# Section 6. CONSTRUCTION PLAN

## 6.1. INTRODUCTION

The Project will be constructed in compliance with applicable local, state, and federal regulations, guidelines and standards, and specific requirements of any necessary permits. See the Issued for Permitting (IFP) Civil Drawing Set (Exhibit 1-2) for further details. The following construction plan describes Project-specific construction techniques that will be implemented during the proposed Project construction. Construction will be performed in such a manner that natural resources will be protected to the greatest extent practicable, and erosion and sedimentation will be minimized. To accomplish this, erosion and sediment control measures will be installed and maintained as outlined and described by the Maine Department of Environmental Protection's (MDEP) *Erosion and Sediment Control Best Management Practices Manual* (BMPs), dated October 2016.

Specific erosion and sedimentation control methods are discussed in the Erosion and Sedimentation Control Plan located in Section 7. This plan focuses on established wind energy project construction methods that will be employed to protect soil and water resources and other sensitive environmental resources during construction. This plan also provides for flexibility to allow application of the most appropriate construction methods and the best access based on site-specific conditions.

## 6.2. CONSTRUCTION SCHEDULE

The Applicant anticipates the construction phase to begin in the first quarter of 2022 and last 18 to 20 months, including final site restoration, concluding in the fall of 2023. Construction sequencing and timing is described below in Table 6-1. Adjustments to the timeline may be necessary to accommodate for weather conditions and seasonal considerations, including wild blueberry production operations and harvest.

**Table 6-1. Estimated Construction Sequencing and Timing**

| Task | Timeframe |
|---|---|
| Preliminary layout and staking of new road segments, turbine clearings, and laydown areas | Weeks 1-30 |
| Clear for roads, collection system, turbines, and laydown area | Weeks 4-36 |
| Grubbing and initial grading for roads, turbines, and laydown areas | Weeks 4-16 |
| Hauling and stockpiling of aggregate from local borrow pits | Weeks 4-70 |
| Install/maintain erosion control measures in areas to be disturbed | Weeks 4-70 |
| Construct substation | Weeks 6-68 |
| Construct turbine foundations, substation transformer pad and conduct blasting as needed | Weeks 6-70 |
| Underground trench/conduit work | Weeks 8-80 |
| Clear and erect the permanent MET tower and temporary power performance tower | Weeks 10-20 |

| Task | Timeframe |
|---|---|
| Turbine Delivery | Weeks 60-70 |
| Turbine Installation | Weeks 60-80 |
| Final grading of roads and turbine areas | Weeks 66-74 |
| Energization | Week 68 |
| Remove temporary erosion and sedimentation control measures upon final site stabilization and reseeding (Civil Restoration) | Weeks 74-82 |
| Test energy | Week 70 |
| Begin commercial operations (COD) | Week 86 |

## 6.3. CONSTRUCTION SEQUENCE

The construction contractor will generally follow the established construction methods listed below, but the sequence may vary. Each item listed is independently discussed in the following subsections.

- Pre-construction Meeting;
- Flagging/Marking;
- Tree Clearing;
- Erosion and Sedimentation Control and Stabilization;
- Grading;
- Access Roads;
- Foundations;
- Component Delivery;
- Turbine Erection/Commissioning;
- Collection Installation;
- Transmission Line;
- Substation and Switchyard;
- Operations and Maintenance (O&M) Building; and
- Site Restoration.

## 6.4. CONSTRUCTION DETAIL

### Pre-Construction Meeting

Prior to the start of any work on the Project, a meeting will be held with representatives of the Applicant, the site Contractor, the Engineer, the MDEP, and other parties involved in the construction or oversight of the Project.

## Flagging/Marking

Sensitive resources, buffers, access points, limits of disturbance, and other significant features will be flagged and marked prior to the start of any Project activities, including clearing. These flagged locations will be maintained throughout the construction of the Project to maintain compliance with permit conditions.

## Tree Clearing

Forested portions of the site will be cut and removed to be used for commercial purposes. The contractor will take precautions to minimize disturbance on existing new vegetation and to restore topsoil in place when removing stumps. Stumps will be ground on site to help make erosion control mix for use as sedimentation control berms and ground-cover mulch.

## Erosion and Sedimentation Control and Stabilization

Prior to any earth-moving activities, erosion and sediment control measures will be installed in accordance with state and local requirements. Monitoring, inspection, and maintenance of erosion and sedimentation controls will be a daily requirement for all site personnel. The primary methodology for avoiding sedimentation concerns will be to limit the site disturbance and the areas of exposed soils and maintain effective erosion controls. See Exhibit 1-2 for further details.

## Grading

This work will begin in the spring of 2022. Grading will be required to prepare designated laydown areas, the off-site O&M and substation/switchyard locations, access roads and crane paths, and individual turbine pads. Topsoil will be stripped and kept separate from lower earth layers. During restoration, topsoil will be spread evenly over the disturbed areas. Excess will be spread in adjacent fields.

## Access Roads

The main gravel access road originates from Rte. 193 on the west, from US Highway 1 to the south, and access to the laydown yard is from Tibbettstown and Bombing Range Rds. from the east, all of which are existing roads. Primary access roads were created by the blueberry farm that owns the property; however, the roads will be maintained and upgraded, as needed by the Project. Road improvements and maintenance will include permanent stormwater controls and ditching, as necessary. Secondary access roads for access to turbine pads will be constructed and maintained as needed.

## Foundations

Concrete foundations will be installed for each turbine unit. Excavations will require a depth of approximately 11 feet and a diameter of 90 feet. Foundation size is 8 feet in depth, with a diameter of 60-70 feet with banked sides. A concrete pedestal with a diameter of approximately 18 feet will extend from the top of the foundation to approximately 1 foot above grade (dimensions may vary depending on final engineered design). Foundation construction will include excavation, re-bar installation, pouring of concrete, curing, backfilling, and compaction.

## Component Delivery

Turbine component deliveries will begin in the summer of 2022. Each turbine will consist of 3-4 tower sections, hub, nacelle, 3 blades, and ancillary equipment. The turbine supplier will confirm precise routing of components to the Project area, based on most accessible and appropriate

shipping parameters. Components will enter the Project area from US Highway 1 via Epping, Pea Ridge, and Schoodic Roads in the town of Columbia and be delivered to prepared turbine pads and laydown areas.

### Turbine Erection/Commissioning

Turbine installation will commence upon delivery and staging of components through the use of cranes. This work will proceed through the summer and fall of 2023, subject to favorable wind and weather conditions.

### Collection Installation

Installation of collections cables will be simultaneous to road improvements and foundation work, and a majority of the collections system is co-located with existing roads. Some additional clearing will be required in areas where the collections corridor deviates from roadways and this work will begin in the spring of 2022. Directional drilling or boring will be used to minimize impacts to streams, wetlands, vernal pools and wetland rare plant habitats, and seasonal considerations and refined trenching procedures adapted to minimize impact to upland rare plants and preserve commercially active blueberry fields will be deployed in consultation with the landowner where necessary.

### Transmission Line

The Project substation will be sited alongside the existing Epping to Deblois section of the Versant "Downeast Loop" and the Project will not require any additional transmission lines to be installed.

### Substation and Switchyard

Clearing, grading, and foundation work will begin in the spring of 2022, followed by construction of both facilities and fencing, with testing and energization planned for spring of 2023.

### Operations and Maintenance Building

The O&M facility for the Project is sited on US Highway 1 in Columbia. The lot was previously used by a restaurant and features existing well and septic infrastructure. The current building will be removed, and siting of the new building will require some additional clearing and grading prior to construction. Erection of the new building will be concurrent with construction operations at the Project site.

### Site Restoration

Debris/trash removal, decompaction, seeding, removal of E/S, and access road top off will occur across the Project as construction is completed.

## 6.5. FIELD ADJUSTMENTS

Minor adjustments to construction and erosion control plans may be made during final design work and during construction based on conditions in the field, such as vegetation clearing outside of resources and minor road alignment changes to accommodate the delivery of Project components. Below is a list of changes that do not require a permit modification and may be made without advance notice to MDEP and do not require prior approval by the third-party inspector or MDEP staff as long as they are reflected in the final as-built drawings:

- Reduction in clearing, impervious surface or size of structure; elimination of a structure; or relocation of a structure within the clearing limits;
- Change in foundation type;
- Location, dimension or addition of drainage culverts, level spreaders, rock sandwiches or other stormwater infrastructure, provided that the culvert does not convey a regulated stream and that the hydraulic capacity of the modified stormwater infrastructure meets design standards;
- Changes to locations for the electrical collection system, provided that any adjustment does not expand the permitted clearing limits and meets the buffer requirements as defined in Section 10 of the Site Location of Development Act permit application;
- Maintenance within the footprint of existing roads, with the exception of any in-stream work or wetland impacts to be used for temporary construction access;
- Temporary vegetation clearing or disturbance of soil that does not require a Permit by Rule to accommodate road alignment adjustments during component delivery;
- Changes of up to 10 feet in vertical roadway alignment and turbine pad elevation; and
- Changes of up to 300 feet in either direction in horizontal roadway alignment and associated clearing, and in turbine or met tower clearing areas, and in electrical collection alignment laydown/staging areas.

Additional adjustments may be made upon prior approval by the third-party inspector or MDEP staff:

- Minor changes that do not increase the footprint of the project and do not increase natural resource impacts;
- A change in the turbine as long as the applicable sound limits will be met and there will not be a significant change in visual impacts associated with the new turbine; and
- Changes other than those identified above and that do not otherwise require a permit amendment, as determined by MDEP.