

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL EFFECTS

3.1 INTRODUCTION

This chapter presents the baseline information needed for the Project area by resource and discloses the predicted effects of the Action Alternatives described in Chapter 2. It is based on the Project description found in Appendix B and includes the EPMS proposed by the Proponents as part of the Project, found in Table 2.7-1. The discussion of each individual resource includes information on what area was evaluated, what the existing conditions are for that resource in that area, what issues were analyzed, and how the analysis was completed. Each resource discussion then describes the effects of the Proposed Action and compares it to its Route Alternatives, if any, by segment. The cumulative effects for each resource analyzed can be found in Chapter 4.

Although the BLM has no authority to either permit or prohibit construction of the Project on non-federal land, NEPA requires an analysis of project effects on all lands, not just the effects to federal lands. Therefore, the EIS makes assumptions on where the Project would be sited on non-federal lands and on how it would be designed and constructed. This is not meant to imply that the BLM is authorizing the Project on non-federal lands. Decisions on siting and construction requirements on non-federal lands are under the authority of state and local governments.

In Wyoming, land use permits must be obtained from counties and local governments, and a Certificate of Public Convenience and Necessity is required from the Wyoming PSC. The Project also falls under the jurisdiction of the Wyoming Industrial Siting Council (ISC), and a permit is required from the ISC to allow construction and operation of the Project in Wyoming. The Wyoming Board of Land Commissioners is responsible for the direction, control, leasing, and disposal of state lands. In Idaho, the IPUC regulates the siting of major transmission lines through a Certificate of Public Convenience and Necessity. Individual counties and local governments are responsible for authorizing the Project on private land. The Idaho State Department of Lands is responsible for authorizing the Project on State lands. Table 1.4-1 provides a summary of the major permits that would be required and Section 3.17.1.3 provides a description of the regulatory requirements that pertain to land use.

3.1.1 Where to Find Information

Understanding the effects analysis depends on understanding how the Project was developed, what it would entail, what was considered, and where it would be located. Table 3.1-1 provides a quick reference to specific information provided elsewhere in the EIS, including the detailed description of the Project and process.

Table 3.1-1. Quick EIS Information Reference

What	Where
Overall organization of the EIS	Chapter 1, Section 1.11; Reader's Guide
Changes between Draft and Final	Chapter 1, Section 1.1.1
Purpose and Need for the Project	Chapter 1

Table 3.1-1. Quick EIS Information Reference (continued)

What	Where
Decisions to be made	Chapter 1, Section 1.2
Scope of the analysis	Chapter 1, Section 1.7
Issues	Chapter 1, Section 1.10
How the alternatives were developed	Chapter 2, Section 2.2
Proposed and associated federal land management plan amendments	Chapter 2, Section 2.2, Tables 2.2-1 through 2.2-3; Appendix F
No Action Alternative	Chapter 2, Section 2.3
Route Action Alternatives	Chapter 2, Section 2.4
Preferred Alternatives	Chapter 2, Section 2.4
Proposed Route and Route Alternatives	Chapter 2, Section 2.4
Substation Alternatives	Chapter 2, Section 2.5
Detailed description of system components	Chapter 2, Section 2.6; Appendix B
Construction	Chapter 2, Section 2.7; Appendix B
Operations and maintenance	Chapter 2, Section 2.7; Appendix B
Abandonment and restoration	Chapter 2, Section 2.7; Appendix B
Environmental Protection Measures	Chapter 2, Section 2.7, Table 2.7-1
Summary comparison of effects of alternatives	Chapter 2, Section 2.8
Summary of cumulative effects	Chapter 2, Section 2.9
Affected environment and environmental effects	Chapter 3
Cumulative Effects	Chapter 4
Consultation, collaboration, and public involvement	Chapter 5
Glossary of terms and index	Chapter 6
References cited in Final EIS	Chapter 7
Maps of the Proposed Action and Alternatives	Appendix A
Plan of Development/design details	Appendix B
Mitigation Plans	Appendix C
Large Format Data Tables	Appendix D

3.1.2 Proposed Action

The Proposed Action is to construct and operate approximately 990 miles of new 230-kV and 500-kV electric transmission system consisting of 10 segments between the Windstar Substation at Glenrock, Wyoming, to the Hemingway Substation approximately 30 miles southwest of Boise, Idaho. Segments 1 to 3 and most of 4 would cross Wyoming while the western part of Segment 4 and Segments 5 through 10 would cross Idaho. Project elements include transmission structures and their construction pads, access roads to structures and other permanent facilities, pulling and tensioning sites, multipurpose yards, fly yards, 3 new substations and expansions or upgrades to 9 existing substations, and up to 13 fiber optic signal regeneration stations. In addition, several distribution lines would be constructed to new substations and to each fiber optic signal regeneration station (see Chapter 2, Table 2.1-2 for details).

Segment 6 is an existing transmission line that was constructed to a 500-kV standard but is currently operated at 345 kV. It would be energized to 500 kV as part of the Proposed Action. The additional ground-disturbing activities associated with this segment are limited to substation and transition structure changes on either end.

3.1.3 Route Alternatives

As of the publication of the Final EIS, route location alternatives were not considered in detail for Segments 1W(c), 3, 6, or 10. Segments 1W(a), 2, 4, 5, 7, 8, and 9 have at least one Route Alternative, described in Chapter 2 and shown on the maps located in Appendix A. Figure A-1 is an overview of all the Proposed Routes (shown in red) and reasonable Route Alternatives considered in detail (shown in green). The BLM Preferred Route is shown as a black dashed overlay. More detailed route location maps are found in Figures A-2 through A-12. The configuration and location of the 12 substations are shown in Figures A-13 through A-24. Route Alternatives considered but eliminated from detailed study (shown in purple on maps in the Draft EIS) are included on the maps in Appendix O of the Final EIS.

3.1.4 Outline

Each resource section follows the same outline described below. In some cases resources often considered together are found in separate sections, as explained in the introduction to such sections.

3.1.4.1 Analysis Area

Each section begins with a characterization of the larger Project area followed by a description of the physical boundaries of the area reviewed for the existing conditions and analyzed in the impacts analysis. In several cases, that area varies depending on the resource element considered. A justification for the Analysis Area is also provided.

3.1.4.2 Issues to be Analyzed

As summarized in Chapter 1, issues were developed through internal and external scoping and the Draft EIS public comment process. Each resource section explains which issues were specifically addressed in that section. Issues included those raised by agencies and the public, and those mandated for review by law, regulation, policy, or land use plan.

3.1.4.3 Regulatory Framework

Regulation, policies, plans, and guidelines that influence the scope of the analysis, assumptions, and measurement criteria are described. In some but not all cases the laws require a particular approach to analysis or require particular consultations, which are detailed.

3.1.4.4 Methods

This section presents the tools and sources of information that were used in the analysis and includes assumptions that were made in order to conduct the analysis and draw comparative conclusions regarding impact.

3.1.4.5 Existing Conditions

In order to understand the effects, a description is provided of the current environmental conditions for each resource. The existing conditions discussion is limited to the Analysis Area and provides site-specific details of the environment that would be affected by the Project.

3.1.4.6 Direct and Indirect Effects

Following the existing conditions discussion, the effects analysis begins with the direct and indirect effects. Direct effects are those caused by the Project, such as soil

disturbance. Indirect effects are those effects caused by the Proposed Action but that are later in time or farther removed in distance, such as sedimentation from soil disturbance, yet still reasonably foreseeable. For each resource area, the effects of the No Action Alternative are discussed first. Effects of the Proposed Action that would occur regardless of the route chosen are discussed under Effects Common to All Action Alternatives for construction, operation, and decommissioning. Subsequent discussion focuses on the impacts of the Preferred Route, the Proposed Route, and in comparing each Route Alternative to its respective comparison portion of the Proposed Route. Chapter 4 presents the cumulative effects discussion for all resources and alternatives.

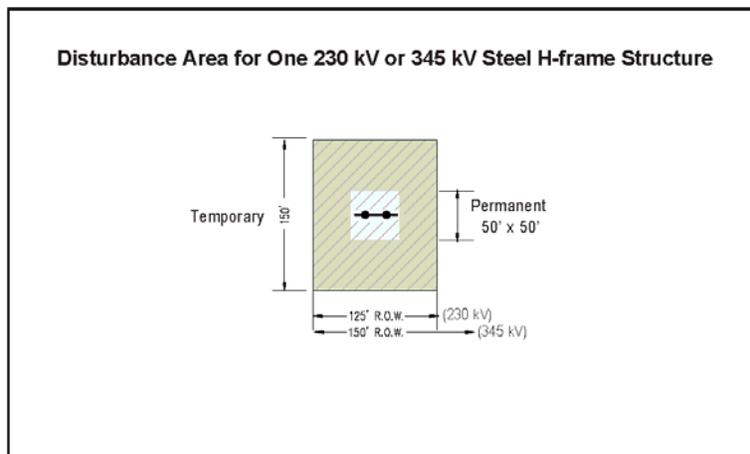
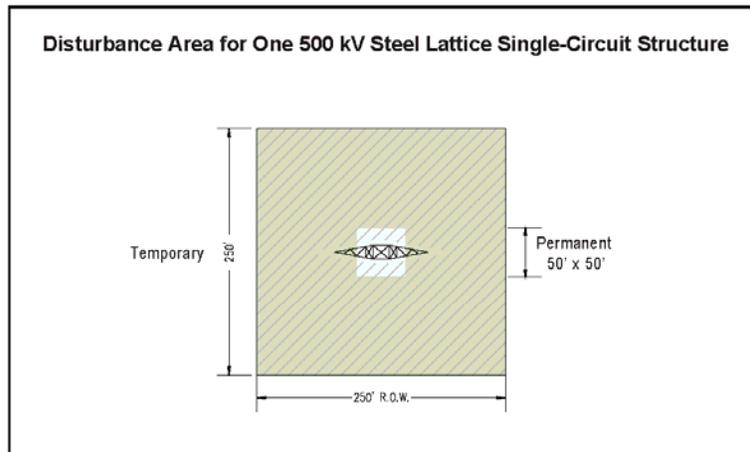
3.1.4.7 Environmental Protection Measures

The Proponents have supplied a detailed Project description that includes EPMs, many of which have changed between draft and final versions of the EIS. The effects analysis in the Draft EIS was conducted assuming that those measures would be in place. Where residual impacts were identified even with EPMs in place, the resource analysis in the Draft EIS concluded that additional mitigation measures should be implemented on federal lands. Many of these measures have been incorporated into the Proponents' EPMs and the analysis in the Final EIS has been revised to reflect this change in the Proposed Action. Some agency-required mitigation measures not incorporated into the EPMs remain. EPMs and mitigation measures are summarized in Table 2.7-1 in Chapter 2 and discussed in the appropriate sections in Chapter 3.

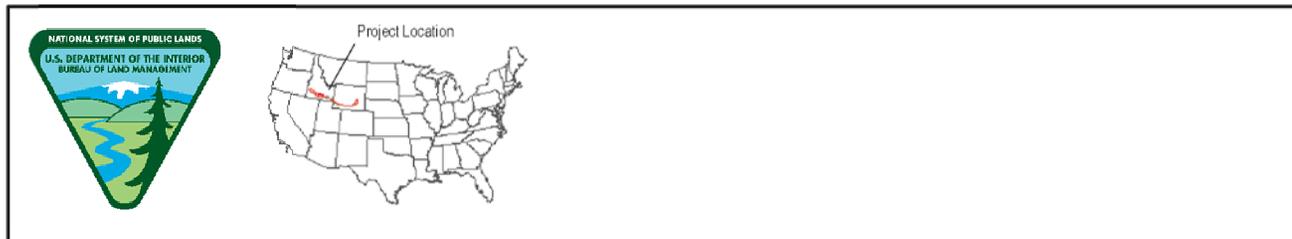
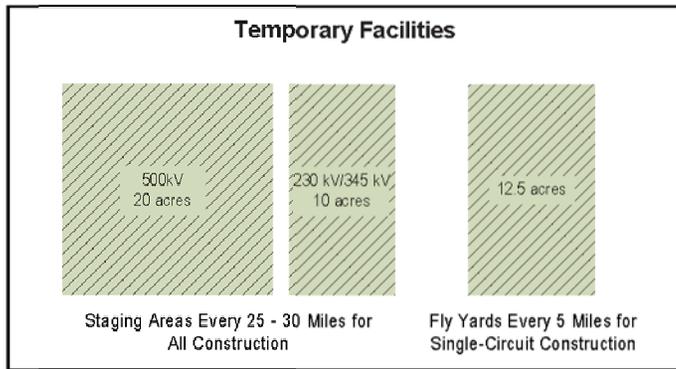
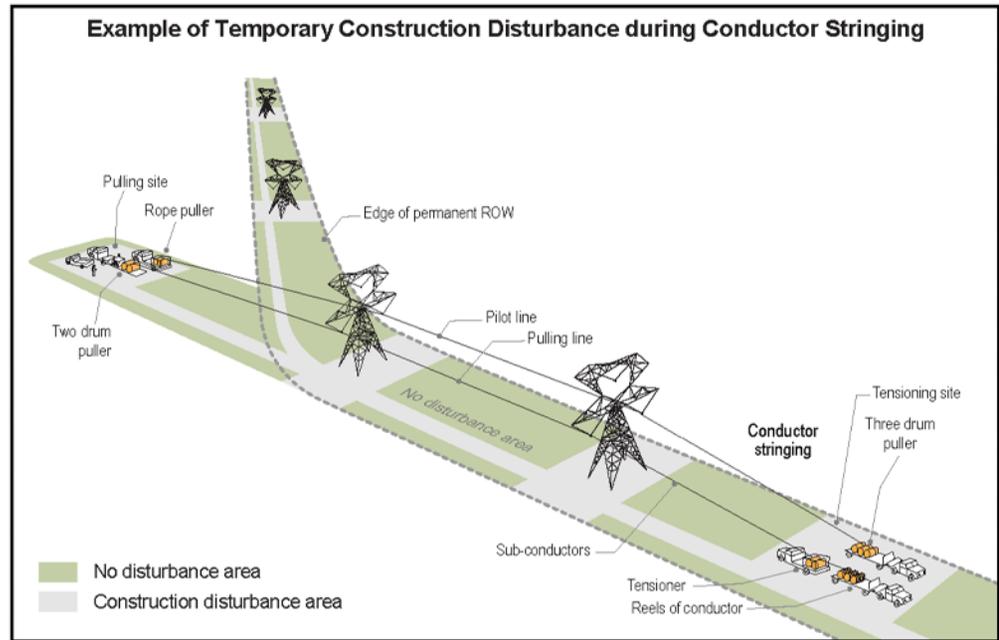
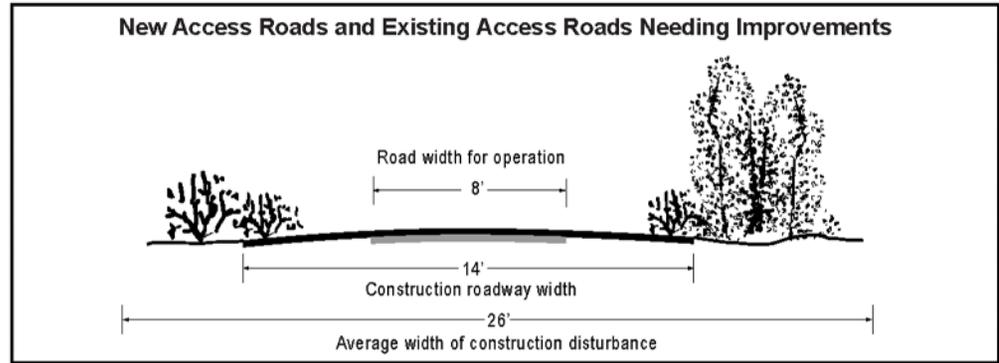
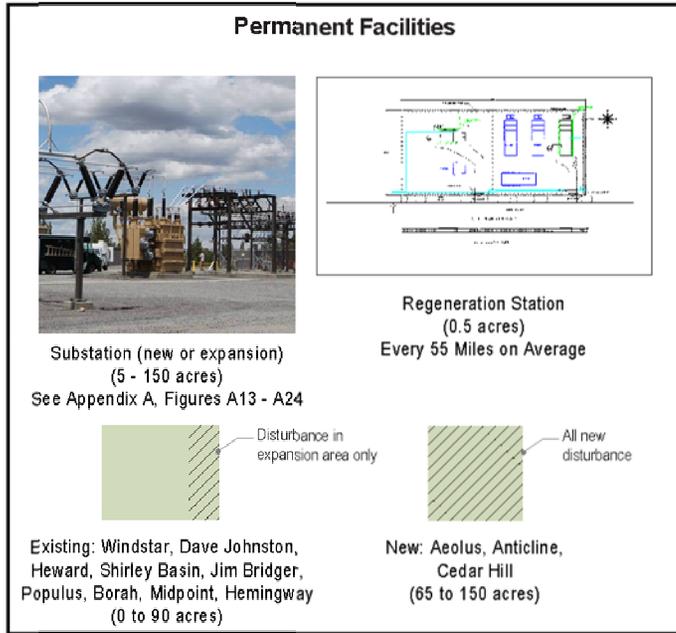
3.1.5 Estimation of Ground Disturbance

Chapter 2 and Appendix B describe the components of the Project contributing to construction ground disturbance and operations site occupancy and use that would be constructed for any Route Alternative chosen. These components include transmission support structures; their associated construction pads; pulling sites for tensioning conductors; access roads to each structure, regeneration station, and substation; multipurpose yards; fly yards where helicopter construction would be used; regeneration sites and their distribution lines; and substations and their distribution lines where indicated. As part of the conceptual design and to aid quantification of effects, preliminary indicative locations were assigned for all components of the Proposed Action and each Action Alternative. At each location the change in existing conditions was measured based on the size requirements, existing vegetation, and land use.

The disturbance footprint was estimated using the ground disturbance element approach provided in Appendix B, Table B-7, and applied across all Route Alternatives. Disturbances due to substation construction or expansion, found in Table 2.1-2, were pro-rated and attributed to the various segments served by each substation. To develop equitable comparisons, the Proposed Route was segmented as needed into one or more "compare-to" portions that began and ended at the same points as Route Alternatives and the two disturbance areas compared across resources. Disturbance estimates were conducted spatially within a geographic model, then summed across the proposed and alternative routes by resource and presented in tables in Appendix D and in smaller comparative tables within the text of each section. Figures 3.1-1 through 3.1-3 illustrate how disturbance was estimated for each of the components.



	<p>Enlarged Area This Sheet</p> 	<p>Disturbance Area</p> <ul style="list-style-type: none"> Temporary Permanent 	<p>Gateway West Transmission Line Project Idaho, Wyoming</p> <p>Disturbance Areas for Transmission Structures</p> <p>Figure 3.1-1</p>
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**Gateway West Transmission Line Project
Idaho, Wyoming
Typical Disturbance Area**

Figure 3.1-2

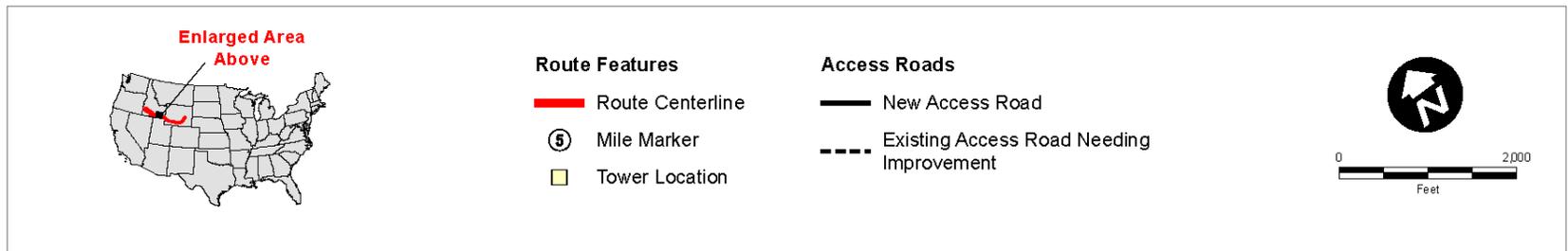
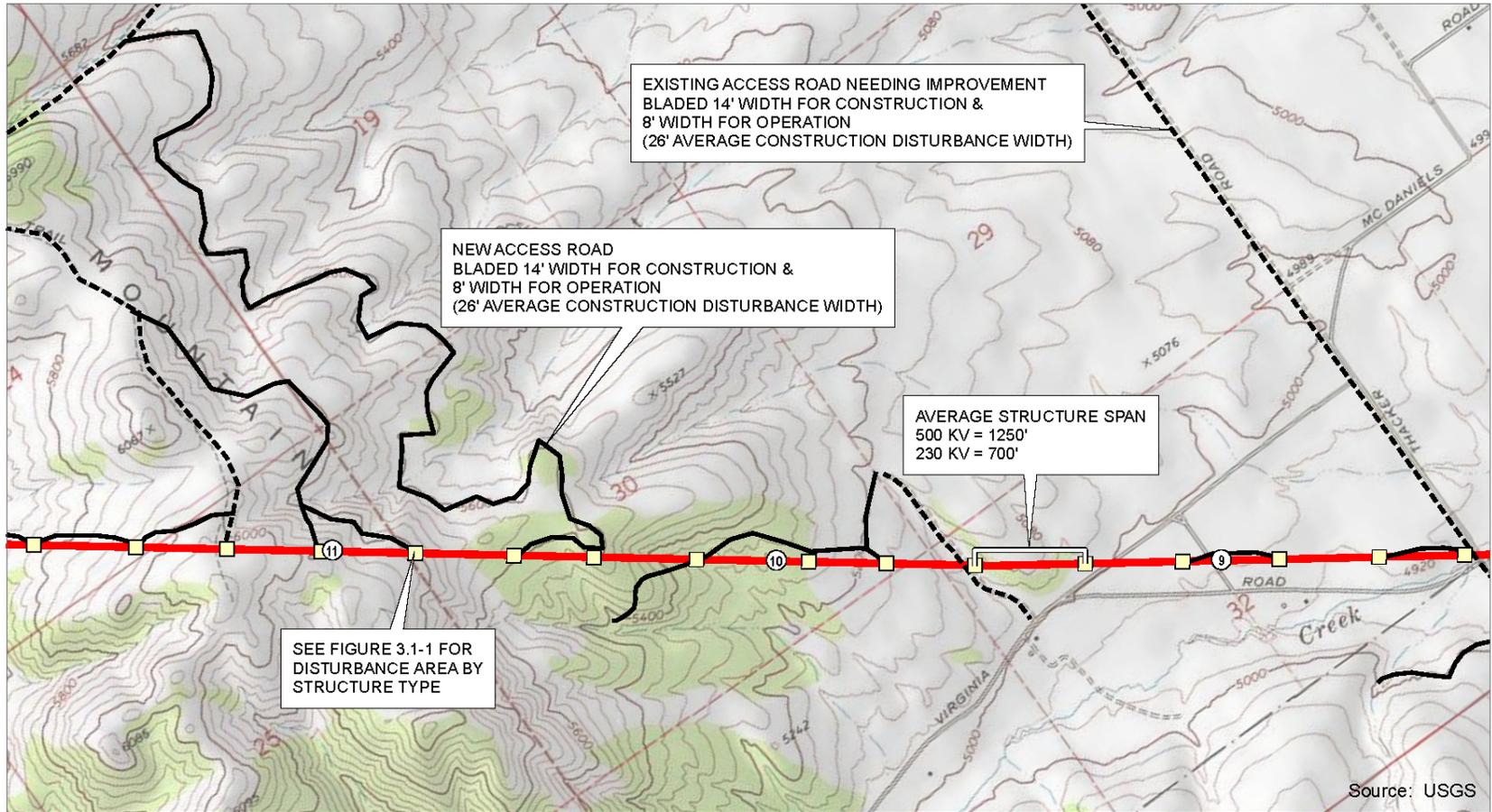


Figure 3.1-3. Example Access Roads and Tower Locations