# Request for Amendment 5
# for the Biglow Canyon Wind Farm

# Exhibit C. Soil Protection

**Submitted to**
**Oregon Energy Facility Siting Council**

**Prepared for**

**Portland General Electric Company**

**Prepared by**

TETRA TECH

**October 2026**

# Table of Contents

1.0 Introduction ..... 1
2.0 Materials Analysis – OAR 345-022-0022(2)(a) ..... 2
3.0 Identification and Description of Soil Types – OAR 345-022-0022(2)(b)(A) ..... 2
3.1 Analysis Area ..... 2
3.2 Major Soil Types ..... 2
3.3 Sensitive Soils ..... 3
4.0 Current Land Use – OAR 345-022-0022(2)(b)(B) ..... 6
5.0 Project Soil Impacts – OAR 345-022-0022(2)(b)(C) ..... 6
5.1 Soil Impacts During Construction ..... 6
5.1.1 General Soil Impacts ..... 6
5.1.2 Impacts to Sensitive Soils ..... 7
5.2 Soil Impacts During Operation ..... 7
5.2.1 General Soil Impacts ..... 7
5.2.2 Impacts to Sensitive Soils ..... 8
5.3 Soil Impacts During Decommissioning ..... 8
5.3.1 General Soil Impacts ..... 8
5.3.2 Impacts to Sensitive Soils ..... 8
6.0 Mitigation Measures – OAR 345-022-0022(2)(b)(D) ..... 9
7.0 Monitoring Program – OAR 345-022-0022(2)(b)(E) ..... 10
8.0 Conclusions ..... 10
9.0 References ..... 11
10.0 Approval Standards and Submittal Requirements ..... 11

# List of Tables

Table C-1. General Description of Mapped Soil Units in Project Area ..... 4
Table C-2. Approval Standards and Submittal Requirements Matrix..... 11

# List of Figures

Figure C-1. NRCS Soil Map

# List of Attachments

Attachment C-1. Erosion and Sediment Control Plan
Attachment C-2. Comprehensive Solar Revegetation and Soil Management Plan

# Acronyms and Abbreviations

| Acronym/Abbreviation | Definition |
|---|---|
| AC | alternating current |
| BCWF or Facility | Biglow Canyon Wind Farm |
| BIGL 2 or Project Developer | BIGL 2, LLC |
| BMP | best management practice |
| Certificate Holder or PGE | Portland General Electric Company |
| Council or EFSC | Energy Facility Siting Council |
| EPC | engineering, procurement, and construction |
| ESCP | Erosion and Sediment Control Plan |
| MW | megawatt |
| MWh | megawatt-hour |
| NRCS | Natural Resources Conservation Service |
| OAR | Oregon Administrative Rules |
| PV | photovoltaic |
| RFA | Request for Amendment |
| Site Certificate | Site Certificate on Amendment 4 |
| Solar Facility | solar energy generation and battery storage components |

# 1.0 Introduction

The Portland General Electric Company (PGE or Certificate Holder) submits this Request for Amendment (RFA) 5 to the Site Certificate on Amendment 4, issued March 27, 2026 (Site Certificate) for the Biglow Canyon Wind Farm (BCWF or Facility) to add a second phase of solar photovoltaic (PV) energy generation and battery storage capacity to the BCWF following the solar power generation and battery storage capacity approved under RFA 4.

BCWF, owned and operated by PGE, is located within an approved site boundary comprising approximately 25,000 acres, approximately 2.5 miles northeast of the town of Wasco in Sherman County, Oregon (Background Exhibit Figure 1). The BCWF operates under the Site Certificate from the Oregon Energy Facility Siting Council (Council or EFSC) as administered by the Oregon Department of Energy. BCWF currently consists of 217 operating wind turbines, with a maximum blade tip height of 445 feet, and a peak generating capacity of 450 megawatts (MW) (Wind Facility). RFA 4, approved March 27, 2026, added 125 MW alternating current (AC) generating capacity from PV solar arrays and 500 megawatt-hours (MWh) in battery storage capacity. The solar energy generation and battery storage components (Solar Facility) described in RFA 4 are currently under construction.

In RFA 5, PGE proposes to add up to 200 MW AC generating capacity from PV solar arrays and 1,000 MWh in battery storage capacity (RFA 5 Solar Facility) by expanding the overall BCWF site boundary by approximately 839 acres. The RFA 5 Solar Facility is located across approximately 622 acres of the existing BCWF site boundary and 839 acres expanded site boundary, for a total of approximately 1,461 acres (together, RFA 5 Site Boundary; see Background Exhibit Figure 4).

The RFA 5 Site Boundary provides a conservative estimate of the maximum area needed for development and micrositing through final design and construction for the RFA 5 Solar Facility, rather than the anticipated disturbance footprint. Primary infrastructure includes solar arrays, inverters, battery energy storage system facilities and their subcomponents (i.e., inverters), one collector substation, and medium-voltage collector lines (herein collectively referred to as "Solar Components"). Additionally, the Solar Components include operations and maintenance structures, site access roads, internal roads, perimeter fencing, facility entry gates, and temporary laydown areas. The maximum generating capacity from the Solar Components will be 200 MW AC. Power generated from the Solar Components will be transferred to the grid via a 230-kilovolt generation tie transmission line, approximately 2.7 miles long. The RFA 5 Solar Facility includes the Solar Components and the gen-tie transmission line.

PGE will own and operate the RFA 5 Solar Facility as a part of the BCWF, which, to date, has been developed by BIGL 2, LLC (BIGL 2, or Project Developer). BIGL 2, in its capacity as the Project Developer, supports PGE in this RFA 5 and may construct and temporarily operate the RFA 5 Solar Facility on behalf of PGE under a Build-Transfer Agreement.

The information contained herein supports demonstration of compliance with the Soil Protection approval standard for Oregon Administrative Rules (OAR) 345-022-0022.

# 2.0 Materials Analysis – OAR 345-022-0022(2)(a)

*(2) To assist the Council in determining whether the standard outlined in (1) has been met, the Applicant must submit, the Applicant must submit:*

*(a) A materials analysis, including:*

*(A) An inventory of substantial quantities of industrial materials flowing into and out of the proposed facility during construction and operation;*

*(B) The applicant's plans to manage hazardous substances during construction and operation, including measures to prevent and contain spills; and*

*(C) The applicant's plans to manage non-hazardous waste materials during construction and operation.*

The materials analysis for the RFA 5 Solar Facility can be found in Section 7.0 of Exhibit N.

# 3.0 Identification and Description of Soil Types – OAR 345-022-0022(2)(b)(A)

*(b) Information from reasonably available sources regarding soil conditions and uses in the analysis area, providing evidence to support findings by the Council as required by OAR 345-022-0022, including:*

*(A) Identification and description of the major soil types in the analysis area;*

## 3.1 Analysis Area

Consistent with OAR 345-027-0360(3), the analysis area for the evaluation of soil conditions is the RFA 5 Site Boundary which includes the Solar Siting Area. This RFA 5 Site Boundary is the maximum area of the RFA 5 Solar Facility containing all solar components, including the gen-tie corridor, and covers 1,461 acres.

## 3.2 Major Soil Types

The Soil Survey Geographic Database for Sherman County in Oregon (Natural Resources Conservation Service [NRCS] 2026) was used to identify the near-surface soils in the analysis area. The survey describes the soils in the top 7 feet of subsurface and the area's land-use classifications. According to NRCS (2026), there are five major soil types (soil units) in the analysis area (Figure C-1, Table C-1).

Of the soil units found within the analysis area, four soil units (Anderly silt loam 1B, Anderly silt loam 1C, Walla Walla silt loam 31B, and Walla Walla silt loam 31C) make up 5 percent or more of the analysis area and are described by the NRCS as follows:

- **Anderly silt loam (1B and 1C)** – These are moderately deep, well-drained silt loams formed in loess overlying basalt. This soil is typically found in upland plateaus with slopes ranging from 1 to 15 percent and have 20 to 40 inches depth to lithic bedrock, typically basalt. Anderly silt loams have slow infiltration rate and moderately high runoff potential.
- **Walla Walla silt loam (31B and 31C)** – These are deep to very deep, well-drained silt loams formed in loess overlying basalt. This soil is typically found in upland plateaus with slopes ranging from 1 to 15 percent and have 20 to 40 inches depth to lithic bedrock, typically basalt. Walla Walla silt loams have moderate infiltration rate and moderate runoff potential.

## 3.3 Sensitive Soils

Sensitive soils are the soil units identified where additional best management practices (BMP) and considerations may be required. The metrics used for this determination are Hazard for Erosion (Off-road, Off-trail), Hazard for Erosion (Road, Trail), Fugitive Dust Resistance, and Soil Compaction Resistance. Based on descriptions for each of the metrics as well as the ratings of each soil unit for these metrics presented in Table C-1, the following can be inferred (Figure C-2):

- Anderly silt loams (1B and 1C) and Walla Walla silt loams (31B and 31C) are prone to erosion by wind and water; therefore, the implementation of erosion and sediment control measures must be an integral part of all phases of construction.
- Anderly silt loam (1C) and Walla Walla silt loam (31C) have a severe Hazard for Erosion (Road, Trail) implying that any roads and trails constructed within these soil units must include measures that address the high potential for erosion by water.
- Most soil units within the analysis area have low Fugitive Dust Resistance making them vulnerable to dust generation and indicating the need for appropriate BMPs that address this.
- Lickskillet very stony loam (16D) has low Soil Compaction Resistance and may necessitate compaction-related BMPs during and after construction.

## Table C-1. General Description of Mapped Soil Units in Project Area

| Soil Unit | Approximate Thickness (cm) | Formation Setting | Percent of Analysis Area | Hydrologic Soil Group[1] | Wind Erodibility Group[2] | Hazard for Erosion (Off-road, Off-trail)[3] | Hazard for Erosion (Road, Trail)[4] | Fugitive Dust Resistance[5] | Soil Compaction Resistance[6] |
|---|---|---|---|---|---|---|---|---|---|
| 1B, Anderly silt loam, 1 to 7 percent slopes | 76 | Loess over fractured basalt | 4.7 | C | 5 | Moderate | Slight | Low Resistance | Moderate Resistance |
| 1C, Anderly silt loam, 7 to 15 percent slopes | 76 | Loess over fractured basalt | 6.5 | C | 5 | Severe | Moderate | Low Resistance | Moderate Resistance |
| 16D, Lickskillet very stony loam, 7 to 40 percent south slopes | 48 | Loess mixed with colluvium from basalt | 0.8 | D | 7 | Moderate | Moderate | Moderate Resistance | Low Resistance |
| 31B, Walla Walla silt loam, 1 to 7 percent slopes | Greater than 200 | Loess over fractured basalt | 62.4 | B | 5 | Moderate | Slight | Low Resistance | Moderate Resistance |
| 31C, Walla Walla silt loam, 7 to 15 percent slopes | Greater than 200 | Loess over fractured basalt | 25.7 | B | 5 | Severe | Moderate | Low Resistance | Moderate Resistance |

1. Hydrologic Soil Group: Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups (A, B, C, and D) according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms. Group A soils have a high infiltration rate (low runoff potential) while Group D soils have a very slow infiltration= rate (high runoff potential).
2. Wind Erodibility Group: A wind erodibility group (WEG) consists of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible.
3. Hazard for Erosion (Off-road, Off-trail): This rating indicates the hazard of soil loss from off-road and off-trail areas after disturbance activities that expose the soil surface. The ratings are based on slope, soil erosion factor K, and an index of rainfall erosivity (R). A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.
4. Hazard for Erosion (Road, Trail): The ratings in this interpretation indicate the hazard of soil loss from unsurfaced roads and trails. The ratings are based on soil erosion factor K, slope, and content of rock fragments. A rating of "slight" indicates that little or no erosion is likely; "moderate" indicates that some erosion is likely, that the roads or trails may require

| Soil Unit | Approximate Thickness (cm) | Formation Setting | Percent of Analysis Area | Hydrologic Soil Group[1] | Wind Erodibility Group[2] | Hazard for Erosion (Off-road, Off-trail)[3] | Hazard for Erosion (Road, Trail)[4] | Fugitive Dust Resistance[5] | Soil Compaction Resistance[6] |
|---|---|---|---|---|---|---|---|---|---|

occasional maintenance, and that simple erosion-control measures are needed; and "severe" indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

5. Fugitive Dust Resistance: This rating indicates the vulnerability of a soil for eroded soil particles to go into suspension upon disturbance. Rating class terms indicate the extent to which all of the soil features affect the formation of dust. "Low resistance" indicates that the soil has features that are very favorable for the formation of dust. "Moderate resistance" indicates that the soil has features that are favorable for dust formation. "High resistance" indicates that the soil has features that are unfavorable for dust formation.
6. Soil Compaction Resistance: This rating indicates the ability of the soil to resist compaction. “High resistance" indicates that the soil has features that are very favorable to resisting compaction. "Moderate resistance" indicates that the soil has features that are favorable to resisting compaction. "Low resistance" indicates that the soil has one or more features that favor the formation of a compacted layer.

# 4.0 Current Land Use – OAR 345-022-0022(2)(b)(B)

> *(B) Identification and description of current land uses in the analysis area, such as growing crops, that require or depend on productive soils;*

The analysis area is zoned Exclusive Farm Use by Sherman County (see Exhibit D). Most of the analysis area and the vicinity consists of private agricultural land used for dryland wheat production. Within the agricultural land, out areas, which are areas where agriculture is not feasible, exist due to factors including steep slopes, sides of ditches and drainages, and shallow soils. Some sections of the analysis area are planted into a grassland mix. See Exhibit D for definition and detailed analysis of land use within the analysis area.

# 5.0 Project Soil Impacts – OAR 345-022-0022(2)(b)(C)

> *(C) Identification and assessment of significant potential adverse impact to soils from construction, operation and retirement of the facility, including, but not limited to, erosion and chemical factors such as salt deposition from cooling towers, land application of liquid effluent, and chemical spills;*

## 5.1 Soil Impacts During Construction

### *5.1.1 General Soil Impacts*

Solar Components construction will require many activities that could adversely impact soils, including:

- Clearing and grubbing vegetation around temporary construction areas, solar arrays, the collector lines, the battery energy storage system foundations, collector circuits, substation construction areas, and new access roads;
- Grading and excavation activities;
- Constructing new access roads;
- Operating and moving cranes;
- Using heavy equipment and hauling trucks to deliver aggregates, concrete, water, solar components, and construction supplies; and
- Fueling or maintaining construction equipment or vehicles.

The portions of the analysis area that will be graded are expected to result in a balanced cut-and-fill quantity of earthwork to maintain the existing conditions to the extent practicable for the protection of the equipment and facilities.

Acres of temporary and permanent disturbance by disturbance type are identified in Section 3.4.3 of the RFA 5 Background Exhibit. Impacts to soil, such as erosion, resulting from construction activities would be limited through the implementation of BMPs including but not limited to those identified in relevant Site Conditions in Amendment 4 to the Site Certificate (Council 2026) as noted below. Measures that will be implemented include the following:

- Implement appropriate BMPs to control any dust generated by construction activities, such as applying water or stabilizers to roads and disturbed soil areas.
- Limit truck traffic to designated existing and improved road surfaces, and newly constructed roads, to avoid soil compaction to the extent possible.
- Conduct all construction work in compliance with the erosion and sediment control BMPs in the Erosion and Sediment Control Plan (ESCP), as required by the National Pollutant Discharge Elimination System Construction Stormwater Discharge General permit 1200-C (see Attachment C-1 for the ESCP; Site Condition PRE-SP-01); the engineering, procurement, and construction (EPC) contractor will apply for the permit before construction via the Oregon Department of Environmental Quality's online *Your DEQ Online* platform and will update the finalized ESCP according to the finalized layout. The ESCP will include any procedures necessary to meet local erosion and sediment control requirements or stormwater management requirements as well as any additional elements of the Solar Components that must be addressed.
- Implement appropriate existing BMPs to prevent and address spill and contamination risk in addition to the Construction Spill Prevention, Control, and Countermeasures Plan that is already in place at the Biglow Canyon Wind Farm (Site Condition PRE-SP-02).
- Implement appropriate site restoration practices following construction (Site Condition CON-SP-01), including decompaction and revegetation, as described in the Comprehensive Solar Revegetation and Soil Management Plan (Attachment C-2; Site Condition CON-SP-02).

### *5.1.2 Impacts to Sensitive Soils*

Soil types identified as sensitive within the analysis area have high Hazard for Erosion, low Fugitive Dust Resistance, and/or low Soil Compaction Resistance and may likely be impacted in certain areas. Therefore, the implementation of erosion control practices to address any potential temporary or permanent impact to sensitive soils is integral at all phases of construction. Refer to Attachment C-1 for the ESCP, which will outline measures to specifically limit the impact to sensitive soils during construction.

## 5.2 Soil Impacts During Operation

### *5.2.1 General Soil Impacts*

Solar array operation would not impact soil erosion. Solar Components operations are not expected to cause any additional ground disturbances. The Certificate Holder will routinely inspect and

maintain all Solar Components and maintain or repair erosion and sediment control measures as needed (Site Condition OPR-SP-06). Vehicles will stay on constructed access roads to avoid unnecessary compaction and erosion. The potential for soil contamination would be limited by implementing measure to prevent and address spill and contamination risk as outlined in the Operations Spill Prevention, Control, and Countermeasures Plan and by observing appropriate safety measures during maintenance procedures (Site Conditions PRO-SP-01 and OPR-SP-07).

### *5.2.2 Impacts to Sensitive Soils*

The implementation of erosion control practices to address any potential temporary or permanent impact to sensitive soils is integral during operation. During operation, the analysis area will be monitored until soils are stabilized and evaluate whether construction-related impacts to soils are being adequately addressed by the mitigation procedures described in the ESCP. The Comprehensive Solar Revegetation and Soil Management Plan (Attachment C-2), which addresses topsoil management and describes a monitoring program for evaluating and addressing impacts to long-term soil stability, may be used to determine the interval and criteria for monitoring.

Features such as straw bales, roadside ditches, infiltration swales, and retention basins may be installed during construction to manage stormwater and stabilize soils and may be left in place for as long as needed to stabilize the site, including during operations. These features may be inspected during site monitoring to assess revegetation efforts and soil stability and will be removed when it is determined that the site has been stabilized.

## 5.3 Soil Impacts During Decommissioning

### *5.3.1 General Soil Impacts*

In the event of decommissioning, erosion hazards would be similar to construction. Measures like those used in construction and operation through required Site Certificate Conditions would be used to prevent and control erosion, mitigate soil compaction, prevent spills, and revegetate disturbed areas.

### *5.3.2 Impacts to Sensitive Soils*

The implementation of erosion control practices to address any potential temporary or permanent impact to sensitive soils is integral during decommissioning, which will be similar to the erosion control practices implemented during construction. Refer to Attachment C-1 for the ESCP, which will outline measures to specifically limit the impact during decommissioning to sensitive soils.

# 6.0 Mitigation Measures – OAR 345-022-0022(2)(b)(D)

*(D) A description of any measures the applicant proposes to avoid or mitigate adverse impact to soils; and*

As noted above, many Site Certificate Conditions require the use of minimizing measures and BMPs throughout the construction, operation, and decommissioning (if necessary) of the Solar Components. The graded portions of the analysis area are expected to create a balanced cut-and-fill quantity of earthwork to maintain the existing conditions and protect equipment and facilities. Some BMPs that may be implemented (depending on seasonal conditions, final siting, etc.) along with other measures identified in the ESCP, including to the sensitive soils within the analysis area, are:

- **Stabilized Construction Entrances/Exits –** Stabilized construction entrances or exits will be installed where construction vehicles move from newly constructed roads or disturbed areas to paved roads. The stabilized construction entrances and exits will be inspected and maintained for the life of the Solar Components.
- **Dust Abatement Measures –** Compact filling and appropriate dust abatement measures such as restricting vehicle speeds; watering active areas, stockpiles, and roadways; track-out control at site exits; and other measures may be used.
- **Preserving Existing Vegetation –** To the extent practicable, existing vegetation will be preserved. Where vegetation clearing is necessary, root systems would be conserved if possible.
- **Silt Fencing –** Silt fencing will be installed throughout the construction area as a perimeter control, material stockpile perimeter control, and on the contour downgradient of excavations.
- **Straw Wattles –** Straw wattles may be used to decrease the velocity of sheet flow stormwater to prevent erosion. Wattles will be used along the downgradient edge of access roads adjacent to slopes or sensitive areas.
- **Mulching –** Mulch may be used to stabilize areas of soil disturbance quickly and during reseeding.
- **Stabilization Matting –** Jute matting, straw matting, or turf reinforcement matting may be used with mulching to stabilize steep slopes exposed during access road installation.
- **Soil Binders and Tackifiers –** Soil binders and tackifiers may be used on exposed slopes to stabilize them until vegetation is established.
- **Concrete Washout Area –** Concrete chutes and trucks will be washed out in dedicated areas near foundation construction locations. This will keep concrete washout water in a localized area.

- **Stockpile Management –** Soil from excavations will be temporarily stockpiled and used onsite. Soils will be stockpiled and reused to prevent productive topsoils from mixing with deeper subsoils. Silt fence or straw wattles will be installed around the stockpile material as a perimeter control. Mulch or plastic sheeting will be used to cover the stockpiled material, if needed. Stockpiles will be watered, if needed, to reduce erosion.
- **Revegetation –** The site will be revegetated with an approved seed mix after construction activities. When required, the seed will be applied with mulch or stabilization matting to protect the growing grass seed. Revegetation will occur as soon as is practicable following construction.
- **Pollutant Management –** During construction, source control measures will be implemented to minimize the likelihood of chemicals polluting surface water or groundwater. Chemical pollution could occur as a release of diesel fuel or lubricating oils or improper debris and waste handling. Small quantities of fuels and oils may be kept onsite in a dedicated area during construction and operation. Construction vehicles will be fueled and maintained only in dedicated areas. Any spills would be cleaned up immediately.
- **Construction Timing –** Whenever possible, construction activities will be scheduled in the dry season when soils are less susceptible to compaction.

# 7.0 Monitoring Program – OAR 345-022-0022(2)(b)(E)

> *(E) The applicant's proposed monitoring program, if any, for adverse impact to soils during construction and operation.*

As discussed in Section 5.1, the Certificate Holder will implement the ESCP including construction monitoring requirements as approved by the Oregon Department of Environmental Quality. In addition, Section 5.2 identified Site Condition OPR-SP-06 in the Fourth Amended Site Certificate (Council 2026), which requires the Certificate Holder to inspect and maintain all Facility components routinely, and, as necessary, maintain or repair erosion and sediment control measures. The monitoring protocol and testing methods are outlined in the Comprehensive Solar Revegetation and Soil Management Plan (Attachment C-2).

# 8.0 Conclusions

During construction, the potential for soil erosion and contamination will be minimized by implementing appropriate BMPs to minimize impacts to the extent practicable and by adhering to the Site Certificate Conditions outlined above. Specific construction and site restoration practices will mitigate construction impacts on soil productivity and measures may be taken as appropriate during operation and decommissioning to address any temporary or permanent impacts if they occur. No adverse impacts are expected on productive farmland soils. Considering the existing Site

Certificate Conditions, the Council may conclude that the design, construction, and operation of the proposed Solar Components is unlikely to have a significant, adverse, and long-term impact on soils.

# 9.0 References

Council (Oregon Energy Facility Siting Council). 2026. Fourth Amended Site Certificate for the Biglow Canyon Wind Farm. Energy Facility Siting Council, Salem, Oregon. March 2026.

NRCS (Natural Resources Conservation Service). 2026. Web Soil Survey. United States Department of Agriculture, Natural Resources Conservation Service. Available online at: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed July 2026.

# 10.0 Approval Standards and Submittal Requirements

**Table C-2. Approval Standards and Submittal Requirements Matrix**

| Requirement | Location |
|---|---|
| OAR 345-022-0022 Soil Protection | – |
| **Approval Standards** | |
| (1) To issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in a significant adverse impact to soils including, but not limited to, erosion and chemical factors such as salt deposition from cooling towers, land application of liquid effluent, and chemical spills. | |
| **Submittal Requirements** | |
| (2) To assist the Council in determining whether the standard outlined in (1) has been met, the Applicant must submit, the Applicant must submit: | – |
| (a) A materials analysis, including: | Section 7.0 of Exhibit N |
| (A) An inventory of substantial quantities of industrial materials flowing into and out of the proposed facility during construction and operation; | Section7.1 of Exhibit N |
| (B) The applicant's plans to manage hazardous substances during construction and operation, including measures to prevent and contain spills; and | Section 7.2 of Exhibit N |
| (C) The applicant's plans to manage non-hazardous waste materials during construction and operation. | Section 7.3 of Exhibit N |
| (b) Information from reasonably available sources regarding soil conditions and uses in the analysis area, providing evidence to support findings by the Council as required by OAR 345-022-0022, including: | – |
| (A) Identification and description of the major soil types in the analysis area; | Section 3.0 |
| (B) Identification and description of current land uses in the analysis area, such as growing crops, that require or depend on productive soils; | Section 4.0 |

| Requirement | Location |
|---|---|
| (C) Identification and assessment of significant potential adverse impact to soils from construction, operation and retirement of the facility, including, but not limited to, erosion and chemical factors such as salt deposition from cooling towers, land application of liquid effluent, and chemical spills; | Section 5.0 |
| (D) A description of any measures the applicant proposes to avoid or mitigate adverse impact to soils; and | Section 6.0 |
| (E) The applicant's proposed monitoring program, if any, for adverse impact to soils during construction and operation. | Section 7.0 |

# Figures

# Biglow Canyon Wind Farm Request for Amendment #5

## Figure C-1
## NRCS Soil Map

**SHERMAN COUNTY, OR**

RFA5 Site Boundary

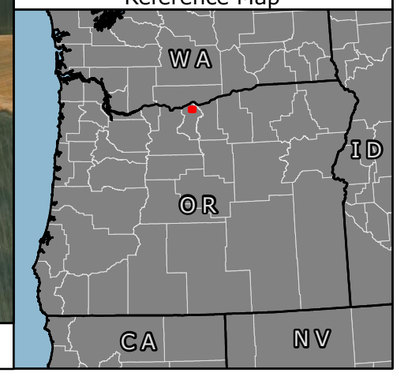
NRCS Soil Map Unit (Symbol, Name)

- 16D, Lickskillet very stony loam, 7 to 40 percent south slopes
- 1B, Anderly silt loam, 1 to 7 percent slopes
- 1C, Anderly silt loam, 7 to 15 percent slopes
- 31B, Walla Walla silt loam, 1 to 7 percent slopes
- 31C, Walla Walla silt loam, 7 to 15 percent slopes

TETRA TECH

PGE

Reference Map




1:25,000

WGS 1984 UTM Zone 10N

0 1 2 Miles

NOT FOR CONSTRUCTION

\\tt.local\GIS\US\CES\Projects\PDX\BrightNight\BiglowCanyon\Maps_RFA5\Exhibit_C\PGE_BiglowCanyon_RFA5_ExhibitC_20260626.aprx

# Attachment C-1. Erosion and Sediment Control Plan

# BIGL bn, LLC
# BIGLOW SOLAR PROJECT - PRELIMINARY
# EROSION AND SEDIMENT CONTROL PLAN (ESCP) DRAWINGS

www.tetratech.com

TETRA TECH

## RATIONALE STATEMENT

A COMPREHENSIVE LIST OF AVAILABLE BEST MANAGEMENT PRACTICES (BMP) OPTIONS BASED ON DEQ'S GUIDANCE MANUAL HAS BEEN REVIEWED TO COMPLETE THIS EROSION AND SEDIMENT CONTROL PLAN. SOME OF THE ABOVE LISTED BMP'S WERE NOT CHOSEN BECAUSE THEY WERE DETERMINED TO NOT EFFECTIVELY MANAGE EROSION PREVENTION AND SEDIMENT CONTROL FOR THIS PROJECT BASED ON SPECIFIC SITE CONDITIONS, INCLUDING SOIL CONDITIONS TOPOGRAPHIC CONSTRAINTS ACCESSIBILITY TO THE SITE, AND OTHER RELATED CONDITIONS, AS THE PROJECT PROGRESSES AND THERE IS A NEED TO REVISE THE ESC PLAN, AN ACTION PLAN WILL BE SUBMITTED.

_____ INITIAL

## PROJECT DESCRIPTION

BIGL bn, LLC TO CONSTRUCT AND OPERATE THE BIGLOW SOLAR PROJECT TO CONSIST OF CONSTRUCTION OF A PHOTOVOLTAIC SOLAR ENERGY FACILITY WITH AN ESTIMATED NOMINAL AND AVERAGE GENERATING CAPACITY OF 125 MEGAWATTS OF ALTERNATING CURRENT. DEVELOPING ADDITIONAL COMPONENTS TO 500 MEGAWATT HOURS OF BATTERY ENERGY STORAGE, TRANSMISSION LINE, UNDERGROUND ELECTRICAL COLLECTION LINES, COLLECTOR SUBSTATIONS, SITE ACCESS ROADS, OPERATIONS AND MAINTENANCE BUILDINGS, AND TEMPORARY CONSTRUCTION AREAS. THE PROPOSED WORK DOES NOT QUALIFY AS "ROUTINE MAINTENANCE" AS DEFINED IN 40 CFR 122.26 (B) (15).

## NOTES:

1. ANY ENGINEERED SOILS USED ON SITE SHALL COMPLY WITH THE 1200-C PERMIT, SCHEDULE A.15.
2. NO WORK WILL OCCUR WITHIN THE NATURAL BUFFER ZONE WIDTH AS DESCRIBED IN THE 1200-C PERMIT, SCHEDULE A.3 AND APPENDIX B.
3. THE PERMIT REGISTRANT IS RESPONSIBLE FOR MEETING ALL CONDITIONS OF THE 1200-C PERMIT. THIS ESCP HAS BEEN DEVELOPED TO FACILITATE COMPLIANCE WITH THE 1200-C PERMIT. IN CASES OF DISCREPANCIES OR OMISSIONS, THE 1200-C PERMIT REQUIREMENTS SUPERSEDE THE REQUIREMENTS OF THIS PLAN. THE PERMIT REGISTRANT IS REQUIRED TO ALTER THE ESCP DEPENDING ON SITE CONDITIONS TO BE PROTECTIVE OF WATER QUALITY.
4. A PRE-CON MEETING MUST BE HELD WITH PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE EC INSPECTOR.
5. ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS.
6. INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS.
7. REVISIONS TO THE APPROVED ESCP MUST BE SUBMITTED TO DEQ OR AGENT IN ACCORDANCE WITH CURRENT 1200-C PERMIT.

## SHEET INDEX


| | |
|---|---|
| ESC-0 | EROSION AND SEDIMENT CONTROL COVER SHEET |
| ESC-1 | EROSION AND SEDIMENT CONTROL SITE SOIL CLASSIFICATION |
| ESC-2 | EROSION AND SEDIMENT CONTROL PLAN EXISTING CONDITIONS |
| ESC-3 | EROSION AND SEDIMENT CONTROL PLAN EXISTING CONDITIONS |
| ESC-4 | EROSION AND SEDIMENT CONTROL PLAN CONSTRUCTION BMPS |
| ESC-5 | EROSION AND SEDIMENT CONTROL PLAN CONSTRUCTION BMPS |
| ESC-6 | EROSION AND SEDIMENT CONTROL PLAN CONSTRUCTION BMPS |
| ESC-7 | EROSION AND SEDIMENT CONTROL PLAN CONSTRUCTION BMPS |
| ESC-8 | EROSION AND SEDIMENT CONTROL PLAN CONSTRUCTION BMPS |
| ESC-9 | EROSION AND SEDIMENT CONTROL PLAN FINAL STABILIZATION |
| ESC-10 | EROSION AND SEDIMENT CONTROL PLAN FINAL STABILIZATION |
| ESC-11 | EROSION AND SEDIMENT CONTROL PLAN DETAILS |
| ESC-12 | EROSION AND SEDIMENT CONTROL PLAN DETAILS |
| ESC-13 | EROSION AND SEDIMENT CONTROL PLAN DETAILS |
| ESC-14 | EROSION AND SEDIMENT CONTROL PLAN DETAILS |


## NARRATIVE DESCRIPTIONS

### PROJECT LOCATION

SHERMAN COUNTY, OREGON
LATITUDE= 45°36'29.91"N LONGITUDE= 120°38'31.45"W

TOTAL SITE AREA: APPROX. 1,924 ACRES
POTENTIAL MAX DISTURBED AREA: APPROX. 1,924 ACRES

### PROPERTY DESCRIPTION

LOCATED BETWEEN ROLLING FARM LAND NORTHEAST OF WASCO, OREGON

### RECEIVING WATER BODIES:

WATERBODIES IN THE PROJECT AREA INCLUDE EMIGRANT CANYON AND BIGLOW CANYON AS TRIBUTARIES OF THE JOHN DAY RIVER, AND NUMEROUS INTERMITTENT/EPHEMERAL EROSIONAL FEATURES.

### EXISTING SITE CONDITIONS

DRY LAND WINTER WHEAT

### SITE SOIL CLASSIFICATION:

SEE SHEET ESC-1

### NATURE OF CONSTRUCTION ACTIVITY AND ESTIMATED TIME TABLE

BIGL bn, LLC TO CONSTRUCT AND OPERATE THE BIGLOW SOLAR PROJECT TO CONSIST OF:

- CONSTRUCTION OF A PHOTOVOLTAIC SOLAR ENERGY FACILITY WITH AN ESTIMATED NOMINAL AND AVERAGE GENERATING CAPACITY OF 125 MEGAWATTS OF ALTERNATING CURRENT AND A BATTERY ENERGY STORAGE SYSTEM WITH 500 MEGAWATT HOURS OF STORAGE.
- DEVELOPING ADDITIONAL COMPONENTS TO INCLUDE BATTERY ENERGY STORAGE SYSTEM, TRANSMISSION LINE, UNDERGROUND ELECTRICAL COLLECTION LINES, COLLECTOR SUBSTATIONS, SITE ACCESS ROADS, OPERATIONS AND MAINTENANCE BUILDINGS, AND TEMPORARY CONSTRUCTION AREAS.

TEMPORARY DISTURBANCE: APPROXIMATELY XXX ACRES

PERMANENT DISTURBANCE: APPROXIMATELY XXX ACRES

### NEAREST RAIN GAUGE

NAME: FW5319 Hood River
LOCATION: BETWEEN EIGHT MILE ROAD AND HWY 197, NORTH OF DUFER
URL: https://www.weather.gov/iln/rainfall-monitoring

## BMP MATRIX FOR CONSTRUCTION PHASE (TYP.)

REFER TO DEQ GUIDANCE MANUAL FOR A COMPREHENSIVE LIST OF AVAILABLE BMP'S

| | 2026 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BMPS | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| Pipe Slope Drains | | | | | | | | | | | | |
| Energy Dissipaters | | | | | | | | | | | | |
| Temporary Diversion Dikes | | | | | | | | | | | | |
| Check Dams | | | | | | | | | | | | |
| Temporary Seeding and Planting | | | | | | | | | | | x | x |
| Permanent Seeding and Planting | | | | | | | | | | | | |
| Mycorrhizae/Biofertilizers | | | | | | | | | | | | |
| Mulches (type) | | | | | | | x | x | x | x | x | |
| Construction Entrance | | | | | | | | | | | | |
| Compost Blankets | | | | | | | | | | | | |
| Compost Socks | | | | | | | | | | | | |
| Compost Berm | | | | | | | | | | | | |
| Soil Trackifiers | | | | | | | | | | | x | x |
| Sodding Vegetative Buffer Strips | | | | | | | | | | | | |
| Sediments Fencing | | | | | x | x | x | x | x | x | x | x |
| Erosio Control Blankets & Mts | | | | | | | | | | | | |
| Earth Dikes | | | | | | | | | | | | |
| Drainage Swales | | | | | | | | | | | | |
| Rock Outlet Protection | | | | | | | | | | | | |
| Sediments Trap | | | | | | | | | | | | |
| Straw Wattles | | | | | x | x | x | x | x | x | x | x |
| Storm Drain Inlet Protection | | | | | | | | | | | | |
| Temporary or Permanent Sedimentation Basins | | | | | | | | | | | | |
| Unpaved Roads Graveled or other BMP on Road | | | | | | | | | | | | |
| Dewatering | | | | | | | | | | | | |
| Paving Operations Controls | | | | | | | | | | | | |
| Concrete Truck Washout | | | | | | | | | | | | |

## OWNER/DEVELOPER

DEVELOPER/COMPANY: BIGL bn, LLC
CONTACT: ARTURO ALVAREZ
ADDRESS: 515 NORTH FLAGLER DRIVE SUITE 250
WEST PALM BEACH, FL 33401
PHONE: 480-416-3051
EMAIL: ARTURO.ALVAREZ@BRIGHTNIGHTPOWER.COM

## PLANNING/ENGINEERING/ SURVEYING FIRM

COMPANY: TETRA TECH
CONTACT: KIANA ZIOLA
ADDRESS: 3380 AMERICANA TERRACE SUITE 201
BOISE ID 83706
PHONE: (208) 489-2872
EMAIL: KIANA.ZIOLA@TETRATECH.COM

## PERMITTEE'S SITE INSPECTOR

INSPECTOR: LYNDA OOSTERHUIS
COMPANY/AGENCY: TETRA TECH
PHONE: (202) 838-2866
EMAIL: LYNDA.OOSTERHUIS@TETRATECH.COM
EXPERIENCE: CESCL- TRAINED INSPECTOR

## INSPECTION FREQUENCY

SCHEDULE B.2.: INSPECTION FREQUENCY

ONCE EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF:

- A STORM EVENT THAT PRODUCES 0.25 INCHES OR MORE OF RAIN WITHIN A 24-HOUR PERIOD.
- THE FIRST DAY AND LAST DAY OF A STORM THAT PROCUDES 0.25 INCHES OF MORE OF RAIN ON SUBSEQUENT DAYS.

## PROJECT LOCATION:

SHERMAN COUNTY, OREGON

## CLIENT INFORMATION:

BIGL bn, LLC
515 NORTH FLAGLER DRIVE SUITE 250
WEST PALM BEACH, FL 33401

## Tt PROJECT No.:

194-1392-0026

## CLIENT PROJECT No.:

N/A

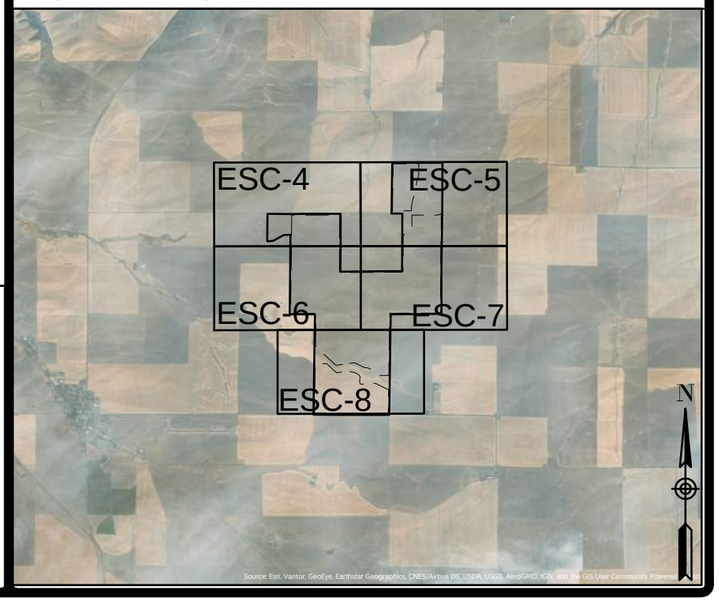
## PROJECT DESCRIPTION / NOTES:

SEE DESCRIPTION ON COVER SHEET

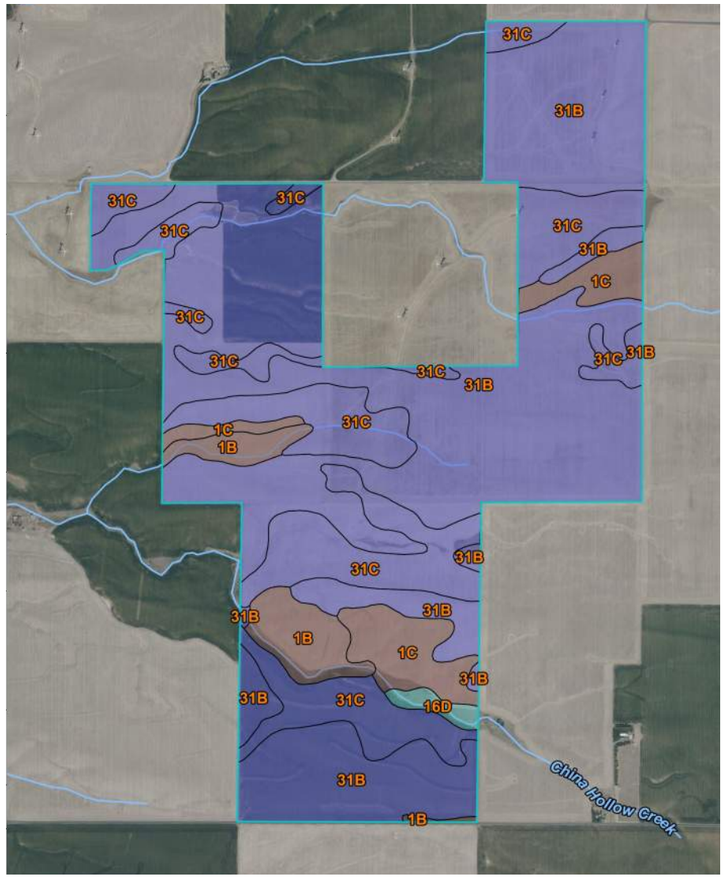
## ISSUED:

REV A - 07/01/26 - ISSUED FOR DEQ REVIEW

## VICINITY MAP / KEY MAP



Map—Hydrologic Soil Group




## MAP LEGEND

**Area of Interest (AOI)**
- Area of Interest (AOI)

**Soils**

**Soil Rating Polygons**
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

**Soil Rating Lines**
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

**Soil Rating Points**
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

**Water Features**
- Streams and Canals

**Transportation**
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**
- Aerial Photography

SITE SOIL CLASSIFICATIONS

| | |
|---|---|
| 1B | ANDERLY SILT LOAM, 1 TO 7 PERCENT SLOPES |
| 1C | ANDERLY SILT LOAM, 7 TO 15 PERCENT SLOPES |
| 16D | LICKSKILLET VERY STONY LOAM, 7 TO 40 PERCENT SOUTH SLOPES |
| 31B | WALLA WALLA SILT LOAM, 1 TO 7 PERCENT SLOPES |
| 31C | WALLA WALLA SILT LOAM, 7 TO 15 PERCENT SLOPES |

DESCRIPTIONS

HYDROLOGIC SOIL GROUPS ARE BASED ON ESTIMATES OF RUNOFF POTENTIAL. SOILS ARE ASSIGNED TO ONE OF FOUR GROUPS ACCORDING TO THE RATE OF WATER INFILTRATION WHEN THE SOILS ARE NOT PROTECTED BY VEGETATION, ARE THOROUGHLY WET, AND RECEIVE PRECIPITATION FROM LONG-DURATION STORMS.

THE SOILS IN THE UNITED STATES ARE ASSIGNED TO FOUR GROUPS (A, B, C, AND D) AND THREE DUAL CLASSES (A/D, B/D, AND C/D). THE GROUPS ARE DEFINED AS FOLLOWS:

GROUP A. SOILS HAVING A HIGH INFILTRATION RATE (LOW RUNOFF POTENTIAL) WHEN THOROUGHLY WET. THESE CONSIST MAINLY OF DEEP, WELL DRAINED TO EXCESSIVELY DRAINED SANDS OR GRAVELLY SANDS. THESE SOILS HAVE A HIGH RATE OF WATER TRANSMISSION.

GROUP B. SOILS HAVING A MODERATE INFILTRATION RATE WHEN THOROUGHLY WET. THESE CONSIST CHIEFLY OF MODERATELY DEEP OR DEEP, MODERATELY WELL DRAINED OR WELL DRAINED SOILS THAT HAVE MODERATELY FINE TEXTURE TO MODERATELY COARSE TEXTURE. THESE SOILS HAVE A MODERATE RATE OF WATER TRANSMISSION.

GROUP C. SOILS HAVING A SLOW INFILTRATION RATE WHEN THOROUGHLY WET. THESE CONSIST CHIEFLY OF SOILS HAVING A LAYER THAT IMPEDES THE DOWNWARD MOVEMENT OF WATER OR SOILS OF MODERATELY FINE TEXTURE OR FINE TEXTURE. THESE SOILS HAVE A SLOW RATE OF WATER TRANSMISSION.

GROUP D. SOILS HAVING A VERY SLOW INFILTRATION RATE (HIGH RUNOFF POTENTIAL) WHEN THOROUGHLY WET. THESE CONSIST CHIEFLY OF CLAYS THAT HAVE A HIGH SHRINK-SWELL POTENTIAL, SOILS THAT HAVE A HIGH WATER TABLE, SOILS THAT HAVE A CLAYPAN OR CLAY LAYER AT OR NEAR THE SURFACE, AND SOILS THAT ARE SHALLOW OVER NEARLY IMPERVIOUS MATERIAL. THESE SOILS HAVE A VERY SLOW RATE OF WATER TRANSMISSION.

IF A SOIL IS ASSIGNED TO A DUAL HYDROLOGIC GROUP (A/D, B/D, OR C/D), THE FIRST LETTER IS FOR DRAINED AREAS AND THE SECOND IS FOR UNDRAINED AREAS. ONLY THE SOILS THAT IN THEIR NATURAL CONDITION ARE IN GROUP D ARE ASSIGNED TO DUAL CLASSES.

MAP INFORMATION

SOURCE OF MAP: NATURAL RESOURCES CONSERVATION SERVICE
WEB SOIL SURVEY URL: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx
COORDINATE SYSTEM: WEB MERCATOR (EPSG:3857)

MAPS FROM THE WEB SOIL SURVEY ARE BASED ON THE WEB MERCATOR PROJECTION, WHICH PRESERVES DIRECTION AND SHAPE BUT DISTORTS DISTANCE AND AREA. A PROJECTION THAT PRESERVES AREA, SUCH AS THE ALBERS EQUAL-AREA CONIC PROJECTION, SHOULD BE USED IF MORE ACCURATE CALCULATIONS OF DISTANCE OR AREA ARE REQUIRED.

THIS PRODUCT IS GENERATED FROM THE USDA-NRCS CERTIFIED DATA AS OF THE VERSION DATE(S) LISTED BELOW.

SOIL SURVEY AREA: SHERMAN COUNTY, OREGON
SURVEY AREA DATA: VERSION 20, SEP 9, 2025

DATE(S) AERIAL IMAGES WERE PHOTOGRAPHED: JUN 1, 2020—JUN 2, 2020

THE ORTHOPHOTO OR OTHER BASE MAP ON WHICH THE SOIL LINES WERE COMPILED AND DIGITIZED PROBABLY DIFFERS FROM THE BACKGROUND IMAGERY DISPLAYED ON THESE MAPS. AS A RESULT, SOME MINOR SHIFTING OF MAP UNIT BOUNDARIES MAY BE EVIDENT.

TETRA TECH
www.tetratech.com
390 UNION BLVD #400
LAKEWOOD, CO 80228

| MARK | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 7/01/26 | ISSUED FOR DEQ REVIEW | CAN |

BIGL bn, LLC

BIGLOW SOLAR PROJECT
SHERMAN COUNTY, OREGON

EROSION AND SEDIMENT CONTROL PLAN
SITE SOIL CLASSIFICATION

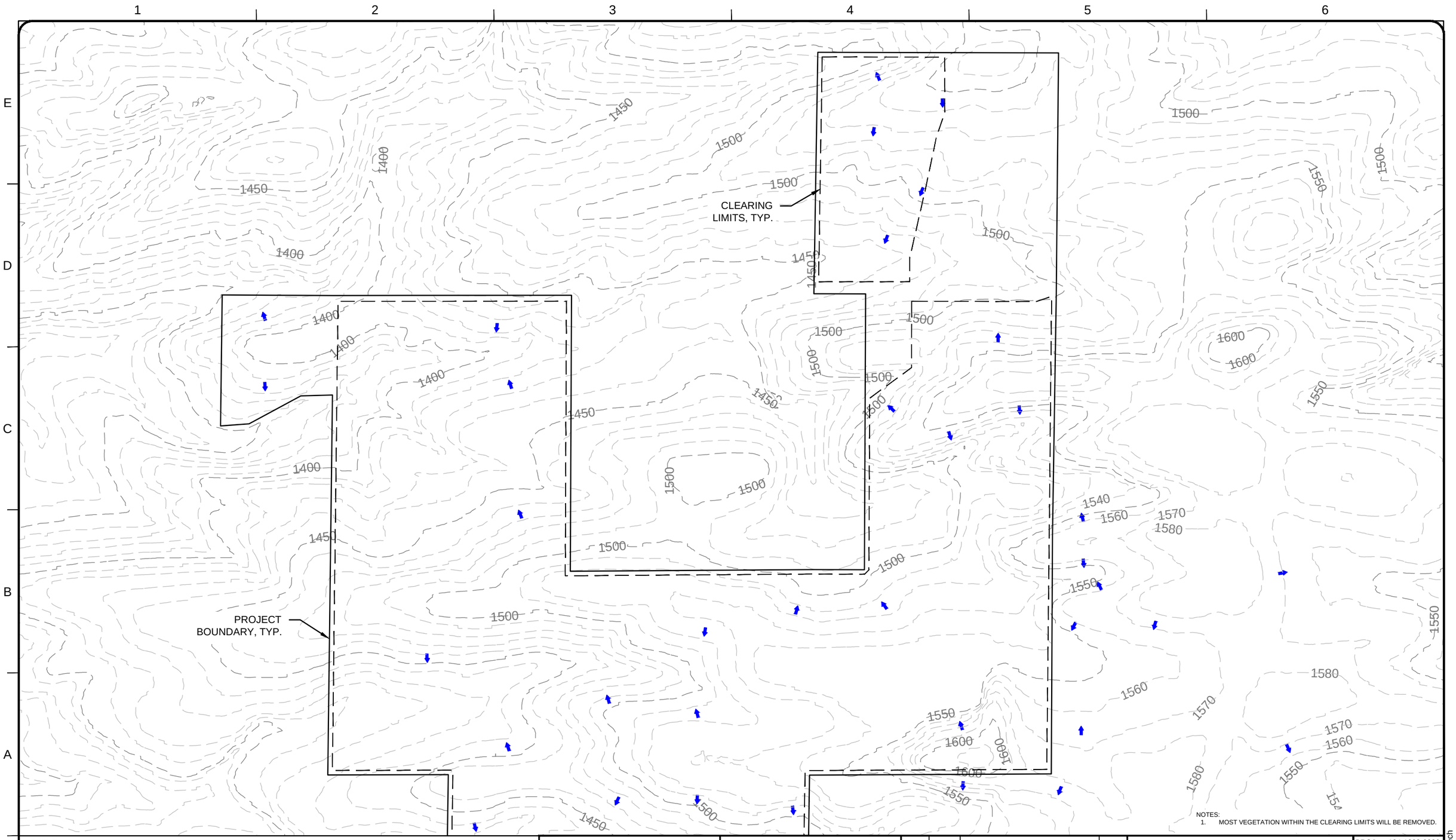
| | |
|---|---|
| PROJ: | 194-1392-0026 |
| DESN: | C.NIETEN |
| DRWN: | C.NIETEN |
| CHKD: | J.PATTON |

ESC-1

Copyright: Tetra Tech

Bar measures 1 inch, otherwise drawing is not to scale

7/1/2026 12:43:21 PM - L:\DENVER OFFICE\ENGINEERING\SOLAR\BRIGHT NIGHT\BIGLOW CANYON\ESCP\BIGLOW RFA5 ESCP_REVA.DWG - NIETEN, CAITLIN




LEGEND

- EXISTING 10' CONTOUR
- EXISTING 50' CONTOUR
- PROJECT BOUNDARY
- CLEARING LIMITS
- DRAINAGE ARROW

0 500 1000 2000

SCALE: 1" = 1000'

TETRA TECH
www.tetratech.com
390 UNION BLVD #400
LAKEWOOD, CO 80228

| MARK | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 7/01/26 | ISSUED FOR DEQ REVIEW | CAN |

BIGL bn, LLC

BIGLOW SOLAR PROJECT
SHERMAN COUNTY, OREGON

EROSION AND SEDIMENT CONTROL PLAN
EXISTING CONDITIONS

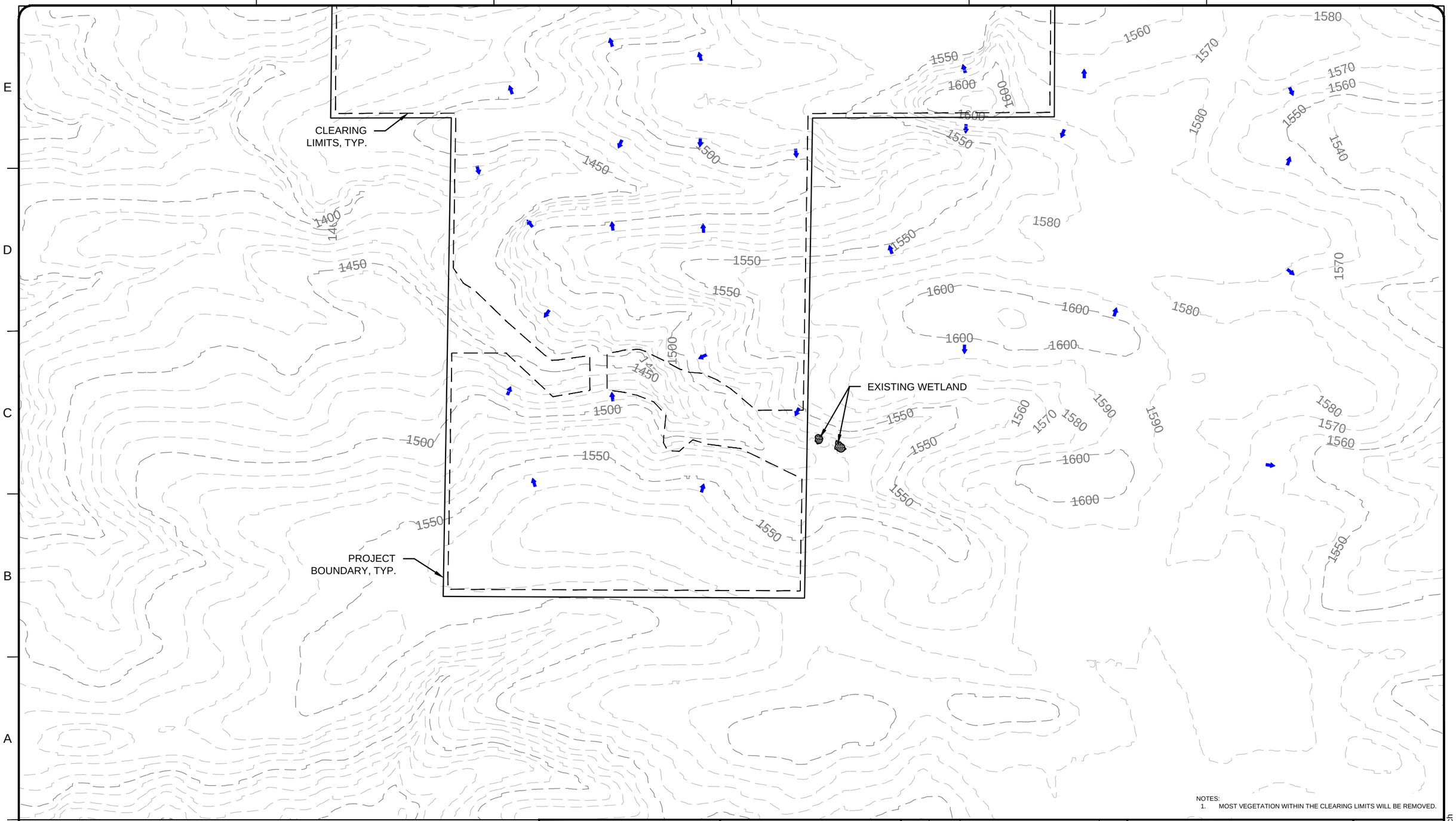
| | |
|---|---|
| PROJ: | 194-1392-0026 |
| DESN: | ES |
| DRWN: | AML |
| CHKD: | JPP |

ESC-2

Bar measures 1 inch, otherwise drawing is not to scale

Copyright: Tetra Tech

7/1/2026 12:43:30 PM - L:\DENVER OFFICE\ENGINEERING\SOLAR\BRIGHT NIGHT\BIGLOW CANYON\ESCP\BIGLOW RFA5 ESCP_REVA.DWG - NIETEN, CAITLIN




NOTES:
1. MOST VEGETATION WITHIN THE CLEARING LIMITS WILL BE REMOVED.

LEGEND
- EXISTING 10' CONTOUR
- EXISTING 50' CONTOUR
- PROJECT BOUNDARY
- CLEARING LIMITS
- DRAINAGE ARROW

0 500 1000 2000
SCALE: 1" = 1000'

TETRA TECH
www.tetratech.com
390 UNION BLVD #400
LAKEWOOD, CO 80228

| MARK | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 7/01/26 | ISSUED FOR DEQ REVIEW | CAN |

BIGL bn, LLC

BIGLOW SOLAR PROJECT
SHERMAN COUNTY, OREGON

EROSION AND SEDIMENT CONTROL PLAN
EXISTING CONDITIONS

| | |
|---|---|
| PROJ: | 194-1392-0026 |
| DESN: | C.NIETEN |
| DRWN: | C.NIETEN |
| CHKD: | J.PATTON |

ESC-3

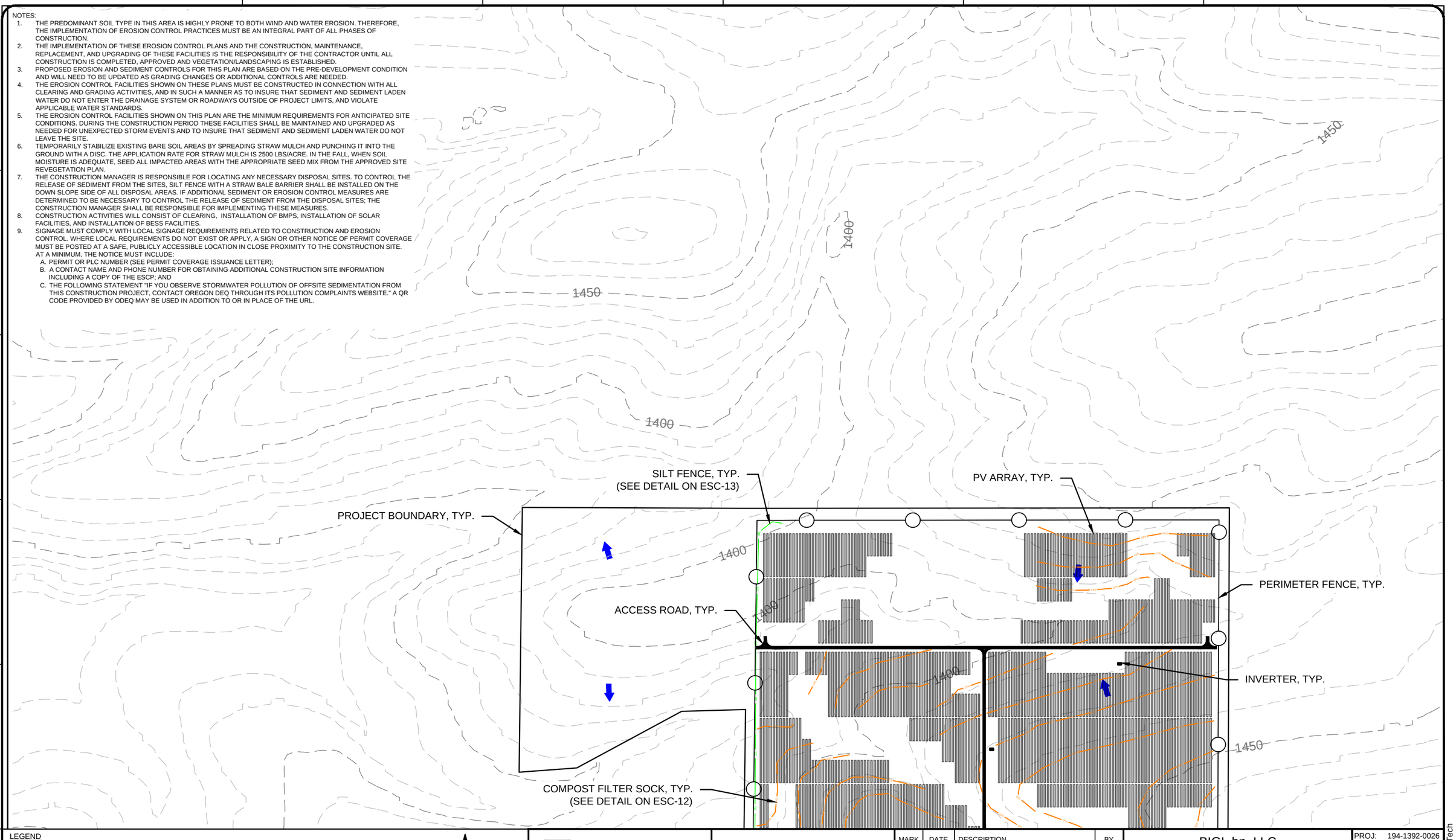
Bar measures 1 inch, otherwise drawing is not to scale

Copyright: Tetra Tech

7/1/2026 12:43:37 PM - L:\DENVER OFFICE\ENGINEERING\SOLAR\BRIGHT NIGHT\BIGLOW CANYON\ESCP\BIGLOW RFA5 ESCP_REVA.DWG - NIETEN, CAITLIN

NOTES:

1. THE PREDOMINANT SOIL TYPE IN THIS AREA IS HIGHLY PRONE TO BOTH WIND AND WATER EROSION. THEREFORE, THE IMPLEMENTATION OF EROSION CONTROL PRACTICES MUST BE AN INTEGRAL PART OF ALL PHASES OF CONSTRUCTION.
2. THE IMPLEMENTATION OF THESE EROSION CONTROL PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED, APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
3. PROPOSED EROSION AND SEDIMENT CONTROLS FOR THIS PLAN ARE BASED ON THE PRE-DEVELOPMENT CONDITION AND WILL NEED TO BE UPDATED AS GRADING CHANGES OR ADDITIONAL CONTROLS ARE NEEDED.
4. THE EROSION CONTROL FACILITIES SHOWN ON THESE PLANS MUST BE CONSTRUCTED IN CONNECTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM OR ROADWAYS OUTSIDE OF PROJECT LIMITS, AND VIOLATE APPLICABLE WATER STANDARDS.
5. THE EROSION CONTROL FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD THESE FACILITIES SHALL BE MAINTAINED AND UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.
6. TEMPORARILY STABILIZE EXISTING BARE SOIL AREAS BY SPREADING STRAW MULCH AND PUNCHING IT INTO THE GROUND WITH A DISC. THE APPLICATION RATE FOR STRAW MULCH IS 2500 LBS/ACRE. IN THE FALL, WHEN SOIL MOISTURE IS ADEQUATE, SEED ALL IMPACTED AREAS WITH THE APPROPRIATE SEED MIX FROM THE APPROVED SITE REVEGETATION PLAN.
7. THE CONSTRUCTION MANAGER IS RESPONSIBLE FOR LOCATING ANY NECESSARY DISPOSAL SITES. TO CONTROL THE RELEASE OF SEDIMENT FROM THE SITES, SILT FENCE WITH A STRAW BALE BARRIER SHALL BE INSTALLED ON THE DOWN SLOPE SIDE OF ALL DISPOSAL AREAS. IF ADDITIONAL SEDIMENT OR EROSION CONTROL MEASURES ARE DETERMINED TO BE NECESSARY TO CONTROL THE RELEASE OF SEDIMENT FROM THE DISPOSAL SITES; THE CONSTRUCTION MANAGER SHALL BE RESPONSIBLE FOR IMPLEMENTING THESE MEASURES.
8. CONSTRUCTION ACTIVITIES WILL CONSIST OF CLEARING, INSTALLATION OF BMPS, INSTALLATION OF SOLAR FACILITIES, AND INSTALLATION OF BESS FACILITIES.
9. SIGNAGE MUST COMPLY WITH LOCAL SIGNAGE REQUIREMENTS RELATED TO CONSTRUCTION AND EROSION CONTROL. WHERE LOCAL REQUIREMENTS DO NOT EXIST OR APPLY, A SIGN OR OTHER NOTICE OF PERMIT COVERAGE MUST BE POSTED AT A SAFE, PUBLICLY ACCESSIBLE LOCATION IN CLOSE PROXIMITY TO THE CONSTRUCTION SITE. AT A MINIMUM, THE NOTICE MUST INCLUDE:
   A. PERMIT OR PLC NUMBER (SEE PERMIT COVERAGE ISSUANCE LETTER);
   B. A CONTACT NAME AND PHONE NUMBER FOR OBTAINING ADDITIONAL CONSTRUCTION SITE INFORMATION INCLUDING A COPY OF THE ESCP; AND
   C. THE FOLLOWING STATEMENT "IF YOU OBSERVE STORMWATER POLLUTION OF OFFSITE SEDIMENTATION FROM THIS CONSTRUCTION PROJECT, CONTACT OREGON DEQ THROUGH ITS POLLUTION COMPLAINTS WEBSITE." A QR CODE PROVIDED BY ODEQ MAY BE USED IN ADDITION TO OR IN PLACE OF THE URL.




LEGEND

- EXISTING 10' CONTOUR
- EXISTING 50' CONTOUR
- PROJECT BOUNDARY
- FENCE LINE
- DRAINAGE ARROW
- PV PANEL
- ACCESS ROAD
- SILT FENCE
- COMPOST FILTER SOCK

0 250 500 1000

SCALE: 1" = 500'


TETRA TECH
www.tetratech.com
390 UNION BLVD #400
LAKEWOOD, CO 80228


| MARK | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 7/01/26 | ISSUED FOR DEQ REVIEW | CAN |

BIGL bn, LLC

BIGLOW SOLAR PROJECT
SHERMAN COUNTY, OREGON

EROSION AND SEDIMENT CONTROL PLAN
CONSTRUCTION BMPS

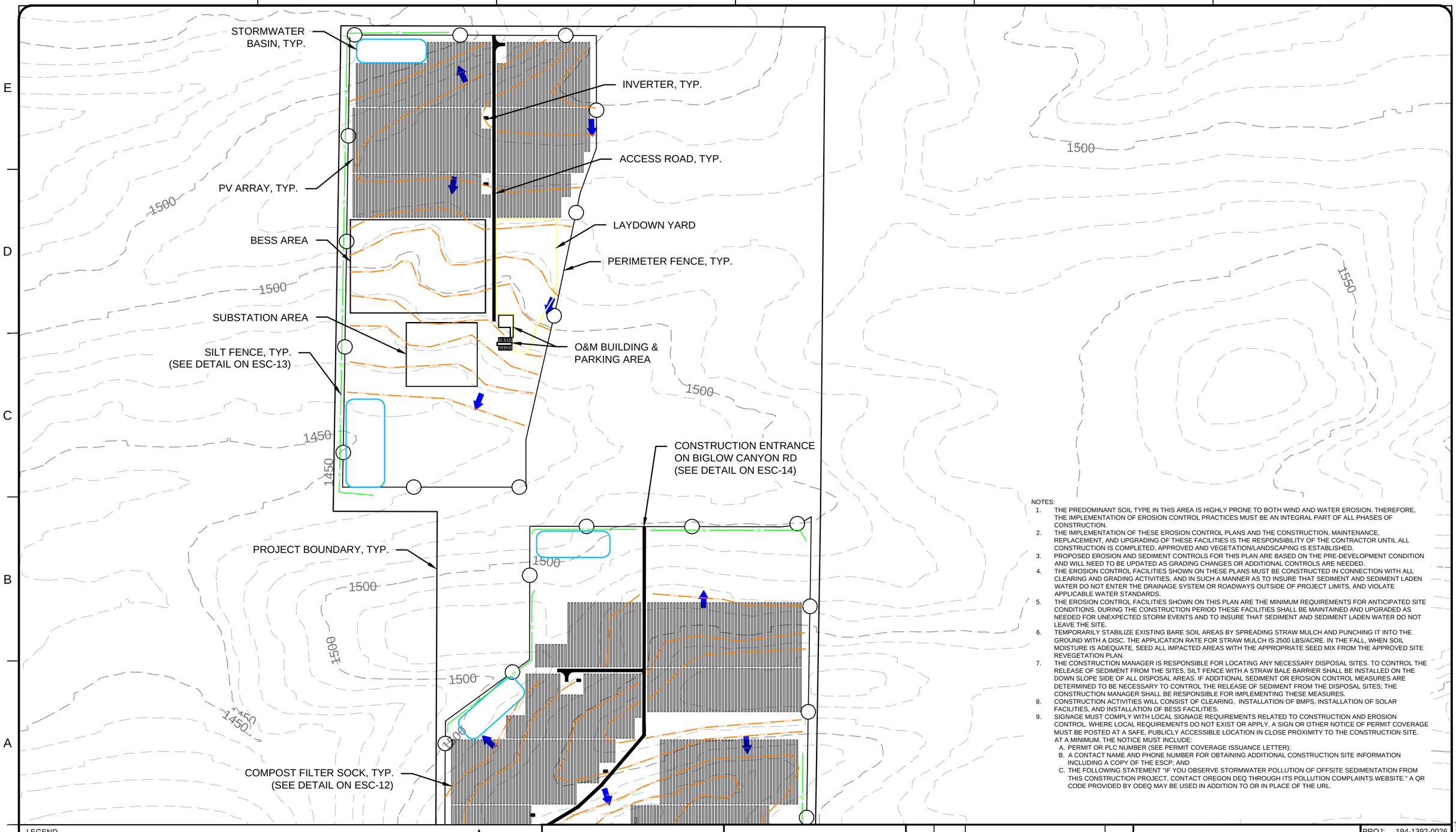
| | |
|---|---|
| PROJ: | 194-1392-0026 |
| DESN: | ES |
| DRWN: | AML |
| CHKD: | JPP |

ESC-4

Bar measures 1 inch, otherwise drawing is not to scale

Copyright: Tetra Tech

7/1/2026 12:43:43 PM - L:\DENVER OFFICE\ENGINEERING\SOLAR\BRIGHT NIGHT\BIGLOW CANYON\ESCP\BIGLOW RFA5 ESCP_REVA.DWG - NIETEN, CAITLIN




NOTES:

1. THE PREDOMINANT SOIL TYPE IN THIS AREA IS HIGHLY PRONE TO BOTH WIND AND WATER EROSION. THEREFORE, THE IMPLEMENTATION OF EROSION CONTROL PRACTICES MUST BE AN INTEGRAL PART OF ALL PHASES OF CONSTRUCTION.
2. THE IMPLEMENTATION OF THESE EROSION CONTROL PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED, APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
3. PROPOSED EROSION AND SEDIMENT CONTROLS FOR THIS PLAN ARE BASED ON THE PRE-DEVELOPMENT CONDITION AND WILL NEED TO BE UPDATED AS GRADING CHANGES OR ADDITIONAL CONTROLS ARE NEEDED.
4. THE EROSION CONTROL FACILITIES SHOWN ON THESE PLANS MUST BE CONSTRUCTED IN CONNECTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM OR ROADWAYS OUTSIDE OF PROJECT LIMITS, AND VIOLATE APPLICABLE WATER STANDARDS.
5. THE EROSION CONTROL FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD THESE FACILITIES SHALL BE MAINTAINED AND UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.
6. TEMPORARILY STABILIZE EXISTING BARE SOIL AREAS BY SPREADING STRAW MULCH AND PUNCHING IT INTO THE GROUND WITH A DISC. THE APPLICATION RATE FOR STRAW MULCH IS 2500 LBS/ACRE. IN THE FALL, WHEN SOIL MOISTURE IS ADEQUATE, SEED ALL IMPACTED AREAS WITH THE APPROPRIATE SEED MIX FROM THE APPROVED SITE REVEGETATION PLAN.
7. THE CONSTRUCTION MANAGER IS RESPONSIBLE FOR LOCATING ANY NECESSARY DISPOSAL SITES. TO CONTROL THE RELEASE OF SEDIMENT FROM THE SITES, SILT FENCE WITH A STRAW BALE BARRIER SHALL BE INSTALLED ON THE DOWN SLOPE SIDE OF ALL DISPOSAL AREAS. IF ADDITIONAL SEDIMENT OR EROSION CONTROL MEASURES ARE DETERMINED TO BE NECESSARY TO CONTROL THE RELEASE OF SEDIMENT FROM THE DISPOSAL SITES; THE CONSTRUCTION MANAGER SHALL BE RESPONSIBLE FOR IMPLEMENTING THESE MEASURES.
8. CONSTRUCTION ACTIVITIES WILL CONSIST OF CLEARING, INSTALLATION OF BMPS, INSTALLATION OF SOLAR FACILITIES, AND INSTALLATION OF BESS FACILITIES.
9. SIGNAGE MUST COMPLY WITH LOCAL SIGNAGE REQUIREMENTS RELATED TO CONSTRUCTION AND EROSION CONTROL. WHERE LOCAL REQUIREMENTS DO NOT EXIST OR APPLY, A SIGN OR OTHER NOTICE OF PERMIT COVERAGE MUST BE POSTED AT A SAFE, PUBLICLY ACCESSIBLE LOCATION IN CLOSE PROXIMITY TO THE CONSTRUCTION SITE. AT A MINIMUM, THE NOTICE MUST INCLUDE:
   A. PERMIT OR PLC NUMBER (SEE PERMIT COVERAGE ISSUANCE LETTER);
   B. A CONTACT NAME AND PHONE NUMBER FOR OBTAINING ADDITIONAL CONSTRUCTION SITE INFORMATION INCLUDING A COPY OF THE ESCP; AND
   C. THE FOLLOWING STATEMENT "IF YOU OBSERVE STORMWATER POLLUTION OF OFFSITE SEDIMENTATION FROM THIS CONSTRUCTION PROJECT, CONTACT OREGON DEQ THROUGH ITS POLLUTION COMPLAINTS WEBSITE." A QR CODE PROVIDED BY ODEQ MAY BE USED IN ADDITION TO OR IN PLACE OF THE URL.

LEGEND

- EXISTING 10' CONTOUR
- EXISTING 50' CONTOUR
- PROJECT BOUNDARY
- FENCE LINE
- DRAINAGE ARROW
- PV PANEL
- ACCESS ROAD
- SILT FENCE
- COMPOST FILTER SOCK

0 250 500 1000

SCALE: 1" = 500'

TETRA TECH
www.tetratech.com
390 UNION BLVD #400
LAKEWOOD, CO 80228

| MARK | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 7/01/26 | ISSUED FOR DEQ REVIEW | CAN |

BIGL bn, LLC

BIGLOW SOLAR PROJECT
SHERMAN COUNTY, OREGON

EROSION AND SEDIMENT CONTROL PLAN
CONSTRUCTION BMPS

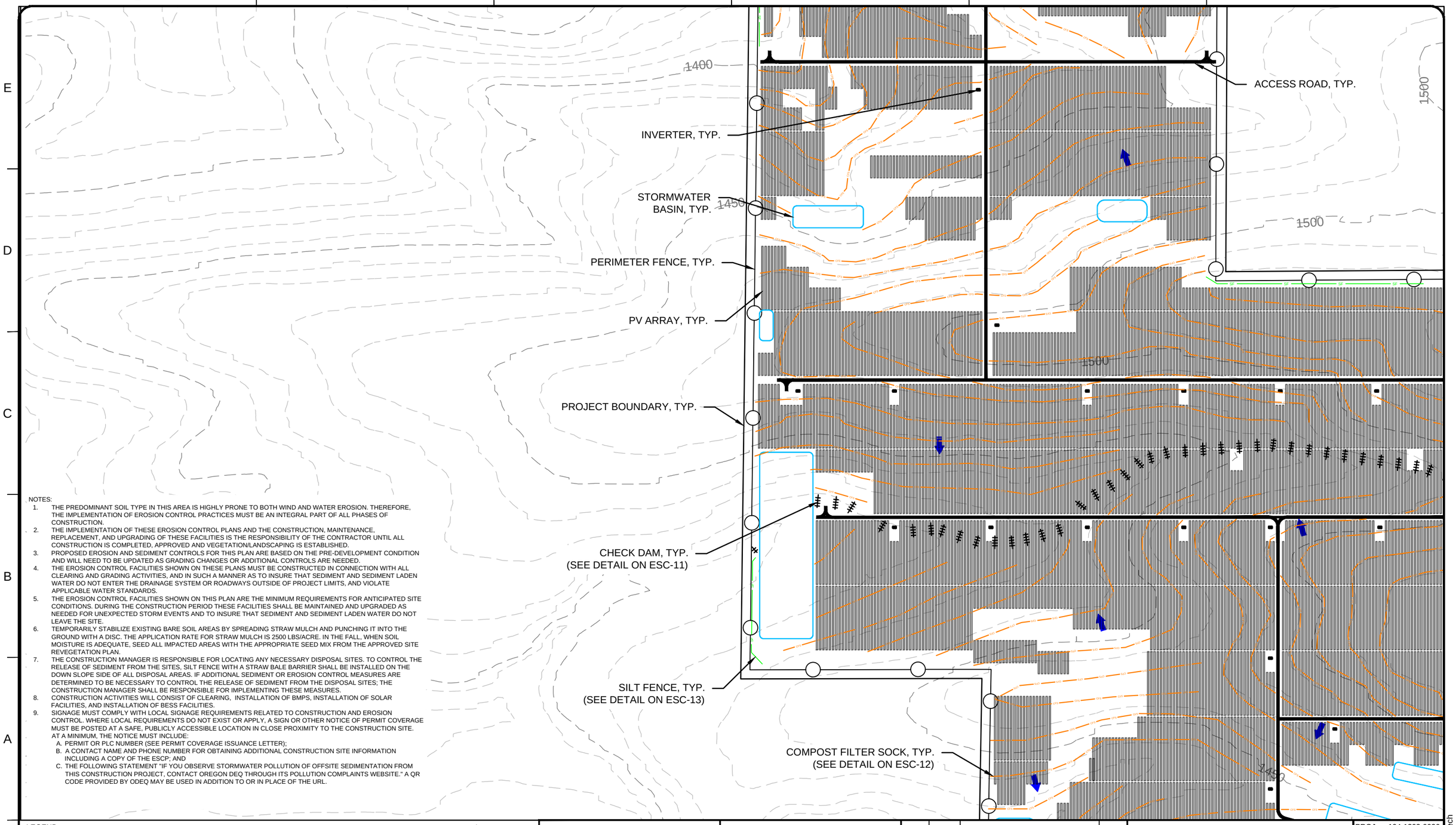
| | |
|---|---|
| PROJ: | 194-1392-0026 |
| DESN: | C.NIETEN |
| DRWN: | C.NIETEN |
| CHKD: | J.PATTON |

ESC-5

Copyright Tetra Tech

Bar measures 1 inch, otherwise drawing is not to scale

7/1/2026 12:43:50 PM - L:\DENVER OFFICE\ENGINEERING\SOLAR\BRIGHT NIGHT\BIGLOW CANYON\ESCP\BIGLOW RFA5 ESCP_REVA.DWG - NIETEN, CAITLIN




NOTES:

1. THE PREDOMINANT SOIL TYPE IN THIS AREA IS HIGHLY PRONE TO BOTH WIND AND WATER EROSION. THEREFORE, THE IMPLEMENTATION OF EROSION CONTROL PRACTICES MUST BE AN INTEGRAL PART OF ALL PHASES OF CONSTRUCTION.
2. THE IMPLEMENTATION OF THESE EROSION CONTROL PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED, APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
3. PROPOSED EROSION AND SEDIMENT CONTROLS FOR THIS PLAN ARE BASED ON THE PRE-DEVELOPMENT CONDITION AND WILL NEED TO BE UPDATED AS GRADING CHANGES OR ADDITIONAL CONTROLS ARE NEEDED.
4. THE EROSION CONTROL FACILITIES SHOWN ON THESE PLANS MUST BE CONSTRUCTED IN CONNECTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM OR ROADWAYS OUTSIDE OF PROJECT LIMITS, AND VIOLATE APPLICABLE WATER STANDARDS.
5. THE EROSION CONTROL FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD THESE FACILITIES SHALL BE MAINTAINED AND UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.
6. TEMPORARILY STABILIZE EXISTING BARE SOIL AREAS BY SPREADING STRAW MULCH AND PUNCHING IT INTO THE GROUND WITH A DISC. THE APPLICATION RATE FOR STRAW MULCH IS 2500 LBS/ACRE. IN THE FALL, WHEN SOIL MOISTURE IS ADEQUATE, SEED ALL IMPACTED AREAS WITH THE APPROPRIATE SEED MIX FROM THE APPROVED SITE REVEGETATION PLAN.
7. THE CONSTRUCTION MANAGER IS RESPONSIBLE FOR LOCATING ANY NECESSARY DISPOSAL SITES. TO CONTROL THE RELEASE OF SEDIMENT FROM THE SITES, SILT FENCE WITH A STRAW BALE BARRIER SHALL BE INSTALLED ON THE DOWN SLOPE SIDE OF ALL DISPOSAL AREAS. IF ADDITIONAL SEDIMENT OR EROSION CONTROL MEASURES ARE DETERMINED TO BE NECESSARY TO CONTROL THE RELEASE OF SEDIMENT FROM THE DISPOSAL SITES; THE CONSTRUCTION MANAGER SHALL BE RESPONSIBLE FOR IMPLEMENTING THESE MEASURES.
8. CONSTRUCTION ACTIVITIES WILL CONSIST OF CLEARING, INSTALLATION OF BMPS, INSTALLATION OF SOLAR FACILITIES, AND INSTALLATION OF BESS FACILITIES.
9. SIGNAGE MUST COMPLY WITH LOCAL SIGNAGE REQUIREMENTS RELATED TO CONSTRUCTION AND EROSION CONTROL. WHERE LOCAL REQUIREMENTS DO NOT EXIST OR APPLY, A SIGN OR OTHER NOTICE OF PERMIT COVERAGE MUST BE POSTED AT A SAFE, PUBLICLY ACCESSIBLE LOCATION IN CLOSE PROXIMITY TO THE CONSTRUCTION SITE. AT A MINIMUM, THE NOTICE MUST INCLUDE:
   A. PERMIT OR PLC NUMBER (SEE PERMIT COVERAGE ISSUANCE LETTER);
   B. A CONTACT NAME AND PHONE NUMBER FOR OBTAINING ADDITIONAL CONSTRUCTION SITE INFORMATION INCLUDING A COPY OF THE ESCP; AND
   C. THE FOLLOWING STATEMENT "IF YOU OBSERVE STORMWATER POLLUTION OF OFFSITE SEDIMENTATION FROM THIS CONSTRUCTION PROJECT, CONTACT OREGON DEQ THROUGH ITS POLLUTION COMPLAINTS WEBSITE." A QR CODE PROVIDED BY ODEQ MAY BE USED IN ADDITION TO OR IN PLACE OF THE URL.

LEGEND

- EXISTING 10' CONTOUR
- EXISTING 50' CONTOUR
- PROJECT BOUNDARY
- FENCE LINE
- DRAINAGE ARROW
- PV PANEL
- ACCESS ROAD
- SILT FENCE
- COMPOST FILTER SOCK

0 250 500 1000

SCALE: 1" = 500'

TETRA TECH

www.tetratech.com

390 UNION BLVD #400
LAKEWOOD, CO 80228

| MARK | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 7/01/26 | ISSUED FOR DEQ REVIEW | CAN |

BIGL bn, LLC

BIGLOW SOLAR PROJECT
SHERMAN COUNTY, OREGON

EROSION AND SEDIMENT CONTROL PLAN
CONSTRUCTION BMPS

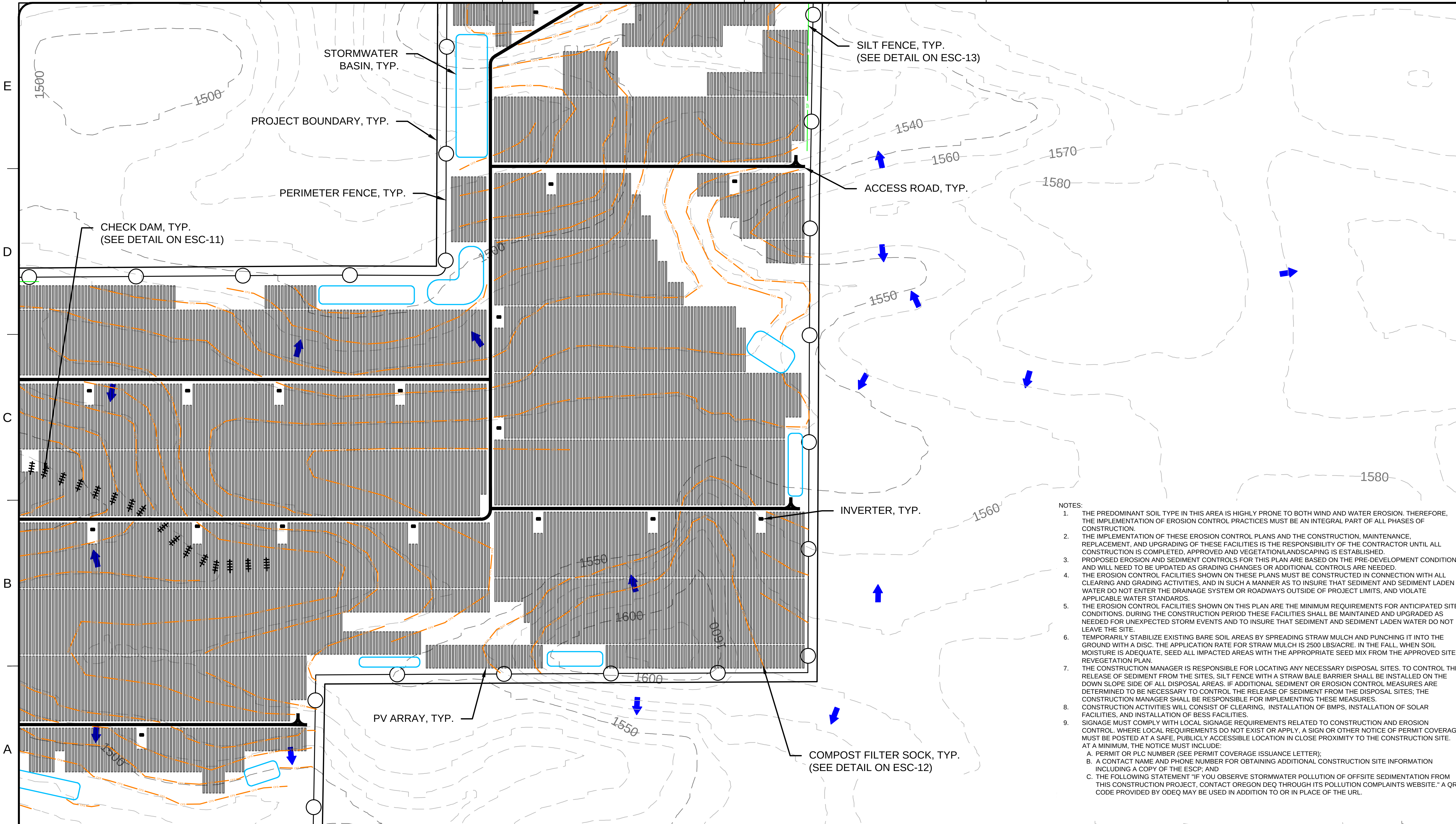
| | |
|---|---|
| PROJ: | 194-1392-0026 |
| DESN: | C.NIETEN |
| DRWN: | C.NIETEN |
| CHKD: | J.PATTON |

ESC-6

Copyright Tetra Tech

Bar measures 1 inch, otherwise drawing is not to scale

7/1/2026 12:43:58 PM - L:\DENVER OFFICE\ENGINEERING\SOLAR\BRIGHT NIGHT\BIGLOW CANYON\ESCP\BIGLOW RFA5 ESCP_REVA.DWG - NIETEN, CAITLIN




NOTES:

1. THE PREDOMINANT SOIL TYPE IN THIS AREA IS HIGHLY PRONE TO BOTH WIND AND WATER EROSION. THEREFORE, THE IMPLEMENTATION OF EROSION CONTROL PRACTICES MUST BE AN INTEGRAL PART OF ALL PHASES OF CONSTRUCTION.
2. THE IMPLEMENTATION OF THESE EROSION CONTROL PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED, APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
3. PROPOSED EROSION AND SEDIMENT CONTROLS FOR THIS PLAN ARE BASED ON THE PRE-DEVELOPMENT CONDITION AND WILL NEED TO BE UPDATED AS GRADING CHANGES OR ADDITIONAL CONTROLS ARE NEEDED.
4. THE EROSION CONTROL FACILITIES SHOWN ON THESE PLANS MUST BE CONSTRUCTED IN CONNECTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM OR ROADWAYS OUTSIDE OF PROJECT LIMITS, AND VIOLATE APPLICABLE WATER STANDARDS.
5. THE EROSION CONTROL FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD THESE FACILITIES SHALL BE MAINTAINED AND UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.
6. TEMPORARILY STABILIZE EXISTING BARE SOIL AREAS BY SPREADING STRAW MULCH AND PUNCHING IT INTO THE GROUND WITH A DISC. THE APPLICATION RATE FOR STRAW MULCH IS 2500 LBS/ACRE. IN THE FALL, WHEN SOIL MOISTURE IS ADEQUATE, SEED ALL IMPACTED AREAS WITH THE APPROPRIATE SEED MIX FROM THE APPROVED SITE REVEGETATION PLAN.
7. THE CONSTRUCTION MANAGER IS RESPONSIBLE FOR LOCATING ANY NECESSARY DISPOSAL SITES. TO CONTROL THE RELEASE OF SEDIMENT FROM THE SITES, SILT FENCE WITH A STRAW BALE BARRIER SHALL BE INSTALLED ON THE DOWN SLOPE SIDE OF ALL DISPOSAL AREAS. IF ADDITIONAL SEDIMENT OR EROSION CONTROL MEASURES ARE DETERMINED TO BE NECESSARY TO CONTROL THE RELEASE OF SEDIMENT FROM THE DISPOSAL SITES; THE CONSTRUCTION MANAGER SHALL BE RESPONSIBLE FOR IMPLEMENTING THESE MEASURES.
8. CONSTRUCTION ACTIVITIES WILL CONSIST OF CLEARING, INSTALLATION OF BMPS, INSTALLATION OF SOLAR FACILITIES, AND INSTALLATION OF BESS FACILITIES.
9. SIGNAGE MUST COMPLY WITH LOCAL SIGNAGE REQUIREMENTS RELATED TO CONSTRUCTION AND EROSION CONTROL. WHERE LOCAL REQUIREMENTS DO NOT EXIST OR APPLY, A SIGN OR OTHER NOTICE OF PERMIT COVERAGE MUST BE POSTED AT A SAFE, PUBLICLY ACCESSIBLE LOCATION IN CLOSE PROXIMITY TO THE CONSTRUCTION SITE. AT A MINIMUM, THE NOTICE MUST INCLUDE:
   A. PERMIT OR PLC NUMBER (SEE PERMIT COVERAGE ISSUANCE LETTER);
   B. A CONTACT NAME AND PHONE NUMBER FOR OBTAINING ADDITIONAL CONSTRUCTION SITE INFORMATION INCLUDING A COPY OF THE ESCP; AND
   C. THE FOLLOWING STATEMENT "IF YOU OBSERVE STORMWATER POLLUTION OF OFFSITE SEDIMENTATION FROM THIS CONSTRUCTION PROJECT, CONTACT OREGON DEQ THROUGH ITS POLLUTION COMPLAINTS WEBSITE." A QR CODE PROVIDED BY ODEQ MAY BE USED IN ADDITION TO OR IN PLACE OF THE URL.

LEGEND

- EXISTING 10' CONTOUR
- EXISTING 50' CONTOUR
- PROJECT BOUNDARY
- FENCE LINE
- DRAINAGE ARROW
- PV PANEL
- ACCESS ROAD
- SILT FENCE
- COMPOST FILTER SOCK

N

0 250 500 1000

SCALE: 1" = 500'

TETRA TECH
www.tetratech.com
390 UNION BLVD #400
LAKEWOOD, CO 80228

| MARK | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 7/01/26 | ISSUED FOR DEQ REVIEW | CAN |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

BIGL bn, LLC

BIGLOW SOLAR PROJECT
SHERMAN COUNTY, OREGON

EROSION AND SEDIMENT CONTROL PLAN
CONSTRUCTION BMPS

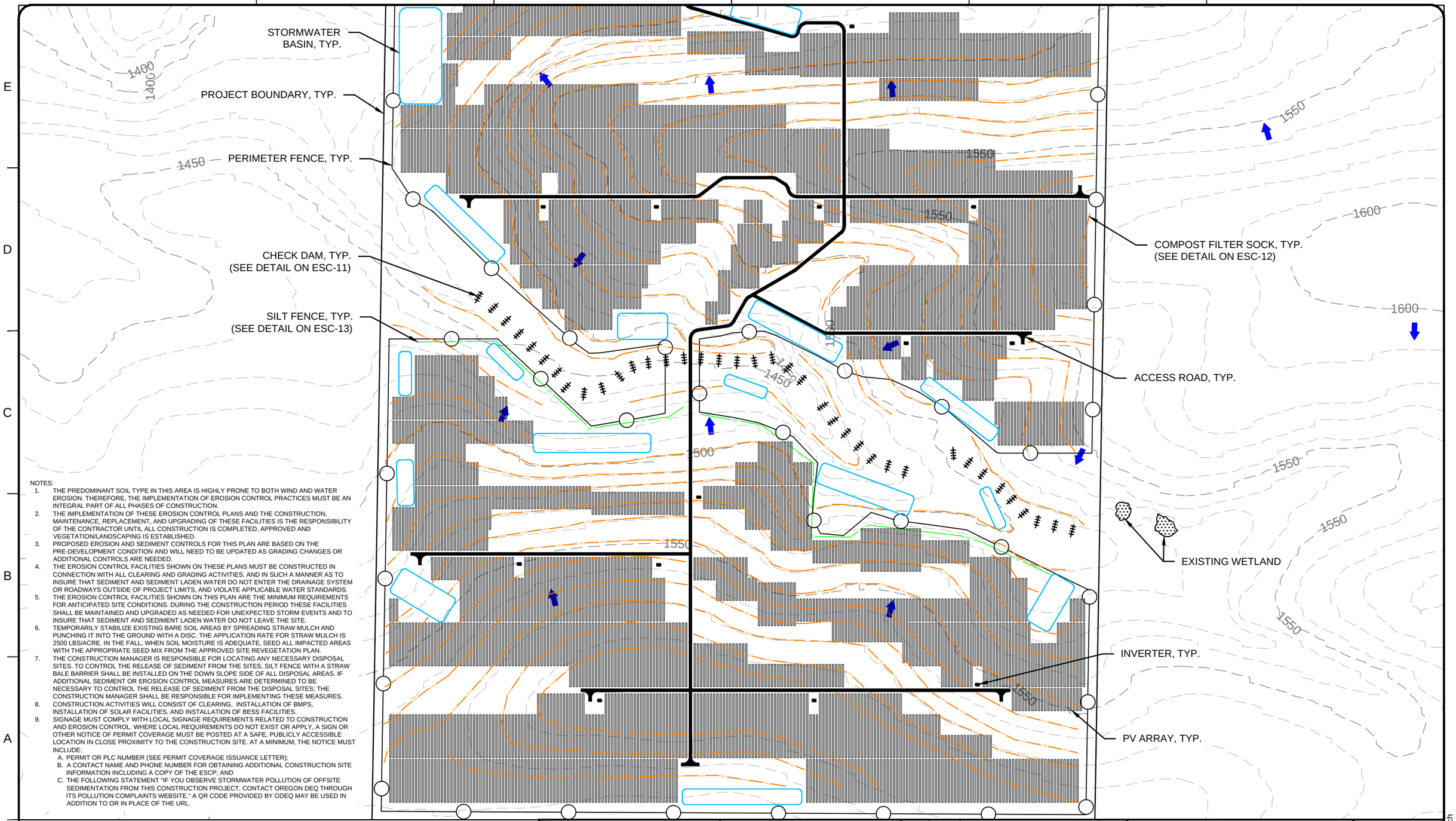
| | |
|---|---|
| PROJ: | 194-1392-0026 |
| DESN: | C.NIETEN |
| DRWN: | C.NIETEN |
| CHKD: | J.PATTON |

ESC-7

Bar measures 1 inch, otherwise drawing is not to scale

Copyright: Tetra Tech

7/1/2026 12:44:06 PM - L:\DENVER OFFICE\ENGINEERING\SOLAR\BRIGHT NIGHT\BIGLOW CANYON\ESCP\BIGLOW RFA5 ESCP_REVA.DWG - NIETEN, CAITLIN




NOTES:

1. THE PREDOMINANT SOIL TYPE IN THIS AREA IS HIGHLY PRONE TO BOTH WIND AND WATER EROSION. THEREFORE, THE IMPLEMENTATION OF EROSION CONTROL PRACTICES MUST BE AN INTEGRAL PART OF ALL PHASES OF CONSTRUCTION.
2. THE IMPLEMENTATION OF THESE EROSION CONTROL PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED, APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
3. PROPOSED EROSION AND SEDIMENT CONTROLS FOR THIS PLAN ARE BASED ON THE PRE-DEVELOPMENT CONDITION AND WILL NEED TO BE UPDATED AS GRADING CHANGES OR ADDITIONAL CONTROLS ARE NEEDED.
4. THE EROSION CONTROL FACILITIES SHOWN ON THESE PLANS MUST BE CONSTRUCTED IN CONNECTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM OR ROADWAYS OUTSIDE OF PROJECT LIMITS, AND VIOLATE APPLICABLE WATER STANDARDS.
5. THE EROSION CONTROL FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD THESE FACILITIES SHALL BE MAINTAINED AND UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.
6. TEMPORARILY STABILIZE EXISTING BARE SOIL AREAS BY SPREADING STRAW MULCH AND PUNCHING IT INTO THE GROUND WITH A DISC. THE APPLICATION RATE FOR STRAW MULCH IS 2500 LBS/ACRE. IN THE FALL, WHEN SOIL MOISTURE IS ADEQUATE, SEED ALL IMPACTED AREAS WITH THE APPROPRIATE SEED MIX FROM THE APPROVED SITE REVEGETATION PLAN.
7. THE CONSTRUCTION MANAGER IS RESPONSIBLE FOR LOCATING ANY NECESSARY DISPOSAL SITES. TO CONTROL THE RELEASE OF SEDIMENT FROM THE SITES, SILT FENCE WITH A STRAW BALE BARRIER SHALL BE INSTALLED ON THE DOWN SLOPE SIDE OF ALL DISPOSAL AREAS. IF ADDITIONAL SEDIMENT OR EROSION CONTROL MEASURES ARE DETERMINED TO BE NECESSARY TO CONTROL THE RELEASE OF SEDIMENT FROM THE DISPOSAL SITES; THE CONSTRUCTION MANAGER SHALL BE RESPONSIBLE FOR IMPLEMENTING THESE MEASURES.
8. CONSTRUCTION ACTIVITIES WILL CONSIST OF CLEARING, INSTALLATION OF BMPS, INSTALLATION OF SOLAR FACILITIES, AND INSTALLATION OF BESS FACILITIES.
9. SIGNAGE MUST COMPLY WITH LOCAL SIGNAGE REQUIREMENTS RELATED TO CONSTRUCTION AND EROSION CONTROL. WHERE LOCAL REQUIREMENTS DO NOT EXIST OR APPLY, A SIGN OR OTHER NOTICE OF PERMIT COVERAGE MUST BE POSTED AT A SAFE, PUBLICLY ACCESSIBLE LOCATION IN CLOSE PROXIMITY TO THE CONSTRUCTION SITE. AT A MINIMUM, THE NOTICE MUST INCLUDE:
   A. PERMIT OR PLC NUMBER (SEE PERMIT COVERAGE ISSUANCE LETTER);
   B. A CONTACT NAME AND PHONE NUMBER FOR OBTAINING ADDITIONAL CONSTRUCTION SITE INFORMATION INCLUDING A COPY OF THE ESCP; AND
   C. THE FOLLOWING STATEMENT "IF YOU OBSERVE STORMWATER POLLUTION OF OFFSITE SEDIMENTATION FROM THIS CONSTRUCTION PROJECT, CONTACT OREGON DEQ THROUGH ITS POLLUTION COMPLAINTS WEBSITE." A QR CODE PROVIDED BY ODEQ MAY BE USED IN ADDITION TO OR IN PLACE OF THE URL.

LEGEND

- EXISTING 10' CONTOUR
- EXISTING 50' CONTOUR
- PROJECT BOUNDARY
- FENCE LINE
- DRAINAGE ARROW
- PV PANEL
- ACCESS ROAD
- SILT FENCE
- COMPOST FILTER SOCK

0 250 500 1000

SCALE: 1" = 500'

TETRA TECH
www.tetratech.com
390 UNION BLVD #400
LAKEWOOD, CO 80228

| MARK | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 7/01/26 | ISSUED FOR DEQ REVIEW | CAN |

BIGL bn, LLC

BIGLOW SOLAR PROJECT
SHERMAN COUNTY, OREGON

EROSION AND SEDIMENT CONTROL PLAN
CONSTRUCTION BMPS

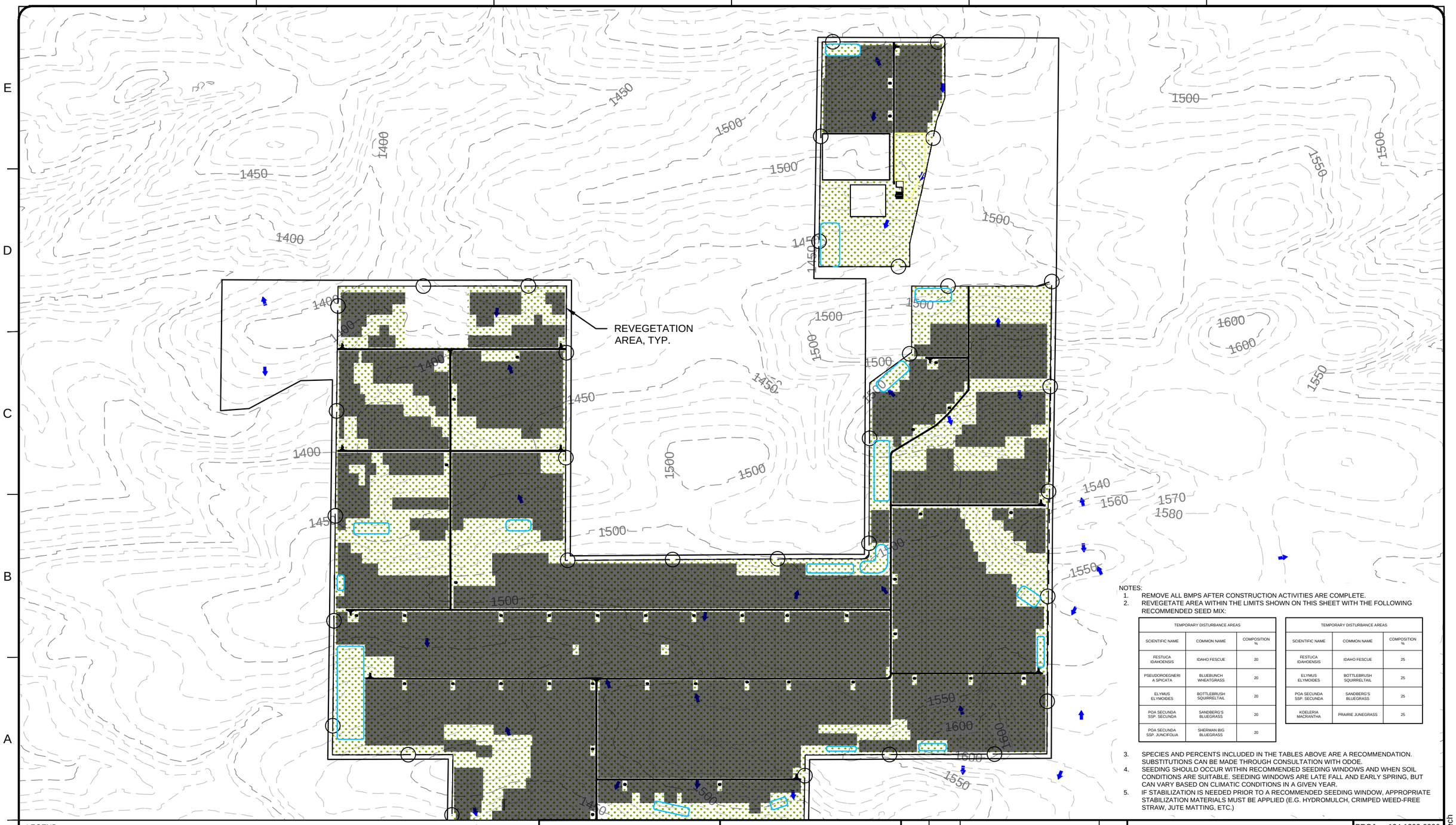
| | |
|---|---|
| PROJ: | 194-1392-0026 |
| DESN: | C.NIETEN |
| DRWN: | C.NIETEN |
| CHKD: | J.PATTON |

ESC-8

Copyright Tetra Tech

Bar measures 1 inch, otherwise drawing is not to scale

7/1/2026 12:44:13 PM - L:\DENVER OFFICE\ENGINEERING\SOLAR\BRIGHT NIGHT\BIGLOW CANYON\ESCP\BIGLOW RFA5 ESCP_REVA.DWG - NIETEN, CAITLIN




NOTES:
1. REMOVE ALL BMPS AFTER CONSTRUCTION ACTIVITIES ARE COMPLETE.
2. REVEGETATE AREA WITHIN THE LIMITS SHOWN ON THIS SHEET WITH THE FOLLOWING RECOMMENDED SEED MIX:

| TEMPORARY DISTURBANCE AREAS | | |
|---|---|---|
| SCIENTIFIC NAME | COMMON NAME | COMPOSITION % |
| FESTUCA IDAHOENSIS | IDAHO FESCUE | 20 |
| PSEUDOROEGNERIA SPICATA | BLUEBUNCH WHEATGRASS | 20 |
| ELYMUS ELYMOIDES | BOTTLEBRUSH SQUIRRELTAIL | 20 |
| POA SECUNDA SSP. SECUNDA | SANDBERG'S BLUEGRASS | 20 |
| POA SECUNDA SSP. JUNCIFOLIA | SHERMAN BIG BLUEGRASS | 20 |

| TEMPORARY DISTURBANCE AREAS | | |
|---|---|---|
| SCIENTIFIC NAME | COMMON NAME | COMPOSITION % |
| FESTUCA IDAHOENSIS | IDAHO FESCUE | 25 |
| ELYMUS ELYMOIDES | BOTTLEBRUSH SQUIRRELTAIL | 25 |
| POA SECUNDA SSP. SECUNDA | SANDBERG'S BLUEGRASS | 25 |
| KOELERIA MACRANTHA | PRAIRIE JUNEGRASS | 25 |

3. SPECIES AND PERCENTS INCLUDED IN THE TABLES ABOVE ARE A RECOMMENDATION. SUBSTITUTIONS CAN BE MADE THROUGH CONSULTATION WITH ODOE.
4. SEEDING SHOULD OCCUR WITHIN RECOMMENDED SEEDING WINDOWS AND WHEN SOIL CONDITIONS ARE SUITABLE. SEEDING WINDOWS ARE LATE FALL AND EARLY SPRING, BUT CAN VARY BASED ON CLIMATIC CONDITIONS IN A GIVEN YEAR.
5. IF STABILIZATION IS NEEDED PRIOR TO A RECOMMENDED SEEDING WINDOW, APPROPRIATE STABILIZATION MATERIALS MUST BE APPLIED (E.G. HYDROMULCH, CRIMPED WEED-FREE STRAW, JUTE MATTING, ETC.)

LEGEND
- EXISTING 10' CONTOUR
- EXISTING 50' CONTOUR
- PROJECT BOUNDARY
- REVEGETATION AREA
- DRAINAGE ARROW
- PV PANEL
- ACCESS ROAD

0 500 1000 2000
SCALE: 1" = 1000'

TETRA TECH
www.tetratech.com
390 UNION BLVD #400
LAKEWOOD, CO 80228

| MARK | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 7/01/26 | ISSUED FOR DEQ REVIEW | CAN |

BIGL bn, LLC

BIGLOW SOLAR PROJECT
SHERMAN COUNTY, OREGON

EROSION AND SEDIMENT CONTROL PLAN
FINAL STABILIZATION

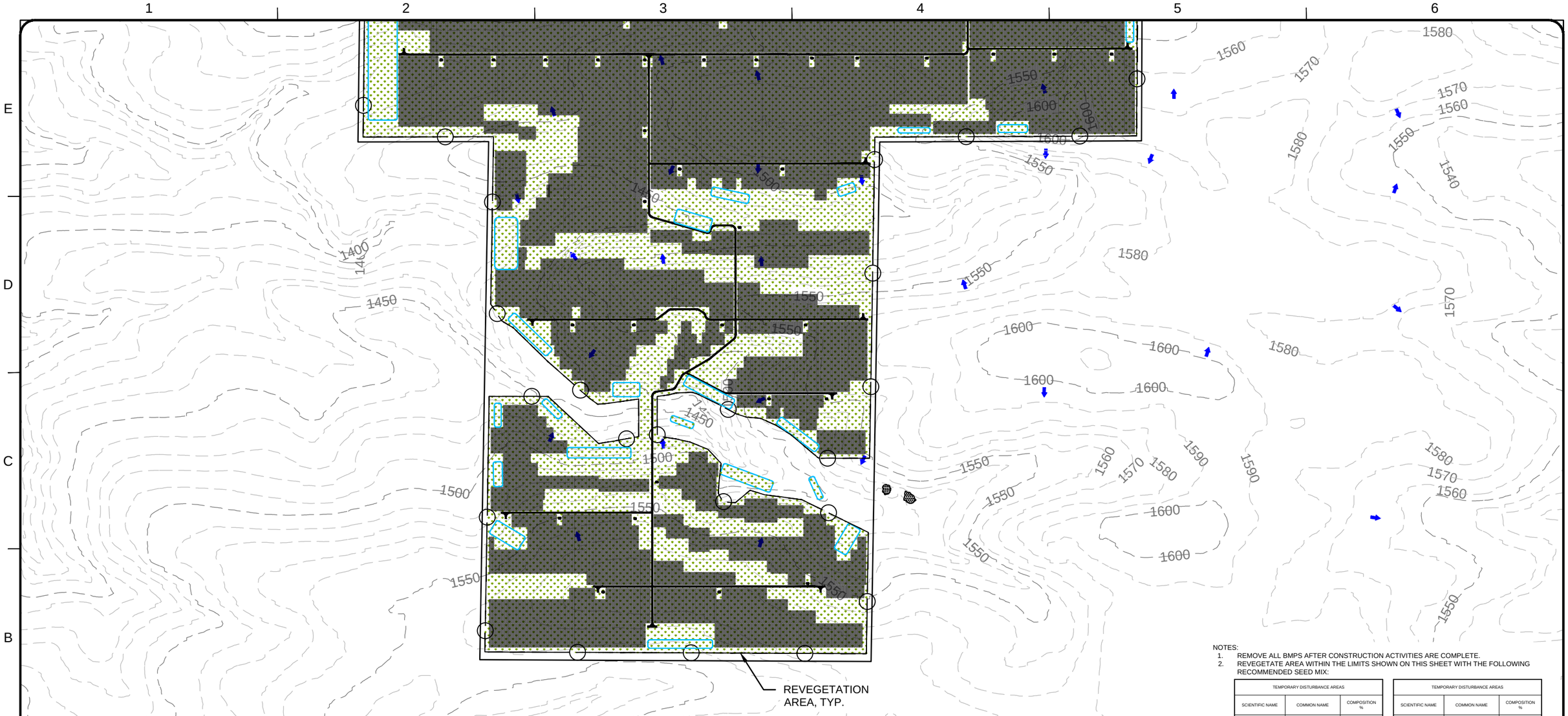
| | |
|---|---|
| PROJ: | 194-1392-0026 |
| DESN: | C.NIETEN |
| DRWN: | C.NIETEN |
| CHKD: | J.PATTON |

ESC-9

Copyright Tetra Tech

Bar measures 1 inch, otherwise drawing is not to scale

7/1/2026 12:44:20 PM - L:\DENVER OFFICE\ENGINEERING\SOLAR\BRIGHT NIGHT\BIGLOW CANYON\ESCP\BIGLOW RFA5 ESCP_REVA.DWG - NIETEN, CAITLIN




NOTES:

1. REMOVE ALL BMPS AFTER CONSTRUCTION ACTIVITIES ARE COMPLETE.
2. REVEGETATE AREA WITHIN THE LIMITS SHOWN ON THIS SHEET WITH THE FOLLOWING RECOMMENDED SEED MIX:

| TEMPORARY DISTURBANCE AREAS | | |
|---|---|---|
| SCIENTIFIC NAME | COMMON NAME | COMPOSITION % |
| FESTUCA IDAHOENSIS | IDAHO FESCUE | 20 |
| PSEUDOROEGNERIA SPICATA | BLUEBUNCH WHEATGRASS | 20 |
| ELYMUS ELYMOIDES | BOTTLEBRUSH SQUIRRELTAIL | 20 |
| POA SECUNDA SSP. SECUNDA | SANDBERG'S BLUEGRASS | 20 |
| POA SECUNDA SSP. JUNCIFOLIA | SHERMAN BIG BLUEGRASS | 20 |

| TEMPORARY DISTURBANCE AREAS | | |
|---|---|---|
| SCIENTIFIC NAME | COMMON NAME | COMPOSITION % |
| FESTUCA IDAHOENSIS | IDAHO FESCUE | 25 |
| ELYMUS ELYMOIDES | BOTTLEBRUSH SQUIRRELTAIL | 25 |
| POA SECUNDA SSP. SECUNDA | SANDBERG'S BLUEGRASS | 25 |
| KOELERIA MACRANTHA | PRAIRIE JUNEGRASS | 25 |

3. SPECIES AND PERCENTS INCLUDED IN THE TABLES ABOVE ARE A RECOMMENDATION. SUBSTITUTIONS CAN BE MADE THROUGH CONSULTATION WITH ODOE.
4. SEEDING SHOULD OCCUR WITHIN RECOMMENDED SEEDING WINDOWS AND WHEN SOIL CONDITIONS ARE SUITABLE. SEEDING WINDOWS ARE LATE FALL AND EARLY SPRING, BUT CAN VARY BASED ON CLIMATIC CONDITIONS IN A GIVEN YEAR.
5. IF STABILIZATION IS NEEDED PRIOR TO A RECOMMENDED SEEDING WINDOW, APPROPRIATE STABILIZATION MATERIALS MUST BE APPLIED (E.G. HYDROMULCH, CRIMPED WEED-FREE STRAW, JUTE MATTING, ETC.)

LEGEND

- EXISTING 10' CONTOUR
- EXISTING 50' CONTOUR
- PROJECT BOUNDARY
- REVEGETATION AREA
- DRAINAGE ARROW
- PV PANEL
- ACCESS ROAD

0 500 1000 2000

SCALE: 1" = 1000'

TETRA TECH
www.tetratech.com
390 UNION BLVD #400
LAKEWOOD, CO 80228

| MARK | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 7/01/26 | ISSUED FOR DEQ REVIEW | CAN |

BIGL bn, LLC

BIGLOW SOLAR PROJECT
SHERMAN COUNTY, OREGON

EROSION AND SEDIMENT CONTROL PLAN
FINAL STABILIZATION

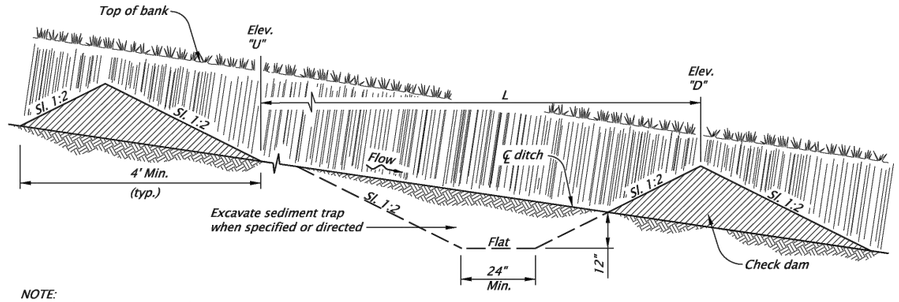
| | |
|---|---|
| PROJ: | 194-1392-0026 |
| DESN: | C.NIETEN |
| DRWN: | C.NIETEN |
| CHKD: | J.PATTON |

ESC-10

Copyright: Tetra Tech

Bar measures 1 inch, otherwise drawing is not to scale

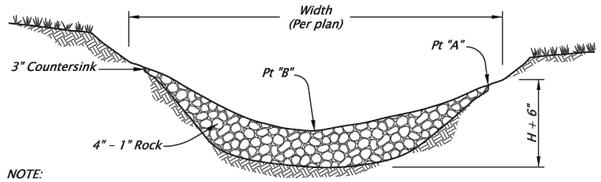
7/1/2026 12:44:28 PM - L:\DENVER OFFICE\ENGINEERING\SOLAR\BRIGHT NIGHT\BIGLOW CANYON\ESCP\BIGLOW RFA5 ESCP_REVA.DWG - NIETEN, CAITLIN




NOTE:
*L = Spacing along swale or ditch so that Elevation "U" equals Elevation "D".*

## TYPICAL PROFILE SECTION CHECK DAMS (SHOWN WITH AGGREGATE)

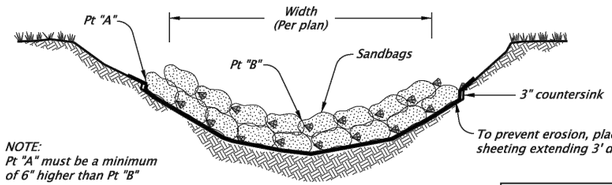
NOT TO SCALE




NOTE:
*Pt "A" must be a minimum of 6" higher than Pt "B"*

## AGGREGATE CHECK DAM - TYPE 1

NOT TO SCALE




NOTE:
*Pt "A" must be a minimum of 6" higher than Pt "B"*

## SANDBAG CHECK DAM - TYPE 4

NOT TO SCALE

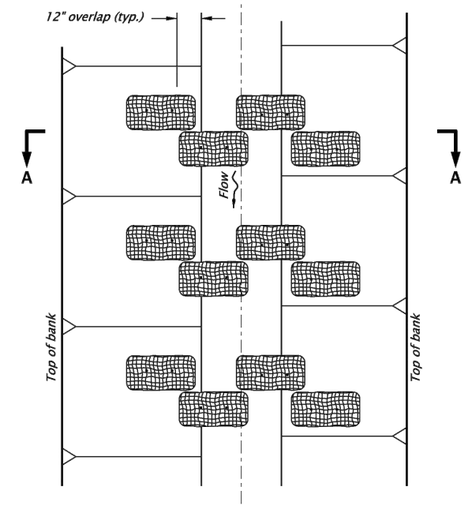
NOTES:

1. *Type 3 – stake biofilter bags with two 2"x2"x18" (minimum) wood stakes per bag. Drive stakes a minimum of 6" into the ground and flush with the top of the bags. Omit stakes if placed over paved surfaces. Overlap bags 12" minimum at each joint.*
2. *Type 4 – Tightly abut or overlap ends of sandbags at each joint.*
3. *Spacing between check dams for all check dam types shall comply with the typical profile section shown above.*
4. *Construct check dams Type 3 or 4 with two bags when installed in paved gutter with curb section.*

**MAXIMUM CHECK DAM SPACING "L"**

| Ditch Grade | H=8" | H=12" | H=18" | H=24" |
|---|---|---|---|---|
| 10% | * * | * * | 15' | 20' |
| 9% | * * | * * | 16' | 22' |
| 8% | * * | * * | 18' | 25' |
| 7% | * * | * * | 21' | 28' |
| 6% | * * | 16' | 25' | 33' |
| 5% | * * | 20' | 30' | 40' |
| 4% | 16' | 25' | 37' | 50' |
| 3% | 22' | 33' | 50' | 66' |
| 2% | 33' | 50' | 75' | 100' |

* * Not allowed  H = Min. dam height




## PLAN




## SECTION A-A

## BIOFILTER BAG CHECK DAM - TYPE 3

NOT TO SCALE

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**CHECK DAMS TYPE 1, 3 AND 4**

2024

| DATE | REVISION DESCRIPTION |
|---|---|
| 01-2021 | REMOVED CALC BOOK NUMBERS |
| 07-2024 | ADDED NOTE 4 |

CALC BOOK NO. N/A  SDR DATE 12-JUL-2024  **RD1005**

Effective Date: December 1, 2024 – May 31, 2025

RD1005.dgn 12-JUL-2024

TETRA TECH
www.tetratech.com
390 UNION BLVD #400
LAKEWOOD, CO 80228

| MARK | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 7/01/26 | ISSUED FOR DEQ REVIEW | CAN |

BIGL bn, LLC

BIGLOW SOLAR PROJECT
SHERMAN COUNTY, OREGON

EROSION AND SEDIMENT CONTROL PLAN DETAILS

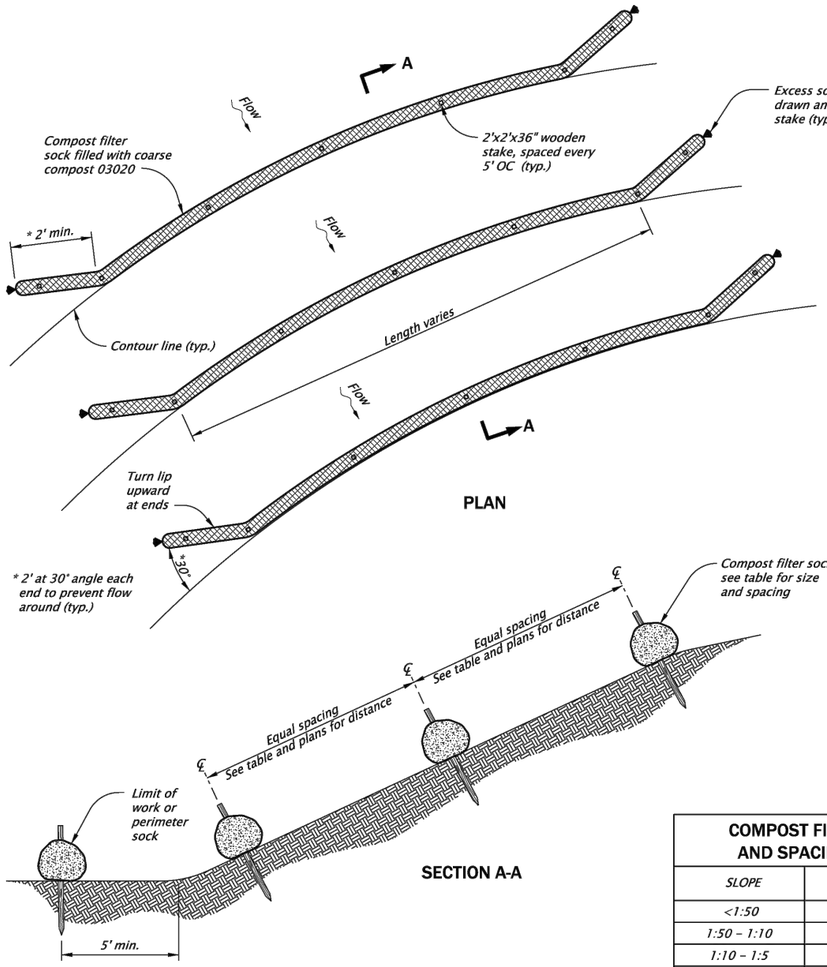
| | |
|---|---|
| PROJ: | 194-1392-0026 |
| DESN: | C.NIETEN |
| DRWN: | C.NIETEN |
| CHKD: | J.PATTON |

ESC-11

Copyright Tetra Tech

Bar measures 1 inch, otherwise drawing is not to scale

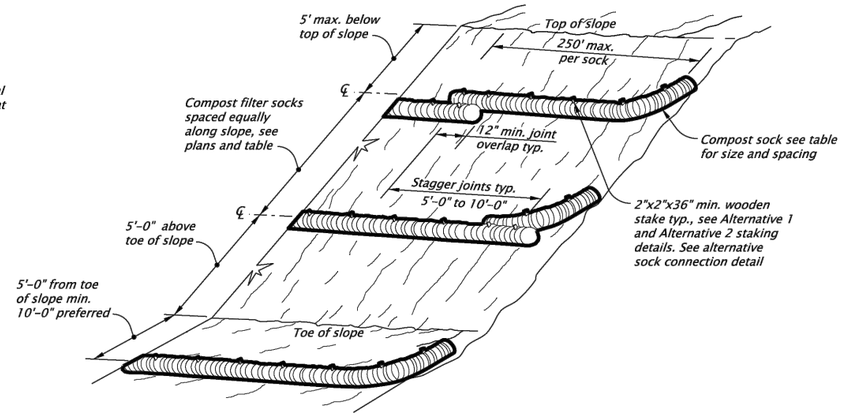
7/1/2026 12:44:30 PM - L:\DENVER OFFICE\ENGINEERING\SOLAR\BRIGHT NIGHT\BIGLOW CANYON\ESCP\BIGLOW RFA5 ESCP_REVA.DWG - NIETEN, CAITLIN



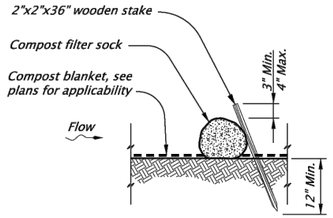

PLAN



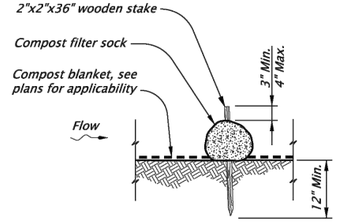

SECTION A-A




SLOPE APPLICATION - PERSPECTIVE VIEW




ALTERNATIVE 1 (Staking)




ALTERNATIVE 2 (Staking)

| COMPOST FILTER SOCK DIAMETER AND SPACING BASED ON SLOPE | | |
|---|---|---|
| SLOPE | SPACING (ft) | DIAMETER (in) |
| <1:50 | 250 | 8 |
| 1:50 – 1:10 | 125 | 12 |
| 1:10 – 1:5 | 100 | 12 |
| 1:5 – 1:2 | 50 | 18 |
| >1:2 | 25 | 18 |

NOTE:
Fully biodegradable compost sock mesh is recommended for permanent installations. Where compost socks must be moved or removed, synthetic sock mesh should be used.

**COMPOST FILTER SOCK**
NOT TO SCALE

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

# SEDIMENT BARRIER TYPE 8

2024

| DATE | REVISION DESCRIPTION |
|---|---|
| 01-2021 | REMOVED CALC BOOK NUMBERS |

CALC BOOK NO. N/A | SDR DATE 20-JAN-2021 | RD1032


TETRA TECH
www.tetratech.com
390 UNION BLVD #400
LAKEWOOD, CO 80228


| MARK | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 7/01/26 | ISSUED FOR DEQ REVIEW | CAN |

BIGL bn, LLC

BIGLOW SOLAR PROJECT
SHERMAN COUNTY, OREGON

EROSION AND SEDIMENT CONTROL PLAN DETAILS

| | |
|---|---|
| PROJ: | 194-1392-0026 |
| DESN: | C.NIETEN |
| DRWN: | C.NIETEN |
| CHKD: | J.PATTON |

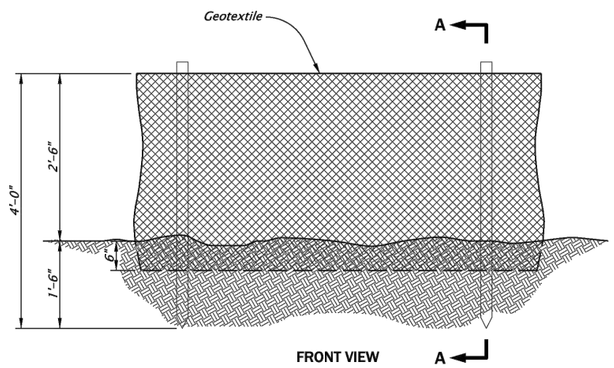
ESC-12

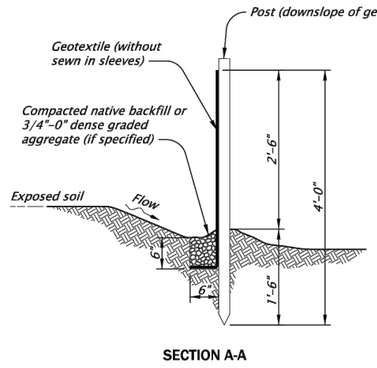
Copyright Tetra Tech

Bar measures 1 inch, otherwise drawing is not to scale

7/1/2026 12:44:32 PM - L:\DENVER OFFICE\ENGINEERING\SOLAR\BRIGHT NIGHT\BIGLOW CANYON\ESCP\BIGLOW RFA5 ESCP_REVA.DWG - NIETEN, CAITLIN

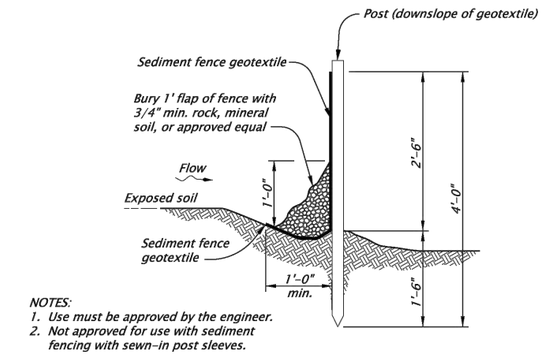
20-JAN-2021 RD1032.dgn




## SEDIMENT FENCE AND GEOTEXTILE BURY DETAIL - TYPE 1

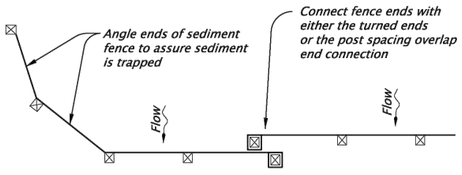
NOT TO SCALE



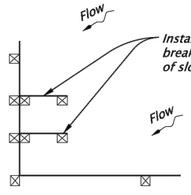

NOTES:
1. Use must be approved by the engineer.
2. Not approved for use with sediment fencing with sewn-in post sleeves.

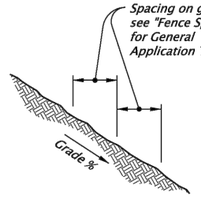
## ALTERNATE SEDIMENT FENCE WITHOUT TRENCHING - TYPE 2

NOT TO SCALE




PLAN VIEW



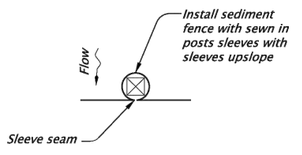




TERMINATION AT CORNER OR PROPERTY LINE

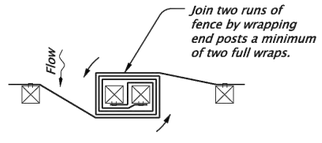
GENERAL NOTES:
1. Use 2"x2" wood fence posts.
2. Posts to be installed on downhill side of sediment fence geotextile. Position posts to prevent separation from geotextile.
3. Compact filter fabric trench backfill and soil on uphill side of fence.
4. Locate fence no closer than three feet to the toe of a slope.
5. Wing spacing shall comply with "Fence Spacing for General Application Table".

| FENCE SPACING FOR GENERAL APPLICATION TABLE | |
|---|---|
| INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS | |
| GRADE | MAXIMUM SPACING ON GRADE |
| Grade < 10% | 300' |
| 10% ≤ Grade < 15% | 150' |
| 15% ≤ Grade < 20% | 100' |
| 20% ≤ Grade < 30% | 50' |
| 30% ≤ Grade | 25' |

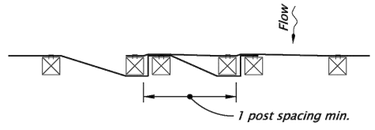
| POST SPACING TABLE | |
|---|---|
| 6' | Sediment Fence with Geotextile elongation less than 50% |
| 4' | Sediment Fence with Geotextile elongation 50% or more |




GEOTEXTILE WITH POST SLEEVES




TURNED ENDS CONNECTION




POST SPACING OVERLAP CONNECTION

## GEOTEXTILE END CONNECTIONS

NOT TO SCALE

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**SEDIMENT FENCE**

2024

| DATE | REVISION DESCRIPTION |
|---|---|
| 01-2021 | REMOVED CALC BOOK NUMBERS |

CALC. BOOK NO. N/A | SDR DATE 20-JAN-2021 | **RD1040**


TETRA TECH
www.tetratech.com
390 UNION BLVD #400
LAKEWOOD, CO 80228


| MARK | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 7/01/26 | ISSUED FOR DEQ REVIEW | CAN |

BIGL bn, LLC

BIGLOW SOLAR PROJECT
SHERMAN COUNTY, OREGON

EROSION AND SEDIMENT CONTROL PLAN DETAILS

| | |
|---|---|
| PROJ: | 194-1392-0026 |
| DESN: | C.NIETEN |
| DRWN: | C.NIETEN |
| CHKD: | J.PATTON |

ESC-13

Copyright Tetra Tech

Bar measures 1 inch, otherwise drawing is not to scale

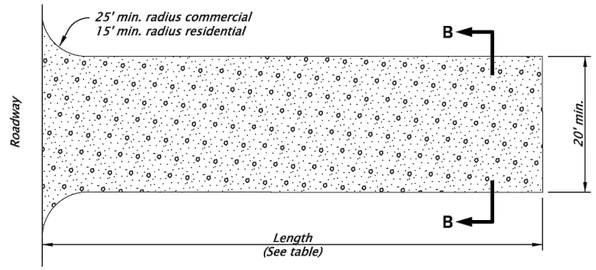
20-JAN-2021

RD1040.dgn

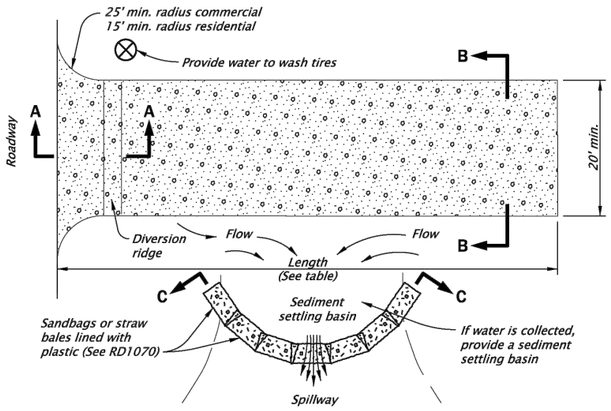
7/1/2026 12:44:34 PM - L:\DENVER OFFICE\ENGINEERING\SOLAR\BRIGHT NIGHT\BIGLOW CANYON\ESCP\BIGLOW RFA5 ESCP_REVA.DWG - NIETEN, CAITLIN

7/1/2026 12:44:36 PM - L:\DENVER OFFICE\ENGINEERING\SOLAR\BRIGHT NIGHT\BIGLOW CANYON\ESCP\BIGLOW RFA5 ESCP_REVA.DWG - NIETEN, CAITLIN

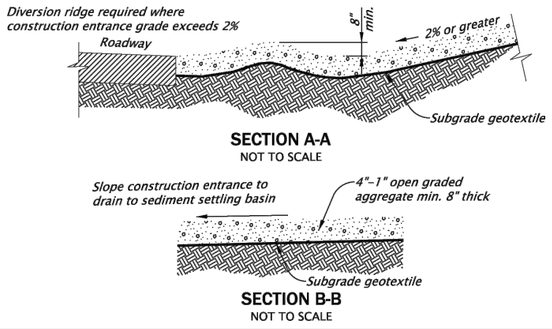
20-JAN-2021
RD1000.dgn

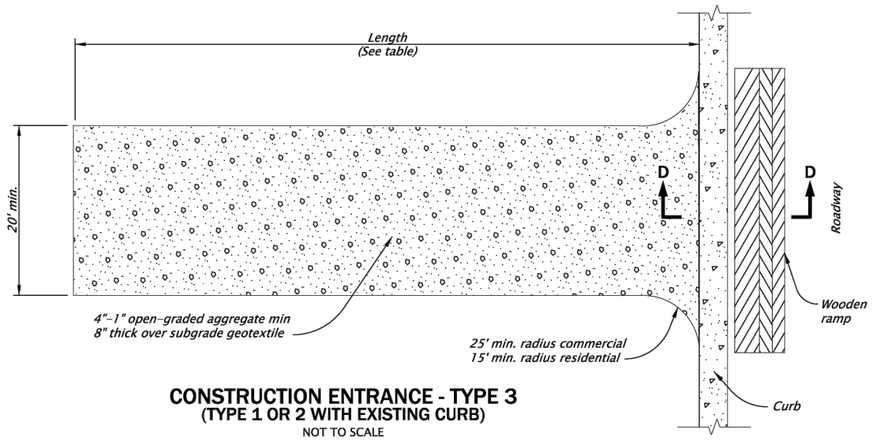



**CONSTRUCTION ENTRANCE - TYPE 1**
NOT TO SCALE

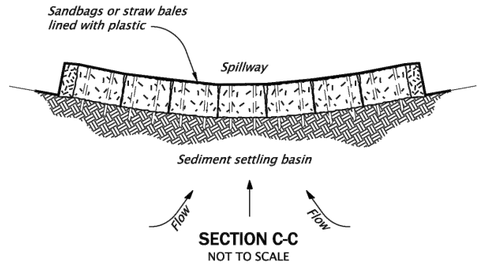


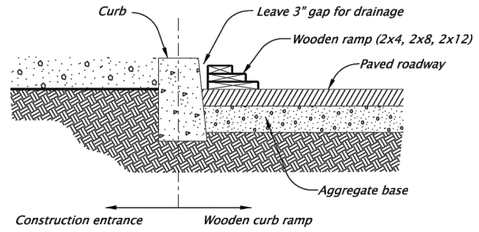

**CONSTRUCTION ENTRANCE - TYPE 2**
NOT TO SCALE




**CONSTRUCTION ENTRANCE - TYPE 3**
**(TYPE 1 OR 2 WITH EXISTING CURB)**
NOT TO SCALE




**WOODEN CURB RAMP SECTION D-D**
NOT TO SCALE

*NOTES:*
1. *The Type 1 entrance is a simple entrance without a diversion ridge or settling basin.*
2. *The wooden ramp may be used on either Type 1 or Type 2 entrances in situations where there is curb and the curb is not removed for the construction entrance.*

| CONSTRUCTION ENTRANCE TABLE MINIMUM LENGTH | |
|---|---|
| *Length (FT)* | *Area Of Exposed Soil (Acre)* |
| *20* | *0.25* |
| *50* | *0.25 < A < 1.0* |
| *100* | *A > 1.0* |

*The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.*

All materials shall be in accordance with the current Oregon Standard Specifications.

**OREGON STANDARD DRAWINGS**

**CONSTRUCTION ENTRANCES**

2024

| DATE | REVISION DESCRIPTION |
|---|---|
| 01-2021 | REMOVED CALC BOOK NUMBERS |

CALC. BOOK NO. N/A | SDR DATE 20-JAN-2021 | **RD1000**

TETRA TECH
www.tetratech.com
390 UNION BLVD #400
LAKEWOOD, CO 80228

| MARK | DATE | DESCRIPTION | BY |
|---|---|---|---|
| A | 7/01/26 | ISSUED FOR DEQ REVIEW | CAN |

BIGL bn, LLC

BIGLOW SOLAR PROJECT
SHERMAN COUNTY, OREGON

EROSION AND SEDIMENT CONTROL PLAN DETAILS

| | |
|---|---|
| PROJ: | 194-1392-0026 |
| DESN: | C.NIETEN |
| DRWN: | C.NIETEN |
| CHKD: | J.PATTON |

**ESC-14**

Copyright Tetra Tech

Bar measures 1 inch, otherwise drawing is not to scale

# Attachment C-2. Comprehensive Solar Revegetation and Soil Management Plan

# Comprehensive Solar Revegetation and Soil Management Plan

**Biglow Canyon Wind Farm**
**Request for Amendments 4 and 5**
**October 2026**

**Prepared for**

**Portland General Electric Company**

**Prepared by**

**Tetra Tech**

# Table of Contents

1.0 Introduction ..... 1
1.1 Plan Finalization ..... 2
2.0 Definitions ..... 3
3.0 Plan Goals and Management Objectives ..... 4
4.0 Pre-construction Compliance ..... 5
5.0 Construction Compliance ..... 7
6.0 Operations Compliance ..... 11
7.0 Plan Amendment ..... 14
8.0 References ..... 14

# List of Tables

Table 1. Action Items for Plan Finalization ..... 2
Table 2. Definitions for the Biglow Canyon Wind Farm ..... 3
Table 3. Pre-construction Compliance Checklist ..... 5
Table 4. Construction Compliance Checklist ..... 7
Table 5. Operations Compliance Checklist ..... 11

# List of Appendices

Appendix A. Roles and Qualifications
Appendix B. Construction Plan
Appendix C. Fugitive Dust Control Plan
Appendix D: Environmental Monitoring Methods
Appendix E: Revegetation and Site Stabilization Methods
Appendix F: Weed Control Plan

# List of Figures

Figure B-1. Temporary and Permanent Disturbance Areas
Figure B-2. RFA 4 Solar Facility Disturbance Levels
Figure D-1. RFA 4 Solar Facility Soil Compaction Sample Locations

# Acronyms and Abbreviations

| Acronym/Abbreviation | Definition |
|---|---|
| AC | alternating current |
| BCWF or Facility | Biglow Canyon Wind Farm |
| BIGL | BIGL bn, LLC |
| BMP | best management practice |
| Comprehensive Plan | Comprehensive Solar Revegetation and Soil Management Plan |
| EFSC | Energy Facility Siting Council |
| EPC | Engineering, Procurement, and Construction |
| MW | megawatt |
| MWh | megawatt-hour |
| NOT | Notice of Termination |
| NPDES | National Pollutant Discharge Elimination System |
| ODOE | Oregon Department of Energy |
| PGE or Certificate Holder | Portland General Electric Company |
| PV | photovoltaic |
| RFA | Request for Amendment |

# 1.0 Introduction

This Comprehensive Solar Revegetation and Soil Management Plan (Comprehensive Plan) has been prepared by Portland General Electric Company (PGE or Certificate Holder) to serve as a primary source of commitments related to revegetation, soil management, dust control, stormwater management, and noxious weed control through the pre-construction, construction, and operations phases for the photovoltaic solar energy generation and battery storage (Solar Components) and a transmission line associated with the Biglow Canyon Wind Farm (BCWF or Facility) Solar Facility, which is under development in two areas connected by a generation-tie transmission line.

BCWF, owned and operated by PGE, is located within an approved site boundary comprising approximately 25,000 acres, approximately 2.5 miles northeast of the town of Wasco in Sherman County, Oregon. The BCWF operates under the Site Certificate from the Oregon Energy Facility Siting Council (EFSC) as administered by the Oregon Department of Energy (ODOE). BCWF consists of 217 operating wind turbines with a peak generating capacity of 450 megawatts (MW).

EFSC issued the BCWF Fourth Amended Site Certificate for the Facility on March 27, 2026, to add 125 MW alternating current (AC) generating capacity from solar photovoltaic (PV) arrays and 500 megawatt-hours (MWh) in battery storage capacity (Request for Amendment [RFA] 4 Solar Facility) within the existing BCWF site boundary. Construction of the RFA 4 Solar Facility commenced in July 2026, with an anticipated commercial operation date of December 2027. BCWF RFA 5 proposes to add 200 MW AC generating capacity from solar PV arrays and 1,000 MWh in battery storage capacity (RFA 5 Solar Facility). The RFA 5 Solar Facility is located across approximately 622 acres of the existing BCWF site boundary and 839 acres of expanded site boundary. Construction of the RFA 5 Solar Facility is anticipated to commence in Q3 of 2027.

PGE will own and operate the RFA 4 and RFA 5 Solar Facilities as a part of the BCWF, which to date, have been developed by BIGL bn, LLC (BIGL or Project Developer). BIGL, in its capacity as the project developer, supports PGE in RFA 4 and RFA 5 to add solar PV energy generation and battery storage at the BCWF and will construct the Solar Components on behalf of PGE under a Build-Transfer Agreement.

This Comprehensive Plan was developed to guide vegetation and soil management at the RFA 4 Solar Facility and was updated in coordination with ODOE and applicable agencies prior to construction to reflect the final layout of the RFA 4 Solar Facility and additional details available following selection of an Engineering, Procurement, and Construction (EPC) Contractor. Following approval prior to construction of the RFA 4 Solar Facility, this Comprehensive Plan has been updated to incorporate vegetation and soil management requirements at the RFA 5 Solar Facility and will be updated again prior to construction of the RFA 5 Solar Facility. Once both Solar Facilities are constructed and in operation, PGE or the Project Developer will manage them together as one Solar Facility according to this Comprehensive Plan.

For ease of implementation and compliance tracking, this document is structured to identify actionable items by phase and typical sequencing within each phase, with additional details provided as appendices and/or incorporated by reference.

## 1.1 Plan Finalization

Table 1 identifies information that must be incorporated into the Comprehensive Plan before beginning any phase of construction.

**Table 1. Action Items for Plan Finalization**

| Action | Time-frame | Implemented By | Review/ Verification | RFA 4 Status | RFA 5 Status |
|---|---|---|---|---|---|
| Notify ODOE of identity of EMC, EPC, RC, and WC. Provide evidence that each contractor meets the minimum qualifications described in Appendix A. | Plan Finalization | Certificate Holder | ODOE | Complete | Will be completed prior to construction |
| Update Appendix A, Table A-1 with name and contact information for each contractor. | Plan Finalization | Certificate Holder | ODOE | Complete | Will be completed prior to construction |
| Update Section 6.0, Table 5 with operations long-term vegetation management details from Public Utility Commission (PUC)-approved vegetation management plan, including monitoring for Wildfire Management Plan vegetation criteria. | Prior to Operations | EMC | ODOE | Will be completed prior to operations | Will be completed prior to operations |
| Update Appendix B, Table B-1 with temporary and permanent disturbance acres by habitat subtype. | Plan Finalization | EMC | ODOE | Complete | Will be completed prior to construction |
| Update Appendix B with a Construction Plan and maps based on final design, expected disturbance levels, and sequencing of construction. | Plan Finalization | EMC | ODOE, ODA, ODFW, County | Complete | Will be completed prior to construction |
| Incorporate all stormwater control and treatment best management practices (BMPs) required by the National Pollutant Discharge Elimination System (NPDES) 1200-C permit into this Comprehensive Plan. | Plan Finalization | EPC | ODOE | Complete | Complete |

| Action | Time-frame | Implemented By | Review/ Verification | RFA 4 Status | RFA 5 Status |
|---|---|---|---|---|---|
| Update Appendix C with construction dust control measures. Include contact information and procedures for Dust Control Hotline | Plan Finalization | EPC | ODOE | Complete | Complete |
| Update Appendix D with proposed baseline soil compaction sample locations. | Plan Finalization | Certificate Holder | ODOE | Complete | Will be completed prior to construction |
| Update Appendix E with Final Revegetation methods, as needed, for both temporary and permanent disturbance areas in consultation with ODOE | Plan Finalization | EMC | ODOE | Complete | Complete |
| Update Appendix F with timing and treatment methods for each identified weed species of concern after consulting with the Sherman County Weed District. | Plan Finalization | WC & EMC | ODOE and County | Complete | Will be completed prior to construction |
| Update Appendix F with final noxious weed and vegetation monitoring methods. | Plan Finalization | EMC | ODOE | Complete | Complete |
| Notes: EMC = Environmental Monitoring Contractor; EPC = Engineering, Procurement, and Construction Contractor; ODA = Oregon Department of Agriculture; ODFW = Oregon Department of Fish and Wildlife; ODOE = Oregon Department of Energy; WC = Weed Control Contractor; County = Sherman County | | | | | |

# 2.0 Definitions

Definitions applicable to this Comprehensive Plan are provided in Table 2, below.

**Table 2. Definitions for the Biglow Canyon Wind Farm**

| Term | Definition |
|---|---|
| BCWF; Facility | Biglow Canyon Wind Farm |
| Habitat Areas | Any undeveloped, non-agricultural areas, including but not limited to areas mapped as grassland, sagebrush shrub-steppe, or riparian habitat, prior to construction of the Solar Components. |
| Permanent Disturbance Area | Any area permanently occupied by the Solar Components, including all areas within the fence line of a solar array or substation. |
| Sensitive Soils | Soils that are highly susceptible to erosion from water, fugitive dust propagation, compaction, or other impacts. |
| Solar Components | Photovoltaic solar energy generation, battery storage, and other components authorized in RFA 4 and RFA 5, not including the transmission line. |

| Term | Definition |
|---|---|
| Solar Siting Area | The anticipated disturbance footprint of the Solar Components which constitutes the permanent disturbance area. |
| Site Boundary | Maximum area where the RFA 4 and 5 Solar Facilities may be built or cause temporary disturbance. |
| Temporary Disturbance Area | Any area that is disturbed during construction of the RFA 4 and 5 Solar Facilities that will not be permanently occupied during operations. |
| Weed Management Area | Disturbance area within the Solar Siting Area and the transmission line right-of-way. |

# 3.0 Plan Goals and Management Objectives

This Comprehensive Plan was developed to demonstrate compliance with the terms and conditions of the Site Certificate and other applicable state and local laws and regulations. Specifically, the actions described in this Comprehensive Plan are intended to increase the probability of revegetation success, reduce erosion and fugitive dust, protect topsoil for future agricultural use on agricultural land, prevent and address the establishment and spread of noxious weeds, minimize fire risk, and maintain beneficial vegetation at the site.

The BCWF is located on privately owned agricultural land used primarily for dryland wheat production and, to a lesser extent, cattle grazing. The grazed land is grassland, shrub-steppe rangeland, and/or fallow wheat stubble fields. The RFA 4 Solar Facility contains important wildlife habitat and movement corridors, particularly along the John Day River and its tributaries. The RFA 5 Solar Facility contains small areas of upland trees in low-lying areas in the southern portion as well as patches of grassland. Sensitive soils are present throughout the RFA 4 and RFA 5 Solar Facilities, and erosion hazards from wind and water are severe in areas with steep slopes, including canyons and drainages in the northeast portion. To ensure that the area can be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the RFA 4 and 5 Solar Facilities, Permanent Disturbance Areas in wildlife habitat will be revegetated for the purposes of soil stabilization to reduce erosion, dust pollution, topsoil depletion, and the potential for invasion by noxious weeds and other invasive plants. Cropland outside the Solar Siting Area will be returned to landowner control and will not be revegetated by the Certificate Holder.

To minimize impacts to agricultural uses and habitat in Temporary Disturbance Areas, soil disturbance and vegetation removal will be minimized and reasonable efforts will be made to restore vegetation and soils in agricultural and habitat areas to their pre-disturbance condition. Best management practices (BMPs) will be implemented to minimize erosion and prevent the introduction or spread of noxious weeds and other invasive plants in both habitat areas and temporarily disturbed developed areas (e.g., existing roads, rock quarries).

# 4.0 Pre-construction Compliance

Table 3 outlines actions related to revegetation, soil management, dust control, stormwater management, and noxious weed control that must be completed before beginning construction.

**Table 3. Pre-construction Compliance Checklist**

| Action | Timeframe | Implemented By | Review/ Verification |
|---|---|---|---|
| Provide Final Comprehensive Plan to all participating parties. | At least 30 days prior to construction | Certificate Holder | ODOE |
| Hold a kick-off meeting with the EMC, EPC, County, and ODOE. Meeting may be in person or remote. | At least 14 days prior to construction. | Certificate Holder | ODOE |
| Collect baseline soil compaction measurements within all anticipated Level 3 and 4 Disturbance Areas using the protocol described in Appendix D. Submit baseline soil compaction measurement results to ODOE. | Prior to construction | EMC | ODOE |
| Complete installation of stormwater, erosion, and sediment controls as required by the 1200-C permit. | Prior to and during construction | EPC | ODOE |
| Coordinate the construction schedule and sequence with landowners to maintain land in current production and weed control until the last growing season prior to construction. | Prior to construction | Certificate Holder | ODOE |
| Conduct on-site Environmental Training with contractors, construction personnel, and environmental inspector(s), inviting specialty contractors, Oregon Department of Agriculture (ODA), Oregon Department of Fish and Wildlife (ODFW), the County, and ODOE. The training must cover all aspects of this Comprehensive Plan and other requirements applicable to construction, including but not limited to:<br>• Roles and responsibilities<br>• Implementation of avoidance buffers for sensitive resources (e.g., flagging)<br>• Methods for identifying and preventing the spread of noxious and invasive weeds<br>• BMPs for soil protection and erosion control under the 1200-C Permit.<br>• Fire prevention practices during construction | Prior to construction | Certificate Holder | ODOE |
| Provide records demonstrating that all contractor personnel have attended on-site Environmental Training described above. | Prior to construction | Certificate Holder | ODOE |

| Action | Timeframe | Implemented By | Review/ Verification |
|---|---|---|---|
| Conduct additional pre-construction noxious weed surveys as necessary to identify noxious weeds present within the Site Boundary at the time of construction to inform management. | Prior to construction | EMC | ODOE |
| Provide the Appendix F Weed Control Plan to the Sherman County Weed District for review and concurrence with treatment guidelines. | Prior to construction | Certificate Holder | ODOE |
| Treat noxious weeds within the Weed Management Area in accordance with methods in Appendix F. Implement pre-construction treatment where feasible and conduct ongoing monitoring, mapping, and weed management during construction to minimize the spread of noxious weeds. | Prior to construction | WC | ODOE |
| Provide evidence that existing noxious weeds have been identified and treated in accordance with methods in Appendix F. | Prior to construction | Certificate Holder | ODOE |
| Flag sensitive environmental resources (e.g., historic, cultural, and archaeological resources; active raptor nests; delineated wetlands and waterways) and untreated noxious weed occurrences, as appropriate, to alert construction personnel of avoidance areas or management requirements. | Prior to construction | EMC | ODOE |
| Notes: County = Sherman County; EMC = Environmental Monitoring Contractor; EPC = Engineering, Procurement, and Construction Contractor; ODOE = Oregon Department of Energy; RC = Revegetation Contractor; WC = Weed Control Contractor | | | |

# 5.0 Construction Compliance

Table 4 outlines actions needed for compliance during construction related to revegetation, soil management, dust control, stormwater management, and noxious weed control. This list includes actions applicable throughout construction as well as actions required as construction nears completion and revegetation commences in preparation for entering the operations phase.

**Table 4. Construction Compliance Checklist**

| Action | Timeframe | Responsible Party | Review/ Verification |
|---|---|---|---|
| **During Construction Mobilization** | | | |
| Provide information about target noxious weed species at the operations and maintenance buildings. | During construction | EPC | EMC & ODOE |
| Ensure a copy of this Comprehensive Plan and a description of any additional fugitive dust control requirements are available on site. | During construction | EPC | EMC & ODOE |
| Prominently display Dust Control Hotline signs, providing direct access to the Certificate Holder Site Manager. | During construction | EPC | EMC & ODOE |
| **During Ground-Disturbing Activities** | | | |
| On or before April 15 of any year in which construction occurs within Category 2 habitat, all mowing, vegetation removal and/or ground disturbance associated with site preparation must be completed. No mowing, vegetation removal and/or ground disturbance associated with site preparation may occur within Category 2 habitat between April 15 through September 1. | During construction within Category 2 habitat | EPC, Certificate Holder | EMC & ODOE |
| In Disturbance Levels 3, 4, and 5 areas (described in Appendix B), stockpile excavated soils by soil horizon to replace in the same order and prevent mixing of topsoil and subsoils. Put conserved topsoil back in place prior to revegetation activities. | During construction | EPC | EMC & ODOE |
| Do not move topsoil and other soils from areas with noxious weeds to areas without noxious weeds; instead, return these soils to their previous location during reclamation activities to reduce the transport of weed seeds, roots, or rhizomes. | During construction | EPC | EMC & ODOE |
| Use appropriate erosion and sediment control practices, as required by the National Pollutant Discharge Elimination System 1200-C permit. | During construction | EPC | EMC & ODOE |

| Action | Timeframe | Responsible Party | Review/ Verification |
|---|---|---|---|
| Limit vehicle access to designated routes, whether existing roads or newly constructed roads, and the outer limits of construction disturbances per the final design for the RFA 4 and 5 Solar Facilities; limit vehicle traffic in areas with noxious weeds. | During construction | EPC | EMC & ODOE |
| Require construction equipment (e.g., bulldozers) to pass through a wheel wash station at laydown yards or mobile wash stations when entering or exiting the Site Boundary. | During construction | EPC | EMC & ODOE |
| Clean vehicles and equipment associated with ground disturbance and movement of topsoil utilizing a mobile wash station after performing work in areas with noxious weeds and prior to performing work in areas without noxious weeds. Equipment may be cleaned off-site prior to arrival instead of using an on-site wash station. | During construction | EPC | EMC & ODOE |
| Implement appropriate BMPs to control any dust generated by construction activities, such as applying water or stabilizers to roads and disturbed soil areas. | During construction | EPC | EMC & ODOE |
| Maintain records of U.S. Environmental Protection Agency (EPA) Method 22 (ODEQ 2019) monitoring. | During construction | EPC | EMC & ODOE |
| After grading is complete but prior to installation of Solar Components, apply temporary or permanent soil stabilization, as described in Appendix E. | During construction | RC | EMC & ODOE |
| Monitor the Weed Management Area for noxious weeds during and after construction and implement control measures as described in Appendix F. | During and following construction | EMC & Certificate Holder | ODOE |
| Conduct compliance monitoring to ensure that contractors are complying with noxious weed prevention measures in this Comprehensive Plan. Facilitate coordination meetings with ODOE and Sherman County Weed District, train all personnel to maintain tracking sheets, conduct routine check-in calls with the construction team, and document communication with landowners prior to chemical application. Maintain records and provide ODOE with copies of these records annually during construction. If the Certificate Holder contracts with the Sherman County Weed District to perform weed control at the RFA 4 or 5 Solar Facilities, then monitoring records will include a statement that the county agency performed the work. | During construction | EMC | ODOE |
| If construction extends into the growing season prior to the commercial date of operations and formal post-construction weed monitoring, conduct informal but comprehensive weed surveys to inform adaptive management. Weed monitoring may be conducted as part of routine environmental monitoring to be completed at least monthly from April to October. | During construction | EMC | ODOE |

| Action | Timeframe | Responsible Party | Review/ Verification |
|---|---|---|---|
| **Soil Stabilization and Reclamation** | | | |
| Coordinate with the landowner or farm operator to identify the preferred approach for soil stabilization on agricultural land until routine seeding and tillage resumes. Soil stabilization may include applying unseeded hydromulch or crimping in weed-free straw until seeding can occur. Landowner may choose to assume responsibility for soil stabilization. Agricultural lands will be restored to landowner satisfaction. | During and following construction | Certificate Holder | EMC & ODOE |
| Meet with ODOE in coordination with ODFW and Sherman County Weed District to review the actual extent and conditions of disturbed areas and confirm the revegetation methods to be implemented. | After each phase of construction is complete and before revegetation | Certificate Holder | ODOE |
| In areas with noxious weeds where soil was removed, return soils to their previous location during reclamation activities to reduce transport of weed seeds, roots, or rhizomes. | During reclamation | EPC | EMC & ODOE |
| Treat noxious weeds in the Weed Management Area using methods described in Appendix F and in consultation with the Sherman County Weed District as necessary. No weed treatment will occur in agricultural lands without landowner permission. | Before reclamation and revegetation | WC | EMC & ODOE |
| Decompact soil by mechanical scarification (tilling or ripping the soil) to an appropriate depth as described in Appendix E. Soil amendment, such as addition of organic matter (compost), may also be necessary to alleviate compaction. | Prior to revegetation | EPC | EMC & ODOE |
| Complete post-construction soil compaction testing in spring or late fall in accordance with Appendix D. Submit results to ODOE for review and approval. | After reclamation and before revegetation | EMC & Certificate Holder | ODOE |
| Perform soil preparation prior to seeding using methods described in Appendix E. | Before revegetation | EPC | EMC & ODOE |
| Prevent conditions favorable for noxious weed germination by revegetating as soon as practicable. | After reclamation | RC | ODOE |
| **Revegetation of Permanent Disturbance Areas** | | | |
| Following completion of construction phases, seed undeveloped permanent disturbance areas in accordance with methods described in Appendix E. | During revegetation | RC | EMC & ODOE |

| Action | Timeframe | Responsible Party | Review/ Verification |
|---|---|---|---|
| **Revegetation of Agricultural Temporary Disturbance Areas** | | | |
| Coordinate with the landowner or farm operator to identify the preferred approach for revegetating agricultural land. Landowner may choose to assume responsibility for revegetation. Agricultural lands will be restored to landowner satisfaction. | During revegetation, following each construction phase | Certificate Holder, EPC | EMC & ODOE |
| Report to ODOE on the success of agricultural land restoration efforts; provide evidence that landowner or farm operator is satisfied with restoration. | During & following construction | Certificate Holder | EMC & ODOE |
| **Revegetation of Non-Agricultural Temporary Disturbance Areas** | | | |
| Reseed areas of temporary disturbance outside of agricultural lands, as described in Appendix E. | During revegetation, following each construction phase | RC | EMC & ODOE |
| If straw is needed and certified weed-free straw is unavailable, identify a local source of straw and obtain approval for its use by ODOE in consultation with the Sherman County Weed District. | Before revegetation | RC or EPC | ODOE |
| Consult with ODOE, ODFW, ODA, Sherman County Weed District, and/or the seed supplier to determine the optimal timing for seed application based on climatic conditions of the particular year when construction and revegetation efforts are implemented. Seeding from September to March is typically recommended. | Before revegetation | RC & EMC | ODOE |
| Stabilize seeded areas to facilitate establishment by applying seedless, certified weed-free hydromulch containing a tackifier or crimped weed-free straw. | During revegetation | RC or EPC | EMC & ODOE |
| Maintain records of revegetation efforts in all temporary and permanent disturbance areas and update ODOE monthly as revegetation work occurs. | Monthly during revegetation | EMC | ODOE |
| Notes: EMC = Environmental Monitoring Contractor; EPC = Engineering, Procurement, and Construction Contractor; ODOE = Oregon Department of Energy; RC = Revegetation Contractor; WC = Weed Control Contractor | | | |

# 6.0 Operations Compliance

Table 5 summarizes actions needed for compliance during operations related to revegetation, stormwater management, and noxious weed control. This list includes actions applicable throughout operations as well as actions required only initially following construction, for example through the Notice of Termination (NOT) for Coverage under a National Pollutant Discharge Elimination System (NPDES) 1200-C Permit. Soil management and dust control measures are not included in Table 5 because they are addressed during prior phases.

**Table 5. Operations Compliance Checklist**

| Action | Timeframe | Responsible Party | Review/ Verification |
|---|---|---|---|
| **YEAR 1** | | | |
| Conduct seasonal monitoring of Permanent Disturbance Areas to visually assess the following:<br>a. Establishment of seeded species;<br>b. Inspection of areas of bare soil for erosion; and<br>c. Presence of noxious weeds. | Initiate within 60 days of the completion of revegetation and conduct once per season in the first year following construction | EMC | ODOE |
| Inspect and maintain stormwater measures as required in the 1200-C permit. | During operations, prior to achieving NOT for the NPDES | Certificate Holder & EMC | ODOE |
| Inspect and maintain any permanent stormwater management infrastructure. Inspect project facilities (e.g., roads) for erosion issues. | During operations, after achieving NOT for the NPDES | Certificate Holder | ODOE |
| **YEARS 2 to 6** | | | |
| Conduct annual monitoring of Permanent Disturbance Areas to assess whether vegetation meets success criteria (Appendices B and D). | Annually for 5 years in May or June, beginning the first year after revegetation | EMC | ODOE |
| Monitor revegetated Temporarily Disturbance Areas, unless the landowner converted the area to land uses that preclude meeting revegetation success criteria. To determine if revegetated temporarily disturbed areas are meeting success criteria, compare vegetation for monitoring and reference transects in each of the non-agricultural habitat subtypes that had more than 0.5 acres of temporary disturbance (Appendix D). | Annually for 5 years in May or June, beginning the first year after revegetation | EMC | ODOE |
| Determine and report on whether success criteria have been met or are trending towards being met (see Appendix E for report content and success criteria) for Temporary and Permanent Disturbance Areas. Final determination of whether | Annually for 5 years in May or June, beginning the first year after revegetation and for the life of the Solar Components on | EMC | ODOE |

| Action | Timeframe | Responsible Party | Review/ Verification |
|---|---|---|---|
| the Certificate Holder is in compliance with revegetation obligations will be made by ODOE. Remedial actions and/or additional monitoring may be required in areas that have been determined by ODOE not to have met the success criteria. | a schedule to be determined in consultation with ODOE | | |
| If a revegetated area is damaged by wildfire, develop a plan, subject to ODOE approval, to address the damaged area. Continue to monitor and report on revegetation progress during the remainder of the 5-year period. Report to ODOE within 72 hours of discovery. | During the first 5 years following revegetation if wildfire occurs. | EMC | ODOE |
| Summarize noxious weed monitoring results in annual reports that describe noxious weeds identified, treatments implemented, treatment efficacy, and recommendations for additional treatments. Submit reports to ODOE, ODA, ODFW, and the County annually. If the Certificate Holder contracts with the Sherman County Weed District to perform weed control at the RFA 4 or 5 Solar Facilities, then no monitoring report needs to be provided except for a statement that the County agency performed the work. | During first 5 years of operations | Certificate Holder & EMC | ODOE |
| Implement the measures outlined in Appendix E to address vegetation management to reduce wildfire risk. | During operation | EMC | ODOE |
| Consult with ODOE, ODA, and the Sherman County Weed District to design a long-term weed control plan as needed based on the success of control efforts. | After 5th year of annual monitoring | Certificate Holder | ODOE, ODA, County |
| Provide records demonstrating that all Facility personnel have been trained in noxious weed control. | Annually during operations | Certificate Holder | ODOE |
| Monitor noxious weeds as outlined in Appendix F within the Weed Management Area for the life of the RFA 4 and 5 Solar Facilities to assess weed growth and inform noxious weed control measures. Assess the success of noxious weed treatments and document any new noxious weed occurrences observed. | During operations | Certificate Holder & EMC | ODOE |
| Control noxious weeds as described in the long-term weed control plan. Maintain ongoing communication with landowners and the Sherman County Weed District regarding noxious weeds at the RFA 4 and 5 Solar Facilities. Control noxious weeds reported by landowners on a case-by-case basis and prepare a summary of measures taken for that landowner. | During operations | Certificate Holder | ODOE |
| Consult with the Sherman County Weed District on timing, method, and application rates for each identified weed species of concern to allow for the adaptive weed management given to change weed control effectiveness from | Every fall season during operations | Certificate Holder | ODOE |

| Action | Timeframe | Responsible Party | Review/ Verification |
|---|---|---|---|
| noxious weed species tolerance to herbicide treatment over time. Report the results of the consultation to ODOE within 30 days. Any alternative control methods can be proposed by the Certificate Holder or its contractors, subject to approval by the Sherman County Weed District. | | | |
| Notes: EMC = Environmental Monitoring Contractor; NOT = Notice of Termination; NPDES = National Pollutant Discharge Elimination System; ODOE = Oregon Department of Energy; ODFW = Oregon Department of Fish and Wildlife | | | |

# 7.0 Plan Amendment

This Comprehensive Plan may be amended from time to time by agreement of the Certificate Holder and the Oregon EFSC. Such amendments may be made without amendment of the site certificate. EFSC authorizes ODOE to agree to amendments to this Comprehensive Plan. ODOE shall notify EFSC of all Comprehensive Plan amendments, and EFSC retains the authority to approve, reject, or modify any amendment agreed to by ODOE.

# 8.0 References

EFSC (Energy Facility Siting Council). 2026. Fourth Amended Site Certificate for the Biglow Canyon Wind Farm. Energy Facility Siting Council, Salem, Oregon. March 27, 2026.

ODEQ (Oregon Department of Environmental Quality). 2019. OAR 340-208-0210 EPA Method 22. https://secure.sos.state.or.us/oard/viewAttachment.action?ruleVrsnRsn=256141

# Appendix A. Roles and Qualifications

## Roles and Responsibilities

The Certificate Holder is the overall responsible party for construction and operation of the RFA 4 and 5 Solar Facilities and implementation of this Comprehensive Plan. However, the Certificate Holder may use contractors to complete tasks associated with this Comprehensive Plan. Responsible parties and their roles are described in Table A-1. Minimum qualifications for contractors are provided in Table A-2.

**Table A-1. Roles and Responsibilities**

| Responsible Party | Name and Contact Information | Role |
|---|---|---|
| Certificate Holder | Portland General Electric Company | Responsible for compliance with all site condition requirements, hiring contractors that meet the minimum qualifications described in Appendix A, and ensuring that all contractors perform work in accordance with the requirements of this Comprehensive Plan. |
| Engineering, Procurement, and Construction Contractor (EPC) | PCL Solar Constructors USA, Inc.<br>Jacob Brovelli, Project Manager<br>2000 S. Colorado Blvd., Suite 2-500<br>Denver, CO 80222<br>(425) 213-2942<br>jbbrovelli@pcl.com | Responsible for implementing best management practices (BMPs) and other measures specified in the National Pollutant Discharge Elimination System (NPDES) 1200-C permit and this Comprehensive Plan to minimize impacts during construction. |
| Revegetation Contractor (RC) | KBL Construction, LLC<br>Contact Person: TBD<br>3405 121st St<br>SW Lynnwood, WA 98087<br>(425) 355-7335<br>info@klbconstruction.com | Responsible for performing revegetation actions during and immediately after construction, as described in this Comprehensive Plan. |
| Weed Control Contractor (WC) | Sherman County Weed Department<br>Nick Weis, Weed District Supervisor<br>66143 Lone Rock Road<br>Moro, OR 97039<br>(541) 565-3655<br>nickw@shermancountyor.gov | Responsible for performing weed control actions in the Weed Management Area, as described in this Comprehensive Plan. |
| Environmental Monitoring Contractor (EMC) | Tetra Tech<br>Jonathan Thompson<br>1750 S Harbor Way, Suite 400<br>Portland, OR 97201<br>(509) 301-3590<br>Jonathan.Thompson@tetratech.com | Responsible for conducting environmental monitoring and documenting compliance with aspects of this Comprehensive Plan during and following construction, including conducting revegetation, dust, soil, stormwater, and noxious weed monitoring. |

| Responsible Party | Name and Contact Information | Role |
|---|---|---|
| Oregon Department of Energy (ODOE) | Oregon Department of Energy<br>Compliance Specialist<br>550 Capitol St. NE<br>Salem, OR 97301<br>Phone:<br>Email: | Responsible for providing technical input on proposed BMPs and other measures to minimize impacts and for validating all compliance deliverables described in this Comprehensive Plan. ODOE may utilize contractors to meet its responsibilities under this Comprehensive Plan during some or all phases. |
| Sherman County (County) | Sherman County Weed Department<br>Nick Weis, Weed District Supervisor<br>66143 Lone Rock Road Moro, OR 97039<br>(541) 565-3655<br>nickw@shermancountyor.gov | Responsible for providing input on weed control and other actions described in this Comprehensive Plan and its implementation as needed. The County will also attend calls with ODOE and other agencies as needed. |

## Contractor Minimum Qualifications

**Table A-2. Contractor Minimum Qualifications**

| Contractor | Role | Minimum Qualification |
|---|---|---|
| Engineering, Procurement, and Construction Contractor (EPC) | Responsible for implementing best management practices (BMPs) and other measures specified in the NPDES 1200-C permit and this Comprehensive Plan to minimize impacts during construction, and for performing restoration and revegetation actions. | Minimum qualifications for the EPC include:<br>• Experience implementing measures in the NPDES 1200-C permit;<br>• Demonstration of sufficient resources and staffing for anticipated BMP installations and maintenance; and<br>• Experience in coordination with agencies and private landowners. |
| Revegetation Contractor (RC) | Responsible for performing revegetation actions during and immediately after construction. | The Certificate Holder will ensure that the RC has the following minimum qualifications:<br>• Demonstrated experience in the Columbia Plateau;<br>• Experience in native plant, non-native and invasive plants, and noxious weed identification and management;<br>• Experience in revegetating natural areas;<br>• Experience with site preparation and applicable seeding methods;<br>• Experience in documenting revegetation actions and providing progress reports;<br>• Experience in coordination with agencies and private landowners; and<br>• No recent (within one year) violations on the contractor's record. |
| Weed Control Contractor (WC) | Responsible for performing weed control prior to, during, and after construction within the disturbance area and a 10-foot buffer (Weed Management Area). | The Certificate Holder will ensure that noxious weed management actions will be conducted by specialists with the following qualifications:<br>• Experience in native plant, non-native and invasive plants, and noxious weed identification in the Columbia Plateau Ecoregion;<br>• Experience in noxious weed mapping;<br>• If chemical control is used, specialists must possess a Commercial or Public Pesticide Applicator License from the Oregon Department of Agriculture or possess an Immediately Supervised Pesticide Trainee License and be supervised by a licensed applicator;<br>• Training in noxious weed management or Integrated Pest Management with an emphasis in noxious weeds; |

| Contractor | Role | Minimum Qualification |
|---|---|---|
| | | • Experience in coordination with agencies and private landowners; and<br>• No recent (within one year) violations on the contractor's record. |
| Environmental Monitoring Contractor (EMC) | Responsible for conducting environmental monitoring and documenting compliance with aspects of this Comprehensive Plan during and following construction, including conducting revegetation, dust, soil, stormwater, and noxious weed monitoring as described below. | Minimum qualifications for the EMC include:<br>• Have an active certification recognized in the 1200-C permit (e.g., Certified Erosion and Sediment Control Lead);<br>• Experience implementing and monitoring measures in the NPDES 1200-C permit;<br>• Experience and knowledge of U.S. Environmental Protection Agency Method 22 (ODEQ 2019)[1] with respect to the general procedures for determining the presence of visible emissions;<br>• Experience in native plant, non-native and invasive plants, and noxious weed identification and management;<br>• Experience in noxious weed mapping;<br>• Training in noxious weed management or Integrated Pest Management with an emphasis in noxious weeds; and<br>• Experience in coordination with agency and private landowners.<br>The EMC will include a qualified botanist or revegetation specialist who will be responsible for monitoring and reporting on revegetation success. |
| 1. ODEQ. 2019. OAR 340-208-0210 EPA Method 22. https://secure.sos.state.or.us/oard/viewAttachment.action?ruleVrsnRsn=256141 | | |

# Appendix B. Construction Plan

## Disturbance Acreage

Acres of anticipated temporary and permanent disturbance to habitat subtypes associated with Solar Component construction and operation are provided in Table B-1 and shown in Figure B-1.

**Table B-1. Acres of Anticipated Temporary and Permanent Disturbance**

| ODFW Habitat Category | Habitat Type | Habitat Subtype | Temporary Disturbance (acres) | | | Permanent Disturbance (acres) | | |
|---|---|---|---|---|---|---|---|---|
| | | | RFA 4 | RFA 5 | Total | RFA 4 | RFA 5 | Total |
| 1 | N/A | N/A | - | - | - | - | - | - |
| 2 | Grassland-steppe | Grassland | 0.1 | - | 0.1 | - | - | - |
| | Riparian | Riparian Trees | <0.1 | - | <0.1 | - | - | - |
| | Shrub-steppe | Sagebrush Shrub-Steppe | 2.7 | - | 2.7 | 11.8 | - | 11.8 |
| | **Category 2 Subtotal** | | **2.8** | **-** | **2.8** | **11.8** | **-** | **11.8** |
| 3 | Upland | Upland Trees | - | - | - | - | 5.0 | 5.0 |
| | **Category 3 Subtotal** | | **-** | **-** | **-** | **-** | **5.0** | **5.0** |
| 4 | Grassland-steppe | Grasslands | 6.1 | - | 6.1 | 36.2 | 0.9 | 37.1 |
| | **Category 4 Subtotal** | | **6.1** | **-** | **6.1** | **36.2** | **0.9** | **37.1** |
| 5 | N/A | N/A | - | - | - | - | - | - |
| 6 | Agriculture | Irrigated Cropland | 4.9 | - | 4.9 | 39.4 | - | 39.4 |
| | Agriculture | Non-Irrigated Cropland | 173 | 43.9 | 217 | 525 | 1,237 | 1,762 |
| | Developed | Developed | 3.5 | 0.2 | 3.7 | 0.2 | 1.1 | 1.3 |
| | **Category 6 Subtotal** | | **181** | **44.1** | **226** | **565** | **1,238** | **1,803** |
| **Total** | | | **190** | **44.1** | **235** | **613** | **1,244** | **1,857** |

Note: Totals in this table may not sum correctly due to rounding. "-" = no impact; <0.1 = greater than zero but less than 0.05 acres.

1. There are no disturbances in surface water habitat types. Refer to Exhibit J of RFA 4 for detailed analysis of disturbances to wetlands and waters.

N/A = not applicable; ODFW = Oregon Department of Fish and Wildlife

## Disturbance Levels

Revegetation and soil stabilization needs will be determined by a combination of topography, soil type, disturbance level, and existing vegetative cover.

Disturbance levels will primarily be determined by conditions such as slope, gradient, and existing vegetation. As much as is feasible, use of heavy machinery and soil disturbance should be conducted on dry soil. Disturbance of saturated soil has a much greater risk of compaction and requires more

effort to revegetate and control weedy species. Disturbance levels are defined as follows and depicted in Figure B-2:

- *Level 1 – Mowing:* Mowing is used to conserve vegetative resources within a facility. Vegetation will be limited to a height of 12 inches and mowed to no less than 6 inches during construction. Mowing to no less than 6 inches protects perennial grass crowns and allows grasses to regenerate. Depending on facility objectives, vegetation can be allowed to reach a normal height or kept trimmed to a height between 6 inches and the plant's full height potential. Crushing of vegetation will be minimal and this disturbance level is designed to have a minimal impact on existing vegetation. This method is least likely to result in invasions of undesirable plant species.
- *Level 2 – Overland Drive and Crush:* Disturbance caused by accessing a facility without significantly modifying the landscape. Vegetation is crushed to the ground but no surface soil is removed so root structures are left intact. Even though vegetation may be damaged or destroyed, the surface soil and seed bank remain in place. Some crushed vegetation will likely sprout after disturbance ceases. These activities would result in minimal to moderate disturbance. This type of disturbance will result in a faster recovery time for vegetation compared to Levels 3 and 4. Soil seed banks remain largely in place, perennial vegetation can grow back, and minimal external efforts are necessary. This method is less likely to result in invasions of undesirable plant species compared to Levels 3 and 4.
- *Level 3 – Clear and Cut:* Disturbance caused by accessing the facility including having to remove all vegetation to improve or provide suitable access for equipment. All vegetation is removed, soils are compacted, and the root zone or soil A-horizon may be disturbed, but no subsurface soil is removed. Clear and cut activities would result in moderate disturbance. This type of disturbance will result in moderate recovery times for vegetation. This method has a moderate risk for invasion of undesirable plant species. An example is imprinting to crush vegetation down into the soil or incidental grading and smoothing of surface soils.
- *Level 4 – Clear and Cut with Soil Removal*: Disturbance is caused by removing all vegetation in the impact zone, soils are compacted, and surface soil and subsoil are displaced. These activities result in heavy disturbance. This type of disturbance results in an extensive recovery time for vegetation and is most likely to lead to invasions of undesirable plant species, which can result in lengthy and expensive control efforts. Includes disc-and-roll construction and other traditional construction methods where soils are disturbed and no vegetation is left intact. This category includes all work requiring the segregation and replacement of topsoil.
- *Level 5 – Development Footprint*: Disturbance is caused by removing all vegetation and covering the area surface with gravel, concrete, or other vegetation-free surfaces, or where the intended function of a specific area necessitates it remain unvegetated. This disturbance level includes roads, graveled lots, fire breaks, utility pole pads, and the areas underlying any component installed on a foundation. This level does not include vegetated areas under solar arrays. This

type of disturbance will result in a complete loss of vegetation and will be required to be monitored and kept free of noxious weeds and other vegetation for the life of the facility.

A map showing the expected disturbance levels in RFA 4 Solar Facility Disturbance Areas is provided in Figure B-2.

# Appendix C. Fugitive Dust Control Plan

To manage fugitive dust from construction, the Certificate Holder and its contractors will generally follow the Dust Control Plan Flow Chart (Figure C-1).

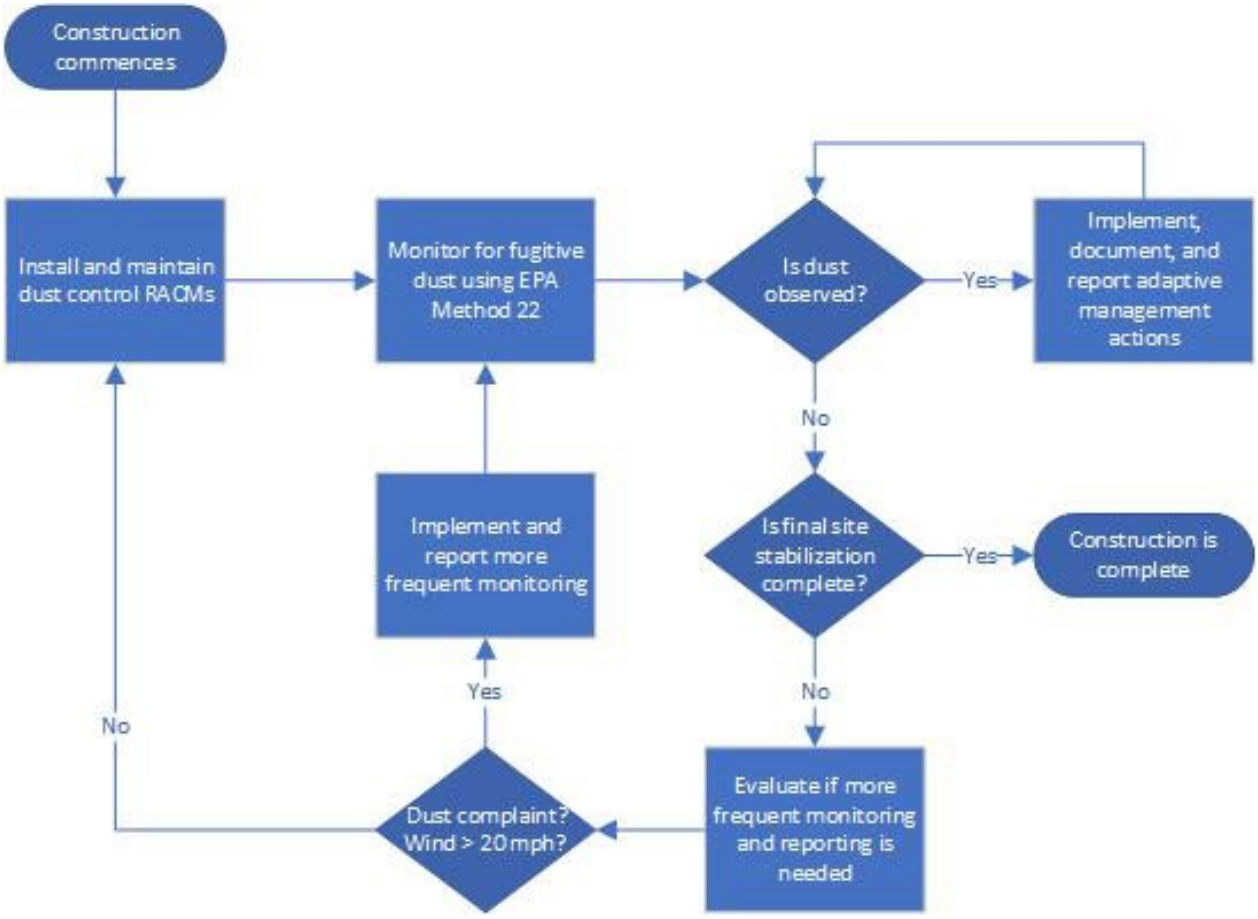



**Figure C-1. Dust Control Plan Flow Chart**

## Fugitive Dust Monitoring and Reasonable Available Control Measures (RACMs)

The visual monitoring required by the 1200-C permit must occur at least once every 14 calendar days. However, because Oregon Administrative Rule (OAR) 340-208-0210 restricts visible fugitive emissions on a continuous standard to a maximum of **18 seconds in any 6-minute period**, and because fugitive dust emissions may provide an immediate public safety concern, this Comprehensive Plan requires that fugitive dust be monitored and controlled on an ongoing basis (Table C-1).

Monitoring for fugitive dust emissions shall include:

- Use of U.S. Environmental Protection Agency (EPA) Method 22 (ODEQ 2019), as specified in OAR 340-208-0210, **at least once per day during the dry season, during peak construction activities.**

- The observation shall be performed during times of peak construction activity at the downwind facility boundary.
- Recording of observations in a fugitive dust inspection log that is kept on site and shall be kept digitally, described below.

Triggers for additional, more frequent monitoring will include:

- Observation of visible fugitive dust emissions by the Environmental Inspector, contractor(s), agency, or Certificate Holder staff,
- Wind speeds or gusts greater than 20 miles per hour, or
- Receipt of complaints or concerns through the Project Dust Control Hotline or other means.

**Table C-1. Fugitive Dust Sources and Reasonable Available Control Measures (RACMs)**

| Construction Phase | RACM(s) | Supplemental RACM(s) |
|---|---|---|
| All Phases of Construction | Daily fugitive dust monitoring and record keeping. | Increase frequency of monitoring. |
| | Prominent display of Dust Control Hotline signs, providing direct access to the Environmental Inspector. | If established, proactive engagement with Community Action Council. |
| | Worker Environmental Awareness Program training for all construction employees. | Additional training and refreshers for employees. |
| | Maintain stockpile of best management practices (BMPs) on site, including sufficient palliatives for a single treatment of all access roads and sufficient palliatives, mulch, and/or hydromulch for a minimum of 25 percent of the total disturbed area, and machinery for application. | Increase stockpile of palliatives, mulch, and/or hydromulch and add additional BMPs. |
| | Documentation and reporting of adaptive management actions. | Development and submittal of revised Fugitive Dust Control Plan. |
| Facility Access | Install and maintain stabilized construction entrances at ingress/egress locations and restrict traffic to these locations. | Add additional construction entrance BMPs (e.g., wheel wash). |
| | Daily sweeping up of sediment from paved surfaces utilizing vacuum sweeper with high efficiency particulate air (HEPA) filtration. | Increase sweeper frequency. |
| | Access roads shall be graveled. | Road maintenance and gravel reapplication. |
| | Access roads would be stabilized with water or palliative sufficient to eliminate visible and sustained dust from vehicular travel and wind erosion. Reapply stabilization as necessary to maintain dust-free condition. | If water is unavailable or ineffective, or if water use is limited by any agency or regulation, access roads will be stabilized with longer-lasting palliatives. |
| | Restrict construction traffic to established and stabilized access routes. | Install fencing or barricades to prevent traffic outside of established routes. |
| | Limit traffic speeds to 15 miles per hour on stabilized unpaved roads within the facility as | Limit traffic speeds within the facility to 5 or 10 miles per hour. |

| Construction Phase | RACM(s) | Supplemental RACM(s) |
|---|---|---|
| | long as such speeds do not create significant visible dust emissions. Traffic speed signs shall be displayed prominently at all entrances and exits. | |
| | Minimize disturbance areas and soil exposure to the maximum extent feasible. | Limit work to a portion of the disturbed area until all disturbed areas receive temporary or final stabilization. |
| | When wind speeds or gusts exceed 15 miles per hour, minimize new disturbances to the extent possible and/or mobilize additional water trucks or palliatives to minimize fugitive dust from exposed surfaces. | Stop all ground disturbing activities and apply additional dust control measures until measures are effective or wind speeds slow and fugitive emissions stop. |
| | Separate and cover or otherwise stabilize topsoil to preserve it until it is replaced during revegetation. | Increase maintenance frequency for topsoil cover/stabilization. Combine methods, such as mulch plus tackifier. |
| | Stabilize exposed soils within the timeframes established in the 1200-C permit. Stabilize exposed soils in stages based on soil conditions and weather. | Stabilize exposed soils more frequently, even if additional work is anticipated within the timeframe established in the 1200-C permit. Reapply stabilization measures following any additional disturbances. |
| | Temporarily stabilize exposed surfaces to prohibit significant and sustained visible fugitive dust from wind erosion. Utilize BMPs such as mulch, hydromulch with or without seeds, tackifier, crimped-in straw, spreading stone or gravel, and trackwalking. | Combine stabilization methods, such as mulch plus tackifier, or trackwalking plus hydromulch. Increase frequency of maintenance of stabilization. |
| | Seed exposed surfaces during the appropriate season with approved temporary or permanent seed mixes. | Reapply seed to newly disturbed areas or areas with poor germination. Use temporary seeding even if additional work is anticipated before final stabilization. Use irrigation to enhance seeding success. |
| Removing and Hauling Sand, Soil, or Other Loose Materials | Gate seals should be tight on dump trucks. Soil load shall be kept below 6 inches of the freeboard of the truck. Drop heights shall be minimized when loaders dump soil into trucks. Gate seals will be checked and tight on dump trucks. All trucks on highways must be fully covered and secured. | Cover haul trucks with a tarp or other suitable cover. |

## Fugitive Dust Reporting

A dust inspection log shall be completed after each dust inspection. Log records shall be kept digitally and included in construction monitoring reports as described in Appendix D of this Comprehensive Plan. This log shall include all information required in EPA Method 22. Photos and/or video taken during the observation period to document conditions shall be available digitally to the Oregon Department of Energy upon request. Any documented exceedance events

shall include a detailed explanation of RACMs implemented for corrective action and the results of subsequent monitoring demonstrating fugitive dust has returned to below exceedance thresholds.

## Dust Control Hotline: (425) 229-5710

PCL Solar Constructors, USA Inc. (PCL) has established a Dust Control Hotline to promptly respond to dust related concerns from the public, landowners, and regulatory agencies during construction activities. A Dust Control Hotline poster will be posted at site entrance/main gate listing "Dust Control Hotline" contact information and hours of work.

### Hotline Administration

The Dust Control Hotline is monitored by the PCL site team. Calls are received by the Civil Superintendent, Richard Canapo Jr., during active work hours.

Primary Contact: Richard Canapo Jr - (425) 229-5710

Secondary Contact: Tim Rippy – (425) 365-6685

### Hours of Operation

Monday through Saturday, 6:30 AM to 5:00 PM.

### Complaint Intake Information

Callers are encouraged to provide the following information to assist in timely response:

- Location of the dust concern.
- Date and time the issue was observed.
- Description of the concern (e.g., traffic dust, construction activity, equipment I.D.: excavator, dozer, personnel vehicle, company name decals, etc.).
- Optional contact information for follow-up.

### Response & Escalation

All complaints are logged and reviewed by the PCL site team. Upon receipt, site personnel will investigate the concern and implement appropriate dust control measures, which may include watering, traffic adjustments, or modification of construction activities. If required, issues will be escalated to project management and environmental staff to ensure compliance with applicable permits and plans.

# Appendix D. Environmental Monitoring Methods

The Environmental Monitoring Contractor (EMC) will be present during construction activities that involve ground disturbance, grading, weed treatments, vegetation removal, and high traffic volumes and is responsible for monitoring and recording construction activity to ensure compliance with this Comprehensive Plan.

In addition, the EMC will:

- Assist contractor(s) for the direction of water trucks, civil activities, and road maintenance to reduce fugitive dust and erosion issues.
- Identify when reasonably available and best available control measures are not adequate, as designated in Appendix C.
- Maintain dust inspection and noxious weed logs and reporting designated in this Comprehensive Plan.

Specific protocols and requirements for testing and monitoring to be performed prior to and during construction and revegetation efforts are described in the following sections.

## Soil Compaction Testing

### *Monitoring Protocol*

The EMC will conduct pre- and post-construction soil compaction testing in all anticipated Level 3 and 4 Disturbance Areas, and any areas consisting of soils with low soil compaction resistance (e.g., Lickskillet very stony loam (16D) and Lickskillet-Rock outcrop complex [18E] soils). Since disturbance level maps were not available at the time of pre-construction sampling, the Certificate Holder based sample locations on the overall anticipated disturbance area (i.e., regardless of level of disturbance). Soil compaction sample locations will be evenly distributed across the disturbance area at a rate of 1 sample per 50 acres. Sample locations were stratified by soil type to ensure a minimum of three sample locations in each soil type and a representative density of sample locations in major soil types. Additionally, sample locations were selected to avoid infrastructure such as inverters and roads where revegetation will not occur. Sample locations are identified in Figure D-1.

Soil compaction measurements were collected at all sample locations prior to ground disturbing activities and will be collected at the same or relatively adjacent locations post reclamation but prior to revegetation.

### *Test Methods*

Soil Compaction Testing will be conducted using the following standard methods (NRCS 2020; Duiker 2025):

- The surveyor will measure soil resistance using a penetrometer.
- Resistance will be measured at 3-inch intervals to 12 inches or until the meter goes above 300 pounds per square inch (3, 6, 9, and 12 inches if soils allow).

- Measurements will be conducted in conditions favorable to soil testing (e.g., non-saturated or frozen soils).

### *Results*

Testing results will be provided to the Oregon Department of Energy (ODOE) prior to construction and after reclamation but before revegetation.

## Revegetation Monitoring

The Certificate Holder will monitor revegetated areas as described below, unless the landowner converted an area to a use that precludes meeting revegetation success criteria such as cropland. The Certificate Holder should coordinate grazing timing and intensity with the landowner so that it does not preclude revegetation success. Revegetated areas will be monitored by a qualified investigator in May or June annually for 5 years, beginning the first year after seeding.

## Baseline Vegetation Conditions

Since no temporary disturbances to wildlife habitat are anticipated within the RFA 5 Site Boundary (Table B-1), baseline monitoring of temporary disturbance areas is not required for the RFA 5 Solar Facility. Baseline monitoring of temporary disturbance areas for the RFA 4 Solar Facility was conducted in May 2026.

Prior to construction of the RFA 4 Solar Facility, the EMC conducted pre-construction habitat surveys for temporary disturbance areas. Data collected included:

- Vascular plant species present;
- Percent cover of dominant vegetation including noxious weeds; and
- Percent cover of litter and bare soil.

Baseline data will be used to confirm that reference and revegetation transects are within the same habitat type and that success criteria are adequate and reasonable to achieve following construction.

### *Temporary Disturbance Areas*

Since no temporary disturbances to wildlife habitat are anticipated within the RFA 5 Site Boundary (Table B-1), quantitative temporary disturbance area monitoring is not required for the RFA 5 Solar Facility. If changes to the layout result in more than 0.5 acres of temporary disturbance to wildlife habitat, the number and location of reference transects to be used during monitoring of temporary disturbance areas will be provided for review and approval by ODOE in consultation with ODFW.

The Certificate Holder will monitor RFA 4 Solar Facility temporary disturbance areas using methods described below to assess the following:

- Percent cover of native, desirable (non-native species included in the seed mix), and non-native species;
- Percent cover of bare soil, litter, moss, rock, and biotic crust;
- Species richness of native, desirable, and non-native species;

- Sagebrush density in habitat subtypes with sagebrush;
- Degree of erosion; and
- Qualitative assessment of overall vigor of vegetation in revegetated areas.

### *Reference and Revegetation Transects*

Establish 50-meter reference and revegetation transects for each temporarily disturbed wildlife habitat subtype and category with more than 0.5 acres of temporary disturbance as described below. Establish one reference transect for every temporarily disturbed wildlife habitat subtype and category. Reference transects are intended to be representative of baseline conditions for the revegetation effort.

Establish revegetation transects randomly in every wildlife habitat subtype and category that will be temporarily disturbed by construction using existing habitat categorization mapping. Transect locations and/or lengths may need to be adjusted to account for linear features whose disturbance footprint may be too narrow or too short to meaningfully place a transect. Determine the number of transects as follows:

- Less than 0.5 acres of temporary disturbance = 0 transects
- 0.6 to 5 acres of temporary disturbance = 1 transect
- 6 to 10 acres of temporary disturbance = 2 transects
- For each additional 10 acres of disturbance, one additional transect will be added (e.g., 11-20 acres of disturbance = 3 transects, 21-30 acres = 4 transects, etc.)

### *Temporary Disturbance Area Monitoring Methods*

Vegetation will be measured quantitatively using the line-point intercept (LPI) method combined with a belt transect to document species richness and sagebrush density, where necessary (Elzinga et al. 1998; MacKinnon et al. 2011). The LPI method is described in detail in the *Monitoring Manual for Grassland, Shrubland, and Savanna Ecosystems, Volume I* (Herrick et al. 2021). The surveyor will drop a narrow pin perpendicular to the ground at 1-meter intervals along a 50-meter transect and record up to four plant species that intercept the pin in order of interception as well as the soil surface type (bare ground, litter, rock, moss, or biotic crust) where the pin touches the ground. Once all 50 points have been collected, the surveyor will walk back along the transect and record any species within 1 meter on either side of the transect that were not documented at a point. The surveyor will take a photo from the transect start point, looking down the length of the transect. For transects in sagebrush shrub-steppe habitat, the surveyor will record the number of sagebrush individuals by size class (i.e., less than 1 foot tall, between 1 and 2 feet tall, greater than 2 feet tall) occurring within 1 meter on either side of the 50-meter transect.

Following field surveys, foliar cover will be determined by multiplying the number of top layer hits (points for which a given species was the first species intercepted) for each species by two. Cover of bare ground will be determined by counting every point in which bare ground was recorded as a surface type and no plants were intercepted and multiply this number by two. Species richness will be determined by counting all the unique species that were recorded at a point or along the belt transect.

## *Permanent Disturbance Areas*

Following implementation of revegetation efforts, the Certificate Holder will monitor revegetated permanent disturbance areas as described below. Revegetated areas will be monitored by a qualified investigator annually for 5 years, beginning the first year after seeding. If success criteria are met in the first 5 years, then long-term vegetation monitoring to document and manage vegetation to reduce wildfire risk will be determined in consultation with ODOE.

The Certificate Holder will monitor Permanent Disturbance Areas to assess the following:

- Dominant species composition;
- Qualitative visual assessment of cover of native, desirable (non-native species included in the seed mix), and non-native forbs and grasses;
- Percent cover of bare soil;
- Degree of erosion;
- Presence of noxious weeds; and
- Qualitative assessment of overall vigor of vegetation within revegetated areas.

The EMC will monitor revegetated Permanent Disturbance Areas with a meander survey beginning within 60 days of the completion of initial revegetation. During the meander survey, the EMC will walk in revegetated Permanent Disturbance Areas and document the assessment items listed above using photos and spatial data collection. Areas of erosion and significant patches of bare soil will be mapped and photographed. The EMC will record dominant species, qualitative assessment of overall percent cover of forbs and grasses, and general notes about plant vigor.

Monitoring will be conducted at least once per season during the first year following construction. After the first complete year of monitoring, the Certificate Holder will consult with ODOE to determine if the monitoring cycle can be reduced based on revegetation progress. After 5 years of monitoring, the Certificate Holder will design a long-term monitoring plan in consultation with ODOE.

## *Revegetation Monitoring Reports*

Revegetation monitoring reports will be prepared and submitted to ODOE annually for 5 years following revegetation. The first monitoring report will include a detailed description and timeline of revegetation methods that were implemented including species included in seed mixes, seeding rate (pounds/acre), and locations of seed applications and dates revegetation work was performed. Annual monitoring reports will include:

a. Geographic information system (GIS) maps of revegetated areas and disturbance levels;
b. Monitoring methods;
c. Local climatic data (i.e., precipitation, temperature) for the monitoring month and year and percent deviation from the historical average;
d. Results of monitoring efforts;

e. Photos of transects and representative overview photos of revegetated areas;
f. Assessment of whether revegetated areas are trending toward meeting success criteria;
g. Assessment of factors impacting the ability of revegetated areas to trend towards meeting the success criteria; and
h. Recommendations for remedial actions, if any. If applicable, provide recommendations for reseeding, weed control, or other remedial measures for areas (either permanently or temporarily disturbed) that are not showing progress toward meeting success criteria. Include adaptive management measures taken in the next monitoring report.

## References

Duiker, S. 2025. Diagnosing Soil Compaction Using a Penetrometer (Soil Compaction Tester). Adapted from: Lloyd Murdock, Tim Gray, Freddie Higgins, and Ken Wells, 1995. Soil Compaction in Kentucky. Cooperative Extension Service, University of Kentucky, AGR-161. https://extension.psu.edu/diagnosing-soil-compaction-using-a-penetrometer-soil-compaction-tester.

Elzinga C.L, D.W. Salzer, and J.W. Willoughby. 1998. Measuring and Monitoring Plant Populations. U.S. Bureau of Land Management Papers. BLM Technical Reference 1730-1.

Herrick J.E., J.W. Van Zee, S.E. McCord, E.M. Courtright, J.W. Karl, and L.M. Burkett. 2021. Monitoring Manual for Grassland, Shrubland, and Savanna Ecosystems, Volume I: Core Methods. USDA-ARS Jornada Experimental Range. ISBN 0-9755552-0-0.

MacKinnon, W.C., J.W. Karl, G.R. Toevs, J.J. Taylor, M. Karl, C.S. Spurrier, and J.E. Herrick. 2011. BLM Core Terrestrial Indicators and Methods. Tech Note 440. U.S. Department of the Interior, Bureau of Land Management, National Operations Center, Denver, CO.

NRCS (Natural Resources Conservation Service). 2020. Cropland In-Field Soil Health Assessment Guide. Soil Health Technical Note No. 450-06. U.S. Department of Agriculture, Natural Resources Conservation Service. Washington, D.C. https://www.nrcs.usda.gov/sites/default/files/2023-03/In-Field%20Assessment%202021%20Complete%20ND.pdf

# Appendix E. Revegetation and Soil Stabilization Methods

## Stormwater Control and Treatment Best Management Practices

All required stormwater control and treatment best management practices required in the National Pollutant Discharge Elimination System (NPDES) 1200-C permit are incorporated in this Comprehensive Plan by reference. Specifically, the Facility Erosion and Sediment Control Plan lists best management practices including, but not limited to:

- **Stabilized Construction Entrances/Exits –** Stabilized construction entrances or exits will be installed where construction vehicles move from newly constructed roads or disturbed areas to paved roads. The stabilized construction entrances and exits will be inspected and maintained for the life of construction.
- **Dust Abatement Measures –** Conduct appropriate dust abatement measures such as restricting vehicle speeds; watering active areas, stockpiles, and roadways; track-out control at site exits; and other measures.
- **Preserving Existing Vegetation –** To the extent practicable, existing vegetation will be preserved. Where vegetation clearing is necessary, root systems will be conserved if possible.
- **Perimeter Controls –** Perimeter controls such as silt fencing will be installed throughout the construction area, material stockpiles, and on the contour downgradient of excavations.
- **Straw Wattles –** Straw wattles may be used to decrease the velocity of sheet flow stormwater to prevent erosion. Wattles will be used along the downgradient edge of access roads adjacent to slopes or sensitive areas.
- **Mulching –** Mulch may be used to stabilize areas of soil disturbance quickly and during reseeding.
- **Stabilization Matting –** Jute matting, straw matting, or turf reinforcement matting may be used with mulching to stabilize steep slopes exposed during access road installation.
- **Soil Binders and Tackifiers –** Soil binders and tackifiers may be used on exposed slopes to stabilize them until vegetation is established.
- **Concrete Washout Area –** Concrete chutes and trucks will be washed out in dedicated areas near foundation construction locations. This will contain concrete washout water to a localized area.
- **Stockpile Management –** Soil from excavations will be temporarily stockpiled and used onsite. Soils will be stockpiled and reused to prevent productive topsoil from mixing with deeper subsoils. Silt fence or straw wattles will be installed around the stockpile material as a perimeter control. Mulch or other stabilization products will be used to cover the stockpiled material, if needed. Stockpiles will be watered, if needed, to reduce erosion.
- **Revegetation –** The site will be revegetated with an approved seed mix after construction activities. When required, the seed will be applied with mulch or stabilization matting to

protect the growing grass seed. Revegetation will occur as soon as practicable following construction.

- **Pollutant Management –** During construction, source control measures will be implemented to minimize the likelihood of chemicals polluting surface water or groundwater. Small quantities of fuels and oils may be kept onsite in a dedicated area during construction and operation. Construction vehicles will be fueled and maintained only in dedicated areas. Any spills will be cleaned up immediately.
- **Construction Timing –** Whenever possible, construction activities will be scheduled in the dry season when soils are less susceptible to compaction.

## Soil Management

### *Soil Stabilization*

- The Engineering, Procurement, and Construction Contractor (EPC) will use appropriate erosion and sediment control practices (i.e., seeded or unseeded hydromulch, tackifier, weed-free erosion control blankets, weed-free or locally sourced straw mulch) to maintain topsoil during construction in Temporary and Permanent Disturbance Areas.
- After grading is complete but prior to installation of Solar Components, apply temporary or permanent soil stabilization.
- If seeding is used for temporary soil stabilization, seed areas with less than 70 percent vegetative cover with a non-invasive, non-persistent cover crop such as winter wheat or sterile triticale.
- Select cover crop based on the time of year; for example, winter wheat or sterile triticale can be seeded from fall to early spring while peas should be seeded in spring. Tillage radish and sunflowers can be seeded in spring to reduce compaction but are not suitable options for soil stability.

### *Soil Reclamation*

In areas where soil is removed during construction, the following measures will be taken where appropriate:

- During construction, excavated topsoil will be stockpiled separately from subsoil and replaced in proper order with topsoil on the surface to maintain soil productivity. Stockpiled soil will be put back in place prior to revegetation activities.
- Topsoil and other soils from areas with noxious weeds will not be moved outside the noxious weed occurrence area and will be returned to their previous location during reclamation activities to eliminate the transport of weed seeds, roots, or rhizomes. Noxious weed occurrences will be flagged and monitored for compliance.

## *Site Preparation*

- Ensure that soils from noxious weed occurrence areas are treated with herbicide as needed prior to initiation of revegetation efforts, depending on site-specific conditions.
- Prior to final regrade and revegetation efforts, any weeds that have grown during periods of construction dormancy should be treated as described in Appendix F.
- Perform site preparation using methods described below. Consider site-specific factors including slope, soil type, size of area, and erosion potential when determining methods.
  - Soil Roughening: Also known as imprinting, tracking, or track walking, soil roughening is a temporary erosion control practice and seedbed preparation technique implemented when grading a slope (EPA 2021). This technique involves creating grooved soil surface with depressions running parallel to the hill contour to promote seed germination and provide moderate erosion control while vegetation is established. Tracking with heavy equipment may compact the soil and inhibit root penetration; this can be mitigated by using lighter-weight equipment and not tracking saturated soil. Soil roughening should be done prior to applying hydromulch, straw mulch, or installing erosion BMPs. Seed and mulch roughened areas as soon as possible to obtain optimum seed germination and growth (ODOT 2023).
  - Deep Tilling: Reduce soil compaction by fracturing restrictive soil layers in areas where compaction levels inhibit plant growth (NRCS 2022). Deep tillage is only suitable in areas outside of solar arrays and where solar infrastructure is not present (i.e., temporary roads) and should be conducted after construction and prior to revegetation when soil moisture is at 30-50 percent of field capacity.
  - Decompaction: Areas with intact vegetation (typically in areas with Level 1 or 2 disturbance) will not be decompacted to avoid additional soil disturbance and erosion risk. Where soil compaction testing in areas with Level 3 and 4 disturbance demonstrates that soils are compacted greater than 300 pounds per square inch (psi), then remediation activities may be completed in those areas prior to the construction contractor moving to a new location or offsite as described in Table E-1. Locations where baseline monitoring indicated that soils were compacted more than 300 psi prior to construction will only be decompacted as needed based on field assessment of likely vegetation success (see Table E-1).
    - Remediation activities may include mechanical scarification (e.g., tilling or ripping the soil) to an appropriate depth to reduce the potential effects of compaction, to maintain soil productivity, and reduce the potential for erosion on compacted soils. Dry soils should be decompacted using an agricultural disc, soil ripper, or similar equipment
- Prepare salvaged topsoil into a firm, fine-textured seedbed before seeding or planting (ODOT 2023). Loosen the top 1 to 2 inches of the soil surface by shallow tilling with a disc, followed by harrow or drag if necessary and where feasible with construction equipment. If

soil is assessed as too soft by the Revegetation Contractor or the Environmental Monitoring Contractor (EMC), firm with a roller or cultipacker.

**Table E-1. Decompaction Action by Disturbance Level**

| Disturbance Level | Baseline Soil Compaction under 300 psi | Baseline Soil Compaction over 300 psi |
|---|---|---|
| 1 – Mowing | If intact, living vegetation present, then no action; confirm vegetation success in next growing season.<br>If bare soil, revegetate as described in the following section | If intact, living vegetation present, then no action; confirm vegetation success in next growing season.<br>If bare soil, decompact prior to revegetation |
| 2 – Overland Drive and Crush | If intact, living vegetation present, then no action; confirm vegetation success in next growing season.<br>If bare soil, revegetate as described in the following section | If intact, living vegetation present, then no action; confirm vegetation success in next growing season.<br>If bare soil, decompact prior to revegetation |
| 3 – Clear and Cut | Revegetate as described in the following section. | Decompact prior to revegetation |
| 4 – Clear and Cut with Soil Removal | Revegetate as described in the following section. | Decompact prior to revegetation |

## Revegetation Methods

- The Certificate Holder will restore temporarily disturbed areas by re-establishing slope, surface stability, and drainage features, as needed, followed by soil preparation and seeding as described below.
- Revegetation will begin as soon as feasible after completion of each construction phase. Seeding and planting will be done in a timely manner and in the appropriate season to facilitate germination and establishment of seeded species.
- Following seeding, stabilize seeded areas to facilitate establishment by applying seedless, certified weed-free hydromulch containing a tackifier or crimped weed-free straw.
- Cropland outside the Solar Siting Area fenceline will be returned to landowner control and will not be revegetated by the Certificate Holder.
- Revegetation methods for each disturbance level were developed to tailor revegetation to specific conditions (Table E-2).

**Table E-2. Revegetation Methods by Disturbance Level**

| Disturbance Level | Soil Reclamation | Site Preparation | Seeding |
|---|---|---|---|
| 1 – Mowing | No soil disturbance. Retain existing vegetation to prevent erosion.<br>If soil is bare and compacted, decompact prior to revegetation. | Weed control. | Seed if necessary to achieve success criteria. |
| 2 – Overland Drive and Crush | No soil disturbance. Retain existing vegetation and implement erosion control practices.<br>If soil is bare and compacted, decompact prior to revegetation. | Weed control. | Seed if necessary to achieve success criteria. |
| 3 – Clear and Cut | Track or decompact soil as necessary. Implement erosion control practices. | Weed control. Seed cover crop if necessary to stabilize soil. Prepare firm, fine-textured seedbed prior to seeding. | Required |
| 4 – Clear and Cut with Soil Removal | Stockpile topsoil separately from subsoil and stabilize during construction. Regrade and replace subsoil then topsoil prior to seeding. Track or decompact soil as necessary. Implement erosion control practices. | Weed control. Regrade and add soil amendments if necessary. Seed cover crop if necessary to stabilize soil. Prepare firm, fine-textured seedbed prior to seeding. | Required |

## *Seed Mix and Shrub Planting*

A low-growing seed mix was approved for revegetation of Temporary Disturbance Areas and Permanent Disturbance Areas within the Site Boundary (Table E-3). The Certificate Holder will make all attempts to procure the approved seed mix or obtain approval from ODOE prior to making substitutions if species are not available at the time of procurement.

**Table E-3. Seed Mix for Revegetation of Disturbed Areas**

| Growth Habit | Common Name | Scientific Name | Pounds of pure live seed/acre[1] |
|---|---|---|---|
| **Grasses** | | | |
| | Squirreltail | *Elymus elymoides* | 3.5 |
| | Thurber's needlegrass | *Eriocoma thurberiana* | 4.4 |
| | Idaho fescue | *Festuca idahoensis* | 2.1 |
| | Sandberg bluegrass | *Poa secunda* ssp. *secunda* | 2.1 |
| **Forbs (choose 3 or 4 depending on seed availability)** | | | |
| | Common yarrow | *Achillea millefolium* | 0.1 |
| | Oregon sunshine | *Eriophyllum lanatum* | 0.1 |
| | Fleabane | *Erigeron filifolius* or *E. pumilus* | 0.1 |
| | Wooly plantain | *Plantago patagonica* | 0.2 |
| | Clover | *Trifolium macrocephalum* | 0.1 |
| **Total** | | | **12** |

Note: The species and seeding rates included in this table are a recommendation. Substitutions can be made through consultation with ODOE.

1. Pounds of pure live seed per acre listed for drill seeding and imprint seeding. Double drill seeding rate for broadcast seeding and multiply by 2.5 for hydroseeding.

## *Seeding Methods*

Four common seed application methods that may be used for revegetation include broadcast seeding, drill seeding, imprint seeding, and hydroseeding; each of these are discussed further below. Other seeding methods may be proposed for review and approval prior to revegetation efforts. Fertilizer should not be used when seeding wildlife habitat.

### *Broadcast Seeding*

Broadcast seeding is the application of seed directly to the ground surface. This method may be chosen for areas with shallow and rocky soils, and the type of broadcast spreader would depend on the size of the area to be seeded and the terrain.

In this method, the seed mix would be broadcast at 24 pounds of pure live seed per acre, or twice the recommended rate for drill seeding. When feasible, due to the seasonality of when planting can occur, the entire area will be seeded after grading is complete but before placement of Solar Components, providing more flexibility in seed application. In those instances where seeding occurs prior to installation of components, follow-up seeding will occur in areas temporarily disturbed by installation and any areas that are deficient in vegetation from the first round of seeding. Immediately following seed application, hydromulch or certified weed-free straw would be applied. Broadcast seeding will not be employed if winds exceed 5 miles per hour. If certified weed-free straw is unavailable, the Certificate Holder or EPC will identify a local source of straw. The local

source of the straw will be approved by the Sherman County Weed District and the Oregon Department of Fish and Wildlife (ODFW) prior to purchase. This straw will either be crimped into the ground or applied with a tackifier.

### *Drill Seeding*

Drill seeding can be used for large areas with deep soils and moderate to gentle terrain to accommodate mechanical equipment. This method provides the advantage of planting the seed at a uniform depth and may provide better soil to seed contact. Using a range seed drill, seeds will be sown at 12 pounds pure live seed per acre or according to application rates recommended by the seed supplier. Drill seeding will be difficult after the Solar Components have been installed, so it will primarily be used if seeding occurs after grading is complete but before components are installed, or in areas that were temporarily disturbed during construction that do not have any permanent infrastructure (e.g., temporary access roads, laydown areas).

### *Imprint Seeding*

Imprint seeding is a no-till drill seeding method used to restore grasslands in areas with low annual precipitation. Seeds will be sown at 12 pounds pure live seed per acre or according to application rates recommended by the seed supplier. The seeder consists of a heavy metal drum roller with V-shaped, angled teeth and a seed agitator box. The teeth create V-shaped troughs with a depth of 4-7 inches to collect rainwater. The rolling drum presses the seed into the soil, insuring good seed-to-soil contact. The troughs collect rainwater for seed germination and seedling growth. Imprint seeders can be used on steep slopes and do not require seed bed preparation before seeding. Seeding can occur on soils with light to moderate vegetative cover, with the vegetation acting as a mulch, preventing soil erosion until seedlings are established. Imprint seeders do not work well in areas with shrubs or heavy vegetation cover. Heavily compacted soils may need to be ripped or de-compacted before seeding. The seeding rate for this method should be the same as for broadcast seeding.

### *Hydroseeding*

Hydroseeding is most applicable for areas where drill or broadcast seeding machinery cannot access; this usually includes steep slopes or narrow terrain but can be used in all terrains. Soil bed preparation is also crucial for growth success and frequently includes tracking perpendicular to the slope to create micro conditions for seed. Flat grading and compaction are not recommended. Seeding rates increase by 30 to 50 percent of broadcast seeding rates (i.e., 30 pounds pure live seed per acre) per consultation with the seed supplier and ODFW. Prior to hydroseeding, the tackifier will be reviewed and approved in consultation with the Oregon Department of Energy (ODOE). Fertilizer should not be used when hydroseeding wildlife habitat.

## Revegetation Records

The EMC will maintain records of revegetation efforts in all temporary and permanent disturbance areas and update ODOE monthly as revegetation work occurs. Revegetation records will include:

a. Date construction phase was completed;

b. Acreage of each disturbance level;

c. Description and photos of the affected area;

d. Date revegetation was initiated;

e. Description of the revegetation effort, including methods, timing, and seed mix used;

f. Supporting figures representing the location, acres affected, and pre-disturbance condition of the revegetation area; and

g. Confirmation from the landowner that temporary disturbances in cropland have been satisfactorily restored.

## Success Criteria for Temporary Disturbance Areas

Reclamation of Temporary Disturbance Areas on agricultural lands will be considered complete after the land is returned to farm operations and landowners provide written confirmation that they are satisfied that any impacts to soil productivity have been addressed. The Certificate Holder will provide evidence that landowners are satisfied after one crop cycle.

In non-agricultural areas, if applicable, the Certificate Holder will make reasonable efforts to restore vegetation and soils in habitat areas to their pre-disturbance condition.

a. **Native Shrubs**: Average density of sagebrush on revegetation transects in areas planted with sagebrush should be at least 50 percent of the reference transect within 5 years.

b. **Native and Desirable Forbs**: Cover of native and desirable (i.e., non-native species included in the seed mix) forbs, averaged across revegetation transects by habitat subtype and category, will be at least 75 percent of reference transects for the corresponding habitat subtype within 5 years.

c. **Native and Desirable Grasses**: Cover and richness of native and desirable (i.e., non-native species included in the seed mix) grass species, averaged across revegetation transects by habitat subtype and category, will be at least 85 percent of reference transects for the corresponding habitat subtype within 5 years.

d. **Noxious Weeds**: Presence and cover of noxious weeds on revegetation transects is 75 percent or less than that of the reference transect for the corresponding habitat subtype.

## Vegetation Management for Permanent Disturbance Areas

During operation of the Solar Components, vegetation under the solar panels will be managed to minimize fire risk and erosion by maintaining low growing vegetation.

### *Prohibition on Use of Domestic Sheep and Goats for Vegetation Management*

The Certificate Holder may not keep or use domestic sheep, goats, or other livestock at the solar facility for vegetation control or other purposes without written approval from ODOE. Any request to use domestic sheep, goats, or other livestock at the solar facility must be accompanied by a description of practices and controls that will be implemented to prevent zoonotic disease

transmission to wild sheep populations. ODOE may impose additional requirements to prevent zoonotic disease transmission based on consultation with ODFW.

## *Success Criteria for Permanent Disturbance Areas*

The Certificate Holder will establish uniform (i.e., evenly distributed, without large bare areas) perennial, non-invasive vegetation that provides 70 percent or more cover on all exposed areas in compliance with the soil protection standard (Oregon Administrative Rule 345-022-0022); NPDES 1200-C permit requirements; and Sherman County requirements.

## *Integrated Vegetation Management*

To support reclamation success and reduce wildfire risk throughout all phases (i.e., both construction and operations) of the RFA 4 and 5 Solar Facilities, vegetation management will be implemented consistent with the Construction Wildfire Mitigation Plan and Operations Wildfire Management Plan. In the interim, while those plans are being finalized, this section establishes the minimum vegetation management and fire prevention requirements that will apply during construction and operation of the Solar Components. Vegetation will be managed in accordance with the applicable provisions of the 2025 Oregon Fire Code:

Oregon Fire Code, Section 1205.5.1 Provides:

> *"A clear brush free area of 10 feet shall be required around the perimeter of the ground-mounted photovoltaic arrays or as determined by the fire code official. A maintained vegetative surface or noncombustible base, approved by the fire code official, shall be installed and maintained under the photovoltaic arrays and associated electrical equipment installations.".*

These measures are intended to minimize ignition potential, maintain defensible space, support consistent vegetation control, and outline inspection practices that will contribute to long-term fire resiliency. At a minimum, the following criteria will be met:

a. **Vegetation Height and Clearance**

- Vegetation within and adjacent to the Solar Components will be maintained as follows:
  - During the dry season (June to October), vegetation height will be limited to 8 inches. Vegetation will be mowed to a height of 4 inches prior to June of each year.
  - Outside the dry season (November to May), vegetation will be maintained at a maximum height of less than 12 inches,
  - A minimum vertical clearance of 12 inches from all electrical and mechanical equipment will be maintained at all times.
- Vegetation exceeding the heights listed above will be mowed or removed in accordance with any Oregon Department of Forestry or County-issued fire restrictions.
- At no time shall vegetation come into contact with electrical infrastructure, inverters, or cable runs.

- Vegetation height will be maintained by mowing or other vegetation management techniques. Grazing by sheep or goats is prohibited without written approval from ODOE.
- A minimum 20-foot buffer will be maintained around the perimeter of fenced solar array areas (10 feet of clear, brush-free buffer inside the fenceline and 10 feet of graveled, vegetation-free area outside the fenceline). Vegetation within the 10-foot buffer area inside the fenceline will be managed in accordance with the recommendations of the local fire official.; and
- Gravel or compacted soil surfaces will be maintained beneath and around all inverter skids, the collector substation, O&M building, and meteorological towers.

b. **Fuel and Debris Management**

- Vegetation and debris removed from the Facility will be disposed of off-site and will not be stored or burned on-site.
- The Certificate Holder and contractors will prevent accumulation of combustible materials or "burn piles."
- Inspections will ensure that fence lines, service roads, and work areas remain clear of dry vegetation, woody debris, or stored materials that could create fuel continuity during fire season.
- All newly constructed or maintained service roads within the Site Boundary will maintain a minimum 16-foot width of graveled, all-weather surface to facilitate emergency response access.

c. **Designated Noncombustible Areas**

- All-weather service roads will be compacted soil or gravel and maintained in good condition.
- A 20-foot non-vegetated perimeter buffer will be maintained around substations and Operations and Maintenance buildings.
- Parking and laydown areas will consist of compacted soil, gravel, or other non-combustible material to reduce ignition potential from vehicles and equipment.
- Areas immediately surrounding electrical equipment, transformers, and battery energy storage system (BESS) enclosures will remain vegetation-free and will be maintained as graveled or earthen surfaces.

d. **Standards and Continuous Improvement:** Vegetation management and fire prevention measures will be reviewed annually to ensure continued compliance with applicable codes and evolving best practices, including:

- North American Electric Reliability Corporation (NERC) FAC-003-0 – Vegetation Management Standard for Transmission Lines
- Oregon Fire Code and National Fire Protection Association (NFPA) Standards relevant to energy facilities
- OAR Chapter 477 and 629-043 – ODF Fire Prevention Standards
- OAR 860-024 – Public Utility Commission (PUC) Electrical Safety Standards

- American Clean Power (ACP) and Avian Power Line Interaction Committee (APLIC) industry best practices

The Certificate Holder will evaluate new technologies, standards, and operational lessons learned each year to incorporate applicable improvements into this Comprehensive Plan or the future Operations Wildfire Management Plan.

## References

EPA (Environmental Protection Agency). 2021. Stormwater Best Management Practice, Soil Roughening. December 2021. EPA-832-F-21-028JJ. https://www.epa.gov/system/files/documents/2021-11/bmp-soil-roughening.pdf.

NRCS (Natural Resource Conservation Service). 2022. Deep Tillage Conservation Practice Standard, Code 324. November 2022. https://www.nrcs.usda.gov/sites/default/files/2022-11/324-NHCP-CPS-Deep-Tillage.pdf.

ODOT (Oregon Department of Transportation). 2023. Erosion Control Manual, Guidelines for Developing and Implementing Erosion and Sediment Controls. Salem, Oregon. April 2023. https://www.oregon.gov/odot/GeoEnvironmental/Docs_Environmental/Erosion_Control_Manual.pdf.

Oregon State Fire Marshall. 2025. 2025 Oregon Fire Code, Section 1205.5.1. https://codes.iccsafe.org/content/ORFC2025P1.

# Appendix F. Weed Control Plan

## Regulatory Framework

The Oregon Department of Agriculture (ODA) and Sherman County Weed District maintain lists and classifications of noxious weeds. Although not all listed noxious weeds occur in the vicinity of the Site Boundary, the Certificate Holder and its contractors should be aware of the entire list while monitoring and controlling weeds.

### *State of Oregon*

In Oregon, a noxious weed is defined under Oregon Revised Statutes (ORS) 569.175 as "a terrestrial, aquatic, or marine plant designated by the State Weed Board under ORS 569.615 as among those representing the greatest public menace and as a top priority for action by weed control programs." Noxious weeds have been declared by ORS 569.350 as a menace to public welfare, and control of these plants is the responsibility of private landowners and operators, as well as county, state, and federal governments.

The Oregon State Weed Board (OSWB) was created by ODA under ORS 569.600. OSWB provides recommendations for noxious weed control at the state level and is responsible for updating the State Noxious Weed List. The OSWB and the ODA classify noxious weeds in Oregon in accordance with the ODA Noxious Weed Classification System; there are three designations under the State's system:

- **A-Listed Weed:** A weed of known economic importance which occurs in the state in small enough infestations to make eradication or containment possible; or is not known to occur, but its presence in neighboring states makes future occurrence in Oregon seem imminent.
    - **Recommended Action:** Focus on prevention of new infestations through vector control, certification programs, education, outreach and surveys. New and existing infestations are prioritized for eradication or intensive control when and where found. Regionally focused, species-specific Statewide Management Strategies for A-listed weeds may be developed as necessary.
- **B-Listed Weed:** A weed of economic importance that is regionally abundant but may have limited distribution in some counties.
    - **Recommended Action:** Limited to intensive control at the state, county, or regional level as determined on a site-specific, case-by-case basis. Where implementation of a fully integrated statewide management plan is not feasible, biological control (when available) shall be the primary control method.
- **T-Designated Weed:** A designated group of weed species selected from the B list as a focus for prevention and control by the Noxious Weed Control Program. T-designated noxious weeds are determined by the Oregon State Weed Board and management actions are prioritized and informed by species-specific T-List Statewide Management Strategies created and maintained by the ODA. Action against these weeds will receive priority in accordance with the recommendations of the Statewide Management Strategy.

### *Sherman County*

The Sherman County noxious weed list and protocol were developed by the Sherman County Weed District. Sherman County defines weeds of significance with six classes:

- **A Class:** High priority. Any noxious weed which greatly endangers the overall economic well-being of the County and has a small enough distribution where eradication is possible.
- **B Class:** Moderate priority. A noxious weed which is well established in the County and has known negative impacts, but due to its distribution, eradication is not feasible.
- **C Class:** Low priority. A noxious weed which is widespread throughout the County and has known economic impacts.
- **Q Class**: Questionable list. A newly detected weed which may have some importance, but more information is needed to determine its impact on agriculture. There is only one Q Class weed currently: hairy willow herb (*Epilobium hirsutum*).
- **T Class:** Targeted list. A noxious weed from any Class that the Sherman County Weed Control Board wishes to focus efforts and resources on. This list is reviewed annually.
- **W Class:** Watch list. Any noxious weed that may occur in neighboring counties, the State or similar environments as the County, and could potentially endanger the overall economic well-being of the County. Once detected, these weeds shall be moved to the appropriate list.

## Noxious Weeds Identified within the Site Boundary

Noxious weeds identified within the Site Boundary in July 2024 and April 2026 are listed in Table F-1. Fourteen listed noxious weeds were documented, including 10 ODA-listed noxious weeds and 13 Sherman County listed noxious weeds. Nine of the noxious weeds observed were state and/or County "B" listed weeds. Two species, rush skeletonweed (*Chondrilla juncea*) and houndstongue (*Cynoglossum officinale*), are "A" Class Weeds in Sherman County.

In addition to noxious weeds, cheatgrass (*Bromus tectorum*), an invasive annual grass, was identified in grassland habitats within the Site Boundary. While cheatgrass is not a listed noxious weed, it and other invasive annual grasses can adversely impact habitat and increase fire risk.

**Table F-1. Noxious Weeds Observed During Surveys**

| Scientific Name | Common Name | ODA Status[1] | Sherman County Status[1] | Frequency[2] |
|---|---|---|---|---|
| *Aegilops cylindrica* | jointed goatgrass | B | C | Infrequently observed. |
| *Centaurea diffusa* | diffuse knapweed | B* | B | Several small to medium-sized occurrences observed. |
| *Chondrilla juncea* | rush skeletonweed | B (T)* | A (T) | Frequently observed in non-cultivated areas. |
| *Cirsium arvense* | Canada thistle | B* | B (T) | One observation made. |

| Scientific Name | Common Name | ODA Status[1] | Sherman County Status[1] | Frequency[2] |
|---|---|---|---|---|
| *Cirsium vulgare* | bull thistle | B* | C | Observed in two locations. |
| *Convolvulus arvensis* | field bindweed | B | B (T) | Many small to large occurrences observed. |
| *Conyza canadensis* | horseweed | Not listed | C | Commonly observed. |
| *Cynoglossum officinale* | houndstongue | B | A | Adjacent to stream in northern portion of Site Boundary. |
| *Lactuca serriola* | prickly lettuce | Not listed | C | Frequently observed. |
| *Onopordum acanthium* | Scotch thistle | B | B (T) | Several observations made. |
| *Phalaris arundinacea* | reed canarygrass | B | Not listed | Growing in streams in northern and eastern areas. |
| *Rhaponticum (Acroptilon) repens* | Russian knapweed | B* | B | One observation made. |
| *Salsola tragus* | Russian thistle | Not listed | C | Frequently observed. |
| *Secale cereale* | common rye, cereal rye | Not listed | C | Frequently observed. |

1. Species marked with a (*) are targeted for biocontrol.
2. Patch/observation sizes are as follows: small = less than 0.1 acre, medium = 0.1 to 1.0 acre, large = greater than 1 acre.

## Management Objectives

Management objectives shall be based on the classification status of a species and frequency of observations (Tables F-1 and F-2). Classification status will be determined based on the highest status identified by the State or County Weed List unless recommended otherwise by the County. Management objectives for problematic species that are not on a state or county noxious weed list will be determined on a case-by-case basis based on need for control (e.g., fire control, etc.)

**Table F-2. Management Objectives**

| Weed Classification | Years | | |
|---|---|---|---|
| | 0 | 1-6 | 6+ |
| A, A(T) or B(T) | Begin control prior to construction; continue throughout construction | Intensive control with goal of eradication within first 5 years of operations. Prevent new occurrences. | Intensive control and eradication for life of facility. Prevent new occurrences. |
| B | Begin control prior to construction on a case-by-case basis and continue throughout construction. | Intensive control on a case-by-case basis with the goal to eradicate within first 5 years of operations. Prevent new occurrences. | Monitor and manage to prevent new occurrences or spread of existing occurrences. |
| C | Monitor and manage to prevent new occurrences or spread of existing occurrences. | Monitor and manage to prevent new occurrences or spread of existing occurrences. | Monitor and manage to prevent new occurrences or spread of existing occurrences. |

| Weed Classification | Years | | |
|---|---|---|---|
| | 0 | 1-6 | 6+ |
| Invasive Annual Grasses[1] | Monitor and manage to minimize wildfire risk. | Monitor and manage to minimize wildfire risk. | Monitor and manage to minimize wildfire risk. |
| 1. Applies to problematic invasive annual grasses that are not on a state or county noxious weed list. | | | |

## Weed Control Methods

Noxious weed control methods for the Weed Management Area (i.e., the disturbance area within the Solar Siting Area and the transmission line right-of-way) described in this Comprehensive Plan were developed utilizing information from the ODA Noxious Weed Control Program and the Sherman County Weed District. Management of noxious weeds will be considered throughout all stages of construction and operation of the RFA 4 and 5 Solar Facilities and will include:

- **Prevention:** Implementing measures to prevent the spread of noxious weeds during construction, operation, and maintenance activities.
- **Treatment:** Treating noxious weed populations with their appropriate control methods, at appropriate time intervals.
- **Monitoring:** Assessing noxious weed changes within the Weed Management Area over time and ensuring that legacy as well as new weed populations are not increasing their distribution.

Portland General Electric Company's (the Certificate Holder) objective is to prevent the introduction of new noxious weed populations and spread of existing noxious weed populations. The methods described above in this Comprehensive Plan and supplemented below will be implemented to minimize the spread of noxious weeds during construction activities. New noxious weeds detected within the Weed Management Area during post-construction revegetation will be considered a result of construction activities and will be controlled accordingly.

### *Biological Control*

Biological control involves the use of prescribed insects, fungi, and livestock to control noxious weeds to achieve management objectives. Biological control methods are typically targeted to a specific species or plant to control its persistence. They are also used for maintenance in targeted areas for vegetation management control in height and density that includes mitigating fire risk and erosion. Biological control is environmentally friendly and should be the first consideration when applicable.

### *Mechanical Treatment*

Mechanical treatment will be the preferred method of treatment for existing noxious weed populations where appropriate within the Weed Management Area. Mechanical control methods rely on removal of plants, seed heads, and/or cutting roots with a shovel or other hand tools or equipment that can be used to remove, mow, or disc noxious weed populations. Hand removal of plants is also included under this treatment method. Mechanical methods are useful for smaller, isolated populations of noxious weeds in areas of sensitive habitats. Additionally, hand removal of

small occurrences can minimize soil disturbance, allowing desirable species to remain and limiting conditions favorable for noxious weeds.

Some rhizomatous plants can spread by discing or tillage. For example, rush skeletonweed, which has been identified within the Site Boundary, can reproduce vegetatively from small segments of root, and discing or tilling can facilitate the spread of this species. As such, implementation of discing will be species-specific and avoided in areas where it will be counter-productive.

If discing is employed in areas that will be revegetated following construction, subsequent seeding will be conducted to re-establish desirable vegetative cover that will stabilize the soils and slow the potential re-invasion of noxious weeds. Discing, tilling, or other mechanical treatments that disturb the soil surface within native habitats will also be avoided in favor of herbicide application, which is an effective means of reducing the size of noxious weed populations as well as preventing the establishment of new occurrences.

## *Chemical Treatment*

Chemical control can effectively remove noxious weeds through use of selective herbicides. The specific herbicide used, and the timing of application will be chosen based on the specific noxious weed being treated, as appropriate herbicides differ between species and types of plants (i.e., dicots such as rush skeletonweed versus monocots such as jointed goatgrass).

Herbicides will be applied to identified, treatable, noxious weed occurrences. The Certificate Holder or their contractors will coordinate with the Sherman County Weed District to determine which populations are treatable and will notify landowners of proposed herbicide use on their lands prior to application. If a noxious weed population is deemed to be untreatable (e.g., too widespread and established in an area to successfully control), the Certificate Holder will implement the applicable prevention measures discussed in this Comprehensive Plan, subject to approval by the Oregon Department of Energy (ODOE) and the Sherman County Weed District.

Apply only herbicides approved by the U.S. Environmental Protection Agency (EPA) and ODA; annually check the status of herbicide approval (e.g., confirming herbicides are approved for use by the EPA and ODA).

Herbicide application will be performed within the appropriate season to achieve desired results, as approved by ODOE and the Sherman County Weed District. No weed treatment will occur in agricultural lands without landowner permission.

### *Herbicide Application and Handling*

Hand application methods (e.g., backpack spraying) may be used in roadless areas or in rough terrain. Vehicle-mounted sprayers (e.g., handgun, boom, and injector) will be used mainly in open areas that are readily accessible by vehicle. Calibration checks of equipment will be conducted prior to spraying activities, as well as periodically throughout use, to ensure that appropriate application rates are achieved.

Herbicides will be transported with the following stipulations:

- Only the quantity needed for that day's work will be transported.

- Concentrate will be transported in approved containers only, and in a manner that will prevent spilling, stored separately from food, clothing, and safety equipment.
- Mixing will be done at a distance greater than 200 feet from open or flowing water, wetlands, or other sensitive species' habitat. No herbicides will be applied in these areas unless authorized by the appropriate regulatory agencies.
- All herbicide equipment and containers will be inspected daily for leaks.
- Herbicide use will be in accordance with all manufacturers' label recommendations and warnings.
- Apply herbicide under appropriate conditions (i.e., not when wind velocity exceeds 15 miles per hour for granular application or exceeds 10 miles per hour for liquid applications; snow or ice covers the foliage of target species; or adverse weather conditions are forecasted within the next few days).

### *Herbicide Spills and Cleanups*

All appropriate precautions will be taken to avoid herbicide spills. In the event of a spill, cleanup will be immediate. Contractors will keep spill kits in their vehicles to allow for quick and effective response to spills. Items included in the spill kit will be:

- Protective clothing and gloves;
- Adsorptive clay, "kitty litter," or other commercial adsorbent;
- Plastic bags and a bucket;
- A shovel;
- A fiber brush and screw-in handle;
- A dustpan;
- Caution tape;
- Highway flares (use on existing hard-top roads only); and
- Detergent.

Response to an herbicide spill will vary with the size and location of the spill, but general procedures include:

- Stopping the leak;
- Containing the spilled material;
- Traffic control;
- Dressing the clean-up team in protective clothing;
- Cleaning up and removing the spilled herbicide, as well as the contaminated adsorptive material and soil; and

- Transporting spilled herbicide and contaminated material to an authorized disposal site.

### *Herbicide Spill Reporting*

All herbicide contractors will have readily available copies of the appropriate material safety data sheets for the herbicides used at their disposal and will keep copies of the safety data sheets in the application vehicle. If an herbicide spill of any size occurs, the appropriate agency and spill coordinators will be notified promptly. In case of a spill into wetlands and waterbodies, the appropriate federal, state, and county agencies will be notified immediately. All herbicide spills equal to or greater than 200 pounds or 25 gallons of pesticide residue will be reported to the Oregon Emergency Response System in accordance with applicable laws and requirements (Oregon Administrative Rules 340-142-0050). The Certificate Holder, Project Developer, or the Environmental Monitoring Contractor (EMC) will report all herbicide spills to ODOE by phone or email within 72 hours with follow-up reporting as appropriate.

### *Special Considerations*

Special consideration will be provided to perennial, intermittent, and ephemeral streams/draws during treatment activities. Unless approved for aquatic use, no herbicide will be sprayed where the drift can enter standing water or saturated soil. It will be the herbicide applicators' responsibility to ensure that no herbicide or drift enters standing water, regardless of the season when the herbicide is applied. Similar considerations will be made when in proximity to agricultural fields.

## ***Weed Monitoring and Reporting***

Weed inspections will occur within the Weed Management Area through visual inspection of the site while driving or walking. During the construction phase, the EMC will conduct periodic monitoring of noxious weeds. Noxious weeds observed during construction will be treated with mechanical or chemical treatments or other best management practices, as applicable. If construction extends into the growing season prior to the commercial date of operations and formal post-construction weed monitoring, the EMC will conduct informal but comprehensive weed surveys to inform adaptive management. In addition, weed monitoring may be conducted by the EMC as part of routine construction environmental monitoring monthly from April to October.

The EMC will conduct seasonal (spring, summer, and fall) post-construction noxious weed monitoring within the Weed Management Area for two years starting the first growing season after construction to map the extent of all noxious weed occurrences and identify areas for treatment (Table F-3). Results will be summarized in annual monitoring reports that describe treatments performed, treatment efficacy, recommendations to improve efficacy (if necessary), and any new noxious weed occurrences. Reports will be submitted to ODOE, ODFW, and the County annually. The Certificate Holder will be responsible for treating all noxious weeds observed within the Weed Management Area.

**Table F-3. Noxious Weed Monitoring Schedule**

| Year | Frequency | Focus |
|---|---|---|
| During construction | Periodic | Conduct periodic monitoring of noxious weeds. Weed monitoring may be conducted by the Environmental Monitoring Contractor (EMC) as part of routine construction environmental monitoring monthly from April to October. |
| Years 1–2 | Seasonal (spring, summer, fall) | Conduct site-wide noxious weed survey to identify areas for treatment. Work with Weed Management Contractor on a post-emergent chemical, mechanical, or other treatment plan. Document previous treatment effectiveness, as applicable. |
| Years 1–2 | Annual | Submit annual noxious weed monitoring report to Oregon Department of Energy (ODOE), Oregon Department of Fish and Wildlife, and the Sherman County Weed District. |
| Year 3 | Once | Certificate Holder will consult with ODOE and the County Weed District to determine if the monitoring cycle can be reduced for Years 3 through 5. |
| Years 3–5 | To be determined | Monitor and control noxious weeds as determined by agency discussions. |
| Year 5 | Once | Certificate Holder will consult with ODOE and the Sherman County Weed District to design a long-term weed control plan. |
| Year 6+ | To be determined | Monitor and control noxious weeds as determined in the long-term weed control plan. |

Based on the success of control efforts after the second year of monitoring, the Certificate Holder will consult with ODOE and the Sherman County Weed District to determine if the monitoring cycle can be reduced for Years 3 through 5. After 5 years of monitoring, the Certificate Holder will design a long-term weed control plan in consultation with ODOE and the Sherman County Weed District. The Certificate Holder will maintain ongoing communication with individual landowners, the Sherman County Weed District, and ODOE regarding noxious weeds within the Weed Management Area. Landowners may also contact the Certificate Holder directly to report the presence of noxious weeds related to Solar Component activity. The Certificate Holder will control reported noxious weeds on a case-by-case basis and prepare a summary of measures taken for that landowner. During the operational period of the RFA 4 and 5 Solar Facilities, the Certificate Holder will control noxious weeds as described in the long-term weed control plan. The Certificate Holder will report the investigator's findings and recommendations regarding weed control in the Solar Component's annual report required by Oregon Administrative Rule 345-026-0080.

## Treatment Plan

Table F-4, below, provides a treatment plan for noxious and invasive weeds (listed by ODA and Sherman County) in the RFA 4 and 5 Solar Facility Weed Management Area, including management objectives and treatment guidelines. This table will be updated following RFA 5 pre-construction weed surveys, as well as in each year's annual monitoring report. Specific herbicide application rates will be determined in consultation with the Sherman County Weed District and the Weed Control Contractor.

**Table F-4. Treatment Plan for Noxious and Invasive Weeds**

| Scientific Name | Common Name | State/County Status | Frequency | Management Objective | Treatment Guidelines[1] |
|---|---|---|---|---|---|
| *Aegilops cylindrica* | jointed goatgrass | B/C | Infrequently observed. | Monitor and manage to prevent new populations or spread of existing populations | Mechanical: Timing is critical, mow after flowering but before seeds reach soft boot stage. Early mowing will result in new tiller growth. Requires multiple mowings throughout the growing season over several years.<br>**Chemical:** Apply to actively growing plants in late winter or spring before flowering or pre-emergent herbicide in fall.<br>Biocontrol: None |
| *Centaurea diffusa* | diffuse knapweed | B/B | Several small to medium-sized occurrences observed. | Monitor and manage to prevent new populations or spread of existing populations | Mechanical: Manually remove entire plant, including taproot, prior to flowering.<br>Chemical: Apply to actively growing plants in fall or spring from rosette to bolting stage.<br>**Biocontrol:** Agents include several seed feeding flies and weevils and a root-boring beetle. |
| *Chondrilla juncea* | rush skeletonweed | B (T)/A(T) | Frequently observed in non-cultivated areas. | Intensive control, eradication within first 5 years of operations. Prevent new populations. | Mechanical: Regenerates from root fragments. Manually remove entire plant, including taproot, prior to flowering. Will require multiple efforts during the growing season for more than one year.<br>**Chemical:** Apply to rosettes in the spring immediately before or during bolting.<br>Biocontrol: Agents include a gall midge, gall mite, rust fungus, and root-mining moth |
| *Cirsium arvense* | Canada thistle | B/B(T) | One observation made. | Begin control prior to construction and continue throughout construction. Intensive control with the goal to eradicate within first 5 years of operations. | Mechanical: Not recommended, rhizomatous.<br>**Chemical:** Apply from rosette to bud stage to actively growing thistle in spring or in fall with select chemicals only.<br>Biocontrol: Four approved agents; stem weevil, seed head weevil, crown weevil, and stem gall fly. |

| Scientific Name | Common Name | State/County Status | Frequency | Management Objective | Treatment Guidelines[1] |
|---|---|---|---|---|---|
| *Cirsium vulgare* | bull thistle | B/C | Observed in two locations. | Begin control prior to construction and continue throughout construction. Intensive control with the goal to eradicate within first 5 years of operations. Prevent new populations. | **Mechanical:** Till or pull prior to flowering. Cut off root below soil surface.<br>Chemical: Treat rosettes in fall or spring.<br>Biocontrol: Seed head gall fly, not effective for individuals but can reduce overall population. |
| *Convolvulus arvensis* | field bindweed | B/B(T) | Many small to large occurrences observed. | Monitor and manage to prevent new populations or spread of existing populations. | Mechanical: Not recommended, bindweed has extensive root systems and can spread by seed and root fragments.<br>**Chemical**: Apply to rapidly growing plants in spring or summer, prior to flowering. Plants should not be under drought stress at time of application.<br>Biocontrol: Two approved agents; a moth and mite. |
| *Conyza canadensis* | horseweed | Not listed/C | Commonly observed. | Monitor and manage to prevent new populations or spread of existing populations. | **Mechanical**: Mow or pull prior to flowering.<br>Chemical: Apply to rapidly growing plants prior to flowering.<br>Biocontrol: Unknown |
| *Cynoglossum officinale* | houndstongue | B/A | Common along stream in northern portion of Site Boundary. | Intensive control, eradication within first 5 years of operations. Prevent new populations. | Mechanical: Cut young rosettes below the crown in fall or early spring.<br>**Chemical:** Apply to rapidly growing plants in spring.<br>Biocontrol: Unknown |
| *Lactuca serriola* | prickly lettuce | Not listed/C | Frequently observed. | Monitor and manage to prevent new populations or spread of existing populations. | Mechanical: Graze, till, or pull prior to flowering. Mowing not considered effective due to robust regrowth.<br>**Chemical:** Apply to rapidly growing plants in spring prior to flowering.<br>Biocontrol: None |

| Scientific Name | Common Name | State/County Status | Frequency | Management Objective | Treatment Guidelines[1] |
|---|---|---|---|---|---|
| *Onopordum acanthium* | Scotch thistle | B/B(T) | Several observations made. | Intensive control, eradication within first 5 years of operations | **Mechanical:** Pull prior to flowering, cut off root below soil surface. Tilling will control emerged plants but stimulate germination. Follow up tilling with herbicide application to treat seedlings. Sheep and goats will eat young plants and flower heads.<br>Chemical: Treat from rosette to bolting stage in fall or spring. Most effective on small rosettes.<br>Biocontrol: None |
| *Phalaris arundinacea* | reed canarygrass | B/Not listed | Common in streams in northern and eastern areas. | Monitor and manage to prevent new populations or spread of existing populations. | **Mechanical:** Repeated mowing (5 times per season).<br>Chemical: Treat young growth in spring when rapidly growing.<br>Biocontrol: None |
| *Rhaponticum (Acroptilon) repens* | Russian knapweed | B/B | One observation made. | Begin control prior to construction and continue throughout construction. Intensive control with the goal to eradicate within first 5 years of operations. Prevent new populations. | **Mechanical:** Manually remove entire plant, including taproot, prior to flowering.<br>Chemical: Apply to actively growing plants in fall or in spring from rosette to bolting stage.<br>Biocontrol: Gall nematode available. |
| *Salsola tragus* | Russian thistle | Not listed/C | Frequently observed. | Monitor and manage to prevent new populations or spread of existing populations. | Mechanical: Hand pulling effective for small populations. Mow just before flower maturation or repeatedly mow younger plants.<br>**Chemical:** Treat young, rapidly growing plants from seedling to mid-rosette stage in spring or fall. Most effective on smaller plants. Preemergence also effective. Many populations are herbicide resistant in the inland northwest, consult with local herbicide applicator or county weed manager.<br>Biocontrol: Leaf mining and stem boring moths have provided poor control. |

| Scientific Name | Common Name | State/County Status | Frequency | Management Objective | Treatment Guidelines[1] |
|---|---|---|---|---|---|
| *Secale cereale* | cereal rye | Not listed/C | Frequently observed. | Monitor and manage to prevent new populations or spread of existing populations. | **Mechanical**: Repeated mowing in spring prior to seed set or tillage combined with herbicide application in fallow fields. Hand pull prior to seed set.<br>Chemical: Treat prior to seed set. Herbicide more effective if applied one year after mowing to reduce thatch buildup.<br>Biocontrol: None |
| *Bromus tectorum (and others)* | Cheatgrass; other annual invasive grasses | Not Listed | Common in grassland habitat | Monitor and manage to minimize wildfire risk. | Mechanical: Repeated mowing (every 3 weeks) to 2 inches in spring can eliminate seed production in areas where herbicide application is unacceptable.<br>**Chemical:** Apply pre-emergent herbicide prior to germination. Post emergent in fall or early spring/summer to rapidly growing plants prior to seed set.<br>Biocontrol: None |

Sources: Becerra-Alvarez 2025, DiTomaso et al. 2013, ODA 2025.

1. Preferred treatment method in bold.

## References

Becerra-Alvarez, A. (Editor). 2025. Pacific Northwest Weed Management Handbook [online]. Oregon State University Extension Communications. https://pnwhandbooks.org/weed

DiTomaso, J.M., G.B. Kyser, et al. 2013. Weed Control in Natural Areas in the Western United States. Weed Research and Information Center, University of California.

ODA (Oregon Department of Agriculture). 2025. Oregon Noxious Weed Profiles. https://www.oregon.gov/oda/weeds/oregon-noxious-weeds/Pages/default.aspx

# Figures

# Biglow Canyon Wind Farm Solar Facility

## Figure B-1.1 Temporary and Permanent Disturbance Areas

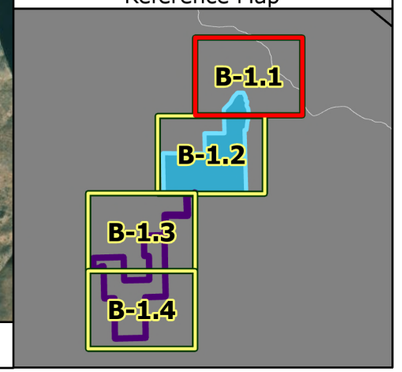
**SHERMAN COUNTY, OR**

RFA5 Site Boundary
RFA4 Site Boundary

TETRA TECH

PGE

Reference Map




1:12,000

WGS 1984 UTM Zone 10N

0 0.25 0.5 Miles

NOT FOR CONSTRUCTION

\\tt.local\GIS\US\CES\Projects\PDX\BrightNight\BiglowCanyon\Maps_RFA5\Exhibit_C\PGE_BiglowCanyon_RFA5_ExhibitC_20260922.aprx

# Biglow Canyon Wind Farm Solar Facility

## Figure B-1.2 Temporary and Permanent Disturbance Areas

**SHERMAN COUNTY, OR**

RFA5 Site Boundary
RFA4 Site Boundary

Transect Type
- Revegetation Transect
- Reference Transect
- Transect

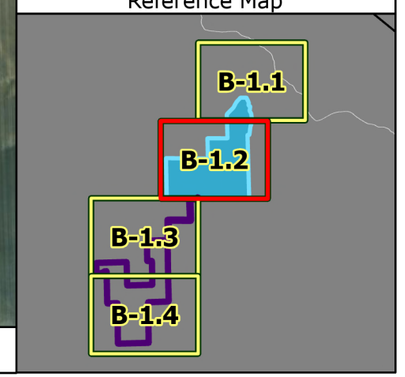
EFSC Subtype
- Irrigated Cropland
- Non-Irrigated Cropland
- Developed
- Grasslands
- Riparian Trees
- Sagebrush Shrub-Steppe
- Surface Water

Impact Type
- Permanent
- Temporary

TETRA TECH

PGE

Reference Map




1:12,000

WGS 1984 UTM Zone 10N

0 0.25 0.5 Miles

NOT FOR CONSTRUCTION

\\tt.local\GIS\US\CES\Projects\PDX\BrightNight\BiglowCanyon\Maps_RFA5\Exhibit_C\PGE_BiglowCanyon_RFA5_ExhibitC_20260922.aprx

# Biglow Canyon Wind Farm Solar Facility

## Figure B-1.3 Temporary and Permanent Disturbance Areas

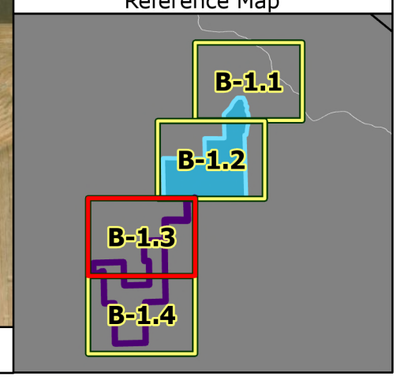
**SHERMAN COUNTY, OR**

RFA5 Site Boundary
RFA4 Site Boundary
EFSC Subtype
Non-Irrigated Cropland
Developed
Grasslands
Impact Type
Permanent
Temporary

TETRA TECH

PGE

Reference Map




1:12,000

WGS 1984 UTM Zone 10N

0 0.25 0.5 Miles

NOT FOR CONSTRUCTION

\\tt.local\GIS\US\CES\Projects\PDX\BrightNight\BiglowCanyon\Maps_RFA5\Exhibit_C\PGE_BiglowCanyon_RFA5_ExhibitC_20260922.aprx

# Biglow Canyon Wind Farm Solar Facility

## Figure B-1.4 Temporary and Permanent Disturbance Areas

**SHERMAN COUNTY, OR**

RFA5 Site Boundary

EFSC Subtype

- Non-Irrigated Cropland
- Developed
- Grasslands
- Upland Trees

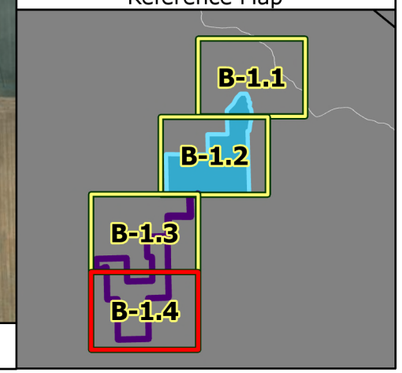
Impact Type

- Permanent

TETRA TECH

PGE

Reference Map



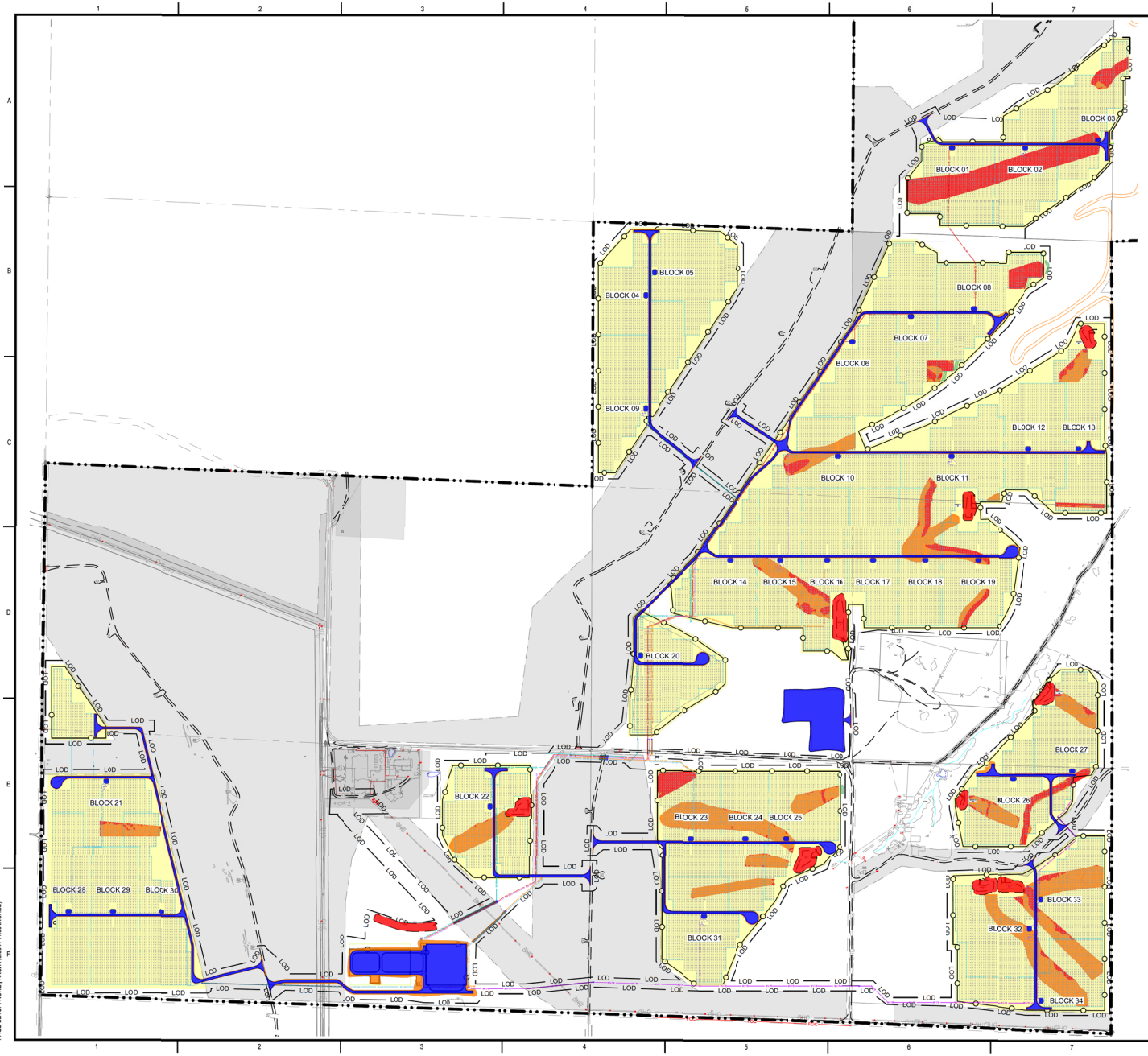

1:12,000

WGS 1984 UTM Zone 10N

0 0.25 0.5 Miles

NOT FOR CONSTRUCTION

\\tt.local\GIS\US\CES\Projects\PDX\BrightNight\BiglowCanyon\Maps_RFA5\Exhibit_C\PGE_BiglowCanyon_RFA5_ExhibitC_20260922.aprx




LINES

- PROJECT BOUNDARY
- PROPOSED ACCESS ROAD
- 1700 EXISTING 10' CONTOUR
- PROPOSED FENCE
- LOD PROPOSED LIMITS OF DISTURBANCE
- BUILDABLE LIMITS

HATCHES

- DISTURBANCE LEVEL 1 ALL AREA WITHIN BOUNDARY
- DISTURBANCE LEVEL 2
- DISTURBANCE LEVEL 3
- DISTURBANCE LEVEL 4
- DISTURBANCE LEVEL 5

SYMBOLS

- ELECTRICAL BORE
- INVERTER & WORKING PAD
- LOADBREAK DISCONNECT
- GATE
- TRACKER MOTOR
- BLOCK ## POWER BLOCK NUMBER

Figure B-2. RFA 4 Solar Facility Disturbance Levels

| REV | DATE | DESCRIPTION | BY | CHK | ENG | ENG MGR |
|---|---|---|---|---|---|---|
| | | REVISIONS | | | | |

| | | |
|---|---|---|
| DATE: | DESIGNER: | CHECKED BY: |
| DRAWN BY: | DESIGN ENGR.: | ENGR. MGR.: |
| SCALE: | CAD FILE NAME: | |

PORTLAND GENERAL ELECTRIC CO.
121 SW SALMON ST. PORTLAND, OR 97204

PLANT DESCRIPTION / PROJECT NAME

# VMP DISTURBANCE LEVEL MAP

| DRAWING NO.: | SHEET NO.: | REV NO.: |
|---|---|---|
| | | |

WARNING
0 ½ 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

PGE Confidential
Access Limited to Authorized Groups

PAGE SETUP: NONE | ANSI A (8.50 X 11.00 INCHES)

VMP DISTURBANCE LEVEL MAP.DWG | 4/30/2026 4:54:42 PM | ALEJANDRO JIMENEZ

# Biglow Canyon Wind Farm Request for Amendment 4

## Figure D-1 Proposed Soil Compaction Test Sites

**SHERMAN COUNTY, OR**

Helms Creek Rd

Herin Ln

Biglow Canyon Rd

Oehman Rd

- Project Area
- Proposed Sample Site

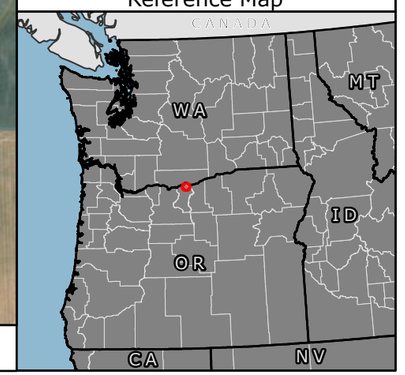
Soil Unit, Soil Name

- 1B,Anderly silt loam, 1 to 7 percent slopes
- 1C,Anderly silt loam, 7 to 15 percent slopes
- 3D,Anderly silt loam, 15 to 35 percent south slopes
- 16D,Lickskillet very stony loam, 7 to 40 percent south slopes
- 18E,Lickskillet-Rock outcrop complex, 40 to 70 percent south slopes
- 31B,Walla Walla silt loam, 1 to 7 percent slopes
- 31C,Walla Walla silt loam, 7 to 15 percent slopes
- 32D,Walla Walla silt loam, 15 to 35 percent north slopes
- 33D,Walla Walla silt loam, 15 to 35 percent south slopes

TETRA TECH

PGE

Reference Map




1:16,000

WGS 1984 UTM Zone 10N

0 0.13 0.25 0.5 0.75 1 Miles

NOT FOR CONSTRUCTION

\\tt.local\GIS\US\CES\Projects\PDX\BrightNight\BiglowCanyonMaps_PreConSoilCompaction_20260323\BrightNight_BiglowCanyon_SoilCompaction_20260323.aprx