob Bowers Farm
95031	Monroe	Dixon	Farm	Notable	Richard Siegel Farm
95032	Monroe	Dixon	School	Contributing	Monroe Township School No.7
95033	Monroe	Dixon	Cemetery	Contributing	Schlemmer Family cemetery
95034	Monroe	Dixon	House	Notable	John L. Friedline House
95035	Monroe	Dixon	Farm	Contributing	Brown Farm
95037	Monroe	Dixon	Farm	Contributing	John Friedling Farm
95038	Monroe	Dixon	Church	Contributing	East Liberty United Brethren Church
95039	Monroe	Dixon	Farm	Notable	George W. Wickwire Farm
95040	Monroe	Dixon	House	Contributing	J. Berger House
95041	Monroe	Dixon	Barn	Notable	J.H. Barkely Barn
95042	Monroe	Dixon	House	Outstanding	Emmanuel Friedline House
95043	Monroe	Dixon	Farm	Contributing	Mort E. House Farm

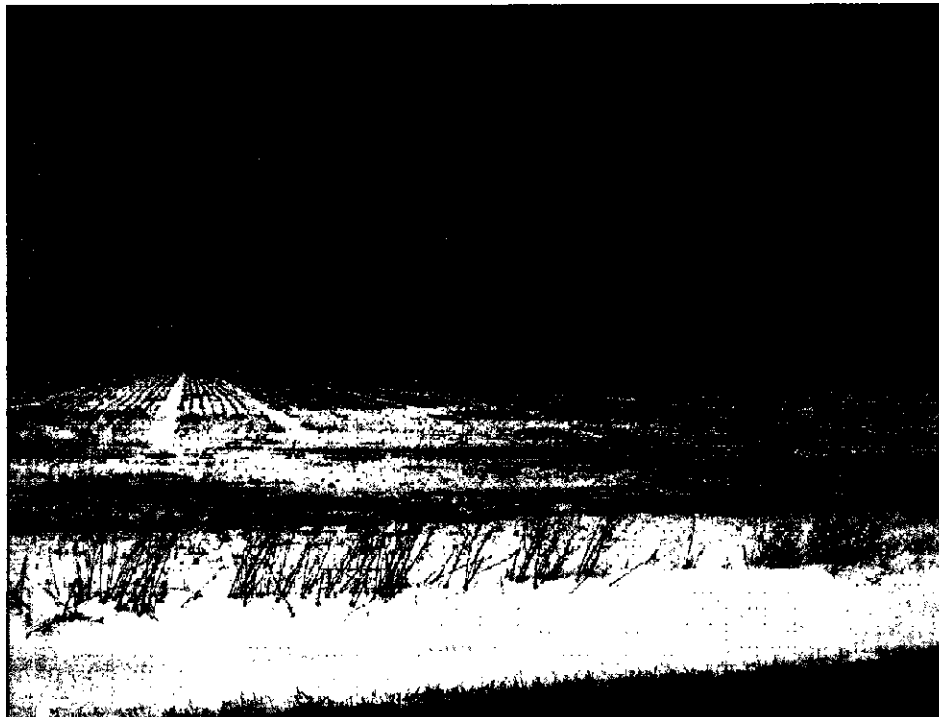
Table 5 – Existing Land and Water Recreation Areas in the Study Area

Table 5 Existing Land and Water Recreation Areas in the Study Area

Land Recreation Areas	Water Recreation Areas
Maumee River	Scenic River
Antwerp Community Park	Municipal Park
Payne Community Park	Municipal Park
Riverside Park	Municipal Park
School Park	Municipal Park



Photograph 1: General Overview of Project Setting.



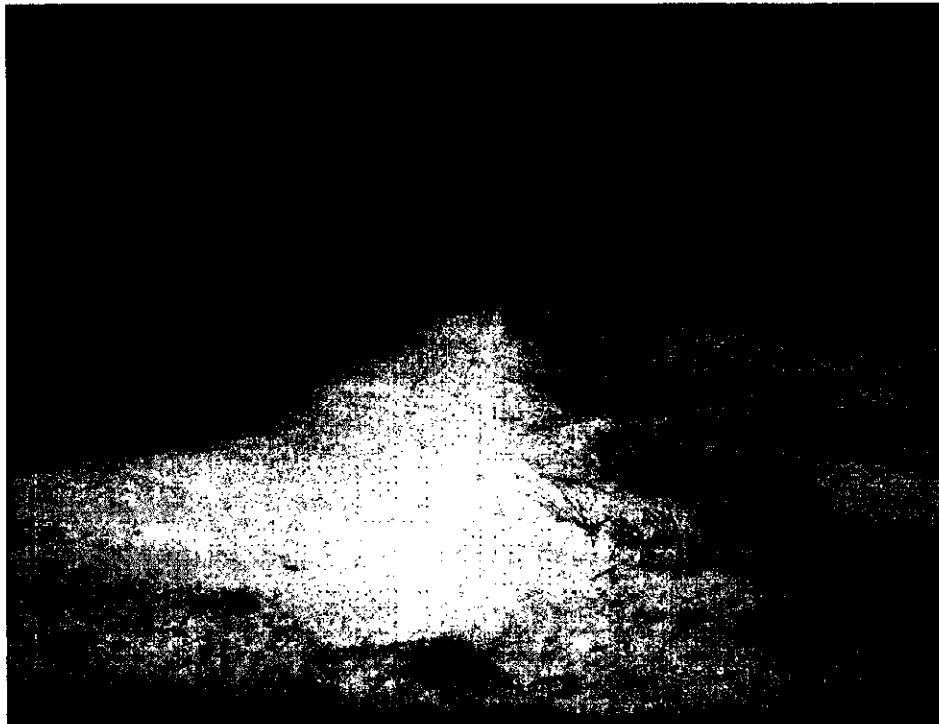
Photograph 2: General Overview of Project Setting.

Photographs
Timber Road II
Paulding Wind Energy, LLC.
Paulding County

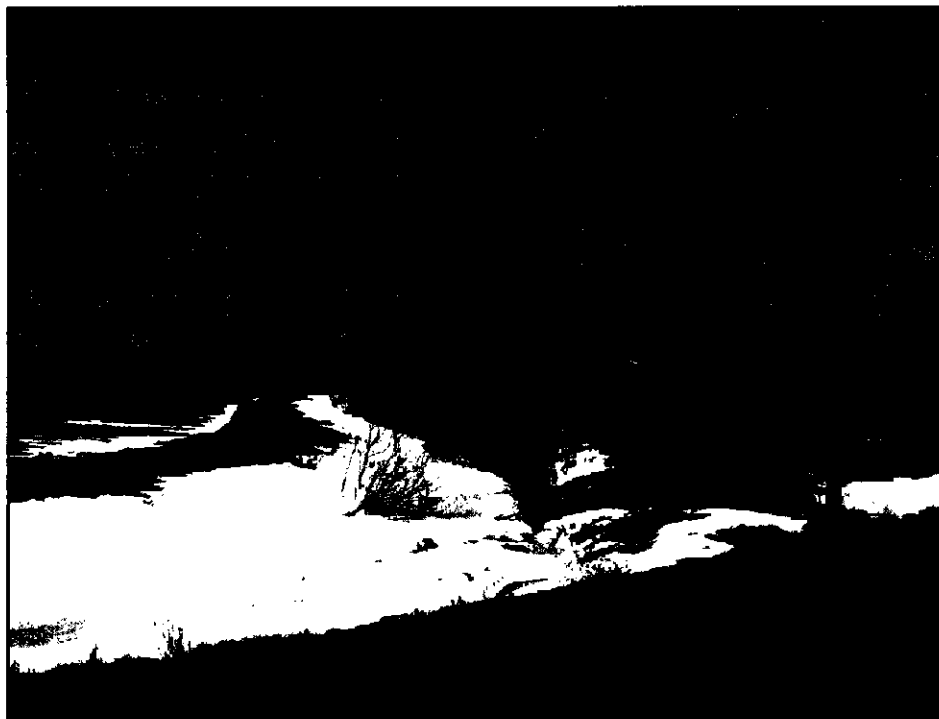
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Photograph 3: General Overview of Project Setting.



Photograph 4: General Overview of Project Setting.

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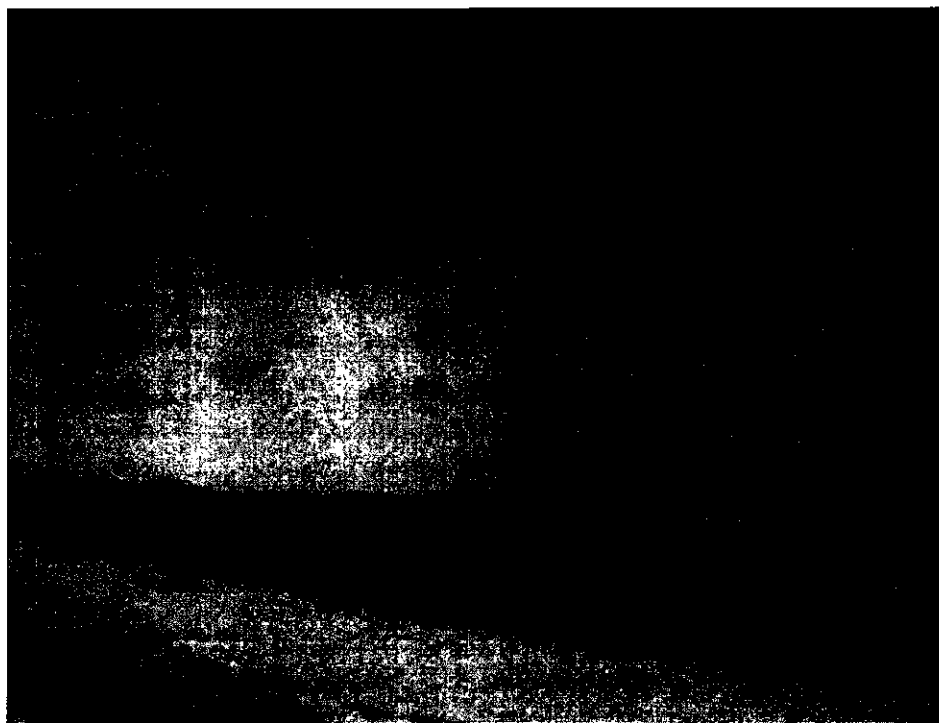
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Photograph 5: General Overview of Project Setting.



Photograph 6: General Overview of Project Setting.

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Photograph 7: View of Dealey Cemetery.



Photograph 8: View of Lehman Cemetery.

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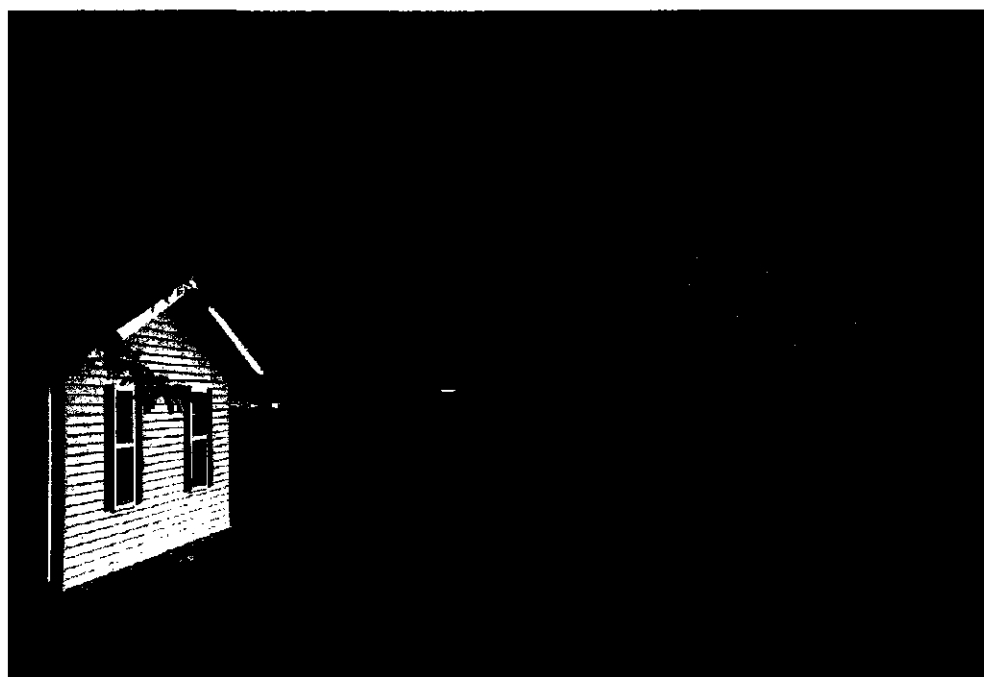
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Photograph 9: Representative view toward project setting from Payne.



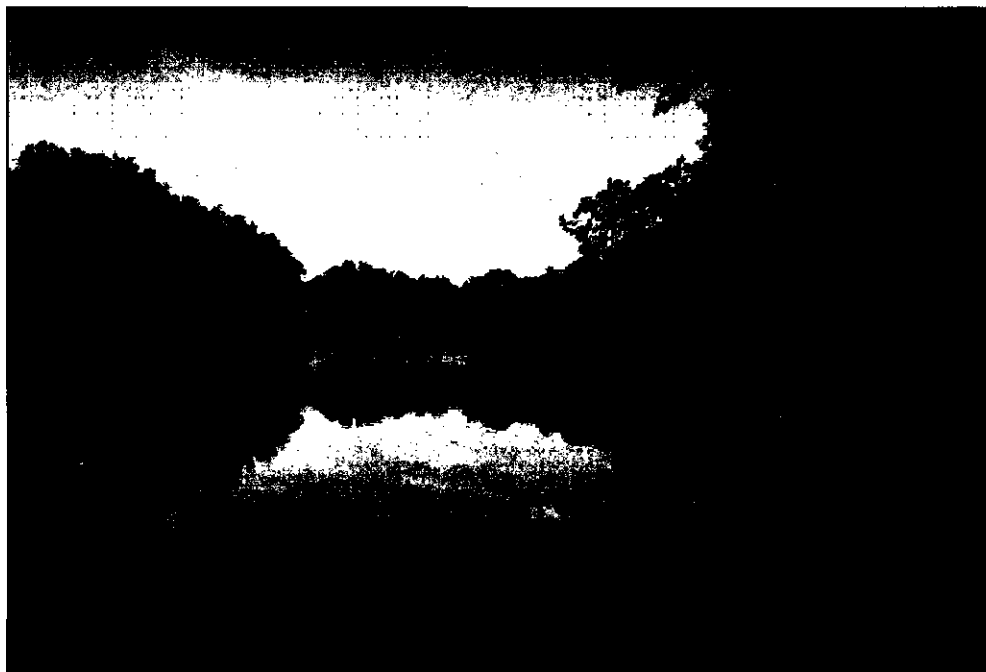
Photograph 10: Representative view toward project setting from Antwerp.

Photographs
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Paulding Wind Energy, LLC.
Paulding County

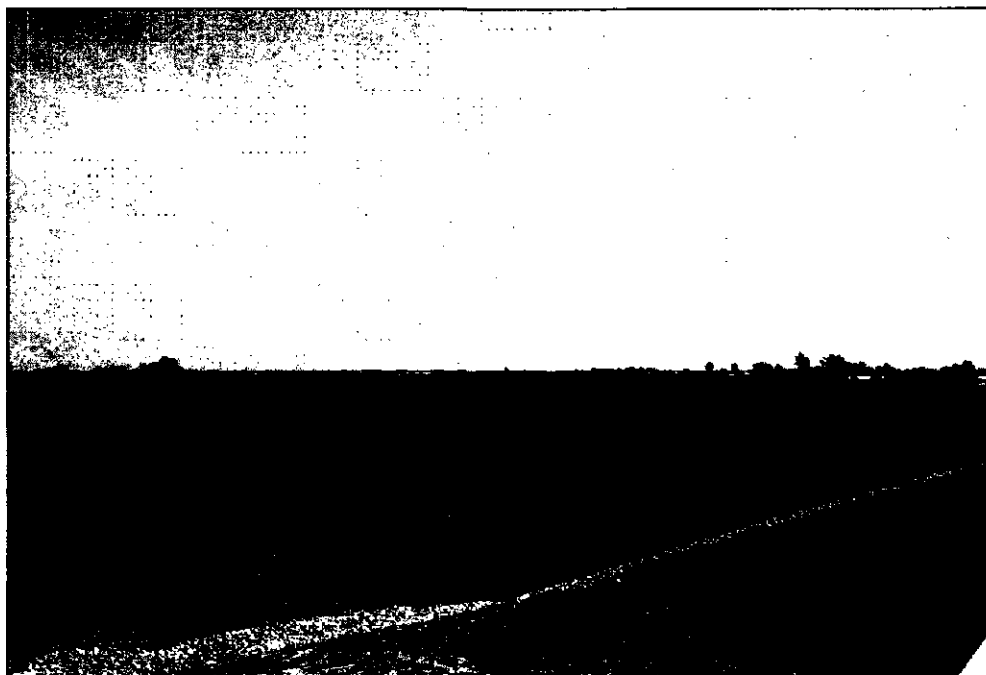
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Photograph 11: Representative view toward project setting from north of Maumee River.



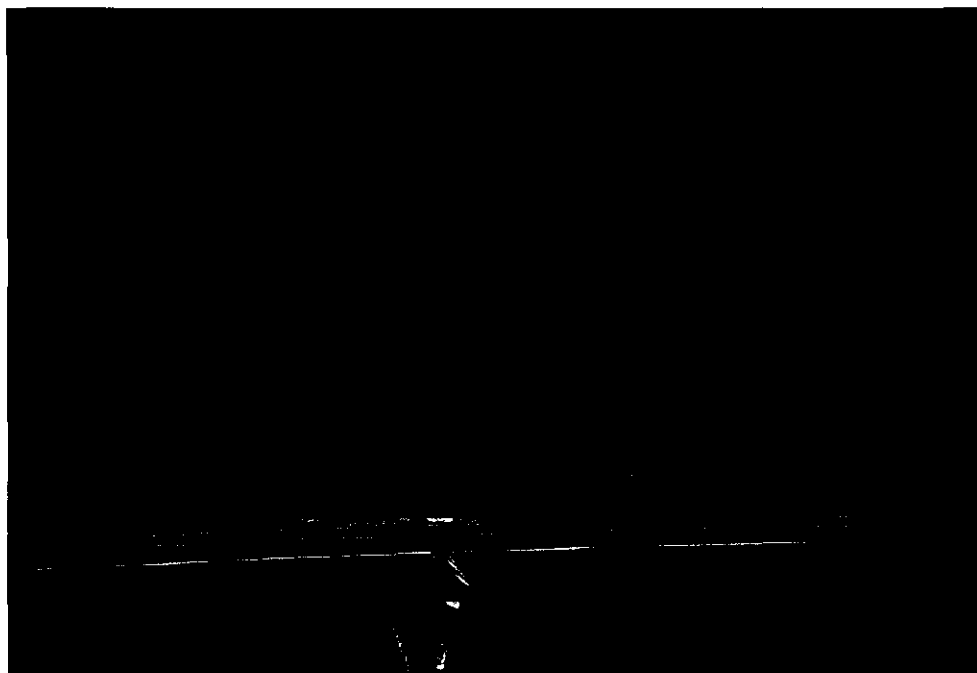
Photograph 12: Representative view toward project setting from state line.

Photographs
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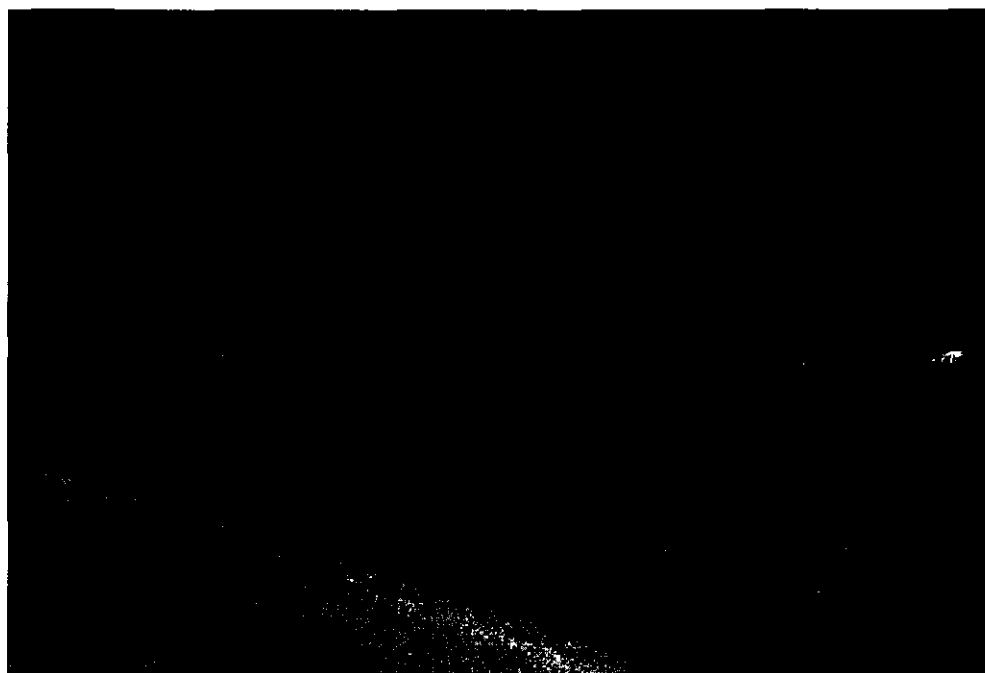
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Photograph 13: Representative view toward project setting from north of Flatrock Creek.



Photograph 14: Representative view toward project setting from north of Flatrock Creek.

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EXHIBIT M

Visual Impact Assessment

Visual Impact Assessment

Timber Road II Wind Farm Paulding County, Ohio

Prepared for:



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April 2010

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Appendix A.	Large Scale Viewshed Maps and Sensitive Site Table
Appendix B.	Photo Log and Field Notes (See enclosed CD)
Appendix C.	Digital Visual Simulations (See enclosed CD)
Appendix D.	Typical Substation Photos

1.0 Introduction

Environmental Design & Research, Landscape Architecture, Planning, Environmental Services, Engineering and Surveying, P.C. (EDR) was retained by Paulding Wind Farm II, LLC, a wholly owned subsidiary of Horizon Wind Energy, ("Project Sponsor") to prepare a Visual Impact Assessment (VIA) for the proposed Timber Road II Wind Farm (the Project) located in Paulding County, Ohio. The purpose of this VIA is to:

- Describe the appearance of the visible components of the proposed Project.
- Define the visual character of the Project study area.
- Inventory and evaluate existing visual resources and viewer groups.
- Evaluate potential Project visibility within the study area.
- Identify key views for visual assessment.
- Assess the visual impacts associated with the proposed action.

This VIA was prepared with oversight provided by a registered landscape architect¹ licensed in the State of Ohio and experienced in the preparation of visual impact assessments. It is also consistent with the policies, procedures, and guidelines contained in established visual impact assessment methodologies (see Literature Cited/References section).

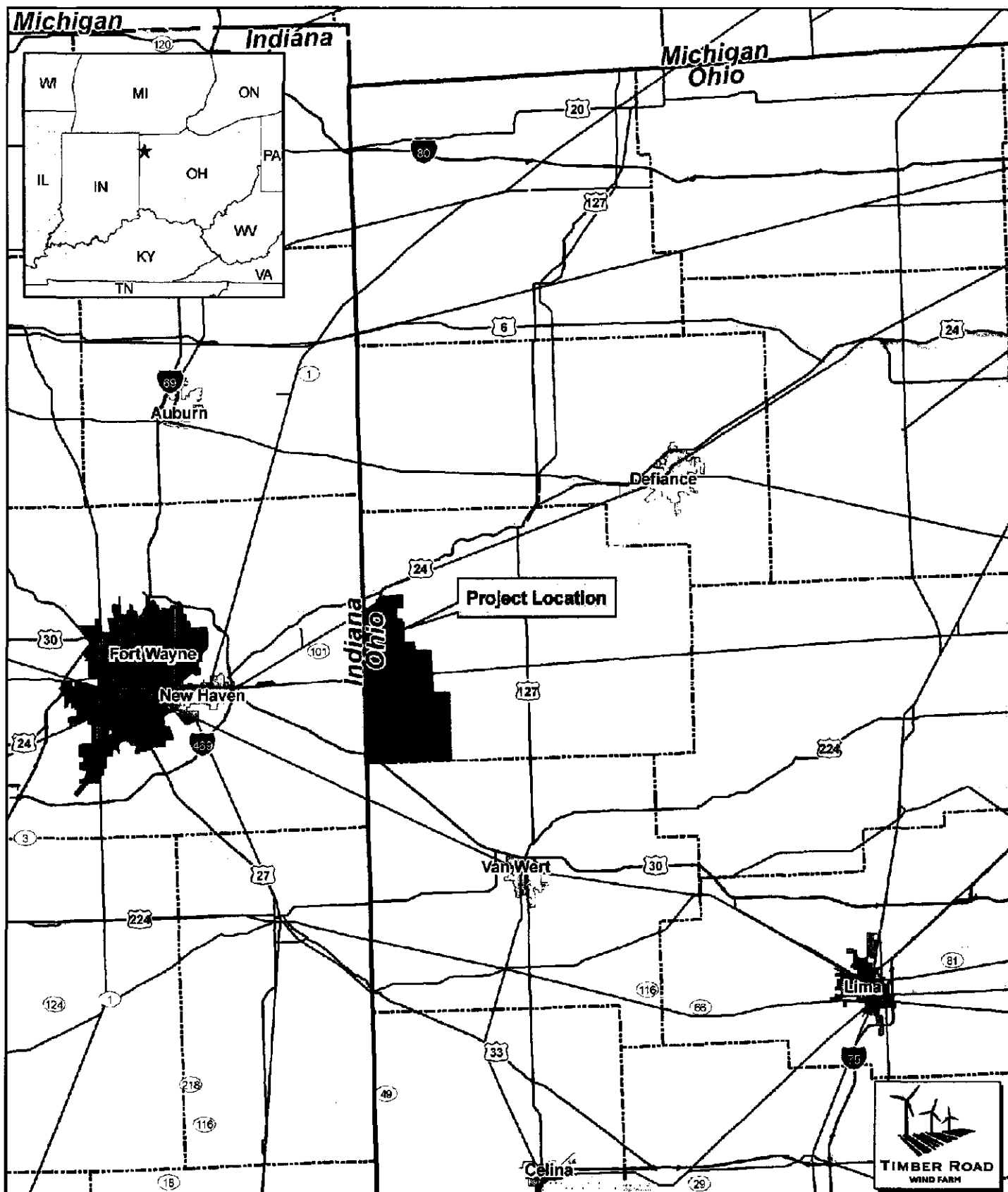
¹Mr. Douglas Brackett: registered by the State Education Departments to practice Landscape Architecture in the States of New York, Pennsylvania, and Ohio.

2.0 Project Description

2.1 Project Site

The Project is located within an approximately 37,000-acre wind resource area (defined by the Project Sponsor), located in the Towns of Harrison and Benton in Paulding County, Ohio (Figure 1). The site is roughly bounded by: US Route 24 and County Route 162 to the north, Town Highway 51 in Harrison and Town Highway 61 in Benton to the east, US Route 30 and County Line Road to the south, and the Ohio-Indiana state line to the west. The site is located north, west, and south of the Village of Payne (the village is 0.8 mile from the nearest proposed turbine), approximately 1.0 mile south of the Village of Antwerp, 2.3 miles east of the City of Woodburn (in Allen County, Indiana), 4.5 miles northeast of the Village of Monroeville (also in Indiana), and 4.9 miles north of the Village of Convoy. The Project site is located approximately 15 miles southwest of the City of Defiance, and 12 miles east of Fort Wayne, Indiana (IN).

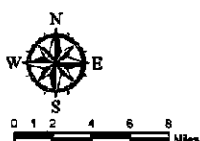
The Project site is located in an area characterized by level topography with elevation ranging from approximately 730 to 765 feet above mean sea level (amsl). Land use within the Project site is dominated by active agricultural fields intermixed with scattered farmsteads and single-family rural residences (see representative photos in Appendix B).



Title
Timber Road II Wind Farm
 Benton and Harrison Townships - Paulding County, Ohio

Figure 1: Regional Project Location

Map Scale
 & Orientation



Notes

Map Created: April 2010.

Base Map:
 ESRI StreetMap North America 2008.

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 Architecture, Planning, Environmental Services,
 Engineering and Surveying, P.C.

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2.2 Proposed Project

The proposed Project is a wind-powered electric generating facility, anticipated to include up to 109 wind turbine generators, with a total generating capacity of up to 150 megawatts (MW). It is anticipated that only 83-100 turbines will actually be constructed depending on the model of turbine selected. However, to provide a "worst case" assessment of potential visual impact, the Project evaluated in this VIA consists of 109 wind turbines and associated support facilities (roads, buried electrical lines, meteorological towers, substations, and operations and maintenance building). Project configuration/layout is illustrated in Figure 2. The major components of the proposed Project are described below:

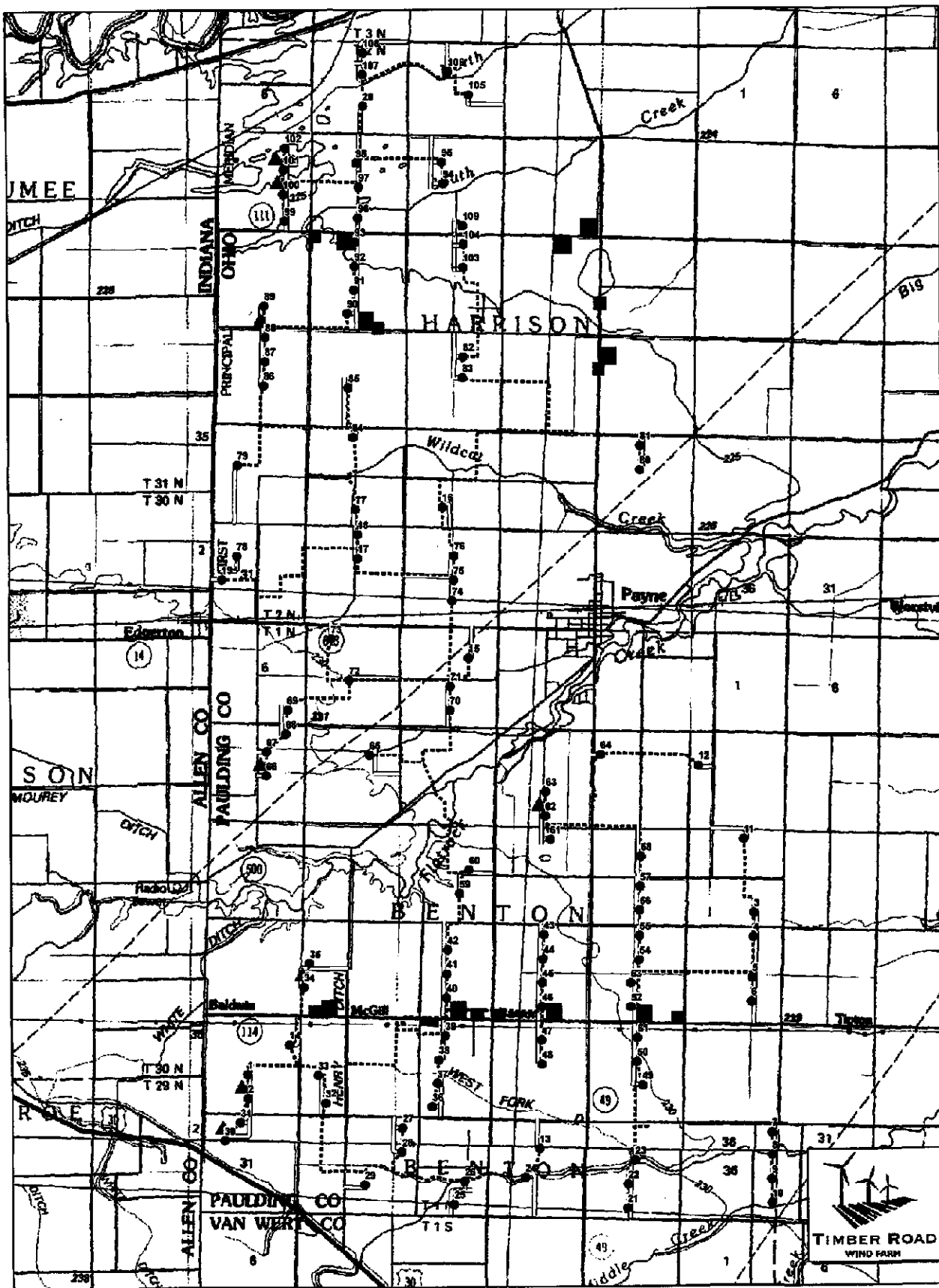
2.2.1 Wind Turbines

Several turbine models are being considered for the Project. For the purpose of the VIA, it was assumed that the Project will use the Vestas V90 1.8 MW turbine with a 95-meter tower, which represents the tallest class of turbines under consideration and therefore provides a "worst case" assessment of potential visual impacts. Each wind turbine consists of three major components; the tower, the nacelle, and the rotor, all of which will be white in color. The "hub height" (or height from foundation to top of tower) will be approximately 311.7 feet (95 m). The nacelle sits atop the tower, and the rotor hub is mounted to the nacelle. Assuming a 90 m rotor diameter, the total turbine height (i.e., height at the highest blade tip position) will be approximately 459.3 feet (140 m). A computer model illustrating the appearance of the proposed turbine is shown in Figure 3. Descriptions of each of the turbine components are provided below.

Tower: The tubular towers used for megawatt-scale turbines are conical steel structures manufactured in multiple sections. Each tower will have an access door in the base section and internal lighting, along with an internal ladder and mechanical lift to access the nacelle. The towers will be painted off-white in accordance with Federal Aviation Administration (FAA) regulations designed to make the structures more visible to aircraft when viewing from above, as light colors contrast sharply against the dark-colored ground. This also has the benefit of reducing visibility from ground vantage points, which are generally viewed against the background of the sky. For the purposes of this study, it is assumed that the towers will be 311.7 feet (95 m) tall, which represents the tallest tower under consideration for the Project.

Nacelle: The main mechanical components of the wind turbine are housed in the nacelle. These components include the drive train, gearbox, and generator. The nacelle is housed in a steel reinforced fiberglass shell that protects internal machinery from the environment and dampens noise emissions. The housing is designed to allow for adequate ventilation to cool internal machinery. The nacelle is equipped with an external anemometer and a wind vane that signals wind speed and direction information to an electronic controller. Attached to the top of some of the nacelles, per specifications of the Federal Aviation Administration (FAA), will be a single, medium intensity aviation warning light. These are anticipated to be pulsing red lights (L-864) that operate only at night. The nacelle is mounted on a bearing that allows it to rotate ("yaw") into the wind to maximize wind capture and energy production. For the purposes of this study, it is assumed that the nacelle will not include any obvious lettering, logo, or exterior markings.

Rotor: A rotor assembly is mounted to the nacelle to operate upwind of the tower. Each rotor consists of three composite blades that will be up to 147.7 feet (45 m) in length, with a maximum rotor diameter of 295.3 feet (90 m). The rotor attaches to the drive train at the front of the nacelle. Hydraulic motors within the rotor hub feather each blade according to wind conditions, which enables the turbine to operate efficiently at varying wind speeds. The rotor can spin at varying speeds to operate more efficiently. Depending on the turbine model selected, the wind turbines will begin generating energy at wind speeds as low as 3.5-4 meters per second (m/s) [8-9 miles per hour (mph)], and cut out when wind speeds reach 20-25 m/s (45-56 mph). Rotor speed will be in the range of 9-17 revolutions per minute (rpm).

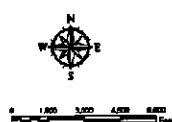


Title
**Timber Road II
 Wind Farm**
 Benton and Harrison Townships -
 Paulding County, Ohio

Figure 2: Proposed Project
 Layout

- Legend
- Wind Turbine
 - ▲ Met Towers
 - O&M Facility
 - Buried Interconnect
 - Access Roads
 - Project Substation
 - Interconnect Substation
 - Laydown Yard

Map Scale
 & Orientation

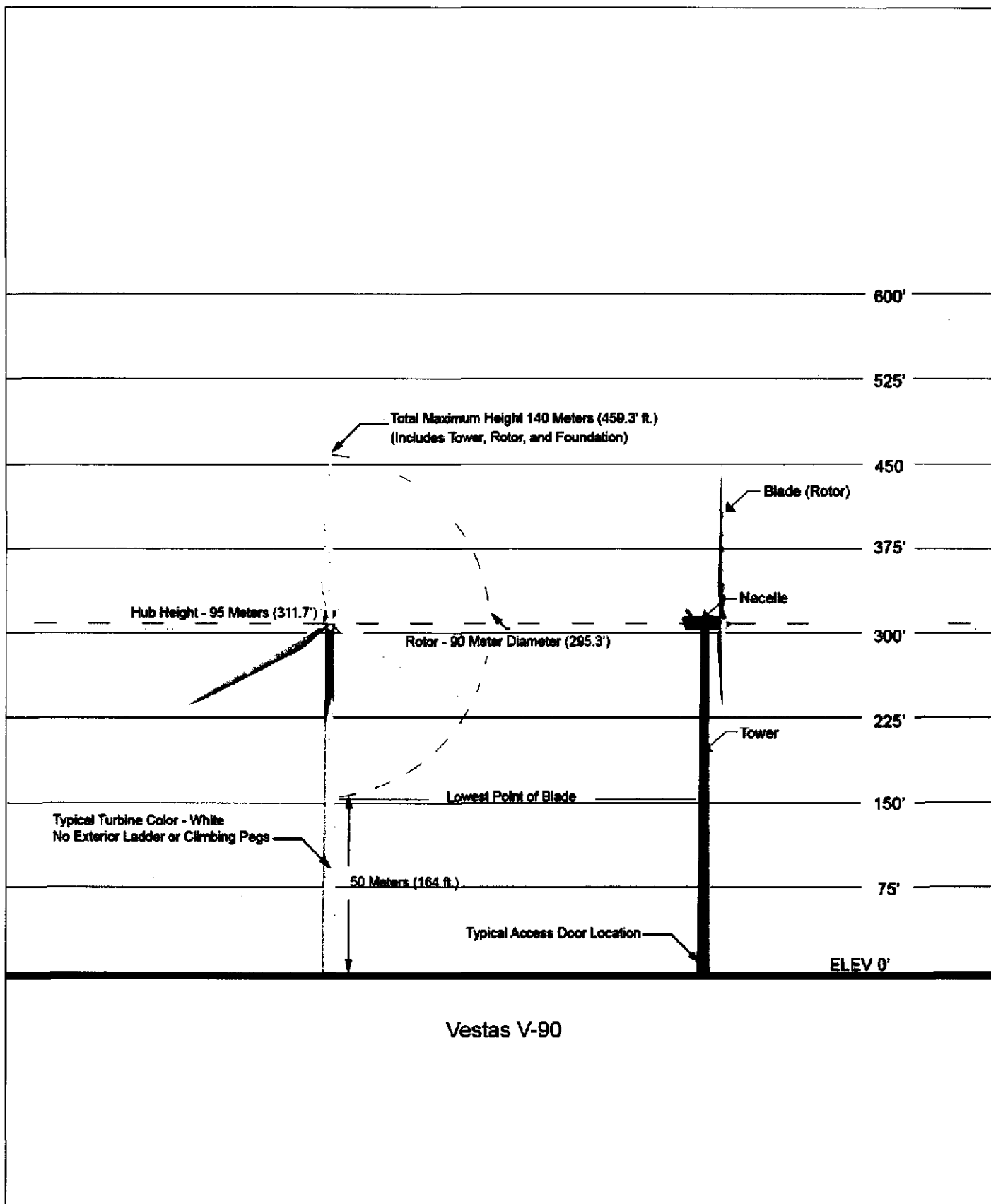


Notes

Map Created: April 2018.
 Base Map:
 USGS 1:100,000 Defense and Line
 quadrangles.
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Author





Title

Timber Road II Wind Farm

Benton and Harrison Townships - Paulding County, Ohio

Figure 3: Computer Model of Proposed Turbine
Vestas V-90

April 2010

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2.2.2 Electrical System

The proposed Project will have an electrical system consisting of two parts: (1) a system of 34.5 kV shielded and insulated cables that will collect power from each wind turbine (the "Collection System"), and (2) a Project collector and interconnection substation (the "Project Substation") that will collect power from the Project and step up voltage prior to connecting with the existing power grid. Each of these electrical system components is described below.

Collection System: The wind turbine transformer will raise the voltage of electricity produced by the turbine generator up to the 34.5 kV voltage level of the collection system. From the transformer, cables will join the collector circuit and turbine communication cables to form the electrical collection system. All collector cables will be buried to a minimum depth of 36 inches below the surface. The location of the proposed collection system is depicted on Figure 2. This 34.5 kV collection system will connect the individual turbines to the Project Substation. The total length of the buried 34.5 kV collector lines carrying electricity to the Project Substation will be approximately 61.7 miles. Because the collection system is buried and required tree clearing will be minimal, it will have no visual impact, and therefore is not evaluated as part of this study.

Project Substation: The Project Substation will be located off of State Route 114, adjacent to the Haviland-Milan 138 kV transmission line. The Project Substation will step voltage up from 34.5 kV to 138 kV to allow connection with the existing transmission line. Major equipment will include one or more step-up transformer(s), switches, breakers, and a control house. The Project Substation will be approximately 400 by 325 feet in size, enclosed by a chain link fence, and accessed from State Route 114 by a new gravel-surfaced road. Design of the proposed substation has not yet been finalized, but examples from other wind power projects, showing the typical appearance of such facilities, are included in Appendix D. As these examples illustrate, although they present contrast with the existing landscape in line, color, texture and form, substation components are relatively low in height and have limited solid mass. Consequently, they are generally only visible from foreground locations (i.e., within 0.5 mile) where natural screening is lacking. Their visual impact is thus limited, and is not the subject of further evaluation in this report.

2.2.3 Access Roads

The Project site includes an extensive network of existing state, county, and town roads; it is possible that some existing public roads will need to be improved to facilitate Project construction.

Although the location and extent of these public road improvements is currently unknown, they are not anticipated to significantly change the character of the roads, and therefore are not evaluated in this study.

The Facility will also require the construction of new or improved roads to provide access to the proposed turbines. The proposed location of Facility access roads is shown on Figure 2. The total length of private access road required to service all proposed wind turbine locations is approximately 31.2 miles. The roads will be gravel-surfaced and typically 16 feet in finished width. Although included in any simulations where they may be visible, these access roads take on the appearance of farm lanes, and generally do not have a significant long-term visual impact. Consequently, the visibility and visual impact of Project access roads, on their own, are not evaluated in this study.

2.2.4 Meteorological Towers

The Project will include installation of up to three 262.5-foot (80 m) permanent meteorological wind measurement towers to collect wind data and support performance testing for the Project. The towers will be galvanized steel structures equipped with wind velocity and directional measuring instruments at three different elevations, and a red aviation warning lighting mounted at the top. It is anticipated that each tower will be self-supporting. Meteorological towers typically have limited visibility and visual impact relative to the adjacent turbines. Consequently, this component of the Project is not addressed in this study.

2.2.5 Operations and Maintenance Facilities

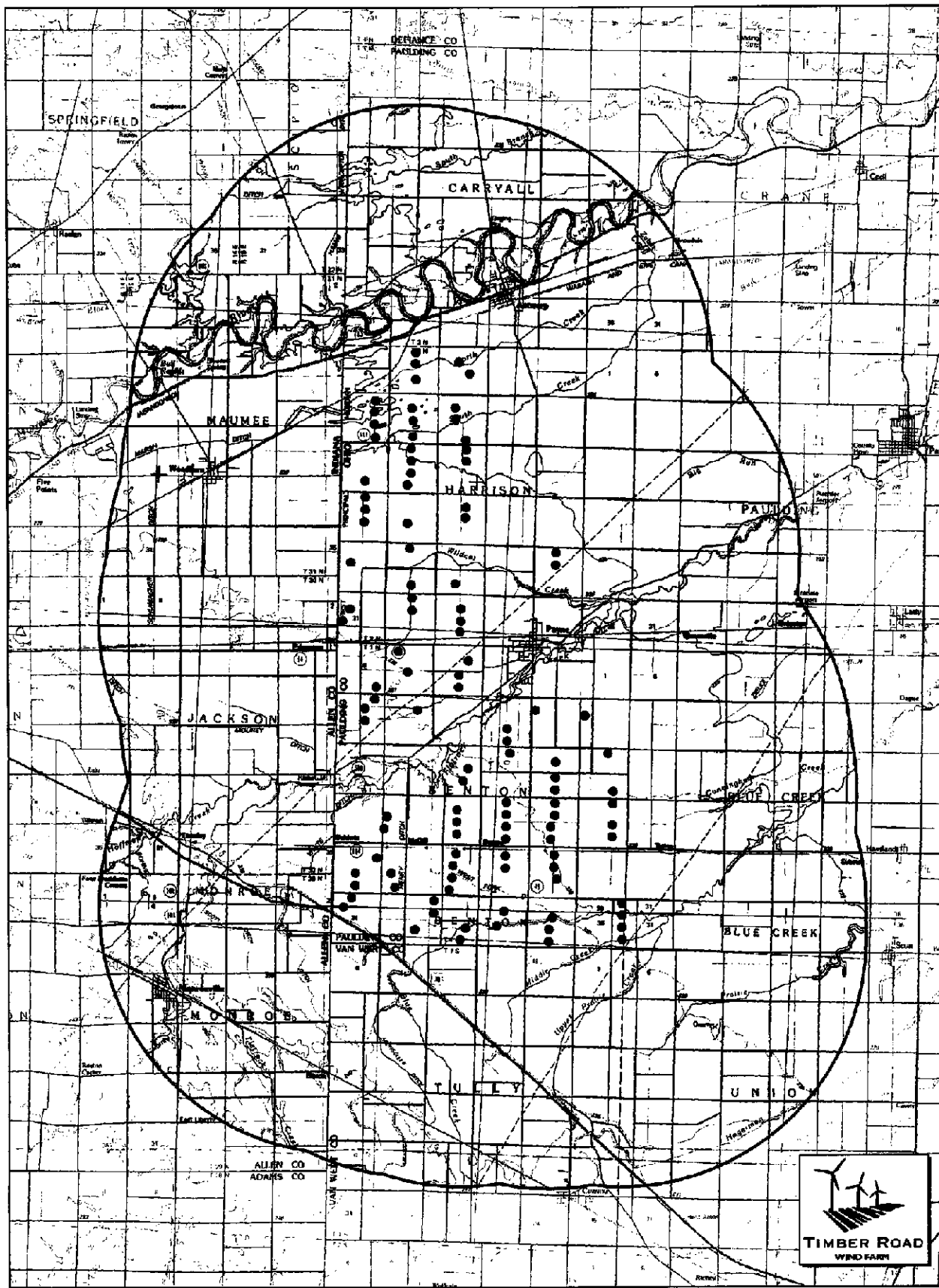
Up to two operations and maintenance (O&M) buildings and associated storage yards will be required to permanently house operations personnel, equipment, and materials, and to provide operations staff parking. It is anticipated that existing suitable structures in the vicinity of the Project may be purchased or leased and refurbished for O&M activities. If one or more new buildings are needed, they are not expected to exceed 6,000 square feet or permanently disturb an area of greater than 2 acres, and will be designed to resemble agricultural buildings similar in style to those found throughout the area. Consequently, the O&M facilities should be compatible with the existing landscape, and are not evaluated as part of this study.

2.2.6 Laydown Areas

It is currently anticipated that Project construction will require the development of up to two temporary construction staging areas, to be located on leased private lands. The laydown areas will accommodate material and equipment storage, parking for construction workers, and construction management trailers. The laydown areas are anticipated to be approximately 22 acres. No lighting of the staging areas is currently proposed. Because the laydown areas will be removed and restored following construction, the visual impact for these areas is not evaluated in this study.

3.0 Existing Visual Character

Based on established visual assessment methodology (USDA Forest Service, 1973; NYSDEC, 2000; APA, not dated) the visual study area for the Project was defined as the area within a 5-mile radius of each of the proposed wind turbines. Chapter 4906-17 of the Ohio Administrative Code (OAC), Application Filing Requirements for Wind-Powered Electrical Generation Facilities, section (D)(1), also indicates that a 5-mile radius is the appropriate study area for the identification of scenic and historic resources (OPSB, 2009). The study area includes approximately 280 square miles in Paulding and Van Wert Counties (Ohio) and Allen County (Indiana). This area includes all or portions of the Towns of Harrison, Paulding, Carryall, Crane, Benton, and Blue Creek in Paulding County (Ohio), Tully and Union in Van Wert County (Ohio), and Maumee, Scipio, Springfield, Jackson, Jefferson, Madison and Monroe in Allen County (Indiana). Named settlements within the study area include the Villages of Antwerp, Payne, and Convoy (in Ohio) and Woodburn and Monroeville (in Indiana) and the hamlets of Worstville, Briceton, Dixon, Batson, and McGill (Ohio) and Edgerton and Townley (Indiana). The location and extent of the visual study area is illustrated in Figure 4.



Title
Timber Road II
Wind Farm
 Benton and Harrison Townships -
 Paulding County, Ohio

Figure 4: Visual Study Area

Legend

- Wind Turbine
- 5 Mile Study Area

Map Scale & Orientation

0 2500 5000 7500 10000
 Feet

Notes

Map Created: April 2010.

Base Map:
 USGS 1:100,000 Defiance and Lima
 quadrangles

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3.1 Physiographic/Visual Setting

3.1.1 Landform and Vegetation

The visual study area lies entirely within the glaciated Maumee Lake Plains Region, in the Huron-Erie Lake Plains Section of the Central Lowland Physiographic Province. This Region is characterized as a flat-lying Ice Age lake basin, containing beach ridges, bars, dunes, deltas, and clay flats. Elevations range from approximately 570 to 800 feet above mean sea level. The area was passed over by both the Illinoian and Wisconsinian glaciers. Historically the Maumee Lake Plain Region contained the Black Swamp, a large regional wetland that existed from the end of the Wisconsin glaciation until the late 19th century. The Black Swamp consisted of extensive swamps and marshes, with some higher dry ground interspersed. Surface topography is the result of ice-deposited ground moraine, which was planed by the waves in glacial lakes following deposition, resulting in a relatively flat surficial topography. The Black Swamp was gradually drained in the second half of the 19th century, and is now highly productive farmland. Low physiographic relief (less than 5 feet) is generally present throughout the Region, except for slight dissection by modern streams (Brockman, 1998; Hull, 2010).

Vegetation in the study area is dominated by active agricultural land (primarily corn and soybean fields) with widely scattered woodlots and corridors of riparian forest bordering the major rivers in the area. Woodlots are generally small (i.e., less than 50 acres) and hedgerows are typically lacking within the open agricultural landscape. However, woodlots are generally more abundant and somewhat larger in the portion of the study area located north of the Maumee River. Despite their limited occurrence, mature trees in woodlots and along the Maumee River and Flatrock Creek provide a backdrop to some open views throughout the study area. Mature trees also typically occur in association with rural residences, and along the streets and yards of homes in the villages and hamlets within the study area. Deciduous trees (primarily oak, beach, elm and ash) dominate the local forest vegetation.

3.1.2 Land Use

As stated above, land use within the 5-mile radius visual study area is dominated by agriculture, with soybeans and corn being the primary agricultural crops grown in the area. Higher density residential and commercial development is concentrated in the Villages of Antwerp, Payne, Convoy, Woodburn,

and Monroeville, and several smaller settlements, including the hamlets of Batson, McGill, Edgerton, Dixon, Townley, and Briceton. The villages generally include a main street business district, surrounded by traditional residential neighborhoods, with some commercial frontage development along the outskirts. Hamlets within the study area are relatively small pockets of development within a primarily rural/agricultural landscape. Outside the areas of concentrated human settlement, commercial/industrial uses within the study area include occasional rural businesses, farm suppliers, and rock quarries.

3.1.3 Water Features

Major water features within a 5-mile radius of the Project site are the Maumee River and Flatrock Creek. Both of these rivers have a gentle gradient, with numerous curves and oxbows. Steep wooded banks enclose the river channels and screen outward views from many locations. The study area also includes numerous man-made ponds that occur on private land, typically in proximity to a rural home or farm. Public access is available to the Maumee River, although the nearest public access site (off of Route 24) is outside of the study area to the west. This water body receives recreational use, including boating, and fishing. Most of the tributary streams within the study area are narrow and lined with trees. Many have been ditched/channelized, and can only be seen at, or in proximity to public road crossings. As such, they are not major visual components of the landscape.

3.2 Landscape Similarity Zones

The definition of landscape types found in a given study area provides a useful framework for the analysis of available visual resources and viewer circumstances. These landscape types, referred to as Landscape Similarity Zones (LSZs), are based on the variety and intensity of features such as landform, vegetation, water, and land use patterns. EDR defined three distinct LSZ's that occur within the visual study area of the Timber Road II Wind Farm. These generally homogeneous character zones were identified in accordance with established visual assessment methodologies (Smardon et al., 1987; USDA Forest Service, 1995; USDOT Federal Highway Administration, 1981; USDI Bureau of Land Management, 1980). The USGS National Land Cover Dataset (NLCD) used to help define the location of these zones is illustrated in Figure 5 (Sheet 1), along with representative photos of each zone (Sheets 2-4). The general landscape character, typical land use, and potential views to the proposed Project within each of the LSZs that occur within the study area are described below.

3.2.1 Zone 1: Agricultural/Rural Residential Zone

The Agricultural/Rural Residential LSZ is the dominant landscape type, and occurs throughout the study area. The landscape is characterized by level topography with a mix of widely scattered farms, rural residences, and small woodlots. The dominant agricultural use is crop farming (primarily soybeans, and corn), although livestock barns also occur in this zone. Due to the presence of open fields, views within this LSZ are more open and long distance than those available in other zones within the study area. These views typically include a level foreground landscape, with some degree of woodland vegetation in the background. Views in the Agricultural/ Rural Residential LSZ include widely scattered homes, barns, grain bins, and other agricultural buildings. Due to the abundance of open fields, and the proposed location of turbines exclusively within this zone, foreground (0-0.5 mile), midground (0.5-3.5 miles), and background (>3.5 miles) views of the proposed Project will be available from many areas within the Rural Residential/Agricultural LSZ.

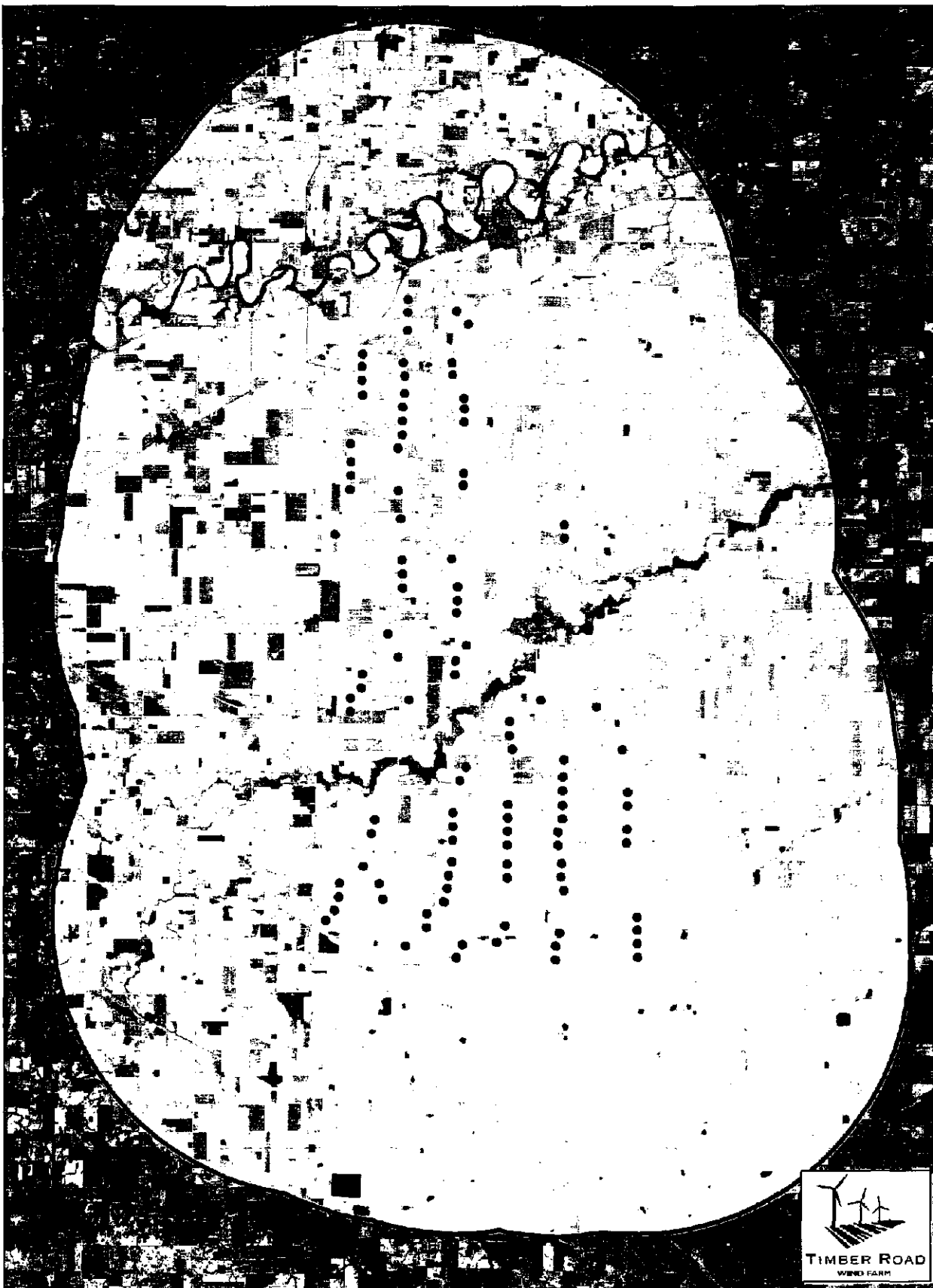
3.2.2 Zone 2. Village/Hamlet Zone

This LSZ includes the various villages and hamlets within the visual study area. This zone is characterized by high to moderate-density residential and commercial development. Vegetation (in the form of street and yard trees) contributes to the visual character in villages and hamlets, but within the majority of this zone, buildings (typically 1-3 stories tall) and other man-made features are dominant elements of the landscape. These features can be highly variable in their size, architectural style, and arrangement. However, all of the villages include large grain elevators and downtown buildings that tend to be traditional in architectural style and arranged in an organized pattern that generally focus views along the streets and block long distance views. In many areas, street and yard trees also help to enclose and screen views within this zone. Outward views toward the proposed Project are most likely from the hamlet and village outskirts, where housing and vegetation density is lower, and adjacent agricultural land more common.

3.2.3 Zone 3. River Corridor Zone

This zone occurs along portions of the Maumee River, Flatrock Creek, Blue Creek, Prairie Creek, and Hagerman Creek. These drainages meander through the study area in a generally northeast/southwest orientation, and are characterized by a gentle gradient and numerous oxbows and switchbacks. Some portions of the river corridors (particularly the Maumee River) have steep,

well-defined banks that drop 10-20 feet to the water's edge. The riverbanks are lined with mature trees and understory brush that extends beyond the banks into the adjacent uplands in many locations. In several locations, these wooded corridors adjacent to the rivers include rural residences tucked within the trees. The rivers receive some recreational use in the form of fishing and boating, and views from the rivers and their shorelines are dominated by the presence of open water. In some areas the rivers' steep wooded banks and adjacent riparian forest vegetation effectively screen outward views from the river corridors toward the surrounding landscape.



Title	Legend	Map Scale & Orientation	Notes	Author
Timber Road II Wind Farm Benton and Harrison Townships - Paulding County, Ohio Figure 5: Landscape Similarity Zones Map Sheet 1 of 4: Land Cover Types	● Wind Turbine □ 5 Mile Study Area ■ Developed ■ High Intensity Developed ■ Forest ■ Open/Agriculture ■ Water	Map Scale & Orientation 	Map Created: April 2010. Base Map: DOQQ Orthophotography, Natural Color, 1/4" Resolution, Year 2006 (Indiana), Year 2006 (Ohio). Source: NLCD land cover data from USGS NLCD 2001. © 2010 Environmental Design & Research, Landscape Architecture, Planning, Environmental Services, Engineering and Surveying, P.C.	Author



☐ Photo 1. Agricultural/Rural Residential



☐ Photo 2. Agricultural/Rural Residential

Title

Author

Timber Road II Wind Farm

Benton and Harrison Townships - Paulding County, Ohio

Figure 5: Landscape Similarity Zones

Sheet 2 of 4 - Representative Photographs

April 2010





☐ Photo 3. Village/Hamlet



☐ Photo 4. Village/Hamlet

Title

Timber Road II Wind Farm

Benton and Harrison Townships - Paulding County, Ohio

Figure 5: Landscape Similarity Zones

Sheet 3 of 4 - Representative Photographs

April 2010



Author



☐ Photo 5. River Corridor



☐ Photo 6. River Corridor

Title

Timber Road II Wind Farm

Benton and Harrison Townships - Paulding County, Ohio

Figure 5: Landscape Similarity Zones

Sheet 4 of 4 - Representative Photographs

April 2010



Author

3.3 Distance Zones

Three distinct distance zones are typically defined in visual studies. Consistent with well-established agency protocols (e.g., Jones and Jones 1977; USDA Forest Service, 1995), EDR generally defines these zones as follows:

- *Foreground:* 0 to 0.5 mile. At these distances, a viewer is able to perceive details of an object with clarity. Surface textures, small features, and the full intensity and value of color can be seen on foreground objects.
- *Mid-ground:* 0.5 to 3.5 miles. The mid-ground is usually the predominant distance at which landscapes are seen. At these distances a viewer can perceive individual structures and trees but not in great detail. This is the zone where the parts of the landscape start to join together; individual hills become a range, individual trees merge into a forest, and buildings appear as simple geometric forms. Colors will be clearly distinguishable, but will have a bluish cast and a softer tone than those in the foreground. Contrast in color and texture among landscape elements will also be reduced.
- *Background:* Over 3.5 miles. The background defines the broader regional landscape within which a view occurs. Within this distance zone, the landscape has been simplified; only broad landforms are discernable, and atmospheric conditions often render the landscape an overall bluish color. Texture has generally disappeared and color has flattened, but large patterns of vegetation are discernable. Silhouettes of one land mass set against another and/or the skyline are often the dominant visual characteristics in the background. The background contributes to scenic quality by providing a softened background for foreground and mid-ground features, an attractive vista, or a distant focal point.

3.4 Viewer/User Groups

Three categories of viewer/user groups were identified within the visual study area. These include the following:

3.4.1 Local Residents

Local residents include those who live, work, and travel for their daily business within the visual study area. They generally view the landscape from their yards, homes, local roads and places of employment. Residents are concentrated in and around the various villages and hamlets, but occur throughout the visual study area. Except when involved in local travel, residents are likely to be stationary, and have frequent or prolonged views of the landscape. Local residents may view the landscape from ground level or elevated viewpoints (typically upper floors/stories of homes). Residents' sensitivity to visual quality is variable, and may be tempered by the aesthetic character/setting of their neighborhood or work place. Those living in densely settled areas with views focused on their neighborhood street or their downtown centers may be less sensitive to landscape changes than those with a view of open farmland. It is generally assumed, however, that all residents are familiar with the surrounding landscape and may be very sensitive to changes, especially with respect to views that are important to them.

3.4.2 Through Travelers

Travelers passing through the area view the landscape from motor vehicles on their way to other destinations. Through travelers are typically moving, have a relatively narrow field of view oriented along the axis of the roadway, and are destination-oriented. Drivers on major roads in the area (e.g., U.S. Route 30, old U.S. Route 24 – a two-lane highway, and the new/under-construction U.S. Route 24 – a four-lane highway) will generally be focused on the road and traffic conditions, but do have the opportunity to observe roadside scenery. Passengers in moving vehicles will have greater opportunities for prolonged off-road views than will drivers, and therefore may be more aware of the quality of surrounding scenery. However, through travelers who are not residents of the area are unlikely to be particularly sensitive to visual change.

3.4.3 Visitors

This viewer group consists of out-of-town visitors who come to the area to visit family or friends, pay their respects at local cemeteries, or participate in cultural and recreational activities at parks, athletic fields, village centers and in undeveloped natural settings such as the Maumee River. Members of this group may view the landscape from area highways while on their way to these destinations, or from the sites themselves. This group includes, bicyclists, recreational boaters, fishermen and those involved in more passive recreational activities (e.g., picnicking, sight seeing, or

walking). Visual quality may or may not be an important part of their visit to the area. However, for some, scenery will be a very important part of their experience, and in almost all cases can serve to enhance the quality of their visit. Outdoor recreational users will often have continuous views of landscape features over relatively long periods of time. However, there is not a significant concentration of recreational resources in the visual study area, and most recreational viewers will only view the surrounding landscape from ground-level vantage points in wooded or developed settings where buildings and/or trees screen outward views.

3.5 Visually Sensitive Resources

The 5-mile radius visual study area includes only a few sites that could be considered scenic resources of statewide significance. These include the Maumee River, which has been designated as a Scenic River by the State of Ohio, and several historic sites including one (the Antwerp Norfolk and Western Railroad Depot) that is listed on the National Register of Historic Places.

3.5.1 Wild and Scenic Rivers

The National Wild and Scenic Rivers System was created by Congress in 1968 (Public Law 90-542) to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. In partial fulfillment of Section 5(d) of the Wild and Scenic Rivers Act of 1968, the National Park Service maintains the National Rivers Inventory (NRI), a national listing of "potentially eligible river segments." A river segment may be listed on the NRI if it is free-flowing and has one or more "outstandingly remarkable values" (ORVs). The kinds of ORVs that can qualify a river for listing include: exceptional scenery, fishing or boating, unusual geological formations, rare plant and animal life, and cultural or historical artifacts that are judged to be of more than local or regional significance (NPS, 2010a). There are no federally designated wild, scenic, or recreational rivers within the visual study area, and none listed by the NRI (NPS, 2010b; IWSRC, 2010).

Ohio's State Scenic Rivers Program was also established in 1968, to protect Ohio's remaining high quality streams for future generations. Scenic rivers retain most of their natural characteristics at a time when many rivers reflect the negative impacts of human activities. The designation process is a cooperative venture among state and local government, citizen groups, and local communities within a watershed that ultimately depends upon the support and protection authority of local

governments and citizens (ODNR, 2010a). Designated in 1974, the Maumee River is the only State Scenic River to flow through the visual study area (ODNR, 2010b).

The scenic designation for the Maumee River starts at the Ohio-Indiana state line and extends northeasterly beyond the visual study area to the U.S. Route 24 bridge located west of the City of Defiance, approximately 24 miles from the Project area. This section of the Maumee River is characterized by a broad meandering floodplain, with valley walls that rise sharply in comparison to the surrounding terrain. The riverbanks support a healthy, forested corridor. The Maumee River watershed is over 5,000 square miles and drains some of the richest farmland in Ohio.

3.5.2 Historic Sites

The Project Sponsor retained JFNew (Favret et al., 2010) to conduct a cultural resource records check for the visual study area. The purpose of the records check was to identify "registered landmarks of historic, religious, archaeological, scenic, natural, or other cultural significance within 5 miles of the proposed facility" (OPSB, 2009) as required by the Ohio Administrative Code, Section 4906-17-08(D)(1). "Registered landmarks" is interpreted to mean properties listed in or previously determined eligible for listing in the State and/or National Register of Historic Places (NRHP). The review included the following records available from the Ohio Historic Preservation Office (OHPO) in Columbus and the Indiana Department of Natural Resources Division of Historic Preservation and Archaeology (DHPA) in Indianapolis:

- National Register of Historic Places (NRHP)
- OHPO Ohio Historic Inventory (OHI)
- OHPO Determination of Eligibility Files (DOE)
- Ohio Genealogical Society (OGS) Cemetery Files
- DHPA Indiana Historic Sites and Structures Inventory (IHSSI)
- National Historic Landmarks (NHL) List

The records check for the 5-mile radius study area identified one historic property listed in the NRHP; seven individual properties and one historic district previously determined eligible for listing in the NRHP; 290 previously identified historic structures recorded in the OHI and 184 historic structures recorded in the IHSSI; and, 27 cemeteries recorded by the OGS. According to the National Park Service website, the NRHP is the official list of designated historic places worthy of preservation. National Register properties have significance to the history of their community, state, or the nation. Authorized by the National Historic Preservation Act of 1966, the NRHP is maintained by the National Park Service as part of a national program to coordinate efforts to identify, evaluate,

and protect historic and archeological resources (NPS, 2010c). The only property listed on the NRHP located in the study area is the Antwerp Norfolk and Western Railroad Depot located on West Water Street in the Village of Antwerp. Properties within the study area previously determined eligible for listing on the NRHP include: 204, 205, 208, and 210 South Main Street in the Village of Antwerp; the County Road 21 Bridge over North Creek, a bridge over South Creek, and Former Worm School/Grange Hall in the Town of Harrison (Paulding County); and, a historic district in downtown Monroeville in Allen County, Indiana (Favret et al., 2010). There are no National Historic Landmarks or NRHP-listed historic districts located within the study area. In addition, the results of analyses performed for the Timber Road I Wind Farm indicate that the region does not warrant consideration as a significant rural historic vernacular landscape eligible for listing in the NRHP (Rutter, 2010).

The Ohio Historic Inventory (OHI) records maintained by OHPO serves as an accurate and continuing record of the architectural and historic properties currently existing in the state. Since 1974, over 90,000 historic properties with historical merit have been entered into the records of the OHI, mostly consisting of residential and commercial structures in downtown and neighborhood commercial nodes. The OHI form provides a brief description of the location, background, and architecture of a building, site, structure, or object of architectural or historical significance. However, the OHI form does not automatically nominate or indicate acceptance of a property to the NRHP (OHPO, 2010). The vast majority of the 290 historic structures listed in the OHI within the study area are located in the Village of Antwerp. A total of 27 OHI-listed historic structures are located within or adjacent to lands leased for the Project. These include structures within the Village of Payne as well as numerous residences and farmsteads recorded during the 2009 survey by JFNew for the proposed Timber Road I wind farm project (Rutter, 2010).

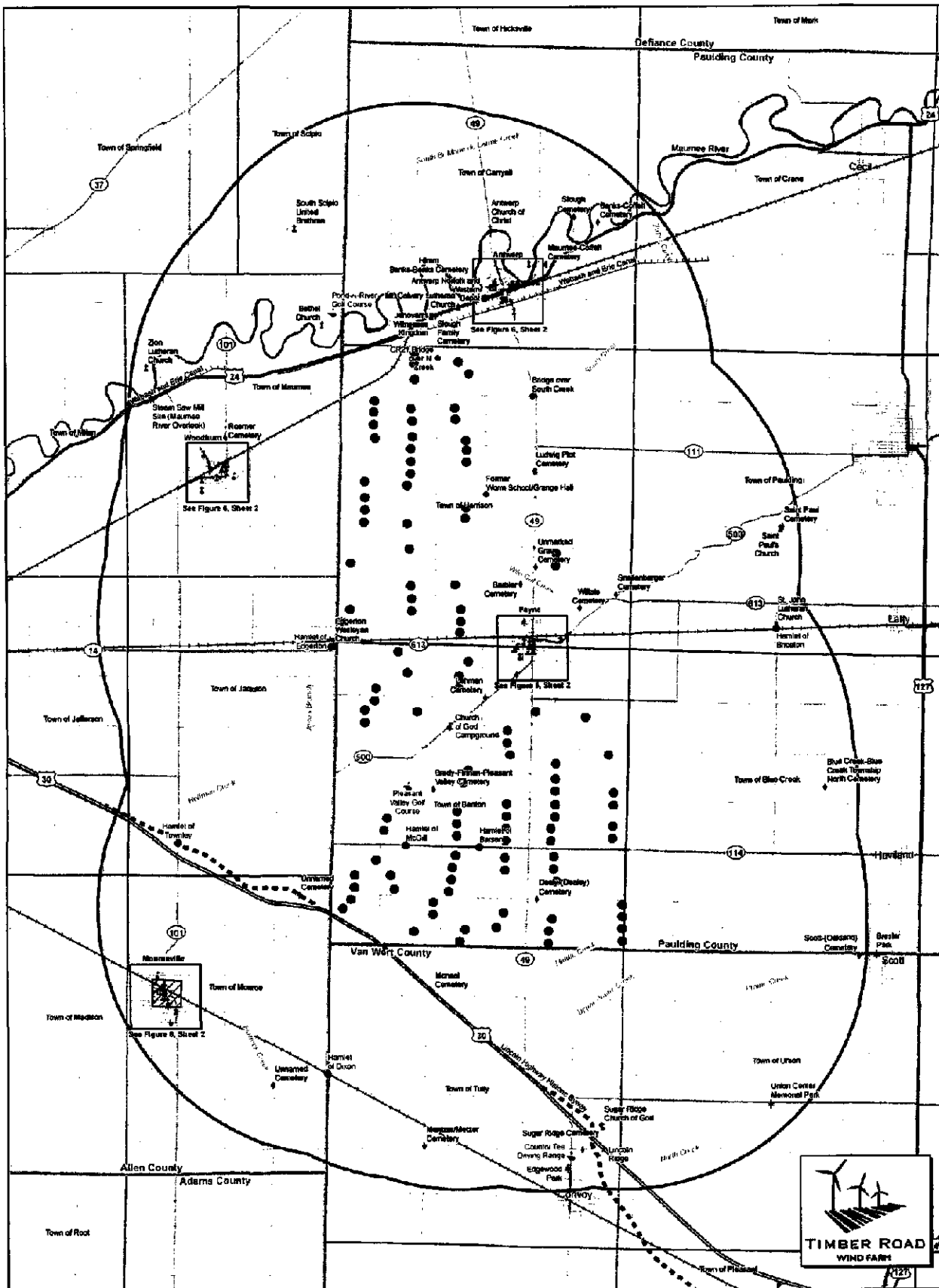
The Lincoln Highway Historic Byway traverses the southern part of the study area. The privately funded Lincoln Highway, named as a tribute to Abraham Lincoln, was originally conceived in 1912-1913 as the first transcontinental highway in the United States built specifically for the automobile (Lin, 2008). Most of the length of the highway within the study area has been re-routed or replaced with US Route 30, a modern four-lane highway. Portions of the original roadway are located from approximately the western limits of the study area to the Indiana-Ohio state line and from approximately the intersection of US Route 30 and Dixon Cavett Road in the Town of Tully (Paulding County, Ohio) southeast to the limits of the study area (Figure 6). The highway is significant for its historical associations but has no formal designation based on scenic qualities or attributes.

3.5.3 Other Scenic and Recreational Resources

There are no State Parks, State Forests, State Wildlife Management Areas, National Wildlife Refuges, National Park Service Lands, designated National Natural Landmarks, designated State or Federal trails, or designated scenic roads or overlooks within the visual study area.

Although scenic resources of statewide significance are limited, the 5-mile radius study area does include several areas that could be considered regionally or locally significant/sensitive, due to the type or intensity of land use they receive. These include local parks, schools, churches, cemeteries, areas of concentrated human settlement (villages and hamlets), and heavily traveled highways.

All inventoried scenic/sensitive resources are listed in Table A in Appendix A. The location of mapped visually sensitive resources within the visual study area is illustrated in Figure 6, and on the large-scale viewshed maps included in Appendix A.



Timber Road II Wind Farm

Benton and Harrison Townships -
Paulding County, Ohio

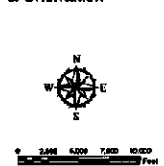
Figure 6: Visually Sensitive Resources

Sheet 1 of 2

Legend

- NRHP Listed
- NRHP Eligible
- ▽ State Historic Marker
- ▨ IHSSI Historic District
- ▨ Scenic and Recreational River
- ▨ Wabash & Erie Canal
- ▨ Scenic Byway
- 1 Churches
- 2 Libraries
- 4 Cemeteries
- ▲ Local Parks
- ▽ Golf Courses
- Schools
- Other Local Resources
- ▨ Hamlet
- ▨ Areas of Intensive Landuse
- Wind Turbine
- 5 Mile Study Area
- ▨ Town Boundary
- ▨ County Boundary

Map Scale & Orientation



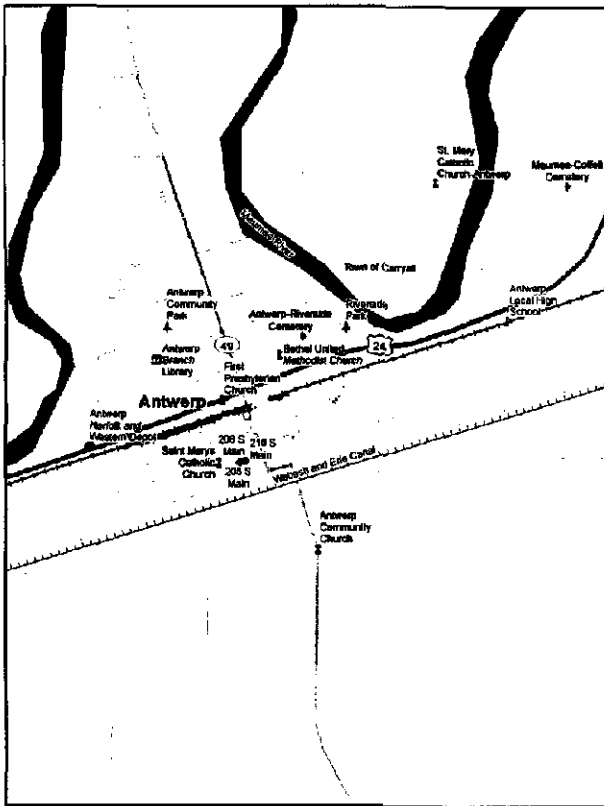
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Map Created: April 2010.
Base Map:
ESRI StreetMap USA, 2008.
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Landscape Architecture, Planning, Environmental
Services, Engineering and Surveying, P.C.

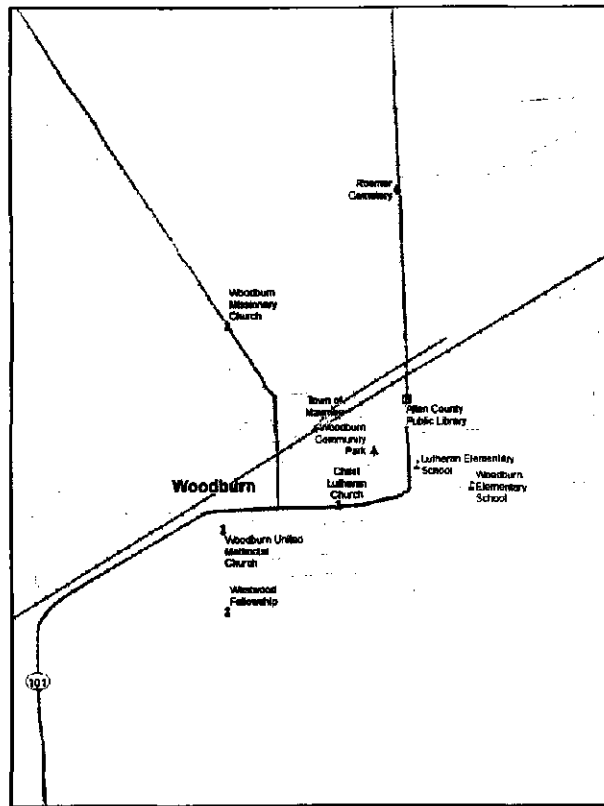
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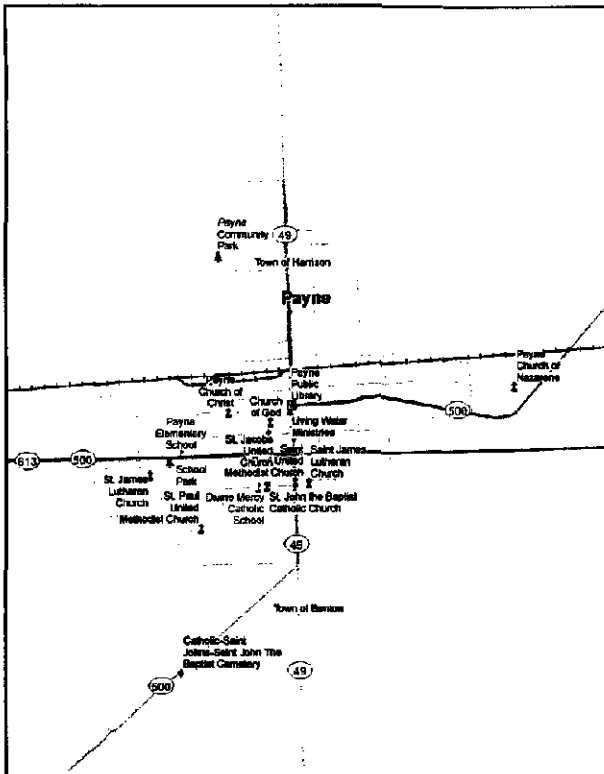
Village of Antwerp



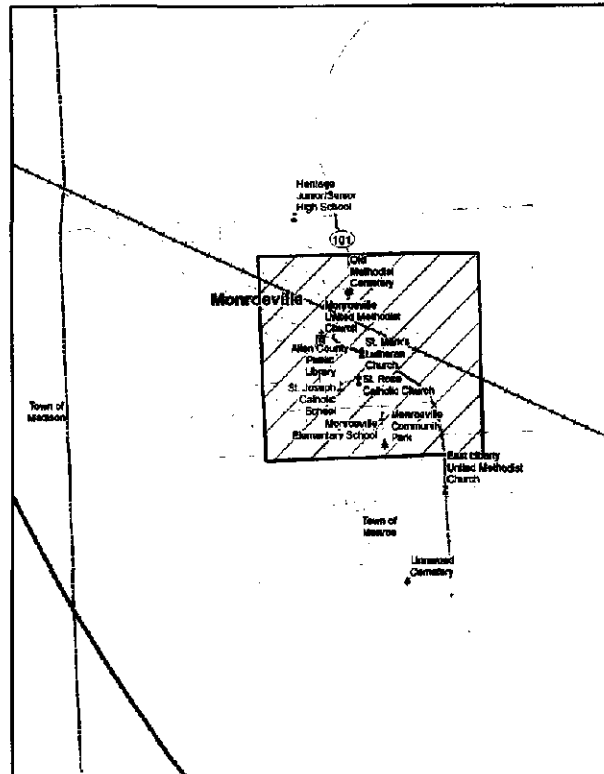
City of Woodburn



Village of Payne



Town of Monroeville



Title	Legend	Map Scale & Orientation	Notes	Author
Timber Road II Wind Farm Benton and Harrison Townships - Paulding County, Ohio Figure 6: Visually Sensitive Resources Sheet 2 of 2	● NRHP Listed ● NRHP Eligible ○ State Historic Marker ▨ IHS&I Historic District ▨ Scenic and Recreational River ▨ Viasheen & Erie Canal ▨ Scenic Byway ⚡ Wind Turbine ⚡ 5 Mile Study Area ▨ Town Boundary ▨ County Boundary ▲ Local Parks ⚡ Golf Courses ⚡ Schools ⚡ Other Local Resources ● Hamlet ○ Areas of Intensive Landuse ⚡ Churches ⚡ Libraries ⚡ Cemeteries	Map Scale & Orientation 	Notes Map Created: April 2010. Base Map: ESRI StreetMap USA, 2008. © 2010 Environmental Design & Research, Landscape Architecture, Planning, Environmental Services, Engineering and Surveying, P.C.	Author 277 Montgomery Street Suite 600 Syracuse, NY 13202 315.471.8888 P: 315.471.1881 www.edrpa.com

4.0 Visual Impact Assessment Methodology

The VIA procedures used for this study are consistent with methodologies developed by various state and federal agencies, including the U.S. Department of the Interior, Bureau of Land Management (1980), U.S. Department of Agriculture, National Forest Service (1974), the U.S. Department of Transportation, Federal Highway Administration (1981), the Adirondack Park Agency (not dated), and the New York State Department of Environmental Conservation (not dated; 2000). The specific techniques used to assess potential Project visibility and visual impacts are described in the following section.

4.1 Project Visibility

An analysis of Project visibility was undertaken to identify those locations within the visual study area where there is potential for the proposed wind turbines to be seen from ground-level vantage points. This analysis included identifying potentially visible areas on viewshed maps, preparing technical cross sections, and verifying visibility in the field. The methodology employed for each of these assessment techniques is described below.

4.1.1 Viewshed Analysis

Topographic viewshed maps for the Project were prepared using USGS digital elevation model (DEM) data (7.5-minute series), the location and height of all proposed turbines (see Figure 2), and ESRI ArcView® software with the Spatial Analyst extension. The viewshed analysis was based on the conservative ("worst case") scenario of 109 wind turbine generators, although it is anticipated that only 83-100 turbines will actually be constructed depending on the model of turbine selected. Two 5-mile radius topographic viewsheds were mapped, one to illustrate "worst case" daytime visibility (based on a maximum blade tip height of 459.3 feet above existing grade) and the other to illustrate potential nighttime visibility of turbine lights (based on the conservative assumption that all of the turbines are lit and a nacelle height of 311.7 feet above existing grade).

The ArcView program defines the viewshed (using topography only) by reading every cell of the DEM data and assigning a value based upon visibility from observation points throughout the 5-mile study area. The resulting topographic viewshed maps define the maximum area from which any turbine within the completed Project could potentially be seen within the study area during both

daytime and nighttime hours (ignoring the screening effects of existing vegetation and structures). A turbine count analysis was also performed to determine how many wind turbines are potentially visible from any given point within the viewshed. The results of this analysis were then grouped by number of turbines potentially visible. Four turbine count groups were defined to create an even distribution of turbines within each group, and to allow easy interpretation of the final map.

Because the screening provided by vegetation and structures is not considered in this analysis, the topographic viewshed represents a "worst case" assessment of potential Project visibility. Topographic viewshed maps assume that no trees exist, and are therefore very accurate in predicting where visibility will not occur due to topographic interference. However, they are less accurate in identifying areas from which the Project would actually be visible. Tall vegetation, coniferous trees, and buildings can limit or eliminate visibility in areas indicated as having potential Project visibility in the topographic viewshed analysis.

To supplement the topographic viewshed analysis, a vegetation viewshed was also prepared to illustrate the potential screening provided by forest vegetation. A base vegetation layer was created using the USGS NLCD to identify the mapped location of forestland (including the Deciduous Forest, Evergreen Forest, Mixed Forest and Woody Wetland NLCD classifications). Based on standard visual assessment practice, the mapped locations of the forestland was assigned an assumed elevation of 40 feet, and added to the DEM. The viewshed analysis was then re-run, as described above. As with the topographic viewshed analysis, a turbine count analysis was performed, and two 5-mile radius vegetation viewsheds were mapped, one to illustrate "worst case" daytime visibility (based on a maximum blade tip height of 459.3 feet above existing grade) and the other to illustrate potential visibility of turbine lights (based on the proposed lighting plan and a nacelle height of 311.7 feet above existing grade). Once the viewshed analysis was completed, the areas covered by the forest vegetation layer were designated as "not visible" on the resulting data layer.

Because it accounts for the screening provided by mapped forest stands, the vegetation viewshed is a much more accurate representation of potential Project visibility. However, it is important to note that because screening provided by buildings and street/yard trees, as well as characteristics of the proposed turbines that influence visibility (color, narrow profile, distance from viewer, etc.), are not taken consideration in the viewshed analyses, being within the viewshed does not necessarily equate to actual Project visibility.

4.1.2 Cross Section Analysis

To further illustrate the screening effect of vegetation and structures within the study area, two representative line-of-sight cross sections (10.2 and 18.2 miles long) were cut through the study area. Cross section locations were chosen so as to include visually sensitive areas (e.g., villages, water bodies, and major roads) and cover the various landscape similarity zones occurring within the 5-mile radius study area. The cross sections are based on forest vegetation and topography as indicated on the 7.5-minute USGS quadrangle maps and digital aerial photographs. For the purposes of this analysis, a uniform 40-foot tree height was assumed. A 10 fold vertical exaggeration was used to increase the accuracy of the analysis and facilitate reader interpretation.

4.1.3 Field Verification

EDR personnel conducted field visits to the study area on August 25-27, 2009 and March 16-19, 2010. The purpose of this exercise was to verify potential turbine visibility as indicated by viewshed analysis and to obtain photographs for subsequent use in the development of visual simulations. A mix of clear and overcast skies provided a representative variety of sky/lighting conditions.

During the field verification, an EDR field crew drove public roads and visited public vantage points within the 5-mile radius study area to document locations from which the turbines would likely be visible, partially screened, or fully screened. This determination was made based on the visibility of existing structures located in proximity to the proposed turbine sites (meteorological towers, farm structures, etc.), which served as locational and scale references. Photos were taken from 298 representative viewpoints within the study area. All photos were obtained using a Nikon D200 and Canon Rebel XT digital SLR cameras with a focal length between 28 and 35 mm (equivalent to between 45 and 55 mm on a standard 35 mm film camera). This focal length is the standard used in visual impact assessment because it most closely approximates normal human perception of spatial relationships and scale in the landscape. Viewpoint locations were determined using hand-held global positioning system (GPS) units and high-resolution aerial photographs (digital ortho quarter quadrangles). The time and location of each photo were documented on all electronic equipment (camera, GPS unit, etc.) and noted on field maps and data sheets (see Appendix B). Viewpoints photographed during field review generally represented the most open, unobstructed available views toward the Project.

4.2 Project Visual Impact

Beyond evaluating potential Project visibility, the VIA also examined the visual impact of the proposed wind turbines on the aesthetic resources and viewers within the Project study area. This assessment involved creating computer models of the proposed Project turbines, selecting representative viewpoints within the study area, and preparing computer-assisted visual simulations of the proposed Project. These simulations were then used to characterize the type and extent of visual impact resulting from Project construction. Details of the visual impact assessment procedures are described below.

4.2.1 Viewpoint Selection

From the photo documentation conducted during field verification, EDR selected a total of 10 viewpoints for development of visual simulations. These viewpoints were selected based upon the following criteria:

1. They provide clear, unobstructed views of the Project (as determined through field verification).
2. They illustrate Project visibility from sensitive sites/resources within the visual study area.
3. They illustrate typical views from landscape similarity zones where views of the Project will be available.
4. They illustrate typical views of the proposed Project that will be available to representative viewer/user groups within the visual study area.
5. They illustrate typical views of different numbers of turbines, from a variety of viewer distances, and under different lighting conditions, to illustrate the range of visual change that will occur with the Project in place.

Location of the selected viewpoints is indicated in Figure 10. Location information and the criteria for selection of each simulation viewpoint are summarized in Table 1, below:

Table 1. Viewpoints Selected for Simulations and Evaluation

Viewpoint Number	Visually Sensitive Resource	LSZ Represented	Viewer Group Represented	Viewing Distance	View Orientation¹
27	State Route 114	Agricultural/ Rural Residential	Residents & Travelers	2.5 mi	W
50	Payne Community Park	Village/ Hamlet	Residents	1.2 mi	WNW
54	State Routes 500 & 613 over Wildcat Creek	River Corridor	Residents & Visitors	1.3 mi	NW
72	Lincoln Highway (Historic Byway) over Flat Rock Creek	Agricultural/ Rural Residential	Residents, Visitors, & Travelers	3.0 mi	NE
92	n/a; (Convoy Heller Road)	Agricultural/ Rural Residential	Residents	0.5 mi	W
101	Pleasant Valley Golf Course	Agricultural/ Rural Residential	Residents & Visitors	0.8 mi	E
107	Former Worm School/ Grange Hall (Historic Site)	Agricultural/ Rural Residential	Residents	0.4 mi	W
117	High Point ² ; US Route 24	Agricultural/ Rural Residential	Residents, Visitors, & Travelers	0.3 mi	S
155	State Route 49 at US Route 30	Agricultural/ Rural Residential	Residents, Visitors, & Travelers	2.6 mi	N
227	n/a; (Ohio State Highway 114)	Agricultural/ Rural Residential	Residents & Travelers	3.4 mi	W

¹N = North, S = South, E = East, W = West

²Overpass on new U.S. Route 24. Most elevated view in study area

4.2.2 Visual Simulations

To show anticipated visual changes associated with the proposed Project, high-resolution computer-enhanced image processing was used to create realistic photographic simulations of the completed turbines from each of the 10 selected viewpoints. The photographic simulations were developed by constructing a three-dimensional computer model of the proposed turbine and turbine layout based on turbine specifications and survey coordinates provided by the Project developer. For the purposes of this analysis, it was assumed that all new turbines would be Vestas V-90 1.8 MW machines. Simulation methodology and accuracy is outlined in Figure 7, and the computer model used in this VIA is shown in Figure 3.

The next step in this process involved utilizing aerial photographs and GPS data collected in the field to create an AutoCAD Civil 3D 2010® drawing. The two dimensional AutoCAD data was then imported into AutoDesk 3ds MAX 2010® and three-dimensional components (cameras, modeled

turbines, etc.) were added. These data were superimposed over photographs from each of the viewpoints, and minor camera changes (height, roll, precise lens setting) made to align all known reference points within the view. This process ensures that Project elements are shown in proportion, perspective, and proper relation to the existing landscape elements in the view. Consequently, the alignment, elevations, dimensions and locations of the proposed structures will be accurate and true in their relationship to other landscape elements in the photo (see Figure 7).

At this point, a "wire frame" model of the facility and known reference points is shown on each of the photographs. The proposed exterior color/finish of the turbines is then added to the model and the appropriate sun angle is simulated based on the specific date, time and location (latitude and longitude) at which each photo was taken. This information allows the computer to accurately illustrate highlights, shading and shadows for each individual turbine shown in the view. All simulations show the turbines with rotors oriented toward the southwest, which is generally the prevailing wind direction in the area.

4.2.3 Visual Impact Evaluation

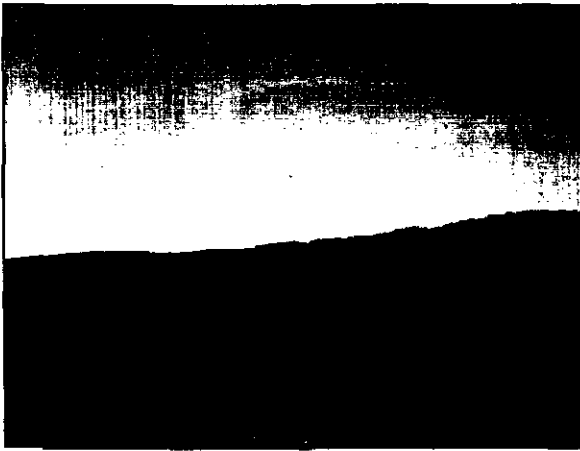
To evaluate anticipated visual changes associated with the proposed Project, the photographic simulations of the completed Project (as described above) were compared to photos of existing conditions. These "before" and "after" photographs, identical in every respect except for the Project components shown in the simulated views, were printed in 11 x 17 inch format for every viewpoint selected in the previously described process. A licensed EDR landscape architect was then asked to determine the effect of the proposed Project on the existing visual conditions in terms of its contrast with existing components of the landscape. Landscape, viewer, and project related factors considered by the landscape architect in his evaluation included the following:

- *Landscape Composition:* The arrangement of objects and voids in the landscape that can be categorized by their spatial arrangement. Basic landscape components include vegetation, landform, water and sky. Some landscape compositions, especially those that are distinctly focal, enclosed, detailed, or feature-oriented, are more vulnerable to modifications than panoramic, canopied, or ephemeral landscapes.
- *Form, Line, Color, and Texture:* These are the four major compositional elements that define the perceived visual character of a landscape, as well as a project. Form refers to the shape

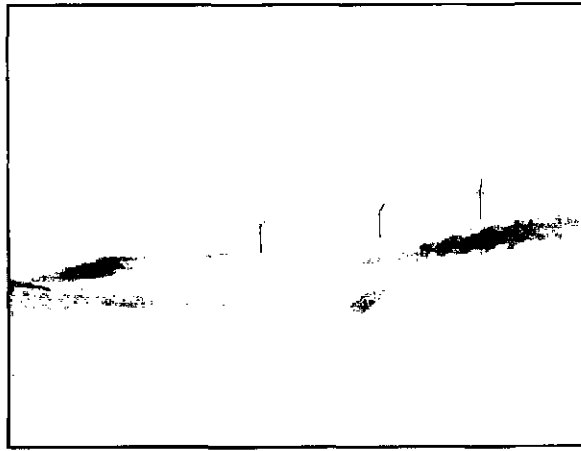
of an object that appears unified; often defined by edge, outline, and surrounding space. Line refers to the path the eye follows when perceiving abrupt changes in form, color, or texture; usually evident as the edges of shapes or masses in the landscape. Texture in this context refers to the visual surface characteristics of an object. The extent to which form, line, color, and texture of a project are similar to, or contrast with, these same elements in the existing landscape is a primary determinant of visual impact.

- *Variety/Diversity:* As a general rule, more diverse landscapes tend to have higher scenic quality. Diversity may result from diverse topography or vegetative types that produce a range of textures and colors, or from the presence of distinct natural features such as water bodies.
- *Focal Point:* Certain natural or man-made landscape features stand out and are particularly noticeable as a result of their physical characteristics. Focal points often contrast with their surroundings in color, form (shape), scale or texture, and therefore tend to draw a viewer's attention. Examples include prominent trees, mountains and water features. Man-made features, such as a steeple or grain elevator can also be focal points.
- *Intactness/Order:* Natural landscapes have an underlying order determined by natural processes. Cultural landscapes exhibit order by displaying traditional or logical patterns or land use/development. Elements in the landscape that are inconsistent with this natural order may detract from scenic quality. When a new project is introduced to the landscape, intactness and order are maintained through the repetition of the forms, lines, colors, and textures existing in the surrounding built or natural environment.
- *Distance:* Views in which all foreground, mid-ground, and background zones are all visible are often considered to have the highest scenic quality. In general, the scale and impact of a project is reduced the further it is located from a viewer.
- *Duration of View:* Some views are seen as quick glimpses while driving along a roadway or hiking a trail, while others are seen for a more prolonged period of time. Longer duration views of a project, especially from significant aesthetic resources, have the greatest potential for adverse visual impact.

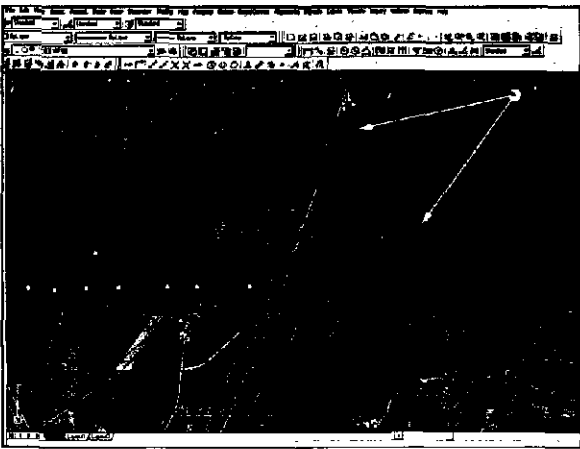
- *Scenic or Recreational Value:* Designation as a scenic or recreational resource is an indication that there is broad public consensus on the value of that particular resource. The particular characteristics of the resource that contribute to its scenic or recreational designation provide guidance in evaluating a project's visual impact on that resource.
- *Project Scale:* The apparent size of a proposed project in relation to its surroundings define the compatibility of its scale with the existing landscape. Perception of project scale is likely to vary depending on the distance from which it is seen and other contextual factors.
- *Visual Clutter:* Numerous unrelated built elements occurring within a view can adversely impact scenic quality by creating visual clutter.
- *Form, Line, Color, and Texture:* These are the basic compositional elements that define the visual characteristics of a landscape, as well as a project. The extent to which form, line, color, and texture of a project are similar to, or contrast with these same elements in the existing landscape is a primary determinant of visual impact.
- *Movement:* Moving project components can make them more noticeable, but in the case of wind turbines, have also been shown to also make them appear more functional and visually appealing.



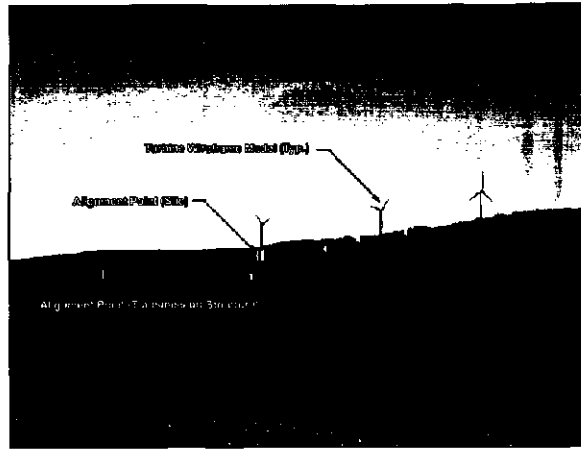
Photos are selected to illustrate typical views of the proposed project that will be available to representative viewer/user groups from the major landscape similarity zones and sensitive sites within the study area.



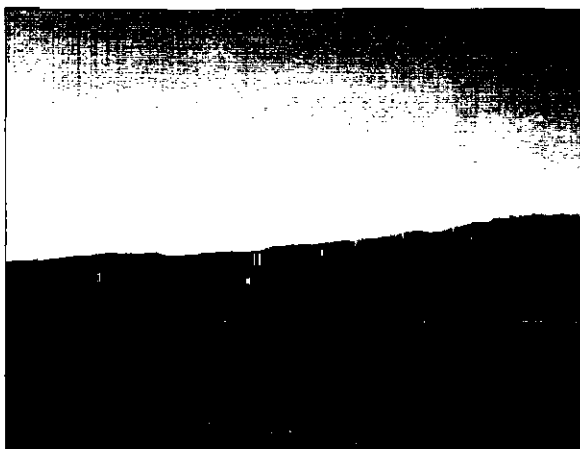
A three-dimensional computer model of the project is built based on proposed turbine specifications and tower site coordinates.



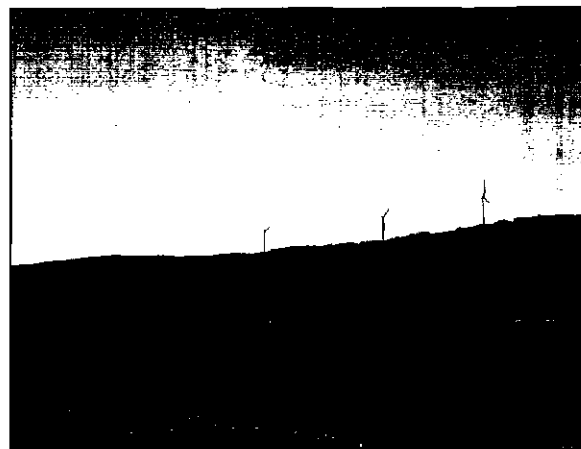
Aerial photographs and GPS data collected in the field are used to create an AutoCAD 2010® drawing.



These data are superimposed over photographs from each of the viewpoints, and minor camera changes are made to align all known reference points within the view.



A digital terrain model representing the existing topography is also overlayed on the existing photograph to refine camera alignment, and target elevation.



The proposed exterior color/finish of the turbines was then added to the model and the appropriate sun angle is simulated based on the specific date, time and location (latitude and longitude) at which each photo was taken.

Title

Timber Road II Wind Farm

Benton and Harrison Townships - Paulding County, Ohio

Figure 7: Visual Simulation Methodology

April 2010

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5.0 Visual Impact Assessment Results

5.1 Project Visibility

Potential turbine visibility, as indicated by the viewshed analyses, is illustrated in Figure 8 and summarized in Table 2. As indicated by the topographic blade tip analysis, some portion of the proposed Project could potentially be visible in approximately 99.7% of the 5-mile study area. This "worst case" assessment of potential visibility indicates the area where any portion of any turbine could possibly be seen without considering the screening effect of existing vegetation and structures.

Table 2. Viewshed Results Summary

Type of Viewshed	5-mile Radius Study Area		
	Total Acres	Visible Acres ¹	%
Blade Tip - Topo Only			
0 Visible	179,213	564	0.3
1-27 Turbines Visible	179,213	1,326	0.7
28-54 Turbines Visible	179,213	1,271	0.7
55-81 Turbines Visible	179,213	992	0.6
82-109 Turbines Visible	179,213	175,067	97.7
Nacelle/FAA Lighting - Topo Only			
0 Visible	179,213	954	0.5
1-27 Turbines Visible	179,213	1,761	1.1
28-54 Turbines Visible	179,213	1,618	1.1
55-81 Turbines Visible	179,213	1,178	1.2
82-109 Turbines Visible	179,213	173,698	96.9
Blade Tip - Topo & Vegetation			
0 Visible	179,213	5,792	3.2
1-27 Turbines Visible	179,213	4,697	2.6
28-54 Turbines Visible	179,213	6,612	3.7
55-81 Turbines Visible	179,213	12,513	7.0
82-109 Turbines Visible	179,213	149,562	83.5
Nacelle/FAA Lighting - Topo & Vegetation			
0 Visible	179,213	6,519	3.6
1-27 Turbines Visible	179,213	6,231	3.5
28-54 Turbines Visible	179,213	8,964	5.0
55-81 Turbines Visible	179,213	16,869	9.4
82-109 Turbines Visible	179,213	140,595	78.5

¹ Acreage for turbine count analysis may not be equal to study area acreage due to rounding and/or raster-to-vector conversion

Areas where there is no possibility of seeing the Project are generally limited to small portions of the Maumee River Valley and associated tributaries. Based on blade tip height and the screening effect

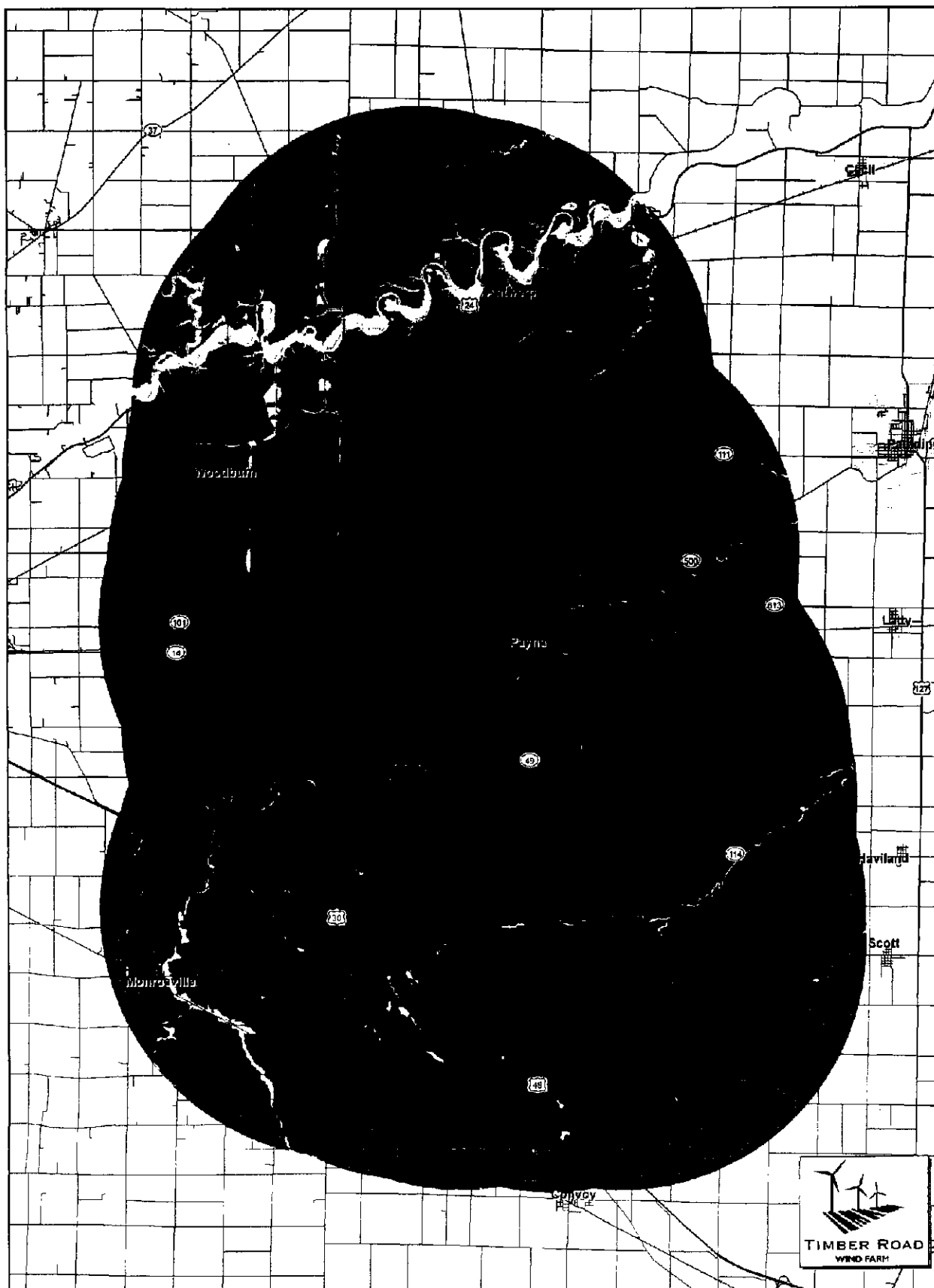
of topography alone, all of the visually sensitive sites within the 5-mile study area are indicated as having potential views of the Project (see Table A in Appendix A). As indicated by the turbine count analysis in Table 3, in most areas where potential blade tip visibility is indicated by the topographic viewshed analysis, views of 82-109 of the proposed turbines could be available. Only about 2.3% of the 5-mile radius study area has the potential for views that include fewer than 82 turbines (if screening by trees is not considered).

It is a requirement of Federal Aviation Administration policy (FAA, 2005) that warning lights be mounted on some of the turbines. In this case, these lights would be mounted on the turbines' nacelles at a height of 311.7 feet above the ground. A lighting plan prepared in accordance with FAA policy was approved in September 2009 for an earlier layout of the Project. The earlier approved lighting plan included warning lights on 59 of the 116 proposed turbines (or approximately 50%). Because a lighting plan for the currently proposed layout has not been prepared, EDR's nacelle viewshed assumes that every proposed turbine would be equipped with a warning light. Based on this "worst case" assumption, the topographic viewshed analysis indicates that the FAA lights could be visible from approximately 99.5% of the 5-mile radius study area, in roughly the same locations shown by the blade tip analysis. As with the blade tip analysis, in most areas where potential views of the FAA warning lights are indicated by the topographic viewshed analysis, views of most of the turbines (82-109) could be available. It is important to note that it is likely that between one-third and one-half of the nacelles will actually be lit. The nacelle/FAA light viewshed analysis presented herein is based on an assumption that over-estimates the number of warning lights that would be installed and therefore overstates the potential nighttime visual impact.

Factoring vegetation into the viewshed analysis reduces potential Project visibility, and is a more accurate reflection of what the actual extent of Project visibility is likely to be (Figure 8, Sheets 3 and 4). Within a 5-mile radius, the vegetation viewshed analysis indicates that approximately 96.8% of the area will have potential views of some portion of the Project. Visibility will be reduced or eliminated in small areas throughout the study area where blocks of forest vegetation occur. These areas occur most commonly in the northern portion of the study area, and in two bands that run along the Maumee River and Flatrock Creek corridors. Compared to the topographic blade tip viewshed, areas where fewer than 82 turbines could potentially be visible increases from 2.3% to 16.5% of the study area simply by factoring in the screening effect of vegetation. Comparing the vegetation and topographic viewshed analysis of the nacelle height results in a further reduction in potential visibility, with 3.6% of the study area not having views of the nacelle and FAA warning lights (see Table 2). As indicated in Table A, considering the screening effect of vegetation in the

viewshed analysis reduces potential Project visibility from sensitive sites within the study area, but all are still indicated as having the potential for at least partial visibility of the Project.

As mentioned previously, areas of actual visibility are anticipated to be more limited than indicated by the viewshed analysis, due to the slender profile of the turbines (especially the blade, which make up the top 147.5 feet of the turbine), the effects of distance, and screening provided by yard trees, street trees and structures, all of which are not considered in the viewshed analysis.



Title
**Timber Road II
 Wind Farm**
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 Paulding County, Ohio

**Figure 8: Viewshed Analysis
 Sheet 1 of 4 - Topographic
 Blade Tip (459 ft.) Visibility**

Legend

- Wind Turbine
- Turbine Count Visibility Analysis
- Number Potentially Visible
- 0
- 1 - 27
- 28 - 54
- 55 - 81
- 82 - 100

Map Scale
 & Orientation

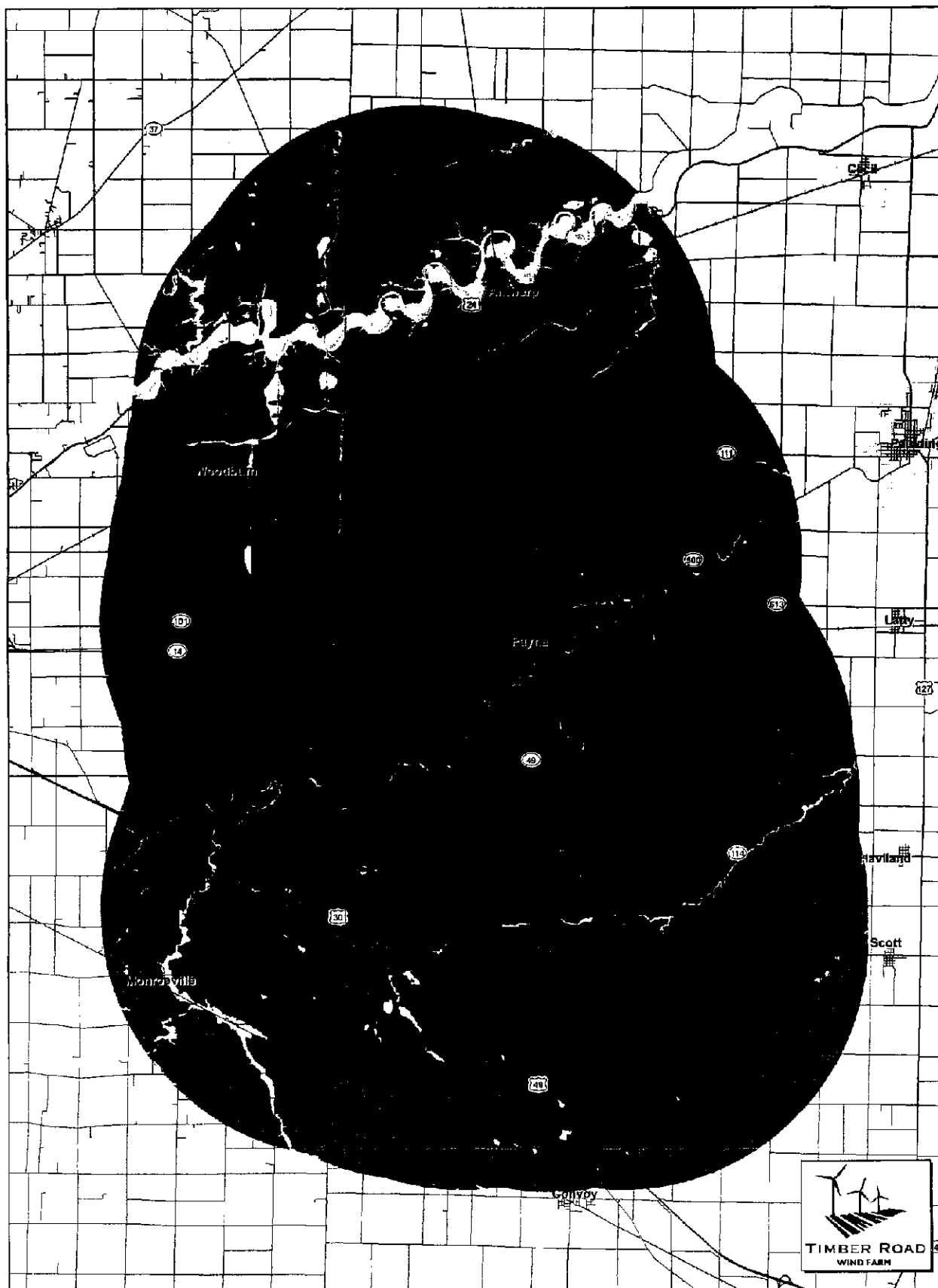
Notes

Map Created: April 2010.

Base Map:
 ESRI StreetMap North America 2008.

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Author



Title	Legend	Map Scale & Orientation	Notes	Author
Timber Road II Wind Farm <i>Benton and Harrison Townships - Paulding County, Ohio</i>	- Wind Turbine - Turbine Count Visibility Analysis - Number Potentially Visible 1 - 27 28 - 54 55 - 81 82 - 108		Map Created: April 2010. Base Map: ESRI StreetMap North America 2008. © 2010 Environmental Design & Research, Landscape Architecture, Planning, Environmental Services, Engineering and Surveying, P.C.	 217 Montgomery Street Suite 300 Syracuse, NY 13202 T: 315.471.1000 F: 315.471.1009 www.edrinfo.com



Title

Timber Road II Wind Farm

Benton and Harrison Townships -
Paulding County, Ohio

Figure 8: Viewshed Analysis
Sheet 3 of 4 - Vegetation
Blade Tip (459 ft.) Visibility

Legend

- Wind Turbine
- Turbine Count Visibility Analysis
- Number Potentially Visible
- 0
- 1 - 27
- 28 - 54
- 55 - 81
- 82 - 109

Map Scale & Orientation



Notes

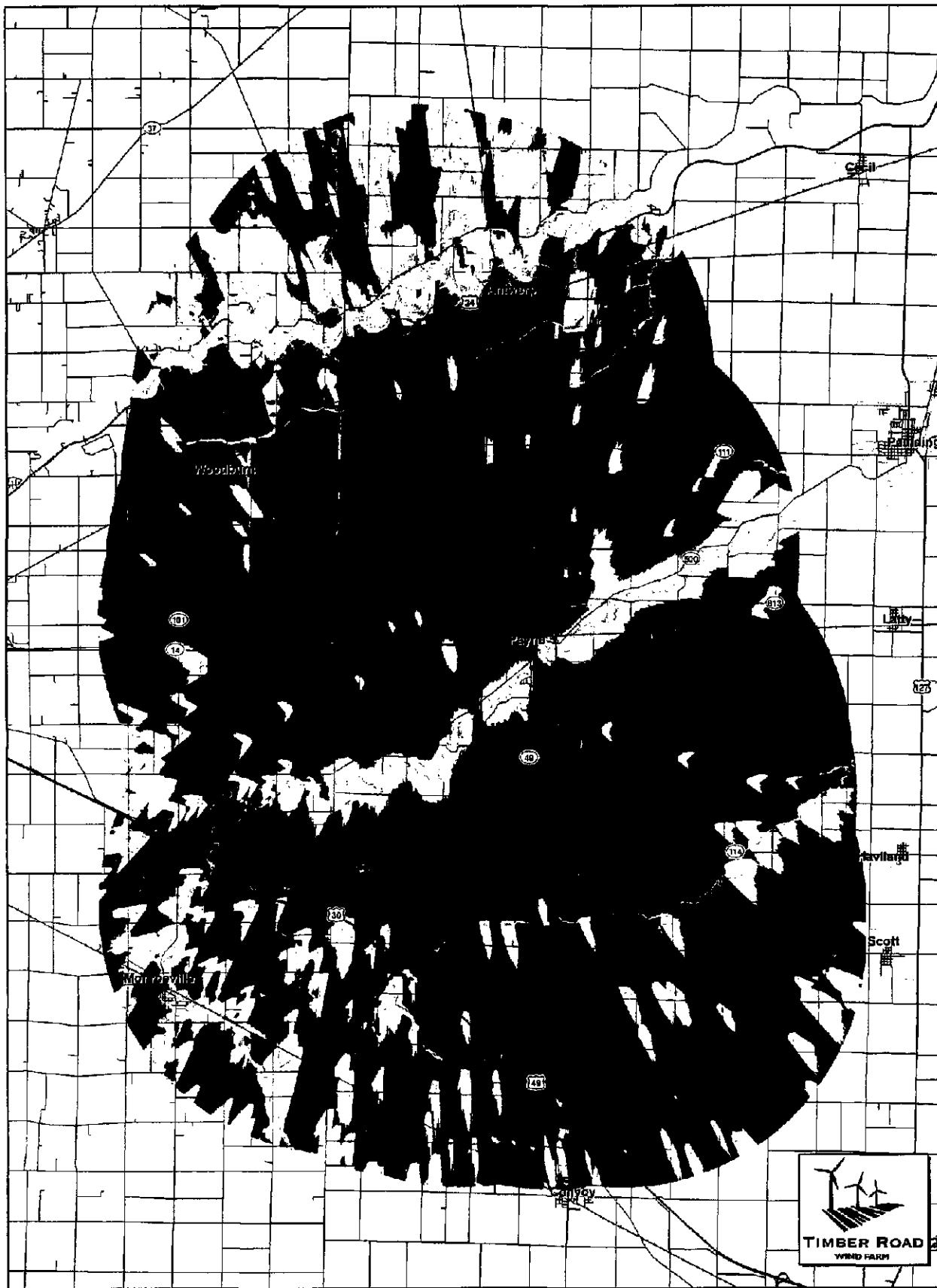
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Base Map:
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Title

Timber Road II Wind Farm

Benton and Harrison Townships -
Paulding County, Ohio

Figure 8: Viewshed Analysis
Sheet 4 of 4 - Vegetation
Nacelle (312 ft.) Visibility

Legend

- Wind Turbines
- Turbine Count Visibility Analysis
- Number Potentially Visible
- 0
- 1 - 27
- 28 - 54
- 55 - 81
- 82 - 105

Map Scale & Orientation



Notes

Map Created: April 2010.

Base Map:
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Cross section analysis (Figure 9) indicates that the Project will be visible from between 71.3% and 73.3% of the area along the selected lines of sight. Although this conclusion only applies to the specific lines of sight evaluated, analysis suggests that views of the Project from many of the visually sensitive sites within the study area are likely to be at least partially screened by buildings and trees, particularly from within the villages and hamlets located in the study area. The results of the cross section analysis are summarized in Table 3.

Table 3. Line-of-Sight (LOS) Summary

Line-of-Sight A-A'		
73.3% Potential Project Visibility along 18.2-mile LOS		
<i>Visually Sensitive Resources in LOS</i>	<i>Location</i>	<i>Potential Visibility¹</i>
Maumee River	Town of Carryall	NV
State Route 49	Town of Carryall	NV
Village of Antwerp	Town of Carryall	NV
North Creek	Town of Harrison	NV
South Creek	Town of Harrison	V
State Highway 111	Town of Harrison	V
Wild Cat Creek		V
State Highway 613		V
State Highway 500		NV
Flat Rock Creek		V
State Highway 114		V
US Highway 30		V
Line-of-Sight B-B'		
71.3% Potential Project Visibility along 10.2-mile LOS		
<i>Visually Sensitive Resources in LOS</i>	<i>Location</i>	<i>Potential Visibility</i>
City of Woodburn	Town of Maumee (Allen County, Indiana)	NV
Woodburn Community Park	Town of Maumee	NV
State Line Road	Town of Maumee/Town of Harrison	V
Village of Payne	Town of Benton	NV
Payne Elementary School	Town of Benton	NV
State Highway 613	Town of Benton	NV
Divine Mercy Catholic School	Town of Benton	NV
South Main Street	Town of Benton	NV

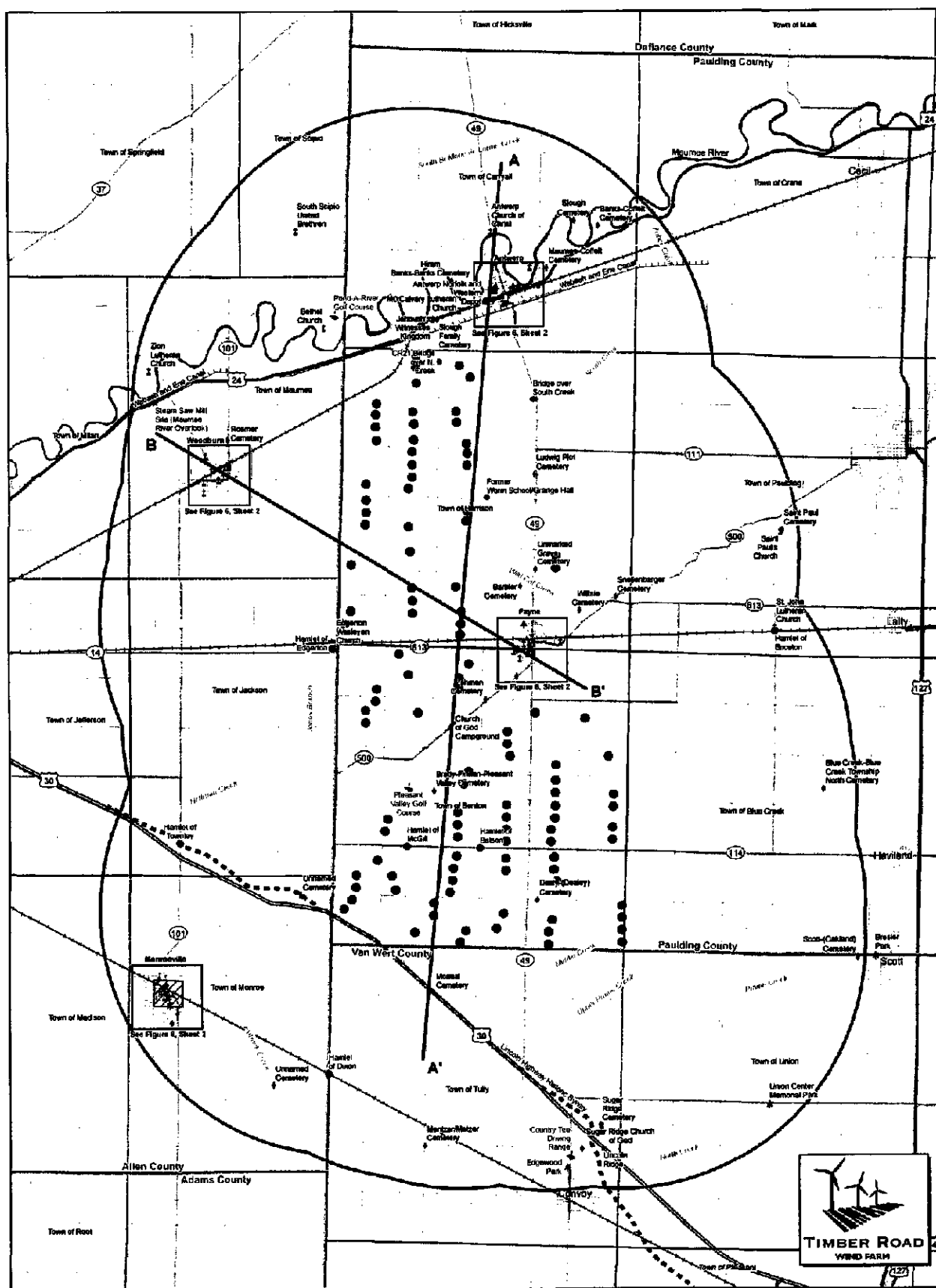
¹ NV = Not Visible (i.e., selected turbines are not visible from the identified resource along this LOS)

PV = Partially Visible (i.e., selected turbines are visible from a portion of the identified resources along this LOS)

V = Visible (i.e., selected turbines are visible from the identified resource along this LOS)

The cross sections indicate that views of turbines along the selected site lines will either not be available or will be partially screened from the Maumee River, and from the Villages of Antwerp, Payne, Paulding, and Woodburn. It should be noted that views of other turbines that are not located

along the selected cross sections may be available from some of the sensitive receptors that are indicated as being screened along the selected lines-of-sight.



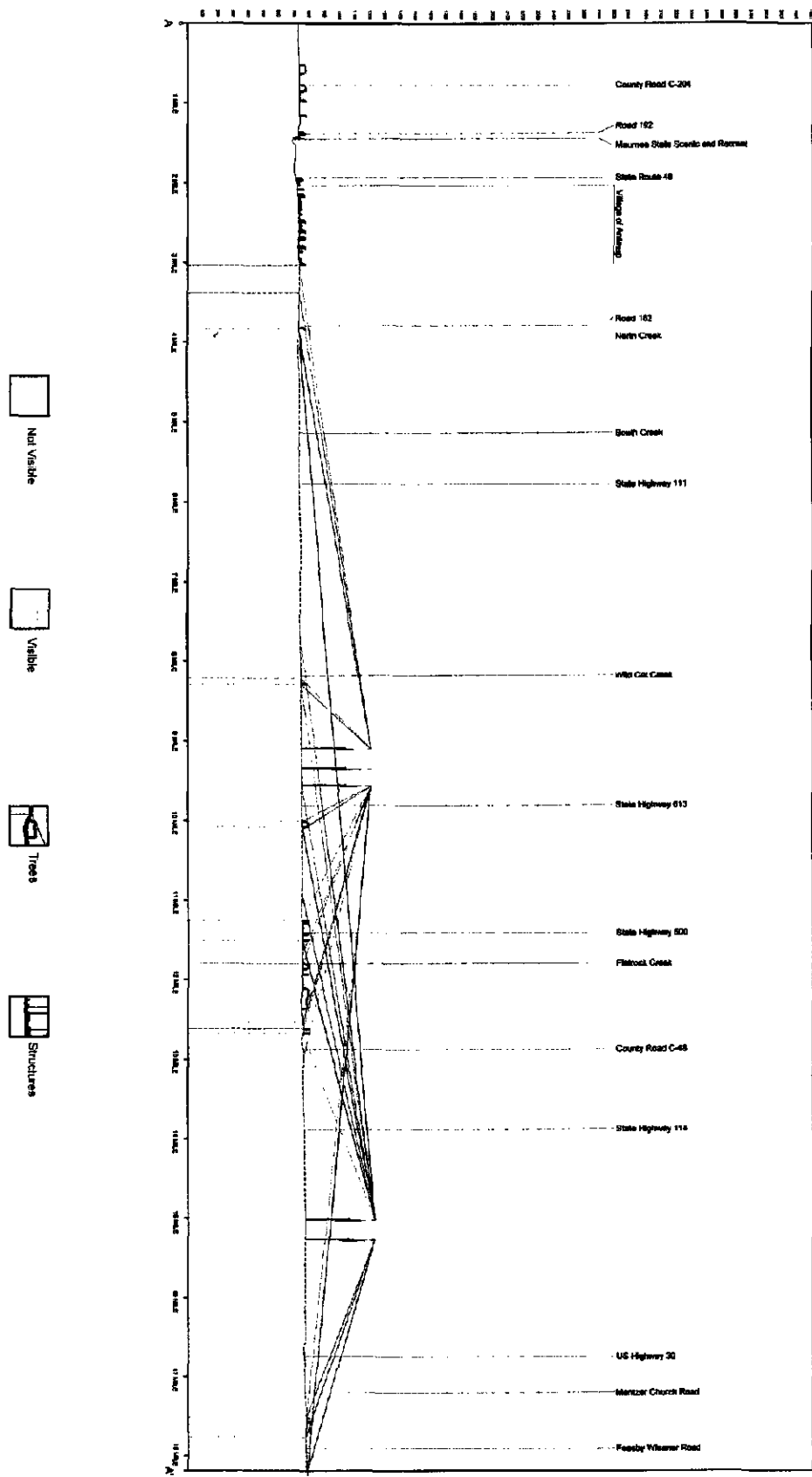
Title _____
Timber Road II
Wind Farm
Benton and Harrison Townships
Paulding County, Ohio

- Legend**
- NRHP Listed
 - NRHP Eligible
 - State Historic District
 - ▨ IHHS Historic Marker
 - Scenic and Recreational River
 - ▬ Washburn & Erie Canal
 - Scenic Byway
 - ⛪ Churches
 - 📖 Libraries
 - ⚱ Cemeteries
 - Local Parks
 - ⛳ Golf Courses
 - 🎓 Schools
 - Other Local Resources
 - Harriet
 - ▬ Areas of Intensive Landuse
 - Wind Turbine
 - 5 Miles Study Area
 - Town Boundary
 - ▬ County Boundary
 - ▬ Section Line

Map Scale — & Orientation

Notes

7 Author



Title

**Timber Road II Wind Farm
Benton and Harrison Townships,
- Paulding County, Ohio**

Sheet 2 of 3
A-A'

APR 20 10

Notes

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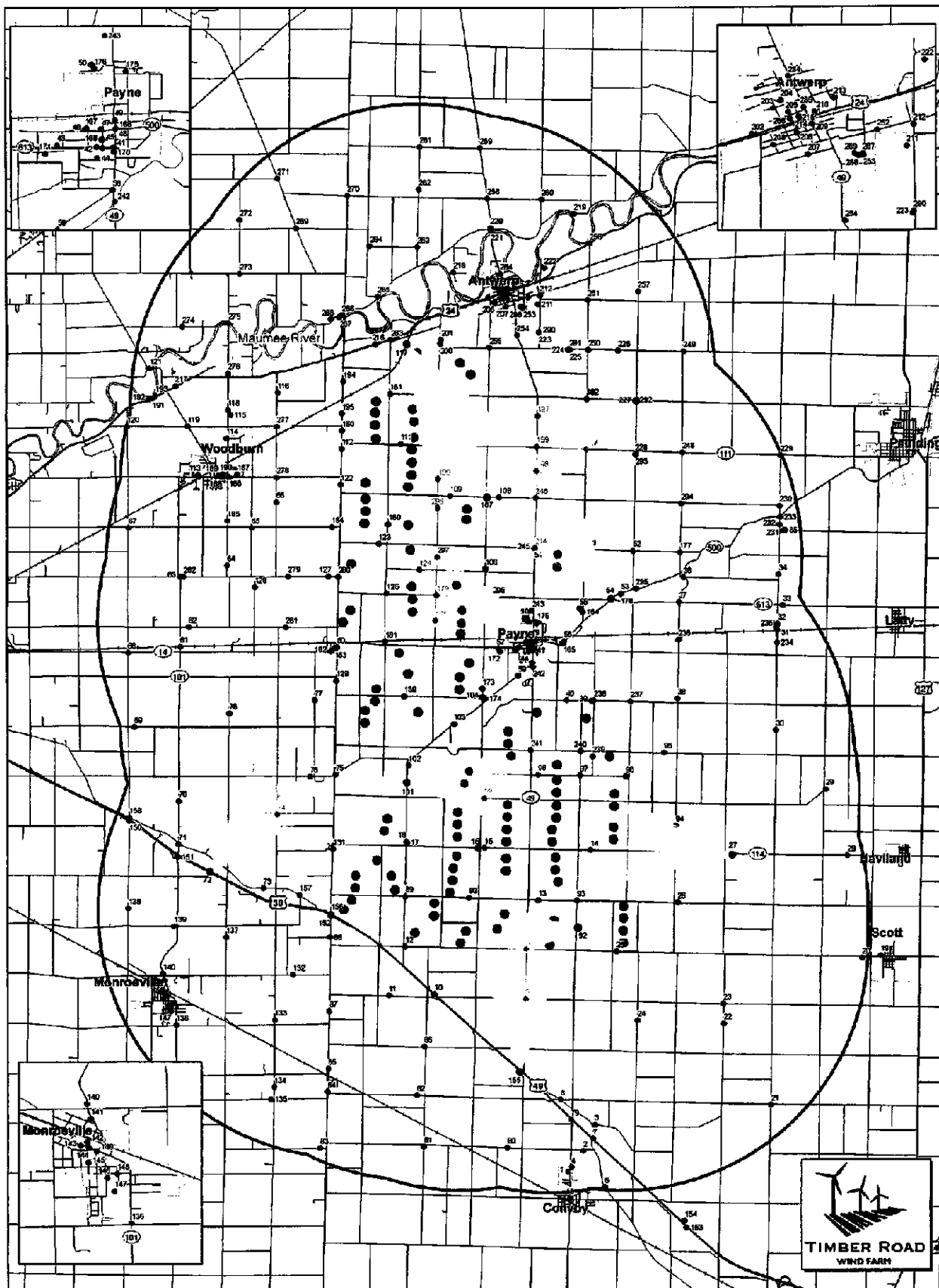
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Field review also suggested that actual Project visibility is likely to be more limited than suggested by viewshed mapping. This is due to the fact that screening provided by buildings and/or trees is more extensive and effective than assumed in these analyses (e.g., vegetation is more extensive than indicated on the USGS maps, and often taller than 40 feet in height). The result is that certain sites/areas where "potential" visibility was indicated by viewshed mapping were actually well screened from views of the proposed Project. Field review confirmed a lack of visibility from areas that were screened by structures and trees, particularly the various villages and hamlets within the study area. Consequently, views of the Project from the majority of residences and historic sites within these areas are anticipated to be fully or partially screened. In general, only on the outskirts of these developed areas (where open fields adjoined residential areas) were open views available in the direction of the Project site. Even in the more rural/agricultural portions of the study area, yard trees not indicated on the USGS maps often blocked/interrupted views toward the Project site from many rural residences. Visually sensitive sites that were fully or significantly screened from view of the proposed turbines included portions of the Maumee River, the Antwerp Norfolk and Western Railroad Depot, the four NRHP-eligible structures at 204, 205, 208, and 210 Main Street in Antwerp, the Pond-A-River Golf Course, the IHSSI Historic District in Monroeville, Monroeville Community Park, and most of the churches, cemeteries, schools and municipal buildings within the study area (see photos and field notes in Appendix B). However, open views that include at least some of the proposed turbines will be available from a broad range of distances/locations within the Agricultural/Rural Residential LSZ.

A comprehensive summary of potential Project visibility from sensitive sites is presented in the Table A in Appendix A.

5.2 Analysis of Existing and Proposed Views

To illustrate anticipated visual changes associated with the proposed Project, photographic simulations of the completed Project from each of the 10 viewpoints indicated in Figure 10 were used to evaluate Project visibility and appearance. Review of these images, along with photos of the existing view, allowed for comparison of the aesthetic character of each view, with and without the proposed Project in place. Results of this evaluation are presented below.



Title
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Wind Farm
 Benton and Harrison Townships -
 Paulding County, Ohio

Figure 10: Viewpoint
Location Map

Legend

- Viewpoint Location
- Viewpoint Selected for Simulation
- Wind Turbine
- 5 Mile Study Area

Map Scale
& Orientation



Notes

Map Created: April 28/10.
 Base Map:
 ESRI StreetMap North America 2008.
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Viewpoint 27 (Figure 11)*Existing View*

This view is from State Highway 114 in the Town of Blue Creek, within the Agricultural/Rural Residential LSZ. It is approximately 2.5 miles east of the nearest proposed turbine, and is oriented to the west. The existing view is of an agricultural landscape with very little topographic relief. The view is down a roadway (State Highway 114) with farm fields and agricultural buildings flanking the road on both sides. An overhead electrical utility line on wooden poles runs along the right side of the road and an overhead electrical transmission line on steel structures carrying six conductors runs along the left side of the road. Visible structures include long, single-story white agricultural buildings in the foreground and a house (also white) in the mid-ground. Overall there are very few trees in the view, with a few isolated woodlots along the roadside and across distant agricultural fields in the background.

Proposed Project

With the proposed Project in place, more than 20 turbines are visible in the mid-ground and background. The vertical lines of the turbines contrast with the horizontal landform. This contrast is heightened by the relative lack of trees in the view; however, the effect is moderated to some extent by the number of utility structures in the foreground. Although the turbines are clearly taller than the trees in the background at this distance, they do not appear out of scale with the existing utility poles. The turbines' white color limits their contrast with the sky under these lighting/atmospheric conditions. Introduction of the turbines results in minimal contrast with the existing agricultural land use, primarily due to the significant presence of utility structures in the foreground.

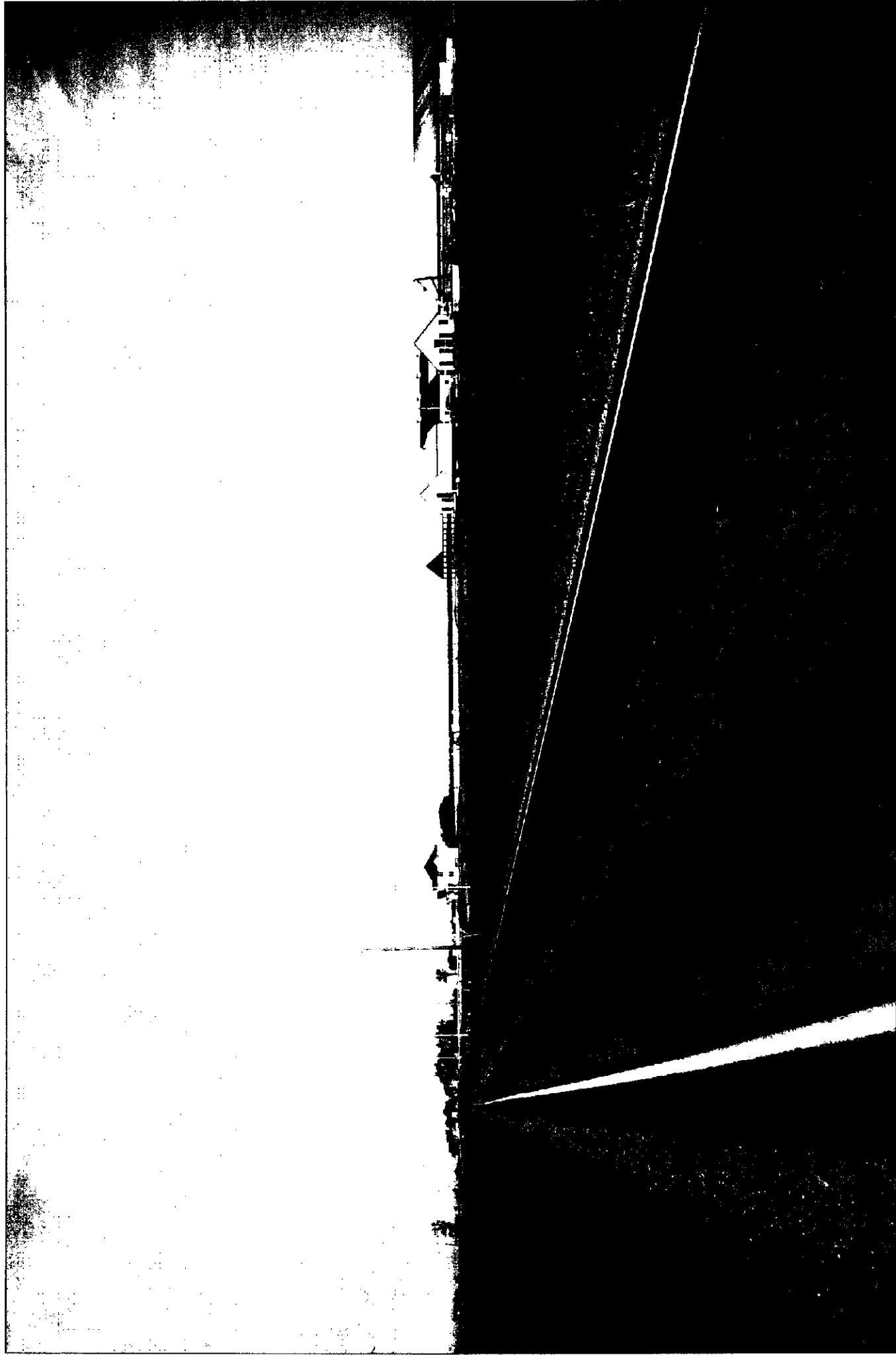


Figure 11: Viewpoint 27

Sheet 1 of 2 - Existing View of Proposed Turbines as seen from State Route 114, Town of Harrison, Paulding
County, Ohio

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

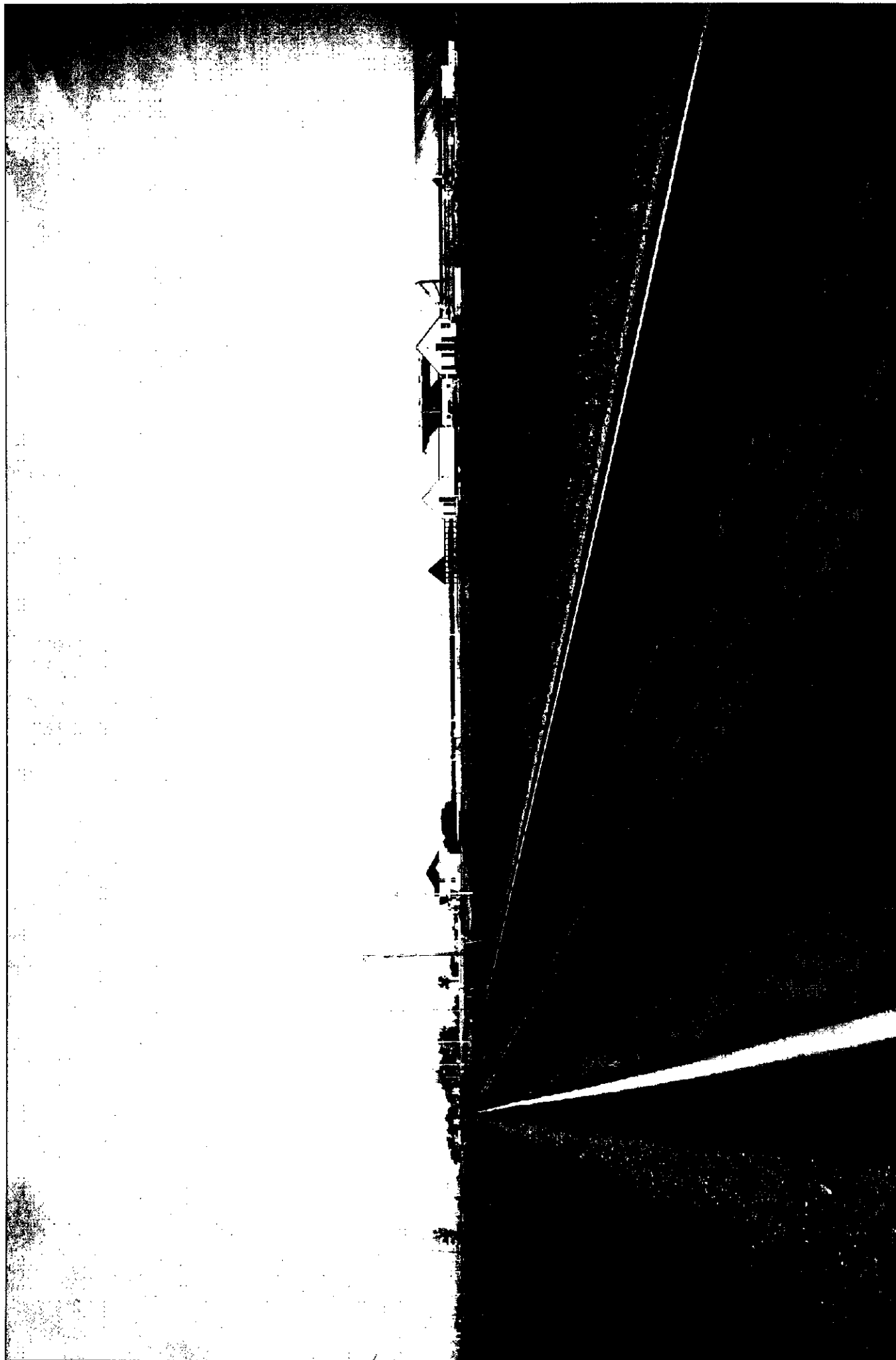


Figure 11: Viewpoint 27

Sheet 2 of 2 - Visual Simulation of Proposed Turbines as seen from State Route 114, Town of Harrison,
Paulding County, Ohio

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

Viewpoint 50 (Figure 12)*Existing View*

This view is to the west-northwest from Payne Community Park, located on the west side of State Route 49 on the northern outskirts of the Village of Payne. The viewpoint is within the Village/Hamlet LSZ. Payne Community Park is considered a locally sensitive site due to the recreational and athletic use it receives. The existing view is of a municipal recreation area with athletic facilities. The landform is level and the horizon is flat. Objects in the foreground to mid-ground include a few deciduous and evergreen trees, chain-link fence, a backstop associated with a baseball field, a swing set, and a small pond. A paved footpath proceeds away from the viewpoint and curves to the left. This viewpoint is located approximately 1.2 miles from the nearest proposed turbine.

Proposed Project

With the proposed Project in place, numerous turbines can be seen in the distant background of the view. Turbines located closer to the viewpoint are largely screened by foreground vegetation. Although the turbines' vertical lines and novel form contrast with the existing features of the landscape, the contrast is limited due to the extent of vegetative screening. If the deciduous trees had leaves on them, the turbines would be even less visible. From a public setting such as this, the operating turbines will attract viewer attention. The moving blades could make the turbines somewhat distracting to recreational and athletic users. However, their relatively slow and steady rate of rotation will limit this impact, and they are not anticipated to have a significant adverse affect on land use or viewer activity from this viewpoint. Overall, the turbines would result in very little effect on scenic quality or viewer enjoyment from this location.



Figure 12: Viewpoint 50

Sheet 1 of 2 - Existing View from Payne Community Park West Side of State Highway 49 at Northern Limits
of the Village of Payne, Town of Harrison, Paulding County, Ohio

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio



Figure 12: Viewpoint 50

Sheet 2 of 2 - Visual Simulation of Proposed Turbines as seen from Payne Community Park, West Side of
State Highway 49 at Northern Limits of the Village of Payne, Town of Harrison, Paulding County, Ohio

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

Viewpoint 54 (Figure 13)*Existing View*

This viewpoint is located at the intersection of State Routes 500 and 613 over Wildcat Creek, approximately 1.3 miles from the nearest turbine that would be visible in the view. The view is oriented to the northwest. The foreground of the existing view includes paved roadway and guardrails at the intersection of the state highways and mature deciduous trees characteristic of the River Corridor LSZ. An agricultural field that backs up on a woodlot occupies the mid-ground and background of the view. The flat landform, roadways, and guardrails create strong horizontal lines in the landscape. The relatively greater numbers of trees at varying distances provide more screening and a narrower/more enclosed field of view than many of the other views within the study area.

Proposed Project

With the proposed Project in place, one turbine is visible in the mid-ground view and a small number of turbines are visible in the background, in gaps between trees. The vertical line and scale of the turbines result in moderate to appreciable contrast with the flat landscape. In this view, the white color of the turbine provides a moderate contrast with the blue sky. However, the turbines are generally not that visible in this view due to the screening effects of foreground and mid-ground vegetation. During the growing season, deciduous trees will almost completely obscure views of the turbines from this location. The overall impact on scenic quality is minimal.



Figure 13: Viewpoint 54

Sheet 1 of 2 - Existing View of Proposed Turbines as seen from State Route 500, Town of Harrison, Paulding
County, Ohio

Timber Road II Wind Farm
Harrison Township Paulding County, Ohio



Figure 13: Viewpoint 54

Sheet 2 of 2 - Visual Simulation of Proposed Turbines as seen from State Route 500, Town of Harrison,
Paulding County, Ohio

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

Viewpoint 72 (Figure 14)*Existing View*

This view is from the Lincoln Highway Historic Byway, looking northeast, approximately 3.0 miles away from the nearest turbine. The view is typical of the Agricultural/Rural Residential LSZ, with open agricultural fields dominating the foreground and mid-ground. The landform in the view is essentially flat with very few trees. An overhead utility line bisects the foreground view at eye level. Flat Rock Creek winds away from the viewer in the foreground and serves as a drainage ditch for the agricultural fields in the mid-ground. Agricultural structures, an electrical transmission line on steel towers, and woodlots are visible in the background. Although the viewpoint is located on a historic roadway, the historic integrity of the setting is compromised by the existing electrical transmission facilities and modern agricultural structures.

Proposed Project

With the proposed Project in place, numerous turbines are visible in the background of the view. Due to their distance from the viewer, the turbines do not appear out of scale with the existing steel structures of the transmission line featured in the view. The vertical lines of the turbines are also consistent with the existing transmission line structures. The turbines would not further diminish the (already compromised) historic character of the landscape from this viewpoint. The white color of the turbines has a moderate contrast with the blue sky, which would be lessened under hazy conditions. Overall, the turbines are far enough away in this view that there is little effect on the composition or scenic quality of this view.

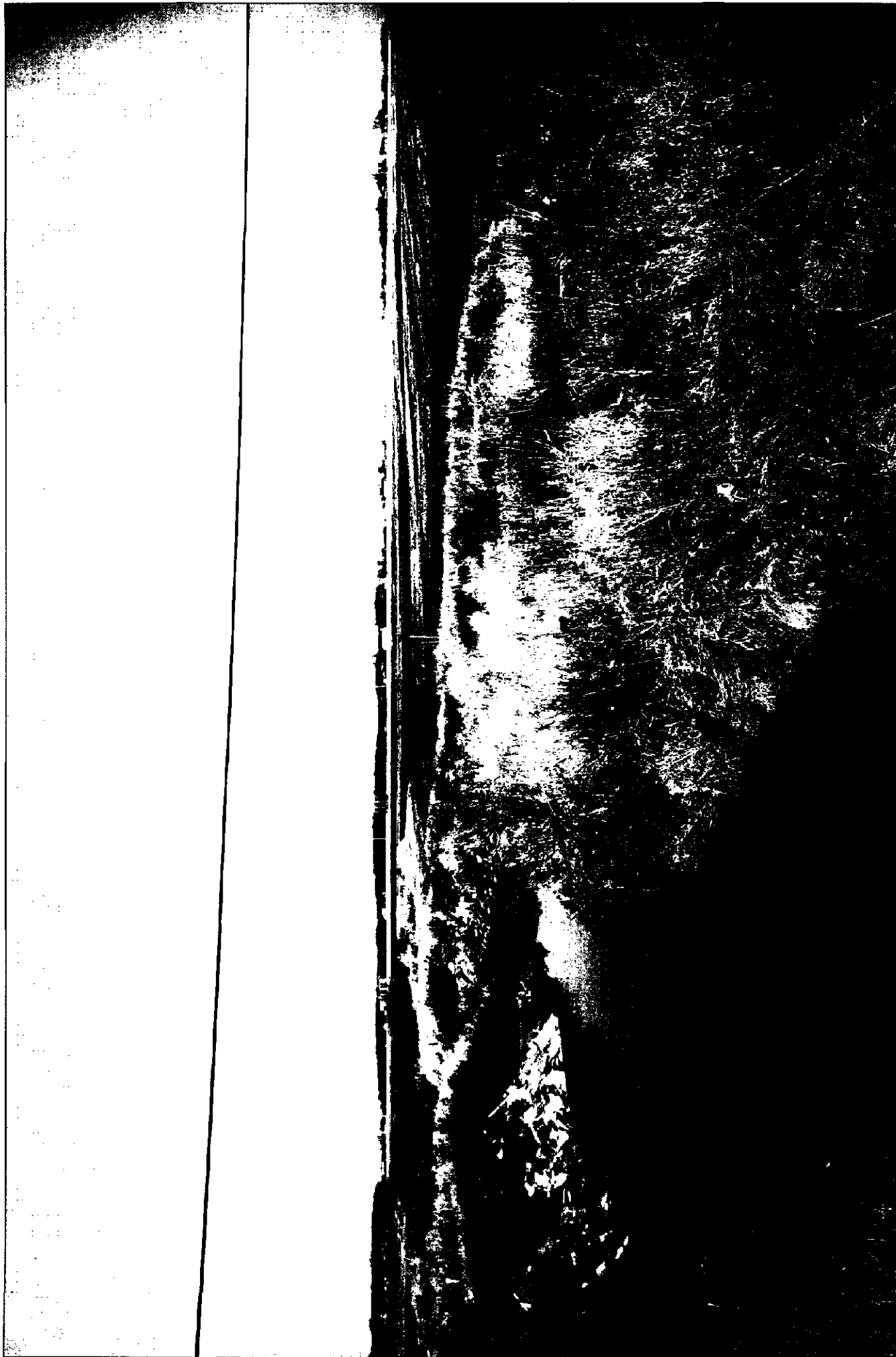


Figure 14: Viewpoint 72

Sheet 1 of 2 - Existing View from Lincoln Highway over Flat Rock
Creek, Allen County, Indiana

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

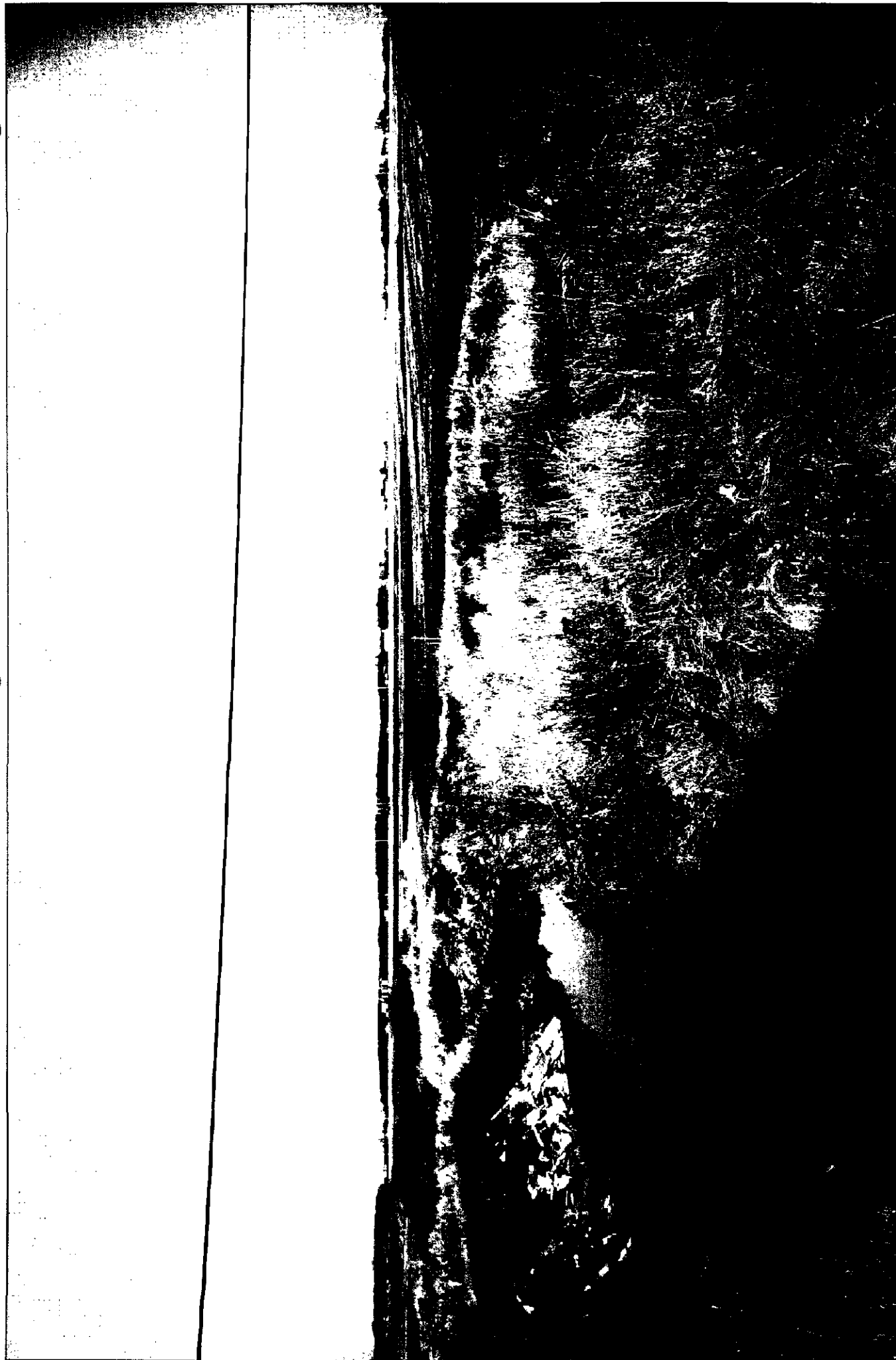


Figure 14: Viewpoint 72

Sheet 2 of 2 - Visual Simulation of Proposed Turbines as seen from Lincoln
Highway over Flat Rock Creek, Allen County, Indiana

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

Viewpoint 92 (Figure 15)*Existing View*

The viewpoint is located on Convoy Heller Road/County Road 49, approximately 0.25 mile north of the Paulding/Van Wert County line. It is approximately 0.5 mile from the nearest proposed turbine. Oriented to the west, this is a typical view of an agricultural field within the Agricultural/Rural Residential LSZ. The view is dominated by an open field in the foreground and mid-ground, with widely scattered agricultural structures, some residential structures, and a woodlot in the background. The landscape is entirely flat, with the structures and woodlots in the background set very low relative to the horizon. The open land and un-obscured sky create a strong sense of openness in the view. Due to the lack of topographic and vegetative variability and absence of any focal points or objects of visual interest in the foreground, the overall scenic quality of the existing view is low to medium.

Proposed Project

With the proposed Project in place, approximately 20 turbines are visible at various distances extending across most of the field of view. As illustrated in this photo, roadside views in this LSZ typically lack any foreground screening. The vertical lines of the turbines result in a strong contrast with the overall flatness of the land. The height of the turbines, particularly the nearer turbines in the mid-ground, also present noticeable scale contrast with the trees in the background. The contrast of the white turbines against the clear blue sky in this view is also appreciable. The proposed Project substantially changes the character of the view, but does not have an adverse impact on the existing scenic quality. The turbines reduce the sense of openness of the view but also add an element of visual interest. The existing agricultural land use would not be affected. Some viewers would likely consider the change to be negative while others would consider the change to be positive.

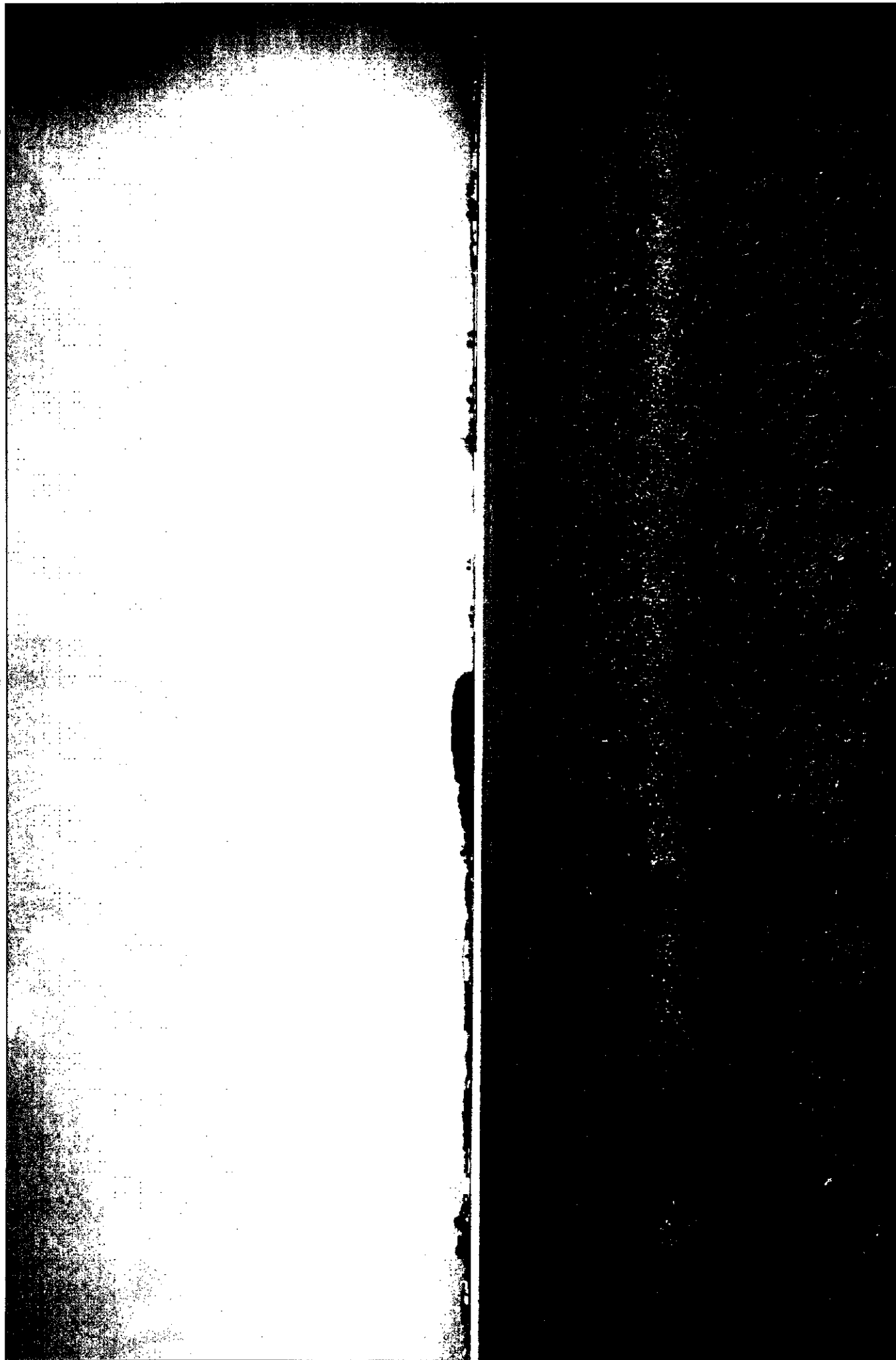


Figure 15: Viewpoint 92

Sheet 1 of 2 - Existing View from Township Highway T-49 - Harrison Township Paulding County, Ohio
Facing North-Northeast

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

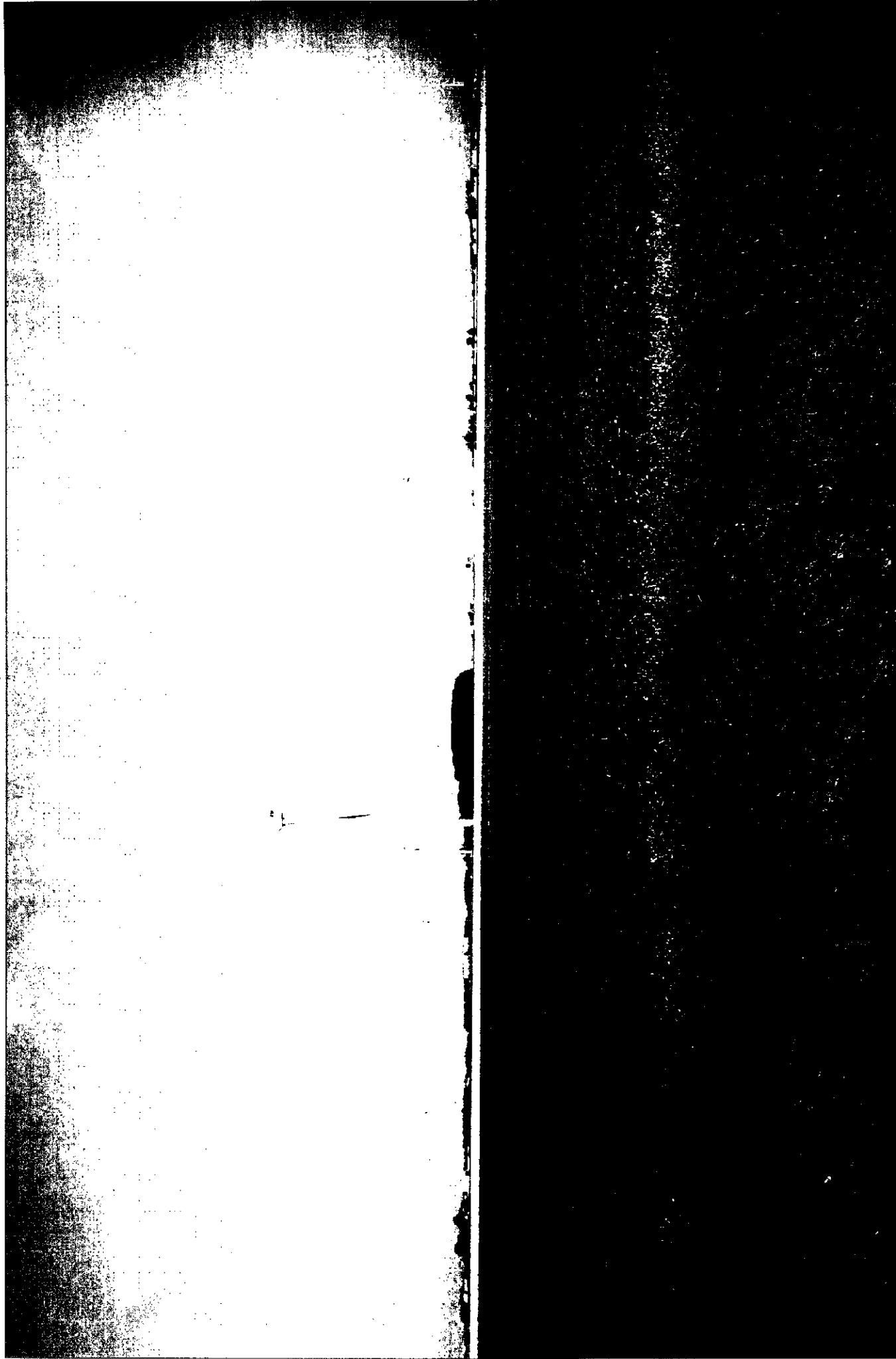


Figure 15: Viewpoint 92

Sheet 2 of 2 - Simulated View from Township Highway T-49 - Harrison Township, Paulding County, Ohio
Facing North-Northeast

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

Viewpoint 101 (Figure 16)*Existing View*

This view is from the east side of Town Highway 17, looking east across the Pleasant Valley Golf Course, approximately 0.8 mile from the nearest proposed turbine. The sky is relatively hazy and somewhat washed-out in this view. The landform is gently undulating. Foreground elements include a flagpole at the right side of the view and a pair of white markers that define the location of a tee box. There is a line of trees (along the Flat Rock Creek river corridor) in the background and along the left side of the view. A small white shed is visible at the left side of the view in the distant mid-ground. The right side of the view is open across a fairway (open lawn) with a few isolated trees in the distant mid-ground and background. The view has a neat, orderly appearance reflecting the planned and actively maintained landscape of a golf course.

Proposed Project

With the proposed Project in place, numerous turbines can be seen in the background of the view. The upper portions of several turbines are partially visible above the woodlot on the left side of the view, while unobscured views of others are available in the open area on the right side of the view. The vertical lines of the turbines relative to the flat landscape, and their height above the trees, result in strong line and scale contrasts. The visual contrast is heightened by the existing recreational land use (a golf course), the perceived scale contrast of the turbines relative to the trees in the mid-ground of the view, and the sense of visual clutter that results from the turbines at various scales receding into the distant background. The hazy conditions illustrated in this photograph somewhat reduce the color contrast of the white turbines against the sky, although on brighter days the turbines would be more visible. The turbines would not affect the recreational use of the property (i.e., golf), although some users may find the movement of the turbine blades to be somewhat distracting. The turbines would substantially affect the character of the view from the golf course.

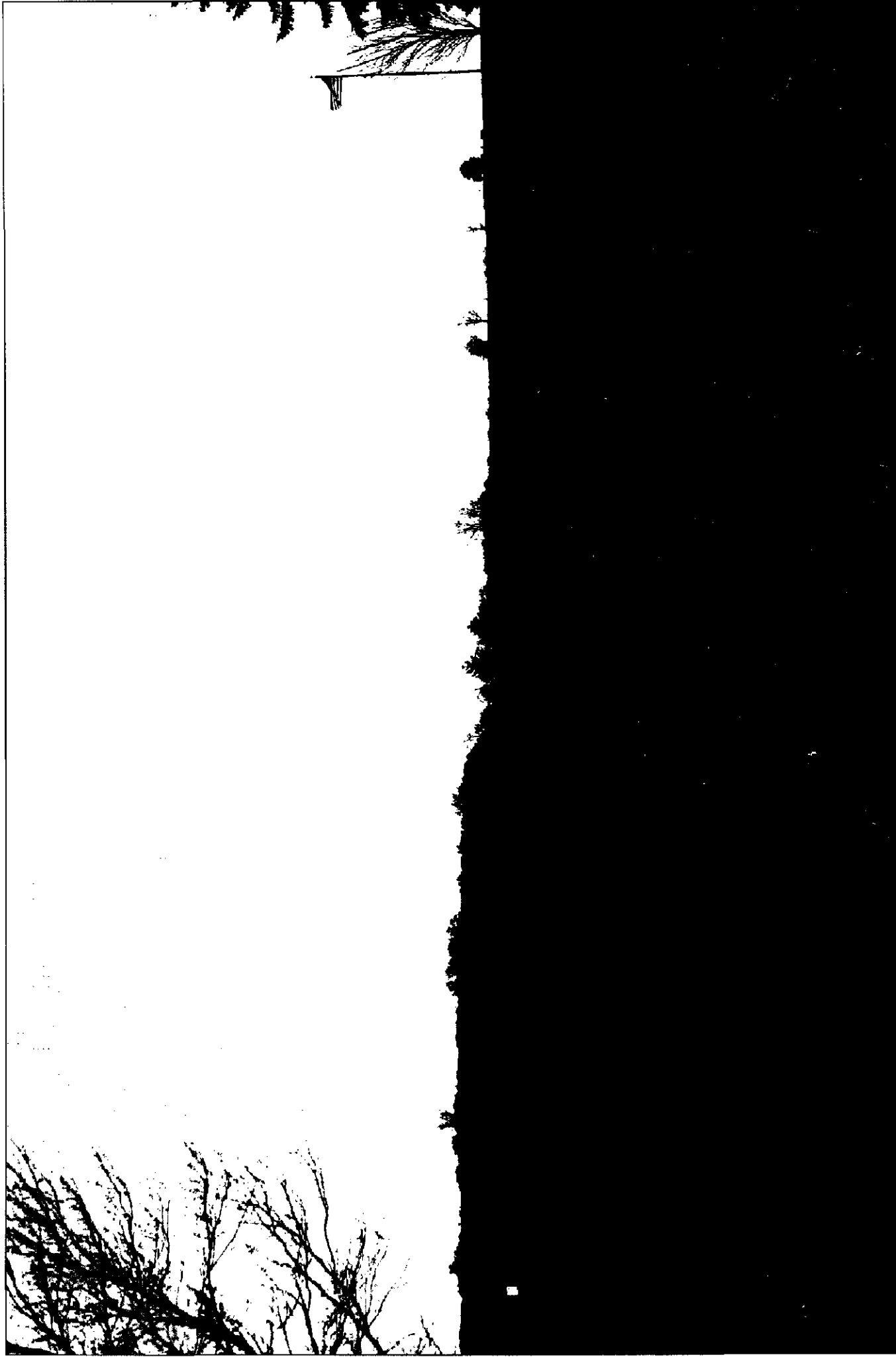


Figure 16: Viewpoint 101

Sheet 1 of 2 - Existing View from Town Highway 17 with Pleasant Valley Golf Course in the Foreground, Town of Benton, Paulding County, Ohio

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

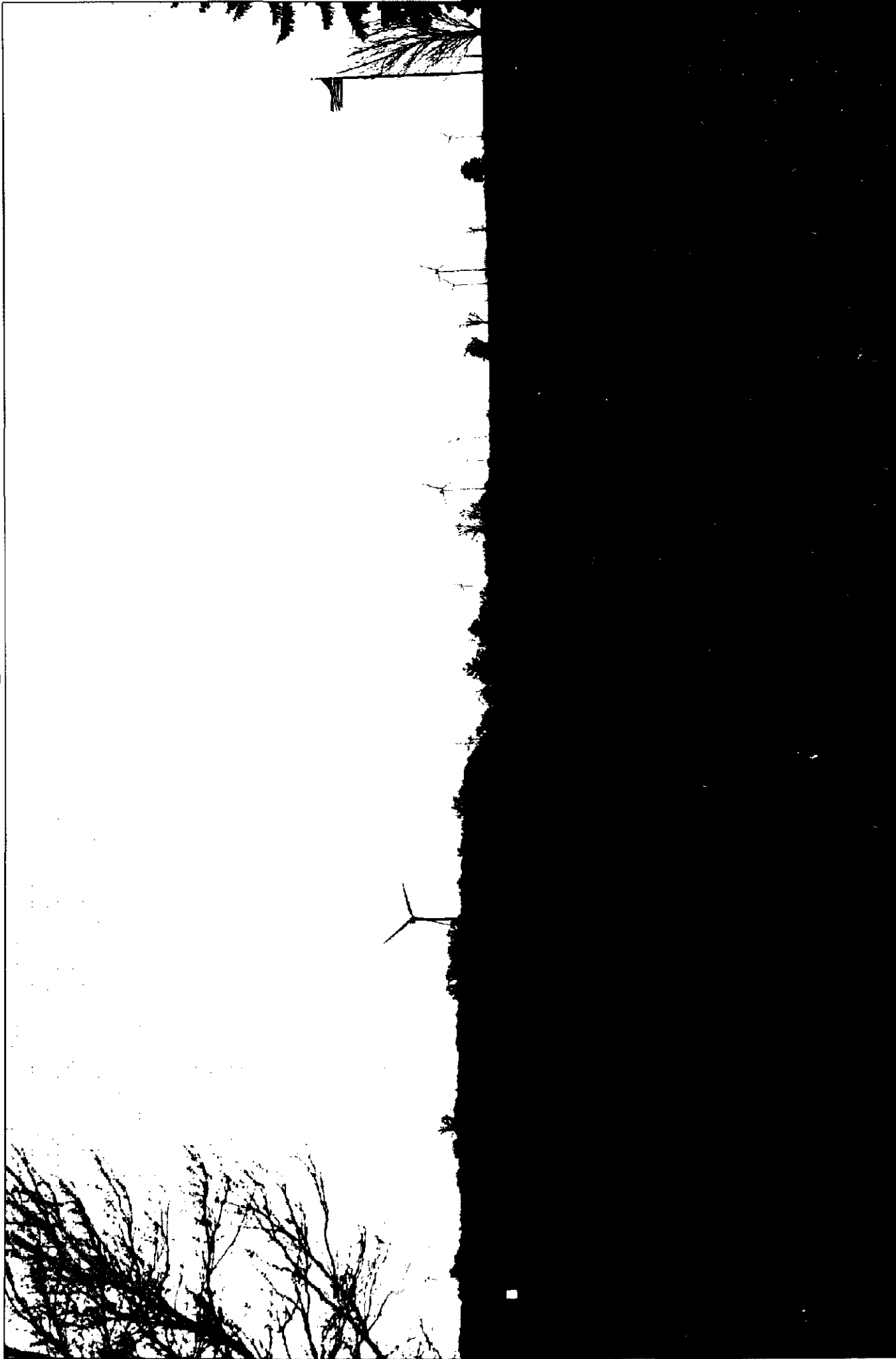


Figure 16: Viewpoint 101

Sheet 2 of 2 - Visual Simulation of Proposed Turbines as seen from Town Highway 17 with Pleasant Valley Golf Course in the Foreground, Town of Benton, Paulding County, Ohio

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

Viewpoint 107 (Figure 17)*Existing View*

This viewpoint is located on Town Highway 33, south of County Road 124. The viewpoint is south of the NRHP-eligible Worm School/Grange Hall (4015 County Road 124), approximately 0.4 mile from the nearest proposed turbine. The view is oriented to the west and approximates the view from the historic site. The existing view is dominated by open agricultural field in the foreground and is typical within the Agricultural/Rural Residential LSZ. Agricultural buildings, residential structures, associated areas of yard vegetation, and a few isolated trees are visible in the background. Like viewpoint 92, the landscape is entirely flat, with the structures and woodlots in the background set very low relative to the horizon. The open fields and unobscured, somewhat hazy sky create a strong sense of openness in the view. Due to the lack of any foreground or mid-ground visual interest, the overall scenic quality is considered relatively low.

Proposed Project

With the proposed Project in place, eight turbines can be seen at varying distances in the mid-ground and background of the view. The vertical lines and height of the turbines contrast strongly with the horizontal landform and low trees visible in the distance. The hazy conditions in the photo somewhat reduce the color contrast of the white turbines against the sky, although on brighter days the turbines would be more visible. The turbines reduce the sense of openness of the view but also add an element of visual interest. The existing agricultural land use would not be affected and the turbines do not look out of place in a working agricultural landscape. Although the perceived contrast with the Project is relatively strong, the existing scenic quality is considered relatively low, so the overall impact is not significant.

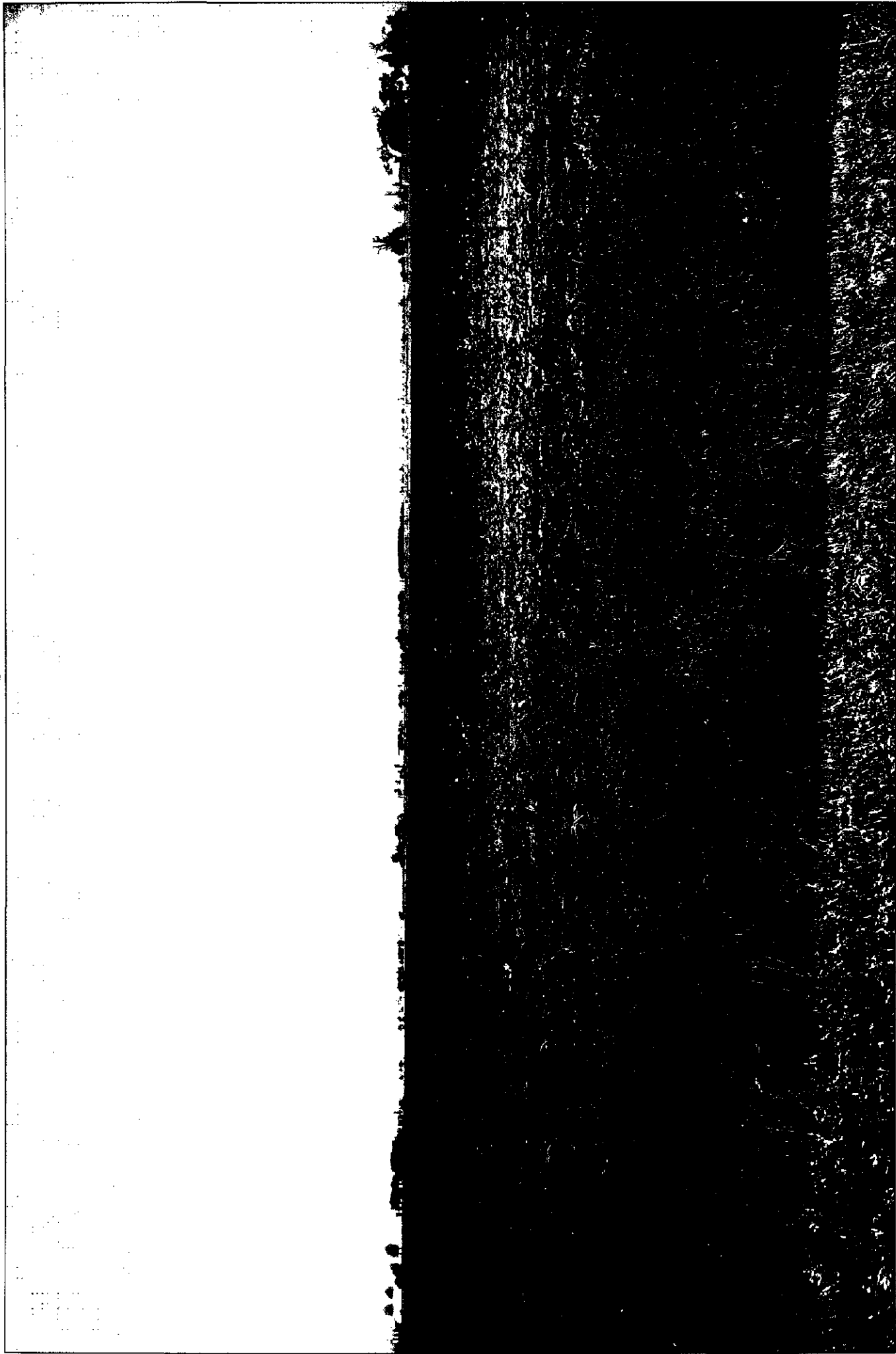


Figure 17: Viewpoint 107

Sheet 1 of 2 - Existing View from Town Highway 33 South of County Road 124,
Town of Harrison, Paulding County, Ohio

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

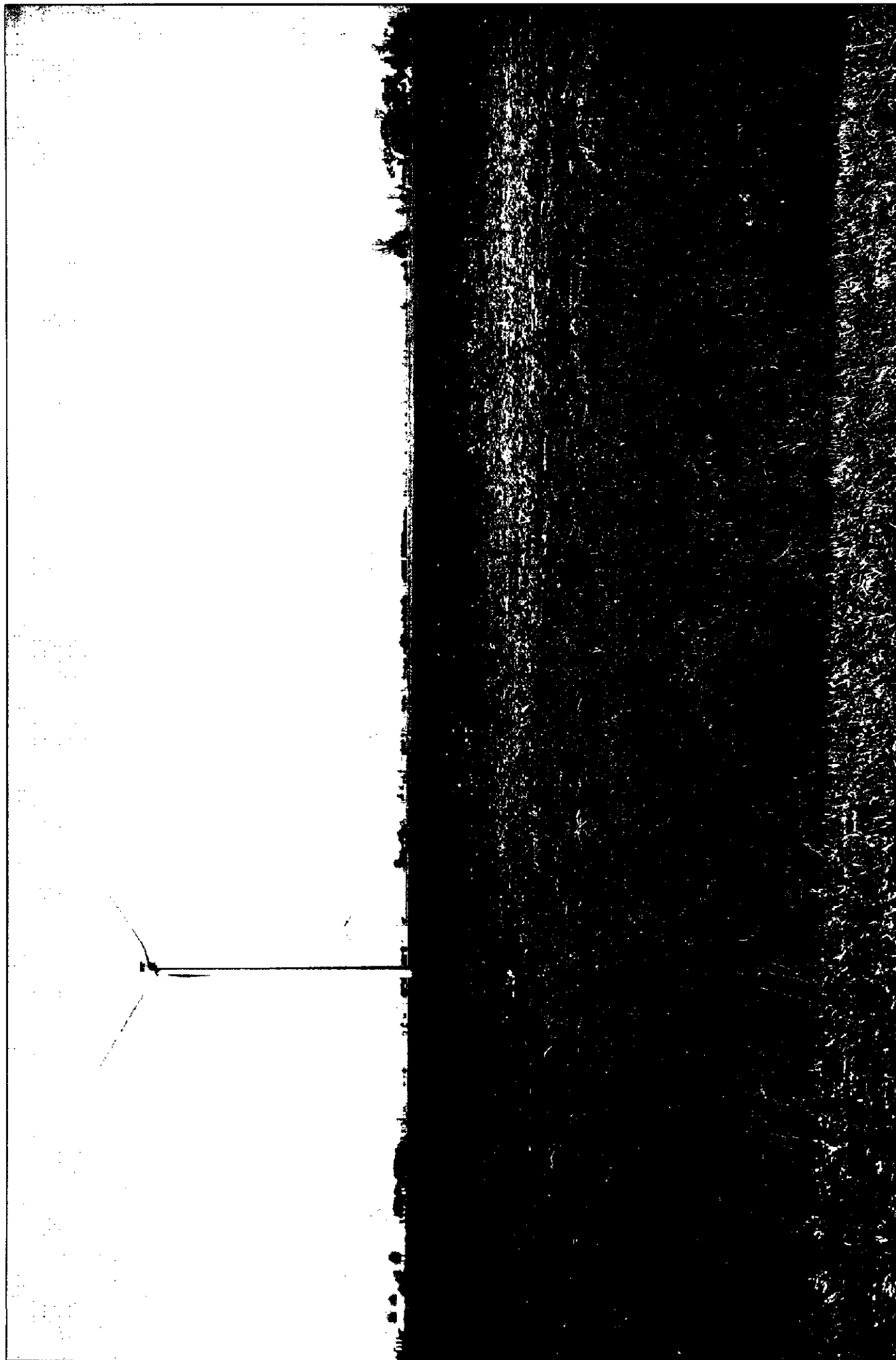


Figure 17: Viewpoint 107

Sheet 2 of 2 - Visual Simulation of Proposed Turbines as seen from Town Highway 33
South of County Road 124, Town of Harrison, Paulding County, Ohio

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

Viewpoint 117 (Figure 18)*Existing View*

This viewpoint is located on US Route 24 on the overpass over the Norfolk & Western Railroad. The view is a panoramic composite from a significantly elevated vantage point, and is oriented to the south. The viewpoint is approximately 0.3 mile from the nearest proposed turbine. The existing view provides a sweeping vista of open agricultural fields and is representative of the Agricultural/Rural Residential LSZ (and the study area in general). The land appears flat and lacks any topographic relief. The view is open and unobstructed. The sky in this view is hazy and expansive. Scattered agricultural structures and woodlots are visible in the distant background. A hedgerow that runs along the railroad corridor is visible at the right side of the view. The overall scenic quality of the view is considered relative low due to the lack of topographic and vegetative variability and absence of any focal points or objects of visual interest in the foreground.

Proposed Project

With the proposed Project in place, numerous turbines are visible across the view at varying distances from the foreground to the background. The vertical lines of the turbines provide strong contrast with the flat, horizontal plane of the land. The heights of the turbines also contrast strongly with the height of the woodlots and trees visible in this view. The scale contrast is heightened by the viewer's proximity to the turbines in the foreground of the view. However, the vast openness of the landscape helps to absorb the turbines and reduces their line and scale contrast. The hazy conditions also reduce the color contrast of the white turbines, which would be more visible against a bright blue sky. The view represents a typical view for travelers on US Route 24, and therefore will be perceived by a relatively large number of potential viewers. However, these viewers would be moving and the duration of views would be relatively brief. Most travelers would not necessarily be familiar with, or have strong attachments to, the existing view. To some, the turbines will add an element of visual interest to the otherwise relatively featureless landscape. Although the Project results in a relatively strong visual contrast, the existing view is considered to be of low scenic quality. The overall adverse effect is therefore not considered significant.

Cumulative Effect of Timber Road I and Timber Road II Projects

Adding the proposed Timber Road I Project (EDR, 2009) to the simulation of the Timber Road II Project allows for consideration of the cumulative effect of these two projects. With both projects in place, additional turbines are visible extending into the distance on the left side of the view. The effect of adding the Timber Road I Project to the view does not substantively change or increase the visual contrast resulting from the Timber Road II Project by itself, and the cumulative effect in this view is not considered significant.



Figure 18: Viewpoint 117
Existing View from US Route 24 over the Norfolk and Western Railroad, Town of Harrison, Paulding County, Ohio

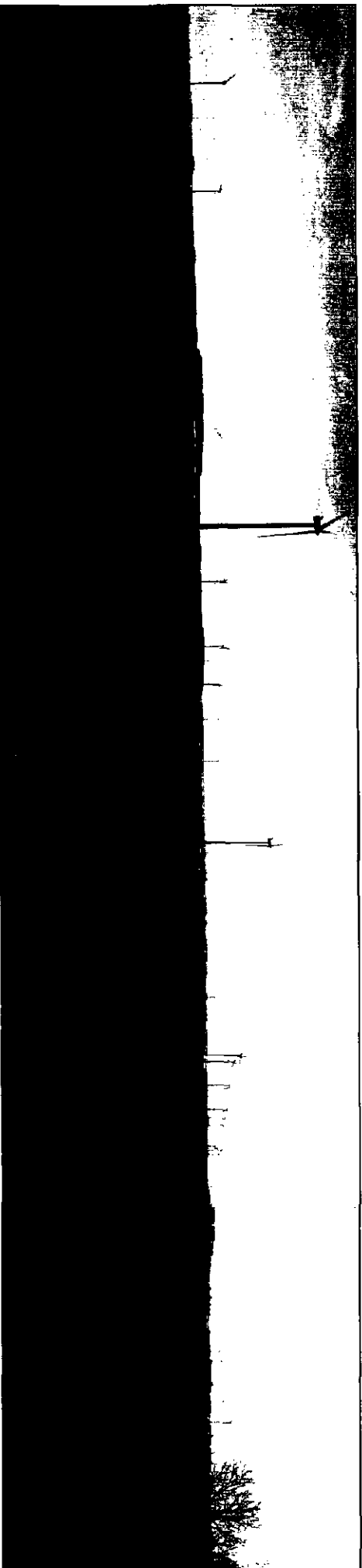


Figure 18: Viewpoint 117
Sheet 1 of 2 - Visual Simulation of Proposed Turbines as seen from US Route 24 over the Norfolk and Western Railroad, Town of Harrison, Paulding County, Ohio

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

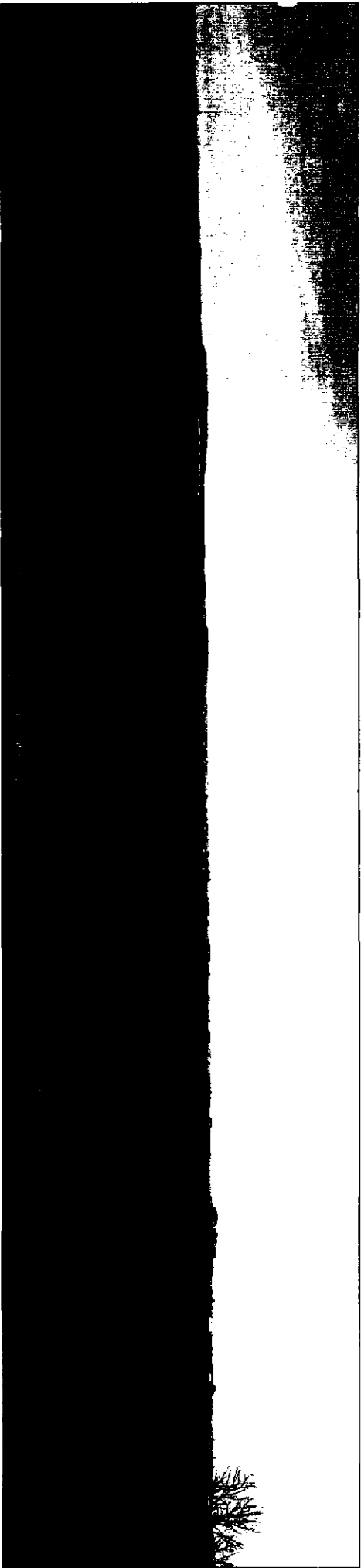


Figure 18: Viewpoint 117
Existing View from US Route 24 over the Norfolk and Western Railroad, Town of Harrison, Paulding County, Ohio

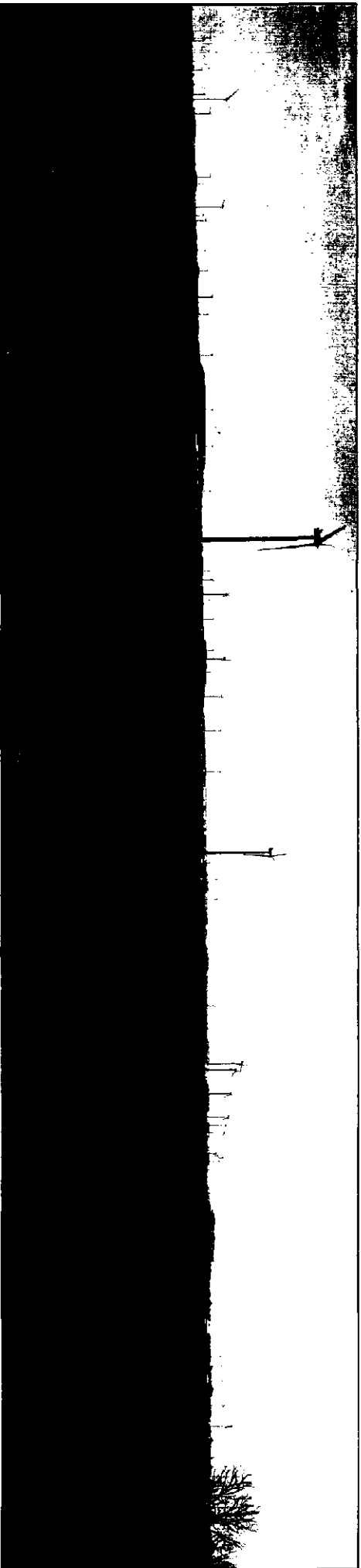


Figure 18: Viewpoint 117, Cumulative Effect of Timber Road I & II Projects
Sheet 2 of 2 - Visual Simulation of Proposed Turbines as seen from US Route 24 over the Norfolk and Western Railroad, Town of Harrison, Paulding County, Ohio

Viewpoint 155 (Figure 19)*Existing View*

This viewpoint is located on Ohio State Highway 49 just off the northbound exit from US Route 30, approximately 2.6 miles from the nearest proposed turbine. The view is to the north and is aligned along State Highway 49, which extends away from the viewer into the background. Open agricultural fields occupy the foreground and mid-ground on either side of the highway. The view is typical of the Agricultural/Rural Residential LSZ, and of views that would be available to travelers within the study area. Agricultural structures set in a cluster of shade trees at the horizon along State Highway 49 provide a focal point for the view. Traffic signs flank the roadside in the mid-ground of the view. The landform is flat and the visible structures and vegetation are relatively low on the horizon.

Proposed Project

With the proposed Project in place, numerous turbines are visible across the horizon at varying distances in the mid-ground and background. The vertical lines of the turbines provide appreciable contrast with the flat landscape. The relative heights of the turbines also result in strong scale contrast with the height of the structures and trees visible in this view. Some of the very distant turbines are screened or partially screened by intervening trees in the background. The number of visible turbines across the full field of view creates an element of interest, but also results in a sense of visual clutter. The hazy conditions represented in this photo result in minimal to moderate color contrast with the white turbines, which would be more visible against a bright blue sky. The view represents a typical view for travelers on State Highway 49, and therefore will be available to a potentially large number of potential viewers. Their sensitivity to the change in the visual character of the view is also likely to be relatively low, as they would not necessarily be familiar with or have strong attachments to the existing view. Visual impact is further reduced due to the fact that the existing view is considered to be of relatively low scenic quality.

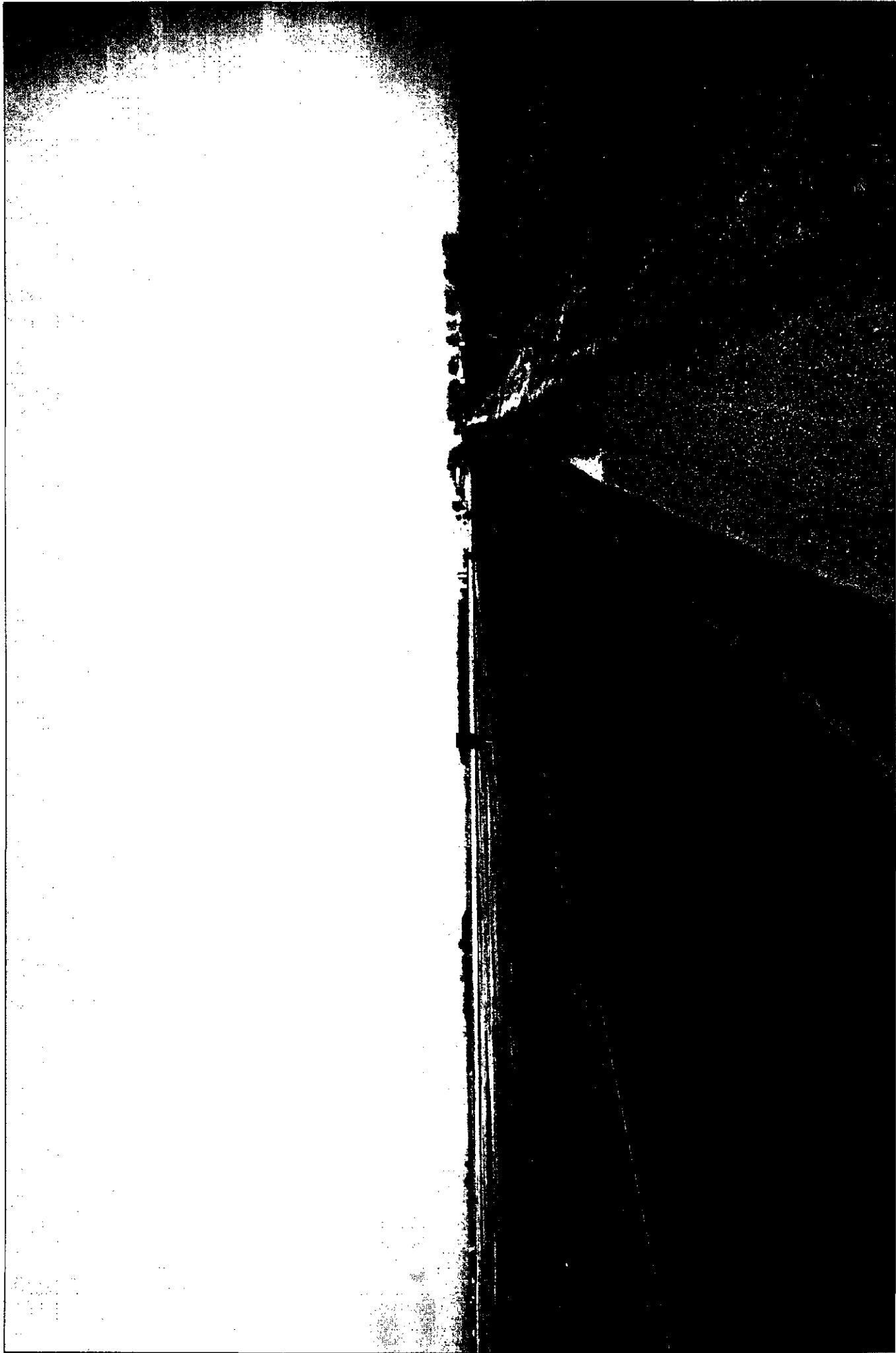


Figure 19: Viewpoint 155

Sheet 1 of 2 - Existing View from Ohio State Highway 49 at US Route 30, Town of
Tully, Van Wert County, Ohio

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

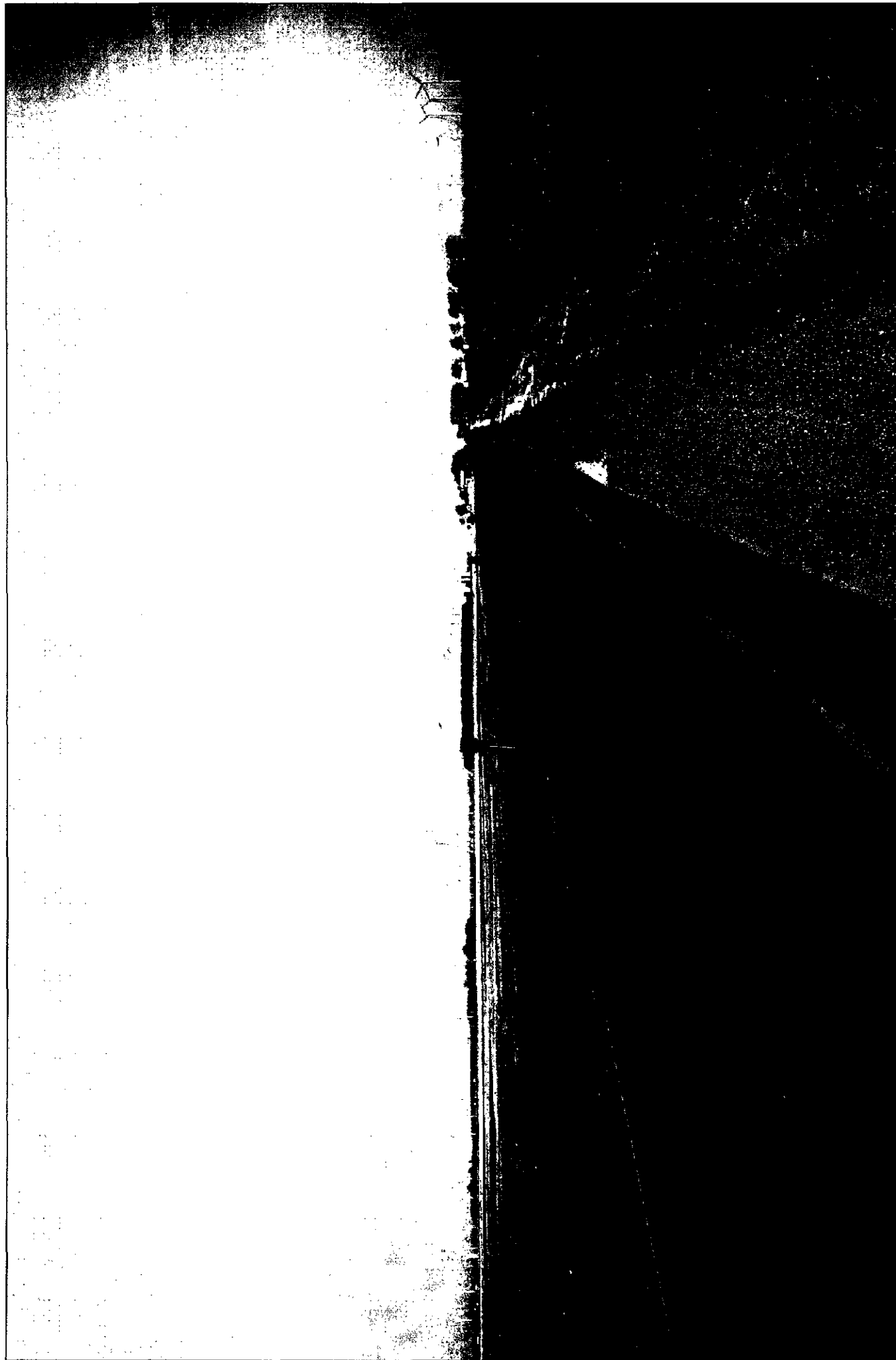


Figure 19: Viewpoint 155

Sheet 2 of 2 - Visual Simulation of Proposed Turbines as seen from Ohio State Highway
49 at US Route 30, Town of Tully, Van Wert County, Ohio

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

Viewpoint 227 (Figure 20)*Existing View*

This viewpoint is located to the east of the Project at the intersection of County Routes 144 and 61, approximately 3.4 miles from the nearest proposed turbine. The view is oriented to the west and is typical of views within the Agricultural/Rural Residential LSZ. Open agricultural fields, a lightly used rural road, and flat topography define the character of the view. Overhead utility lines flank both sides of the road in the foreground and mid-ground. The broad open fields are broken by widely scattered rural residences, barns, and grain bins that occur along the existing road network. Individual trees and woodlots are also scattered throughout the view. The open land and unobscured sky create a strong sense of openness in the view.

Proposed Project

With the proposed Project in place, numerous turbines are visible across the horizon in the background. The vertical line of the turbines results in strong contrast with the horizontal landscape. The turbines are located far enough away that deciduous trees in the mid-ground screen or partially screen some of turbines from view (at least on a seasonal basis). The scale contrast is also minimized by distance, which reduces the perceived height of the turbines. The number of visible turbines across the full field of view creates an element of interest, but also results in a sense of visual clutter. The turbines' white color contrasts with the sky, but is consistent with the color of several of the built features in the view. The existing agricultural land use would not be affected. As illustrated in this photo, roadside views in this LSZ typically lack any foreground screening, but views from rural residences (visible down the road) will often be partially screened by yard trees.

Cumulative Effect of Timber Road I and Timber Road II Projects

Adding the proposed Timber Road I Project (EDR, 2009) to the simulation of the Timber Road II Project in this view allows for consideration of the cumulative effect of these two projects². With both projects in place, additional turbines are visible in the foreground and near mid-ground. The nearest visible proposed turbine in the Timber Road I Project is only 0.5 mile away. The effect of adding the Timber Road I Project to the view results in a greater sense of visual clutter. The proximity of the

Timber Road I turbines also increases the perceived scale and line contrast of the turbines relative to the flat landscape and existing structures and vegetation in the view. The cumulative effect of the two projects from this viewpoint is therefore greater than the visual impact of only the Timber Road II Project.

²This view was previously evaluated as Viewpoint 72 in the VIA prepared for the Timber Road I Project (EDR, 2009).

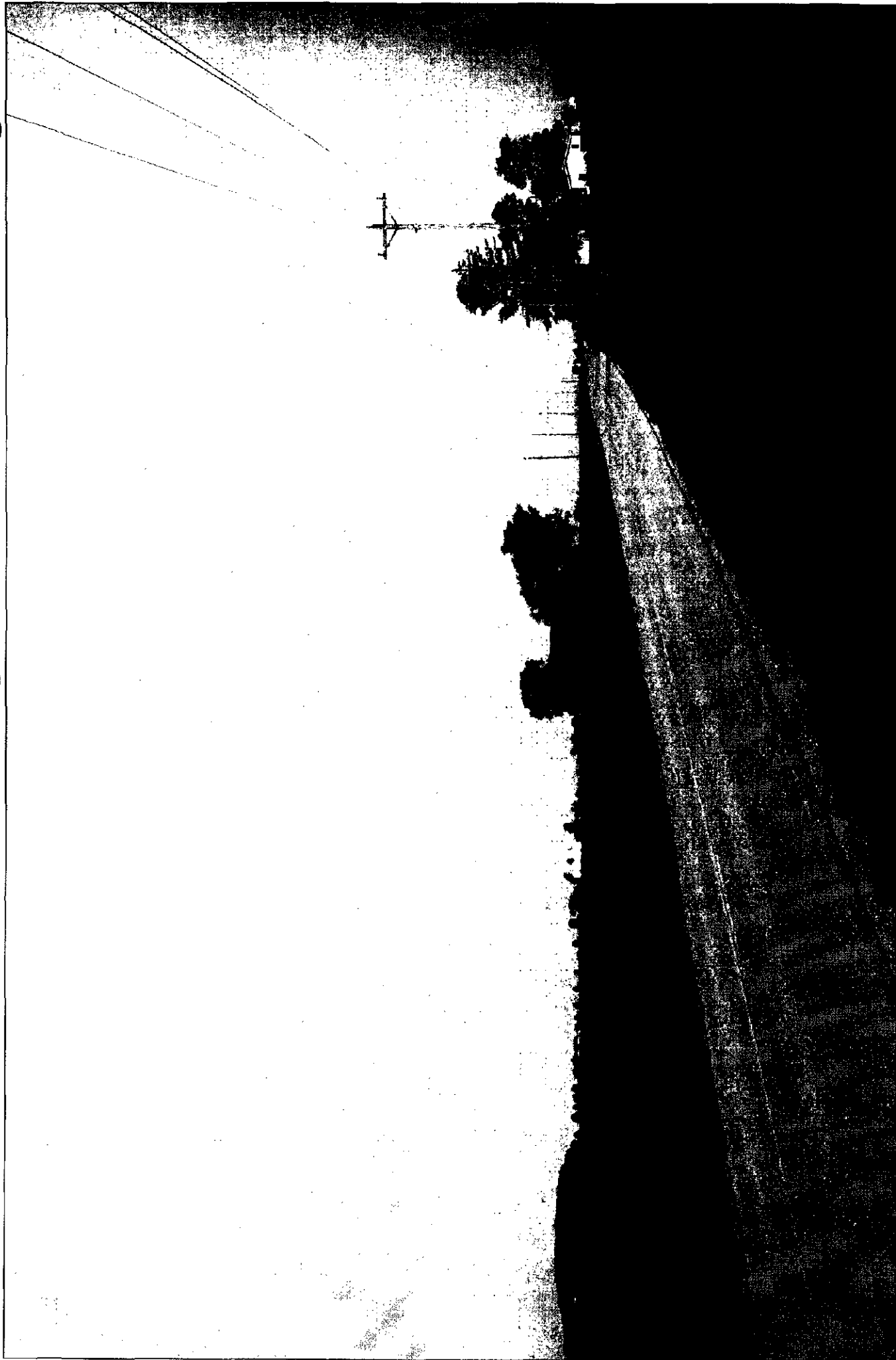


Figure 20: Viewpoint 227 - Existing View

Sheet 1 of 3 - Existing View from Intersection of County Routes 61 & 144 - Harrison Township, Paulding County, Ohio

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

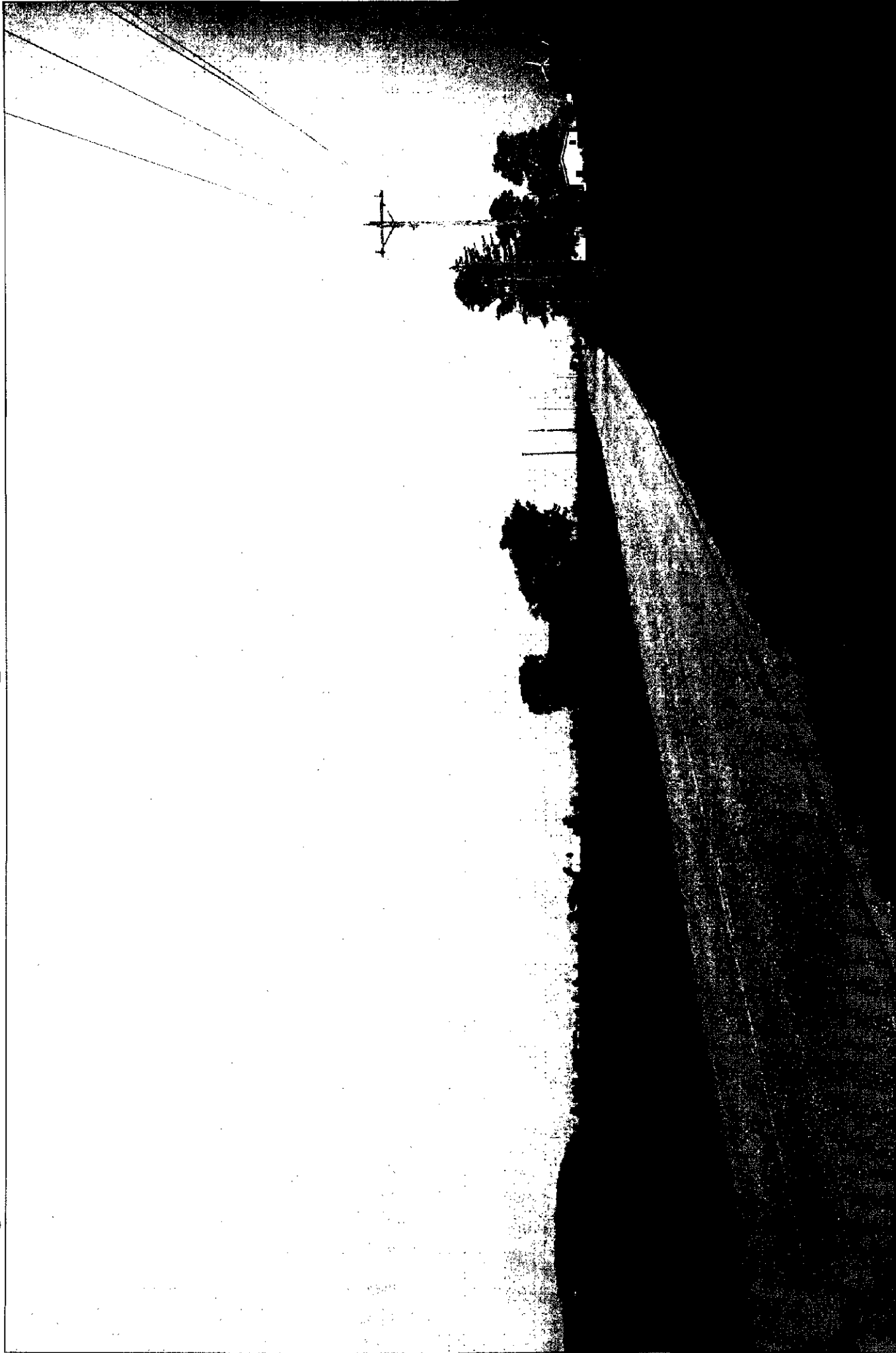


Figure 20: Viewpoint 227

Sheet 2 of 3 - Simulated View from Existing View from Intersection of
County Routes 61 & 144 - Harrison Township, Paulding County, Ohio

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

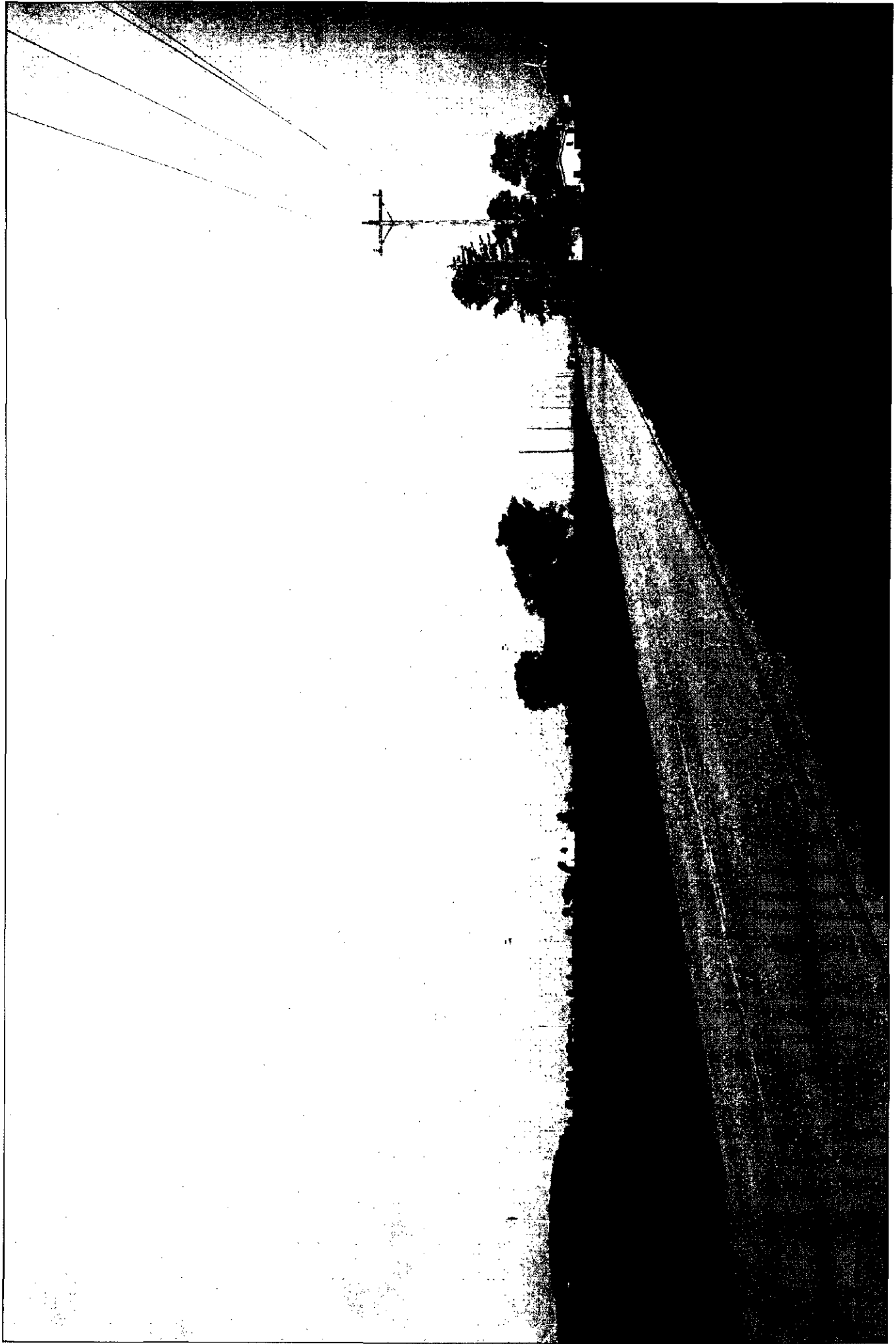


Figure 20: Viewpoint 227, Cumulative Effect of Timber Road I & II Projects
Sheet 3 of 3 - Simulated View from Existing View from Intersection of County
Routes 61 & 144 - Harrison Township, Paulding County, Ohio

Timber Road II Wind Farm
Harrison Township, Paulding County, Ohio

Evaluation of the simulations of the proposed Project by an EDR landscape architect indicated that overall impact on scenic quality is variable and dependent on the viewer's location, the distance from the viewer to the nearest turbine, the presence or lack of screening afforded by foreground vegetation, and the number of turbines visible. Of the 12 simulations evaluated (10 of the Timber Road II Project and two showing both Timber Road I and II), seven simulations (including the two simulations from Viewpoints 117 and 227 that show the cumulative effect of the Timber Road I and Timber Road II projects) had a composite contrast rating greater than 2.0 (moderate) on a scale of 0 (insignificant) to 4 (strong). The remaining five views had a composite contrast rating of 2.0 or less (see Table 4).

Table 4. Visual Simulations Contrast Rating Summary

Viewpoint Number	Nearest Turbine	Scenic Quality	Contrast Rating ¹						Average/Composite
			Landform	Vegetation	Land Use	Water	Sky	Viewer Activity	
27	2.5 mi	Low	3	3	1	n/a	2	1	2
50	1.2 mi	Medium	1	0	1	n/a	1	0.5	0.7
54	1.3 mi	Medium	2.5	1	1.5	n/a	2	1.5	1.7
72	3.0 mi	Low	1.5	1.5	0.5	n/a	2	0.5	1.2
92	0.5 mi	Low to Medium	4	4	0.5	n/a	4	3	3.1
101	0.8 mi	Medium	4	4	3	n/a	3	3.5	3.5
107	0.4 mi	Low	4	4	0.5	n/a	2	3	2.7
117	0.3 mi	Low	4	4	0.5	n/a	2.5	3	2.8
117 ²	0.3 mi	Low	4	4	0.5	n/a	2.5	3	2.8
155	2.6 mi	Low	3	3	0.5	n/a	2.5	3	2.2
227	3.4 mi	Low to Medium	2.5	2	0.5	n/a	1.5	2.5	1.8
227 ²	0.5 mi	Low to Medium	3.5	3.5	0.5	n/a	2.5	3	2.6

¹ Contrast ratings on a scale from 0 (insignificant) to 4 (strong)

² Cumulative simulation, which show combined views of both Timber Road I and Timber Road II projects.

In most of the simulated views, the greatest impact was related to the turbines' scale and line contrast with the existing landform and vegetation. Contrast ratings in these categories ranged from 0 to 4, with Viewpoints 92, 101, 107, and 117 receiving scores of 4 (strong contrast) in both categories. Viewpoints 101, 92, 117, 107, and the simulation from Viewpoint 227 that shows the cumulative effect of both the Timber Road I and II Wind Projects received the highest overall contrast ratings. In these views the Project was considered to present appreciable-moderate to moderate-strong contrast with the existing landscape. All of these viewpoints were located within 0.5 mile of the nearest visible turbine (Table 4). The higher contrast ratings for these views are

attributable to the proximity of the turbines, the number of turbines in the view, and lack of any vegetative screening.

Viewpoint 101 received the highest overall contrast rating (3.5), indicating an appreciable to strong visual contrast. This results from the existing recreational land use (a golf course), the perceived scale contrast of the turbines relative to the trees in the mid-ground of the view, and the sense of visual clutter that results from the turbines at various scales receding into the distant background. The neat, orderly appearance of the fairway and relatively greater number of trees in the mid-ground and background of the existing view result in a greater level of scenic quality (rated as "medium") than any of the other simulated views. The movement of the turbine blades would also heighten the visual contrast.

From views at greater distances and with more screening, the contrast/impact of the Project were significantly reduced. Views located greater than two miles from the nearest proposed turbine (Viewpoints 27, 72, 155, and 227) received an overall contrast rating of moderate. In these views, the effect of distance significantly reduces the perceived scale contrast of the turbines, however, the greater numbers of turbines visible in the mid-ground and background result in a greater sense of visual clutter. The affected landscape in these views is generally composed of vast open spaces with views defined by repeating, flat, horizontal lines. In some cases, the vast openness of the agricultural landscape is able to absorb the turbines and reduce their contrast (e.g., Viewpoint 117). The presence of existing vertical line elements, such as overhead utility poles and/or transmission lines, in the foreground and mid-ground of some views (e.g., Viewpoints 27, 72, and 227) also reduces the perceived line and scale contrast. In areas where vegetative screening was present in the foreground of the view, such as viewpoints 50 and 54, the overall contrast ratings scored between insignificant (0) and minimal (1).

Viewpoints 72 and 107 represent views from historic properties within the study area (see Section 3.5.2). For historic properties, the potential visual impact is related to a change in the visual setting associated with the property. The results of analyses performed for the Timber Road I Wind Farm indicate that the study area in general does not warrant consideration as a significant rural historic vernacular landscape eligible for listing in the NRHP (Rutter, 2010). Viewpoint 107 approximates the view from the NRHP-eligible former Worm School/Grange Hall (4015 County Road 124). The previous cultural resources impact assessment conducted for the Timber Road I Wind Farm concluded that the introduction of wind turbines into the visual setting associated with

this historic resource would not result in any adverse effect because the alteration of the visual setting does not affect the qualities or attributes that contribute to the historical or architectural significance of the property. The historic structures within the study area derive their significance from their architectural integrity as representatives of a certain time-period or style, or for their association with specific local historical contexts, and do not derive any significance from their visual setting or landscape association (Rutter, 2010). Therefore, the change in visual setting resulting from the project would not detract from the integrity of these properties nor diminish the meaningfulness of their historical associations. Viewpoint 72 represents the view from the Lincoln Highway Historic Byway, which traverses the southern part of the study area. The highway is significant for its historical associations but has no formal designation based on scenic qualities or attributes. The historic integrity of the existing setting is already compromised by electrical transmission facilities and modern agricultural structures visible from the roadway. The introduction of the Project into the visual setting would not further diminish the (already compromised) historic character of the landscape from the historic byway.

In EDR's experience, the contrast and visual impact of the wind turbines will be highly variable based on the number of turbines visible, viewer sensitivity/acceptance, and/or existing land use characteristics. Consistent with the findings of this evaluation, the greatest impact typically occurs when numerous turbines are visible and/or where the turbines are close to the viewer (i.e., less than 1.0 mile). These conditions tend to heighten the Project's contrast with existing elements of the landscape in terms of, line, form, and especially scale. Visual impact can also be significant where the turbines appear incongruous or out of place in a particular landscape setting, or where aesthetic quality and/or viewer sensitivity are high. However, the lack of topographic and vegetative variability in the Agricultural/Rural Residential LSZ generally results in relatively low aesthetic quality in much of the area surrounding the proposed Project. Also, most of the sensitive resources/receptors within the study area are in the villages and hamlets, or otherwise screened from view. In addition, the Project also does not appear incompatible with the working agricultural landscape that characterizes the area. In this setting, the proposed Project, although at times offering appreciable contrast with the landscape, will not necessarily be perceived by viewers as having an adverse visual impact.

EDR's experience is that recently built wind power projects in similar settings in New York State have generally received a positive public reaction following their construction. This observation is supported by a recent survey conducted in Lewis County, New York (location of the 195-turbine Maple Ridge Wind Power Project, in operation since 2006) revealed strong community support for wind power (Jefferson Community College, 2008). A majority of Lewis County residents surveyed

indicated that wind farms have had a positive impact on the County (70.7% of participants) and indicated that wind farms should be expanded (79.2% of participants). The survey further characterized the individuals that were able to see and/or hear turbines from their homes to reveal that 77.1% of these individuals indicated that the wind farms have had a positive impact on Lewis County. Additionally, only 7.5% of participants who live within 1 mile of the nearest wind turbine felt that wind farms have had a negative impact (Jefferson Community College, 2008).

The following published observations of operating wind power projects in Upstate New York also support the prediction of limited adverse visual impact and general public support:

"Given the broad sweep of the Fenner [New York] landscape...the completed turbines look anything but out of place. Their colossal dimensions notwithstanding...from a distance, they take on a spindly, almost delicate look." Syracuse New Times, August 21, 2002 (Hall, 2002).

"The nonlinear arrangement of the Fenner turbines situated them comfortably among the traditional farmhouses, paths, and roads, while at Madison [New York], a grassy hillside site, the windmills were more prominent but still unaggressive. Unlike a ski run, say, or a power line cutting through the countryside, the windmills didn't seem like a violation of the landscape. The turning vanes called to mind a natural force – the wind – in a way that a cell phone or microwave tower, for example, most certainly does not." Orion, September-October 2006 (Komanoff, 2006).

These observations, and the Jefferson Community College 2008 survey, are consistent with the results of a recent study of public perception of wind power in Scotland and Ireland (Warren, et. al., 2005). The conclusion of this study states the following:

"A remarkably consistent picture is emerging from surveys of public attitudes to wind power, and the case studies provide further evidence that this picture is a representative one. Large majorities of people are strongly in favour of their local windfarm, their personal experience having engendered positive attitudes. Moreover, although some of those living near proposed windfarm sites are less convinced of their merits, large majorities nevertheless favour their construction. This stands in marked contrast with the impression conveyed in much media coverage, which typically portrays massive grassroots opposition to windfarms."

5.3 Cumulative Impacts

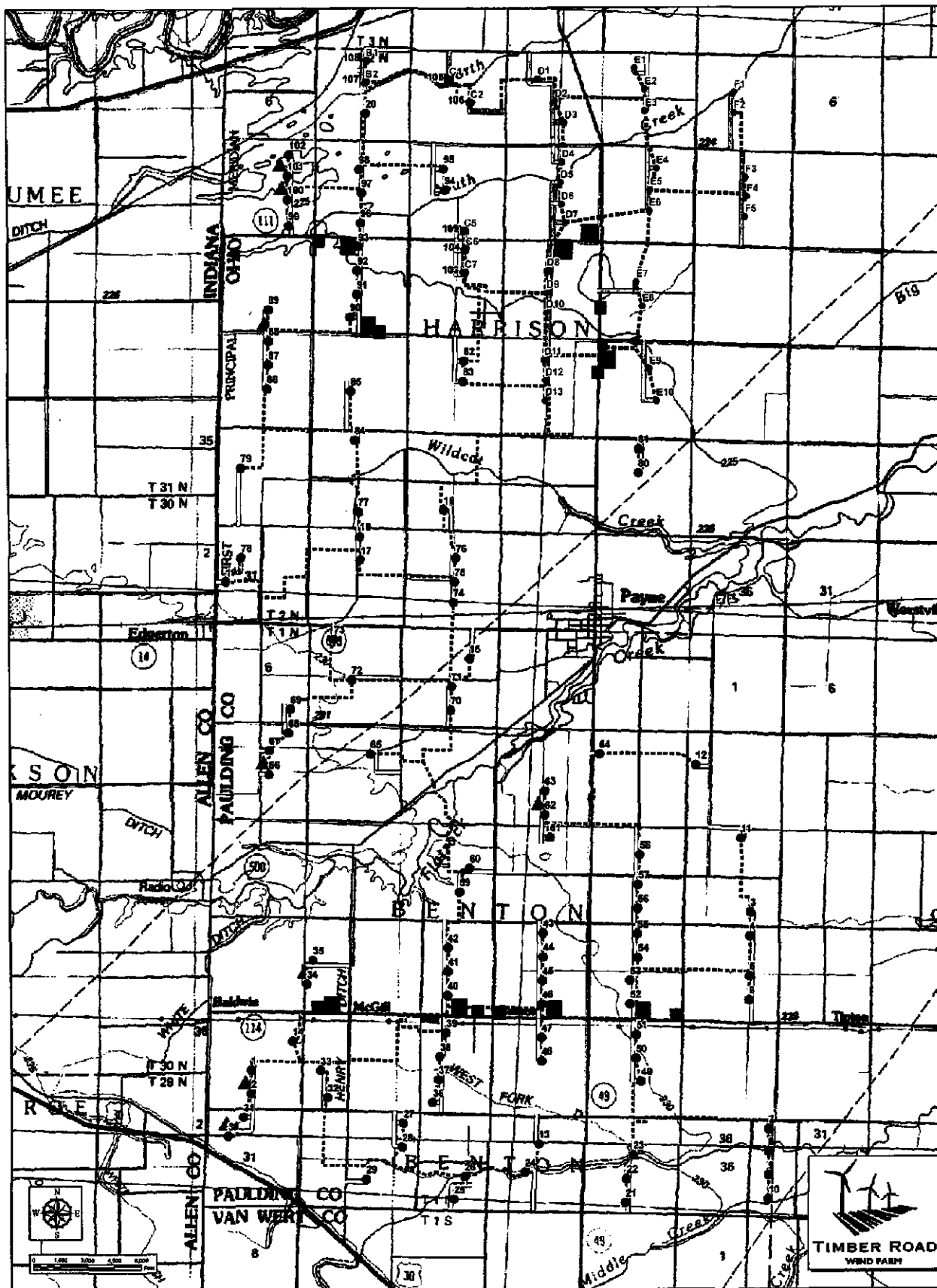
The proposed Timber Road II Wind Farm project is located in proximity to the previously proposed Timber Road I Wind Farm (EDR, 2009; 2010; Figure 21). The proposed Timber Road I Project will

include up to 35 turbines and the proposed Timber Road II Project will include up to 109 turbines; however, the two project layouts share seven turbine locations in common. These seven turbines could be installed as part of either project. As a result, if both projects were built, the two projects combined would include a total of up to 137 wind turbines.

Although not required for permitting purposes, EDR prepared a cumulative viewshed analysis and visual simulations to address possible concerns regarding the potential cumulative visual impact of both projects. The 5-mile radius topographic viewsheds (based on maximum blade-tip height) for the Timber Road I and II Projects were plotted on a base map and the area of overlap identified (Figure 22). The turbine visibility counts for the two projects were then combined, taking into account that seven of the turbines are shared by the two projects but would only be built as part of one project if both were constructed. The results of the cumulative topographic viewshed analysis (based on blade-tip height) are depicted on Figure 22 and summarized in Table 5. The results of the cumulative viewshed analysis are essentially identical to the results of each individual project: the proposed Projects would be visible from approximately 99.6% of the overlapping study areas. Furthermore, the analysis indicates that between 102 and 137 turbines (from the combined projects) could potentially be visible in 96.1% of the cumulative overlap study area. Construction of both projects did not result in the addition of any areas to the cumulative viewshed that would have no visibility of turbines if either project were constructed in isolation.

Table 5. Cumulative Viewshed Analysis Results Summary

Blade Tip - Topo Only Viewshed	5-mile Radius Study Area		
	Total Acres	Visible Acres ¹	%
0 Visible	83,596	376	0.4
1-34 Turbines Visible	83,596	966	1.2
35-68 Turbines Visible	83,596	967	1.2
69-102 Turbines Visible	83,596	949	1.1
103-137 Turbines Visible	83,596	80,338	96.1



Title

**Timber Road II
Wind Farm**

Benton and Harrison Townships -
Paulding County, Ohio

**Figure 21: Combined Project
Layouts for the Timber
Road I and II Projects**

- Legend**
- Timber Road I Wind Turbine
 - Timber Road I Buried Interconnect
 - Timber Road I Access Roads
 - Timber Road I Substation
 - O&M Facility
 - ▲ Met Towers
 - Timber Road II Wind Turbine
 - Timber Road II Buried Interconnect
 - Timber Road II Access Roads
 - Timber Road II Project Substation
 - Timber Road II Interconnect Substation
 - Laydown Yard

Notes

Map Created: April 2010.

Base Map:
USGS 1:100,000 Distance and Lens
quadrangles.

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Services, Engineering and Surveying, P.C.

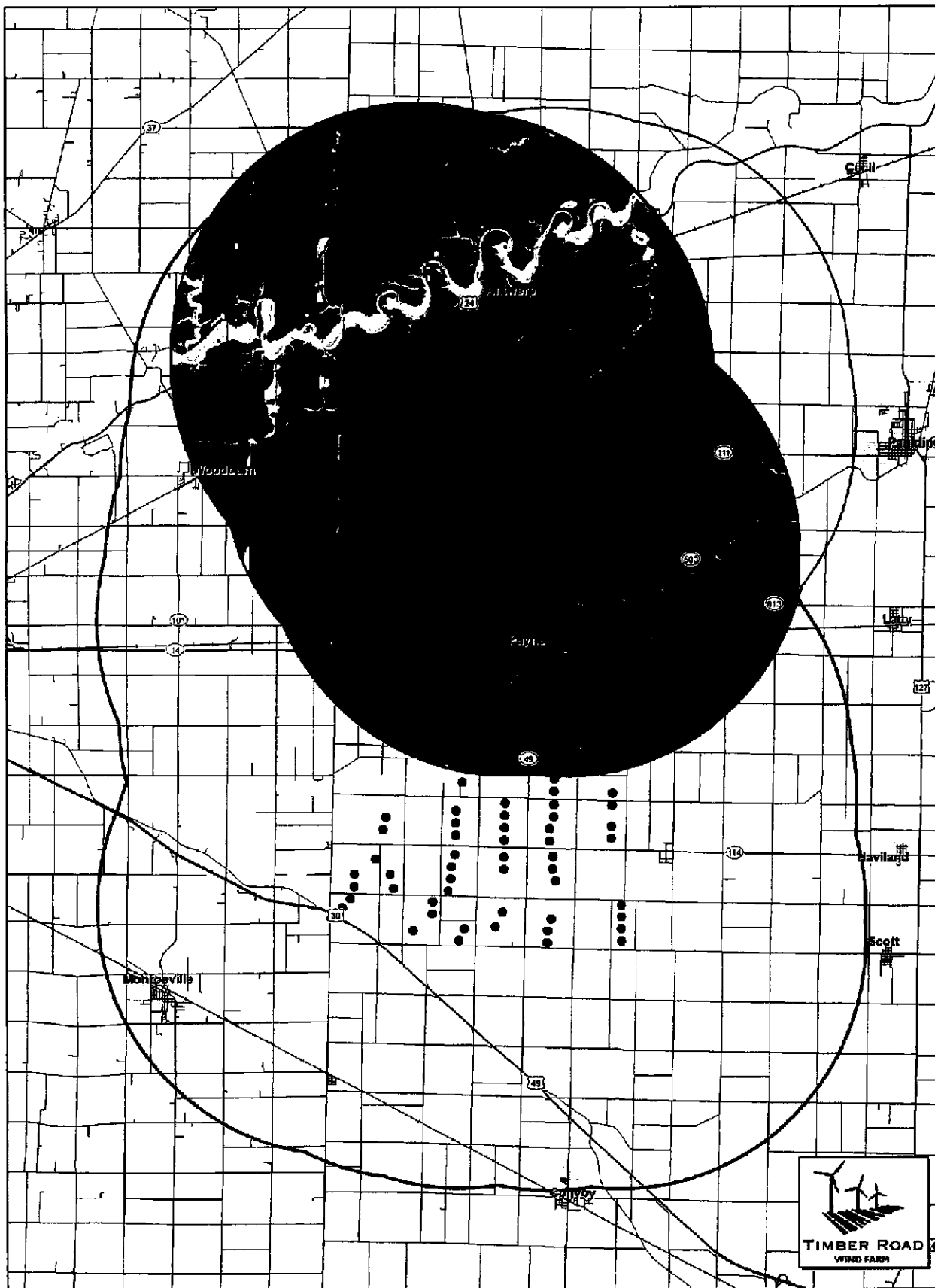
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Given the similarity of the results of the cumulative topographic blade-tip viewshed analysis to the comparable analyses for each individual project, it is reasonable to assume that the nacelle and vegetation viewsheds would result in comparable reduction of visibility (or lack thereof) for the combined projects. Overall, the cumulative viewshed prepared for the Timber Road I and II Projects (Figure 22; Table 5) indicates that the change in visibility resulting from the construction of both projects would be a change in degree (i.e., number of turbines visible) but not a change in kind (i.e., whether or not turbines would be visible from any particular vantage point).

Simulations prepared for Viewpoints 117 and 227 included views that show the combined effect of the two projects (Figures 18: Sheet 3 and Figure 20: Sheet 3). From Viewpoint 117, the effect of adding the Timber Road I Project to the view does not substantively change or increase the visual contrast resulting from the Timber Road II Project by itself, due primarily to the distance of both projects from the viewer. Consequently, the cumulative visual impact of both projects on this view is not considered significantly different than the effect of just the Timber Road II Project. Adding the Timber Road I turbines to Viewpoint 227 adds turbines to the near mid-ground of the view, resulting in greater scale and line contrast and in a greater sense of visual clutter. The cumulative effect of the two projects is therefore greater than the visual impact of only the Timber Road II Project by itself. In general the cumulative effects of both projects result in similar levels of contrast and visual impact as either project by itself: the greatest impact typically occurs when numerous turbines are visible and/or where the turbines are close to the viewer. In the opinion of EDR, the cumulative effect of constructing both projects is negligible relative to the effect of introducing either project as a visual component of the landscape.



Title

Timber Road II Wind Farm

Benton and Harrison Townships -
Paulding County, Ohio

**Figure 22: Cumulative
Viewshed Analyses for the
Timber Road I and II
Projects (Topographic
Blade Tip Visibility)**

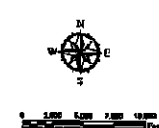
Legend

- Timber Road I Wind Turbine
- Timber Road II Wind Turbine
- Timber Road I 15 Mile Study Area
- Timber Road II 15 Mile Study Area

Turbine Count Visibility Analysis
Number Potentially Visible

0
1 - 34
35 - 68
69 - 102
103 - 137

Map Scale
& Orientation



Notes

Map Created: April 2010.

Base Map:
ESRI StreetMap North America 2006.

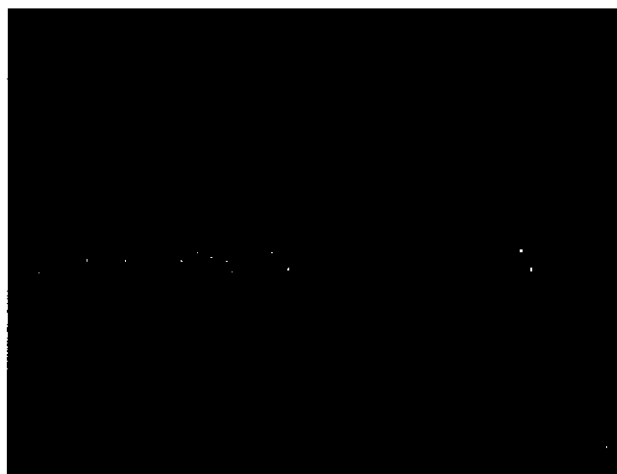
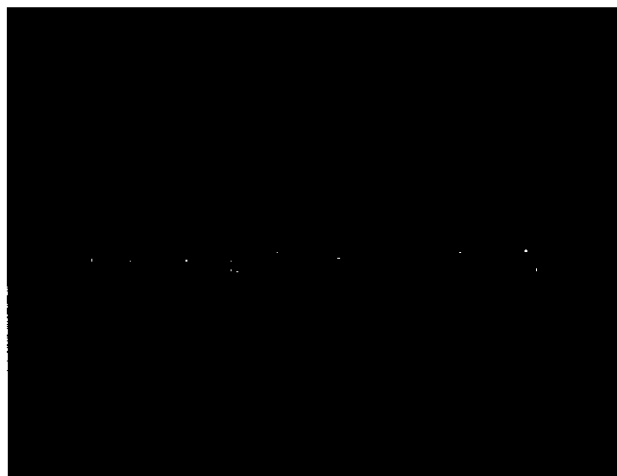
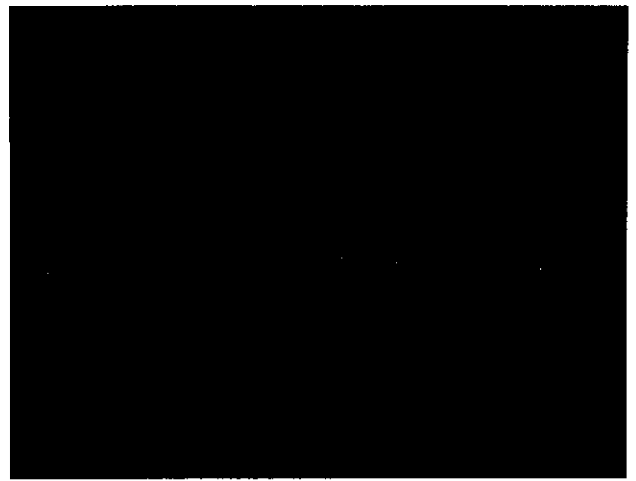
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5.4 Nighttime Impacts

Nighttime photos from the Fenner (New York) Wind Power Project (Figure 23), illustrate the type of nighttime visual impact that can occur due to the turbines' FAA aviation warning lights. Although daytime lighting, and night time lighting of every turbine, (as was the case in Fenner) will not be required on the Timber Road II Project, as shown in this photo, the contrast of the aviation warning lights with the night sky can be strong in dark, rural settings, and their presence suggests a more commercial/industrial land use. The flashing lights draw viewer attention, and any positive reaction that wind turbines engender (due to their graceful form, association with clean energy, etc.) is lost at night. While not disturbing (or even strongly perceptible) from roads and other public viewpoints, turbine lighting may be perceived negatively by area residents who may be able to view these lights from their homes and yards.



Existing Fenner Wind Power Project Fenner, NY

Title

Timber Road II Wind Farm

Benton and Harrison Townships - Paulding County, Ohio

Figure 23: Representative Evening/Night Time Photos

April 2010



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6.0 Conclusions

The VIA for the Timber Road II Wind Farm allows the following conclusions to be drawn:

1. Viewshed mapping, cross section analysis, and field verification indicate that the Project has the potential to be visible from the majority of the 5-mile radius study area. In most locations where turbines will be visible, significant portions of the overall Project are also likely to be visible. However, from the villages and hamlets, and many rural homes, a significant number of the turbines will be at least partially screened by foreground trees and structures. In addition, significant visual effects of wind power projects are generally concentrated within 3.5 miles (6 kilometers) of the Project site (Eyre, 1995; Bishop, 2002). EDR's observations on existing wind power projects in New York State indicate that under favorable conditions, views of the wind turbines will likely be available from certain viewpoints well over 10 miles from the Project site. However, visual impact at these distances is typically minimal.
2. Viewshed analysis indicates that views of the Project could be available from all of the visually sensitive resources and areas of intensive land use that occur within the 5-mile radius study area. However, cross section analysis and field review suggest that views of the Project from many sensitive sites (with the exception of some roads) will be fully or partially screened by foreground vegetation and structures (particularly in village/hamlet settings).
3. Simulations of the proposed Project indicate that the visibility and visual impact of the wind turbines will be variable, based on the number of turbines visible and their distance from the viewer. Evaluation of the 12 simulations prepared as part of this VIA by a licensed EDR landscape architect resulted in seven receiving a composite contrast rating greater than 2.0 (moderate) on a scale of 0 (insignificant) to 4 (strong). The remaining five views had a composite contrast rating of 2.0 or less. The views that received the highest visual contrast ratings were all located within 0.5 mile of the nearest visible turbine and included unobstructed views of numerous wind turbines. In areas with unobstructed views of the Project, the vertical lines of the turbines were perceived to result in a strong contrast with the overall flatness of the land, and reduced the sense of openness of many views. However, for some viewers the turbines will also add an element of visual interest. The vast openness of the landscape helps to absorb the turbines and reduces their line and scale contrast. The proposed Project would substantially change the visual character of the study area, but would not necessarily have an adverse impact on the existing scenic quality. This is due to the fact that the overall scenic

quality of the study area is generally low to medium due to the lack of topographic and vegetative variability, and the absence of any focal points or foreground objects of visual interest in many of the views.

4. Based on experience with currently operating wind power projects elsewhere, public reaction to the Project is likely to be generally positive, but highly variable based on proximity to the turbines, the affected landscape, and personal attitude of the viewer regarding wind power. As Stanton (1996) notes, although a wind power project is a man-made facility, what it represents "may be seen as a positive addition" to the landscape.
5. Based upon the nighttime photos/observations of existing wind power projects, the red flashing lights on the turbines could result in a nighttime visual impact on certain viewers. The actual significance of this impact from a given viewpoint will depend on how many lighted turbines are visible, what other sources of lighting are present in the view, the extent of screening provided by structures and trees, and nighttime viewer activity/sensitivity. However, night lighting could be somewhat distracting and have an adverse effect on rural residents that currently experience dark nighttime skies. It should be noted that nighttime visibility/visual impact will be reduced on this Project due to 1) FAA lighting guidelines which will likely result in aviation warning lights on only one-third to one-half of the turbines evaluated in this study, 2) actual Project size of 83 to 100 turbines, which will further reduce the number that need to be lighted, 3) the presence of street trees and yard trees that screen portions of the Project from many homes, and 4) the concentration of residences in villages, hamlets, and along highways where existing lights already compromise dark skies and compete for viewer attention.
6. Mitigation options are limited, given the nature of the Project and its siting criteria (tall structures located in open fields). However, various mitigation measures were considered. These included the following:
 - A. Screening. Due to the height of individual turbines and the geographic extent of the proposed Project, screening of individual turbines with earthen berms, fences, or planted vegetation will generally not be effective in reducing Project visibility or visual impact. However, as illustrated in the simulation from Viewpoints 50 and 54, selective off-site plantings could be effective in screening views of the turbines from some residences in the area.

-
- B. Relocation. Because of the extent of the Project, the number of individual turbines, and the variety of viewpoints from which the Project can be seen, turbine relocation will generally not significantly alter visual impact. Where visible from sensitive resources within the study area, (e.g., the edges of villages and hamlets, and heavily used roadways) numerous turbines are likely to be visible, and relocation of individual machines would have little effect on overall visual impact. Throughout the study area, views of the Project are highly variable and include different turbines at different vantage points. Therefore, turbine relocation would generally not be effective in mitigating visual impacts.
- C. Camouflage. The white color of wind turbines (as mandated by the FAA to eliminate the need for day time lighting) minimizes contrast with the sky under most conditions, especially when viewed under hazy/overcast conditions, or at distance against the horizon. Consequently it is recommended that this color be utilized on the Timber Road Project. The size and movement of the turbines prevents more extensive camouflage from being a viable mitigation alternative (i.e., they cannot be made to look like anything else). Neilson (1996) notes that efforts to camouflage or hide wind farms generally fail, while Stanton (1996) feels that such efforts are inappropriate. She believes that wind turbine siting "is about honestly portraying a form in direct relation to its function and our culture; by compromising this relationship, a negative image of attempted camouflage can occur."
- D. Low Profile. A significant reduction in turbine height is not possible without significantly decreasing power generation. To off-set this decrease, additional turbines would be necessary. However, a higher number of shorter turbines would not necessarily decrease Project visual impact. In fact, several studies have concluded that people tend to prefer fewer larger turbines to a greater number of smaller ones (Thayer and Freeman, 1987; van de Wardt and Staats, 1988). EDR has evaluated this alternative on several proposed wind power projects in New York, and we have typically found that visual impact is not significantly altered by using a larger number of smaller turbines. The visual impact of the electrical collector system is being minimized by installing the lines underground.
- E. Downsizing. Reducing the number of turbines could reduce visual impact from certain viewpoints. However, reducing the overall turbine number would reduce the environmental and economic benefits of the Project. Furthermore, as stated above, only 85-100 turbines will be constructed at the proposed Facility. Since 109 turbines were evaluated in the VIA, the constructed Facility will be somewhat smaller in comparison.

- F. **Alternate Technologies.** Alternate technologies for power generation (fossil fuel, nuclear, solar, etc.) would have different, and perhaps more significant, visual impacts than wind power. In addition, because the Project Sponsor is a wind power developer, alternative types of power generation are not realistic alternatives. Alternative utility-scale wind power technologies (e.g., vertical axis turbines), that could reduce visual impacts, are not currently viable.
- G. **Nonspecular Materials.** Where possible, non-reflective paints and finishes will be used on the wind turbines to minimize reflected glare. Where this is not feasible, natural weathering/dulling of any glossy surfaces (on turbine or substation components) will typically occur within one year following installation.
- H. **Lighting.** Turbine lighting will be kept to the minimum allowable by the FAA. Medium intensity pulsing red lights will be used at night, rather than white strobes or steady burning red lights.
- I. **Maintenance.** The turbines and turbine sites will be maintained to ensure that they are clean, attractive, and operating efficiently. Research and anecdotal reports indicate that viewers find wind turbines more appealing when the rotors are turning (Stanton, 1996). In addition, the Project operator will establish a decommissioning fund to ensure that if the Project goes out of service and is not repowered/redeveloped, all visible above-ground components will be removed.
- J. **Offsets.** Correction of an existing aesthetic problem within the viewshed is a viable mitigation strategy for wind power projects that result in significant adverse visual impact. However, because the analysis presented herein does not indicate a significant adverse visual impact, offset mitigation does not appear to be warranted.

In addition to the mitigation measures described above, other measures that will reduce or mitigate visual impact have been incorporated into the Project design. These include the following:

- All turbines will have uniform design, speed, height and rotor diameter.

- The white color of the turbines generally blends well with the sky at the horizon, and eliminates the need for daytime FAA warning lights.
- The Project operations and maintenance building (although not yet designed) will reflect the vernacular architecture of the area (i.e., resemble an agricultural structure).
- The placement of any advertising devices on the turbines will be prohibited.

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Appendix A

Large Scale Viewshed Maps and Visually Sensitive Site Table

Appendix A: Table A. Project Visibility from Sensitive Sites

Visually Sensitive Resource ¹	Location	VP Number ²	Distance (miles) from Nearest Turbine ³	Project Visibility ⁴			Field Review/ Simulation
				Viewshed ⁵	Vegetation	Cross Section ⁶	
Antwerp Norfolk and Western Depot	West Water St, Antwerp, Paulding County	202	1.4	V	V	NV	NV
County Road 21 Bridge over N. Creek	Town of Harrison, Paulding County	-	0.4	V	V	-	U
Former Worm School/Grange Hall	4015 County Road 124, Town of Harrison, Paulding County	-	0.5	V	V	-	U
County Road 144 Bridge over South Creek	Town of Harrison, Paulding County	-	1.4	V	V	-	U
204 S Main	204 S Main, Antwerp, Paulding County	-	1.6	V	V	NV	U
205 S Main	205 S Main, Antwerp, Paulding County	-	1.8	V	V	NV	U
210 S Main	210 S Main, Antwerp, Paulding County	-	1.6	V	V	NV	U
208 S Main	208 S Main, Antwerp, Paulding County	-	1.6	V	V	NV	U
INHSI Historic District	Town of Monroe, Allen County	142-146, 148, 149	3.6	PV	PV	-	NV
Antwerp and Carryall Township	Gold Star Post 5087, Railroad Street, Antwerp, Paulding County	-	1.7	V	V	NV	U
None in study area	-	-	-	-	-	-	-
None in study area	-	-	-	-	-	-	-
None in study area	-	-	-	-	-	-	-
None in study area	-	-	-	-	-	-	-
None in study area	-	-	-	-	-	-	-
None in study area	-	-	-	-	-	-	-
None in study area	-	-	-	-	-	-	-
Maumee State Scenic and Recreational River	Towns of Maumee, Carryall, and Crane, Paulding and Allen Counties	191-193, 221, 275	0.7	PV	PV	NV	PV
Lincoln Highway Historic Byway	Towns of Jefferson, Jackson, Benton, and Tully, Allen, Paulding and Van Wert Counties	6-8, 10, 71-73, 152, 156-158	0.2	V	V	-	V

Visually Sensitive Resource ¹	Location	VP Number ²	Distance (miles) from Nearest Turbine ³	Project Visibility ⁴			Field Review/ Simulation
				Viewshed ⁵		Cross Section ⁶	
				Topography	Vegetation		
None in study area	-	-	-	-	-	-	-
LOCAL RESOURCES							
Village of Payne	Paulding County	41-49, 56, 165-171, 175	0.8	V	PV	NV	PV
Village of Antwerp	Paulding County	202-210, 212-215, 252, 253, 284-289	1.0	PV	PV	NV	PV
City of Woodburn	Allen County	113, 186-190	2.3	PV	PV	NV	NV
Town of Monroeville	Allen County	141-149	3.4	PV	PV	-	PV
Village of Conway	Van Wert County	1, 5	4.5	V	V	-	PV
Hamlet of Batson	Town of Benton, Paulding County	15, 16	0.5	V	V	-	V
Hamlet of McGill	Town of Benton, Paulding County	17, 18	0.5	V	V	-	V
Hamlet of Edgerton	Town of Jackson, Allen County	80, 182, 183	0.8	V	V	-	PV
Hamlet of Dixon	Town of Tully, Van Wert County; Town of Monroe, Allen County	85	3.4	V	V	-	V
Hamlet of Townley	Town of Jackson, Allen County	71	3.6	V	V	-	V
Hamlet of Briceon	Town of Paulding, Paulding County	31, 32, 234, 235	4.3	V	V	-	V
Local Parks							
Church of God Campground	3450 State Route 500, Payne, Paulding County	103	0.7	V	V	-	PV
School Park	Payne, Paulding County	43	1.0	V	V	-	PV
Payne Community Park	Payne, Paulding County	50, 176	1.3	V	V	-	PV
Antwerp Community Park	Antwerp, Paulding County	204	1.8	V	V	-	PV
Riverside Park	Antwerp, Paulding County	-	2.0	V	V	-	U
Woodburn Community Park	Woodburn, Allen County	-	2.8	V	V	NV	U
Monroeville Community Park	Monroe St, Monroeville, Allen County	146	4.1	V	V	-	NV
Union Center Memorial Park	Liberty Union Road and Dixon Cavett Road, Town of Union, Van Wert County	21	4.5	V	V	-	PV
Edgewood Park	634 North Main St, Conway, Van Wert County	1	4.5	V	V	-	PV
Golf Courses							
Pleasant Valley Golf Course	4152 Road 17, Payne, Paulding County	101	0.8	V	V	-	V
Pond-A-River Golf Course	26025 River Road, Woodburn, Allen County	286-288	1.9	V	V	-	NV
Country Tee Driving Range	5445 State Route 49, Conway, Van Wert County	4	4.3	V	V	-	PV
Named Streams							
Middle Creek	Towns of Benton, Blue Creek, Tully; Paulding and Van Wert Counties	-	0.0	V	PV	-	U

Visually Sensitive Resource ¹	Location	VP Number ²	Distance (miles) from Nearest Turbine ³	Project Visibility ⁴			Field Review/ Simulation
				Viewshed ⁵		Cross Section ⁶	
				Topography	Vegetation		
North Creek	Towns of Carryall, Crane, Harrison, Tully, Union; Paulding and Van Wert Counties	7	0.1	V	PV	NV	PV
South Creek	Towns of Carryall, Crane, Harrison; Paulding	228	0.1	PV	PV	V	PV
Wild Cat Creek	Town of Harrison; Paulding	106	0.3	V	PV	V	PV
Wabash and Erie Canal	Towns of Maumee, Harrison, Carryall, and Crane; Paulding and Allen Counties	-	0.4	PV	PV	-	U
Flatrock Creek	Towns of Jackson, Monroe, Benton; Allen, Paulding and Van Wert Counties	72, 135	0.5	PV	PV	NV	PV
Upper Prairie Creek	Towns of Blue Creek, Tully, Union; Paulding and Van Wert Counties	-	0.7	V	PV	-	U
Jones Branch	Town of Jackson; Allen County	-	1.1	V	V	-	U
Prairie Creek	Towns of Blue Creek, Union; Paulding and Van Wert Counties	-	1.9	V	PV	-	U
Hoffman Creek	Towns of Jackson, Jefferson; Allen County	-	2.2	PV	PV	-	U
South Br Marie de Lerne Creek	Towns of Scipio, Carryall; Paulding and Allen Counties	-	3.5	PV	PV	-	U
Zuber Cutoff	Towns of Carryall, Crane; Paulding	-	4.1	PV	PV	-	U
Hospitals							
None	-	-	-	-	-	-	-
Schools							
Payne Elementary School	501 West Townline Street, Payne, Paulding County	43	1.1	V	V	NV	NV
Divine Mercy Catholic School	120 Arturus Street, Payne, Paulding County	44	1.2	V	V	NV	NV
Antwerp Local High School	303 Harrmann Road, Antwerp, Paulding County	-	2.3	V	V	-	U
Woodburn Elementary School	23005 Woodburn Rd, Woodburn, Allen County	187	2.7	V	V	-	PV
Lutheran Elementary School	4502 NState Road 101, Woodburn, Allen County	186	2.8	V	V	-	PV
Heritage Junior/Senior High School	13608 Monroeville Rd, Monroeville, Allen County	-	4.0	V	V	-	U
Monroeville Elementary School	401 Monroe Street, Monroeville, Allen County	-	4.0	V	V	-	U
St. Joseph Catholic School	209 Mulberry Street, Monroeville, Allen County	145	4.1	V	V	-	NV
Libraries							

Visually Sensitive Resource ¹	Location	VP Number ²	Distance (miles) from Nearest Turbine ³	Project Visibility ⁴			Field Review/ Simulation
				Viewshed ⁵		Cross Section ⁶	
				Topography	Vegetation		
Payne Public Library	101 N. Main St., Payne, Paulding County	48, 186	1.4	V	V	-	NV
Antwerp Branch Library	205 N. Madison, Antwerp, Paulding County	203	1.7	V	V	-	NV
Allen County Public Library, Woodburn Branch	4701 State Hwy 101, Woodburn, Allen County	-	2.9	V	V	-	U
Allen County Public Library, Monroeville Branch	104 Allen Street, Monroeville, Allen County	142	4.1	V	V	-	NV
Churches							
Edgerton Wesleyan Church	1717 Bertha Street, Woodburn, Allen County	60, 183	0.5	V	V	-	V
Jehovah's Witnesses Kingdom	2937 US 24, Antwerp, Paulding County	-	0.8	V	V	-	U
St. James Lutheran Church	Payne, Paulding County	171	1.0	V	V	-	V
St. Paul United Methodist Church	420 Arda Street, Payne, Paulding County	-	1.1	V	V	-	U
Mt. Calvary Lutheran Church	3497 US 24, Antwerp, Paulding County	-	1.1	V	V	-	U
Payne Church of Christ	220 W Merrin Street, Payne, Paulding County	46	1.2	V	V	-	PV
St. John the Baptist Catholic Church	203 W Townline Street, Payne, Paulding County	44	1.2	V	V	-	PV
Saint Paul United Methodist Church	312 S Main Street, Payne, Paulding County	-	1.2	V	V	-	U
St. Jacobs United Church	207 W Oak Street, Payne, Paulding County	45, 168	1.3	V	V	-	PV
Church of God	Payne, Paulding County	-	1.3	V	V	-	U
Living Water Ministries	104 South Main Street, Payne, Paulding County	48, 166	1.4	V	V	-	PV
Payne Church of Nazarene	508 Orchard Street, Payne, Paulding County	58, 165	1.5	V	V	-	PV
Saint Marys Catholic Church	303 Monroe Street, Antwerp, Paulding County	-	1.5	V	V	-	U
Antwerp Community Church	704 Erie Street, Antwerp, Paulding County	-	1.5	V	V	-	U
First Presbyterian Church	128 West River Street, Antwerp, Paulding County	-	1.7	V	V	-	U
Bethel United Methodist Church	202 East River Street, Antwerp, Paulding County	-	1.8	V	V	-	U
Bethel Church	Woodburn, Allen County	-	1.9	V	V	-	U
St. Mary Catholic Church-Antwerp	Dagget, Antwerp, Paulding County	-	2.5	V	V	-	U
Antwerp Church of Christ	15413 Ohio 49, Antwerp, Paulding County	220, 221	2.8	V	V	-	NV

Visually Sensitive Resource ¹	Location	VP Number ²	Distance (miles) from Nearest Turbine ³	Project Visibility ⁴		Cross Section ⁶	Field Review/ Simulation
				Viewshed ⁵			
				Topography	Vegetation		
Christ Lutheran Church	4412 Park Street, Woodburn, Allen County	-	3.0	V	V	-	U
Woodburn United Methodist Church	4300 Becker Road, Woodburn, Allen County	-	3.3	V	V	-	U
Westwood Fellowship	4100 Becker Road, Woodburn, Allen County	-	3.3	V	V	-	U
Woodburn Missionary Church	5108 Bull Rapids Road, Woodburn, Allen County	-	3.3	V	V	-	U
South Scipio United Brethren	24990 Antwerp Road, Harlan, Allen County	269	3.5	V	V	-	PV
Sugar Ridge Church of God	6432 Pollock Road, Conroy, Van Wert County	3	3.7	V	V	-	V
East Liberty United Methodist Church	115 Willow Run Drive, Monroeville, Allen County	-	4.0	V	V	-	U
St. Mark's Lutheran Church	201 E. South Street, Monroeville, Allen County	149	4.0	V	V	-	NV
St. Rose Catholic Church	208 Summit Street, Monroeville, Allen County	-	4.0	V	V	-	U
Monroeville United Methodist Church	208 W South Street, Monroeville, Allen County	-	4.1	V	V	-	U
St. John Lutheran Church	7611 Road 87, Paulding, Paulding County	235	4.3	V	V	-	PV
Saint Paul's Church	Paulding, Paulding County	231	4.6	V	V	-	PV
Zion Lutheran Church	7616 Bull Rapids Road, Woodburn, Allen County	121	4.7	V	V	-	NV
Cemeteries							
Unmarked Grave Cemetery	Town of Harrison, Paulding County	-	0.4	V	V	-	U
Dealy-(Dealey) Cemetery	Town of Benton, Paulding County	13	0.5	V	V	-	V
Lehman Cemetery	Town of Benton, Paulding County	174	0.6	V	V	-	V
Brady-Finnan-Pleasant Valley Cemetery	Town of Benton, Paulding County	-	0.6	V	V	-	U
Barber Cemetery	Town of Harrison, Paulding County	-	0.8	V	V	-	U
Catholic-Saint Johns-Saint John The Baptist Cemetery	Town of Benton, Paulding County	59	0.8	V	V	-	V
Slough Family Cemetery	Town of Carryall, Paulding County	-	0.8	V	V	-	U
Unnamed Cemetery	Town of Monroe, Allen County	157	0.9	V	V	-	V
Willis Cemetery	Town of Harrison, Paulding County	55, 164	1.0	V	V	-	V
Mcneal Cemetery	Town of Tully, Van Wert County	10	1.2	V	V	-	V
Snellenbarger Cemetery	Town of Harrison, Paulding County	53, 178	1.4	V	V	-	V
Ludwig Plot Cemetery	Town of Harrison, Paulding County	198	1.4	V	V	-	V
Hiram Banks-Banks Cemetery	Town of Carryall, Paulding County	-	1.7	V	V	-	U
Antwerp-Riverside Cemetery	Town of Carryall, Paulding County	213	1.8	V	V	-	NV
Maumee-Coffelt Cemetery	Town of Carryall, Paulding County	222	2.7	V	V	-	PV
Rosner Cemetery	Town of Maumee, Allen County	114	3.0	V	V	-	PV
Sugar Ridge Cemetery	Town of Tully, Van Wert County	-	3.7	V	V	-	U

Visually Sensitive Resource ¹	Location	VP Number ²	Distance (miles) from Nearest Turbine ³	Project Visibility ⁴			Field Review/ Simulation
				Viewshed ⁵		Cross Section ⁶	
				Topography	Vegetation		
Slough Cemetery	Town of Carryall, Paulding County	-	3.8	V	V	-	U
Unnamed Cemetery	Town of Monroe, Allen County	134	3.8	V	V	-	PV
Old Methodist Cemetery	Town of Monroe, Allen County	-	4.0	V	V	-	U
Banks-Coffelt Cemetery	Town of Carryall, Paulding County	-	4.0	V	V	-	U
Mentzer/Metzer Cemetery	Town of Tully, Van Wert County	81	4.2	V	V	-	V
Convoy I.O.O.F.-(Township) Cemetery	Town of Tully, Van Wert County	2	4.2	V	V	-	V
Unnamed Cemetery	Town of Monroe, Allen County	136	4.2	V	V	-	PV
Blue Creek-Blue Creek Township North Cemetery	Town of Blue Creek, Paulding County	29	4.3	V	V	-	PV
Saint Paul Cemetery	Town of Paulding, Paulding County	35, 231	4.7	V	V	-	PV
Scott-(Oakland) Cemetery	Town of Union, Van Wert County	20	4.9	V	V	-	PV
Other							
Lincoln Ridge	6837 Lincoln Highway, Convoy, Van Wert County	-	4.2	V	V	-	U
Steam Saw Mill Site (Maumee River Overlook)	Town of Maumee, Allen County	191-193	4.5	V	V	-	PV
State Hwy 49	Towns of Hicksville, Carryall, Harrison, Benton, Tully; Paulding and Van Wert Counties	4, 5, 9, 41, 48, 49, 51, 58, 79, 91, 155, 159, 166, 170, 197, 198, 209, 220, 221, 241, 242, 244, 245, 248, 254, 258, 259, 284, 285	0.1	V	V	NV	V
State Hwy 111	Towns of Harrison, Paulding; Paulding	111, 159, 196, 229, 247, 248	0.1	V	V	V	V
State Hwy 114	Towns of Benton, Blue Creek; Paulding and Allen Counties	14-16, 27, 28	0.1	V	V	V	V
State Hwy 613	Towns of Harrison, Paulding, Jackson, Brown, Benton; Paulding	33, 37, 54, 57	0.1	V	V	V/NV	V
US Hwy 30	Towns of Jackson, Jefferson, Monroe, Benton, Tully, Union, Pleasant, Ridge; Allen, Paulding and Van Wert Counties	7, 10, 79, 150, 151-153, 156	0.2	V	V	V	V
US Hwy 24	Towns of Maumee, Milan, Jefferson, Delaware, Carryall, Crane, Emerald, Harrison, Paulding and Allen Counties	191-193, 202, 210, 214-217, 256, 283, 288	0.4	PV	PV	-	PV
State Hwy 14	Towns of Jackson, Jefferson; Paulding and Allen Counties	68	0.4	V	V	-	V
State Hwy 500	Towns of Harrison, Paulding, Benton; Paulding	41-43, 53, 54, 56, 58, 59, 75, 103, 165, 169, 170, 178, 233, 295	0.5	V	PV	NV	PV
State Hwy 101	Towns of Concord, Spencer, Springfield, Maumee, Jackson, Monroe, Union; Allen County	61, 63, 70, 71, 114, 118, 136, 140-144, 149, 151, 168, 275, 276	2.5	V	PV	-	PV

¹ Resources located within 5 miles of nearest turbine.

Visually Sensitive Resource ¹	Location	VP Number ²	Distance (miles) from Nearest Turbine ³	Project Visibility ⁴			Field Review/ Simulation
				Viewshed ⁵	Vegetation	Cross Section ⁶	
				Topography			

¹ If no viewpoint (VP) number is indicated, no photo was obtained during fieldwork.

² For large areas and linear sites, approximate distance to the nearest turbine was measured from the respective areas closest point.

³ Project visibility is indicated as follows: V=Visible, PV=Partly Visible, NV=Not Visible, U=Undetermined. A "-" is indicated when previous analysis eliminated potential visibility.

⁴ Does not take into account screening provided by structures and street trees.

⁵ When cross section visibility is indicated as "NV" and simulation visibility as "V", that is because cross section is determined from a single point, whereas simulation visibility may be from a different location within the

Appendix B

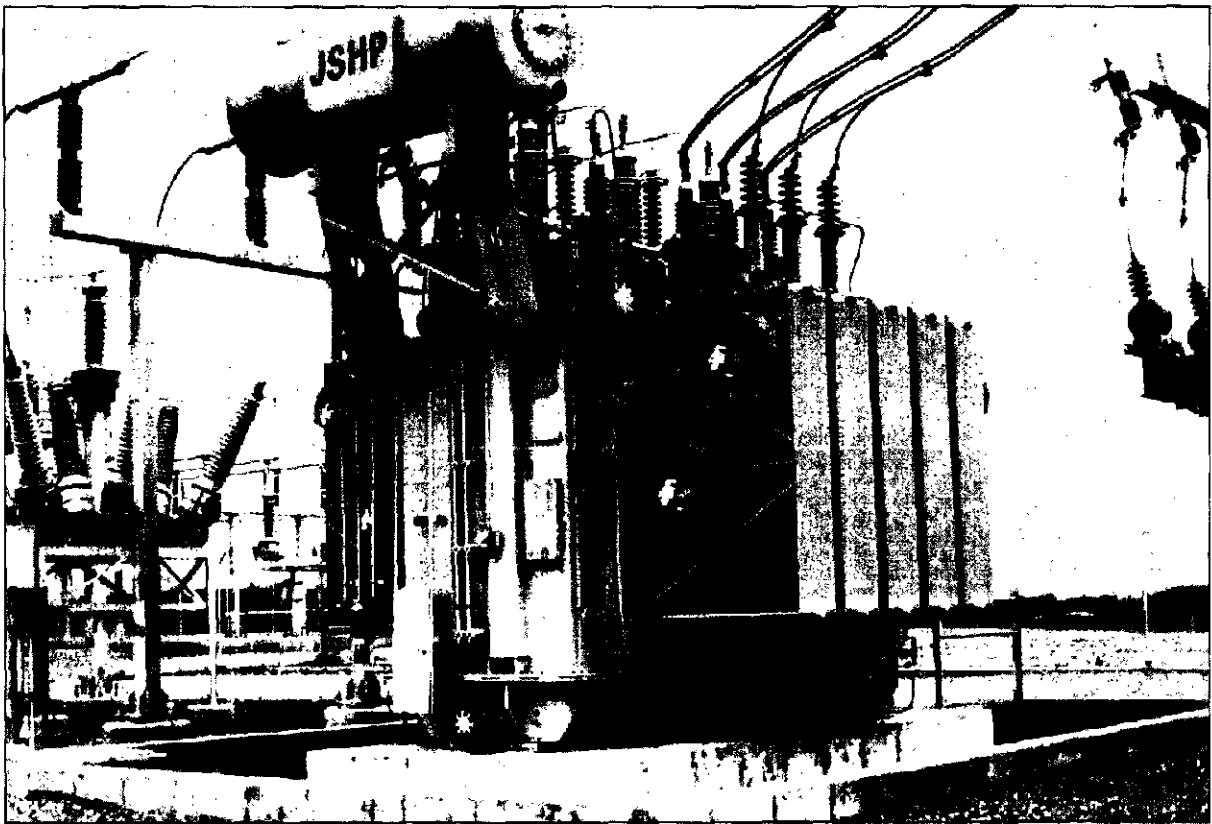
Photo Log and Field Notes
(See Enclosed CD)

Appendix C

Digital Simulations
(See Enclosed CD)

Appendix D

Typical Substation Photos



☐ Photo 1: Highland Wind Project. Cambria County, Pennsylvania



☐ Photo 2: Highland Wind Project. Cambria County, Pennsylvania

Title

Timber Road II Wind Farm

Benton and Harrison Townships - Paulding County, Ohio

Appendix D: Typical Substation Photos

Sheet 1 of 2

April 2010



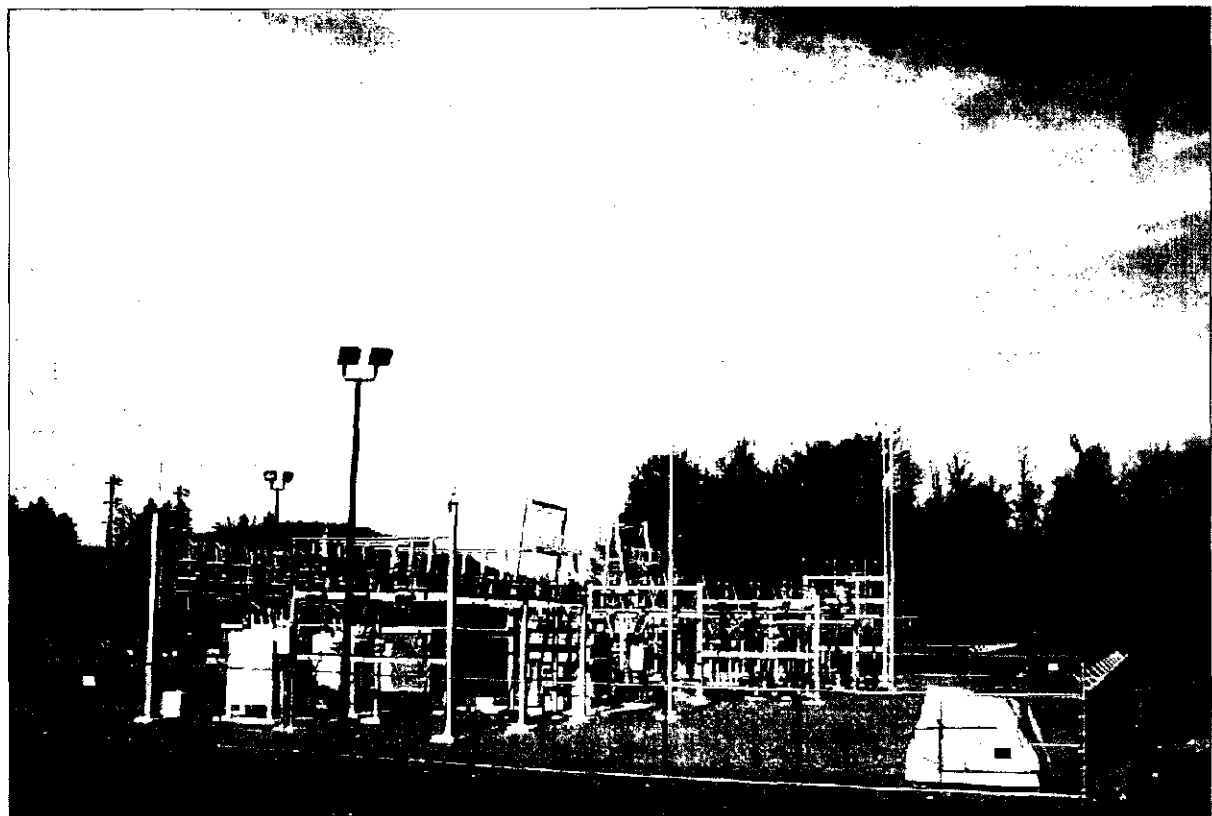
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☐ **Photo 3:** Munnsville Wind Farm. Madison County, New York



☐ **Photo 4:** Munnsville Wind Farm. Madison County, New York

Title

Timber Road II Wind Farm

Benton and Harrison Townships - Paulding County, Ohio

Appendix D: Typical Substation Photos

Sheet 2 of 2

April 2010



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