PACIFICORP
ENVIRONMENTAL ASSESSMENT
OR-056-03-104

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PACIFICORP

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1.1 INTRODUCTION

This Environmental Assessment (EA) has been prepared for the Bureau of Land Management's (BLM) Prineville District Office for the proposed granting of three rights-of-way (ROW) across BLM managed lands to a destination resort, The Resort at Pronghorn (herein referred to as the Resort). These ROWs would allow for utility services to a private land parcel located in Township16S, Range13E, Section 16, owned by High Desert Development Company, LLC (HDDP), shown in Figure 1. An EA is a site-specific analysis of potential impacts that could result with the implementation of a proposed action or alternatives to the proposed action. This EA will assist the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. "Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a "Finding of No Significant Impact" (FONSI). A FONSI is a document that briefly presents the reasons why implementation of the proposed actions would not result in "significant" environmental impacts (effects) beyond those already addressed in the Brothers / La Pine Resource Management Plan (1989). If the decision maker determines that this project has "significant" impacts following the analysis in the EA, then an EIS would be prepared for the project. A Decision Record (DR) may be signed following public comment on the EA to document the decision.

Changes from the Previous EA

An Environmental Assessment (EA) of the proposed project (EA OR-056-02-006) was prepared by the Prineville BLM Deschutes Resource Area in January of 2002, followed by a Decision Record granting the proponent ROWs as described in Alternative A. A FONSI was also prepared. In the course of implementation of the utility services, Pacific Power advised the proponent, HDDP, that the winding nature of the existing dirt road would make the installation of the below ground utilities (as specified under the EA) impractical and costly. Furthermore, assumptions regarding impacts to vegetation during construction of overhead utilities changed with additional information provided to the proponent by Pacific Power and URS Corporation, an environmental consulting firm retained by the proponent. Because of anticipated installation difficulties for the placement of below ground utilities combined with revised information regarding impacts to vegetation for overhead utilities, an additional EA considering these factors was initiated.

The purpose of this EA is to examine the environmental effects relating to the granting of a right of way for the placement of dry utilities to the resort, including power, cable, and telephone service. This EA examines three alternatives to supply utilities to the Resort (See Section 2.0).

1.2 BACKGROUND

1.2.1 The Resort at Pronghorn Proposal

The Resort at Pronghorn is proposing the development of the private land parcel in the following manner:

- Approximately 220 acres would become managed grass land or golf course, which includes multiple water features, juniper and rock outcroppings;
- Approximately 75 acres would be developed to provide residential buildings and driveways;
- Approximately 15 acres would be developed to provide roads and paved areas; and
- Approximately 335 acres would be retained in native condition.

Full buildout of the development is expected to occur within 20 to 25 years (50 percent buildout within 7 to 10 years). In the event that full development occurs, the resort could have up to 700 dwelling units with a peak season projected population of approximately 2,000 people.

1.2.2 Oregon State and Deschutes County Land Use and Planning

The applicant's property is zoned by Deschutes County for destination resort development. Deschutes County adopted a destination resort ordinance and mapped the lands available in the County for destination resort development in the early 1990s.

The destination resort overlay zone was established in 1992, following a complex public process to determine which lands in Deschutes County were best suited for destination resort development. Development of the proposed Resort at Pronghorn (located in T.16S., R.13 E., Section 16, Willamette Meridian, Oregon) conforms to the use intended by Deschutes County's present overlay zone. The process that established the overlay zone was developed to meet Oregon Statewide Planning Goal 8, which establishes procedures for siting destination resorts in Oregon. In July 1989, the Oregon Department of Land Conservation and Development issued a guide to Statewide Planning Goal 8's procedures and requirements for siting destination resorts. This guide states:

"*The State supports siting new resorts. New resorts are an appropriate way to expand the State's economy. Property sited in planned resorts can be compatible with the other objectives of Oregon's Planning Program. This includes protecting highly valuable farm and forest lands and promoting efficient growth in urban and rural areas…State law and Statewide Planning Goal 8 implement this policy in two ways: First, by defining what qualifies as a destination resort; and second, by identifying the lands that are eligible for resort development. These rules are precisely written so resort developers and the public will know ahead of time what lands will qualify and exactly what can be built.*"

Deschutes County Zoning, Title 18, (10/1998) states:

"*The purpose of the DR Zone is to establish a mechanism for siting destination resorts to ensure compliance with LCDC Goal 8 and the county Comprehensive Plan. The destination resort designation is intended to identify land areas which are available for the siting of destination resorts, but which will only be developed if consistent with the purpose and intent of this chapter and Goal 8. The DR Zone is an overlay zone. The DR Zone is intended to provide for properly designed and sited destination resort facilities, which enhance and diversify the recreational opportunities and the economy of Deschutes County. The DR Zone will ensure resort development that compliments the natural and cultural attractiveness of the area without significant adverse effect on commercial farming and forestry, environmental and natural features, cultural and historic resources and their settings and other significant resources.*"

To satisfy both the State and County procedures for the development of a destination resort, the developer participated in a pre-application conference with the Deschutes County Planning staff, followed by the filing of the Conceptual Master Plan application. The burden of proof statement for the application included a notebook of reports and exhibits to address criteria in the Deschutes County land use code. Deschutes County sent written notices to approximately 75 property owners in the vicinity of the proposed resort and published a notice of the public hearing for the Conceptual Master Plan in the Bend Bulletin. In addition, a proposed land use action sign was posted on the property. The Deschutes County land use process included a description of the pending BLM application for access and utility ROWs.

Deschutes County conducted a public hearing on December 14, 2000. Following the hearing, written testimony was accepted from interested parties for an additional 30 days. Deschutes County approved the Conceptual Master Plan application in a decision dated March 5, 2001. Deschutes County upheld the Conceptual Master Plan approval in an appeal proceeding dated June 13, 2001 (Deschutes County Decision, file No. CU-00-118, available at the BLM office in Prineville.)

Deschutes County subsequently granted land use approval for the Final Master Plan for the proposed resort on May 22, 2002 (file no. FN-02-1). Deschutes County also approved site plans and tentative plans for initial resort development. Additional Deschutes County land use procedures will be required for all major components or phases of the proposed resort.

1.2.3 Deschutes County Requirements

Deschutes County has no relevant requirements pertaining to the method of utility siting.

1.2.4 Fire Protection

The Redmond Fire Department would provide Fire protection services to the Resort. The Redmond Fire Department requires primary access and a second emergency access (3/22/2001

Redmond Fire Marshall Correspondence at the BLM office) for The Resort at Pronghorn. These accesses were approved pursuant to EA-OR-056-02-006 and the associated FONSI and Decision Record. Fire protection would include water lines and fire hydrants within the Resort.

1.2.5 Utility Service

Deschutes County Land Development Code and the Rural Fire Protection District establish standards for access and general requirements for utility service. The Oregon Health Division and ODEQ also stipulate specific requirements for sewer and water service. These standards are summarized in the land use decision (Deschutes County Decision, file no. CU-00-118, available at the BLM office in Prineville). The existing dirt road leading from Highway 97 east to the Resort meets Pacific Power's access requirements for utility construction and maintenance without further improvement.

1.3 PROPOSED ACTION

PacifiCorp, QWest and Bend Cable are requesting a ROW across approximately 3.0 miles of BLM managed land for the siting of power, telephone, and cable service (utilities) to private lands owned by HDDP, for development of the Resort at Pronghorn, located in Township 16 S, Range 13 E, Section 16, Willamette Meridian, Oregon. The proposed action differs from the alternatives presented within the previous EA in order to include an assessment of impacts of above ground (aerial) utility placement.

1.4 PURPOSE (AND LIST OF OBJECTIVES)

The purpose of this project is to provide requested ROWs for utility services and associated vehicular access to The Resort at Pronghorn's private land parcel surrounded by BLM managed land that would allow for the reasonable and enjoyable use of the private land parcel while complying with the Brothers/La Pine Resource Management Plan. To comply with the Resource Management Plan, the proposed action would incorporate the following objectives:

- Limit the fragmentation of wildlife habitat on BLM managed lands that may be caused by the ROWs.
- Reduce disturbance to soils and vegetation on BLM managed land and limit the potential for the invasion of noxious weeds.
- Maintain current recreational uses of the BLM managed land and reduce the potential for negative influences on the enjoyment of the BLM managed land.
- Maintain or increase public safety on BLM managed land.
- Use existing ROW corridors where possible.
- Limit the potential impact to cultural resources.

- Limit impacts to and conflicts with existing permitted uses of the BLM managed land, including grazing and military activities.

1.5 NEED

The need for this proposed action is to respond to a requested ROW to The Resort at Pronghorn's privately-owned property. The BLM has a need to comply with the BLM policy to provide requested ROWs for private land parcels surrounded by BLM managed lands that will allow the reasonable and enjoyable use of the private land parcel (BLM Manual 2800.06 (D)). The Prineville District Deschutes Resource Area has a need to comply with the Brothers / La Pine Resource Management Plan Record of Decision regarding the granting of ROWs (Brothers / La Pine ROD, 1989, pg. 29, 33-34):

> "*…actions approved will be consistent with the objectives of the RMP(pg. 29).*"
>
> *"Each right-of way shall be limited to the area necessary for operation and maintenance, will consider the protection of public safety and will do no unnecessary damage to the environment (pg. 33)."*
>
> *"Each right-of-way shall contain terms and conditions requiring compliance with environmental quality standards applicable to Federal or State law (pg. 33)."*

1.6 ISSUES

1.6.1 Vegetation

All alternatives would impact vegetation within the granted ROWs, including the removal of juniper trees. Soil disturbance and compaction associated with construction of the utilities and access during maintenance may allow for noxious weed encroachment.

1.6.2 Wildlife

Construction of the utilities under all alternatives could have temporary disturbance on wildlife residing within the area, and may potentially displace wildlife nesting within the immediate vicinity of the utilities.

1.6.3 Recreation

Short-term and long-term impacts to recreational activity in the area include both construction-related (short-term) impacts to recreational resources and impacts to these resources from operation of the facility caused through BLM issuance of the ROW grants.

1.6.4 Visual Resources

The degree of contrast with the characteristic landscape introduced by project features (e.g., power poles, conductors, vaults, etc.) and vegetation or landform alterations required for project construction and maintenance.

1.6.5 Cultural Resources

Extensive excavation for the placement of below ground utilities may affect historic or prehistoric properties directly through construction activities.

1.6.6 County and State Requirements

Although the existing ROW would accommodate power, telephone, and television service, or dry utilities, it does not accommodate sewer, irrigation water, natural gas, and domestic water, otherwise known as wet utilities. Wet utilities (facilities) complying to state standards, sewer and water service have been built and delivered from the City of Bend to the south of the private land parcel. This ROW was addressed within EA #OR-056-02-006.

1.6.7 Existing Permittee Use

Livestock grazing permits are authorized on BLM managed lands in the area. BLM's grazing permits allow "open range" livestock grazing on public land east of Highway 97. The increased human use of the area would potentially increase the potential for any livestock gates being left open, restrictions on management practices such as weed control, burning, and predator control, loss of livestock from vehicle accidents, and increased liability (Huntington and Hopkins, 1996).

Additionally, Pacific Power will obtain a Burlington Northern Railroad crossing permit.

1.7 CONFORMANCE AND CONSISTENCY

1.7.1 Rights of Way (BLM Manual 2800.06(D))

BLM Manual 2800.06 (D) states that it is the policy of the BLM to: "*Allow owners of non-Federal lands surrounded by public land managed under FLPMA (Federal Land Policy and Management Act) a degree of access across public land which will provide for the reasonable use and enjoyment of the non-Federal land. Such access must conform to rules and regulations governing the administration of the public land; keep in mind, however, that the access necessary for the reasonable use and enjoyment of the non-Federal land cannot be denied.*"

1.7.2 Brothers/La Pine Resource Management Plan Record of Decision and Rangeland Program Summary (Prineville District, July 1989)

The Brothers/La Pine Resource Management Plan Record of Decision, which is the land use plan that covers the *BLM managed lands in the area where the ROWs are being applied for provides the following management direction for Rights of Way and Utility and Transportation Corridors (pg. 29 and pgs. 33-34):*

"…actions approved will be consistent with the objectives of the RMP."

"Each right-of way shall be limited to the area necessary for operation and maintenance, will consider the protection of public safety and will do no unnecessary damage to the environment."

"*Public lands will continue to be available for rights-of-way, including multiple use and single use utility/transportation corridor following existing routes, communication sites and roads."*

"All rights-of-way applications will be reviewed using the criteria of following existing corridors wherever practical and avoiding proliferation of separate rights-of-way…All designated areas of critical environmental concern and wilderness study areas will be considered right-of-way exclusion areas. Federally designated wild and scenic rivers, as well as rivers identified as eligible as potential wild and scenic rivers, will also be considered exclusion areas. All areas identified as having special status plant or animal species will be avoidance areas. Areas having high or sensitive visual qualities will be avoided or appropriate mitigation measures taken."

1.7.3 Existing Grazing Permits

The Resort at Pronghorn controls the grazing permit for the Crenshaw Allotment, which completely surrounds The Resort at Pronghorn property. The current permit has an active preference of 631 animal unit months (AUMs). Active preference is the maximum number of AUMs available each year. An AUM is the amount of forage (dry weight) consumed by one cow with a calf in one month. Other grazing permits existing in the area include the Pipeline, Hutton, Allen and Weigand allotments.

Two other grazing allotments exist within the project area for the proposed utility line. These are the Black Rock Allotment and the Sanowski Allotment, both of which are located east of US 97 in T 16 S, R 12 E, Section 13. The Sanowski Allotment has an active preference of 10 AUM. The Black Rock Allotment is not active.

1.7.4 Existing Military Permit

The Oregon Military Department has used this area for military training since before World War II. A Land Use Permit (OR 56312) was reissued to the Oregon Military Department (OMD) on February 2, 2001 for a period of three years. This permit allows OMD the use of 31,310+ acres of BLM managed lands in the vicinity of the Resort in Crook and Deschutes counties. The

purpose of the permit is for conducting military maneuvers. OMD needs to provide training in desert conditions to its soldiers and the BIAK Training Base is the only base in Oregon that provides such training. Some of the terms and conditions of the OMD permit are as follows:

- OMD cannot carry or use live ammunition,
- OMD must take reasonable precautions for the prevention of fire during and immediately after use, and shall take immediate action to suppress any fires caused by such use,
- OMD shall not construct permanent structures or improvements without prior approval,
- Military vehicles shall not run over or otherwise damage juniper trees,
- OMD shall maintain 500-foot buffer zones to Highway 126 and the Powell Butte Highway and ¼ mile buffer zones to all private lands, and
- OMD shall conduct rehabilitation on an annual basis on all disturbed land.

This Environmental Assessment presents three alternatives for the proposed construction of dry utilities (power, cable, and telephone) to The Resort at Pronghorn.

2.1 ALTERNATIVE A: NO ACTION

Under the No Action Alternative, the below ground utility option identified in EA OR-056-02-006 and granted under the subsequent Decision Record (OR-056-02-006) would be implemented (Figure 2).

Under Alternative A, the power, cable, and telephone utilities would be installed in a common trench underground between Highway 97 and the resort. These utilities would follow the existing developed roadbed included in the ROW grant (OR-49075) held by High Desert Development and connect to the private property. The previous owners of the property used this dirt road to access the property and never fully developed the access in the authorized ROW grant (OR-49075). The length of this ROW corridor would be approximately 3.0 miles (5.5 new acres of disturbance). Trenching for the placement of the power, cable, and telephone lines would occur primarily within the existing disturbed roadbed to limit disturbance to soil and vegetation, maintain wildlife habitat, and reduce the possibility of noxious weed invasions in the area. In addition to this section of new ROW, approximately 2.5 miles of existing power lines along the BNSF Railroad would be upgraded to connect the power line to the Deschutes substation on Pleasant Ridge Road.

Trench excavation is accomplished with drilling and blasting, a large truck mounted excavator, and dump trucks to convey bedding material and utility ducts. Smaller construction equipment such as dozer and rubber tired backhoe are commonly utilized for trench backfill. Alternatively, a trencher can be utilized in lieu of drilling, blasting, and the track mounted excavator. The excavated material from the trench would be side cast and stockpiled on the ground surface adjacent to the trench, while the remainder of trench construction is accomplished. The total disturbed cross section would be 16 to 17 feet wide, plus additional space required for construction equipment access, or approximately 20 feet wide throughout the corridor. Trees directly adjacent to the roadbed (those with limbs overhanging the road) would likely be removed.

For the purposes of this EA, the No Action Alternative is the alternative selected by BLM pursuant to EA # 0056-02-006 and the subsequent Decision Record. After the Decision Record was released, the proponent determined that due to the winding nature of the existing dirt road, installation of the below ground utilities (as specified under the EA) would be impractical and at excessive cost. Furthermore, assumptions regarding impacts to vegetation during construction of overhead utilities changed with additional information provided to the proponent by Pacific Power and URS Corporation. Because of anticipated installation difficulties for the placement of below ground utilities, higher than anticipated cost, and revised information regarding impacts to vegetation for overhead utilities, other alternatives are being considered for placement of the utilities.

2.2 COMMON TO ALL ALTERNATIVES

2.2.1 Burlington Northern Railroad ROW Upgrades

With regard to the existing Pacific Power overhead power lines along the Burlington Railroad (Links 1 through 4, Figures 2, 3 and 4), all poles would be raised to 65 feet. The power poles in this area are currently from 50 to 65 feet high. A 13 KV line would be installed underneath the existing power line.

This segment of power line originates at the Deschutes Substation about ½ mile north and east of the Deschutes Market Road junction with Highway 97, and ends at the road crossing in the center of section 7.

2.2.2 Wildlife Mitigation

In addition to the mitigation measures outlined in EA #OR-056-02-006 and the subsequent Wildlife Situation Report, additional mitigation measures would be applied to the alternatives outlined in this document. A minimum of 5.5 lineal miles (or twice the length of the above ground lines) of relic and/or illegal fencing would be removed or replaced with pronghorn antelope passable fencing within the Sections of BLM managed lands surrounding the Resort (Sections 8, 9, 10, 17, 15, 20, 21, 22, and 28). Priority of removal would be given to those fences that exclude or inhibit pronghorn antelope movement, particularly in or near the Sections of the North Unit Main Irrigation Canal which provides year-round water to resident wildlife. The removal and disposal of relic and/or illegal fencing and the removal of various illegal refuse dump sites would be coordinated with BLM.

It should be noted that these alternatives would be constructed utilizing guidance contained within the document titled, *Suggested Practices for Raptor Protection on Power Lines: the State of the Art in 1996* (Avian Power Line Interaction Committee. 1996. Suggested Practices for Raptor Protection on Power Lines: The State of the Art 1996. Edison Electric Institute and the Raptor Research Foundation. Washington, D.C.)

2.2.3 Recreation

To assist recreational users of BLM lands, signs would be posted at entrances to the BLM property and near areas of high construction activity to alert users to potential noise and safety hazards. All hazardous construction areas would be signed to temporarily restrict access to recreational use and advise recreational users.

2.2.4 Wildfire and Public Safety

During the construction of the utilities, all work would follow basic fire safety rules, as specified in the Central Oregon Fire Management Safety regulations.

2.2.5 Cultural Resources

An Area of Potential Effects (APE) for all the action alternatives was established in response to information provided by consulting parties. Consulting parties included representatives from the Deschutes County Historical Society, Archaeological Society of Central Oregon, Confederated Tribes of the Warm Springs Reservation, Burns Paiute Tribe, State Historic Preservation Office, Archaeological Investigations Northwest, Oregon Military Department, The Resort at Pronghorn, W & H Pacific, BLM, and members of the public with an interest in historic preservation (documentation on file at the BLM office in Prineville).

As a result of those consultations, the APE for cultural resources for the project area includes an area measuring 200 meters on each side of the proposed utility line corridors.

Cultural resource surveys were conducted within the APE in order to locate and document surface evidence of past human uses of the area. The majority of the APE was surveyed by Archaeological Investigations Northwest (AINW) in 2002; those areas not surveyed by AINW along the APE were previously surveyed by the BLM in 1998. Surveys did not result in the identification of significant cultural resources in the utility corridor APE.

2.2.6 Utility Construction Standards

2.2.6.1 Revegetation of Disturbed Areas

The applicant would hydroseed or hand seed all areas newly disturbed through construction of the utilities. The applicant would also reseed areas of ground significantly disturbed during maintenance activities such as removal or replacement of a section or pole of the utility line. Following disturbance, application of seed would occur as soon as possible between the established timeframes of October 1st and February 1st. The seed mixture for all sites would consist of species native to the Prineville District, at an application rate and species selection approved by BLM prior to application. All seed would be 100 percent pure live seed and certified weed-free. The applicant would provide BLM with a seed testing report provided by the nursery or distributor prior to broadcasting any seed. Over time, juniper may reestablish in these areas, and would be removed as necessary to maintain the facilities

2.2.6.2 Noxious Weed Suppression

The applicant would be required to suppress noxious weeds within the specified ROWs according to BLM standards for noxious weed suppression for a period of three years following

construction. The applicant would be required to use a licensed applicator for any herbicide application. Herbicide application rates would be approved by the BLM prior to use. All construction equipment would be required to be washed with, at minimum, a high pressure nozzle prior to arrival and departure on BLM managed lands.

2.2.6.3 Tree Removal

The applicant would mark all trees to be removed with flagging within the ROW limits for utility construction and contact BLM prior to cutting operations. The applicant would make the initial route selection and, at BLM's request, consider reasonable modifications to avoid removal of or impacts to old-growth juniper trees. Trees would be cut down to a stump height of no more than 8 inches, with all branches removed from the remaining stump. All snags or trees with potential nest cavities would be avoided if possible. Following reseeding, all cut trees would be scattered on disturbed BLM managed land within the utility ROWs, or other areas approved by BLM. Where possible, cut trees would be used to camouflage disturbed sites either on or adjacent to the constructed ROW, or sold as firewood to the public by BLM.

2.2.6.4 Hazardous Materials

Under all action alternatives the following ROW stipulations would apply for hazardous materials:

(1) Construction sites would be maintained in a sanitary condition at all times: waste materials at those sites would be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded material including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes and equipment.

(2) A litter-policing program would be implemented by the Resort, and approved of in writing by the authorized officer, which covers all roads and sites associated with the ROW.

(3) The Resort would comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, holder(s) would comply with the Toxic Substances Control Act of 197, as amended (15 U.S.C. 2601, et seq.) with regard to any toxic substances that are used, generated by or stored on the ROW or on facilities authorized under the ROW grants. (See 40 CFR, part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.)

(4) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of reportable quantity established by 40 CFR, part 117 would be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State Government as a result of a reportable release or spill of any toxic substances would be

furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

2.2.6.6 Road Access

Access to this utility line during construction and maintenance activities would occur on the existing dirt road.

2.2.6.7 Telephone Lines

QWest will provide telephone service to The Resort at Pronghorn from it's Redmond telephone exchange. QWest will use it's existing rights of way and existing conduit to cross underneath Highway 97. QWest will obtain a permit from Oregon Department of Transporatation for the crossing of Highway 97. From Highway 97 to the BNSF Railroad, the telephone line will be installed in a conduit in a 30" deep by 1' wide trench within the existing access road. From the BNSF Railroad to The Resort at Pronghorn, the telephone line would be installed in the same manner as the other utilities as described in the alternatives in this document.

2.3 ALTERNATIVE B: BELOW GROUND

Power, Cable, and Telephone Route: Below Ground Lines

Under Alternative B the below ground power, telephone, and cable lines would be installed in a common underground trench between Highway 97 east towards the Resort (Figure 3). These utilities would generally follow the developed road bed, however, due to the winding nature of the existing dirt road the trench would extend a more straight route adjacent to the existing road. The length of this ROW corridor would be approximately 3.0 miles (6.66 acres of new disturbance). As part of the construction of the utilities trench, 32 vaults (see Appendix B) would be installed directly over the utility lines. These concrete vaults would be approximately 6x12x8 feet, rising approximately 18 inches above the ground and would include two manhole covers per vault (see Appendix B).

Trench excavation is accomplished with drilling and blasting, a large truck mounted excavator, and dump trucks to convey bedding material and utility ducts. Smaller construction equipment such as dozer and rubber tired backhoe are commonly utilized for trench backfill. Alternatively, a trencher can be utilized in lieu of drilling, blasting, and the track mounted excavator. The excavated material from the trench would be side cast and stockpiled on the ground surface adjacent to the trench, while the remainder of trench construction is accomplished. The total disturbed cross section would be approximately 20 feet wide throughout the corridor, with all trees and other vegetation removed including 113 juniper trees. Currently the existing width of the road varies between 6 to 12 feet wide. Over time, juniper may reestablish in these areas, and would be removed as necessary to maintain the facilities.

2.4 ALTERNATIVE C: ABOVE GROUND (PROPOSED ACTION ALTERNATIVE)

Power, Cable, and Telephone Route: Above Ground Lines

Under Alternative C, power, telephone, and cable lines would be strung above ground on 43 foot utility poles (see Appendix A for utility pole diagram). This new above ground utility line would connect to the existing above ground line along the BNSF Railroad (upgraded as described in Section 2.2.1) and route utilities to the east across BLM managed land to a point 300 feet west of the resort property (where the utilities would transition from above ground to below ground). The utility line would closely follow the existing developed roadbed (see Figure 4 for Alternative C location). These poles are a little more than ½ the height of the BPA transmission line structures (the BPA poles are 75 feet; the proposed power poles are 43 feet). Each power pole will be supported by two guy wires strung to an anchor and a 1" diameter anchor rod. The anchor rods would be buried in a hole 8 to 10 feet deep. Each end pole and angle pole will be supported by four guy wires, anchored in the same manner.

For the under ground portion (i.e., 300-feet west of the resort property) of this alternative, two under ground vaults would be required. Some deviation from the existing roadbed would be necessary due to the winding nature of the road. No road improvements would be made, and no new permanent roads would be created. The utilities would run in a new corridor west of and adjacent to the existing BPA powerlines. The total length of this corridor would be approximately 3.0 miles, with a utility pole every 300 feet, with approximately 49 poles. Average width of construction disturbance would be ten feet for the length of the utility line, for a total of 3.33 acres of both temporary and permanent soil disturbance. Construction of Alternative C along the existing BPA corridor is not anticipated to increase the clearing of juniper trees in excess of what has been reported in this document. Utility company workers would be required to drive directly underneath the lines during construction in order to install the power, phone and cable lines; however, the existing dirt road would serve as the primary access for the remainder of construction and maintenance activities.

2.5 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER STUDY

Two additional alternatives, discussed below, were considered but dismissed after initial study.

A utility corridor was considered within the existing right of way granted to HDDP running east/west along Sections 8 and 17 until reaching the BPA lines (Figure 5) under EA# 056-02-006. The option of both above and below ground utilities were explored within this right of way. This alternative was dismissed due to several factors. No roads are present within the present ROW, and creating new roads on BLM land is not within the objectives set forth in the Brother's La Pine Resource Management Plan. Creating a new dirt road would allow for noxious weed encroachment in this otherwise undisturbed section of BLM land. The majority of the juniper trees within this area are considered pre-settlement junipers, many with cavities that could

potentially house cavity nesting species. Installing either below ground or above ground utilities would require the removal or trimming of many of these trees. For these reasons, this route was dismissed as a viable alternative for the placement of utilities.

Another overhead alternative was considered in which the utility corridor would run east from the Pacific Power substation at Deschutes Junction. This route would follow existing roads from the Deschutes Substation along Highway 97, through the north end of sections 25, 29, and 30, heading north along the western boundary of section 21 to the Resort. This alternative presented the least cost alternative to HDDP in order to provide utilities to the resort. However, this alternative was discarded for several reasons. The vegetation community in this area is largely undisturbed due to limited access and primitive roads. Overhead utility lines would likely be visible from the Boonesborough neighborhood community, and to recreationists within the area. Finally, the route would require issuance of a new right of way, contrary to established direction in the Brothers Area Resource Management Plan which directs the use of existing ROW corridors wherever possible

3.1 LOCATION AND TOPOGRAPHY

The area analyzed in this document extends from the Resort west to Highway 97. The topography is generally flat. Volcanic ridges and rocky outcrops are common, but they seldom exceed 20 feet in height. The overall elevation difference between the Bend Airport and the Redmond Airport is approximately 400 feet, over a distance of approximately 11 miles, which calculates to an average grade of less than one percent.

3.2 SOILS

The public land soil resources in and around The Resort at Pronghorn property were identified and mapped as part of BLM's Soil Vegetation Inventory Method (SVIM) in 1980. These units were incorporated into the U.S. Dept of Agriculture Natural Resources Conservation Service's (NRCS) Upper Deschutes Soil Survey (1992). This survey identified the two major mapping units in this area. The first unit covers The Resort at Pronghorn property and the surrounding public lands. This unit is mapped as: Stukel-Rock outcrop-Deschutes complex, dry, 0 to 8 percent slopes. The unit is about 35 percent Stukel soil, 35 percent rock outcrop, and 25 percent Deschutes soil. The area about a mile south of the silt pond and south of The Resort at Pronghorn property, is mapped as: Gosney-Rock outcrop-Deskamp complex dry, 0 to 15 percent slopes. This unit consists of 59 percent Gosney soils, 25 percent Rock outcrop, and 20 percent Deskamp soils.

The Stukel soil is a well-drained sandy loam (0 to 4 inches) over a cobbly sandy loam (4 to 11 inches) over a gravelly sandy loam (11- to 18 inches) over basalt. Depth to bedrock is 10 to 20 inches. The Deschutes soil is a well-drained sandy loam 0 to 17 inches over a light grayish brown sandy loam 17 to 31 inches over basalt. Depth to bedrock is 20 to 40 inches. The Stukel soils were typed to a Lava Blisters 10-12 PZ (Precipitation Zone) and the Deschutes to a Pumice Flat 10 -12 PZ range site.

The Gosney soil is a somewhat excessively drained stony loamy sand (0 to 2 inches) grayish brown and pale brown loamy sand (2 to14 inches) over basalt. Depth to bedrock is 10 to 20 inches. The Deskamp soil is a somewhat excessively drained brown loamy sand (0 to 17 inches) and a pale brown gravelly loamy sand (17 to 32 inches) over basalt. Depth to bedrock is 20 to 40 inches. The Gosney soils were typed to a Lava Blisters 8-10 PZ and the Deskamp to a Pumice Flat 8-10 PZ range site.

3.3 VEGETATION

3.3.1 Vegetation

The site occurs within the western juniper vegetation zone. Common native plants include juniper trees, big sagebrush, bitterbrush, and green and gray rabbitbrush, with an understory of

bluebunch wheatgrass, Thurber's and western needlegrasses, and bottlebrush squirreltail. Cheatgrass, an invasive non-native annual grass, is also common. The juniper/sagebrush/bunch grass plant community dominates the site, with plant species that are both structurally and floristically typical of vegetation of the community. Juniper trees occur at an average density of 17 trees per acre at maturity.

No prime or unique farmland (7 USC 4201) would be affected by the development of these ROW corridors.

3.3.2 Special Status Plants

No special status plants were expected to be on the site and none were found during the 2003 site reconnaissance or during prior surveys conducted by BLM in 2001. An inquiry was made to the Oregon Natural Heritage Information Center on July 2, 2003 for presence within a one-mile radius of the project location, and no known special status plant species were found.

3.3.3 Noxious Weeds

Currently there are only a few, scattered noxious weed sites in the general area. The primary species are spotted knapweed, diffuse knapweed, and an occasional Dalmatian toadflax. Other weedy species, which are not classified as noxious, include annual mustards, cheatgrass, mullein, and teasel.

The area surrounding the proposed project is periodically monitored for the existence of noxious weeds and where infestations are found and treatment is warranted, control activities are initiated by the BLM. These monitoring and treatment activities would continue on BLM managed lands regardless of the development of these ROWs.

3.4 WATER QUALITY AND QUANTITY

There are no natural streams, lakes, or natural water bodies of any kind within several miles of the proposed ROWs. No floodplains (Executive Order 11988; 10 CFR 1022) or wetlands (Executive Order 11990; 10 CFR 1022) exist within the project area. No surface erosion or other signs of surface runoff are apparent within the proposed ROWs. The North Unit Main Canal runs within one-half mile of the proposed resort property.

The groundwater aquifer underlying the project area is derived primarily from precipitation that falls in the Cascade Range located to the west of the project area. Groundwater that originates in the Cascade Range is the major source of streamflow for the Lower Deschutes, Lower Crooked River, and Lower Squaw Creek (Gannett, et al, 2001).

3.5 WILDLIFE

The proposed project area provides habitat for nearly 100 species of vertebrates, including mule deer, black-tailed jackrabbits, and western fence lizards (Styskel 2001). Pronghorn antelope also use this habitat and, as a result of the canal/silt pond, one resident herd of 50-60 pronghorn antelope occupies the area year round (George 11/29/2001, Ferry, 11/28/2001).

3.5.1 Special Status Wildlife Species

The only federally listed threatened, endangered, proposed, or candidate species (CEQ 1508.27 9[b] [9]) occurring within the project area is the northern bald eagle (threatened). This area does not contain habitat preferred by the bald eagle, and there are no known nest sites or key foraging habitat located near (within 1.0 mile) any of the proposed transportation or utility corridors. No BLM records exist of bald eagle sightings in the proposed project site (Hanf 2001), although the possibility exists of observing a winter migrant passing through the analysis area.

Twelve BLM designated wildlife species inhabit, or have the potential to occur within the area of influence of The Resort at Pronghorn utility ROW (Table 3-1). Although many of these species are considered incidental to juniper woodlands, three species have some potential to be residents. The northern pygmy owl has been known to make use of juniper stands during the winter although no sightings have been reported in or near the project area. The northern goshawk, normally common to coniferous forests, has been reported occasionally nesting in juniper woodlands. No active goshawk nest sites have been located in the project area. The western burrowing owl has been documented nesting along roadsides in sagebrush-steppe ecosystems and in the transition area between sagebrush-steppe and juniper woodlands. However, there are no known nests in the project area.

Table 3-1 Special Status Wildlife Species Occurring or Potentially Occurring within the Project Area*

Common Name	Scientific Name	Federal/Bureau Status	Presence in Project Area	Effect Determination
Northern bald eagle	*Haliateetus leucocephalus*	Threatened	Potential	No effect because suitable habitat would not be affected and disturbance would not occur.
Northern goshawk	*Accipiter gentilis*	Sensitive	Potential	Impacts would not contribute to the need to list this species. See Wildlife Situation Report (Appendix C).
Northern pygmy owl	*Glaucidium gnoma*	Sensitive	Potential	Impacts would not contribute to the need to list this species. See Wildlife Situation Report

Common Name	Scientific Name	Federal/Bureau Status	Presence in Project Area	Effect Determination
				(Appendix C).
Western burrowing owl	*Athene cunicularia hypugea*	Sensitive	Potential	Impacts would not contribute to the need to list this species. See Wildlife Situation Report (Appendix C).
Oregon Spotted Frog	*Rana pretiosa*	Fed. Candidate	Unlikely	No effect because no suitable habitat is present.
Ferruginous hawk	*Buteo regalis*	Sensitive	Potential	No effect because their habitat is not affected.
American peregrine falcon	*Falco peregrinus anatum*	Sensitive	Potential	No effect because their habitat is not affected.
Greater sage grouse	*Centrocercus urphasianus phaios*	Sensitive	Potential	No effect because their habitat is not affected.
Pygmy nuthatch	*Sitta pygmaea*	Sensitive	Confirmed	No effect because their habitat is not affected.
Yellow rail	*Coturnicops novebroacensis*	Sensitive	Confirmed	No effect because their habitat is not affected.
Townsend's Big-eared bat	*Corynorhinus townsendii*	Sensitive	Potential	No effect because their habitat is not affected.
Bufflehead	*Bucephala albeola*	Assessment	Confirmed	No effect because their habitat is not affected.
Pygmy rabbit	*Brachylagus idahoensis*	Assessment	Potential	No effect because their habitat is not affected.

*includes species migrating through, seasonal users or visitors

Presence Key (From Reiher et al. 2000, Styskel, E. B.E. The Resort at Pronghorn, 2001): P – Potentially occurring, C – Confirmed, U – Unlikely
Source: ONHP 2001/Csuti et al. 2001, Atlas of Oregon Wildlife

3.5.2 Big Game

In the area directly south of Redmond, and between Highway 97 and the Powell Butte highway, a herd of 50 to 60 pronghorn antelope reside year round and use the area for breeding, fawning, and foraging (Upper Deschutes AMS; Tetra Tech, 2001; Ferry, 11/28/2001). These animals mix with another group of approximately 90 animals southeast of the project area in the Mayfield Pond and Alfalfa region (Upper Deschutes AMS, Hostick, 2001). This herd moves primarily north-south with a general range of approximately 70 square miles. No specific winter ranges, key fawning areas or important foraging areas have been designated by ODFW (Hostick, 2001).

Although juniper woodlands are not considered ideal habitat, elk have adapted to this environment and have been observed using the proposed project area. No herds of elk have been identified by ODFW in or near the proposed project area (George, 11/29/2001); however, animals from established herds in the Powell Butte and Mayfield Pond/Alfalfa areas occasionally cross into this area (Upper Deschutes AMS, October, 2001).

Mule deer currently use the proposed project area and are most likely a part of a migratory herd that uses the North Paulina Winter Range approximately 6 miles east of Resort, and 4 miles east of the Powell Butte Highway.

3.6 RECREATIONAL RESOURCES

This section presents a discussion of the current recreational environment in the BLM-managed area that would be affected by the proposed action.

The area of analysis (from the Resort west to Highway 97) is currently used as a recreational resource by horseback riders, off-road vehicle (ORV) users, hunters, pedestrians, and other non-motorized recreationists. The area is currently designated as "open" to ORV/motorized use under the Brothers/LaPine Resource Management Plan. Access to the area is gained via the existing dirt roadbed, although physical evidence gained on-site generally indicates that overall recreational use of the area is minimal. However, BLM policy states that it must "provide ROWs that allow for the reasonable use and enjoyment of properties surrounded by BLM managed land" (BLM Manual 2800.06(d)). Due to the dusty and sandy conditions, difficulty of access, and numerous rocky outcrops, the area of analysis is used primarily by ORV users and only periodically by other recreationists.

3.7 VISUAL RESOURCES

3.7.1 Introduction

This section presents a discussion and characterization of the natural and man-made visual elements that have created the visual setting within the study area, including a description of the regional landscape setting, the visual sphere of influence (VSOI), and the visual inventory methodology and results. Further, a discussion of BLM visual resource management (VRM) direction is also provided within this section. The land traversed by the Proposed Action Alternatives (herein referred to as the proposed project) has been identified as a mix of Bureau of Land Management (BLM), State, and private lands. The following table represents general characteristics of the proposed project within the VSOI.

Table 3-2 Proposed Project General Characteristics

Land Ownership within VSOI	Acres	Proposed Project (miles)	
		New Corridor	Parallel to Existing Corridors
BLM	4218	1.73	1.65
State/Private	3485	0	.90
Total	7703 (i.e., VSOI)	1.73	2.55

Note to reader: The land traversed by the proposed project has been segmented into "links" (Figure 6) for ease of discussion within this analysis. A "link" is a portion of the proposed project. The proposed project has been divided into seven (7) distinct "links" (refer to Figure 6).

3.7.2 Regional Landscape Setting

The proposed project is located in a high desert region of Deschutes County, Oregon, situated between Bend and Redmond, east of Highway 97 (US 97) (refer to Figure 1). Landscapes in the region are characteristic of the Basin and Range physiographic province, which is distinguished by isolated, roughly parallel, north-south trending mountain ranges (i.e., Cascade Mountains approximately 28 miles west from the VSOI) juxtaposed by broad flat to rolling hills alluvial plains.

The vegetation in the VSOI includes juniper with various approximate heights between 15 feet to 40 feet. Other vegetation in the area consists of grasses and low-lying shrubs.

Cultural modification within the VSOI includes residential communities, agricultural and farm lands, commercial retail establishments, roadways, transmission and distribution lines, PG&E pipeline, North Unit Canal, and Burlington Northern Sante Fe Railroad.

Areas within the VSOI are viewed primarily by travelers along Hwy 97, at intermittent residences along Links 1 – 4, along Pleasant Ridge Road, along an existing access road (i.e., OR-49075), and by dispersed recreationalist within the VSOI. Following is a more specific description of views from these locations:

1. *Views along Hwy 97* – these views occur primarily to travelers both north and south bound between Bend and Redmond along the highway. Characteristics views east along the highway include foreground open views of existing power lines adjacent to the highway, residential and commercial structures, and agricultural land. Middle ground and background characteristics views east of the highway include partially screened intermittent (either by topography or by vegetation) views of two power line corridors. One along the BNSF railroad and the other along the BPA and CEC corridor east of the BNSF railroad. Background views include distant topographic features (e.g., Powell Butte). Views along Hwy 97 can further be characterized as short in duration given the

speed of travelers along this highway. Studies have shown that at a speed of 40 mph the typical angle of vision is approximately 37 degrees; whereas, the typical angle of vision at 60 mph is approximately 20 degrees. What this indicates is that the travelers attention is focused more directly and more narrowly to the horizon as speed increases.

2. *Views from Residential Areas* – these views occur primarily at residences west of the BNSF railroad and within the Boonesborough residential community (southeast of the project substation). Residential views toward the east and along the BNSF railroad currently include two power line corridors (one sited on the east side of the railroad and one sited to the west). The horizontal edge effect of the railroad and the vertical edge effect of the power line have created a modified view setting within the foreground view threshold. These views are partially screened by mature vegetation within residential parcels. Further, views east of Hwy 97 and west of the railgrade contain less middle ground to background views when compared to views along Hwy 97 as the ground elevation is slightly lower with vegetation and topographic blocking more distant horizon views. These views can further be characterized as long in duration.

3. *Views along Pleasant Ridge Road* – these views can be characterized as occurring primarily within the immediate foreground to foreground viewing threshold. Currently views along this road contain three substations, power line corridors on both sides of the road, the BNSF railroad grade, a material extraction pit, as well as associated residential structures and open farmland. Travelers along this road will typically be driving at 30 to 40 mph with a horizon view angle of approximately 37 degrees. Perceived detail of existing visual features along this road will be slightly higher than that of views along Hwy 97 as travelers will be traveling at slower speed. These views can further be characterized as short in duration.

4. *Views along access road OR-49075* – these views occur in a more natural appearing setting. Given the curvilinear nature of the road, the undulation of topography, vegetative screening, and speed of the traveler; views along this road continually change and no one view can be characterized as typical. At the juncture of Hwy 97 and OR-49075, eastbound foreground views include residential structures and an existing power line sited adjacent to and east of Hwy 97. Approximately ¼ mile east of this juncture the traveler will notice and cross over the BNSF railroad as well as notice two existing power line corridors along the railroad grade. Heading further east along this road, the traveler will notice two additional power line corridors (i.e., the CEC and the BPA corridors). These views are from within the immediate foreground viewing threshold as this access road bisects and is parallel with these corridors. Once east of these corridors the views are more natural appearing with only the roadway itself and an associated range fence occurring within the viewshed. Distance background views occur as topographic relief along the road provides intermittent superior viewing conditions. Distant eastern background views are less interesting then to western background views.

Westbound travelers along this road with have enhanced background distance views as the Cascade Mountain Range is intermittently viewed at various places. Views along this road can be characterized as moderate in duration when compared to travelers along Hwy 97 (short) and residential viewers (long).

5. *Dispersed Recreational Viewers* – these views are similar to views associated to travelers along Access Road OR-49075 as this is the primary access into the VSOI interior. The one difference would be a longer duration of view as it is assumed that hikers and off-highway vehicle users would be the primary viewer traveling through this setting at a reduced rate when compared to other traveling viewers elsewhere within the VSOI.

3.7.3 Visual Sphere of Influence

The area in which the utilities may result in impacts on scenic quality or sensitive viewers (i.e., key observation points [KOP]) is defined as the VSOI. The information provided within this section focuses on an area within approximately 1 mile on either side of the ROW.

Given the relative rolling nature of topography and height of vegetation surrounding the proposed project, it is highly unlikely that views beyond the 1-mile VSOI will result in a noticeable change within the existing setting with the selection of any of the action alternatives.

3.7.4 BLM Visual Resource Management Class

BLM VRM Classes define the acceptable degree of visual change that can occur within a landscape unit. There are four VRM Classes (I, II, III, and IV) utilized by the BLM. VRM Class I typically is assigned to special areas that are designated to maintain the natural landscape (e.g., Wilderness and Areas of Critical Environmental Concern). Classes II, III, and IV are based on three evaluations: scenic quality, visual sensitivity, and visibility based on viewer distance. A brief description of the VRM Classes is as follows:

VRM Class 1

The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

VRM Class 2

The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract attention of the casual observer. Any changes must repeat the basic elements of form, line, color and texture found in the predominant natural features of the characteristic landscape.

VRM Class 3

The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

VRM Class 4

The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements of form, line, color and texture.

The VRM Classes identified within the VSOI include VRM Class III (along and within ¼ mile of Hwy 97) and VRM Class IV (for the remainder of BLM land). The BLM has assigned these classes to land contained within the VSOI based on the area being relatively flat within a homogeneous juniper vegetative community. Characterizations of lands for scenic quality within the VSOI are primarily Class C within intermittent developed areas (i.e., residential and commercial areas) and undeveloped open space. Scenic quality Class A or B is absent within the VSOI (Currie 2003a). Photographs 1 through 4 (see Figure 1 for locations) show typical landscapes that have been identified within the VSOI.

3.7.5 Inventory Results

3.7.5.1 Scenic Quality

As stated earlier, the proposed project is located on the eastern side of US 97 between the towns of Redmond and Bend. The majority of the natural landscape setting can be characterized as relatively flat juniper vegetation type with occurrences of man-made features (e.g., US 97, residential areas, BNSF Railroad, transmission line corridors, two-track roads, and the North Unit Canal). The major watercourse within the study area is the concrete-lined North Unit Irrigation District Canal. The North Unit Canal is located approximately 1 ½ miles east of the proposed project and the Deschutes River located to the west of the VSOI, and is not considered part of the project area. A smaller watercourse to the west of the VSOI is the Pilot Butte Canal. It should be noted that portions of the VSOI contain a BLM designated utility corridor as identified within the Brothers/LA Pine Resource Management Plan (RMP). Portions of the proposed project are sited within this designated utility corridor along Links 5, 6, and 7.

The North Unit Canal may contain an opportunity for the BLM to develop a recreational trail to link the towns of Redmond and Bend. Intermittent parcels of land located along US 97 are

owned and managed by Oregon State Parks and referred to as Redmond/Bend Juniper Wayside (Currie 2003b). Further, intermittent residences and commercial areas occur along both sides of US 97.

Photograph #1 – view looking north along Link 1

Photograph #2 – view looking northeast along Link 2

Photograph #3 – view looking southeast at the confluence of Links 4 and 5

Photograph #4 – view looking north along Link 6

3.7.5.2 Key Observation Points

Portions of the proposed project would be visible by residences and travelers along US 97 within the VSOI. Three typical KOPs were identified within the VSOI: (KOP #1) middleground residents southeast of the proposed project, (KOP #2) foreground roadway travelers along US 97 west of the proposed project, and (KOP #3) foreground views from HDDP property/dispersed recreationists. Please refer back to section 3.7.2 for a more detailed description of existing viewsheds and viewpoints within the VSOI. It should be noted that views from potential dispersed recreationists along the North Unit Canal were inventoried; however, they would not likely view the proposed facilities because of distance, vegetative, and topographic screening available. Typical potential viewpoints were inventoried in the study area and assigned levels of

sensitivity as described in Table 3-3. Photographs labeled KOP #1 through #3 (see Figure 6 for locations) describe existing views of the area traversed by the proposed project.

Table 3-3 KOP Sensitivity Levels

KOP	Sensitivity Level
Intermittent Residences along US 97	High
Boonesborough Residential Area	High
US 97	Moderate/High
Secondary Travel Routes	Moderate
Dispersed Recreationists	High

KOP #1 – view looking northwest along Link 1

KOP #2 – view looking northeast along Link 3

KOP #3 – view looking southwest along Link 7

The following section describes more specifically the existing viewing condition from each selected typical KOP:

- KOP #1 (refer to Figure 1) is located approximately 0.75-mile southeast of the proposed project. This viewpoint is representative of a resident's view. Distant background views consist of Cline Buttes and the Cascade Range.
- KOP #2 (refer to Figure 1) is located approximately 0.25-mile west of the proposed project. This viewpoint is representative of a traveler's view from US 97 paralleling the proposed project along BNSF Railroad within the foreground threshold.
- KOP #3 (refer to Figure 1) is located near the HDDP property along the proposed project corridor on a two-track road. The viewing location is representative of existing views from the HDDP Resort as well as a dispersed recreationist's view.

3.7.5.3 Bureau of Land Management VRM Classes

As stated previous, based on review of the Brothers / La Pine RMP and coordination with the BLM, two VRM Classes have been specified (within the VSOI) as Class III and Class IV (Currie 2003a). VRM Class III is located 0.25-mile off either side of US 97, and VRM Class IV is located east of the 0.25-mile Class III corridor within the VSOI within land administered by the BLM. Please refer back to Section 3.7.4 for BLM acceptable visual changes within these VRM Classes. Table 3-4 describes acres of VRM Classes III and IV within the VSOI.

Table 3-4 Acres of VRM Classes III and IV

VRM Class	Acres
VRM Class III	161
VRM Class IV	4,057

3.8 CULTURAL RESOURCES (EXECUTIVE ORDER 11593)

3.8.1 History and Prehistory

The Resort at Pronghorn retained the services of Archaeological Investigations Northwest, Inc. (AINW) to perform certain tasks (e.g., Class I Literature Search and on-the-ground-surveys within the Area of Potential Effect - APE) to assist the BLM in meeting federal cultural resource requirements pertaining to the proposed action. The report on the literature search conducted by AINW states that one-third of the area surrounding the resort area has been previously surveyed for cultural resources in the past 23 years. According to the report, "These previous surveys identified 164 cultural resources…14 have been recommended as potentially eligible for listing [to the National Register of Historic Places], and the National Register eligibility of another 15 resources are unknown. The remaining 128 previously identified resources have not been recommended or determined not eligible for the National Register."

Approximately 2,825 acres were surveyed for cultural resources by AINW for the previous EA. The completed surveys resulted in the recording of 79 archaeological isolates (i.e., occurrences of less than 10 artifacts) and 133 archaeological sites for a total of 212 cultural resources within the entire survey area. Of those, 16 cultural resources were identified within the current APE of the utility corridors. Resource types include four isolated sites containing prehistoric stone tools or flakes, nine sites defined by culturally modified trees with blazes, one historic can scatter associated with a grouping of blazes, one historic dump, and one prehistoric lithic scatter. None of these sites within the proposed utility corridors were recommended by AINW as eligible for nomination to the National Register of Historic Places.

3.9 WILDFIRE AND PUBLIC SAFETY

Illegal activities such as dumping, people living on public lands, firewood cutting without permits, and drug manufacturing have been witnessed on BLM managed lands in the vicinity. Wildfire and public safety are concerns of the current residents in the vicinity and potential threats to wildlife habitat, recreation, and visual resources.
Current management problems in this BLM managed tract are illegal activities such as dumping, itinerant camping, abandoned cars, late night parties and bonfires, mudbogging, poaching, and unsafe target practice.
The interior portions of this large tract, due to the extremely primitive and confusing road system and the long rough drive into some of these areas, are relatively untouched by the dumping and

resource damage that is evident on the fringe of this larger tract. The illegal dumping activities seem to be focused adjacent to paved roadways with easy access off the pavement and entering public lands only about 0.1 mile or out of sight from the paved roadway.

3.10 LIVESTOCK GRAZING

BLM managed lands surrounding the proposed The Resort at Pronghorn currently are used for both horse and cattle grazing. High Desert Development Partners currently holds the grazing permit for the 12,254-acre Crenshaw allotment, which completely surrounds the proposed resort. The six other allotments in the area are; the 8,227-acre Pipeline Allotment to the east, the 3,910-acre Hutton Allotment to the southeast, the 3,554-acre Allen Allotment and 2,651 acre Weigand Allotment to the northeast, and the 254-acre Black Rock Allotment and 40-acre Sanowski Allotment to the west of the proposed resort.

3.11 MILITARY PERMIT

The BIAK Training Center surrounds much of the Resort property. The Oregon Military Department (OMD) holds a BLM permit to conduct training exercises in the vicinity of the proposed The Resort at Pronghorn. The OMD training site boundary extends from Highway 126 on the north to the 6585-C road intersection on the Powell Butte Highway to the south. Several large land tracts, including the Resort, are not included in OMD's permit. OMD training operations include an outdoor small arms firing range, administrative offices, storage buildings and equipment maintenance facilities. The OMD operates Abrams Tanks, Bradley Fighting Vehicles, and Armored Personnel Carriers on the training site.

3.12 RESOURCES AFFECTED BY THE PROPOSED PROJECT

The following resources may be affected by the proposed project. Further analysis of effects to resources are discussed in Section 4.0 Environmental Consequences.

Soils
Vegetation
Wildlife
Recreation
Visual Resources
Cultural Resources

4.1 INTRODUCTION

This section discusses the environmental consequences of the proposed action as it affects each resource.

4.2 SOILS

The public land soil resources within the area of construction would be both directly and indirectly affected by the proposed construction of utilities along the proposed or alternative ROWs. The acres affected by the construction of the utilities which include power, cable and telephone are summarized below:

Alternative	**Acres of surface soil disturbance**
Alternative A: No Action	5.5 acres
Alternative B: Below Ground	6.66 acres
Alternative C: Above Ground	3.33 acres

All three alternatives assessed here would result in similar indirect impacts, though the degree to which they affect soil resources are discussed under each alternative. Indirect impacts would include temporary dust blowing during construction and while disturbed areas lack protective vegetative cover. Water erosion is not expected to be a factor due to relative flat slopes and sandy soils, but minor erosion may occur on the existing dirt road. Mitigations, as described in Section 2.2.6 *Utility Construction Standards,* would reduce the amount of soil disturbance and the length of time the soil remained unvegetated. These mitigations would limit impacts to the soil resource on BLM managed lands.

4.2.1 Alternative A: No Action

Direct and Indirect Impacts: Under the No Action Alternative, the utilities would be buried under the existing roadbed in an underground ditch for a distance of approximately 3.0 miles. The ditching work could potentially require trenching through bedrock. It is expected that at least 50 percent of the material removed from the trenches for the placement of the below ground utilities would be large rock. The placement of this rock on adjacent areas could temporarily compact soils where it is placed. In addition, hauling the rock from the area would compact the soils. Alternative A would require removal of approximately 174,240 cubic feet of soil and bedrock material, plus an additional 5.5 acres of surface soil disturbance.

Alternative A would reduce new soil compaction and disturbance if the rock removed from the trenches were to be placed on the pipeline area discussed in EA # 0056-02-006 that was

previously disturbed and compacted. However, if placement of the rock on the pipeline is not feasible, this alternative would increase disturbance and compaction of soils because much of the large rock removed during trenching would need to be placed in areas that are currently undisturbed or minimally disturbed and not compacted. All soils disturbed during construction would be revegetated as specified under Section 2.2.6, Utility Construction Standards.

4.2.2 Alternative B: Below Ground

Direct and Indirect Impacts: Under Alternative B, the utilities would be buried in currently undisturbed ground in a ditch approximately 3 feet wide by 4 feet deep within a total corridor width of approximately 20 feet for a distance of 3.0 miles. As part of the construction of the utilities trench, 32 vaults (see Appendix B) would be installed directly over the utility line trench. These concrete vaults would be approximately 6x12x8 feet, rising approximately 18 inches above the ground. The excavation of the ditch and placement of the vaults could potentially require trenching through bedrock. This would involve blasting or mechanical ripping the underlying basalt bedrock. This material would be temporarily placed adjacent to the ditch. Alternative B would require removal of approximately 174,240 cubic feet of soil and bedrock material, plus create an additional 6.66 acres of surface soil disturbance.

It is expected that at least 50 percent of the material removed from the trenches for the placement of the below ground utilities would be large rock. The placement of this rock on adjacent areas could compact soils where it is placed. In addition, hauling the rock from the area would temporarily compact the soils.

Material removed from the trench would be temporarily placed adjacent to the trench during construction. All soils disturbed during construction would be revegetated as specified under Section 2.2.6, Utility Construction Standards.

4.2.3 Alternative C: Above Ground

Direct and Indirect Impacts: Access to this utility line during construction and for continuing maintenance would be provided by the existing dirt road, and would not require any road improvements or additional permanent road creation. The total length of this corridor would be approximately 3.0 miles, with a utility pole every 300 feet, or approximately 49 poles buried to a depth of 8.5 feet, creating 0.03 acres of new permanent soil disturbance. During construction, the utility workers would be required to drive directly underneath the lines in order to install the power, telephone, and cable lines, however, the existing dirt road would serve as the primary access for the remainder of construction and maintenance activities. Using an average width of disturbance of ten feet for the length of the utility line, construction activities would create 3.33 acres of temporary soil disturbance, for a total of 3.33 acres of both temporary and permanent soil disturbance. All soils disturbed during construction would be revegetated as specified under

Section 2.2.6, Utility Construction Standards. For the under ground portion (i.e., 300-feet west of the resort property) of this alternative, two under ground vaults will be required.

4.2.4 Cumulative Impacts

The development of the Resort combined with continuing activities by the military, livestock grazers, and recreationists (particularly ORV enthusiasts), would continue to cause soil disturbance in the area both on private and public land. These activities would cause direct displacement, compaction, removal of protective vegetation and disturbances to the soil biological crusts (micro and macro biotic crusts resulting in increased susceptibility to wind and water erosion). The proposed project is being constructed to accommodate full build out of the resort and will add approximately 1.73 miles of new utility facilities within the study area.

Construction has begun on the private land, and some impacts to soils may occur within this section even if the ROWs are not granted. The amount of soil disturbance would depend upon the type of activities that are developed on the private property in the absence of the destination resort and the manner in which the existing ROW grant held by HDDP is developed.

4.3 VEGETATION

The vegetation within the construction area would be both directly and indirectly affected by the proposed construction of utilities along the proposed or alternative ROWs. The acres affected by the construction of the utilities which include power, cable and telephone are summarized below:

Alternative	**Acres of vegetation disturbance**
Alternative A: No Action	5.5 acres
Alternative B: Below Ground	6.66 acres
Alternative C: Above Ground	3.33 acres

4.3.1 Alternative A: No Action

Direct and Indirect Impacts: Under the No Action Alternative, the utilities would be buried under the existing roadbed in an underground ditch, causing approximately 5.5 acres of new disturbance to vegetation. Approximately 24 juniper trees would be removed under this alternative. Impacts to vegetation would be mitigated through revegetation of disturbed areas as specified under Section 2.2.6, Utility Construction Standards.

4.3.2 Alternative B: Below Ground

Direct and Indirect Impacts: Under Alternative B, the utilities would be through currently undisturbed ground in an underground ditch, causing approximately 6.66 acres of new vegetation disturbance. Over time, juniper may reestablish in these areas, and would be removed as necessary to maintain the facilities. Approximately 113 juniper trees would be removed under this alternative. Impacts to vegetation would be mitigated through revegetation of disturbed areas as specified under Section 2.2.6, Utility Construction Standards.

4.3.3 Alternative C: Above Ground

Direct and Indirect Impacts: The total length of this corridor would be approximately 3.0 miles, with a utility pole every 300 feet, or approximately 49 poles, creating a total of 0.03 acres of permanent vegetation disturbance. During construction, the workers would be required to drive directly underneath the lines in order to install the power, telephone and cable lines, at an average width of 10 feet of disturbance throughout the corridor, creating 3.3 acres temporary vegetation disturbance for a total of 3.33 acres of combined vegetation disturbance. According to surveys performed under the direction of Pacific Power, approximately 37 juniper trees would be removed and an additional 37 trees would require pruning and/or topping under this alternative. The existing dirt road would continue to serve as the primary access for the remainder of construction and for scheduled maintenance activities. For the under ground portion (i.e., 300-feet west of the resort property) of this alternative, two under ground vaults will be required.

Impacts to vegetation would be mitigated through revegetation of disturbed areas as specified under Section 2.2.6, Utility Construction Standards.

4.3.4 Special Status Plants

No Special Status Plants have been found in the area, therefore, there would be no expected impact on any Special Status Plants from any of the alternatives (Botanical Evaluation 00022, available at the Prineville BLM office). An additional inquiry to the Oregon Natural Heritage Information Center in July of 2003 confirmed no presence of federal or state listed plant species within one mile of the project location.

4.3.5 Noxious Weeds

Construction disturbance on proposed utility service could potentially allow for the invasion and establishment of noxious weed species. If proper noxious weed control efforts were not exercised to prevent the establishment of noxious weeds in disturbed areas within the private parcel, those disturbed areas on the private land would be sources of noxious species that may spread onto neighboring public land.

Mitigations described in Section 2.2.6.2 would limit invasions of noxious weeds onto BLM managed lands, and are again described below:

The applicant would be required to suppress noxious weeds within the specified ROW according to BLM standards for noxious weed suppression for a period of three years following construction. The applicant would be required to use a licensed applicator for any herbicide application. Herbicide application rates would be approved by the BLM prior to use. All construction equipment would be required to be washed with at minimum a high pressure nozzle prior to arrival and departure on BLM managed lands.

4.3.6 Cumulative Impacts

The development of the resort may have several effects on the surrounding vegetation. Increased human use may result in the loss of vegetation due to user created roads and trails being developed. These additional roads and trails may be created because a paved road would provide greater public access into the area than the current primitive access. The fencing of the primary access route may enable the closing and rehabilitation of many user created roads and trails. If some user created roads and trails are closed and rehabilitated through the development of the access route as described in EA # OR-056-02-006, this would have some beneficial effects to vegetation on the BLM managed public land. Rehabilitation would involve re-seeding the area and rest from livestock use for one year following seeding.

Increased use of the area could lead to the introduction of noxious weeds or other non-native plants into the area.

Removal of juniper trees within the private property and on surrounding public lands for resort development would increase the availability of groundwater for native plant use and storage. Trees cut on public lands would be left down to allow for increased nutrient cycling, improved soil organics, and increased ground cover, all of which would benefit plant health.

Some of the same impacts to vegetation may also occur on the private land depending upon the type of activities developed on the private property.

4.4 WILDLIFE

4.4.1 Big Game

4.4.1.1 Alternative A: No Action

Direct and indirect impacts: This alternative would result in the construction of approximately 3.0 miles of below ground utilities underneath the existing roadbed through pronghorn antelope habitat. This alternative could result in the permanent loss of approximately 5.5 acres of

available pronghorn habitat. The majority of Alternative A utility route takes advantage of the existing dirt road, thereby reducing the alteration of undisturbed pronghorn habitat.

No identified herds of elk or deer use this area. However, individuals and small groups of these species are occasionally observed. In the short-term, big game (including pronghorn) would be impacted by construction noise and traffic along the existing roadbed. Re-seeding projects to rehabilitate the areas disturbed outside of the roadbed would provide increased forage for big game in the long-term.

4.4.1.2 Alternative B: Below Ground

Direct and Indirect impacts: Under Alternative B, the utilities would be buried partially under the existing roadbed and partially through currently undisturbed ground in a below ground ditch approximately 20 feet wide for a length of approximately 3.0 miles, resulting in the loss of approximately 6.66 acres of available pronghorn habitat.

4.4.1.3 Alternative C: Above Ground

Direct and Indirect impacts: This alternative would construct 3.0 miles of above ground utility poles through pronghorn antelope habitat. Pronghorn antelope would be expected to avoid the area during construction, creating a temporary loss in available habitat. This alternative would result in the permanent loss of 0.03 acres of available pronghorn habitat, and the temporary loss of 3.3 acres for a combined total of 3.33 acres.

Table 4-1 Comparison of Alternatives for Pronghorn Antelope Habitat Impacts

Alternative	Miles of utilities constructed	Miles of pronghorn habitat disturbed	Total acres of new impacts to pronghorn habitat
A- No Action	3.0	3.0	5.5
B- Below ground Mod.	3.0	3.0	6.66
C- Above ground	3.0	3.0	3.33

All alternatives would be reseeded after construction of the utilities with a native seed mix approved by BLM as described in section 2.2.6.1 Revegetation of Disturbed Areas.

4.4.2 Threatened and Endangered Species

The Oregon Natural Heritage Information Center's (ONHP) database was queried in July of 2003 for federal and state listed species within a one-mile radius of the project. The ONHP had no records for any listed species within a one mile radius of the project site. The proposed

actions are unlikely to affect threatened or endangered species. Bald eagles, the only federally listed species with potential presence, would not be affected because they do not typically nest or frequent this area and the removal of juniper trees along existing transportation or utility corridors would not impact any key habitat component. Construction of Alternative B along the existing BPA corridor is not anticipated to increase the clearing of Juniper trees in excess of what has been reported in this document. There are currently no nest or roost trees in or near the project area (within 1 mile). This species is not analyzed further in this document.

4.4.3 Bureau of Land Management Sensitive Species

Of the ten Bureau designated sensitive species that could potentially occur in the analysis area, three were analyzed further because their habitat could be impacted by the proposed action.

Northern goshawk - The goshawk is primarily associated with coniferous forests, however, they have been occasionally documented nesting in juniper woodlands on the Prineville District (Hanf, 2001). The action alternatives would have a minimal potential for affecting nesting habitat through the removal of western juniper trees. Alternative A (the No-Action alternative), would involve construction underneath the existing dirt roadbed, and would remove approximately 24 juniper trees along 3.0 miles (5.5 acres). Alternative B would remove the greatest number of juniper trees (approximately 113) along 2.75 miles (6.66 acres) of a previously undisturbed ground. Alternative C (the preferred alternative) would remove approximately 37 juniper trees and another 37 trimmed and/or topped. There are no known goshawks using the project area, and the area does not have typical nesting habitat for this species. Due to the availability of other western juniper trees, and the small amount of woodland habitat removed, none of the action alternatives would contribute to the need to list the northern goshawk. This species is not analyzed further in this document.

Northern pygmy owl - This owl is found primarily in both coniferous and mixed coniferous-deciduous forests, riparian woodlands, and ponderosa pine woodlands. However, in eastern Oregon, this owl has been documented wintering in juniper woodlands (Csuti et al. 1997), utilizing abandoned woodpecker holes in juniper snags. Forest practices that remove snags containing old woodpecker holes may reduce available nest sites. Although the proposed action alternatives would remove western juniper trees (see description under Northern Goshawk), every attempt would be made by the utilities to avoid trees and snags with suitable nesting holes. There are currently no documented pygmy owls in the project area, and there is no typical pygmy owl habitat along any of the proposed utility corridors. Therefore, none of the alternatives would contribute to the need to list the northern pygmy owl and this species will not be analyzed further in this document.

Western burrowing owl - This owl is mainly associated with open deserts, grasslands, fields, and pastures. Although found more commonly in the sagebrush steppe of eastern Oregon, potential habitat exists in Deschutes county (Csuti et al. 1997). This owl nests in burrows made by

squirrels, badgers and other animals, and has been known to occupy areas near roadsides and even airports. Although no burrowing owls have bee documented in the planning area, surveys indicate the presence of main prey species such as deer mice, pinon mice, and sagebrush voles. All action alternatives have the potential to temporarily impact this owl's nesting habitat during construction activities. Alternative C (preferred) would impact the least amount of potential habitat because it would involve constructing selectively placed utility poles as opposed to underground trenching throughout the ROW for alternatives A and B. Once construction is completed, the habitat within the ROW would again become available for future nesting. Therefore, none of the alternatives would contribute to the need to list the western burrowing owl.

4.4.4 Cumulative Impacts

Other facilities and activities affecting the habitats in the proposed project area include the Redmond Airport, the Oregon Military Department, residential developments including West Powell Butte Estates, existing recreation uses, and the Resort itself.

Development from the City of Redmond has been expanding in all directions, including south/southeast toward the proposed project area. The Redmond Airport lies directly north of the analysis area and has recently fenced the entire airport perimeter with a fence designed to exclude big game from the property. While this action limits aircraft-wildlife conflicts, it also reduces the amount of available habitat for big game, especially pronghorn antelope.

The Oregon Military Department operates a training center adjacent to the Redmond Airport. The OMD has developed an Integrated Natural Resources Management Plan, which has mitigated impacts to wildlife over the past three years through extensive rehabilitation efforts, and big-game populations have remained stable in the area (McCaffery, 12/20/01). However, the training center may have made big game habitat unsuitable, less suitable, or may have changed the type of use available for wildlife in the area. Permanent structures have removed available habitat, and training exercises remove sections of habitat permanently or temporarily depending on the type and scale of the operation. For big game, these operations could remove hiding cover, foraging habitat, access to water, and could harass the animals.

In addition to municipal and military-owned facilities in and around the project area, the number of private residences and subdivisions are also increasing, affecting the condition and extent of available wildlife habitat. The most recently constructed subdivision, West Powell Butte Estates, is a fenced community just northeast of the project area, adjacent to the military facility. While not yet fully developed, homes built on 20-acre parcels will remove available hiding cover and foraging habitat.

With the introduction of a paved access to the Resort (as described in EA # 0056-02-006), the potential exists for increased recreational activities on public land around the resort. OHV enthusiasts, hikers, bikers and horseback riders make occasional use of the area. Increased use by

these types of recreationists has the potential to add stress to wildlife already experiencing shrinking ranges. However, by fencing this access route, habitat lost as a result of motorized vehicle use may be reduced. Fewer roads would be available to recreationists, and limited access points through the fence would funnel activity to specific areas. In addition, illegal activities such as garbage dumping is anticipated to decrease.

Finally, The Resort at Pronghorn development would affect wildlife habitat by developing 220 acres as managed grasslands or golf courses, 75 acres as buildings, and 15 acres of roads and/or paved areas. The presence of water and lawn on the resort may attract some wildlife use, although the property may become unsuitable, less suitable or altered as wildlife habitat in other ways. The entire resort will be fenced, limiting, at least in the short-term, access by big game to the property and reducing available forage and habitat. However, the resort has proposed to develop in a manner that protects and enhances wildlife habitat, including maintaining rock outcroppings, constructing ponds and water features, installing bat boxes, maintaining big game access to forage opportunities and retaining 335 acres as native vegetation. These mitigation measures are required by the Wildlife Mitigation Plan developed by The Resort at Pronghorn, approved by ODFW in December 2001.

4.5 RECREATION

4.5.1 Alternative A: No Action

Direct and Indirect Impacts: Access to recreational use would be temporarily altered during construction of the below ground utility lines underneath the existing dirt road. Construction of the below ground utility lines could generate noise impacts to recreational users on BLM lands. This includes noise impacts from machinery used for blasting, hauling, movement of materials, and the transfer of vehicles on and off the project site. Increased traffic could also present a hazard to motorized and non-motorized users within the area or temporarily disrupt OHV recreationists at any road crossing points.

4.5.2 Alternative B: Below Ground

Direct and Indirect Impacts: Access to recreational use would be temporarily altered during construction of the below ground utility lines. Construction of the below ground utility lines would generate noise impacts to recreational users on BLM lands. This includes noise impacts from machinery used for blasting, hauling, movement of materials, and the transfer of vehicles on and off the project site. Increased traffic could also present a hazard to motorized and non-motorized users within the area or temporarily disrupt OHV recreationists at any road crossing points.

4.5.3 Alternative C: Above Ground

Direct and Indirect Impacts: Access to recreational use would be temporarily altered during construction of the above ground utility lines. Construction of the utility poles would generate noise impacts to recreational users on BLM lands. This includes noise impacts from machinery used for minimal blasting, hauling, movement of materials, and the transfer of vehicles on and off the project site. Increased traffic could also present a hazard to motorized and non-motorized users within the area or temporarily disrupt OHV recreationists at any road crossing points.

4.5.4 Cumulative Impacts

Construction of one of the alternatives is not expected to have cumulative impacts on recreational use within the area. Cumulative impacts due to past, present, or reasonably foreseeable future projects not associated with the Resort may decrease the level of recreational access in the study area. However, future development outside of the scope of the current development plan is currently unknown. Any such development would be subject to county zoning, regulations, and BLM review if impacting BLM managed recreational resources.

4.6 VISUAL RESOURCES

4.6.1 Visual Resources

The assessment of potential impacts on visual resources resulting from the proposed project was based on utilization of a visual contrast methodology as defined by the Visual Resource Inventory and Contrast Rating System (BLM 8400 Series Manual 1984). The following section describes employment of this system to derive impacts.

4.6.2 Assessment Methodology

This section describes the visual resource assessment methods used to assess impacts of the proposed project on scenic quality and on Key Observation Points (KOPs) (Figure 6). Visual contrast is a measure of the perceivable level of change on scenic quality and on views from KOPs resulting from the proposed project. The severity or magnitude of impact is determined by combining the scenic quality, viewer sensitivity levels for KOPs, and distance data with potential project contrast levels.

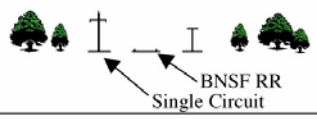
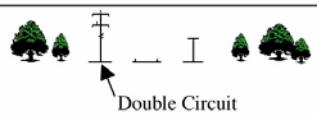
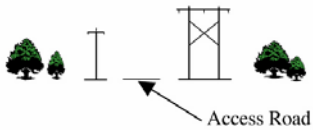
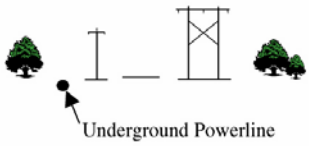
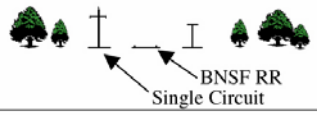
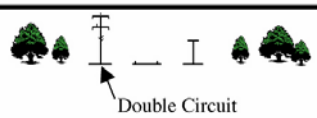
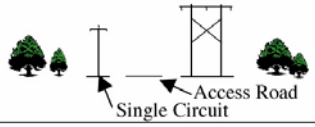
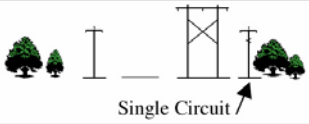
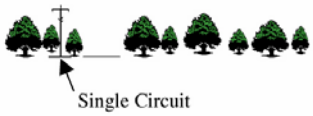
4.6.3 Project Contrast

As stated previous, project contrast is defined as a measure of the perceivable degree of change that would occur on scenic quality or on KOPs within the VSOI. Project contrast was determined for this project based on a number of variables that included: 1) skyline views of the proposed project structures, 2) horizontal lines when contrasted with a juniper forest, 3) possible

differences in soil and vegetation color, as well as 4) the presence of similar projects within the VSOI such as existing power line corridors, roads and railroad, as well as residential, commercial, and industrial structures and facilities within existing viewsheds.

The introduction of new or modified structures into the existing landscape would create degrees of visual change in the VSOI. Table 4-2 is a conceptual typical graphic description of the visual contrast potentials along Alternatives A, B, and C. It should be noted that Alternative A contrast potentials are described in the following table for Links 1-4. Contrast potential for Links 5-7 for Alternative A are indiscernible as this alternative would be constructed within the existing access roadbed.

Table 4-2 Typical Existing Visual Condition and Contrast Rating

Link	Existing Condition	Proposed Condition	Contrast
ALTERNATIVES A & B			
Links 1 - 4			Weak
Link 5			Moderate
Link 6			Weak
Link 7			Moderate
ALTERNATIVE C			
Links 1 - 4			Weak
Link 5			Weak/ Moderate
Link 6			Weak
Link 7			Weak/ Moderate

The three contrast levels considered for the proposed project are defined as follows:

1. ***Strong*** – Changes in scenic quality that would become the focal point or most dominant feature in the setting. Changes typically would be noticeable in the foreground.
2. ***Moderate*** – Changes in scenic quality that would be evident but visually subordinate to the setting due to factors previously described. These changes may attract slight attention but would not compete with adjacent landscape scenery or views.
3. ***Weak*** – Changes in scenic quality that would not be evident unless pointed out due to such factors as previous disturbance, distance, terrain and vegetation screening, dominance of existing adjacent landscape features, and reduced contrast due to backdropped terrain.

4.6.4 Scenic Quality

Impacts on scenic quality are determined by evaluating the level of change to the aesthetic qualities of landscapes within the VSOI as a result of the implementation of the proposed project. Impacts on scenic quality considered the existing visual conditions within the VSOI.

Typically, impacts from the proposed project on scenic quality would be highest in Class A landscapes where a strong project contrast would occur. Conversely, impacts would be lowest when the proposed project is located in existing transmission line corridors.

4.6.5 Key Observation Points

Impacts on KOPs are directly attributable to the visibility potential from a particular viewing area. The impact assessment considered four components in establishing the degree of impact on KOPs resulting from the introduction of the proposed project into the VSOI. These components included: 1) viewing distance, 2) viewer sensitivity, 3) scenic quality, and 4) project contrast discussed previously.

The noticeable visual change on the landscape resulting from the introduction of the proposed project depends largely on the distance of the project from the viewer. The contrast of distribution lines within the landscape typically decreases with increased viewing distance because the details and dominance of the distribution line are reduced. Conversely, when viewed in close proximity (e.g., 0.25 mile) the details and dominance of the proposed project are prominent depending on project contrast levels. Four distance zones utilized for this analysis are as follows:

- Foreground views – 0 to 0.25 mile
- Middleground views – 0.25 to 0.5 mile
- Background views – 0.5 to 1 mile

- Distant background views – 1 mile and beyond

Existing screening was also considered in the assignment of impact levels. Two types of screening were identified within the VSOI, including vegetative screening (e.g., 40-foot-tall juniper trees) and topography screening (e.g., distant rolling terrain). The presence of vegetative screening could effectively lower levels of impact assigned to views from surrounding areas since visibility of the proposed facilities may be substantially reduced or blocked. Additionally, the proposed project is absorbed to varying degrees when backdropped by terrain.

As previously described, key observation points (KOP's) are those most susceptible to visual impacts resulting from the introduction of the proposed project into their viewshed as well as areas identified as retaining high scenic value.

4.6.6 Impact Results

Direct impacts of the proposed project on visual resources within the study area could result from a variety of project activities occurring both during construction (e.g., erection of poles, installation of conductors) and operation (e.g., presence of poles, increase in existing pole heights, increase in miles of aerial lines, underground vault covers, conductors, insulators). This section discusses the results of the impact analysis for each action alternative. Potential visual impacts resulting from the proposed facilities would be highest in areas where substantial changes would occur in the visual setting and the lowest in areas where change would be least evident. Indirect and cumulative impacts are described in the indirect and cumulative impact section following.

<u>Impacts Common to All Alternatives (links 1-4)</u>

Potential impacts on scenic quality and on KOPs from the proposed project would range from low to moderate impacts depending on the alternative selected as described below. It should be noted that for all action alternatives impacts on scenic quality and on KOPs would be low for links 1-4 as these segments of the proposed project would be constructed on existing structures and vegetation would not be removed. The increased height of the proposed structures will not create an impact that substantially changes the existing visual dominance of the exiting power line along the BNSF Railroad. This assessment is based on the existing screening, distance of view, and orientation/duration of view as discussed in the affected environment section of this report.

4.6.6.1 Direct Impacts on Scenic Quality and on KOPs

<u>Alternative A: No Action</u>

Impacts associated with Alternative A would be low as this alternative would be constructed within an existing access roadbed along Links 5, 6, and 7. This alternative would be in compliance with acceptable levels of modification within VRM Class III and IV.

Alternative B: Below Ground

Impacts associated with Alternative B would be low to moderate as this alternative would be constructed parallel to an existing access road along Links 5, 6, and 7. Construction of up to 30 maintenance vaults will create a more accentuated linear feature along the corridor, but would not be considered a dominant feature within the existing setting. The clearing of a 20-foot right-of-way and associated removal of juniper trees will create a distinctive horizontal edge effect that would be intermittently noticed by infrequent travelers along Links 5, 6, and 7. These views would typically be parallel in nature as the corridor and access road would parallel each other along the entire length of the proposed project. Construction of this alternative may create a braided horizontal view effect on travelers along this road as the cleared corridor and the existing access road would converge and diverge intermittently along the proposed project. Short term impacts associated with exposing a lighter colored sub-soil will be evident; however, over time grasses and low growing shrubs will be allowed to grow within the corridor that will lessen the horizontal edge effect. This alternative would be in compliance with acceptable levels of modification within VRM Class III and IV.

Alternative C: Above Ground

Impacts associated with Alternative C would be low to moderate as this alternative would be constructed above ground and parallel to an existing access road along Links 5, 6, and 7 and existing power line corridors along Links 1-4 as well as Link 6. Maintenance vaults will not be required nor would complete vegetation removal within the right of way occur. Intermittent removal of up to 37 junipers will occur; however, this is not viewed as substantially changing the existing natural setting. Construction of this alternative would create a distinct vertical edge effect within the introduction of a vertical feature in an area where currently none exists along Links 5 and 7. Residential areas and travelers along Hwy 97 viewing Link 5 will typically be at the middle ground viewing threshold and Link 7 at the background viewing threshold. At these distances and based on the existing views from these areas coupled with topographic and vegetative screening this change to the existing setting will be in compliance with VRM Class III and IV direction. A location 300' outside the resort boundary was chosen to transition the power line from above ground to below ground. This location would minimize visual impacts to resort residents and visitors (similar to the effects described for alternatives A & B above).

4.6.6.2 Consistency with BLM Visual Resource Management Classes

The project is consistent with BLM VRM Class III (along Hwy 97) and Class IV in the remainder of the project area.

4.6.7 Cumulative Impacts

4.6.7.1 Indirect and Cumulative Impacts

When compared to other past, present, or reasonably foreseeable future projects the proposed project will not significantly change or alter the existing natural and manmade setting within the VSOI. Admittedly, the proliferation of projects within the VSOI will continue to incrementally change the existing setting; however, consolidation of like projects within existing utility corridors and along exiting linear facilities will conserve other open space areas. A cumulative impact along Pleasant Ridge Road (Link 1) may occur as it relates to the consolidation of similar electrical facilities within this area, due to the presence of three substations. As proposed, all project alternatives change the configuration of an existing power line in this area, but do not introduce a completely new visual feature. Therefore, the effect attributed to the proposed project is low.

4.7 CULTURAL RESOURCES

4.7.1 Cultural Resource Surveys

A cultural resources survey by Archaeological Investigations Northwest (AINW) identified 16 cultural resource sites in the area of potential affect (APE) for the proposed utility corridors. An additional 164 previously recorded resources were noted during the literature search conducted by AINW in areas surrounding the resort. The utility corridor between Section 16 and Highway 97 was surveyed for cultural resources in 1998 (Gregory 1998).

These resources include prehistoric archaeological sites and isolates and historic sites and features. None of these recorded sites are recommended by AINW as eligible for nomination to the National Register; consequently, no further recommendations were made.

4.7.2 Direct and Indirect Impacts

The BLM is responsible for evaluating the cultural resources identified against National Register of Historic Places criteria to determine which cultural resources within the APE would be eligible for the Register and thus subject to Section 106, of the National Historic Preservation Act, review. Those cultural resources found eligible for the National Register would be considered historic properties (i.e., Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places . . . [36 CFR 800.16.(l)]). To bring the identification and evaluation process to closure, the agency would make and document a formal finding as to whether historic properties may be affected by the proposed action. Affect means altering the characteristics of a historic property that qualify it for inclusion in or eligibility for the National Register [36 CFR 800.16(i)]. If the agency finds that

no historic properties are present or affected, it provides documentation to the State Historic Preservation Office/Tribal Historic Preservation Office and, barring any objection in 30 days, proceeds with its proposed action.

If the agency finds that historic properties are present, it proceeds to assess possible adverse effects. Consultation to resolve adverse effects involves consideration of alternative ways to accomplish the purposes of a proposed action, which could avoid unnecessary damage to historic properties or minimize or mitigate unavoidable damage.

4.7.2.1 Direct Impacts

The survey parameters of the ROW corridors have been expanded to include buffer zones so that if cultural resources are identified, construction activities would be adjusted to avoid direct impacts to those resources. However, in the event that cultural resource sites cannot be avoided any impacts to them would be minimized or mitigated. Information provided by AINW regarding National Register eligibility indicates that there are no significant sites identified to date in the areas of direct effects.

4.7.2.2 Indirect Impacts

Increased numbers of users and dispersed recreational activities have the potential to encounter cultural resources. All cultural resources identified will be evaluated for National Register eligibility and if they are determined significant (i.e., eligible for the National Register) effects to those properties would likely be minimized or mitigated through such measures as documentation or data retrieval action being authorized. Information provided by AINW regarding National Register eligibility indicates that there are no significant sites identified to date in the areas of indirect effects.

4.7.3 Alternative A: No Alternative

The utilities would be placed underground in an existing roadbed, which would minimize soil disturbance. Although 16 cultural resources were recorded within 200 meters of this corridor as a result of the AINW survey, no significant archaeological sites are located along the existing road corridor. Consequently, no direct or indirect effects to cultural resources are anticipated.

4.7.4 Alternative B: Below Ground

The utilities would be placed below ground and would involve trenching from Highway 97 to the Resort at Pronghorn in a more direct corridor than the current roadbed. Although 2 cultural resources were recorded within 200 meters of this corridor as a result of the AINW survey, no significant archaeological sites are located along the existing road corridor or in the area between

Highway 97 and the Resort proposed for Alternative B. Consequently, no direct or indirect effects to cultural resources are anticipated.

4.7.5 Alternative C: Above Ground

The utilities would be strung above ground on 43-foot utility poles from Highway 97 until reaching the resort property, partially following the existing unimproved dirt road. Although 2 cultural resources were recorded within 200 meters of this corridor as a result of the AINW survey, no significant archaeological sites are located along the existing road corridor or in the area between Highway 97 and the Resort proposed for Alternative C. Consequently, no direct or indirect effects to cultural resources are anticipated.

4.7.6 Cumulative Impacts

A total of 16 cultural resource sites were identified during the survey by AINW of the proposed utility corridors. None of these were found to be eligible for listing on the National Register of Historic Places. Consequently, no direct or indirect effects to cultural resources are anticipated.

4.8 WATER QUALITY AND QUANTITY

No changes to water quality and quantity would be made or are anticipated as a result of the proposed action. Water quality and quantity are addressed in EA# OR-056-02-006.

4.9 WILDFIRE AND PUBLIC SAFETY

No changes to wildfire and public safety would be made or are anticipated as a result of the proposed action. Wildfire and public safety are addressed in EA# OR-056-02-006.

4.10 LIVESTOCK GRAZING

No changes to livestock grazing would be made or are anticipated as a result of the proposed action. Livestock grazing issues are addressed in EA# OR-056-02-006.

4.11 MILITARY PERMIT

No changes to military permits would be made or are anticipated as a result of the proposed action. Military permits are addressed in EA# OR-056-02-006.

4.12 ENVIRONMENTAL JUSTICE

No changes to environmental justice would be made or are anticipated as a result of the proposed action. Environmental justice issues are addressed in EA# OR-056-02-006.

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2. Marci Todd, Bureau of Land Management
3. Greg Currie, Bureau of Land Management
4. Janet Hutchison, Bureau of Land Management
5. Jean Nelson-Dean, Bureau of Land Management
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NEPA Requirements met:

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Marci Todd, Deschutes Resource Area Environmental Coordinator Date

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FIGURES

TYPICAL UTILITY POLE STRUCTURE

TYPICAL BELOW GROUND UTILITY VAULT STRUCTURE

WILDLIFE SITUATION REPORT