installed in the Town of Villenova. No overhead collection line will be required in the Town of Hanover.

- Construction and use of a new substation (Hanover Substation) within the Project Area in the Town of Hanover that will tie into a new 115-kilovolt (kV) transmission line. The substation footprint will be approximately 200 by 300 feet. The substation will be located on, and have direct access to, Hurlbert Road.

- Construction and use of a switchyard within the Project Area in the Town of Hanover. The switchyard footprint will be approximately 300 by 500 feet. The switchyard will be located on and have direct access to Bennett State Road (County Route 85).

- Construction and use of a 6-mile overhead 115 kV transmission line, sited within the Town of Hanover, to transfer the energy from the new substation to the new switchyard. The proposed switchyard will provide a connection to the existing 230 kV National Grid transmission line that provides access to the grid.

- Use of equipment laydown areas for temporary staging of turbine components and other construction related materials and facilities. Approximately 28 acres of laydown area are proposed within the Project Area.

Equipment required for construction of the Project will be delivered to the construction sites along a designated Haul Route. There are currently four primary Haul Routes under consideration. The final selection of the preferred Haul Route will be based on the identification of the point of entry for the Project and for equipment delivery. As discussed in the Transportation Study, Project materials could be brought to the site via either a port at Oswego, New York or a port in Erie, Pennsylvania. As a result, some modifications to existing transportation infrastructure within the study area may be required to allow the transport of Project-related equipment to the Project Site along the proposed Local Haul Routes. The general Haul Routes are depicted in Figure 5A and the minor alternatives for each route within the study area (those areas considered in this study) are depicted in Figure 5B. The intersections potentially affected by use of each Local Haul Route are listed and described in Table 1. Those intersections beyond the Local Haul Route study area were not considered in this study.

The East Access Haul Route Option begins in Springville, New York, at the intersection of U.S. Route 219 and NYS Route 39 and proceeds east to NYS Route 93, then south along NYS Route 93 and northwest throughout the Project Area. This route includes three minor alternatives. The affected intersections within the study area are depicted on Figure 6A.

The South Access Haul Route Option begins in Ellington, New York, at the intersection of U.S. Route 62 and Main Street and proceeds north to and northwest throughout the Project Area. The affected intersections within the study area are depicted on Figure 6B.

The Southwest Access Haul Route Option begins in Cassadaga, New York, at the intersection of Maple Avenue and Main Street and proceeds generally east to the Project Area. A minor alternative route begins in Pomfret, New York, at the intersection of NYS Route 60 and NYS Route 83 and proceeds east and south to the Project Area. The Southwest Haul Routes enter the Ball Hill Study Area at the intersection of Cassadaga-Hamlet Road, CR 72 and Wentworth Road, proceeds east then generally northwest through the Project Area. The affected intersections within the study area are depicted on Figure 6C.

The Northwest Access Haul Route Option begins in Fredonia, New York, at the intersection of East Main Street and Bennett Road, and proceeds generally west to the Project Area. The Northwest Access Haul Route Option enters the Study Area at the intersection of Lodi Street, NYS Route 39, and Empire Road and proceeds south then generally northwest through the Project Area.

Complete descriptions of the Haul Routes being considered can be found in the Transportation Haul Route Study. Wetland and waterbody surveys were limited to observations made from public roadways along the side of the road, at all intersections to be utilized within the Local Haul Route study area. Visual observations were made from the roadside to determine the presence/absence of wetlands/waterbodies. Based on the Transportation Haul Route Study, road improvements are needed only at specific intersections where adequate turning radii are currently not available for the larger trucks that will be transporting equipment and materials to the Project Site.

A total of 16 intersections within the Project Area may be used for the Haul Route. These intersections are listed in Table 1. Of these, 14 intersections were identified as requiring temporary road modifications. Only two of the intersections within the Project Area (Route 91/Route 93 and North Hill Road/Pope Hill Road) were identified as requiring no road modifications. Intersections that require modifications will be restored to their original condition when construction of the project is complete, including traffic sign replacement and roadway resurfacing, if necessary.

Of the 14 intersections requiring modifications, four could potentially result in impact to federally jurisdictional wetlands and one could potentially result in impact to a NYSDEC wetland. Potential impacts will depend on the workspace required. A summary of each of the intersections evaluated and results of the reconnaissance level surveys is provided in Section 4, Results.

Table 1 Ball Hill Windpark Local Haul Route Intersections

Intersection #	Location	East Route		South Route		Southwest Route		Northwest Route	
		ID	Upgraded Corner	ID	Upgrade Corner	ID	Upgrade Corner	ID	Upgrade Corner
1	NYS Rt. 39 & CR 93 (Hanover Rd.)	E-1	SW	S-5	SW & SE	S-5	SW & SE	N/A	N/A
2	CR 93 (Hanover Rd.) & East Lake Rd.	E-2	SW	S-4*	SW	S-4*	SW	NW-4*	SW
3	Dye Rd. & East Lake Rd.	E-3	NE & SE	E-3	NE & SE	E-3	NE & SE	NW-3	NE & SE
4	CR 91 (Buttermilk Rd.) & CR 93 (S. Dayton-Silver Creek Rd.)	E-4	**none**	S-3	**none**	S-3	**none**	E-4	**none**
5	CR 91 (Buttermilk Rd.) & Hooker Rd.	E-5	NW	S-2	SW	S-2	SW	E-5	NW
6	NYS Rt. 83 (Ball Hill Rd. & Danker Rd.) & Cemetery Rd. & Smith Rd.	E-6	SE	E-6	SE	E-6	SE	E-6	SE
7	North Hill Rd. & CR 87 (Ball Hill Rd.)	E-7	NW & E	E-7	NW & E	E-7	NW & E	E-7	NW & E
8	CR 87 (Ball Hill Rd.) & Bartlet Hill Rd.	E-8	SE	E-8	SE	E-8	SE	E-8	SE
9	Smith Rd. & North Hill Rd.	E-9	W	E-9	W	E-9	W	E-9	W
10	North Hill Rd. & Pope Hill Rd.	E-10	**none**	E-10	**none**	E-10	**none**	E-10	**none**
11	Pope Hill Rd. & Round Top Rd.	E-11	SE	E-11	SE	E-11	SE	E-11	SE
12	Round Top Rd. & Villenova Rd.	E-12	NE & SE	E-12	NE & SE	E-12	NE & SE	E-12	NE & SE
13	CR 87 (Villenova Rd.) & CR 87 (Balcom Cross Rd.)	N/A	N/A	S-1**	SE & SW	SW-2**	SE & SW	N/A	N/A
14	NYS Rt. 39 & Empire Rd.	N/A	N/A	N/A	N/A	N/A	N/A	NW-1	NW & SW
15	Hurlbert Rd. & Empire Rd.	N/A	N/A	N/A	N/A	N/A	N/A	NW-2	NW & NE
16	NYS Rt. 83 & NYS Rt. 322	N/A	N/A	N/A	N/A	SW-1	NW	N/A	N/A

Notes:

* S-4 same inprovements as NW-4

** S-1 same improvements as SW-2

The modifications are described in detail in the Transportation Haul Route Study and include:

- Temporary embankment and widening of roadways;
- Extension of culverts;
- Temporary relocation of road signs and guard rails;
- Trimming of brush and tree limbs; and
- Temporary relocation of fences, mail boxes, and other landowners personal items.

To facilitate field review, this report presents the Local Haul Route survey results organized by intersection number and roadway name. Table 1 presents the assigned intersection number, the assigned modification upgrade identification (as identified in the Transportation Haul Route Study), and the modifications needed for each Haul Route option.

The following terms are used throughout this document to describe the proposed action.

- **Project.** The term "Project" refers to all activities involved in the construction and operation of the Noble Ball Hill Windpark described above and all components thereof, including but not limited to wind turbines (including blades, towers, pads, and foundations); electrical collection/transmission lines and poles; trenches; access roads; and related structures.
- **Access Roads.** The roads Noble proposes to construct within the Project to provide access to turbines or other facilities are called access roads. Each road is assigned a number that corresponds with the cluster of turbines for which access is provided (numbered 1 through 27 in Figure 2).
- **Haul Route.** The Haul Route that ultimately will be used for the transportation of Windpark equipment will be determined by the port of entry chosen. Please refer to the Transportation Haul Route Study for additional discussion regarding the ports of entry under consideration.
- **Local Haul Route.** The portion of the Haul Route located within the study area. Intersections associated with the Local Haul Route are considered in this study.
- **Study Area.** The area within which E & E conducted roadside surveys for intersection modifications for this study. The study area is depicted on Figure 4.

- **Haul Route Survey Corridor.** The limit of the corridor within which presence or absence surveys were conducted for wetlands and waterbodies includes a buffer with a length of approximately 100 feet in both directions along the side of the road to be modified, from the limits of the proposed road modification. In all survey areas, the width of the buffer was limited to the roadside ROW due to property constraints. Visual observations were made from the roadside to determine the presence/absence of wetlands/waterbodies on no-access properties. The Transportation Haul Route Study outlines the proposed road modification limits.

- **Haul Route Intersections.** There are 14 intersections located along the different Local Haul Route options at which road improvements may be required to provide appropriate turning radii for delivery of equipment. This number will vary depending on the selected Haul Route option selected. The actual number of these intersection modifications to be utilized ranges from 10 in the East Access Haul Route up to 12 in the Northwest Access Haul Route. There are two intersections mentioned in the Transportation Haul Route Study that do not require improvements. These intersections would be utilized in all of the Haul Route options. All Haul Route intersections on the Local Haul Route are depicted in the Transportation Haul Route Study and are listed in Table 1.