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*Permit Application*

**Teanaway Solar Reserve  
Conditional Use Permit  
Application**

Submitted to

**Kittitas County, Washington**

by

**Teanaway Solar Reserve, LLC**

August 2009



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**Attachments**

- A Figures Referenced in Text
- B Photographs of Solar Facilities
- C Landowners Adjacent to Proposed Site Boundary
- D Legal Description
- E Development Agreement

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## SECTION 1

# Request

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Teanaway Solar Reserve, LLC (Applicant) proposes to construct and operate the Teanaway Solar Reserve (project), a solar farm capable of generating up to 75 direct current megawatts (MWdc) of photovoltaic (PV) solar energy. The proposed project area consists of 982 acres within the County's Forest and Range (F-R) zoning district. Based on site surveys, the project will utilize approximately 580 acres within the proposed project area.

The Applicant worked with staff from Kittitas County to determine the applicable land use approvals and permits in addition to the relevant provisions from the *Kittitas County Code* (KCC). This narrative is a component of the application submitted to Kittitas County for a Conditional Use Permit (CUP) necessary to construct and operate the proposed project. The Applicant understands that the following approvals and permits are also required from Kittitas County:

- The Applicant must demonstrate project compliance with the State Environmental Policy Act (SEPA) through a decision rendered by Kittitas County. This application notebook also includes the Applicant's Expanded SEPA Checklist to demonstrate compliance with SEPA.
- The project is subject to compliance with the County's Critical Areas Ordinance (CAO). The CAO is introduced in this narrative (see Section 3), but a thorough demonstration of compliance is included in the Land Use section of the Expanded SEPA Checklist.
- Kittitas County has indicated that the size and complexity of the project generates the need for a Development Agreement (DA) between the Applicant and County. To ensure mitigation consistency and jurisdictional efficiency, the requirement for the DA is expected to be a condition for approval of this CUP, and will condition and govern this CUP. As set forth in the DA, any inconsistencies between the CUP and the DA will be resolved in favor of the DA. A draft DA is included as Attachment E to this CUP application and will also be submitted concurrent with the other application material described above, under separate cover. The SEPA Expanded Checklist is intended to apply to all of Applicant's County proposals triggering SEPA, including this CUP and the DA.

Subsequent sections of this narrative are organized as follows:

- **Section 2, Project Description:** This section provides information about the project in general, including the purpose and need (Section 2.1), proposed schedule (Section 2.2) site setting (Section 2.3), key components (Section 2.4), permits and authorizations (Section 2.5), summary of construction activities and features (Section 2.6), and summary of operations and maintenance activities and features (Section 2.7).
- **Section 3, Compliance with Kittitas County Land Use Regulations:** This section provides specific detail on how the project is consistent with the applicable provisions from the KCC. The section is organized numerically by applicable code.

- **Attachment A:** Contains figures referenced in the text of this narrative.
- **Attachment B:** Contains photographs showing examples of proposed project components.
- **Attachment C:** Contains a table identifying landowners of real property within 500 feet of the proposed project.
- **Attachment D:** Contains a legal description of the proposed project.
- **Attachment E:** Contains the Draft Development Agreement, which will be submitted to the Board of County Commissioners of Kittitas County.

## SECTION 2

# Project Description

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This section provides an overview of the project. Topics addressed are project purpose and need, proposed schedule, site setting, key components, permits and authorizations, summary of construction activities and components, and a summary of operations and maintenance activities and components.

## 2.1 Purpose and Need

The purpose of the proposed project is to generate up to 75 MWdc of PV solar energy for distribution to utilities and communities seeking to optimize their renewable and sustainable energy sources. The project was conceived in response to the growing need for sustainable energy sources and the State of Washington's Renewable Electricity Standard, Revised Code of Washington (RCW) Title 19, mandate that by the year 2020, the state's largest electric utilities meet 15 percent of their retail electric load with renewable electricity (for example, wind and solar energy). The standard first takes effect in 2012 with a requirement of 3 percent through 2015, then 9 percent from 2016 through 2019 and 15 percent thereafter.

Oregon and California have adopted similar standards. Depending on the commercial terms available for the power sales, the utilities that may buy the power from the project could change over time.

The Applicant proposes to develop the site described below to maximize its solar energy potential, based on its commitment to providing renewable energy and becoming a leading (in terms of energy production and environmentally sensitive development and management of its solar production site) sustainable energy production location in North America. The following factors will be analyzed to determine optimal location within the site defined below:

- Significant solar radiation (insolation)
- Site accessibility
- Avoidance of environmentally sensitive areas
- Limited visibility from offsite locations

## 2.2 Project Schedule

The proposed project schedule is outlined in Table 2-1.

TABLE 2-1  
 Proposed Project Schedule

| Task/Milestone           | Start         | Finish   |
|--------------------------|---------------|--|
| Obtain Necessary Permits | June 2009     | April 1, 2010  |
| Engineering              | June 2009     | October 2010   |
| Construction             | April 1, 2010 | As early as October 2011 or as late as December 2012 |
| Initial Operation        | Fall 2010     | Not applicable                                       |

Note: Two to three 7- to 9-month construction seasons are anticipated, from April to as early as October or as late as December in 2010, 2011, and 2012.

## 2.3 Site Setting

The proposed project site is located approximately 4 miles northeast of Cle Elum, Washington, in Township 20N, Range 16E, within Sections 22, 23, and 27 (see Figure 1 for site location). The site is located on the eastern slopes of the Cascade Mountains on Cle Elum Ridge, which runs generally from east to west at elevations ranging from approximately 2,200 to 2,600 feet (Figure 2). The Teanaway River is approximately 1 mile to the northeast of Cle Elum Ridge. The site is accessed from Highway 970 by way of County roads such as Red Bridge Road (Figure 3), and private roads such as Loping Lane and Weihl Road.

The proposed project area consists of 982 acres. Based on site surveys, the project will utilize approximately 580 acres within the proposed project area. The remaining acres are currently undeveloped open space, but may accommodate some future expansion of the project after appropriate surveys are conducted to address any environmental concerns and compliance with any underlying federal, state, or local permitting requirements.

The Bonneville Power Administration's (BPA) 345-kilovolt (kV) Rocky Reach-Maple Valley transmission line runs east to west along the southern site boundary (Figure 2). The proposed project is expected to interconnect to the regional transmission grid using this line (Figure 5). An interconnection substation with an approximate footprint of 10 acres will be located either on the project site, or within the BPA line right-of-way (Figure 5).

Some structural and residential development has taken place on the site's southern boundary. Figure 4 shows the identified structures within the vicinity of the site boundary. The closest identified residence is approximately 200 feet southeast of the proposed project area.

The site is currently zoned Forest and Range (F-R) (Figure 6). The site was most recently selectively logged in 2001 and existing site vegetation consists of low grasses, shrubs, and plants with scattered 50- to 60-foot, 6- to 18-inch-diameter ponderosa pine (*Pinus ponderosa*) trees. Shrub and riparian plant communities are predominantly snowberry (*Symphoricarpos albus*) and Rose (*Rosa* spp.) bushes. Herbaceous plant communities are predominantly Lupine (*Lupinus seiceus*), yarrow (*Achillea millefolium*), arrowleaf balsamroot (*Balsamorhiza*



*sagittata*), and various grass species. Wetland plant communities are dominated by rushes (*Juncus* spp.), sedges (*Carex* spp.), wild onion (*Allium douglasii*), and various grass species.

## 2.4 Key Components

The proposed project will consist of the following key components:

- Solar modules
- Inverter Buildings
- Underground Electrical Conductors
- Substation
- Transmission Line
- Access and Maintenance Roads
- Operations and Maintenance (O&M) Building

Key components are described in the following subsections.

### 2.4.1 Solar Modules

Solar modules in a metal frame on supporting mounting structures will be used for the proposed project. The solar modules are manufactured offsite and will be delivered to the site by truck in wooden crates or cardboard boxes. A representative module from Sharp Electronics Corporation is shown in Attachment B, Photo 1. The module measures 1.0 by 1.6 meters (3.3 feet by 5.3 feet) and is rated at 216 watts (Sharp Electronics, 2009). The solar modules are mounted in a fashion that orients the modules toward the sun.

Several mounting types will be considered to best address the slope of land at the project site. For example, large land areas with a slope toward the south are excellent for single-axis tracking systems. Land areas that are sloped to the east, southeast, west, or southwest will not as easily accommodate single-axis tracking systems, and are better suited to a fixed-tilt mounting structure or a pole-mounted tracking system.

A representative single-axis tracking system is presented in Attachment B, Photo 2. The mounting system foundations could consist of precast foundations or embedded posts or poles. The embedment could be done by driving a ground screw, or by boring the ground to a depth of approximately 4 to 6 feet and width of approximately 8 to 10 inches, then backfilling with concrete. For one type of support approach, one post is needed for every five to six solar modules. If the entire 75 MWdc were to be installed with this mounting system, then approximately 70,000 posts would need to be set. About 70 percent of the solar modules for the proposed site will likely use this mounting type, meaning that about 50,000 posts would need to be set (primarily on lands with a south-facing slope). The excavated earth would not be removed from the site.

Another mounting method is to place the solar modules on top of a single pole. The “top of pole mount” system could be installed in areas with a slope facing the southeast. This system consists of a large steel pole that supports the solar module. The pole would attach to a post buried into the ground to a depth of 10 to 15 feet, with a width of 10 to 24 inches. A representative top of pole mount system is shown in Attachment B, Photo 3. The system shown attaches eight solar modules. The most likely configuration is to have between 12 to

20 solar modules mounted on one pole. It is estimated that about 10 percent of the solar installation will be installed using this method, and approximately 3,000 posts will need to be set.

Fixed-tilt systems typically have a galvanized or corrosion-resistant metal frame to hold the solar modules at a 20 to 30 degree tilt, as shown in Attachment B, Photo 4. A dimensioned view is shown in Attachment B, Photo 5, and a cutaway view is shown in Attachment B, Photo 6. It is estimated that 20 percent of the solar installation will be installed using this mounting method.

## 2.4.2 Inverter Buildings

Up to 40 inverter buildings will be needed for the project. The inverters can be placed outdoors, as shown in Attachment B, Photo 8. While the inverter enclosures are rated for outdoor use, the manufacturer recommends an enclosure to protect the inverters from the elements and extreme temperature changes. An example inverter building includes a concrete pad, and prefabricated facilities are available such as the 2-MW enclosed system offered by Xantrex. Systems similar to the offering from Xantrex enclose four 500-kilowatt (kW) inverters and a 2-MW transformer in a weather-resistant structure measuring 40 feet by 9 feet by 8 feet 6 inches tall. The 2-MW structure shown in Attachment B, Photo 9, is representative of an inverter building that will be used onsite.

## 2.4.3 Underground Electrical Conductors

Underground electrical conductors will be installed in trenches at a depth in compliance with the Kittitas County (36 inches or greater). Conductors either will be direct burial or in a polyvinylchloride (PVC) conduit.

## 2.4.4 Substation

The Applicant proposes to construct an electrical substation that will interconnect with the 345-kV BPA transmission line. The substation will require a level, fenced area of approximately 10 acres. The 10-acre area will be graveled with no vegetation. The substation will contain a small control house, transformer(s), circuit breakers and switches, steel support structures, and overhead electrical bus work. Its appearance will be similar to that of many other substations throughout the Pacific Northwest.

## 2.4.5 Transmission Line

A new 345-kV transmission line will be needed to connect the new substation to the existing BPA line. If the substation is located at the BPA right-of-way, this line would be very short. The line would have two circuits, one into the substation and one out of the substation. The construction could be similar to the existing lattice towers, and require a right-of-way of up to 300 feet in width.

## 2.4.6 Access and Maintenance Roads

The site will be accessed via Kittitas County and private roads that interconnect with Highway 970. The major County access road is Red Bridge Road. Loping Lane and Weihl Road are private roads over which the Applicant has easement rights. Loping Lane is subject to several road use and cost-sharing agreements, and the Applicant will be subject to

those agreements. Additionally, the Applicant will work with neighbors who use Loping Lane to identify measures that will minimize disruption to their use during construction and to the roadway itself. The project will be served internally by a network of existing and/or new maintenance roads. The existing maintenance roads, along with Wehl Road and Loping Lane, generally consist of gravel and dirt and will be improved pursuant to County requirements. As set forth in the attached DA, the Applicant will coordinate any improvements to these roads with the Kittitas County Public Works Department. Figure 3 shows the location of the access and maintenance roads in relation to the project site.

## 2.5 Permits and Authorizations

Table 2-2 outlines the permits and authorizations required to construct the proposed project.

TABLE 2-2  
 Required Permits and Authorizations

| <b>Act/Law</b>                         | <b>Permit/Authorization</b>                   | <b>Agency/Contact</b>                      |
|--|---|--|
| Section 404 Clean Water Act Compliance | Section 404—Nationwide Permit                 | U.S. Army Corps of Engineers               |
| Historic Preservation Act Compliance   | Section 106 Review                            | State Historic Preservation Office         |
| State Environmental Policy Act         | Chapter 197-11 Washington Administrative Code | Kittitas County                            |
| Clean Water Act—Section 401 Compliance | Water Quality Certification                   | Washington Department of Ecology           |
| Forest Practices Act                   | Forest Practices permit                       | Washington Department of Natural Resources |
| Land Use Review                        | Conditional Use Permit                        | Kittitas County                            |
| Land Use Review                        | Development Agreement                         | Kittitas County                            |
| Land Use Review                        | Cultural Resources                            | Kittitas County                            |
| Land Use Review                        | Stormwater                                    | Kittitas County                            |
| Land Use Review                        | Critical Areas Ordinance                      | Kittitas County                            |

## 2.6 Summary of Construction Activities and Components

Site preparation will consist of clearing the existing vegetation only in those areas where driveways and modular construction will be undertaken, grading, and establishing temporary staging areas (including stockpile and laydown areas). Site preparation will be limited to staging areas, maintenance roads, O&M facilities, and some extreme portions of the larger site as needed to accommodate a level field for the solar facility. Once the site is prepared, the installation of foundations, trackers, modules, inverter equipment pads, and substation foundation can begin.

## 2.6.1 Site Clearing and Grading

The project site will require clearing to address the potential for damage to the project from blown down trees, decreased power efficiency of the solar modules, the risk of fire from fuel buildup within the project area, and the need to create a 100-foot firebreak along the project's perimeters as provided below. To clear the site for installing the project, trees will be harvested within the project area on an as-needed basis for facilitating the next construction phase of the project (Table 2-1). Trees will generally be harvested to a stump level of 6 to 12 inches above ground level. The Applicant will obtain a permit from the Washington Department of Natural Resources (WDNR) and contract with a professional forester to harvest these trees in accordance with the permit. Because the bottoms of the solar modules will be approximately 3 feet above grade, any vegetation taller than 3 feet or expected to exceed 3 feet in height will be removed. Shrubs, grass, and groundcover will, to the maximum extent practicable, remain between rows and under the solar modules.

Construction equipment such as tractors, backhoes, loaders, dozers, and graders will be needed to clear brush and vegetation from the site as needed, and to grade roads and foundation locations. If the slope of the land is excessive, terracing, or retaining walls may be required.

## 2.6.2 Staging Areas

A temporary staging area of approximately 5 acres will be used as a laydown area for parts and materials such as solar crates, electric cable, structural supports, and perhaps a concrete batching facility. The staging area could be located at the intersection of logging roads on the property, as illustrated on Figure 7. Attachment B, Photo 10, shows a typical staging area for a 10-MW solar project. Mobilization of the site will consist of fencing off a 5 acre section of land that will be needed to store materials. Mobilization will also include a temporary facility and staging area for solar module deliveries, and metal racking. Mobilization will last approximately 1 month.

## 2.6.3 Foundations, Trackers, and Modules

The foundations securing the solar modules will be designed to withstand high winds and snow loads. The site may have multiple foundation types to match the ground conditions and type of mounting structure used. One foundation type consists of boring a hole approximately 12 inches wide and 48 inches deep to hold a steel support pipe. The hole is then filled with concrete. A support pier will be required for every 45 square feet of land area, or approximately 1,000 piers per installed MW of solar capacity. Approximately 145 acres of modules will be installed within the 982-acre proposed project area.

A second type of foundation consists of an abovegrade concrete ballast used to support the uplift forces of the solar mounting structure. These ballasts will contain 0.25 to 0.35 cubic yards of concrete per block, and two concrete ballasts will support a small array of solar modules.

Pending final design, the solar module foundations will require site work, potential boring, trucking of materials, and concrete. The number of foundations could be as high as 70,000, and require approximately four thousand truck deliveries.

Installation of foundations, trackers, and modules will occur over a period of approximately 7 to 9 months during two or three construction seasons (April to December).

#### 2.6.4 Inverter Equipment Pads and Substation Foundation

Electrical equipment will be located onsite in multiple locations. There will be one inverter building (that houses two inverters and one associated transformer) for every approximately 7 acres of solar field. One inverter building will house (2) 500-kW inverters, so there will be one inverter building for every 1 MW of solar field. Approximately 7 acres are needed for a 1-MW solar array. As stated in Section 2.6.3, approximately 145 acres of modules will be installed within the 982 acre proposed project area.

Up to 75 inverter buildings will be needed. The inverter stations will require a concrete pad of approximately 40 by 10 feet. The inverter buildings will be approximately 10 feet tall.

Wiring connecting module arrays to the inverters and the inverters to the substation will need to be run in underground cables (Attachment B, Photos 11, 12, and 13). Trenching is required for the conductors from the inverter buildings to the main substation. Trenching requires removing earth in a section of several feet wide by approximately 2 to 3 feet deep.

The substation will require an area of approximately 10 acres. The substation consists of a steel support structure that is 15 to 20 feet tall. The substation will be surrounded by a cyclone fence that is approximately 10 feet tall. The substation will include a small control building, approximately 20 feet wide by 20 feet long, that is enclosed with air conditioning.

Pending location of the substation, overhead electrical distribution lines may be required to connect the substation with BPA's transmission line. Poles supporting the overhead lines will be required approximately every 750 feet.

Installation of inverter equipment pads and other foundations will occur over a period of approximately 5 to 6 months.

#### 2.6.5 Construction Materials and Equipment

If the project uses above-ground mounting methods with ballasted (concrete) blocks, the amount of concrete required is subject to wind loading and engineering analysis. An estimated 33,000 cubic yards of concrete could be used to create the ballasted footings, equivalent to approximately 3,500 truckloads of concrete. The concrete is expected to be pre-mixed. If a concrete batch plant is necessary for the site, it will only be used for onsite purposes and will be removed when construction is completed. The structural supports and other mounting materials would require an estimated 800 trucks to deliver materials to the site based on vendor estimates. Thus, a total number of truck deliveries to the site would be in the range of 4,300 for deliveries of goods and materials.

The 75 MWdc anticipated to be generated from this project equates to 75,000,000 watts-dc, or 347,222 solar modules of 216 watts-dc each. It is estimated that the project will require up to 450 shipping containers of solar modules.

Gravel and concrete for the project will be sourced in the Cle Elum area to the extent possible.

Construction equipment such as backhoes, loaders, concrete trucks, and graders will likely be used. A crane may be necessary, but is typically not required.

### 2.6.6 Transportation and Traffic

Materials for the project (e.g., solar modules, supporting racks, foundation materials, electrical gear) will be brought to the site by truck. The trucks will travel on Interstate 90 and access Highway 970 by way of County roads such as Red Bridge Road (see Figure 3), and private roads such as Loping Lane and Weihl Road. Road service within the project area will be provided by an existing network of maintenance roads, although new maintenance roads or segments may be necessary. Road improvements will be conducted pursuant to County requirements. Road improvements are further addressed through the attached DA with Kittitas County (see Attachment E). For further discussion of the traffic impacts, please see the Transportation section of the SEPA.

### 2.6.7 Employment

A typical construction workforce for a multiple-megawatt solar facility consists of between 200 and 450 full-time workers, during the construction period. Typically, 100 to 150 workers are involved in the site prep, and 100 to 150 are involved in fabricating the concrete forms and placing the concrete ballasts in the field. When the solar installation begins, the workload will peak, and will likely remain at between 300 and 450 workers for a period of up to 27 months (two to three 7- to 9-month construction seasons). Workers could be brought in by vanpool or bus. Workers are not typically housed onsite, but this is subject to the cost of transportation to the site. Subject to the needs of any security personnel for the project, it is not expected that a significant number of workers will remain onsite and require temporary housing. Security crews will likely consist of up to eight onsite workers. In addition, access control in the form of an electric gate with an associated keypad security code for entry will be installed.

### 2.6.8 Safety and Fire Protection

The fire protection needs of the site are currently served by WDNR. After the project is constructed, the site will likely be served by the Kittitas County Fire Protection District #7. Further, the project will be bordered by a firebreak no less than 100 feet wide. Separate safety or fire protection systems will not be required at the site. Basic safety and fire protection equipment such as fire extinguishers, personal protective equipment, and other equipment as determined by the site's safety and emergency response plan can be stored in the O&M equipment storage building.

### 2.6.9 Water Use

Water will be needed for activities such as dust control and module cleaning. The Applicant proposes to truck in water from the Cle Elum area or elsewhere. Subject to any restrictions imposed by the County or Washington Department of Ecology (Ecology), an alternative approach would be to establish a groundwater well onsite. For initial project permitting, it is assumed that water will be trucked to the site.

### 2.6.10 Sewer and Solid Waste

Sewer services are not anticipated. Portable toilets will be placed onsite during construction. The onsite toilets will require regular service visits.

## 2.7 Summary of Operations and Maintenance Activities and Components

Photovoltaic power plants typically have low O&M requirements. During the life of the plant, there will be regular O&M site activity. The actual O&M requirements will be determined by the specific plant components.

### 2.7.1 Materials and Equipment

A storage and O&M building will store spare parts (e.g., modules and fuses), equipment testing equipment, and cleaning equipment. The building will be of cinderblock construction or pre-engineered with dimensions of roughly 20 feet by 20 feet.

### 2.7.2 Transportation and Traffic

Routine vehicular traffic will occur along the site access roads and any maintenance roads within the PV array. One to two small to medium-duty pickup trucks will be required. Larger delivery trucks occasionally may be required if major equipment is in need of replacement such as structural elements, inverters, or large quantities of PV modules (not likely).

### 2.7.3 Employment

Personnel for system monitoring, maintenance, and troubleshooting will likely be needed onsite. A staff of 2 to 4 technicians will perform system monitoring. The staff will work out of the O&M building and make frequent trips to the facility by way of passenger pickup truck or off-road vehicle. If issues regarding plant performance are detected, additional troubleshooting or maintenance may be required through special visits from vendors or specialty technicians.

Routine onsite activities will consist of maintaining vegetation so that it does not interfere with operation of the plant (as often as weekly during periods of high rain and growth), and cleaning the solar modules of dirt and debris. In a heavily vegetated area such as the proposed site, it is not anticipated that cleaning will be required on a weekly basis (as it would be in a desert environment). The firebreak will require periodic monitoring and clearing to remove vegetation buildup. The project is also anticipated to require the need for personnel to monitor and secure the site.

### 2.7.4 Safety and Fire Protection

As previously discussed, separate safety or fire protection systems will not be required at the site. Basic safety and fire protection equipment such as fire extinguishers, personal protective equipment, and other equipment as determined by the site's safety and emergency response plan can be stored in the O&M equipment storage building.

### **2.7.5 Water Use**

The solar modules must be kept clear from dirt and debris, the presence of which can affect the performance of the PV plant. Because the proposed site is heavily vegetated and has sufficient rainfall, it is not anticipated that monthly washing will be required. Annual cleaning may be recommended based on soiling conditions. It may be possible to use special brushes in lieu of water to remove any dirt that accumulates on the solar modules. However, if it is determined that water is required for cleaning the solar modules or other purposes, a water tanker truck could be brought onsite to fill portable canisters with water to be used throughout the PV array.

### **2.7.6 Sewer and Solid Waste**

Sewer services are not anticipated. If necessary, portable toilets can be placed onsite. Onsite toilets would require regular service visits.

### **2.7.7 Weed Control and Site Reclamation**

Routine weed control will be required to ensure vegetation growth does not interfere with the operation of any equipment. The frequency of visits will be determined by the growth rate and density of the vegetation left on the site once construction is complete. The Applicant is under a contractual obligation with the landowner to return the site in good condition and, at the landowner's request, to remove any or all of the project's components. Applicant is also contractually bound to reclaim the site to address any damage caused by the demolition and removal of any alterations or improvements to the site, including the project.



SECTION 3

# Compliance with Kittitas County Land Use Regulations

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This section demonstrates compliance with the relevant provisions from the KCC. The project is proposed entirely within the Kittitas County F-R zoning district and the applicable review procedure includes approval of a CUP. The relevant provisions from the KCC are reviewed below in numerical order by title and then chapter. The KCC provisions are included in *italics* followed by the Applicant's response (i.e., finding of fact, or "finding").

## 3.1 Title 17—Zoning

### 3.1.1 Chapter 17.56—Forest and Range Zone

*17.56.020 Uses permitted.*

*17.56.030 Conditional uses.*

**Finding:** The project is a "Major alternative energy facility" as defined in Section 17.61.010(9) and is an authorized use in the Forest and Range Zone subject to approval of a CUP per Section 17.61.020(4) & (6). Sections 17.61.010(9) and 17.61.020(4) & (6) are reviewed further later in this narrative.

*17.56.040 Lot - Minimum size.*

*The minimum lot size in the Forest and Range Zone shall be:*

- 1. Twenty acres;*
- 2. One-half acre minimum for any lot with an approved platted cluster subdivision, served by public water and sewer;*
- 3. Six thousand square feet for lots on existing municipal sewer and water systems.*

**Response:** The project is proposed on four existing tax parcels. The smallest parcel is 22 acres and exceeds the 20-acre minimum. The project does not include a request for approval of a subdivision or municipal sewer and water, and criteria 2 and 3 are not applicable. Therefore, the project complies with these criteria.

*17.56.050 Lot - width.*

- 1. No parcel created after the adoption of the ordinance codified in this chapter shall have a length-width dimension less than five hundred feet unless the parcel is approved under provisions established in Section 17.56.040 (2) and (3).*
- 2. No platted parcel shall have dimensions in excess of a 4:1 length by width ratio.*

**Finding:** The proposed project does not include the creation of any new parcels nor does it modify the boundaries of existing lots. Therefore, the project complies with these criteria.

### **17.56.060 Yard –requirements.**

1. *Front Yard.* There shall be a minimum front yard of twenty-five feet.
2. *Side Yard.* Side yard shall be ten feet, except on corner lots which shall have a fifteen-foot side yard.
3. *Rear Yard.* There shall be a rear yard with a minimum depth of ten feet to the main building.

**Finding:** The proposed project will not include any buildings or improvements within 25 feet of a property boundary. The Applicant will create and maintain a firebreak of no less than 100 feet between all outer edges of the project site and adjacent property lines. Therefore, the project complies with these criteria.

### **17.56.065 Yard requirements – Zones Adjacent to Commercial Forrest Zone**

*Properties bordering or adjacent to the Commercial Forest zone are subject to a 200' setback from the Commercial Forest Zone. (KCC 17.57.050(1)). For properties where such setback isn't feasible, development shall comply with Kittitas County Code 17.57.050(2).*

**Finding:** The northernmost extent of the proposed project boundary is directly adjacent to an area encompassed by the Commercial Forest (CF) zone. To achieve 75 dcMW of generating capacity, use of the entire area within the project boundary may be required, including the area within 200 feet of the adjacent CF zone. The closest structure is a PV array, which is located 104 feet from the adjacent CF property boundary. Assuming the 200 foot setback applies to the project, the Applicant will seek a modification to this dimensional standard as set forth in Section 5.3 of the DA, which is attached in draft to this CUP and submitted to the County under a separate cover.

### **17.56.070 Structure height**

*No structure shall exceed two and one-half stories or thirty-five feet in height, whichever is greater. This limit does not apply to agricultural buildings.*

**Finding:** The solar modules and associated structures currently proposed for the project will be less than 2 1/2 stories or 35 feet in height. The solar modules will be approximately 14 feet in height, inverter buildings 12 feet, switchgear structures 10 feet, substation 14 feet, and storage/O&M building 24 feet.

A new 345-kV transmission line may be needed to connect the proposed substation to the existing BPA line, if the substation is not located at the BPA right-of-way. The construction could be similar to the existing lattice towers for the BPA line, which are approximately 150 feet tall. A maximum of five towers would be needed for the 3,000-foot-long line. The line would be constructed at the lowest elevation on the site to minimize its visibility. A modification to 17.56.070 may be needed to address the height of the transmission line towers. More detailed information regarding this modification can be found in the DA (Attachment E).

Although potentially necessary as an accessory use for the project (if the substation is not located at the BPA right-of-way), the 345-kV transmission line is likely considered a "Special utility" as defined in the KCC (see Section 17.61.010(2)(b)). The substation is also likely considered a "special utility" under the KCC (see Section 17.61.010(2)(c)). Special utilities may be authorized as a conditional use in all zoning districts per KCC Section 17.61.020(6),

and subject to the additional review criteria of KCC 17.61.030. Thus, the potential for this transmission line and substation can be processed as part of the CUP for the overall project and the project will comply with the structure height criterion.

#### **17.56.080 Setbacks**

*The following setbacks shall be enforced for residential and accessory buildings constructed or placed on shorelines or floodplains under the jurisdiction of the Washington State Shoreline Management Act:*

- 1. One hundred feet (measured horizontally) from the ordinary high water mark or line of vegetation for lots abutting such waterways;*
- 2. One hundred feet (measured horizontally) from the ordinary high water mark of line of vegetation for lots fronting on reservoirs including Keechelus, Cle Elum, Kachess, and Easton Lakes and Wanapum reservoir.*

**Finding:** The proposed project site and adjacent areas do not include shorelines or floodplains under the jurisdiction of the Washington State Shoreline Management Act. In addition, the proposed project does not include any residential structures. The proposed buildings for operation and maintenance activities will not be anywhere near a regulated shoreline or floodplain. Therefore, the project complies with these criteria.

### **3.1.2 Chapter 17.60A—Conditional Uses**

#### **17.60A.010 Review Criteria**

*The Board of Adjustment, upon receiving a properly filed application or petition, may permit and authorize a conditional use when the following requirements have been met:*

- 1. The Board of Adjustment shall determine that the proposed use is essential or desirable to the public convenience and not detrimental or injurious to the public health, peace, or safety or to the character of the surrounding neighborhood.*

**Finding:** The proposed project is desirable to the public convenience. The Applicant proposes to develop the project site so that solar energy potential is maximized, in accordance with the commitment to establishing a leading sustainable energy production location in North America. The Applicant is committed to energy production and environmentally sensitive development and management of its solar production site.

The project is desirable as it will have the capacity to generate up to 75 MWdc of PV solar energy for distribution to utilities and communities seeking to optimize their renewable and sustainable energy sources. The project was conceived in response to the growing need for sustainable energy sources and the State of Washington's Renewable Electricity Standard, RCW Title 19, mandate that by the year 2020, the state's largest electric utilities meet 15 percent of their retail electric load with renewable electricity (for example, wind and solar energy). The standard first takes effect in 2012 with a requirement of 3 percent through 2015, then 9 percent from 2016 through 2019 and 15 percent thereafter. Therefore, the project will provide a clean energy source and assist utilities in achieving the Renewable Electricity Standard.

Construction and operation of the project is desirable as it will benefit the local and regional economies. When the solar installation begins, the workload will peak, and will likely remain at between 300 and 450 workers for a period of up to 27 months (two to three 7- to 9-month construction seasons). The project, along with the construction workers, will further stimulate the economy through local purchases of goods and materials. The total value of goods and services that will be purchased locally (within Kittitas County) during the three construction seasons is estimated to be \$97.5 million. Project construction could also attract other related businesses to the local and regional area, resulting in longer-term economic benefits. Operation of the project will employ a minimum of two to four O&M staff and potentially more for security and other functions. For a more detailed analysis of the economic benefits provided by the construction and operation of the proposed project, please see the *Economic Impact Analysis for the Teanaway Solar Reserve Kittitas County, Washington*, which has been prepared at the County's request.

The project will not be injurious to the public health, peace, or safety or to the character of the surrounding neighborhood. The Applicant is in the process of applying for all necessary approvals and permits from federal and state agencies. The proposal involves a clean energy source without emissions to air or water for the life of the project.

The solar modules do not present a health or safety hazard. Contact with the modules will not lead to electrocution or contamination. No combustible materials will be used except for fuel and oil used in construction equipment. The project will be constructed in accordance with applicable federal, state and county regulations that pertain to fire prevention and suppression. In addition, standard construction safety measures would be implemented to reduce the risk of hazards and accidents. The project is proposed in a rural area with a limited existing neighborhood character and a limited number of surrounding residences. In addition, it is being designed and sited to minimize its visibility from all surrounding areas and will not result in any noise or odors.

For the reasons stated above, the project complies with this criterion.

2. *The Board of Adjustment shall determine that the proposed use at the proposed location will not be unreasonably detrimental to the economic welfare of the county and that it will not create excessive public cost for facilities and services by finding that (1) it will be adequately serviced by existing facilities such as highways, roads, police and fire protection, irrigation and drainage structures, refuse disposal, water and sewers, and schools; or (2) that the applicant shall provide such facilities or (3) demonstrate that the proposed use will be of sufficient economic benefit to offset additional public costs or economic detriment.*

**Finding:** The proposed project will not be unreasonably detrimental to the economic welfare of the county and will not create excessive public cost for facilities and services for the following reasons:

- Construction and operation of the project is desirable as it will benefit the local and regional economies. Construction will employ 150 to 250 workers at peak levels. The project, along with the construction workers, will further stimulate the economy through local purchases of goods and materials. The total value of goods and services that will be purchased locally (within Kittitas County) during the three construction seasons is estimated to be \$97.5 million.

- Project construction could also attract other related businesses to the local and regional area, resulting in longer-term economic benefits.
- Operation of the project will employ a minimum of two to four O&M staff and potentially more for security and other functions. Fifty (50) percent of the onsite peak construction workforce of 450 is assumed to be from the local labor market (within Kittitas County) while the remaining 50 percent, or 225 peak period workers could come from outside the County and are assumed to relocate to Kittitas County for the duration of the construction period or phase.
- The Applicant assumes that in general the project will be adequately served by existing facilities, as discussed below, and the economic benefits summarized above and in the *Economic Impact Analysis for the Teanaway Solar Reserve Kittitas County, Washington* are adequate to offset any minor public costs. However, the Applicant also understands that specific negotiations occur through the process of generating the DA.

The project's use of existing facilities is summarized as follows:

**Highways and Roads.** The site will be accessible via Kittitas County and private roads that interconnect with Highway 970 (see Figure 3). The major County access road is Red Bridge Road. Loping Lane and Wehl Road are private roads over which the Applicant has easement rights. Loping Lane is subject to several road use and cost sharing agreements, and Applicant will be subject to those agreements. The Applicant will additionally work with neighbors who use Loping Lane to identify improvements that will minimize disruption to their use during construction and to the roadway itself. The project will be internally served by a network of existing and/or new maintenance roads. These maintenance roads, along with Wehl Road and Loping Lane, consist of gravel and dirt and may need improvements pursuant to County requirements. As set forth in attached Draft DA, the Applicant will coordinate any improvements to these roads with the Kittitas County Public Works Department. Figure 3 shows the location of the maintenance and access roads in relation to the project site.

**Police Protection.** Police protection of the project area is provided by the County's Sheriff's Office. The project will include periodic visits by security staff. As a result of proposed project security measures and personnel, it is not anticipated that the project will generate any new demand for police services. The construction contractor will notify the police services of staging and active construction locations so these services can respond efficiently to emergencies, should any arise. During the operational phase, the Applicant will contact police services in the event of an emergency.

**Fire Protection.** The project area is currently subject to the fire suppression services of the Washington Department of Natural Services. Should project construction require additional or different fire protections services, the Applicant will work with Kittitas County Fire Protection District #7 to ensure that suitable fire suppression services are in place during project construction and ongoing operations. The construction contractor will notify the fire protection services of staging and active construction locations so these services can respond efficiently to emergencies, should any arise. During the operational phase, the Applicant will contact fire protection services in the event of an emergency.

The project will be constructed in accordance with applicable federal, state, and county regulations that pertain to fire prevention and suppression. In addition, standard construction safety measures will be implemented to reduce the risk of hazards and accidents. Separate safety or fire protection systems will not be required at the site. Basic safety and fire protection equipment such as fire extinguishers, personal protective equipment, and other equipment as determined by the site's safety and emergency response plan can be stored in the O&M equipment storage building.

**Irrigation and Drainage.** The project will be adequately served by existing drainage. The project will maximize existing pervious surface on the site by maintaining natural ground cover wherever possible including areas under solar modules. In addition, the Applicant will maintain existing contours whenever possible during grading and site preparation. Therefore, site runoff and drainage will remain largely unchanged. During construction, the Applicant will implement Best Management Practices (BMPs) to minimize erosion and sediment release.

**Refuse.** Construction workers will be directed to dispose of all refuse in defined containers. Following construction, the only refuse generated by the project will be from the two to four O&M staff. This limited refuse will be disposed of as required by the County.

**Water and Sewers.** The need for water rights is not anticipated. The Applicant proposes to truck in water from the Cle Elum area or elsewhere as necessary for activities such as dust control during construction and module cleaning for operation.

The need for sewer services is not anticipated. Portable toilets will be placed onsite during construction and as necessary during operation. Service visits to the onsite toilets will occur on a regular basis.

**Schools.** The project will not be unreasonably detrimental or cause an increased burden on local school resources. It is unlikely that any school age children will move to the surrounding area due to the proposed project.

#### **17.60A.020 Conditions**

- 1. In permitting such uses the board of adjustments may impose in addition to the regulations specified herein, such conditions as it deems necessary to protect the best interests of the surrounding property or neighborhood or the county as a whole.*
- 2. Uses subject to conditions which exist in an R or S zone on the effective date of the ordinance codified herein shall not be changed, expanded nor structures used in connection therewith altered without first applying to the board of adjustment for review and under provisions of this chapter.*
- 3. Any change, enlargement or alternation in such use shall require a review by the board of adjustment and new conditions may be imposed where finding requires.*

**Finding:** The Applicant understands the criteria listed under KCC 17.60A.020. To ensure mitigation consistency and jurisdictional efficiency, Applicant further intends this CUP to be conditioned and governed by the attached Draft DA once it is approved by the County (per KCC Chapter 15A.11).

### 3.1.3 Chapter 17.61—Utilities

#### 17.61.010 Definitions.

2. “Special utility” or “special utilities” shall mean the following:

- b. Electrical transmission lines exceeding 115,000 volts
- c. Electrical substations

**Finding:** The proposed project will include a new 345-kV transmission line and a substation. The transmission line will connect the new substation to the existing BPA line. If the substation is located at the BPA right-of-way, this line would be very short. The line would have two circuits, one into the substation and one out of the substation. The construction could be similar to the existing lattice towers, and require a right-of-way of up to 300 feet in width. Therefore, both the transmission line and substation are considered “special utilities” per the KCC.

9. “Major alternative energy facility” means a hydroelectric plant, solar farm, or wind farm that is not a minor alternative energy facility.

11. “Minor alternative energy facility” or “minor alternative energy system” means a fuel cell or a facility for the production of electrical energy that:

- a.
  - i. Uses as its fuel either solar, wind, or hydropower;
  - ii. Is located on the power beneficiary’s premises;
  - iii. Is intended primarily to offset part or all of the beneficiary’s requirements for electricity;
  - and
  - iv. Is secondary to the beneficiary’s use of the premises for other lawful purpose(s)

**Finding:** The proposed project is a major alternative energy facility. It does not qualify as a minor alternative energy facility because the production of electrical energy is not intended to primarily offset part of all of the beneficiary’s requirements for electricity per KCC Section 17.61.010(11)(a)(iii). Instead, the solar energy will be distributed to the existing electrical grid.

#### 17.61.020 Permitted and conditional uses.

4. Major alternative energy facilities may be authorized in the Agriculture-20, forest and range, commercial agriculture, and commercial forest zone as follows:

- b. All other major alternative energy facilities may be authorized by the board of adjustments as a conditional use.

**Finding:** The Applicant understands this provision and requests approval of a CUP for the proposed project from the board of adjustments.

#### 17.61.030 Review criteria – Special utilities and associated facilities.

1. *The board of adjustment shall determine that adequate measures have been undertaken by the proponent of the special utility and/or associated facility to reduce the risk of accidents caused by hazardous materials.*

The proposed project will include a transmission line and substation. The risk of exposure to hazardous materials will be minimal. The transmission line will contain no hazardous materials. The substation will contain oil-filled equipment; however, proper spill clean-up kits will be available. Basic safety and fire protection equipment such as fire extinguishers, personal protective equipment, and other equipment as determined by the site's safety and emergency response plan can be stored in the O&M equipment storage building.

2. *The board of adjustment, as required by existing statutes, shall determine that the proposed special utility and/or associated facilities are essential and desirable to the public convenience and/or not detrimental or injurious to the public health or safety, or to the character of the surrounding neighborhood.*

The proposed project is desirable to the public convenience. The Applicant proposes to develop the project site so that solar energy potential is maximized, in accordance with the commitment to establishing a leading sustainable energy production location in North America. The Applicant is committed to energy production and environmentally sensitive development and management of its solar production site.

The project is desirable as it will have the capacity to generate up to 75 MWdc of PV solar energy for distribution to utilities and communities seeking to optimize their renewable and sustainable energy sources. The project was conceived in response to the growing need for sustainable energy sources and the State of Washington's Renewable Electricity Standard, RCW Title 19, mandate that by the year 2020, the state's largest electric utilities meet 15 percent of their retail electric load with renewable electricity (for example, wind and solar energy). The standard first takes effect in 2012 with a requirement of 3 percent through 2015, then 9 percent from 2016 through 2019 and 15 percent thereafter. Therefore, the project will provide a clean energy source and assist utilities in achieving the Renewable Electricity Standard.

Construction and operation of the project is desirable as it will benefit the local and regional economies. Construction will employ 150 to 250 workers at peak levels. The project, along with the construction workers, will further stimulate the economy through local purchases of goods and materials. The total value of goods and services that will be purchased locally (within Kittitas County) during the three construction seasons is estimated to be \$97.5 million. Project construction could also attract other related businesses to the local and regional area, resulting in longer-term economic benefits. Operation of the project will employ a minimum of two to four O&M staff and potentially more for security and other functions. For a more detailed analysis of the economic benefits provided by the construction and operation of the proposed project, please see the *Economic Impact Analysis for the Teanaway Solar Reserve Kittitas County, Washington*, which has been prepared at the County's request.

The project will not be injurious to the public health, peace, or safety or to the character of the surrounding neighborhood. The Applicant is in the process of applying for all necessary approvals and permits from federal and state agencies. The proposal involves a clean energy source without emissions to air or water for the life of the project.



The solar modules do not present a health or safety hazard. Contact with the modules will not lead to electrocution or contamination. No combustible materials will be used except for fuel and oil used in construction equipment. The project will be constructed in accordance with applicable federal, state and county regulations that pertain to fire prevention and suppression. In addition, standard construction safety measures would be implemented to reduce the risk of hazards and accidents. The project is proposed in a rural area with a limited existing neighborhood character and a limited number of surrounding residences. In addition, it is being designed and sited to minimize its visibility from all surrounding areas and will not result in any noise or odors.

For the reasons stated above, the project complies with this criterion.

*3. The board of adjustment shall determine that the proposed special utility and/or associated facilities will not be unreasonably detrimental to the economic welfare of the county and /or it will not create excessive public cost for the public services by finding that:*

*a. It will be adequately serviced by existing services such as highways, roads, police and fire protection, emergency response, and drainage structures, refuse disposal, water and sewers, and schools; or*

*b. The applicant shall provide such services or facilities.*

**Finding:** The proposed project will not be unreasonably detrimental to the economic welfare of the county and will not create excessive public cost for facilities and services for the following reasons:

- Construction and operation of the project is desirable as it will benefit the local and regional economies. Construction will employ 150 to 250 workers at peak levels. The project, along with the construction workers, will further stimulate the economy through local purchases of goods and materials. The total value of goods and services that will be purchased locally (within Kittitas County) during the three construction seasons is estimated to be \$97.5 million.
- Project construction could also attract other related businesses to the local and regional area, resulting in longer-term economic benefits.
- Operation of the project will employ a minimum of two to four O&M staff and potentially more for security and other functions. Fifty (50) percent of the onsite peak construction workforce of 450 is assumed to be from the local labor market (within Kittitas County) while the remaining 50 percent, or 225 peak period workers could come from outside the County and are assumed to relocate to Kittitas County for the duration of the construction period or phase.
- The Applicant assumes that in general the project will be adequately served by existing facilities, as discussed below, and the economic benefits summarized above and in the *Economic Impact Analysis for the Teanaway Solar Reserve Kittitas County, Washington* are adequate to offset any minor public costs. However, the Applicant also understands that specific negotiations occur through the process of generating the DA.

The project's use of existing facilities is summarized as follows:

**Highways and Roads.** The site will be accessible via Kittitas County and private roads that interconnect with Highway 970 (see Figure 3). The major County access road is Red Bridge Road. Loping Lane and Weihl Road are private roads over which the Applicant has easement rights. Loping Lane is subject to several road use and cost sharing agreements, and Applicant will be subject to those agreements. The Applicant will additionally work with neighbors who use Loping Lane to identify improvements that will minimize disruption to their use during construction and to the roadway itself. The project will be internally served by a network of existing and/or new maintenance roads. These maintenance roads, along with Weihl Road and Loping Lane, consist of gravel and dirt and may need improvements pursuant to County requirements. As set forth in attached Draft DA, the Applicant will coordinate any improvements to these roads with the Kittitas County Public Works Department. Figure 3 shows the location of the maintenance and access roads in relation to the project site.

**Police Protection.** The project will include periodic visits by security staff. As a result of proposed project security measures and personnel, it is not anticipated that the project will generate any new demand for police services.

**Fire Protection.** The fire protection needs of the site are currently served by WDNR. After the project is constructed, it will be served by the Kittitas County Fire Protection District #7. Further, the project will be bordered by a firebreak no less than 100 feet wide. The project will be constructed in accordance with applicable federal, state, and county regulations that pertain to fire prevention and suppression. In addition, standard construction safety measures will be implemented to reduce the risk of hazards and accidents. Separate safety or fire protection systems will not be required at the site. Basic safety and fire protection equipment such as fire extinguishers, personal protective equipment, and other equipment as determined by the site's safety and emergency response plan can be stored in the O&M equipment storage building.

**Irrigation and Drainage.** The project will be adequately served by existing drainage. The project will maximize existing pervious surface on the site by maintaining natural ground cover wherever possible including areas under solar modules. In addition, the Applicant will maintain existing contours whenever possible during grading and site preparation. Therefore, site runoff and drainage will remain largely unchanged. During construction, the Applicant will implement Best Management Practices (BMPs) to minimize erosion and sediment release.

**Refuse.** Construction workers will be directed to dispose of all refuse in defined containers. Following construction, the only refuse generated by the project will be from the two to four O&M staff. This limited refuse will be disposed of as required by the County.

**Water and Sewers.** The need for water rights is not anticipated. The Applicant proposes to truck in water from the Cle Elum area or elsewhere as necessary for activities such as dust control during construction and module cleaning for operation.

The need for sewer services is not anticipated. Portable toilets will be placed onsite during construction and as necessary during operation. Service visits to the onsite toilets will occur on a regular basis.

**Schools.** The project will not be unreasonably detrimental or cause an increased burden on local school resources. It is unlikely that any school age children will move to the surrounding area due to the proposed project.

*4. Special utilizes and/or associated facilities as defined by this chapter shall use public rights-of-way or established utility corridors when reasonable. Although Kittitas County may map utility corridors, it is recognized and reaffirmed that the use of such corridors is subject to conditional use and approval and just compensation to the landowner for the use of such corridor. While a utility corridor may be used for more than one utility or purpose, each utility or use should be negotiated with the landowner as a separate easement, right-of-way, or other agreement, or other arrangement between the landowner and all owners of interests in the property. Any county map which shows utility corridors shall designate such corridors as "private land closed to trespass and public use" where such corridors are on private land. Nothing in this paragraph is intended to conflict with the right of eminent domain.*

**Finding:** The Applicant understands the criteria listed under KCC 17.61.030(4) and intends to comply with this provision.

*5. The board of adjustment shall consider industry standards, available technology, and proposed design technology for special utilities and associated facilities in promulgating conditions of approval.*

**Finding:** The Applicant understands the criteria listed under KCC 17.61.030(5) and intends to comply with this provision. Current industry standards and technology will be utilized in the design and implementation of the proposed project.

*6. The construction and installation of utilities and special utilities may necessitate the importation of fill material which may result in the displacement of native material. The incidental generation of earthen spoils resulting from the construction and/or installment of a utility or special utility, and the removal said material from the development site shall not require a separate zoning conditional use permit.*

**Finding:** The Applicant understands the criteria listed under KCC 17.61.030(6) and intends to comply with this provision.

*7. The operation of some utilities and special utilities identified within this chapter may necessitate unusual parcel configurations and/or parcel sizes.*

**Finding:** The Applicant understands the criteria listed under KCC 17.61.030(7) and does not seek to reconfigure or resize any parcels. The proposed project will be located on land leased from the property owner. Therefore, this criterion does not apply.

## 3.2 Title 17A—Critical Areas

### 3.2.1 Chapter 17A.02—Critical Areas Ordinance Definitions

#### *17A.02.060 Critical areas.*

*“Critical areas” are (1) wetlands; (2) areas with a critical recharging effect on aquifers used for potable water; (3) fish and wildlife habitat conservation areas; (4) frequently flooded area; and (5) geologically hazardous areas.*

**Finding:** The Applicant understands the critical areas definition. All five critical areas are discussed in the Land Use section of the Expanded SEPA Checklist. The proposed project site does not include any of the critical areas defined in KCC Section 17A.02.060 except for wetlands.

### 3.2.2 Chapter 17.A.03—Critical Areas Administration

#### *17A.03.015 Land use activities to which this chapter applies.*

1. *The following land use activities shall be subject to and coordinated with the requirements of this chapter:*
  - a. *Any activity which is not exempt from a threshold determination under the State Environmental Policy Act, as subject to the threshold exemptions established by the county SEPA ordinance;*
  - b. *Any activity which requires approval through a public hearing process under the county ordinance;*
  - k. *Conversion of forest land to nonforest land uses.*

**Finding:** The Applicant understands that the proposed project fits under the provisions listed above. Therefore, the Critical Areas Ordinance applies as part of the proposed project review and approval.

#### *17A.03035 Critical area checklist and required information.*

*An applicant is required to submit a checklist of critical area information before commencement of all land use activities which are subject to this chapter. This information shall be used in processing all other site related development permits and approvals. Development may be required to be modified or may be conditioned to meet the requirements of this chapter. The checklist shall contain the following information:*

1. *Legal description of the land, and assessor’s parcel number.*

**Finding:** The legal description of the land is located in Attachment D to this CUP application. The assessor’s parcel numbers are as follows: 20-16-22000-0001, 20-16-23000-0002, 20-16-22000-0002, 20-16-27000-00025, and 20-16-27000-0009.

2. *As defined herein, the location of the following, if applicable:*
  - a. *Wetlands;*
  - b. *Erosion hazard areas;*
  - c. *Floodplains and floodways;*
  - d. *Riparian habitat;*
  - e. *Geologically hazardous areas;*
  - f. *Landslide hazard areas;*
  - g. *Mine hazard areas;*
  - h. *Seismic hazard areas;*
  - i. *Streams and rivers*

**Finding:** The proposed project site contains wetlands, riparian areas, streams, and erosion hazards. Impacts to riparian areas, streams, and erosion prone soils will be avoided through hazard design. Minimal impacts to wetlands will occur. See the Land Use section of the Expanded SEPA Checklist for additional discussion.

3. *Any voluntary methods or activities anticipated by the applicant pertaining to critical areas, including incentives being offered by local or state government.*

**Finding:** The Applicant has coordinated with all applicable local and state agencies. The Applicant will comply with all associated regulations and apply for all applicable licenses and permits.

4. *Duplicate plans drawn to scale showing the nature, location, dimensions and elevations of the area in question, including existing or proposed structures, estimated amounts of fill material, drainage facilities, significant natural features, and the location of the above items, if applicable. Survey quality documents will not normally be required.*

**Finding:** Plans showing the nature, location, dimensions, and elevations of the area in question are contained in Attachment A to this CUP application.

5. *The requirement for delineating the location of possible critical areas will be waived if field investigation by county staff indicates the following:*
  - a. *Sufficient information exists for staff to estimate the boundaries of any critical areas without a delineation by the applicant; or*
  - b. *No structures and uses, except for exempt activities, are proposed to be located within the possible critical areas.*
6. *Subject to field investigation by county staff, or other reliable and relevant information, the information submitted by the applicant shall be presumed valid for all purposes under this chapter.*

**Finding:** The Applicant conducted significant research and field surveys for critical areas located within or directly adjacent to the project site (Attachment A, Figure 5). The Land Use section of the Expanded SEPA Checklist provides additional discussion of critical areas and the various technical reports attached to the SEPA Checklist demonstrate the research and field surveys. The wetlands located within the proposed project area have been delineated by professional wetland scientists. A full description of the wetland boundaries will be included in the Joint Aquatic Resources Permit Application (JARPA).

***17A.03.045 Coordination with the State Environmental Policy Act and other concurrent permitting.***

*The director shall coordinate application of the critical areas ordinance with any required SEPA review and the processing of any other associated permits. Any required critical areas mitigation shall be separate from SEPA conditions imposed as part of a threshold determination. The objective is to provide a concurrent, coordinated, and consistent review of development activities within critical areas, without creating another regulatory review or appeal process.*

**Finding:** The Applicant understands this criterion. A detailed discussion of critical areas is provided in the Land Use section of the Expanded SEPA Checklist.



**ATTACHMENT A**  
**Figures Referenced in Text**

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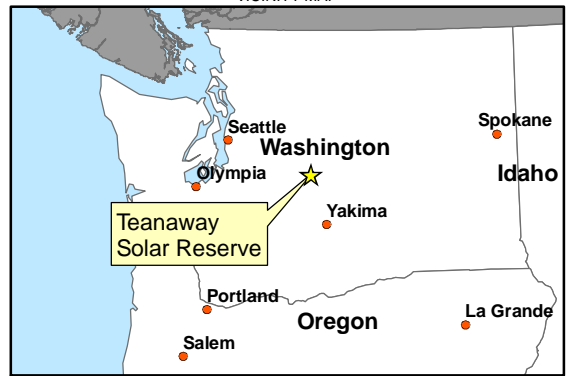
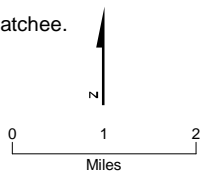
VICINITY MAP

LEGEND

-  Proposed Project Area
-  City Boundary
-  Interstate
-  Highway
-  Major Road

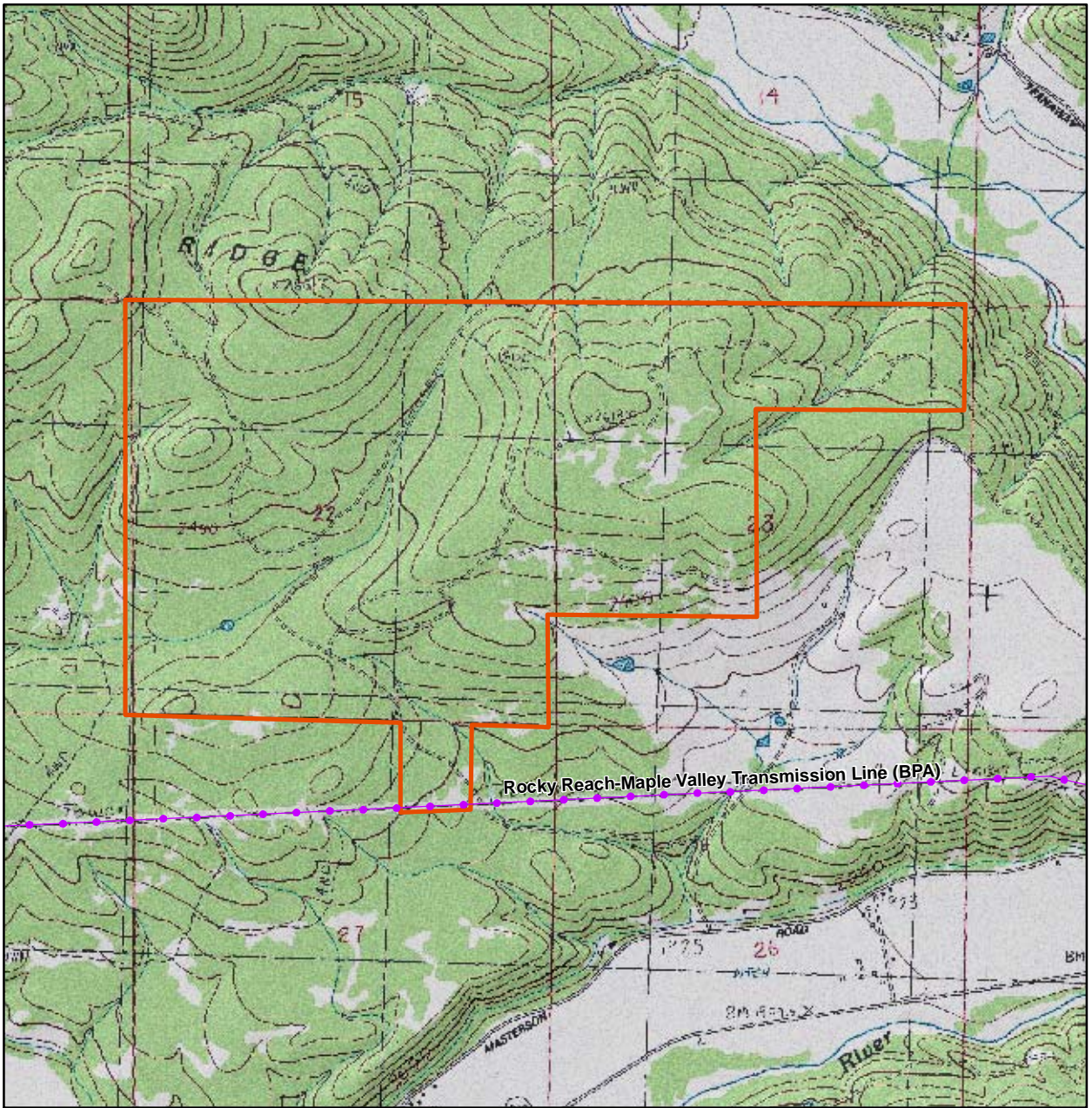
Note:

1. USGS 100K Quadrangle: Wenatchee.





**FIGURE 1**  
**Vicinity Map**

Teanaway Solar Reserve  
Kittitas County, Washington

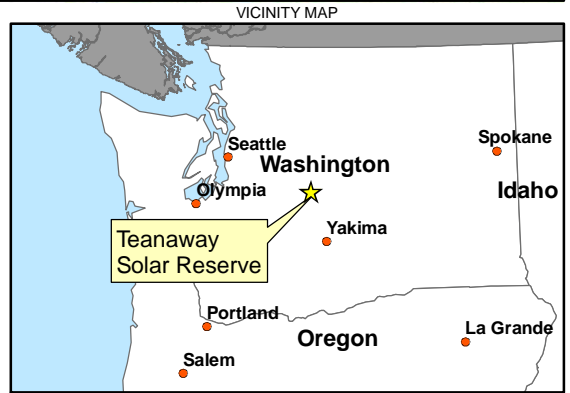
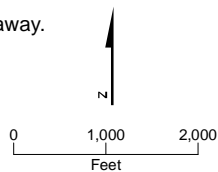


**LEGEND**

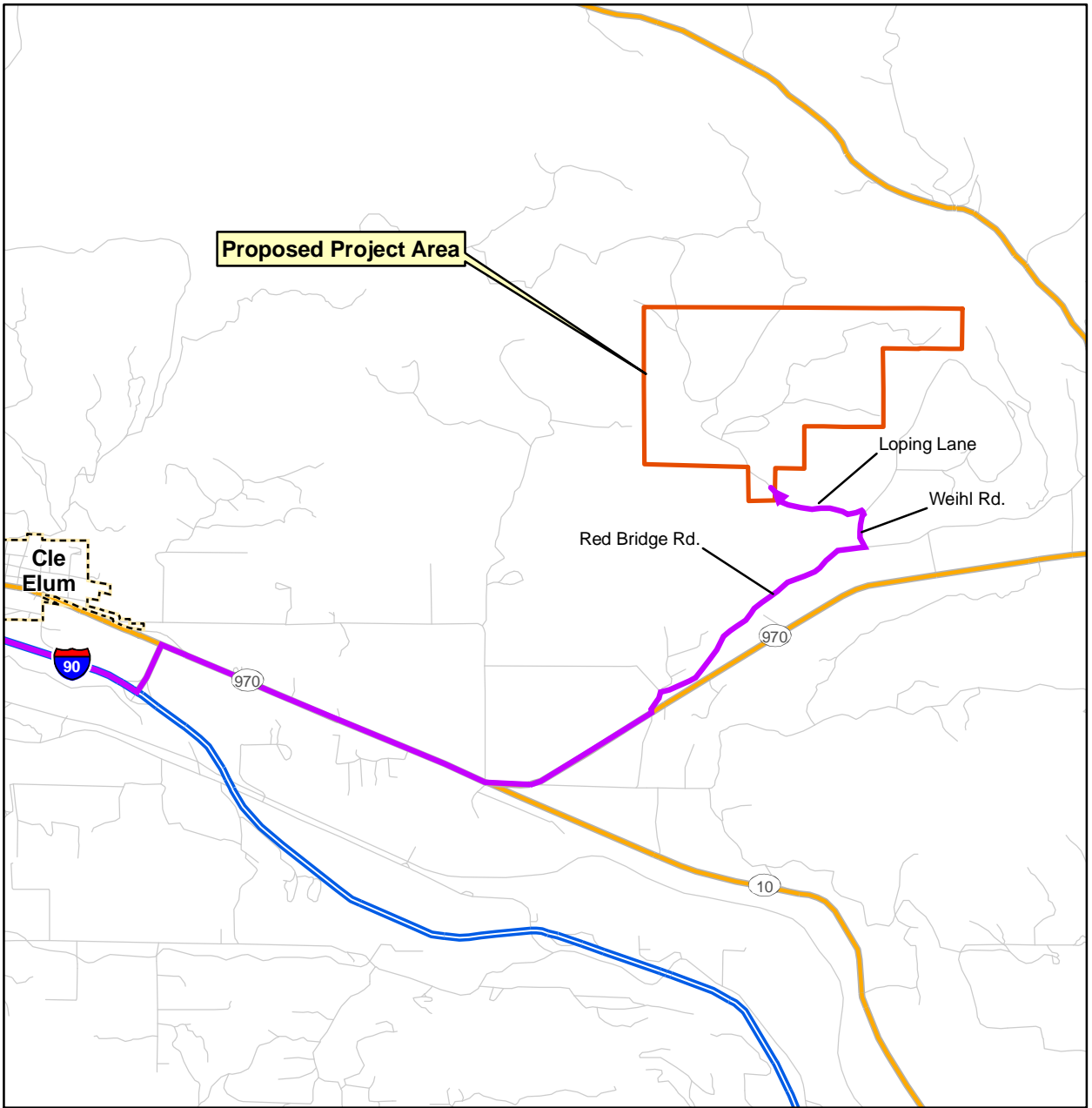
-  Existing BPA Transmission Line
-  Proposed Project Area

**Note:**

1. USGS 24K Quadrangle: Teanaway.



**FIGURE 2**  
**U.S. Geological Survey Topographic Map**  
 Teanaway Solar Reserve  
 Kittitas County, Washington



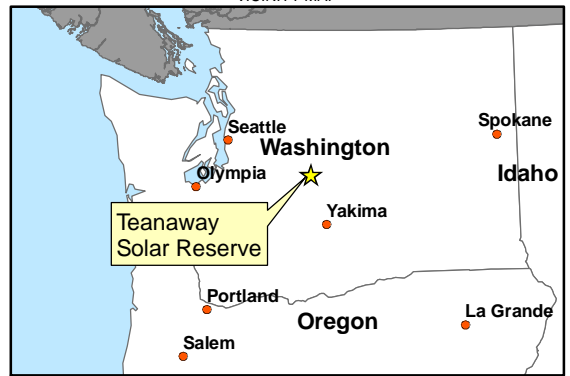
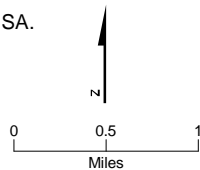
VICINITY MAP

**LEGEND**

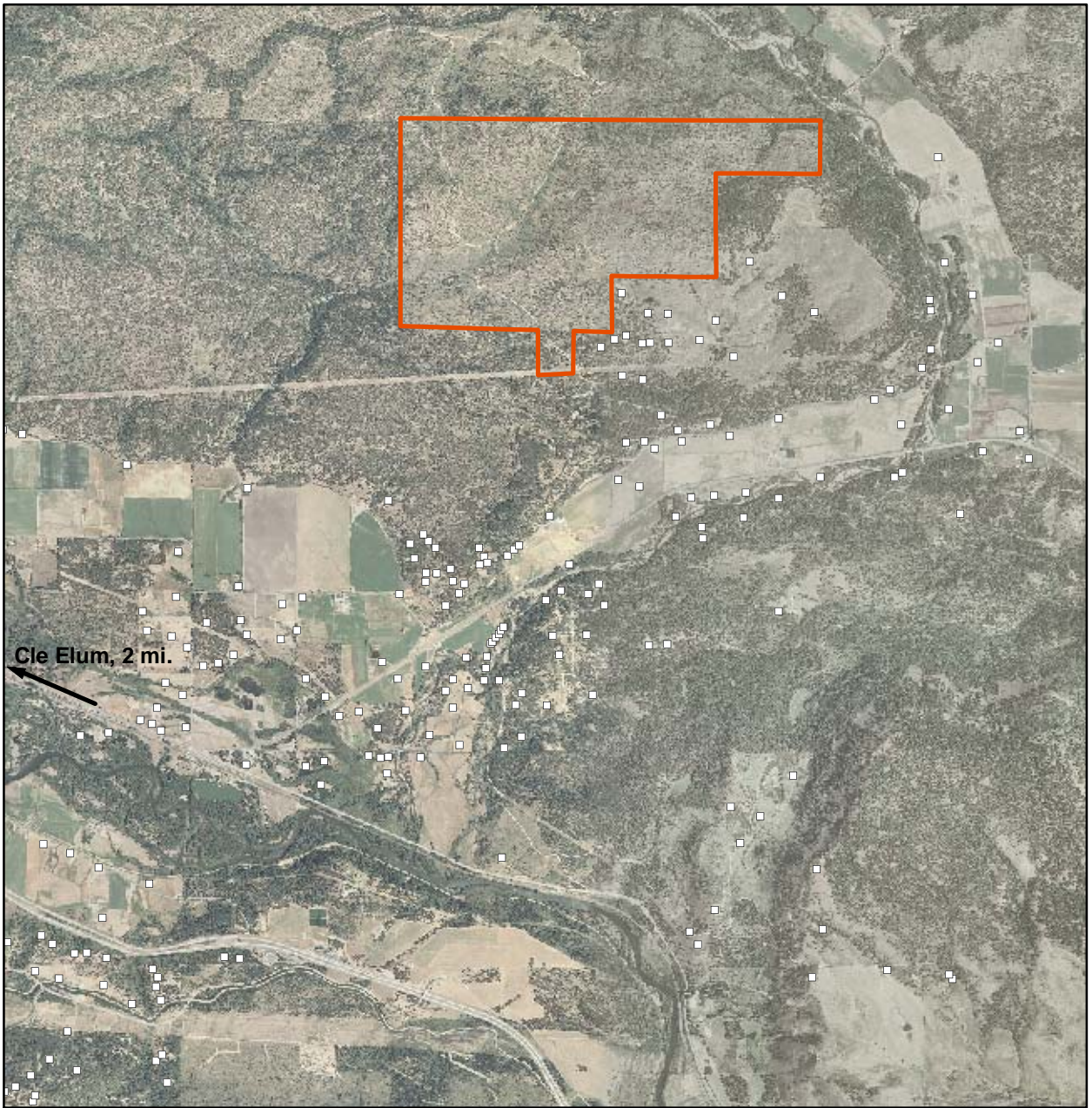
-  Proposed Project Area
-  Site Access Route
-  City Boundary
-  Interstate
-  Highway
-  Major Road
-  Minor Road

**Note:**

1. Street Data: 2002 ESRI StreetMap USA.





**FIGURE 3**  
**Site Access Map**  
 Teanaway Solar Reserve  
 Kittitas County, Washington



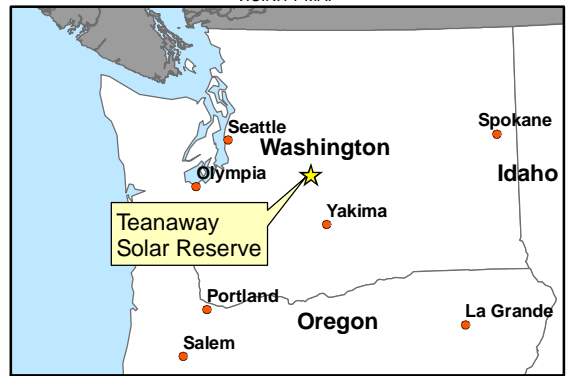
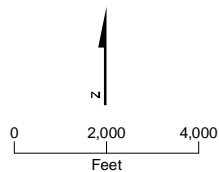
VICINITY MAP

LEGEND

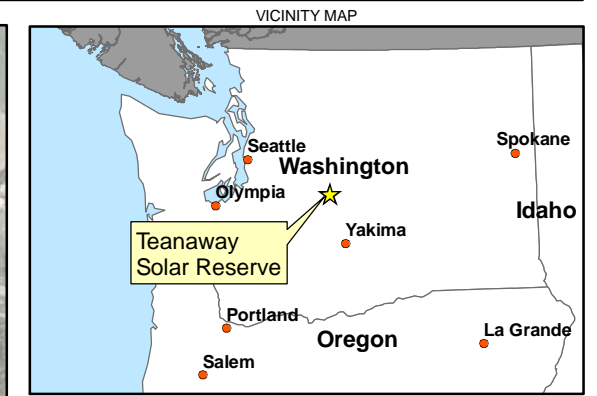
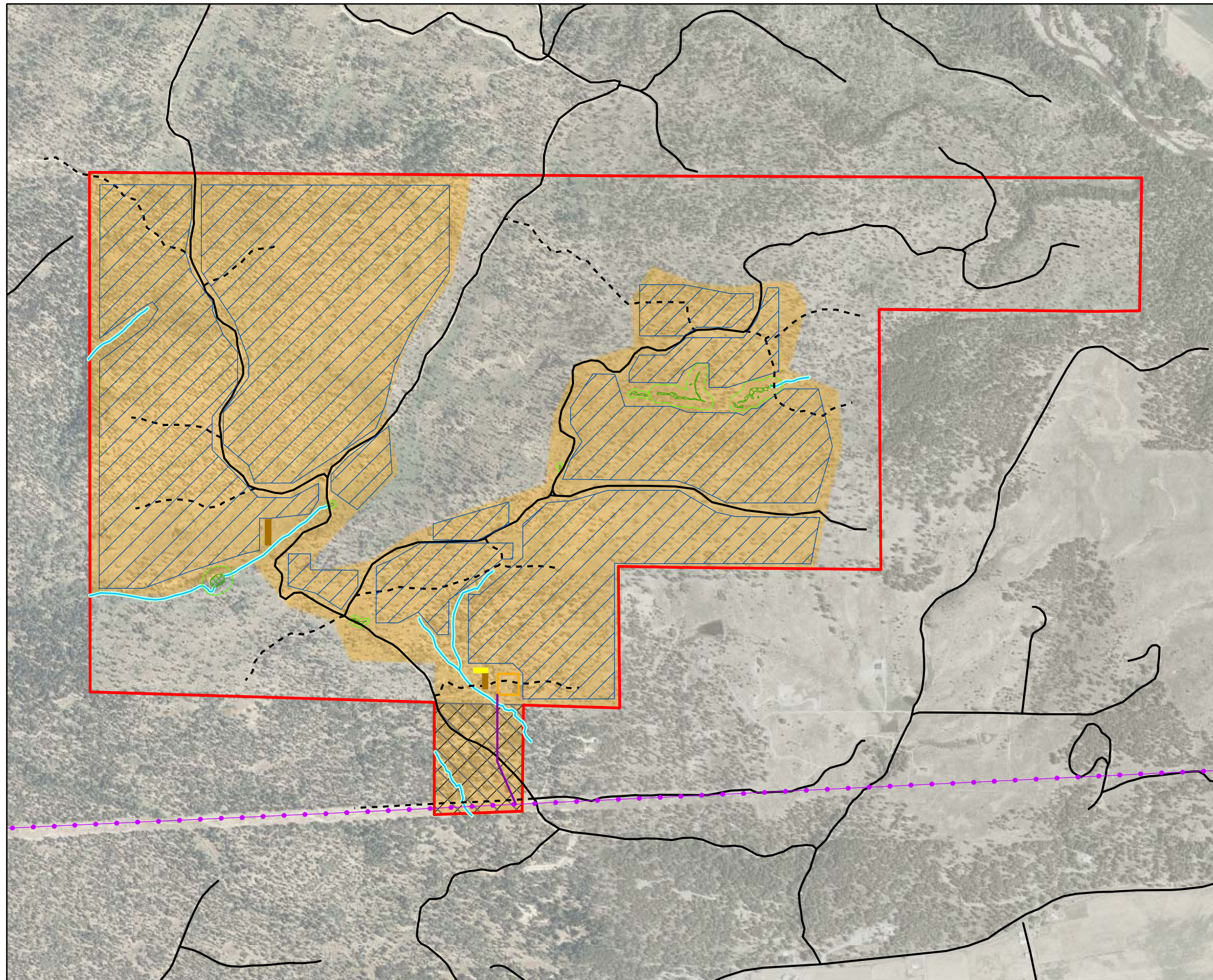
-  Proposed Project Area
-  Identified Structure

Notes:

1. Aerial Imagery: 2006 1m NAIP.
2. Structures identified from aerial, not ground verified.

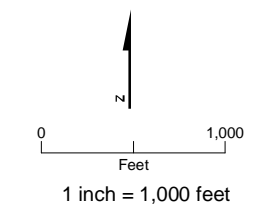


**FIGURE 4**  
**Identified Structure Map**  
 Teanaway Solar Reserve  
 Kittitas County, Washington

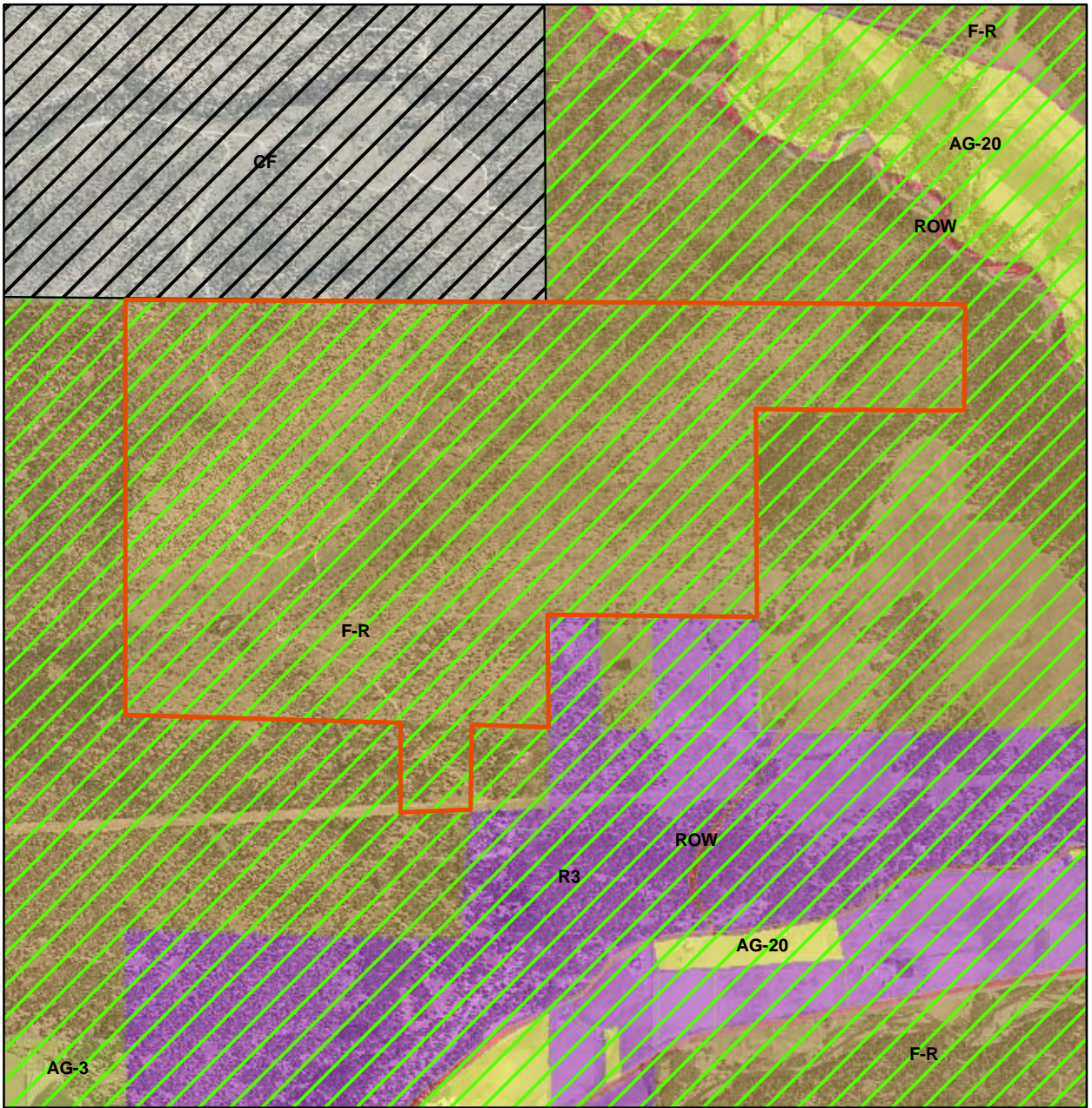


- LEGEND**
- Proposed Project Area
  - Proposed Project Site (580 acres)
  - Proposed Powerline Route to Grid
  - Potential Module Placement Area
  - Proposed O&M Facility
  - Proposed Substation
  - Proposed Switchgear
  - Transmission and Access Corridor
  - Existing Transmission Line
  - Road
  - Minor Dirt Road
  - Wetland
  - Wetland Buffer
  - Stream
  - Stream Buffer

Note:  
1. Aerial Imagery: 2006 1m NAIP.

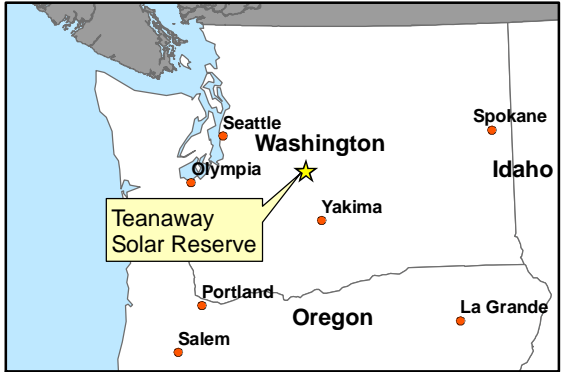
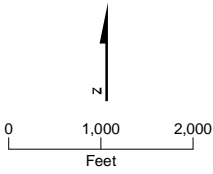


**FIGURE 5**  
**Conceptual Site Layout**  
Teanaway Solar Reserve  
Kittitas County, Washington

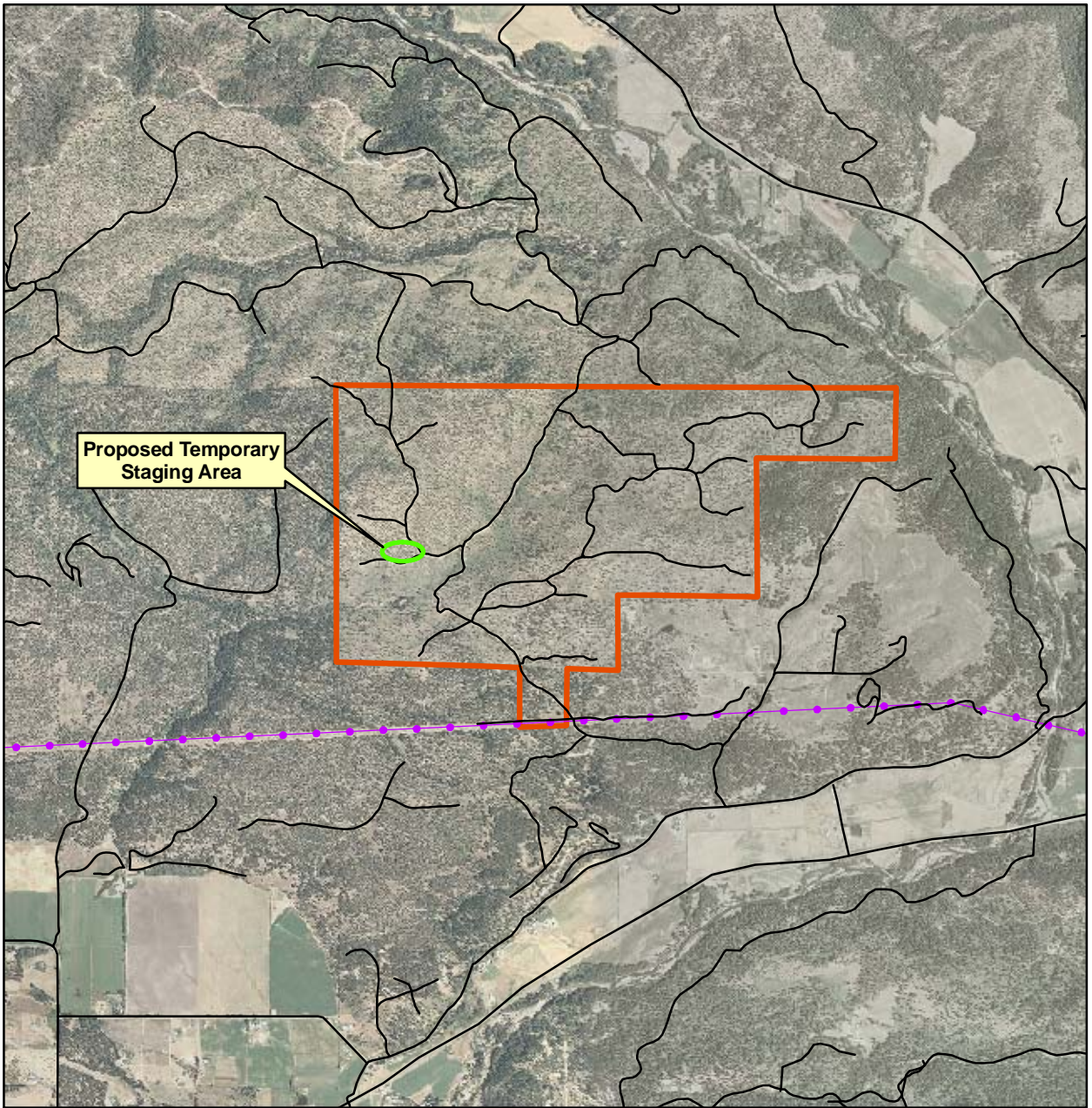


- LEGEND**
- Proposed Project Area
  - Land Use**
  - COMMERCIAL FOREST
  - RURAL
  - Zoning**
  - AG-20, Agricultural 20
  - AG-3, Agricultural 3
  - CF, Commercial Forest
  - F-R, Forest & Range
  - R3, Rural 3
  - ROW, Right-of-Way

Note:  
1. Aerial Imagery: 2006 1m NAIP.







**FIGURE 6**  
**Land Use/Zoning Map**  
Teanaway Solar Reserve  
Kittitas County, Washington



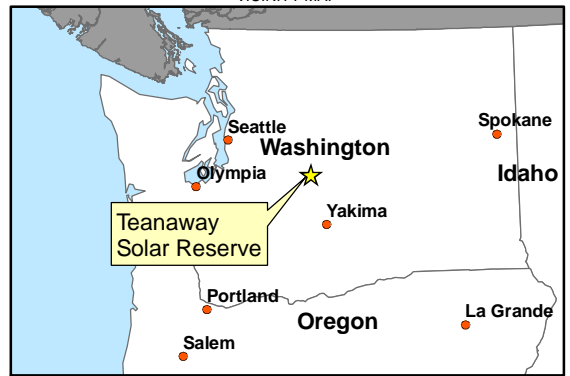
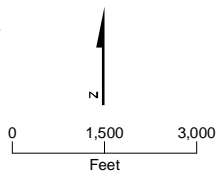
VICINITY MAP

LEGEND

-  Proposed Project Area
-  Proposed Temporary 5-Acre Staging Area
-  Road
-  Existing BPA Transmission Line

Note:

1. Aerial Imagery: 2006 1m NAIP.



**FIGURE 7**  
**Staging Area Map**  
 Teanaway Solar Reserve  
 Kittitas County, Washington





**ATTACHMENT B**

# **Photographs of Solar Facilities**

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ATTACHMENT B

# Photo Plates

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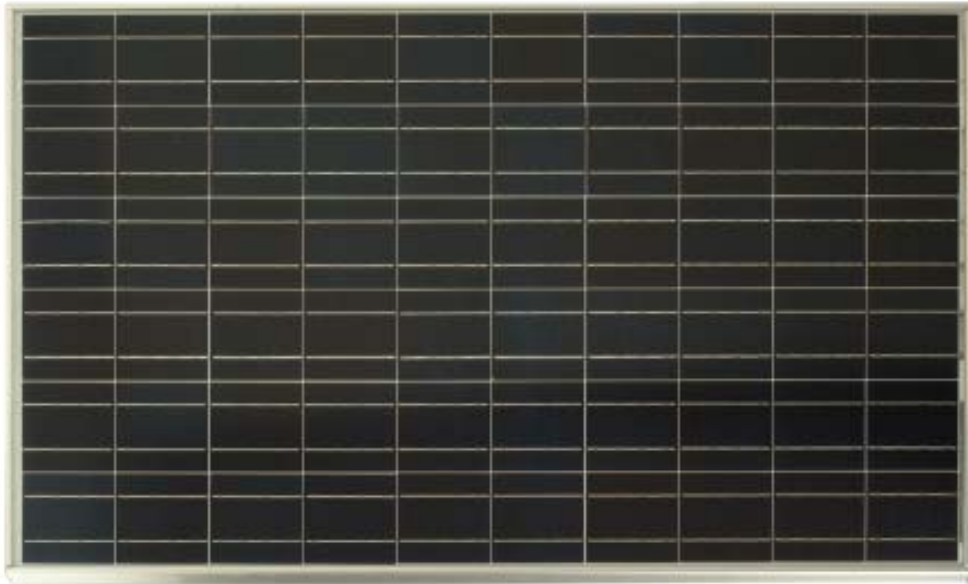


Photo Plate 1: Representative Solar Module (Source: Sharp Electronics Corporation)



Photo Plate 2: Single-Axis Tracking System by RayTracker



Photo Plate 3: Top of Pole-Mount Tracking System Holding Eight Solar Modules by Ignite Solar



Photo Plate 4: Proposed Fixed Tilt Mounting Structure (Source: Conergy)

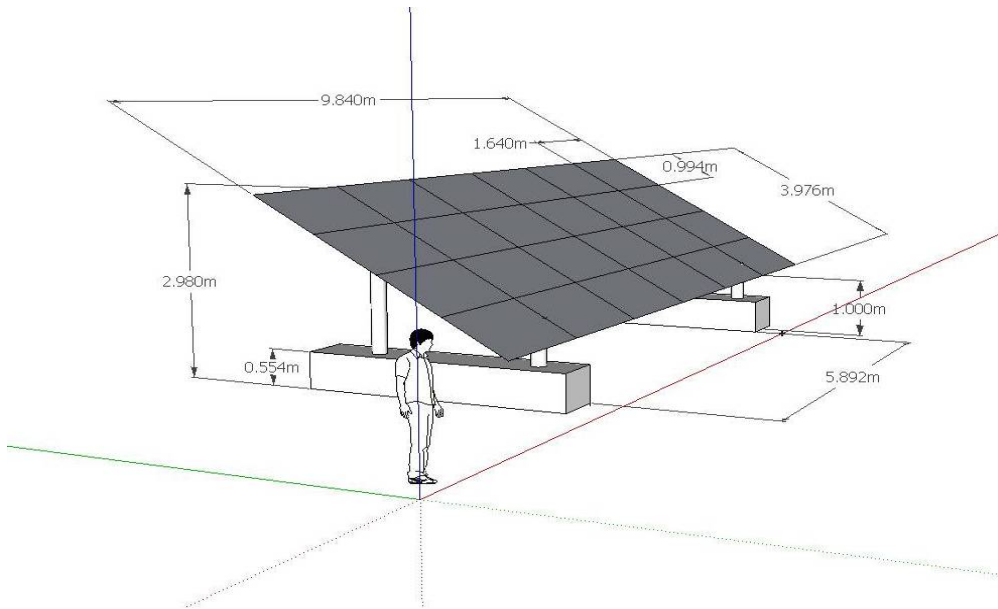


Photo Plate 5: Representative Mounting Structure with Dimensions



Photo Plate 6: Representative Mounting Structure, Cutaway View (Source: Conergy)



Photo Plate 7: Use of Timber Construction Materials in a Ground-Mounted Solar System



Photo Plate 8: Outdoor Compatible Commercial Inverters (Source: Xantrex)



Photo Plate 9: Example of 2-MW Inverter Building with Transformer (Source: Xantrex/Schneider Electric)



Photo Plate 10: Staging Area for a Solar Facility



Photo Plate 11: Example of Cabling Being Installed in Trenches for Interconnection to Grid



Photo Plate 12: Example of Cabling Being Installed in Trenches for Interconnection to Grid



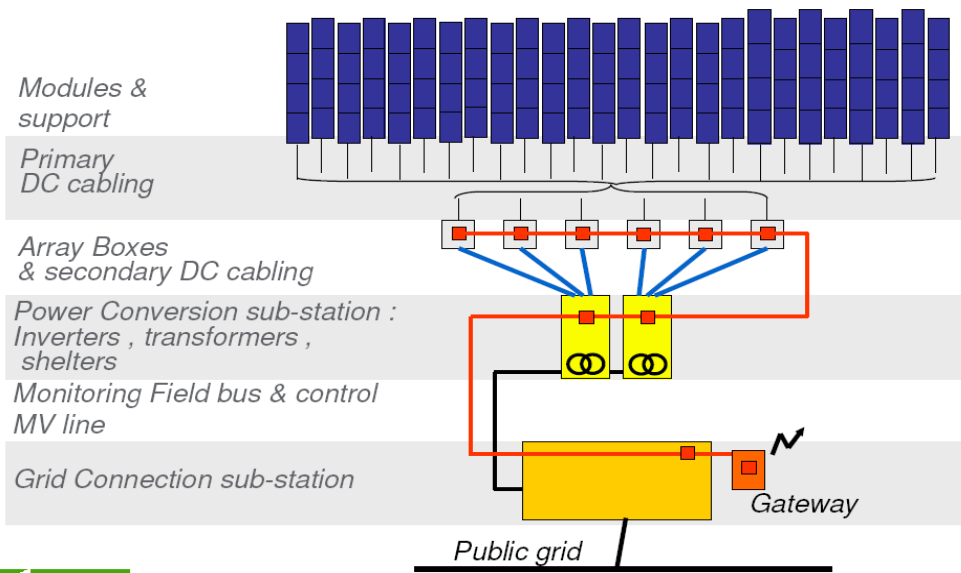


Photo Plate 13: Typical Cabling Diagram for a Photovoltaic System (Source: Xantrex/Schneider Electric)



ATTACHMENT C

# Landowners Adjacent to Proposed Site Boundary

---



**Attachment C****Landowners with Property within 500 feet of the Proposed Site Boundary**

| <b>Parcel ID</b> | <b>Tax Lot Number</b> | <b>Current Owner</b>              |
|------------------|-----------------------|-----------------------------------|
| 344935           | 20-16-14000-0010      | AMERICAN FOREST HOLDINGS LLC      |
| 364935           | 20-16-14000-0012      | AMERICAN FOREST HOLDINGS LLC      |
| 424935           | 20-16-15000-0001      | AMERICAN FOREST HOLDINGS LLC      |
| 104835           | 20-16-13000-0018      | AMERICAN FOREST HOLDINGS LLC      |
| 715836           | 20-16-14000-0019      | AMERICAN FOREST HOLDINGS LLC      |
| 18433            | 20-16-27000-0017      | BLACKBURN, PENNY L                |
| 18434            | 20-16-27000-0018      | BLACKBURN, PENNY L                |
| 18431            | 20-16-27000-0015      | BROSE, JAMES B ETUX               |
| 694935           | 20-16-23000-0013      | BROWN, RODNEY L JR ETUX           |
| 114935           | 20-16-27000-0001      | DUNN, REAGAN B ETUX               |
| 14727            | 20-16-26000-0072      | GOODWIN, BRADLEY & RANDY ETUX     |
| 14723            | 20-16-23000-0014      | GOODWIN, BRADLEY & RANDY ETUX     |
| 14735            | 20-16-26000-0065      | GOODWIN, BRADLEY J & WILLIAM M JR |
| 14725            | 20-16-23000-0016      | HANSEN, MICHAEL R ETUX            |
| 14726            | 20-16-23000-0017      | KUOLT, MILT                       |
| 949882           | 20-16-27050-0001      | L T VENTURES LLC                  |
| 949883           | 20-16-27050-0002      | L T VENTURES LLC                  |
| 949884           | 20-16-27050-0003      | L T VENTURES LLC                  |
| 949885           | 20-16-27050-0004      | L T VENTURES LLC                  |
| 494935           | 20-16-21000-0001      | MASTERSON, HARRY J.               |
| 263236           | 20-16-21000-0004      | MASTERSON, HARRY J.               |
| 124935           | 20-16-28000-0001      | MASTERSON, HARRY J.               |
| 274935           | 20-16-27000-0002      | MASTERSON, HARRY J.               |
| 554935           | 20-16-23000-0004      | MAYBO, JOSEPH S. ETUX             |
| 674935           | 20-16-23000-0011      | MAYBO, JOSEPH S. ETUX             |
| 544935           | 20-16-23000-0003      | PINE HILLS RANCH PTNRSHIP         |
| 564935           | 20-16-23000-0006      | PINE HILLS RANCH PTNRSHIP         |
| 664935           | 20-16-23000-0010      | PINE HILLS RANCH PTNRSHIP         |
| 724935           | 20-16-24000-0007      | PINE HILLS RANCH PTNRSHIP         |
| 744935           | 20-16-24000-0009      | PINE HILLS RANCH PTNRSHIP         |
| 434935           | 20-16-16000-0001      | STATE OF WASH (DNR)               |
| 524935           | 20-16-23000-0001      | WILLIAM F COCKLE FAMILY TRUST     |



**ATTACHMENT D**  
**Legal Description**

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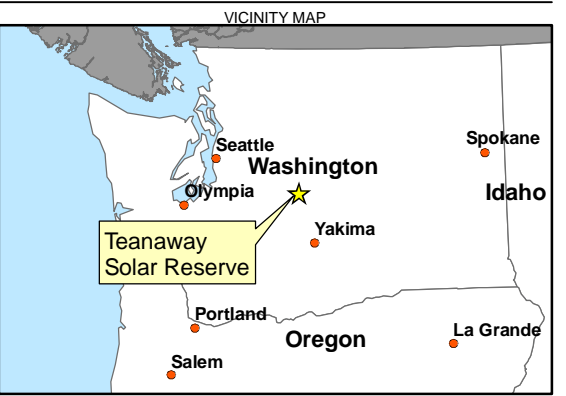
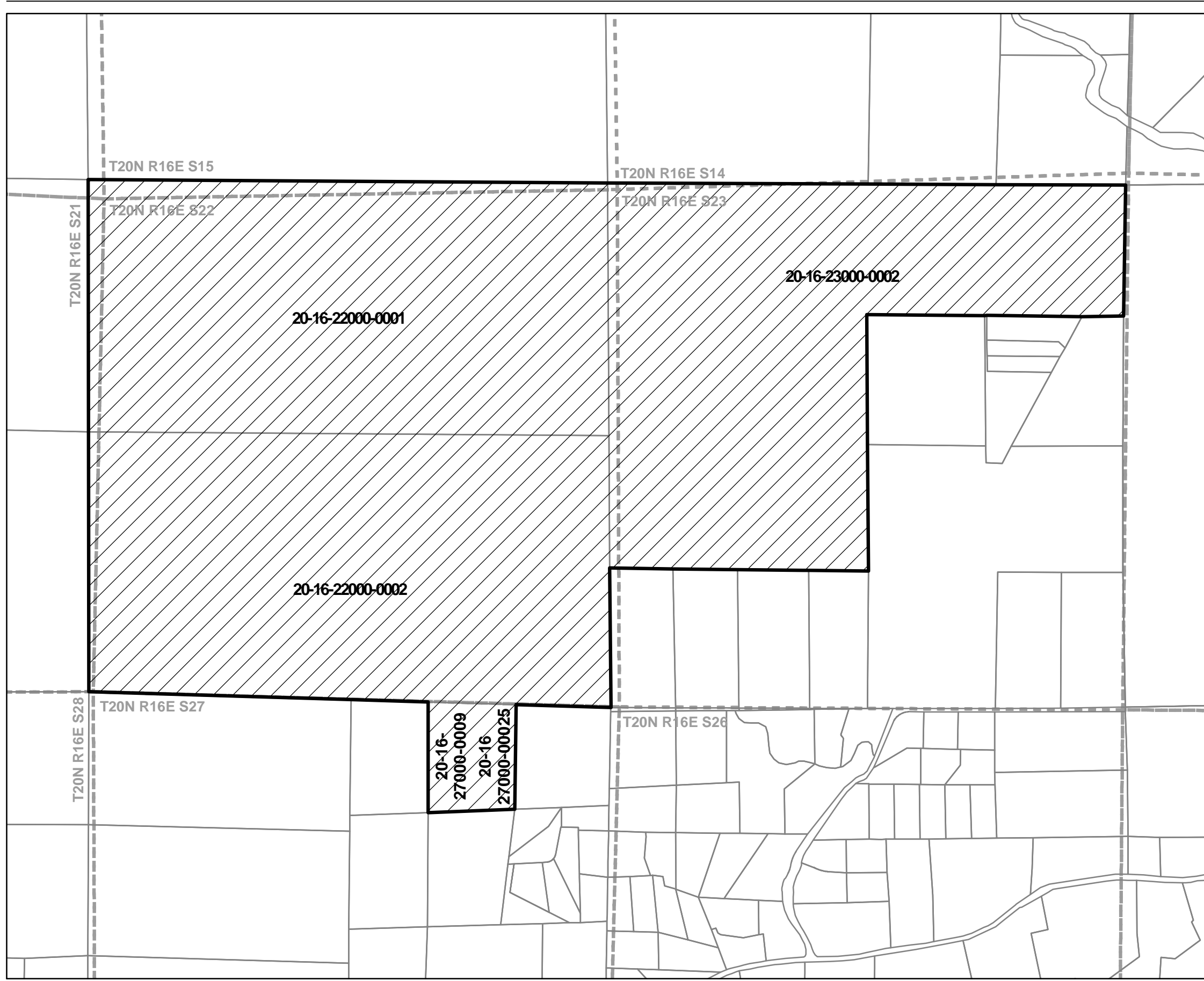


ATTACHMENT D

# Legal Description

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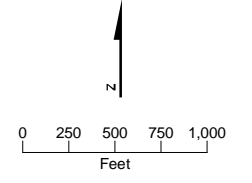
All of Section 22; the North Half of the Northeast Quarter, the Northwest Quarter and the North Half of the Southwest Quarter of Section 23; and Parcel 2 of that certain Survey as recorded May 6, 2003 in Book 28 of Surveys, pages 234, 235 and 236, under Auditor's File No. 200305060025, records of Kittitas County, Washington, being a portion of the Northeast Quarter of Section 27; All in Township 20 North, Range 16 East, W.M., in the County of Kittitas, State of Washington. A map illustrating this area is provided on the following page.



- LEGEND**
- Proposed Project Area (982 Acres)
  - Lease Boundary
  - Tax Lot Boundary
  - Public Land Survey System Boundary

**Notes:**

1. Tax Lot Boundary Data: Kittitas County Information Services.
2. PLSS Data: WADNR.



**Legal Description**  
 Teanaway Solar Reserve  
 Kittitas County, Washington

**ATTACHMENT E**  
**Development Agreement**

---



**PROPOSED DRAFT**

**DEVELOPMENT AGREEMENT**

**Between**

**KITTITAS COUNTY WASHINGTON**

**and**

**TEANAWAY SOLAR RESERVE, LLC**

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**List of Attachments**

- Attachment A: Project Description
- Attachment B: Project Area Legal Description
- Attachment C: Proposed Conditional Use Permit Application
- Attachment D: SEPA Checklist

## **DEVELOPMENT AGREEMENT**

### **TEANAWAY SOLAR RESERVE PROJECT**

THIS DEVELOPMENT AGREEMENT ("Agreement") is entered into and effective this \_\_\_\_ day of \_\_\_\_\_, 2009 by and between Kittitas County, a Washington municipal corporation ("County") and Teanaway Solar Reserve, LLC, a Wyoming limited liability company authorized to do business in the state of Washington ("Applicant") (collectively, the "Parties"). This Agreement is made pursuant to Revised Code of Washington ("RCW") 36.70B.170, Kittitas County Code ("KCC") Chapter 15A.11, and KCC Chapter 17.61, and relates to the Teanaway Solar Reserve Project.

#### **RECITALS**

A. RCW Chapter 36.70B, and KCC Chapter 15A.11 authorize the County to enter into an agreement regarding development of real property located within the County's jurisdiction with any person having an ownership interest in or control of such real property.

B. The Applicant desires and intends to develop a solar farm in Upper Kittitas County known as the Teanaway Solar Reserve Project (the "Project") located approximately four miles northeast of the town of Cle Elum. Key components and related appurtenant improvements of the Project include solar modules, inverter buildings, underground electrical conductors, substation, transmission line, maintenance and access roads, and Operations and Maintenance (O&M) building. A full description of the Project is contained in Attachment A: Project Description.

C. The Applicant's objective is to develop a commercially viable solar energy facility generating up to 75 megawatts (MWdc) of photovoltaic (PV) for distribution to utilities and communities seeking to optimize their renewable and sustainable energy sources through an interconnection point on the Pacific Northwest power grid.

D. The Project will be located on land referred to herein as the "Project Area". The Applicant entered into agreements with the owners of approximately 982 acres of real property comprising the Project Area, giving it requisite control of this land for the purpose of, and authority to, develop the Project. The Project Area is as more specifically described in Attachment B: Project Area Legal Description. A map showing the location of the Project Area is contained in Attachment A: Project Description.

E. The construction of the Project is currently scheduled for three consecutive seven to nine month construction seasons (generally between April 1 to October 31 as weather allows) between the years 2010 through 2012. As fully constructed, the Project is anticipated to require approximately 580 acres ("Project Site") within the overall Project Area. A map showing the location and layout of the Project is contained in Attachment A: Project Description.

F. A solar farm is defined by the County as a "major alternative energy facility". KCC 17.61.010(9) & (15). The transmission line and electrical substation may also be considered "special utilities." KCC 17.61.010(2). Major alternative energy facilities and special utilities may be authorized for the Project Site by the County's Board of Adjustment as conditional uses following a 15-day comment period and hearing, per KCC Chapter 15.61, KCC Title 15A, and KCC Chapter 17.60A.

G. In conjunction with this Agreement, the Applicant submitted a Conditional Use Permit ("CUP") Application as required by KCC 15.61.020(4)(b) & (6), attached hereto as Attachment C. One of the conditions of the CUP is that Applicant will obtain an approved development agreement with the County, and that it will be conditioned and governed by this Agreement.

H. The Applicant's submissions were deemed complete by the County on \_\_\_\_\_. As the State Environmental Policy Act ("SEPA") Lead Agency, Kittitas County issued a Mitigated Determination of Non-significance ("MDNS") for the Project on \_\_\_\_\_. Applicant agrees to abide by the CUP, the Proposed SEPA Mitigation Measures identified in the MDNS, and the Development Standards set forth in this Agreement to mitigate impacts to the environment.

I. The CUP was the subject of a 15-day comment period and a hearing before the Board of Adjustment as required by KCC Title 15A. On November \_\_\_\_, 2009, the Board of Adjustment approved the CUP.

J. This Agreement was the subject of a 30-day comment period and a hearing before the Kittitas County Board of County Commissioners ("BOCC") as required by KCC Title 15A and accompanying Table, and RCW 36.70B.200.

NOW, THEREFORE, in consideration of the recitals (which are incorporated into the Agreement by this reference) and for other good and valuable consideration, the receipt and



sufficiency of which are hereby acknowledged, the County and the Applicant agree as follows:

## **AGREEMENT**

### **1. Effective Date, Termination and Modification.**

1.1 Effective Date. The Effective Date of this Agreement is the last date upon which it was signed by the Parties hereto.

1.2 Termination. This Agreement may be terminated by mutual agreement of the Parties to this Agreement, or terminated by Applicant pursuant to Section 9 of this Agreement.

1.3 Modification. This Agreement shall govern and vest the development, use, and mitigation of the Project, and shall not be modified unless as provided in Section 8 below; *Provided* that nothing herein shall be construed to limit the County's reserved authority per KCC 15A.11.020(6) to impose new or different regulations to the extent required by a serious threat to public health and safety.

### **2. Definitions.**

For purposes of this Agreement, the following terms, phrases, words, and their derivations shall have the meaning given herein where capitalized; words not defined herein shall have their ordinary and common meaning. When not inconsistent with the context, words used in the present tense include the future, words in the plural number include the singular number, words in the singular number include the plural number, and the use of any gender shall be applicable to all genders whenever the sense requires. The words "shall" and "will" are mandatory and the word "may" is permissive. References to governmental entities (whether persons or entities) refer to those entities or their successors in authority. If specific provisions of law referred to herein are renumbered, then the reference shall be read to refer to the renumbered provision. Unless otherwise specified herein, references to laws, ordinances or regulations shall be interpreted broadly to cover government actions, however nominated, and include laws, ordinances and regulations now in force.

2.1. Agreement. "Agreement" means this Development Agreement between Kittitas County, Washington and Teanaway Solar Reserve, LLC, approved by the Board of County Commissioners.

2.2. Applicant. "Applicant" means Teanaway Solar Reserve, LLC or any of its Transferee(s) as provided in Section 10 of this Agreement.

2.3. BOCC. "BOCC" means the Board of County Commissioners of Kittitas County, Washington.

2.4. BOJ. "BOJ" means Kittitas County Board of Adjustment.

2.5. County. "County" means Kittitas County, Washington.

2.6. Construction Buildout Period. "Construction Build out Period" has the meaning set forth in Section 5.10 of this Agreement.

2.7. CUP. "CUP" means the Conditional Use Permit approved by the County's BOJ for the Project, which shall be conditioned and governed by this Agreement.

2.8. Development Standards. "Development Standards" means the requirements stated in Section 5 of this Agreement.

2.9. Director. "Director" means the Director of the County Department of Community Development Services.

2.10. Effective Date. "Effective Date" has the meaning set forth in Section 1.1 of this Agreement.

2.11. Force Majeure Event. "Force Majeure Event" means any event that directly prevents or delays the performance by the Party affected of any obligation arising under this Agreement, including an event that is within one or more of the following categories: condemnation; expropriation; invasion; plague; drought; landslide; tornado; hurricane; tsunami; flood; lightning; earthquake; fire; explosion; epidemic; quarantine; war (declared or undeclared), terrorism or other armed conflict; material physical damage to the Project caused by third Parties; riot or similar civil disturbance or commotion; other acts of God; acts of the public enemy; blockade; insurrection, riot or revolution; sabotage or vandalism; embargoes; and, actions of a governmental authority other than EFSEC.

2.12. Liability. "Liability" means all loss, damage, cost, expense (including costs of investigation and attorneys' fees and expenses at arbitration, trial or appeal and without

institution of arbitration or suit), liability, claims and demands of whatever kind or nature (including those arising under the Federal Employers Liability Act), arising out of an occurrence relating to this Agreement or occurring on or relating to the Project described herein.

2.13 MDNS. "MDNS" means the Mitigated Determination of Non-significance" issued as a SEPA determination by Kittitas County for the Project on \_\_\_\_\_.

2.14. Parties. "Parties" means Kittitas County, Washington and the Applicant, Teanaway Solar Reserve, LLC, a Wyoming limited liability company.

2.15. Project. "Project" means the Teanaway Solar Reserve Project, a solar farm generating up to 75 megawatts (MWdc) of photovoltaic (PV) solar energy, together with any necessary Project components and related appurtenant improvements, including approximately 400,000 solar panels, inverter buildings, underground electrical conductors, substation, transmission line, maintenance and access roads and Operations and Maintenance (O&M) building. The Project and its components are more fully described in Attachment A: Project Description.

2.16 Project Area. "Project Area" means the overall land area in which the Project Site will be located. The Project Area covers approximately 982 acres. A map depicting the location of the Project Area is contained in Attachment A: Project Description. The land within the Project Area is as more specifically described in Attachment B: Project Area Legal Description.

2.17 Project Site. "Project Site" means the land area on which the Project will actually be sited. The Project Site covers approximately 580 acres. A map showing the approximate location of the Project Site is contained in Attachment A: Project Description.

2.18. SEPA. "SEPA" means the State Environmental Policy Act, Chapter 43.21C RCW.

2.19. Substantial Completion. "Substantial Completion" means the Project is constructed, installed, generating and delivering energy to the electric power grid.

2.20. Transferee. A party to which the Project is transferred or assigned in part or in whole under the provisions contained in Section 10.1 of this Agreement.

**3. Protect Description**

The Project is a proposed solar farm, along with other necessary components and related appurtenant improvements as described in Attachment A: Project Description, capable of generating up to 75 megawatts (MWdc) of photovoltaic (PV), modified as necessary in accordance with the Development Standards contained herein, the CUP, and the proposed SEPA MDNS mitigation measures.

**4. Vesting.**

Except as otherwise noted, this Agreement vests the Project, Project Site, and Project Area to the existing County land use plans, ordinances, and regulations effective as of the Effective Date of this Agreement.

**5. Development Standards.**

5.1. Location and Description of Project. The Project is as described in Attachment A: Project Description, and illustrated in Attachment A: Project Description, modified as necessary in accordance with this Agreement's Development Standards, CUP, and SEPA mitigation measures, see Attachments C and D. Figure 4 in Attachment A: Project Vicinity Map with Landowners and Residential Locations illustrates the location of the Project and its components in relation to existing structures in the vicinity of the Project.

5.2 Structures. As part of the Project, Applicant may require supporting structures for any related transmission line. Such structures shall not be subject to any applicable County height restriction, provided that any supporting structure taller than 175 feet will not be used without Applicant first obtaining an approved variance from the County.

5.3. Fire and Police Protection Measures. Applicant will create and maintain a firebreak of no less than 100 feet between all outer edges of the Project Site and adjacent property lines, as illustrated in Attachment A: Project Description. The Project Area is currently subject to the fire suppression services of the Washington Department of Natural Services. Should the construction of the Project require additional or different fire protections services, the Applicant will work with Kittitas County Fire Protection District #7 to ensure that suitable fire suppression services are in place during the construction and on-going operations of the Project. Police protection of the Site Area is provided by the County's Sherriff's Office. The construction contractor will notify the fire protection and police services of staging and active

construction locations so these services can respond efficiently to emergencies, should any arise. During the operational phase, the Applicant will contact fire protection and police services in the event of an emergency.

5.4. Setbacks. The Project may be located up to, but no less than, 100 feet from any bordering property as illustrated in Attachment A: Project Description.

5.5. Emergency Plans. An emergency preparedness and response plan shall be prepared and submitted to the County by the Applicant prior to construction.

5.6. Project Access and Maintenance Roads. The main Project access road entrance is from a private roadway generally known as Loping Lane extending from the Weihl Road, also a private road, through portions of sections 26 and 27, T. 20, 16 E, W.M., Kittitas County, to the Project Area as generally depicted in Attachment A: Project Description. The Applicant's road use shall be subject to any road use agreements in effect pertaining to Applicant's use of that roadway, including, without limitation, the Horseshoe Hills Ranch Declaration of Protective Covenants, Conditions and Easements (Kittitas County Auditor's Recoding No. 488155, dated June 5, 1985), Easement and Road Maintenance Agreement (Kittitas County Auditor's Recoding No. 200204020024 dated February 5, 2002), Declaration of Protective Covenants (Kittitas County Auditor's Recoding No. 200306060049 dated June 6, 2003), and Addendum To Protective Covenants (Kittitas County Auditor's Recoding No. 200308290105 dated August 28, 2003). The Applicant will additionally work with neighbors who use Loping Lane to identify measures that will minimize disruption to their use during construction and to the roadway itself.

The project will be served internally by a network of existing and/or new maintenance roads. The existing maintenance roads, along with Weihl Road and Loping Lane, generally consist of gravel and dirt and may need improvements in accordance with County requirements. The Applicant is responsible for any improvements to these roads, and will first submit a plan detailing any such improvement for review and approval by the Kittitas County Public Works Department, which shall not unreasonably be withheld.

5.7. The Relationship between this Agreement and the CUP. This Agreement incorporates by reference the terms and conditions of the CUP as approved by the BOJ, which shall be further conditioned and governed by this Agreement. In the event a conflict should occur between the CUP and this Agreement, the terms and provisions of this Agreement shall control.

5.8. Concrete batch plants. Concrete batch plants on the site, if any, shall be strictly for on-site use and shall be removed from the site when construction is complete.

5.9. Project Site Access. Public access to the Project Area is already restricted by the subject landowners and will continue to be restricted in accordance with easement agreements. Access to the Project Site shall be further controlled in the form of an electric gate with an associated keypad security code for entry. The Applicant shall be responsible for the installation and maintenance of the gate, and will work with applicable landowners to determine its appropriate location. Property owners who access their property from Loping Lane and require access through the gate will be provided the necessary and applicable access. Representatives of the Washington State Department of Natural Resources currently has access to and through the Project Site and will continue to be allowed access. The Applicant will also coordinate with local landowners to identify any necessary additional security measures, including an additional access restriction on Loping Lane near its intersection with Wehl Road. The Applicant does not have the authority to grant permission to third party recreationists, including hunters and campers, to access the Project, but may grant permission to such parties on a case-by-case basis provided such parties first secure written permission from all of the applicable landowners along Loping Lane.

5.10 Construction Buildout Period. Applicant shall be allowed to construct the Project such that Substantial Completion is achieved no later than 5 years from the date that all permits necessary to construct the Project are obtained, but in no event later than 6 years from the Effective Date of this Agreement (the "Construction Buildout Period") provided however, that such construction is not delayed by a Force Majeure Event.

**6. Decommissioning and Reclamation.**

The Applicant is under a contractual obligation with the landowner to return the site in pre-construction condition minus reasonable wear and tear and, at the landowner's request, to remove any or all of the Project's components. Applicant is also contractually bound to reclaim the site to address any damage caused by the demolition and removal of any alterations or improvements to the Project Site, including the Project.

**7. Consistency with Local Regulations.**

The County hereby acknowledges that if the Project is developed consistent with this

Agreement and any Amendments thereto, the public health, safety, and welfare will be adequately protected within the bounds of the law; the Project will be considered essential and desirable to the public convenience; the Project will not be detrimental or injurious to the public health, peace, or safety, or to the character of the surrounding neighborhood; the Project will not be unreasonably detrimental to the economic welfare of the County; and the Project will not create excessive public cost for public facilities and services. Assuming the Applicant's objectives are met, the Project helps fills significant local needs in supplying electricity, creating local jobs and promoting economic development in rural areas, while also having the positive benefits of avoiding the external environmental costs associated with traditional electrical generation technologies.

The Project is located on property that is zoned as Forest & Range -20. Due to Project and equipment design and materials, the Project's O&M, the remoteness of the Project, and the surrounding vegetation, the Project poses no significant risks to residents from reflective glare, noise impacts, fire, or other disturbances from the construction, installation or use of the Project. The Project will deliver cost effective renewable energy to the electric grid and, as such, is essential and desirable to the public convenience. The Project will contribute significant tax revenues to the County which will far exceed the limited public service costs the Project will introduce.

## **8. Amendments and Revisions.**

This Development Agreement may be amended by mutual agreement of the Parties only if the amendment is in writing and signed by Applicant and the County and is approved by the BOCC (an "Amendment"), whose approval shall not unreasonably be withheld. The following sections specify what Project actions and revisions can be undertaken without the need for amendment of the Development Agreement and what revisions require Amendment to the Agreement.

8.1 Project Facility Repair, Maintenance and Replacement. Applicant shall be permitted, without any further approval from the County or amendment to this Agreement, to repair, maintain and replace the Project and its components consistent with the terms of this Agreement.

8.2 Project and Project Area Expansion. If Applicant seeks to expand the generating capacity of the Project and the geographic scope of the Project Site or Project Area, Applicant

will seek an Amendment to this Agreement and amend the CUP, if and as necessary, in accordance with any applicable state and local regulations in effect at the time of such amendments.

**9. Termination.**

Applicant shall have the option, in its sole discretion, to terminate this Agreement prior to Substantial Completion of the Project, *Provided* such termination will not relieve the Applicant of any obligation owed the County under the terms of this Agreement and outstanding at the time of such termination. If it elects to terminate this Agreement, Applicant shall submit a Notice to this effect to Kittitas County at least thirty (30) days prior to such termination.

**10. General Provisions.**

10.1 Assignment. The County and Applicant acknowledge that development of the Project may involve the sale and/or assignment of all or substantially all of the assets or all or substantially all of the membership interests to third parties. In addition the County and Applicant acknowledge that Applicant and its permitted Transferees may obtain financing for all or a portion of the costs of the Project. Applicant shall have the right to assign or transfer all or any portion of its interest in the Project at any time, including rights, obligations and responsibilities arising hereunder, to third parties acquiring all or substantially all the assets of the Project or all or substantially all the membership interests in Applicant (each such third party, a "Transferee"), provided such assignments or transfers are made in accordance with the following:

10.1.1 Assignments or Transfers Requiring the Consent of the County.

Applicant may at any time enter into a written agreement with a Transferee other than those described in Sections 10.1.2 and 10.1.3 to transfer all or substantially all the assets of the Project or all or substantially all the membership interests in Applicant, including rights, obligations and responsibilities arising hereunder (such agreement, a "Transfer Agreement"); provided that Applicant obtains the prior written consent of the County as described in this section:

(a) Such Transfer Agreement shall not take effect unless and until the County has consented in writing to such transfer or assignment, which consent shall not be unreasonably withheld, conditioned, or delayed. Written notice of the proposed Transfer



Agreement shall be mailed, first-class, to the County at least thirty (30) days in advance of the proposed date of transfer or assignment. Failure by the County to respond within thirty (30) days after receipt of a request made by Applicant for such consent shall be deemed to be the County's approval of the Transfer Agreement.

(b) Any Transfer Agreement shall be binding on the Applicant, the County and the Transferee. Upon approval of a Transfer Agreement by the County, the Applicant shall be released from those obligations and responsibilities assumed by the Transferee therein.

(c) Applicant shall be free from any and all liabilities accruing on or after the date of any assignment or transfer with respect to those obligations assumed by a Transferee pursuant to an approved Transfer Agreement. No breach or default hereunder by any person that assumes any portion of Applicant's obligations under this Agreement pursuant to an approved transfer shall be attributed to Applicant, nor shall any of Applicant's remaining rights hereunder be cancelled or diminished in any way by any such breach or default.

(d) No breach or default hereunder by Applicant shall be attributed to any person succeeding to any portion of Applicant's rights or obligations under this Agreement, nor shall such Transferee's rights be cancelled or diminished in any way by any such breach or default.

(e) Upon any transfer made in accordance with this Section 10.1.1 for which the County has consented, the Transferee shall be entitled to all interests and rights and be subject to all obligations under this Agreement, and Applicant shall be automatically released of all liabilities and obligations under this Agreement as to that portion of its interest so transferred or assigned.

#### 10.1.2 Collateral Assignments Without the Consent of the County.

Notwithstanding anything herein to the contrary, Applicant or any Transferee shall be permitted to collaterally assign its interest in the Project to a lender providing financing for the Project without the consent of the County, provided that Applicant or any Transferee delivers written notice to the County at least thirty (30) days prior to the date of such collateral assignment and identifies such lender.

#### 10.1.3 Assignments or Transfers without the Consent of the County.

Applicant may transfer or assign all or any portion of its interest in the Project at

any time, including rights, obligations and responsibilities arising hereunder, to third parties acquiring all or substantially all the assets of the Project or all or substantially all the membership interests in Applicant without the consent of the County provided that:

(a) Transferee is (i) an investor-owned electric utility, such as Puget Sound Energy, regulated by the Federal Regulatory Energy Commission ("FERC") and the Washington Utilities and Transportation Commission ("WUTC") or a wholly owned subsidiary of such an investor-owned electric utility, or; (ii) an entity having, at the time of transfer or assignment, a senior unsecured long term debt rating ("Credit Rating") of (1) if such entity has a Credit Rating from Standard and Poor's but not from Moody's, BBB- or better from Standard and Poor's or (2) if such entity has a Credit Rating from Moody's but not from Standard and Poor's, Baa3 or better from Moody's or (3) if such entity has a Credit Rating from both Standard and Poor's and Moody's, BBB- or better from Standard and Poor's and Baa3 or better from Moody's; and

(b) Transferee agrees to be bound by the rights, obligations and responsibilities of Applicant hereunder, on and after the date of such transfer or assignment. In the event that Applicant transfers or assigns all or any portion of its interest in and to the Project in accordance with this provision, Applicant shall be released from all obligations or liabilities under this Agreement on and after the date of such transfer or assignment as to that portion of Applicant's interest so transferred or assigned.

10.2 Binding Effect. This Agreement shall be binding upon, and inure to the benefit of, the Parties and their respective heirs, successors (by merger, consolidation or otherwise) and assigns, devisees, administrators, representatives, lessees and all other persons or entities acquiring all or any portion of the Project, any lot, parcel or any portion thereof within the Project Area, or any interest therein, whether by sale, operation of law, devise, or in any manner whatsoever.

10.3 Washington Law. This Agreement is entered into under the laws of the State of Washington, and the parties hereto intend that Washington law shall apply to the interpretation hereof.

10.4 Severability. If any provisions of this Agreement are determined to be unenforceable or invalid, this Agreement shall thereafter be modified, to implement the intent of the Parties to the maximum extent allowable under law and the remainder of this Agreement shall remain unaffected and in full force and effect.

10.5 Authority. Each Party represents and warrants that it has the respective power and authority, and is duly authorized, to enter into this Agreement on the terms and conditions herein stated, and to execute, deliver and perform its obligations under this Agreement.

10.6 No Third-Party Beneficiary. This Agreement is made and entered into for the sole protection and benefit of the Parties hereto and their successors and assigns. No other person shall have any right of action based upon any provision of this Agreement.

10.7 Duty to Act Reasonably and in Good Faith. Unless otherwise expressly provided, each party shall act reasonably in giving consent, approval, or taking any other action under this Agreement. The Parties agree that each of them shall at all times act in good faith in order to carry out the terms of this Agreement and each of them covenants that it will not at any time voluntarily engage in any actions which frustrate the purpose and intent of the Parties to develop the Project in conformity with the terms and conditions specified in this Agreement. The Parties understand and agree that the process described in this Agreement depends upon timely and open communication and cooperation between the Parties. The Parties agree to use best efforts to communicate regarding issues, changes, or problems that arise in the performance of the rights, duties and obligations hereunder as early as possible in the process, and not wait for explicit due dates or deadlines. Each party agrees to work cooperatively and in good faith toward resolution of any such issues.

10.8 Time of Essence. Time is of the essence in the performance of each and every obligation to be performed by the Parties hereto.

10.9 Staffing Agreement for County Project Costs. The Applicant will pay for County costs, including third party consultant costs, if necessary, incurred to support plan review and inspection of the Project during construction, in accordance with K.C.C. 14.04 et. al., under a County Staffing Agreement. The Staffing Agreement shall be approved by the County prior to construction, and such approval shall not be unreasonably withheld.

## **11. Notices**

11.1 Written Notice. Any notice, demand, or other communication ("Notice") given under this Agreement shall be in writing and given personally or by registered or certified mail (return receipt requested). A courtesy copy of the Notice may be sent by facsimile transmission.

11.2 Addresses. Notices shall be given to the Parties at their addresses set forth

below.

If to the County: Kittitas County Community Development Services  
411 North Ruby, Suite 2  
Ellensburg, Washington 98926  
Attn: Director

CC: Kittitas County Prosecuting Attorney's Office  
205 West Fifth, Room 213  
Ellensburg, Washington 98926  
Attn: Neil Caulkins

If to Applicant: Teanaway Solar Reserve, LLC  
418 E. 1st, Suite B  
Cle Elum, WA 98922

CC: Perkins Coie LLP  
Attention: Patrick W. Ryan  
1201 Third Ave, Suite 4800  
Seattle, WA 98109  
Fax: 206-359-9662

11.3 Notice by hand delivery shall be effective upon receipt. If deposited in the mail, notice shall be deemed delivered forty-eight (48) hours after deposited. Any party at any time by Notice to the other party may designate a different address or person to which such notice or communication shall be given.

## **12. Default and Remedies.**

No party shall be in default under this Agreement unless it has failed to perform as required under this Agreement for a period of thirty (30) days after written notice of default from the other party. Each notice of default shall specify the nature of the alleged default and the manner in which the default may be cured satisfactorily. If the nature of the alleged default is such that it cannot be reasonably cured within the thirty (30) day period, then commencement of the cure within such time period and the diligent prosecution to completion of the cure shall be deemed a cure of the alleged default.

### **12.1 Dispute Resolution Process.**

12.1.1. In the event of any dispute relating to this Agreement, each Party, upon the request of the other Party, shall meet within seven (7) calendar days to confer and seek to resolve the dispute ("Conference"). The Conference shall be attended by the following parties:

(a) the County shall send department director(s) and County employees and contractors with information relating to the dispute, and (b) Applicant shall send an Applicant's representative and any Applicant's consultant(s) with technical information or expertise related to the dispute. The parties shall, in good faith, endeavor to resolve their disputes through the Conference.

12.1.2. Mediation. If this Conference process does not resolve the dispute within the 7 day Conference period, the Parties shall in good faith submit the matter to mediation, The Parties shall send the same types of representatives to mediation as specified for the "Conference" process. Additionally the Parties shall have representatives present at the mediation with full authority to make a settlement within the range of terms being discussed, should settlement be deemed prudent. The mediation shall take place within 45 days of the parties submitting the dispute to mediation.

In order to expedite the mediation, during the Conference process the Parties shall select the mediator. The mediator must be a neutral professional full time mediator with time available to meet with the parties within the 45 day mediation period following the 7 day Conference period.

To prepare for mediation, during the 7 day Conference period, the County will select three qualified mediators, as specified above, who are available in the following 45 days. At the end of the 7 day Conference period, if the matter has not been resolved, the Applicant shall, within the 24 hours of being given the three names select one of the three. The parties will in good faith attempt to resolve the dispute in the 45 day mediation period.

If the dispute is not able to be resolved through the mediation process in the 45 day period, the parties may pursue their legal remedies in accordance with Washington law.

### **13. Indemnity.**

The Project owners shall indemnify and hold harmless the County and its elected officials and employees from and against any and all claims, actions, suits, liability, loss, costs, expenses, and damages of any nature whatsoever ("Claims") that are caused by or result from the negligent act or omission of Applicant's employees, officers, or agents in the operation of the Project; provided, however, that the total and cumulative obligation hereunder for all such Claims is limited to and shall not exceed five million dollars (\$5,000,000.00). In the event of concurrent negligence, Applicant shall indemnify and hold harmless the County only to the

extent of Applicant's negligence, subject to the foregoing five-million-dollar limitation for any and all Claims.

**14. Entire Agreement.**

This Agreement, together with all Attachments hereto, constitutes the entire agree between the Parties with respect to the subject matter of this Agreement. Agreement is specifically intended by the Parties to supersede all prior agreements whether written or oral.

APPROVED this \_\_\_\_\_ day of \_\_\_\_\_, 200\_\_.

BOARD OF COUNTY COMMISSIONERS  
Kittitas County, Washington

\_\_\_\_\_  
Chairman, Alan A. Crankovich

\_\_\_\_\_  
Vice Chairman, Paul Jewell

\_\_\_\_\_  
Clerk of the Board, Julie Kjorsvik

\_\_\_\_\_  
Commissioner, Mark McClain

Approved by:

\_\_\_\_\_  
Kittitas County Prosecuting Attorney, Deputy  
Neil Caulkins

TEANAWAY SOLAR RESERVE, LLC,  
a Wyoming limited liability company

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

ATTACHMENT A

# Project Description

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# Project Description

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Teanaway Solar Reserve, LLC (Applicant) proposes to construct and operate the Teanaway Solar Reserve (project), a solar farm capable of generating up to 75 direct current megawatts (MWdc) of photovoltaic (PV) solar energy. The proposed project area consists of 982 acres within the County's Forest and Range (F-R) zoning district. Based on site surveys, the project will utilize approximately 580 acres within the proposed project area.

## Purpose and Need

The purpose of the proposed project is to generate up to 75 MWdc of PV solar energy for distribution to utilities and communities seeking to optimize their renewable and sustainable energy sources. The project was conceived in response to the growing need for sustainable energy sources and the State of Washington's Renewable Electricity Standard, Revised Code of Washington (RCW) Title 19, mandate that by the year 2020, the state's largest electric utilities meet 15 percent of their retail electric load with renewable electricity (for example, wind and solar energy). The standard first takes effect in 2012 with a requirement of 3 percent through 2015, then 9 percent from 2016 through 2019 and 15 percent thereafter.

Oregon and California have adopted similar standards. Depending on the commercial terms available for the power sales, the utilities that may buy the power from the project could change over time.

The Applicant proposes to develop the site described below to maximize its solar energy potential, based on its commitment to providing renewable energy and becoming the leading (in terms of energy production and environmentally sensitive development and management of its solar production site) sustainable energy production location in North America. The following factors will be analyzed to determine optimal location within the site defined below:

- Significant solar radiation (insolation)
- Site accessibility
- Avoidance of environmentally sensitive areas
- Limited visibility from offsite locations

## Site Setting

The proposed project site is located approximately 4 miles northeast of Cle Elum, Washington, in Township 20N, Range 16E, within Sections 22, 23, and 27 (Figure 1). The site is located on the eastern slopes of the Cascade Mountains on Cle Elum Ridge, which runs generally from east to west at elevations ranging from approximately 2,200 to 2,600 feet (Figure 2). The Teanaway River is approximately 1 mile to the northeast of Cle Elum Ridge. The site is accessed from Highway 970 by way of County roads such as Red Bridge Road (Figure 3), and private roads such as Loping Lane and Weihl Road.

The proposed project area consists of 982 acres. Based on site surveys, the project will utilize approximately 580 acres within the proposed project area. The remaining acres are currently undeveloped open space, but may accommodate some future expansion of the project after appropriate surveys are conducted to address any environmental concerns and compliance with any underlying federal, state, or local permitting requirements.

The Bonneville Power Administration's (BPA) 345-kilovolt (kV) Rocky Reach-Maple Valley transmission line runs east to west along the southern site boundary (Figure 2). The proposed project is expected to interconnect to the regional transmission grid using this line. An interconnection substation with an approximate footprint of 10 acres will be located either on the project site, or within the BPA line right-of-way (ROW) (Figure 2).

Some structural and residential development has taken place in the southern portion of the proposed project area. Figure 4 shows the identified structures within the vicinity of the project area. The closest identified residence is approximately 200 feet southeast of the project area, and approximately 300 feet from the project site. Figure 5 shows the conceptual site layout.

The site is currently zoned Forest and Range (F-R) (Figure 6). The site was most recently selectively logged in 2001 and existing site vegetation consists of low grasses, shrubs, and plants with scattered 50- to 60-foot, 6- to 18-inch-diameter ponderosa pine (*Pinus ponderosa*) trees. Shrub and riparian plant communities are predominantly snowberry (*Symphoricarpos albus*) and Rose (*Rosa* spp.) bushes. Herbaceous plant communities are predominantly lupine (*Lupinus seiceus*), yarrow (*Achillea millefolium*), arrowleaf balsamroot (*Balsamorhiza sagittata*), and various grass species. Wetland plant communities are dominated by rushes (*Juncus* spp.), sedges (*Carex* spp.), wild onion (*Allium douglasii*), and various grass species.

## Key Components

The proposed project will consist of the following key components:

- Solar modules
- Inverter Buildings
- Underground Electrical Conductors
- Substation
- Transmission Line
- Access and Maintenance Roads
- Operations and Maintenance (O&M) Building

Key components are described in the following subsections.

### Solar Modules

Solar modules in a metal frame on supporting mounting structures will be used for the proposed project. The solar modules are manufactured offsite and will be delivered to the site by truck in wooden crates or cardboard boxes. The module measures 1.0 by 1.6 meters (3.3 feet by 5.3 feet) and is rated at 216 watts (Sharp Electronics, 2009). The solar modules are mounted in a fashion that orients the modules toward the sun.

Several mounting types will be considered to best address the slope of land at the project site. For example, large land areas with a slope toward the south are excellent for single-axis tracking systems. Land areas that are sloped to the east, southeast, west, or southwest will not as easily accommodate single-axis tracking systems, and are better suited to a fixed-tilt mounting structure or a pole-mounted tracking system.

A representative single-axis tracking system foundations could consist of precast foundations or embedded posts or poles. The embedment could be done by driving a ground screw, or by boring the ground to a depth of approximately 4 to 6 feet and width of approximately 8 to 10 inches, then backfilling with concrete. For one type of support approach, one post is needed for every five to six solar modules. If the entire 75 MWdc were to be installed with this mounting system, then approximately 70,000 posts would need to be set. About 70 percent of the solar modules for the proposed site will likely use this mounting type, meaning that about 50,000 posts would need to be set (primarily on lands with a south-facing slope). The excavated earth would not be removed from the site.

Another mounting method is to place the solar modules on top of a single pole. The “top of pole mount” system could be installed in areas with a slope facing the southeast. This system consists of a large steel pole that supports the solar module. The pole would attach to a post buried into the ground to a depth of 10 to 15 feet, with a width of 10 to 24 inches. The most likely configuration is to have between 12 to 20 solar modules mounted on one pole. It is estimated that about 10 percent of the solar installation will be installed using this method, and approximately 3,000 posts will need to be set.

Fixed-tilt systems typically have a galvanized or corrosion-resistant metal frame to hold the solar modules at a 20 to 30 degree tilt. It is estimated that 20 percent of the solar installation will be installed using this mounting method.

## **Inverter Buildings**

Up to 40 inverter buildings will be needed for the project. The inverters can be placed outdoors. While the inverter enclosures are rated for outdoor use, the manufacturer recommends an enclosure to protect the inverters from the elements and extreme temperature changes. An example inverter building includes a concrete pad, and prefabricated facilities are available such as the 2-MW enclosed system offered by Xantrex. Systems similar to the offering from Xantrex enclose four 500-kilowatt (kW) inverters and a 2-MW transformer in a weather-resistant structure measuring 40 feet by 9 feet by 8 feet 6 inches tall.

## **Underground Electrical Conductors**

Underground electrical conductors will be installed in trenches at a depth in compliance with the Kittitas County (36 inches or greater). Conductors either will be direct burial or in a polyvinylchloride (PVC) conduit.

## **Substation**

The Applicant proposes to construct an electrical substation that will interconnect with the 345-kV BPA transmission line. The substation will require a level, fenced area of approximately 10 acres. The 10-acre area will be graveled with no vegetation. The substation will contain a small control house, transformer(s), circuit breakers and switches, steel

support structures, and overhead electrical bus work. Its appearance will be similar to that of many other substations throughout the Pacific Northwest.

## Transmission Line

A new 345-kV transmission line will be needed to connect the new substation to the existing BPA line. If the substation is located at the BPA ROW, this line would be very short. The line would have two circuits, one into the substation and one out of the substation. The construction could be similar to the existing lattice towers, and require a ROW of up to 300 feet in width.

## Access and Maintenance Roads

The site will be accessed via Kittitas County and private roads that interconnect with Highway 970. The major County access road is Red Bridge Road. Weihl Road and Loping Lane are private roads over which the Applicant has easement rights. Loping Lane is subject to several road use and cost-sharing agreements, and the Applicant will be subject to those agreements. Additionally, the Applicant will work with neighbors who use Loping Lane to identify measures that will minimize disruption to their use during construction and to the roadway itself. The project will be served internally by a network of existing and new maintenance roads. The existing maintenance roads will be improved pursuant to County requirements. As set forth in the Draft DA, the Applicant will coordinate any improvements to these roads with the Kittitas County Public Works Department. Figure 3 shows the location of the access and maintenance roads in relation to the project site.

## Summary of Construction Activities and Components

Site preparation will consist of clearing the existing vegetation only in those areas where driveways and modular construction will be undertaken, grading, and establishing temporary staging areas (including stockpile and laydown areas). Site preparation will be limited to staging areas, maintenance roads, O&M facilities, and some extreme portions of the larger site as needed to accommodate a level field for the solar facility. Once the site is prepared, the installation of foundations, trackers, modules, inverter equipment pads, and substation foundation can begin.

## Site Clearing and Grading

The project site will require clearing to address the potential for damage to the project from blown down trees, decreased power efficiency of the solar modules, the risk of fire from fuel buildup within the project area, and the need to create a 100-foot firebreak along the project's perimeters as provided below. To clear the site for installing the project, trees will be harvested within the project area on an as-needed basis for facilitating the next construction phase of the project (Draft DA, Attachment D, Table 1). Trees will generally be harvested to a stump level of 6 to 12 inches above ground level. The Applicant will obtain a permit from WDNR and contract with a professional forester to harvest these trees in accordance with the permit. Because the bottoms of the solar modules will be approximately 3 feet above grade, any vegetation taller than 3 feet or expected to exceed 3 feet in height will be removed. Shrubs, grass, and groundcover will, to the maximum extent practicable, remain between rows and under the solar modules. Construction equipment such as tractors, backhoes, loaders, dozers, and graders will be needed to clear brush and vegetation

from the site as needed, and to grade roads and foundation locations. If the slope of the land is excessive, terracing, or retaining walls may be required.

## Staging Areas

A temporary staging area of approximately 5 acres will be used as a laydown area for parts and materials such as solar crates, electric cable, structural supports, and perhaps a concrete batching facility. The staging area could be located at the intersection of logging roads on the property, as illustrated on Figure 7. Mobilization of the site will consist of fencing off a 5 acre section of land that will be needed to store materials. Mobilization will also include a temporary facility and staging area for solar module deliveries, and metal racking. Mobilization will last approximately 1 month.

## Foundations, Trackers, and Modules

The foundations securing the solar modules will be designed to withstand high winds and snow loads. The site may have multiple foundation types to match the ground conditions and type of mounting structure used. One foundation type consists of boring a hole approximately 12 inches wide and 48 inches deep to hold a steel support pipe. The hole is then filled with concrete. A support pier will be required for every 45 square feet of land area, or approximately 1,000 piers per installed MW of solar capacity. Approximately 145 acres of modules will be installed within the 982-acre proposed project area.

A second type of foundation consists of an abovegrade concrete ballast used to support the uplift forces of the solar mounting structure. These ballasts will contain .25 to .35 cubic yards of concrete per block, and two concrete ballasts will support a small array of solar modules.

Pending final design, the solar module foundations will require site work, potential boring, trucking of materials, and concrete. The number of foundations could be as high as 70,000, and require approximately four thousand truck deliveries.

Installation of foundations, trackers, and modules will occur over a period of approximately 7 to 9 months during two or three construction seasons (between April and October or April and December).

## Inverter Equipment Pads and Substation Foundation

Electrical equipment will be located onsite in multiple locations. There will be one inverter building (that houses two inverters and one associated transformer) for every approximately 7 acres of solar field. One inverter building will house (2) 500-kW inverters, so there will be one inverter building for every 1 MW of solar field. Approximately 7 acres are needed for a 1-MW solar array. Approximately 145 acres of modules will be installed within the 982-acre proposed project area.

Up to 75 inverter buildings will be needed. The inverter stations will require a concrete pad of approximately 40 by 10 feet. The inverter buildings will be approximately 10 feet tall.

Wiring connecting module arrays to the inverters and the inverters to the substation will need to be run in underground cables. Trenching is required for the conductors from the inverter buildings to the main substation. Trenching requires removing earth in a section of several feet wide by approximately 2 to 3 feet deep.

The substation will require an area of approximately 10 acres. The substation consists of a steel support structure that is 15 to 20 feet tall. The substation will be surrounded by a cyclone fence that is approximately 10 feet tall. The substation will include a small control building, approximately 20 feet wide by 20 feet long, that is enclosed with air conditioning.

Pending location of the substation, overhead electrical distribution lines may be required to connect the substation with BPA's transmission line. Poles supporting the overhead lines will be required approximately every 750 feet.

Installation of inverter equipment pads and other foundations will occur over a period of approximately 5 to 6 months.

## Construction Materials and Equipment

If the project uses aboveground mounting methods with ballasted (concrete) blocks, the amount of concrete required is subject to wind loading and engineering analysis. An estimated 33,000 cubic yards of concrete could be used to create the ballasted footings, equivalent to approximately 3,500 truckloads of concrete. The concrete is expected to be premixed. If a concrete batch plant is necessary for the site, it will only be used for onsite purposes and will be removed when construction is completed. The structural supports and other mounting materials will require an estimated 800 trucks to deliver materials to the site based on vendor estimates. Thus, a total number of truck deliveries to the site will be in the range of 4,300 for deliveries of goods and materials.

The 75 MWdc anticipated to be generated from this project equates to 75,000,000 watts-dc, or 347,222 solar modules of 216 watts-dc each. It is estimated that the project will require up to 450 shipping containers of solar modules.

Gravel and concrete for the project will be sourced in the Cle Elum area to the extent possible.

Construction equipment such as backhoes, loaders, concrete trucks, and graders will likely be used. A crane may be necessary, but is typically not required.

## Transportation and Traffic

Materials for the project (e.g., solar modules, supporting racks, foundation materials, electrical gear) will be brought to the site by truck. The trucks will travel on Interstate 90 (I-90) and access Highway 970 by way of County roads such as Red Bridge Road (see Figure 3), and private roads such as Loping Lane and Wehl Road. Road service within the project area will be provided by an existing network of maintenance roads, although new maintenance roads or segments may be necessary. Road improvements will be conducted as required by the County. Road improvements are further addressed in the DA with Kittitas County. For further discussion of traffic impacts, see the Transportation section of this checklist.

## Employment

A typical construction workforce for a multiple-megawatt solar facility consists of between 200 and 450 full-time workers, during the construction period. Typically, 100 to 150 workers are involved in the site prep, and 100 to 150 are involved in fabricating the concrete forms and placing the concrete ballasts in the field. When the solar installation begins, the

workload will peak, and will likely remain at between 300 and 450 workers for a period of up to 27 months (three 9-month construction seasons). Workers could be brought in by vanpool or bus. Workers are not typically housed onsite, but this is subject to the cost of transportation to the site. Subject to the needs of any security personnel for the project, it is not expected that a significant number of workers will remain onsite outside and require temporary housing. Security crews will likely consist of up to eight onsite workers. In addition, access control in the form of an electric gate with an associated keypad security code for entry will be installed.

## **Safety and Fire Protection**

The fire protection needs of the site are currently served by WDNR. After the project is constructed, the site will likely be served by the Kittitas County Fire Protection District #7. Further, the project will be bordered by a firebreak no less than 100 feet wide. Should the construction of the project require additional or different fire protections services, the Applicant will work with Kittitas County Fire Protection District #7 to ensure that suitable fire suppression services are in place during the construction and ongoing operations of the project. Separate safety or fire protection systems will not be required at the site. Basic safety and fire protection equipment such as fire extinguishers, personal protective equipment, and other equipment as determined by the site's safety and emergency response plan can be stored in the O&M equipment storage building.

Police protection of the proposed project area is provided by the County's Sheriff's Office. The construction contractor will notify the fire protection and police services of staging and active construction locations so these services can respond efficiently to emergencies, should any arise.

## **Water Use**

Water will be needed for activities such as dust control and module cleaning. The Applicant proposes to truck in water from the Cle Elum area or elsewhere. Subject to any restrictions imposed by the County or the Washington Department of Ecology (Ecology), an alternative approach would be to establish a groundwater well onsite. For initial project permitting, it is assumed that water will be trucked to the site.

## **Sewer and Solid Waste**

Sewer services are not anticipated. Portable toilets will be placed onsite during construction. The onsite toilets will require regular service visits.

## **Summary of Operations and Maintenance Activities and Components**

Photovoltaic power plants typically have low O&M requirements. During the life of the plant, there will be regular O&M site activity. The actual O&M requirements will be determined by the specific plant components.

## Materials and Equipment

A storage and O&M building will store spare parts (e.g., modules and fuses), equipment testing equipment, and cleaning equipment. The building will be of cinderblock construction or pre-engineered with dimensions of roughly 20 feet by 20 feet.

## Transportation and Traffic

Routine vehicular traffic will occur along the site access roads and any maintenance roads within the PV array. One to two small to medium-duty pickup trucks will be required.

Larger delivery trucks occasionally may be required if major equipment is in need of replacement such as structural elements, inverters, or large quantities of PV modules (not likely).

## Employment

Personnel for system monitoring, maintenance, and troubleshooting will likely be needed onsite. A staff of 2 to 4 technicians will perform system monitoring. The staff will work out of the O&M building and make frequent trips to the facility by way of passenger pickup truck or off-road vehicle. If issues regarding plant performance are detected, additional troubleshooting or maintenance may be required through special visits from vendors or specialty technicians.

Routine onsite activities will consist of maintaining vegetation so that it does not interfere with operation of the plant (as often as weekly during periods of high rain and growth), and cleaning the solar modules of dirt and debris. In a heavily vegetated area such as the proposed site, it is not anticipated that cleaning will be required on a weekly basis (as it would be in a desert environment). The firebreak will require periodic monitoring and clearing to remove vegetation buildup. The project is also anticipated to require the need for personnel to monitor and secure the site.

## Safety and Fire Protection

As previously discussed, separate safety or fire protection systems will not be required at the site. The Applicant will create and maintain a firebreak of no less than 100 feet between all outer edges of the project site and adjacent property lines. Basic safety and fire protection equipment such as fire extinguishers, personal protective equipment, and other equipment as determined by the site's safety and emergency response plan can be stored in the O&M equipment storage building.

Police protection of the proposed project area is provided by the County's Sheriff's Office. During the operational phase, the Applicant will contact fire protection and police services in the event of an emergency.

## Water Use

The solar modules must be kept clear from dirt and debris, the presence of which can affect the performance of the PV plant. Because the proposed site is heavily vegetated and has sufficient rainfall, it is not anticipated that monthly washing will be required. Annual cleaning may be recommended based on soiling conditions. It may be possible to use special brushes in lieu of water to remove any dirt that accumulates on the solar modules.

However, if it is determined that water is required for cleaning the solar modules or other



purposes, a water tanker truck could be brought onsite to fill portable canisters with water to be used throughout the PV array.

### **Sewer and Solid Waste**

Sewer services are not anticipated. If necessary, portable toilets can be placed onsite. Onsite toilets would require regular service visits.

### **Weed Control and Site Reclamation**






Routine weed control will be required to ensure vegetation growth does not interfere with the operation of any equipment. The frequency of visits will be determined by the growth rate and density of the vegetation left on the site once construction is complete. The Applicant is under a contractual obligation with the landowner to return the site in good condition and, at the landowner's request, to remove any or all of the project's components. Applicant is also contractually bound to reclaim the site to address any damage caused by the demolition and removal of any alterations or improvements to the site, including the project.





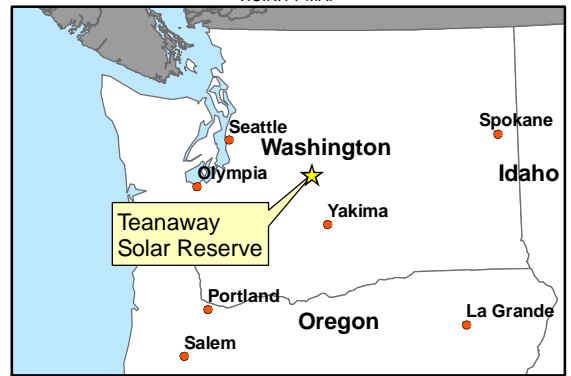
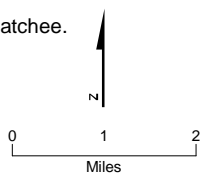
VICINITY MAP

LEGEND

-  Proposed Project Area
-  City Boundary
-  Interstate
-  Highway
-  Major Road

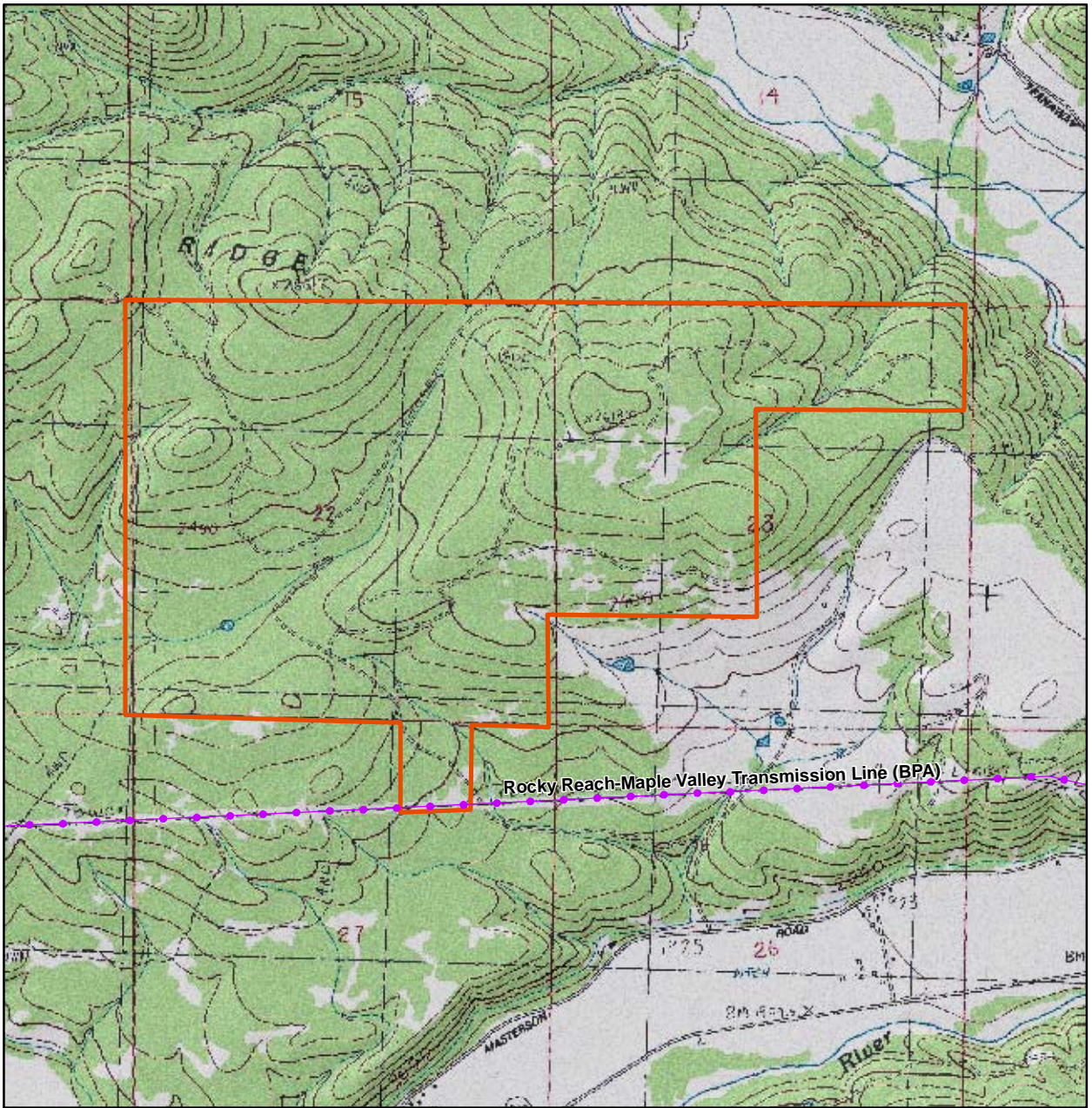
Note:

1. USGS 100K Quadrangle: Wenatchee.





**FIGURE 1**  
**Vicinity Map**

Teanaway Solar Reserve  
Kittitas County, Washington

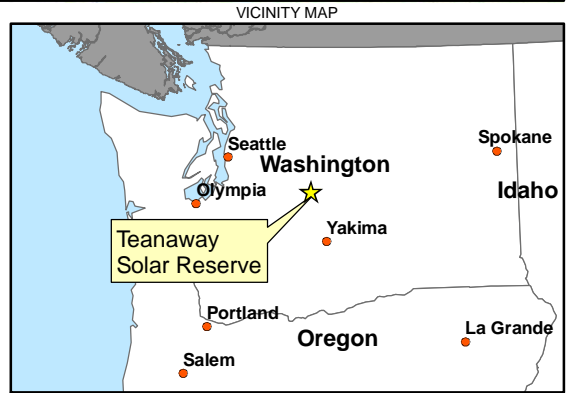
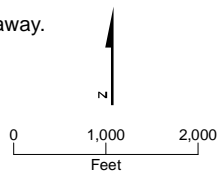


**LEGEND**

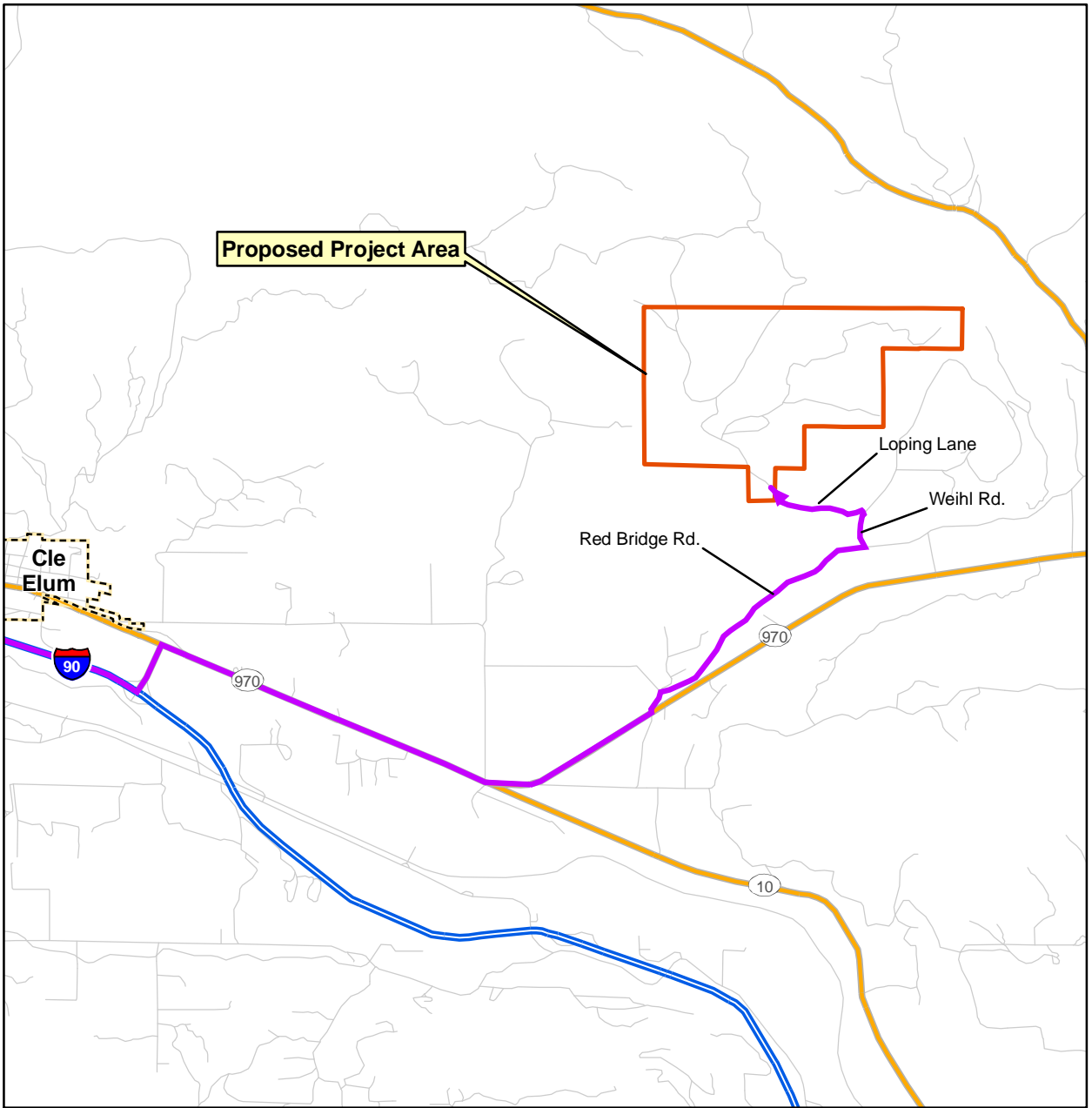
-  Existing BPA Transmission Line
-  Proposed Project Area

**Note:**

1. USGS 24K Quadrangle: Teanaway.



**FIGURE 2**  
**U.S. Geological Survey Topographic Map**  
 Teanaway Solar Reserve  
 Kittitas County, Washington



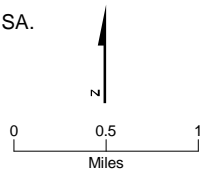
VICINITY MAP

**LEGEND**

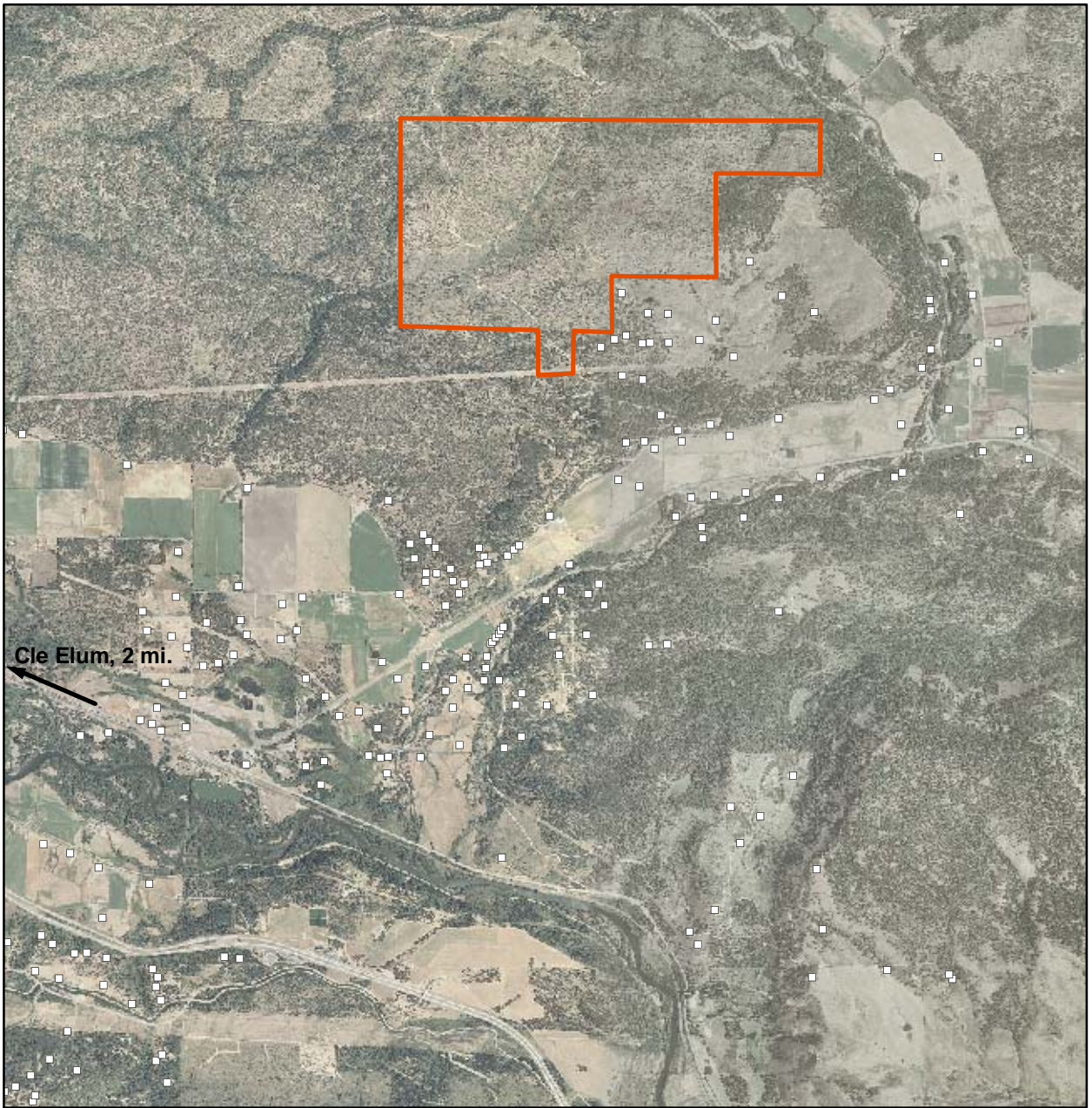
-  Proposed Project Area
-  Site Access Route
-  City Boundary
-  Interstate
-  Highway
-  Major Road
-  Minor Road

**Note:**

1. Street Data: 2002 ESRI StreetMap USA.





**FIGURE 3**  
**Site Access Map**  
 Teanaway Solar Reserve  
 Kittitas County, Washington



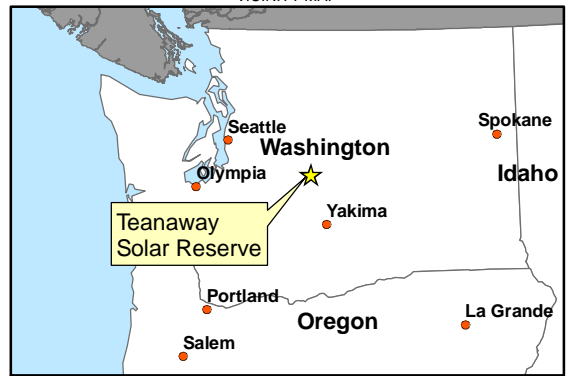
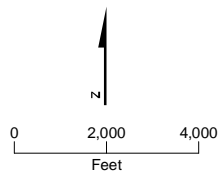
VICINITY MAP

LEGEND

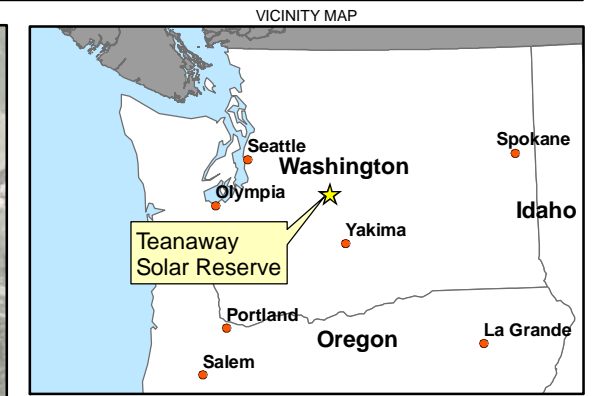
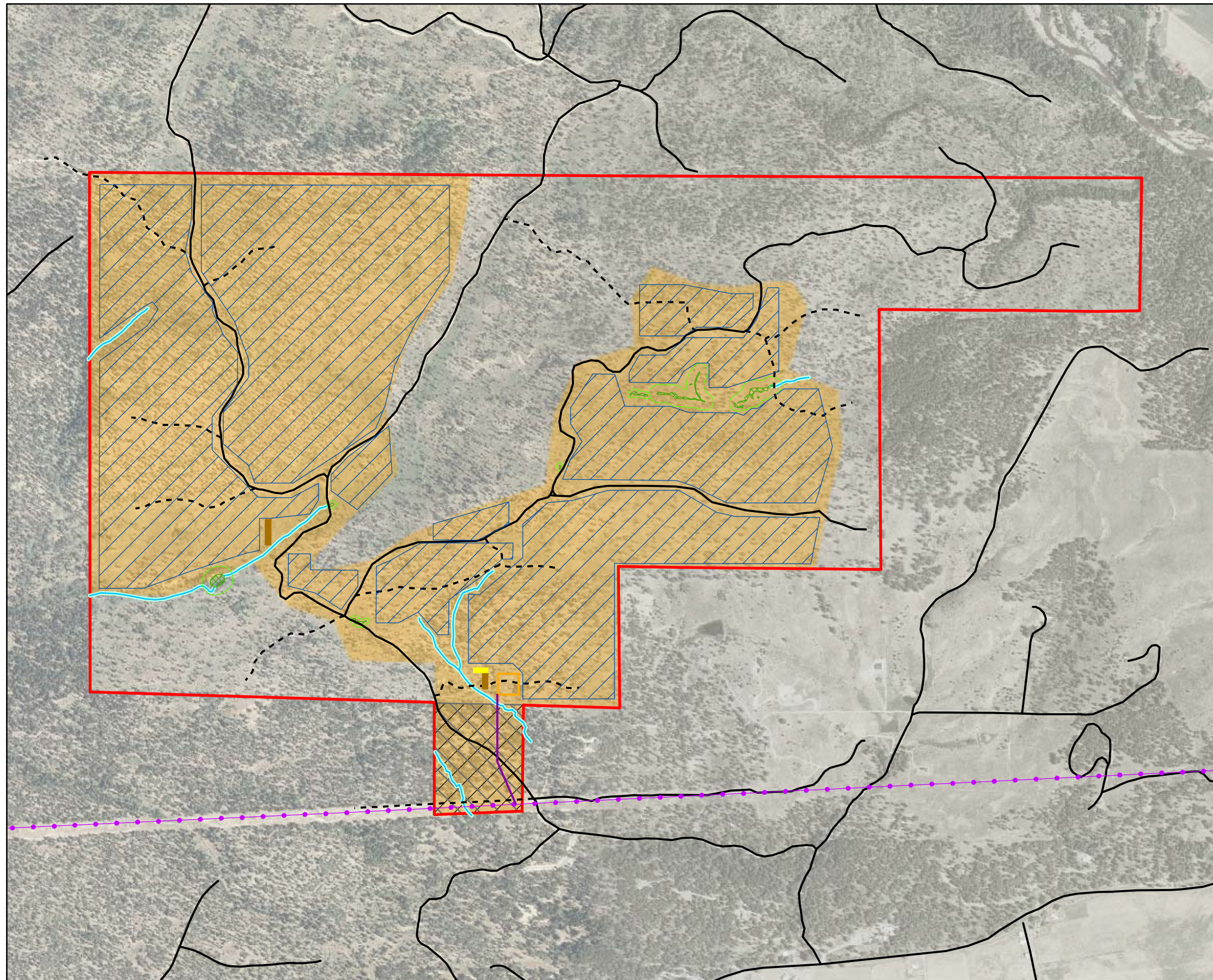
-  Proposed Project Area
-  Identified Structure

Notes:

1. Aerial Imagery: 2006 1m NAIP.
2. Structures identified from aerial, not ground verified.

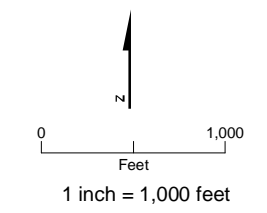


**FIGURE 4**  
**Identified Structure Map**  
 Teanaway Solar Reserve  
 Kittitas County, Washington

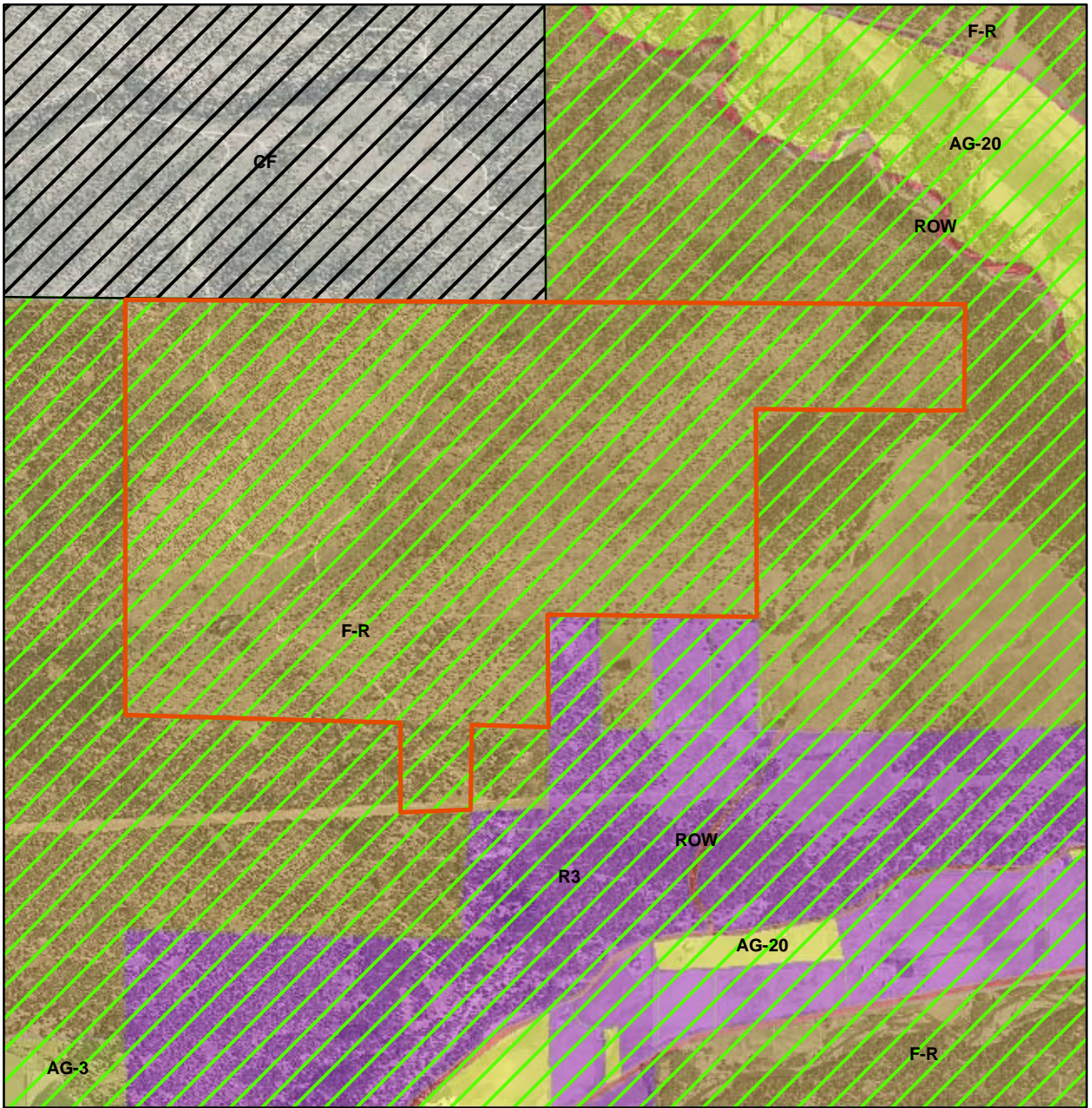


- LEGEND**
- Proposed Project Area
  - Proposed Project Site (580 acres)
  - Proposed Powerline Route to Grid
  - Potential Module Placement Area
  - Proposed O&M Facility
  - Proposed Substation
  - Proposed Switchgear
  - Transmission and Access Corridor
  - Existing Transmission Line
  - Road
  - Minor Dirt Road
  - Wetland
  - Wetland Buffer
  - Stream
  - Stream Buffer










Note:  
1. Aerial Imagery: 2006 1m NAIP.



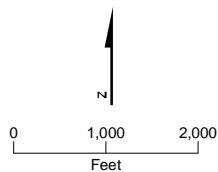
**FIGURE 5**  
**Conceptual Site Layout**  
Teanaway Solar Reserve  
Kittitas County, Washington



**LEGEND**

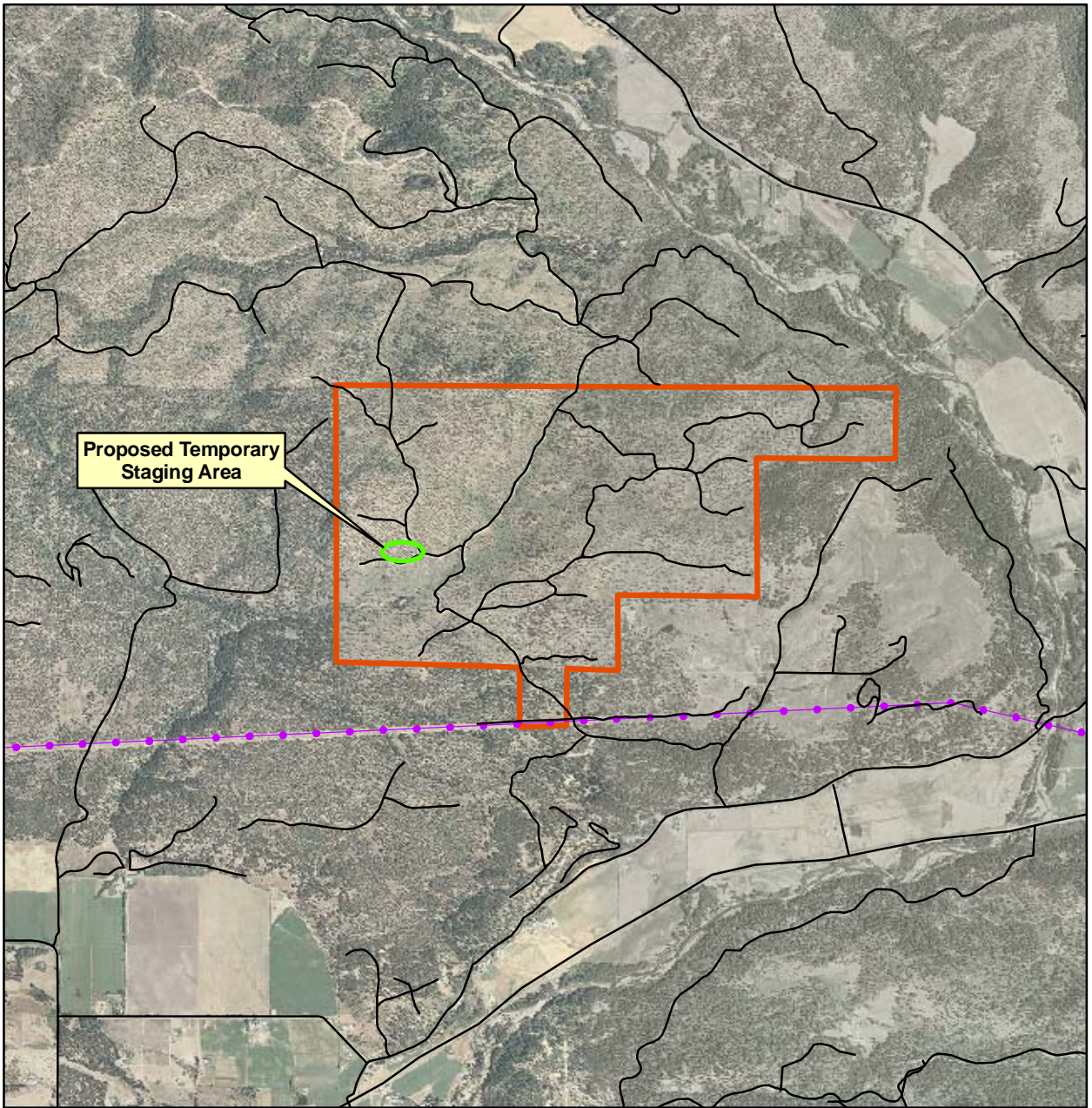
-  Proposed Project Area
- Land Use**
-  COMMERCIAL FOREST
-  RURAL
- Zoning**
-  AG-20, Agricultural 20
-  AG-3, Agricultural 3
-  CF, Commercial Forest
-  F-R, Forest & Range
-  R3, Rural 3
-  ROW, Right-of-Way

Note:  
1. Aerial Imagery: 2006 1m NAIP.







**FIGURE 6**  
**Land Use/Zoning Map**  
Teanaway Solar Reserve  
Kittitas County, Washington



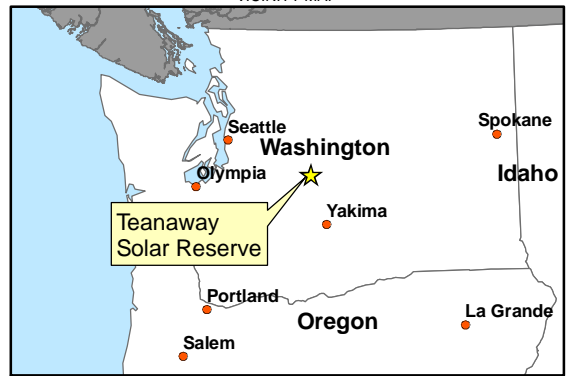
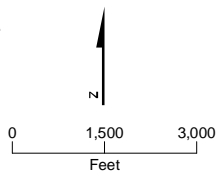


VICINITY MAP

LEGEND

-  Proposed Project Area
-  Proposed Temporary 5-Acre Staging Area
-  Road
-  Existing BPA Transmission Line

Note:  
1. Aerial Imagery: 2006 1m NAIP.



**FIGURE 7**  
**Staging Area Map**  
Teanaway Solar Reserve  
Kittitas County, Washington



ATTACHMENT B  
**Legal Description**

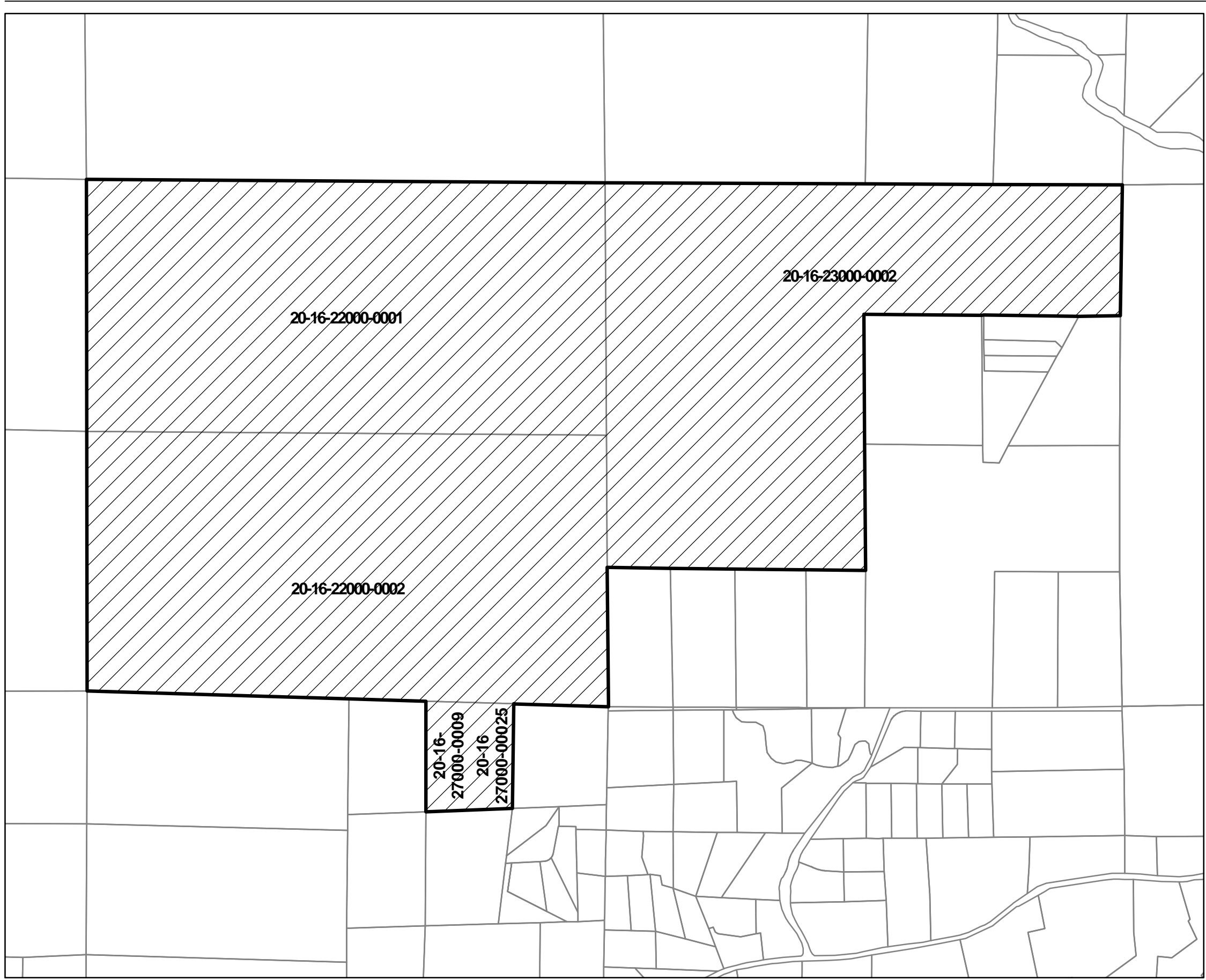
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# Legal Description

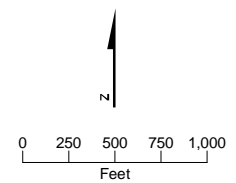
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All of Section 22; the North Half of the Northeast Quarter, the Northwest Quarter and the North Half of the Southwest Quarter of Section 23; and Parcel 2 of that certain Survey as recorded May 6, 2003 in Book 28 of Surveys, pages 234, 235 and 236, under Auditor's File No. 200305060025, records of Kittitas County, Washington, being a portion of the Northeast Quarter of Section 27; All in Township 20 North, Range 16 East, W.M., in the County of Kittitas, State of Washington. A map illustrating this area is provided on the following page.



- LEGEND
- Proposed Project Area (982 Acres)
  - Lease Boundary
  - Tax Lot Boundary

Note:  
 1. Tax Lot Boundary Data: Kittitas County Information Services.



**Legal Description**  
 Teanaway Solar Reserve  
 Kittitas County, Washington

ATTACHMENT C

# Proposed Conditional Use Permit Application

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*See CUP Application tab*





ATTACHMENT D  
**SEPA Checklist**

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*See SEPA Checklist tab*

