1.0 PROJECT DESCRIPTION

Weaver Wind, LLC (Applicant), a wholly owned subsidiary of Longroad Energy Partners LLC, proposes to construct the Weaver Wind Project (project), a 22-turbine utility scale wind energy facility in Hancock County, Maine (Figure 1-1). Eight turbines are proposed to be constructed in the Town of Eastbrook and 14 turbines in the Town of Osborn. The turbines will have an installed capacity of 72.6 megawatts (MW) of electricity.

The Weaver Wind project underwent agency and public review in 2015, with the application withdrawn in that year without decision. The project design is substantially the same as in 2015, with the following exceptions:

- Selection of a turbine type;
- Elimination of one turbine location (#21);
- Leasing space rather than construction of an Operations and Maintenance facility;
- Additional earthwork to allow for turbine transport; and
- Addition of several short segments of above ground electrical collector in sections that were previously proposed to be buried.

The project area primarily consists of low elevation mixed forest, which is predominantly managed for commercial timber production. The project will be constructed on hills south of Route 9, including Hardwood Hill, Birch Hill, Een Ridge, Little Bull Hill, and other unnamed hills nearby. Ridge elevations within the project area range between 500 and 700 feet above sea level.

As described in greater detail below, other project features will include: upgrades to existing roads and construction of new roads; up to five permanent and eight temporary meteorological (met) towers; and a series of 34.5 kilovolt (kV) electrical collector lines among the turbines and connecting to a substation adjacent to the existing Bull Hill substation in T16 MD.

The project is designed to use a Vestas V126-3.45 MW turbine on a 117-meter hub and a maximum height of 591 feet. The turbine will be “de-rated” so it only can produce 3.3 MW of electricity.

A substantial road network, primarily consisting of gravel logging roads, currently exists within the project area. The Applicant will use existing roads to the extent practicable to minimize project impacts. Approximately four miles of existing access roads will be upgraded to provide construction and maintenance access to the project areas and to connect turbine locations. Additionally, roughly six miles of new access roads will be constructed to further connect turbine locations and will be maintained by the Applicant (Figure 1-1). There are also laydown areas proposed for the project, all of which will be temporary during construction (Exhibit 1).

The project will share space at the Hancock Wind Project Operations and Maintenance (O&M) building in the Town of Aurora.

The power from each turbine will be collected in approximately 24.5 miles of 34.5-kV electrical collector lines (Figure 1-1). The majority of collector lines will be underground, though above-ground lines will also be installed. The underground electrical collector lines will be buried in trenches generally located within roadways. Below grade boxes will be installed as needed (typically every 1500 feet) to splice collector

cables and will be installed immediately adjacent to roadways. Boxes will be located to avoid natural resource locations. Underground fiber optic communications cables will be installed in typical two-inch conduits routed adjacent to the electrical collector lines, and the fiber optic cables will require splice/pull boxes. Overhead collector lines will avoid fill impacts to wetlands and will be installed on wood utility poles in areas where roadways do not exist or where going above ground avoids impacts.

Power from the collector lines will be transmitted to a substation adjacent to the Bull Hill substation in T16 MD, where it will tie into the existing electrical grid. Electrical infrastructure will be located within a fence at the substation to "step up" the power to 115 kV and transmit it directly to Emera Energy's Line 66. Line 66 is an existing 115-kV transmission line that can accept power from the project. Electrical design plans are provided in Exhibit 2.

The project also includes up to five permanent and eight temporary met towers. Both permanent and temporary met towers will be a maximum height of 400 feet, and the footprint for each tower will be a maximum of 3.82 acres per tower. Project plans depict five potential locations for permanent met towers, as well as associated clearing impacts (Exhibit 1).

During construction, temporary met towers will be placed at turbine pad locations before turbines are erected. These temporary towers will be removed prior to the completion of construction. All temporary met towers will either be erected with guy wires or will be self-supporting structures, though it is likely that one tower (tmt_14) will be self-supporting. In restricted areas where guy lines are not possible, permanent met towers will also be self-supporting. The permanent met towers may be guyed or self-supporting.

The project will use a radar-assisted lighting system. Radar-assisted lighting is designed to minimize the effects of nighttime safety lighting of turbines. Such systems are approved by the Federal Aviation Administration (FAA) on a project by project basis and allow turbine obstruction lights to remain off unless an aircraft is operating in the vicinity of the site, thus greatly reducing the time that nighttime lighting is visible. Standard turbine lighting will be installed initially and once the FAA has granted approval, the project will be retrofitted with radar-assisted lighting provided such systems are technically feasible and economically viable. Further details on lighting are presented in Section 27.

As part of the permitting process, the Applicant has completed studies of natural resources and wildlife in the project area and on adjacent lands. As designed, the project will not result in any temporary or permanent fill in wetlands, or in-stream work.

Certain project activities, such as filling, grading, clearing and installing stormwater controls are proposed within the regulated natural resource buffers, and vegetation clearing will occur in wetlands along access roads and above ground collector corridors. This will require approvals from the Maine Department of Environmental Protection (MDEP) pursuant to the Natural Resources Protection Act (NRPA); therefore, this permit application is combined application to satisfy the Site Location of Development Law, the NRPA, the Construction General Permit and a 401 Water Quality Certification.

1.1 CONSTRUCTION PLAN

The Applicant's owners have extensive experience constructing wind energy facilities in Maine, with six projects currently in operation. The Applicant is committed to constructing facilities that minimize environmental impacts and comply with regulatory requirements and recommendations.

Construction of the project is projected to begin in the spring 2019 with the goal of project completion set for summer of 2020. The sequence of project construction will generally adhere to the timeline detailed below (Table 1-1), although adjustments may be necessary to accommodate seasonality and weather conditions.

The project site will be accessed by the network of existing logging roads. Construction will likely be somewhat linear, but multiple areas may be constructed concurrently depending on the final overall construction schedule.

Once the site or portions of the site are cleared, such areas will be grubbed and earthwork to build crane paths and pads will commence. When an area has sufficient roads and pads built to accommodate foundation construction, foundations will be built in place with concrete delivered from a redi-mix concrete plant.

Concurrently to earthwork and foundation installations, the electrical collection system will be installed. Underground collection systems along turbine strings will likely be constructed in conjunction with the earthwork activities in those areas. Underground collection lines located along existing access roads, as well as the overhead collection system, will be constructed at a time that accommodates the overall project schedule.

Turbines will be delivered to the site and may be temporarily staged at laydown areas or delivered directly to the turbine pads. This will depend on the final construction schedule. Turbine erection will generally be linear, depending on the final construction schedule. Components will be erected by several crews, with each crew focusing on certain components (i.e. one crew for lower level components and other crews focusing on mid and high-level components). As individual turbines are completed, internal electrical and cleaning work will occur.

Substation construction will likely occur concurrently with other work on site. The site will be prepared to provide sub-grade or final-grade for foundation construction. Foundations will be cast on site with concrete from an offsite commercial redi-mix plant. Once foundations are constructed, structural steel will be installed to support the substation. Other control buildings, as needed, within the fenced substation yard will either be constructed on site or pre-fabricated and delivered. If necessary, the substation will be energized for back feeding the site collection system and the turbines for final testing and commissioning.

Table 1-1. Estimated construction activity timeline

Task	Timeframe
Preliminary layout and staking of new road segments, turbine clearings, and laydown areas	Weeks 1–8
Clear and erect temporary and permanent met towers	Weeks 1-4
Install erosion control measures in areas to be disturbed	Weeks 9–13
Clear for roads, collection system, turbines, and laydown areas	Weeks 4–16
Grubbing and initial grading for roads, turbines, and laydown areas	Weeks 16–24
Blasting (as needed) and on-site stockpiling of reusable blasted bedrock	Weeks 16–30
Construct substation	Weeks 20–45
Remove temporary met towers	Weeks 20–45
Underground trench/conduit work	Weeks 22–36
Hauling and stockpiling of aggregate from local borrow pits	Weeks 24–36
Construct turbine foundations and substation transformer pad	Weeks 24–38
Final grading of roads and turbine areas	Weeks 30–38
Deliver turbines, assemble rotors, erect towers, lift nacelles and rotor assemblies, construct above ground and underground collection systems, permanent met towers	Weeks 32–40
Install transformers and activate turbines	Weeks 32–36
Commission and test wind turbine generators and electrical interconnections	Weeks 40–46
Remove temporary erosion and sedimentation control measures upon final site stabilization and reseeding	Weeks 46–50
Begin commercial operations	Week 50

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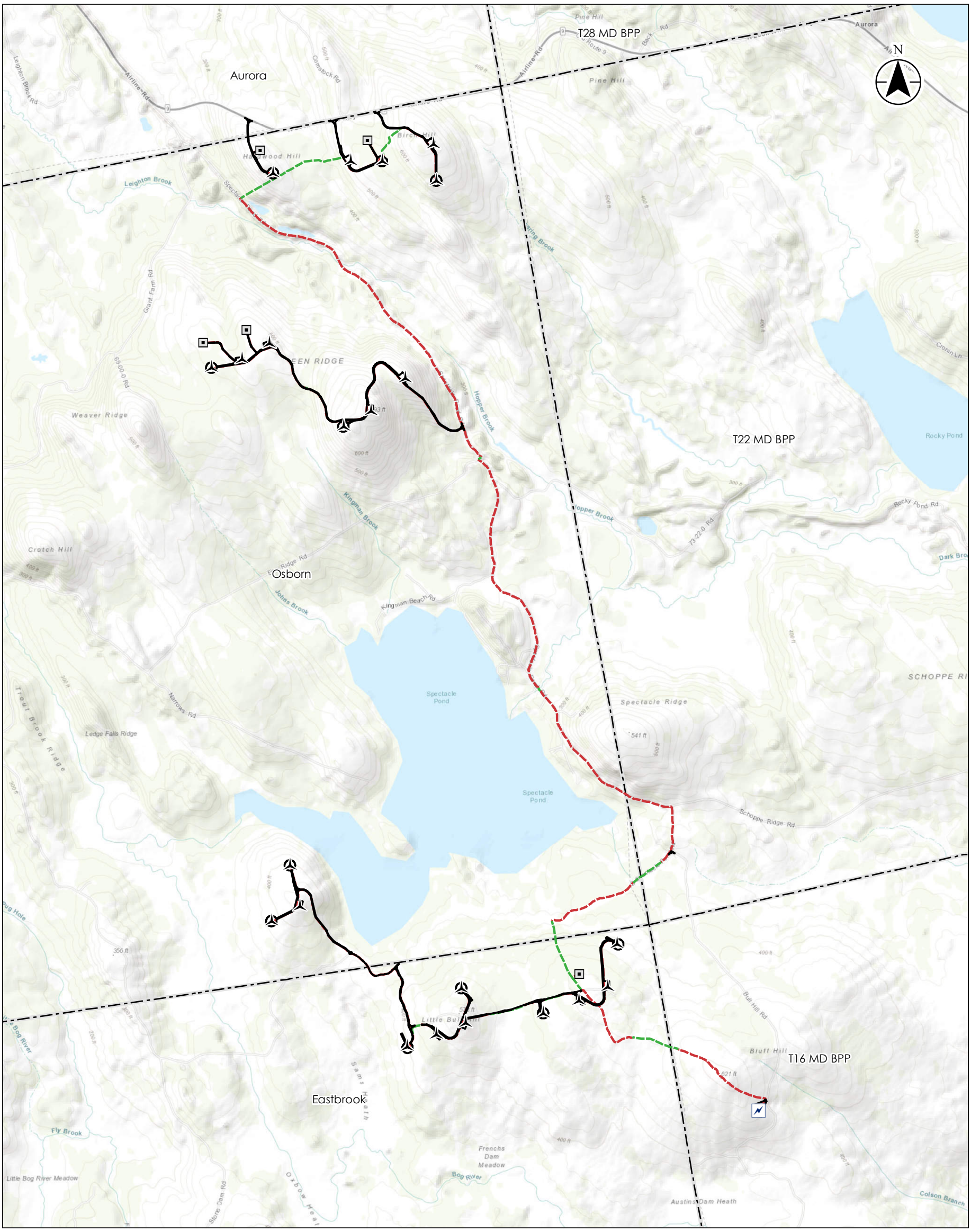

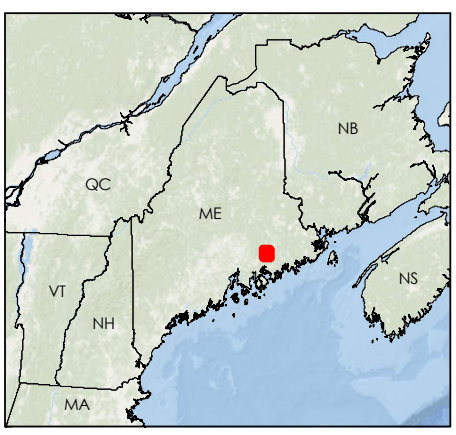

Legend

- Turbine Layout
- MET Tower
- Substation
- Major Overhead Collector Line
- Underground Collector Line
- Access Road

0 4,000 Feet

1:48,000 (At Original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 19N FT
2. Base map: ESRI World Topographic Map

Stantec

Project Location
Hancock County, Maine

195601223

Prepared by GAC on 2018-08-14
Reviewed by BRB on 2018-08-14

Client/Project
Weaver Wind Project
Longroad Energy Partners LLC

Figure No.
1-1

Title
Weaver Wind Project
Location Map