
Power Line TL626 Alternative Route Analysis
for the
Cleveland National Forest Power Line Replacement Projects

Prepared for:



Prepared by:



February 2014

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1 – INTRODUCTION

In September 2012, San Diego Gas & Electric Company (SDG&E) submitted a Preliminary Plan of Development (POD) to the United States (U.S.) Forest Service (USFS), along with a Standard Form (SF) 299 Application for Transportation and Utility Systems and Facilities on Federal Lands, to combine over 70 existing use permits and easements for 69 kilovolt (kV) power line and 12 kV distribution line (collectively, electric line) facilities and appurtenant facilities within the Cleveland National Forest (CNF) into one Master Special Use Permit (MSUP) to be issued by the USFS. In these application materials, SDG&E proposed to fire harden existing 69 kV power line TL626 within its existing alignment.

In April 2013, SDG&E submitted a Revised POD in response to comments received from USFS and California Public Utilities Commission (CPUC) staff. USFS staff requested, among other things, that SDG&E identify a study corridor to the east of the existing alignment of TL626 within which a segment of TL626 could potentially be relocated and that SDG&E “identify a preferred route within the alternative study corridor for TL626”. USFS and CPUC staff further requested that SDG&E “provide all relevant information for this route”, including “analysis of the entire TL626 proposed alternative route for comparison purposes with TL626 as proposed by SDG&E.” Subsequent to these requests, in January 2014, USFS released a draft Record of Decision (ROD) for the Southern California National Forests Land Management Plan (LMP) Amendment for the CNF that, if approved, would rezone portions of the existing TL626 alignment as “Recommended Wilderness”. The draft ROD is currently subject to a 60-day period during which objections may be filed.

This TL626 Alternative Route Analysis has been prepared in response to USFS’ and CPUC’s request for an analysis of the potential relocation of the segment of TL626 between poles Z213680 and Z372134 (referred to in this document as the Existing Alignment) to an alternative location that passes through previously undisturbed land within CNF, tribal lands, and private properties. SDG&E notes that the USFS and CPUC will need to identify the potential environmental impacts and assess the “feasibility” of relocating a segment of TL626. SDG&E has not determined that the relocation is “feasible” as defined under both the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA), which require consideration of a number of factors (technological, legal, environmental, social, and economic). The alternative route analysis for TL626 provided herein is made without prejudice to, and is not a waiver of, SDG&E’s right to rely on other facts or documents in these proceedings. SDG&E expressly reserves the right to supplement, clarify, revise, or correct any or all of the relevant information for this alternative study corridor, and to assert additional objections or arguments pertaining to the “feasibility” of relocating a segment of TL626, in these or other subsequent proceedings.

This analysis describes the preliminary study corridor, identifies two potential overhead relocation alternatives, and includes a high-level and preliminary analysis of potential environmental impacts that may result from the relocation of TL626 relative to the potential impacts associated with the Existing Alignment. Because SDG&E does not currently have access rights to properties within the study corridor for the two potential overhead relocation alternatives, resource surveys were not conducted in these areas; therefore, the analysis is based

on general field reconnaissance data. In addition, due to the limited access, the design for the alternatives is preliminary, and the location and number of poles, stringing sites, and access roads is subject to change.

2 – TL626 STUDY CORRIDOR DESCRIPTION

In coordination with the USFS and CPUC, and using available topographical, road, parcel, land use, and environmental resource data, SDG&E created a preliminary study corridor within which a potential alternative route may be identified; this study corridor is shown in Figure 1: TL626 Preliminary Study Corridor. The potential alternative routes avoid the USFS's proposed Recommended Wilderness Land Use Zones and Inventoried Roadless Areas as those areas are proposed to be expanded in the draft ROD for the CNF LMP Amendment, while at the same time ensuring connectivity between Descanso and Santa Ysabel substations and continued service to customers served by distribution underbuild along this segment of the power line. The preliminary study corridor included an area somewhat longer than requested by the USFS, extending from pole Z213684 to pole Z372114.

Based on initial reconnaissance-level surveys from public roads in the preliminary study corridor, review of parcel and topographical data, and confirmation of land uses and topographical features from aerial surveys, SDG&E amended the study corridor to eliminate some portions of the preliminary study corridor and expand it into other areas. The revised study corridor is shown in Figure 2: TL626 Revised Study Corridor and served as the basis for SDG&E's exploration of potential alternative alignments. The potential alternative alignments are depicted in Figure 3: TL626 Potential Realignment Alternatives.

3 – PROPOSED PROJECTS AND ALTERNATIVE DESCRIPTIONS

Because no power lines currently exist and SDG&E does not have easements or rights-of-way (ROWs) within the majority of the proposed TL626 study corridor, SDG&E was unable to access these areas to conduct full pedestrian surveys for potential realignment alternatives. As a result, in September and October 2013, SDG&E conducted reconnaissance-level surveys from public roads to gather additional data regarding land uses, vegetation communities, hydrological features, and other pertinent environmental resources within the revised study corridor. Following these pedestrian surveys, SDG&E conducted an aerial survey via helicopter to gather similar information for those areas within the revised study corridor that are not accessible by public roads. Using the available and existing topographical, road, parcel, land use, and environmental resource data, SDG&E determined that Alternatives A and B should be analyzed further for their construction potential and associated environmental impacts relative to those posed by the Existing Alignment. The following subsections describe in greater detail the Existing Alignment, as well as these two alternatives.

3.0 EXISTING ALIGNMENT PROJECT DESCRIPTION

As depicted in Attachment A: Existing Alignment Detailed Route Map, the Existing Alignment includes the wood-to-steel conversion of approximately 58 existing wood poles along an approximately 5.4-mile-long alignment within existing SDG&E ROWs between Descanso and

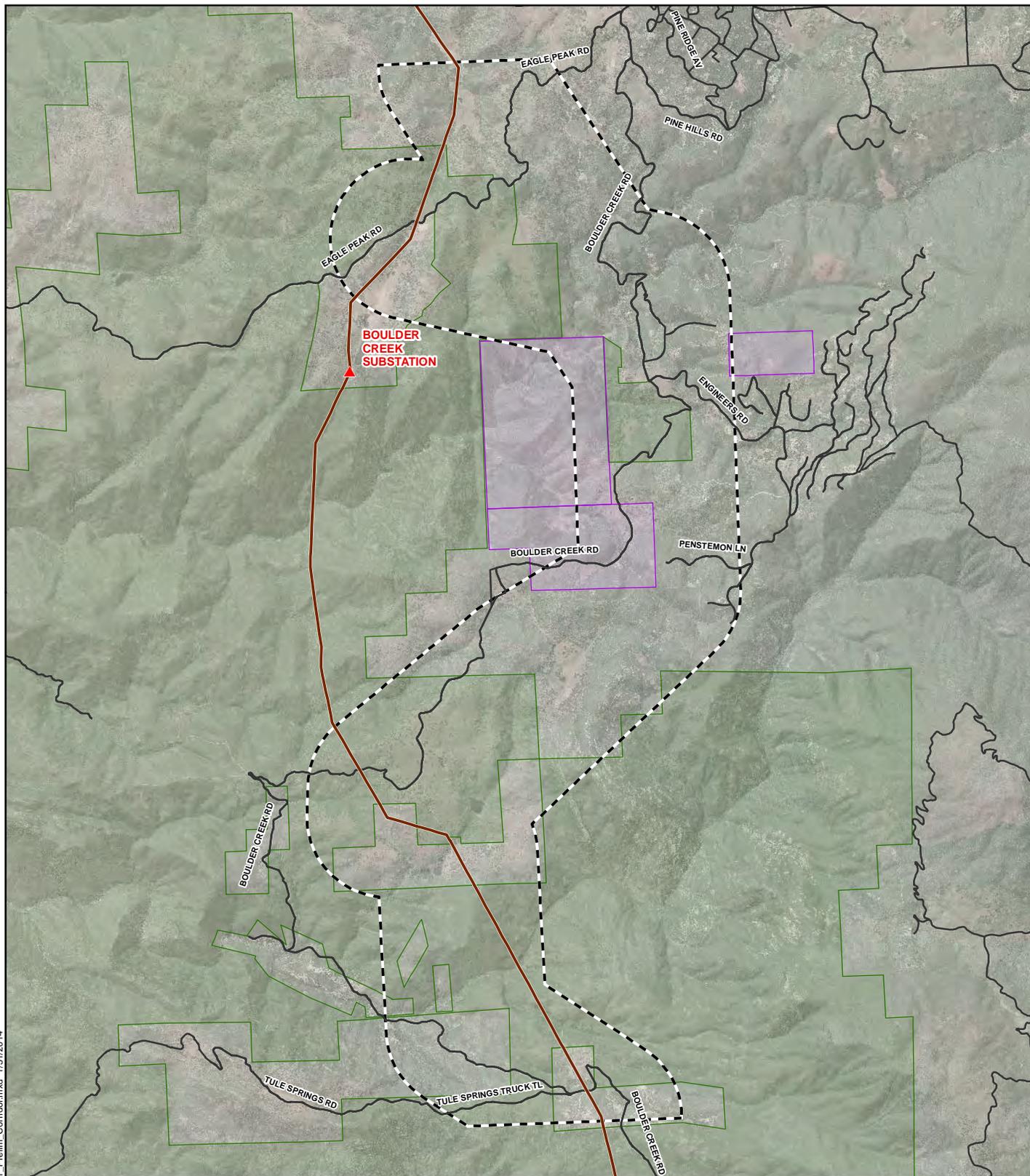
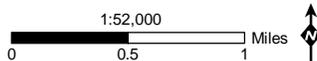


Figure 1: TL626 Preliminary Study Corridor

Power Line TL626 Alternative Analysis

- ▲ Substation
- Existing TL626 Line
- Preliminary Study Corridor
- Inaja and Cosmit Indian Reservation
- Cleveland National Forest
- Existing Road



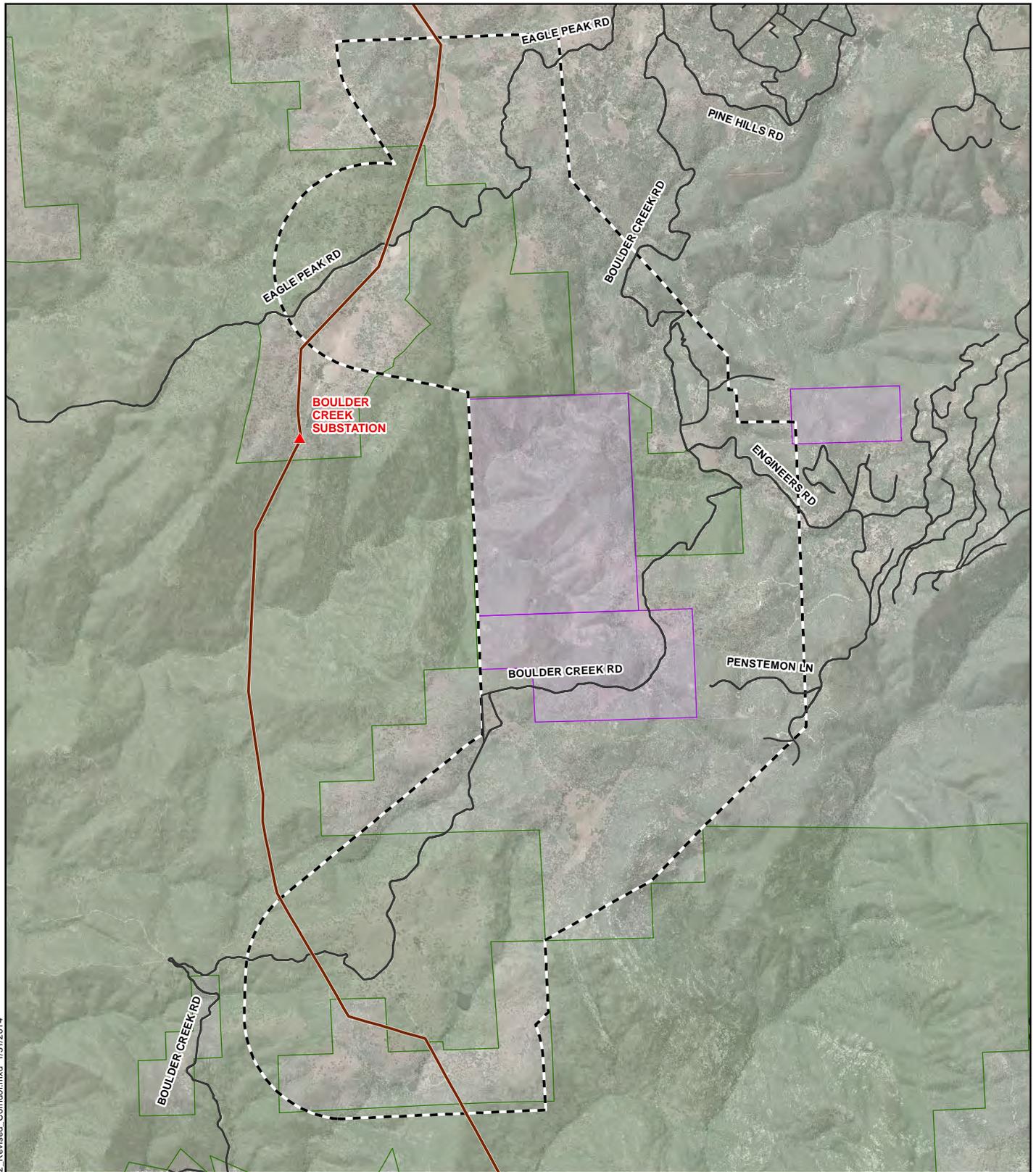
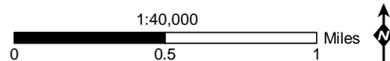


Figure 2: TL626 Revised Study Corridor

Power Line TL626 Alternative Analysis

- ▲ Substation
- Existing TL626
- Revised Study
- Inaja and Cosmit Indian Reservation
- Cleveland National Forest
- Existing Road



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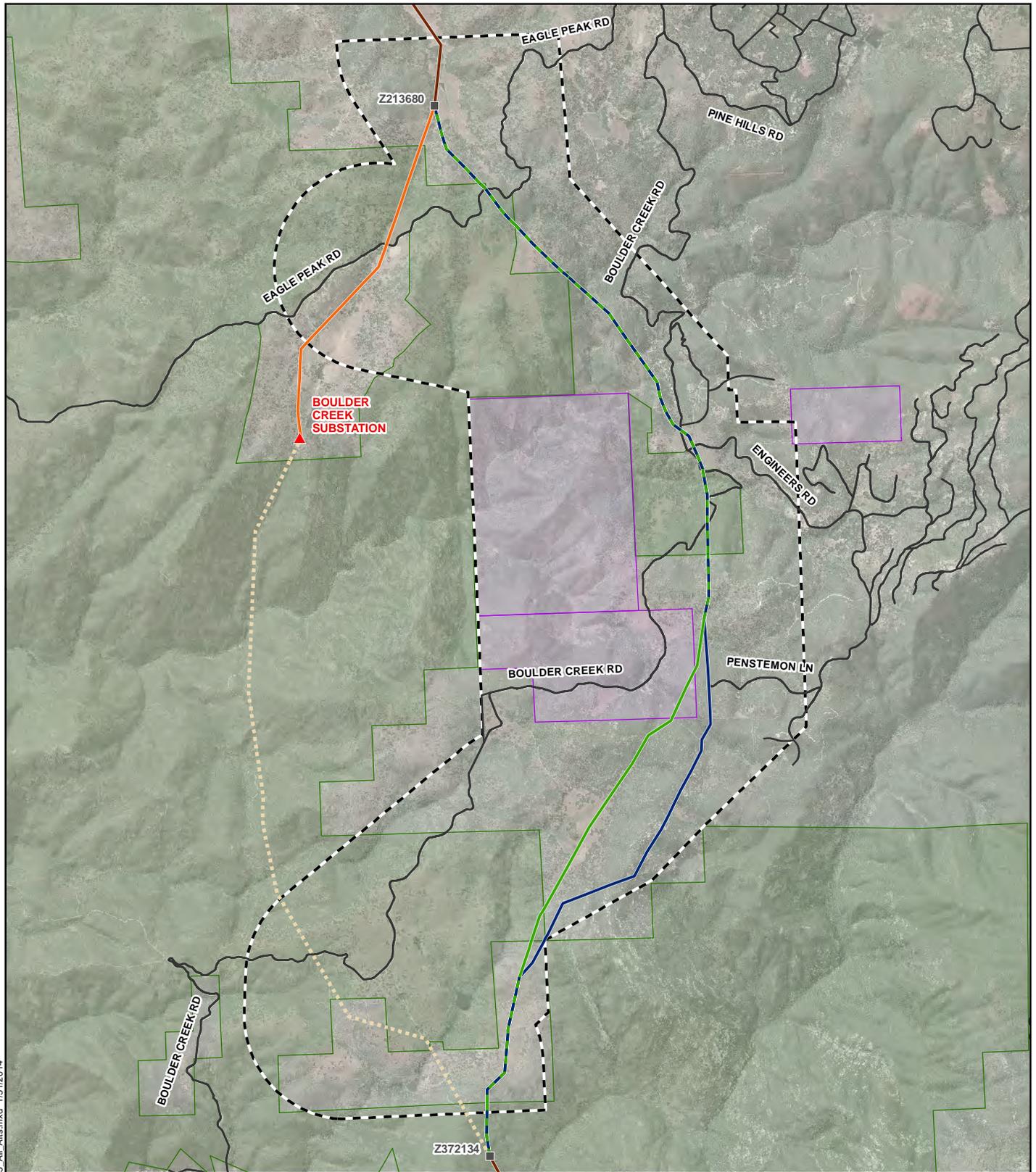


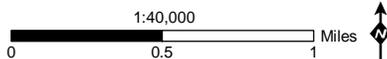
Figure 3: TL626 Potential Realignment Alternatives

Power Line TL626 Alternative Route Analysis

- | | | |
|---|---------------------------------|---------------------------------------|
| ▲ Substation | — Alternative A - New Steel | — Existing Road |
| ■ Original Proposed Pole | — Alternative A & B - New Steel | - - - Revised Study Corridor |
| — Existing TL 626 Line | — Alternative B - New Steel | ■ Inaja and Cosmit Indian Reservation |
| ⋯ Existing TL 626 Line - Removal* | | ■ Cleveland National Forest |
| — Existing TL 626 Line - Wood-to-Steel Replacement* | | |

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* Removal and replacement apply to both Alternative A & B.



Santa Ysabel substations. Approximately 3.5 miles of the Existing Alignment are located within the CNF, and approximately 1.9 miles are located outside of the CNF boundary on private lands. For the purposes of evaluation, TL626 was subdivided into two sections in the POD; the Existing Alignment spans portions of each of these sections as follows:

- TL626B: The northern portion of the Existing Alignment travels southwest from pole Z213680 for approximately 0.2 mile on private land, then enters the CNF for approximately 0.5 mile near Eagle Peak Road. The line continues south from Eagle Peak Road for approximately one mile before tapping into Boulder Creek Substation, where section TL626B terminates.

TL626A: The southern portion of the Existing Alignment begins at Boulder Creek Substation, heading south for approximately 0.1 mile before entering the CNF. TL626A then continues through the CNF for approximately 2.6 miles and crosses Cedar Creek, Kelly Creek, and Boulder Creek Road. The line then leaves the CNF for approximately 0.3 mile near McCoy Ranch Road, re-enters the CNF for approximately 0.2 mile, crosses McCoy Ranch Road, leaves the CNF for approximately 0.3 mile, and re-enters the CNF near King Creek. The line then continues for approximately 0.3 mile until reaching pole Z372134.

3.1 ALTERNATIVE A PROJECT DESCRIPTION

Alternative A would reroute TL626 between poles Z213680 and Z372134 to approximately two miles directly east of the existing alignment at its farthest point. The rerouted segment of Alternative A would measure approximately 5.5 miles in length from pole Z213680 to pole Z372134, as depicted in Figure 4: TL626 Alternative A Location and Attachment B: Alternative A Detailed Route Map. In order to continue serving Boulder Creek Substation and the associated customers in the vicinity of the substation, the TL626B portion of the Existing Alignment (*i.e.*, the northern section ending at Boulder Creek Substation) would remain as is described for the Proposed Projects in the POD, and the TL626A portion from Boulder Creek Substation south to pole Z372134 would be removed. Approximately 1.1 miles of the rerouted portion of the line would be located within the CNF. In addition, the rerouted portion of Alternative A would cross approximately 0.2 mile of the Inaja and Cosmit Reservation and approximately 4.2 miles of private land. More specifically, Alternative A would include the following three components:

- Wood-to-steel replacement of existing poles along the approximately 1.7-mile portion of the existing power line from pole Z213680 to Boulder Creek Substation, as described in the POD.
- Removal of the approximately 3.7-mile portion of the existing power line from Boulder Creek Substation to pole Z372134.
- Construction of a new TL626 segment from pole Z213680 to pole Z372134 along an alignment within the revised study corridor. Alternative A would travel southeast from pole Z213680 for approximately 0.4 mile through private land, enter the CNF for approximately 0.2 mile, leave the CNF for approximately 0.3 mile, then re-enter the CNF

for less than approximately 0.1 mile. The line would then continue southeast for approximately 1.1 miles across private land, travel south through the CNF for approximately 0.4 mile, then leave the CNF and travel southwest for approximately 1.8 miles, of which approximately 0.2 mile is located on the Inaja and Cosmit Reservation. The line would then continue southwest, entering the CNF for approximately 0.2 mile, leave the CNF for approximately 0.8 mile, then re-enter the CNF and travel south for approximately 0.3 mile before terminating at pole Z372134.

3.2 ALTERNATIVE B PROJECT DESCRIPTION

Alternative B would also reroute TL626 between poles Z213680 and Z372134 to approximately two miles directly east of the existing alignment at its farthest point, following a path generally similar to Alternative A. However, the Alternative B alignment would avoid the Inaja and Cosmit Reservation by taking a more easterly path, as shown in Figure 5: TL626 Alternative B Location and Attachment C: Alternative B Detailed Route Map. The rerouted segment of Alternative B would measure approximately 5.6 miles in length from pole Z213680 to pole Z372134; more specifically, Alternative B would include the following three components:

- Wood-to-steel replacement of existing poles along the approximately 1.7-mile portion of the existing power line from pole Z213680 to Boulder Creek Substation, as described in the POD.
- Removal of the approximately 3.7-mile portion of the existing power line from Boulder Creek Substation to pole Z372134.
- Construction of a new TL626 segment from pole Z213680 to pole Z372134 along an alignment within the revised study corridor. Alternative B would travel southeast from pole Z213680 for approximately 0.4 mile through private land, enter the CNF for approximately 0.3 mile, leave the CNF for approximately 0.3 mile, then re-enter the CNF for less than 0.1 mile. The line would then continue southeast for approximately 1.1 miles on private land, travel south through the CNF for approximately 0.4 mile, then leave the CNF and travel southwest for approximately 2.1 miles. The line would then continue southwest, enter the CNF for less than 0.1 mile, leave the CNF for approximately 0.8 mile, then re-enter the CNF and travel south for approximately 0.3 mile before terminating at pole Z372134.

4 – ENVIRONMENTAL RESOURCE COMPARATIVE ANALYSIS

The following subsections describe the potential environmental impacts that may result from construction, operation, and maintenance of the Existing Alignment of TL626, as well as the potential impacts that may result from constructing, operating, and maintaining Alternatives A or B. Because SDG&E does not have access rights and therefore could not obtain the same or a similar level of data for the two alternatives, SDG&E has included methodology and assumptions for each environmental resource area, as necessary, to create as close a comparative analysis as possible at this time. The resource areas addressed include air quality, biological resources, cultural resources, fire hazards, hydrology and water quality, noise, transportation and

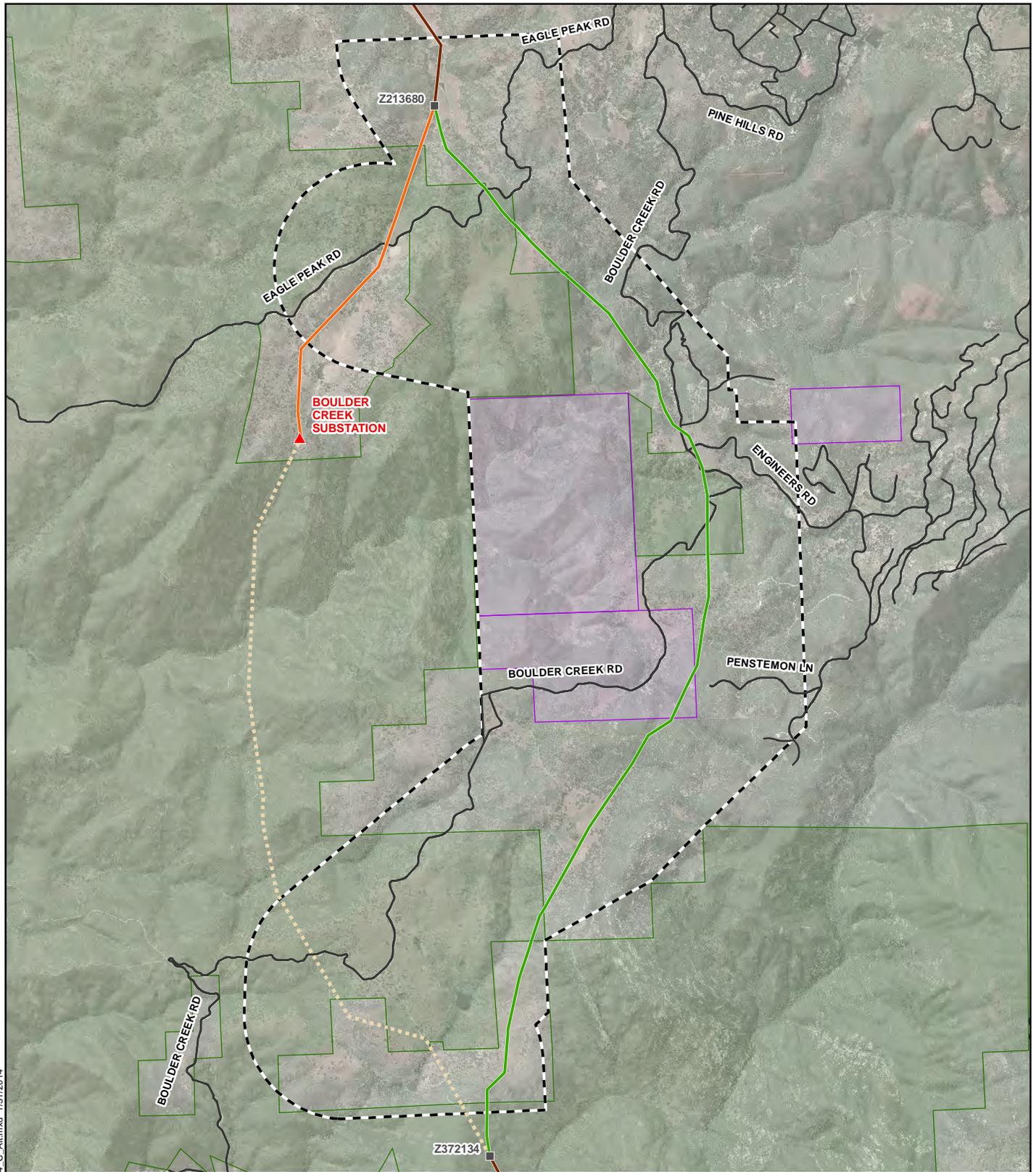
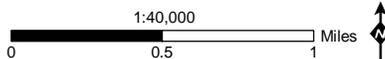


Figure 4: TL626 Alternative A Location

Power Line TL626 Alternative Analysis

- ▲ Substation
- Existing Pole
- Existing TL 626 Line
- ⋯ Existing TL 626 Line - Removal*
- Existing TL 626 Line - Wood-to-Steel Replacement*
- Alternative A - New Steel
- Existing Road
- Revised Study Corridor
- Inaja and Cosmit Indian Reservation
- Cleveland National Forest



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* Removal and replacement apply to both Alternative A & B.

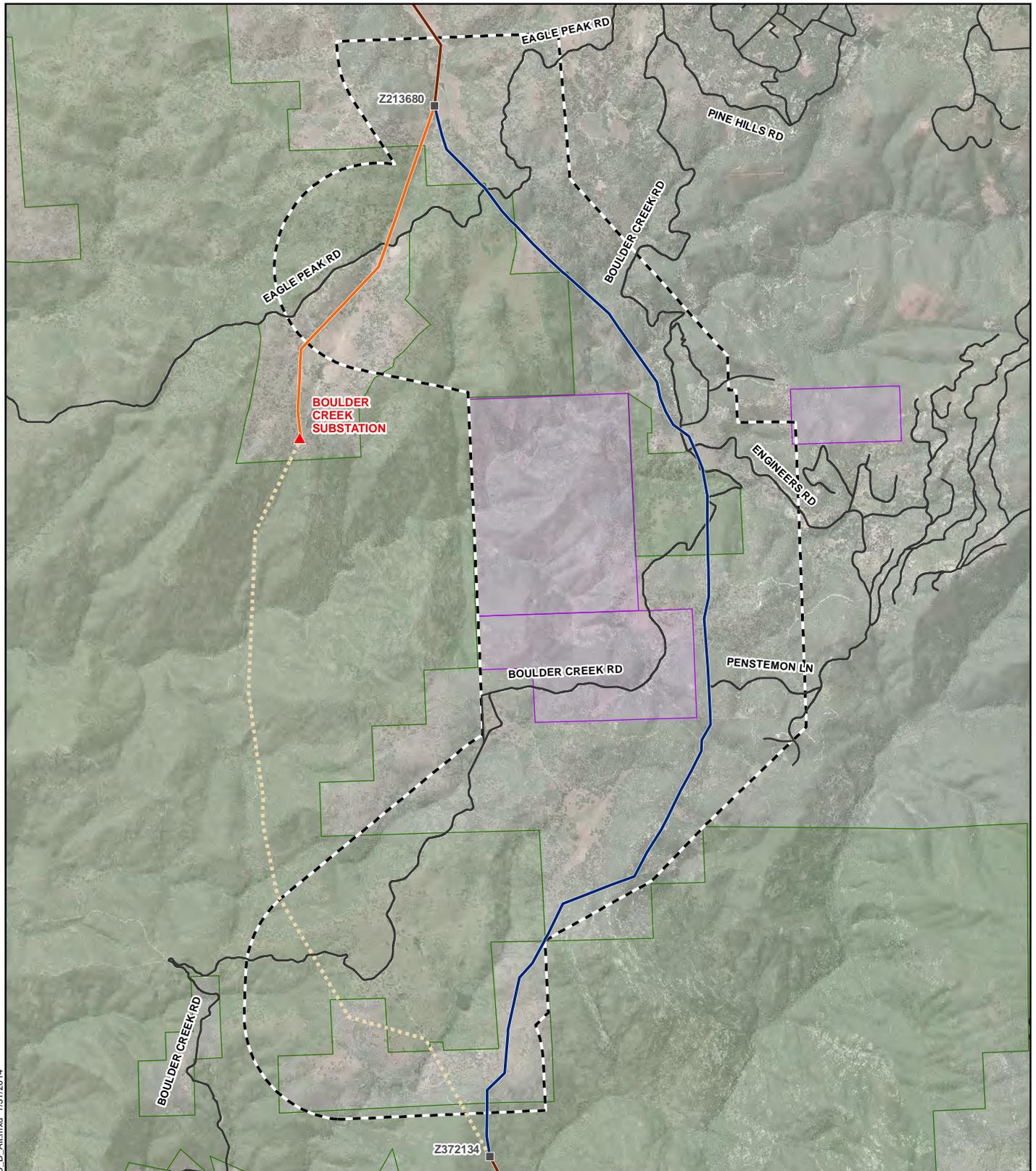
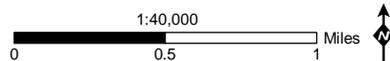


Figure 5: TL626 Alternative B Location

Power Line TL626 Alternative Analysis

- ▲ Substation
- Existing Pole
- Existing TL 626 Line
- ⋯ Existing TL 626 Line - Removal*
- Existing TL 626 Line - Wood-to-Steel Replacement*
- Alternative B - New Steel
- Existing Road
- - - Revised Study Corridor
- Inaja and Cosmit Indian Reservation
- Cleveland National Forest



* Removal and replacement apply to both Alternative A & B.

traffic, visual resources, and wilderness and recreation. In addition, an impact analysis of land use is included to describe potential impacts in this area. In the following subsections, the impacts of the Existing Alignment are described first, followed by a comparison of impacts from Alternatives A and B.

4.0 AIR QUALITY

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts to air quality that may result from construction, operation, and maintenance of the Existing Alignment, Alternative A, and Alternative B.

4.0.0 Methodology and Assumptions

The methodology used to compare anticipated impacts from the Existing Alignment, Alternative A, and Alternative B is the same that was used to assess potential impacts from the Proposed Projects in the POD. Potential impacts to air quality were assessed by using the San Diego Air Pollution Control District's (SDAPCD's) emission thresholds; in addition, this analysis assumes that construction of new access roads required for Alternatives A and B would last approximately twice as long as the POD construction schedule identified for improvement of access roads along the Existing Alignment. New access roads would be approximately 20 feet in width to accommodate construction as well as operation and maintenance vehicles. Alternatives A and B would also include wood-to-steel pole replacement of 24 existing poles along an approximately 1.7-mile-long portion of TL626B, running from pole Z213680 to Boulder Creek Substation, and the removal of 58 wood poles along an approximately 3.7-mile-long portion of TL626A, from Boulder Creek Substation south to pole Z372134. This latter portion of the Existing Alignment would also require restoration of the existing ROW and associated access roads. It is assumed that all new poles to be installed for Alternative A and Alternative B would be foundation-supported steel poles on either pier foundation or micro-pile foundations, as the engineering design for these alternatives is still in its initial stages.

Six crews were assumed to be required for construction of the Existing Alignment in the POD; for the purposes of this analysis, Alternative A and Alternative B were also assumed to require six crews. Construction of Alternative A or Alternative B was also assumed to commence in October 2015, consistent with the existing construction schedule for TL626. If Alternative A or B is selected, the construction of the alternative would be conducted by the same crews as for the remainder of TL626 as part of construction for the overall line; as a result, selection of one of the alternatives would lengthen the overall schedule for TL626, and the construction schedule would be adjusted to allow for the increased length of the Proposed Projects. In addition, it is assumed that removal of a significant number of trees would be required for construction of Alternative A and Alternative B through previously undisturbed areas, based on vegetation cover data collected during reconnaissance-level surveys from public roadways and aerial surveys conducted by SDG&E in September and October 2013. Tree removal would not be required for construction of the Existing Alignment.

4.0.1 Existing Alignment Analysis

The primary source of criteria air pollutant emissions during construction activities for the Existing Alignment would stem from the use of heavy equipment, including crew trucks,

compressors, drilling rigs, and helicopters. A list of equipment anticipated to be used during construction is provided in the POD. Each phase of construction would require different equipment, and often multiple pieces of equipment would be required to operate simultaneously. In addition, many pieces of equipment require engine-idling to provide energy for equipment operation, such as for truck-mounted drills or compressors. Helicopters would be used to deliver personnel and equipment and position poles during construction where truck access is not available, and would also be used to string new conductors and position aerial markers, where necessary.

As part of the Existing Alignment construction, SDG&E would replace approximately 82 existing wood utility poles with steel poles. Up to six crews would be required to work on the Existing Alignment as part of constructing the larger TL626 alignment. Because of the amount of equipment required to operate during construction activities, pollutant emissions are anticipated to occur but would be dispersed throughout the air basin according to the specific locations of construction.

Based on the currently anticipated schedule and construction equipment required for the Proposed Projects, the Existing Alignment would emit a maximum of approximately 1.6 tons per year of volatile organic compounds (VOCs), well below the General Conformity applicability *de minimis* threshold for VOCs. In addition, the Proposed Projects would emit a maximum of approximately 6.6 tons per year of carbon monoxide (CO), which also falls below the General Conformity applicability *de minimis* threshold for CO. The Proposed Projects' largest emission would be nitrogen oxides (NO_x); the maximum annual emission of this pollutant would be approximately 12.2 tons per year, which is also well below the federal threshold of 100 tons per year that would be applied were San Diego County (County) a nonattainment area for this pollutant.

Maximum daily pollutant emissions resulting from heavy equipment used during construction are anticipated to exceed levels established by the SDAPCD for VOCs, NO_x, CO, and particulate matter (PM) less than 2.5 microns in diameter (PM_{2.5}). Table 1: SDAPCD Criteria Air Pollutant Exceedances During Construction lists the threshold and maximum daily emissions rate (lbs/day) during the approximately five-year construction schedule for all criteria air pollutants, as well as the approximate emissions during construction of the Existing Alignment.

In addition to emissions from heavy equipment use, wood-to-steel pole replacement would involve a relatively small amount of daily ground disturbance, which would contribute to an increase of fugitive dust in the vicinity of the Existing Alignment. The majority of ground disturbance and the potential for fugitive dust would result from the establishment and use of temporary work areas, including staging and stringing sites, pole work areas, and fly yards. According to the design of the Proposed Projects, however, a total of only approximately 2.3 acres of temporary ground disturbance would occur from construction activities associated with the Existing Alignment. Because ground disturbance would be relatively small in size at each construction location and fugitive dust emissions would be limited to the areas surrounding the Existing Alignment work areas, impacts from PM_{2.5} resulting from fugitive dust emissions are anticipated to be minor.

Table 1: SDAPCD Criteria Air Pollutant Exceedances During Construction

Pollutant	Threshold (lbs/day)	Project-Wide Maximum (lbs/day)	Existing Alignment Maximum (lbs/day)
VOCs	75	136.56	44.57
NO _x	250	1,082.4	347.84
CO	550	571.08	195.88
Sulfur Dioxide (SO ₂)	250	1.52	0.50
PM less than 10 microns in diameter (PM ₁₀)	100	71.18	21.06
PM _{2.5}	55	63.18	19.04

Potential air quality impacts from airborne dust may occur as a result of the use of existing access roads and temporary work areas. However, airborne dust generated during access road use would be limited to the immediate vicinity of the access road, and would occur only instantaneously as vehicles traverse the access roads. For temporary work areas, airborne dust would be controlled using water application as described in the POD. As previously mentioned, tree removal would not be required for construction of the Existing Alignment.

Following construction, operation and maintenance of the Existing Alignment would occur similarly to those activities currently conducted for the existing power line. The only operation and maintenance emissions associated with the Existing Alignment would be from crew trucks, helicopters, and other equipment accessing the electric lines to perform periodic inspections and maintenance activities. These inspections and maintenance activities currently occur annually and are not anticipated to increase in frequency following the completion of the Existing Alignment. As a result, the Existing Alignment activities are not expected to exceed the SDAPCD’s operational emission thresholds, and no operational impact to air quality is anticipated. Because the Existing Alignment is shorter than either Alternative A or Alternative B, thus requiring that fewer poles be maintained, operational emissions for this alternative would be slightly lower than those for the other two options.

4.0.2 Alternative A Analysis

Alternative A would measure approximately 5.5 miles in length from pole Z213680 to pole Z372134, and approximately 1.7 miles between pole Z213680 and Boulder Creek Substation. Pole removal and access road/ROW restoration would also be conducted along the TL626A portion of the Existing Alignment as part of Alternative A. Construction activities for Alternative A would include the installation of approximately 45 new steel poles and the replacement of 24 wood poles with steel poles. Approximately 3.9 miles of new access roads would be required to access the new pole locations. In addition, approximately 5.8 miles of existing access roads and approximately 3.7 miles of existing ROW would be restored for Alternative A. Construction equipment types required would be similar to those used for the Existing Alignment. Approximately three of the 45 poles within the new alignment would be

installed by helicopter. Where new poles would be constructed and accessed for operation and maintenance purposes via helicopter, landing areas in the vicinity of the pole locations would be required. SDG&E has not identified potential locations for these landing areas, but would attempt to minimize the number of landing areas required, to the extent feasible.

Construction of Alternative A may overlap in time with portions of the activities associated with the Existing Alignment. Given the potential for overlapping activities and the greater level of effort required during construction of Alternative A, pollutant emissions from the use of heavy equipment would be greater than the emissions resulting from construction activities associated with the Existing Alignment. The exact pollutant emissions are unknown at this time due to the lack of a complete construction schedule and power line design; however, it is anticipated that the inclusion of Alternative A would require more crews and equipment than for the Existing Alignment due to the significant tree trimming and removal required. It is also anticipated that Alternative A would be constructed using a phased approach. When considered alone, the replacement of the Existing Alignment with Alternative A is not anticipated to trigger additional exceedances of the established SDAPCD thresholds for VOCs, CO, SO₂, PM₁₀, and PM_{2.5}. Similar to the Existing Alignment, construction emissions for Alternative A are anticipated to exceed the NO_x emission threshold.

In addition to emissions from heavy equipment use, construction of Alternative A would involve a total of approximately 23.3 acres of temporary ground disturbance, which would contribute to an increase of fugitive dust from earthmoving activities. Due to the increased amount of ground disturbance required to establish work areas and access roads along Alternative A, fugitive dust emissions would be greater than those associated with the Existing Alignment. Because the increased level of ground disturbance would be relatively small in size and limited to small portions of the Proposed Projects each day, and the fugitive dust emissions would typically be limited to the areas surrounding each work area, impacts from these increased levels of PM₁₀ and PM_{2.5} are anticipated to be minor.

Further, the removal of a significant number of trees—which assist in the sequestration of carbon dioxide (CO₂)—would be required to clear a new ROW and access roads for construction of Alternative A in previously undisturbed areas. As a result, greenhouse gas emissions associated with Alternative A would result in a higher release of CO₂ emissions when compared to the Existing Alignment.

The only operational emissions associated with Alternative A would be from crew trucks, helicopters, and other equipment accessing the power line to perform periodic inspections and maintenance activities. There would be no increase in the frequency of inspection and maintenance activities following construction of Alternative A. As a result, Alternative A is not expected to exceed the SDAPCD's operational emission thresholds and no impact to air quality is anticipated from operation and maintenance of this alternative.

4.0.3 Alternative B Analysis

Construction activities required for wood-to-steel pole replacement, pole removal, and installation of new poles in a previously undisturbed area would be similar to those described for the Existing Alignment and Alternative A. Alternative B would be approximately 5.6 miles in length from pole Z213680 to pole Z372134, and approximately 1.7 miles between pole Z213680

and Boulder Creek Substation. Construction activities for Alternative B would include the installation of approximately 53 new steel poles and replacement of 24 existing wood poles with steel poles. As previously discussed, approximately 3.7 miles of new access roads would be needed to access the new pole locations. Construction equipment types required would be consistent with those described for Alternative A. Approximately four of the 53 poles within the new alignment would be installed by helicopter. Where new poles would be constructed and accessed for operation and maintenance purposes via helicopter, landing areas in the vicinity of the pole locations would be required. SDG&E has not identified potential locations for these landing areas, but would attempt to minimize the number of landing areas required, to the extent feasible.

As with Alternative A, construction of Alternative B may overlap in time with portions of the activities associated with the Existing Alignment. Given the potential for this overlap and the increased level of effort required to construct Alternative B, emissions from heavy equipment use would be greater than those associated with the Existing Alignment. As described previously, exact pollutant emissions are unknown at this time due to the lack of a complete construction schedule and power line design. While exact emissions are unknown, it is anticipated that Alternative B would be constructed using a similar number of crews and equipment used for the remainder of TL626. It is also anticipated that Alternative B would use a phased construction approach. When considered on its own, the replacement of the Existing Alignment with Alternative B is not anticipated to trigger additional exceedances of the established SDAPCD thresholds for VOCs, CO, SO₂, PM₁₀, and PM_{2.5}. Similar to the Existing Alignment, construction emissions for Alternative B are anticipated to exceed the NO_x emission threshold.

In addition to emissions from heavy equipment use, construction would involve a total of approximately 29.3 acres of temporary ground disturbance, which would contribute to an increase in fugitive dust from the construction of Alternative B. As with Alternative A, ground disturbance would be relatively small in size and fugitive dust emissions would be limited to the areas surrounding the work areas; thus, impacts from PM_{2.5} resulting from fugitive dust emissions are anticipated to be minor. However, due to the increased amount of ground disturbance required for construction of access roads along Alternative B and a result of the use of additional heavy equipment within a 24-hour period, fugitive dust emissions would be greater than those associated with the Existing Alignment.

4.1 BIOLOGICAL RESOURCES

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts to biological resources that may result from construction, operation, and maintenance of the Existing Alignment, Alternative A, and Alternative B.

4.1.0 Methodology and Assumptions

Methods for identifying sensitive biological resources and potential impacts to species resulting from the Proposed Projects are detailed in the POD. From 2010 to 2012, focused surveys for targeted rare plant and wildlife species were conducted for the Existing Alignment as part of the larger TL626 alignment. Because SDG&E does not currently have access rights to properties within the revised study corridor, focused surveys for targeted rare plant and wildlife species

could not be conducted for Alternative A or Alternative B. Instead, general field reconnaissance data on vegetation communities and habitat types for Alternative A and Alternative B were collected during pedestrian surveys from public roadways and aerial surveys in September and October 2013. Based on the results of these surveys and the proximity of known species occurrences, SDG&E assumed for the purposes of this analysis that the potential for species to occur along Alternative A and Alternative B would be similar to those identified for the Existing Alignment. Should either alternative be selected, additional field surveys would be required to fully capture the potential impacts to biological resources from the chosen alternative.

4.1.1 Existing Alignment Analysis

The Existing Alignment is situated between 2,500 feet and 3,800 feet above mean sea level. Six vegetation communities—mixed oak woodland, southern riparian forest, southern mixed chaparral, freshwater seep/open water, non-native grassland, and urban and developed/ornamental landscaping—occur within the Existing Alignment. The Existing Alignment is not located within critical habitat designated by the U.S. Fish and Wildlife Service.

Based on the proximity of known species occurrences and the results of focused surveys conducted for TL626, six special-status plant species and 10 special-status wildlife species were determined to be present within the ROW or have a moderate to high potential to occur based on the specific habitat types and elevations found along the ROW. These species, their respective listing statuses, and their inclusion under SDG&E's Subregional Natural Community Conservation Plan (NCCP) and the Low-Effect Habitat Conservation Plan (HCP) for the Quino Checkerspot Butterfly (QCB) are shown in Table 2: Special-Status Plant Species' Potential to Occur Along the Existing Alignment and Table 3: Special-Status Wildlife Species' Potential to Occur Along Existing Alignment.

Construction of the Existing Alignment would result in temporary disturbances and permanent loss of vegetation, though no trees are anticipated be removed. Temporary disturbances include short-term impacts during construction of new poles and removal of existing poles, improvements to existing access roads, and work at staging/laydown areas, stringing sites, and landing zones. Permanent impacts would result to an area roughly the diameter of the replacement poles where steel poles would be installed, as well as at locations where landing areas would be required. The Existing Alignment would result in a temporary impact area of approximately 2.32 acres, and a permanent impact area of approximately 0.02 acre. These temporary and permanent impacts are summarized by habitat type in Table 4: Vegetation Community Impacts of the Existing Alignment and Alternatives in Approximate Acres.

Potential impacts to special-status plant species may include the temporary or permanent loss of habitat, including loss of habitat that supports the species, and loss of potential seed bank due to the excavation of pole holes, consistent with construction activities conducted for other similar wood-to-steel replacement projects. Other impacts may include potential crushing by equipment, vehicles, and personnel working within suitable or occupied habitat. Project equipment and vehicles may result in petroleum product or other chemical spills that negatively affect special-status plant species and habitat. In addition, impacts such as an increase in fugitive dust could reduce the growth and vigor of special-status plant species. However, these impacts will be avoided and/or minimized with the implementation of the measures in the NCCP and QCB HCP.

Table 2: Special-Status Plant Species’ Potential to Occur Along the Existing Alignment

Species Name	Listing Status ¹	Covered by NCCP/ QCB HCP	Existing Alignment Potential to Occur
San Diego thornmint ² <i>Acanthomintha ilicifolia</i>	FT, CE, USFS S 1B.1 BLM S	✓	Low
Dean’s milk-vetch ² <i>Astragalus deanei</i>	USFS S 1B.1 BLM S		No
Jacumba milk-vetch ² <i>Astragalus douglasii</i> var. <i>perstrictus</i>	USFS S 1B.2 BLM S		Low
San Diego milk-vetch ² <i>Astragalus oocarpus</i>	USFS S 1B.2 BLM S		Low
Orcutt’s brodiaea ² <i>Brodiaea orcuttii</i>	USFS S 1B.1 BLM S	✓	Low
Dunn’s mariposa lily ² <i>Calochortus dunnii</i>	USFS S 1B.2 BLM S	✓	Low
Payson’s jewel-flower ² <i>Caulanthus simulans</i>	USFS S 4.2	✓	Low

¹ Explanation of state and federal listing codes

Federal listing codes:

FE: Federally listed as Endangered
 FT: Federally listed as Threatened
 USFS S: USFS Sensitive
 BLM S: Bureau of Land Management (BLM) Sensitive Species
 BGEPA: Bald and Golden Eagle Protection Act

California listing codes:

CE: State-listed as Endangered
 CT: State-listed as Threatened
 Rare: State-listed as Rare
 FPS: State-listed Fully Protected
 SSC: State Species of Special Concern

California Native Plant Society lists:

1B.1: Rare, threatened, or endangered in California or elsewhere; seriously threatened in California
 1B.2: Rare, threatened, or endangered in California or elsewhere; fairly threatened in California
 1B.3: Rare, threatened, or endangered in California or elsewhere; not very threatened in California
 2.1: Rare, threatened, or endangered in California only; seriously threatened in California
 2.2: Rare, threatened, or endangered in California only; fairly threatened in California
 2.3: Rare, threatened, or endangered in California only; not very threatened in California
 3: Plants that are on a review list and require additional information
 4.1: Uncommon in California; seriously threatened in California
 4.2: Uncommon in California; fairly threatened in California
 4.3: Uncommon in California; not very threatened in California

² Special-status species that were targeted during focused surveys.

Species Name	Listing Status ¹	Covered by NCCP/ QCB HCP	Existing Alignment Potential to Occur
Long-spined spineflower ² <i>Chorizanthe polygonoides</i> var. <i>longispina</i> ³	1B.2		Low
Delicate clarkia ² <i>Clarkia delicata</i> ³	1B.2		Present
Tecate tarplant ² <i>Deinandra floribunda</i>	USFS S 1B.2 BLM S		High
Variiegated dudleya <i>Dudleya variegata</i>	1B.2 BLM S	✓	No
Vanishing wild buckwheat ² <i>Eriogonum evanidum</i>	USFS S 1B.1		Low
Mexican flannelbush <i>Fremontodendron mexicanum</i>	FE, Rare 1B.1 BLM S		No
Palmer's grappling-hook <i>Harpagonella palmeri</i>	4.2	✓	No
Tecate cypress ² <i>Hesperocyparis forbesii</i>	USFS S 1B.1 BLM S	✓	Low
Cuyamaca cypress ² <i>Hesperocyparis stephensonii</i>	USFS S 1B.1		Low
Ramona horkelia ² <i>Horkelia truncata</i>	USFS S 1B.3		High
Parish's meadowfoam ² <i>Limnanthes gracilis</i> ssp. <i>parishii</i>	USFS S CE 1B.2 BLM S		No
Orcutt's linanthus ² <i>Linanthus orcuttii</i>	USFS S 1B.3 BLM S		No
Felt-leaved monardella ² <i>Monardella hypoleuca</i> ssp. <i>lanata</i>	USFS S 1B.2	✓	No
Hall's monardella <i>Monardella macrantha</i> ssp. <i>hallii</i>	1B.3		Low
San Felipe monardella <i>Monardella nana</i> ssp. <i>leptosiphon</i>	1B.2 BLM S		Moderate

³ This species was removed from the Regional Forester's Sensitive Species List in 2013.

Species Name	Listing Status ¹	Covered by NCCP/ QCB HCP	Existing Alignment Potential to Occur
California orcutt grass <i>Orcuttica californica</i>	FE, CE 1B.1	✓	No
Gander's ragwort ² <i>Packera ganderi</i>	USFS S Rare 1B.2 BLM S	✓	No
Moreno currant ² <i>Ribes canthariforme</i>	USFS S 1B.3 BLM S		No
Southern skullcap ² <i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	USFS S 1B.2		Low
Laguna Mountains jewelflower ² <i>Streptanthus bernaldenis</i> ³	4.3		No
Southern jewelflower ² <i>Streptanthus campestris</i>	USFS S 1B.3		High
San Bernardino aster ² <i>Symphyotrichum defoliatum</i>	1B.2 BLM S		No
Velvety false-lupine ² <i>Thermopsis californica</i> var. <i>semota</i>	USFS S 1B.2		High

Table 3: Special-Status Wildlife Species’ Potential to Occur Along Existing Alignment

Species Name	Listing Status ¹	Covered by NCCP/ QCB HCP	Existing Alignment Potential to Occur
Invertebrates			
Quino checkerspot butterfly ² <i>Euphydryas editha quino</i>	FE	✓	No
Hermes copper butterfly ² <i>Lycaena hermes</i>	Not currently listed		Low
Laguna Mountains skipper <i>Pyrgus ruralis lagunae</i>	FE		No
Fish			
Arroyo chub <i>Gila orcutti</i>	USFS S SSC		No
Amphibians			
Arroyo toad ² <i>Anaxyrus californicus</i>	FE, SSC	✓	Low
Large-blotched salamander <i>Ensatina klauberi</i>	USFS S SSC		Moderate
Reptiles			
California legless lizard <i>Anniella pulchra</i>	SSC USFS S		Low
Belding’s orange-throated whiptail <i>Aspidoscelis hyperythra beldingi</i>	SSC	✓	No
Southwestern pond turtle <i>Clemmys marmorata pallida</i>	SSC, USFS S	✓	High
Northern red-diamond rattlesnake <i>Crotalus ruber ruber</i>	SSC	✓	Low
San Diego mountain kingsnake <i>Lampropeltis zonata pulchra</i>	SSC, USFS S		Moderate
Coastal rosy boa <i>Lichanura trivirgata roseofusca</i>	BLM S, USFS S	✓	Low
Coast (San Diego) horned lizard <i>Phrynosoma coronatum blainvillii</i>	SSC, USFS S	✓	Moderate
Coronado Island Skink <i>Plestiodon (Eumeces) skiltonianus interparietalis</i>	SSC	✓	Low

Species Name	Listing Status ¹	Covered by NCCP/ QCB HCP	Existing Alignment Potential to Occur
Coast patch-nosed snake <i>Salvadora hexalepis virgulata</i>	SSC	✓	Low
Two-striped garter snake <i>Thamnophis hammondi</i>	SSC, BLM S USFS S	✓	Moderate
Birds			
Tricolored blackbird – nesting colony <i>Agelaius tricolor</i>	SSC	✓	No
Golden eagle <i>Aquila chrysaetos</i>	FPS BGEPA	✓	No
Southwestern willow flycatcher ² <i>Empidonax traillii extimus</i>	FE	✓	No
Coastal California gnatcatcher ² <i>Poliophtila californica californica</i>	FT, SSC	✓	No
California spotted owl ² <i>Strix occidentalis occidentalis</i>	SSC, USFS S		No
Least Bell's vireo ² <i>Vireo bellii pusillus</i>	FE, CE	✓	Low
Mammals			
Pallid bat <i>Antrozous pallidus</i>	SSC, USFS S BLM S		Moderate
Dulzura (California) pocket mouse <i>Chaetodipus californicus femoralis</i>	SSC	✓	Moderate
Northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	SSC	✓	Low
Pallid San Diego pocket mouse <i>Chaetodipus fallax pallidus</i>	SSC	✓	Low
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	SSC, USFS S BLM S		Moderate
Stephens' kangaroo rat ² <i>Dipodomys stephensi</i>	FE, CT	✓	No
Western red bat <i>Lasiurus blossevillii</i>	SSC, USFS S		Moderate
California leaf-nosed bat <i>Macrotus californicus</i> ³	SSC		No
American badger <i>Taxidea taxus</i>	SSC	✓	Moderate

Table 4: Vegetation Community Impacts of the Existing Alignment and Alternatives in Approximate Acres

Habitat Type	Existing Alignment		Alternative A Route		Alternative B Route	
	Permanent	Temporary	Permanent	Temporary	Permanent	Temporary
Freshwater Seep/Open Water	0	0	0.40	0.19	0	0.19
Mixed Oak Woodland	< 0.01	1.61	2.08	6.96	1.90	8.28
Non-Native Grassland	< 0.01	0.32	2.50	7.54	1.50	7.47
Southern Mixed Chaparral	0.01	2.36	4.11	8.25	5.04	12.01
Southern Riparian Forest	0	0	0	0.23	0	0.23
Urban and Developed/Ornamental Landscaping	0	0	0	0.11	0	0.11
Total	0.02	2.32	9.09	23.28	8.44	28.29

Construction of the Existing Alignment would likely impact habitat for one special-status amphibian species, the large-blotched salamander (*Ensatina klauberi*). The large-blotched salamander does not inhabit streams or bodies of water, and instead prefers moist, shaded, evergreen and oak woodland forests. Construction of the Existing Alignment may impact this special-status amphibian species by temporarily and permanently affecting suitable habitat. Temporary impacts to amphibians may also be caused by the disruption of hibernating, feeding, and breeding from increased human activity; an increase in vehicles and equipment noise; direct mortality by vehicles; and crushing or removal of subterranean refuge. Amphibians have the potential to fall into and become trapped within the pole excavation areas, as well as trenches and bore pits where undergrounding of electric lines would occur. Permanent impacts may result from the loss of suitable upland habitat. However, permanent impacts from the construction of the Existing Alignment would be minor given the total size of permanent impacts with respect to the amount of suitable habitat in the area.

Construction of the Existing Alignment may impact four special-status reptiles, including southwestern pond turtle (*Clemmys marmorata pallida*), San Diego mountain kingsnake (*Lampropeltis zonata pulchra*), coast (San Diego) horned lizard (*Phrynosoma coronatum blainvillii*), and two-striped garter snake (*Thamnophis hammondi*). Impacts to reptiles may include disturbance caused by the increase in vehicles and equipment noise. Human activity may also disrupt hibernating, feeding, and breeding behavior. Direct mortality may be caused by crushing from vehicles and equipment. Construction activity may also result in the removal of burrows these species often utilize. In addition, removal of vegetation may reduce the amount of cover that reptile species have to avoid predators. Other permanent impacts from the construction of the Existing Alignment would be minor given the total size of permanent impacts with respect to the amount of suitable habitat in the area.

Construction activities could also potentially impact avian species. No special-status avian species were determined to have a moderate or high potential to occur within the Existing Alignment. General impacts to all avian species may include the removal of potential nesting and cover habitat and the disruption of nesting behavior due to a temporary increase in noise from construction equipment and vehicles. The southern portion of the Existing Alignment passes through a raptor sensitive area. Therefore, construction activities could also potentially impact foraging raptors. Impacts may include minor degradation of foraging habitat, removal of some food sources, and the disruption of foraging behavior due to a temporary increase in noise from construction equipment and vehicles. Other permanent impacts on avian species from the construction of the Existing Alignment would be minor because no trees would be removed, and because the total size of permanent impacts would be minimal with respect to the amount of suitable nesting and foraging habitat for these species in the area.

Concerns regarding potential electrocution and collision impacts to wildlife species from electric lines are primarily focused on avian species. Electrocution of avian species can occur from wing contact as avian species perch, land, or take off from a utility pole by coming into simultaneous contact with two conductors to complete the electrical circuit; simultaneous contact with energized phase conductors and other equipment; and simultaneous contact with energized wires and a grounded wire. Electrocution of avian species is more of a potential hazard to larger birds, such as raptors, because their body size and wing span are large enough to span the distance between the conductor wires and, thus, complete the electrical circuit. Potential impacts to avian

species resulting from collisions with power lines, poles, and other facilities include bird injury and mortality. All structures would be constructed in compliance with the Avian Power Line Interaction Committee's Suggested Practices for Avian Protection on Power Lines in order to avoid or minimize bird electrocutions and collisions. The Existing Alignment includes only the replacement of existing electric lines and does not include the construction of any new electric lines; therefore, the electrocution and collision risk would not increase from the risk posed by the existing lines.

Construction activities may potentially impact special-status mammal species, including Dulzura (California) pocket mouse (*Chaetodipus californicus femoralis*) and American badger (*Taxidea taxus*). Potential impacts to mammal species include the temporary and permanent loss of suitable foraging and cover habitat, as well as the potential loss of burrows or dens. Rodent species and American badgers have the potential to fall into and become trapped within the pole excavation areas, as well as trenches and bore pits. In addition, potential impacts could result from temporary disturbance due to an increase in vehicle and equipment use and possible direct mortality from construction vehicles and equipment. Other permanent impacts from the construction of the Existing Alignment would be minor given the total size of permanent impacts with respect to the amount of suitable habitat in the area.

Construction activities may potentially impact special-status bat species. Three special-status bat species have a moderate or high potential to occur within the Existing Alignment area. These species include the pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), and western red bat (*Lasiurus blossevillii*). Impacts to bats may occur if construction activities result in the disruption or abandonment of nearby active bat roosts. Because the Existing Alignment includes the replacement of existing poles with steel poles, any potential impacts to bat foraging or movement are anticipated to be minimal. The western red bat roosts in small colonies in the foliage of trees and shrubs and may be directly impacted from vegetation clearing. The remaining two bat species prefer to roost in caves, rock crevices, cliff faces, or man-made structures. Potential roosting habitat for these species would be not be directly impacted, but disturbance to nearby roosts is possible due to noise from construction equipment.

Following completion of construction activities, operation and maintenance of the Existing Alignment facilities would occur in the same manner that is currently conducted for the existing facilities. Additionally, the replacement steel poles would require less frequent inspection, repairs, and routine maintenance than the existing wood poles. As a result, any potential impacts to biological resources from operation and maintenance of the Existing Alignment facilities would be less than currently exists.

4.1.2 Alternative A Analysis

Alternative A is located approximately two miles directly east of the existing alignment at its farthest point. It is situated between 3,100 feet and 4,100 feet above mean sea level, which is a slightly higher elevation than the Existing Alignment. Vegetation communities along Alternative A are similar to those found along the Existing Alignment. Based on the similarity of habitat and the proximity of known species occurrences, it is anticipated that special-status plant and wildlife species have a similar potential to occur on Alternative A as they do along the Existing Alignment, as shown in Table 2: Special-Status Plant Species' Potential to Occur Along the

Existing Alignment and Table 3: Special-Status Wildlife Species' Potential to Occur Along Existing Alignment. As previously noted, however, focused surveys for targeted rare plant and wildlife species have not been conducted for Alternative A. Therefore, additional surveys would be needed to determine the presence or absence of special-status species along Alternative A.

Due to the similar vegetation and species present on both alignments, many of the potential impacts of Alternative A would be similar to those described for the Existing Alignment. However, because Alternative A would include the removal of existing poles in the Existing Alignment, as well as construction of new poles in a previously undisturbed area, there would be substantially more impacts associated with Alternative A as opposed to the Existing Alignment. The greater impacts for Alternative A would primarily result from the increased temporary and permanent impacts to vegetation, the additional impacts from the construction of new access roads, impacts from tree removal (whereas no tree removal is anticipated for the Existing Alignment), and increased impacts due to operation and maintenance activities in a new area. These impacts are described further in the following paragraph.

Construction of Alternative A would result in more temporary and permanent impacts than the Existing Alignment, as shown in Table 4: Vegetation Community Impacts of the Existing Alignment and Alternatives in Approximate Acres. The additional permanent impacts for Alternative A would primarily result from the construction of new access roads and helicopter landing areas that SDG&E would continue to maintain following construction completion. Approximately 3.9 miles of new access roads would be required for the construction of Alternative A. In addition, tree removal would be required for the construction and placement of new poles, staging/laydown areas, stringing sites, and landing zones needed for Alternative A. Tree removal required for Alternative A would result in impacts to species and habitat that would not occur for the Existing Alignment. Following the completion of construction activities, operation and maintenance of Alternative A would occur in the same manner in which it is currently conducted for the Existing Alignment. These operation and maintenance activities are considered part of the environmental baseline and environmental setting for the Existing Alignment; therefore, no additional impacts would occur for the Existing Alignment. Additional impacts are anticipated along Alternative A because these activities do not currently occur in this area; however, some of these impacts would be offset by the removal of a portion of the Existing Alignment that would no longer be required. Potential impacts to biological resources as a result of operation and maintenance of Alternative A may result from activities such as the maintenance and repair of new and existing access roads and helicopter landing areas, pole brushing, tree trimming, and the use of pesticides and herbicides for maintenance activities.

4.1.3 Alternative B Analysis

Potential impacts to biological resources resulting from construction, operation, and maintenance of Alternative B are anticipated to be similar to those described for Alternative A. Alternatives A and B follow a generally similar alignment with the exception of one approximately two-mile-long segment. This segment of Alternative B is located within 0.3 mile of the Alternative A segment, and vegetation communities and species habitats are assumed to be similar. Therefore, special-status species are anticipated to have a similar potential to occur as those listed in Table 2: Special-Status Plant Species' Potential to Occur Along the Existing Alignment and Table 3: Special-Status Wildlife Species' Potential to Occur Along Existing Alignment. However,

Alternative B is partially located in USFS-suitable modeled habitat for Laguna Mountains skipper (*Pyrgus ruralis lagunae*) and San Bernardino bluegrass (*Poa atropurpurea*). As a result, Alternative B would potentially have greater impacts to these species due to temporary and permanent impacts to this habitat from construction activities, including the construction of new access roads and helicopter landing areas in these areas where none currently exist.

Construction of Alternative B would result in a temporary impact of approximately 28.29 acres, and a permanent impact of approximately 8.44 acres. These temporary and permanent impacts are summarized by habitat type in Table 4: Vegetation Community Impacts of the Existing Alignment and Alternatives in Approximate Acres.

4.2 CULTURAL RESOURCES

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts to cultural resources that may result from construction, operation, and maintenance of the Existing Alignment, Alternative A, and Alternative B.

4.2.0 Methodology and Assumptions

SDG&E previously conducted a records search and intensive pedestrian surveys for cultural resources in the vicinity of the existing TL626 alignment as part of the Proposed Projects. No pedestrian surveys for cultural resources were conducted for the analysis of Alternative A and Alternative B due to a lack of access to properties within the study corridor. Details regarding the methods used and results of the records search and pedestrian surveys are detailed in Section 10.2 Cultural Resources in the POD.

SDG&E conducted a records search at the South Coast Information Center in November 2013 of all lands within a one-mile radius of the two alternative alignments. This search indicated that 12 previous archaeological investigations were conducted within this area between 1977 and 2005. However, only one previous investigation crossed a portion of one alternative (Alternative B), and each study covers only a small portion of the areas surrounding the alternative alignments.

Because little prior information exists regarding cultural resources in the vicinity of the alternative alignments, a slope analysis was prepared by PanGIS, Inc. and ASM Affiliates, Inc. for the proposed alternative alignments to identify areas where potential geologic formations capable of containing buried deposits would potentially exist. Aerial imagery and other data were also used to identify locations in the vicinity of major drainages or highland valleys; these areas have a high likelihood for sites that are more intensively utilized and capable of bearing intact surface deposits. Prior to construction, it is recommended that intensive pedestrian surveys be conducted along the entire alignment selected and that poles and work areas be relocated, where feasible, to avoid any identified cultural resources.

4.2.1 Existing Alignment Analysis

As described in the POD, five previously recorded archaeological resources were identified within 300 feet of proposed pole locations and work areas along the Existing Alignment. An additional five archaeological resources were identified within the current ROW and required specific impact avoidance measures in the POD. During the initial assessment for the existing

TL626 alignment, a sacred lands search was conducted at the Native American Heritage Commission and letters were sent to the local tribe. No tribal concerns or traditional cultural properties were identified for the Existing Alignment. Because SDG&E incorporated the results of previous record searches and the intensive pedestrian surveys along TL626 into the Proposed Projects design, proposed pole locations and temporary work areas were modified or relocated, as necessary, to avoid potential impacts to cultural resources. Construction, operation, and maintenance of the Existing Alignment would also continue to utilize existing access roads that have been established over an extended period of time and maintained under SDG&E's existing authorizations. Because no new access roads would be needed for the Existing Alignment, and because the Proposed Projects' design has already incorporated changes to avoid known cultural resources in the vicinity of the alignment, no impacts to cultural resources would likely occur along this length during construction. Similarly, operation and maintenance of the Existing Alignment would continue to occur consistent with existing practices under SDG&E's standard operation restrictions for the current alignment. As a result, no impacts to cultural resources from operation and maintenance activities would occur for the Existing Alignment.

4.2.2 Alternative A Analysis

No cultural resources were identified within the anticipated temporary and permanent impact areas for Alternative A during the records search; however, because the breadth of studies conducted in this area include less than 25 percent of the potential alignment for Alternative A, insufficient information currently exists to accurately assess the potential for cultural resources to occur in areas of disturbance for Alternative A. One historical resource—the Historic Pine Hills Guard Station—is adjacent to the Alternative A alignment and would likely necessitate a visual impact analysis for this resource to determine potential impacts to it from Alternative A. An examination of aerial photography and other available data suggest that there are approximately six locations along the new construction portion of Alternative A that contain major drainage crossings or highland valleys where no previous development has occurred; these areas could potentially contain cultural resources. In addition, a portion of Alternative A crosses the Inaja and Cosmit Reservation, which has not been surveyed and would require additional consultation with tribal authorities and the Bureau of Indian Affairs (BIA). Tribal concerns or traditional cultural properties could potentially exist along this portion of Alternative A within tribal lands, and a sacred lands file search and Native American contact program would need to be conducted. Federal regulations do not permit surveys on tribal trust land without tribal approval. Federal law also requires tribal and BIA approval for any ROW to be issued across trust lands. Similar restrictions apply to trust allotments. Based on prior discussions with the USFS and BIA, SDG&E anticipates that the BIA will participate as a Cooperating Agency during the NEPA process.

Because Alternative A would include the wood-to-steel replacement of existing wood poles from the north into Boulder Creek Substation, as well as the removal of existing poles south of Boulder Creek Substation as described previously, any potential impacts to cultural resources identified for the Existing Alignment would be equally as likely to occur for Alternative A. Alternative A would also require the construction of approximately 3.9 miles, or approximately 9.5 acres, of new access roads where none previously existed. This additional land disturbance, coupled with approximately 8.4 acres of temporary disturbance from new work areas and less

than 0.1 acre of permanent impacts from new pole locations, would substantially increase the potential for impacts to cultural resources during construction of Alternative A.

Once Alternative A is complete, operation and maintenance of Alternative A would occur consistent with SDG&E's existing standard operating restrictions. No significant ground disturbance would be required during operation and maintenance; therefore, no additional impacts to cultural resources from these activities would likely occur.

4.2.3 Alternative B Analysis

Similar to Alternative A, no cultural resources were identified within the anticipated and permanent impact areas for Alternative B; however, because the breadth of studies conducted in this area include less than 25 percent of the potential alignment for Alternative B, insufficient information currently exists to accurately assess the potential for cultural resources to occur in areas of disturbance for Alternative B. An examination of aerial photography and other available data suggests that there are approximately five locations along the new construction portion of Alternative B that contain major drainage crossings or highland valleys where no previous development has occurred; these areas could potentially contain cultural resources.

Because Alternative B would include the wood-to-steel replacement of existing wood poles from the north into Boulder Creek Substation, as well as the removal of existing poles south of Boulder Creek Substation as described previously, any potential impacts to cultural resources identified for the Existing Alignment would be equally as likely to occur for Alternative B. Alternative B would also require the construction of approximately 3.7 miles, or 9.0 acres, of new access roads where none previously existed. This additional land disturbance, coupled with approximately 8.9 acres of temporary disturbance from new work areas and approximately 0.1 acre of permanent impacts from new pole locations, would substantially increase the potential for impacts to cultural resources during construction of Alternative B.

Once Alternative B is complete, operation and maintenance of Alternative B would occur consistent with SDG&E's existing standard operating restrictions. No significant ground disturbance would be required during operation and maintenance; therefore, no additional impacts to cultural resources from these activities would likely occur.

4.3 FIRE HAZARDS

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts from fire hazards that could result from construction, operation, and maintenance of the Existing Alignment, Alternative A, and Alternative B.

4.3.0 Methodology and Assumptions

The methodology used to compare anticipated impacts from the Existing Alignment of the Proposed Projects, Alternative A, and Alternative B is the same that was used in the POD. The California Department of Forestry and Fire Protection's (CAL FIRE's) Fire and Resource Assessment Program (FRAP) classifications were used to assess the fire severity level of the Existing Alignment and alternative routes. Because SDG&E does not currently have access rights to properties within the revised study corridor, no pedestrian surveys were conducted to evaluate vegetative cover and the potential fire hazards posed by local conditions; instead,

SDG&E assumed potential hazards from vegetative cover by using data gathered from an aerial survey and available data from CAL FIRE.

4.3.1 Existing Alignment Analysis

As depicted in Figure 6: Fire Hazard Severity Map, FRAP classifies the area of the Existing Alignment as having a high to very high fire threat. According to these data, approximately 86 percent of Existing Alignment components would be located in an area of very high fire threat classification, while the remaining 14 percent would be located in a high fire threat classification area.

As described in the POD, the County supports dense, drought-adapted shrub lands that are highly flammable as a result of its Mediterranean-type climate. Santa Ana winds create extremely dangerous fire conditions, which can cause electric lines to touch, fall, or come in contact with adjacent vegetation, causing sparks which could ignite potentially damaging wildfires. SDG&E has developed operating protocols and safety standards that minimize the risk of wildland fires during SDG&E construction activities. Specifically, wildland fire prevention during construction is governed internally to SDG&E through implementation of Electric Standard Practice (ESP) No. 113-1 Wildlife Fire Prevention & Fire Safety, as described in Section 7.4 Fire Preparedness of the POD.

Fire hardening of the Existing Alignment is being undertaken in part to minimize the risk of wildfires that exists when certain atmospheric conditions occur within geographic areas designated as having high- to extreme-risk fire threats. The Existing Alignment is consistent with SDG&E's long-term plan to improve service reliability in fire-prone areas through system hardening or other enhancements. Consistent with the requirements of CPUC General Order 95, construction of the Existing Alignment would replace existing wood pole structures with new steel pole structures designed to withstand higher wind speeds; increase conductor spacing to maximize line clearances; install new conductors and remove potentially weak spliced locations; and install longer polymer insulators to minimize contamination, which would improve system reliability during extreme weather conditions and reduce potential fire hazards from the power line. In addition, there are only three residences located within one mile of the Existing Alignment. With these design features and the minimal number of residences in close proximity to the Existing Alignment, exposure of people or structures to loss, injury, or death involving wildland fires would not pose a significant risk, but would, in fact, be significantly reduced by comparison to the existing conditions.

Construction activities have the potential to start a fire due to the increased presence of vehicles, equipment, and human activity in areas of elevated fire hazard severity. In particular, heat or sparks from construction vehicles or equipment have the potential to ignite dry vegetation. As described in the POD, SDG&E will implement ESP 113-1 and SDG&E Electric Distribution Operation (EDO) Procedure 3017 EDO's Requirements During SDG&E Fire Conditions, as well as the SDG&E Operation and Maintenance Project Fire Plan (CNF Fire Plan), to assist in safe practices to prevent fires.

Operation and maintenance of the power lines included in the Existing Alignment would not differ from that of the existing facilities. Potential fire hazards would be reduced following fire hardening of the Existing Alignment. SDG&E would continue to implement ESP 113-1, EDO

Procedure 3017, and the CNF Fire Plan, as described in Section 7.4 Fire Preparedness of the POD, to ensure that the proper steps are taken to maintain fire safety while meeting all operational and service requirements.

4.3.2 Alternative A Analysis

The possible causes and types of potential impacts from fire hazards due to construction, operation, and maintenance of Alternative A would be similar to those described for the Existing Alignment. However, 100 percent of new construction for Alternative A, including the new access roads to be constructed, would be located in an area of extreme threat to people and with a very high fire severity classification, as depicted in Figure 6: Fire Hazard Severity Map. In addition, a greater amount of ground disturbance would be required for Alternative A compared to the Existing Alignment, as new access roads would be constructed in previously undisturbed and more densely vegetated areas that would require clearing. Impacts associated with vegetation clearing are described in Section 4.1 Biological Resources. As a result, construction activities would require approximately two months of additional time than construction of the Existing Alignment. The increased construction period required for Alternative A within previously undisturbed, often densely vegetated areas could increase the potential for fires to occur as a result of construction in these areas, depending on the level of fire prevention measures taken and the time of year when construction occurs. In addition, there are approximately 67 residences located within one mile of the Alternative A alignment, compared to three residences along the Existing Alignment. Because additional ground disturbance would require a greater number of vehicles and construction equipment that could create heat or sparks—and because these activities would occur completely within an area of extreme threat to people and with a very high fire severity classification, dense vegetation cover, and a higher number of nearby residences—potential fire hazards related to construction of Alternative A would be significantly greater than the fire threat associated with constructing the Existing Alignment.

Operation and maintenance activities would generally be the same as for the Existing Alignment. However, the Alternative A alignment would be located completely within an area of extreme threat to people and with a very high fire severity classification, and approximately 67 residences are located within one mile of the Alternative A alignment compared to three for the Existing Alignment. Due to the increased number of poles and access roads in areas of very high fire threat severity and greater number of residences in close proximity to the alignment, the potential for exposure of people or structures to loss, injury, or death involving wildland fires would pose a significantly greater risk for operation and maintenance activities associated with Alternative A than for the Existing Alignment. Because construction and operation and maintenance activities associated with Alternative A would pose greater fire hazards than those anticipated for the Existing Alignment, selection of Alternative A would not be consistent with SDG&E's fire hardening and service reliability efforts.

4.3.3 Alternative B Analysis

Impacts from fire hazards due to Alternative B would be similar to those described for Alternative A, with 100 percent of Alternative B components, including the new access roads to be constructed, located in an area of extreme fire threat to people with a very high fire severity classification, as depicted in Figure 6: Fire Hazard Severity Map. Like Alternative A,

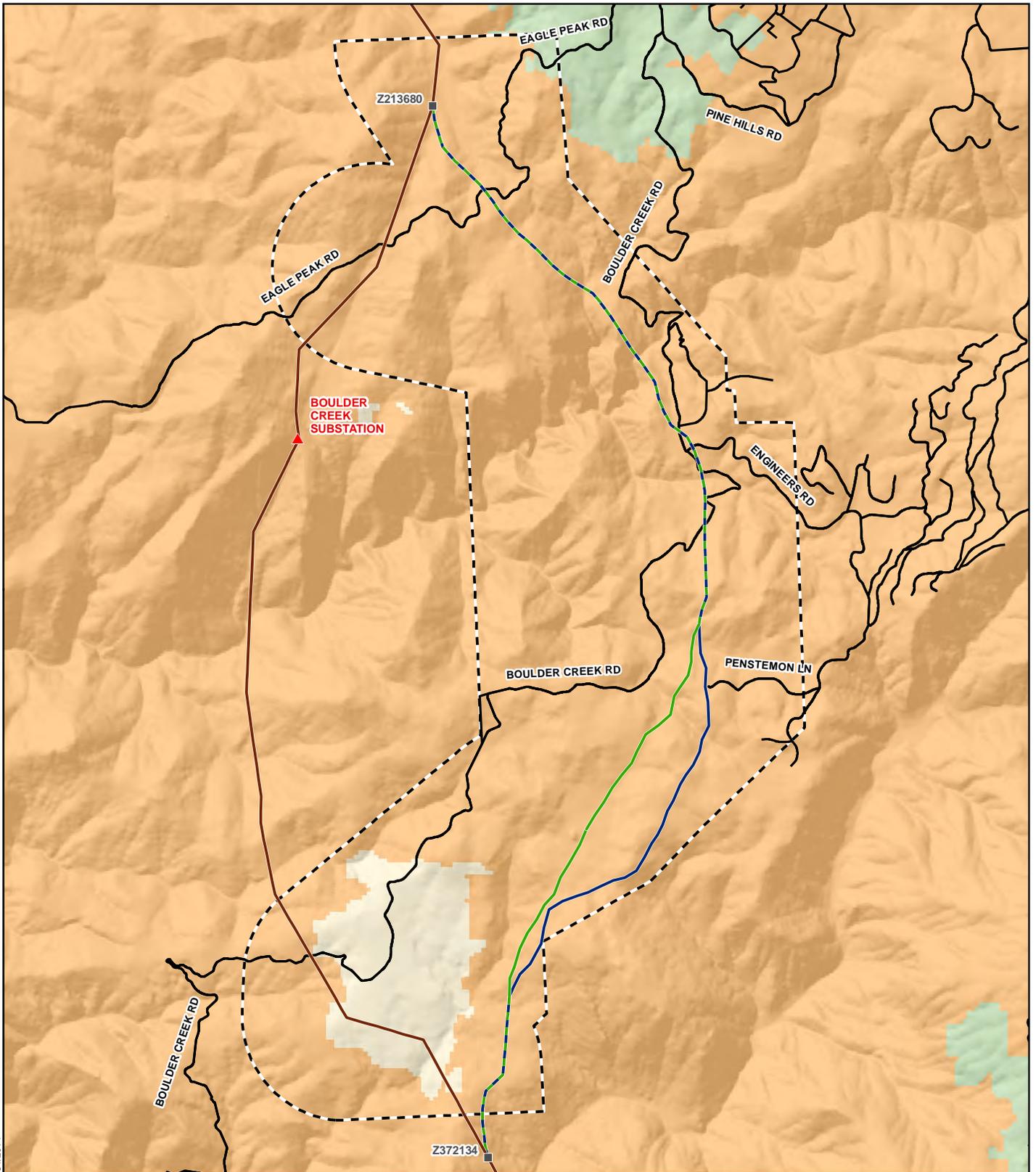
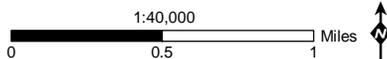


Figure 6: Fire Hazard Severity

Power Line TL626 Alternative Analysis

- | | | |
|-----------------------|---------------------------------------|-----------------------------|
| ▲ Substation | — Existing Road | Fire Severity Threat |
| ■ Existing Pole | - - - Revised Study Corridor | Very High |
| — Existing TL626 Line | ■ Cleveland National Forest | High |
| — Alternative A & B | ■ Inaja and Cosmit Indian Reservation | Moderate |
| — Alternative A | | |
| — Alternative B | | |



a greater amount of ground disturbance would be required for Alternative B compared to the Existing Alignment, as new access roads would be constructed in previously undisturbed and more densely vegetated areas that would require clearing. Impacts associated with vegetation clearing are described in Section 4.1 Biological Resources. Construction activities would require approximately two months of additional time than construction of the Existing Alignment. The increased construction period required for Alternative B within previously undisturbed, often densely vegetated areas could increase the potential for fire hazards as a result of construction activities, depending on the level of fire prevention measures taken and the time of year when construction occurs. In addition, there are approximately 67 residences located within one mile of the Alternative B alignment, compared to three residences along the Existing Alignment. Because additional ground disturbance would require a greater number of vehicles and construction equipment that could create heat or sparks, and because these activities would occur in an area that is completely within a very high fire threat classification with dense vegetation cover and a higher number of nearby residences, potential fire hazards related to construction of Alternative B would be significantly greater than the fire threat associated with constructing the Existing Alignment.

Operation and maintenance activities would generally be the same for Alternative B as for the Existing Alignment. However, the Alternative B alignment would be located completely within an area of extreme threat to people and with a very high fire severity classification, and there are approximately 67 residences located within one mile of the Alternative B alignment compared to three for the Existing Alignment. Due to the increased number of poles and access roads in areas of very high fire threat severity and greater number of residences in close proximity to the alignment, the potential for exposure of people or structures to loss, injury, or death involving wildland fires would pose a greater risk for operation and maintenance activities associated with Alternative B than for the Existing Alignment. Because construction, operation, and maintenance activities associated with Alternative B would pose greater fire hazards than those anticipated for the Existing Alignment, selection of Alternative B would not be consistent with SDG&E's fire hardening and service reliability efforts.

4.4 HYDROLOGY AND WATER QUALITY

The following subsections describe the methods and assumptions used to analyze potential impacts, describe water resources, and then provide potential impacts to hydrology and water quality that may result from construction, operation, and maintenance of the Existing Alignment, Alternative A, and Alternative B.

4.4.0 Methodology and Assumptions

Methods for identifying water resources and potential impacts to hydrology and water quality that may result from the Proposed Projects are detailed in the POD. Field surveys to identify potentially jurisdictional wetlands or waters of the U.S. within 50 feet of pole locations and work areas were conducted for TL626, including the Existing Alignment, in February and April 2012. Field surveys for potentially jurisdictional wetlands or waters of the U.S. have not been conducted for Alternative A or Alternative B. General field reconnaissance data on hydrological features for Alternative A and Alternative B were collected during reconnaissance-level surveys from public roadways and aerial surveys in September and October 2013. For this comparison of impacts, hydrological features in the vicinity of Alternative A and Alternative B were located

using the National Wetlands Inventory (NWI) database and riparian conservation areas (RCAs) data from the USFS. In addition, aerial imagery was reviewed to confirm the NWI and RCA data, and to determine the location of additional hydrological features.

4.4.1 Existing Alignment Analysis

The majority of the Existing Alignment is located within the CNF boundary, and the existing alignment crosses several USFS-identified RCAs. As a result, the Existing Alignment would temporarily impact approximately 1.5 acres of RCAs during construction, and would permanently impact less than 0.01 acre of these areas from the construction of the replacement steel poles. Table 5: Temporary and Permanent Impacts to RCAs and Riparian Areas describes these potential impacts in greater detail. The Existing Alignment also crosses over or comes within close proximity to several creeks, including the following:

- Boulder Creek,
- Sheep Camp Creek,
- Cedar Creek,
- Johnson Creek, and
- Kelly Creek.

In addition, many unnamed, intermittent creeks and drainages are present throughout the Existing Alignment ROW. Hydrological features located within pole work areas, stringing sites, and fly yards are described in Table 6: Potentially Jurisdictional Waters within Existing Alignment Work Areas. Impacts to these hydrological features have the potential to occur from sediment runoff or erosion resulting from clearing and grading activities associated with the creation of work areas, pole installation and removal, vegetation clearing, and changing runoff patterns during rain and snowmelt if temporarily disturbed areas are not stabilized. Impacts to these water features could also result from the degradation of water quality from the introduction of sediment. None of the pole replacements along the Existing Alignment would be located within the ordinary high water mark of a hydrological feature.

The installation of direct-bury and micropile poles requires the excavation of holes for pole-setting. Poles that encounter groundwater during excavation may require dewatering, which can increase the potential for sedimentation if not performed properly. However, dewatering would not likely be necessary due to the small diameter of the excavation holes and the location of the groundwater table in the vicinity of the Existing Alignment.

A portion of the Existing Alignment is within a watershed that drains to 303(d)-listed waterbodies, including Cedar Creek and Boulder Creek. Cedar Creek is spanned by the Existing Alignment and Boulder Creek is located approximately 0.25 mile south of the southern terminus of the Existing Alignment. Specific requirements would be incorporated into the Storm Water Pollution Prevention Plan (SWPPP), including appropriate best management practices (BMPs) and a sampling and monitoring plan, to mitigate potential impacts to these waterbodies. Implementation of site-specific erosion and sediment control devices and the proper handling of potentially hazardous materials would ensure that the work does not contribute to the pollutant load for Cedar Creek or Boulder Creek.

Table 5: Temporary and Permanent Impacts to RCAs and Riparian Areas

Line	Approximate Number of Direct-Bury Poles	Approximate Number of Foundation-Supported Steel Poles	Approximate Number of Poles to be Removed	Approximate Number of Non-Pole Work Areas	Approximate Temporary Impact (acres)	Approximate Permanent Impact (acres)
Existing Alignment	9	7	16	3	1.5	< 0.01
Alternative A	6	12	16	5	6.7	0.4
Alternative B	9	11	16	5	7.0	0.1

Table 6: Potentially Jurisdictional Waters within Existing Alignment Work Areas

Identification Number	Power Line	Pole Reference or Work Area Number	Name of Waterbody	Feature Type	Flow Characteristic
D-04	TL626	Z372154	Unnamed	Drainage	Ephemeral
D-06	TL626	Z372163	Unnamed	Drainage	Ephemeral
F-02	TL626	Z213644	Unnamed	Swale	Not Applicable (NA)
F-02	TL626	Z213644	Unnamed	Swale	NA
W-03	TL626	Z213671	Unnamed	Meadow	NA

The operation and maintenance activities required for the Existing Alignment would be similar to those currently conducted for the existing lines. In addition, less frequent maintenance of the electric lines would be required in comparison to what is currently needed for the existing wood poles. Following construction, the ROW, work areas, stringing sites, staging areas, and fly yards would be returned to pre-construction conditions, which include re-establishing drainage patterns and vegetation, where feasible. Existing access roads would be utilized to access the replacement structures where helicopter-only access is not required. Because no new roads would be constructed and temporary work areas would be returned to pre-construction conditions, there would be no new impacts associated with operation and maintenance of the Existing Alignment.

4.4.2 Alternative A Analysis

Water resources and potential impacts to hydrology and water quality resulting from construction, operation, and maintenance of Alternative A are similar to those described for the Existing Alignment. However, because Alternative A involves the removal of existing poles in the Existing Alignment and installation of new poles in a previously undisturbed area, substantially more impacts would result from Alternative A as opposed to the Existing Alignment. The greater impacts for Alternative A, which are described further in the following discussion, would primarily result from increased impacts to riparian areas, permanent vegetation loss where new access roads are constructed, additional impacts to potentially jurisdictional wetlands or waters of the U.S., additional impacts to water resources from the construction of new poles where currently none exist, and increased impacts due to operation and maintenance activities in a new area.

Construction of Alternative A would result in more impacts to riparian areas than the Existing Alignment, as shown in Table 5: Temporary and Permanent Impacts to RCAs and Riparian Areas. Although RCAs only occur on USFS land, similar riparian areas to RCAs are located outside of the CNF boundary within the alignment of Alternative A. Construction of Alternative A would result in approximately 6.7 acres of temporary impacts and 0.4 acre of permanent impacts to riparian areas.

Alternative A would impact the same hydrological features located in the vicinity of the Existing Alignment during the removal of poles along the Existing Alignment south of Boulder Creek Substation to pole Z372134. Additional hydrological features may also be impacted during the construction of new poles along Alternative A. Hydrological field surveys of pole locations and work areas along Alternative A have not been conducted, but would be required prior to permitting. No NWI features are located within areas of planned temporary or permanent disturbance along Alternative A. Four NWI features—Sandy Creek, Cedar Creek, Dehr Creek, and one unnamed feature—are spanned by Alternative A. Cedar Creek is located approximately 50 feet from an area of temporary impact; Sandy Creek and Dehr Creek are located at least 200 feet from an area of temporary impact; and the unnamed feature is located at least 100 feet away from an area of temporary impact. Field surveys would also be needed to identify potentially jurisdictional wetlands or waters of the U.S. within 50 feet of pole locations and work areas. These features likely exist within or in the vicinity of Alternative A poles and work areas. Prior to permitting, these features would be identified, mapped, and avoided where feasible. In the event

that these features cannot be avoided, impacts to these features would be similar to those described for the Existing Alignment.

Alternative A would result in additional impacts to water resources and hydrological features primarily from the construction of new access roads that SDG&E would need to maintain. Approximately 3.9 miles of new access roads would be required for the construction of Alternative A. A portion of a planned access road is located within 50 feet of a pond and 200 feet of an emergent wetland. Field surveys would be needed to identify if potentially jurisdictional wetlands or waters of the U.S. are located within or in close proximity to planned access roads. Although hydrological features and riparian areas would be avoided to the extent feasible, permanent impacts to hydrological features and riparian areas will result from the construction and maintenance of these new access roads. No new access roads are needed for the Existing Alignment and, therefore, substantially more permanent impacts to jurisdictional waterways will result from the construction access roads for Alternative A. In addition, new access roads could potentially cause additional erosion or sedimentation concerns in areas where they would be required, but these impacts would be minimized with the installation of BMPs for erosion and sediment control that would be identified in the SWPPP.

Following completion of construction activities, operation and maintenance of Alternative A would occur in the same manner as it is currently conducted for the Existing Alignment. These operation and maintenance activities are considered part of the environmental baseline and environmental setting for the Existing Alignment; therefore, no additional impacts will occur for the Existing Alignment. However, additional impacts are anticipated for Alternative A because these activities do not currently occur within this area. Potential impacts to hydrology and water quality as a result of operation and maintenance of Alternative A may result from activities such as the maintenance and repair of new and existing access roads and the use of pesticide and herbicides for maintenance activities.

Because Alternative A would introduce new temporary and permanent disturbance to areas where none currently exist, and would require additional access roads to be constructed that could impact jurisdictional waterways and create additional runoff, sedimentation, or erosion in these areas, potential impacts to hydrological resources would be greater for Alternative A than for the Existing Alignment.

4.4.3 Alternative B Analysis

Water resources and potential impacts to hydrology and water quality resulting from construction and operation and maintenance of Alternative B would be similar to those described for Alternative A. Alternatives A and B follow a similar alignment with the exception of one approximately two-mile-long segment. This segment of Alternative B is located within 0.3 mile of the Alternative A segment, and hydrology conditions in this area are similar to those described for Alternative A. Alternative B would have a slightly larger temporary impact and a smaller permanent impact on RCAs and riparian areas than Alternative A, however, as shown in Table 5: Temporary and Permanent Impacts to RCAs and Riparian Areas. Alternative B would result in approximately seven acres of temporary impact and 0.1 acre of permanent impacts to RCAs or riparian areas.

Because Alternative B would introduce new temporary and permanent disturbance to areas where none currently exist and would require additional access roads to be constructed that could impact jurisdictional waterways and create additional runoff, sedimentation, or erosion in these areas, potential impacts to hydrological resources would be greater for Alternative B than for the Existing Alignment.

4.5 NOISE

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts from noise that may result from construction, operation, and maintenance of the Existing Alignment, Alternative A, and Alternative B.

4.5.0 Methodology and Assumptions

Because SDG&E does not have access rights to properties along the two alternative alignments, no additional noise surveys were conducted for Alternatives A or B. SDG&E assumed that the background noise in the vicinity of both alternatives would be approximately the same as that of the Existing Alignment, with the exception of a small increase in vehicle noise due to the alternatives' proximity to Boulder Creek Road. Construction equipment and schedules were anticipated to be approximately the same as well, with the exception of the access road construction phase, which would be more significant for the alternatives because new access roads would need to be constructed where none currently exist. Construction of new access roads was assumed to require approximately twice the number of days anticipated for repair and improvement of existing access roads along the Existing Alignment due to the additional vegetation removal, grading, surface construction, and other aspects associated with construction of new roads.

Because geotechnical studies have not been conducted along the two alternative alignments, it is unknown how many poles will require micropile foundations based on site-specific geological conditions. As a result, SDG&E assumed for this analysis that all new construction poles along the alternative alignments would be helicopter-set micropile poles, which have the greatest potential construction noise levels.

As described in the POD, residences may be exposed to eight-hour average noise levels in excess of 75 A-weighted decibels (dBA) during pole installation and removal activities if they are located within 180 feet of truck-set pole foundation construction; 190 feet of truck-set, direct-bury pole construction; 590 feet of helicopter-set pole foundation construction; or 330 feet of helicopter-set, direct-bury pole construction. In addition, any residences located within approximately 100 feet of stringing sites along the power lines may be exposed to eight-hour average noise levels in excess of 75 dBA during conductor-stringing activities.

4.5.1 Existing Alignment Analysis

No residences along the Existing Alignment would be exposed to eight-hour average noise levels in excess of 75 dBA; however, three residential parcels have property boundaries along the Existing Alignment that may be exposed to these noise levels.

Some of the equipment used during construction may cause groundborne vibrations and groundborne noise; however, this equipment would be used intermittently throughout the duration of construction. As described in the Noise Study Report, residences within

approximately 60 feet of most construction activities would exceed the annoyance threshold for vibration impacts; however, no residences are within this distance from the Existing Alignment.

The Existing Alignment would continue to operate at its current voltages and with its current number of circuits; therefore, the audible corona noise from this line would not change from the existing condition. Because operation and maintenance activities would not change from the existing practices, there would be no change in noise levels from what currently exists.

Due to the short-term nature of noise impacts, the length of the construction schedule, the size of the area over which these impacts would be spread, and the distance from the Existing Alignment to the nearest residences and residential parcels, potential noise impacts resulting from construction, operation, and maintenance of the Existing Alignment would be minimal.

4.5.2 Alternative A Analysis

Compared to the Existing Alignment, Alternative A would expose a greater number of sensitive receptors to eight-hour average noise levels in excess of 75 dBA—a total of four residences and four additional residential parcels. This alternative would also require the construction of new access roads, some of which may come within close proximity to existing residences. The construction of these access roads would result in greater noise impacts along Alternative A than those anticipated to occur for the Existing Alignment. Groundborne vibrations and groundborne noise from Alternative A would be similar to those described for the Existing Alignment due to the remoteness of the area and the distance to residents.

Compared to the Existing Alignment, Alternative A would have greater operational impacts due to audible corona noise, vegetation clearance, and annual inspections because the alternative would introduce these noise sources into an area with a greater number of residences. Because of this factor, and because Alternative A would require the construction of new access roads and bring operational activities with potential noise impacts in closer proximity to residences, potential impacts from noise due to Alternative A would be greater than those anticipated to occur for the Existing Alignment.

4.5.3 Alternative B Analysis

Compared to the Existing Alignment, Alternative B would expose a greater number of sensitive receptors to eight-hour average noise levels in excess of 75 dBA—a total of four residences and four additional residential parcels. This alternative would also require the construction of new access roads, some of which may come within close proximity to existing residences. The construction of these access roads would result in greater noise impacts along Alternative B than those anticipated to occur for the Existing Alignment. Groundborne vibrations and groundborne noise from Alternative B would be similar to those described for the Existing Alignment due to the remoteness of the area and the distance to residents.

Compared to the Existing Alignment and similar to Alternative A, Alternative B would have greater operational impacts due to audible corona noise, vegetation clearance, and annual inspections because the alternative would introduce these noise sources into an area with a greater number of residences. Because of these factors, and because Alternative B would require the construction of new access roads and bring operational activities with potential noise impacts

in closer proximity to residences, potential impacts from noise due to Alternative B would be greater than those anticipated to occur for the Existing Alignment but similar to those anticipated for Alternative A.

4.6 TRANSPORTATION AND TRAFFIC

4.6.0 Methodology and Assumptions

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts to transportation and traffic that may result from construction, operation, and maintenance of the Existing Alignment, Alternative A, and Alternative B. Existing conditions related to transportation and traffic in the vicinity of TL626 are documented in the POD, which provides a basis for this analysis. Additional County resources, including the County’s General Plan Update Environmental Impact Report and the County’s Level of Service (LOS) standards for unincorporated roadways, were also consulted for this analysis.

4.6.1 Existing Alignment Analysis

The Existing Alignment, which involves the replacement of 82 poles, crosses a network of County, USFS, and private roadways. TL626 runs north-to-south between State Route (SR-) 78 to the north and Interstate (I-) 8 to the south, approximately parallel to SR-79. Table 7: Public Roadways Providing Access to the Existing Alignment lists the major and local roadways that would be used for access during pole replacement, the number of lanes, daily and peak trips, and the LOS associated with each, where available.

Table 7: Public Roadways Providing Access to the Existing Alignment

Roadway	Classification	Number of Lanes	Average Daily Trips	Peak Hour Trips	LOS
I-8	Expressway/Freeway	4 to 6	21,181	2,183	A-C
SR-78	Collector Urban	2	4,663	738	A-C
SR-79	Rural Minor Arterial	2	14,525	1,885	B
Boulder Creek Road	Collector Rural	2	700	--	A-C
Eagle Peak Road	Collector Rural	2	--	--	--

Other roadways anticipated to be affected by construction of the Existing Alignment include a network of existing, unpaved SDG&E access roads. Although portions of the CNF are not currently served by roads, the Existing Alignment is generally located within close proximity to existing access roads or unimproved roads. The Existing Alignment crosses Eagle Peak Road at approximately pole Z213670 and Boulder Creek Road at pole Z372154, and portions of the segment run roughly parallel to USFS road Drd408606-1 between poles Z372161 and Z37266. Construction activities associated with the Existing Alignment would utilize these roadways and previously existing overland access connections to access pole sites, stringing sites, and other temporary construction areas, and would not require the construction of new access roads.

SDG&E maintains approximately 5.8 miles of existing access roads along the length of the Existing Alignment to provide access for maintenance of these poles.

During construction activities, personnel would generally drive to the work site at the beginning of the day and leave at the end of the day, with vehicles traveling to and from the work site periodically throughout the day. This would result in approximately two to four personnel vehicle trips per day during peak construction times and would only slightly increase the existing daily traffic in the area. In addition to personnel travel, approximately four to eight truck trips per day would be required during construction of the Existing Alignment to transport construction materials; provide water for construction, dust suppression, and fire safety; remove existing wood poles and conductors; or perform other construction-related tasks. Because the number of vehicle trips during construction is a small percentage of vehicle trips on I-80, SR-78, and SR-79 (i.e., a maximum .05 percent, 0.2 percent, and .08 percent, respectively), traffic on these roadways would not appreciably increase, and no reduction in LOS is expected.

On Boulder Creek and Eagle Peak roads, traffic associated with personnel and construction equipment will be more noticeable due to lower numbers of daily trips on these rural roadways. Temporary travel delays could occur when poles on either side of Eagle Peak and Boulder Creek roads are replaced. Line crossing of roadways is anticipated to be facilitated by the use of temporary crossing structures; however, if the use of crossing structures is not feasible, temporary lane closures may be required to ensure public safety during conductor installation and removal. Where temporary lane closures are required, the lanes would generally be closed for 10 to 15 minutes during the stringing of each conductor, for a total of approximately three closures at each crossing. No complete road closures would be required.

Helicopters would be used in part along the Existing Alignment when removing existing wood poles or installing new weathered-steel poles and stringing new conductors in areas of rugged terrain, which would temporarily increase air traffic and encroach on navigable air space. The Existing Alignment involves 50 sites that would require helicopter usage (37 pole sites in the TL626A portion and 13 pole sites in the TL626B portion). Consistent with SDG&E's current operational procedures, SDG&E would coordinate flight patterns with local air traffic control and the Federal Aviation Administration (FAA) prior to construction to prevent any adverse impacts due to increased air traffic. The pole replacement in the Existing Alignment would not be considered by the FAA to be a potential obstruction, as the poles would not exceed 200 feet in height, and the Existing Alignment would not be located within 10,000 feet of a public or military-use airport or within 5,000 feet of a public-use heliport.

The proposed work within the Existing Alignment is more likely to affect transportation facilities or increase traffic during the construction phase than during operation and maintenance, as only a very limited amount of surface activity is typically required to maintain an electric line. Further, the lines already exist in the area and no increase in activity is expected once construction is complete.

4.6.2 Alternative A Analysis

Alternative A would reroute a portion of the existing 69 kV power line between poles Z213680 and Z372134 to approximately two miles directly east of the existing alignment at its farthest point. The Alternative A route would consist of the construction of approximately 45 new steel

poles within a new ROW. Construction activities would be completed by helicopter in areas without ground access (approximately three sites) and by boom truck where sites can be accessed via roadway (approximately 42 sites). Because this alternative does not have previously constructed access and maintenance roads, new road construction would be necessary for these pole locations. In addition, helicopter landing areas would be required in the vicinity of pole locations where no roadway access would exist. Alternative A would require the construction or improvement of approximately 6.8 miles of unimproved single-lane roads to allow for truck and construction equipment access to pole and stringing sites. Construction of these roads would consist of vegetation removal to achieve a road width of 12 feet to 20 feet and grading of the road beds. Construction vehicles associated with the improvement of these roadways would likely include a bulldozer, road grader, loader, haul truck, two water trucks, and a mower. Construction of these roads would require additional days of construction activity over what would be required for the Existing Alignment, resulting in more trucks using local and regional roadways during that extended time period.

In addition to the construction of new access roads associated with the newly constructed portion of Alternative A, 58 poles within the Existing Alignment between Boulder Creek Substation and pole Z372134 would be removed and 24 poles north of the substation would be replaced. These poles would be accessed via existing access roads or by helicopter. As with construction of the new poles, these additional components would result in more days of truck travel on local and regional roadways as the existing poles are removed and the existing access roads are restored to previous conditions (to the extent feasible).

Traffic flow in the area would be impacted to a greater degree in Alternative A because of a greater number of road crossings, as well as pole construction and removal activities, in close proximity to roadways. In addition to the roadways noted in Table 7: Public Roadways Providing Access to the Existing Alignment, Alternative A would also impact Engineers Road, which accommodates approximately 100 vehicle trips per day. Alternative A would cross Boulder Creek Road four times, Engineers Road one time, and Eagle Peak Road one time. Traffic delays would be experienced on these roads as crossing work is completed. Penstemon Road and Penstemon Lane would also be utilized for access to both Alternatives A and B. Numerous other small, unnamed roads would also be crossed with the potential for sporadic delays.

Helicopters would make multiple trips per pole site to drop off and pick up personnel and equipment and to set poles in rugged terrain. Alternative A includes approximately three sites requiring helicopter usage for the new alignment, as well as 50 sites within the Existing Alignment, for a total of 53 pole sites requiring helicopter use. Helicopters would be required for at least one day per site, which would result in at least 53 days of helicopter usage—approximately three more days than what would be required for construction of the Existing Alignment.

Because additional access roads would need to be constructed, a larger number of road crossings would be required, additional vehicle trips along collector roadways would result, and additional helicopter usage would be required, the anticipated impacts to transportation and traffic resulting from Alternative A would be greater than those anticipated for the Existing Alignment.

4.6.3 Alternative B Analysis

Alternative B would reroute a portion of the existing 69 kV power line between poles Z213680 and Z372134 to approximately two miles directly east of the existing alignment, at its farthest point. The new construction portion of Alternative B would include the installation of approximately 53 steel poles within a new ROW. Construction activities would be completed by helicopter in areas without ground access (approximately four sites) and by boom truck where sites can be accessed via roadway (approximately 49 sites). Because this alternative does not have previously constructed access and maintenance roads, new road construction would be necessary for these pole locations. In addition, helicopter landing areas would be required in the vicinity of pole locations where no roadway access would exist. Alternative B would require the construction or improvement of approximately 6.8 miles of unimproved single-lane roads to allow for truck and construction equipment access to pole and stringing sites. Construction of these roads would require additional days of construction activity beyond what would be required for the Existing Alignment or Alternative A, resulting in more trucks using local and regional roadways during that extended time period.

In addition to the construction of new access roads associated with the newly constructed portion of Alternative B, 58 poles within the Existing Alignment between Boulder Creek Substation and pole Z372134 would be removed and 24 poles north of the substation would be replaced. These poles would be accessed via existing access roads or by helicopter. As with construction of the new poles, this additional component would result in more days of truck travel on local and regional roadways while the existing poles are removed and the existing access roads are restored to previous conditions (to the extent feasible). Construction vehicles would cross the same roadways as identified under Alternative A, as well as numerous small, unnamed and private roads.

Helicopters would make multiple trips per pole site to drop off and pick up personnel and equipment. Alternative B would include approximately four sites requiring the use of helicopters, as well as 50 sites within the Existing Alignment, for a total of approximately 54 sites. Helicopters usage is required for at least one day per site, which would result in at least 54 days of helicopter usage—four more days than what would be required for construction of the Existing Alignment as part of the Proposed Projects, and at least one day more than what would be required for construction of Alternative A.

4.7 VISUAL RESOURCES

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts to visual resources that may result from construction, operation, and maintenance of the Existing Alignment, Alternative A, and Alternative B.

4.7.0 Methodology and Assumptions

The methodology used to evaluate the potential impacts to visual resources is the same as the methodology described in the Revised POD—namely, application of the USFS's Scenery Management System and its Scenic Integrity Objectives (SIOs). Because SDG&E does not currently have access to properties along the two alternative alignments, no visual simulations were created for this analysis. Instead, representative photographs were collected from public

roadways in the vicinity of the proposed alignments, which are provided in Attachment D: Representative Photographs.

4.7.1 Existing Alignment Analysis

SDG&E would replace existing wood utility poles along the Existing Alignment with steel poles at an approximately one-to-one ratio. In general, these activities would involve incremental and minor changes to a sparsely settled landscape. The Existing Alignment crosses approximately 2.4 miles of CNF land with USFS SIOs that are classified as High and approximately 1.2 miles of CNF land with USFS SIOs that are classified as Moderate.

The Existing Alignment may be visible from one scenic vista—Cuyamaca Peak—which is approximately 3.2 miles southeast of the southern end of the Existing Alignment. The replacement of existing 40- to 90-foot-tall wood poles with reddish-brown, weathered steel poles up to 100 feet tall would not result in a noticeable change in visual contrast with regard to line, form, or color from the existing view, which includes the existing poles along the length of TL626. Therefore, the Existing Alignment components would not cause a perceptible deviation to the intactness of the existing landscape character. The Existing Alignment would not substantially affect the existing visual character of the scenic vista because existing poles would be replaced by somewhat taller poles, which represents a minor incremental change, and the taller poles would be located more than three miles from Cuyamaca Peak.

Portions of the Existing Alignment may be visible from eligible state scenic highways SR-78 and SR-79, which are also County scenic routes. SR-78 is located approximately 2.8 miles north of the northern end of the existing TL626 alignment, and SR-79 is located approximately four miles southeast of the existing TL626 alignment. None of the Existing Alignment components would be visible from a designated state scenic highway. Like the existing structures, the replacement poles would appear against a landscape backdrop. Given the viewing distance and presence of existing structures, and because the color of the new poles would blend in with the landscape backdrop, change along the Existing Alignment would not be particularly noticeable. If noticeable, the Existing Alignment would generally represent a minor and incremental change that would not substantially affect motorists' views from SR-78 or SR-79.

To varying degrees, construction activity would be noticeable to local residents, motorists, and recreational visitors. Construction-related visual impacts would result from the presence of equipment, materials, and work crews along the Existing Alignment, temporary staging areas, and stringing sites. Construction activities would take place over an approximately two-year period as part of the overall construction of TL626, but the construction timeframe would be considerably shorter in duration at individual locations. Minor disturbances of land within and along the Existing Alignment would occur as a result of activity required for removing and replacing poles. In addition, minor land disturbance may occur at some of the temporary construction areas that would be established as part of the Existing Alignment construction; these areas would generally be located near or along the existing alignment. A limited degree of visual contrast could occur as a result of land disturbance activity, such as creation of newly exposed soil areas along the Existing Alignment; however, all disturbed terrain would be restored to near pre-construction conditions.

The majority of construction activities would take place during daylight hours; however, some construction along the Existing Alignment may be required or finished at night; these activities would require lighting for safety. Any required lighting would be limited to an individual pole work area of approximately 1,256 square feet and would not exceed more than two hours per evening for more than four evenings. No new permanent lighting would be required for the Existing Alignment. No new glare would be created along the Existing Alignment due to the use of non-specular conductors and reddish-brown, weathered-steel poles, which have non-reflective finishes. These visual changes would be consistent with the USFS aesthetic management standards for the CNF and would meet the SIOs. Therefore, a decrease of more than one SIO level is not anticipated for the Existing Alignment.

4.7.2 Alternative A Analysis

As part of Alternative A, SDG&E would install new steel utility poles in a previously undisturbed and predominantly undeveloped location, replace existing wood poles with steel poles at an approximately one-to-one ratio from Boulder Creek Substation north to pole Z213680, and remove approximately 3.7 miles of the Existing Alignment from Boulder Creek Substation south to pole Z372134. In general, these activities would involve noticeable changes to a sparsely settled landscape and would place new steel poles in closer proximity to roads and residences. Portions of Alternative A would also cross approximately two miles of CNF land with USFS SIOs that are classified as High.

Alternative A may also be visible from one scenic vista, Cuyamaca Peak, and two eligible state scenic highways, SR-78 and SR-79. Compared to the Existing Alignment, Alternative A would result in a greater visual contrast with regard to line, form, and color, as well as a greater perceptible deviation to the intactness of the existing landscape character because a new power line would be installed in a sparsely settled landscape where currently none exists, which would have a greater impact on the visual character of the scenic vista than that presented by construction of the Existing Alignment.

Compared to the Existing Alignment, Alternative A would also result in greater land disturbance—new access roads would be required where currently none exist—and require an additional approximately two months of construction, resulting in a longer duration of impact on the visual character of the area. In addition, Alternative A would be closer to local residents and motorists along Boulder Creek, Eagle Creek, and Engineers roads, which would result in a greater impact to the visual character during construction and operation and maintenance compared to the Existing Alignment.

The lighting requirements for Alternative A would be similar to the Existing Alignment, but would occur over a longer period of time due to the lengthier construction schedule and in closer proximity to local residents and motorists. Because SDG&E would use the same reddish-brown, weathered steel poles and other materials designed to minimize glare, potential impacts from glare would be similar to those identified for the Existing Alignment.

4.7.3 Alternative B Analysis

As part of Alternative B, SDG&E would install new steel utility poles in a previously undisturbed and predominantly undeveloped location, replace existing wood poles with steel

poles at an approximately one-to-one ratio from Boulder Creek Substation north to pole Z213680, and remove approximately 3.7 miles of the Existing Alignment from Boulder Creek Substation south to pole Z372134. In general, these activities would involve noticeable changes to a sparsely settled landscape. Portions of Alternative B would cross approximately 1.8 miles of CNF land with USFS SIOs that are classified as High.

Alternative B may also be visible from one scenic vista, Cuyamaca Peak, and two eligible state scenic highways, SR-78 and SR-79. Compared to the Existing Alignment, Alternative B would result in a greater visual contrast with regard to line, form, and color, as well as a greater perceptible deviation to the intactness of the existing landscape character because a new power line would be installed in a sparsely settled landscape, which would have a greater impact on the visual character of the scenic vista than that presented by construction of the Existing Alignment.

Compared to the Existing Alignment and similar to Alternative A, Alternative B would result in greater land disturbance (due to new access roads) and an additional approximately two months of construction, resulting in a longer duration of impact on the visual character of the area. In addition, Alternative B would be closer to local residents and motorists along Boulder Creek Road, Eagle Creek Road, Engineers Road, and Penstemon Road, which would result in a greater impact to the visual character during construction, operation, and maintenance compared to the Existing Alignment.

The lighting requirements for Alternative B would be the similar to the Existing Alignment and Alternative A, but could occur over a longer period of time due to the lengthier construction schedule and in closer proximity to local residents and motorists. Because SDG&E would use the same reddish-brown, weathered steel poles and other materials designed to minimize glare, potential impacts from glare would be similar to those identified for the Existing Alignment.

4.8 WILDERNESS AND RECREATION

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts to wilderness and recreation that could result from construction, operation, and maintenance of the Existing Alignment, Alternative A, and Alternative B.

4.8.0 Methodology and Assumptions

The methodology used to evaluate the potential impacts to wilderness and recreation for this analysis is the same as the methodology described in the Revised POD. Because SDG&E does not currently have access rights to properties within the revised study corridor, no pedestrian surveys were conducted for Alternatives A or B to assess the potential for areas within the revised study corridor, which would include characteristics consistent with the USFS wilderness designation.

4.8.1 Existing Alignment Analysis

The Existing Alignment and its associated access roads are within areas currently proposed by the USFS to be rezoned as Recommended Wilderness; however, this area has not yet been adopted as a Recommended or Designated Wilderness Area, and the draft ROD that would rezone these areas to become Recommended Wilderness is currently subject to a 60-day

objection period. The closest Designated Wilderness Area is the Pine Creek Wilderness Area, which is approximately 11 miles southeast of the Existing Alignment; therefore, the Existing Alignment would not impact an existing Designated Wilderness Area. The Existing Alignment crosses approximately 1.7 miles of areas proposed by the USFS as Recommended Wilderness; however, the Existing Alignment and associated access roads are well-established and have been in their current locations for many years. Therefore, while continued use of the Existing Alignment would impact Recommended Wilderness Areas if such a designation is approved in the USFS LMP, the fire hardening of the Existing Alignment would not change the characteristics of the surrounding areas as this alignment and its access roads have already impacted and influenced the characteristics of the surrounding area, and are part of the baseline condition.

Along the Existing Alignment, pole replacement and conductor-stringing activities could result in temporary restrictions of recreational activities within the CNF along this alignment during construction activities; however, no campgrounds, trails, or other established facilities are located in the vicinity of the Existing Alignment that would require closure. Any associated impacts from the Existing Alignment would be expected to occur during construction activities, would be short-term and temporary in nature, and would improve the existing condition from a fire safety perspective, consistent with the USFS LMP and thereby improving the future recreation potential of the area.

Operation and maintenance of the Existing Alignment would not change from those activities already occurring along the existing power line. No new access roads will be constructed for the Existing Alignment, as the existing access roads will be utilized where ground access is required. After construction is completed, the power line would be operated and maintained by SDG&E at existing staffing levels, and no additional staff would be needed to maintain the power line; as a result, there would be no increase in local population and no corollary increase in recreation facility use or demand in the area.

Because the Existing Alignment and its access roads are currently outside of the area identified by the USFS as Recommended or Designated Wilderness Areas and no closures of existing recreational facilities or additional local population would occur, the Existing Alignment would not pose any impacts to wilderness or recreation. If the draft ROD for the USFS LMP for CNF is issued, the area within the Existing Alignment would be rezoned Recommended Wilderness.

4.8.2 Alternative A Analysis

Alternative A would not be located within a Proposed Recommended or Designated Wilderness Area or a Proposed Inventoried Roadless Area. The closest Designated Wilderness Area is the Pine Creek Wilderness Area, which is approximately 11 miles southeast of Alternative A. In addition, no recreational facilities, such as trails or campgrounds, are located in the vicinity of Alternative A. Approximately 1.1 miles of the new alignment for Alternative A would be located within the CNF boundary in a location where no facilities currently exist. Alternative A would also include the construction of a new alignment in areas outside the CNF where no development currently exists—often through heavily forested or wild areas—which would permanently impact these areas and disturb the currently undeveloped nature of these areas. Alternative A would also require new access roads in areas where none currently exist, which would result in impacts to these areas' recreational and wilderness values.

Along the Alternative A alignment, pole replacement and conductor-stringing activities could result in temporary restrictions of recreational activities within the CNF along this portion of the alignment during construction activities; however, no campgrounds, trails, or other established facilities are located in the vicinity of Alternative A that would require closure. Similar to the Existing Alignment, no additional local population would result from construction, operation, or maintenance of Alternative A. Because Alternative A and its access roads are outside the area identified by the USFS as Proposed Recommended Wilderness, and because no closures of existing recreational facilities or additional local population would occur, Alternative A would not pose any impacts to wilderness or recreation within the CNF. In comparison with the Existing Alignment, however, Alternative A would have greater impacts to wild, undeveloped and forested areas by placing permanent impact areas (e.g., pole locations and access roads) in currently undeveloped areas.

4.8.3 Alternative B Analysis

Similar to Alternative A, Alternative B would not be located within a Proposed Recommended or Designated Wilderness Area or a Proposed Inventoried Roadless Area. The closest Designated Wilderness Area is the Pine Creek Wilderness Area, which is approximately 11 miles southeast of Alternative B. In addition, no recreational facilities, such as trails or campgrounds, are located in the vicinity of Alternative B. Approximately 0.9 mile of the new alignment for Alternative B would be located within the CNF boundary in a location where no facilities currently exist. Alternative B would also include the construction of a new alignment in areas outside of the CNF where no development currently exists—often through heavily forested or wild areas—which would permanently impact these areas and disturb the currently undeveloped nature of these areas. Alternative B would also require new access roads in areas where none currently exist, which would result in impacts to these areas' recreational and wilderness values.

Along the Alternative B alignment, pole replacement and conductor-stringing activities could result in temporary restrictions of recreational activities within the CNF along this portion of the alignment during construction activities; however, no campgrounds, trails, or other established facilities are located in the vicinity of Alternative B that would require closure. Similar to the Existing Alignment, no additional local population would result from construction or operation and maintenance of Alternative B. Because Alternative B and its access roads are outside the area identified by the USFS as Proposed Recommended Wilderness and no closures of existing recreational facilities or additional local population would occur, Alternative B would not pose any impacts to wilderness or recreation within the CNF. In comparison with the Existing Alignment, however, Alternative B would have greater impacts to wild, undeveloped and forested areas by placing permanent impact areas (e.g., pole locations and access roads) in currently undeveloped areas.

4.9 ADDITIONAL RESOURCE: LAND USE

The following subsections describe the methods and assumptions used to analyze potential impacts, then provide potential impacts to land use that could result from construction, operation, and maintenance of the Existing Alignment, Alternative A, and Alternative B.

4.9.0 Methodology and Assumptions

The land use analysis for the Proposed Projects involved a review of various city, county, and regional land use plans, policies, and regulations. Land use and policy information reviewed included the County, USFS, and California State Parks (State Parks) websites. Personal communication with the USFS and site visits to the Proposed Projects area confirmed existing land uses and jurisdictions. This analysis also included a review of applicable general plan and zoning maps covering the Proposed Projects area. Plans that were developed and are currently implemented by SDG&E, such as the NCCP and QCB HCP, were also reviewed, as were the County's Multiple Species Conservation Program and Multiple Habitat Conservation and Open Space Plan. Land use-related geographic information system data were obtained from the County Department of Planning and Land Use and the USFS, and were used to verify jurisdictional information. A review of USFS, BLM, and California Department of Parks and Recreation plans was conducted to confirm jurisdictional boundaries and identify applicable management practices and standards.

To determine whether or not the Existing Alignment and Alternatives A and B would create an impact to land use, the potential of each power line segment to physically divide a community; conflict with any local land use plan, policy, or regulation; and/or conflict with an applicable HCP or NCCP were taken into consideration. These topics are discussed for the Existing Alignment and Alternatives A and B in the subsections that follow.

4.9.1 Existing Alignment Analysis

The Existing Alignment is located between the communities of Santa Ysabel and Descanso in central San Diego County. It crosses approximately 3.5 miles of the CNF; the areas outside of the CNF are primarily rural and contain ranches and other agricultural uses. The land use zones crossed by each portion of the Existing Alignment are as follows:

- The TL626B portion of the Existing Alignment from pole Z213680 to Boulder Creek Substation crosses the following San Diego County General Plan land use designations: approximately 0.2 acre of Public Agency Lands and approximately 0.5 acre of lands designated as Rural Land. This portion of the Existing Alignment would also cross approximately 0.1 acre of privately owned Resource Conservation Area.
- The TL626A portion of the Existing Alignment from Boulder Creek Substation to pole Z372134 crosses the following San Diego County General Plan land use designations: approximately 1.3 acres of Public Agency Lands and approximately 0.3 acre of lands designated as Rural Land. TL626A crosses the following Resource Conservation Areas: 0.2 acre of Forest Resource Conservation Area, 0.05 acre of privately owned Resource Conservation Area, and 0.03 acre of other federally owned Resource Conservation Area.

Construction of the Existing Alignment will consist of wood-to-steel pole replacement of existing poles at an approximately one-to-one ratio. In addition, the Existing Alignment will be constructed entirely within existing ROWs. The existing access roads will be utilized; therefore, no new access roads will be constructed as part of the Existing Alignment. Operation and maintenance activities for the Existing Alignment will include the same activities as those currently performed by SDG&E to maintain the existing facilities. Further, the replacement of

existing wood poles with steel poles will improve system operations and decrease maintenance requirements for these lines. As a result, the Existing Alignment will not result in the physical division of established communities.

SDG&E considered relevant land use plans, policies, and concerns as part of the environmental review process in the Revised POD and provided a summary of how the Proposed Projects will be consistent with the USFS LMP. Construction of the Existing Alignment will proceed according to local air quality regulations, noise ordinances, and traffic regulations, as described Section 4.0 Air Quality, Section 4.5 Noise, and Section 4.6 Transportation and Traffic of the Revised POD, respectively. In addition, operation and maintenance will occur along the Existing Alignment according to current procedures, which are consistent with all relevant land use plans and policies. As a result, the Existing Alignment will not conflict with any existing land use plans, policies, or regulations.

Construction, operation, and maintenance of the Existing Alignment will not conflict with the SDG&E Subregional NCCP or the QCB HCP. As described further in Section 4.1 Biological Resources, activities along the Existing Alignment will continue to comply with the biological and habitat-related provisions and policies contained within the SDG&E Subregional NCCP and the QCB HCP. Therefore, no impact to an HCP or NCCP will occur.

Because the Existing Alignment will not physically divide an established community, will not conflict with any existing land use plans, policies, or regulations, and will not impact an HCP or NCCP, no impacts to land use will result from the construction, operation, and maintenance of the Existing Alignment.

4.9.2 Alternative A Analysis

Alternative A would also be located between the communities of Santa Ysabel and Descanso in central San Diego County. The new construction portion of Alternative A would cross approximately 1.1 miles of the CNF in previously undisturbed areas. The Alternative A alignment outside of the CNF would cross primarily rural land uses. The land use zones crossed by Alternative A are listed as follows:

- The TL626B segment of Alternative A (from pole Z213680 to Boulder Creek Substation) would cross the following San Diego County General Plan land use designations, similar to the Existing Alignment: approximately 0.2 acre of Public Agency Lands and approximately 0.5 acre of lands designated as Rural Land. This portion of Alternative A would also cross approximately 0.1 acre of privately-owned RCA.
- The TL626A portion of the Existing Alignment from Boulder Creek Substation to pole Z372134 would be removed under Alternative A. This portion of the existing line crosses the following San Diego County General Plan land use designations: approximately 1.3 acres of Public Agency Lands and approximately 0.3 acre of lands designated as Rural Land. This existing alignment also crosses the following RCAs: 0.2 acre of Forest RCA, 0.05 acre of privately owned RCA, and 0.03 acre of other federally owned RCA.

- The new construction portion of Alternative A would cross the following San Diego County General Plan land use designations: approximately 2.3 acres of Public Agency Lands, approximately 0.3 acre of Public/Semi-Public Facilities, approximately 23.4 acres of Rural Lands, less than 0.1 acre of Semi-Rural Residential, and approximately 2.9 acres of Tribal Lands. The Rural Land area that Alternative A would cross is sparsely settled with several residences. Alternative A would also cross the following RCAs: approximately 0.2 acre of Forest RCA, approximately 0.3 acre of other federal RCA, and approximately 6.6 acres of privately owned RCA.

Because construction of Alternative A would include the construction of new steel poles and accompanying access roads in areas outside of existing SDG&E ROWs, new ROWs would need to be secured by SDG&E from the USFS, the Inaja and Cosmit Reservation, and approximately 12 private landowners. However, the construction, operation, and maintenance of the new Alternative A alignment would not physically divide an established community.

All activities associated with Alternative A would proceed according to local policies, ordinances, and regulations in a manner similar to what would occur for the Existing Alignment. Further, these activities would not conflict with the SDG&E Subregional NCCP or the QCB HCP, but would comply with the biological and habitat-related provisions and policies contained within these two plans. Therefore, no impact to an HCP or NCCP would occur. Because it would not physically divide an established community nor conflict with any existing policies, plans, or regulations, Alternative A would not have an impact on land use.

4.9.3 Alternative B Analysis

Alternative B would be located similarly to that described for Alternative A, and would cross approximately 0.9 mile of the CNF with new construction where none currently exists. The areas outside of the CNF crossed by this alternative are primarily rural. The land use zones crosses by the portions associated with Alternative B are listed as follows:

- The TL626B segment of Alternative B (from pole Z213680 to Boulder Creek Substation) would cross the following San Diego County General Plan land use designations, similar to the Existing Alignment: approximately 0.2 acre of Public Agency Lands and approximately 0.5 acre of lands designated as Rural Land. This portion of Alternative B would also cross approximately 0.1 acre of privately owned RCA.
- The TL626A portion of the Existing Alignment from Boulder Creek Substation to pole Z372134 would be removed under Alternative B. This portion of the existing line crosses the following San Diego County General Plan land use designations: approximately 1.3 acres of Public Agency Lands and approximately 0.3 acre of lands designated as Rural Land. This existing alignment also crosses the following RCAs: 0.2 acre of Forest RCA, 0.05 acre of privately owned RCA, and 0.03 acre of other federally owned RCA.
- The new construction portion of Alternative B would cross the following San Diego County General Plan land use designations: approximately 2.3 acres of Public Agency Lands, approximately 0.3 acre of Public/Semi-Public Facilities, approximately 28.1 acres of Rural Lands, less than 0.1 acre of Semi-Rural Residential, and approximately 2.6 acres

of Tribal Lands. The Rural Land area that Alternative B would cross is sparsely settled with several residences. Alternative B would also cross the following RCAs: approximately 0.2 acre of Forest RCA, approximately 0.3 acre of other federal RCA, and approximately 6.5 acres of privately owned RCA.

Similar to Alternative A, construction of Alternative B would consist of the installation of new steel poles and access roads in locations where SDG&E does not currently have ROWs. Therefore, new ROWs would need to be secured from the USFS and approximately 13 private landowners. However, the construction, operation, and maintenance of the new Alternative B alignment would not physically divide an established community.

All activities associated with Alternative B would proceed according to local policies, ordinances, and regulations in a manner similar to what would occur for the Existing Alignment. Further, these activities would not conflict with the SDG&E Subregional NCCP or the QCB HCP, but would comply with the biological and habitat-related provisions and policies contained within these two plans. Therefore, no impact to an HCP or NCCP would occur. Because it would not physically divide an established community or conflict with any existing policies, plans, or regulations, Alternative B would not have an impact on land use.

5 – CONCLUSION

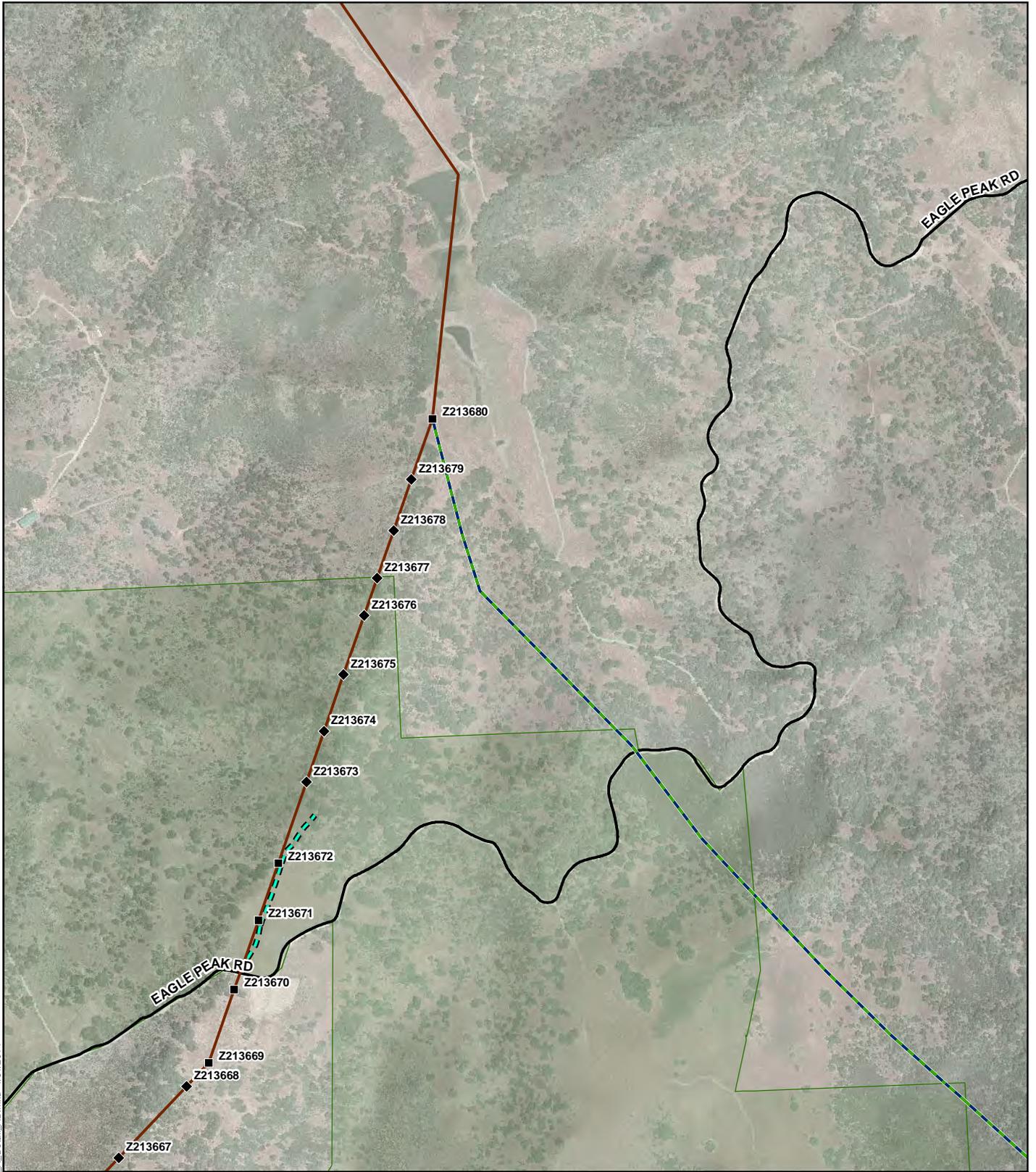
Based on the preliminary fieldwork and analysis described in the previous subsections, construction of either alternative to the Existing Alignment would have potentially greater impacts to all environmental resources evaluated but wilderness due to the extended construction timeline, the construction of a larger number of poles, the construction of new access roads and helicopter landing areas, and the removal of a large number of trees and other undisturbed native vegetation to accommodate new access roads and overhead alignment. In addition, construction of either alternative would require new ROWs on private lands, as well as on tribal lands for Alternative A, which would permanently impact the future use of these properties. Reconstruction of the Existing Alignment, which has established access roads and work areas, would not require tree removal and would be preferential from an environmental resources perspective to the construction of a new alignment in a location where none currently exist.

6 – REFERENCES

San Diego County. 2010. General Plan Update Environmental Impact Report, October 2010.

San Diego County Public Works. 2006. LOS for Unincorporated Roadways.

ATTACHMENT A: EXISTING ALIGNMENT DETAILED ROUTE MAP



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Attachment A: Existing Alignment Detailed Route Map 1 of 5

Power Line TL626 Alternative Analysis

Poles

- ◆ Helo
- Helo/Boom Truck

Alignment

- Existing TL626 Line
- Alternative A
- Alternative A & B
- Alternative B

Access

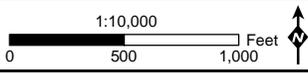
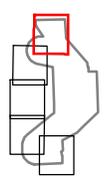
- SDG&E Maintained
- Existing Road

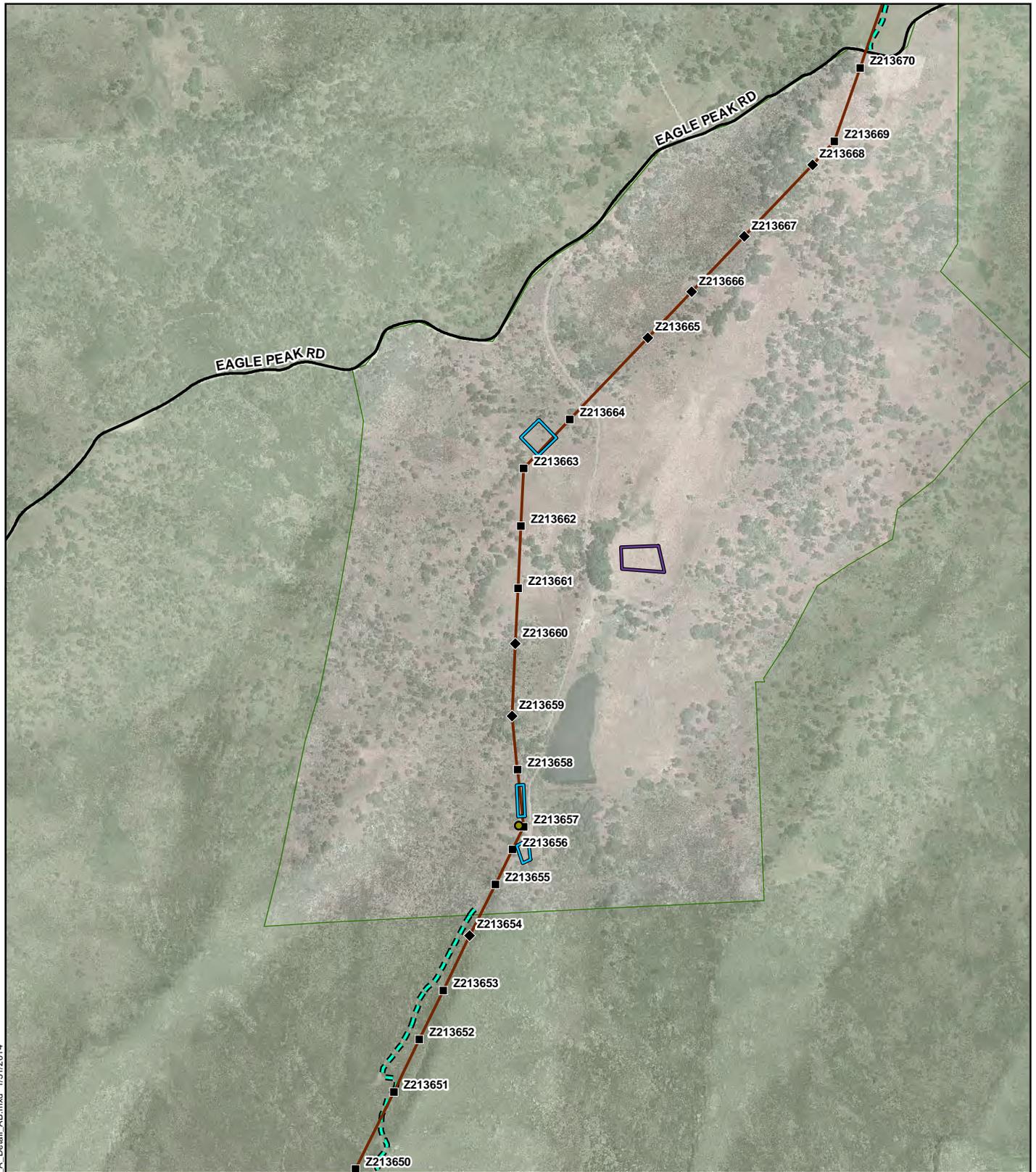
Temporary Work Areas

- ▭ Staging Area
- ▭ Stringing Site

Parcel Ownership

- ▭ Inaja and Cosmit Indian Reservation
- ▭ Cleveland National Forest





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Attachment A: Existing Alignment Detailed Route Map 2 of 5

Power Line TL626 Alternative Analysis

Poles

- ◆ Helo
- Helo/Boom Truck

Alignment

- Existing TL626 Line
- Alternative A
- Alternative A & B
- Alternative B

Access

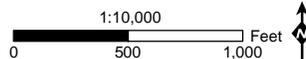
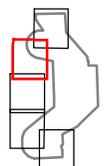
- - - SDG&E Maintained
- Existing Road

Temporary Work Areas

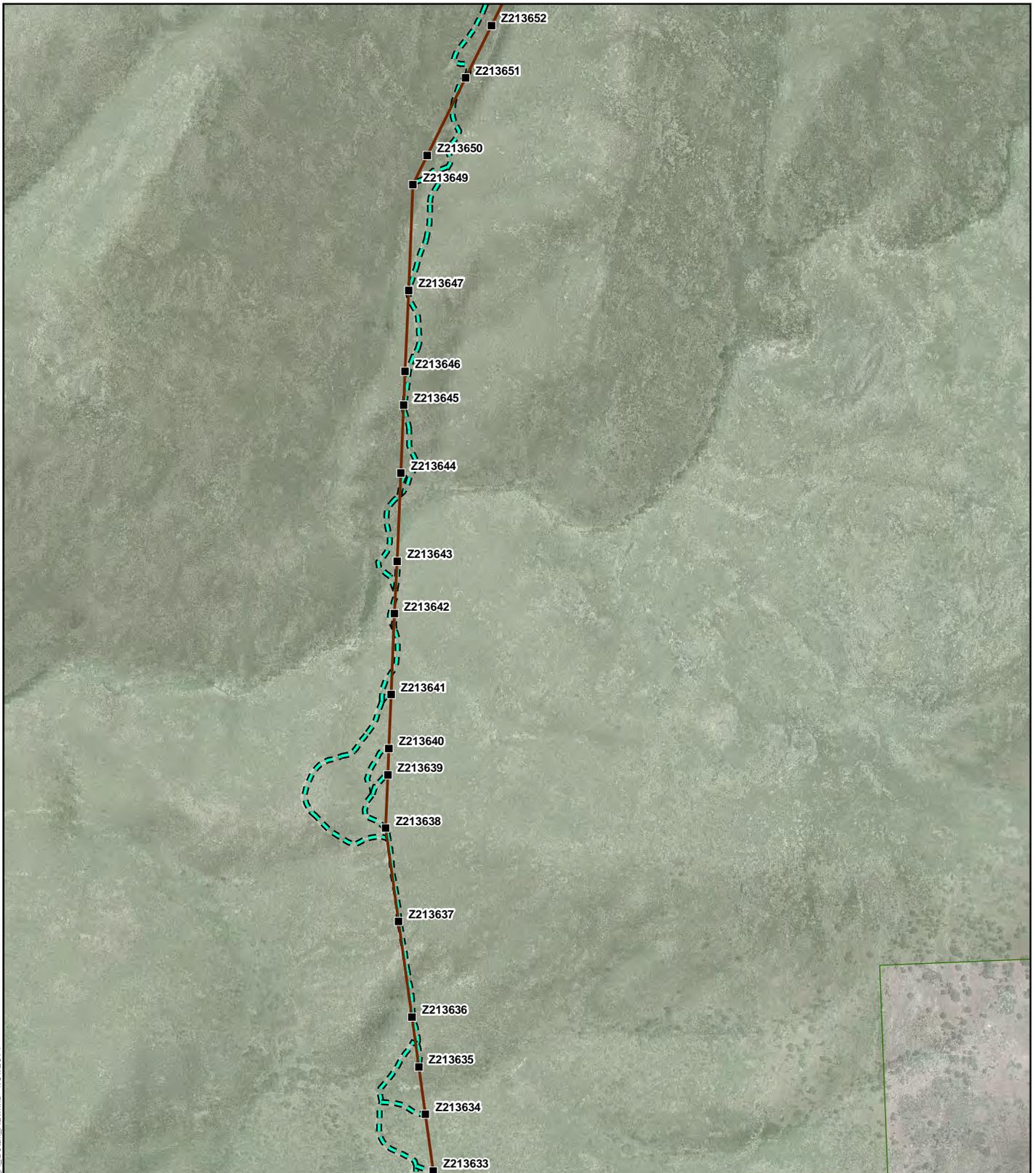
- Staging Area
- Stringing Site

Parcel Ownership

- Inaja and Cosmit Indian Reservation
- Cleveland National Forest



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Attachment A: Existing Alignment Detailed Route Map 3 of 5

Power Line TL626 Alternative Analysis

Poles

- ◆ Helo
- Helo/Boom Truck

Alignment

- Existing TL626 Line
- Alternative A
- Alternative A & B
- Alternative B

Access

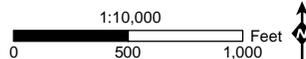
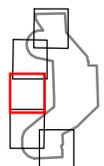
- SDG&E Maintained
- Existing Road

Temporary Work Areas

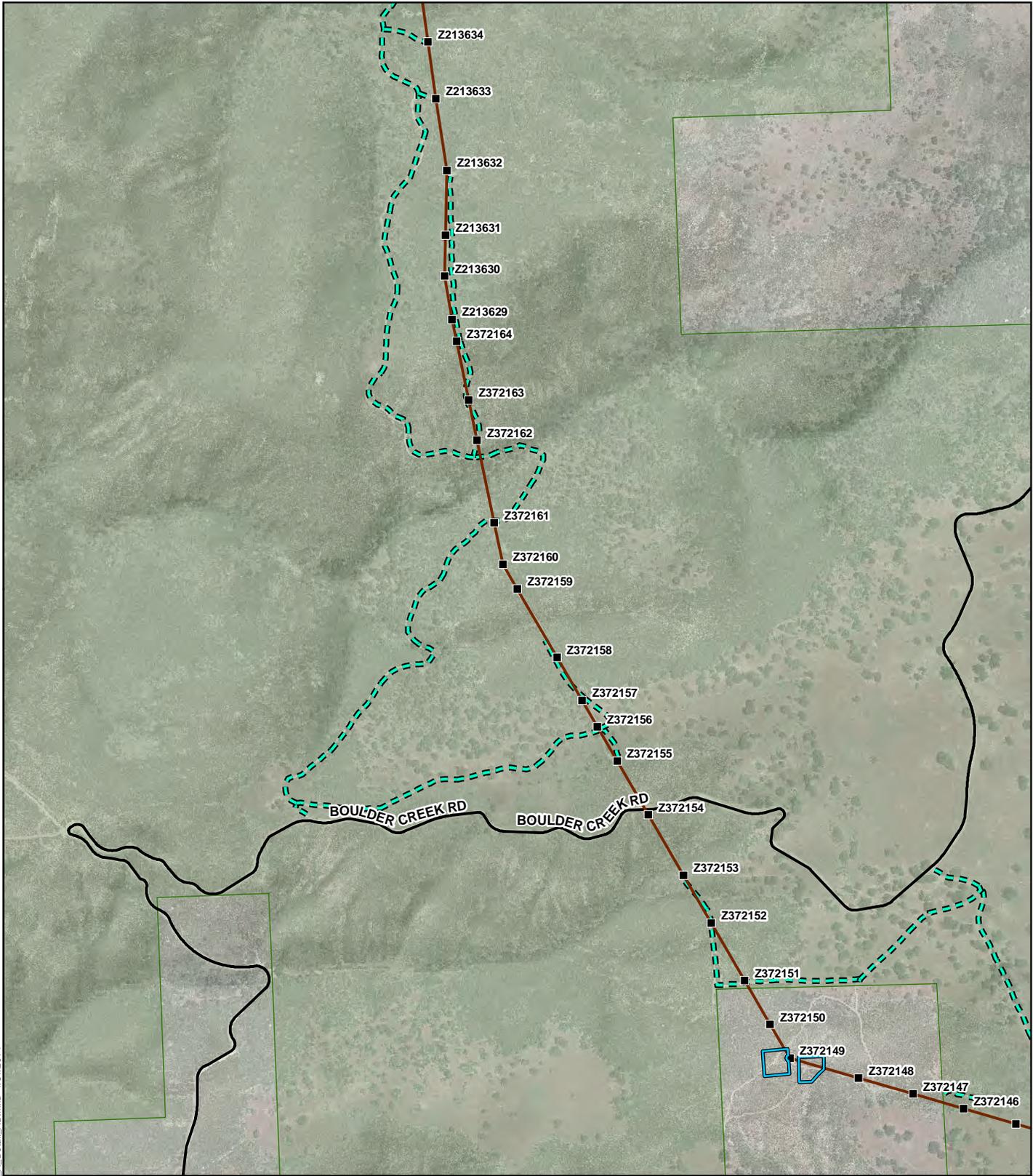
- Staging Area
- Stringing Site

Parcel Ownership

- Inaja and Cosmit Indian Reservation
- Cleveland National Forest



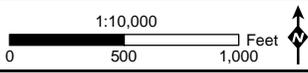
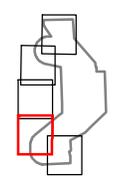
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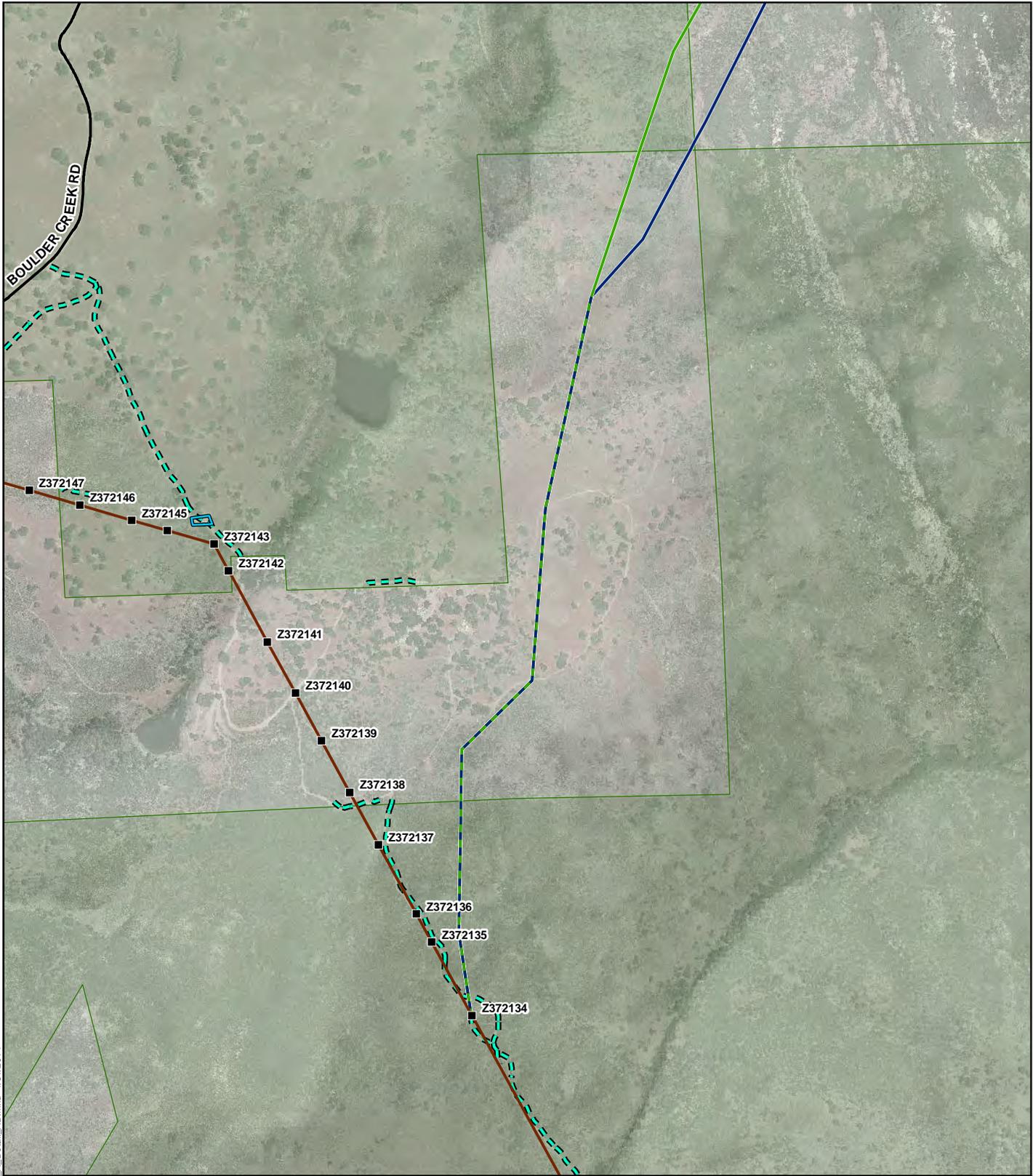


Attachment A: Existing Alignment Detailed Route Map 4 of 5

Power Line TL626 Alternative Analysis

Poles	Alignment	Access	Temporary Work Areas
◆ Helo	— Existing TL626 Line	— SDG&E Maintained	▭ Staging Area
■ Helo/Boom Truck	— Alternative A	— Existing Road	▭ Stringing Site
	— Alternative A & B		Parcel Ownership
	— Alternative B		▭ Inaja and Cosmit Indian Reservation
			▭ Cleveland National Forest

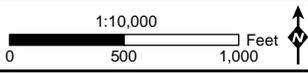




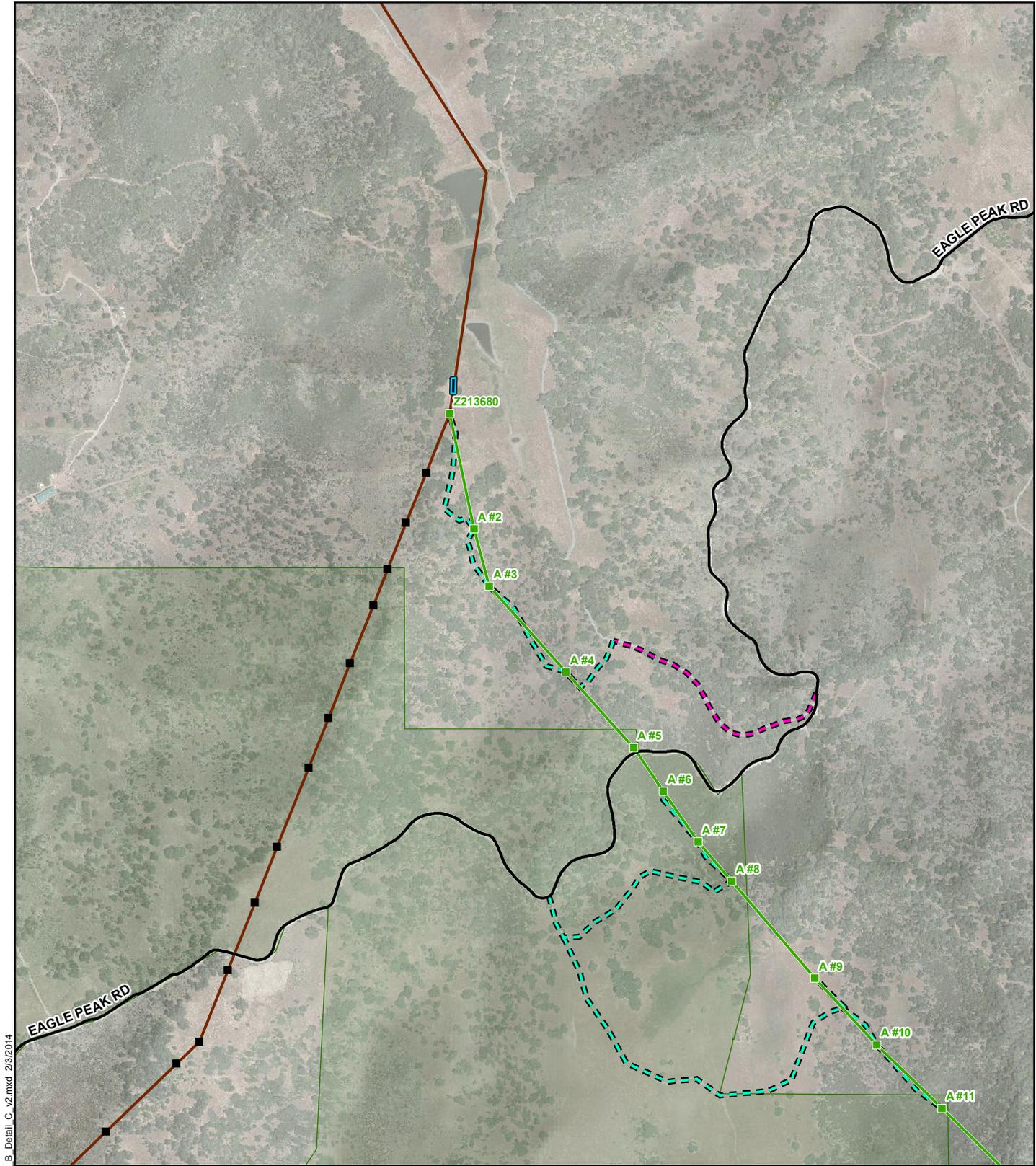
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Attachment A: Existing Alignment Detailed Route Map 5 of 5 **Power Line TL626 Alternative Analysis**

Poles <ul style="list-style-type: none"> ◆ Helo ■ Helo/Boom Truck 	Alignment <ul style="list-style-type: none"> — Existing TL626 Line — Alternative A — Alternative A & B — Alternative B 	Access <ul style="list-style-type: none"> - - - SDG&E Maintained — Existing Road 	Temporary Work Areas <ul style="list-style-type: none"> ▭ Staging Area ▭ Stringing Site Parcel Ownership <ul style="list-style-type: none"> ▭ Inaja and Cosmit Indian Reservation ▭ Cleveland National Forest 	
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ATTACHMENT B: ALTERNATIVE A DETAILED ROUTE MAP

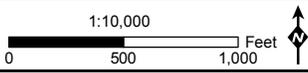


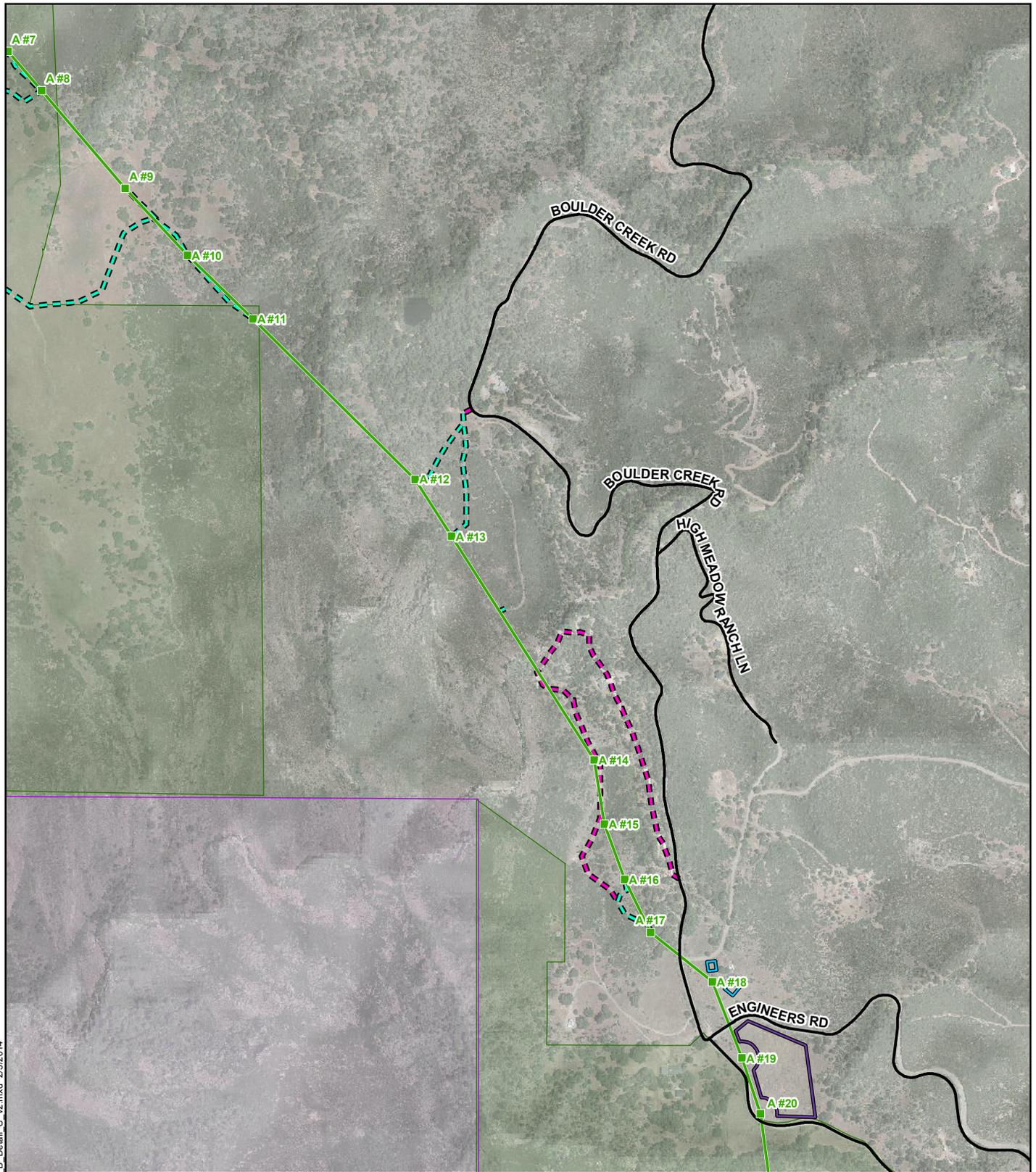
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Attachment B: Alternative A Detailed Route Map 1 of 5

Power Line TL626 Alternative Analysis

<ul style="list-style-type: none"> ■ Boom Truck ◆ Helo ■ Existing Pole 	<p>Alignment</p> <ul style="list-style-type: none"> — Existing TL626 Line — Alternative A <p>Access</p> <ul style="list-style-type: none"> - - - Existing Road to be Improved - - - SDG&E Maintained — Existing Road 	<p>Temporary Work Areas</p> <ul style="list-style-type: none"> Landing Zone Staging Area Stringing Site <p>Parcel Ownership</p> <ul style="list-style-type: none"> Inaja and Cosmit Indian Reservation Cleveland National Forest 	
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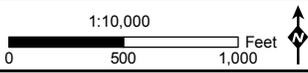


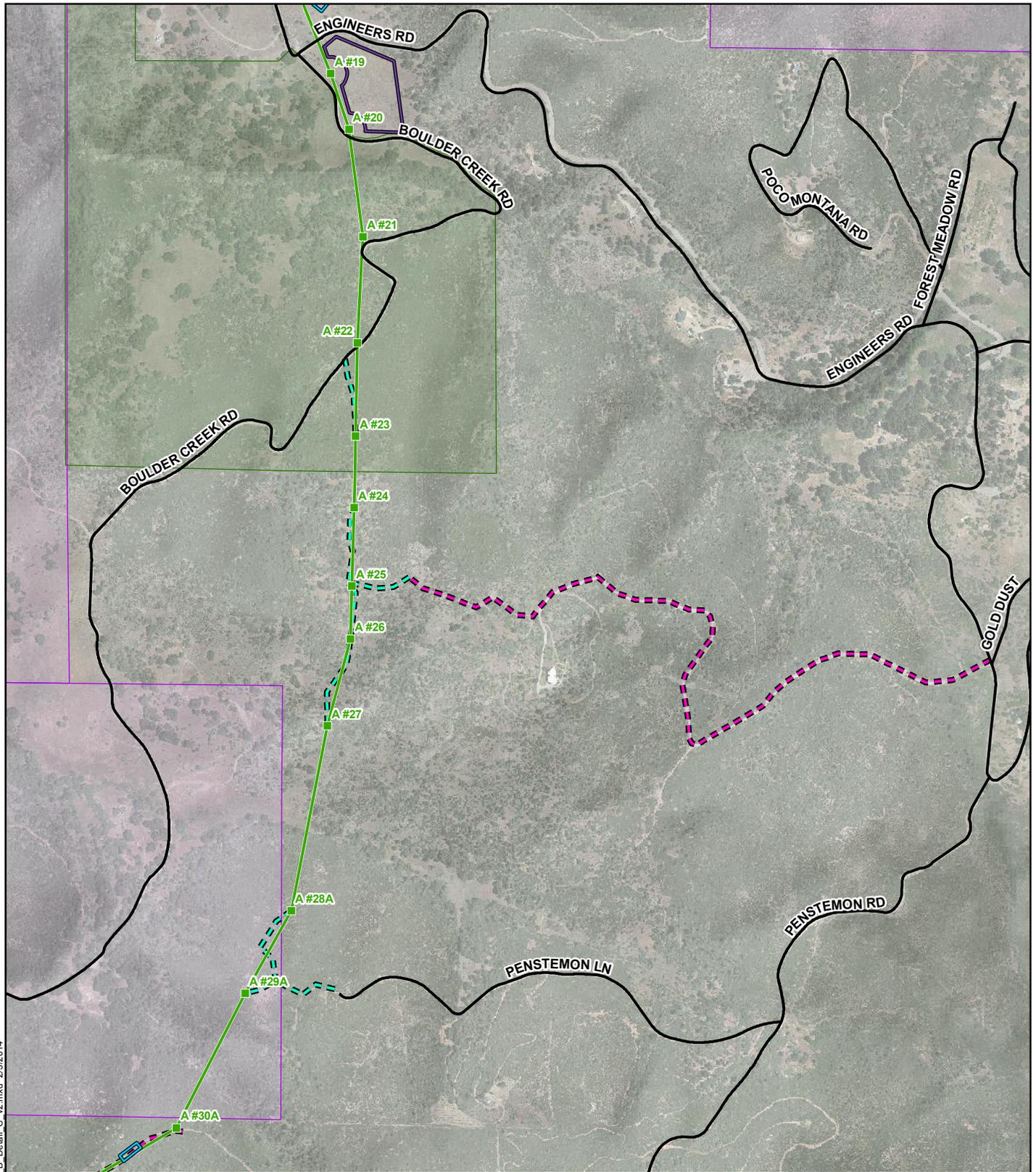
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Attachment B: Alternative A Detailed Route Map 2 of 5

Power Line TL626 Alternative Analysis

<ul style="list-style-type: none"> ■ Boom Truck ◆ Helo ■ Existing Pole 	<p>Alignment</p> <ul style="list-style-type: none"> — Existing TL626 Line — Alternative A <p>Access</p> <ul style="list-style-type: none"> - - - Existing Road to be Improved - - - SDG&E Maintained — Existing Road 	<p>Temporary Work Areas</p> <ul style="list-style-type: none"> □ Landing Zone □ Staging Area □ Stringing Site <p>Parcel Ownership</p> <ul style="list-style-type: none"> □ Inaja and Cosmit Indian Reservation □ Cleveland National Forest 	
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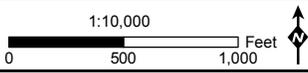


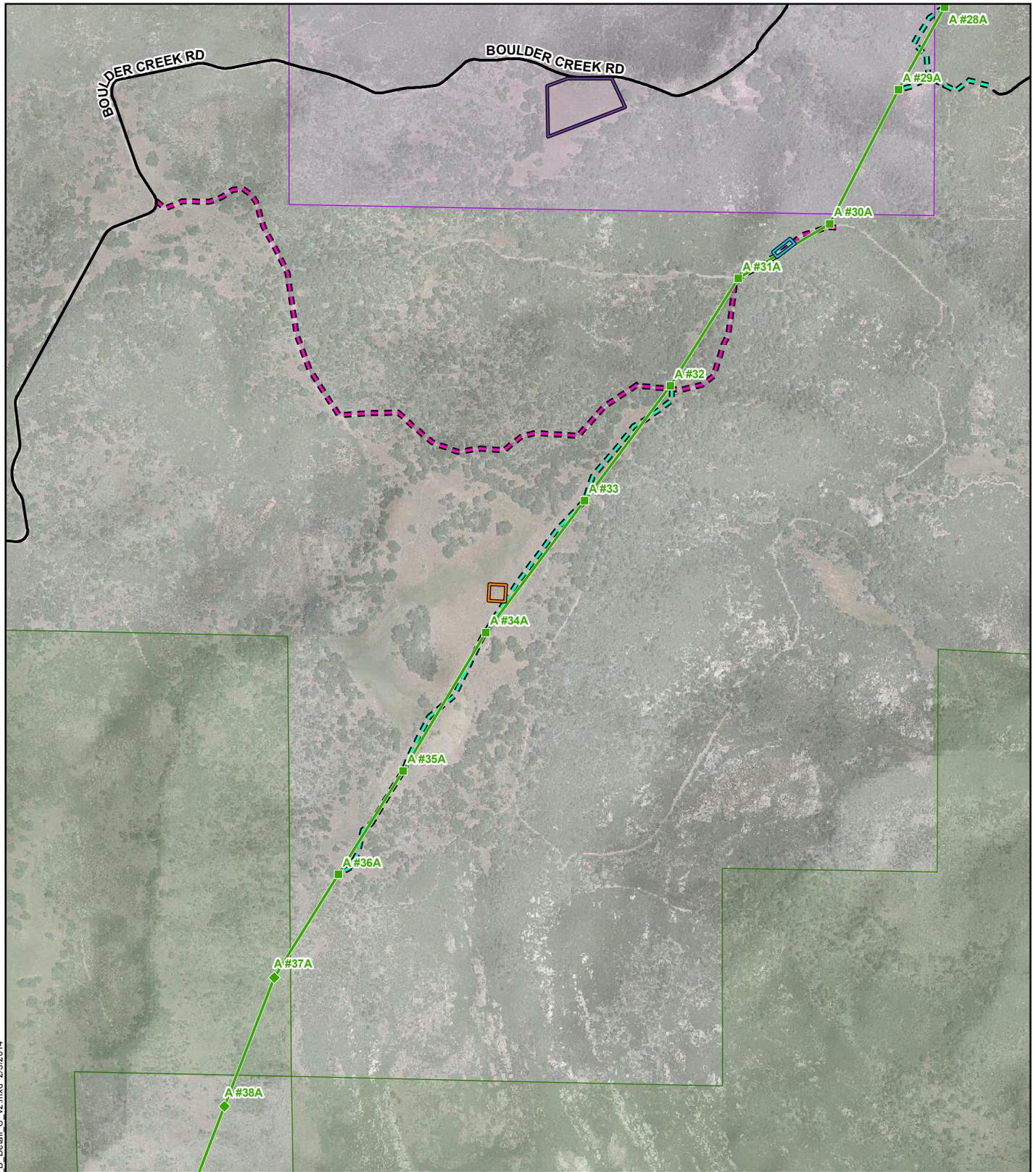
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Attachment B: Alternative A Detailed Route Map 3 of 5

Power Line TL626 Alternative Analysis

<ul style="list-style-type: none"> ■ Boom Truck ◆ Helo ■ Existing Pole 	<p>Alignment</p> <ul style="list-style-type: none"> — Existing TL626 Line — Alternative A <p>Access</p> <ul style="list-style-type: none"> - - - Existing Road to be Improved - - - SDG&E Maintained — Existing Road 	<p>Temporary Work Areas</p> <ul style="list-style-type: none"> □ Landing Zone □ Staging Area □ Stringing Site <p>Parcel Ownership</p> <ul style="list-style-type: none"> □ Inaja and Cosmit Indian Reservation □ Cleveland National Forest 	
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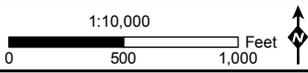


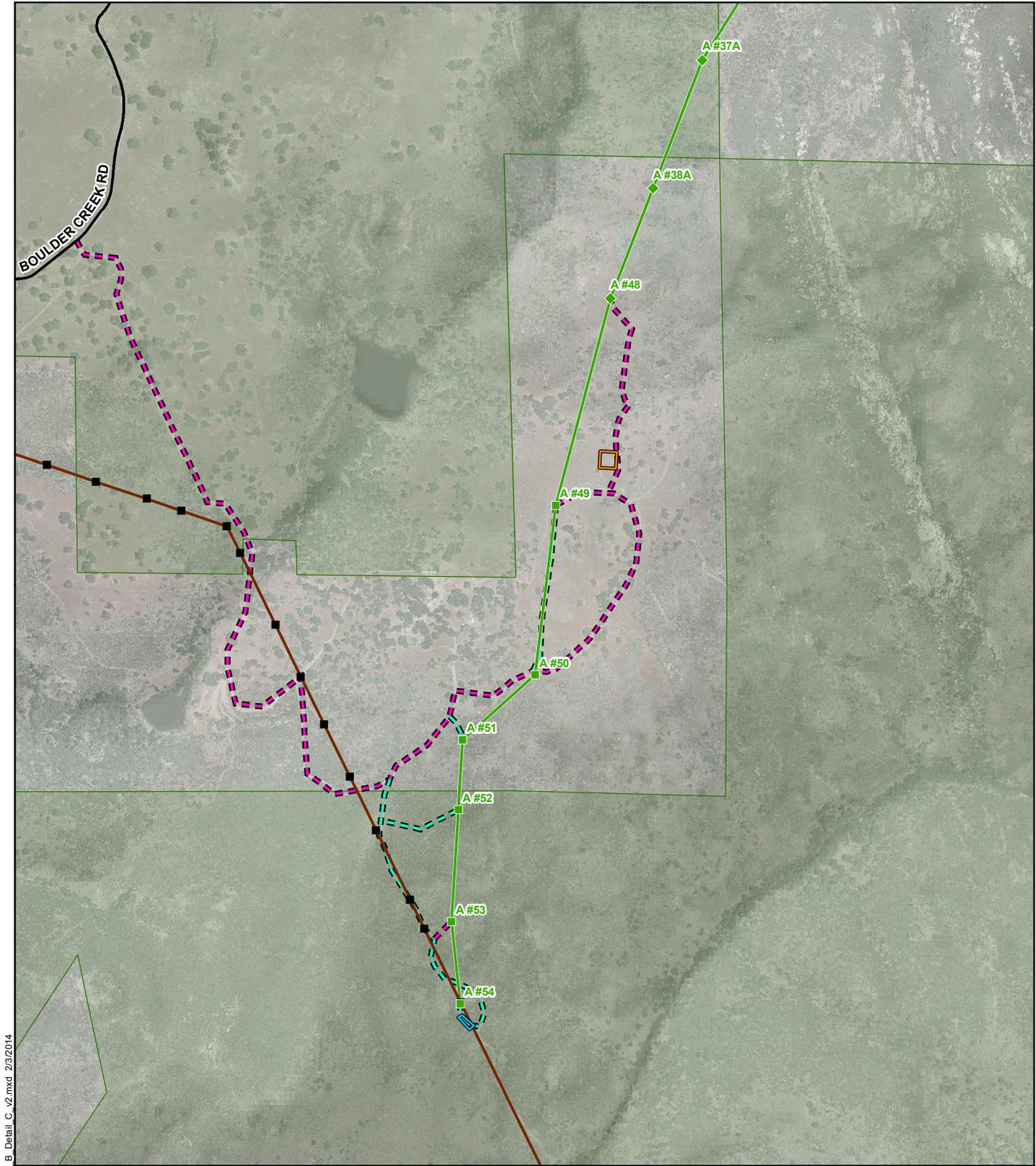


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Attachment B: Alternative A Detailed Route Map 4 of 5 **Power Line TL626 Alternative Analysis**

<ul style="list-style-type: none"> ■ Boom Truck ◆ Helo ■ Existing Pole 	<p>Alignment</p> <ul style="list-style-type: none"> — Existing TL626 Line — Alternative A <p>Access</p> <ul style="list-style-type: none"> - - Existing Road to be Improved - - SDG&E Maintained — Existing Road 	<p>Temporary Work Areas</p> <ul style="list-style-type: none"> □ Landing Zone □ Staging Area □ Stringing Site <p>Parcel Ownership</p> <ul style="list-style-type: none"> □ Inaja and Cosmit Indian Reservation □ Cleveland National Forest 	
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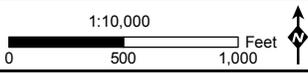
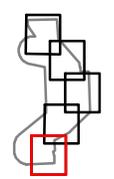


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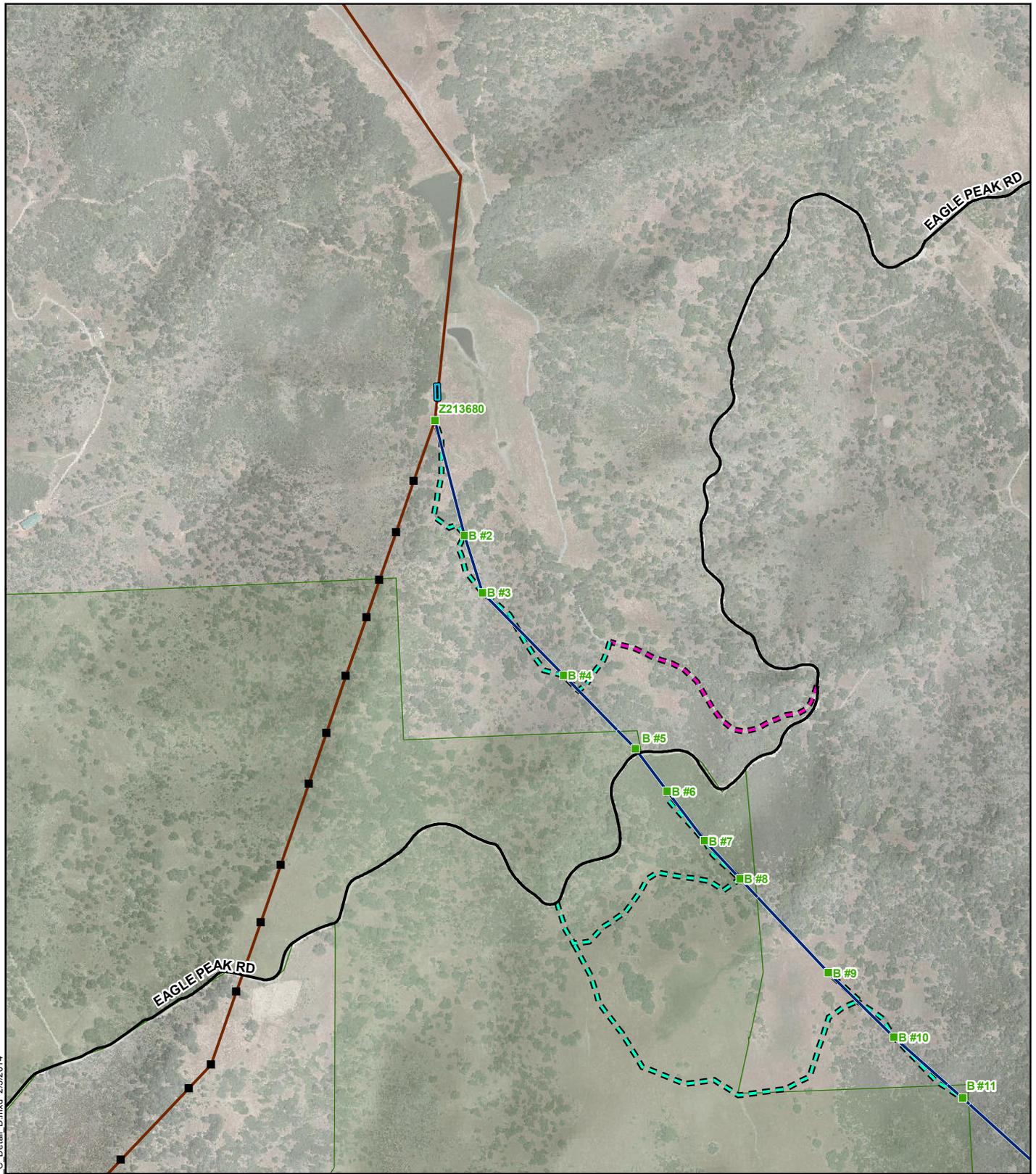
Attachment B: Alternative A Detailed Route Map 5 of 5

Power Line TL626 Alternative Analysis

<ul style="list-style-type: none"> ■ Boom Truck ◆ Helo ■ Existing Pole 	<p>Alignment</p> <ul style="list-style-type: none"> — Existing TL626 Line — Alternative A <p>Access</p> <ul style="list-style-type: none"> - - - Existing Road to be Improved - - - SDG&E Maintained — Existing Road 	<p>Temporary Work Areas</p> <ul style="list-style-type: none"> Landing Zone Staging Area Stringing Site <p>Parcel Ownership</p> <ul style="list-style-type: none"> Inaja and Cosmit Indian Reservation Cleveland National Forest
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ATTACHMENT C: ALTERNATIVE B DETAILED ROUTE MAP

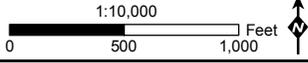


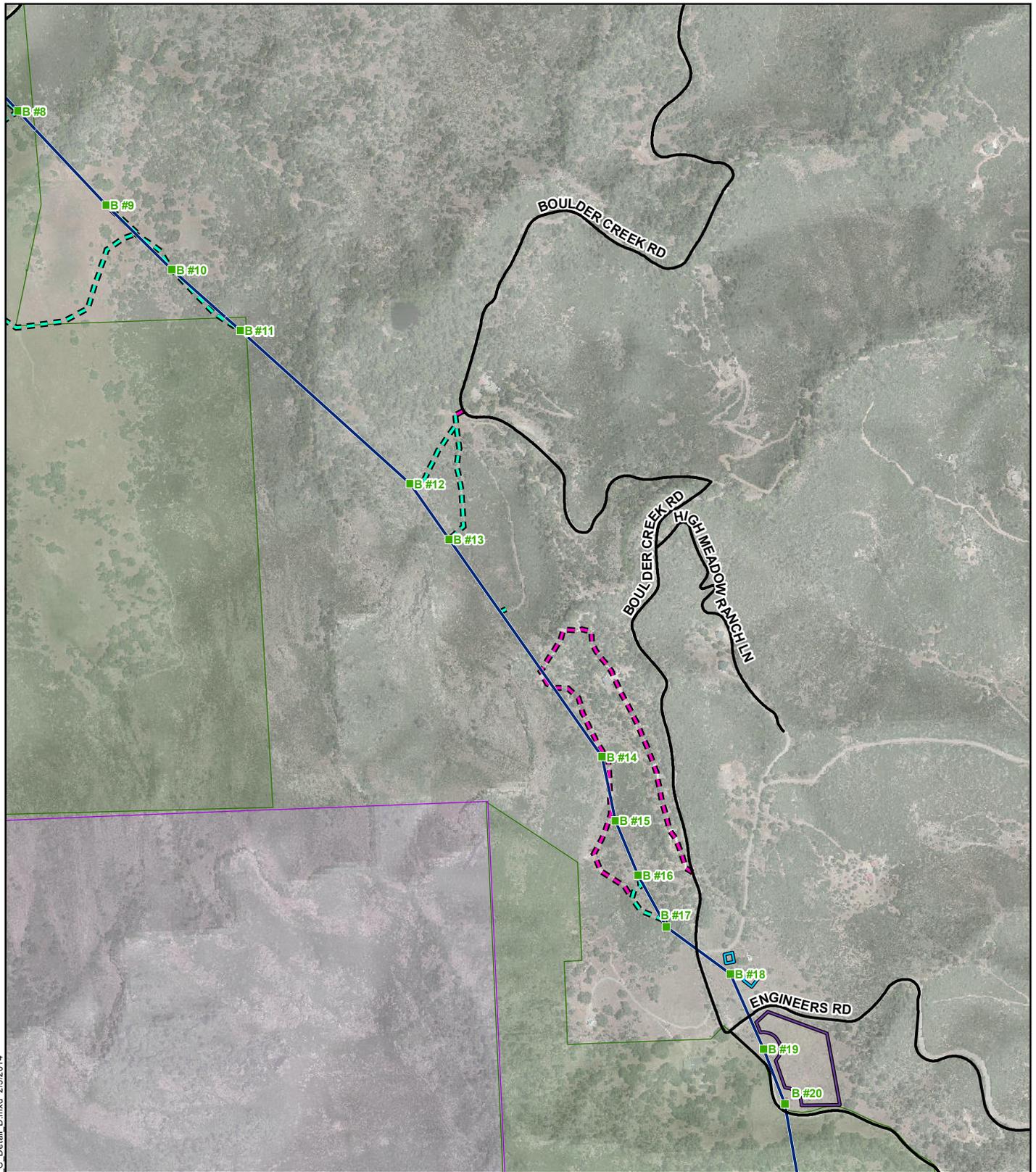
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Attachment C: Alternative B Detailed Route Map 1 of 5

Power Line TL626 Alternative Analysis

<ul style="list-style-type: none"> ■ Boom Truck ◆ Helo ■ Existing Pole 	<p>Alignment</p> <ul style="list-style-type: none"> — Existing TL626 Line — Alternative B <p>Access</p> <ul style="list-style-type: none"> - - Existing Road to be Updated - - SDG&E Maintained — Existing Road 	<p>Temporary Work Areas</p> <ul style="list-style-type: none"> □ Landing Zone □ Staging Area □ Stringing Site <p>Parcel Ownership</p> <ul style="list-style-type: none"> □ Inaja and Cosmit Indian Reservation □ Cleveland National Forest 	
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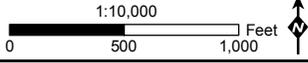


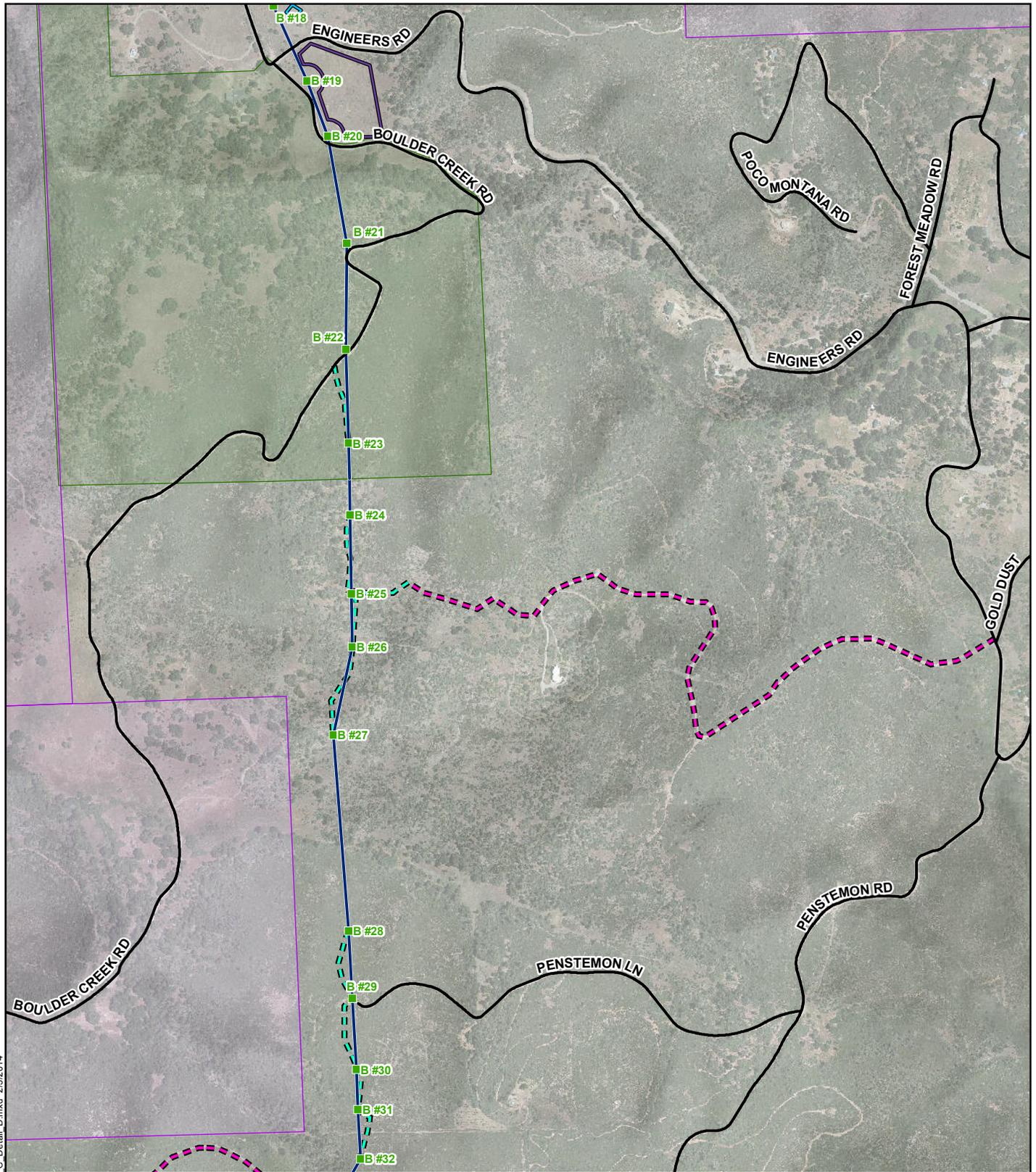
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Attachment C: Alternative B Detailed Route Map 2 of 5

Power Line TL626 Alternative Analysis

<ul style="list-style-type: none"> ■ Boom Truck ◆ Helo ■ Existing Pole 	<p>Alignment</p> <ul style="list-style-type: none"> — Existing TL626 Line — Alternative B <p>Access</p> <ul style="list-style-type: none"> - - - Existing Road to be Updated - - - SDG&E Maintained — Existing Road 	<p>Temporary Work Areas</p> <ul style="list-style-type: none"> □ Landing Zone □ Staging Area □ Stringing Site <p>Parcel Ownership</p> <ul style="list-style-type: none"> □ Inaja and Cosmit Indian Reservation □ Cleveland National Forest 	
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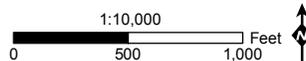
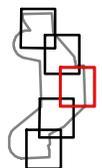


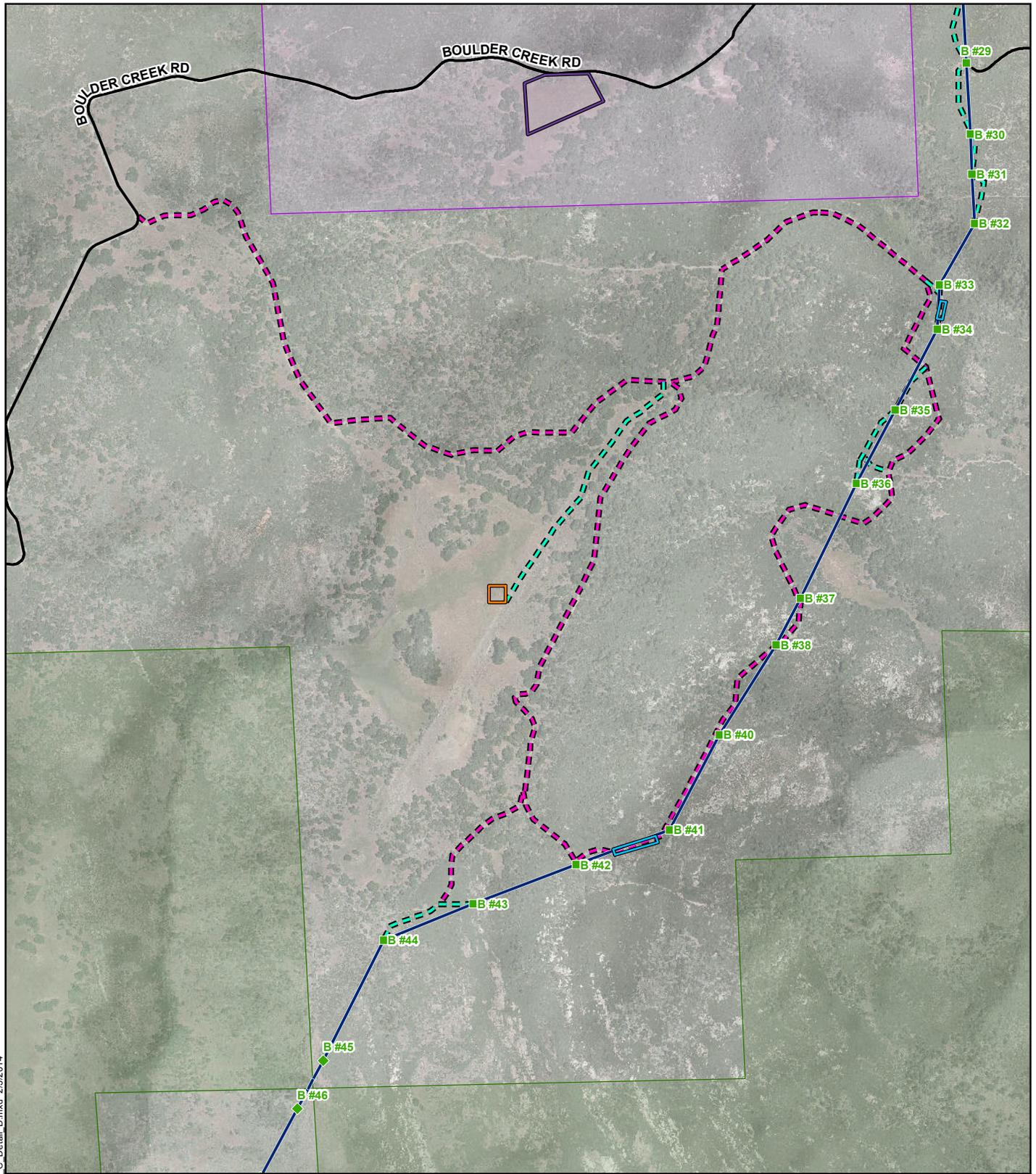
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Attachment C: Alternative B Detailed Route Map 3 of 5

Power Line TL626 Alternative Analysis

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> ■ Boom Truck ◆ Helo ■ Existing Pole | <p>Alignment</p> <ul style="list-style-type: none"> — Existing TL626 Line — Alternative B <p>Access</p> <ul style="list-style-type: none"> - - - Existing Road to be Updated - - - SDG&E Maintained — Existing Road | <p>Temporary Work Areas</p> <ul style="list-style-type: none"> □ Landing Zone □ Staging Area □ Stringing Site <p>Parcel Ownership</p> <ul style="list-style-type: none"> □ Inaja and Cosmit Indian Reservation □ Cleveland National Forest |
|---|--|---|



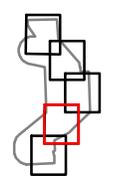
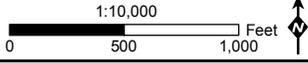


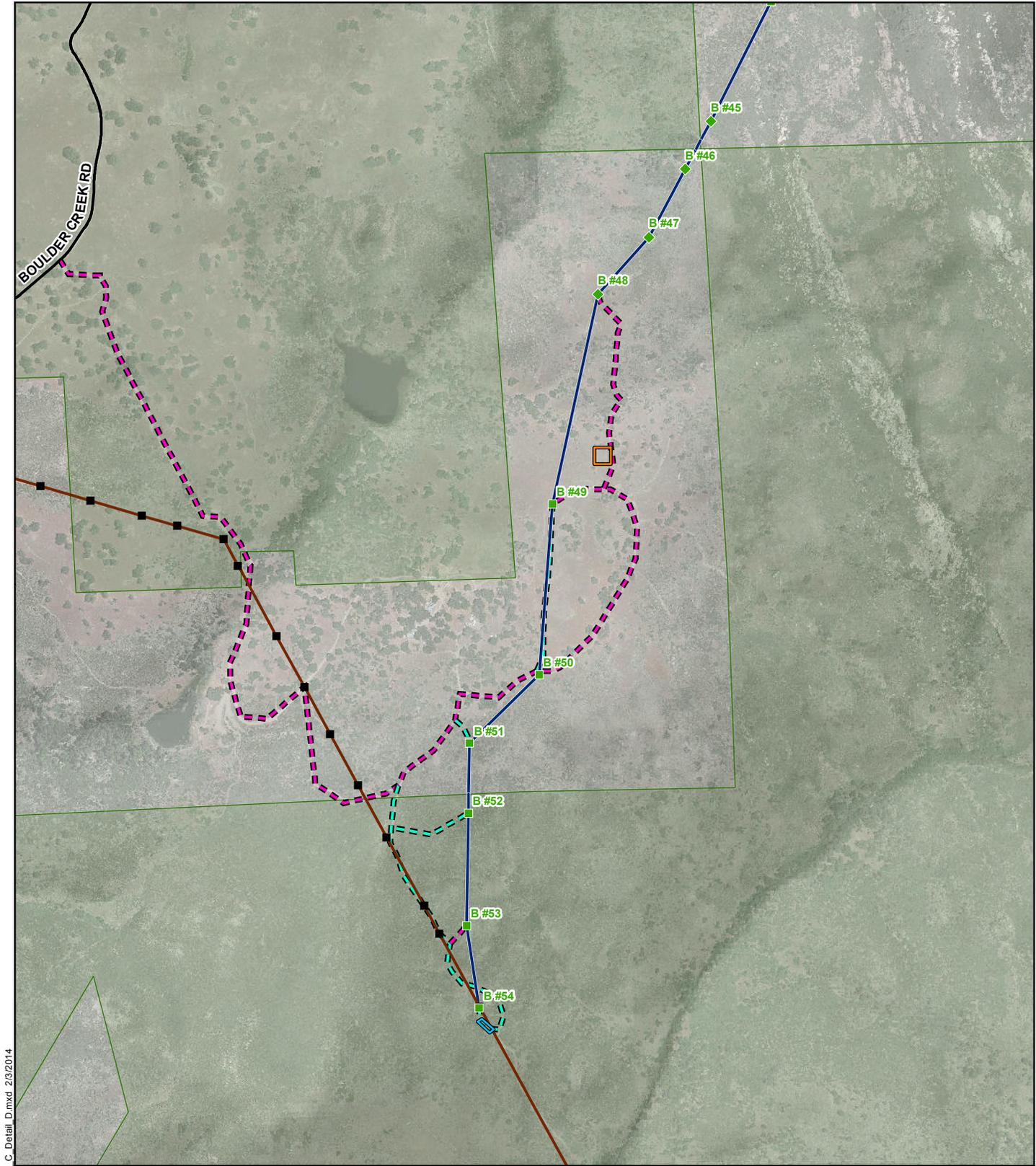
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Attachment C: Alternative B Detailed Route Map 4 of 5

Power Line TL626 Alternative Analysis

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> ■ Boom Truck ◆ Helo ■ Existing Pole | <p>Alignment</p> <ul style="list-style-type: none"> — Existing TL626 Line — Alternative B <p>Access</p> <ul style="list-style-type: none"> - - - Existing Road to be Updated - - - SDG&E Maintained — Existing Road | <p>Temporary Work Areas</p> <ul style="list-style-type: none"> □ Landing Zone □ Staging Area □ Stringing Site <p>Parcel Ownership</p> <ul style="list-style-type: none"> □ Inaja and Cosmit Indian Reservation □ Cleveland National Forest |
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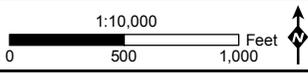
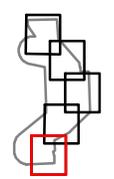


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Attachment C: Alternative B Detailed Route Map 5 of 5

Power Line TL626 Alternative Analysis

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> ■ Boom Truck ◆ Helo ■ Existing Pole | <p>Alignment</p> <ul style="list-style-type: none"> — Existing TL626 Line — Alternative B <p>Access</p> <ul style="list-style-type: none"> - - Existing Road to be Updated - - SDG&E Maintained — Existing Road | <p>Temporary Work Areas</p> <ul style="list-style-type: none"> □ Landing Zone □ Staging Area □ Stringing Site <p>Parcel Ownership</p> <ul style="list-style-type: none"> □ Inaja and Cosmit Indian Reservation □ Cleveland National Forest |
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ATTACHMENT D: REPRESENTATIVE PHOTOGRAPHS

ATTACHMENT D: REPRESENTATIVE PHOTOGRAPHS



Photograph 1:
Possible staging area off Boulder Creek Road with views of the Alternative C and D alignments.



Photograph 2:
View of the Alternative C and D alignments east of Boulder Creek Road.



Photograph 3:
View of Alternative C and
D alignments northwest of
Eagle Peak Road.



Photograph 3:
View of Alternative C and
D alignments south of Eagle
Peak Road.