Appendix B
Draft Decommissioning Plan

A DECOMMISSIONING PLAN FOR

Plum Creek Wind

Murray, Cottonwood, and Redwood Counties, Minnesota

OCTOBER 17, 2024

PREPARED FOR:

Plum Creek Wind Farm, LLC

PREPARED BY:

Westwood

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Decommissioning Plan

Plum Creek Wind Project

Murray, Cottonwood, and Redwood Counties, Minnesota

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1.0 Introduction / Project Description

The Plum Creek Wind Project (the "Facility" or the "Project") is a wind power generation project proposed by Plum Creek Wind Farm, LLC ("Applicant"[1]) in Murray, Cottonwood, and Redwood Counties, Minnesota. The Facility includes the construction of permanent facilities of up to 78 wind turbines ranging from 3.8 to 6.1 megawatts, access roads, up to four meteorological (MET) towers, two substations, underground collection and communications lines, Sonic Detection and Ranging (SoDAR) or Light Detection and Ranging (LiDAR) unit, an overhead transmission line, up to two Aircraft Detection and Lighting Systems (ADLS), and an operation and maintenance (O&M) facility. Please see Attachment A for an exhibit showing the location and general layout of the Project.

This Decommissioning Plan ("Plan") has been prepared in accordance with the requirements of Minn. R. 7854.0500, subp. 13. The purpose of the Plan is to describe the means and methods that can be used to remove project facilities and reclaim, restore, and return the land altered during the construction and operation of the wind project to its predevelopment condition to the extent feasible. The Plan identifies components that may be removed and the areas that may be restored once the Facility has surpassed the useful lifespan of the turbines and facilities. Project lease agreements require removal of all permanent facilities to a depth of four (4) feet or more below grade within twelve (12) months of commencing the activities within this Plan.

The useful life of commercial size turbines is generally considered to be 30 years. At that time, the Project will either be decommissioned or repowered with newer technology. This Plan reflects the full decommissioning of the Facility, including removal of all infrastructure and equipment and reclamation of the site to match previous land use, unless otherwise specified.

2.0 Proposed Future Land Use

Prior to the development of the Facility, the land use of the project area was primarily agricultural production of corn and soybeans, with smaller areas of undeveloped grassland and wetlands. After the developed areas of the Facilities are decommissioned, they will be returned to their predevelopment condition and tilled to an agricultural condition. Please refer to Section 3.2 for a detailed description of reclamation activities.

3.0 Engineering Techniques

Decommissioning of the wind farm includes multiple phases and activities such as:

- Application of necessary sediment and erosion controls during and following decommissioning activities.
- Public road modifications (if required) and access road improvements to accommodate heavy equipment traffic during decommissioning.
- Removal of aboveground components (turbines, transformers, overhead transmission lines, and substations) for either resale or scrap.
- Removal of turbine foundations to a depth of four feet below grade.

[1] "Applicant" refers to any operator, subsequent owner, or transferee of the Facility.

- Removal of other underground components (junction boxes, transformer and substation foundations) to a depth of four feet below grade.
- Removal of access roads (unless the landowners request the roads to remain) and decompaction.
- Reclamation, re-grading, and restoration of disturbed areas including topsoil reapplication and decompaction of soils.
- Repair and/or restoration of public roads and culverts to pre-decommissioning conditions, as required.

During decommissioning, the landowners will be consulted to identify the extent and type of work to be completed. Some Facility infrastructure, such as the access roads, may be left in place at the landowners' requests. Underground utility lines, if deeper than four feet below ground surface elevation, may be left in place to minimize land disturbance and associated impacts to future land use.

Decommissioning will include the removal and transportation of all turbine components from the Facility site. Decommissioning will also include the removal of electrical components, foundations, and any other associated facilities in the manner described in the Plan, unless otherwise agreed upon by the Applicant and the applicable landowner(s). All dismantling, removal, recycling, and disposal of materials generated during decommissioning will comply with rules, regulations, and prevailing federal, state, and local laws at the time decommissioning is initiated and will use approved local or regional disposal or recycling sites as available. Recyclable materials will be recycled to the furthest extent practicable. Non-recyclable materials will be disposed of in accordance with state and federal law.

3.1 Decommissioning of Project Components

3.1.1 Public Road Improvement and Access Road Modifications and Removal

As the cost estimate is based on scrapping and recycling turbine components where possible, sections of public roads that have insufficient strength to accommodate the construction traffic necessary for decommissioning will need to be improved prior to the start of hauling operations. Intersection turning radius modifications are not anticipated since turbine components will be cut to fit on standard semitrailer trucks. The roads subjected to decommissioning traffic will be restored to a condition equal to or better than the condition of the road prior to decommissioning activities. Aggregate removed from the Facility access roads is a potential source for the public road restoration material. A pre-decommissioning road survey, similar to a pre-construction survey, may be prepared so that road conditions pre- and post-decommissioning can be accurately assessed.

3.1.2 Crane Path and Crane Pad Preparation and Removal

This Plan assumes the felling of all turbines, which eliminates the need for large industrial cranes and the associated crane paths and crane pads. As such, crane paths and pads are not considered in this Plan or cost estimate.

3.1.3 Wind Turbine Felling

This cost estimate assumes that the turbines not being resold will be brought to the ground using the technique of "felling." Once on the ground, the turbines will be disassembled and processed for recycling. The felling technique has been used on numerous wind decommissioning projects and has several advantages over disassembly using large crawler cranes. Felling of a turbine eliminates the use of crane paths and crane pads that are otherwise necessary to disassemble the components of a turbine. In addition to avoiding costs associated with preparing crane paths and pads, this method will reduce the total disturbed area that needs to be reclaimed and restored during the decommissioning process. The elimination of the use of large cranes also reduces the number of trucks delivering and removing equipment and reduces the time required for decommissioning. Felling consists of disconnecting electrical connections and draining oil, hydraulic fluid, and any other liquids from the turbine. A long cable is attached to the nacelle and to a heavy piece of equipment, such as a bulldozer, positioned on the access road. Wedge shaped areas are then cut out of the tower steel using cutting torches to create a hinge that will direct the turbine to fall on the access road when pulled by the dozer.

3.1.4 Wind Turbine Removal

Each wind turbine consists of steel tower segments, a nacelle, a rotor and hub assembly, and three blades. These modular components can be disassembled and then processed into pieces small enough (less than 40 feet by eight feet by eight feet and less than 20 tons) to be loaded onto standard semitrailer trucks and transported off site. The components of the wind turbines that are not designated for resale will be cut into pieces sized to meet recycling requirements so the scrap value may be maximized. The components will then be loaded on tractor-trailers and transported to a licensed recycling facility. If there are facilities for recycling of turbine blades at the time the turbines are decommissioned, the blades will be transported to the facility for recycling, if cost effective. At this time, blade recycling facilities are not operating at the scale necessary for the volume of waste that will be generated from decommissioning this project. As a result, this cost estimate assumes the blades and other components that cannot be recycled will be disposed of at a licensed landfill.

3.1.5 Turbine Foundation Removal and Restoration

The turbine foundations are constructed from concrete and rebar. Little topsoil stripping will be required since the portion of the foundation less than four feet deep is within the gravel ring around each turbine. The foundation will first be exposed using backhoes or other earth moving equipment. The pedestal (upper part of the turbine foundation) will then be removed to a depth of at least four feet below grade using hydraulic vibratory hammers to break up the concrete. The rebar can be cut with torches or cutoff saws. The concrete will be broken into pieces sized for transport. The foundation debris will be hauled off site to be recycled or disposed of, depending on market prices for aggregate at the time of decommissioning. The rebar will be recycled.

Following removal of the turbine foundation, the resulting void will be backfilled with native subsoils and compacted to at least 90% of the fill material's standard

Proctor density. Topsoil will be reapplied to the site and graded to match surrounding grade to preserve existing drainage patterns. The topsoil and subsoil will be decompacted to a minimum depth of 18 inches and revegetated to match pre-construction conditions.

3.1.6 Meteorological (MET) Towers

Following disconnection of electrical components, towers will be gradually lowered to the ground for disassembly. The steel structures will be cut into pieces sized to meet recycling requirements so the scrap value may be maximized. The components will then be loaded on tractor-trailers and transported to a metal recycling facility.

The concrete pads, along with any anchoring components, will be excavated to a depth of 4 feet. Concrete will be broken into transportable pieces and hauled off site. Following removal of the foundations, subsoil will be decompacted to a minimum depth of 18 inches. Topsoil will be reapplied to match the surrounding grade.

3.1.7 Access Roads

Access roads will be removed or left in place based on the individual landowner's request. Removal of access roads will entail removal of the road base aggregate and any other materials used for constructing the roads. During removal, the topsoil adjacent to both sides of the roads will be stripped and stockpiled in a windrow paralleling the road. The road base materials will then be removed by bulldozers, wheeled loaders, or backhoes and hauled off site in dump trucks to be recycled or disposed of at an off-site facility. On-site processing may allow much of the aggregate to be re-used to improve public roads. The aggregate base can often be used by local landowners for driveway or clean fill. Another option is to use the aggregate base as "daily cover" at a landfill, where it is usually accepted without cost.

If geotextile fabric was utilized under the aggregate base, it will be removed and disposed of in a landfill off site. The access road removal will proceed from the turbine area to the public roads to limit tracking and provide stable access during removal. Following removal, topsoil will be reapplied and graded to blend with surrounding contours to promote pre-construction drainage patterns. Topsoil to cover the access roads, turbine rings, and met tower rings will be acquired from the areas where it was stockpiled (or wasted) during the original construction. Since topsoil stayed with each landowner during the construction of the wind farm, there will be adequate topsoil to restore each area to its pre-construction condition. The soil and topsoil will then be decompacted to a minimum depth of 18 inches and restored to pre-construction tillable conditions or revegetated.

3.1.8 Underground Electrical Collection Lines

The electrical cables and fiber optic conduits will be installed at a depth of a minimum of 48 inches (by plan), and contain no material known to be harmful to the environment. The only exception is cables entering ground-mounted transformers and junction boxes. Accordingly, the majority of underground cables will be left in place, non-functional. Following cable, junction box, and route marker removals, disturbed areas will be restored by the restoration methods described above for

access roads, including the reapplication of topsoil to match the surrounding grade and preserve or promote pre-existing drainage patterns.

3.1.9 Overhead Electrical Transmission Lines

The overhead electrical lines associated with the Facility connect the project substation, located within the project footprint, to the voltage step-up substation at the point of interconnection north of the project. All poles, conductors, switches, and lines associated with the overhead electrical will be removed and hauled off site to a recycling facility or disposal site. Underground infrastructure such as pole foundations will be removed down to four feet below grade. Pole foundation holes will be filled with a suitable clean compactable material. Topsoil will be applied and the areas will be tilled to a farmable condition. Transmission line work requires specialized equipment including man lifts, cable reels, pole removal/installation lifts, etc.

3.1.10 Substations

Decommissioning of the project substations will be performed with the rest of the Facility. All steel, conductors, switches, transformers, and other components of the substations will be disassembled and taken off site to be recycled or reused. Foundations and underground components will be removed to a depth of four feet. The rock base will be removed using bulldozers and backhoes or front loaders. The material will be hauled from the site using dump trucks to be recycled or disposed at on off-site facility. Additionally, any permanent stormwater treatment facilities (e.g., infiltration ponds and engineered drainage swales) will be removed. Topsoil will be reapplied to match surrounding grade to preserve existing drainage patterns. Topsoil and subsoil will be decompacted to a minimum depth of 18 inches and the site will be revegetated to match pre-construction conditions.

3.1.11 Operations and Maintenance Building

Plum Creek may rent an existing building or construct a new building for its O&M facility. Hydraulic oil and lubricants will be stored in the building during operation of the wind project. The project will have a Spill Prevention Control and Countermeasure (SPCC) Plan in place during operations that will require immediate clean-up of any spilled hazardous materials, so the cleanup of any hazardous materials is an operating cost and not a decommissioning cost.

The O&M facility, if constructed, will likely be a sturdy, general-purpose, steel building. Buildings have a longer useful life than wind turbines so the building will not likely be at the end of its useful life when the Facility is decommissioned. As a result, this Plan assumes the building will not be demolished as part of decommissioning the rest of the Facility.

If demolition is undertaken, all associated materials (including concrete and rock), will be re-moved from the site using backhoes and bulldozers and hauled off-site in dump trucks. All materials which can be recycled will be brought to an approved facility. The remaining materials will be disposed of at an approved landfill. Topsoil will be reapplied to the site and graded to blend with the surrounding grade to

promote existing drainage patterns. The topsoil will be de-compacted and restored to pre-construction tillable conditions or re-vegetated.

3.2 Reclamation

In addition to the reclamation activities described above for each decommissioning activity, all unexcavated areas compacted by equipment and activity during the decommissioning will be decompacted to a depth needed to ensure proper density of topsoil consistent and compatible with the surrounding area and associated land use. All materials and debris associated with the Facility decommissioning will be removed and properly recycled or disposed of at off-site facilities.

As necessary, the topsoil will be stripped and isolated prior to removal of structures and facilities for reapplication to promote future land use activities. Preservation of topsoil will be key for re-establishing vegetation at the site. The topsoil will be reapplied following backfill, as necessary, and graded to blend with adjacent contours to maintain pre-construction drainage patterns. Decompaction of the soil and topsoil will be applied to a minimum depth of 18 inches.

Areas formerly used for agriculture shall be re-tilled to a farmable condition. In areas not to be used for crops, the topsoil will then be revegetated using seed mixes approved by the local Farm Service Agency, Soil and Water Conservation District, Natural Resource Conservation Service, or other state agency. The selected seed mix must be suitable for the site's annual precipitation and elevation. Temporary erosion protection such as nurse crop (annual grass to aid in establishment of permanent species), mulch, hydromulch, or erosion control blanket will be applied in accordance with the requirements of the project Stormwater Pollution Prevention Plan (SWPPP) until permanent vegetation has been established.

4.0 Best Management Practices (BMPs)

During decommissioning, erosion and sediment control BMPs will be implemented to minimize potential for erosion of site soils and sedimentation of surface waters and waters of the state. Because decommissioning will entail disturbance of more than one acre of soil, the Applicant will prepare a SWPPP and obtain coverage under the Minnesota Pollution Control Agency's (MPCA's) National Pollutant Discharge Elimination System (NPDES) construction stormwater permit prior to initiating soil disturbing activities. Potential BMPs to be implemented during decommissioning activities are described below and will be subject to refinement in the SWPPP. The decommissioning team will review the permitting requirements at the time of decommissioning and obtain any other necessary permits, which may include a US Army Corps of Engineers (USACE) Section 404 Permit to Discharge Dredged or Fill Material.

4.1 Erosion Control

Erosion control measures will be refined based on the standard of practice current at the time the SWPPP is developed for decommissioning. All disturbed areas without permanent impermeable or gravel surfaces, or planned for use as crop land, will be vegetated for final stabilization. All slopes steeper than 4:1 should be protected with erosion control blankets. Restoration should include seed application prior to application

of the blanket. All slopes 4:1 or flatter should be restored with seed and mulch, which will be disc anchored.

4.2 Sediment Control

Sediment controls, such as silt fence, fiber logs, dewatering practices, construction entrances, and sedimentation traps and/or basins will be implemented during construction to prevent the transport of sediment off-site during decommissioning activities. Street sweeping/scraping will also be implemented to mitigate potential tracking of sediment onto public roadways.

4.3 Controlling Stormwater Flowing onto and Through the Project

Given the low gradient of the slopes in the project area, controlling stormwater flow that enters the project area will likely require minimal effort during decommissioning activities. Only newly disturbed areas may require new, temporary stormwater control. If necessary, water may be diverted around the project site using diversion berms.

4.4 Permitting

All decommissioning and reclamation activities will comply with federal and state permit requirements. Decommissioning activities that will disturb more than one acre of soil will require coverage under the MPCA's NPDES permit for construction stormwater. The permits will be applied for and received prior to decommissioning construction activities commencing. A SWPPP will be developed prior to filing for construction stormwater permit coverage.

If necessary for decommissioning activities, wetlands and waters permits will be obtained from the USACE or Minnesota Department of Natural Resources (DNR). An SPCC Plan for decommissioning will likely also be required for decommissioning work.

4.5 Health and Safety Standards

Work will be conducted in strict accordance with the Applicant's health and safety plan. The construction contractor hired to perform the decommissioning will also be required to prepare a site-specific health and safety plan. All site workers, including subcontractors, will be required to read, understand, and abide by the Plans. A site safety office will be designated by the construction contractor to ensure compliance. This official will have stop-work authority over all activities on the site should unsafe conditions or lapses in the safety plan be observed.

4.6 Notification

Prior to the start of decommissioning, the Applicant will notify in writing the Project landowners, county government contact for Murray, Cottonwood, and Redwood Counties, and the Minnesota Public Utilities Commission. The notification will include the anticipated start date of decommissioning activities. All parties will be notified again once final restoration activities have been completed.

5.0 Decommissioning Costs

The cost estimate for decommissioning and reclamation of the Facility was prepared in current dollars with the salvage value of equipment or materials calculated separately. The estimate includes:

(i) An analysis of the physical activities necessary to implement the approved reclamation plan, with physical construction and demolition costs based on applicable Department of Transportation unit bid prices from surrounding states and RS Means material and labor cost indices;

(ii) The level of effort or number of crews required to perform each of the activities; and

(iii) An amount to cover contingencies above the calculated cost.

The total estimated cost of the decommissioning of the Plum Creek Wind Project was calculated for four turbine models: Vestas V163-4.5MW, Vestas V150-4.5MW, GE 158-6.1MW, and GE 154-3.8MW. The estimated costs, salvage values, and net costs for each turbine model is summarized in the table below:

Turbine Model	Estimated Decom. Cost *Cost per turbine*	Estimated Salvage Values *Cost per turbine*	Estimated Net Cost *Cost per turbine*
V163 – 4.5MW	$21,351,612 *$273,739*	$11,517,092 *$147,655*	$9,140,455 *$117,185*
V150 – 4.5MW	$21,653,410 *$277,607*	$11,878,498 *$152,288*	$9,080,847 *$116,421*
GE 158 – 6.1MW	$22,505,171 *$288,528*	$12,035,154 *$154,297*	$9,775,951 *$125,333*
GE 154 – 3.8 MW	$19,976,196 *$256,105*	$8,731,856 *$111,947*	$10,550,275 *$135,260*

It is recommended that the Project decommissioning cost be reassessed every five years and updated if necessary. In year 10 following the Project's commercial operation date, Plum Creek shall begin initial payments for the Financial Surety in the form of escrow, bond, letter of credit, etc. Full funding will be implemented by the end of the Power Purchase Agreement to ensure that decommissioning funds are available at the time of decommissioning.

Attachment A

Site Location Exhibit

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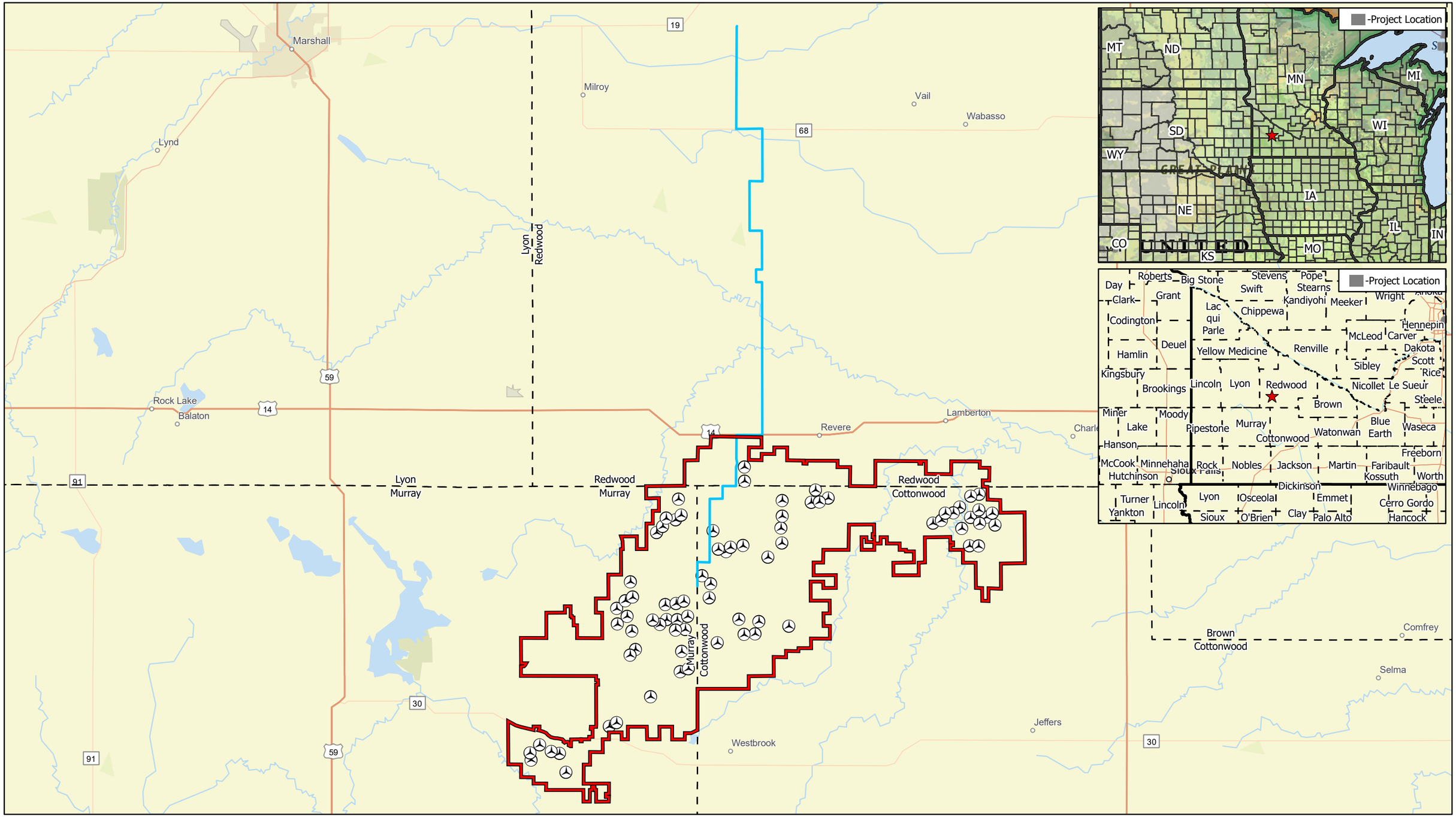

Data Source(s): Westwood (2024); Esri WMS Basemap Imagery (Accessed 2024); USGS (2024); FEMA (2024); USDA (2024)

Legend

- Project Boundary Area
- Transmission Line
- County Boundary
- Turbine

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Plum Creek Wind Project

Cottonwood, Murray, and Redwood Counties, Minnesota

Figure 1: Vicinity Map

October 17, 2024

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Vicinity Map - Vicinity Map | 10/17/2024 11:37 AM | ESnover

Attachment B

Decommissioning Cost Estimate

Plum Creek Wind Decommissioning Cost Estimate – Vestas V163 4.5-MW

Number of Turbines	78	Each		
	Quantity	Unit	Unit Cost	Total Cost
Mobilization/Demobilization	1	Lump Sum	$1,243,000.00	$1,243,000
Permitting				
County/Municipal Permits	1	Lump Sum	$10,000.00	$10,000
State Permits (SWPPP, SPCC)	1	Lump Sum	$25,000.00	$25,000
Subtotal Permits				**$35,000**
Wind Turbine Generators				
Disconnect Turbine Wiring	78	Each	$3,060.80	$238,742
Fell Turbine	78	Each	$2,043.25	$159,374
Process to Size and Load Turbine Components	46,854	Tons	$164.77	$7,720,134
Haul Turbine Components Offsite for Recycling (except blades)	31,550	Tons	$7.06	$222,743
Haul Turbine Components For Disposal (except blades)	12,788	Tons	$7.89	$100,897
Turbine Component Disposal (except blades)	12,788	Tons	$81.00	$1,035,828
Haul Fiberglass Blades For Recycling	2,516	Tons	$104.27	$262,343
Fiberglass Blades Recycling	2,516	Tons	$450.00	$1,132,200
Excavate Around Turbine Foundation	78	Each	$15.26	$1,190
Remove Turbine Foundation and Load	2,601	Cubic Yards	$208.09	$541,242
Backfill Excavation Area from Turbine Foundation Removal	78	Each	$146.73	$11,445
Haul Concrete (Turbine Foundation)	5,267	Tons	$7.89	$41,557
Disposal of Concrete from Turbine Foundation	2,601	Cubic Yards	$40.00	$104,040
Decompact Wind Turbine Generator Site	78	Each	$160.81	$12,543
Grade Wind Turbine Generator Site	78	Each	$2,603.08	$203,040
Erosion and Sediment Control at Turbine/Transformer Site	78	Each	$1,200.09	$93,607
Till to Farmable Condition	56	Acres	$177.52	$9,941
Subtotal Wind Turbine Generators				**$11,890,867**
MET and ADLS Towers				
Disconnect Tower Wiring	6	Each	$1,530.40	$9,182
Dismantle, Disassemble, and Load Tower Components	6	Each	$5,208.79	$31,253
Haul Tower Components Off Site	24	Tons	$7.06	$169
Excavate Around Tower Foundation	6	Each	$33.86	$203
Remove Tower Foundation and Load	71	Cubic Yards	$208.09	$14,775
Haul Concrete (Tower Foundation)	5.3	Tons	$7.89	$42
Disposal of Concrete from Tower	5.3	Tons	$40.00	$212
Grade Tower Site	6	Each	$1,470.29	$8,822
Erosion and Sediment Control at Tower Site	6	Each	$382.00	$2,292
Till to Farmable Condition	0.88	Acre	$177.52	$156
Subtotal Met and ADLS Towers				**$67,106**
Electrical Collection/Transmission System				
Removal of Underground Collector System Cables	93	Locations	$480.00	$44,640
Haul Underground Collector System Cables	6.4	Tons	$7.06	$45
Disposal of Removed Cables (See Salvage Value)	6.4	Tons	$0.00	$0
Removal of Junction Box	15	Each	$120.00	$1,800
Removal of Overhead Transmission Line Cables	143,114	Feet	$9.50	$1,359,587
Loadout Overhead Cables	544	Tons	$44.40	$24,146
Haul Overhead Cables	544	Tons	$7.06	$3,839
Disposal of Overhead Cables (See Salvage Value)	544	Tons	$0.00	$0
Remove and Load Steel Transmission Poles	144	Each	$865.69	$124,660
Haul Steel Poles for Disposal	144	Each	$158.85	$22,874
Haul Hardware, Bracing, and Attachments for Disposal	144	Each	$8.07	$1,162
Erosion and Sediment Control at Junction Box Location	1,500	Feet	$3.82	$5,730
Till to Farmable Condition at Junction Box Locations	1	Acres	$177.52	$178
Erosion and Sediment Control for Transmission Removal	7,156	Feet	$3.82	$27,335
Till to Farmable Condition Along Transmission Line	33	Acres	$177.52	$5,858
Subtotal Electrical Collection/Transmission System				**$1,621,854**

Access Roads				
Remove and Load Gravel Surfacing from Access Roads	43,986	Cubic Yards	$2.84	$124,920
Haul Gravel Removed from Access Roads	71,258	Tons	$7.89	$562,226
Disposal of Gravel Removed from Access Roads	71,258	Tons	$0.00	$0
Remove and Load Culvert from Beneath Access Roads	73	Each	$540.00	$39,420
Haul Culvert Removed from Access Roads	23	Tons	$7.89	$181
Disposal of Culverts	23	Tons	$40.00	$920
Remove Low Water Crossing from Access Roads	19	Each	$4,100.00	$77,900
Haul Low Water Crossing Materials Removed from Access Roads	19	Each	$7.89	$150
Disposal of Low Water Crossing Materials	19	Each	$80.00	$1,520
Decompact Access Road Corridor	111,340	Linear Feet	$0.08	$8,907
Grade Access Road Corridor	111,340	Linear Feet	$1.54	$171,464
Erosion and Sediment Control Along Access Roads	27,835	Linear Feet	$3.82	$106,330
Topsoil and Revegetation on Removed Access Road Area	61	Acres	$177.52	$10,829
Subtotal Access Roads				**$1,104,766**
Substation				
Disassembly and Removal of Main Power Transformer(s)	2	Each	$5,400.00	$10,800
Freight Transformer(s) Offsite	2	Each	$635.40	$1,271
Disposal of Transformer (Including Oil; Assume Salvage Value)	2	Each	$0.00	$0
Excavate Around Transformer Foundation(s)	2	Each	$1,633.10	$3,266
Remove Complete Transformer Foundation(s)	2	Each	$15,199.80	$30,400
Backfill Excavation Area from Transformer Foundation Removal	2	Each	$262.64	$525
Haul Concrete (Transformer, Switch Gear, etc. Foundations)	340	Tons	$7.89	$2,683
Disposal of Concrete from Transformer Foundation	340	Tons	$40.00	$13,600
Demolish Substation Site Improvements (fences, etc.)	2	Lump Sum	$4,200.00	$8,400
Demolish Control Building and Foundation	2	Lump Sum	$14,400.00	$28,800
Remove Medium/High Voltage Equipment	2	Lump Sum	$4,200.00	$8,400
Remove Structural Steel Substation Frame	2	Lump Sum	$4,200.00	$8,400
Haul - Demolition Materials, Removed Equipment & Structural Steel	2	Lump Sum	$1,412.00	$2,824
Disposal of Demolition Materials, Removed Equipment and Structural Steel (Salvage	2	Lump Sum	$0.00	$0
Remove and Load Gravel Surfacing from Substation Site	3,329	Cubic Yards	$2.84	$9,454
Haul Gravel Removed from Substation Site	5,393	Tons	$7.89	$42,551
Disposal of Gravel from Substation Site	5,393	Tons	$0.00	$0
Decompact Substation Site	4	Acre	$222.97	$920
Grade Substation Site	4	Acre	$4,195.79	$17,314
Erosion and Sediment Control at Substation Site	1,272	Linear Feet	$3.82	$4,859
Topsoil and Revegetation at Substation Site	4	Acre	$177.52	$733
Subtotal Each Substation				$195,200
Total for Two Substations				**$390,399**
O&M Building (Assume Leased)				
Public Roads Restoration	65.3	Miles	$ 44,000.00	$2,873,200
Total Direct Costs				**$19,226,193**
Contingency (10%)	10%	Percent		$1,922,619
Crop Loss (156 Acres)	156	Acres	$ 1,300.00	$202,800
Total Cost				**$21,351,612**
Salvage/Recycle				
Turbine Towers (Structural Steel)	25,893	Tons	$281.25	$7,282,406
Turbine Nacelles (Structural Steel)	3,044	Tons	$281.25	$856,125
Met Towers (Structural Steel)	23	Tons	$281.25	$6,469
Substation (Structural Steel)	10	Tons	$281.25	$2,813
Transmission Towers (Structural Steel)	1008	Tons	$281.25	$283,500
Turbine Generators	9,904,831	Pounds	$0.28	$2,773,353
Collection - Aluminum Electrical Conductor (Supported)	12,800	Pounds	$0.28	$3,584
Transmission - Aluminum and Steel Conductor (Suspended-Aluminum Weight)	435,068	Pounds	$0.28	$121,819
Transmission - Aluminum and Steel Conductor (Suspended-Steel Weight)	136	Tons	$281.25	$38,238
Transformers (copper windings)	486,800	Pounds	$0.26	$127,785
Transformers (oil)	30,000	Gallons	$0.70	$21,000
Subtotal Salvage				**$11,517,092**
Total Demolition Minus Resale and Salvage Value				**$9,140,455**

Plum Creek Wind Decommissioning Cost Estimate – Vestas V150 4.5MW

Number of Turbines	78	Each		
	Quantity	Unit	Unit Cost	Total Cost
Mobilization/Demobilization	1	Lump Sum	$1,261,000.00	$1,261,000
Permitting				
County/Municipal Permits	1	Lump Sum	$10,000.00	$10,000
State Permits (SWPPP, SPCC)	1	Lump Sum	$25,000.00	$25,000
Subtotal Permits				**$35,000**
Wind Turbine Generators				
Disconnect Turbine Wiring	78	Each	$3,060.80	$238,742
Fell Turbine	78	Each	$2,043.25	$159,374
Process to Size and Load Turbine Components	48,779	Tons	$164.77	$8,037,316
Haul Turbine Components Offsite for Recycling (except blades)	32,627	Tons	$7.06	$230,347
Haul Turbine Components For Disposal (except blades)	13,945	Tons	$7.89	$110,026
Turbine Component Disposal (except blades)	13,945	Tons	$81.00	$1,129,545
Haul Fiberglass Blades For Recycling	2,207	Tons	$104.27	$230,124
Fiberglass Blades Recycling	2,207	Tons	$450.00	$993,150
Excavate Around Turbine Foundation	78	Each	$15.26	$1,190
Remove Turbine Foundation and Load	2,601	Cubic Yards	$208.09	$541,242
Backfill Excavation Area from Turbine Foundation Removal	78	Each	$146.73	$11,445
Haul Concrete (Turbine Foundation)	5,267	Tons	$7.89	$41,557
Disposal of Concrete from Turbine Foundation	2,601	Cubic Yards	$40.00	$104,040
Decompact Wind Turbine Generator Site	78	Each	$160.81	$12,543
Grade Wind Turbine Generator Site	78	Each	$2,603.08	$203,040
Erosion and Sediment Control at Turbine/Transformer Site	78	Each	$1,200.09	$93,607
Till to Farmable Condition	56	Acres	$177.52	$9,941
Subtotal Wind Turbine Generators				**$12,147,229**
MET and ADLS Towers				
Disconnect Tower Wiring	6	Each	$1,530.40	$9,182
Dismantle, Disassemble, and Load Tower Components	6	Each	$5,208.79	$31,253
Haul Tower Components Off Site	24	Tons	$7.06	$169
Excavate Around Tower Foundation	6	Each	$33.86	$203
Remove Tower Foundation and Load	71	Cubic Yards	$208.09	$14,775
Haul Concrete (Tower Foundation)	5.3	Tons	$7.89	$42
Disposal of Concrete from Tower	5.3	Tons	$40.00	$212
Grade Tower Site	6	Each	$1,470.29	$8,822
Erosion and Sediment Control at Tower Site	6	Each	$382.00	$2,292
Till to Farmable Condition	0.88	Acre	$177.52	$156
Subtotal Met and ADLS Towers				**$67,106**
Electrical Collection/Transmission System				
Removal of Underground Collector System Cables	93	Locations	$480.00	$44,640
Haul Underground Collector System Cables	6.4	Tons	$7.06	$45
Disposal of Removed Cables (See Salvage Value)	6.4	Tons	$0.00	$0
Removal of Junction Box	15	Each	$120.00	$1,800
Removal of Overhead Transmission Line Cables	143,114	Feet	$9.50	$1,359,587
Loadout Overhead Cables	544	Tons	$44.40	$24,146
Haul Overhead Cables	544	Tons	$7.06	$3,839
Disposal of Overhead Cables (See Salvage Value)	544	Tons	$0.00	$0
Remove and Load Steel Transmission Poles	144	Each	$865.69	$124,660
Haul Steel Poles for Disposal	144	Each	$158.85	$22,874
Haul Hardware, Bracing, and Attachments for Disposal	144	Each	$8.07	$1,162
Erosion and Sediment Control at Junction Box Location	1,500	Feet	$3.82	$5,730
Till to Farmable Condition at Junction Box Locations	1	Acres	$177.52	$178
Erosion and Sediment Control for Transmission Removal	7,156	Feet	$3.82	$27,335
Till to Farmable Condition Along Transmission Line	33	Acres	$177.52	$5,858
Subtotal Electrical Collection/Transmission System				**$1,621,854**

Access Roads				
Remove and Load Gravel Surfacing from Access Roads	43,986	Cubic Yards	$2.84	$124,920
Haul Gravel Removed from Access Roads	71,258	Tons	$7.89	$562,226
Disposal of Gravel Removed from Access Roads	71,258	Tons	$0.00	$0
Remove and Load Culvert from Beneath Access Roads	73	Each	$540.00	$39,420
Haul Culvert Removed from Access Roads	23	Tons	$7.89	$181
Disposal of Culverts	23	Tons	$40.00	$920
Remove Low Water Crossing from Access Roads	19	Each	$4,100.00	$77,900
Haul Low Water Crossing Materials Removed from Access Roads	19	Each	$7.89	$150
Disposal of Low Water Crossing Materials	19	Each	$80.00	$1,520
Decompact Access Road Corridor	111,340	Linear Feet	$0.08	$8,907
Grade Access Road Corridor	111,340	Linear Feet	$1.54	$171,464
Erosion and Sediment Control Along Access Roads	27,835	Linear Feet	$3.82	$106,330
Topsoil and Revegetation on Removed Access Road Area	61	Acres	$177.52	$10,829
Subtotal Access Roads				**$1,104,766**
Substation				
Disassembly and Removal of Main Power Transformer(s)	2	Each	$5,400.00	$10,800
Freight Transformer(s) Offsite	2	Each	$635.40	$1,271
Disposal of Transformer (Including Oil; Assume Salvage Value)	2	Each	$0.00	$0
Excavate Around Transformer Foundation(s)	2	Each	$1,633.10	$3,266
Remove Complete Transformer Foundation(s)	2	Each	$15,199.80	$30,400
Backfill Excavation Area from Transformer Foundation Removal	2	Each	$262.64	$525
Haul Concrete (Transformer, Switch Gear, etc. Foundations)	340	Tons	$7.89	$2,683
Disposal of Concrete from Transformer Foundation	340	Tons	$40.00	$13,600
Demolish Substation Site Improvements (fences, etc.)	2	Lump Sum	$4,200.00	$8,400
Demolish Control Building and Foundation	2	Lump Sum	$14,400.00	$28,800
Remove Medium/High Voltage Equipment	2	Lump Sum	$4,200.00	$8,400
Remove Structural Steel Substation Frame	2	Lump Sum	$4,200.00	$8,400
Haul - Demolition Materials, Removed Equipment & Structural Steel	2	Lump Sum	$1,412.00	$2,824
Disposal of Demolition Materials, Removed Equipment and Structural Steel (Salvage	2	Lump Sum	$0.00	$0
Remove and Load Gravel Surfacing from Substation Site	3,329	Cubic Yards	$2.84	$9,454
Haul Gravel Removed from Substation Site	5,393	Tons	$7.89	$42,551
Disposal of Gravel from Substation Site	5,393	Tons	$0.00	$0
Decompact Substation Site	4	Acre	$222.97	$920
Grade Substation Site	4	Acre	$4,195.79	$17,314
Erosion and Sediment Control at Substation Site	1,272	Linear Feet	$3.82	$4,859
Topsoil and Revegetation at Substation Site	4	Acre	$177.52	$733
Subtotal Each Substation				$195,200
Total for Two Substations				**$390,399**
O&M Building (Assume Leased)				
Public Roads Restoration	65.3	Miles	$ 44,000.00	$2,873,200
Contingency (10%)	10%	Percent		$1,950,055
Total Demolition Costs				**$21,450,610**
Crop Loss (156 Acres)	156	Acres	$ 1,300.00	$202,800
Total Cost				**$21,653,410**
Salvage/Recycle				
Turbine Towers (Structural Steel)	25,648	Tons	$281.25	$7,213,500
Turbine Nacelles (Structural Steel)	4,574	Tons	$281.25	$1,286,438
Met Towers (Structural Steel)	23	Tons	$281.25	$6,469
Substation (Structural Steel)	10	Tons	$281.25	$2,813
Transmission Towers (Structural Steel)	1008	Tons	$281.25	$283,500
Turbine Generators	9,904,831	Pounds	$0.28	$2,773,353
Collection - Aluminum Electrical Conductor (Supported)	12,800	Pounds	$0.28	$3,584
Transmission - Aluminum and Steel Conductor (Suspended-Aluminum Weight)	435,068	Pounds	$0.28	$121,819
Transmission - Aluminum and Steel Conductor (Suspended-Steel Weight)	136	Tons	$281.25	$38,238
Transformers (copper windings)	486,800	Pounds	$0.26	$127,785
Transformers (oil)	30,000	Gallons	$0.70	$21,000
Subtotal Salvage				**$11,878,498**
Total Demolition Minus Resale and Salvage Value				**$9,080,847**

Plum Creek Wind Decommissioning Cost Estimate – GE 158 6.1MW

Number of Turbines	78	Each		
	Quantity	Unit	Unit Cost	Total Cost
Mobilization/Demobilization	1	Lump Sum	$1,311,000.00	$1,311,000
Permitting				
County/Municipal Permits	1	Lump Sum	$10,000.00	$10,000
State Permits (SWPPP, SPCC)	1	Lump Sum	$25,000.00	$25,000
Subtotal Permits				**$35,000**
Wind Turbine Generators				
Disconnect Turbine Wiring	78	Each	$3,060.80	$238,742
Fell Turbine	78	Each	$2,043.25	$159,374
Process to Size and Load Turbine Components	51,442	Tons	$164.77	$8,476,098
Haul Turbine Components Offsite for Recycling (except blades)	34,218	Tons	$7.06	$241,579
Haul Turbine Components For Disposal (except blades)	14,645	Tons	$7.89	$115,549
Turbine Component Disposal (except blades)	14,645	Tons	$81.00	$1,186,245
Haul Fiberglass Blades For Recycling	2,579	Tons	$104.27	$268,912
Fiberglass Blades Recycling	2,579	Tons	$450.00	$1,160,550
Excavate Around Turbine Foundation	78	Each	$15.32	$1,195
Remove Turbine Foundation and Load	2,623	Cubic Yards	$208.09	$545,820
Backfill Excavation Area from Turbine Foundation Removal	78	Each	$147.85	$11,532
Haul Concrete (Turbine Foundation)	5,312	Tons	$7.89	$41,908
Disposal of Concrete from Turbine Foundation	2,623	Cubic Yards	$40.00	$104,920
Decompact Wind Turbine Generator Site	78	Each	$160.81	$12,543
Grade Wind Turbine Generator Site	78	Each	$2,603.08	$203,040
Erosion and Sediment Control at Turbine/Transformer Site	78	Each	$1,200.09	$93,607
Till to Farmable Condition	56	Acres	$177.52	$9,941
Subtotal Wind Turbine Generators				**$12,871,557**
MET and ADLS Towers				
Disconnect Tower Wiring	6	Each	$1,530.40	$9,182
Dismantle, Disassemble, and Load Tower Components	6	Each	$5,208.79	$31,253
Haul Tower Components Off Site	24	Tons	$7.06	$169
Excavate Around Tower Foundation	6	Each	$33.86	$203
Remove Tower Foundation and Load	71	Cubic Yards	$208.09	$14,775
Haul Concrete (Tower Foundation)	5.3	Tons	$7.89	$42
Disposal of Concrete from Tower	5.3	Tons	$40.00	$212
Grade Tower Site	6	Each	$1,470.29	$8,822
Erosion and Sediment Control at Tower Site	6	Each	$382.00	$2,292
Till to Farmable Condition	0.88	Acre	$177.52	$156
Subtotal Met and ADLS Towers				**$67,106**
Electrical Collection/Transmission System				
Removal of Underground Collector System Cables	93	Locations	$480.00	$44,640
Haul Underground Collector System Cables	6.4	Tons	$7.06	$45
Disposal of Removed Cables (See Salvage Value)	6.4	Tons	$0.00	$0
Removal of Junction Box	15	Each	$120.00	$1,800
Removal of Overhead Transmission Line Cables	143,114	Feet	$9.50	$1,359,587
Loadout Overhead Cables	544	Tons	$44.40	$24,146
Haul Overhead Cables	544	Tons	$7.06	$3,839
Disposal of Overhead Cables (See Salvage Value)	544	Tons	$0.00	$0
Remove and Load Steel Transmission Poles	144	Each	$865.69	$124,660
Haul Steel Poles for Disposal	144	Each	$158.85	$22,874
Haul Hardware, Bracing, and Attachments for Disposal	144	Each	$8.07	$1,162
Erosion and Sediment Control at Junction Box Location	1,500	Feet	$3.82	$5,730
Till to Farmable Condition at Junction Box Locations	1	Acres	$177.52	$178
Erosion and Sediment Control for Transmission Removal	7,156	Feet	$3.82	$27,335
Till to Farmable Condition Along Transmission Line	33	Acres	$177.52	$5,858
Subtotal Electrical Collection/Transmission System				**$1,621,854**

Access Roads				
Remove and Load Gravel Surfacing from Access Roads	43,986	Cubic Yards	$2.84	$124,920
Haul Gravel Removed from Access Roads	71,258	Tons	$7.89	$562,226
Disposal of Gravel Removed from Access Roads	71,258	Tons	$0.00	$0
Remove and Load Culvert from Beneath Access Roads	73	Each	$540.00	$39,420
Haul Culvert Removed from Access Roads	23	Tons	$7.89	$181
Disposal of Culverts	23	Tons	$40.00	$920
Remove Low Water Crossing from Access Roads	19	Each	$4,100.00	$77,900
Haul Low Water Crossing Materials Removed from Access Roads	19	Each	$7.89	$150
Disposal of Low Water Crossing Materials	19	Each	$80.00	$1,520
Decompact Access Road Corridor	111,340	Linear Feet	$0.08	$8,907
Grade Access Road Corridor	111,340	Linear Feet	$1.54	$171,464
Erosion and Sediment Control Along Access Roads	27,835	Linear Feet	$3.82	$106,330
Topsoil and Revegetation on Removed Access Road Area	61	Acres	$177.52	$10,829
Subtotal Access Roads				**$1,104,766**
Substation				
Disassembly and Removal of Main Power Transformer(s)	2	Each	$5,400.00	$10,800
Freight Transformer(s) Offsite	2	Each	$635.40	$1,271
Disposal of Transformer (Including Oil; Assume Salvage Value)	2	Each	$0.00	$0
Excavate Around Transformer Foundation(s)	2	Each	$1,633.10	$3,266
Remove Complete Transformer Foundation(s)	2	Each	$15,199.80	$30,400
Backfill Excavation Area from Transformer Foundation Removal	2	Each	$262.64	$525
Haul Concrete (Transformer, Switch Gear, etc. Foundations)	340	Tons	$7.89	$2,683
Disposal of Concrete from Transformer Foundation	340	Tons	$40.00	$13,600
Demolish Substation Site Improvements (fences, etc.)	2	Lump Sum	$4,200.00	$8,400
Demolish Control Building and Foundation	2	Lump Sum	$14,400.00	$28,800
Remove Medium/High Voltage Equipment	2	Lump Sum	$4,200.00	$8,400
Remove Structural Steel Substation Frame	2	Lump Sum	$4,200.00	$8,400
Haul - Demolition Materials, Removed Equipment & Structural Steel	2	Lump Sum	$1,412.00	$2,824
Disposal of Demolition Materials, Removed Equipment and Structural Steel (Salvag	2	Lump Sum	$0.00	$0
Remove and Load Gravel Surfacing from Substation Site	3,329	Cubic Yards	$2.84	$9,454
Haul Gravel Removed from Substation Site	5,393	Tons	$7.89	$42,551
Disposal of Gravel from Substation Site	5,393	Tons	$0.00	$0
Decompact Substation Site	4	Acre	$222.97	$920
Grade Substation Site	4	Acre	$4,195.79	$17,314
Erosion and Sediment Control at Substation Site	1,272	Linear Feet	$3.82	$4,859
Topsoil and Revegetation at Substation Site	4	Acre	$177.52	$733
Subtotal Each Substation				$195,200
Total for Two Substations				**$390,399**
O&M Building (Assume Leased)				
Public Roads Restoration	65.3	Miles	$ 44,000.00	$2,873,200
Total Direct Costs				**$20,274,883**
Contingency (10%)	10%	Percent		$2,027,488
Total Demolition Costs				**$22,302,371**
Crop Loss (156 Acres)	156	Acres	$ 1,300.00	$202,800
Total Cost				**$22,505,171**
Salvage/Recycle				
Turbine Towers (Structural Steel)	26,163	Tons	$281.25	$7,358,344
Turbine Nacelles (Structural Steel)	4,616	Tons	$281.25	$1,298,250
Met Towers (Structural Steel)	23	Tons	$281.25	$6,469
Substation (Structural Steel)	10	Tons	$281.25	$2,813
Transmission Towers (Structural Steel)	1008	Tons	$281.25	$283,500
Turbine Generators	9,904,831	Pounds	$0.28	$2,773,353
Collection - Aluminum Electrical Conductor (Supported)	12,800	Pounds	$0.28	$3,584
Transmission - Aluminum and Steel Conductor (Suspended-Aluminum Weight)	435,068	Pounds	$0.28	$121,819
Transmission - Aluminum and Steel Conductor (Suspended-Steel Weight)	136	Tons	$281.25	$38,238
Transformers (copper windings)	486,800	Pounds	$0.26	$127,785
Transformers (oil)	30,000	Gallons	$0.70	$21,000
Subtotal Salvage				**$12,035,154**
Total Demolition Minus Resale and Salvage Value				**$9,775,951**

Plum Creek Wind Decommissioning Cost Estimate – GE 154 3.8MW

Number of Turbines	78	Each		
	Quantity	Unit	Unit Cost	Total Cost
Mobilization/Demobilization	1	Lump Sum	$1,161,000.00	$1,161,000
Permitting				
County/Municipal Permits	1	Lump Sum	$10,000.00	$10,000
State Permits (SWPPP, SPCC)	1	Lump Sum	$25,000.00	$25,000
Subtotal Permits				**$35,000**
Wind Turbine Generators				
Disconnect Turbine Wiring	78	Each	$3,060.80	$238,742
Fell Turbine	78	Each	$2,043.25	$159,374
Process to Size and Load Turbine Components	40,958	Tons	$164.77	$6,748,650
Haul Turbine Components Offsite for Recycling (except blades)	29,428	Tons	$7.06	$207,762
Haul Turbine Components For Disposal (except blades)	9,051	Tons	$7.89	$71,412
Turbine Component Disposal (except blades)	9,051	Tons	$81.00	$733,131
Haul Fiberglass Blades For Recycling	2,479	Tons	$104.27	$258,485
Fiberglass Blades Recycling	2,479	Tons	$450.00	$1,115,550
Excavate Around Turbine Foundation	78	Each	$15.26	$1,190
Remove Turbine Foundation and Load	2,601	Cubic Yards	$208.09	$541,242
Backfill Excavation Area from Turbine Foundation Removal	78	Each	$146.73	$11,445
Haul Concrete (Turbine Foundation)	5,267	Tons	$7.89	$41,557
Disposal of Concrete from Turbine Foundation	2,601	Cubic Yards	$40.00	$104,040
Remove and Load Transformer	78	Each	$583.74	$45,532
Freight Transformer to Recycler	78	Each	$169.63	$13,231
Remove Transformer Pad	476	Cubic Yards	$138.56	$65,896
Transformer Disposal (Salvage Value)	78	Each	$0.00	$0
Haul Concrete (Transformer Pad)	963	Tons	$7.89	$7,598
Disposal of Concrete from Transformer Pad	963	Tons	$40.00	$38,521
Decompact Wind Turbine Generator Site	78	Each	$160.81	$12,543
Grade Wind Turbine Generator Site	78	Each	$2,603.08	$203,040
Erosion and Sediment Control at Turbine/Transformer Site	78	Each	$1,200.09	$93,607
Till to Farmable Condition	56	Acres	$177.52	$9,941
Subtotal Wind Turbine Generators				**$10,722,489**
MET and ADLS Towers				
Disconnect Tower Wiring	6	Each	$1,530.40	$9,182
Dismantle, Disassemble, and Load Tower Components	6	Each	$5,208.79	$31,253
Haul Tower Components Off Site	24	Tons	$7.06	$169
Excavate Around Tower Foundation	6	Each	$33.86	$203
Remove Tower Foundation and Load	71	Cubic Yards	$208.09	$14,775
Haul Concrete (Tower Foundation)	5.3	Tons	$7.89	$42
Disposal of Concrete from Tower	5.3	Tons	$40.00	$212
Grade Tower Site	6	Each	$1,470.29	$8,822
Erosion and Sediment Control at Tower Site	6	Each	$382.00	$2,292
Till to Farmable Condition	0.88	Acre	$177.52	$156
Subtotal Met and ADLS Towers				**$67,106**
Electrical Collection/Transmission System				
Removal of Underground Collector System Cables	93	Locations	$480.00	$44,640
Haul Underground Collector System Cables	6.4	Tons	$7.06	$45
Disposal of Removed Cables (See Salvage Value)	6.4	Tons	$0.00	$0
Removal of Junction Box	15	Each	$120.00	$1,800
Removal of Overhead Transmission Line Cables	143,114	Feet	$9.50	$1,359,587
Loadout Overhead Cables	544	Tons	$44.40	$24,146
Haul Overhead Cables	544	Tons	$7.06	$3,839
Disposal of Overhead Cables (See Salvage Value)	544	Tons	$0.00	$0
Remove and Load Steel Transmission Poles	144	Each	$865.69	$124,660
Haul Steel Poles for Disposal	144	Each	$158.85	$22,874
Haul Hardware, Bracing, and Attachments for Disposal	144	Each	$8.07	$1,162
Erosion and Sediment Control at Junction Box Location	1,500	Feet	$3.82	$5,730
Till to Farmable Condition at Junction Box Locations	1	Acres	$177.52	$178
Erosion and Sediment Control for Transmission Removal	7,156	Feet	$3.82	$27,335
Till to Farmable Condition Along Transmission Line	33	Acres	$177.52	$5,858
Subtotal Electrical Collection/Transmission System				**$1,621,854**

Access Roads				
Remove and Load Gravel Surfacing from Access Roads	43,986	Cubic Yards	$2.84	$124,920
Haul Gravel Removed from Access Roads	71,258	Tons	$7.89	$562,226
Disposal of Gravel Removed from Access Roads	71,258	Tons	$0.00	$0
Remove and Load Culvert from Beneath Access Roads	73	Each	$540.00	$39,420
Haul Culvert Removed from Access Roads	23	Tons	$7.89	$181
Disposal of Culverts	23	Tons	$40.00	$920
Remove Low Water Crossing from Access Roads	19	Each	$4,100.00	$77,900
Haul Low Water Crossing Materials Removed from Access Roads	19	Each	$7.89	$150
Disposal of Low Water Crossing Materials	19	Each	$80.00	$1,520
Decompact Access Road Corridor	111,340	Linear Feet	$0.08	$8,907
Grade Access Road Corridor	111,340	Linear Feet	$1.54	$171,464
Erosion and Sediment Control Along Access Roads	27,835	Linear Feet	$3.82	$106,330
Topsoil and Revegetation on Removed Access Road Area	61	Acres	$177.52	$10,829
Subtotal Access Roads				**$1,104,766**
Substation				
Disassembly and Removal of Main Power Transformer(s)	2	Each	$5,400.00	$10,800
Freight Transformer(s) Offsite	2	Each	$635.40	$1,271
Disposal of Transformer (Including Oil; Assume Salvage Value)	2	Each	$0.00	$0
Excavate Around Transformer Foundation(s)	2	Each	$1,633.10	$3,266
Remove Complete Transformer Foundation(s)	2	Each	$15,199.80	$30,400
Backfill Excavation Area from Transformer Foundation Removal	2	Each	$262.64	$525
Haul Concrete (Transformer, Switch Gear, etc. Foundations)	340	Tons	$7.89	$2,683
Disposal of Concrete from Transformer Foundation	340	Tons	$40.00	$13,600
Demolish Substation Site Improvements (fences, etc.)	2	Lump Sum	$4,200.00	$8,400
Demolish Control Building and Foundation	2	Lump Sum	$14,400.00	$28,800
Remove Medium/High Voltage Equipment	2	Lump Sum	$4,200.00	$8,400
Remove Structural Steel Substation Frame	2	Lump Sum	$4,200.00	$8,400
Haul - Demolition Materials, Removed Equipment & Structural Steel	2	Lump Sum	$1,412.00	$2,824
Disposal of Demolition Materials, Removed Equipment and Structural Steel (Salvag	2	Lump Sum	$0.00	$0
Remove and Load Gravel Surfacing from Substation Site	3,329	Cubic Yards	$2.84	$9,454
Haul Gravel Removed from Substation Site	5,393	Tons	$7.89	$42,551
Disposal of Gravel from Substation Site	5,393	Tons	$0.00	$0
Decompact Substation Site	4	Acre	$222.97	$920
Grade Substation Site	4	Acre	$4,195.79	$17,314
Erosion and Sediment Control at Substation Site	1,272	Linear Feet	$3.82	$4,859
Topsoil and Revegetation at Substation Site	4	Acre	$177.52	$733
Subtotal Each Substation				$195,200
Total for Two Substations				**$390,399**
O&M Building (Assume Leased)				
Public Roads Restoration	65.3	Miles	$ 44,000.00	$2,873,200
Total Direct Costs				**$17,975,815**
Contingency (10%)	10%	Percent		$1,797,581
Total Demolition Costs				**$19,773,396**
Crop Loss (156 Acres)	156	Acres	$ 1,300.00	$202,800
Total Cost				**$19,976,196**
Salvage/Recycle				
Turbine Towers (Structural Steel)	23,565	Tons	$281.25	$6,627,656
Turbine Nacelles (Structural Steel)	3,525	Tons	$281.25	$991,406
Met Towers (Structural Steel)	23	Tons	$281.25	$6,469
Substation (Structural Steel)	10	Tons	$281.25	$2,813
Transmission Towers (Structural Steel)	1008	Tons	$281.25	$283,500
Turbine Generators	1,715,306	Pounds	$0.28	$480,286
Collection - Aluminum Electrical Conductor (Supported)	12,800	Pounds	$0.28	$3,584
Transmission - Aluminum and Steel Conductor (Suspended-Aluminum Weight)	435,068	Pounds	$0.28	$121,819
Transmission - Aluminum and Steel Conductor (Suspended-Steel Weight)	136	Tons	$281.25	$38,238
Transformers (copper windings)	486,800	Pounds	$0.26	$127,785
Transformers (oil)	69,000	Gallons	$0.70	$48,300
Subtotal Salvage				**$8,731,856**
Total Demolition Minus Resale and Salvage Value				**$10,550,275**

Decommissioning Cost Assumptions

To develop a cost estimate for the decommissioning of the Plum Creek Wind Project, Westwood engineers made the following assumptions and used the following pricing references. Costs were estimated based on current pricing, technology, and regulatory requirements. The assumptions are listed in order from top to bottom of the estimate spreadsheet. When publicly available bid prices or Minnesota Department of Transportation bid summaries were not available for particular work items, we developed time- and material-based estimates considering composition of work crews and equipment and material required. While materials may have a salvage value at the end of the project life, the construction activity costs and the hauling/freight costs are separated from the disposal costs or salvage value to make revisions to salvage values more transparent.

1. Project quantities are based on the layout prepared by Westwood Professional Services and dated September 30, 2024. Project quantities not yet determined were extrapolated from previous site layouts or projects of similar size. A total of 78 turbines are reflected in the cost estimate, which may include both primary and alternate turbine locations.

2. Unit pricing obtained from RS Means for the Windom, MN area for the first quarter of 2024.

3. Common labor will be used for the majority of tasks, supplemented by electricians, steel workers, and equipment operators where labor rules may require. The labor rates reflect union labor rates.

4. Mobilization was estimated at approximately 7% of total cost of other items.

5. Permit applications will require the preparation of a Stormwater Pollution Prevention Plan (SWPPP) and a Spill Prevention, Control, and Countermeasure (SPCC) Plan.

6. The selected disposal facility (Cottonwood County Sanitary Landfill) is located in Windom, MN, approximately 26 miles from the project site. Hauling costs to the landfill are estimated to be $7.89 per ton.

7. The selected metal recycling facility (Hilltop Recycling) is located in Sanborn, MN, approximately 22 miles from the project site. Hauling costs to the recycling facility are approximately $7.06 per ton.

8. Wind turbines are assumed to be removed from the site using the felling method. Felling of a turbine eliminates the use of crane paths and crane pads necessary to disassemble the components of a turbine. This method will also reduce the total disturbed area that needs to be restored during the decommissioning process.

9. Fiberglass blades will be hauled for recycling at Veolia's recycling plant located in Louisiana, Missouri.

10. Subsurface turbine components will be removed to a depth of 4 feet below ground surface. This will include removal of the turbine pedestal.

11. Medium voltage AC collection lines comprise 3-phase aluminum cables plus an aluminum grounding conductor and fiber optic cable. The underground collector system cables are placed in trenches with a minimum of 18 inches of cover. Several cables/circuits are placed side by side in each trench. The conduits and cables can be removed by trenching.

12. Overhead transmission lines comprise two 3-phase aluminum cables plus fiber optic cable. Transmission poles will be made of steel and will range from 65 to 110 feet in height.

13. Road gravel removal was estimated on a time and material basis. Since the material will not remain on site, a hauling cost is added to the removal cost. Clean aggregate can typically be used as “daily cover” at landfills without incurring a disposal cost. The road gravel may also be used to fortify local driveways and roads, lowering hauling costs but incurring placing and compaction costs. The hauling costs to a landfill represents an upper limit to costs for disposal of the road gravel.

14. Erosion and sediment control along road reflects the cost of silt fence on the downgradient side of the proposed roads. As such, the length of controls has been estimated to be approximately 25% of the road length.

15. Topsoil is required to be stockpiled on site during construction, so no topsoil replacement is expected to replace the road aggregate. Subsoiling cost to decompact roadway areas is estimated as $222.97 per acre and tilling to an agriculture-ready condition is estimated as $177.52 per acre.

16. Metal salvage prices (steel, aluminum, copper) are based on April 2024 quotes from www.scrapmonster.com for the Midwest. Posted prices are three months old. These prices are based on delivery to the recycling facility with the material prepared to meet size, thickness, cleanliness, and other specifications.

17. A reduction of 25% has been taken from all pricing obtained from www.scrapmonster.com to reflect the processing by the contractor to meet the specifications.

18. Care to prevent damage and breakage of equipment must be exercised, but removal assumes unskilled common labor under supervision.