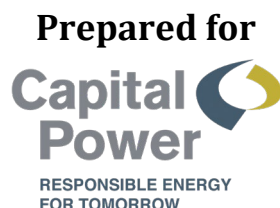


Exhibit U

Availability of Public and Private Providers to Provide Services

**Nolin Hills Wind Power Project
February 2020**



d/b/a Nolin Hills Wind, LLC

Prepared by



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Acronyms and Abbreviations

ADT	average daily traffic
Applicant	Nolin Hills Wind, LLC
BMP	Best Management Practice
CR	County Road
DoD	Department of Defense
ESCP	Erosion and Sediment Control Plan
FAA	Federal Aviation Administration
I-84	Interstate Highway 84
LOS	level of service
met towers	meteorological data collection towers
NPDES	National Pollutant Discharge Elimination System
O&M	operations and maintenance
OAR	Oregon Administrative Rules
ODOT	Oregon Department of Transportation
OHP	Oregon Highway Plan
ODA	Oregon Department of Aviation
ORS	Oregon Revised Statutes
Project	Nolin Hills Wind Power Project
RV	recreational vehicle
TSP	Transportation System Plan
UEC	Umatilla Electric Cooperative
US	United States
US-395	US Highway 395
V/C	volume to capacity

1.0 Introduction

Exhibit U contains information pertaining to potential adverse impacts of construction and operation of the Nolin Hills Wind Power Project (Project) on the ability of public and private providers of services in the analysis area to provide critical services. This exhibit was prepared pursuant to the Public Services standard in Oregon Administrative Rules (OAR) 345-022-0110 and the submittal requirements in OAR 345-021-0010(1)(u) paragraphs (A) through (E).

2.0 Applicable Rules and Standards

This exhibit demonstrates that the Project can comply with the approval standard in OAR 345-022-0110:

345-022-0110 Public Services

(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to the ability of public and private providers within the analysis area described in the project order to provide: sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools.

(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

(3) The Council may issue a site certificate for a special criteria facility under OAR 345-015-0310 without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

3.0 Analysis

3.1 Analysis Area

In accordance with Section IV of the Project Order, the Analysis Area for public services is the area within the Site Boundary and 10 miles from the Site Boundary. The Site Boundary is defined in OAR 345-001-0010 as “...the perimeter of the site of a proposed energy facility, its related or supporting facilities, all temporary laydown and staging areas, and all road and transmission line corridors proposed by the applicant.” The Site Boundary is defined in detail in Exhibits B and C.

3.2 Information Required by OAR 345-021-0010(1)(u)

OAR 345-021-0010(1)(u) Information about significant potential adverse impacts of construction and operation of the proposed facility on the ability of public and private providers in the analysis area to provide the services listed in OAR 345-022-0110, providing evidence to support a finding by the Council as required by OAR 345-022-0110. The applicant must include:

OAR 345-021-0010(1)(u)(A) The important assumptions the applicant used to evaluate potential impacts;

3.2.1 Assumptions Used to Evaluate Potential Impacts

3.2.1.1 Construction Employment

During construction, an average of 125 to 140 workers will be present at the Project. An estimated maximum of 350 to 500 workers will be on-site at one time, as multiple disciplines of contractors complete their work simultaneously during periods of the highest activity. Most construction workers will be employees of construction and equipment manufacturing companies under contract to Nolin Hills Wind, LLC (the Applicant).

Wind energy facility construction requires specialized skills; many workers move from project to project. Therefore, the Applicant assumes that approximately 30 percent of the estimated construction workforce hired to work on the Project will be hired locally (i.e., from Oregon, and from Umatilla County to the extent practicable), and the remaining 70 percent of the workforce will be from out of state, and will temporarily relocate to the Project. Very few, if any, of the out-of-state workers employed during the construction phase of the Project will be expected to permanently relocate to the area. The percentage of the construction workforce that is hired locally will depend on the availability of workers with appropriate skills. The size of the skilled local workforce is continually growing, as more wind farms are built in eastern Oregon, so the percentage of local construction workers may be higher than estimated.

Workers in some positions, such as construction foremen and inspectors, will be employed for the entire 18-month duration of the Project, but many workers will be employed for 6 to 12 months and therefore will not be expected to bring families with them. The Applicant assumes very few workers will relocate their families.

Because most construction workers will not be in the area for more than 6 to 12 months, housing for most construction workers will primarily be provided by hotels and recreational vehicle (RV) parks. For purposes of analyzing potential impacts on housing availability, the Applicant assumes that workers will commute from up to 30 miles away from the Project. While not all of Umatilla and Morrow counties are located within the Analysis Area or within 30 miles of the Project, housing data were reviewed for both counties, because housing data are available at a countywide level.

3.2.1.2 *Operation and Maintenance Employment*

An estimated 10 to 15 operational personnel will be permanently employed by the Project at its full 350-megawatt capacity. The operations and maintenance (O&M) staff will be hired locally, to the extent that skilled workers are available. As a conservative assumption, it is assumed that up to 10 workers may relocate from outside the area. Some outside contractors may also be required from time to time for specialized maintenance tasks, such as turbine inspections, or the repair of nacelles or meteorological equipment. The Applicant assumes that the Project will be in operation for at least 30 years.

3.2.1.3 *Facility Retirement Employment*

If the Project is retired (decommissioned), operational jobs will be eliminated. Retirement of the Project will require the removal of most Facility components and the restoration of disturbed areas. These activities will result in temporary construction employment similar to that generated by the construction of the Project.

3.2.1.4 *Other Assumptions*

Other assumptions regarding public and private services include the use of water and the number of construction and individual trips taken to bring workers and materials to and from the Project. Approximately 65 to 67 million gallons of water will be needed during Project construction, primarily for dust control and making concrete for wind turbine foundations. Water use during operations, at the O&M Building, is estimated at 50-100 gallons per worker per day, for a total of less than 5,000 gallons per day. This water will be provided by an on-site well.

During construction, the Applicant assumes up to 146 one-way delivery truck trips per day, and up to 512 one-way private vehicle trips per day to bring workers to the Project. During operation, the Applicant assumes approximately 15 full-time workers will commute to and from the facility.

3.2.2 *Affected Public and Private Service Providers and Potential Impacts*

OAR 345-021-0010(1)(u)(B) Identification of the public and private providers in the analysis area that would likely be affected;

OAR 345-021-0010(1)(u)(C) A description of any likely adverse impact to the ability of the providers identified in (B) to provide the services listed in OAR 345-022-0110;

OAR 345-021-0010(1)(u)(D) Evidence that adverse impacts described in (C) are not likely to be significant, taking into account any measures the applicant proposes to avoid, reduce or otherwise mitigate the impacts;

3.2.2.1 *Sewers and Sewage Treatment*

In the rural area surrounding the Project, there are no developed sewer systems that will be impacted by construction or operation of the turbines, although sewer systems in Stanfield,

Hermiston, Echo, and Pendleton are located within the Analysis Area. None would be impacted by the Project. Within the portion of the Project Site Boundary containing turbines, sewage treatment is limited to on-site septic systems.

During construction, sanitary waste will be collected on-site in portable toilets, to be provided and maintained by a licensed subcontractor. During operations, sanitary waste will be limited to domestic wastewater from the Project's O&M Building, which will be discharged to a licensed on-site septic system. Due to the distance to the nearest developed sewer system from the O&M Building, the Applicant does not anticipate that connection to sewers or sewage treatment facilities will be required. Therefore, impacts to community sewer systems are not anticipated.

3.2.2.2 *Water*

In the rural area surrounding the Project, there are no developed water systems that will be impacted by construction or operation of the Project. Water sources in the analysis area are limited to the water pipelines and water treatment and supply systems associated with the cities of Stanfield, Echo, and Hermiston, private landowners' wells, and Umatilla surface water rights.

As discussed in Exhibit O, potential water sources for use during construction include the City of Hermiston, a purchase/transfer of an existing Umatilla River surface water right, or local landowners with existing, upgraded existing, or newly constructed well or wells permitted under a limited water use license.

Because water for construction can be obtained from permitted sources with adequate water rights, public water systems will not be adversely affected by construction of the Project. The Public Works Department of Hermiston has provided written correspondence (see Exhibit O, Attachment O-1) that adequate water is available for the construction of the Project. Construction of the Project will not affect the small number of private landowner wells already existing in the Analysis Area.

Water use during operation of the Project will be limited to small amounts used at the O&M Building for sanitation and human consumption. The Applicant expects to rely on an exempt well allowed under Oregon Revised Statutes (ORS) 537.545 to provide water to the O&M Building, which will not require the Applicant to obtain a new water right. The limited amount of water that can be used from an exempt well is not expected to result in injury to other private water rights in the vicinity of the Project.

3.2.2.3 *Stormwater Drainage*

Stormwater infrastructure within the Site Boundary is limited to minimal facilities associated with public roads maintained by Umatilla County, state highways, and Interstate Highway 84 (I-84).

The Project will not have an adverse impact on stormwater drainage services because construction, operation, and decommissioning will not require construction or expansion of public stormwater drainage facilities. The majority of the Project is located sufficiently far from existing municipal stormwater drainage facilities that there will be no impacts to those facilities.

Stormwater runoff generated in areas disturbed by Project construction will be managed on-site, through the use of retention and infiltration systems as described in the Project's National Pollutant Discharge Elimination System (NPDES) 1200-C construction permit and accompanying Erosion and Sediment Control Plan (ESCP; Exhibit I, Attachment I-2). Most of the area within the Project Site Boundary is vegetated, which will serve as a buffer to promote infiltration and minimize erosion.

Stormwater management infrastructure added during construction will, as needed, be left in place to continue functioning throughout the life of the Project. Such features may include roadside ditches, infiltration swales, or retention basins. All of these facilities will be located on private land and will not affect the provision of stormwater management services by public agencies.

The Project will comply with federal, state, and local statutes and regulations related to stormwater runoff, including the NPDES 1200C permit, which will be completed prior to construction, and the associated ESCP (Exhibit I, Attachment I-2). Construction Best Management Practices (BMP) associated with these permits are expected to reduce any stormwater impacts below significant levels.

3.2.2.4 Solid Waste Management

Umatilla County provides solid waste disposal and recycling services through franchise agreements with various private providers. Solid waste disposal for the Project during construction and operations will be provided through a private contract with a local commercial hauler (or haulers). The regional landfill closest to the Project Site Boundary is the Finley Buttes Regional Landfill, located approximately 12 miles south of Boardman, Oregon. The Columbia Ridge Landfill located near the town of Arlington in Gilliam County, Oregon, located approximately 50 miles from the Project, also accepts construction and municipal solid wastes.

Construction and operation of the Project will not have an adverse impact on solid waste management. Project construction will generate a variety of solid wastes, including concrete, scrap metal, and wood and plastics used to secure and protect components during shipping. All waste will be collected in a central location during construction, to be hauled away by a licensed waste disposal service for disposal or recycling. Excess soil from road construction and foundation excavation will be spread on site to the extent practicable, or hauled off-site to be disposed of in accordance with applicable regulations. Operation and maintenance of the Project will employ an estimated 10 to 15 people, which will result in little generation of solid waste. Exhibit V includes detailed information about types and quantities of solid waste and disposal.

The Applicant will recycle wastes to the extent practicable, and will coordinate with waste and recycling franchisees servicing the Project, in accordance with the Umatilla County Solid Waste Ordinance. Solid wastes are anticipated to be disposed at the Finley Buttes Landfill or the Columbia Ridge Landfill, which have adequate capacity to serve the Project. Correspondence with the Finley Buttes Landfill and Columbia Ridge Landfill confirms that both landfills will be able to easily handle construction waste generated by Project construction and operation (Attachment U-1).

3.2.2.5 *Housing*

In general, housing is not provided as a government service per se, except in the case of subsidized housing for low-income people and through a variety of government loans and other incentives. There is no government housing within the Project Site Boundary. No existing housing will be directly impacted by the Project.

While some construction contractors will be hired locally, many construction workers are expected to come from outside the Project vicinity and will require temporary housing. Assuming conservatively that only 30 percent of the construction workers will be local residents, an average of about 100 and a peak of about 350 new workers will be temporary residents (in-migrants) in the area in need of temporary housing. Typical housing options for temporary workers include hotels or motels, apartments, short-term rental homes, and campgrounds, or other areas where workers can park mobile housing (e.g., trailers or RVs).

Construction workers may commute daily from many communities within and beyond the immediate Project vicinity, including Echo, Stanfield, Hermiston, Pendleton, Pilot Rock, and Umatilla, Oregon. Because workers can spread out to many communities within a commutable distance, the impacts to housing in the immediate vicinity of the Project will be lessened.

Motels, hotels, and trailer or RV parking will be the most available housing option for temporary residents. An Internet search using Google Maps and travel websites such as Expedia.com and Kayak.com identified more than 30 hotel and motels and over 20 RV parks in Umatilla and Morrow counties (Google 2019; Expedia 2019; Kayak 2019). According to the American Hotel and Lodging Association, hotels in the Oregon 2nd Congressional District, which includes Umatilla and Morrow counties, have an average of 60 rooms per hotel (AHLA 2018). Using this average, Umatilla and Morrow counties have approximately 1,800 hotel and motel rooms. Most of these are found in Hermiston or Pendleton. Additional rooms may be available in establishments that do not have information on the Internet, or in communities located farther from the assumed commutable distance of 30 miles from the Project, but still roughly an hour away from the Project, such as in Kennewick, Washington. Although not all of these housing facilities will be available at any given time, adequate supplies are available in relation to the number of temporary workers.

The availability of temporary housing varies seasonally. Demand for temporary housing is generally greatest during the tourism season in the summer months. The average hotel and motel occupancy rate during the month of August 2019, the most recent data available from the Oregon Tourism Commission, was 80.8 percent statewide, and in Eastern Oregon (comprising 11 counties, including Umatilla and Morrow counties) the occupancy rate was 73 percent. Year-to-date occupancy rates through the month of August 2019, which are more indicative of the low tourist season occupancy, were 67.8 percent statewide and 59.1 percent in Eastern Oregon (Oregon Tourism Commission 2019). Based on the higher of these two occupancy rates (i.e., month of May 2018 data and year-to-date through May 2018 data), it is likely that 686 rooms will be available for rent during the high tourism season and approximately 900 rooms will be available during the low tourism season.

Some construction workers, particularly those employed for the entire duration of construction, may rent a house or apartment during construction of the Project. Table U-1 presents the rental housing supply and availability data for Umatilla and Morrow counties, as reported in the 2017 United States (US) Census American Community Survey (US Census Bureau 2017). The estimated number of vacant rental units is calculated as a percentage of total vacant housing units; that percentage is based on the ratio of renter-occupied dwellings to owner-occupied dwellings. Using this method, an estimated 1,185 housing units will be available for rent in Umatilla County, and 181 housing units will be available for rent in Morrow County.

Table U-1. Available Housing Estimates

Geographic Area	Total Housing Units	Vacant Housing Units	Of Occupied Housing, Percentage Occupied by Renter	Estimated Number of Vacant Rental Units
Umatilla County	30,172	3,196	37.1	1,185
Morrow County	4,558	622	29.1	181
Source: U.S. Census Bureau 2017.				

Potential impacts on housing could result if there were an inadequate supply of housing in relation to the demand from the new temporary and permanent residents associated with the Project.

Construction and operation of the Project will not have a substantial adverse impact on housing in the Analysis Area. The construction workforce will be dispersed among a number of communities in the area and will generally stay in one place for 6 to 12 months at a time. Any potential impacts to housing in the Analysis Area will be short term.

In the 2020 to 2022 timeframe, potential construction projects in the area include the Project, the Perennial Wind Chaser Station natural gas generating plant in Hermiston, the Boardman to Hemingway Transmission Line Project, and the Wheatridge Wind Energy Facility in Morrow County. See Figure C-3 in Exhibit C for known energy projects within 10 miles of the Project. In addition, other non-energy projects may be undertaken in the area around the Project.

The potential cumulative impact on Umatilla County area housing from these projects will depend on the overlap of project construction workforces. The aggregate number of construction workers will fluctuate depending on the timing of specific phases for each project, and a detailed impact analysis is not possible at this time.

Construction of the Project will require temporary housing for an estimated peak of about 350 workers who will be temporary residents (in-migrants) in the area. Based upon the publicly available information in the Application for Site Certificate for the following energy projects, construction of the Boardman to Hemingway Transmission Line Project will require housing for up to approximately 243 workers during peak construction times, construction of the Perennial Wind Chaser Plant will require housing for approximately 225 workers during peak construction times, and the Wheatridge Wind Energy Facility will require housing for approximately 250 workers

during peak construction times (Idaho Power 2017; Perennial-WindChaser LLC 2014; Wheatridge Wind Energy, LLC 2015).

An adequate stock of temporary housing is available for construction workers building the Project. In the unlikely event that the large infrastructure projects identified above overlap such that their three workforces all require housing in the area at the same time, an adequate temporary housing stock appears to be available in Umatilla and Morrow counties.

3.2.2.6 Transportation and Traffic Safety

The affected transportation service providers are the Oregon Department of Transportation (ODOT) for state highways, and the Public Works Department for Umatilla County for other public roads.

The construction of the Project will result in a temporary increase in local traffic, including large trucks and construction equipment, as well as construction workers' vehicles. Primary transportation corridors and a few major county roads will carry the majority of construction-related truck and workforce traffic. The primary corridors are I-84, I-82, and US Highway 395 (US-395). Deliveries will generally follow County Road (CR) 1350 from US-395. CR-1350 (Coombs Canyon Road) will see increased traffic as it will be a primary delivery route. Other local county roads, such as CR-1361, CR-1362, CR-1363, and CR-1394, as well as some private roads on leased lands inside the Site Boundary, may also see increases in traffic. Additional private access roads will be developed within the Site Boundary to each of the proposed wind turbines and associated facilities. Figure U-1 identifies primary construction traffic routes to the Project.

The Applicant may also use the existing Union Pacific Railroad tracks to transport construction materials and equipment to Hermiston or another nearby rail/distribution center, then by truck to the site following the transportation route described above. The Applicant met with Union Pacific Railroad to discuss rail transport logistics to the site. Height restrictions (14 feet, 6 inches) on nearby bridges are too low to allow the passage of turbine tower bases and nacelles to be transported by rail as far as the Nolin siding. Other restrictions such as turning radii along the track would restrict delivery of other components. Therefore, in the immediate vicinity of the Project, all materials will arrive by road. If some materials are shipped by rail to Hermiston, this will reduce the amount of project related traffic on major roadways such as I-84 farther from the Project.

Performance Standards and Existing Traffic

A significant, adverse impact in terms of transportation will result if construction or operation of the Project meaningfully lowers the level of service (LOS) provided to the public. That could occur if additional traffic generated by the Project were to exceed the capacity of existing roads, resulting in significant and ongoing delays in travel times, or unmitigated damage to roads.

Transportation engineers have established various standards for measuring the traffic capacity of roadways or intersections. Each standard is associated with a particular LOS. The LOS concept requires the consideration of factors that include travel speed, delay, frequency of interruptions in

traffic flow, relative freedom for traffic maneuvers, driving comfort and convenience, and operating costs. In the Oregon Highway Plan (OHP; ODOT 2018a), LOS were defined by a letter grade from A to F, with each grade representing a range of volume to capacity (V/C) ratios. A V/C ratio is the peak hour traffic volume on a highway divided by the maximum volume that the highway can handle. If traffic volume entering a highway section exceeds the section's capacity, then disruptions in traffic flow will occur, reducing the LOS. LOS A represents relatively free-flowing traffic and LOS F represents conditions where the road system is totally saturated with traffic and movement is very difficult.

The OHP guides state highway development and management for a 20-year planning horizon. In this plan, ODOT identified the performance standards in terms of V/C for state highways. Table U-2 lists applicable maximum V/C for peak hour operating conditions from the OHP (ODOT 2018a).

Table U-2. ODOT Maximum Volume-to-Capacity Ratios for Peak Hour Operating Conditions

Highway Category	Inside Urban Growth Boundary ^{1/}	Unincorporated Communities	Rural Lands
Interstate Highways (I-84, I-82)	0.80 to 0.85	0.70	0.70
Statewide Expressways (US-395)	0.80 to 0.85	0.70	0.70
Source: ODOT 2018a.			
1. The primary transportation routes to the Project are not located within any Urban Growth Boundary.			

Performance standards for Umatilla County roads are defined in the 2002 Umatilla County Transportation System Plan (TSP). The TSP discusses roadway capacity in terms of both LOS and V/C, and provides a useful comparison between the two for both freeways and two-lane highways; this comparison, as shown in the TSP, is presented in Table U-3, along with a description of typical traffic flow conditions for two-lane highways. The TSP includes a goal to "Preserve the function, capacity, LOS, and safety of the local streets, county roads, and state highways"; however, a minimum LOS is not specified in the TSP (Umatilla County 2002).

Table U-3. Level of Service(LOS) to Volume to Capacity (V/C) Equivalencies

LOS	Equivalent V/C	Typical Traffic Flow Conditions for Two-Lane Highways
A	0.00 to 0.48	Motorists are able to drive at their desired speed which, without strict enforcement, would result in average speeds approaching 60 miles per hour (mph). Passing demand is well below passing capacity, and almost no platoons of three or more vehicles are observed.
B	0.49 to 0.59	Speeds of 55 mph or slightly higher are expected on level terrain. Passing demand needed to maintain desired speeds becomes significant and approximately equals the passing capacity.

LOS	Equivalent V/C	Typical Traffic Flow Conditions for Two-Lane Highways
C	0.60 to 0.69	Further increases in flow result in noticeable increases in platoon formation, platoon size, and frequency of passing impediment. Average speed still exceeds 52 mph on level terrain, even though unrestricted passing demand exceeds passing capacity. While traffic flow is stable, it is becoming susceptible to congestion due to turning traffic and slow-moving vehicles.
C-D	0.70 to 0.73	
D	0.74 to 0.83	Unstable traffic flow as passing demand is very high. Average platoon sizes of 5 to 10 vehicles are common, although speeds of 50 mph can still be maintained under ideal conditions. This is the highest flow rate that can be maintained for any length of time over an extended section of level terrain without a high probability of breakdown.
D-E	0.84 to 0.87	
E	0.88 to 0.97	Under ideal conditions, speeds will drop below 50 mph. Average travel speeds on highways with less than ideal conditions will be slower, as low as 25 mph on sustained upgrades. Passing is virtually impossible and platooning becomes intense when slower vehicles or other interruptions are encountered.
E-F	0.98 to 0.99	
F	1.00	Heavily congested flow with traffic demand exceeding capacity.
Source: Umatilla County 2002.		

According to the TSP (Umatilla County 2002)¹, all rural segments of freeways in Umatilla County operate at LOS A or better during average conditions, and at LOS B or better during peak summer conditions. All but one segment (on US 730, a road that would not carry Project traffic) of rural two-lane highways in Umatilla County operate at LOS C or better.

Average daily traffic (ADT) volumes along most local roads are less than 500. Collector roads are intended to carry between 1,200 and 10,000 ADT, and the TSP reports that most of these carry below 1,000 ADT (Umatilla County 2002). All roads used for access to the Project operate at LOS A (<0.48 V/C). Access to and from “highly important” roads at intersecting minor roads is also adequate, reaching an estimated LOS B, where peak hour minor road traffic volumes reach up to 150 vehicles per hour.

Road Design Standards

State highways are designed and constructed to handle legal loads of 80,000 pounds. Some trucks that deliver large and heavy equipment (typically the base tower sections, nacelles, main transformers, and blades) will be required to obtain oversize/overweight permits. These permits allow travel on all unrestricted roads. I-84, I-82, and US-395 are constructed to standards that will safely allow the legally oversize/overweight trucks to pass with no adverse impact on the road

¹ A telephone conversation between Tetra Tech and the Umatilla County Department of Land Use Planning on August 3, 2018, confirmed that the 2002 TSP is the most current version, and no updates to the TSP have occurred.

surface. At this time, none of the state roads are restricted; nevertheless, at the time of construction, ODOT and the county transportation departments will be contacted by the transportation contractor to make certain that no roads are restricted at that time. As of the 2018 ODOT pavement conditions report, the pavement conditions are either very good, good, or fair, with one short segment of US-395 near Pilot Rock rated as poor (ODOT 2018b). No impairment to the quality of these roads is expected.

The condition of the existing county roads that will be used by the Project vary from improved gravel two-lane roads to two-track roads with minimal aggregate surfacing. Some of the private roads will require upgrading to accommodate the truck traffic associated with the wind farm construction. This may include widening, replacing cattle guards, replacing or adding covers to culverts, or adding road base aggregate to the existing roads. Improvements to county roads will be limited to temporary turning radius expansions with relevant permits from Umatilla County.

CR-1350, CR-1361, and CR-1363 are located within the Project Site Boundary and will be used during construction and operation of the Project. These roads are well-maintained gravel roads and are in good condition based upon recent field observations. Construction truck traffic should also not adversely impact these roads, because they are constructed for legal loads. These roads frequently see fully loaded trucks carrying grain and other agricultural materials with similar loadouts to the construction-related trucks that will be associated with the Project.

The final category of roads are local roads that are not paved. These roads are either one or two lanes wide, have some to minimal aggregate on the surface, frequently have culvert pipes with inadequate covers, and have grades and corners that may require flattening or widening to accommodate the large and long construction trucks, in particular the turbine component and transformer delivery trucks. These roads may require the addition of more road base aggregate to support the loads, replacement or lengthening of culverts, grading, and replacement of cattle guards. At the design stage of the Project, a careful inspection of these roads will be required to determine where and what improvements will be needed to make these roads serviceable for construction traffic. It is expected that existing local unpaved roads will be upgraded from their current status to support construction.

Project Trip Generation

Truck Traffic

The construction activities are anticipated to take approximately 18 months from mobilization until commercial operation. During construction, trucks will be using I-84, US-395, and local county roads to bring construction equipment, turbine components, substation equipment, and transmission line equipment to the various Project construction sites. Trucks will also be used to bring road base aggregate to improve existing roads and to construct new access roads; concrete for the turbine, substation, and O&M Building foundations; and water for dust control. As previously noted, the Project materials and equipment will arrive via I-84 and US-395. Figure U-1 identifies primary construction traffic routes to the Project.

The estimated number of construction trips is based on experience with traffic from similar sized wind projects and actual construction experience. Included in the estimate were the following major Project elements:

- Civil construction and material (aggregate, culverts, etc.) supply for new roads and upgrades to existing roads, turbine erection pads and crane pads, substations, laydown areas, collector lines, transmission lines, and the O&M Building;
- Turbine and related component delivery, including towers, nacelles, hubs, blades, pad mount transformers, substation equipment and transformers, collector line components, transmission line towers and conductor, and O&M Building materials;
- Material supply for turbine foundations (sand, aggregate, cement, and steel rebar);
 - The Applicant assumes concrete will be batched on-site in temporary plants; local suppliers may be used instead at the option of the construction contractor;
- Delivery of on-site construction equipment such as cranes, dozers, graders, compactors, forklifts, etc.; and
- Water truck traffic (assumes water comes from Hermiston, Stanfield, Echo, and Pendleton).

The Applicant assumes that construction of the turbines and facilities associated with the wind farm portion of the Project will take 18 months, whereas the construction of the off-site 230-kilovolt transmission line will only take approximately 9 months. An estimated total of 19,900 truck trips will be required for the wind farm construction; the on-site transmission line construction will require an estimated 1,060 trips and construction of the off-site transmission line is expected to require a similar number of trips. Over the 18-month wind farm construction period, and assuming an average of 24 working days per month, an average of 46 daily round trips will be generated by wind farm construction activities, and approximately 12 round trips per day will be generated by transmission line construction. It is further assumed that construction of the transmission lines between Project substations and off-site to the point of interconnection will occur concurrently with the wind farm construction so that the combined average daily trips during the 9 months when both activities are underway will be approximately 58 round trips per day. Since construction vehicle traffic is not uniform, this number is increased by 25 percent to account for peak periods, yielding an estimated maximum of 73 round trips per day or 146 one-way trips per day.

Truck traffic during operation of the Project will be minimal, and most of the time nonexistent. Heavy equipment may be brought in occasionally for major repairs or turbine replacement, but these occasions are expected to be infrequent.

Private Vehicle Traffic

Privately owned vehicles will be the primary means of transporting workers to and from the Project on a daily basis. During construction, an estimated average workforce of approximately 125 to 140 workers will be employed. During the peak months of construction activity, the estimated number of workers will increase to approximately 500. Most of the construction worker traffic will

originate from the communities that are along I-84, stretching from Boardman to Pendleton; a small number may also live in the small communities of Pilot Rock (which is located east of the Project) or Heppner in Morrow County (which is located southwest of the Project). As such, the workforce will use the same roads to access the Project as the equipment transporters.

Conservatively, it is assumed that most workers will drive alone, and that the average vehicle will only have 1.25 occupants. This makes the average daily vehicle counts 400 for the peak period and 112 for the average workforce. These daily vehicle counts are doubled to account for each one-way trip, resulting in an estimated 800 peak or 224 average trips per day. Private vehicles will primarily travel mornings and evenings corresponding to the work day, whereas the construction truck traffic will be more uniformly distributed throughout the work day. As a result, the private traffic and the truck traffic will not overlap for the most part.

During operations, an estimated 10 to 15 employees will be hired for O&M. These employees will live in proximity to the Project and use the same roads that will be used by the construction workforce. Occasionally during operations, specialty contractors will be brought in to handle major repairs. Operational traffic generation will be minimal.

Impacts to Existing Levels of Service

State, county, and local roads may be temporarily affected by construction related traffic but the impact is expected to be minimal. Table U-4 provides a summary of current traffic volumes and LOS conditions, as well as projected traffic volumes and service levels with Project construction traffic on the surrounding road network. Truck traffic will generally not coincide with morning and evening peak hours; rather, truck traffic will be dispersed throughout the working day. The private vehicle traffic will generally occur out of phase with the truck traffic, as the workers report earlier and leave later than most of the truck traffic. Given the early start times (7 a.m.) and late finish times (7 p.m.) common to wind farm construction, worker commuting traffic likely will overlap with peak traffic hours.

Interstate 84

Most Project traffic will travel on I-84 but will not cause a reduction in service levels on the highway. The highest traffic volume on I-84 in the Project Analysis Area is approximately 17,500 ADT (measured at automatic traffic recorder station 30-004 on I-84, west of Pendleton) for the most recent period of record of 2018 (ODOT 2018c). This ADT has remained steady over recent years and should be relatively stable in the future. Assuming that all Project traffic (both truck and personal vehicle traffic) will use I-84, the increase in traffic on I-84 that will be attributable to Project construction will be less than 1 percent of total traffic volume on that highway. This is inconsequential, as the interstate is operating well below its design capacity.

US-395

The segment of US-395 south of I-84 to CR-1350 will carry most of Project construction traffic. The traffic counts on US-395 near Pilot Rock are 810 ADT (measured at automatic traffic recorder station 30-007) as shown in Table U-4, and this highway operates at LOS A. Project construction

will add an estimated 372 peak trips per day on this road segment. Although this is a 46 percent increase in total traffic volume on this highway, this number of additional trips for construction traffic will not cause an appreciable increase in LOS on this highway segment because collector roads are intended to carry between 1,200 and 10,000 ADT.

County Roads

Project construction traffic will have lesser impacts on county roads in Umatilla County. Traffic count data collected by the county are limited, but most rural county roads see little traffic currently, typically less than 500 vehicles per day. As reported in the TSP (Umatilla County 2002):

“Since the observed traffic flows along many of the rural county roads are less than 1,000 vpd, peak hour traffic operations along these roads and at lower volume intersecting roads, are at excellent levels (LOS A, <0.48 v/c). Even where daily traffic volumes range between 1,000 and 6,000 vpd, roadway traffic operations are still at excellent levels (LOS A, <0.48 v/c).”²

Consequently, the traffic generated by the Project is not anticipated to result in total traffic volume that will decrease the service level on any Umatilla County road.

² The TSP uses “vpd,” or “vehicles per day,” as its metric. This is equivalent to ADT.

Table U-4. Project Construction Traffic Impacts to Area Roads

Location	Existing ADT (2018)	Current Peak Hour LOS	Existing Peak Hour V/C	Project Construction Traffic			ADT with Project Traffic	Projected V/C with Construction Traffic	Projected LOS with Construction Traffic
				Total Peak Trips per day, one-way	Worker Traffic, Peak trips per day, one-way	Truck Traffic, peak trips per day, one-way			
I-84 – South Pendleton Station 30-008	25,900	A (assumed)	Unknown	516	400	116	26,416	<0.48	A (no change)
US-395 at Pilot Rock – Station 30-007	810	A	<0.48	516	400	116	1,326	<0.48	A (no change)

Impact Minimization Measures

Agency Coordination

The Applicant will coordinate with ODOT and Umatilla County road officials as needed on road improvements, road closures, and permits needed for construction or movement of oversized loads of construction equipment or materials. Three permits from ODOT may be required (see also Exhibit E):

- **Oversize Load Movement Permit/Load Registration.** This permit is required for the movement of oversize or overweight loads on state highways, such as construction cranes, substation transformers, or other large equipment.
- **Permit to Occupy or Perform Operations Upon a State Highway.** This permit addresses utility installations within the right-of-way of an interstate or state highway, including the crossings of interstate and state highways by the Project transmission lines.
- **Access Management Permit.** This permit may be needed if a Project access road intersects directly with a state highway, and improvements are required at that intersection.

In addition to these state permits, the Applicant will coordinate with Umatilla County road officials as needed to address necessary road turning radius improvements, temporary road closures, oversize load movements, and monitoring of impacts to county roads. Pursuant to ORS 374.305, all affected counties require permitting for any work to be done within a county right-of-way, including making improvements to roads or intersections, or crossing a county road with the collector lines. The specific permit requirements and the names of those permits vary from county to county, as indicated in Exhibit E, Section 5, Third Party State or Local Permits; the Applicant will verify and comply with all local permit requirements prior to beginning construction on the Project.

A traffic management plan will be developed prior to construction in cooperation with Umatilla County, and with nearby cities, if necessary, to minimize impacts to traffic safety. The traffic management plan will address such issues as flagging, signage, and traffic flow around work sites on public roads; timing of oversize/overweight truck loads to avoid impacts to school bus schedules or during peak travel hours; and other mitigation measures if deemed necessary. These measures will help to prevent any construction-related traffic safety issues and will facilitate the free movement of traffic through the Project's vicinity. While the movement of heavy or oversized loads of construction materials or equipment may cause some localized traffic delays, these disruptions will be intermittent and temporary.

The Applicant will cooperate with the Public Works Department in Umatilla County with respect to obtaining permits to improve the roads and also to make repairs to roads that might result from construction traffic. In addition, the Applicant expects to enter into road use agreements with Umatilla County, to ensure that public roads impacted by construction will be left in 'as good or better' condition than that which existed prior to the start of construction.

Transportation BMPs

To minimize conflicts between Project traffic and background traffic, movements of normal heavy trucks (dump trucks, concrete trucks, standard size tractor-trailers or flatbeds, etc.) will be minimized (essential deliveries only), to the extent practicable, during peak traffic times. Movements of oversize trucks will be prohibited during peak times (rush-hour traffic periods), to the extent practicable. If possible, and considering worker safety, such oversize deliveries will occur during other parts of the day, when background traffic tends to be lower, such as late morning and early afternoon. The Applicant will work with local law enforcement as appropriate to assist with Project deliveries.

In addition, the Applicant's construction contractor will implement the following BMPs:

- Coordinating the timing and locations of road closures or oversize load movements in advance with emergency services such as fire, paramedics, and essential services such as mail delivery and school buses.
- Maintaining emergency vehicle access to private property.
- Developing plans as required by county or state permit to accommodate traffic where construction would require closures of state- or county-maintained roads for longer periods.
- Posting signs on county- and state-maintained roads, where appropriate, to alert motorists of construction and warn them of slow, merging, or oversize traffic.
- Using traffic control measures such as traffic control flaggers, warning signs, lights, and barriers during construction to ensure safety and to minimize localized traffic congestion. These measures will be required at locations and during times when trucks will be entering or exiting highways frequently.
- Using chase vehicles as required (or police vehicles, if required by ODOT) to give drivers additional warning.
- Notifying landowners prior to the start of construction near residences.
- Restoring residential areas as soon as possible, and fencing construction areas near residences at the end of the construction day. Gates will be installed on access roads to reduce unauthorized access when requested by property owners.

Air Transportation

No less than 45 days prior to construction, the Applicant will submit Federal Aviation Administration (FAA) form 7460-1 to the FAA and Oregon Department of Aviation (ODA) in accordance with ORS 836.535(2)(a) requesting a Determination of No Hazard to Air Navigation in order to allow the agency to evaluate the effect of the proposed construction on air safety and navigable airspace. This evaluation process begins with a determination of whether the proposed structure represents an obstruction. Obstructions are defined in 14 Code of Federal Regulations 77,

Subpart C (Sections 77.13 through 77.23), which defines obstructions based on both absolute height of the proposed object and height in relation to protected airspace. Thresholds for notifying the FAA are defined in 14 Code of Federal Regulations Subpart B Section 77.9 and are related to construction that would represent an obstruction or would intrude upon protected airspace or approach and takeoff clearance areas around airports. The first threshold for notice is any construction or alteration that would exceed 200 feet above ground level. The second threshold for notice is construction that would exceed the height of an imaginary surface extending upward and outward for a horizontal distance of 20,000 feet (3.8 miles) from an airport runway. For the purposes of notification and hazard determination, an airport is defined by the FAA as a public use airport, a military airport, an airport operated by a federal agency or the Department of Defense (DoD), or an airport with an FAA-approved Instrument Approach Procedure.

The Project meets the first threshold to notify the FAA for evaluation of the proposed wind turbines for their potential hazard to air traffic. The Applicant is required to submit notice to the FAA and ODA due to the overall height of the considered wind turbine models exceeding 200 feet above ground level. No public airports are located within 5 miles of the Project. The closest airport to the Project area is the Eastern Oregon Regional Airfield at Pendleton, which is approximately 7.8 miles northeast of the Site Boundary. Therefore, the second threshold for notifying the FAA and ODA is not exceeded.

Following the submittal of the Project's notice to FAA and ODA (a pre-construction requirement), FAA will conduct an aeronautical study in coordination with the DoD "clearing house" process. The DoD conducts formal reviews of projects for which the FAA conducts aeronautical analyses. The DoD provides information regarding FAA analyses to potentially affected military departments and DoD components, and reports back to FAA and the project proponents if unacceptable impacts to national security could occur as a result of implementation of a project. Proponents then have the opportunity to explore potential mitigation options that ensure continued DoD operations, testing, and training as well as energy development.³

A Determination of No Hazard to Air Navigation will be issued when the aeronautical study concludes that the proposed construction or alteration will exceed an obstruction standard but will not have a substantial aeronautical impact to air navigation. A Determination of No Hazard to Air Navigation may include conditional provisions, limitations to minimize potential problems, supplemental notice requirements, or requirements for marking and lighting, as appropriate. The Applicant will provide a record of all correspondence with FAA and ODA to the Oregon Energy Facility Siting Council no less than 30 days prior to construction.

³ The DoD Siting Clearinghouse acts as a single point of contact for Federal agencies; State, Indian tribal, and local governments; developers; and landowners, and provides a central forum for internal staffing. This website is a central location to provide information and act as a resource to assist interested individuals and organizations understand the mission impacts of proposed energy projects near military activities, and the Department's MCE process, procedures, and mitigation opportunities. The Clearing House process is defined in Part 211 of Title 32 of the Code of Federal Regulations.

3.2.2.7 Law Enforcement

Police service in the analysis area is primarily provided by county police departments; the cities of Hermiston and Stanfield have their own police departments, but only small segments of the Project Site Boundary and the Analysis Area are within their cities. As necessary, the Applicant will seek assistance from the nearest of the Umatilla County Sheriff's offices, which are located in Hermiston and Pendleton, Oregon. Additional law enforcement service is available through the Oregon State Police, which also has offices in Hermiston and Pendleton.

Construction and operation of the Project will not have a substantial, adverse impact on the provision of law enforcement services in the Analysis Area. The Applicant has contacted Umatilla County Sheriff Terry Rowan, the law enforcement service provider in the Site Boundary. Sheriff Rowan indicated that he did not foresee any significant impact to law enforcement services (Attachment U-2).

Any impacts to law enforcement caused by construction of the Project will be intermittent and temporary, as construction workers will remain in any one location for approximately 6 to 18 months and will not be expected to stay in the area beyond the end of construction. The construction contractor will be responsible for providing on-site security in the Project. The small number of permanent-resident employees is not anticipated to place significant, new demands on law enforcement agencies in the area.

3.2.2.8 Fire Protection

Fire protection service in the analysis area is provided by a number of agencies, including the Echo Rural Fire Protection District, Pilot Rock Rural Fire Protection District, Oregon Department of Forestry Pendleton Unit, Umatilla County Fire District #1, the Stanfield Fire District, the City of Pendleton Fire Department, and the Heppner Rural Fire District in Morrow County. The Applicant will provide construction plans, phasing information, and locational information for all Project facilities, including Project access, to all involved fire departments.

Attachment U-3 is a record of correspondence with the Umatilla County Fire District #1 and the Echo Rural Fire Protection District confirming that the construction and operation of the Project will not impede their abilities to provide emergency services. The Project is also within the Pilot Rock Rural Fire Protection District which, as of July 2018, merged with the Umatilla County Fire District #1. As the majority of the Project is outside of city boundaries and is within the rural fire protection districts of Echo and Pilot Rock, any emergency fire response will likely be by one of these two districts, and any assistance by another fire department will be in the service of one of these districts.

The greatest risk of fire on a wind farm occurs during construction, particularly from metal cutting and welding to construct the steel reinforcing cages for turbine foundations. In addition, fire hazards can result from workers smoking, refueling vehicles and equipment, and operating or parking vehicles and other equipment off roadways in areas of tall dry grass that could ignite upon contact with hot vehicle parts (e.g., mufflers or catalytic convertors).

Fire danger during construction can be significantly reduced through the implementation of safe working practices, such as maintaining adequate firefighting equipment and water supplies on hand during operations that carry a high fire risk, conducting metal cutting and welding within a cleared or graveled area, and preventing the parking of vehicles in areas with high, dry grass.

The following list provides a summary of typical fire prevention BMPs that will be implemented during Project construction:

- **Fire Prevention**
 - During periods of high fire danger, potential sources of fire ignition (vehicle exhaust systems, cigarettes, matches, propane torches, sparks from various hot work operations, etc.) must be used with extra precaution.
 - During construction, a water truck will be on-site to keep the ground and vegetation moist during extreme fire conditions.
 - Maintain open communication with local fire district personnel to identify and address fire hazards.
- **Vehicles**
 - Plan and manage the work and the movement of vehicles. No off-road driving is to be done while working alone.
 - The general contractor will be responsible for identifying and marking the path for all off-road vehicle travel.
 - All off-road vehicle travel is to stay on the identified path.
 - In the event a vehicle gets stuck, shut the engine off. Periodically inspect the area adjacent to the exhaust system for evidence of ignition of vegetation. Do not "rock" the vehicle to free it; rather, pull it out. Inspect the area after the vehicle has been moved.
 - In tall grass (i.e., tall or taller than the exhaust system of the vehicle[s]), pre-wet the area with water prior to driving on it with vehicles.
- **Fueling**
 - The general contractor will designate a location for field fueling operations at each construction yard. Any fueling of generators, pumps, etc., shall take place at this location only.
 - Fuel containers, if used, shall remain in a vehicle or equipment trailer, parked at a designated location alongside county rights-of-way. No fuel containers shall be in the vehicles that exit the right-of-way except for one 5-gallon container that is required for the water truck pump.

- Smoking
 - Smoking shall only be allowed in the designated smoking areas on the Project.
- Fire Suppression and Emergency Preparedness
 - Each vehicle used on-site shall have a fire extinguisher of sufficient type and capacity to suppress small fires around vehicles. Vehicle occupants shall be familiar with the location of these fire extinguishers. All employees who may have a need to use a fire extinguisher shall be current in their training on the general principles of fire extinguisher use and the hazards involved with incipient stage firefighting.
 - Prior to start of construction work activities, contact the local fire department and advise them of work type, location, and probable duration.
 - Prior to performing hot work (anything that creates a spark or an open flame is considered hot work), fire suppression equipment must be immediately available, hot work must only be done on road or turbine pad surfaces cleared of vegetation, and the on-site Safety Supervisor must be notified.
 - A fire watch, equipped with a suitable fire extinguisher, shall be maintained for a period of 60 minutes after completion of work in a specific area, and at the end of each day's activities.
- Emergency Notification and Follow Up
 - The following course of action should be taken if an emergency situation develops:
 - Evacuate as necessary. Maintain site security and control if possible. If crews are working at different areas of the site, a designated meeting location will be created for all people to gather.
 - Notify proper emergency services (fire, ambulance, etc.) for assistance.
 - Notify site management of any possible fires.
 - Prepare a summary report of the incident as soon as possible after the incident.

During the O&M phase of the Project, fire danger will be minimal. Wind turbines contain a number of safety features designed to provide increased fire protection; for example, fully independent braking systems and emergency shutoff devices. In addition, the turbine models considered will be equipped with internal fire suppression systems in the nacelles. The O&M Building will be equipped with fire protection equipment in accordance with the Oregon Fire Code, and the substations, collector lines, and other electrical connections will be built to National Electrical Safety Code standards. Typical maintenance activities will not carry a significant fire risk, as maintenance vehicles will drive and park on maintained gravel roads and turbine pads, avoiding hazards associated with driving or parking in tall dry grass. Given the inherent fire-safety features of Project

components and the relatively small number of new temporary and permanent residents, significant new demands on fire protection forces are not anticipated.

Both Fire Chief Merle Gehrke of the Echo Rural Fire District and Operations Chief Jim Forquer of the Umatilla County Fire District #1 have indicated that the construction and operation of the Project will not impact their ability to provide fire protection services to their respective districts. Additionally, Fire Chief Merle Gehrke stated that they do not provide high angle or confined space rescues (Attachment U-3).

3.2.2.9 Health Care

There are a number of health care service providers in the Analysis Area. The nearest hospitals are the St. Anthony Hospital located in Pendleton, the Good Shepherd Medical Center in Hermiston, and Pioneer Memorial Hospital located in Heppner, in Morrow County. The nearest Level III trauma center is the Good Shepard Medical Center (OHA 2019). The nearest Level I trauma centers are located in the city of Portland: Oregon Health & Science University Hospital and Legacy Emmanuel Medical Center. Ambulance service in the area is provided by the Umatilla County Fire District #1 (UCFD 2019). Some of the nearby fire districts also have First Response Vehicles, with equipment and crew trained to stabilize a patient until the arrival of an ambulance for transport.

Although the small number of temporary workers and permanent resident employees are not expected to place significant, new demands on the routine health care services in the Project's Analysis Area, impacts on health care could occur if Project construction activities result in an unexpected increase in emergency services to such a degree that it overwhelms local providers. Construction and operation of the Project will not have an adverse impact on area health care providers. Impacts on local health care services during both construction and operation will be minimized by implementation of a robust safety program that will minimize health and safety risks. Should any worker suffer an injury that requires immediate medical attention, such injured workers would be transported using one of the local ambulance services. Any worker suffering minor injuries will be transported and treated at any of the three local hospitals, while workers suffering more serious injuries will be taken to the Good Shepherd Medical Center in Hermiston, which is a Level III trauma center, or will be flown by helicopter (operated by Life Flight) to one of the two Level I hospitals located in Portland.

The construction contractor will be responsible for implementing the safety program, which is expected to prevent nearly all serious injuries that would require ambulance or hospital services. Area ambulance services and hospitals appear to have adequate capacity, and the Project will not impact their ability to serve local communities.

3.2.2.10 Schools

The Project Analysis Area falls within the Hermiston, Stanfield, Pendleton, Echo, Umatilla, Pilot Rock, and Morrow County school districts. According to the Umatilla County Coordinated Human Services Public Transportation Plan, the Mid-Columbia Bus Service provides school bus service to all county public schools on a contract basis in Umatilla County (Umatilla County 2016). No school

districts outside the Analysis Area are anticipated to experience increased enrollment as a result of the Project.

No significant adverse impacts to schools are anticipated during construction and operation of the Project. No schools are located within the Site Boundary, and therefore none will be directly affected by Project construction or operations. Construction will be temporary and short-term, and much of the peak work period will occur during the summer months, when school is not in session. The trend in construction projects of this nature is that only a small percentage of workers hired from outside the area bring their families and school-age children for a short-term relocation, so the number of additional students will be minimal (USDE 2019). The number of new permanent resident employees will also be small, and new families with school-age children will be welcomed at local area schools. Impacts on school services will depend on the housing choices of the new residents with children, which cannot be predicted; however, given the number of schools in the locations where new residents are likely to settle, and the small number of new school children expected, it is unlikely that any one school will receive more new students than it can accommodate.

To the degree practicable, the Applicant will coordinate the timing of large component or equipment deliveries to avoid peak hours for school buses and impacts to bus routes.

3.2.3 Proposed Monitoring Programs

OAR 345-021-0010(1)(u)(E) The applicant's proposed monitoring program, if any, for impacts to the ability of the providers identified in (B) to provide the services listed in OAR 345-022-0110.

Since no adverse impacts are anticipated during either the construction or operations phases of the Project, no monitoring program is being proposed.

4.0 Conclusions

Based on the rural nature of the Project, the low number of workers needed during the operations phase, and the impact minimization measures that will be implemented during Project construction, adverse impacts to public or private service providers are not anticipated. For the reasons set forth in this Exhibit, the construction and operation of the Project are not likely to result in any significant, adverse impact to the ability of public or private providers to provide the services listed in OAR 345-022-0110.

5.0 References

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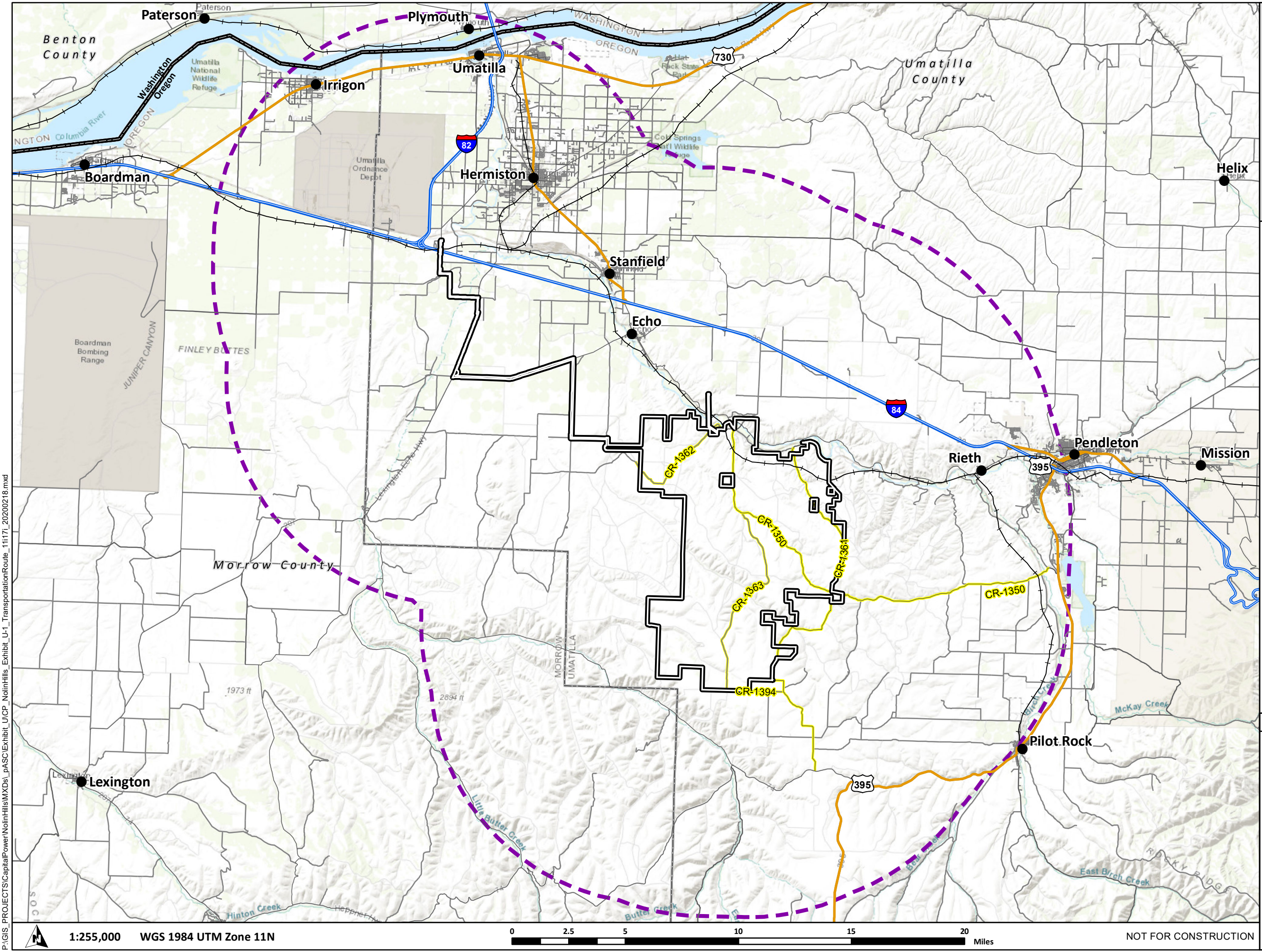
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Figures

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Nolin Hills Wind Power Project


Figure U-1
Transportation Routes

UMATILLA COUNTY, OREGON

- Proposed Site Boundary
- Analysis Area (10-mile Buffer)
- County and Local Roads
- Transportation Route
- City/Town
- Interstate Highway
- Secondary Highway
- Secondary Road
- Local Road
- Railroad
- State Boundary
- County Boundary

 TETRA TECH


RESPONSIBLE ENERGY
FOR TOMORROW

Data Sources	Reference Map
Capital Power-Project Infrastructure; USDA-Aerial Imagery; ESRI-Roads; Ventyx-Railroads; ESRI-Counties, States, Cities	

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Attachment U-1. Landfill Communications

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Cavanagh, Suzy

From: McNown, Keith <KMcNown@wm.com>
Sent: Tuesday, September 18, 2018 4:55 PM
To: Jay Shukin
Cc: Cyrus Tingley
Subject: RE: Construction Debris Disposal

Notice: External Email

Yes sir

We can handle it. We have a tipper that could be used for that 100 yard box.

Happy to help.

Keith McNown

Manager-3rd Party Sales-Oregon
Pacific NW/BC Market Area
kmcnown@wm.com

Waste Management

3205 SE Minter Bridge Road
Hillsboro, OR 97123
Tel (503) 640-9427
Cell (503) 575-8133
Fax (503) 648-3942

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From: Jay Shukin [mailto:jshukin@capitalpower.com]
Sent: Tuesday, September 18, 2018 3:53 PM
To: McNown, Keith <KMcNown@wm.com>
Cc: Cyrus Tingley <ctingley@capitalpower.com>
Subject: [EXTERNAL] RE: Construction Debris Disposal

Hi Keith – thanks for your note and attention. Just to clarify, we are still in the regulatory approval stage in terms of project development. My intent in making contact with you was just to inquire whether you could handle the waste volumes that we're expecting to generate once project construction begins. It sounds like you would be able to – correct?

Thanks very much for reaching out. We will continue to keep you posted as we move along with the Nolin Hills Wind Energy Project.

Best,

Jay

Jay Shukin
Manager, Stakeholder Engagement

From: McNown, Keith <KMcNown@wm.com>
Sent: Tuesday, September 18, 2018 3:47 PM
To: Jay Shukin <jshukin@capitalpower.com>
Cc: Cyrus Tingley <ctingley@capitalpower.com>
Subject: Construction Debris Disposal

Notice: External Email

Gents

I can help you with the construction debris waste. Sounds like a big job and I will get you quotes from the drop box rep. However, I can quote this 100 yard intermodal too.

It holds 25 tons and is quoted flat rate.

If you went with 40 yard roll off's, how many do you need at one time onsite?

Keith McNown

Manager-3rd Party Sales-Oregon
Pacific NW/BC Market Area
kmcnown@wm.com

Waste Management

3205 SE Minter Bridge Road
Hillsboro, OR 97123
Tel (503) 640-9427
Cell (503) 575-8133
Fax (503) 648-3942

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From: McNown, Keith
Sent: Tuesday, September 18, 2018 3:43 PM
Cc: 'jshukin@capitalpower.com' <jshukin@capitalpower.com>
Subject:

Gents

Keith McNown

Manager-3rd Party Sales-Oregon
Pacific NW/BC Market Area
kmcnown@wm.com

Waste Management

3205 SE Minter Bridge Road

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Tel (503) 640-9427
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Fax (503) 648-3942

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Cavanagh, Suzy

From: Dean Large <Dean.Large@WasteConnections.com>
Sent: Wednesday, August 1, 2018 9:50 AM
To: Jay Shukin
Cc: Jocelyn Jones; Kevin Green
Subject: Re: Nolin Hills Wind Energy Project – Consulting re. Impacts to Services

Notice: External Email

Thank you for the update.

Finley Buttes Landfill has more than 100 years of remaining life and can receive any non hazardous waste. Some wastes require prior approvals through our Special Waste process, but that should not impact our ability to accept your waste. I am asking Jocelyn Jones to follow up with you regarding this project Thanks

Sent from my iPhone

> On Aug 1, 2018, at 8:44 AM, Jay Shukin <jshukin@capitalpower.com> wrote:

>

> Hi Dean - I'm following on our discussion last week about the Nolin Hills Wind Energy Project, which Capital Power has proposed in Umatilla County. The Project is located on land owned by the Cunningham Sheep, Pendleton, Hoke, and Mud Springs Ranches. We anticipate it will generate 350 megawatts from as many as 130 turbines. A map of the Project boundary is attached.

>

> I'm gathering information about the possible volumes of waste that the project could generate during construction. This would be general construction materials (i.e. no hazardous substances). I'll get back to you asap.

>

> As noted, Capital Power (www.capitalpower.com<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.capitalpower.com&d=DwMF-g&c=9g49JK_oyOnGoB_QNpFjmMtJm41Yy-9dAZtUwi7WKVQ&r=5X6ijVlw_pKuiiqTF9sa30orBRL2mj3DOpMKtdNZ-o4&m=1drp5gBFNVctc3rzQlnHzYf4YUr1ywpqNi5W-1tRbAY&s=fFd-bDkmDuxn7sflsrhL-tcvtkz2hberdyJNQ9sXpt8&e=>>) is moving the Project through the state's regulatory process (the Energy Facility Siting Council process). As part of this, required seek a letter from you indicating that our project will not affect your facility's ability to provide services to the area.

>

> Capital Power is an experienced power generation company with over 4,500 megawatts in operation at 24 facilities throughout North America. Building and operating wind projects is one of the company's core skill areas, with six projects built over the last seven years, ranging from 140 to 270 megawatts.

>

> I'll get back to you with more as soon as possible.

>

> Regards,

>

> Jay

>

> Jay Shukin

> Manager, Indigenous and Stakeholder Engagement Capital Power

> 250-882-5188

>

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> <Nolin Hills Wind Project (vicinity map) - July 2018.pdf>

Attachment U-2. Police Communications

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UMATILLA COUNTY SHERIFF'S OFFICE

"Conservators of the Peace"

Sheriff Terry L. Rowan



Undersheriff Jim Littlefield

TO: Jay Shukin

FROM: Sheriff Terry L. Rowan

RE: Nolin Hills Wind Energy Project.

Date: 9-7-18

Dear Sir,

I have reviewed the material you provided including the site map. The area indicated in the site map falls within the Law Enforcement Jurisdiction of the Umatilla County Sheriff's Office. This area is comprised mostly of farm/ranch land and is sparsely populated.

After my review of the material, I do not see any significant impact to Law Enforcement services in the outline area.

Respectfully,

A handwritten signature in blue ink, appearing to read "Terry L. Rowan".

Terry L. Rowan/Sheriff

Attachment U-3. Fire District Communications

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UMATILLA COUNTY FIRE DISTRICT #1

Date: August 8, 2018
To: Jay Shukin – Capitol Power
From: Jim Forquer – Operations Chief UCFD #1
Subject: Nolin Hills Wind Energy Project

After reviewing the memo and documents you forwarded, I wanted to respond to your request regarding potential impact to Umatilla County Fire District #1.

As I mentioned in our conversation, UCFD #1 provides the ambulance transport service for approximately the western half of your project. We also have automatic and mutual aid agreements for emergency response with all the surrounding fire districts.

Based on the information you provided, I would expect the “daily operations” of your project to have minimal impact to UCFD #1.

I would very much appreciate to be included in the distribution of site safety and emergency response plans as those are developed and implemented.

If you need anything else please don't hesitate to ask.