

# Corridor 16-104

Empire to Madeline Corridor

## Corridor Purpose and Rationale

The corridor provides a southeast-northwest pathway for energy transport from western Nevada into northern California. The corridor connects multiple Section 368 energy corridors to the east and south, creating a continuous corridor network across BLM- and USFS-administered lands through western Nevada and south to Los Angeles, California. Input regarding alignment from the Redding Electric Utility and Western Utility Group during the WWEC PEIS suggested following this route. There are no major pending ROWs for transmission line or pipeline projects within the corridor at this time.

### Corridor location:

California (Lassen Co.) and Nevada (Washoe Co.)

BLM: Applegate and Black Rock Field Offices  
Regional Review Region: Region 5

### Corridor width, length:

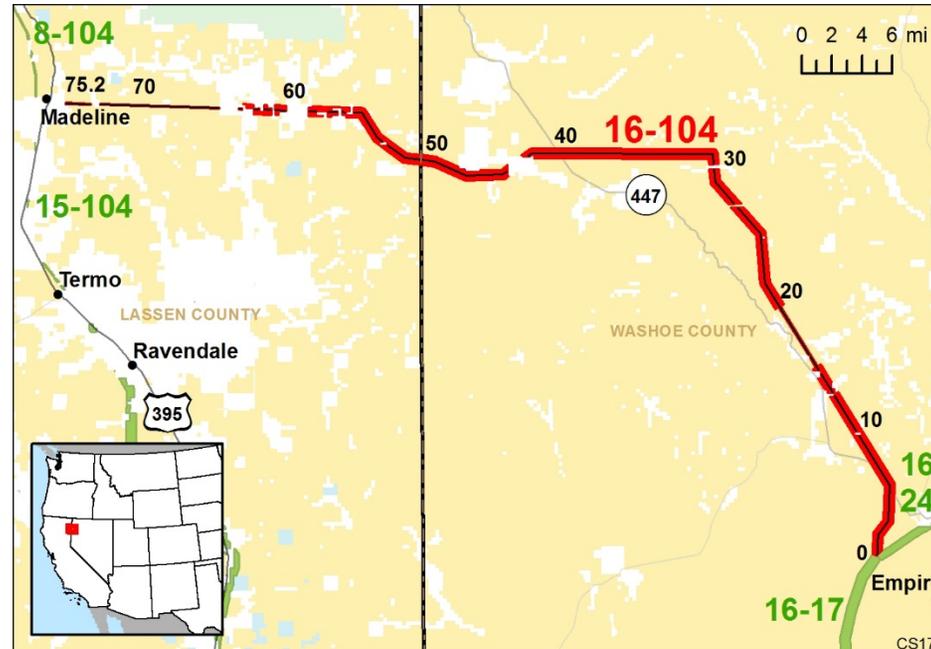
Width variable 500 ft, 1000 ft, 3,500 ft  
66 miles of designated corridor  
75 miles of posted route, including gaps

### Designated Use:

- corridor is multi-modal

### Corridor of concern (Y)

BLM Wilderness Area



### Corridor history:

- Locally designated prior to 2009 (N)
- Existing infrastructure (Y)
  - 60- and 1,000-kV transmission lines are within and adjacent to a portion of the corridor.
- Energy potential near the corridor (Y)
  - 4 substations are within 5 mi of the corridor.
- Corridor changes since 2009 (N)

Figure 1. Corridor 16-104

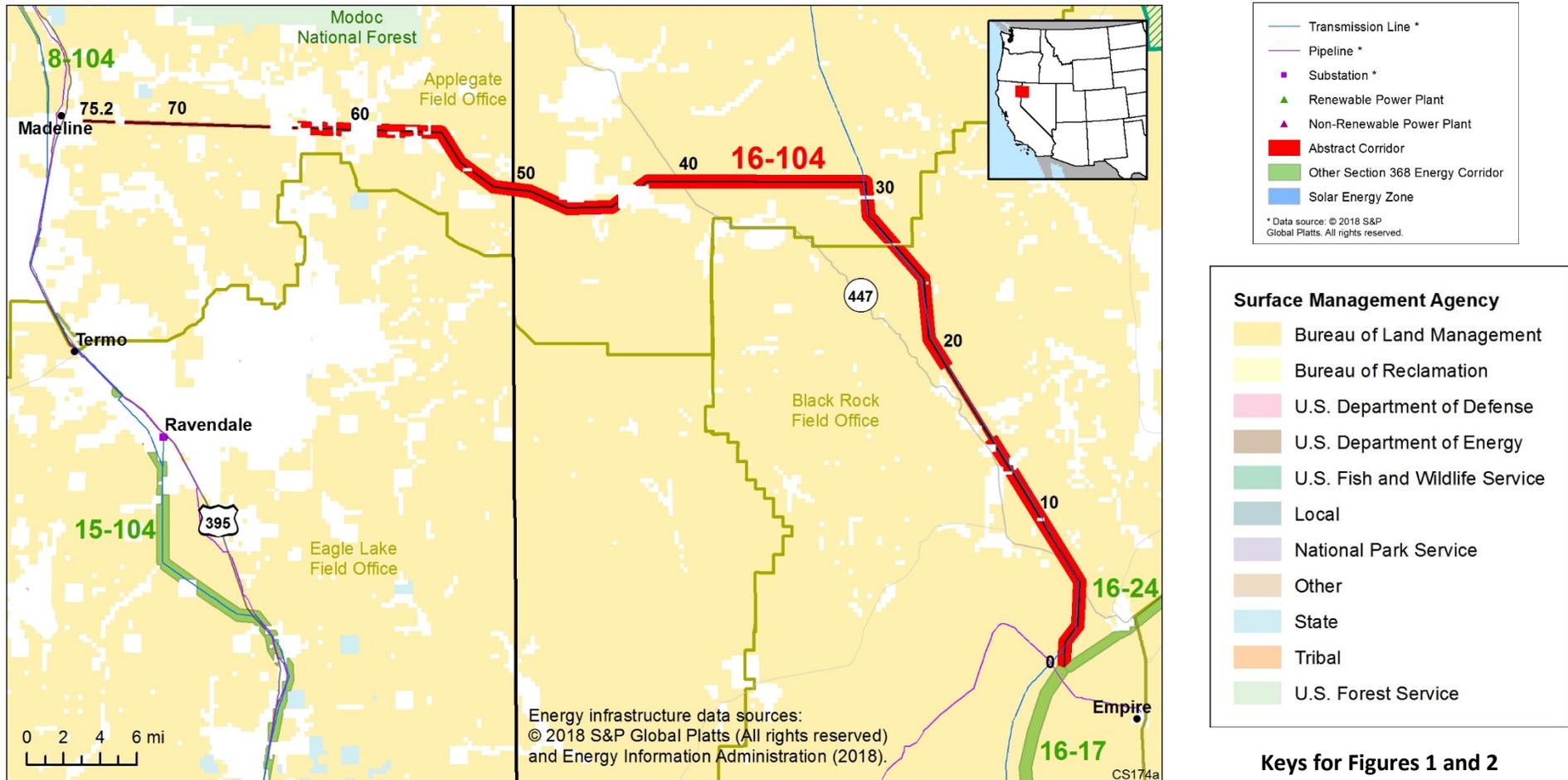


Figure 2. Corridor 16-104 and nearby electric transmission lines and pipelines

## Conflict Map Analysis

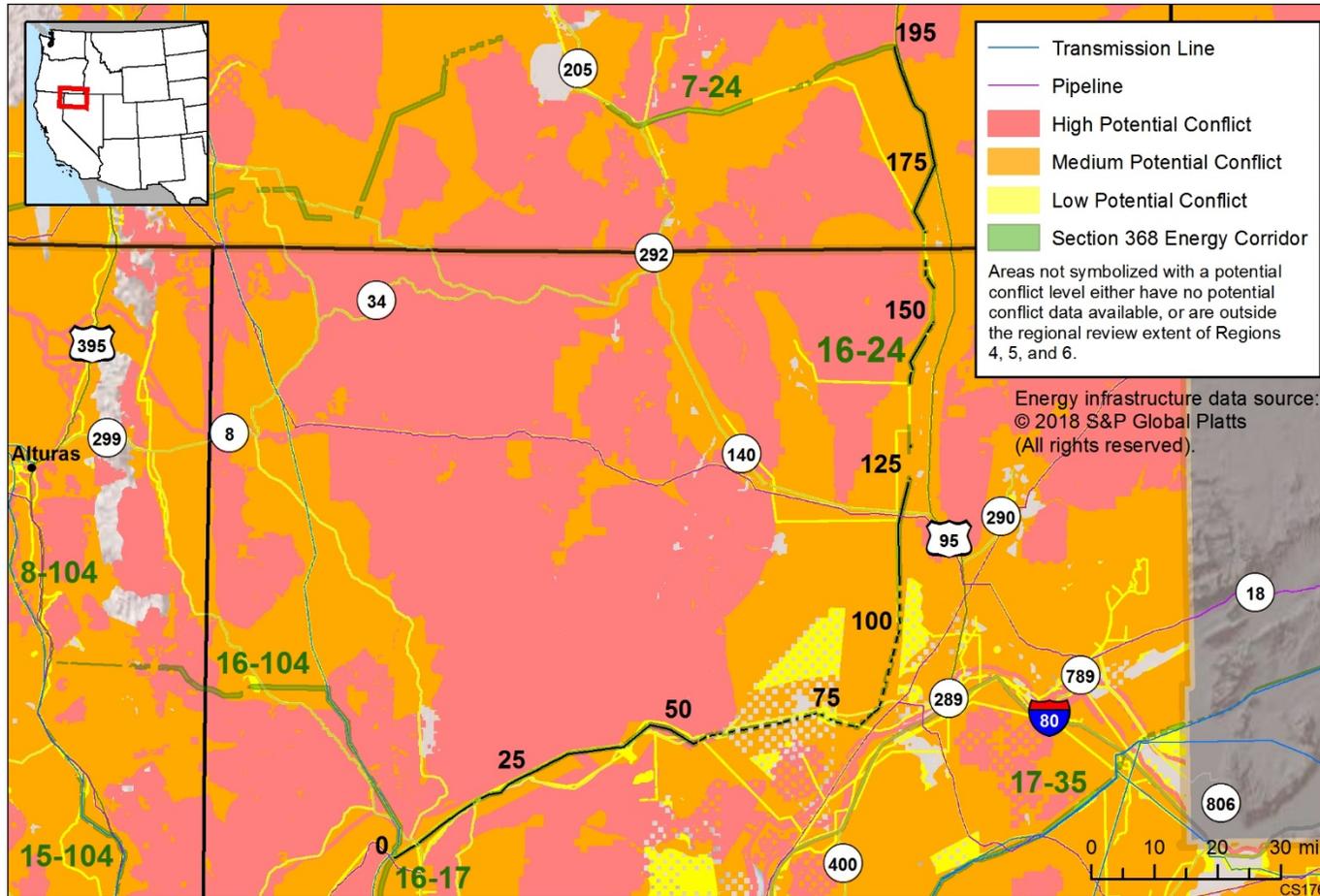


Figure 3. Map of Conflict Areas in Vicinity of Corridor 16-104

Figure 3 reflects a comprehensive resource conflict assessment developed to enable the Agencies and stakeholders to visualize a corridor’s proximity to environmentally sensitive areas and to evaluate options for routes with lower potential conflict. The potential conflict assessment (low, medium, high) shown in the figure is based on [criteria](#) found on the WVEC Information Center at [www.corridoreis.anl.gov](http://www.corridoreis.anl.gov). To meet the intent of the Energy Policy Act and the Settlement Agreement siting principles, corridors may be located in areas where there is potentially high resource conflict; however, where feasible, opportunity for corridor revisions should be identified in areas with potentially lower conflict.

Visit the 368 Mapper for a full view of the potential conflict map (<https://bogi.evs.anl.gov/section368/portal/>)

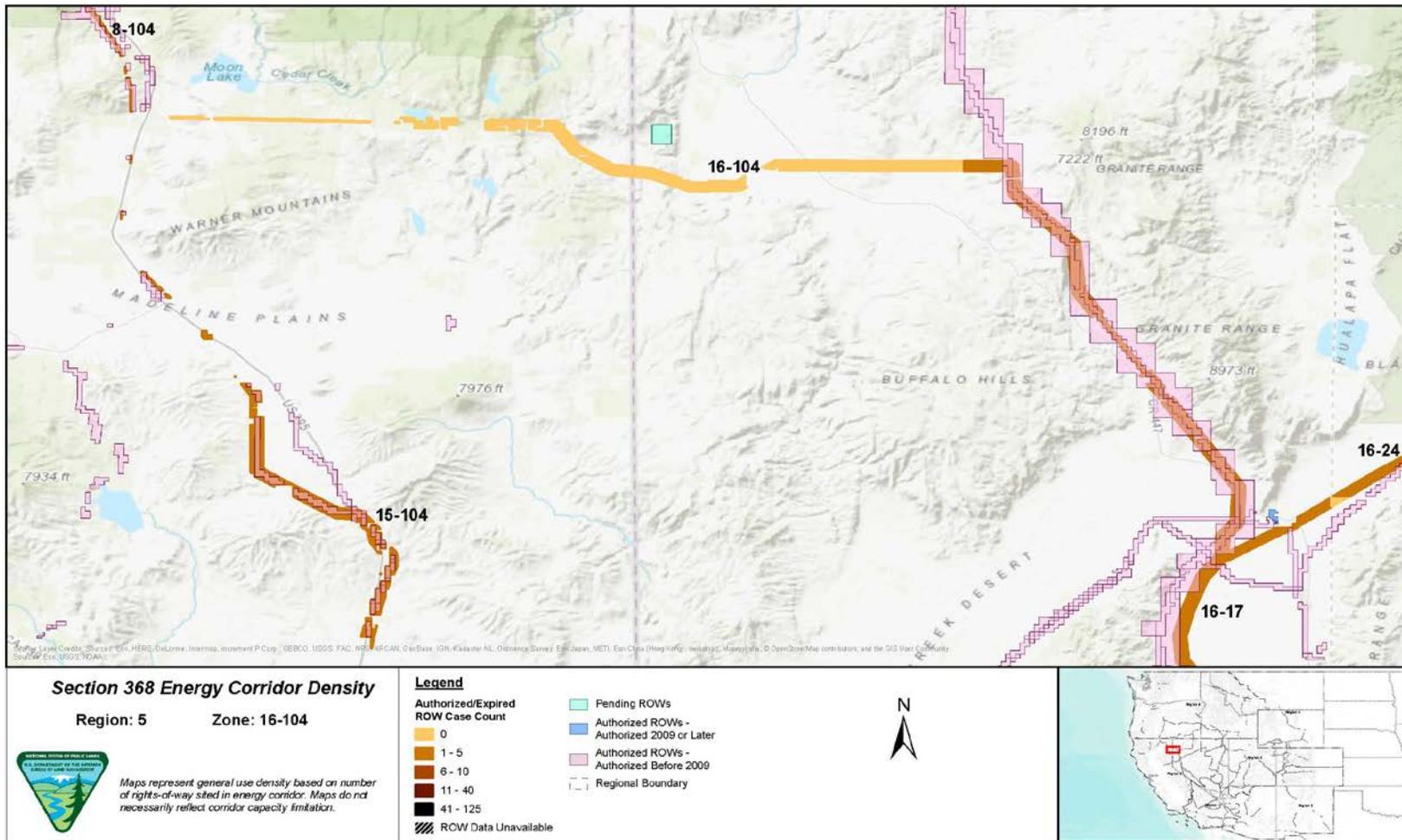


Figure 4. Corridor 16-104, Corridor Density Map

Figure 4 shows the density of energy use to assist in evaluating corridor utility. ROWs granted prior to the corridor designation (2009) are shown in pink; ROWs granted after corridor designation are shown in blue; and pending ROWs under current review for approval are shown in turquoise. Note the ROW density shown for the corridor is only a snapshot that does not fully illustrate remaining corridor capacity. Not all ROWs have GIS data at the time this abstract was developed. BLM and USFS are currently improving their ROW GIS databases and anticipate more complete data in the near future.

## Corridor Review Table

Designated energy corridors are areas of land prioritized for energy transmission infrastructure and are intended to be predominantly managed for multiple energy transmission infrastructure lines. Other compatible uses are allowable as specified or practicable. Resource management goals and objectives should be compatible with the desired future conditions (i.e., responsible linear infrastructure development of the corridor with minimal impacts) of the energy transmission corridor. Land management objectives that do not align with desired future conditions should be avoided. The table below identifies serious concerns or issues and presents potential resolution options to better meet corridor siting principles.

The preliminary information below is provided to facilitate further discussion and input prior to developing potential revisions, deletions, or additions.

<b>CORRIDOR 16-104 REVIEW</b>			
<b>POTENTIAL COMPATIBILITY ISSUES or CONCERNS TO EXAMINE</b>	<b>MILEPOST (MP)<sup>1</sup></b>	<b>STAKEHOLDER INPUT and OTHER RELEVANT INFORMATION</b>	<b>POTENTIAL RESOLUTIONS BASED ON SITING PRINCIPLE ANALYSIS<sup>2</sup></b>
<p><i>BLM Jurisdiction: Winnemucca District Office</i>  <i>Agency Land Use Plan: Winnemucca District Planning Area RMP (2015)</i></p>			
<p>California NHT and the corridor intersect – the corridor is not within a NHT high potential segment.</p> <p>The RMP requires new electric transmission lines above 345 kV to be placed in a designated corridor.</p>	<p>MP 4 to MP 5</p>	<p>A large transmission line coincides with the corridor centerline. Intersection of the corridor and the California NHT is approximately perpendicular.</p> <p>The National Trails System Act, as cited in the Comprehensive Plan for the California NHT (1999)<sup>3</sup>, states that the Secretary of the Interior or the Secretary of Agriculture may grant easements and rights-of-way upon, over, under, across, or along any component of the national trails system in accordance with the laws applicable to the national forest system, provided that any conditions contained in such easements and rights-of-way are related to the policy and purposes of this Act.</p>	<p>The corridor intersection here appears to best meet the siting principles. Existing infrastructure, minimal crossing overlap and the absence of more preferable alternatives suggest that the corridor cannot be relocated to a more preferred area for development.</p> <p>Agencies could consider a new IOP for NSTs and NHTs to enhance BMPs for proposed development within the energy corridor.</p>
<p>VRM Class II areas and the corridor intersect – The objective of VRM Class II designation is to retain the existing character of the landscape.</p>	<p>MP 7 to MP 31, MP 48 to MP 59, MP 61 to MP 64</p>		<p>Areas with the VRM Class II designation may not be consistent with future overhead transmission line. However, the corridor is collocated with an existing DC transmission line from MP 7 to MP 31. There is the</p>

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The RMP requires new electric transmission lines above 345 kV to be placed in a designated corridor.			potential to shift the corridor to the west at MP 27 to MP 31 to avoid the VRM Class II area; otherwise, there are no readily available opportunities to shift the corridor. In order to best meet the siting principles, a change in the VRM class could be considered.
<b>BLM Jurisdiction: Applegate Field Office</b> <b>Agency Land Use Plan: ROD Surprise RMP (2008)</b>			
The Tuledad/Duck Flat CRMA and the corridor intersect. CRMAs identify areas with high densities of cultural resources and were developed to protect these resources. ROW transactions, decisions, and actions will be conducted in a manner that would prevent adverse impacts to archaeological or historical values.	MP 40 to MP 50		The corridor appears to best meet the siting principles. The corridor cannot be readily shifted to avoid the CRMA. As appropriate, Section 106 of the NHPA requires federal agencies to consider the effects of an undertaking on cultural resources.
<b>BLM Jurisdiction: Applegate Field Office</b> <b>Agency Land Use Plan: Alturas RMP ROD (2008)</b>			
Other than the GRSG PHMA and GHMA intersections discussed below, no issues related to resource intersections with the corridor in the Applegate Field Office have been identified.			
<b>BLM Jurisdiction: Northern California and Winnemucca District Offices</b> <b>Agency Land Use Plan: Nevada and Northeastern California GRSG ROD and ARMPA –March 2019</b>			
GRSG PHMA (ROW avoidance area) and the corridor intersect - The 2019 ARMPA indicates that PHMA and GHMA areas are designated as major pipeline (≥24-inch diameter) ROW avoidance areas, unless the major pipeline meets one of the allocation exception criteria outlined (in MD SSS 5). The ARMPA also states that collocating new infrastructure within or next to existing infrastructure is a priority when PHMA and GHMA areas cannot be avoided	MP 15 to MP 30 and MP 43 to MP 56	RFI comment: re-route or exclude new infrastructure ROWs and avoid all new energy infrastructure development within GRSG PACs (73% overlap).  Comment on abstract: corridor crosses PHMA. Consider eliminating the corridor to avoid and minimize impacts.	ROW avoidance areas are not compatible with the corridor’s purpose as a preferred location for infrastructure. However, collocation is preferred and from MP 15 to MP 30 the corridor is collocated with an existing DC transmission line. From MP 43 to MP 56 the PHMA encompasses a broad area surrounding the corridor which cannot easily be avoided.
GRSG GHMA (ROW avoidance area) and the corridor intersect - The 2019 ARMPA indicates that PHMA and GHMA areas are designated as major pipeline (≥24-inch diameter) ROW avoidance areas,	MP 15, MP 30 to MP 40, and MP 63	RFI comment: re-route or exclude new infrastructure ROWs and avoid all new energy infrastructure	ROW avoidance areas are not compatible with the corridor’s purpose as a preferred location for infrastructure. From MP 30 to MP 40 the GHMA

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unless the major pipeline meets one of the allocation exception criteria outlined (in MD SSS 5). The ARMPA also states that collocating new infrastructure within or next to existing infrastructure is a priority when PHMA and GHMA areas cannot be avoided.		development within GRSG PACs (73% overlap).	encompasses a broad area surrounding the corridor which cannot easily be avoided.

<sup>1</sup> Mileposts are rounded to the nearest mile.

<sup>2</sup> Siting Principles include: *Corridors are thoughtfully sited to provide maximum utility and minimum impact on the environment; Corridors promote efficient use of landscape for necessary development; Appropriate and acceptable uses are defined for specific corridors; and Corridors provide connectivity to renewable energy generation to the maximum extent possible, while also considering other generation, in order to balance the renewable sources and to ensure the safety and reliability of electricity transmission.* Projects proposed in the corridor would be reviewed during their ROW application review process and would adhere to Federal laws, regulations, and policy.

<sup>3</sup> Full Title: Comprehensive Management and Use Plan / Final Environmental Impact Statement - California National Historic Trail and Pony Express National Historic Trail. Management and Use Plan Update/Final Environmental Impact Statement - Oregon National Historic Trail and Mormon Pioneer National Historic Trail.

### Additional Compatibility Concerns

The issues and concerns listed below are not explicitly addressed through agency land use plans or are too general in nature to be addressed without further clarification. Although difficult to quantify, the concerns listed have potential to affect future use and/or development within this designated corridor. The Agencies have provided a preliminary general analysis. The information below is provided to facilitate further discussion during stakeholder review.

**Corridor Revision:**

- Reduce corridor width to 500 ft. for consistency with narrowest existing segment MP 26 to MP 66 (comment on abstract).

*Analysis:* Maintaining the higher width for the corridor may be environmentally preferable, because it allows greater flexibility to avoid sensitive resources and still locate future development within the corridor.

**Specially designated areas:**

- Re-route to avoid BLM Wilderness Area (RFI comment).

*Analysis:* The corridor does not intersect any BLM Wilderness Areas. However, the Poodle Mountains WSA is located closer than 1.5 miles west of the corridor between MP 13 and MP 21. In this location, the corridor is narrowed to 500 ft., potentially limiting future development within the corridor.

**Ecology:**

- Big Horn Sheep occupy the Granite Range which is to the northeast of the existing power lines.
- Although the initial installation of transmission lines would be disrupting to the Sage-grouse, the presence of the towers could create an ongoing raven problem. Undergrounding of transmission lines in this corridor should be considered (comment on abstract).

*Analysis:* Existing IOPs and BMPs would be required. The Agencies could consider an IOP for habitat connectivity so that transmission projects within Section 368 energy corridors are sited and designed in a manner that minimizes impacts on habitat connectivity. With respect to Sage-grouse impacts, Required Design Features in the 2019 ROD/ARMPA documents would be implemented to minimize impacts.

**Military and Civilian Aviation:**

- SUA and the corridor intersect from MP 0 to MP 23.
- MTR – VR and the corridor intersect from MP 31 to MP 36 and MP 51 to MP 59.

*Analysis:* Adherence to existing IOP regarding coordination with DoD would be required. Agencies could consider a revision to the existing IOP to include height restrictions for corridors in the vicinity of DoD training routes.

## Abstract Acronyms and Abbreviations

ARMPA = Approved Resource Management Plan Amendment; BLM = Bureau of Land Management; BMP = best management practice; CRMA = Cultural Resource Management Area; DoD = Department of Defense; GHMA = general habitat management area; GIS = geographic information system; GRSG = Greater Sage-grouse; IOP = interagency operating procedure; MP = milepost; MTR = Military Training Route; NHPA = National Historic Preservation Act; NHT = National Historic Trail; PAC = priority areas for conservation; PEIS = Programmatic Environmental Impact Statement; PHMA = priority habitat management area; RFI = request for information; RMP = resource management plan; ROD = Record of Decision; ROW = right-of-way; SUA = special use airspace; USFS = U.S. Forest Service; VR = visual route; VRM = visual resource management; WWEC = West-wide Energy Corridor.