

## **Exhibit C Project Location**

### **Boardman to Hemingway Transmission Line Project**



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*Preliminary Application for Site Certificate*

*February 2013*

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## ACRONYMS AND ABBREVIATIONS

Note: Not all acronyms and abbreviations listed will appear in this Exhibit.

°C	degrees Celsius
4WD	4-wheel-drive
A	ampere
A/ph	amperes/phase
AC	alternating current
ACDP	Air Contaminant Discharge Permit
ACEC	Area of Critical Environmental Concern
ACSR	aluminum conductor steel reinforced
AIMP	Agricultural Impact Mitigation Plan
AMS	Analysis of the Management Situation
aMW	average megawatt
ANSI	American National Standards Institute
APE	Area of Potential Effect
APLIC	Avian Power Line Interaction Committee
ARPA	Archaeological Resource Protection Act
ASC	Application for Site Certificate
ASCE	American Society of Civil Engineers
ASP	Archaeological Survey Plan
AST	aboveground storage tank
ASTM	American Society of Testing and Materials
ATC	available transmission capacity
ATV	all-terrain vehicle
AUM	animal unit month
B2H	Boardman to Hemingway Transmission Line Project
BCCP	Baker County Comprehensive Plan
BCZSO	Baker County Zoning and Subdivision Ordinance
BLM	Bureau of Land Management
BMP	best management practice
BPA	Bonneville Power Administration
BOR	Bureau of Reclamation
C and D	construction and demolition
CAA	Clean Air Act
CadnaA	Computer-Aided Noise Abatement
CAFE	Corona and Field Effects
CAP	Community Advisory Process
CBM	capacity benefit margin
CFR	Code of Federal Regulations
CH	critical habitat
CIP	critical infrastructure protection
CL	centerline
cm	centimeter
cmil	circular mil
COA	Conservation Opportunity Area
CO <sub>2</sub> e	carbon dioxide equivalent

COM Plan	Construction, Operations, and Maintenance Plan
CPCN	Certificate of Public Convenience and Necessity
cps	cycle per second
CRP	Conservation Reserve Program
CRT	cathode-ray tube
CRUP	Cultural Resource Use Permit
CSZ	Cascadia Subduction Zone
CTUIR	Confederated Tribes of the Umatilla Indian Reservation
CWA	<i>Clean Water Act of 1972</i>
CWR	Critical Winter Range
dB	decibel
dBA	A-weighted decibel
DC	direct current
DoD	Department of Defense
DOE	U.S. Department of Energy
DOGAMI	Oregon Department of Geology and Mineral Industries
DPS	Distinct Population Segment
DSL	Oregon Department of State Lands
EA	environmental assessment
EDRR	Early Detection and Rapid Response
EIS	Environmental Impact Statement (DEIS for Draft and FEIS for Final)
EFSC or Council	Energy Facility Siting Council
EFU	Exclusive Farm Use
EHS	extra high strength
EMF	electric and magnetic fields
EPA	Environmental Protection Agency
EPC	Engineer, Procure, Construct
EPM	environmental protection measure
EPRI	Electric Power Research Institute
ERO	Electric Reliability Organization
ERU	Exclusive Range Use
ESA	Endangered Species Act
ESCP	Erosion and Sediment Control Plan
ESU	Evolutionarily Significant Unit
EU	European Union
FAA	Federal Aviation Administration
FCC	Federal Communication Commission
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FFT	find, fix, track, and report
FLPMA	Federal Land Policy and Management Act
Forest Plan	Land and Resource Management Plan
FPA	Forest Practices Act
FSA	Farm Services Agency
FWS	U.S. Fish and Wildlife Service
G	gauss

GeoBOB	Geographic Biotic Observation
GF	Grazing Farm Zone
GHG	greenhouse gas
GHz	gigahertz
GIL	gas insulated transmission line
GIS	geographic information system
GPS	Global Positioning System
GRMW	Grande Ronde Model Watershed
GRP	Grassland Reserve Program
HAC	Historic Archaeological Cultural
HCNRA	Hells Canyon National Recreation Area
HPFF	high pressure fluid-filled
HPMP	Historic Properties Management Plan
HUC	Hydrologic Unit Code
Hz	hertz
I-84	Interstate 84
ICC	International Code Council
ICES	International Committee on Electromagnetic Safety
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IDAPA	Idaho Administrative Procedures Act
IDEQ	Idaho Department of Environmental Quality
IDFG	Idaho Department of Fish and Game
IDWR	Idaho Department of Water Resources
ILS	intensive-level survey
IM	Instructional Memorandum
INHP	Idaho Natural Heritage Program
INRMP	Integrated Natural Resources Management Plan
IPC	Idaho Power Company
IPUC	Idaho Public Utilities Commission
IRP	integrated resource plan
IRPAC	IRP Advisory Council
ISDA	Idaho State Department of Agriculture
JPA	Joint Permit Application
KCM	thousand circular mils
kHz	kilohertz
km	kilometer
KOP	Key Observation Point
kV	kilovolt
kV/m	kilovolt per meter
kWh	kilowatt-hour
L <sub>dn</sub>	day-night sound level
L <sub>eq</sub>	equivalent sound level
lb	pound
LCDC	Land Conservation and Development Commission
LDMA	Lost Dutchman's Mining Association
LiDAR	light detection and ranging
LIT	Local Implementation Team

LMP	land management plan
LOLE	Loss of Load Expectation
LRMP	land and resource management plan
LUBA	Land Use Board of Appeals
LWD	large woody debris
m	meter
mA	milliampere
MA	Management Area
MAIFI	Momentary Average Interruption Frequency Index
MCC	Malheur County Code
MCCP	Morrow County Comprehensive Plan
MCE	Maximum Credible Earthquake
MCZO	Morrow County Zoning Ordinance
mG	milligauss
MHz	megahertz
mm	millimeter
MMI	Modified Mercalli Intensity
MP	milepost
MPE	maximum probable earthquake
MRI	magnetic resonance imaging
MVAR	megavolt ampere reactive
Mw	mean magnitude
MW	megawatt
$\mu\text{V/m}$	microvolt per meter
N <sub>2</sub> O	nitrous oxide
NAIP	National Agriculture Imagery Program
NED	National Elevation Dataset
NEMS	National Energy Modeling System
NEPA	<i>National Environmental Policy Act of 1969</i>
NERC	North American Electric Reliability Corporation
NESC	National Electrical Safety Code
NF	National Forest
NFPA	National Fire Protection Association
NFS	National Forest System
NGDC	National Geophysical Data Center
NHD	National Hydrography Dataset
NHOTIC	National Historic Oregon Trail Interpretive Center
NHT	National Historic Trail
NIEHS	National Institute of Environmental Health Sciences
NIST	National Institute of Standards and Technology
NOAA	National Oceanic and Atmospheric Administration
NOAA Fisheries	National Oceanic and Atmospheric Administration Fisheries Division
NOI	Notice of Intent to File an Application for Site Certificate
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service

NRHP	National Register of Historic Places
NSR	noise sensitive receptor
NTTG	Northern Tier Transmission Group
NWGAP	Northwest Regional Gap Analysis Landcover Data
NWI	National Wetlands Inventory
NWPP	Northwest Power Pool
NWR	National Wildlife Refuge
NWSRS	National Wild and Scenic Rivers System
NWSTF	Naval Weapons Systems Training Facility
O <sub>3</sub>	ozone
O&M	operation and maintenance
OAIN	Oregon Agricultural Information Network
OAR	Oregon Administrative Rules
OATT	Open Access Transmission Tariff
ODA	Oregon Department of Agriculture
ODEQ	Oregon Department of Environmental Quality
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
ODOE	Oregon Department of Energy
ODOT	Oregon Department of Transportation
OHGW	overhead ground wire
OHV	off-highway vehicle
OPGW	optical ground wire
OPRD	Oregon Parks and Recreation Department
OPS	U.S. Department of Transportation, Office of Pipeline Safety
OPUC	Public Utility Commission of Oregon
OR	Oregon (State) Highway
ORBIC	Oregon Biodiversity Information Center
ORS	Oregon Revised Statutes
ORWAP	Oregon Rapid Wetland Assessment Protocol
OS	Open Space
OSDAM	Oregon Streamflow Duration Assessment Methodology
OSHA	Occupational Safety and Health Administration
OSSC	Oregon Structural Specialty Code
OSWB	Oregon State Weed Board
OWC	Oregon Wetland Cover
P	Preservation
PA	Programmatic Agreement
pASC	Preliminary Application for Site Certificate
PAT	Project Advisory Team
PCE	Primary Constituent Element
PEM	palustrine emergent
PFO	palustrine forested
PGA	peak ground acceleration
PGE	Portland General Electric
PGH	Preliminary General Habitats
Pike	Pike Energy Solutions

PNSN	Pacific Northwest Seismic Network
POD	Plan of Development
POMU	Permit to Operate, Maintain and Use a State Highway Approach
PPH	Preliminary Priority Habitats
Project	Boardman to Hemingway Transmission Line Project
PSD	Prevention of Significant Deterioration
PSS	palustrine scrub-shrub
R	Retention
R-F	removal-fill
RCM	Reliability Centered Maintenance
RCRA	Resource Conservation and Recovery Act
ReGAP	Regional Gap Analysis Project
RFP	request for proposal
RLS	reconnaissance-level survey
RMP	resource management plan
ROD	Record of Decision
ROE	right of entry
RNA	research natural area
ROW	right-of-way
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SC	Sensitive Critical
SEORMP	Southeastern Oregon Resource Management Plan
SF6	sulfur hexafluoride
Shaw	Shaw Environmental and Infrastructure, Inc.
SHPO	State Historic Preservation Office
SLIDO	Statewide Landslide Inventory Database for Oregon
SMS	Scenery Management System
SMU	Species Management Unit
SPCC	Spill Prevention, Containment, and Countermeasures
SRMA	Special Recreation Management Area
SRSAM	Salmon Resources and Sensitive Area Mapping
SSURGO	Soil Survey Geographic Database
STATSGO	State Soil Geographic Database
SUP	special-use permit
SV	Sensitive Vulnerable
SWPPP	Stormwater Pollution Prevention Plan
T/A/Y	tons/acre/year
TDG	Total Dissolved Gas
TES	threatened, endangered, and sensitive (species)
TG	Timber Grazing
TMIP	Transmission Maintenance and Inspection Plan
TNC	The Nature Conservancy
tpy	tons per year
TSD	treatment, storage, and disposal
TV	television
TVES	Terrestrial Visual Encounter Surveys

TVMP	Transmission Vegetation Management Program
UBAR	Umatilla Basin Aquifer Restoration
UBWC	Umatilla Basin Water Commission
UCDC	Umatilla County Development Code
UCZPSO	Union County Zoning, Partition and Subdivision Ordinance
UDP	Unanticipated Discovery Plan
U.S.	United States
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USDA	U.S. Department of Agriculture
USFS	U.S. Department of Agriculture, Forest Service
USGS	U.S. Geological Survey
UWIN	Utah Wildlife in Need
V/C	volume to capacity
V	volt
VAHP	Visual Assessment of Historic Properties
VMS	Visual Management System
VQO	Visual Quality Objective
VRM	Visual Resource Management
WAGS	Washington ground squirrel
WCU	Wilderness Characteristic Unit
WECC	Western Electricity Coordinating Council
WHO	World Health Organization
WMA	Wildlife Management Area
WOS	waters of the state
WOUS	waters of the United States
WPCF	Water Pollution Control Facility
WR	winter range
WRCC	Western Regional Climate Center
WRD	(Oregon) Water Resources Division
WRP	Wetland Reserve Program
WWE	West-wide Energy
XLPE	cross-linked polyethylene

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## 1 Exhibit C 2 Project Location

### 3 1.0 INTRODUCTION

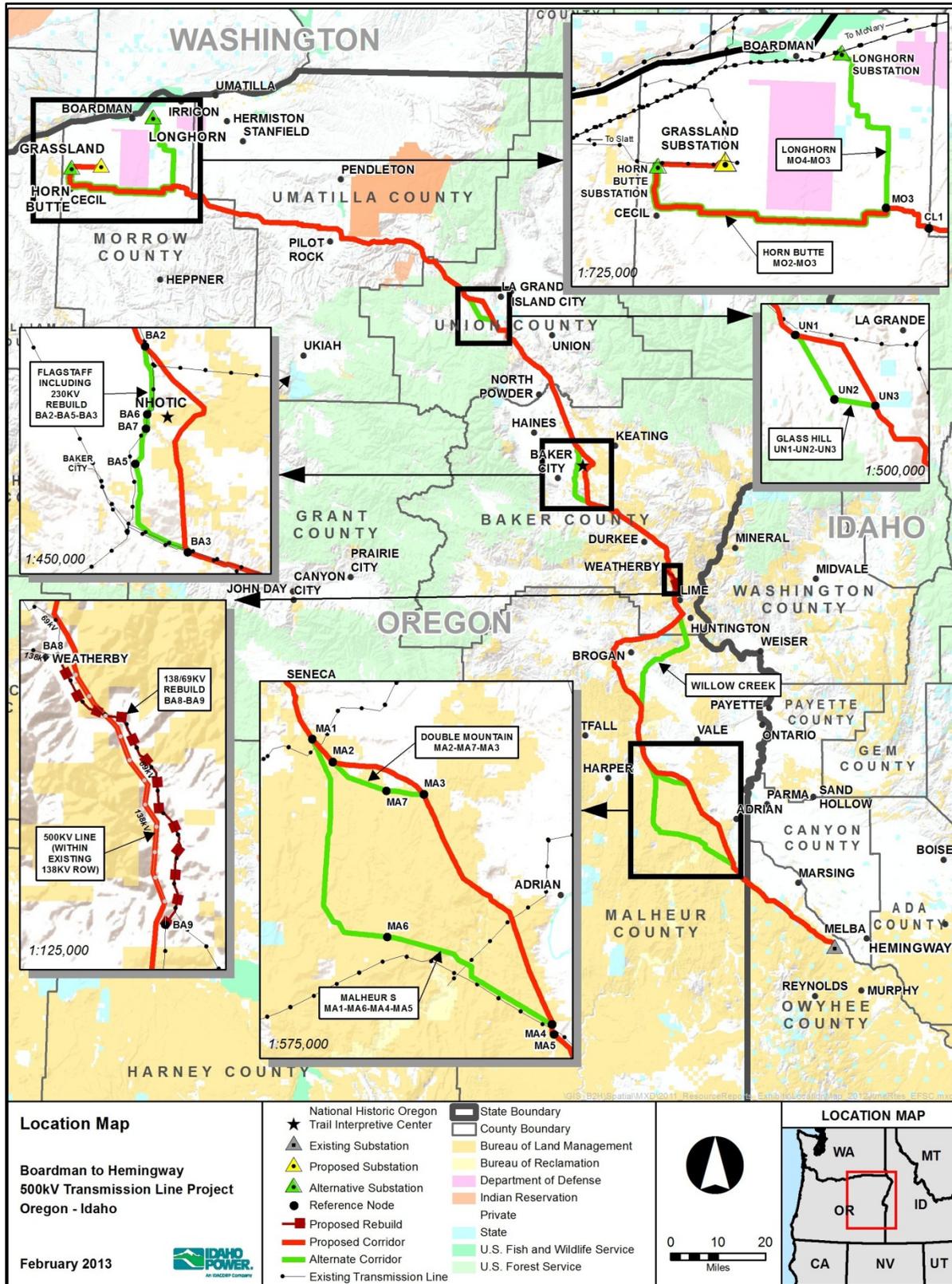
4 Exhibit C describes the location of the Boardman to Hemingway Transmission Line Project  
5 (Project) facilities. Figure C-1 shows the location of the Project in Oregon and Idaho. The  
6 Project and its related and supporting facilities in Oregon include:

- 7 • Proposed Corridor: 277.2 miles of 500-kilovolt (kV) transmission line corridor, 5.0 miles  
8 of double-circuit 138/69-kV transmission line corridor, and 0.3 mile of 138-kV  
9 transmission line corridor.
- 10 • Alternate Corridor Segments: Seven alternate corridor segments consisting of  
11 approximately 134.1 miles that could replace certain segments of the Proposed Corridor.  
12 Idaho Power Company (IPC) has proposed these alternate corridor segments in order to  
13 allow flexibility for IPC and the Oregon Department of Energy's Energy Facility Siting  
14 Council (EFSC or Council), as well as federal agencies, to reconcile competing resource  
15 constraints in several key locations.
- 16 • One proposed substation expansion of 3 acres; two alternate substation sites (one 3-  
17 acre substation expansion and one new 20-acre substation). IPC ultimately needs to  
18 construct and operate only one substation expansion or substation in the Boardman  
19 area.
- 20 • Eight communication station sites of less than one acre each in size; four alternate  
21 communication station sites along alternate corridor segments.
- 22 • Temporary and permanent access roads.
- 23 • Temporary multi-use areas, pulling and tensioning sites, and fly yards.

### 24 2.0 APPLICABLE RULES AND STATUTES

25 In accordance with OAR 345-021-0010(1)(c), Exhibit C must include the following:

- 26 (A) *A map or maps showing the proposed locations of the energy facility site, all related or*  
27 *supporting facility sites and all areas that might be temporarily disturbed during*  
28 *construction of the facility in relation to major roads, water bodies, cities and towns,*  
29 *important landmarks and topographic features, using a scale of 1 inch = 2000 feet or*  
30 *smaller when necessary to show detail.*
- 31 (B) *A description of the location of the proposed energy facility site, the proposed site of each*  
32 *related or supporting facility and areas of temporary disturbance, including the total land*  
33 *area (in acres) within the proposed site boundary, the total area of permanent disturbance,*  
34 *and the total area of temporary disturbance. If a proposed transmission line is to follow an*  
35 *existing road, pipeline or transmission line, the applicant shall state to which side of the*  
36 *existing road, pipeline or transmission line the proposed facility will run, to the extent this is*  
37 *known.*



1  
2 **Figure C-1. Location Map**

1 Additionally, the Project Order requires Exhibit C to include the following specific information:

- 2 • *Maps included in Exhibit C should provide enough information for property owners*  
3 *potentially affected by the facility to determine whether their property is within or*  
4 *adjacent to the site. Maps should indicate the “site boundary” as defined in OAR 345-*  
5 *001-0010(55). Major roads should be named. The application for a site certificate should*  
6 *include identification of lands enrolled in the Conservation Reserve Program and lands*  
7 *currently zoned for Exclusive Farm Use. IPC should include maps drawn to a scale of 1*  
8 *inch = 2,000 feet or smaller when necessary to show detail.*
- 9 • *Maps should clearly show the boundaries of the proposed corridor within which the*  
10 *transmission line would be constructed, and should include familiar landmarks such as*  
11 *roads and existing power lines that reviewing agencies and affected landowners may*  
12 *use to readily identify the proposed corridor. Aerial photographs with all roads identified*  
13 *are helpful for public interpretation and review. All proposed access roads, temporary*  
14 *laydown areas, substations, and other related or supporting facilities and their site*  
15 *boundaries must be identified.*
- 16 • *Exhibit C should contain a table listing the approximate land areas for both temporary*  
17 *disturbance associated with construction and permanent footprint of structures*  
18 *associated with facility operation for each type of disturbance or structure. This*  
19 *information should be consistent with information provided in other exhibits, including in*  
20 *particular Exhibit B, Exhibit P, and Exhibit W.*

### 21 3.0 ANALYSIS

#### 22 OAR 345-021-0010(1)(c) Exhibit C.

23 Information about the location of the proposed facility, including:

### 24 3.1 Maps Showing the Proposed Locations

#### 25 OAR 345-021-0010(1)(c)(A)

26 A map or maps showing the proposed locations of the energy facility site, all related or supporting  
27 facility sites and all areas that might be temporarily disturbed during construction of the facility in  
28 relation to major roads, water bodies, cities and towns, important landmarks and topographic features,  
29 using a scale of 1 inch = 2000 feet or smaller when necessary to show detail; and

30 The proposed locations of the Project facilities, all related or supporting facilities, and all areas  
31 that might be temporarily disturbed during the construction of the facilities are provided in  
32 Attachments C-1 and C-2.

- 33 • Attachment C-1 contains maps with an aerial background showing the location of the  
34 Proposed Grassland Substation Expansion, Alternate Horn Butte Substation, and  
35 Alternate Longhorn Substation Expansion. The scale of the maps is 1 inch equals  
36 1,000 feet.
- 37 • Attachment C-2 contains map sets organized by county proceeding north to south  
38 showing the location of the Proposed Corridor and alternate corridor segments. Each  
39 set of maps includes a county overview map and series of detailed maps that are at  
40 a scale of 1 inch equals 1,000 feet. These detailed maps show 5-meter contours on  
41 an aerial background. Project features shown include the Site Boundary, tower  
42 locations, right-of-way (ROW) limits, substations, communication stations sites, and  
43 associated communication distribution lines along with access roads. Temporary

1 project features are also shown, including structure work areas, multi-use areas  
2 (which include concrete batch plants), fly yards, and pulling and tensioning sites.

### 3 3.2 Description of the Proposed Locations

#### 4 OAR 345-021-0010(1)(c)(B)

5 A description of the location of the proposed energy facility site, the proposed site of each related or  
6 supporting facility and areas of temporary disturbance including the approximate land area of each. If  
7 a proposed pipeline or transmission line is to follow an existing road, pipeline or transmission line, the  
8 applicant shall state to which side of the existing road, pipeline or transmission line the proposed  
9 facility will run, to the extent this is known;

10 Federal, state, and private lands in five counties in Oregon and one county in Idaho will be  
11 utilized to construct the proposed transmission line. The description of the Project contained  
12 herein is limited to facilities in Oregon. Table C-1 describes land ownership by county and major  
13 land managing agency and private ownership.

14 **Table C-1. Corridor Mileage Summary by Land Manager/Owner**

Corridor Name	County	Miles of Line	USFS		BLM		BOR		State		Private	
			Miles	%	Miles	%	Miles	%	Miles	%	Miles	%
Proposed Corridor	Morrow	46.8	–	–	–	–	–	–	–	–	46.8	100%
	Umatilla	49.5	–	–	–	–	–	–	–	–	49.5	100%
	Union	39.8	5.9	15%	1.0	2%	–	–	–	–	32.9	83%
	Baker	69.2	–	–	16.7	24%	–	–	2.9	4%	49.5	72%
	Malheur	72.0	–	–	50.5	70%	0.8	1%	0.0	0%	20.6	29%
Proposed 138/69-kV Rebuild	Baker	5.3	–	–	0.9	18%	–	–	–	–	4.3	82%
<i>Total Proposed Corridor</i>		<b>282.5</b>	<b>5.9</b>	<b>2%</b>	<b>69.2</b>	<b>24%</b>	<b>0.8</b>	<b>0%</b>	<b>3.0</b>	<b>1%</b>	<b>203.7</b>	<b>72%</b>
<b>Alternate Corridor Segments</b>												
Horn Butte Alternate	Morrow	27.5	–	–	–	–	–	–	–	–	27.5	100%
Longhorn Alternate	Morrow	18.4	–	–	0.0	0%	–	–	–	–	18.4	100%
Glass Hill Alternate	Union	7.5	–	–	0.4	5%	–	–	–	–	7.1	95%
Flagstaff Alternate including 230-kV Rebuild	Baker	15.1	–	–	0.3	2%	–	–	–	–	14.8	98%
Willow Creek Alternate	Baker/Malheur	24.6	–	–	11.3	46%	–	–	–	–	13.3	54%
Malheur S Alternate	Malheur	33.6	–	–	32.5	97%	0.1	0%	–	–	1.1	3%
Double Mountain Alternate	Malheur	7.4	–	–	7.4	100%	–	–	–	–	–	–

15 BLM – Bureau of Land Management; BOR – Bureau of Reclamation; USFS – U.S. Department of Agriculture, Forest  
16 Service

## 1 **3.2.1 Proposed Grassland Substation Expansion and Proposed Corridor**

### 2 **3.2.1.1 Proposed Grassland Substation Expansion**

3 IPC's preferred terminus for the Proposed Corridor is the proposed Grassland Substation, a 34-  
4 acre substation that Portland General Electric (PGE) has proposed for development on private  
5 lands west of PGE's existing Boardman (Coal) Generating Plant.<sup>1</sup> PGE has planned the  
6 Grassland Substation to electrically terminate up to six new transmission lines: one from the  
7 existing Coyote Springs Substation, one from PGE's Boardman Generating Plant, one from  
8 PGE's Carty Generating Plant, two from PGE's proposed Cascade Crossing Project, and one  
9 from IPC's Boardman to Hemingway Project.<sup>2</sup> In order to accommodate the 500-kV series  
10 capacitor bank and shunt reactor bank needed for the Project, IPC proposes to develop a  
11 3-acre expansion of the southeast corner of the proposed Grassland Substation as shown in  
12 Attachment C-1, Figure C-1-1. The 34-acre fenced area for the proposed Grassland Substation  
13 will include both PGE and IPC facilities. Typical equipment proposed to support the Project  
14 termination is described in Exhibit B, Section 3.2.

### 15 **3.2.1.2 Proposed Corridor**

16 The Proposed Corridor is described below by segment and county.

#### 17 **Segment 1 – Morrow County**

18 The Proposed Corridor crosses Morrow County for approximately 46.8 miles beginning at the  
19 Proposed Grassland Substation Expansion, which is the northern terminus of the Project (see  
20 Attachment C-2, Maps 1–23). For those lands along the Proposed Corridor in Morrow County,  
21 the predominant land uses are dryland farming and rangeland. Table C-2 lists Project features  
22 and existing roads, railroads, and transmission lines crossed that are located within Morrow  
23 County. Table C-18 lists the acres in Morrow County that would be disturbed during construction  
24 or affected during operations.

25 The Proposed Corridor exits the Grassland Substation to the west, generally paralleling the existing  
26 Boardman to Slatt 500-kV transmission line for about 6.5 miles. The Proposed Corridor then turns  
27 south and proceeds across the Willow Creek Valley, where the Blue Mountain Scenic Byway is  
28 located. The Blue Mountain Scenic Byway, designated in 1989 under the National Scenic Byway  
29 Program, begins at the Columbia River near Arlington and proceeds 130 miles southeast to Baker  
30 City, Oregon. The Proposed Corridor follows State Route 74 (State 74) and Willow Creek west of  
31 the Boardman Conservation Area, where it is crossed by the Proposed Corridor, paralleled for 2.4  
32 miles, and crossed again before proceeding southeasterly across Morrow County. In the Willow  
33 Creek Valley, near the town of Cecil, there has been extensive wind energy development with  
34 numerous wind turbines visible from portions of the Byway.

35 Beginning at milepost (MP) 8, the Proposed Corridor passes along the western boundary of the  
36 Boardman Grasslands Conservation Area before angling east at MP 10.5 and following its  
37 southern boundary, crossing the Oregon National Historic Trail (NHT) at MP 15.4 and an existing  
38 Bonneville Power Administration (BPA) 115-kV transmission line at approximately MP 25.7.

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<sup>1</sup> Portland General Electric (PGE) has proposed the Grassland Substation for development in connection with at least two proposed facilities, one of which has been issued a Site Certificate (Carty Generating Station) and one currently under review by EFSC (Cascade Crossing 500 kV transmission line).

<sup>2</sup> See Preliminary Application for Site Certificate for Cascade Crossing Transmission Project, Exhibit B, Table B-1 and § 4.4.1 for additional information.

1 **Table C-2. Proposed Corridor Morrow County**

<b>Project Features</b>	<b>Number of Sites</b>
Towers – Single Circuit 500 kV	221
Towers – Double Circuit 138/69 kV	0
Towers – Single Circuit 230 kV	0
Communication Station(s)	1
Fly Yards	3
Multi-use Areas	2
Pulling and Tensioning Sites	72
Substation(s)	1
<b>Access Roads</b>	<b>Total Miles</b>
New Roads <sup>1</sup>	51.1
Existing Roads Needing Improvement <sup>2</sup>	27.4
<b>Crossings by Proposed Corridor</b>	<b>Number of Crossings</b>
EHV Transmission Line Crossings <sup>3</sup>	1
Existing Road Crossings <sup>4</sup>	15
Existing Railroad Crossings <sup>5</sup>	0

2 <sup>1</sup> Includes following road types: all-terrain vehicle, bladed, overland travel and overland travel with clearing.

3 <sup>2</sup> Includes following road types: existing roads needing improvement and existing roads requiring only spot repairs.

4 <sup>3</sup> Existing Transmission Line data from Ventyx and Idaho Power Company.

5 <sup>4</sup> U.S. Department of Commerce, U.S. Census Bureau, Geography Division, 2010.

6 <sup>5</sup> Geographic Information Services Unit, Oregon Department of Transportation, 2012.

7  
8 The Boardman Grasslands Conservation Area is managed by The Nature Conservancy (TNC)  
9 but owned by Threemile Farms. Threemile Farms purchased this tract of land from the State of  
10 Oregon, and it was during this 93,000-acre land transfer that the conservation area (22,642  
11 acres) was designated a State of Oregon Conservation Area as part of the sale agreement.

12 The Proposed Corridor also passes along the southern boundary of the Naval Weapons  
13 Systems Training Facility (NWSTF). The NWSTF is located approximately 2 miles south of  
14 Boardman, Oregon. It is a 6- by 12-mile rectangle bounded on the north by Interstate 84 (I-84),  
15 on the south by Immigrant Road, and on the east and west by irrigated farmlands. Currently, the  
16 NWSTF consists of more than 47,000 acres used by the Navy, Oregon National Guard, and  
17 other federal, state, and local agencies to meet their training and testing requirements (U.S.  
18 Navy 2010). There are three approach zone easements to the NWSTF that would restrict  
19 transmission tower height to 100 feet. Two zones are located along the western boundary of the  
20 NWSTF but are not crossed by the Proposed Corridor or alternate corridor segments. The third  
21 zone is located along the eastern boundary of the NWSTF and would be crossed by the  
22 Longhorn Alternate Corridor Segment.

23 Two alternate corridor segments and termination points to the Proposed Grassland Substation  
24 Expansion have been identified in Morrow County: the Horn Butte Alternate and Substation and  
25 the Longhorn Alternate and Substation Expansion as discussed in Section 3.2.2.

## 26 **Segment 2 – Umatilla County**

27 The Proposed Corridor has two segments in Umatilla County that cross approximately 49.5  
28 miles of privately owned land (see Attachment C-2, Maps 18–19, 36–56). Table C-3 lists Project  
29 features and existing roads, railroads, and transmission lines crossed that are located within  
30 Umatilla County. Table C-18 lists the acres in Umatilla County that would be disturbed during  
31 construction or affected during operations.

1 **Table C-3. Proposed Corridor Umatilla County**

<b>Project Features</b>	<b>Number of Sites</b>
Towers – Single Circuit 500 kV	204
Towers – Double Circuit 138/69 kV	0
Towers – Single Circuit 230 kV	0
Communication Station(s)	1
Fly Yards	6
Multi-use Areas	3
Pulling and Tensioning Sites	66
Substation(s)	0
<b>Access Roads</b>	<b>Total Miles</b>
New Roads <sup>1</sup>	60.1
Existing Roads Needing Improvement <sup>2</sup>	43.1
<b>Crossings by Proposed Corridor</b>	<b>Number of Crossings</b>
EHV Transmission Line Crossings <sup>3</sup>	2
Existing Road Crossings <sup>4</sup>	13
Existing Railroad Crossings <sup>5</sup>	1

2 <sup>1</sup> Includes following road types: all-terrain vehicle, bladed, overland travel and overland travel with clearing.

3 <sup>2</sup> Includes following road types: existing roads needing improvement and existing roads requiring only spot repairs.

4 <sup>3</sup> Existing Transmission Line data from Ventyx and IPC.

5 <sup>4</sup> U.S. Department of Commerce, U.S. Census Bureau, Geography Division, 2010.

6 <sup>5</sup> Geographic Information Services Unit, Oregon Department of Transportation, 2012.

7 The initial segment of the Proposed Corridor crosses into Umatilla County from Morrow County  
8 at MP 39.5, approximately 0.4 mile south of Butter Creek Junction. Most of this initial 3.0-mile  
9 segment crosses dryland farming. The Proposed Corridor angles back into Morrow County for  
10 7.3 miles beginning at MP 42.5 before again entering Umatilla County at MP 49.8.

11 After re-entering Umatilla County, the second segment of the Proposed Corridor continues east,  
12 then south across the county for about 46.5 miles to the Union County line. From the  
13 Morrow/Umatilla county line (MP 49.8) east to U.S. Highway 395 (U.S. 395) (MP 73.1), about  
14 2.5 miles northeast of Pilot Rock, the Proposed Corridor again crosses mostly dryland farming.  
15 East of U.S. 395 to the vicinity of McKay Creek Road (MP 84), the Proposed Corridor is located  
16 primarily on rangeland.

17 For about 7 miles (MP 76.8 to MP 84) the Proposed Corridor is located 0.4 to 1.4 miles south of  
18 the Umatilla Indian Reservation. The reservation, home of the Cayuse, Umatilla, and Walla  
19 Walla tribes, collectively known as the Confederated Tribes of the Umatilla Indian Reservation  
20 (CTUIR), is mostly located in Umatilla County, with a very small part extending south into Union  
21 County. The reservation, located about 7 miles east of Pendleton on the north side of the Blue  
22 Mountains with a land area of approximately 273 square miles, has over 2,800 tribal members  
23 (CTUIR 2010). No Project facilities will be located within, and no construction activities would  
24 occur on, the reservation.<sup>3</sup>

25 After crossing McKay Road at MP 84, the Proposed Corridor proceeds across rangeland with  
26 scattered stands of trees for about 3 miles before crossing mostly forested land for roughly the  
27 next 10 miles. Approximately 2.5 miles southwest of the community of Meacham, the corridor  
28 passes between scattered parcels of CTUIR land and remains west of a segment of the Blue  
29 Mountain Forest State Scenic Corridor, passing into Union County at MP 96.3.

<sup>3</sup> No portion of the Project is located on CTUIR reservation lands. However, the mapped Site Boundary area of a single existing road that will be used for Project construction does extend on to CTUIR reservation lands. No ground disturbance to CTUIR reservation lands will occur from the use of this existing road for Project construction. Exhibit C describes the location of the Project and its relating and supporting facilities. Attachment C-2 of Exhibit C provides detailed maps that show the location of the Project in relation to the Umatilla Indian Reservation.

### 1 **Segment 3 – Union County**

2 The Proposed Corridor traverses Union County for 39.8 miles, crossing 5.9 miles of the  
 3 Wallowa-Whitman National Forest (NF); 1 mile of Vale District, Bureau of Land Management  
 4 (BLM)-managed lands; and 32.9 miles of privately owned lands (see Attachment C-2, Maps 56–  
 5 80). Table C-4 lists Project features and existing roads, railroads and transmission lines crossed  
 6 that are located within Union County. Table C-18 lists the acres in Union County that would be  
 7 disturbed during construction or affected during operations.

8 **Table C-4. Proposed Corridor Union County**

<b>Project Features</b>	<b>Number of Sites</b>
Towers – Single Circuit 500 kV	180
Towers – Double Circuit 138/69 kV	0
Towers – Single Circuit 230 kV	0
Communication Station(s)	1
Fly Yards	4
Multi-use Areas	1
Pulling and Tensioning Sites	62
Substation(s)	0
<b>Access Roads</b>	<b>Total Miles</b>
New Roads <sup>1</sup>	37.2
Existing Roads Needing Improvement <sup>2</sup>	40.9
<b>Crossings by Proposed Corridor</b>	<b>Number of Crossings</b>
EHV Transmission Line Crossings <sup>3</sup>	2
Existing Road Crossings <sup>4</sup>	18
Existing Railroad Crossings <sup>5</sup>	2

9 <sup>1</sup> Includes following road types: all-terrain vehicle, bladed, overland travel and overland travel with clearing.

10 <sup>2</sup> Includes following road types: existing roads needing improvement and existing roads requiring only spot repairs.

11 <sup>3</sup> Existing Transmission Line data from Ventyx and IPC.

12 <sup>4</sup> U.S. Department of Commerce, U.S. Census Bureau, Geography Division, 2010.

13 <sup>5</sup> Geographic Information Services Unit, Oregon Department of Transportation, 2012.

14

15 After entering Union County at MP 96.3, the Proposed Corridor continues east, passing  
 16 between two segments of the Blue Mountain Forest State Scenic Corridor before turning  
 17 southeast at MP 97.4, adjacent and offset to the southwest from the existing BPA 230-kV  
 18 transmission line. At MP 99, the Proposed Corridor enters the Wallowa-Whitman NF, where it  
 19 crosses within a designated utility corridor for 5.5 of the total 5.9 miles of NF land crossed. The  
 20 area of the Wallowa-Whitman NF traversed by the Project is a designated NF Management  
 21 Area 17, called the Power Transportation Facility Retention Corridor. The Proposed Corridor  
 22 shares the utility corridor with an interstate highway, a railway, a 230-kV transmission line, a  
 23 petroleum products pipeline, and two large natural-gas pipelines.

24 Between MP 102.5 and 102.7, the Proposed Corridor traverses Railroad Canyon, a designated  
 25 segment of the Blue Mountain Forest State Scenic Corridor. The Blue Mountain Forest State  
 26 Park comprises six separate parcels located along I-84, the Old Oregon Trail Highway. These  
 27 parcels extend from Deadman's Pass Rest Area in Umatilla County south to Spring Creek in  
 28 Union County (OPRD 2011a).

29 Between MP 106.4 and MP 107, near the crossing of an existing BPA 230-kV transmission line,  
 30 the Proposed Corridor proceeds south, passing about 0.4 mile west of Hilgard Junction State  
 31 Park. Hilgard Junction State Park is located 8 miles west of La Grande at the intersection of I-84  
 32 and Highway 244 near the Grande Ronde River (OPRD 2011b). At MP 107.4, the Proposed  
 33 Corridor proceeds southeasterly for approximately 4 miles, generally parallel to the south side

1 and offset 2,000 to 2,500 feet from the existing BPA 230-kV transmission line due to severe  
2 terrain. While parallel to the existing 230-kV line, the Proposed Corridor crosses the Grande  
3 Ronde River and State Highway 244 at MP 107.7.

4 At MP 111.5, the Proposed Corridor angles to the southeast, away from the existing 230-kV  
5 line, and at MP 112.5, it passes about 1 mile west of Morgan Lake. This city park is situated a  
6 few miles southwest of the city of La Grande.

7 The Proposed Corridor continues generally southeast through a mix of rangeland and forested  
8 areas, with scattered homes and cabins for the next 14 miles to Clover Creek Valley. In this  
9 segment, there are three large land holdings: Elk Song Ranch, the Eastern Oregon University  
10 Rebarrow Research Forest, and Ladd Marsh Wildlife Area.

11 The Proposed Corridor crosses Elk Song Ranch, which occupies about 7,198 acres in the Blue  
12 Mountains west of La Grande. South of Elk Song Ranch is the Eastern Oregon University  
13 Rebarrow Research Forest. The Proposed Corridor avoids the forest.

14 Approximately 0.5 mile east of Elk Song Ranch and the Rebarrow Research Forest, and 1.5  
15 miles east of the Proposed Corridor (MP 117.0), is Ladd Marsh Wildlife Management Area  
16 (WMA). The Ladd Marsh WMA is managed by the Oregon Department of Fish and Wildlife  
17 (ODFW) in accordance with the Ladd Marsh WMA Management Plan (ODFW 2008).

18 Between MP 117 and 120, the Proposed Corridor traverses Glass Hill and proceeds  
19 southeasterly for the next approximately 6 miles, staying to the west of the existing IPC 230-kV  
20 transmission line. At MP 127, the corridor proceeds southeast along the northeast side of Clover  
21 Creek Valley, crossing the Oregon NHT at MP 128.7. The corridor continues southeast,  
22 maintaining an offset of at least 1,500 feet to the southwest of the existing IPC 230-kV line and  
23 crossing mostly rangeland to the Union County/Baker County line at MP 136.

24 The Elkhorn Valley Wind Farm, approximately 4 miles northeast of North Powder, is located  
25 adjacent to the east side of the existing 230-kV transmission line near Proposed Corridor MPs  
26 134.3 to 135.8. In this segment, the Proposed Corridor crosses State Highway 237 (MP 134.6),  
27 which is a segment of the state designated scenic byway called the Grande Tour Route. The  
28 Grande Tour Route is an 80-mile byway located between the Hells Canyon and Elkhorn  
29 byways.

30 One alternate corridor segment is under evaluation within Union County: the Glass Hill  
31 Alternate, as discussed in Section 3.2.2.

#### 32 **Segment 4 – Baker County**

33 The Proposed Corridor crosses Baker County for 69.2 miles with an additional 5.3-mile segment  
34 comprising the proposed 138/69-kV rebuild (see Attachment C-2, Maps 79–124). Approximately  
35 16.7 miles of the Proposed Corridor cross BLM-managed lands in the Vale District, about 2.9  
36 miles cross state land, and 49.5 miles cross private land. Approximately 0.9 mile of the 138/69-  
37 kV rebuild is located on BLM-managed lands with the other 4.3 miles located on private land.  
38 Table C-5 lists Project features and existing roads, railroads and transmission lines crossed that  
39 are located within Baker County. Table C-18 lists the acres in Baker County that would be  
40 disturbed during construction or affected during operations.

41 The Proposed Corridor in Baker County passes through several areas where intensive  
42 agricultural practices occur. The Baker Valley, located along I-84, spans north from Baker City  
43 into Union County and is intensively farmed with flood and pivot irrigation. The Durkee Valley,

1 located approximately 22 miles south of Baker City along I-84 just north of the Ash Grove  
2 Cement Plant, is another area with irrigated agriculture.

3 **Table C-5. Proposed Corridor Baker County**

<b>Project Features</b>	<b>Number of Sites</b>
Towers – Single Circuit 500 kV	294
Towers – Double Circuit 138/69 kV	72
Towers – Single Circuit 230 kV	0
Communication Station(s)	2
Fly Yards	6
Multi-use Areas	2
Pulling and Tensioning Sites	112
Substation(s)	0
<b>Access Roads</b>	<b>Total Miles</b>
New Roads <sup>1</sup>	80.8
Existing Roads Needing Improvement <sup>2</sup>	91.9
<b>Crossings by Proposed Corridor</b>	<b>Number of Crossings</b>
EHV Transmission Line Crossings <sup>3</sup>	6 <sup>6</sup>
Existing Road Crossings <sup>4</sup>	22
Existing Railroad Crossings <sup>5</sup>	2

4 <sup>1</sup> Includes following road types: all-terrain vehicle, bladed, overland travel and overland travel with clearing.

5 <sup>2</sup> Includes following road types: existing roads needing improvement and existing roads requiring only spot repairs.

6 <sup>3</sup> Existing Transmission Line data from Ventyx and IPC.

7 <sup>4</sup> U.S. Department of Commerce, U.S. Census Bureau, Geography Division, 2010.

8 <sup>5</sup> Geographic Information Services Unit, Oregon Department of Transportation, 2012.

9 <sup>6</sup> These 6 crossings are by the 500-kV line and do not include crossings that may happen in vicinity of 138/69-kV  
10 rebuild.

11  
12 Once across the Powder River and into Baker County, the Proposed Corridor crosses about  
13 13.1 miles of rangeland as it continues southeast, parallel and offset about 1,500 feet west of an  
14 existing IPC 230-kV transmission line. At MP 139, the Proposed Corridor passes about 2 miles  
15 west of the Thief Valley Reservoir, which is located on the North Powder River and provides  
16 year-round fishing with a boat ramp, 10 primitive campsites, and a restroom.

17 From MP 149.2, the Proposed Corridor angles to the southeast, crossing an existing IPC 230-  
18 kV transmission line at MP 150, State Route 203 at about MP 150.7, and another existing IPC  
19 230-kV transmission line at MP 151.3. Beginning at MP 154.7 the Proposed Corridor turns  
20 south, passing between steep hills before angling southwest across Hells Canyon Scenic  
21 Byway (State Highway 86) and the west end of the Virtue Flat Off-Highway Vehicle (OHV) Park  
22 in proximity to the National Historic Oregon Trail Interpretive Center (NHOTIC) and Oregon Trail  
23 Area of Critical Environmental Concern (ACEC) segment. At the closest point, the Proposed  
24 Corridor is about 1.1 miles southeast of the NHOTIC and 0.3 mile southeast of the ACEC  
25 boundary which includes the Center.

26 The Oregon Trail ACEC comprises seven separate segments totaling about 1,495 acres of  
27 mostly rangeland located across Umatilla, Union, and Baker counties. The segment of the  
28 Oregon Trail ACEC mentioned above is located along the north side of State Highway 86 for  
29 about 1.7 miles and includes Flagstaff Hill. The NHOTIC is located on Flagstaff Hill in the north  
30 central portion of this ACEC about 6 miles northeast of Baker City.

31 The Virtue Flat OHV Park covers nearly 6 square miles (3,560 acres) of rolling hills with narrow  
32 draws. It is located along the south side of State Highway 86, east of the entrance road to the  
33 NHOTIC, for a distance of about 7 miles. The OHV trails and routes at this BLM facility are

1 available year-round for all uses including mountain bikes and horseback riding. The Proposed  
2 Corridor crosses the westernmost portion of the OHV area, but should not affect its use.

3 Where the Proposed Corridor crosses State Highway 86, near MP 156.2, it is at the eastern end  
4 of the Pine Valley to Baker Valley segment of the Hells Canyon Scenic Byway. In total, the  
5 Byway is a 218-mile-long loop in eastern Oregon extending from La Grande to Baker City.

6 Between MP 156 and MP 158.5, the Proposed Corridor crosses the Baker County NHOTIC  
7 Overlay Zone. The purpose of this zone is to establish a review process for land use actions  
8 within the NHOTIC viewshed overlay. This review process allows the BLM to comment on  
9 proposed land use actions prior to establishing the use.

10 From Virtue Flat the Proposed Corridor proceeds southwest to the ridgeline of the Prospects at  
11 about MP 157.4. It then turns and proceeds directly south for approximately 6.3 miles through  
12 rangeland to MP 163.7, where it crosses existing 69-kV and 138-kV IPC transmission lines just  
13 northeast of I-84.

14 The Proposed Corridor angles and proceeds southeasterly from MP 163.7 generally in a  
15 corridor with the existing IPC 138-kV and 69-kV lines and an existing pipeline along the  
16 northeast side of I-84. For the next approximately 23.6 miles, the corridor crosses mostly  
17 rangeland with little or no development and passes north and east of farmland located along  
18 I-84 including the Durkee Valley.

19 Entering steep, mountainous terrain at MP 187.3, the Proposed Corridor again becomes part of  
20 the existing transportation-utility corridor with I-84, IPC's existing 69-kV and 138-kV  
21 transmission lines, and the Union Pacific Railroad. For approximately 4.1 miles the Proposed  
22 Corridor will be located within the existing 138-kV transmission line ROW and the 138-kV line  
23 will be relocated to the existing 69-kV ROW where the lines will be rebuilt onto double-circuit  
24 structures. In addition to I-84 and several utilities, this area includes the Burnt River, several  
25 farms and farmland, and the Weatherby Rest Area at the intersection of I-84 and Sisley Creek  
26 Road. Approximately 1.4 miles of the Proposed Corridor would also be located on a West-wide  
27 Energy (WWE) corridor, designated by the U.S. Department of Energy (DOE). A 0.7-mile  
28 segment of the 138/69-kV rebuild would cross the Lost Dutchman's Mining Association's private  
29 Blue Bucket Camp. The camp, located on 11 acres along the east side of I-84, is a place for  
30 Association members to prospect and mine for gold. The site has flat areas for camping,  
31 including limited electrical, with water, hook-ups and fulltime caretakers.

32 At the southern end of the Weatherby Mountains, near MP 192.5, the Proposed Corridor leaves  
33 the I-84 corridor and continues south for about 6 miles passing east of Table Rock and parallel  
34 to the west side of the existing 138-kV transmission line ROW. At MP 198.4, approximately  
35 2.0 miles northwest of Huntington, the Proposed Corridor leaves the 138-kV line and proceeds  
36 southwest for the next 6.9 miles through an area of steep topography and rangeland to the  
37 Baker/Malheur County line.

38 Two alternate corridor segments are under evaluation within or partially within Baker County:  
39 the northern segment of the Willow Creek Alternate and the Flagstaff Alternate as discussed in  
40 Section 3.2.2.

#### 41 **Segment 5 – Malheur County**

42 The Proposed Corridor traverses 72.0 miles across northeast Malheur County (see Attachment  
43 C-2, Maps 124–169) of which 20.6 miles cross privately owned lands, 50.5 miles cross BLM-  
44 managed lands, and 0.8 miles cross Bureau of Reclamation (BOR)-managed lands. Most of the  
45 land along the corridor in Malheur County is rangeland and sagebrush with little or no

1 development. Table C-6 lists Project features and existing roads, railroads, and transmission  
 2 lines crossed that are located within Malheur County. Table C-18 lists the acres in Malheur  
 3 County that would be disturbed during construction or affected during operations.

4 Heading southwest across rangeland from the Baker County line, the Proposed Corridor  
 5 traverses a steep canyon north of the community of Brogan, before crossing an existing IPC  
 6 69-kV transmission line at MP 215.5. Approximately 1.4 miles west of the Pole Creek Reservoir,  
 7 the corridor angles across U.S. Highway 26, which is a designated utility corridor under the Vale  
 8 District BLM's Southeastern Oregon Resource Management Plan, and proceeds south along  
 9 the eastern foothills of the Cottonwood Mountains.

10 **Table C-6. Proposed Corridor Malheur County**

<b>Project Features</b>	<b>Number of Sites</b>
Towers – Single Circuit 500 kV	317
Towers – Double Circuit 138/69 kV	0
Towers – Single Circuit 230 kV	0
Communication Station(s)	3
Fly Yards	9
Multi-use Areas	4
Pulling and Tensioning Sites	96
Substation(s)	0
<b>Access Roads</b>	<b>Total Miles</b>
New Roads <sup>1</sup>	84.8
Existing Roads Needing Improvement <sup>2</sup>	76.5
<b>Crossings by Proposed Corridor</b>	<b>Number of Crossings</b>
EHV Transmission Line Crossings <sup>3</sup>	4
Existing Road Crossings <sup>4</sup>	17
Existing Railroad Crossings <sup>5</sup>	0

11 <sup>1</sup> Includes following road types: all-terrain vehicle, bladed, overland travel and overland travel with clearing.

12 <sup>2</sup> Includes following road types: existing roads needing improvement and existing roads requiring only spot repairs.

13 <sup>3</sup> Existing Transmission Line data from Ventyx and Idaho Power Company.

14 <sup>4</sup> U.S. Department of Commerce, U.S. Census Bureau, Geography Division, 2010.

15 <sup>5</sup> Geographic Information Services Unit, Oregon Department of Transportation, 2012.

16 At MP 229.6, the Proposed Corridor passes southwest of Hope Flat and proceeds south  
 17 between Hope Butte and Sugarloaf Butte before crossing Cottonwood Creek, west of the Bully  
 18 Creek Reservoir. The Proposed Corridor continues south, crossing the Vale Oregon Canal (MP  
 19 238.3), the Union Pacific Railroad (MP 238.8), and the Malheur River and Malheur Canyon at  
 20 about MP 238.9. At MP 243.2, the Proposed Corridor crosses U.S. Highway 20 near Vines Hill,  
 21 which is another BLM designated utility corridor and angles easterly, passing south of Sand  
 22 Hollow. Between MP 247.1 and MP 252.2 the Proposed Corridor passes along the northern  
 23 boundary (outside) of the Double Mountain Wilderness Characteristic Unit. The Proposed  
 24 Corridor continues southeasterly, crossing Cow Hollow and passing west of Lealy Reservoir and  
 25 east of Chalk Reservoir.

26 At MP 260, the Proposed Corridor enters a BLM designated utility corridor. This segment of the  
 27 Vale District utility corridor was developed to provide a corridor that avoided the area of the  
 28 Owyhee Dam, and to provide an alternative to the utility corridor designated along the existing  
 29 PacifiCorp 500-kV line that crosses the Owyhee River just below the Owyhee Dam.

30 The BOR completed the Owyhee Project in 1939 to furnish irrigation water to over 105,000  
 31 acres of land lying along the west side of the Snake River in eastern Oregon and southwestern  
 32 Idaho. The key features of the project are the Owyhee Dam, on the Owyhee River about

1 11 miles southwest of Adrian, Oregon, and the Owyhee Reservoir, a long, narrow reservoir with  
2 about 150 miles of shoreline, which experiences heavy recreational use (BOR 2009).

3 At MP 260.8, the Proposed Corridor passes within 250 feet of the northern boundary of the  
4 Owyhee River Below the Dam ACEC. This 11,239-acre ACEC is also designated a Special  
5 Recreation Management Area (SRMA) and includes the Owyhee Reservoir, Snively Hot Springs  
6 recreation site, and the interpretive site of the existing Lower Owyhee Canyon Watchable  
7 Wildlife Area. The BLM, BOR, state, county, and other agencies cooperatively manage and  
8 protect the resource values and recreation opportunities within the river canyon.

9 Recreational activities within the ACEC/SRMA include high-quality scenery, driving and walking/  
10 hiking for pleasure, varied wildlife and historic resource viewing, photography, camping, hunting,  
11 fishing, and water play. Recreation management objectives include roaded natural, semi-  
12 primitive motorized, and semi-primitive non-motorized recreation as well as reasonable levels of  
13 tourism, environmental education, and interpretation while maintaining the integrity of the area's  
14 natural and cultural resource values. The BLM has also designated the ACEC/SRMA as Visual  
15 Resource Management (VRM) Class II lands to retain the existing character of the landscape.

16 The Proposed Corridor proceeds across the North Canal at approximately MP 261.2 before  
17 turning south where it exits the utility corridor and crosses Owyhee Lake Road followed by the  
18 Owyhee River at MP 261.7. At MP 262.6, the Proposed Corridor re-enters the BLM utility  
19 corridor where it remains as it proceeds to the south, crossing the existing Summer Lake to  
20 Midpoint 500-kV transmission line at MP 272.6 to MP 272.9 where it exits the corridor and turns  
21 to the southeast. For the next 4.6 miles, the corridor proceeds parallel to and offset  
22 approximately 1,500 to 3,500 feet from the southwest side of the existing 500-kV line to the  
23 Oregon/Idaho state line (MP 277.3).

24 Three alternate corridor segments are under evaluation within or partly within Malheur County:  
25 the Willow Creek Alternate, the Malheur S Alternate, and the Double Mountain Alternate as  
26 discussed in Section 3.2.2.

### 27 **3.2.2 Alternate Substations and Corridors**

28 IPC has identified two alternate substation/substation expansion sites and seven alternate  
29 corridor segments. These locations are shown on Figure C-1 and in Attachments C-1 and C-2.

#### 30 **3.2.2.1 Alternate Substations**

##### 31 **Alternate Longhorn Substation Expansion**

32 The Longhorn Substation has been proposed by BPA to allow a 230-kV connection to the 500-  
33 kV transmission grid for an unrelated wind project. BPA's Longhorn Substation would be located  
34 on private lands just west of the Port of Morrow, due north of the Boardman Bombing Range  
35 road, about 0.25 to 0.5 mile north of I-84 (see Attachment C-1, Figure C-1-2). In order to  
36 accommodate the Project, IPC proposes a 3-acre expansion of the planned BPA substation as  
37 shown in Attachment C-1, Figure C-1-2. Typical equipment proposed to support the Project  
38 termination is described in Exhibit B, Section 3.2. The planned BPA substation fenced area,  
39 including both BPA and IPC facilities, will be approximately 36 acres in size.

##### 40 **Alternate Horn Butte Substation**

41 The Alternate Horn Butte Substation is located along the Proposed Corridor approximately 6.5  
42 miles west of the Proposed Grassland Substation Expansion, about 1 mile northeast of State  
43 Highway 74 (see Attachment C-1, Figure C-1-3). The Alternate Horn Butte Substation will be  
44 located on private lands approximately 6 miles west of the Boardman Generating Plant. The full

1 yard as would be built by IPC will be developed with only three fully equipped bays. The three  
 2 bays will be constructed to electrically terminate the Project and connect it into the Boardman to  
 3 Slatt line. Typical equipment proposed to support the Project termination is described in Exhibit B,  
 4 Section 3.2. The Alternate Horn Butte Substation fenced area would be approximately 20 acres.

### 5 3.2.2.2 Alternate Corridor Segments

#### 6 **Longhorn Alternate Corridor Segment**

7 The Longhorn Alternate is an 18.4-mile corridor segment located entirely on private land in  
 8 Morrow County (see Attachment C-2, Maps 24–35). Table C-7 lists Project features and existing  
 9 roads, railroads, and transmission lines crossed that are located along the Longhorn Alternate.  
 10 Table C-19 lists the acres along the Longhorn Alternate that would be disturbed during  
 11 construction or affected during operation.

12 **Table C-7. Longhorn Alternate**

<b>Project Features</b>	<b>Number of Sites</b>
Towers – Single Circuit 500 kV	102
Towers – Double Circuit 138/6 9kV	0
Towers – Single Circuit 230 kV	0
Communication Station(s)	0
Fly Yards	1
Multi-use Areas	4
Pulling and Tensioning Sites	29
Substation(s)	1
<b>Access Roads</b>	<b>Total Miles</b>
New Roads <sup>1</sup>	18
Existing Roads Needing Improvement <sup>2</sup>	21.5
<b>Crossings by Longhorn Alternate</b>	<b>Number of Crossings</b>
EHV Transmission Line Crossings <sup>3</sup>	1
Existing Road Crossings <sup>4</sup>	6
Existing Railroad Crossings <sup>5</sup>	1

13 <sup>1</sup> Includes following road types: all-terrain vehicle, bladed, overland travel and overland travel with clearing.

14 <sup>2</sup> Includes following road types: existing roads needing improvement and existing roads requiring only spot repairs.

15 <sup>3</sup> Existing Transmission Line data from Ventyx and Idaho Power Company.

16 <sup>4</sup> U.S. Department of Commerce, U.S. Census Bureau, Geography Division, 2010.

17 <sup>5</sup> Geographic Information Services Unit, Oregon Department of Transportation, 2012.

18 The Longhorn Alternate begins at the Alternate Longhorn Substation Expansion. An existing  
 19 transmission corridor comprising three existing BPA transmission lines, one 500-kV line, and  
 20 two 230-kV lines, is already present in this area. At MP 0.5 the Longhorn Alternate continues  
 21 southeast across the Columbia River Highway (U.S. Highway 730) before proceeding across  
 22 the West Extension Irrigation Canal at MP 0.7 and along the north side of the Union Pacific  
 23 Railroad to MP 1.4. At MP 1.4, the Longhorn Alternate turns south and angles across the  
 24 railroad (MP 1.5) and I-84 (MP 2.0), approximately 1.5 miles east of the Boardman Junction.

25 The Longhorn Alternate continues almost due south for the next 3.2 miles to MP 5.2 where it  
 26 turns to the southeast and proceeds 0.4 mile to the south side of an existing farm road (MP 5.6).  
 27 At this point, the alternate proceeds east to MP 6.1 then turns south, passing between poplar  
 28 trees and irrigation pivots to MP 7.1. The Longhorn Alternate turns and proceeds east again for  
 29 approximately one mile before turning southeast and angling across an existing farm road to  
 30 MP 8.1. From MP 8.1 to 9.0, the Longhorn Alternate proceeds south along the east side of an  
 31 existing farm road and along the western edge of a dairy farm. At MP 9.0, the alternate turns  
 32 and proceeds easterly along the north side of Homestead Lane until about MP 9.4 where it

1 angles southeast across Homestead Lane and continues east along the south side of this road  
 2 to approximately MP 11.0. Turning and proceeding south, the Longhorn Alternate passes east  
 3 of Sand Lake, stays west of Echo Windfarms, and crosses the Oregon NHT at MP 16.6.  
 4 Between MP 8.6 and 11.4, the alternate passes through the NWSTF approach zone easement  
 5 which would restrict tower height to 100 feet.

6 Continuing south across Sand Hollow, the Longhorn Alternate crosses the TransCanada gas  
 7 pipeline at MP 17.0 before joining with the Proposed Corridor at the Proposed Corridor MP 34.1.

### 8 **Horn Butte Alternate Corridor Segment**

9 The Horn Butte Alternate is identical to the Proposed Corridor for its entire 27.4-mile length; it is  
 10 6 miles shorter than the Proposed Corridor and would terminate at the Alternate Horn Butte  
 11 Substation if selected for development. Table C-8 lists Project features and existing roads,  
 12 railroads, and transmission lines crossed that are located along the Horn Butte Alternate. Table  
 13 C-19 lists the acres along the Horn Butte Alternate that would be disturbed during construction  
 14 or affected during operation.

15 **Table C-8.** Horn Butte Alternate

<b>Project Features</b>	<b>Number of Sites</b>
Towers – Single Circuit 500 kV	133
Towers – Double Circuit 138/69 kV	0
Towers – Single Circuit 230 kV	0
Communication Station(s)	0
Fly Yards	2
Multi-use Areas	2
Pulling and Tensioning Sites	39
Substation(s)	1
<b>Access Roads</b>	<b>Total Miles</b>
New Roads <sup>1</sup>	35.3
Existing Roads Needing Improvement <sup>2</sup>	8.1
<b>Crossings by Horn Butte Alternate</b>	<b>Number of Crossings</b>
EHV Transmission Line Crossings <sup>3</sup>	1
Existing Road Crossings <sup>4</sup>	10
Existing Railroad Crossings <sup>5</sup>	0

16 <sup>1</sup> Includes following road types: all-terrain vehicle, bladed, overland travel and overland travel with clearing.

17 <sup>2</sup> Includes following road types: existing roads needing improvement and existing roads requiring only spot repairs.

18 <sup>3</sup> Existing Transmission Line data from Ventyx and Idaho Power Company.

19 <sup>4</sup> U.S. Department of Commerce, U.S. Census Bureau, Geography Division, 2010.

20 <sup>5</sup> Geographic Information Services Unit, Oregon Department of Transportation, 2012.

21  
 22 The Horn Butte Alternate departs from the Alternate Horn Butte Substation at approximately  
 23 Proposed Corridor MP 6.8. It then follows the same alignment as the Proposed Corridor,  
 24 heading south along the west side of the Boardman Conservation Area before turning east  
 25 approximately 1 mile north of Cecil (see Attachment C-2, Maps 4–15). The corridor proceeds  
 26 easterly along the south side of the Boardman Conservation Area and NWSTF to Proposed  
 27 Corridor MP 34.1. For a more detailed description of the Horn Butte Alternate, see Section  
 28 3.2.1.2 (discussion between MP 6.8 and 34.1).

### 29 **Glass Hill Alternate Corridor Segment**

30 The Glass Hill Alternate is a 7.5-mile corridor located in Union County. This alternate is located  
 31 west of the Proposed Corridor on private land (see Attachment C-2, Maps 62–68). Table C-9  
 32 lists Project features and existing roads, railroads, and transmission lines crossed that are

1 located along the Glass Hill Alternate. Table C-19 lists the acres along the Glass Hill Alternate  
2 that would be disturbed during construction or affected during operations.

3 **Table C-9. Glass Hill Alternate**

<b>Project Features</b>	<b>Number of Sites</b>
Towers – Single Circuit 500 kV	31
Towers – Double Circuit 138/69 kV	0
Towers – Single Circuit 230 kV	0
Communication Station(s)	1
Fly Yards	1
Multi-use Areas	0
Pulling and Tensioning Sites	10
Substation(s)	0
<b>Access Roads</b>	<b>Total Miles</b>
New Roads <sup>1</sup>	8.4
Existing Roads Needing Improvement <sup>2</sup>	14.8
<b>Crossings by Glass Hill Alternate</b>	<b>Number of Crossings</b>
EHV Transmission Line Crossings <sup>3</sup>	0
Existing Road Crossings <sup>4</sup>	2
Existing Railroad Crossings <sup>5</sup>	0

4 <sup>1</sup> Includes following road types: all-terrain vehicle, bladed, overland travel and overland travel with clearing.

5 <sup>2</sup> Includes following road types: existing roads needing improvement and existing roads requiring only spot repairs.

6 <sup>3</sup> Existing Transmission Line data from Ventyx and Idaho Power Company.

7 <sup>4</sup> U.S. Department of Commerce, U.S. Census Bureau, Geography Division, 2010.

8 <sup>5</sup> Geographic Information Services Unit, Oregon Department of Transportation, 2012.

9

10 The Glass Hill Alternate leaves the Proposed Corridor at MP 108.5 proceeding southeast  
11 following a ridge to the west of Graves Creek for 4.5 miles. This alternate crosses a jeep trail at  
12 MP 0.7, Whiskey Creek (Mill Canyon) Road at MP 1.6, Little Graves Creek at MP 2.2, and  
13 Morgan Lake Road at MP 2.5. At MP 4.9, Glass Hill Alternate angles easterly and crosses  
14 several ridges. At MP 5.0, the alternate crosses an unnamed road before traversing the first  
15 canyon and crossing Graves Creek at MP 5.3. The alternate crosses a second canyon and Little  
16 Rock Creek at MP 5.9 and finally a third canyon and Rock Creek at MP 6.6. At MPs 6.9 and 7.3,  
17 two unnamed roads are crossed before the Glass Hill Alternate joins with the Proposed Corridor  
18 at about MP 116.

### 19 **Flagstaff Alternate Corridor Segment**

20 The Flagstaff Alternate is a 15.1-mile alternate corridor segment in Baker County, comprising  
21 14.2 miles of single-circuit 500-kV line and the relocation of a 0.9-mile segment of the existing  
22 IPC 230-kV transmission line (See Attachment C-2, Maps 88–102). Table C-10 lists Project  
23 features and existing roads, railroads, and transmission lines crossed that are located along the  
24 Flagstaff Alternate. Table C-19 lists the acres along the Flagstaff Alternate that would be  
25 disturbed during construction or affected during operations.

26 The relocation of the 230-kV transmission line segment, between Flagstaff MP 4.0 to 5.0, allows  
27 both the 500-kV and 230-kV towers to be co-located in a valley between ridgelines along the  
28 Prospects Range. The relocation shifts the 230-kV towers several hundred feet to the east to  
29 make room for the 500-kV towers within this valley, minimizing visibility from surrounding  
30 vantage points by locating the towers at the lowest elevation for maximum screening. The  
31 Flagstaff Alternate crosses 0.3 mile of Vale District, BLM-managed land, and 14.8 miles of  
32 privately owned land.

1 **Table C-10. Flagstaff Alternate**

<b>Project Features</b>	<b>Number of Sites</b>
Towers – Single Circuit 500 kV	68
Towers – Double Circuit 138/69 kV	0
Towers – Single Circuit 230 kV	9
Communication Station(s)	0
Fly Yards	2
Multi-use Areas	1
Pulling and Tensioning Sites	35
Substation(s)	0
<b>Access Roads</b>	<b>Total Miles</b>
New Roads <sup>1</sup>	14.5
Existing Roads Needing Improvement <sup>2</sup>	17.0
<b>Crossings by Flagstaff Alternate</b>	<b>Number of Crossings</b>
EHV Transmission Line Crossings <sup>3</sup>	3
Existing Road Crossings <sup>4</sup>	4
Existing Railroad Crossings <sup>5</sup>	0

2 <sup>1</sup> Includes following road types: all-terrain vehicle, bladed, overland travel and overland travel with clearing.

3 <sup>2</sup> Includes following road types: existing roads needing improvement and existing roads requiring only spot repairs.

4 <sup>3</sup> Existing Transmission Line data from Ventyx and IPC.

5 <sup>4</sup> U.S. Department of Commerce, U.S. Census Bureau, Geography Division, 2010.

6 <sup>5</sup> Geographic Information Services Unit, Oregon Department of Transportation, 2012.

7  
8 The Flagstaff Alternate leaves the Proposed Corridor at MP 149.7, angling to the southeast  
9 across State Highway 203 at MP 0.9. Approximately 0.7 mile beyond this road crossing, this  
10 alternate joins in a corridor with an existing IPC 230-kV wood pole H-frame transmission line  
11 proceeding almost due south for 2.0 miles along the eastern edge of agricultural fields to  
12 MP 3.6. This alternate continues to follow the existing 230-kV line as it angles to the southwest,  
13 crosses State Highway 86, a scenic byway as described above, and then proceeds south  
14 between two hills. It is between these two hills where the 0.9-mile segment of the existing  
15 230-kV line would be relocated several hundred feet to the east to allow for placement of the  
16 500-kV towers within this valley.

17 Land use in this segment (3.6 miles) from State Highway 203 to State Highway 86 includes 1.4  
18 miles of irrigated agricultural land and 2.2 miles of rangeland at the eastern edge of the Baker  
19 Valley. At MP 2.3 in the vicinity of Prowell Lane, the Flagstaff Alternate passes just east of a  
20 farm complex with another farmstead passed near MP 3.5. The alternate passes within 0.2 mile  
21 of a segment of the Oregon Trail ACEC and within about 1.0 mile of the NHOTIC.

22 At MP 4.9 the Flagstaff Alternate would cross the southern end of the relocated 230-kV  
23 transmission line as it leaves the corridor with this existing line. The Flagstaff Alternate crosses  
24 an abandoned gravel pit at MP 5.0 and then continues southeast and south around an  
25 agricultural pivot. The alternate then angles to the southwest, again crossing rangeland, to  
26 rejoin the corridor with the existing 230-kV transmission line at MP 7.5. After crossing another  
27 4.4 miles of rangeland the Flagstaff Alternate joins the transportation/utility corridor with I-84, a  
28 69-kV line and a 138-kV line which it parallels to its intersection with the Proposed Corridor at  
29 MP 163.9.

### 30 **Willow Creek Alternate Corridor Segment**

31 The 24.6-mile-long Willow Creek Alternate spans from Baker County south into Malheur County,  
32 with 11.3 miles located on BLM-managed land and 13.3 miles on private land (see Attachment  
33 C-2, Maps 170–187). Table C-11 lists Project features and existing roads, railroads, and

1 transmission lines crossed that are located along the Willow Creek Alternate. Table C-19 lists  
 2 the acres along the Willow Creek Alternate that would be disturbed during construction or  
 3 affected during operation.

4 **Table C-11. Willow Creek Alternate**

<b>Project Features</b>	<b>Number of Sites</b>
Towers – Single Circuit 500 kV	114
Towers – Double Circuit 138/69 kV	0
Towers – Single Circuit 230 kV	0
Communication Station(s)	1
Fly Yards	1
Multi-use Areas	2
Pulling and Tensioning Sites	34
Substation(s)	0
<b>Access Roads</b>	<b>Total Miles</b>
New Roads <sup>1</sup>	32
Existing Roads Needing Improvement <sup>2</sup>	22.4
<b>Crossings by Willow Creek Alternate</b>	<b>Number of Crossings</b>
EHV Transmission Line Crossings <sup>3</sup>	1
Existing Road Crossings <sup>4</sup>	10
Existing Railroad Crossings <sup>5</sup>	0

5 <sup>1</sup> Includes following road types: all-terrain vehicle, bladed, overland travel and overland travel with clearing.

6 <sup>2</sup> Includes following road types: existing roads needing improvement and existing roads requiring only spot repairs.

7 <sup>3</sup> Existing Transmission Line data from Ventyx and Idaho Power Company.

8 <sup>4</sup> U.S. Department of Commerce, U.S. Census Bureau, Geography Division, 2010.

9 <sup>5</sup> Geographic Information Services Unit, Oregon Department of Transportation, 2012.

10

11 The Willow Creek Alternate leaves the Proposed Corridor at MP 199.4, approximately 2.5 miles  
 12 west of Huntington. Proceeding south, the alternate crosses Durbin Creek at MP 1.0 before  
 13 passing east of Lost Tom Mountain and across Benson Creek (MP 2.3). Continuing south, the  
 14 alternate leaves Baker County and enters Malheur County (MP 3.8) where it angles around the  
 15 east side of Striped Mountain. At MP 5.9, the Willow Creek Alternate crosses Birch Creek and  
 16 then at MP 6.2 angles and proceeds in a southwest manner, passing south of McDowell Butte  
 17 Reservoir (MP 8.7), across Dry Gulch and Mud Spring (MP 10.5), and over Stone Quarry Gulch  
 18 (MP 13.4) to MP 13.7.

19 At MP 15.8 the Willow Creek Alternate enters the Willow Creek Valley, which is zoned Exclusive  
 20 Farm Use and is heavily farmed. Proceeding southwest and spanning across irrigated  
 21 agricultural fields and the Vale Oregon Canal, the alternate angles due south at approximately  
 22 MP 16.5 and continues across U.S. Highway 26 (MP 16.8) to MP 17.0 where it then angles to  
 23 the southwest between center pivot irrigation fields. At the closest point, the Willow Creek  
 24 Alternate is approximately one mile northwest of the community of Jamieson.

25 Southwest of the Willow Creek Valley, the alternate proceeds southerly across Poison Creek,  
 26 Turner Creek, and the North and South Fork Little Willow Creeks. The Willow Creek Alternate  
 27 then passes east of Morrison Reservoir and west of Hope Flat before rejoining with the  
 28 Proposed Corridor at approximately MP 229.6, about 1.3 miles northwest of Hope Butte.

### 29 **Malheur S Alternate Corridor Segment**

30 The Malheur S Alternate Corridor leaves the Proposed Corridor at MP 242.6 and proceeds  
 31 south and southeast in Malheur County for 33.6. The Malheur S Alternate crosses 32.5 miles of  
 32 BLM-managed land, 0.1 mile of BOR-managed land, and 1.1 miles of private land (see

1 Attachment C-2, Maps 188–209). Table C-12 lists Project features and existing roads, railroads  
 2 and transmission lines crossed that are located along the Malheur S Alternate. Table C-19 lists  
 3 the acres along the Malheur S Alternate that would be disturbed during construction or affected  
 4 during operation.

5 The general vicinity where the Malheur S Alternate is located is characterized by large tracks of  
 6 severe topography, rangeland, and sagebrush with very little or no development.

7 **Table C-12. Malheur S Alternate**

<b>Project Features</b>	<b>Number of Sites</b>
Towers – Single Circuit 500 kV	185
Towers – Double Circuit 138/69 kV	0
Towers – Single Circuit 230 kV	0
Communication Station(s)	2
Fly Yards	6
Multi-use Areas	2
Pulling and Tensioning Sites	38
Substation(s)	0
<b>Access Roads</b>	<b>Total Miles</b>
New Roads <sup>1</sup>	49
Existing Roads Needing Improvement <sup>2</sup>	53.1
<b>Crossings by Malheur S Alternate</b>	<b>Number of Crossings</b>
EHV Transmission Line Crossings <sup>3</sup>	3
Existing Road Crossings <sup>4</sup>	7
Existing Railroad Crossings <sup>5</sup>	0

8 <sup>1</sup> Includes following road types: all-terrain vehicle, bladed, overland travel and overland travel with clearing.

9 <sup>2</sup> Includes following road types: existing roads needing improvement and existing roads requiring only spot repairs.

10 <sup>3</sup> Existing Transmission Line data from Ventyx and Idaho Power Company.

11 <sup>4</sup> U.S. Department of Commerce, U.S. Census Bureau, Geography Division, 2010.

12 <sup>5</sup> Geographic Information Services Unit, Oregon Department of Transportation, 2012.

13 After snaking between the Double Mountain and Sourdough Mountain Wilderness Characteristic  
 14 Units, the Malheur S Alternate proceeds to the east across the northern end of Grassy Mountain  
 15 and over the Owyhee River. The Owyhee River is crossed approximately 5 miles downstream  
 16 from the Owyhee Dam at MP 23.9. In crossing the Owyhee River, the alternate traverses 1.3  
 17 miles of the Owyhee River Below the Dam ACEC and SRMA between MP 22.7 and MP 24.0.

18 At MP 25.3, the Malheur S Alternate turns south to join in corridor with the existing PacifiCorp  
 19 500-kV Summer Lake to Midpoint line. Entering the Vale District utility corridor at MP 25.8, this  
 20 alternate parallels or is within a WWE corridor for the next approximately 8 miles. From MP 25.9  
 21 to MP 29.6, the Malheur S Alternate is within the Vale District utility corridor and parallel to, but  
 22 outside of, the WWE corridor due to terrain, and from MP 29.6 to its intersection with the  
 23 Proposed Corridor it is located within the WWE corridor.

#### 24 **Double Mountain Alternate Corridor Segment**

25 The 7.4-mile Double Mountain Alternate leaves the Proposed Corridor at MP 244.9, stays north  
 26 of the Double Mountains, and rejoins the Proposed Corridor at MP 252.3 (see Attachment C-2,  
 27 Maps 150–155). Table C-13 lists Project features and existing roads, railroads, and  
 28 transmission lines crossed that are located along the Double Mountain Alternate. Table C-19  
 29 lists the acres along the Double Mountain Alternate that would be disturbed during construction  
 30 or affected during operations.

1 The large majority of land along this alternate, which is located entirely on BLM-managed land,  
 2 is rangeland and sagebrush. Almost the entire length of this route is located within the Double  
 3 Mountain Wilderness Characteristic Unit designated by the BLM.

4 **Table C-13. Double Mountain Alternate**

<b>Project Features</b>	<b>Number of Sites</b>
Towers – Single Circuit 500 kV	34
Towers – Double Circuit 138/69 kV	0
Towers – Single Circuit 230 kV	0
Communication Station(s)	0
Fly Yards	2
Multi-use Areas	0
Pulling and Tensioning Sites	9
Substation(s)	0
<b>Access Roads</b>	<b>Total Miles</b>
New Roads <sup>1</sup>	11.9
Existing Roads Needing Improvement <sup>2</sup>	5.2
<b>Crossings by Double Mountain Alternate</b>	<b>Number of Crossings</b>
EHV Transmission Line Crossings <sup>3</sup>	0
Existing Road Crossings <sup>4</sup>	2
Existing Railroad Crossings <sup>5</sup>	0

5 <sup>1</sup> Includes following road types: all-terrain vehicle, bladed, overland travel and overland travel with clearing.

6 <sup>2</sup> Includes following road types: existing roads needing improvement and existing roads requiring only spot repairs.

7 <sup>3</sup> Existing Transmission Line data from Ventyx and Idaho Power Company.

8 <sup>4</sup> U.S. Department of Commerce, U.S. Census Bureau, Geography Division, 2010.

9 <sup>5</sup> Geographic Information Services Unit, Oregon Department of Transportation, 2012.

### 10 **3.2.3 Proposed and Alternate Communication Station Sites**

11 Communication station sites and associated map locations are listed in Table C-14 and shown  
 12 in Attachment C-2. Proposed locations for distribution lines to the new communication station  
 13 sites and associated map locations are listed in Table C-15 and shown in Attachment C-2.

14

1 **Table C-14.** Communication Station Sites

Corridor	County	Feature ID	Map <sup>1</sup>	Easting <sup>2</sup>	Northing <sup>2</sup>	Land Ownership	Closest Milepost	Distance to Milepost (ft)	Construction Acres	Operation Acres
Proposed Corridor	Morrow	CS MO-1	18	308483	5054508	Private	38.3	184.8	0.2	0.1
Proposed Corridor	Umatilla	CS UM-1	44	355648	5042754	Private	70.6	220.9	0.2	0.1
Proposed Corridor	Union	CS UN-1	62	404084	5019146	Private	108.8	496.1	0.2	0.1
Proposed Corridor	Baker	CS BA-1	103	446826	4949075	Private	165.6	280.5	0.2	0.1
Proposed Corridor	Baker	CS BA-2	112	470502	4932439	Private	184.6	258.6	0.2	0.1
Proposed Corridor	Malheur	CS MA-1	131	452822	4899583	Private	216.2	175.0	0.2	0.1
Proposed Corridor	Malheur	CS MA-2	149	465296	4860871	BLM	243.2	272.7	0.2	0.1
Proposed Corridor	Malheur	CS MA-3	166	492895	4828671	BLM	271.7	179.7	0.2	0.1
Glass Hill Alternate	Union	CS UN-1	62	404084	5019146	Private	0.2	1093.3	0.2	0.1
Willow Creek Alternate	Malheur	CS MA-4	178	464971	4895637	Private	15.1	275.1	0.2	0.1
Malheur S Alternate	Malheur	CS MA-2	149	465170	4860657	BLM	0.7	175.2	0.2	0.1
Malheur S Alternate	Malheur	CS MA-5	166	491954	4828487	BLM	32.0	238.6	0.2	0.1

2 <sup>1</sup> Attachment C-2 Map Set Reference3 <sup>2</sup> Centroid Coordinate, NAD\_1983\_UTM\_Zone\_11N, meters

4

1 **Table C-15. Distribution Lines**

Corridor	Line Type	Line Length (mi)	County	Map No. <sup>1</sup>	Easting <sup>2</sup>	Northing <sup>2</sup>	Land Ownership	Closest Milepost	Distance to Milepost (mi)
Proposed Corridor	Power	0.2	Morrow	18	308319	5054482	Private	38.3	0.1
	Power	0.0	Umatilla	44	355631	5042755	Private	70.6	0.0
	Fiber	0.1	Union	62	404013	5019086	BLM	108.7	0.1
	Power	1.1	Union	62	403615	5019776	Private	108.2	0.3
	Power	0.3	Baker	103	447009	4948881	Private	165.8	0.1
	Power	1.9	Baker	112	470971	4931092	Private	185.6	0.1
	Power	0.0	Malheur	149	465297	4860886	BLM	243.2	0.0
	Power	0.0	Malheur	149	465281	4860874	BLM	243.2	0.1
	Power	0.5	Malheur	131	452875	4899988	Private	215.9	0.2
Glass Hill Alternate	Fiber	0.3	Union	62	404105	5018924	BLM	0.3	0.1
	Power	1.1	Union	62	403615	5019776	Private	0	0.4
Willow Creek Alternate	Power	0.0	Malheur	178	464996	4895621	Private	15.1	0.0
Malheur S Alternate	Power	0.2	Malheur	149	465234	4860788	BLM	0.6	0.1
	Power	1.6	Malheur	166	493173	4828706	BLM	32.6	0.5

2 Attachment C-2 Map Set Reference

3 <sup>2</sup> Midpoint Coordinate, NAD\_1983\_UTM\_Zone\_11N, meters4 **3.3 Temporary Uses**5 **3.3.1 Multi-use Areas**6 Multi-use areas and associated map locations are listed in Table C-16 and shown in Attachment  
7 C-2.8 **3.3.2 Fly Yards**9 Fly yards and associated map locations are listed in Table C-17 and are shown in Attachment  
10 C-2.

11

**Table C-16. Multi-use Areas**

Corridor	County	Feature ID	Map <sup>1</sup>	Easting <sup>2</sup>	Northing <sup>2</sup>	Land Ownership	Closest Milepost	Distance to Milepost (mi)	Construction Acres
Proposed Corridor	Morrow	MU MO-1	1	279964	5065971	Private	0.0	1.3	32.1
Proposed Corridor	Morrow	MU MO-2	14	301932	5051720	Private	30.7	2.2	25.4
Proposed Corridor	Umatilla	MU UM-1	17	315104	5075052	Private	36.6	12.4	39.0
Proposed Corridor	Umatilla	MU UM-2	37	327275	5043268	Private	51.3	2.6	23.0
Proposed Corridor	Umatilla	MU UM-3	47	360555	5038661	Private	75.3	0.5	30.4
Proposed Corridor	Union	MU UN-1	80	426744	4986206	Private	136.3	3.7	39.8
Proposed Corridor	Baker	MU BA-1	88	441562	4968080	Private	150.8	0.2	53.9
Proposed Corridor	Baker	MU BA-2	107	461034	4942492	Private	175.6	0.5	4.1
Proposed Corridor	Malheur	MU MA-1	131	455699	4900780	Private	213.3	1.4	25.9
Proposed Corridor	Malheur	MU MA-2	149	465276	4860691	BLM	243.3	0.1	23.8
Proposed Corridor	Malheur	MU MA-3	160	486570	4843366	Private	261.5	0.6	22.4
Proposed Corridor	Malheur	MU MA-4	162	492830	4839292	Private	265.4	2.4	18.7
Horn Butte Alternate	Morrow	MU MO-1	1	279964	5065971	Private	0.0	1.3	32.1
Horn Butte Alternate	Morrow	MU MO-2	14	301932	5051720	Private	30.7	2.2	25.4
Longhorn Alternate	Morrow	MU MO-2	14	301932	5051720	Private	18.4	3.5	25.4
Longhorn Alternate	Morrow	MU MO-3	24	297333	5079873	Private	0.4	0.1	21.4
Longhorn Alternate	Morrow	MU MO-4	28	302409	5072782	Private	8.0	1.5	15.1
Longhorn Alternate	Umatilla	MU UM-1	17	315104	5075052	Private	11.0	7.8	39.0
Flagstaff Alternate	Baker	MU BA-1	88	441562	4968080	Private	0.7	0.8	53.9
Willow Creek Alternate	Baker	MU BA-3	173	481636	4905787	Private	4.3	3.0	32.8
Willow Creek Alternate	Malheur	MU MA-5	179	462718	4893849	Private	16.6	0.4	16.9
Malheur S Alternate	Malheur	MU MA-2	149	465276	4860691	BLM	0.7	0.1	23.8
Malheur S Alternate	Malheur	MU MA-6	207	486996	4831089	BLM	28.5	0.2	28.9

<sup>1</sup> Attachment C-2 Map Set Reference<sup>2</sup> Centroid Coordinate, NAD\_1983\_UTM\_Zone\_11N, meters

Table C-17. Fly Yards

Corridor	County	Feature ID	Map <sup>1</sup>	Easting <sup>2</sup>	Northing <sup>2</sup>	Land Ownership	Closest Milepost	Distance to Milepost (mi)	Construction Acres
Proposed Corridor	Morrow	FY MO-1	11	289178	5056635	Private	23.7	0.9	20.6
Proposed Corridor	Morrow	FY MO-2	14	302074	5052146	Private	30.8	2.0	10.7
Proposed Corridor	Morrow	FY MO-3	22	319794	5046268	Private	47.3	1.8	10.0
Proposed Corridor	Umatilla	FY UM-1	18	310268	5054715	Private	39.7	0.4	7.4
Proposed Corridor	Umatilla	FY UM-2	37	327204	5043587	Private	51.3	2.4	10.7
Proposed Corridor	Umatilla	FY UM-3	41	340233	5042764	Private	60.3	1.2	14.5
Proposed Corridor	Umatilla	FY UM-4	43	348527	5042765	Private	65.8	0.6	4.9
Proposed Corridor	Umatilla	FY UM-5	51	377697	5038446	Private	86.3	0.2	14.8
Proposed Corridor	Umatilla	FY UM-6	54	387473	5035026	Private	93.6	0.3	4.9
Proposed Corridor	Union	FY UN-1	60	399143	5023850	USFS	104.2	0.1	8.4
Proposed Corridor	Union	FY UN-2	66	410126	5015876	Private	113.3	0.2	11.7
Proposed Corridor	Union	FY UN-3	72	422046	5004467	Private	124.5	1.4	7.5
Proposed Corridor	Union	FY UN-4	77	427574	4993870	Private	132.1	0.9	21.0
Proposed Corridor	Baker	FY BA-1	89	440268	4967722	Private	150.4	0.6	9.4
Proposed Corridor	Baker	FY BA-2	92	440563	4961532	Private	157.4	1.7	11.8
Proposed Corridor	Baker	FY BA-3	102	442887	4951005	Private	163.2	0.6	14.6
Proposed Corridor	Baker	FY BA-4	104	451855	4947761	Private	168.9	0.2	13.3
Proposed Corridor	Baker	FY BA-5	113	470700	4928117	Private	187.4	0.1	7.0
Proposed Corridor	Baker	FY BA-6	116	473640	4921340	Private	192.3	0.1	0.9
Proposed Corridor	Malheur	FY MA-1	131	455793	4900988	Private	213.2	1.3	12.5
Proposed Corridor	Malheur	FY MA-2	142	461298	4875190	Private	233.5	0.1	9.1
Proposed Corridor	Malheur	FY MA-3	150	470397	4858762	Private	246.9	0.2	14.8
Proposed Corridor	Malheur	FY MA-4	155	478210	4855906	BLM	252.0	0.5	16.6
Proposed Corridor	Malheur	FY MA-5	158	481107	4848863	BLM	256.6	0.2	14.8
Proposed Corridor	Malheur	FY MA-6	160	486547	4843174	Private	261.5	0.5	13.5
Proposed Corridor	Malheur	FY MA-7	162	492739	4839633	Private	265.2	2.5	18.5
Proposed Corridor	Malheur	FY MA-8	163	492443	4835510	Private	267.6	1.5	11.9
Proposed Corridor	Malheur	FY MA-9	166	493683	4828776	BLM	271.9	0.5	14.3
Horn Butte Alternate	Morrow	FY MO-1	11	289178	5056635	Private	23.7	0.9	20.6
Horn Butte Alternate	Morrow	FY MO-2	14	302074	5052146	Private	30.8	2.0	10.7
Longhorn Alternate	Morrow	FY MO-2	14	302074	5052146	Private	18.4	3.2	10.7
Glass Hill Alternate	Union	FY UN-2	66	410126	5015876	Private	6.0	2.3	11.7
Flagstaff Alternate	Baker	FY BA-2	92	440563	4961532	Private	4.9	0.1	11.8

**Table C-17.** Fly Yards (continued)

<b>Corridor</b>	<b>County</b>	<b>Feature ID</b>	<b>Map<sup>1</sup></b>	<b>Easting<sup>2</sup></b>	<b>Northing<sup>2</sup></b>	<b>Land Ownership</b>	<b>Closest Milepost</b>	<b>Distance to Milepost (mi)</b>	<b>Construction Acres</b>
Flagstaff Alternate	Baker	FY BA-3	102	442887	4951005	Private	13.1	0.2	14.6
Willow Creek Alternate	Baker	FY BA-7	170	476153	4909017	BLM	1.5	0.3	35.0
Malheur S Alternate	Malheur	FY MA-3	150	470397	4858762	Private	3.1	2.5	14.8
Malheur S Alternate	Malheur	FY MA-10	191	466245	4856099	BLM	3.7	0.3	27.5
Malheur S Alternate	Malheur	FY MA-11	199	468066	4836890	BLM	15.3	1.1	21.6
Malheur S Alternate	Malheur	FY MA-12	202	479361	4838021	BLM	21.9	0.8	7.1
Malheur S Alternate	Malheur	FY MA-13	207	485609	4830509	BLM	27.9	0.9	14.8
Malheur S Alternate	Malheur	FY MA-14	209	492155	4828603	BLM	32.0	0.2	21.0
Double Mountain Alternate	Malheur	FY MA-3	150	470397	4858762	Private	2.1	1.3	14.8
Double Mountain Alternate	Malheur	FY MA-4	155	478210	4855906	BLM	7.4	0.5	16.6

<sup>1</sup> Attachment C-2 Map Set Reference<sup>2</sup> Centroid Coordinate, NAD\_1983\_UTM\_Zone\_11N, meters

### 3.4 Disturbance

Estimates for construction disturbances and land permanently required for operations are based on best professional judgment and experience with linear transmission projects. Components included in disturbance estimates are: transmission support structures; their associated construction work areas; pulling sites for tensioning conductors; access roads to each structure; multi-use areas; fly yards where helicopter construction would be used; communications stations; and substations. As part of the preliminary design and in order to aid quantification of effects, locations were assigned for all components of the Proposed Corridor and alternate corridor segments. Tables C-18 and C-19 show the estimated amount of land that will be disturbed during construction or required to be permanently converted to operational uses for the Proposed Corridor and alternate corridor segments and substations. In addition, Table C-20 details the approximate acres of forest clearing required for the Project. Facility locations are shown in Attachments C-1 and C-2.

**Table C-18.** Proposed Corridor—Acres of Land Disturbed during Construction and Operation

County/Project Component	Land Affected During Construction (acres) <sup>1</sup>	Land Permanently Converted to Operations (acres)
<b>Proposed Corridor – Morrow County</b>		
Substation – Grassland Expansion	4.0	2.9
Structure Work Area – SC 500 kV	317.1	12.8
New/Improved Access Road	227.3	132.8
Pulling and Tensioning	287.4	–
Multi-use Area	57.5	–
Fly Yard	43.3	–
Communication Station	0.2	0.1
Communication Power Line	0.5	0.5
<b>Morrow County Total</b>	<b>937.4</b>	<b>149.1</b>
<b>Proposed Corridor – Umatilla County</b>		
Structure Work Area - SC 500 kV	292.3	11.8
New/Improved Access Road	312.7	174.0
Pulling and Tensioning	342.7	–
Multi-use Area	92.4	–
Fly Yard	55.3	–
Communication Station	0.2	0.1
Communication Power Line	0.0	0.0
<b>Umatilla County Total</b>	<b>1,095.7</b>	<b>185.9</b>
<b>Proposed Corridor – Union County</b>		
Structure Work Area - SC 500 kV	258.1	10.4
New/Improved Access Road	225.1	132.1
Pulling and Tensioning	286.8	–
Multi-use Area	39.8	–
Fly Yard	48.6	–
Communication Station	0.2	0.1
Communication Power Line	2.8	2.8
<b>Union County Total</b>	<b>861.6</b>	<b>145.5</b>
<b>Proposed Corridor – Baker County</b>		
Structure Work Area - SC 500 kV	421.6	17.0
Structure Work Area - DC 138/69 kV	16.5	4.1
New/Improved Access Road	539.8	290.6

1 **Table C-18.** Proposed Corridor—Acres of Land Disturbed during Construction and  
 2 Operation (continued)

County/Project Component	Land Affected During Construction (acres) <sup>1</sup>	Land Permanently Converted to Operations (acres)
Pulling and Tensioning	436.5	—
Multi-use Area	58.0	—
Fly Yard	56.9	—
Communication Station	0.5	0.3
Communication Power Line	5.5	5.5
<b>Baker County Total</b>	<b>1,535.4</b>	<b>317.4</b>
<b>Proposed Corridor – Malheur County</b>		
Structure Work Area - SC 500 kV	448.0	18.0
New/Improved Access Road	486.5	271.9
Pulling and Tensioning	426.3	—
Multi-use Area	90.7	—
Fly Yard	126.1	—
Communication Station	0.7	0.4
Communication Power Line	3.7	3.7
<b>Malheur County Total</b>	<b>1,582.1</b>	<b>294.1</b>
<b>Total Proposed Corridor</b>		
Substation - Grassland	4.0	2.9
Structure Work Area - SC 500 kV	1,737.2	69.9
Structure Work Area - DC 138/69 kV	16.5	4.1
New/Improved Access Road	1,791.4	1,001.4
Pulling and Tensioning	1,779.8	—
Multi-use Area	338.5	—
Fly Yard	330.3	—
Communication Station	1.8	1.0
Communication Power Line	12.6	12.6
<b>Total Proposed Corridor</b>	<b>6,012.2</b>	<b>1,092.0</b>

3 <sup>1</sup> Acres disturbed during construction include acres permanently converted to operational use. The exact land  
 4 requirements would depend on the final detailed design of the transmission line, which is influenced by the terrain,  
 5 land use, and economics. Alignment options may also slightly increase or decrease these values.

6  
 7 **Table C-19.** Alternate Corridor Segments—Acres of Land Disturbed during  
 8 Construction and Operation

Alternate/Project Component	Land Affected During Construction (acres) <sup>1</sup>	Land Permanently Converted to Operations (acres)
<b>Horn Butte Alternate</b>		
Structure Work Area – SC 500 kV	191.0	7.7
New/Improved Access Road	123.1	73.0
Pulling and Tensioning	157.7	—
Multi-use Area	57.5	—
Fly Yard	31.3	—
Substation – Alternate Horn Butte	47.8	20.0
<b>Horn Butte Alternate Total</b>	<b>608.6</b>	<b>100.7</b>
<b>Longhorn Alternate</b>		
Structure Work Area – SC 500 kV	144.9	5.8
New/Improved Access Road	112.2	66.7

9

1 **Table C-19.** Alternate Corridor Segments—Acres of Land Disturbed during  
 2 Construction and Operation (continued)

Alternate/Project Component	Land Affected During Construction (acres) <sup>1</sup>	Land Permanently Converted to Operations (acres)
Pulling and Tensioning	113.2	–
Multi-use Area	100.9	–
Fly Yard	10.7	–
Substation – Alternate Longhorn Expansion	4.0	2.9
<b>Longhorn Alternate Total</b>	<b>486.0</b>	<b>75.4</b>
<b>Glass Hill Alternate</b>		
Structure Work Area – SC 500 kV	44.5	1.8
New/Improved Access Road	75.9	39.1
Pulling and Tensioning	49.1	–
Fly Yard	11.7	–
Communication Station	0.2	0.1
Communication Power Line	3.2	3.2
<b>Glass Hill Alternate Total</b>	<b>184.6</b>	<b>44.2</b>
<b>Flagstaff Alternate</b>		
Structure Work Area – SC 500 kV	97.4	3.9
New/Improved Access Road	94.1	53.0
Pulling and Tensioning	114.1	–
Multi-use Area	53.9	–
Fly Yard	26.4	–
Structure Work Area – SC 230 kV	3.1	0.5
<b>Flagstaff Alternate Total</b>	<b>388.8</b>	<b>57.4</b>
<b>Willow Creek Alternate</b>		
Structure Work Area – SC 500 kV	163.6	6.6
New/Improved Access Road	165.4	92.0
Pulling and Tensioning	158.3	–
Multi-use Area	49.7	–
Fly Yard	35.0	–
Communication Station	0.2	0.1
Communication Power Line	0.1	0.1
<b>Willow Creek Alternate Total</b>	<b>572.3</b>	<b>98.7</b>
<b>Malheur S Alternate</b>		
Structure Work Area – SC 500kV	210.9	8.5
New/Improved Access Road	324.6	172.5
Pulling and Tensioning	174.8	–
Multi-use Area	52.6	–
Fly Yard	106.8	–
Communication Station	0.5	0.3
Communication Power Line	4.2	4.2
<b>Malheur S Alternate Total</b>	<b>874.4</b>	<b>185.5</b>
<b>Double Mountain Alternate</b>		
Structure Work Area – SC 500kV	48.8	2.0
New/Improved Access Road	54.4	28.9
Pulling and Tensioning	40.9	–
Fly Yard	31.4	–
<b>Double Mountain Alternate Total</b>	<b>175.5</b>	<b>30.8</b>

3 <sup>1</sup> Acres disturbed during construction include acres permanently converted to operational use. The exact land  
 4 requirements would depend on the final detailed design of the transmission line, which is influenced by the terrain,  
 5 land use, and economics. Alignment options may also slightly increase or decrease these values.

1 **Table C-20. Estimated Forest Clearing for All Project Features**

County	Forest Clearing (acres)
Umatilla County	335
Union County	728
<b>Total</b>	<b>1,063</b>

2 Note: The operation area used to estimate forest clearing is a 250-foot corridor and  
3 all Project features outside of the centerline corridor and a 30-foot buffer for  
4 proposed new road. This estimate is approximate and preliminary in nature and is  
5 not intended to serve as a forest inventory. Impact estimate was based on field  
6 survey data (see Exhibit P, Attachment P-8).

### 7 3.5 Site Boundary

8 The Site Boundary is the area within which IPC will locate all facilities. The requested Site  
9 Boundary size varies based on the specific facility component as listed in Table C-21.

10 **Table C-21. Site Boundary by Project Component**

Component	Site Boundary Description
<b>Transmission Lines</b>	
Single-Circuit 500-kV Transmission Line	Mapped centerline plus 250-foot buffer along either side of centerline
Double-Circuit 138/69-kV Transmission Line <sup>1</sup>	Mapped centerline plus 250-foot buffer along either side of centerline
Single-Circuit Relocated 230-kV <sup>1</sup> Transmission Line	Mapped centerline plus 250-foot buffer along either side of centerline
<b>Substations<sup>2</sup></b>	
Proposed Grassland Substation Expansion	431-acre site (see Attachment C-1)
Alternate Longhorn Substation Expansion	239-acre site (see Attachment C-1)
Alternate Horn Butte Substation	136-acre site (see Attachment C-1)
<b>Access Roads</b>	
New Access Roads	Mapped road plus 100-foot buffer along either side of the road centerline
Existing Access Roads Needing Improvement	Mapped road plus 50-foot buffer along either side of the road centerline
Existing Roads that May Need Repairs	Mapped road plus 30-foot buffer either side of centerline
<b>Communication Stations</b>	
Communication Station	Mapped site (100 x 100 feet) plus 50-foot buffer
Distribution Power Lines to Communication Station	Mapped distribution line plus 50-foot buffer either side of centerline
Fiber Lines to Communication Station	Mapped fiber lines plus 50-foot buffer either side of centerline
<b>Temporary Facilities</b>	
Multi-use Area	Mapped site (see Table C-16 and Attachment C-2)
Fly Yard	Mapped site (see Table C-17 and Attachment C-2)
Pulling and Tensioning	Mapped site (see Attachment C-2)

11 <sup>1</sup> Includes several spans of single-circuit 138-kV transmission line to reconnect the rebuilt 138/69-kV transmission line

12 <sup>2</sup> The variability in Site Boundary area for each substation is based on uncertainty in how the transmission line will  
13 approach the substation operational boundary.

## 14 4.0 CONCLUSIONS

15 Exhibit C provides a detailed description of the location of the proposed Project, as required by  
16 OAR 345-021-0010(1)(c), paragraphs (A) and (B). Additional requirements of the Project Order

1 as to site boundary, and map scale are met or exceeded. The description provides sufficient  
 2 detail for members of the public, landowners, and reviewing agencies to make informed  
 3 comments.

## 4 **5.0 SUBMITTAL AND APPROVAL COMPLIANCE MATRICES**

5 Table C-22 provides cross references between the Exhibit submittal requirements of OAR 345-  
 6 021-0010 and where discussion can be found in the Exhibit. There is no Council Approval  
 7 Standard for Exhibit C.

8 **Table C-22.** Submittal Requirements Matrix

Requirement	Location
<b>OAR 345-021-0010(c)</b>	
(c) <b>Exhibit C.</b> Information about the location of the proposed facility, including:	
(A) A map or maps showing the proposed locations of the energy facility site, all related or supporting facility sites and all areas that might be temporarily disturbed during construction of the facility in relation to major roads, water bodies, cities and towns, important landmarks and topographic features, using a scale of 1 inch = 2000 feet or smaller when necessary to show detail; and	Section 3.1, Attachments C-1 and C-2
(B) A description of the location of the proposed energy facility site, the proposed site of each related or supporting facility and areas of temporary disturbance, including the approximate land area of each. If a proposed pipeline or transmission line is to follow an existing road, pipeline or transmission line, the applicant shall state to which side of the existing road, pipeline or transmission line the proposed facility will run, to the extent this is known;	Sections 3.3 and 3.4, Attachments C-1 and C-2
<b>Project Order Section VI(b) Comments</b>	
Maps included in Exhibit C should provide enough information for property owners potentially affected by the facility to determine whether their property is within or adjacent to the site. Maps should indicate the "site boundary" as defined in OAR 345-001-0010(53). Major roads should be named. The application for a site certificate should include identification of lands enrolled in the Conservation Reserve Program and lands currently zoned for Exclusive Farm Use. IPC should include maps drawn to a scale of 1 inch = 2,000 feet or smaller when necessary to show detail.	Attachments C-1 and C-2; Conservation Reserve Program lands are not available to be publicly disclosed. Exclusive Farm Use zoned lands are shown on Figure K-4 and Section 4.0 of Exhibit K
Maps should clearly show the boundaries of the proposed corridor within which the transmission line would be constructed, and should include familiar landmarks such as roads and existing power lines that reviewing agencies and affected landowners may use to readily identify the proposed corridor. Aerial photographs with all roads identified are helpful for public interpretation and review. All proposed access roads, temporary laydown areas, substations, and other related or supporting facilities and their site boundaries must be identified.	Attachments C-1 and C-2

9

1 **Table C-22.** Submittal Requirements Matrix (continued)

Requirement	Location
Exhibit C should contain a table listing the approximate land areas for both temporary disturbance associated with construction and permanent footprint of structures associated with facility operation for each type of disturbance or structure. This information should be consistent with information provided in other exhibits, including in particular Exhibit B, Exhibit P, and Exhibit W.	Tables C-18 and C-19

2

## 3 **6.0 RESPONSE TO COMMENTS FROM THE PUBLIC AND**

## 4 **REVIEWING AGENCIES**

5 There were no comments cited in the Project Order from public and reviewing agencies related  
6 to Exhibit C.

## 7 **7.0 REFERENCES**

- 8 BOR (Bureau of Reclamation). 2009. Owyhee Project. Available at  
9 [http://www.usbr.gov/projects/Project.jsp?proj\\_Name=Owyhee%20Project](http://www.usbr.gov/projects/Project.jsp?proj_Name=Owyhee%20Project). Accessed  
10 March 28, 2011.
- 11 CTUIR (Confederated Tribes of the Umatilla Indian Reservation). 2010. Comprehensive Plan of  
12 the Confederated Tribes of the Umatilla Indian Reservation. Available at  
13 <http://www.umatilla.nsn.us/Comprehensive%20Plan.pdf>. Accessed May 25, 2011.
- 14 Eastern Oregon University. No date. Rebarrow Research Forest. Available at  
15 <http://www.eou.edu/~kantell/rebarrow.html>. Accessed May 25, 2011.
- 16 ODFW (Oregon Department of Fish and Wildlife). 2008. Ladd Marsh Wildlife Management Area  
17 Management Plan. Draft. Oregon Department of Fish and Wildlife. January. Available  
18 online at: [http://www.dfw.state.or.us/agency/commission/minutes/  
19 08/01\\_January/Exhibit%20G\\_%204%20Ladd%20Marsh.pdf](http://www.dfw.state.or.us/agency/commission/minutes/08/01_January/Exhibit%20G_%204%20Ladd%20Marsh.pdf)
- 20 OPRD (Oregon Parks and Recreation Department). 2011a. Blue Mountain Forest State Scenic  
21 Corridor [Internet]. Available online at: [http://www.oregonstateparks.org/park\\_237.php](http://www.oregonstateparks.org/park_237.php)
- 22 OPRD. 2011b. Hilgard Junction State Park [Internet]. Available online at:  
23 [http://www.oregonstateparks.org/park\\_20.php](http://www.oregonstateparks.org/park_20.php)
- 24 U.S. Navy. 2010. Naval Weapons Systems Training Facility Boardman Environmental Impact  
25 Statement [Internet]. Available online at: <http://nwstfboardmaneis.com/Home.aspx>

**ATTACHMENT C-1**  
**PROPOSED AND ALTERNATE SUBSTATION LOCATIONS**

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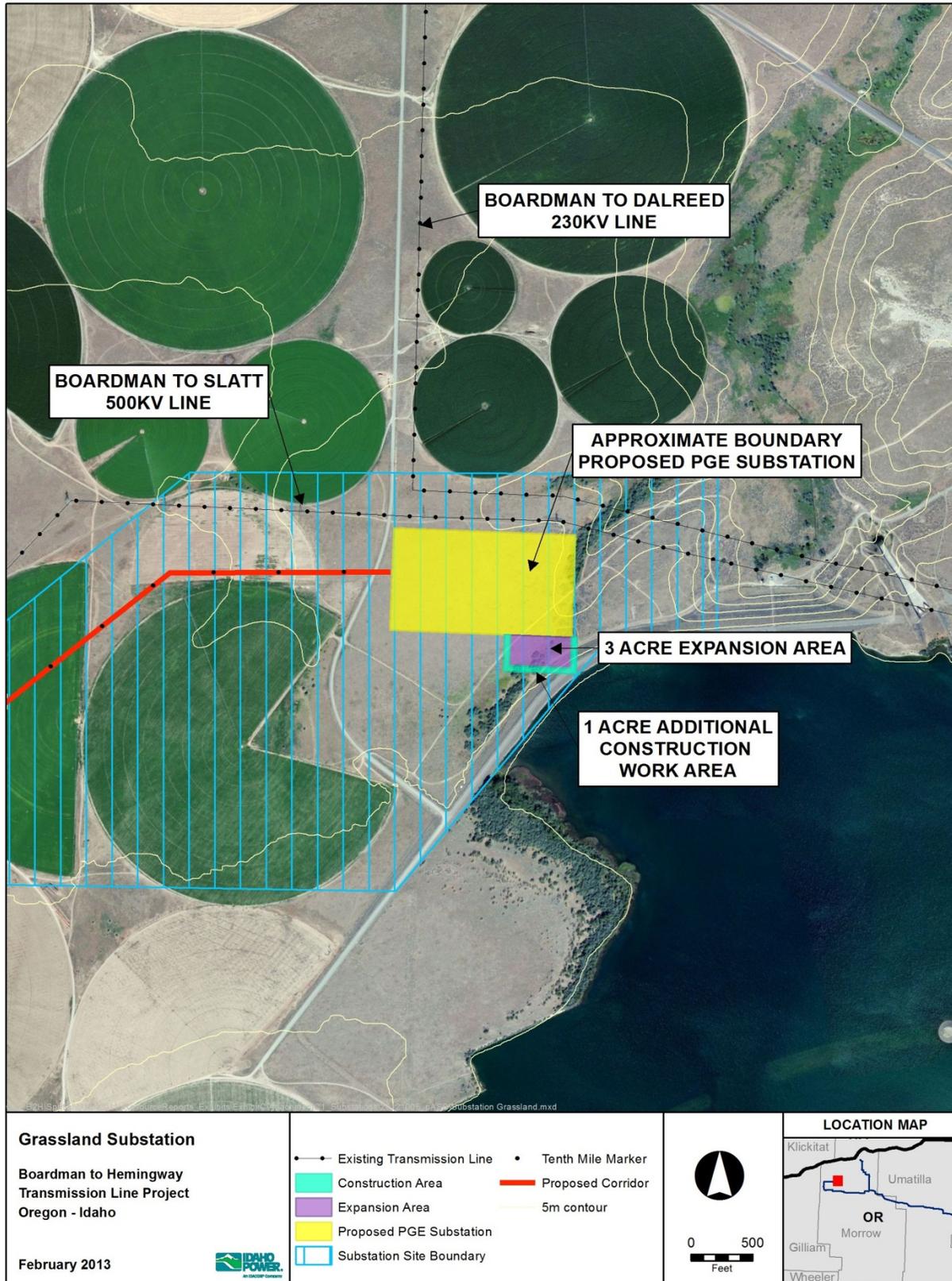


Figure C-1-1. Proposed Grassland Substation Expansion

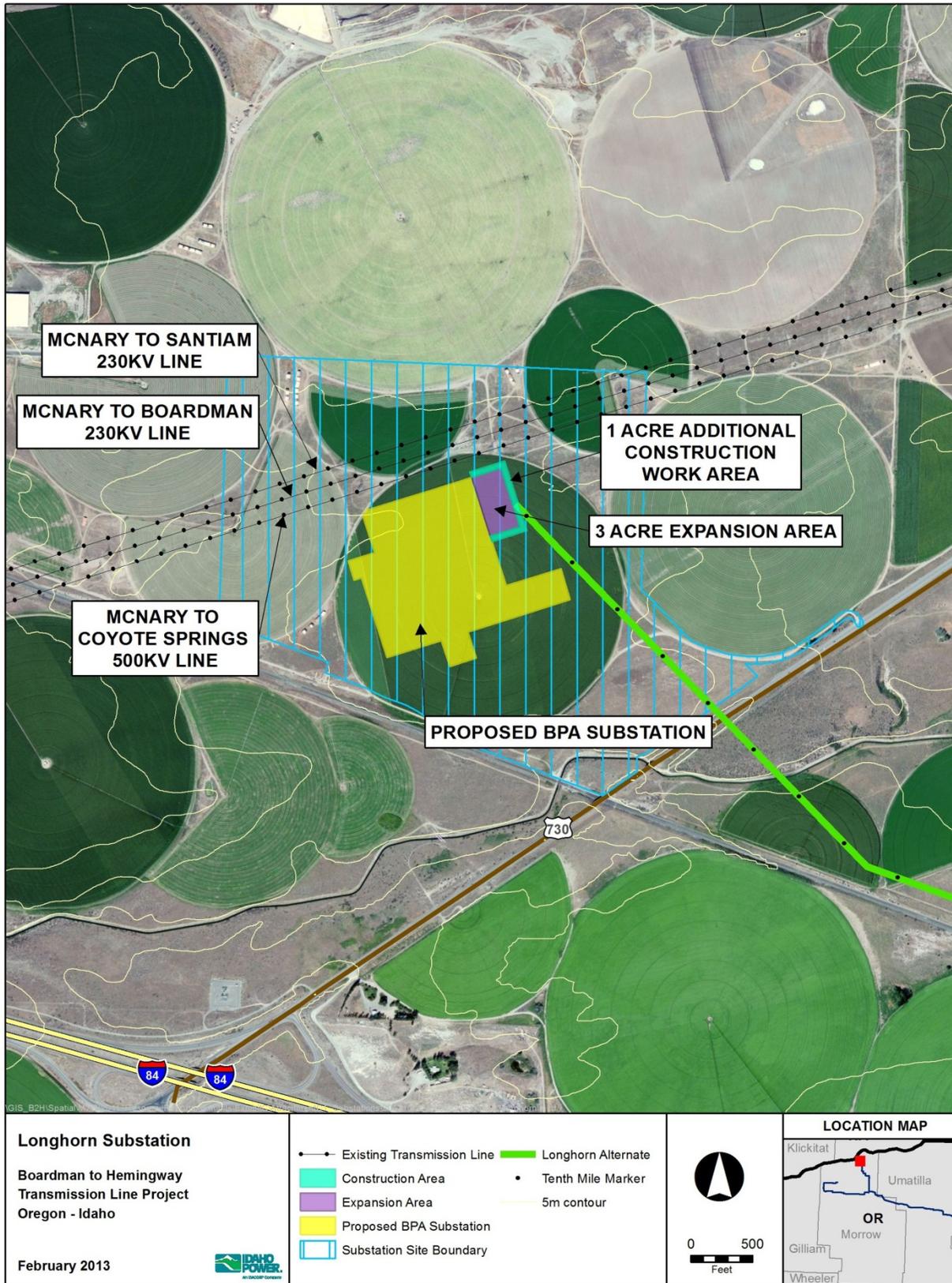


Figure C-1-2. Alternate Longhorn Substation Expansion

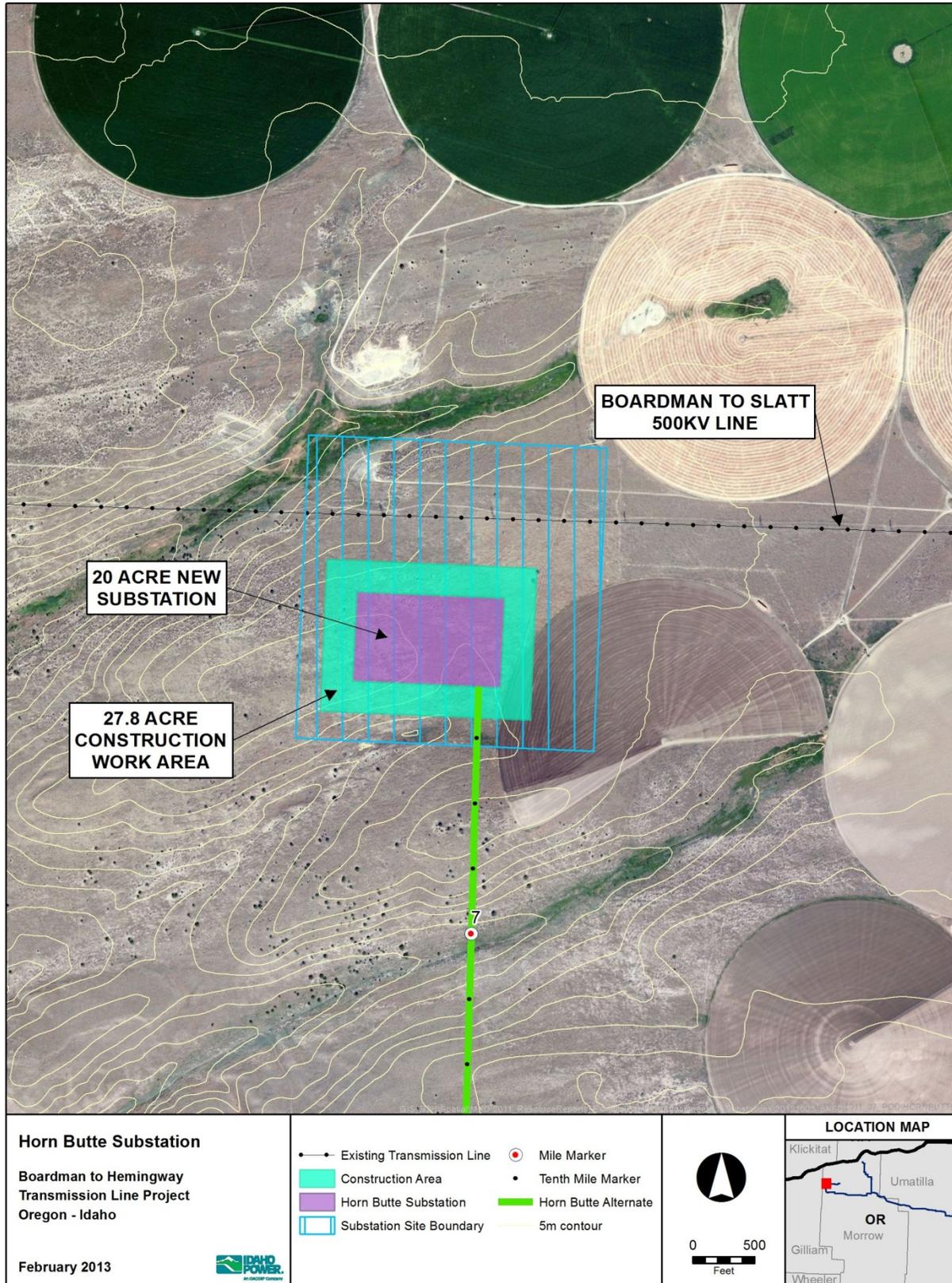


Figure C-1-3. Alternate Horn Butte Substation