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Bureau of Land Management

Preliminary Environmental Assessment
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September 2013

STRAWBERRY 69 kV TRANSMISSION LINE
RIGHT-OF-WAY PROJECT

Location:

White Pine County, Nevada

Applicant/Address:

Mt. Wheeler Power, Inc.
P.O. Box 151000
1600 Great Basin Boulevard
Ely, Nevada 89315

U.S. Department of the Interior
Bureau of Land Management
Ely District Office
Phone: 775-289-1800
Fax: 775-289-1910



Mt. Wheeler Power, Inc.
Strawberry 69 kV Transmission Line Right-of-Way Project

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1.0 INTRODUCTION

This Environmental Assessment (EA) has been prepared to analyze Mt. Wheeler Power, Inc.'s (MWP) proposal relative to the Strawberry 69 Kilovolt (kV) Transmission Line Right-of-Way Project (Project). The 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. The EA assists the Bureau of Land Management (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 the NEPA and is found in Chapter 40 of the Code of Federal Regulations (CFR) §1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement or a statement of "Finding of No Significant Impact" (FONSI).

This document is tiered, as described in Section 5.2.2 of the BLM NEPA Handbook H-1790-1, to the *Ely Proposed Resource Management Plan/Final Environmental Impact Statement* (RMP/FEIS) released in November 2007. Should a determination be made that implementation of the proposed or alternative actions would not result in "significant environmental impacts" or "significant environmental impacts beyond those already addressed in the RMP/FEIS," a FONSI will be prepared to document that determination, and a Decision Record issued providing the rationale for approving the chosen alternative.

1.1 Background

MWP currently has one authorized right-of-way (ROW) adjacent to the Project (NVN-005638). This ROW consists of an existing 25 kV power distribution line located adjacent to Strawberry Road in the northwest (NW) ¼ of Section 33, Township 19 North, Range 55 East (T19N, R55E), Mount Diablo Base and Meridian (MDB&M).

In October 2012, the Strawberry 69 kV Transmission Line Right-of-Way Project Plan of Development (POD) was submitted along with a complete BLM Form SF-299 (1/2006) Application for Transportation and Utility Systems and Facilities on Federal Lands.

MWP's objective is to construct, operate, and maintain a new overhead transmission line and associated structures on public land.

1.2 Purpose of the Proposed Action

The BLM's purpose in considering approval of the application for the ROW is to provide legitimate use of the public lands to MWP. Legitimate uses are those that are authorized under the Federal Lands Policy and Management Act of 1976 (FLPMA), or other Public Land Acts, and meet the proponent's objective while preventing undue and unnecessary degradation.

1.3 Need for the Proposed Action

The BLM needs to consider approval of the application for the Strawberry 69 kV Transmission Line ROW to respond to its mandate under the FLPMA to manage the public lands for multiple use.

1.4 Conformance with BLM Land Use Plan(s)

The Proposed Action described in this EA is in conformance with the Ely District Record of Decision and Approved RMP (BLM 2008), which states BLM would manage public lands in a manner that “meets public, local, state, and federal agency needs for use authorizations such as rights-of-way, permits, leases, and easements while avoiding or minimizing adverse impacts to other resource values.” Parameter LR-48 states “where feasible, consolidate new land use authorizations within or adjacent to existing authorizations.”

1.5 Relationship to Statutes, Regulations, or other Plans

Authorized ROWs on BLM-administered land are granted through the FLPMA, BLM ROW Regulations at 43 CFR 2800, and the BLM Rights-of-Way Manual MS-2800 through MS-2809. BLM ROW policy is extracted and implemented from these affecting regulations.

1.6 Authorizations, Permits, Reviews, and Approvals

The Project complies with the BLM Ely District’s RMP and with relevant federal, state, and local statutes, regulations, and plans. Table 1.6-1 documents the federal, state, and local agencies’ approvals, reviews, and permitting requirements as anticipated for the proposed Project.

Table 1.6-1: Authorizations, Permits, Reviews, and Approvals

Action Requiring Permit, Approval, Review	Permit/Approval	Accepting Authority/Approving Agency	Statutory Reference
FEDERAL			
ROW over land under Federal Management	ROW Grant	BLM	FLPMA 1976 (PL94-579) United States Code (USC) 1761-1771 and 43 CFR 2800
NEPA Compliance to Grant ROW	EA	BLM	NEPA, 40 CFR Part 1500-et.seg.

Action Requiring Permit, Approval, Review	Permit/Approval	Accepting Authority/Approving Agency	Statutory Reference
Grant of ROW by BLM	National Historic Preservation Act Compliance with Section 106	BLM and State Historic Preservation Office	National Historic Preservation Act of 1966, 36 CFR part 800, 16 USC 47
STATE OF NEVADA			
Construction of Utility Facilities	Notice of Intent to Comply with the General Storm Water Discharge Permit for Construction Activity	Nevada Department of Conservation and Natural Resources, Division of Environmental Protection, Bureau of Water Pollution Control	Nevada Administrative Code (NAC) 445a
Required for any construction within Nevada Department of Transportation (NDOT) ROWs	Encroachment Permit, including Traffic Control Plan	NDOT	Nevada Revised Statutes (NRS) 408.423; NAC 408
LOCAL			
Construction and Operation	Special Use Permit	White Pine County	County Zoning Code

1.7 Identification of Issues

While many issues may arise during scoping, not all of the issues raised warrant analysis. Issues raised through scoping are analyzed if:

- Analysis of the issue is necessary to make a reasoned choice between alternatives;
- The issue is significant (an issue associated with a significant direct, indirect, or cumulative impact, or where analysis is necessary to determine the significance of impacts); or
- If there is a disagreement about the best way to use a resource, or resolve an unwanted resource condition, or potentially significant effects of a proposed action or alternative.

Internal scoping was conducted by an interdisciplinary (ID) team that analyzed the potential consequences of the proposed action. Potential impacts to the following resources/concerns were evaluated in accordance with criteria listed above to determine if detailed analysis was required. Consideration of some of these items is to ensure compliance with laws, statutes or executive orders that impose certain requirements upon all Federal actions. Other items are relevant to the management of public lands in general, and to the Ely District BLM in particular.

Table 1.7-1: Summary of Supplemental Authorities and Other Elements of the Human Environment

Resource/Concern	Issue(s) Analyzed ? (Y/N)	Rationale for Dismissal from Detailed Analysis or Issue(s) Requiring Detailed Analysis
Air Quality	N	There would be temporary increased particulate matter (dust) resulting from the Proposed Action due to construction activities. The affected area is not within an area of non-attainment or areas where total suspended particulates or other criteria pollutants exceed Nevada air quality standards. Direct, indirect or cumulative impacts would not approach a level of significance. No further analysis is required.
Areas of Critical Environmental Concern	N	Not present.
Cultural Resources	N	A Class-III cultural resources inventory was conducted for the Project (8111 NV 04-012-2011(P)), and no sites eligible for the National Register of Historic Places (NRHP) were identified. Avoidance measures are included in the Project for future unidentified cultural sites. Further analysis is not required.
Forest Health	N	The Project does not meet Healthy Forests and Rangeland Act criteria.
Migratory Birds, including bald and golden eagles	Y	Migratory bird habitat is present within the Project area and is subject to disturbance. Further analyzed in EA.
Native American Religious and other Concerns	N	Consultation is ongoing. No issues have been identified to date.
United States Fish and Wildlife Service (USFWS) Listed or proposed for listing Threatened or Endangered Species or critical habitat	N	Not known to be present.
Wastes, Hazardous or Solid	N	The Proposed Action incorporates sufficient protection measures to prevent impacts associated with the uses of hazardous or regulated materials. All waste would be transported off site and recycled when feasible. No further analysis is required.
Water Quality, Drinking/Ground	N	The Proposed Action would have no impact to drinking or ground water quality. No further analysis is required.

Resource/Concern	Issue(s) Analyzed ? (Y/N)	Rationale for Dismissal from Detailed Analysis or Issue(s) Requiring Detailed Analysis
Environmental Justice	N	No minority or low-income groups would be disproportionately affected by health or environmental effects. No further analysis is required.
Floodplains	N	Not present.
Farmlands, Prime and Unique	N	Not present.
Wetlands/Riparian Zones	N	Not present.
Invasive Non-native Species	Y	The Project has the potential to introduce or spread invasive and non-native species. Prevention measures are included in the Proposed Action. Further analyzed in the EA.
Wilderness/Wilderness Study Area	N	Not present.
Lands with Wilderness Characteristics	N	Not present.
Human Health and Safety	N	Stipulations would be included in the ROW grant for the Project. No further analysis is required.
Wild and Scenic Rivers	N	Not present.
Special Status Animal Species, other than those listed or proposed by the USFWS as Threatened or Endangered	Y	BLM sensitive species have been identified as present within the Project Area. Further analyzed in the EA.
Special Status Plant Species, other than those listed or proposed by the USFWS as Threatened or Endangered	Y	BLM sensitive species have been identified as present within the Project Area. Further analyzed in the EA.
Fish and Wildlife	Y	Potential direct and indirect impacts to wildlife and wildlife habitat are further analyzed in the EA.
Wild Horses	N	The Project is not within a Herd Management Area. No further analysis is required.
Soils/Watershed	Y	Soils would be temporarily disturbed during construction of the Project. Further analyzed in the EA.
Visual Resources	Y	This resource is further analyzed in the EA.
Grazing Uses/Forage	N	The Proposed Action would not have an effect on rangeland management or grazing permits. No further analysis is required.

Resource/Concern	Issue(s) Analyzed ? (Y/N)	Rationale for Dismissal from Detailed Analysis or Issue(s) Requiring Detailed Analysis
Land Uses	N	Land is managed for multi-use. The Proposed Action is within the scope of the current land use designation. Land use designations would not be changed by the Proposed Action. No further analysis is required.
Transportation/Access	N	No roads would be closed during construction or maintenance activities as part of the Proposed Action. No further analysis is required.
Recreation Uses	N	The Proposed Action would not have an impact to recreation resources. No further analysis is required.
Public Safety	N	Stipulations will be included in the ROW grant for the Project. No further analysis is required.
Fire Management	N	The Proposed Action would not have an impact on fire management in the region. No further analysis is required.
Social Values and Economics	Y	The Proposed Action may have an indirect impact to social values and economics in the area. Further analyzed in the EA.
Paleontological Resources	N	Based on the BLM's paleontological model, the Project Area does not fall within a sensitive paleontological area. No further analysis is required.
Water Resources (Water Rights)	N	The Proposed Action would not impact existing water rights or require new water rights. No further analysis is required.
Mineral Resources	N	The Proposed Action would have no impact on mineral resources within the Project site. No further analysis is required.
Vegetative Resources	Y	The Proposed Action would have an impact on the vegetation present within the Project site. Further analyzed in the EA.

2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING PROPOSED ACTION

2.1 Introduction

The previous chapter presented the Purpose and Need for the proposed Project, as well as the relevant issues, i.e., those elements that could be affected by the implementation of the proposed Project. In order to meet the purpose and need of the proposed Project in a way that resolves the issues, the BLM has developed a range of action alternatives. These alternatives, as well as a no action alternative, are presented below. The potential environmental impacts or consequences resulting from the implementation of each alternative are then analyzed in Chapter 3 for each of the identified issues.

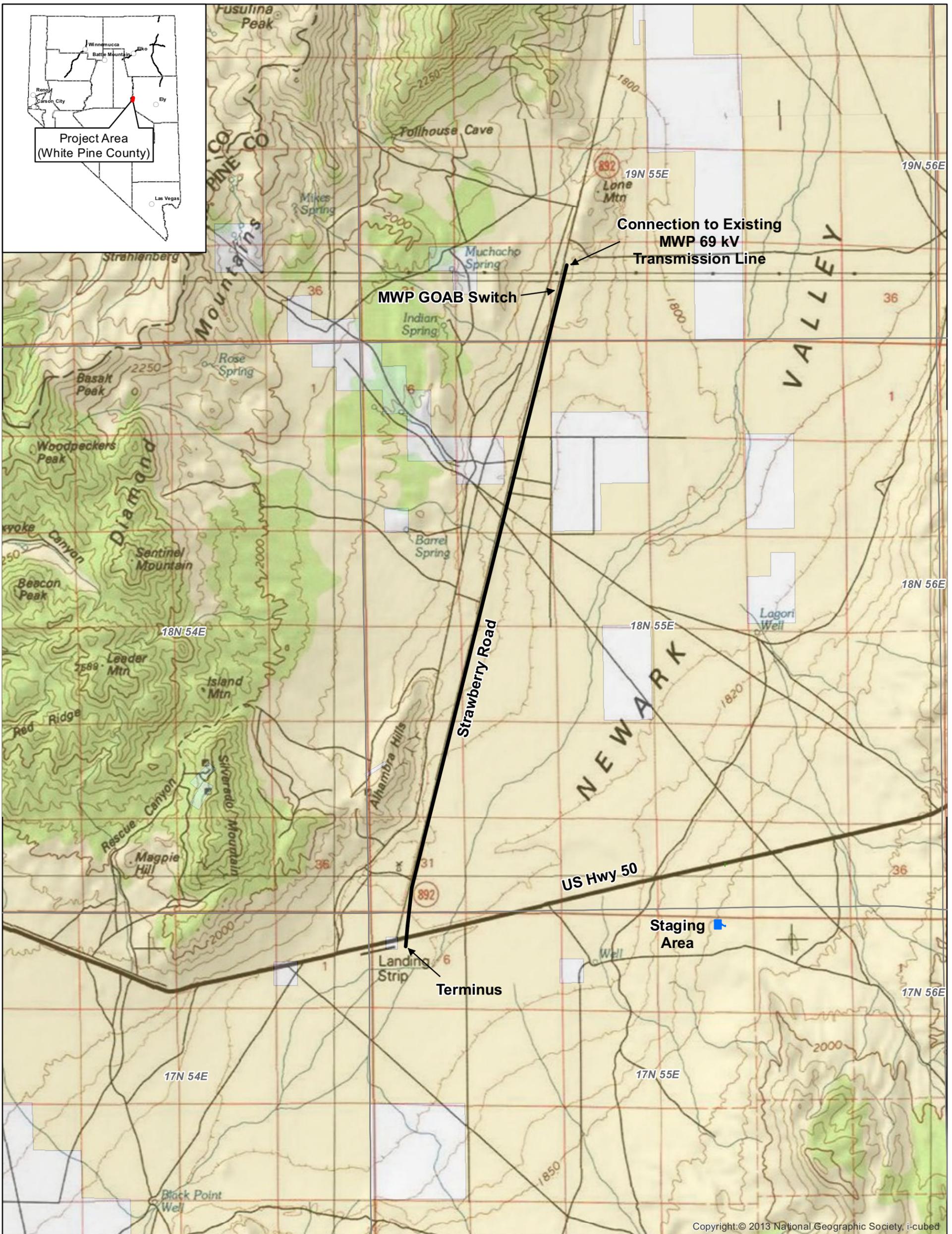
2.2 Alternative A - Proposed Action

2.2.1 Location and Access

The Project is located on public lands administered by the BLM in all or portions of Section 6, T17N, R55E, Sections 5, 8, 17, 19, 20, 30, and 31, T18N, R55E, and Sections 32 and 33, T19N, R55E, MDB&M in White Pine County, Nevada (Project Area) (Figure 2.1.1). The Project is located on the United States Geological Survey (USGS) Silverado Mountain and Black Point 7.5-minute topographic quadrangles. Access to the Project would occur by traveling west from Ely, Nevada on U.S. Highway 50 (U.S. 50) approximately 62 miles, then north onto Strawberry Road. Authorized vehicles would access the proposed overhead transmission line from a 12- to 15-foot-wide two-track maintenance road that is included in the west side of the proposed ROW (Figure 2.1.2).

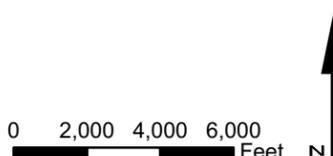
2.2.2 Proposed Action

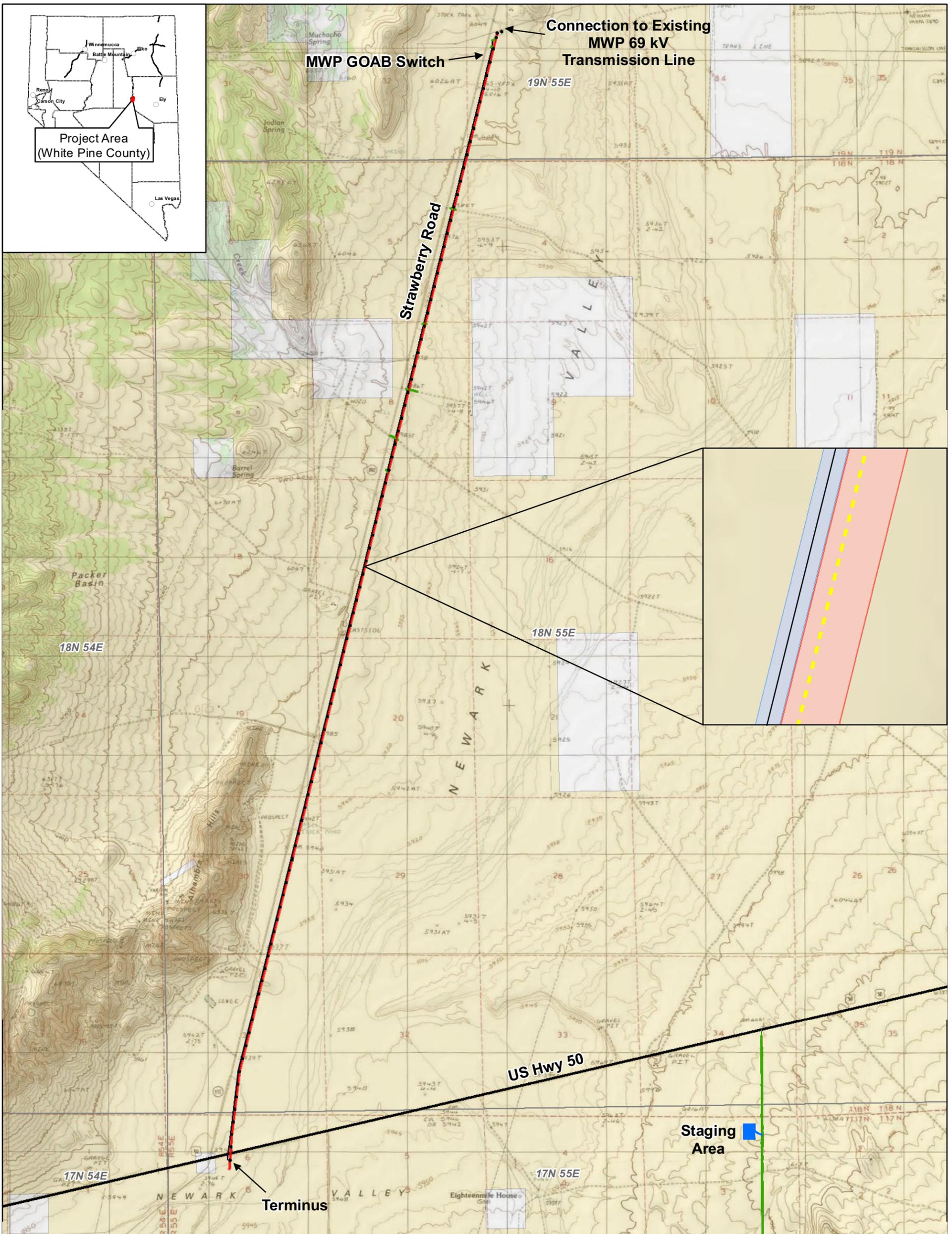
The Project would consist of the construction of approximately 7.32 miles (approximately 38,650 feet) of a 69 kV overhead transmission line connecting to an existing 69 kV overhead transmission line north of the proposed transmission line, and would span across U.S. 50 to an area just south of the intersection of the proposed 69 kV overhead transmission line and U.S. 50. The proposed overhead transmission line would be located adjacent to an existing 25 kV distribution line that runs adjacent to Strawberry Road. The new construction would include the 69 kV overhead transmission line and structures and a 12- to 15-foot-wide two-track maintenance road on the west side of the proposed 60-foot-wide ROW (Figure 2.1.2). The ROW totals approximately 53.3 acres. The surface disturbance associated with the Project would total approximately 13.6 acres with the majority of disturbance occurring from the construction of the maintenance road and to a lesser extent from the disturbance associated with the pole locations. The maintenance road would be utilized for the duration of the Project to inspect and maintain the overhead transmission line, as necessary. Maintenance may include adding gravel to any rutted two-track grooves to prevent any further rutting. Overland travel may be necessary during pole installation or during pulling and tensioning activities, but would occur only as necessary. Specific overland travel locations cannot be determined at this time. Project disturbance would be implemented with environmental protection measures outlined in Section 2.2.26 to prevent unnecessary and undue degradation during



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<p>Explanation</p> <p>— Proposed 69 kV Transmission Line</p> <p>■ Staging Area</p> <p>Land Status</p> <p>■ Bureau of Land Management</p> <p>□ Private</p>	<p>ELY DISTRICT OFFICE Egan Field Office 702 N. Industrial Way Ely, Nevada 89301</p>  <p>No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.</p>	<p>BUREAU OF LAND MANAGEMENT</p> <p>STRAWBERRY 69kV TRANSMISSION LINE RIGHT-OF-WAY PROJECT</p> <p>Project Location and Land Status</p> <p>Figure 2.1.1</p> <p>09/25/2013</p>
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Explanation

- Proposed 69 kV Transmission Line
- Existing 25kV Distribution Line
- Proposed 69 kV ROW
- Existing 25 kV ROW
- Staging Area
- Existing Access Roads
- Proposed Poles

Land Status

- Bureau of Land Management
- Private

ELY DISTRICT OFFICE
 Egan Field Office
 702 N. Industrial Way
 Ely, Nevada 89301



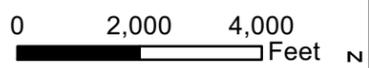
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BUREAU OF LAND MANAGEMENT

STRAWBERRY 69kV TRANSMISSION LINE RIGHT-OF-WAY PROJECT

Existing and Proposed Rights-of-Way and Project Access Roads

Figure 2.1.2



09/25/2013

construction, operation, and reclamation activities for the Project. The construction activities associated with the Project would take place over approximately eight to 12 weeks. Table 2.2-1 shows the total surface disturbance associated with each construction activity.

Table 2.2-1: Proposed Surface Disturbance

	Construction Disturbance		
	Number Needed	Individual Disturbance	Total Disturbance (acres)
Pole placement sites	110	113 square feet	0.29
Maintenance road	1	13.3 acres	13.3

2.2.3 Legal Description

The ROW would originate at the existing 69 kV overhead transmission line in the NW $\frac{1}{4}$, Section 33, T19N, R55E and terminate at a pole-mounted switch in the NW $\frac{1}{4}$, Section 6, T17N, R55E (Figure 2.1.2), which is proposed for construction in MWP's Highway 50 to Pan 69 kV Transmission Line project. Specific ROW location information can be found in Table 2.2-2.

Table 2.2-2: Legal Description of Project Area

Township/Range	Section Number	Aliquot Part
T17N, R55E	6	NW $\frac{1}{4}$
T18N, R55E	5	NE $\frac{1}{4}$, SE $\frac{1}{4}$
	8	NE $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$
	17	NW $\frac{1}{4}$, SW $\frac{1}{4}$
	19	SE $\frac{1}{4}$
	20	NW $\frac{1}{4}$, SW $\frac{1}{4}$
	30	NE $\frac{1}{4}$, SE $\frac{1}{4}$
	31	NE $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$
T19N, R55E	32	SE $\frac{1}{4}$
	33	NW $\frac{1}{4}$, SW $\frac{1}{4}$

Notes: NE = northeast; SW = southwest; SE = southeast; NW = northwest

2.2.4 Existing Land Use

The Project Area is located entirely on BLM-administered land and is used for recreation, wildlife habitat, an existing 25 kV distribution line, and other public land uses. Multiple dirt access roads transect the Project Area and would provide access for construction activities. The ROWs that have been granted by the BLM on the public lands adjacent to the Project Area are listed in Table 2.2-3.

Table 2.2-3: Existing Land Use Authorizations

Holder	ROW/Activity	Case File Number	Location
Mt. Wheeler Power	25 kV Distribution Line	N5638	Newark Valley
Mt. Wheeler Power	69 kV Transmission Line	N29660	Newark Valley

2.2.5 Facility Design

The design, construction, operation, and maintenance of the Project would meet or exceed the requirements of the following: the National Electrical Safety Code (NESC); the United States Department of Agriculture (USDA) – Rural Utilities Service; the United States Department of Labor Occupational Safety and Health Administration (OSHA) standards; and MWP’s requirements for safety and protection of landowners and their property. Based on the Avian Power Line Interaction Committee (APLIC) recommendations, adequate raptor protection construction per NESC Rule 2345E Table 2345-6, in conjunction with the APLIC Report CEC-500-2006-022 (APLIC 2006), would be implemented. With the BLM’s approval, MWP may install design modifications that provide the same or similar avian protection, such as perch protection on the top of every pole, which would be created by using the ground/static wire that goes up the pole, bending it to the center of the top of the pole and then upwards another ten to 12 inches. In addition, the neutral (multi-grounded wye system) wire would be grounded at regular intervals and insulated hardware and conductors would be used. Table 2.2-4 describes the typical design characteristics associated with power lines similar to the proposed Project. Further descriptions of Project-specific design characteristics can be found in the following subsections.

Table 2.2-4: Typical Design Characteristics

Design Part	Description
Line length	Approximately 7.32 miles
Type of structure	Single wood mono-pole
Structure height	43 to 48 feet
Span length	Approximately 350 feet
Number of structures/mile	Approximately 12 - 18 per mile
Structure base	Direct embedded
Conductor types	397.5 Aluminum Conductor Steel Reinforced “Ibis”
Clearance of conductor	27 to 28 feet
ROW width	60-foot wide ROW
Access roads	A 12- to 15-foot wide two-track maintenance road is proposed for construction within the 60-ft, 69 kV overhead transmission line ROW. MWP may need to add gravel to various “rutted road” areas.
Voltage	69 kV Delta

2.2.6 Structure Design

MWP is proposing the use of direct burial self-supporting mono-pole wood structures approximately 43 to 48 feet in height. These types of structures would be installed including tangent, angle and dead-end poles. The base of each structure would range from one to two feet in diameter. Temporary pole placement sites would include assembly and boom/line truck-landing areas resulting in temporary disturbance in the form of overland travel around each pole extending approximately four to six feet in all directions. Appendix 1 includes five diagrams of typical single-pole structures.

Tangent, angle and dead-end structures would be assembled and insulators would be attached to the pole. The poles would be erected with a boom/line truck to lift and set the structure after it is assembled. The span length between the structures would be approximately 350 feet. Final design characteristics would be determined in the detailed design phase of this Project.

2.2.7 Conductor

Minimum conductor height above the ground for the 69 kV overhead transmission line would be approximately 27 to 28 feet, at 120 degrees Fahrenheit (°F), based on the NESC minimum clearance provided per MWP standards. The exact height of each structure would be governed by topography and safety requirements for conductor clearance.

2.2.8 Shield Wire

The shield wire would be installed to protect the 69 kV overhead transmission line and equipment from direct lightning strikes. Current from lightning strikes would be transferred through the static wire, on top of the pole, and to structures in the ground.

2.2.9 Equipment

During construction, the pole placement sites would be cleared of vegetation with a bulldozer. The 12- to 15-foot-wide two-track maintenance road would be constructed as the power line structures are being constructed to allow access to the Project pole placement sites. Structural components would be transported to the site by truck and trailer. For ground construction, a boom/line truck would be used to erect the structure. Structure erection would be completed at each pole placement site. Generally, earthwork as needed, including grading the pole placement sites or any reclamation activities would be completed with a Caterpillar dozer, backhoe, or equivalent equipment. Construction materials and equipment would be stored at an off-site storage area south of U.S. 50 and placed in areas in the Project Area that would minimize disturbance to vegetation (staging area).

Table 2.2-5 includes a list of the major equipment expected to be used during construction of the Project.

Table 2.2-5: Major Equipment for Project Construction

Type of Equipment	Use
Truck	Hole drilling and earth compaction
Skid steer	Backfill pole holes
Crawler tractor/Trackhoe	Excavation
Backhoe	Excavation
Boom/Line Truck	Load and unload material, erect poles
Bucket truck	Access poles, string conductor and other uses
Cable reel trailer	Transport cable reels and feed cables into
Truck with cinch	Pull cable
Auger	Drill holes
Crane or forklift	Material management
Bulldozer/Muskeg (track unit)	Grading, access roads, pole sites, vegetation removal, and reclamation
Commercial motor vehicle	Haul poles and equipment

2.2.10 Ancillary Facilities

The approximately 7.32 miles of proposed 69 kV overhead transmission line would necessitate the construction and/or improvement of the transmission system and associated facilities prior to energization. These associated facilities, located along this proposed 69 kV overhead transmission line alignment, are outlined in the discussion below.

MWP would construct a new 69 kV overhead transmission line connecting from the existing 69 kV overhead transmission at the northern most section of this new line, insert a Gang Operated Air Break (GOAB) Switch and then proceed south towards U.S. 50. A similar GOAB Switch would be inserted into the existing 69 kV overhead transmission line servicing the Barrick Mines.

2.2.11 General Construction Activities

Construction of the transmission line would generally follow a sequential set of activities performed by a number of small crews proceeding along the length of the line.

The entire route of the transmission system would be wood mono-poles with anti-perch protection on the top of every pole, which would be created by using the ground/static wire that goes up the pole, bending it to the center of the top of the pole and then upwards another ten to 12 inches. The mono-poles and associated equipment would be transported to the staging area via commercial trucks.

Approximately five to six semi-truck and trailer loads would be required to bring the materials to the staging area. Once at the staging area, the poles would be transported to individual pole location sites via flat bed trucks and trailers. A standard truck-mounted

auger/or backhoe would be used to drill the holes for pole installation. The poles would be lifted by boom/line trucks and installed with the assistance of a backhoe/tracker.

2.2.12 Work Force

It is anticipated that six to ten linemen would be on site during the construction of the overhead transmission line. The work force would decrease to what is required during the operation and maintenance period. It is anticipated that up to four personnel would be on site at any given time for operation and maintenance following the construction period.

2.2.13 Project Compliance Plan

MWP would contact the BLM Authorized Officer (AO) or his/her designee at least ten days prior to commencing construction and/or any surface disturbing activities. A pre-construction conference would be scheduled with the BLM and MWP prior to commencing construction and/or surface disturbing activities on the ROW. MWP personnel and contractors' representatives involved with construction and/or any surface disturbing activities associated with this ROW would attend this conference to review the stipulations of the BLM ROW grant including stipulations of the POD and other documents as determined by the BLM.

MWP would not initiate any construction or other surface disturbing activities on the ROW until after the release of the BLM Notice to Proceed (Form 2800-15) is issued by the AO or his/her designee.

MWP would conduct all activities associated with the construction, operation, and termination of the ROW within the authorized limits of the ROW. MWP would construct, operate and maintain the facilities, improvements and structures within this ROW in strict conformity with the POD as approved and made part of the grant. Any relocation, additional construction, or use that is not in accordance with the approved POD, would not be initiated without the prior written approval of the AO or his designee. A copy of the most up to date POD would be made available on the ROW area during construction.

A Compliance Inspection Contractor (CIC) would provide environmental oversight and compliance regulatory activities for the BLM. The CIC would be empowered to act as BLM's representative in accordance with the Memorandum of Understanding (MOU) between the BLM and MWP. The MOU between the BLM and MWP would be developed containing the Scope of Work to outline the authority and responsibilities of the CIC. The CIC would assist the construction contractor(s) (Contractor) and construction personnel with any environmental issues that arise during construction.

MWP and the Contractor would maintain a safety program in connection with construction activities. The safety program would include safety training, elimination of unsafe conditions, and daily tail gate safety meetings. Safety practices would meet or exceed the safety practices outlined in the latest edition of the American Public Power Association "Safety Manual" as adopted by MWP.

Construction and work activities would comply with all requirements of the OSHA, and the State of Nevada Division of Occupational Safety, including provisions of the NRS 618.375 pertaining to Occupational Safety and Health. Work would also comply with all legal requirements in NRS 455.200 through NRS 455.250 pertaining to activities to be performed near overhead electrical lines.

MWP and the Contractor would be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work, including giving notices, erecting and maintaining all safeguards and complying with all laws, ordinances, regulations, codes, and lawful orders of any public agency.

2.2.14 Deviations During Construction

Minor changes in an approved project are sometimes necessary to accommodate or mitigate on-site circumstances. In the past, project construction has been stopped, pending further agency approval of the requested variance. These delays are extremely costly and could jeopardize the economic feasibility of the Project. When the variance requested is for an action that has been assessed in the NEPA document for the Project, and the resultant disturbance area is within the existing approved ROW, the CIC would have the authority to approve or deny the requested variance if the authority is delegated to the CIC by the BLM. The empowerment of the CIC to approve minor variances would expedite the Project while protecting resource values.

Minor changes that occur would not require amending the ROW. Minor changes include movement within the existing approved ROW. Avoidance areas for sensitive plant species within the approved ROW (based on biological surveys) are identified in this EA. The CIC and biological monitors would review the identified sensitive areas as recorded in this EA, and the area of the minor change, to identify any additional avoidance concerns. Examples of changes that could be approved by the CIC include the following:

Disturbance areas: Modify disturbance areas within the authorized ROW and temporary work sites. Any special status species that could be impacted by modifications would be mitigated under the direction of the CIC prior to implementation.

Power lines: Move location of erosion control devices, location of temporary fences, tensioning locations, temporary work sites, access point to poles/structures, and cable spool storage locations within authorized areas.

Roads: Meander roads within the ROW to avoid impacts to plants and wildlife, and utilize existing previously disturbed roads.

2.2.15 Solid Waste and Hazardous or Regulated Materials

Totally enclosed containment would be provided for any trash stored on site. Spill kits would be on site and absorbent diapers would be placed under leaking equipment immediately to prevent ground contamination. All construction waste, including trash and

litter, garbage or solid waste, petroleum products and other materials would be removed to a disposal facility authorized to accept such materials.

All construction, operation, and maintenance activities would comply with all applicable federal, state, and local laws and regulations regarding the proper use and disposal of hazardous substances. No hazardous substances would be used or stored within the ROW. The construction or maintenance crew foreman would be responsible for maintaining compliance with all applicable laws and regulations. In addition, an on-site inspector would be present during construction to make sure all materials are used and stored properly.

In the event that hazardous or regulated materials are spilled, measures would be taken to control the spill, and the BLM and the Nevada Division of Environmental Protection would be notified as required. Any hazardous substance spills would be handled in accordance with all applicable federal, state, and local regulations.

2.2.16 Dust Control

Water trucks would be the primary means of dust abatement during all phases of construction. Roads would be watered as needed. Water spray would be controlled so that pooling would be avoided to the extent possible. Speed limits of 20 to 25 miles per hour (mph) would be set and strictly enforced. The CIC would monitor dust conditions on site during construction.

2.2.17 Typical Pole Location Site and Temporary Work Areas

Construction materials would be delivered by truck from the staging area to the pole location sites. Crews would load the material required for the workday thus limiting the weight hauled on the access roads. This would limit the impact of rutting on access roads caused by the use of heavy vehicles.

At each pole location site, temporary areas are required to facilitate the safe operation of equipment and construction operations. The temporary areas would be located in previously disturbed areas whenever possible (i.e. along access roads). At each pole location site, a temporary work area would be cleared of vegetation and leveled only if necessary. Access to the temporary work area would be via the constructed maintenance road or overland travel. In most relatively level terrain, this would not be needed. Structure pieces would be delivered to the temporary work areas where workers would assemble the pole and attach insulators and hardware in relatively level areas without the need for blading. The pole would be erected using a boom/line truck from the staging area. After construction, the temporary work areas identified as temporary disturbance would be reclaimed and restored.

2.2.18 Structure Installation

Excavation for setting of structures would be performed in a continuous operation, preventing the possibility of caving of holes or injury to animals or persons in the vicinity of the construction. No excavations would be left uncovered when the Contractor's personnel are not on site.

Surveying and routing work for the transmission line would help in identifying areas of poor soil stability. If soil conditions prevent installation of structures at locations as staked by MWP's Engineering Manager, the Contractor is required to notify the Engineering Manager of conditions existing at the structure location. If possible, the problem would be remedied by the relocation of the structure upline or downline from the initial location. Similar protocols would be followed to avoid any identified sensitive environmental resources.

2.2.19 Conductor Installation

Conductor and shield wire would be delivered on reels by flatbed truck to the various conductor pulling sites along the ROW. Other equipment required to install the conductor would include reel stringing trailers, tensioning machines, pullers, a boom/line truck or muskeg, and several trucks including a bucket truck. One of two methods may be used for installing conductor and neutral wire.

The conventional method is to pull out a sock line or "pullrope" along the route of the line and manually lift the rope into stringing sheaves. The rope is brought to a puller at one end and a tensioner on the other end. The tensioner holds the wire reels and maintains enough tension to keep the wire off the ground and vegetation while the puller pulls the wire through the stringing sleeves. This method may require some overland travel between structures. When overland travel is required for this purpose, an all-terrain vehicle or similar type vehicle would be used.

Temporary guard structures would be installed to ensure that the conductors do not drop into the road or other locations that could result in a safety hazard. Splicing would occur between conductor spools. After the conductors are pulled in, conductor tension would be adjusted to properly sag the conductors. The conductors would then be clipped to the insulators and the stringing roller wheels removed.

Typically, conductor pulling sites for stringing the conductor would be spaced at 3,000- to 5,000-foot intervals. However, distances between each site would vary depending on the geography, topography, and environmental sensitivity of the specific area, the length of the conductor pull, the conductor size and the accessibility of the equipment. Pulling sites may require a temporary work area. At each pulling site stringing equipment would be set up approximately 250 feet from the initial structure for leveraging the conductor pull safely. Angle structure pulling sites may also be located outside the proposed ROW, but all conductor pulling operations would be contained within the cultural and biological survey areas.

Sites for tensioning equipment and pulling equipment are typically areas approximately 60 feet by 200 feet in size. However, when construction occurs in the steep and rough terrain, these sites may require larger, less symmetrical pulling and tensioning sites.

2.2.20 Ground Rod Installation

The transmission line is a delta system, and all poles and structures would have a #4 stranded copper ground wire attached to the shield wire, stapled to the pole and then attached to a 5/8-inch diameter, eight-foot long copper clad ground rod buried vertically with the top of the rod one foot below the ground surface.

2.2.21 Equipment Refueling

MWP would implement standard refueling procedures for heavy equipment that is left on the ROW for long periods of time, such as blades, cats, muskeg, etc. This equipment would be refueled in place. A spill kit would be available on the heavy equipment to be refueled in the ROW. No personal or light duty vehicles would be allowed to refuel on the ROW.

2.2.22 Post-Construction Cleanup and Reclamation

The Contractor would be required to have a continuous cleanup program throughout construction. The Contractor would restore disturbed land to its pre-construction condition. Restoration would include the removal of deep ruts and the disposal of foreign objects such as slash, pile cut-off, construction materials, etc. Reclamation would include recontouring of impacted areas to match the surrounding terrain, and cleaning trash out of gullies.

Construction sites, material storage yards, and access roads would be kept in an orderly condition and free of trash throughout the construction period. Waste materials and debris from construction areas would be collected, hauled away, or disposed of at an approved landfill site. Refuse and trash would be collected in closed containers on the vehicles daily and disposed of at an approved location after the vehicles exit the ROW. Oils and fuels would not be dumped on the ROW. Waste oils or chemicals would be hauled to an approved site for disposal by MWP.

After completion of the Project, MWP's Operations Manager would complete a final walk through. The Operations Manager would note any waste material left on site and any ruts or terrain damage or vegetation disturbance that has not been repaired. The Contractor would be given this list and final payment would not be received until all items are completed.

Procedures for restoration and ROW maintenance would be coordinated with the BLM Ely District Egan Field Office, White Pine County and would be implemented as standard construction and reclamation measures for the 69 kV overhead transmission line. The temporary work areas would be recontoured to match the surrounding terrain. Revegetation of the temporary work areas associated with Project construction would be

seeded. Seeding would be limited to areas where disturbance occurred and would be completed with a BLM-approved weed free seed mix and application rate.

Timing of revegetation activities is critically important to the overall success of the program. Seeding activities would be timed to take advantage of optimal climatic windows and would be coordinated with other reclamation activities. In general, earthwork and drainage control, if necessary, would be completed in the summer or early fall and seedbed preparation would be completed in the fall, either concurrently with or immediately prior to seeding. Seeds would be sown in late fall to take advantage of winter and spring precipitation and optimum spring germination. Early spring seeding may be utilized for areas not seeded in the fall. Seeding would not be conducted when the ground is frozen or snow covered.

2.2.23 Transmission Line Operation and Maintenance

Safety is a primary concern in the design, construction and operation of the Project. The transmission line would be protected with circuit breakers, reclosers or fuses, and related line relay protection equipment. If conductor failure occurs, power would be automatically removed from the line. Lightning protection is provided by neutral wires along the line.

Routine maintenance would include transmission line and pole repair and/or replacement. However, MWP would annually inspect the transmission line from a light, off-road vehicle. MWP would provide the annual inspection report to the BLM including details of wildlife noted within the ROW. MWP would make repairs and/or perform facility replacement as necessary. MWP would not routinely travel within the ROW and maintenance would not include the construction of new access roads. Equipment damaged by vandals would be replaced as deemed necessary.

The electrical equipment and monopoles are anticipated to have a lifetime of approximately 50 to 60 years or more depending upon maintenance operations and climatic conditions. Structures, conductors, static wire, insulators, and hardware would be left in place, dismantled, and replaced or removed from the ROW during the life of the Project.

Emergency maintenance, such as repairing downed wires during storms and correcting unexpected outages, would be performed by MWP. MWP would respond to emergency conditions along the proposed route within a few hours after being made aware of an incident. The length of time needed to make the repairs would depend on the nature of the outage. MWP manuals include emergency response procedures, as well as operations and maintenance activities for metering sites and transmission lines, which would be implemented for this Project as necessary.

MWP would maintain the proposed transmission system by monitoring, testing, and repairing equipment.

2.2.24 Dust Control

Dust control during maintenance of the transmission line would be managed the same as during construction. Monitoring and maintenance would be done from all approved or existing access roads. When access into the pole location sites needs improvement, a dozer or motor-grader may be used. Application of gravel in tire track ruts would be used for dust suppression as needed. Gravel would be used from a BLM-approved source.

2.2.25 Abandonment

If the transmission line has no foreseeable use, poles, conductors, and hardware associated with the 69 kV overhead transmission line would be totally removed. The remaining holes would be filled with soil gathered from the immediate vicinity. The areas where the poles were removed would be raked to match the surrounding topography. Bladed areas would be recontoured and seeded with a BLM-approved seed mix.

2.2.26 Environmental Protection Measures

MWP anticipates no conflicts with resources or public health and safety during and after completion of this Project. MWP proposes the following general environmental protection measures:

- Public safety would be maintained throughout the life of the Project. All equipment and other facilities would be maintained in a safe and orderly manner;
- Prior to construction, Project personnel would be instructed on the protection of cultural and ecological resources;
- A speed limit of 25 mph would be used by Project-related equipment on roads within the Project Area to reduce the potential for collisions with recreationists and grazing animals;
- Any survey monuments, witness corners, or reference monuments would be protected;
- In the event that any existing roads are severely damaged as a result of Project activities, MWP would return the roads to their original or better condition;
- The overhead transmission line would be regularly patrolled and properly maintained in compliance with applicable safety codes;
- Existing fences would be repaired or replaced to their original condition if they are damaged by construction activities; and

- Non-specular conductors, or aluminum conductors which have been mechanically or chemically treated to reduce reflectivity, would be used to reduce visual impacts.

Additional resource specific protection measures are included below.

Air Quality

- Water would be applied to the ground during the construction and utilization of the access roads and other disturbed areas as necessary to control dust;
- During excavation, backfilling, contouring, and rehabilitation, the disturbed soil should be wetted, chemically treated, or treated by other means satisfactory to the AO, sufficiently in order to effectively reduce airborne dust and reduce soil erosion. A regular maintenance program shall include, but is not limited to, soil stabilization and reapplication of dust abatement methods as necessary;
- New roads would be built at right angles to washes to the extent practicable. Construction and maintenance activities would be conducted to minimize disturbance to vegetation and drainage channels, as needed. Existing roads would be left in or restored to a condition equal to or better than their condition prior to construction;
- All construction vehicle movement outside the ROW would be restricted to designated access or public roads, or temporary movement via overland travel; and
- Open burning of construction trash is not allowed.

Hazardous or Solid Wastes

- No paint or permanent discoloring agents would be applied to rocks or vegetation to indicate limits of surveys or construction activities;
- Equipment would be properly maintained to reduce the possibility of leaks and hose ruptures. In the event of a discharge or spill, cleanup procedures would be implemented immediately to ensure that no materials would be available for transport by storm water run-off;
- Portable chemical toilets would be utilized and all human waste would be hauled off site;
- Regulated wastes would be removed from the Project Area and disposed in a state, federal, or local designated area;

- Hazardous materials would not be drained onto the ground or into streams or drainage areas. Totally enclosed containment would be provided for all trash. All construction waste including trash, litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials would be removed to a disposal facility authorized to accept such materials. No debris of any kind would be deposited in or on the ROW; and
- No biodegradable debris would be left in the ROW.

Cultural Resources

- Any areas containing cultural resources of significance would be avoided, or the potential for impacts mitigated in a manner acceptable to the BLM. MWP employees, contractors, and suppliers would be reminded that all cultural resources are protected and if uncovered shall be left in place and reported to the MWP representative and/or their supervisor;
- A buffer of approximately 100 to 150 feet would be established around eligible and unevaluated cultural sites that lie very close to Project activities. When initial construction is close to the buffered areas, an archaeological monitor would be present to insure that eligible and unevaluated cultural sites are not disturbed; and
- Cultural resources would continue to be considered during post-environmental assessment phases of plan implementation. Any cultural or paleontological resources (historic or prehistoric site or object) discovered by the Contractor, or any person working on his/her behalf on public lands, shall be immediately reported to the AO. The Contractor shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the AO. An evaluation of the discovery would be made by the AO to determine appropriate actions to prevent the loss of significant cultural or scientific values. MWP or the Contractor would be responsible for the cost of evaluation. The AO would make any decision regarding suitable mitigation measures after consulting with MWP or the Contractor. MWP or the Contractor shall be responsible for the resultant mitigation costs.

Soil and Water Resources

- To minimize erosion from storm water runoff, access roads would be maintained consistent with the best management practices (BMPs) applicable to development roads. BLM BMPs for storm water would be followed, as applicable, on public lands.

Biological Resources

Noxious Weeds

- Eradication measures would be implemented in coordination with the BLM if noxious weeds were found; and
- Noxious weeds would be controlled through implementation of preventive BMPs as outlined in the table below, which would include, but not be limited to the following: (a) any heavy equipment moving in to the Project Area from another project site would have wheel wells, wheels and tires, bumpers, undercarriage, etc., cleaned with high pressure water or air to remove any weed seeds prior to moving onto the site; (b) only certified weed-free seed would be used for reclamation seeding; and (c) all reclamation would be monitored for infestations of noxious weeds.

BMP	Purpose
Equipment washing prior to moving onto Project Area	Reduces spread of invasive species into Project Area.
Use certified weed-free seed for reclamation	Reduces introduction of invasive species into Project Area.
Avoiding disturbance to known populations	Reduces spread of species into Project Area.
Removal of populations in reclaimed areas	Manage spread of invasive species in disturbed areas to allow native vegetation to establish.
Concurrent reclamation	Reduces the establishment of invasive species in disturbed areas.
Monitoring of reclaimed areas	Identifies populations of invasive species in early stages.

Vegetation

- In newly disturbed temporary work areas, the soil would be salvaged and would be distributed and contoured evenly over the surface of the disturbed area after construction completion. The soil surface would be left rough to help reduce potential wind erosion;
- Grading would be minimized by utilizing overland travel within work areas whenever possible; and
- Following Project construction, areas of disturbed land no longer required for operations would be reclaimed to promote the reestablishment of native plant and wildlife habitat.

BLM Sensitive Species

- Should construction be planned within the greater sage-grouse (*Centrocercus urophasianus*) wintering season of November 1 through March 31, prior to the commencement of construction, areas proposed for disturbance would be surveyed by a qualified biologist to determine if wintering sage-grouse concentrations exist. Any wintering concentrations of birds would be avoided by 0.6 mile;
- Greater sage-grouse lek surveys would be performed by the Nevada Department of Wildlife (NDOW) between March 1 and May 15 to determine the activity status of the leks near the Project Area. If the leks are determined to be inactive, then no further measures would be taken. If the leks are determined to be active, then no activities would occur one hour prior to sunrise until three hours after daily between March 1 and May 15 within two miles of the active lek;
- In order to mitigate the temporary and permanent loss of Preliminary Priority Habitat (PPH) by the Proposed Action, MWP would implement the applicable stipulations outlined in the draft MOU being prepared by the Nevada Mining Association and the BLM;
- A MWP-hired biologist would conduct a pre-disturbance survey for pygmy rabbit (*Brachylagus idahoensis*) in suitable habitat within the Project Area two weeks prior to any surface disturbance. If occupied habitat is detected within the proposed area of disturbance, then no surface disturbance activities would occur within 200 feet of the occupied habitat when the young are in their burrows. If disturbance is unavoidable within occupied suitable habitat, then avoidance during breeding season would be followed, or gradual Project disturbance would occur to allow for the relocation of the species. If unoccupied habitat is discovered within the Project Area, avoidance by a minimum of 200 feet would be practiced as much as feasible through monitoring;
- To reduce potential impacts to sand cholla (*Grusonia pulchella*), all sand cholla plants in the Project Area that cannot be avoided through monitoring would be removed by a qualified botanist and replanted after power line installation activities are completed, to a BLM-approved area as close to the Project Area as possible; and
- A pre-construction nesting bird and raptor survey would be conducted prior to Project construction activities within breeding and nesting season as described below, in the Migratory Birds and Raptors section.

Migratory Birds and Raptors

- All power poles would utilize perch deterrent methods or equipment approved by BLM, such as perch protection on the top of every pole, which would be created

2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING PROPOSED ACTION

by using the ground/static wire that goes up the pole, bending it to the center of the top of the pole and then upwards another ten to 12 inches;

- Powerlines and associated structures would be constructed to conform to those practices and standards described in the *Suggested Practices for Avian Protection on Power Lines* (APLIC 2006). These standards prevent electrocution through proper spacing between overhead transmission line features; and
- Prior to surface disturbance being conducted during the avian breeding season (April 1 through July 31), MWP would provide a wildlife biologist to conduct a migratory bird nest survey of active working areas within the Project Area to verify that no nesting birds would be affected. The migratory bird nest survey would be conducted by an established protocol approved by the Wildlife Biologist in the BLM Egan Field Office. During the period from April 1 through May 15, all ground disturbing activities would be completed within fourteen days of the date on which the bird nest survey was performed. If activities begin or last more than fourteen days from the date of the most recent bird nest survey, another bird nest survey would be performed to ensure that no nests are disturbed and that no take of migratory birds occurs. A single migratory bird nest survey would be performed without the fourteen day time restriction for project activities occurring between May 15 and July 31 as most migratory bird species would have completed their nest building activities by then. If nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nest material, transporting food) is observed, a protective buffer would be delineated, as identified in the procedures outlined in Appendix 3, and the buffer area avoided to prevent destruction or disturbance to nests until they are no longer active.

Wildlife

- Following Project construction, areas of disturbed land no longer required for operations would be reclaimed to promote the reestablishment of native plant and wildlife habitat.

Fire Protection

- All construction and operating equipment would be equipped with applicable exhaust spark arresters, hand tools, and a fire extinguisher;
- Personnel would be allowed to smoke only in designated areas, and they would be required to follow applicable BLM regulations regarding smoking;
- All vehicles must stay on designated roads or park in areas free of vegetation;
- Water that is used for construction and dust control would be available for firefighting;

- MWP or its Contractor would be responsible for any fire started in or out of the Project Area by its employees or operations during construction. MWP or its Contractor would be responsible for fire suppression and rehabilitation. MWP or its Contractor would take aggressive action to prevent and suppress fires on and adjacent to the Project Area and would utilize its workers and equipment on the Project for fighting fires within the Project Area. Costs involved with MWP or Contractor-caused fires would be charged to MWP or the Contractor;
- MWP or the Contractor would provide and store, in a place easily accessed at each construction site, shovels and one five-pound ABC dry powder carbon dioxide fire extinguisher during all construction activities; and
- All federal, state, and county laws, ordinances, rules, and regulations, which pertain to prevention, pre-suppression, and suppression of fires, would be strictly followed. All personnel would be advised of their responsibilities under the applicable fire laws and regulations. It would be the responsibility of the construction contractor to notify the BLM, Ely Interagency Communications Center at (775) 289-1925 and the BLM Ely Fire Officer at (775) 635-4144, when a Project related fire occurs within or adjacent to the construction area.

2.3 Connected Action

Based on the requirements outlined in 40 CFR §1508.25 (a)(1)(iii) for connected actions, a temporary storage area has been identified as a connected action to the Proposed Action. The storage area is located south of U.S. 50 in the NW ¼ of the NE ¼ of Section 3, T17N, R55E (Figure 2.1.2), which is currently used as a gravel pit by Midway Gold for maintenance of the Pan Mine site access road. This area has been previously disturbed and MWP would not perform any new disturbance in this area.

For this Project, the storage area would be required for construction materials. This storage area would serve as the reporting location for workers, parking space for vehicles, and storage space for equipment and material.

The storage area would be located in an area requiring no clearing or grading. Structural materials such as structure steel, hardware, foundation material, spools of conductor, and shield wire would be hauled by truck into the staging area. A crane or forklift would be required to unload and transport the materials.

2.4 Alternative B - No Action

Under the No Action Alternative, the BLM would not grant the ROW, and the Project would not be constructed. There are no existing ROWs within the Project Area to be maintained.

2.5 Alternatives Considered, but Eliminated from Further Analysis

2.5.1 Underground Route Alternative

Under this alternative, MWP would construct the proposed 69 kV transmission line underground instead of above ground. This alternative would not be technically or economically feasible as it would result in additional costs to the construction and operation of the transmission line, making the project economically unfeasible, and increased difficulties with maintenance procedures, making the project technically infeasible.

3.0 AFFECTED ENVIRONMENT/ENVIRONMENTAL IMPACTS

3.1 Introduction

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values and resources) of the impact area.

3.2 General Setting

The Project Area is located in the southern extent of the Newark Valley on the east flank of the Diamond Mountains. The elevation in the Project Area ranges from 5,938 to 6,160 feet above mean sea level (amsl). The Project Area contains valley bottom and flat terrain that is vegetated with big sagebrush scrub, salt desert scrub, and greasewood vegetation communities. Several ephemeral drainages, shown as blue-line streams on the USGS Ely 7.5-minute topographic map, traverse the Project Area in a northeast-southwest trend. Surface water runoff from the Project Area flows east into the Newark Valley.

Soils in the Project Area according to the Natural Resources Conservation Service (NRCS) consist of Pyrat-Cowgil-Broyles, Linoyer-Heist-Tulase, Katelana, Sheffit-Katelana, and Automal-Wintermute associations (NRCS 2013). Soils within these associations range from gravelly sandy loam, gravelly loam, gravelly silt loam, and silt loam and consist of mixed alluvium, loess over mixed alluvium, residuum and colluvium from volcanic ash, limestone, andesite, basalt, dolostone, sandstone, rhyolite, and quartzite.

According to the Western Regional Climate Center (WRCC), the average maximum temperature at Fish Creek Ranch, which is located approximately ten miles southwest of the Project Area, is 86 °F in July, and the average minimum temperature is 3 °F in January. The average annual precipitation is approximately 5.56 inches and tends to peak in January in the form of snow that can accumulate up to two inches in depth (WRCC 2013).

3.3 Resources/Concerns Analyzed

3.3.1 Migratory Birds, including bald and golden eagles

The analysis area for migratory birds is defined as the Biological Survey Area and Raptor Survey Area from the August 2012 Biological Survey Report prepared for the Project.

3.3.1.1 Affected Environment

"Migratory bird" means any bird listed in 50 CFR 10.13. All native birds commonly found in the United States (U.S.), with the exception of native resident game birds, are protected under the Migratory Bird Treaty Act of 1918 (as amended) (MBTA). The MBTA prohibits taking of migratory birds, their parts, nests, eggs, and nestlings without a permit. Executive Order (EO) 13186, signed January 10, 2001, directs federal agencies

to protect migratory birds by integrating bird conservation principles, measures, and practices.

Additional direction comes from the MOU between the BLM and the USFWS, signed April 12, 2010. The purpose of this MOU is to strengthen migratory bird conservation through enhanced collaboration between the BLM and USFWS, in coordination with state, tribal, and local governments. The MOU identifies management practices that impact populations of high priority migratory bird species, including nesting, migration, or over-wintering habitats on public lands, and develops management objectives or recommendations that avoid or minimize these impacts.

Bald and Golden Eagles

Bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) are protected by the MBTA and the Bald and Golden Eagle Protection Act of 1940 (as amended), both of which prohibit take of migratory birds, their parts, nests, eggs, and nestlings without a permit.

The NDOW identified eight golden eagle nests within ten miles of the Project Area (NDOW 2012). The 2012 biological surveys identified suitable golden eagle nesting habitat approximately one to two miles west of the Project Area in the Diamond Mountains. There are no cliffs representing golden eagle nesting habitat in the Project Area (Enviroscientists 2012).

Migratory Birds

Three types of habitat occur within the Project Area; big sagebrush shrubland, salt desert scrub, and greasewood community. According to the Great Basin Bird Observatory (GBBO), migratory bird species associated with areas characterized by sagebrush and salt desert scrub vegetative communities may include the following: Swainson's hawk (*Buteo swainsoni*); golden eagle (*Aquila chrysaetos*); ferruginous hawk (*Buteo regalis*); prairie falcon (*Falco mexicanus*); western burrowing owl (*Athene cunicularia*); common poorwill (*Phalaenoptilus nuttallii*); gray flycatcher (*Empidonax wrightii*); sage thrasher (*Oreoscoptes montanus*); Brewer's sparrow (*Spizella breweri*); sage sparrow (*Amphispiza belli*); and loggerhead shrike (*Lanius ludovicianus*). The black-throated sparrow (*Amphispiza bilineata*) serves as an indicator species for the salt desert scrub vegetation community. Other species that may occasionally, seasonally, or opportunistically use the vegetation communities within the Project Area, but are not primarily dependent on it include the sharp-tailed grouse (*Tympanuchus phasianellus*), pinyon jay (*Gymnorhinus cyanocephalus*) and black rosy-finch (*Leucosticte atrata*) (GBBO 2010).

Migratory bird species observed in the Biological Survey Area and Raptor Survey Area during a survey conducted by Enviroscientists, Inc. (Enviroscientists) in April and May 2012 include the following: black-throated sparrow; Brewer's sparrow; common raven (*Corvus corax*); ferruginous hawk; golden eagle; horned lark (*Eremophila alpestris*); loggerhead shrike; prairie falcon; red-tailed hawk (*Buteo jamaicensis*); rough-legged

hawk (*Buteo lagopus*); sage sparrow; sage thrasher; turkey vulture (*Cathartes aura*); and western meadowlark (*Sturnella neglecta*).

In a February 2012 response letter to a species request for the Project Area, the NDOW identified the following migratory bird species as having distribution ranges throughout the Project Area and vicinity: American kestrel (*Falco sparverius*); barn owl (*Tyto alba*); Cooper's hawk (*Accipiter cooperii*); great horned owl (*Bubo virginianus*); long-eared owl (*Asio otus*); merlin (*Falco columbarius*); northern goshawk (*Accipiter gentilis*); northern harrier (*Circus cyaneus*); northern saw-whet owl (*Aegolius acadicus*); osprey (*Pandion haliaetus*); peregrine falcon (*Falco peregrinus*); sharp-shinned hawk (*Accipiter striatus*); short-eared owl (*Asio flammeus*); and western screech owl (*Megascops kennicottii*). The NDOW also stated that the American kestrel, bald eagle, burrowing owl, ferruginous hawk, golden eagle, northern harrier, prairie falcon, red-tailed hawk, and rough-legged hawk have been directly observed in the Project Area (NDOW 2012).

3.3.1.2 Impact Analysis

Proposed Action

Impacts to migratory birds may include temporary loss of foraging habitat during construction activities and permanent loss of a small amount of habitat due to power pole and access road installation. Temporary work areas including staging areas and construction laydown areas would cause a small amount of temporary habitat loss until reclamation is complete. No impacts to nesting birds would be expected since nesting surveys would be conducted for any disturbance activities occurring during the nesting season April 1 through July 31, and appropriate protection measures would be implemented for any nests found. In addition, environmental protection measures in Section 2.2.26 provide protection against electrocution and perching activities.

Installation of powerlines may provide additional opportunities for raptor perching and nesting in the Project Area. Increasing raptor perch sites may increase predation rates on prey species associated with raptors; however, existing powerlines in the Project Area already provide perch sites so any increase is likely to be small. In addition, the proposed power lines include perch deterrent methods, which would also minimize the potential for predation rates.

No Action Alternative

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur. There are no existing ROWs within the Project Area, so no impacts to migratory birds would be anticipated from the No Action Alternative; however, ongoing potential impacts could occur with the adjacent 25 kV powerline.

3.3.2 Invasive and Nonnative Species

The analysis area for invasive and nonnative species is defined as the Biological Survey Area from the August 2012 Biological Survey Report prepared for the Project (Enviroscientists 2012).

3.3.2.1 Affected Environment

The control of noxious weeds on public land under BLM jurisdiction includes the Federal Insecticide, Fungicide and Rodenticide Act of 1972, Federal Noxious Weed Act of 1974, FLPMA (1976), and the Public Rangelands Improvement Act of 1978.

An "invasive species" is defined as a species that is nonnative to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health (EO 13112). Invasive, nonnative species are species that are highly competitive, highly aggressive, and spread easily. They include plants designated as noxious and animals designated as pests by federal or state law.

The Nevada Department of Agriculture maintains a Nevada Noxious Weed List. The BLM defines "noxious weed" as "any plant growing where it is not wanted. Legally, a noxious weed is any plant designated by a federal, state or county government as injurious to public health, agriculture, recreation, wildlife or property. A noxious weed is also commonly defined as a plant that grows out of place and is 'competitive, persistent, and pernicious'." The agency's primary focus is "providing adequate capability to detect and treat smaller weed infestations in high-risk areas before they have a chance to spread." Noxious weed control would be based on a program of "...prevention, early detection, and rapid response" (BLM 2013).

No listed noxious weeds were detected during the botanical survey within the Biological Survey Area; however, the invasive and nonnative species Russian thistle (*Salsola tragus*), halogeton (*Halogeton glomeratus*), and cheatgrass (*Bromus tectorum*) were observed (Enviroscientists 2012). These species were primarily observed in previously disturbed areas intermixed with native species and no monocultures of Russian thistle, halogeton, or cheatgrass were noted in the Biological Survey Area.

3.3.2.2 Impact Analysis

Proposed Action

The strategy for noxious weed management is to provide "adequate capability to detect and treat smaller weed infestations in high-risk areas before they have a chance to spread" (BLM 2013). Noxious weed control would be based on a program of "prevention, early detection and rapid response" (BLM 2013). Surface disturbance activities associated with the Proposed Action may have the potential to facilitate the introduction or establishment of invasive, nonnative species, and noxious weeds. These

impacts would be minimized based on implementation of the environmental protection measures in Section 2.2.26.

No Action Alternative

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur. There are no existing ROWs within the Project Area, so no impacts from invasive and nonnative species would be anticipated from the No Action Alternative.

3.3.3 Social Values and Economics

The analysis area for social values and economics includes White Pine and Eureka Counties.

3.3.3.1 Affected Environment

The Project Area is located in White Pine County, Nevada, approximately 62 miles west of Ely, Nevada, at U.S. 50 and Strawberry Road. White Pine County is located in east central Nevada and encompasses approximately 8,897 square miles. The State of Utah borders the county to the east. Elko, Eureka, Nye and Lincoln counties border White Pine County to the north, west, southwest, and south, respectively. U.S. 50 traverses White Pine County in an east-west direction.

The total population of White Pine County in 2012 was estimated to be 10,042 (U.S. Census Bureau 2013a). The median household income in White Pine County in 2011 was \$52,014, with mining being identified as a major employment sector (Department of Employment, Training, and Rehabilitation [DETR] 2013). The population in Ely, the only incorporated city and county seat, in 2011 was 4,069 (White Pine County 2013). Ely is considered a regional commercial center and is home to several restaurants and retail establishments and provides a variety of lodging and recreational opportunities.

The total population in Eureka County in 2012 was estimated to be 2,001 (U.S. Census Bureau 2013b). The median household income in Eureka County in 2011 was \$58,985, with mining also being identified as a major employment sector similar to White Pine County (DETR 2013). The population in the Town of Eureka, the largest town in Eureka County and county seat, in 2010 was 610 (U.S. Census Bureau 2013c). The Town of Eureka provides several dining, retail, and lodging opportunities.

The economy of White Pine County is based on major industries including mining, state and local government services, and tourism. White Pine County is home to gold, copper, and other types of mining. Tourism is also a large part of White Pine County's economy due to gaming and a variety of recreational opportunities. The residents and businesses of White Pine County rely on power from MWP to service their electrical needs and enhance their standard of living. The economy of Eureka County is primarily based on

gold mining and local government services. MWP, Wells Rural Electric Company, and NV Energy provide power to residents and businesses throughout Eureka County.

3.3.3.2 Impact Analysis

Proposed Action

Under the Proposed Action, the construction of the power line would be conducted by existing MWP employees for a temporary period of up to eight weeks. Up to ten employees would be on site at any one time during construction activities, and up to four employees would be on site at any one time during operation and maintenance activities. Most of these employees currently reside in Ely, Nevada.

The employment rates in White Pine and Eureka Counties are not anticipated to change as a result of the Project, as existing MWP employees that currently live and contribute to the economy of the area would be constructing and operating the powerline. There also would not be anticipated impacts to public services and facilities. Direct impacts to social values and economics are anticipated to be minimal. The construction of a new powerline could indirectly bring more people to the area by providing increased housing and business opportunities in which the new powerline could provide electricity.

No Action Alternative

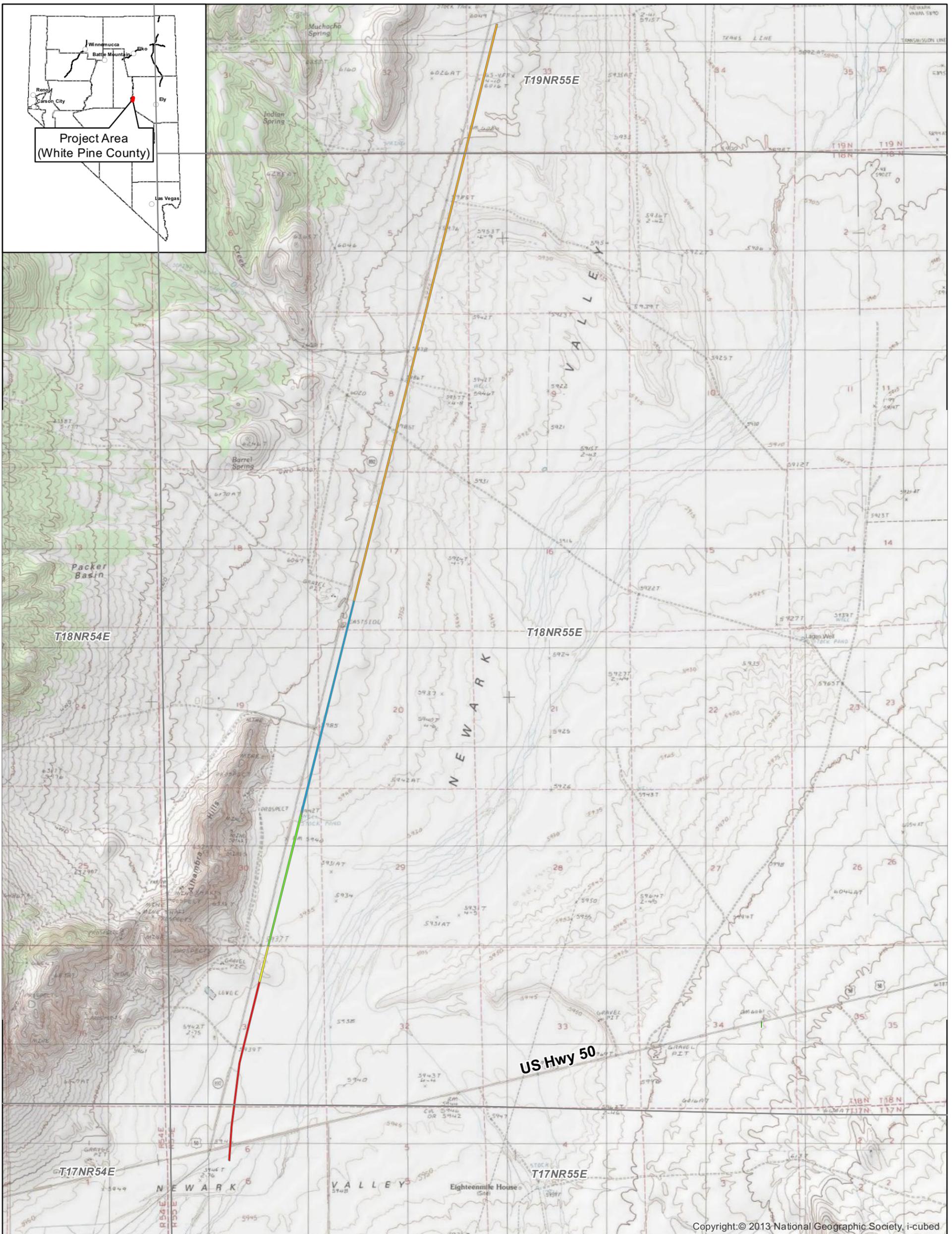
Under the No Action Alternative, the overhead transmission line would not be constructed; therefore, impacts from the Proposed Action would not occur. MWP's contribution to the local economy would continue at current levels.

3.3.4 Soils

The analysis area for soils includes the approximate 7.32-mile long, 60-foot wide ROW, and encompasses approximately 53.3 acres.

3.3.4.1 Affected Environment

The information for soils in the Project Area was primarily obtained from the NRCS. The soils within the Project Area consist of gravelly sandy loam, gravelly loam, gravelly silt loam, and silt loam and consist of mixed alluvium, loess over mixed alluvium, residuum and colluvium from volcanic ash, limestone, andesite, basalt, dolostone, sandstone, rhyolite, and quartzite (NRCS 2013). The soil mapping units within the Project Area are shown on Figure 3.3.4 and listed in Table 3.3-1.



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Explanation

NRCS Soil Map Units

- 181, Pyrat-Cowgil-Broyles association (27.1 acres)
- 232, Linoyer-Heist-Tulase association (9.9 acres)
- 242, Katelana association (8.3 acres)
- 250, Sheffit-Katelana association (6.3 acres)
- 373, Automal-Wintermute association (1.7 acres)

ELY DISTRICT OFFICE
Egan Field Office
702 N. Industrial Way
Ely, Nevada 89301



BUREAU OF LAND MANAGEMENT

**STRAWBERRY 69kV TRANSMISSION
LINE RIGHT-OF-WAY PROJECT**

Soil Types in the Project Area

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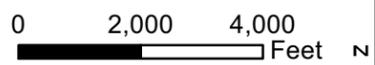


Figure 3.3.4

09/25/2013

Table 3.3-1: Soil Characteristics in the Project Area

Mapping Unit	Soil Series	Acres in the Project Area	Soil Depth in Inches to Restrictive Feature	Hydrological Characteristics	Soil Erosion Hazard	
					By Water	By Wind
Pyrat-Cowgil-Broyles association (181)	Pyrat	27.1	>80	Well-drained	Slight	Slight
	Cowgil		>80	Well-drained		
	Broyles		>80	Well-drained		
Linoyer-Heist-Tulase association (232)	Linoyer	9.9	>80	Well-drained	Moderate	Slight
	Heist		>80	Well-drained		
	Tulase		>80	Well-drained		
Katelana association (242)		8.3	>80	Well-drained	Moderate	Slight
Sheffit-Katelana association (250)	Sheffit	6.3	>80	Moderately well-drained	Moderate	Slight
	Katelana		>80	Well-drained		
Automal-Wintermute association (373)	Automal	1.7	>80	Well-drained	Slight	Slight
	Wintermute		>80	Well-drained		

3.3.4.2 Impact Analysis

Proposed Action

Out of the approximate 53-acre ROW and the 0.29 acre of pole location site disturbance, Project-related activities would result in the disturbance to approximately 13.3 acres of soils and includes the following: approximately 6.7 acres of the Pyrat-Cowgil-Broyles association; approximately 2.6 acres of the Linoyer-Heist-Tulase association; approximately two acres of the Katelana association; approximately 1.6 acres of the Sheffit-Katelana association; and approximately 0.4 acre of the Automal-Wintermute association. In addition, Project activities could contribute to soil and wind erosion and soil compaction over the approximate six- to eight-week long Project until the disturbed surfaces have been revegetated. Environmental protection measures discussed in Section 2.2.26 to reduce the disturbance of Project-related activities on soils within the Project Area include minimizing cut and fill activities through the selection of the transmission line routes and utilizing BMPs to reduce erosion from storm water runoff. These measures and reclamation activities would minimize impacts to soils.

No Action Alternative

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur. There are no existing ROWs within the Project Area, so no impacts to soils would be anticipated from the No Action Alternative.

3.3.5 Special Status Species

The analysis area for special status species is defined as the Biological Survey Area and Raptor Survey Area from the August 2012 Biological Survey Report prepared for the Project (Enviroscientists 2012).

3.3.5.1 Affected Environment

BLM policy for management of special status species is in the BLM Manual Section 6840. Special status species include the following:

- Federally Threatened or Endangered Species: Any species that the USFWS has listed as an endangered or threatened species under the Endangered Species Act of 1973, as amended (ESA) throughout all or a significant portion of its range;
- Proposed Threatened or Endangered Species: Any species that the USFWS has proposed for listing as a federally endangered or threatened species under the ESA;
- Candidate Species: Plant and animal taxa that are under consideration for possible listing as threatened or endangered under the ESA;
- BLM Sensitive Species: 1) Species that are currently under status review by the USFWS; 2) Species whose numbers are declining so rapidly that federal listing may become necessary; 3) Species with typically small and widely dispersed populations; or 4) Species that inhabit ecological refugia or other specialized or unique habitats; and
- State of Nevada Listed Species: State-protected animals that have been determined to meet BLM's Manual 6840 policy definition.

Nevada BLM policy is to provide State of Nevada listed species and Nevada BLM sensitive species with the same level of protection as is provided to candidate species in BLM Manual 6840.06C. Per wording in Table IIa in BLM Information Bulletin No. NV-2003-097, Nevada protected animals that meet BLM's 6840 policy definition are those species of animals occurring on BLM-managed lands in Nevada that are: 1) "protected" under authority of the NAC; 2) have been determined to meet BLM's policy definition of "listing by a state in a category implying potential endangerment or extinction;" and 3) are not already included as federally listed, proposed, or candidate species.

The USFWS, the Nevada Natural Heritage Program (NNHP), and the NDOW were contacted to obtain a list of threatened and endangered and sensitive species that have the potential to occur within the Project Area. In addition, the BLM Sensitive Species List and Special Status Species (threatened and endangered) lists were evaluated for potential to occur in the Project Area. Information from the NNHP, the NDOW, and the USFWS indicate that no federally threatened or endangered plant or animal species have the potential to occur within the Project Area (NNHP 2012; NDOW 2012; USFWS 2012).

Special status plant and wildlife field surveys were conducted during March, April, May, and June 2012 by Enviroscientists (Enviroscientists 2012). Enviroscientists conducted a biological survey of the Project Area which included an assessment of potential sensitive species habitat. Prior to conducting field surveys, Enviroscientists reviewed available literature and corresponded with resource agencies to identify potential biological resources and special status species that have the potential to occur within the Project Area. The survey assessment included: a vegetation community assessment and species inventory; a sensitive plant survey; a general wildlife habitat assessment and species inventory; a greater sage-grouse survey and habitat assessment; a pygmy rabbit survey and habitat assessment; and a migratory bird and raptor survey.

Based on the NNHP response letter, potential habitat exists for at risk taxa low feverfew (*Parthenium ligulatum*) and Eastwood milkweed (*Asclepias eastwoodiana*). Based on the results of the biological survey and habitat assessment, BLM sensitive or special status wildlife species that were determined to have the potential to utilize the Project Area include: Brewer's sparrow; ferruginous hawk; greater sage-grouse; loggerhead shrike; sage sparrow; sage thrasher; and pygmy rabbit.

BLM Sensitive Species

Sensitive species are species that require special management consideration to avoid potential future listing under the ESA and that have been identified in accordance with procedures set forth in BLM Manual 6840. BLM policy in BLM Manual 6840.06 states, "Actions authorized by the BLM shall further the conservation and/or recovery of federally listed species and conservation of Bureau sensitive species. Note that 'conservation' has a different meaning depending on whether it is referring to ESA listed species or Bureau sensitive species...Bureau sensitive species would be managed consistent with species and habitat management objectives in land use and implementation plans to promote their conservation and to minimize the likelihood and need for listing under the ESA."

The following sensitive species are discussed because they have been directly observed in the Project Area. Sensitive species with the potential to occur in the Project Area are identified in Appendix 3.

Sensitive Plant Species

In a letter dated February 14, 2012, the NNHP stated that the at risk taxa starveling milkvetch (*Astragalus jejunus* var. *jejunus*) and low feverfew have been observed in the

vicinity of the Project Area; however, only low feverfew is a BLM sensitive species. The NNHP letter also identified potential habitat in the vicinity of the Project Area for the Eastwood milkweed, also a BLM sensitive species. No low feverfew or Eastwood milkweed was observed in the Biological Survey Area during the May and June 2012 botanical field surveys. The survey was conducted during the time of year when these species would have been visible.

Sand cholla

Sand cholla, a BLM sensitive species, was not identified by the NNHP as having the potential to occur within the vicinity of the Project Area; however, during May and June 2012 field surveys, 22 locations of sand cholla were identified within the proposed overhead transmission line ROW. Sand cholla is a low, inconspicuous clump-forming flowering cactus. It is usually found on sand dunes, dry-lake borders, river bottoms, washes, valleys, and desert plains (NatureServe 2012).

Sensitive Wildlife Species

Greater sage-grouse

In response to a request for identification of federally-listed and candidate species in the Project Area, the USFWS memorandum on March 1, 2012, stated that the greater sage-grouse, a candidate species, has the potential to occur in the Project Area (USFWS 2012).

The BLM has issued two Instruction Memoranda (IMs) for the protection of greater sage-grouse. IM 2012-043, *Greater Sage-Grouse Interim Management Policies and Procedures*, provides interim policies and procedures to the BLM to be applied to ongoing and proposed authorizations that affect greater sage-grouse, while long-term permanent measures are being developed (BLM 2011a). IM 2012-044, *BLM National Greater Sage-Grouse Land Use Planning Strategy*, provides direction to the BLM for the consideration of conservation measures, identified in *A Report on National Greater Sage-Grouse Conservation Measures* prepared by the Sage-Grouse National Technical Team, to apply during the land use planning process (BLM 2011b). The NDOW has recently mapped greater sage-grouse habitat in Nevada to support these IMs and published a Habitat Characterization Map in March 2012. The BLM used this NDOW map to create a map identifying PPH and Preliminary General Habitat (PGH) on BLM-administered lands. According to this map, there are approximately 28 acres of PPH located within the Project Area, and no PGH. Most of this area is subject to proposed disturbance from the proposed ROW activities. On August 10, 2012, the BLM Nevada State Office issued IM NV-2012-058 (BLM 2012), which provides clarity on how to implement mapping and management protocols outlined in IM 2012-043 and IM 2012-044.

Greater sage-grouse is a candidate for listing under the ESA, and on March 23, 2010, the USFWS's 12-month status review of the species determined that the species warrants

protection under the ESA. The listing of the greater sage-grouse at this time is precluded by the need to address higher priority species, and the state and BLM are responsible for management of the species.

Greater sage-grouse, an upland game bird, are largely dependent on sagebrush for nesting and brood rearing and feed almost exclusively on sagebrush leaves during the winter. They are known to occur in foothills, plains, and mountain slopes where sagebrush meadows and aspen are in close proximity. Dense sagebrush overstory and an herbaceous understory of grasses are important to provide shade and security, and both new herbaceous growth and residual cover are important in the understory. Greater sage-grouse have specific habitat requirements to carry out their life cycle functions. Early spring habitat or breeding sites called “leks,” are usually situated on ridge tops or grassy areas surrounded by a substantial brush and herbaceous component (Schroeder et al. 1999). Leks have less herbaceous and shrub cover than surrounding areas. In early spring, males gather in leks where they strut to attract females.

Late spring habitat or nesting sites are located in thick cover in sagebrush habitat beneath sagebrush or other shrubs. Nests are situated on the ground in a shallow depression with an average distance between nest sites and nearest leks of 0.7 mile to 3.9 miles; however, females may move greater than 12.4 miles from a lek to nest (NatureServe 2012).

Early brood rearing habitat may be relatively open with approximately 14 percent canopy cover of sagebrush and abundant forbs, which attract insects to feed young chicks. Denser sagebrush is often on the periphery to provide shelter from predators. Late brood rearing habitat includes sagebrush vegetation with plants that are more succulent and have a perennial water source nearby such as meadows with streams (NatureServe 2012).

Fall habitat consists mainly of sagebrush as a result of frost killing the forbs and grasses. In the winter, males and females separate into different groups. Fall movements to winter ranges are typically slow. The winter habitat consists of sagebrush that has approximately 15 percent canopy cover and is approximately 18 inches in height (Schroeder et al. 1999). The territory of this species ranges from the mid-west to the western U.S.

According to data provided by the NDOW for the baseline biology studies conducted for the Project, there is no core breeding habitat in the Project Area, but core nesting habitat for greater sage-grouse exists throughout the Project Area. In addition, both winter and summer distribution exists throughout the Project Area (NDOW 2012).

According to the response letter from the NDOW, dated February 2012, there were five known lek sites in the vicinity of the Project Area (NDOW 2012). Field surveys were conducted in April and May 2012 in accordance with NDOW survey recommendations. No greater sage-grouse or fresh sign was observed on any lek, resulting in a conclusion of lek inactivity in 2012. Old sign was observed on three of the leks. No greater sage-grouse or sign was seen on two of the leks. Rough-legged hawks, red-tailed hawks, prairie falcons, and golden eagles were all observed in the vicinity of one of the leks. A female greater sage-grouse was observed in the vicinity of one of the leks on April 2, 2012, in

the afternoon, indicating that this area is used as winter and breeding habitat (Enviroscientists 2012).

Pygmy rabbit

Pygmy rabbit typical habitat consists of dense stands of big sagebrush growing in deep loose or friable soils. The rabbits dig burrows three inches in diameter, and a burrow may have three or more entrances. Pygmy rabbits often use burrows created by other species, and may occur in shallower or more compact soils if these soils support sufficient shrub cover. Big sagebrush is the primary food source in winter, but grasses and forbs are eaten in spring and summer (NatureServe 2012).

Potentially suitable habitat of big sagebrush is located in ephemeral drainages located in the northern half of the Biological Survey Area. Three distinct colonies of pygmy rabbit were observed in the Biological Survey Area and included the following: one small colony with eight burrows and fresh sign; another colony with 12 burrows that are active, with abundant scat and rabbit trails; one pygmy rabbit was directly observed at this colony; and a third colony that was larger in size with more than 25 burrows that showed signs of activity. There were abundant scat and rabbit trails, and two pygmy rabbits were directly observed in the third colony, which is located in a shallow drainage with deeper soils and taller sagebrush (Enviroscientists 2012).

Brewer's sparrow

The Brewer's sparrow is typically associated with montane shrubland, sagebrush, and salt desert scrub habitats. This species prefers high shrub density and relatively large habitat patches and mosaics of varying shrub densities. Nesting habitat often consists of dense crown tall shrubs (GBBO 2010). Brewer's sparrow was observed throughout the Project Area during the March through June 2012 surveys (Enviroscientists 2012).

Ferruginous hawk

Ferruginous hawks use sagebrush, piñon-juniper woodlands, and salt desert scrub habitats year-round in northern Nevada. Ferruginous hawks in Nevada reportedly prefer landscapes where human presence is minimal and they are generally more sensitive to nest disturbances than most other raptors (GBBO 2010). One inactive ferruginous hawk nest was located near U.S. 50. Ferruginous hawk was observed throughout the Project Area during the March through June 2012 surveys (Enviroscientists 2012).

Loggerhead shrike

Loggerhead shrikes are typically associated with greasewood and sagebrush communities. They also frequent open country in valleys and foothills, and juniper or piñon-juniper woodlands. Dense stands of trees and shrubs are used for nesting and roosting sites, as well as for hunting perches (GBBO 2010). Loggerhead shrikes were observed in the Project Area during the March through June 2012 field surveys (Enviroscientists 2012).

Sage sparrow

Sage sparrows are typically associated with primarily sagebrush and secondarily salt desert scrub communities and are most abundant in large expanses of unbroken shrubland. Nesting habitat occurs in the dense crowns of tall shrubs or on the ground under the shrubs (GBBO 2010). Sage sparrows were observed in the Project Area during the March through June 2012 field surveys (Enviroscientists 2012).

Sage thrasher

Sage thrashers are most often associated with sagebrush, montane shrubland, and salt desert scrub habitats. Species abundance can be associated with higher shrub densities and a lack of trees. Nest habitat often consists of low branches in dense shrubs (GBBO 2010). A sage thrasher was observed within the Project Area vicinity during the March through June 2012 field surveys (Enviroscientists 2012).

3.3.5.2 Impact AnalysisProposed Action

Refer to Section 3.3.1.2, Migratory Birds, for an impact discussion on migratory birds, which includes special status bird species.

Sage grouse lek surveys conducted in 2012 resulted in the discovery that all leks were considered inactive. However, surface disturbance associated with the Proposed Action would potentially reduce sage grouse habitat, specifically with the direct permanent reduction of approximately 13.6 acres of PPH, and the indirect temporary reduction of approximately 16.8 acres of PPH with the application of potential sage grouse visual impacts. Environmental protection measures, as identified in Section 2.2.26, would be implemented to help reduce impacts to sage grouse habitat.

Surface disturbing activities associated with the Proposed Action may result in impacts to pygmy rabbit colonies identified during the 2012 biological surveys. As stated in the protection measure in Chapter 2, a pre-disturbance survey would be conducted two weeks prior to any surface disturbance. If occupied habitat or potentially occupied burrows are detected within the proposed areas of disturbance, a 200-foot buffer would be established to reduce potential impacts to pygmy rabbits or pygmy rabbit burrows. If pygmy rabbit burrows cannot be avoided, the BLM biologist would be notified and appropriate steps would be taken to minimize potential impacts to the burrows and killing of the rabbits.

No Action Alternative

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur. There are no existing ROWs within the Project Area, so no impacts to special status species would be anticipated from the No Action Alternative.

3.3.6 Vegetation

The analysis area for vegetation includes the approximate 7.32-mile long, 60-foot wide ROW, and encompasses approximately 53.3 acres.

3.3.6.1 Affected Environment

The Project is located within the Intermountain Region, Great Basin Division, Central Great Basin Section floristic zone. This region is characterized by elevated valleys and mountains of sandstone, siltstone, and shale derived from volcanic rock. The Central Great Basin Section floristic zone is large and diverse, covering approximately 30,250 square miles (Cronquist et al 1972).

Vegetation in the Project Area consists of big sagebrush scrubland, salt desert scrub, and greasewood scrub communities. The big sagebrush scrubland community is the dominant plant association within the Project Area measuring approximately 30.1 acres. The dominant species in the overstory are Wyoming big sagebrush (*Artemisia tridentata* spp. *wyomingensis*) and to a lesser extent yellow rabbitbrush (*Chrysothamnus viscidiflorus*). Prickly pear cactus (*Opuntia polyacantha*) was noted in the dryer rocky soils within this community. Forbs observed included orange globemallow (*Sphaeralcea munroana*), woolly milkvetch (*Astragalus purshii*), rayless tansy aster (*Machaeranthera grindelioides* (Nutt.) Shinners var. *grindelioides*), Indian paintbrush (*Castilleja angustifolia*), spiny phlox (*Phlox hoodii*), desert evening primrose (*Oenothera caespitosa*), and small wirelettuce (*Stephanomeria exigua*). Grasses included Indian ricegrass (*Achnatherum hymenoides*), Thurber's needlegrass (*Achnatherum therberianum*), bottlebrush squirreltail (*Elymus elymoides*), and Sandberg's bluegrass (*Poa secunda*).

The salt desert scrub community occurs in the central portion of the Project Area in the lower elevations and measures approximately 13.1 acres. The dominant species in the overstory are low growing and sparse and included winterfat (*Krascheninnikovia lanata*), budsage (*Picrothamnus desertorum*), shadscale (*Atriplex confertifolia*), broom snakeweed (*Gutierrezia sarothrae*), spiny hopsage (*Grayia spinosa*), yellow rabbitbrush, and black sagebrush (*Artemisia nova*). Forbs observed included orange globemallow (*Sphaeralcea munroana*), halogeton, pinnate tansy mustard (*Descurainia pinnata*), and desert evening primrose. Grasses observed included Indian ricegrass, Sandberg's bluegrass, cheatgrass, and bottlebrush squirreltail. Succulents observed included sand cholla and prickly pear (*Opuntia polyacantha*). Additionally, several areas of winterfat monocultures occurred throughout this community.

The greasewood community is primarily located in the southern portion of the Project Area, and measures approximately 10.1 acres. The dominant shrub species in this community is greasewood (*Sarcobatus vermiculatus*), and to a lesser extent Wyoming big sagebrush, rubber rabbitbrush (*Ericameria nauseosus*), yellow rabbitbrush, and shadscale. Forbs were interspersed within the shrubs and included orange globemallow, Russian thistle (*Salsola tragus*), and halogeton. Grasses noted within this community included Indian ricegrass, bottlebrush squirreltail, and cheatgrass.

3.3.6.2 Impact Analysis

Proposed Action

The Proposed Action would impact approximately 13.6 acres of vegetation within the Project Area, which includes the removal of up to approximately 7.5 acres of big sagebrush scrubland, approximately 3.4 acres of salt desert scrub, and approximately 2.4 acres of greasewood. The disturbance would be dispersed throughout the vegetation communities in the Project Area. Any removed vegetation would be mulched on site. Reclamation would occur upon the completion of the temporary Project-related activities. BLM-approved seed mixes would be applied to the temporary disturbed areas that were created during construction and installation activities. In the short-term (zero to ten years following construction), both invasive species and native vegetation are expected to recolonize the disturbed area. In the long-term (ten to 30 years following construction), additional native vegetation may recolonize the disturbed area, depending on climate, grazing management, invasive species presence, and/or other factors. Permanent disturbance, including the pole placement sites and maintenance road, would be maintained for operation and maintenance of the overhead transmission line. The environmental protection measures identified in Section 2.2.26 and reclamation activities would minimize impacts to vegetation.

No Action Alternative

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur. There are no existing ROWs within the Project Area, so no impacts to vegetation would be anticipated from the No Action Alternative.

3.3.7 Visual Resources

The analysis area for visual resources is a ten-mile viewshed from the highest point in elevation in the Project Area, or at approximately 6,000 feet amsl.

3.3.7.1 Affected Environment

The visual contrast rating system is a systematic process used by the BLM to analyze potential visual impacts of proposed projects and activities. The basic philosophy underlying the system is the degree to which a management activity affects the visual quality of a landscape depends on the visual contrast created between a project and the existing landscape. The contrast can be measured by comparing the project features with the major features in the existing landscape. The basic design elements of form, line, color, and texture are used to make this comparison and to describe the visual contrast created by a project. This assessment process provides a means for determining visual impacts and for identifying measures to mitigate these impacts.

Visual resources are identified through a visual resource inventory. This inventory consists of a scenic quality evaluation, sensitivity level analysis, and a delineation of

distance zones. Based on these factors, BLM-administered lands are placed into four visual resource inventory classes: visual resource management (VRM) Class I, II, III, and IV. Classes I and II are the most valued, Class III represents a moderate value, and Class IV is of the least value. VRM classes serve two purposes: 1) as an inventory tool that portrays the relative value of visual resources in the area; and 2) as a management tool that provides an objective for managing visual resources. The specific objectives of each VRM class are presented in Table 3.3-2.

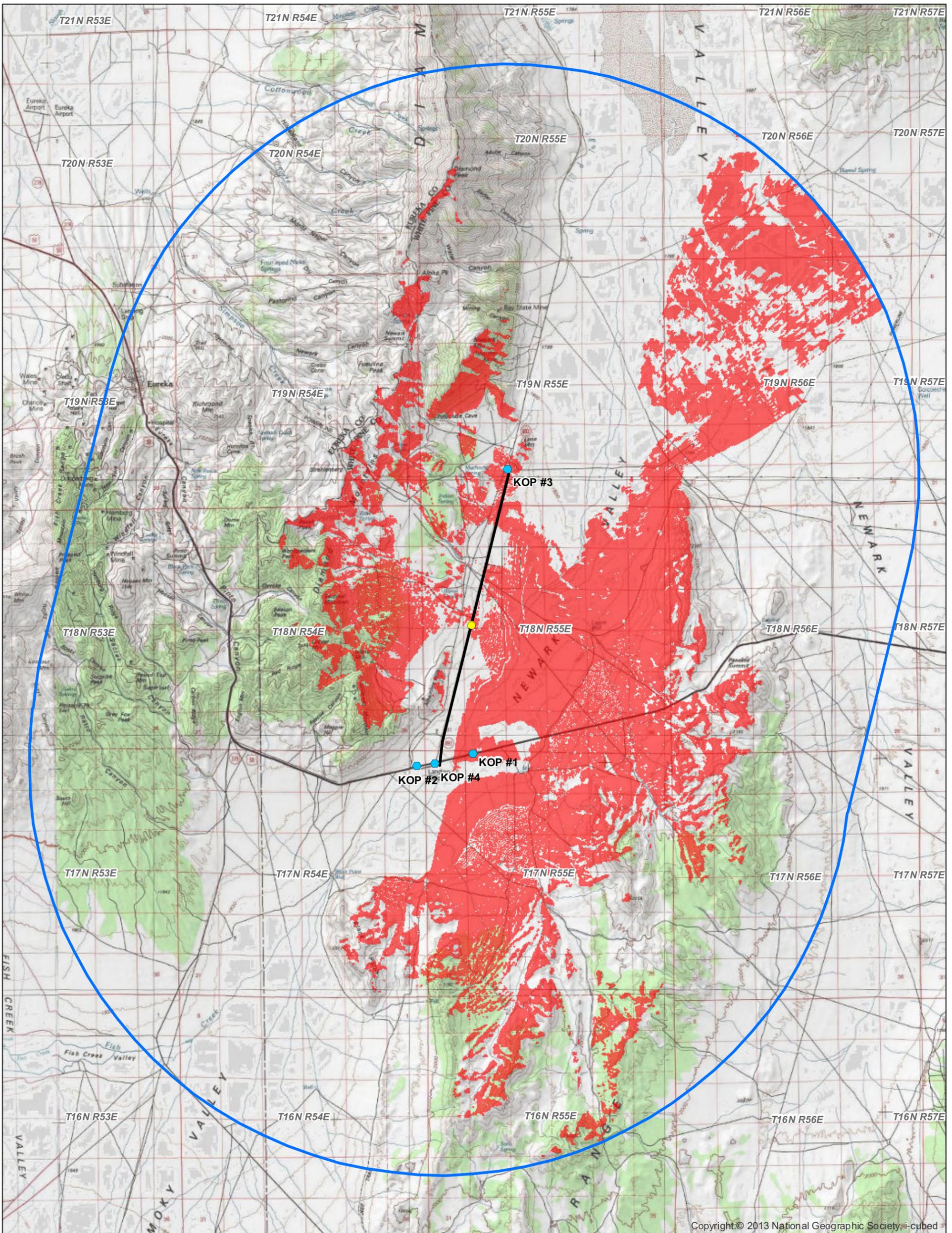
Table 3.3-2: BLM Visual Resource Management Classes

Class	Description
I	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.
II	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 the attention of the casual observer. Any change must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
III	The objective of this class is to partially retain the existing character of the landscape. The level of change to the character 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.
IV	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. 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.

In order to describe the existing visual characteristic landscape and make an assessment of potential project impacts, viewing locations called key observation points (KOPs) were selected. A KOP is defined as one or a series of points on a travel route or at a use area or a potential use area, where the view of a management activity would be most revealing (BLM 1984). Four KOPs were selected from the analysis area and are discussed below.

The photo for KOP #1 was taken along U.S. 50 looking northwest towards the proposed powerline. The photo for KOP #2 was taken along U.S. 50 looking east down the highway. The photo for KOP #3 was taken looking south towards the proposed powerline down Strawberry Road. The photo for KOP #4 was taken from a point across U.S. 50 south of the proposed powerline looking northeast (Figure 3.3.7).

The landscape looking from KOP #1 consists of a gray-brown to brown-colored undulating to rolling moderately steep hills in the background, with an ochre- to tan-colored flat middle ground, and a gray- to ochre-colored flat foreground. The landscape looking from KOP #2 consists of a gray to tan and blue-colored undulating to rolling hills in the background, with an ochre- to tan-colored flat middle ground, and a



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Explanation

- Proposed 69 kV Transmission Line
- Ten-Mile Buffer of Proposed 69 kV Transmission Line
- Key Observation Points
- Viewshed Point
- Areas Visible From Viewshed Point

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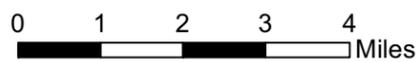
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Ten-Mile Viewshed and
Key Observation Points

Figure 3.3.7

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gray- to whitish-colored flat foreground. The landscape looking from KOP #3 consists of a blue-colored undulating, rolling, jagged background, with a gray- to brown-colored flat middle ground, and a gray-colored flat foreground. The landscape looking from KOP #4 consists of a pinkish gray- to blue-colored undulating to rolling hills in the background, with a light yellow-gray-colored flat middle ground, and a light gray-colored flat foreground.

3.3.7.2 Impact Analysis

Proposed Action

The Project's visual impact looking from KOPs #1, 2, and 4 were evaluated under VRM Class III objectives, while KOP #3 was evaluated under VRM Class IV objectives. Based on the analysis presented on the Visual Contrast Rating Worksheets (Appendix 4), KOPs I, II, and III would meet their respective VRM class objectives. At KOP #4, the new powerline would add a moderate contrast in form and a strong linear contrast, which would not meet the objectives of VRM Class III. It is anticipated that the new additional linear contrast due to the new powerline would introduce a strong linear contrast and dominate the view of the casual observer while traveling along U.S 50. Although these impacts have been considered strong, the view from the casual observer would only occur for a very short time.

No Action Alternative

Under the No Action Alternative, the new powerline would not be built, which would result in no change to the existing character landscape.

3.3.8 Wildlife

The analysis area for wildlife is defined as the Biological Survey Area from the August 2012 Biological Survey Report prepared for the Project (Enviroscientists 2012).

3.3.8.1 Affected Environment

General Wildlife

The general wildlife species detected in the Biological Survey Area are common throughout the Great Basin Region. General wildlife species observed or detected during surveys in the Project Area include: American badger (*Taxidea taxus*); black-tailed jackrabbit (*Lepus californicus*); chipmunk spp. (*Tamias* spp.); coyote (*Canis latrans*); deer mouse (*Peromyscus maniculatus*); desert cottontail (*Sylvilagus audubonii*); desert kangaroo rat (*Dipodomys deserti*); white-tailed antelope ground squirrel (*Ammospermophilus leucurus*); long nosed leopard lizard (*Gambelia wislizenii*); sagebrush lizard (*Sceloporus graciosus*); short horned lizard (*Phrynosoma hernandesi*); and side-blotched lizard (*Uta stansburiana*).

Big Game Species

Pronghorn antelope (*Antilocapra americana*) were detected within the Biological Survey Area. In addition, the NDOW has identified pronghorn antelope distribution across the entire Biological Survey Area (NDOW 2012).

3.3.8.2 Impact Analysis

Proposed Action

Impacts to wildlife species may include temporary displacement from suitable habitats during construction activities, a small increase in habitat fragmentation, and loss of a small amount of habitat due to the proposed 12- to 15-foot wide two-track maintenance road and pole installation sites (approximately 13.6 acres). In addition, some fossorial and/or slow moving animals may be harmed or lost during ground disturbance.

No Action Alternative

Under the No Action Alternative, none of the impacts associated with the Proposed Action would occur. There are no existing ROWs within the Project Area, so no impacts to wildlife would be anticipated from the No Action Alternative.

4.0 CUMULATIVE IMPACTS

4.1 Introduction

As required under the NEPA and the regulations implementing the NEPA, this section analyzes potential cumulative impacts from past, present, and reasonably foreseeable future actions combined with the Proposed Action within the area analyzed for impacts in Chapter 3 specific to the resources for which cumulative impacts may be anticipated. A cumulative impact is defined as “the impact which results from the incremental impact of the action, decision, or project when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 CFR 1508.7).

This chapter addresses those cumulative effects on the environmental resources in the Cumulative Effects Study Area (CESA) which could result from the implementation of the Proposed Action and No Action Alternative. The extent of the CESA would vary with each resource, based on the geographic or biologic limits of that resource. As a result, the list of projects considered under the cumulative analysis may vary according to the resource being considered. In addition, the length of time for cumulative effects analysis would vary according to the duration of impacts from the Proposed Action on the particular resource.

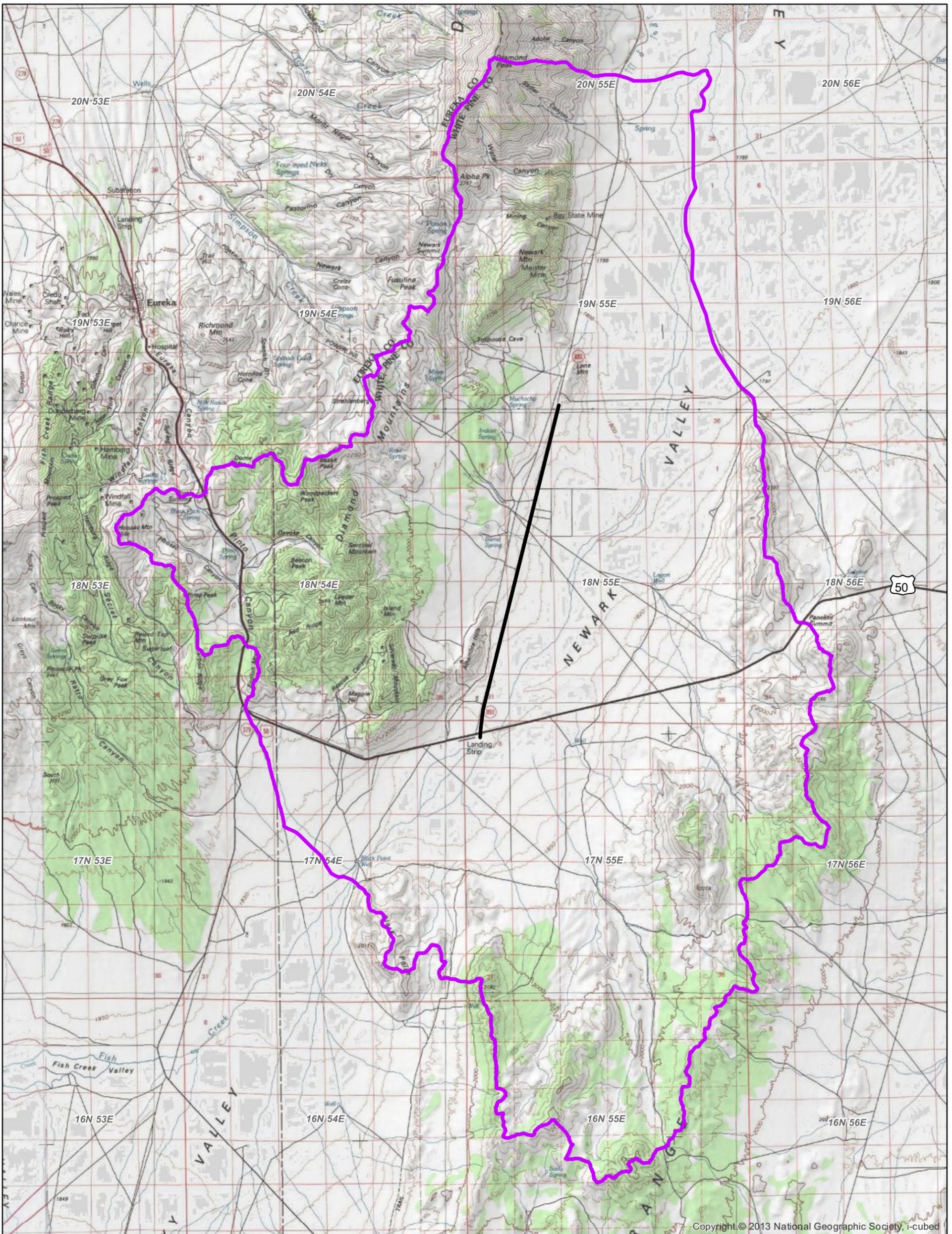
4.2 Analysis Areas

The geographic area considered for the analysis of cumulative effects reflects each evaluated environmental resource and the potential area of impact. The Silverado Mountain HUC 5 Watershed (Watershed CESA) is used to analyze the cumulative impacts to invasive, nonnative species and soils, and is approximately 122,965 acres in size (Figure 4.2.1). The Newark Valley Hydrographic Basin is approximately 514,964 acres in size (Figure 4.2.2). The Newark Valley Hydrographic Basin (Wildlife CESA) is used for this EA to analyze the cumulative impacts to migratory birds, special status species, vegetation, and wildlife. The CESA for social values and economics has been identified as Eureka and White Pine counties. The CESA for visual resources is a ten-mile viewshed from the highest point in elevation in the Project Area, or at approximately 6,000 feet amsl (Figure 3.3.7).

4.3 Past, Present, and Reasonably Foreseeable Future Actions

4.3.1 Past and Present Actions

The primary past and present actions that have impacted and are currently impacting the resources analyzed in the CESAs include the following: wildlife and game habitat management; livestock grazing; wildland fires; dispersed recreation; ROW construction and management; and mineral exploration and mining.



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Explanation

- Proposed 69 kV Transmission Line
- Watershed CESA (CESA for Invasive, Nonnative Species and Soils)

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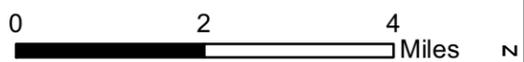


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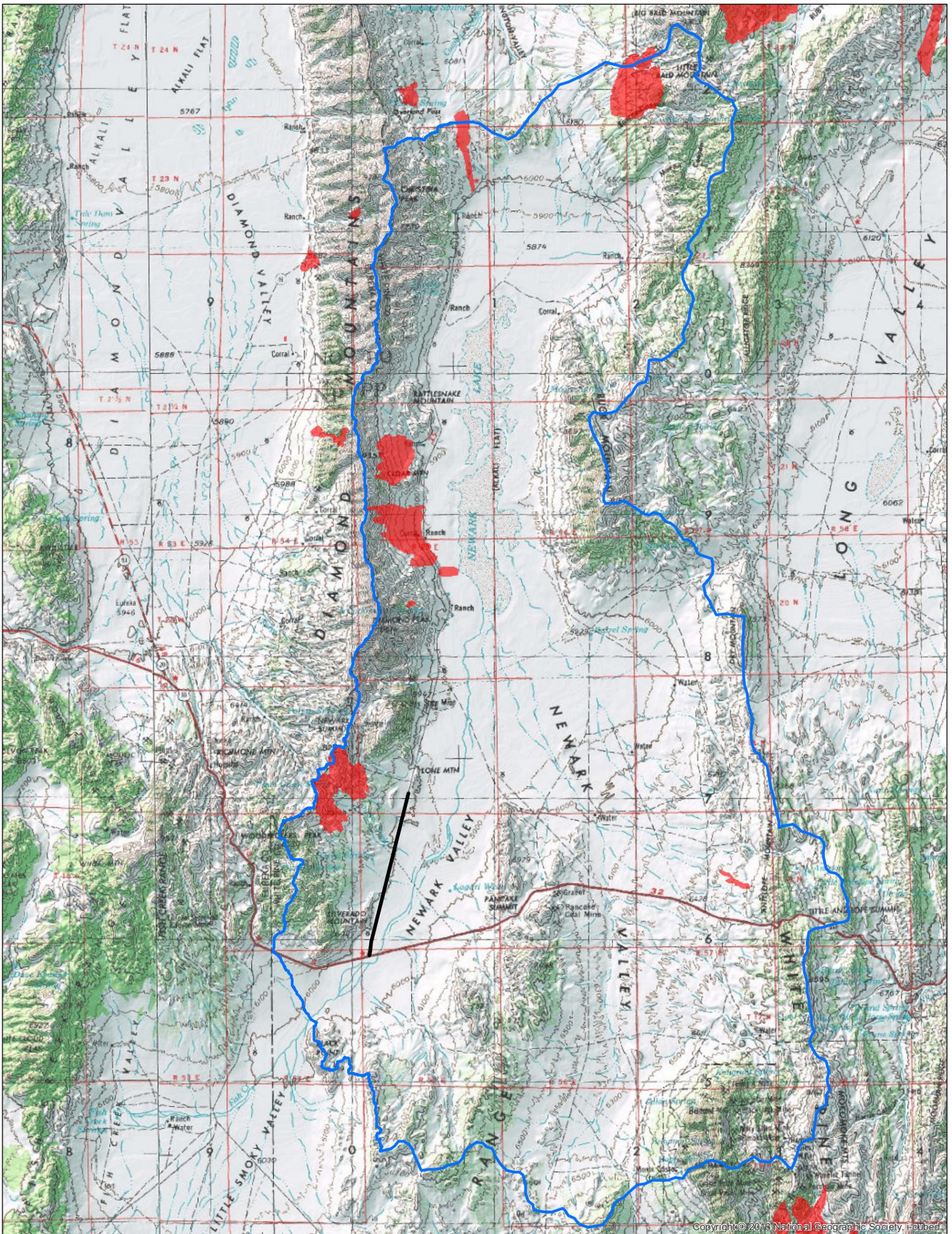
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Watershed CESA Map

Figure 4.2.1



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Explanation

- Proposed 69 kV Transmission Line
- Wildlife CESA *(CESA for Migratory Birds, Special Status Species, Vegetation, and General Wildlife)*
- Fire History 1981-2012

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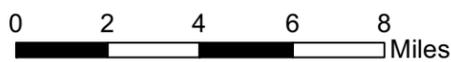


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Wildlife CESA Map

Figure 4.2.2



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4.3.1.1 Wildlife and Game Habitat Management

Research and management of big game and wildlife are undertaken by the NDOW and the BLM, and may include modification to existing habitat and rangeland facilities. NDOW Hunt Units 108, 131, and 144 are included in the Wildlife CESA, which would be impacted by wildlife and game habitat management activities. In addition to hunt units 108, 131, and 144, a portion of hunt unit 145 is included in the Watershed CESA.

4.3.1.2 Livestock Grazing

The Wildlife CESA encompasses portions of 17 grazing allotments including the following: Three Mile; Diamond Springs; North Springs; Dry Mountain; Shannon Station; Black Point; Evans; Moorman Ranch; Monte Cristo; Silverado; Duckwater; Six Mile; Strawberry; Cold Creek; South Pancake; Warm Springs; and Newark. The Watershed CESA encompasses portions of ten grazing allotments including the following: Black Point; Duckwater; Evans; Fish Creek Ranch; Newark; Ruby Hill; Shannon Station; Silverado; South Pancake; and Spanish Gulch. The allotments in the Wildlife and Watershed CESAs occur in both the Ely and Battle Mountain BLM Districts. Many grazing permits are authorized within the allotments for both cattle and sheep grazing, and the seasons of use vary. The grazing permits are renewed periodically with terms and conditions of grazing use that conform to and achieve or make progress towards achievement of the Standards and Guidelines for Rangeland Health.

4.3.1.3 Dispersed Recreation

Recreation opportunities within the CESAs consist primarily of dispersed recreation types of activities including hunting, hiking, mountain biking, horseback riding, camping, and rock collecting.

4.3.1.4 Rights-of-Way

The BLM's Land & Mineral Legacy Rehost 2000 System (LR2000) database was used to query the various types of ROWs that have been closed, authorized or constructed within the CESAs by section, township, and range. The ROWs that have been issued in the Wildlife CESA include the following: approximately 6,011 acres of roads and highways; approximately 22,635 acres of wind energy development; approximately 1,263 acres of telecommunication facilities; approximately 8,290 acres of power transmission facilities; approximately 21 acres of communication sites; approximately 68 acres of water and irrigation facilities; and approximately seven acres of other ROWs. The LR2000 database was queried on March 7, 2013 for the Wildlife CESA; therefore, any newly approved ROWs that have been added to the LR2000 database after March 7, 2013 are not included in the analysis.

The ROWs that have been issued in the Watershed CESA include the following: approximately 4,425 acres of roads and highways; approximately 14,344 acres of wind energy development; approximately 1,282 acres of telecommunication facilities;

approximately 8,125 acres of power transmission facilities; approximately 185 acres of communication sites; approximately 282 acres of water and irrigation facilities; and approximately seven acres of other ROWs. The LR2000 database was queried on April 15, 2013 for the Watershed CESA; therefore, any newly approved ROWs that have been added to the LR2000 database after April 15, 2013 are not included in the analysis.

4.3.1.5 Mineral Exploration and Mining

The LR2000 database was used to query the past and present mineral exploration or mining activities (authorized and closed Notices, and authorized and closed plans of operation) that have been issued within the CESAs by section, township, and range. The past and present mineral exploration and mining activities that have been issued in the Wildlife CESA include the following: approximately 11,577 acres of closed and authorized plans of operation, and approximately 165 acres of closed and authorized Notices. In addition, there were approximately 1,260 acres of mineral material disposal sites. The LR2000 database was queried on March 7, 2013 for the Wildlife CESA; therefore, any newly approved mineral exploration or mining plans or Notices that have been added to the LR2000 database after March 7, 2013 are not included in the analysis.

The past and present mineral exploration and mining activities that have been issued in the Watershed CESA include the following: approximately 1,513 acres of closed and authorized plans of operation and approximately 63 acres of closed and authorized Notices. In addition, there were approximately 850 acres of mineral material disposal sites. The LR2000 database was queried on April 15, 2013 for the Watershed CESA; therefore, any newly approved mineral exploration or mining plans or Notices that have been added to the LR2000 database after April 15, 2013 are not included in the analysis.

4.3.2 Reasonably Foreseeable Future Actions

Activities/events that would continue to occur in the Watershed CESA include the following: livestock grazing; wildlife and game habitat management; mineral exploration and mining; ROW management; wildland fires; and dispersed recreation. Reasonably foreseeable future actions (RFFAs) in the Watershed CESA include approximately eight acres of roads, approximately 269 acres of power transmission facilities, and approximately 3,399 acres of mineral exploration and mining activities.

Activities/events that would continue to occur in the Wildlife CESA include the following: livestock grazing; wildlife and game habitat management; mineral exploration and mining; ROW management; wildland fires; and dispersed recreation. RFFAs in the Wildlife CESA include approximately nine acres of roads, approximately 269 acres of power transmission facilities, approximately 0.3 acre for a water facility, and approximately 3,238 acres of mineral exploration and mining activities.

4.4 Cumulative Impacts Assessment

4.4.1 Invasive and Nonnative Species

The CESA for invasive and nonnative species is the Watershed CESA. This CESA encompasses approximately 122,965 acres and is shown on Figure 4.2.1.

Past and present actions: Past and present actions with impacts created from invasive and nonnative species could have included and may currently include livestock grazing, wildland fires, dispersed recreation, utility and other ROW management and maintenance, mineral exploration, and mining. These actions could have disturbed vegetation and soils creating an opportunity for invasive plant colonization and the introduction of invasive or nonnative species seeds. There are no specific data to quantify impacts from invasive and nonnative species that resulted from livestock grazing or dispersed recreation.

Historic fires (1981 – 2012) have burned approximately 2,784 acres in the Watershed CESA (approximately two percent of the CESA). Authorized or closed mineral exploration and mining Notices or plans of operation total approximately 1,576 acres (approximately one percent of the CESA) of surface disturbance. ROWs, roads and highways, and material disposal sites total approximately 29,510 acres within the Watershed CESA and had the potential to introduce invasive and nonnative species. Livestock grazing and associated management could have also contributed to the spread of invasive and nonnative species. The past and present actions that are quantifiable have disturbed approximately 33,870 acres or approximately 28 percent of the CESA.

RFFAs: Potential impacts from invasive and nonnative species as a result of livestock grazing, dispersed recreation, mineral exploration, mining, utility and other ROW management and maintenance, or loss of native vegetation associated with potential wildland fires are expected to continue. There are no specific data to quantify impacts from invasive and nonnative species as a result of livestock grazing or wildland fires. There are approximately 3,399 acres of disturbance from pending minerals projects in the Watershed CESA, and approximately 277 acres of pending ROW projects.

Cumulative Impacts: The Proposed Action would impact approximately 0.01 percent of the CESA. Quantifiable past and present actions and RFFA disturbance in the Watershed CESA is approximately 37,546 acres, which is an impact to approximately 30 percent of the total Watershed CESA. Based on the above analysis and findings, incremental impacts from invasive and nonnative species as a result of the Proposed Action, when combined with the impacts from the past and present actions and RFFAs, are expected to be minimal.

4.4.2 Migratory Birds, including bald and golden eagles

The CESA for migratory birds is the Wildlife CESA. This CESA encompasses approximately 514,964 acres is shown on Figure 4.2.2.

Past and Present Actions: Past and present actions that could have impacted and may be currently impacting migratory birds and their habitat include livestock grazing, wildlife and game habitat management, wildland fires, dispersed recreation, utility and other ROW management and maintenance, mineral exploration, and mining. Impacts to migratory birds and their habitat have resulted from the following: 1) indirect impacts from the destruction of habitat associated with building roads and clearing vegetation; 2) indirect impacts from the disruption from human presence or noise from drill rigs, water trucks and four-wheel drive pickups; and 3) direct impacts or harm to migratory birds that result from the removal of trees and shrubs containing viable nests or ground nests destroyed by construction or ranching equipment. There are no specific data that quantify impacts to migratory birds and their habitat as a result of livestock grazing. However, impacts to migratory birds and their habitat from grazing include trampling of vegetation or nesting areas near streams, springs, or riparian areas within the Wildlife CESA. Impacts to migratory birds and their habitat from recreation activities include destruction of native vegetation or nesting areas from off-road vehicles that traveled off of established roadways.

Historic fires (1981 – 2012) have burned approximately 10,309 acres in the Wildlife CESA (approximately two percent of the CESA). Authorized or closed mineral exploration and mining Notices or plans of operation total approximately 13,118 acres (approximately 2.5 percent of the CESA) of surface disturbance. ROWs, roads and highways, and material disposal sites total approximately 31,266 acres within the Wildlife CESA that had the potential to create surface disturbance and disturb migratory bird habitat and vegetation. The CESA is also comprised of the NDOW Hunt Units 108, 131, and 144, and activities associated with these hunt units had the potential to create noise and disturbance to migratory birds, or remove or alter habitat. Livestock grazing and associated management could have contributed to the spread of noxious weeds, invasive and nonnative species, which could have had an indirect effect on migratory birds. The past and present actions that are quantifiable have disturbed approximately 54,693 acres or approximately 11 percent of the CESA.

RFFAs: Potential impacts to migratory birds and their habitat from livestock grazing, wildlife and game habitat management, mineral exploration, mining, utility and other ROW management and maintenance, or loss of native vegetation associated with potential wildland fires could occur. There are no specific data to quantify impacts to migratory birds or their habitat as a result of livestock grazing, wildlife and game habitat management, dispersed recreation, or potential wildland fires within the CESA. There are approximately 279 acres of disturbance for pending ROWs and approximately 3,238 acres of disturbance for pending minerals projects reported in LR2000 in the Wildlife CESA. These pending projects are all required to incorporate protection measures for migratory birds, and therefore are not expected to directly harm migratory birds, but may result in habitat removal or alteration.

Cumulative Impacts: The Proposed Action would impact approximately 0.003 percent of the CESA. Quantifiable past and present actions and RFFA disturbance in the Wildlife CESA is approximately 58,210 acres, which is an impact to approximately

4.0 CUMULATIVE IMPACTS

11 percent of the total Wildlife CESA. However, based on the above analysis and findings, incremental impacts to migratory birds and their habitat as a result of the Proposed Action, when combined with the impacts from the past and present actions and RFFAs, are expected to be minimal.

4.4.3 Social Values and Economics

The CESA for social values and economics is defined as White Pine and Eureka Counties.

Past and present actions: Past and present actions within the Social Values and Economics CESA include the following: utility and infrastructure construction and maintenance; livestock grazing and agriculture; wildland fires; dispersed recreation; mineral development and exploration; and wind energy development. Potential impacts to social and economic values from these activities include increased population, increased demand for public services, increased employment opportunities, increased revenues within the CESA, and increased expenditures by the communities within the CESA. The extent of these impacts vary with the type of activity and have not been quantified; however, the majority of the impacts from past and present activities do not have any ongoing impacts and are considered to be part of the existing social and economic climate within the CESA. One of the major existing transmission line projects in the area is the Falcon-Gondor transmission line. In addition, MWP's Highway 50 to Pan 69 kV Transmission Line Project and the Mount Hope 230 kV Transmission Line Project have been recently authorized by the BLM within the CESA. Mining projects also play an important role in the social and economic climate in the CESA. Some of the major existing mines and exploration projects in the CESA include the Robinson Mine in White Pine County and the Mount Hope Project in Eureka County. The Robinson Mine includes approximately 6,867 acres of surface disturbance on BLM-administered and private lands with approximately 600 employees, and the Mount Hope Project includes approximately 8,355 acres of surface disturbance on BLM-administered and private lands with approximately 370 employees at full Project operation.

RFFAs: Social values and economic impacts would result from the following RFFAs: utility and infrastructure construction and maintenance; livestock grazing and agriculture; wildland fires; dispersed recreation; and mineral development and exploration. Specific projects that are planned include roads, water facilities, power transmission lines, and mineral exploration and mining projects. Reasonably foreseeable major mining projects in the CESA include the Pan Mine located in White Pine County, the Gold Rock Mine Project located in White Pine County, and the Gibellini Project located in Eureka County. The Pan Mine would include approximately 3,204 acres of surface disturbance on BLM-administered land with approximately 160 employees. The Gold Rock Mine Project would include approximately 3,749 acres of surface disturbance on BLM-administered land with up to approximately 300 employees. The Gibellini Project would include approximately 730 acres of surface disturbance on BLM-administered land with approximately 120 employees during Project operations. The Ely District RMP

identified a corridor for the Southwest Intertie Project, which when completed would extend more than 500 miles from Jerome County, Idaho to Clark County, Nevada.

Cumulative Impacts: The identified projects within the CESA, including the Proposed Action, would have an impact on social values and economics. The Proposed Action would employ existing MWP employees for a temporary period of up to eight weeks. Up to ten employees would be on site at any one time during construction activities, and up to four employees would be on site at any one time during operation and maintenance activities. The Proposed Action's direct incremental contribution to the cumulative environment when added to the past and present actions and RFFAs in the Social Values and Economics CESA would be minimal.

4.4.4 Soils

The CESA for soils is the Watershed CESA. This CESA encompasses approximately 122,965 acres and is shown on Figure 4.2.1.

Past and Present Actions: Past and present actions that have impacted and are currently impacting soils include livestock grazing/rangeland management, dispersed recreation, utility and other ROW management and maintenance, mineral exploration, mining, and soil compaction due to travel by heavy equipment on unpaved roads. These actions may have directly disturbed or impacted soils, or increased erosion or sedimentation potential. Impacts from these activities include loss of soils productivity due to changes in soil physical properties, soil fertility, soil movement in response to water and wind erosion, and loss of soil structure due to compaction. Soil disturbance has also been associated with wildland fires; however, fire rehabilitation and natural revegetation has occurred; stabilizing soil loss. There are no specific data to quantify impacts to soils from livestock grazing/rangeland management in the Watershed CESA.

Historic fires (1981 – 2012) have burned approximately 2,784 acres in the Watershed CESA (approximately two percent of the CESA). Authorized or closed mineral exploration and mining Notices or plans of operation total approximately 1,576 acres (approximately one percent of the CESA) of surface disturbance. ROWs, roads and highways, and material disposal sites total approximately 29,510 acres within the Watershed CESA that had the potential to impact soils. The past and present actions that are quantifiable have disturbed approximately 33,870 acres or approximately 28 percent of the CESA.

RFFAs: Livestock grazing, dispersed recreation, mineral exploration, mining, utility and other ROW management and maintenance, soil compaction due to travel by heavy equipment on unpaved roads, or loss of native vegetation associated with potential wildland fires are expected to continue. There are no specific data to quantify impacts from livestock grazing or wildland fires. There are approximately 3,399 acres of disturbance from pending minerals projects in the Watershed CESA and approximately 277 acres of pending ROW projects.

Cumulative Impacts: The Proposed Action would impact approximately 0.01 percent of the CESA. Quantifiable past and present actions and RFFA disturbance in the Watershed CESA is approximately 37,546 acres, which is an impact to approximately 30 percent of the total Watershed CESA. Based on the above analysis and findings, incremental impacts to soils as a result of the Proposed Action, when combined with the impacts from the past and present actions and RFFAs, are expected to be minimal.

4.4.5 Special Status Species

The CESA for special status species is the Wildlife CESA. This CESA encompasses approximately 514,964 acres and is shown on Figure 4.2.2.

Past and present actions: Past and present actions that have impacted and are currently impacting special status species include livestock grazing, wildland fires, dispersed recreation, utility and other ROW management and maintenance, mineral exploration, and mining. Noise and surface disturbance have also impacted special status wildlife species. Impacts to special status species from these activities include loss of forage, cover, and habitat as well as disturbance of mating and brood rearing practices. There are no specific data to quantify impacts to special status species from livestock grazing or dispersed recreation, or to greater sage-grouse as a result of the reduction in PPH or PGH.

Historic fires (1981 – 2012) have burned approximately 10,309 acres in the Wildlife CESA (approximately two percent of the CESA). Authorized or closed mineral exploration and mining Notices or plans of operation total approximately 13,118 acres (approximately 2.5 percent of the CESA) of surface disturbance. ROWs, roads and highways, and material disposal sites total approximately 31,266 acres within the Wildlife CESA and had the potential to create surface disturbance and disturb special status species habitat and vegetation. The past and present actions that are quantifiable have disturbed approximately 54,693 acres or approximately 11 percent of the CESA.

RFFAs: Potential impacts to special status species from livestock grazing, dispersed recreation, mineral exploration, mining, utility and other ROW management and maintenance, or loss of native vegetation associated with potential wildland fires are expected to continue. There are no specific data to quantify impacts to special status species or their habitat as a result of livestock grazing or potential wildland fires within the CESA. There are approximately 279 acres of disturbance for pending ROWs and approximately 3,238 acres of disturbance for pending minerals projects reported in LR2000 in the Wildlife CESA. These pending projects are all required to incorporate protection measures for special status species and therefore, are not expected to directly harm special status species, but may result in habitat removal or alteration.

Cumulative Impacts: The Proposed Action would impact approximately 0.003 percent of the CESA. Quantifiable past and present actions and RFFA disturbance in the Wildlife CESA is approximately 58,210 acres, which is an impact to approximately 11 percent of the total Wildlife CESA. Based on the above analysis and findings, incremental impacts to special status species and their habitat as a result of the Proposed Action, when

combined with the impacts from the past and present actions and RFFAs, are expected to be minimal.

4.4.6 Vegetation

The CESA for vegetation is the Wildlife CESA. This CESA encompasses approximately 514,964 acres is shown on Figure 4.2.2.

Past and Present Actions: Past and present actions that have impacted and are currently impacting vegetation include livestock grazing, dispersed recreation, utility and other ROW management and maintenance, wildland fires, mineral exploration, and mining. There are no specific data to quantify impacts to vegetation from livestock grazing or dispersed recreation. Impacts caused by hunting activities and associated off-road vehicle travel include the introduction of noxious weeds, invasive or nonnative species, and trampled vegetation.

Historic fires (1981 – 2012) have burned approximately 10,309 acres in the Wildlife CESA (approximately two percent of the CESA). Authorized or closed mineral exploration and mining Notices or plans of operation total approximately 13,118 acres (approximately 2.5 percent of the CESA) of surface disturbance. ROWs, roads and highways, and material disposal sites total approximately 31,266 acres within the Wildlife CESA and had the potential to create surface disturbance and disturb vegetation. The past and present actions that are quantifiable have disturbed approximately 54,693 acres or approximately 11 percent of the CESA.

RFFAs: Potential impacts to vegetation from livestock grazing, dispersed recreation, mineral exploration, mining, utility and other ROW management and maintenance, or loss of native vegetation associated with potential wildland fires are expected to continue. There are no specific data to quantify impacts from livestock grazing or wildland fires. There are approximately 279 acres of disturbance for pending ROWs and approximately 3,238 acres of disturbance for pending minerals projects reported in LR2000 in the Wildlife CESA.

Cumulative Impacts: The Proposed Action would impact approximately 0.003 percent of the CESA. Quantifiable past and present actions and RFFA disturbance in the Wildlife CESA is approximately 58,210 acres, which is an impact to approximately 11 percent of the total Wildlife CESA. Based on the above analysis and findings, incremental impacts to vegetation as a result of the Proposed Action, when combined with the impacts from the past and present actions and RFFAs, are expected to be minimal.

4.4.7 Visual Resources

The CESA for visual resources is a ten-mile viewshed from the highest point in elevation in the Project Area, or at approximately 6,000 feet amsl (Figure 3.3.2).

Past and Present Actions: The past actions that have affected visual resources include powerlines, roads and other structures, and mineral exploration and mining. The existing 25 kV powerline adjacent to the Project has already impacted the visual context of the area. Present actions that are currently impacting visual resources include existing fences and other ground disturbing activities that modify the existing characteristic landscape.

RFFAs: The RFFAs that have the potential to affect visual resources include powerlines, roads, fences, and other ground disturbing activities that could modify the existing characteristic landscape.

Cumulative Impacts: There are many actions that have an effect on visual resources within the vicinity of the Project Area. The BLM's visual resource management within the CESA allows for moderate to substantial changes of the visual characteristics of the area. Incremental impacts to visual resources as a result of the Proposed Action, when combined with impacts from the past and present actions and RFFAs, are expected to be moderate.

4.4.8 Wildlife (General)

The CESA for wildlife is the Wildlife CESA. This CESA encompasses approximately 514,964 acres and is shown on Figure 4.2.2.

Past and present actions: Past and present actions that have impacted and are currently impacting wildlife include livestock grazing, wildland fires, dispersed recreation, utility and other ROW management and maintenance, mineral exploration, and mining. Impacts to wildlife from these activities include loss of forage, cover, and habitat as well as disturbance of mating and brood rearing practices. There are no specific data to quantify impacts to wildlife from livestock grazing or dispersed recreation.

Historic fires (1981 – 2012) have burned approximately 10,309 acres in the Wildlife CESA (approximately two percent of the CESA). Authorized or closed mineral exploration and mining Notices or plans of operation total approximately 13,118 acres (approximately 2.5 percent of the CESA) of surface disturbance. ROWs, roads and highways, and material disposal sites total approximately 31,266 acres within the Wildlife CESA and had the potential to create surface disturbance and disturb wildlife habitat and vegetation. The past and present actions that are quantifiable have disturbed approximately 54,693 acres or approximately 11 percent of the CESA.

RFFAs: Potential impacts to wildlife from livestock grazing, dispersed recreation, mineral exploration, mining, utility and other ROW management and maintenance, or loss of native vegetation associated with potential wildland fires are expected to continue. There are no specific data to quantify impacts to wildlife or their habitat as a result of livestock grazing or potential wildland fires within the CESA. There are approximately 279 acres of disturbance for pending ROWs and approximately 3,238 acres of disturbance for pending minerals projects reported in LR2000 in the Wildlife CESA.

Cumulative Impacts: The Proposed Action would impact approximately 0.003 percent of the CESA. Quantifiable past and present actions and RFFA disturbance in the Wildlife CESA is approximately 58,210 acres, which is an impact to approximately 11 percent of the total Wildlife CESA. Based on the above analysis and findings, incremental impacts to wildlife as a result of the Proposed Action, when combined with the impacts from the past and present actions and RFFAs, are expected to be minimal.

5.0 CONSULTATION AND COORDINATION

5.1 Introduction

The issue identification section of Chapter 1 provides the rationale for issues that were considered but not analyzed further and identifies those issues analyzed in detail in Chapter 3. The issues were identified through the public and agency involvement process shown in sections 5.2 and 5.3 below.

5.2 Persons, Groups and Agencies Consulted

Name	Purpose & Authority for Consultation or Coordination	Findings and Conclusions
Nevada State Historic Preservation Office (SHPO)	Consultation for undertakings as required by the National Historic Preservation Act (16 USC 1531)	The cultural survey report was sent to SHPO with a determination of no adverse effect. No response was received within 30 days from the submission of any of the reports. Consultation is therefore considered to be closed.
Mike Podborny, NDOW	Greater sage-grouse lek surveys	NDOW would be conducting lek surveys for this Project.

The BLM Ely District Office sent formal consultation letters on February 20, 2013 to the following tribes and tribal councils informing them of the proposed Project and EA and inviting comments and concerns:

- Duckwater Shoshone Tribe
- Skull Valley Band of Goshute Indians of Utah
- Ely Shoshone Tribe
- Las Vegas Paiute Tribe
- Confederated Tribes of the Goshute Reservation, Nevada-Utah
- Battle Mountain Band Council
- Paiute Indian Tribe of Utah
- Te-Moak Tribe of the Western Shoshone Indians of Nevada
- Indian Peaks Band
- Wells Band Council
- Shivwits Band of Paiutes
- South Fork Band Council
- Cedar City Band of Paiutes
- Elko Band Council
- Kaibab Band of Paiute Indians
- Yomba Shoshone Tribe
- Moapa Band of Paiute Indians

A site visit was conducted with the Duckwater Shoshone Tribe on May 9, 2013. The Tribe did not identify any concerns with the Project.

5.3 Summary of Public Participation

During preparation of the EA, the public was notified of the Proposed Action by posting on the BLM NEPA Register on February 14, 2013. Any pertinent comments were incorporated into the text of this EA.

5.4 List of Preparers

5.4.1 BLM

Name	Title	Responsible for the Following Section(s) of this Document
Christopher Mayer	Assistant Field Manager	Soils, Water Quality, Air Quality
Marian Lichtler	Wildlife Biologist	General Wildlife, Migratory Birds, Special Status Species
Mindy Seal	Assistant Field Manager	Social Values and Economics; NEPA compliance
Leslie Riley	Archaeologist	Cultural Resources
Timothy "T.J." Mabey	Forestry and Fuels Specialist	Forest Health
Elvis Wall	Native American Coordinator	Native American Religious and Other Concerns
Melanie Peterson	Environmental Protection Specialist	Health and Safety
Christopher McVicars	Natural Resource Specialist	Invasive and Nonnative Species
Emily Simpson	Wilderness Planner	Wilderness
Ruth Thompson	Wild Horse Specialist	Wild Horses
Erin Rajala	Outdoor Recreation Planner	Recreation, Visual Resources
Mark Lowrie	Rangeland Management Specialist	Rangeland Health, Vegetation, Livestock Grazing
Miles Kreidler	Geologist	Mineral Resources
Stephanie Trujillo	Realty Specialist	Project Lead; Lands and Realty

5.4.2 Non-BLM Preparers

Name	Title	Responsible for the Following Section(s) of this Document
Audra Miller, Enviroscientists	Principal Specialist	Overall project management; technical review
Catherine Lee, Enviroscientists	Senior Specialist	Preparation of all document sections
Gail Liebler	GIS Specialist	GIS data management and figure production

6.0 REFERENCES AND ACRONYMS

6.1 References Cited

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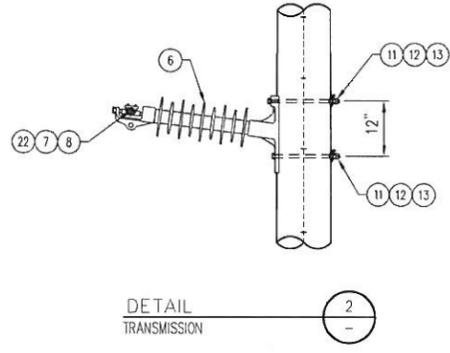
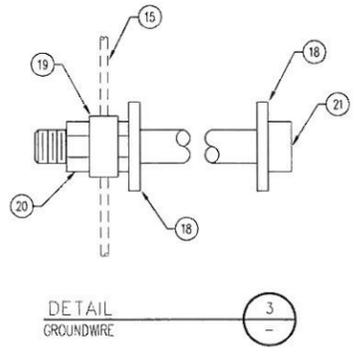
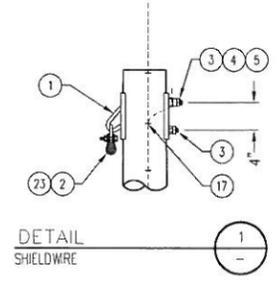
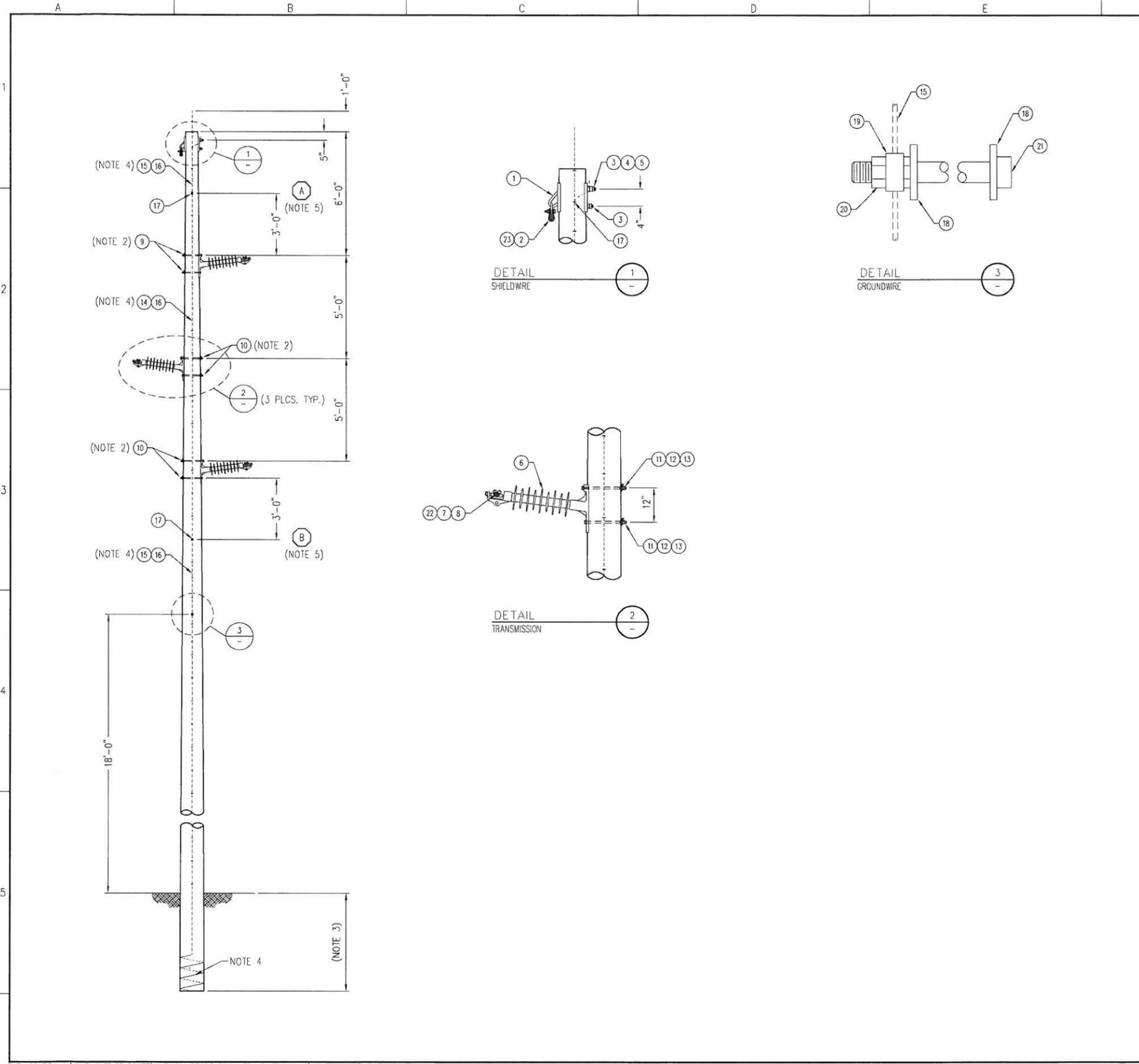
6.2 Acronyms

° - degrees
amsl – above mean sea level
AO – Authorized Officer
APLIC – Avian Power Line Interaction Committee
BLM - Bureau of Land Management
BMPs – Best Management Practices
CESA – cumulative effects study area
CFR - Code of Federal Regulations
CIC - Compliance Inspection Contractor
DETR – Department of Employment, Training, and Rehabilitation
EA - Environmental Assessment
EO – Executive Order
ESA – Endangered Species Act
F - Fahrenheit
FEIS – Final Environmental Impact Statement
FLPMA - Federal Land Policy and Management Act
FONSI - Finding of No Significant Impact
GBBO – Great Basin Bird Observatory
GOAB - Gang Operated Air Break
ID - Interdisciplinary
IM - Instruction Memorandum
IMs – Instruction Memoranda
kV – kilovolt
LR2000 – Land & Mineral Legacy Rehost 2000 System
MBTA – Migratory Bird Treaty Act
MDB&M – Mount Diablo Base and Meridian
MOU – Memorandum of Understanding
mph – miles per hour
MWP – Mt. Wheeler Power, Inc.
NAC – Nevada Administrative Code
NDOT – Nevada Department of Transportation
NDOW – Nevada Department of Wildlife
NE - northeast
NEPA - National Environmental Policy Act
NESC – National Electrical Safety Code
NNHP – Nevada Natural Heritage Program
NRCS – Natural Resources Conservation Service
NRHP – National Register of Historic Places
NRS – Nevada Revised Statutes
NW - northwest
OSHA – Occupational Safety and Health Administration
PGH – Preliminary General Habitat
POD – Plan of Development
PPH – Preliminary Priority Habitat

RFFA - Reasonably Foreseeable Future Action
RMP - Resource Management Plan
ROW – right-of-way
SE - southeast
SHPO – State Historic Preservation Office
SW - southwest
U.S. – United States
U.S. 50 – United States Highway 50
USC – United States Code
USDA – United States Department of Agriculture
USFWS – United States Fish and Wildlife Service
USGS – United States Geological Survey
VRM – Visual Resource Management
WRCC – Western Regional Climate Center

Appendix 1

Typical Single-Pole Structures



MATERIAL BILL				
ITEM	QTY	MATERIAL DESCRIPTION	MANUFACTURE	CATALOG NO.
1	1	OHGW SUPPORT ASSY., DOUBLE, 12", W/ BOLTS, NUTS & CHAIN LINK	HUGHES	2859 1-12
2	1	CLAMP, SUSP., ALUM., FOR 3/8" EHS 7-STRAND W/ CLEVIS EYE	ANDERSON	MS-46C
3	2	LOCKNUT, FOR 5/8" BOLT	HUGHES	MF60
4	1	CLAMP, GROUNDWIRE, FOR 5/8" BOLT	HUGHES	2727.6
5	1	NUT, SQUARE, FOR 5/8" BOLT	HUGHES	N60
6	3	INSULATOR, LINE POST, 69 kv, CAST BASE, TRUNNION END	MACLEAN	NPKG20XG017S0
7	3	CLAMP, TRUNNION FOR 4/0 ACSR, W/ ROD	MACLEAN	ACTS-118
8	3	ARMOR RODS FOR 4/0 ACSR, 60" LONG, 0.25" DIA.	PREFORMED	AR-0124
9	2	BOLT, MACHINE, 3/4" x 16" W/ NUT	HUGHES	B716-6
10	4	BOLT, MACHINE, 3/4" x 18" W/ NUT	HUGHES	B718-6
11	6	LOCKNUT, FOR 3/4" BOLT	HUGHES	MF70
12	6	WASHER, SPRING, FOR 3/4" BOLT	HUGHES	2702.7
13	6	WASHER, SQUARE, CURVED, 4", FOR 3/4" BOLT	HUGHES	CW70
14	AR	GROUND CONDUCTOR, INSULATED, #4 CU	-	-
15	AR	GROUNDWIRE, #4 CU, STRANDED, BARE, SOFT DRAWN	-	-
16	AR	STAPLE, GROUNDWIRE, 1-1/2" x 3/8" 0.162	CHANCE	9167
17	3	CLAMP, C-TAP, #4 CU STRANDED - #4 CU STRANDED	BURNDY	YGAC2C2
18	2	WASHER, ROUND, FOR 1/2" BOLT	HUGHES	RW2-50
19	1	BONDING CLIP, FOR 1/2" BOLT	HUGHES	2727.5
20	1	NUT, SQUARE, FOR 1/2" BOLT	HUGHES	N50
21	1	BOLT, MACHINE, 1/2" x 14" W/ NUT (NOTE 2)	HUGHES	B514-6
22	6	SPIRAL VIBRATION DAMPER FOR 4/0 ACSR CONDUCTOR	PREFORMED	5050105
23	2	SPIRAL VIBRATION DAMPER FOR 7/8" EHS STEEL SHIELD WIRE	PREFORMED	5050104

- NOTES:
- SEE PROJECT STRUCTURE LIST FOR ADDITIONAL CONSTRUCTION UNITS REQUIRED FOR A COMPLETE INSTALLATION.
 - BOLTS SIZED FOR A 55'-0" CLASS 2 WESTERN RED CEDAR POLE. SEE STRUCTURE LIST FOR REQUIRED POLE SIZE AND ADJUST THROUGH BOLT LENGTHS AS REQUIRED.
 - STANDARD EMBEDMENT FOR POLES SHALL BE "10% + 2 FT" UNLESS OTHERWISE NOTED ON THE STRUCTURE LIST. BACKFILL, UNLESS OTHERWISE NOTED, SHALL BE PROCESSED NATIVE FILL COMPACTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
 - STAPLE THE DOWNLEAD TO THE POLE LEAVING ONE FOOT OF WIRE PROJECTING ABOVE THE POLES. STAPLES ON THE DOWNLEAD SHALL BE 2 FEET, EXCEPT FOR A DISTANCE OF 8 FEET ABOVE THE GROUND AND 8 FEET FROM THE TOP OF THE POLE WHERE THEY SHALL BE 6 INCHES APART. CARRY THE DOWNLEAD TO THE BASE OF THE POLE. BUTT WRAP (8) TIMES AS SHOWN AND THEN CONTINUE DOWNLEAD TO BOTTOM OF POLE FOR PLATE WRAP. ON THE BUTT WRAP, STAPLE THE GROUNDWIRE TO THE POLE AT EACH WIRE CROSSING AND ON THE OPPOSITE SIDES OF THE POLE. ON THE PLATE WRAP, USE (6) TURNS, STAPLED SECURILY, WITH THE LAST TURN BEING WITHIN 2" OF THE EDGE OF THE POLE. SEE TM-GR DRAWING FOR ADDITIONAL GROUNDING INSTRUCTIONS.
 - INSULATED GROUND CONDUCTOR TO BE INSTALLED BETWEEN POINTS (A) AND (B) AS SHOWN.

FILE LOCATION: L:\MNT. WHEELER POWER\MWP-009 PESCIO 69 KV TRANSMISSION LINE\05 DRAWINGS\01 FRAMING DRAWINGS\MWP009-B-T01-01.01.DWG LAST SAVED BY: jday 10/23/2012 2:59 PM PLOTTED BY: Jason D. Day 10/23/2012 5:14 PM Tab 1

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SALT LAKE CITY, UTAH

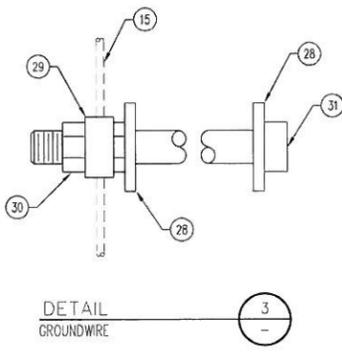
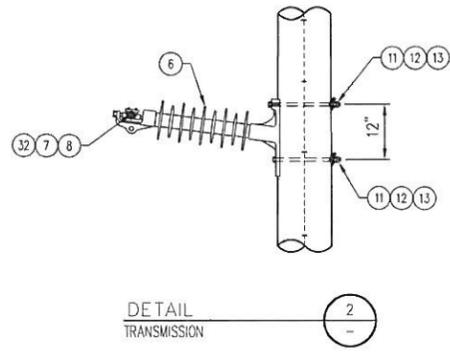
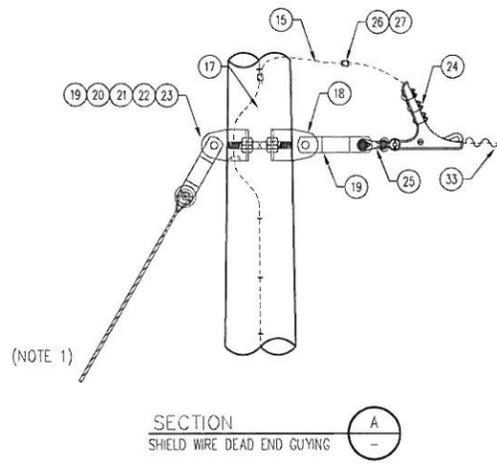
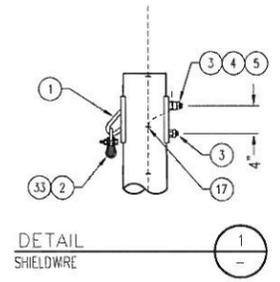
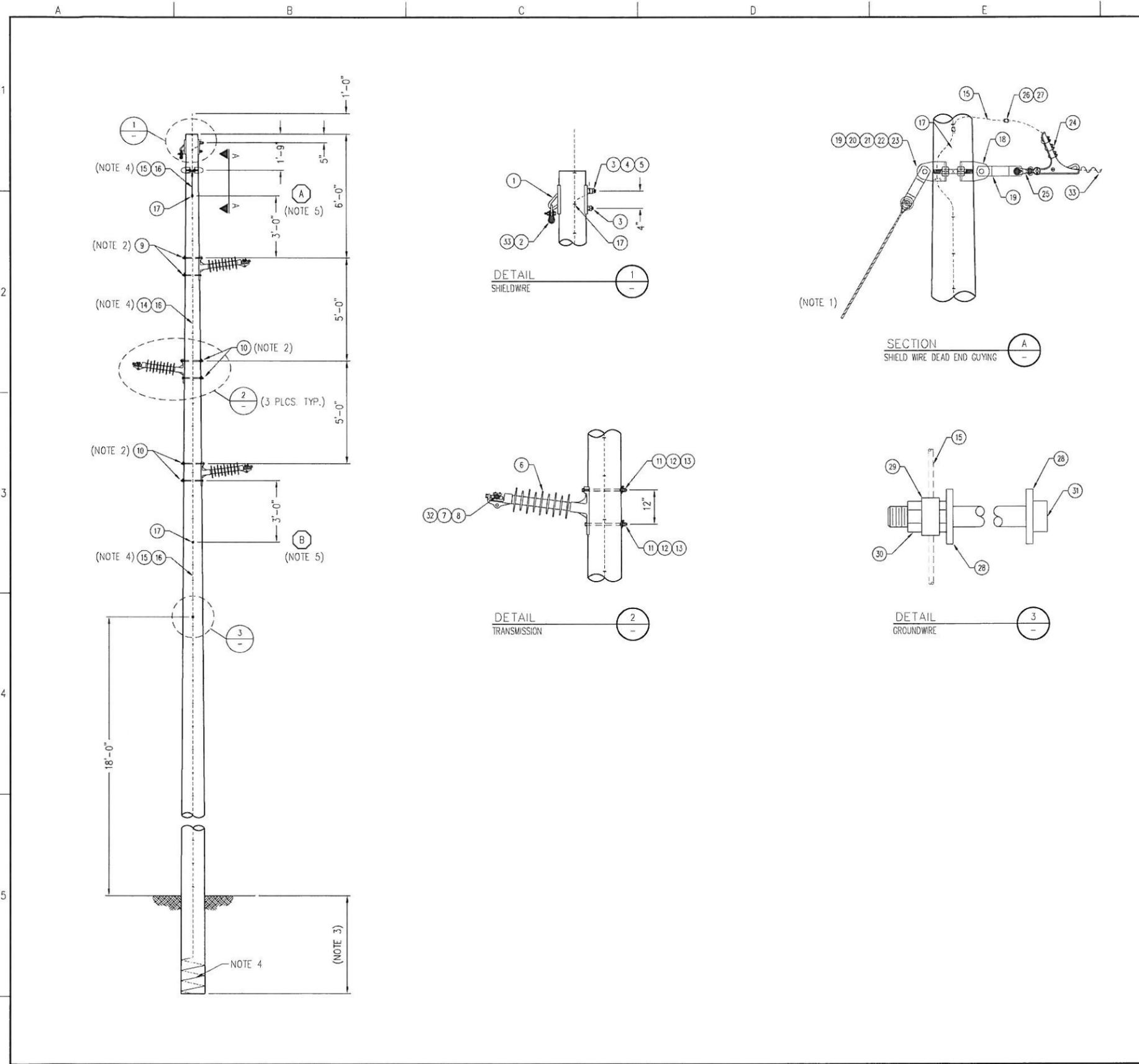
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A	FOR BID	10/22/12	NJN	BJL

MT. WHEELER POWER

ENGINEERING RECORD		DATE
DRAWN	JDD/ECI	10/11/12
DESIGNED	NJN/ECI	10/11/12
CHECKED	JRB/ECI	10/11/12
APPROVED	BJL/ECI	10/11/12

PESCIO 69 kv TAP
FRAMING DRAWING
69 - SCTANW

DWG NAME: MWP009-B-T01-01.01 REVISION NO: A



MATERIAL BILL

ITEM	QTY	MATERIAL DESCRIPTION	MANUFACTURE	CATALOG NO.
1	1	OHGW SUPPORT ASSY., DOUBLE, 12", W/ BOLTS, NUTS & CHAIN LINK	HUGHES	2859.1-12
2	1	CLAMP, SUSP., ALUM., FOR 3/8" EHS 7-STRAND W/ CLEVIS EYE	ANDERSON	MS-46C
3	2	LOCKNUT, FOR 5/8" BOLT	HUGHES	MF60
4	1	CLAMP, GROUNDWIRE, FOR 5/8" BOLT	HUGHES	2727.6
5	1	NUT, SQUARE, FOR 5/8" BOLT	HUGHES	N60
6	3	INSULATOR, LINE POST, 69 kV, CAST BASE, TRUNNION END	MACLEAN	NPKG20XG017S0
7	3	CLAMP, TRUNNION FOR 4/0 ACSR W/ ROD	MACLEAN	ACTS-118
8	3	ARMOR RODS FOR 4/0 ACSR, 60" LONG, 0.182" DIA.	PREFORMED	AR-0124
9	2	BOLT, MACHINE, 3/4" x 16" W/ NUT	HUGHES	B716-6
10	4	BOLT, MACHINE, 3/4" x 18" W/ NUT	HUGHES	B718-6
11	6	LOCKNUT, FOR 3/4" BOLT	HUGHES	MF70
12	6	WASHER, SPRING, FOR 3/4" BOLT	HUGHES	2702.7
13	6	WASHER, SQUARE, CURVED, 4", FOR 3/4" BOLT	HUGHES	CW70
14	AR	GROUND CONDUCTOR, INSULATED, #4 CU STRANDED	-	-
15	AR	GROUNDWIRE, #4 CU, STRANDED, BARE, SOFT DRAWN	-	-
16	AR	STAPLE, GROUNDWIRE, 1-1/2" x 3/8" 0.162	CHANCE	9167
17	4	CLAMP, C-TAP, #4 CU STRANDED - #4 CU STRANDED	BURNDY	YGHC2C2
18	1	BAND, POLE 7-10 IN DIA 2-WAY, 7/8 IN THROUGH BOLT	HUGHES	3108.5
19	2 PAIR	CONNECTING LINKS, 24 000 LBS.	HUGHES	3152
20	1	GUY ROLLER, 7/8" x 2 3/4", 3/8" WIRE SEAT	HUGHES	28082
21	2	BOLT, MACHINE, 7/8" x 3" W/ NUT	HUGHES	BB3-2
22	2	LOCKNUT, FOR 7/8" BOLT	HUGHES	MF80
23	1	BONDING CLIP, W/ 1/2" x 1-1/2" BOLT	HUGHES	2718.55
24	1	BOLTED DEAD END ASSY. FOR 3/8" EHS, W/ SOCKET EYE, GALV.	ANDERSON	SWDE-465
25	1	Y-CLEVIS BALL, 35 KIP, BNC	MACLEAN	YCB-65A
26	1	CONN-WEDGE WHITE, 3/8" EHS TO #4 CU STRANDED	TYCO	6022831
27	1	CARTRIDGE - AMPACT WHITE WEDGE CONNECTOR	TYCO	693385
28	2	WASHER, ROUND, FOR 1/2" BOLT	HUGHES	RW2-50
29	1	BONDING CLIP, FOR 1/2" BOLT	HUGHES	2727.5
30	1	NUT, SQUARE, FOR 1/2" BOLT	HUGHES	N50
31	1	BOLT, MACHINE, 1/2" x 14" W/ NUT (NOTE 2)	HUGHES	B514-6
32	6	SPIRAL VIBRATION DAMPER FOR 4/0 ACSR CONDUCTOR	PREFORMED	5050105
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- NOTES:**
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 - BOLTS SIZED FOR A 60'-0" CLASS 2 WESTERN RED CEDAR POLE. SEE STRUCTURE LIST FOR REQUIRED POLE SIZE AND ADJUST THROUGH BOLT LENGTHS AS REQUIRED.
 - STANDARD EMBEDMENT FOR POLES SHALL BE "10% + 2 FT" UNLESS OTHERWISE NOTED ON THE STRUCTURE LIST. BACKFILL, UNLESS OTHERWISE NOTED, SHALL BE PROCESSED NATIVE FILL COMPACTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
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 - INSULATED GROUND CONDUCTOR TO BE INSTALLED BETWEEN POINTS (A) AND (B) AS SHOWN.

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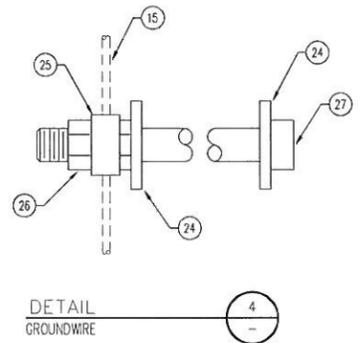
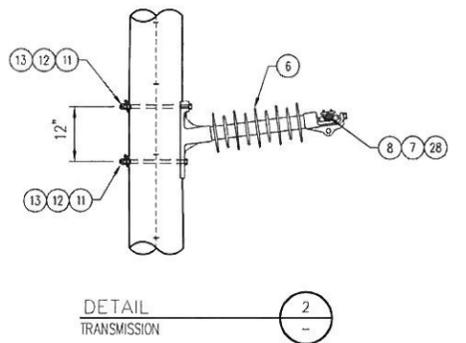
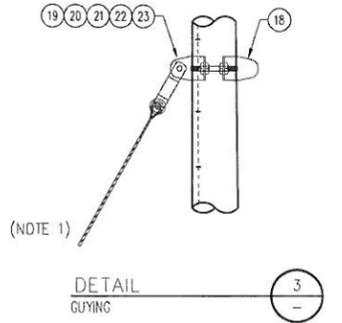
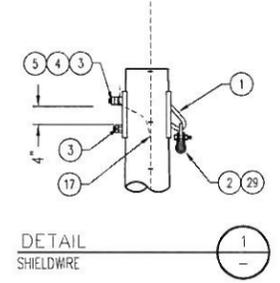
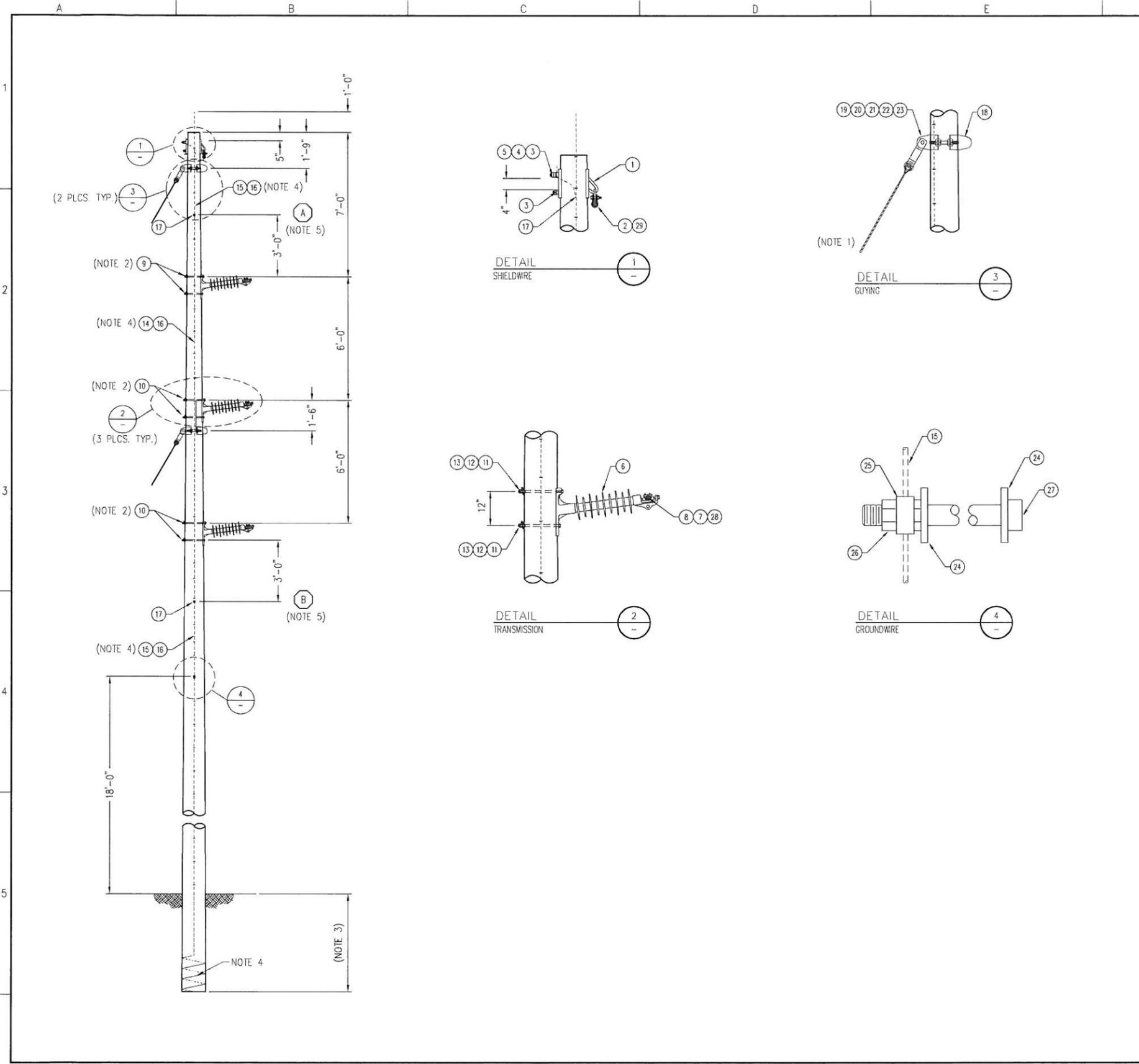
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MT. WHEELER POWER

ENGINEERING RECORD	DATE
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DESIGNED NJN, ECI	10/11/12
CHECKED JJD, ECI	10/11/12
APPROVED BJL, ECI	10/11/12

PESCIO 69 kV TAP
FRAMING DRAWING
69 - SCTANW - 0.1

DWG NAME: MWP009-B-T01-02.01 REVISION NO: A



MATERIAL BILL

ITEM	QTY	MATERIAL DESCRIPTION	MANUFACTURE	CATALOG NO.
1	1	OHGW SUPPORT ASSY., DOUBLE, 12", W/ BOLTS, NUTS & CHAIN LINK	HUGHES	2859 1-12
2	1	CLAMP, SUSP., ALUM., FOR 3/8" EHS 7-STRAND W/ CLEVIS EYE	ANDERSON	MS-46C
3	2	LOCKNUT, FOR 5/8" BOLT	HUGHES	MF60
4	1	CLAMP, GROUNDWIRE, FOR 5/8" BOLT	HUGHES	2727.6
5	1	NUT, SQUARE, FOR 5/8" BOLT	HUGHES	N60
6	3	INSULATOR, LINE POST, 69 kV, CAST BASE, TRUNNION END	MACLEAN	NPKG20XG017SO
7	3	CLAMP, TRUNNION FOR 4/0 ACSR W/ ROD	MACLEAN	ACTS-118
8	3	ARMOR RODS FOR 4/0 ACSR, 60" LONG, 0.182" DIA.	PREFORMED	AR-0124
9	2	BOLT, MACHINE, 3/4" x 16" W/ NUT	HUGHES	B716-6
10	4	BOLT, MACHINE, 3/4" x 18" W/ NUT	HUGHES	B718-6
11	6	LOCKNUT, FOR 3/4" BOLT	HUGHES	MF70
12	6	WASHER, SPRING, FOR 3/4" BOLT	HUGHES	2702.7
13	6	WASHER, SQUARE, CURVED, 4", FOR 3/4" BOLT	HUGHES	CW70
14	AR	GROUND CONDUCTOR, INSULATED, #4 CU STRANDED	-	-
15	AR	GROUNDWIRE, #4 CU, STRANDED, BARE, SOFT DRAWN	-	-
16	AR	STAPLE, GROUNDWIRE, 1-1/2" x 3/8" 0.162	CHANCE	9167
17	3	CLAMP, C-TAP, #4 CU STRANDED - #4 CU STRANDED	BURNDY	YGHC2C2
18	2	BAND, POLE 7-10 IN DIA 2-WAY, 7/8 IN THROUGH BOLT	HUGHES	3108.5
19	2 PAIR	CONNECTING LINKS, 24 000 LBS.	HUGHES	3152
20	2	GUY ROLLER, 7/8" x 2 3/4", 3/8" WIRE SEAT	HUGHES	28082
21	4	BOLT, MACHINE, 7/8" x 3" W/ NUT	HUGHES	BB3-2
22	4	LOCKNUT, FOR 7/8" BOLT	HUGHES	MF80
23	2	BONDING CLIP, W/ 1/2" x 1-1/2" BOLT	HUGHES	2718.55
24	2	WASHER, ROUND, FOR 1/2" BOLT	HUGHES	RW2-50
25	1	BONDING CLIP, FOR 1/2" BOLT	HUGHES	2727.5
26	1	NUT, SQUARE, FOR 1/2" BOLT	HUGHES	N50
27	1	BOLT, MACHINE, 1/2" x 14" W/ NUT (NOTE 2)	HUGHES	B514-6
28	6	SPIRAL VIBRATION DAMPER FOR 4/0 ACSR CONDUCTOR	PREFORMED	5050105
29	2	SPIRAL VIBRATION DAMPER FOR 7/8" EHS STEEL SHIELD WIRE	PREFORMED	5050104

NOTES:

- SEE PROJECT STRUCTURE LIST FOR ADDITIONAL CONSTRUCTION UNITS REQUIRED FOR A COMPLETE INSTALLATION.
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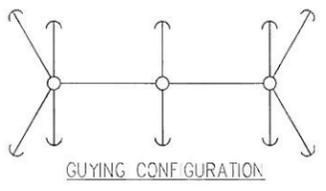
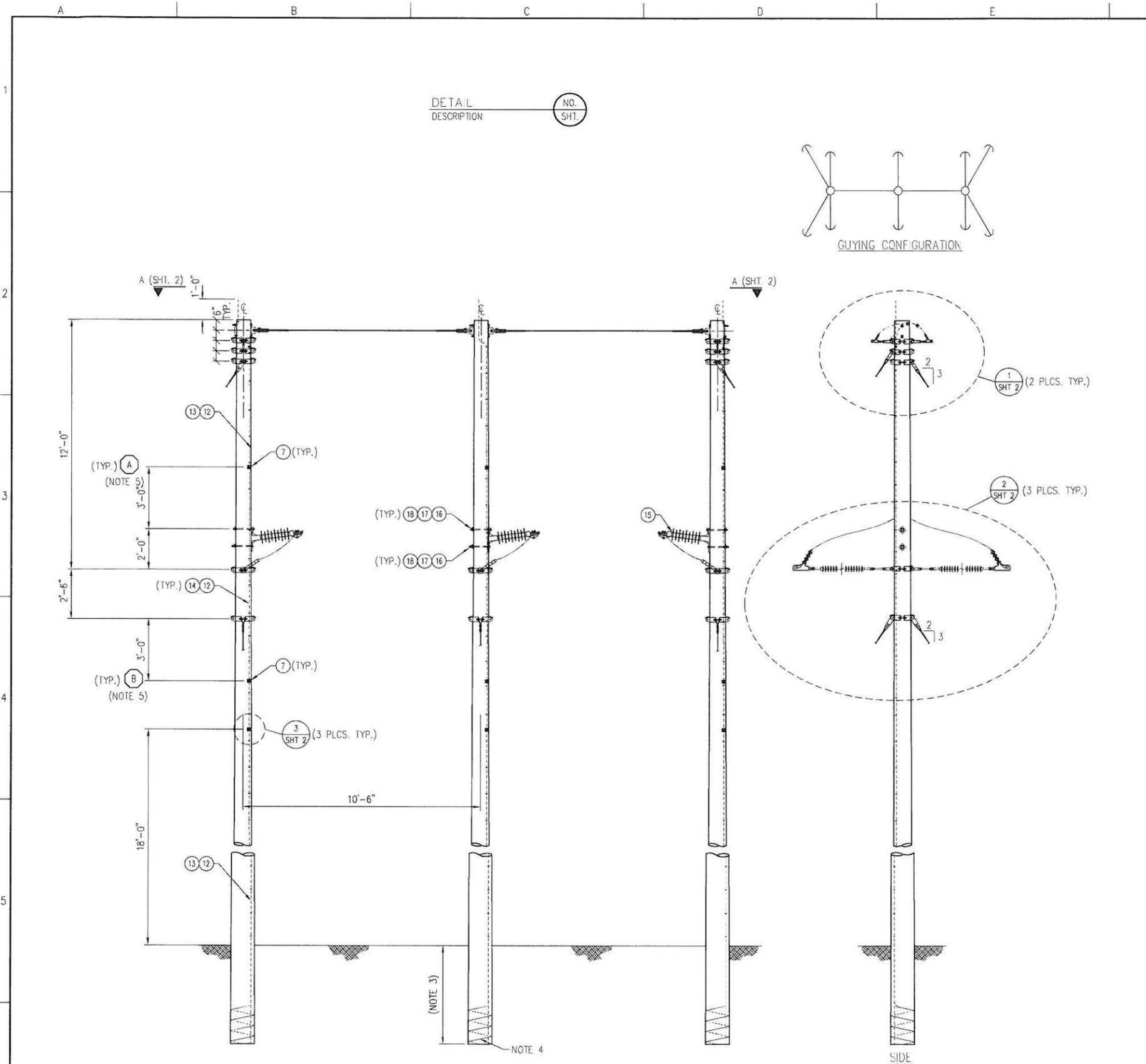
NO	REVISION	DATE	BY	APR
A	FOR BID	10/22/12	N.J.N.	B.J.L.

MT. WHEELER POWER

ENGINEERING RECORD	DATE
DRAWN: JDD, ECI	10/11/12
DESIGNED: N.J.N., ECI	10/11/12
CHECKED: J.R.B., ECI	10/11/12
APPROVED: B.J.L., ECI	10/11/12

PESCIO 69 kV TAP
FRAMING DRAWING
69 - SCRAW - 5.0

DWG NAME: MWP009-B-T01-03.01 REVISION NO: A



MATERIAL BILL

ITEM	QTY	MATERIAL DESCRIPTION	MANUFACTURE	CATALOG NO.
1	6	POLE BAND, 7"-10", HEAVY DUTY	HUGHES	3108.5
2	4	BOLTED DEADEND ASSY. FOR 3/8" EHS, W/SOCKET EYE, GALV. 15,000 LBS	ANDERSON	SWDE-46-S
3	4	Y-CLEVIS BALL, 35K, GALV.	MACLEAN	YCB-65A
4	20 PAIR	LINK, CONNECTING, 3/8" x 2" x 9-1/2"	HUGHES	3154
5	10	GUY ROLLER, POLE BAND, 15/16" HOLE, 7/8" T x 2-3/4" D	HUGHES	28082
6	6	BONDING CLIP ASSY., POLE BAND	HUGHES	2718.55
7	9	CLAMP, C-TAP, #4 CU STRANDED TO #4 CU STRANDED	BURNDY	YGHC2C2
8	4	CARTRIDGE-IMPACT BLUE WEDGE CONNECTOR	TYCO	693381
9	2	CONN-WEDGE BLUE FOR 3/8" EHS	TYCO	600403
10	2	CONN-WEDGE WHITE 3/8" EHS TO #4	TYCO	6022831
11	4	CARTRIDGE-IMPACT WHITE WEDGE CONNECTOR	TYCO	693385
12	AR	STAPLE, GROUNDWIRE, 1-1/2" x 3/8" 0.162	CHANCE	9617
13	AR	GROUND WIRE, #4 CU, STRANDED	-	-
14	AR	GROUND CONDUCTOR, INSULATED, #4 CU	-	-
15	3	INSULATOR, LINE POST, 69 kV, CAST BASE, TRUNNION END	MACLEAN	NPKG20XG01750
16	6	LOCKNUT, FOR 3/4" BOLT	HUGHES	MF78
17	6	WASHER, SPRING, FOR 3/4" BOLT	HUGHES	2702.7
18	6	WASHER, SQUARE, CURVED, 4", FOR 3/4" BOLT	HUGHES	CW70
19	6	Y-CLEVIS OVAL EYE, HOTLINE	HUBBELL	HYOCE 3011
20	6	SUSPENSION INSULATOR, 115 kV, Y-CLEVIS EYE, 25K	MACLEAN	S148060FX01
21	6	POLE BAND, 9"-12", HEAVY DUTY	HUGHES	3108.6
22	6	BOLTED DEADEND ASSY. FOR 4/0 ACSR, W/SOCKET, GALV. 30,000 LBS	ANDERSON	SD112S
23	6	WASHER, ROUND, FOR 1/2" BOLT	HUGHES	RW2-50
24	3	BONDING CLIP, FOR 1/2" BOLT	HUGHES	2727.5
25	3	NUT, SQUARE, FOR 1/2" BOLT	HUGHES	N50
26	3	BOLT, MACHINE, 1/2" x 14" W/ NUT (NOTE 2)	HUGHES	B514-6
27	10	MACHINE BOLT, POLE BAND 7/8" x 4" GALV., W/ NUT	HUGHES	B84-2
28	10	LOCKNUT, FOR 7/8" BOLT	HUGHES	MF80
29	6	SPIRAL VIBRATION DAMPER FOR 4/0 ACSR CONDUCTOR	PREFORMED	5050105
30	4	SPIRAL VIBRATION DAMPER FOR 3/8" EHS SHIELD WIRE	PREFORMED	5050104

NOTES:

- SEE PROJECT STRUCTURE LIST FOR ADDITIONAL CONSTRUCTION UNITS REQUIRED FOR A COMPLETE INSTALLATION.
- BOLTS SIZED FOR 55'-0" CLASS 2 WESTERN RED CEDAR POLES. SEE STRUCTURE LIST FOR REQUIRED POLE SIZE AND ADJUST THROUGH BOLT LENGTHS AS REQUIRED.
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SALT LAKE CITY, UTAH

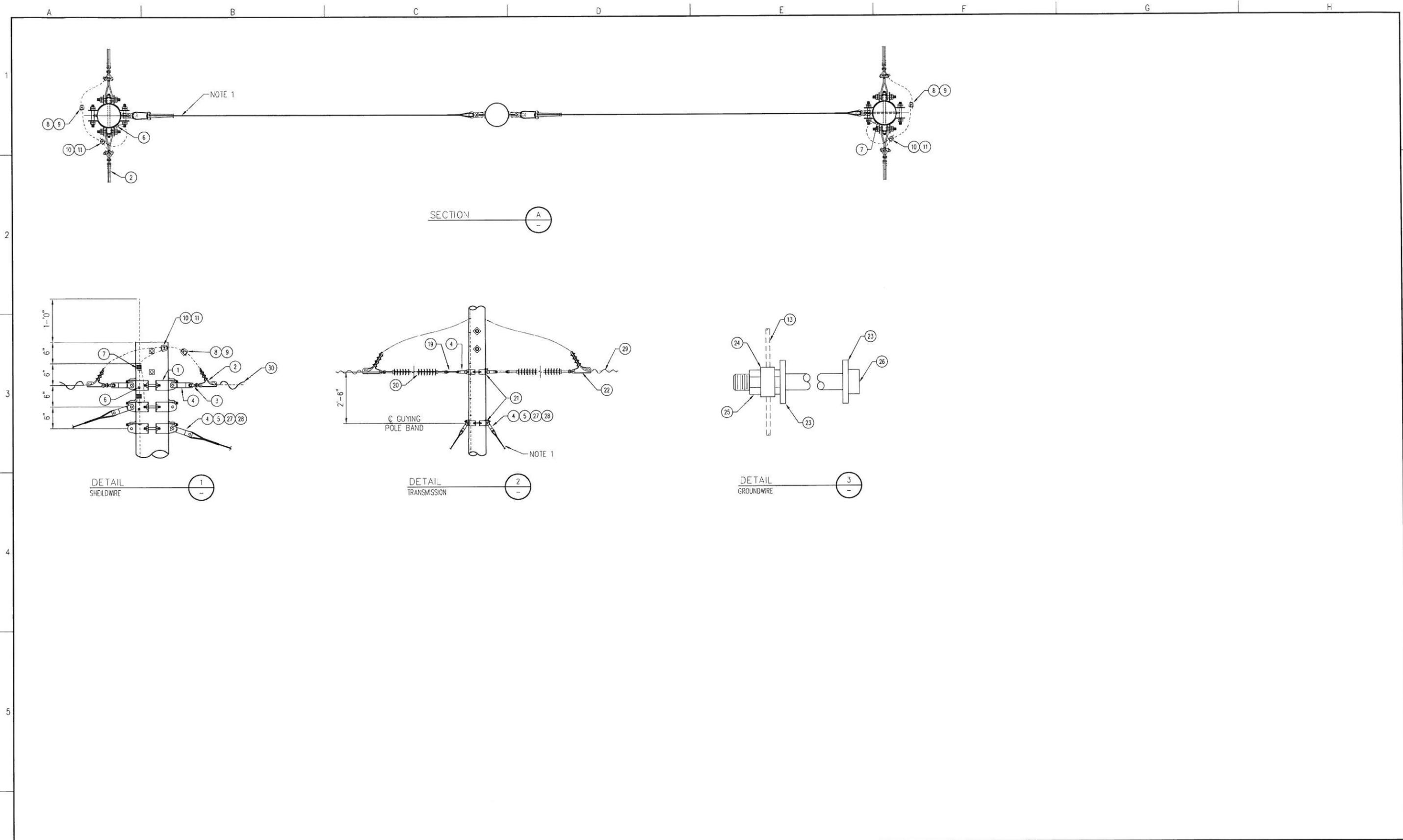
NO.	REVISION	DATE	BY	APR
A	FOR BID	10/22/12	NUN	B.J.L.

MT. WHEELER POWER

ENGINEERING RECORD	DATE
DRAWN: JDD/ECI	10/11/12
DESIGNED: N.J.V./ECI	10/11/12
CHECKED: J.R.B./ECI	10/11/12
APPROVED: B.J.L./ECI	10/11/12

PESCIO 69 kV TAP
FRAMING DRAWING
69 - SCDEW

DWG NAME: MWP009-B-T01-04.01 REVISION NO.: A



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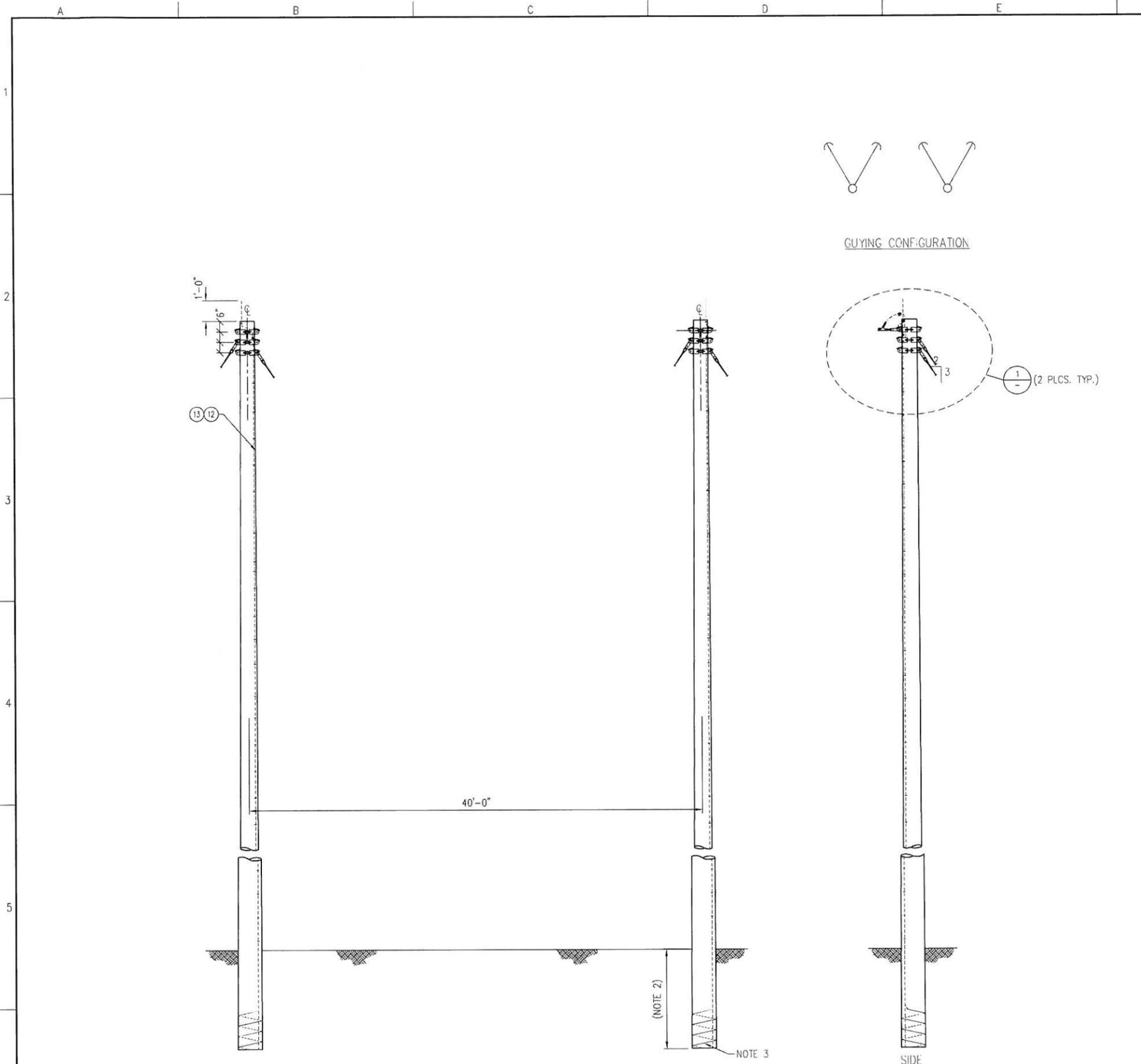
MT. WHEELER POWER

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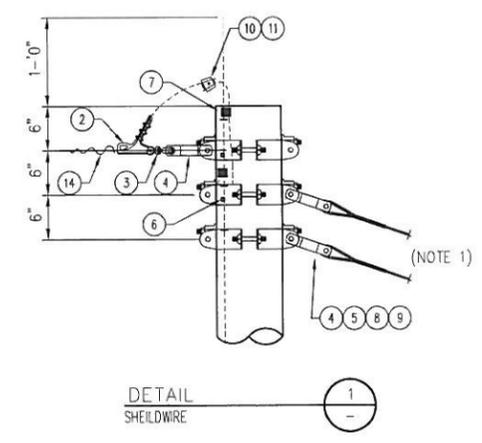
PESCIO 69 kV TAP
FRAMING DRAWING
69 - SCDEW

DWG NAME: MWP009-B-T01-04.02 | REVISION NO: A



MATERIAL BILL				
ITEM	QTY	MATERIAL DESCRIPTION	MANUFACTURE	CATALOG NO.
1	6	POLE BAND, 7"-10", HEAVY DUTY	HUGHES	3108.5
2	2	BOLTED DEADEND ASSY. FOR 3/8" EHS, W/SOCKET EYE, GALV. 8,000 LBS	ANDERSON	SWDE-46-S
3	2	Y-CLEVIS BALL, 35K, GALV.	MACLEAN	YCB-65A
4	6 PAIR	LINK, CONNECTING, 3/8" x 2" x 9-1/2"	HUGHES	3154
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6	6	BONDING CLIP ASSY., POLE BAND	HUGHES	2718.55
7	2	CLAMP, C-TAP, #4 CU TO #4 CU	BURNDY	YCHC2C2
8	4	MACHINE BOLT, POLE BAND 7/8" x 4" GALV. W/ NUT	HUGHES	B84-2
9	4	LOCKNUT, FOR 7/8" BOLT	HUGHES	MF80
10	2	CONN-WEDGE WHITE 3/8" EHS TO #4	TYCO	6022831
11	4	CARTRIDGE-IMPACT WHITE WEDGE CONNECTOR	TYCO	693385
12	AR	STAPLE, GROUNDWIRE, 1-1/2" x 3/8" 0.162	CHANCE	9617
13	AR	GROUND WIRE, #4 CU, 7 STRAND	-	-
14	2	SPIRAL VIBRATION DAMPER FOR 3/8" EHS SHIELD WIRE	PREFORMED	5050104

- NOTES:**
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SALT LAKE CITY, UTAH

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MT. WHEELER POWER

ENGINEERING RECORD		DATE
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DESIGNED	NJN/ECI	10/11/12
CHECKED	JRB/ECI	10/11/12
APPROVED	DJL/ECI	10/11/12
DWG SCALE:	NONE	PLT SCALE:

PESCIO 69 kV TAP
FRAMING DRAWING
69 - SCDEW - SM

DWG. NAME: MWFO09-B-T01-05.01 REVISION NO: A

Appendix 2

BLM Ely District Recommended Bird Nest Buffer Sizes

Appendix 3

BLM Ely District Recommended Bird Nest Buffer Sizes

Nest Buffer Sizes

The following buffer sizes for nests are recommended by the BLM Ely District. The type of disturbance, current life cycle of the birds (i.e. just started nest construction, incubating, chicks in nest, chicks ready to fledge), and habitat in the area (i.e. riparian area) may warrant adjustments to these recommended buffer sizes. With certain species, an increase in monitoring of the response of the nesting birds and their young to the disturbance may be allowed to reduce buffer sizes. Nests **will not** be marked with bright-colored flagging or anything that could attract predators to the nest. Nests **will not** be checked more than one time per week so as to not alert predators to nest locations.

The following process will be employed once nesting activity has been observed for this project area:

- 1) Activity will cease in the area until the chick(s) fledge, if this is not possible, see number 2 below.
- 2) The buffer specified in the table below will be adhered to until the chick(s) fledge, if this is not possible, see number 3 below.
- 3) The biological monitors will document the following information and submit it to the CICs. The information will then go to the BLM biologists and managers for approval:
 - a) Give a detailed description of the nest, nesting activity, vegetation, pre-existing disturbances to the nest (i.e. proximity to roads, power poles, substations, etc.), monitoring information, and include a photo of the area.
 - b) What action is proposed in an area smaller than the standard buffer? Be sure to include types of equipment, frequency, duration, and number of people.
 - c) Is there a potential for screening the action from the birds, either auditory or visual (i.e. due to terrain, dense vegetation)?

Once the information is received, BLM biologists will make a recommendation to management to either approve or deny the request as presented.

Habitat	Common name	Scientific name	Buffer Size	time from eggs to fledging
sagebrush/salt desert scrub	Greater sage grouse	<i>Centrocercus urophasianus</i>	600 ft	25-27-days (eggs only)
open/grasslands	killdeer	<i>Charadrius vociferous</i>	300 ft	24-26 days (eggs only)
open/grasslands	long-billed curlew	<i>Numenius americanus</i>	300 ft	27-28 days (eggs only)
desert scrub	Gambel's quail	<i>Callipepla gambelii</i>	200 ft	31-34 days (eggs only)
generalist	Mourning dove	<i>Zenaida macroura</i>	200 ft	25-28 days
generalist	White-winged dove	<i>Zenaida asiatica</i>	200 ft	26-30 days
open/grasslands	common nighthawk	<i>Chordeiles minor</i>	300 ft	39 days
woodlands	hummingbirds	<i>Many spp.</i>	200 ft	35-41 days
woodlands/cavity	Lewis's woodpecker	<i>Melanerpes lewis</i>	100 ft	43-45 days
woodlands/cavity	red-naped sapsucker	<i>Sphyrapicus nuchalis</i>	100 ft	39-40 days

Habitat	Common name	Scientific name	Buffer Size	time from eggs to fledging
woodlands/cavity	Williamson's sapsucker	<i>Sphyrapicus thyroideus</i>	100 ft	44 days
woodlands/cavity	hairy woodpecker	<i>Picoides villosus</i>	100 ft	39-45 days
woodlands/cavity	Ladder-backed woodpecker	<i>Picoides scalaris</i>	100 ft	34-39 days
woodlands/cavity	northern flicker	<i>Colaptes arcticus</i>	100 ft	28-31 days
P/J or sagebrush	gray flycatcher	<i>Empidonax wrightii</i>	200 ft	30 days
cliffs	black phoebe	<i>Sayornis nigricans</i>	200 ft	32-39 days
cliffs	Say's phoebe	<i>Sayornis saya</i>	200 ft	26-30 days
woodlands	vermillion flycatcher	<i>Pyrocephalus rubinus</i>	200 ft	28-31 days
open/trees	western kingbird	<i>Tyrannus verticalis</i>	200 ft	28-31 days
open/cavity/trees	Ash-throated flycatcher	<i>Myiarchus cinerascens</i>	100 ft	31-32 days
tree/scrub	Phainopepla	<i>Phainopepla nitens</i>	200 ft	32-34 days
cliff/tree/cavity	Violet-green swallow	<i>Tachycineta thalassina</i>	100 ft	33-40 days
tree/cavity	Tree swallow	<i>Tachycineta bicolor</i>	100 ft	29-40 days
burrows	Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>	100 ft	32-37 days
woodlands	Blue-gray gnatcatcher	<i>Polioptila caerulea</i>	200 ft	27-28 days
woodlands	Black-tailed gnatcatcher	<i>Polioptila melanura</i>	200 ft	23-29 days
woodlands/yucca	Scott's oriole	<i>Icterus parisorum</i>	200 ft	28 days
open woodlands	Bullock's oriole	<i>Icterus bullockii</i>	200 ft	28 days
open/scrub	horned lark	<i>Eremophila alpestris</i>	300 ft	22-31 days
woodlands	western scrub-jay	<i>Aphelocoma californica</i>	200 ft	33-35 days
woodlands	pinyon jay	<i>Gymnorhinus cyanocephalus</i>	200 ft	38 days
woodlands	Clark's nutcracker	<i>Nucifraga Columbiana</i>	200 ft	38-40 days
scrub woods	black-billed magpie	<i>Pica pica</i>	200 ft	39-50 days
woods	American crow	<i>Corvus brachyrhynchos</i>	200 ft	30-40 days
cliffs/trees	common raven	<i>Corvus corax</i>	200 ft*	55-63 days
tree/cavity	juniper titmouse	<i>Parus inornatus ridgwayi</i>	100 ft	31-33 days
scrub	verdin	<i>Auriparus flaviceps</i>	300 ft	35 days
woodlands	bushtit	<i>Psaltriparus minimus</i>	200 ft	26-28 days
scrub	cactus wren	<i>Campylorhynchus brunneicapillus</i>	300 ft	36-39 days
rock outcrops	rock wren	<i>Salpinctes obsoletus</i>	300 ft	26-30 days

Habitat	Common name	Scientific name	Buffer Size	time from eggs to fledging
rock outcrops	canyon wren	<i>Catherpes mexicanus</i>	300 ft	27-33 days
woodlands/cavity	Bewick's wren	<i>Thryomanes bewickii</i>	200 ft	28 days
woodlands/cavity	mountain bluebird	<i>Sialia currucoides</i>	100 ft	31-35 days
woodlands/cavity	Townsend's solitaire	<i>Myadestes townsendii</i>	100 ft	25 days
woodlands	northern mockingbird	<i>Mimus polyglottos</i>	200 ft	23-28 days
sagebrush	sage thrasher	<i>Oreoscoptes montanus</i>	300 ft	26-29 days
scrub	Bendire's thrasher	<i>Toxostoma bendirei</i>	300 ft	28 days
scrub	Crissal thrasher	<i>Toxostoma crissale</i>	300 ft	25-26 days
tree in scrub	loggerhead shrike	<i>Lanius ludovicianus</i>	300 ft	31-37 days
woodlands	gray vireo	<i>Vireo vicinior</i>	200 ft	26-28 days
Ground	Virginia's warbler	<i>Vermivora virginiae</i>	300 ft	23-26 days
woodlands/cavity sensitive	Lucy's warbler	<i>Vermivora luciae</i>	300 ft	23 days
woodlands	yellow-rumped warbler	<i>Dendroica coronate auduboni</i>	200 ft	24-27 days
Scrub	MacGillivray's warbler	<i>Opornis tolmei</i>	300 ft	19-23 days
Ground	Wilson's warbler	<i>Wilsonia pusilla</i>	300 ft	21-24 days
Scrub	yellow-breasted chat	<i>Ctergia virens</i>	300 ft	19-23 days
woodlands	western tanager	<i>Piranga ludoviciana</i>	200 ft	23-24 days
Scrub	pyrrhuloxia	<i>Cardinalis sinuatus</i>	200 ft	24 days
Scrub	lazuli bunting	<i>Passerina amoena</i>	300 ft	22-27 days
Scrub	green-tailed towhee	<i>Pipilo chlorus</i>	300 ft	23-24 days
Scrub	spotted towhee	<i>Pipila maculatus</i>	300 ft	21-22?days
Scrub	Abert's towhee	<i>Pipila aberti</i>	300 ft	25-27 days
woodlands	chipping sparrow	<i>Spizella passerine</i>	200 ft	20-26 days
sagebrush	Brewer's sparrow	<i>Spizella breweri</i>	300 ft	19-22 days
sagebrush	black-chinned sparrow	<i>Spizella atrogularis</i>	300 ft	23 days
sagebrush	vesper sparrow	<i>Pooecetes gramineus</i>	300 ft	31-35 days
Scrub	lark sparrow	<i>Chondestes grammacus</i>	300 ft	20-33 days
sagebrush	black-throated sparrow	<i>Amphispiza bilineata</i>	300 ft	22 days
sagebrush	sage sparrow	<i>Amphispiza belli</i>	300 ft	22-26 days
sagebrush	western meadowlark	<i>Sturnella neglecta</i>	300 ft	37-41 days
woodlands	Brewer's blackbird	<i>Euphagus cyanocephalus</i>	200 ft	25-26 days
Alpine	black rosy-finch	<i>Leucosticte atratus</i>	200 ft	32-34 days
woodlands	Cassin's finch	<i>Carpodacus cassinii</i>	200 ft	26-28 days
woodlands	red crossbill	<i>Loxia curvirostra</i>	200 ft	30-38 days
woodlands	lesser goldfinch	<i>Carduelis psaltria</i>	200 ft	33 days

Habitat	Common name	Scientific name	Buffer Size	time from eggs to fledging
woodlands	evening grosbeak	<i>Coccothraustes vespertinus</i>	200 ft	25-28 days
ledge or cavity	House finch	<i>Carpodacus mexicanus</i>	100 ft	23-33 days

* = nest may be removed with FWS depredation permit

References

Baich, Paul J. and Colin J. O. Harrison. 1997. A Guide to the Nests, Eggs, and Nestlings of North American Birds.

CalPIF (California Partners in Flight). 2009. Version 1.0. The Desert Bird Conservation Plan: a Strategy for Protecting and Managing Desert Habitats and Associated Birds in California. California Partners in Flight. <http://www.prbo.org/calpif/plans.html>

Ehrlich, Paul R., David S. Dobkin, and Darryl Wheye. 1988. The Birder's Handbook. Simon and Schuster/ Fireside Books. New York, New York.

Appendix 3

Strawberry 69 kV Transmission Line Project Ely District Sensitive Species with the Potential to Occur in the Project Area

APPENDIX 3
STRAWBERRY 69kV TRANSMISSION LINE RIGHT-OF-WAY PROJECT
ELY DISTRICT SENSITIVE SPECIES
WITH THE POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Potential to Occur (Yes or No)
Plants	
<i>Arctomecon merriamii</i> White bearpoppy	No
<i>Asclepias eastwoodiana</i> Eastwood milkweed	Yes
<i>Astragalus calycosus</i> var. <i>monophyllidius</i> Torrey milkvetch	Yes
<i>Astragalus ensiformis</i> var. <i>gracilior</i> Veyo milkvetch	No
<i>Astragalus eurylobus</i> Needle Mountains milkvetch	Yes
<i>Astragalus geyeri</i> var. <i>triquetrus</i> Threecorner milkvetch	No
<i>Astragalus lentiginosus</i> var. <i>stramineus</i> Straw milkvetch	No
<i>Astragalus oophorus</i> var. <i>lonchocalyx</i> Long-calyx eggvetch	No
<i>Astragalus uncialis</i> Currant milkvetch	No
<i>Botrychium crenulatum</i> Dainty moonwort	No
<i>Castilleja salsuginosa</i> Monte Neva paintbrush	No
<i>Cymopterus basalticus</i> Intermountain wavewing	Yes
<i>Epilobium nevadense</i> Nevada willowherb	No
<i>Ericameria cervina</i> Antelope Canyon goldenbush	No
<i>Erigeron ovinus</i> Sheep fleabane	No
<i>Eriogonum corymbosum</i> var. <i>nilesii</i> Las Vegas buckwheat	No
<i>Eriogonum microthecum</i> var. <i>phoeniceum</i> (<i>Eriogonum microthecum</i> var. <i>arceuthinum</i>) Scarlet buckwheat	No
<i>Eriogonum pharnaceoides</i> var. <i>cervinum</i> Deer Lodge buckwheat	No
<i>Eriogonum viscidulum</i> Sticky buckwheat	No
<i>Frasera gypsicola</i> Sunnyside green gentian	Yes
<i>Grusonia pulchella</i> Sand cholla	Yes
<i>Ivesia arizonica</i> var. <i>saxosa</i> Rock purpusia	No
<i>Jamesia tetrapetala</i> Waxflower	No

Species	Potential to Occur (Yes or No)
<i>Lewisia maguirei</i> Maquire's bitterroot	No
<i>Mentzelia argillicola</i> Pioche blazingstar	No
<i>Mentzelia tiehmii</i> Tiehm blazingstar	No
<i>Penstemon concinnus</i> Tunnel Springs beardtongue	No
<i>Penstemon leiophyllus</i> var. <i>francisci-pennellii</i> Pennell beardtongue	No
<i>Phacelia parishii</i> Parish phacelia	No
<i>Sclerocactus blainei</i> Blaine pincushion	No
<i>Sclerocactus pubispinus</i> Great Basin fishhook cactus	Yes
<i>Sclerocactus schlesseri</i> Schlesser pincushion	No
<i>Silene nachlingerae</i> Nachlinger catchfly	No
<i>Sisyrinchium radicatum</i> St. George blue-eyed grass	No
<i>Sphaeralcea caespitosa</i> var. <i>williamsiae</i> Railroad Valley globemallow	Yes
<i>Spiranthes diluvialis</i> Ute ladies' tresses	Yes
<i>Trifolium andinum</i> var. <i>podocephalum</i> Currant Summit clover	No
<i>Viola lithion</i> Rock violet	No
Amphibians	
<i>Rana onca</i> Relict leopard frog	No
<i>Rana pipiens</i> Northern leopard frog	No
Birds	
<i>Accipiter gentilis</i> Northern goshawk	No
<i>Aquila chrysaetos</i> Golden eagle	Yes
<i>Athene cunicularia hypugaea</i> Western burrowing owl	Yes
<i>Buteo regalis</i> Ferruginous hawk	Yes
<i>Buteo swainsonii</i> Swainson's hawk	Yes
<i>Centrocercus urophasianus</i> Greater sage-grouse	Yes
<i>Charadrius alexandrinus nivosus</i> Western snowy plover	No
<i>Coccyzus americanus</i> Western yellow-billed cuckoo	No
<i>Empidonax traillii extimus</i> Southwestern willow flycatcher	No

Species	Potential to Occur (Yes or No)
<i>Falco peregrinus</i> Peregrine falcon	No
<i>Gymnorhinus cyanocephalus</i> Pinyon jay	No
<i>Haliaeetus leucocephalus</i> Bald eagle	No
<i>Lanius ludovicianus</i> Loggerhead shrike	Yes
<i>Leucosticte atrata</i> Black rosy-finch	No
<i>Melanerpes lewis</i> Lewis' woodpecker	No
<i>Oreoscoptes montanus</i> Sage thrasher	Yes
<i>Spizella breweri</i> Brewer's sparrow	Yes
<i>Toxostoma bendirei</i> Bendire's thrasher	No
<i>Toxostoma lecontei</i> Le Conte's thrasher	No
Mammals	
<i>Antrozous pallidus</i> Pallid bat	No
<i>Brachylagus idahoensis</i> Pygmy rabbit	Yes
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	No
<i>Eptesicus fuscus</i> Big brown bat	No
<i>Euderma maculate</i> Spotted bat	No
<i>Eumops perotis californicus</i> Greater western mastiff bat	No
<i>Lasionycteris noctivagans</i> Silver-haired bat	No
<i>Lasiurus blossevillii</i> Western red bat	No
<i>Lasiurus cinereus</i> Hoary bat	No
<i>Microdipodops megacephalus</i> Dark kangaroo mouse	Yes
<i>Microdipodops pallidus</i> Pale kangaroo mouse	Yes
<i>Microtus montanus focosus</i> Pahranagat Valley montane vole	No
<i>Myotis californicus</i> California myotis	No
<i>Myotis ciliolabrum</i> Western small-footed myotis	No
<i>Myotis evotis</i> Long-eared myotis	No

Species	Potential to Occur (Yes or No)
<i>Myotis lucifugus</i> Little brown myotis	No
<i>Myotis thysanodes</i> Fringed myotis	No
<i>Myotis volans</i> Long-legged myotis	No
<i>Myotis yumanensis</i> Yuma myotis	No
<i>Ochotona princeps</i> American pika	No
<i>Ovis canadensis</i> Bighorn sheep	No
<i>Pipistrellus hesperus</i> Western pipistrelle	No
<i>Tadarida brasiliensis</i> Brazilian free-tailed bat	No
Fish	
<i>Catostomus clarkia</i> ssp. 2 Meadow Valley Wash desert sucker	No
<i>Crenichthys baileyi baileyi</i> White River springfish	No
<i>Crenichthys baileyi grandis</i> Hiko White River springfish	No
<i>Crenichthys nevadae</i> Railroad Valley springfish	No
<i>Empetrichthys latos</i> Pahrump poolfish	No
<i>Gila bicolor isolata</i> Independence Valley tui chub	No
<i>Gila bicolor newarkensis</i> Newark Valley tui chub	No
<i>Gila bicolor</i> ssp. 7 Railroad Valley tui chub	No
<i>Gila elegans</i> Bonytail chub	No
<i>Gila robusta jordani</i> Pahranagat roundtail chub	No
<i>Gila seminuda</i> pop. 2 Virgin River chub (Muddy River pop.)	No
<i>Lepidomeda albivalis</i> White River spinedace	No
<i>Lepidomeda mollispinis pratensis</i> Big Spring spinedace	No
<i>Moapa coriacea</i> Moapa dace	No
<i>Oncorhynchus clarkia</i> Utah Bonneville cutthroat trout	No
<i>Relictus solitarius</i> Relict dace	No
<i>Rhinichthys osculus</i> spp 11 Meadow Valley speckled dace	No

Species	Potential to Occur (Yes or No)
<i>Rhinichthys osculus</i> spp 7 White River speckled dace	No
<i>Rhinichthys osculus velifer</i> Pahranagat speckled dace	No
Reptiles	
<i>Gopherus agassizii</i> Desert tortoise	No
<i>Heloderma suspectum cinctum</i> Banded Gila monster	No
<i>Lampropeltis pyromelana</i> Sonoran mountain kingsnake	No
<i>Sauromalus ater</i> Chuckwalla	No
Insects	
<i>Euphilotes bernardino minuta</i> Baking powder flat blue	No
<i>Hesperia uncas fulvapalla</i> Railroad Valley skipper	No
<i>Hesperia uncas grandiosa</i> White River Valley skipper	No
<i>Pelocoris shoshone Shoshone</i> Pahranagat naucorid bug	No
<i>Phyciodes pascoensis arenacolor</i> Steptoe Valley crescent spot	No
Molluscs	
<i>Pyrgulopsis aloba</i> Duckwater pyrg	No
<i>Pyrgulopsis anatina</i> Southern duckwater pyrg	No
<i>Pyrgulopsis cruciglans</i> Tranverse gland pyrg	No
<i>Pyrgulopsis landyei</i> Landyes pyrg	No
<i>Pyrgulopsis merriami</i> Pahranagat pebblesnail	No
<i>Pyrgulopsis orbiculata</i> Sub-globose Steptoe Ranch pyrg	No
<i>Pyrgulopsis peculiaris</i> Bifid duct pyrg	No
<i>Pyrgulopsis planulata</i> Flat-topped Steptoe pyrg	No
<i>Pyrgulopsis serrata</i> Northern Steptoe pyrg	No
<i>Pyrgulopsis sulcata</i> Southern Steptoe pyrg	No
<i>Pyrgulopsis umbilicata</i> Southern Soldier Meadow pyrg	No
<i>Pyrgulopsis villacampae</i> Duckwater warm springs pyrg	No
<i>Tryonia clathrata</i> Grated tryonia	No

Appendix 4

Visual Contrast Rating Sheets

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Date: April 13, 2013

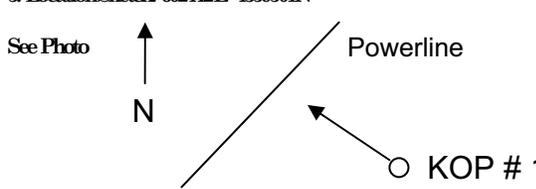
District: Ely District Office

Resource Area: Ely District RMP

Activity (program): 43 CFR 2800

VISUAL CONTRAST RATING WORKSHEET

SECTION A. PROJECT INFORMATION

1. Project Name: Strawberry 69kV Transmission Line ROW Project	4. Location Township 17 North Range 55 East Section 5	5. Location Sketch: 602442E 435501N See Photo 
2. Key Observation Point: KOP#1		
3. VRM Class: Class III		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	FG- flat MG- flat BG- rolling, moderately steep	FG- bold, rounded MG- low, sparse BG- nonexistent to patchy	FG- none MG- linear fence w/ vertical posts BG- none
LINE	FG- horizontal MG- horizontal BG- undulating - horizontal	FG- rounded MG- irregular BG- irregular	FG- none MG- linear fence w/ vertical posts BG- none
COLOR	FG- gray - ochre MG- ochre - tan BG- gray brown - brown	FG- gray - sage green MG- gray BG- deep blue	FG- none MG- brown BG- none
TEXTURE	FG- uniform - medium grained MG- uniform - fine grained BG- smooth - blocky	FG- rough - patchy MG- uniform - patchy - medium grained BG- soft - patchy	FG- none MG- smooth BG- none

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	FG- flat MG- flat BG- rolling, moderately steep	FG- bold, rounded MG- low, sparse BG- nonexistent to patchy	FG- none MG- linear fence w/ vertical posts new powerline BG- none
LINE	FG- horizontal MG- horizontal BG- undulating - horizontal	FG- rounded MG- irregular BG- irregular	FG- none MG- linear fence w/ vertical posts new powerline BG- none
COLOR	FG- gray - ochre MG- ochre - tan BG- gray brown - brown	FG- gray - sage green MG- gray BG- deep blue	FG- none MG- brown BG- none
TEXTURE	FG- uniform - medium grained MG- uniform - fine grained BG- smooth - blocky	FG- rough - patchy MG- uniform - patchy - medium grained BG- soft - patchy	FG- none MG- smooth BG- none

SECTION D. CONTRAST RATING SHORT TERM LONG TERM

1.	DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	
					X				X			X		
					X				X			X		
ELEMENTS	Form				X				X			X		3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
	Line				X				X			X		
	Color				X				X			X		
	Texture				X				X			X		
Evaluator's Names												Date		
Opal Adams												4/13/2013		
Photos taken by Audra Miller														

SECTION D. (Continued)

Comments from item 2.

There is existing similar disturbance to the proposed activities in the form of a powerline. The new powerline will be along the same right-of-way and will be of a similar height and diameter. The existing powerline is difficult to see in the photographs. There will be minimal disturbance with the addition of the new powerline and will add a weak contrast to the existing character landscape. Therefore, the Project will meet the VRM Class III objectives, and there is no need for further mitigation.



Additional Mitigating Measures (See item 3)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Date: April 13, 2013

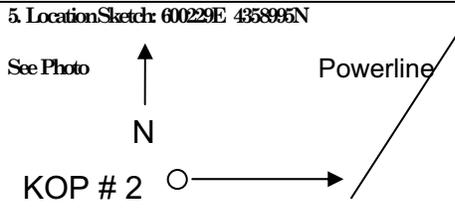
District: Ely District Office

Resource Area: Ely District RMP

Activity (program): 43 CFR 2800

VISUAL CONTRAST RATING WORKSHEET

SECTION A. PROJECT INFORMATION

1. Project Name: Strawberry 69kV Transmission Line ROW Project	4. Location Township .17 North Range 54 East Section 1	5. Location Sketch: 600229E 435895N See Photo 
2. Key Observation Point: KOP#2		
3. VRM Class: Class III		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	FG- flat MG- flat BG- undulating - rolling	FG- patchy - spiky MG- patchy - rounded BG- patchy - uniform	FG- none MG- crosscutting, vertical BG- none
LINE	FG- horizontal - angular MG- horizontal BG- rolling - angular	FG- irregular - vertical MG- irregular - rounded - horizontal BG- irregular	FG- none MG- angular - vertical BG- vertical (highway)
COLOR	FG- gray - whitish MG- ochre - tan BG- gray - tan, blue	FG- yellow - tan - gray MG- yellow tan BG- gray green - blue	FG- none MG- gray, brown - white, light gray BG- none - light gray (highway)
TEXTURE	FG- fine to coarse grained MG- fine grained BG- very fine grained - velvety	FG- coarse grained - spiky MG- medium grained - rough BG- fine grained	FG- none MG- smooth BG- none - smooth (highway)

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	FG- flat MG- flat BG- undulating - rolling	FG- patchy - spiky MG- patchy - rounded BG- patchy - uniform	FG- none MG- crosscutting, vertical, new powerline BG- none
LINE	FG- horizontal - angular MG- horizontal BG- rolling - angular	FG- irregular - vertical MG- irregular - rounded - horizontal BG- irregular	FG- none MG- angular - vertical, new powerline BG- vertical (highway)
COLOR	FG- gray - whitish MG- ochre - tan BG- gray - tan, blue	FG- yellow - tan - gray MG- yellow tan BG- gray green - blue	FG- none MG- gray, brown - white, light gray BG- none - light gray (highway)
TEXTURE	FG- fine to coarse grained MG- fine grained BG- very fine grained - velvety	FG- coarse grained - spiky MG- medium grained - rough BG- fine grained	FG- none MG- smooth BG- none - smooth (highway)

SECTION D. CONTRAST RATING SHORT TERM LONG TERM

1.	DEGREE OF CONSTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	
					X				X		X			
					X				X				X	
ELEMENTS	Form				X				X			X	3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)	
	Line				X				X		X			
	Color				X				X			X		
	Texture				X				X			X		
Evaluator's Names											Date			
Opal Adams											4/13/2013			
Photos taken by Audra Miller														

SECTION D. (Continued)

Comments from item 2.

There is existing similar disturbance to the proposed activities in the form of a powerline. The new powerline will be along the same right-of-way and will be of a similar height and diameter. The disturbance from the proposed powerline will create an additional linear contrast to the existing characteristic landscape. The contrast is considered Weak to Moderate from this KOP and therefore, will continue to meet the VRM Class III objectives. No additional mitigation is necessary.



Additional Mitigating Measures (See item 3)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Date: April 13, 2013

District: Ely District Office

Resource Area: Ely District RMP

Activity (program): 43 CFR 2800

VISUAL CONTRAST RATING WORKSHEET

SECTION A. PROJECT INFORMATION

1. Project Name: Strawberry 69kV Transmission Line ROW Project	4. Location Township .19 North Range 55 East Section 33	5. Location Sketch: 603799E 4370668N See Photo 
2. Key Observation Point: KOP#3		
3. VRM Class: Class IV		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	FG- flat MG- flat BG- undulating - rolling - jagged	FG- patchy - rounded MG- uniform BG- uniform	FG- flat - vertical MG- angular - vertical - flat BG- horizontal - vertical
LINE	FG- horizontal - angular MG- horizontal - angular BG- vertical - undulating	FG- irregular MG- horizontal BG- horizontal	FG- angular MG- angular - vertical BG- horizontal - vertical
COLOR	FG- gray MG- gray - brown BG- blue	FG- sage green MG- brown BG- blue	FG- gray MG- gray, brown BG- light gray - blue
TEXTURE	FG- coarse grained - fine grained MG- fine grained - medium grained BG- very fine grained - velvety	FG- coarse grained - spiky MG- medium grained - rough BG- fine grained	FG- very coarse - very fine grained MG- smooth - fine grained BG- smooth - velvety

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	FG- flat MG- flat BG- undulating - rolling - jagged	FG- patchy - rounded MG- uniform BG- uniform	FG- flat - vertical MG- angular - vertical - flat BG- horizontal - vertical
LINE	FG- horizontal - angular MG- horizontal - angular BG- vertical - undulating	FG- irregular MG- horizontal BG- horizontal	FG- angular MG- angular - vertical BG- horizontal - vertical
COLOR	FG- gray MG- gray - brown BG- blue	FG- sage green MG- brown BG- blue	FG- gray MG- gray, brown BG- light gray - blue
TEXTURE	FG- coarse grained - fine grained MG- fine grained - medium grained BG- very fine grained - velvety	FG- coarse grained - spiky MG- medium grained - rough BG- fine grained	FG- very coarse - very fine grained MG- smooth - fine grained BG- smooth - velvety

SECTION D. CONTRAST RATING SHORT TERM LONG TERM

1.	DEGREE OF CONSTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	
					X				X			X		
					X				X				X	
ELEMENTS	Form				X				X			X		
	Line				X				X			X		
	Color				X				X				X	
	Texture				X				X				X	
3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)												Evaluator's Names Opal Adams Photos taken by Audra Miller		
Date 4/13/2013														

SECTION D. (Continued)

Comments from item 2.

There is existing similar disturbance to the proposed activities in the form of a powerline. The new powerline will be along the same right-of-way and will be of a similar height and diameter. The disturbance from the proposed powerline will create an additional linear contrast to the existing characteristic landscape. The contrast is considered Weak from this KOP and therefore, will continue to meet the VRM Class IV objectives. No additional mitigation is necessary.



Additional Mitigating Measures (See item 3)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Date: April 13, 2013

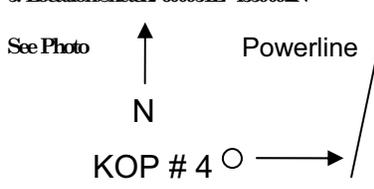
District: Ely District Office

Resource Area: Ely District RMP

Activity (program): 43 CFR 2800

VISUAL CONTRAST RATING WORKSHEET

SECTION A. PROJECT INFORMATION

1. Project Name: Strawberry 69kV Project	4. Location Township .17 North Range 55 East Section 6	5. Location Sketch: 600331E 435902N See Photo 
2. Key Observation Point: KOP#4		
3. VRM Class: Class III		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	FG- flat MG- flat BG- undulating - rolling	FG- none MG- spiky BG- patchy - uniform	FG- flat parking area MG- horizontal & vertical BG- none
LINE	FG- horizontal MG- horizontal & vertical BG- rolling	FG- flat MG- irregular - vertical BG- irregular - patchy	FG- horizontal MG- horizontal - vertical BG- none
COLOR	FG- light gray MG- light yellow - gray BG- pinkish gray - blue	FG- gray MG- yellow - tan - gray BG- gray green - blue	FG- gray MG- red, white, light gray BG- none
TEXTURE	FG- medium grained MG- coarse grained to rough BG- fine grained - velvety	FG- none MG- medium grained - rough BG- fine grained	FG- medium grained MG- smooth BG- none

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	FG- flat MG- flat BG- undulating - rolling	FG- none MG- spiky BG- patchy - uniform	FG- flat parking area MG- horizontal & vertical BG- none
LINE	FG- horizontal MG- horizontal & vertical BG- rolling	FG- flat MG- irregular - vertical BG- irregular - patchy	FG- horizontal MG- horizontal - vertical BG- none
COLOR	FG- light gray MG- light yellow - gray BG- pinkish gray - blue	FG- gray MG- yellow - tan - gray BG- gray green - blue	FG- gray MG- red, white, light gray BG- none
TEXTURE	FG- medium grained MG- coarse grained to rough BG- fine grained - velvety	FG- none MG- medium grained - rough BG- fine grained	FG- medium grained MG- smooth BG- none

SECTION D. CONTRAST RATING SHORT TERM LONG TERM

1.	DEGREE OF CONSTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	
					X				X	X	X			
					X				X				X	
ELEMENTS	Form				X				X	X	X			
	Line				X				X	X				
	Color				X				X				X	
	Texture				X				X				X	
3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)												Evaluator's Names Opal Adams Photos taken by Audra Miller	Date 4/13/2013	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)														
Evaluators' Names: Opal Adams Date: 4/13/2013														

SECTION D. (Continued)

Comments from item 2.

There is existing similar disturbance to the proposed activities in the form of a powerline. The new powerline will be along the same right-of-way and will be of a similar height and diameter. The disturbance from the proposed powerline will create an additional linear contrast to the existing characteristic landscape, as well as with the powerline crossing US 50. The contrast is considered Moderate to Strong from this KOP and the management activities may dominate the view of the casual observer even though for a short time. Therefore, this KOP does not meet VRM Class III objectives.



Additional Mitigating Measures (See item 3)

Additional mitigation could be to completely avoid crossing U.S. 50. However, this alternative was not considered a feasible alternative for analysis in the EA. Therefore, this visual contrast rating worksheet serves as a notation of the characteristic changes for the Project administrative record.