

3. Revisions to Proposed and Alternative Transmission Line Routes

This section presents discussion and analysis of 13 revisions to the Proposed Project or alternatives evaluated in the Draft EIR/EIS. These revisions were developed to reduce project impact(s) and are considered to be mitigation reroutes. They are discussed here in order to present information to allow for approval by the decisionmakers, if so desired. Descriptions and maps of each route area presented in this section.

Two reroutes are presented in this document for the Proposed Project (see Section 3.1):

- BLM Gifted Lands Reroute
- Northern Grapevine Canyon Reroute

Three reroutes are presented for Northern Route alternatives (see Section 3.2):

- Top of the World Substation Alternative Revision
- SDG&E Santa Ysabel Partial Underground Alternative Revision
- Coastal Link System Upgrades Alternative Revision

Eight reroutes are presented for Southern Route alternatives (see Section 3.3):

- Jacumba SWPL Breakaway Point Reroute
- BCD Alternative and BCD South Option Revisions
- High Meadows Reroute
- Highway 67 Hansen Quarry Reroute
- Cameron Reroute
- Pacific Crest Trail Reroute
- Western Modified Route D Alternative Reroute
- Star Valley Option Revision

The modifications were developed in order to reduce impacts of the routes as originally defined in the Draft EIR/EIS. Most reroutes were proposed by SDG&E in its comments on the Draft EIR/EIS. The revisions to the Modified Route D Alternative, the BCD South Option, and the BCD Alternative were developed by SDG&E in consultation with the CPUC, BLM, and the U.S. Forest Service in order to reduce impacts on National Forest lands.

The revisions and reroutes to portions of the Proposed Project and alternatives discussed in this section are included in the Recirculated Draft EIR/Supplemental Draft EIS either because they may create new or more severe significant impacts, and to provide the public with a meaningful opportunity to comment.

SDG&E suggested other reroutes that are not included in this Recirculated Draft EIR/Supplemental Draft EIS. Where a suggested reroute would adjust an alignment, but would not create a substantial change in the route and where no new land owners would be affected, the changes will be incorporated into the Final EIR/EIS but are not discussed here. Other reroutes were evaluated, and have been eliminated from consideration because they would create new significant impacts without reducing any impacts or they would not be feasible, and so are not discussed further. The rationale for elimination of these routes will be presented in the Final EIR/EIS.

3.1 Reroutes on the Proposed Project Route

3.1.1 BLM Gifted Lands Reroute

3.1.1.1 Reroute Description and Rationale

This reroute was suggested by SDG&E to avoid Caltrans mitigation land and lands given to BLM as a gift in Imperial County. It is included in the Recirculated Draft EIR/EIS because new landowners would be affected by the modified route. The BLM Gifted Lands Reroute would diverge from the Proposed Project at MP 49.5 (Structure DGL17), turning west along private parcel boundaries for approximately 5,500 feet. The reroute would then turn south and parallel private parcel boundaries for approximately 5,600 feet before rejoining the Proposed Project at MP 51.4 (Structure DGL9). The BLM Gifted Lands Reroute is shown on Figure 3-1 and would be approximately 1,600 feet longer than the portion of the proposed route that it would replace.

3.1.1.2 Biological Resources

The original segment of the Proposed Project and the BLM Gifted Lands Reroute would both impact the following biological resources: one sensitive vegetation community (stabilized and partially stabilized desert sand field), flat-tailed horned lizard (FTHL; *Phrynosoma mcallii*) Management Area (MA), and FTHL habitat outside of MA.

This reroute would result in slightly greater impacts to this vegetation community, as well as to FTHL MA, and FTHL habitat outside of MA because two additional towers, two additional staging areas, and a slightly longer access road is needed. However, the impact significance (Class I) would not change.

Neither the original segment nor the reroute, would impact desert pupfish (*Cyprinodon macularius*) critical habitat, which occurs less than one mile to the east of MP 49.5.

Although the original segment of the Proposed Project would result in fewer impacts to sensitive vegetation and to FTHL habitat, it would impact a Caltrans-owned biological resources mitigation parcel, which would require consultation with Caltrans and greater compensatory measures may need to be developed to offset impacts. As a result, the reroute is environmentally superior to the original segment of the Proposed Project for biological resources. This reroute would have no effect on the conclusions of the biological analysis conducted for the Proposed Project, but habitat acreage figures will be updated as part of the Final EIR/EIS.

Figure 3-1. Proposed Project: BLM Gifted Lands Reroute
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3.1.1.3 Cultural Resources

There is one cultural resource (CA-IMP-7857) present within the study corridors of both the BLM Gifted Lands Reroute and the original segment of the Proposed Project. This large habitation site contains multiple cremations and other cultural features. The study corridor of the original Proposed Project contains two additional cultural resources (CA-IMP-1277, an isolate, and CA-IMP-7849, a prehistoric site with cremations), while the BLM Gifted Lands Reroute contains one additional known cultural resource (CA-IMP-8026, a lithic and ceramic artifact scatter).

Because the original Proposed Project has been 66 percent intensively surveyed for cultural resources (100 percent of its length, but only a 200-foot wide corridor), compared to approximately one percent of the BLM Gifted Lands Reroute, there is a much greater potential to find additional cultural resources within surveys of the reroute. However, because prehistoric site CA-IMP-7849 is located in the Proposed Project corridor and contains cremations, any impacts to this site would be Class I. The Proposed Project is preferred for cultural resources, because the route would likely have fewer cultural resources and the route would be shorter resulting in less ground disturbance.

The BLM Gifted Lands Reroute will not result in any change to paleontological impacts.

3.1.1.4 Conclusion

Although this short reroute would be slightly longer and would be slightly less preferred for biological and cultural resources, it would avoid lands given to BLM as a gift in Imperial County and Caltrans-owned biological resources mitigation land. The Caltrans-owned parcel was acquired as biological mitigation for impacts resulting from several Caltrans projects located on SR86. Locating the Proposed Project across this parcel would negate this compensation. Caltrans would require a plan for mitigation of these impacts at appropriate compensation ratios, which would be greater than for the Proposed Project. In addition, Caltrans has stated that this site has not been recently evaluated for biological resources. A Natural Environmental Study would be required for an easement or encroachment permit. A request for Biological Opinion from the U.S. Fish and Wildlife Service for potential impacts to federally listed species may also be required, which could cause a delay in permitting for the Proposed Project. Therefore, this reroute, which would avoid BLM-gifted and Caltrans mitigation lands was found to be overall environmentally superior to the Proposed Project.

3.1.2 Northern Grapevine Canyon Reroute

3.1.2.1 Reroute Description and Rationale

This reroute was suggested by SDG&E for two purposes:

- To move the new 500 kV transmission line farther from residences in upper Grapevine Canyon, and
- To leave the existing 69 kV line on the existing wood poles rather than to underbuild them on the new 500 kV towers, since those poles support distribution circuits and could not be removed even if the 69 kV line were moved to the 500 kV towers.

It is also included in the Recirculated Draft EIR/EIS because the revised tower locations would affect new landowners and would change the effects on already affected landowners.

As shown on Figure 3-2, the reroute would diverge from the Proposed Project just south of MP 84, and would roughly parallel the original proposed route for its length. The reroute would initially be east of the Proposed Project, but would cross to the west of the original route at MP 85.75 and west of Grapevine Canyon Road at MP 86.1, paralleling the Proposed Project at a maximum distance of approximately 400 feet to its end at MP 87.7.

3.1.2.2 Biological Resources

Due to its similar location, the Northern Grapevine Canyon Reroute would impact the same four sensitive vegetation communities as the segment of the Proposed Project that was developed to replace: northern mixed chaparral-granitic, semi-desert chaparral, coast live oak woodland, and non-native grassland. The reroute would result in greater impacts to these sensitive communities and other biological resources, because of the addition of four towers north of MP 86. It would also result in impacts from the construction of new access roads. Although some of the access roads for the reroute are shorter than those required for the Proposed Project, others are longer, and overall, the total length and impacts from access roads are similar to the original segment of the Proposed Project.

Because the original segment of the Proposed Project would result in fewer impacts to sensitive vegetation communities, it is environmentally superior to the reroute. However, both routes would have significant and unmitigable (Class I) impacts. This reroute would have no effect on the biological analysis already conducted for the Proposed Project.

3.1.2.3 Visual Resources

From the point where the Grapevine Canyon Reroute begins to diverge from the Proposed Project Route (near MP 84), to the point where the reroute crosses to the south of the Proposed Project (between MP 85 and 86), the reroute would result in similar visual impacts compared to the Proposed Project. North of the crossover point, the reroute would be slightly less prominently positioned in the canyon relative to view angles and the primary cone of vision for travelers on Grapevine Canyon Road. The resulting visual impacts associated with the reroute would be slightly less than those of the Proposed Project though the significance level (Class I) would not change (see Impact V-15: Increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 12 on Grapevine Canyon Road within Anza-Borrego Desert State Park [VS VC]). Therefore, the reroute would be marginally environmentally superior to the Proposed Project for visual resources.

3.1.2.4 Cultural Resources

There are 10 cultural resources present within the study corridors of both the Northern Grapevine Canyon Reroute and the bypassed portion of the Proposed Project. The length of the routes and the ground disturbance for both routes would be largely similar. Because the original Proposed Project has been 100 percent intensively surveyed for cultural resources, compared to approximately 76 percent of the Northern Grapevine Canyon Reroute, there is a greater potential to find additional cultural resources within remaining surveys of the reroute. The Proposed Project is slightly preferred for cultural resources, because there is a reduced likelihood to encounter unknown resources (Impact C-3: Construction of the project would cause an adverse change to unknown significant buried prehistoric and historical archaeological sites or buried Native American human remains).

Figure 3-2. Proposed Project: Northern Grapevine Canyon Reroute
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3.1.2.5 Conclusion

Both the Proposed Project and the reroute would have significant and unmitigable (Class I) impacts to biological and visual resources. The original proposed route would be slightly preferred for biological resources and cultural resources because of additional ground disturbance from additional towers. However, the reroute would be preferred for visual resources and would be slightly less visible to travelers on Grapevine Canyon Road, which could include both residents in upper Grapevine Canyon and recreationists around ABDSP. In addition, the reroute would move the new 500 kV transmission line farther from residences in upper Grapevine Canyon.

Finally, leaving the existing 69 kV line on the existing wood poles rather than to underbuild them on the new 500 kV towers reduces the scope of construction, since those poles support distribution circuits and could not be removed even if the 69 kV line were moved to the 500 kV towers. Therefore the Northern Grapevine Canyon Reroute is environmentally superior to the Proposed Project.

3.2 Reroutes on Northern Route Alternatives

3.2.1 Top of the World Substation Alternative Revision

3.2.1.1 Revision Description and Rationale

This reroute was suggested by SDG&E, because it would allow for greater separation between the 230 kV and 500 kV lines and the terrain would be less difficult for construction. It is included in the Recirculated Draft EIR/EIS because it would also have a different effect on Vista Irrigation District (VID) property. As shown on Figure 3-3, the principal revisions are that the reroute would shorten a bend in the 500 kV ingress transmission line east of the Top of the World Substation Alternative, and the 230 kV egress line would parallel the ingress line, rather than heading northwest from the substation. The reroute would diverge from the original Top of the World Substation Alternative ingress line approximately 3,400 feet south of the start of the alternative. This is the same point where the Proposed Project would jog southeast to the proposed Central East Substation site (approximately MP 92.7). The reroute would cut the corner of the alternative ingress alignment and would be located a maximum of about 300 feet north of the original alternative route for approximately 1,400 feet before rejoining the alternative approximately 3,000 feet east of the Top of the World Substation (TOTW) Alternative.

The reroute would diverge again from the TOTW Alternative approximately 1,000 feet after leaving the substation. At this point, the 230 kV line of the original alternative would travel north-northwest to rejoin the Proposed Project around MP 95. The 230 kV line of the reroute would travel to the north-east, around the substation, and then would turn east and north, paralleling the ingress line at a distance approximately 600 feet to its north, to where it would join the Proposed Project route at MP 92.2.

3.2.1.2 Biological Resources

The original Top of the World Substation Alternative would impact seven sensitive vegetation communities (coastal sage scrub-inland form, non-native grassland, wildflower field, northern mixed chaparral, chamise chaparral, red shank chaparral, and coast live oak woodland) and Stephens' kangaroo rat (SKR; *Dipodomys stephensi*) occupied habitat. This reroute would result in greater impacts to sensitive

vegetation communities and to the SKR because it would require 17 additional towers, four additional pull sites, and a greater total length of access roads (comparison from the egress from the substation site to MP 95.3 of the Proposed Project). However, the significance levels would remain as Class I for impacts to sensitive vegetation and the SKR. The original Top of the World Alternative is preferred over this reroute because it would have fewer impacts to sensitive vegetation communities and fewer impacts to SKR habitat. This reroute would have no effect on the biological analysis already conducted for the Top of the World Substation Alternative.

3.2.1.3 Visual Resources

The Top of the World Substation Alternative Revision proposed by the Applicant would increase the number of transmission structures that would be visible to travelers on San Felipe Road, both north and south of the Montezuma Valley Road (S22) intersection. This approach would exacerbate an already significant (Class I) visual impact and seems unnecessary given the availability of several ravines down the north side of the central ridge that would help to minimize visibility of structures (to San Felipe Road) and overall project prominence by following the mitigation route described in Mitigation Measure V-52a (discussed in the Draft EIR/EIS under Impact V-52: Introduced structure contrast, industrial character, view blockage, and skylining when viewing the Top of the World Substation Alternative from KVP 19 [VS-VC]), and shown on Figure D.3-46. For this reason, the Mitigation Measure V-52a mitigation route (shown here as originally presented in Section D.3.19 in the Draft EIR/EIS) is preferred over the Top of the World Substation Alternative Revision suggested by the applicant.

V-52a Reduce visibility of the 500 kV transmission line connection to the Top of the World Alternative Substation site. In order to substantially reduce the visibility of the 500 kV transmission line connection to the Top of the World Substation site, reroute the 500 kV line due west after crossing San Felipe Road, and then turning south, west, and south again over the primary ridgeline to access the substation site from the north rather than the east as currently proposed. Figure D.3-46 provides a map of the mitigation route. SDG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC and USFS for review and approval at least 120 days prior to the start of construction.

Also, it is suggested that the mitigation route could be further improved with detailed engineering and a joint field reconnaissance by the Applicant's transmission routing/design engineers and the EIS/EIR Visual Resources Specialist. Implementation of Mitigation Measure V-52a for the transmission line would reduce visual impacts from the Top of the World Substation Alternative to less than significant (Class II).

3.2.1.4 Cultural Resources

There are two cultural resources, VID-I-040 and VID-I-14 located within both the Top of the World Substation Alternative Revision (reroute) ingress, and the original Top of the World Substation Alternative ingress (see Table Ap.9B-81 in Appendix 9B of the Draft EIR/EIS). No cultural resources have been identified within the egress of the reroute or original alternative. Both of the known resources are isolates, which are not considered eligible for NRHP or CRHR listing, due to the absence of context or data potential.

Figure 3-3. Top of the World Substation Alternative Revision
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Approximately 90 percent of the reroute ingress has been intensively surveyed for cultural resources, compared to 100 percent of the alternative ingress. Approximately 5 to 10 percent of the reroute egress has been intensively surveyed for cultural resources, compared to 100 percent of the alternative egress. As a result, the reroute has a potential to encounter additional cultural resources during survey, while the original alternative egress has already been completely surveyed. However, to date, neither the reroute nor alternative would appear to significantly impact cultural resources. The original Top of the World Substation Alternative appears slightly environmentally superior due to the potential to encounter additional unknown cultural resources during remaining survey of the reroute egress from the substation.

3.2.1.5 Conclusion

Although this revision would be less preferred from a visual resources standpoint and would create a longer egress transmission line, it would allow for greater separation between the 230 kV and 500 kV lines and the terrain would be less difficult for construction. This would result in reduced grading for access and would fit updated substation civil and electrical engineering. SDG&E would consult with the landowner, VID, to determine its preference across its property, however, the revision has been found to be environmentally superior to the original Top of the World Substation Alternative.

3.2.2 SDG&E Santa Ysabel Partial Underground Alternative Revision

3.2.2.1 Revision Description and Rationale

This reroute was suggested by SDG&E to reduce potential impacts to cultural resources, including human remains buried at the cemetery at the Santa Ysabel Mission, and to also minimize impacts to properties and traffic in SR79. It is included in the Recirculated Draft EIR/EIS because it would have direct effects on additional landowners. As shown on Figure 3-4, the underground reroute would diverge from the original Santa Ysabel Partial Underground Alternative approximately 2,200 feet east of where it would originally reach SR79. The reroute would turn south in ranching roads cutting across grazing lands along parcel boundaries for approximately one mile. At this point, the reroute would turn east along a parcel boundary for 1,900 feet and would rejoin the original alternative in SR79, near MP SYPU-2. Approximately one mile south of this point the next segment of the reroute would diverge from the original alternative just north of the town of Santa Ysabel. From near MP SYPU-3, the reroute would turn west for 600 feet and then south for 0.7 miles, passing the west side of the town and rejoining the original alternative along a private ranching road at a parcel boundary.

At approximately Milepost SYAU-9, the SDG&E Santa Ysabel Partial Underground Alternative Revision would transition from underground to overhead. From the new transition structure, the revised route would travel approximately 1,100 feet south overhead to the next structure and then southwest for 1,200 feet, where it would rejoin the Proposed Project at approximately MP SYR-8.8.

The transition structure for the SDG&E Santa Ysabel Partial Underground Alternative Revision would be approximately 1,400 feet northeast of the transition structure that is proposed for the original Santa Ysabel Partial Underground Alternative and Santa Ysabel All Underground Alternative.

3.2.2.2 Biological Resources

The original segments of the Santa Ysabel Partial Underground Alternative would impact the following sensitive vegetation communities: non-native grassland, northern mixed chaparral, coast live oak woodland, and Engelmann oak woodland. The SDG&E Santa Ysabel Partial Underground Alternative Revision reroute segments would impact non-native grassland, meadow, southern arroyo willow riparian forest, coast live oak woodland, and Diegan coastal sage scrub—inland form. The original Santa Ysabel Partial Underground Alternative would be built underground within paved roadways for approximately 3.25 miles with no impacts to sensitive vegetation. This reroute would only be underground in paved roadways for approximately 1.5 miles. Therefore, this reroute would result in greater impacts to sensitive vegetation communities (particularly non-native grassland) over a distance of approximately 1.75 miles, and some of the impact would be to an area that is likely jurisdictional wetland (i.e., southern arroyo willow riparian forest).

Despite the differences in the impacts, the significance levels for impacts to sensitive vegetation communities (Class I) and jurisdictional waters and wetlands (Class II) would not change with the reroute. Although the arroyo toad (*Bufo californicus*) and SKR have been observed along the northern portion of the reroute (and Santa Ysabel Partial Underground Alternative), and there is a golden eagle nest within 4,000 feet, the impacts to these species are anticipated to be similar to the Santa Ysabel Partial Underground Alternative, so the significance levels (Class II for arroyo toad and golden eagle and Class I for SKR) would not change with this reroute because both would entail underground construction where there is already an existing disturbance such as a highly traveled road or a utility corridor. The specific location of the golden eagle nest area is not disclosed in this EIR/EIS, nor are the MPs within 4,000 feet of this nest area in order to protect the golden eagle. SDG&E will be made aware of the MPs subject to mitigation in an unpublished document. Implementation of Mitigation Measure B-7h (Implement appropriate avoidance/minimization strategies for eagle nests) is required to compensate for impacts to the golden eagle.

With the greater impacts to sensitive vegetation communities that would occur with this SDG&E reroute, the original Santa Ysabel Partial Underground Alternative is considered to be environmentally superior.

3.2.2.3 Visual Resources

The SDG&E Santa Ysabel Partial Underground Revision would, for the most part, follow previously analyzed routes including the Proposed Project, the Mesa Grande Alternative, and the Santa Ysabel Partial Underground Alternative. A new underground segment extending south from Mesa Grande Road and paralleling SR79 before rejoining the Santa Ysabel Partial Underground Alternative within SR79 would not result in significant visual impacts, because the line would be installed underground. Another new underground segment that diverges from SR 79 to pass west of the intersection of SR78 and SR79 and then head south to rejoin the Santa Ysabel Partial Underground Alternative route also would not cause significant visual impacts. Although the revised route would transition aboveground approximately 0.15 miles east of the Santa Ysabel Partial Underground Alternative transition point, the visual impact would not be substantially different from that already analyzed for the Santa Ysabel Partial Underground Alternative, because it would be on similar topography in a similar viewshed.

Figure 3-4. Santa Ysabel Partial Underground Alternative Revision
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At the northern overhead to underground transition site, both the alternative and the revision would introduce two prominently visible, vertical, linear features with substantial structural complexity and industrial character into a rural landscape that is predominantly natural appearing. The project would result in a high degree of visual contrast with the existing landscape character. The co-dominant-to-dominant structures would cause substantial view blockage of the background hills, ridgelines, and sky (due to structure skylining). These three equally weighted factors would result in an overall visual change that would be moderate-to-high and in the context of the existing landscape's moderate-to-high visual sensitivity, the visual impact would be significant (Class II for Impact V-42: Introduced structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 35 on west-bound Mesa Grande Road). In the Draft EIR/EIS it is recommended that Mitigation Measure V-42a be implemented, which would move the proposed transition point to reduce the visibility of the cable poles. By relocating the cable poles to a position that approximates the location shown in Figure 3-4A, partial structure screening (by adjacent terrain) can be achieved. For this reason, the Mitigation Measure V-42a mitigation route (shown here as originally presented in Section D.3.16.2 in the Draft EIR/EIS) is preferred over the transition location of both the Santa Ysabel Partial Underground Alternative and the revision suggested by the applicant.

V-42a Reduce visibility of the transition structures by relocating the structures. In order to substantially reduce the visibility of the transition structures in the vicinity of Mesa Grande Road, the structures shall be relocated approximately 0.5 miles further west along the Proposed Route to a location immediately adjacent to an existing ranch road. SDG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 120 days prior to the start of construction.

In addition, at the southern end it is recommended that the proposed transition point be moved to reduce the visibility of the cable poles. By relocating the cable poles to a position that approximates the location shown in Figure 3-4A, partial structure screening (by adjacent terrain) can be achieved. Therefore, Mitigation Measure V-42b is recommended for implementation and is preferred over the transition location of the SDG&E Santa Ysabel Partial Underground Alternative Revision.

V-42b Reduce visibility of the southern transition structures by relocating the structures (SDG&E Santa Ysabel Partial Underground Alternative Revision only). In order to reduce the visibility of the cable poles at its southern end, the alternative revision route would diverge from the original Santa Ysabel Partial Underground Alternative at approximately MP SYAU-8.8 where it would turn and head south for 600 feet before transitioning from underground to overhead just south of the existing 69 kV line (as shown on Figure 3-4A). From this point, the route would parallel the existing 69 kV ROW for approximately 2,400 feet to rejoin the SDG&E Santa Ysabel Partial Underground Alternative Revision and then the Proposed Project. SDG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 120 days prior to the start of construction.

3.2.2.4 Agricultural Resources

The impacts of the SDG&E Santa Ysabel Partial Underground Alternative Revision on agricultural resources would be somewhat greater those that would occur under the original alternative. This is because in the northern portion of the reroute, the underground alignment, would pass through agricultural land rather than in SR79. However, because it is underground, the land would be restored to its current use as grazing land and ranch roads. Due to this restoration, potentially significant impacts would be reduced to less than significant (Class II) by implementation of the mitigation measures applied to agricultural

land disturbance (see Impact AG-3: Operation would permanently interfere with Active Agricultural Operations). Specifically, effective implementation of mitigation measures AG-1a (Avoid interference with agricultural operations), AG-1b (Restore compacted soil), AG-1c (Coordinate with grazing operators), AG-2a (Avoid interference with agricultural equipment), and AG-3e (Install project facilities along borders), would ensure that impacts are less than significant with mitigation (Class II).

3.2.2.5 Cultural Resources

The SDG&E Santa Ysabel Partial Underground Revision would reduce the number of impacts to known cultural resources, because it would be located farther from the cemetery and would have less of a potential to impact unknown human remains. The following resources are within both the reroute and the original portion of the Santa Ysabel Partial Underground Alternative: CA-SDI-1032, CA-SDI-16460, ISO-JC-2, ISO-JC-1, and site JC-1. Sites JC-03(JC-3H), JC-02, and JB-10 are only present along the original alternative. Approximately 31 percent of the original Santa Ysabel Partial Underground Alternative has been intensively surveyed for cultural resources, compared to 17 percent of the SDG&E Santa Ysabel Partial Underground Alternative Revision. Although there is a greater potential to encounter additional cultural resources during survey of the reroute, the greater number of known cultural resources within the original alternative (8 versus 5) result in the SDG&E Santa Ysabel Partial Underground Revision being preferred for cultural resources.

3.2.2.6 Transportation and Traffic

Table 3-1 lists the roads that potentially could be impacted by the Santa Ysabel Partial Underground Alternative and the revised route.

Table 3-1. Public Roadways along the Santa Ysabel Partial Underground Alternative and SDG&E Revision

Roadway	Jurisdiction	Classification	Existing Lanes	Traffic Volumes		Structure No.	Transmission Line Orientation
				Year	ADT		
State and County Facilities							
State Route 79	Caltrans	Collector	2	2005	3000	SYR-4 & 7.2	Underground
State Route 78	Caltrans	Collector	2	2005	1400		Underground
Local Roadways							
Mesa Grande Road	San Diego County	None	2	ND	—	MG-1.9	Underground

Source: California Department of Transportation; County of San Diego; County of Imperial; Linscott, Law & Greenspan Engineers.
N/A = Not applicable; ND = Data not available; ADT = Average Daily Traffic

Figure 3-4A. Santa Ysabel Partial Underground Alternative Revision: Southern Transition
Relocation

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The revised route would avoid approximately 0.4 miles of underground construction in Mesa Grande Road, one mile of underground construction in SR79, and 0.3 miles of underground construction in SR78. Therefore, circulation and traffic impacts, such as lane closures and restricted access, during construction on all three roadways would be greatly reduced with the SDG&E Santa Ysabel Partial Underground Alternative Revision.

Operations and maintenance would have a minimal effect on traffic, movement, emergency access restrictions, affect parking capacity, increase road hazards and/or the level of service on the affected roadways for both the original alternative and the revised route.

3.2.2.7 Conclusion

SDG&E suggested this revised underground segment as a means of avoiding impacts to cultural resources within SR79 near the Santa Ysabel Mission and minimizing traffic impacts in on SR79, as well as SR78 and Mesa Grande Road. The feasibility of this segment underground in SR79 will not be known until the completion of additional tribal consultation or possibly until subsurface investigations are completed prior to construction. In the absence of finding burial sites or new tribal information, the SDG&E Santa Ysabel Partial Underground Alternative Revision is found to be environmentally superior to the original Santa Ysabel Partial Underground Alternative.

3.2.3 Coastal Link System Upgrades Alternative Revision

3.2.3.1 Revision Description and Rationale

SDG&E has stated that this alternative revision was identified by SDG&E Transmission Planning through powerflow analysis performed in support of Phase 2 testimony (Response to CPUC Data Request #28, dated May 23, 2008). This revision to the alternative is an addition to the Coastal Link System Upgrades Alternative that was analyzed in the Draft EIR/EIS and would not substitute for other parts of the alternative. The revision is included in this Recirculated Draft EIR/Supplemental Draft EIS, because it would impact additional new landowners. As shown on Figure 3-5, the Coastal Link System Upgrade Alternative Revision would include one additional transmission upgrade: the upgrade of the Sycamore-Scripps 69 kV line.

The Sycamore-Scripps 69 kV reconductoring would use a single 900 kcmil ACSS conductor and would be installed on the existing overhead transmission structures. The reconductor project would entail the replacement of the conductor and would not require the replacement of any overhead transmission structures. Upgrades of associated substation breakers and disconnects would occur within SDG&E's Scripps, and Sycamore Canyon Substations.

In addition, as part of the Sycamore-Scripps 69 kV reconductoring, the Coastal Link System Upgrades Alternative Revision would require the upgrade of an existing underground portion of the Sycamore-Scripps 69 kV circuit from single to bundled cable (remove 1750 AL kcmil and install bundled 3000 CU in a new trench). A short segment (930 feet) of underground construction would be required in Rue Biarritz to re-locate the line into city streets. The work would take approximately one month and occur in phased segments along the route.

3.2.3.2 Visual Resources

Construction Impacts. Construction impacts associated with the reconductoring of the Sycamore-Scripps transmission lines would be similar to those described in Section D.3.5.1 in the Draft EIR/EIS and would include visibility of construction activities and equipment (Impact V-1) and the long-term visibility of land scars and vegetation clearance in arid and semi-arid landscapes (Impact V-2). As discussed in Section D.3.5.1 in the Draft EIR/EIS, the short-term visibility of construction activities, equipment, and night lighting would cause significant but mitigable (Class II) visual impacts at the substations and construction, storage, and fly yards while the visual impacts associated with installation of new conductors would be adverse but less than significant (Class III). Mitigation Measures V-1a (Reduce visibility of construction activities and equipment) and V-1b (Reduce construction night lighting impacts) would reduce the visual impact of construction activities at the substations and yards to levels that would be less than significant. Although the visual impacts associated with construction activities during reconductoring of the structures would be less than significant without mitigation, Mitigation Measures V-1a and V-1b are recommended along the routes as well in compliance with NEPA to further reduce the impact.

The long-term visibility of land scars and vegetation clearance in arid and semi-arid landscapes would cause significant but mitigable (Class II) visual impacts within an existing transmission corridor. Land scarring from use of staging areas and construction yards, construction of new access and spur roads, and activities adjacent to construction sites and along the ROW can be long-lasting (several years) in arid and semi-arid environments where vegetation recruitment and growth are slow. In-line views of linear land scars or newly bladed roads are particularly problematic and introduce adverse visual change and contrast by causing unnatural vegetative lines and soil color contrast from newly exposed soils. Vegetation clearance could occur in conjunction with project construction or during the life of the project if vegetation is cleared as part of ongoing ROW maintenance or if a changed vegetation structure is maintained within the ROW.

APM BIO-23 would ensure that only the minimum amount of vegetation necessary would be removed during construction, and that topsoil in areas of sensitive habitat would be conserved and reused to facilitate vegetation re-growth. APM GEO-2 would restrict vehicle and construction equipment use to access roads and areas in the immediate vicinity of construction work sites to help reduce soil disturbance, and would require that any disturbed areas be returned to pre-construction contours and allowed to revegetate naturally or be reseeded with an appropriate seed mixture if necessary.

Effective implementation of Mitigation Measures V-2a (Reduce in-line views of land scars), V-2b (Reduce visual contrast from unnatural vegetation lines), V-2c (Reduce color contrast), V-2e (Minimize vegetation removal), and V-2f (Restrict vehicle travel and restore land) would mitigate land scarring and vegetation clearance impacts to levels that would be less than significant (Class II).

Operational Impacts. Operational impacts would be minimally noticeable because the new components (insulators and conductors) would appear similar (insulators) to identical (conductors) when compared to the components that would be replaced. To the extent that any change is noticed as a result of the reconductoring and replacement of insulators, the impact would be adverse but less than significant (Class III). No mitigation is recommended or required.

Figure 3-5. Coastal Link System Upgrades Alternative Revision

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3.2.3.3 Land Use

The addition of the Sycamore Canyon – Scripps reconductoring projects to the Coastal Link System Upgrades Alternative would have effects on land use. There would be no conversion of existing land use to other uses, as the reconductoring would be in existing ROW and use existing structures. However, during construction there could be disruption to roads and access to existing land uses (Impact L-1: Construction would temporarily disturb land uses at or near the alignment). This would be a potentially significant impact, but would be reduced to less than significant with mitigation (Class II). The mitigation measures would include: L-1a (Prepare Construction Notification Plan), L-1d (Provide advance notice and appoint public affairs officer), and L-1e (Notify property owners and provide access).

3.2.3.4 Noise

Construction Impacts. Varying ambient noise levels occur along the existing 69 kV transmission lines, and noise-sensitive residences and schools are nearby. Reconductoring these transmission lines would temporarily substantially increase ambient noise levels along the Sycamore-Scripps route and along routes used for construction access. Construction noise would occur within 1,000 feet of residences and other noise-sensitive suburban uses. The construction noise impacts would involve equipment and possibly helicopter noise that would result in a significant impact by causing substantial noise increases for the nearby noise-sensitive uses. Implementing Mitigation Measure N-1a (Implement Best Management Practices for construction noise) and Mitigation Measure L-1a (Prepare Construction Notification Plan) would reduce the impact of construction noise to the extent feasible, but the substantial noise increase from construction would be significant and unavoidable (Impact N-1, Class I).

Perceptible vibration could be experienced by residents or workers inside structures within 50 feet of trucks traveling over uneven surfaces, the notification process suggested in NOI-APM-1 would reduce the likelihood of a nuisance or annoyance occurring. Physical damage to nearby structures would not occur with the work needed to reductor lines. The impact of construction vibration would be less than significant (Impact N-2, Class III).

Operational Impacts. Operational noise would not cause any local ordinance to be violated or any notable change in existing noise levels because the reducted overhead lines would cause less than 40 dBA in corona noise, and substation modifications would not substantially change substation noise levels (Impact N-3, Class III). Noise from occasional inspection and maintenance activities would not change notably from existing conditions or adversely affect any noise-sensitive receptors, and therefore these impacts would be less than significant (Impact N-4, Class III).

3.2.3.5 Traffic and Transportation

The Coastal Link System Upgrades Alternative Revision would disrupt traffic during construction of a short underground section in Rue Biarritz. This is a quiet residential street with no through traffic. Fourteen houses face the street. During the one month construction, access to driveways of various houses will be blocked from access during the work day (Impact T-1: Construction would cause temporary road and lane closures that would temporarily disrupt traffic flow). However, there is sufficient parking on the street to not make this a significant impact. Implementation of APMs and Mitigation Measures T-5a (Repair damaged roads) and T-10a (Ensure access to properties and businesses) will ensure that this is a less than significant impact (Class II).

3.2.3.6 Conclusion

SDG&E has stated that this alternative revision was identified by SDG&E Transmission Planning through powerflow analysis performed in support of Phase 2 testimony (Response to CPUC Data Request #28, dated May 23, 2008). Therefore, it is an addition to the Coastal Link System Upgrades Alternative that is necessary for the original alternative to meet the transmission system requirements for the Proposed Project in the Coastal Link.

Although the additional upgrade of the Sycamore-Scripps 69 kV line would cause additional construction impacts, these impact would be minor over the course of one month, less than significant, and would occur in an existing corridor. Therefore, even with the addition of the Coastal Link System Upgrades Alternative Revision, the alternative is still found to be environmentally superior to the Proposed Project in the Coastal Link.

3.3 Reroutes on Southern Route Alternatives

3.3.1 Jacumba SWPL Breakaway Point Reroute

3.3.1.1 Reroute Description and Rationale

This reroute was suggested by SDG&E, because it would eliminate the need for one large angle structure by spanning directly between two smaller angle structures without impacting additional parcels. However, it is included in the Recirculated Draft EIR/EIS, because it would change the effect on a private parcel. As shown on Figure 3-6, the reroute would break away from the existing SWPL line and the Interstate 8 Alternative, which parallels the SWPL corridor, at a point 1,700 feet to the east of where the Interstate 8 Alternative would diverge from the existing SWPL corridor. Specifically, at MP 35.2 the reroute would diverge from the alternative and head northwest for 1,700 feet. This would have the effect of shortening the Interstate 8 Alternative by cutting across a “V” in the original alternative’s alignment.

3.3.1.2 Biological Resources

The original segment of the I-8 Alternative would impact one sensitive vegetation community (semi-desert chaparral) and Quino checkerspot butterfly (QCB; *Euphydryas editha quino*) designated critical habitat. The Jacumba SWPL Breakaway Point Reroute would impact less semi-desert chaparral and less QCB designated critical habitat because it eliminates one tower location and the associated access road; however, the significance level (Class I) would not change. This reroute is, therefore, preferred over the Interstate 8 Alternative segment it would replace and would have no effect on the biological analysis already conducted for the I-8 Alternative.

3.3.1.3 Cultural Resources

There are two cultural resources, CA-SDI-7951 and CA-SDI-9154, present within the study corridors for both the Jacumba SWPL Breakaway Point Reroute and the original Interstate 8 Alternative. No portion of the reroute or the original alternative has been intensively surveyed for cultural resources. As a result, neither alignment is environmentally preferred for cultural resources.

Figure 3-6. Interstate 8 Alternative: Jacumba SWPL Breakaway Point Reroute
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3.3.1.4 Conclusion

This reroute would eliminate the need for one large angle structure by spanning directly between two smaller angle structures without impacting additional parcels. Therefore, the reroute would be preferred for biological resources and would also result in less ground disturbance due to its shorter length. The Jacumba SWPL Breakaway Point Reroute would be environmentally superior to the original breakaway point along the Interstate 8 Alternative.

3.3.2 BCD Alternative and BCD South Option Revisions

3.3.2.1 Revision Description and Rationale

Revision of these two alternative segments was suggested by SDG&E with input from the U.S. Forest Service, as well as the CPUC and BLM, to avoid back country non-motorized land use zones on the Cleveland National Forest and to minimize disturbance and visibility on the Forest. These revisions are included in the Recirculated Draft EIR/EIS because they would change effects on landowners, and because they are components of the Modified Environmentally Superior Southern Alternative (see Section 5 for a discussion of the Modified Environmentally Superior Southern Alternative).

As shown on Figure 3-7, the BCD Alternative and BCD South Option Revisions would replace part of the BCD Alternative and all of the BCD South Option. The BCD Alternative Revision would diverge from the BCD Alternative at MP BCD-9. It would head to the northwest for just over four miles and then turn and head south-southwest for two miles to where it would cross the original BCD Alternative. This is the point where the BCD South Option Revision begins. The BCD South Option Revision would roughly parallel the BCD South Option's original route for 3.8 miles, crossing Interstate 8 approximately 0.25 miles west of the original BCD South Option crossing. The revised route would remain approximately 0.5 miles west of the original BCD South Option and join the Modified Route D Alternative at MP MRD-3.6.

3.3.2.2 Biological Resources

The original segment of the BCD Alternative/BCD South Option/Modified Route D Alternative would impact ten sensitive vegetation communities (semi-desert chaparral, red shank chaparral, northern mixed chaparral, chamise chaparral, coastal sage scrub-inland form, flat-topped buckwheat scrub, big sagebrush scrub, non-native grassland, coast live oak woodland, and southern cottonwood-willow riparian forest), Peninsular bighorn sheep (PBS; *Ovis canadensis nelsoni*) designated critical habitat, arroyo toad assumed occupied habitat, and one golden eagle (*Aquila chrysaetos canadensis*) nest area. This reroute is approximately 1,500 feet from the nest area and there would be direct line of sight between the nest area and the BCD South reroute. In addition to the transmission line being slightly closer to the nest area than the original BCD South Option, the USFS is requiring this portion of the reroute to be constructed and maintained by helicopter.

As compared to the original segment, the BCD Alternative and BCD South Option Revisions would require construction of five additional towers and construction of larger temporary construction/maintenance pads for 11 of the 53 towers; however, 5 fewer pull sites would be needed and length of access roads would be reduced (9 of the 53 towers would be constructed by helicopter and several of the original segment's access roads have been shortened). This reroute would result in slightly greater impacts to sensitive vegetation communities, and it would result in similar impacts to PBS designated critical habitat, arroyo toad assumed occupied habitat, and the golden eagle nest area. The significance level for each of these impacts would remain the same (Class I for sensitive vegetation, Class I for PBS, Class II for arroyo toad, and Class I for golden eagle).

This reroute would have no effect on the biological analysis already conducted for the BCD Alternative, the BCD South Option, or the Modified Route D Alternative. The original segment is preferred over this reroute because it would result in slightly fewer impacts to sensitive vegetation communities.

3.3.2.3 Visual Resources

The BCD Alternative and BCD South Option Revisions between MP BCD-9 and MP BCD-14 would result in impacts similar to those already addressed in the original BCD analysis and the impact classifications would not change. Therefore, the BCD revision would be similar to the analysis already conducted for the BCD Alternative in Section E.2.3 of the Draft EIR/EIS.

The BCD South Option Revision between MP BCDS-0 and the Interstate 8 span would result in visual impacts that would be slightly less severe than those addressed in the original BCD South Option analysis. The reduced impact would occur because the route would stay to the west of La Posta Truck Trail, which would cause a reduced level of view blockage when viewing south down the valley from La Posta Truck Trail. The revised span of I-8 would be substantially improved (with a reduction in structure prominence and an improved background for absorbing structure contrast) over the originally proposed I-8 span location, though the impact classification (Class I) would not change. South of I-8 to the intersection with the Modified Route D Alternative, the visual impact would also be similar to that previously analyzed for the BCD Alternative South Option.

3.3.2.4 Cultural Resources

One cultural resource recommended eligible for NRHP listing, P-37-024023, is present within the BCD Alternative and BCD South Option Revisions as well as within the original portion of the BCD South Option. Three additional resources are present within the BCD South Option Revision: P-37-18905, CA-SDI-10975, and ISO-CC-13. In comparison, the original alternative possesses an additional six cultural resources: P-37-15312, CA-SDI-8710, CA-SDI-9540, CA-SDI-11670, SDM-W-5470, and ISO-CC-3. However, because only 6 percent of the BCD Alternative and BCD South Option Revisions have been intensively surveyed for cultural resources compared to 70 percent of the original alternatives, there is a greater potential to find additional cultural resources within the revisions. As a result, the original BCD Alternative and the original BCD South Option are preferred over the revisions for cultural resources.

3.3.2.5 Conclusion

These revisions were suggested by SDG&E with input from the U.S. Forest Service, as well as the CPUC and BLM, to avoid back country non-motorized land use zones on the Cleveland National Forest. Construction of transmission lines is prohibited in BCNM zones. The revisions would also reduce the number of towers associated with the BCD Alternative and would minimize impacts on Forest land. In addition, the revised crossing of I-8 with the BCD South Option Revision would be slightly less severe than those addressed in the original BCD South Option analysis. Overall, both revisions would be environmentally preferred to the BCD Alternative and BCD South Option.

Figure 3-7. Interstate 8 Alternative: BCD Alternative and BCD South Option Revisions
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3.3.3 High Meadows Reroute

3.3.3.1 Reroute Description and Rationale

The High Meadows Reroute was suggested by SDG&E to minimize land use and visual impacts to the High Meadows Ranch Subdivision, and is included in the Recirculated Draft EIR/EIS because new landowners would be affected. As shown on Figure 3-8, the reroute would diverge south from the Interstate 8 Alternative at MP I8-87.1 and would parallel the Interstate 8 Alternative to its south and then west. The reroute would be separated from the original alternative alignment by approximately 500 feet and would be located down the hill slope. After a distance of approximately 2 miles, the High Meadows Reroute would rejoin the Interstate 8 Alternative at MP I8-89.3.

3.3.3.2 Biological Resources

The original segment of Interstate 8 Alternative would impact two sensitive vegetation communities (Diegan coastal sage scrub and southern mixed chaparral). The High Meadows Reroute would result in slightly greater impacts to sensitive vegetation communities because it requires one additional tower. However, the significance level for sensitive vegetation impacts remains the same (Class I), and this reroute would have no effect on the biological analysis already conducted for the Interstate 8 Alternative. The original segment of the Interstate 8 Alternative is preferred over the reroute because it would have slightly fewer impacts to sensitive vegetation.

3.3.3.3 Visual Resources

The High Meadows Reroute is consistent with the intent of Mitigation Measure V-68a in that it would move ten (10) transmission structures to slightly lower elevations on hillsides (east of SR67 and south of Moreno Avenue), which would reduce structure skylining and prominence and lessen the overall visual impact of this portion of the Interstate 8 Alternative (though it would not change the impact significance level [Class I for Impact V-68: Increased structure contrast, industrial character, view blockage, and skylining when viewed from Key Viewpoint 55 on Moreno Boulevard]). Therefore, this reroute is preferred over the Interstate 8 Alternative route segment it would replace and would have no effect on the visual analysis already conducted for the Interstate 8 Alternative.

3.3.3.4 Cultural Resources

The High Meadows Reroute would not change project-related impacts to cultural resources. There are no known cultural resources within the reroute or the original Interstate 8 Alternative alignment. Similarly, no portion of the reroute or the original alternative has been adequately surveyed for cultural resources, resulting in an equal likelihood for encountering cultural resources during survey of either alignment. The High Meadows Reroute is equivalent to the original Interstate 8 Alternative with regard to cultural resources.

3.3.3.5 Conclusion

The High Meadows Reroute would reduce land use and visual impacts to the High Meadows Ranch Subdivision. It would lessen the overall visual impact of this portion of the Interstate 8 Alternative by moving the transmission structures to lower elevations on the hillside. Therefore, the reroute has been found to be environmentally superior to the Interstate 8 Alternative between approximately MP I8-87.1 to I8-89.3.

3.3.4 Highway 67 Hansen Quarry Reroute

3.3.4.1 Reroute Description and Rationale

This reroute was suggested by SDG&E (see Comment Set E0004) and EnviroMine, Inc. (see Comment Set B0046) during the comment period to minimize impacts to aggregate mineral resources at an operational quarry along the Interstate 8 Alternative. It is also included in the Recirculated Draft EIR/EIS, because new landowners are affected. As shown on Figure 3-9, the Highway 67 Hansen Quarry Reroute would continue from the northern end of the High Meadows Reroute at MP I8-89.3 (see Section 3.3.3). It would diverge from the Interstate 8 Alternative on the east side, heading north and then northeast of the original route by a maximum of approximately 500 feet for a distance of about 1.5 miles before rejoining the Interstate 8 Alternative at MP I8-91.9. From that point to the end of the Interstate 8 Alternative at MP 92.7, there would be minor adjustments to structure locations.

3.3.4.2 Biological Resources

The original segment of the Interstate 8 Alternative would impact six sensitive vegetation communities (Diegan coastal sage scrub, southern mixed chaparral, chamise chaparral, valley needlegrass grassland, non-native grassland, and mule fat scrub). The Highway 67 Hansen Quarry Reroute would result in fewer impacts to sensitive vegetation communities because it would require two fewer towers, six fewer pull sites, and it would avoid impacts to mule fat scrub; however, the significance level for impacts to sensitive vegetation would remain the same (Class I). This reroute is preferred over the I-8 Alternative segment it would replace because it would have fewer impacts to sensitive vegetation, and it would have no effect on the biological analysis already conducted for the I-8 Alternative.

3.3.4.3 Visual Resources

In avoiding some of the Hansen Quarry operations, the Highway 67 Hansen Quarry Reroute would also achieve a slight reduction in structure prominence and skylining by moving four (4) transmission structures to slightly lower elevations on a hillside east of the quarry operation and SR67. Although the visual impact of this portion of the I-8 Alternative would be lessened, the overall impact significance level (Class I) would not change. However, this reroute is preferred over the Interstate 8 Alternative route segment it would replace and would have no effect on the visual analysis already conducted for the I-8 Alternative.

3.3.4.4 Cultural Resources

There are three cultural resources present within the study corridors for both the Highway 67 Hansen Quarry Reroute and the original Interstate 8 Alternative alignment (see Table 3-2 below and Section E.1.7 of the Draft EIR/EIS): CA-SDI-13849, CA-SDI-14040, and CA-SDI-12821. The reroute contains three additional resources: CA-SDI-17652, CA-SDI-17651, and CA-SDI-17286 as well. One cultural resource present within the original portion of the alternative (CA-SDI-13631) would be avoided by the reroute. Therefore, the reroute would result in a net increase of two cultural sites located in its corridor.

Figure 3-8. Interstate 8 Alternative: High Meadows Reroute
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Figure 3-9. Interstate 8 Alternative: Highway 67 Hansen Quarry Reroute
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No portion of the reroute or the original alternative has been surveyed for cultural resources, however, a Class I data search has been performed for both routes. As a result, there is the potential to find additional unknown cultural resources in both. All of the recorded resources are potentially eligible for NRHP or CRHR listing but have insufficient data for an eligibility determination. All of the resources are bedrock milling sites except CA-SDI-12821, a historical road segment, and CA-SDI-13849, a pre-historic temporary camp. Any project related impacts to these resources would likely be less than significant (Class II), with mitigation. However, based on the greater number of known cultural resources within the reroute, the original alternative alignment is likely less sensitive and is environmentally preferred.

Table 3-2. Cultural Resources in or avoided by Highway 67 Hansen Quarry Reroute

Resources in Reroute and Bypassed Alignment

Resource No.	Resource Type	National Register Status, Designations or Recommendations	Comments
CA-SDI-12821	Historical Road Segment	Insufficient Data	Reroute and original I-8 Alternative
CA-SDI-13849	Temporary Camp	Insufficient Data	Reroute and original I-8 Alternative
CA-SDI-14040	Bedrock Milling	Insufficient Data	Reroute and original I-8 Alternative

Resources in Reroute Only

Resource No.	Resource Type	National Register Status, Designations or Recommendations	Comments
CA-SDI-17286	Bedrock Milling	Insufficient Data	Reroute only
CA-SDI-17651	Bedrock Milling	Insufficient Data	Reroute only
CA-SDI-17652	Bedrock Milling	Insufficient Data	Reroute only

Resources in Bypassed Alignment Only

Resource No.	Resource Type	National Register Status, Designations or Recommendations	Comments
CA-SDI-13631	Bedrock Milling	Insufficient Data	Original I-8 Alternative only

3.3.4.5 Geology, Mineral Resources, and Soils

In San Diego County, the Interstate 8 Alternative ROW would cross the northern edges of two adjacent quarries located between MP I8-89.5 and I8-90.5, the Ennis Pit owned by Hansen Aggregate which is in active production of sand and gravel and the TTT Quarry owned by Superior Ready Mix which is an active granite/crushed-broken stone quarry.

Construction operations for the Interstate 8 Alternative would potentially interfere with daily ongoing mining operations at these active quarries and potentially render mineral resources inaccessible. Implementation of Mitigation Measure G-9a would be required to ensure that this impact would be reduced to less than significant levels (Class II) by coordinating construction activities with the quarry operations and therefore avoiding or minimizing interference (Mitigation Measure G-9a: Coordinate with quarry operations).

The portion of the Hansen Aggregate property that the original alternative line would cross would be located in a hilltop location that would not likely have prime aggregate, and mitigation would reduce potential impacts to less than significant; however, the original alternative would cross the corner of the property (designated MRZ-2), which may result a loss of mining aggregate and revenues. Therefore, the reroute, which would avoid the mining property entirely, would be environmentally preferable for mineral resources.

3.3.4.6 Conclusion

The Highway 67 Hansen Quarry Reroute would reduce impacts to aggregate mineral resources at an operational quarry along the Interstate 8 Alternative by moving the route to the east of the Hansen Aggregate property to land owned by the City of San Diego. In addition, the reroute would move four transmission structures to a lower elevation on the hillside, thereby reducing visual impact. Finally the reroute would also be environmentally preferred for biological and cultural resources and therefore, it has been found to be environmentally superior to the original Interstate 8 Alternative between MP I8-89.3 and MP I8-91.9.

3.3.5 Cameron Reroute

3.3.5.1 Reroute Description and Rationale

This reroute was suggested by SDG&E to reduce impacts to properties and avoid CNF back country non-motorized land use zone, and is included in the Recirculated Draft EIR/EIS because the effect on a private landowner has changed due to the slightly revised location.

As shown on Figure 3-10, the reroute would diverge from the Modified Route D Alternative just west of Buckman Springs Road. The reroute would head northwest for 0.6 miles converging again with the original alternative route near MP MRD-9.2.

The reroute would again diverge from the Modified Route D Alternative at MP MRD-9.6, just west of Big Potrero Truck Trail. The rerouted line would be located a maximum of approximately 150 feet southeast of its original location for 0.3 miles in order that the line does not cross a corner of a CNF land use zone that does not allow transmission lines, and it would remain entirely on private land.

3.3.5.2 Biological Resources

The original segment of the Modified Route D Alternative would impact four sensitive vegetation communities (big sagebrush scrub, southern mixed chaparral, chamise chaparral, and coast live oak woodland). The Cameron Reroute would result in similar impacts to sensitive vegetation communities. One additional tower (Structure #218) and two additional pull sites associated with Structure #2218 would be required for this reroute, but the total length of access roads is shorter because the access road from Buckman Springs Road to Structure #212 is shorter than the original segment. The significance level for impacts to sensitive vegetation remains as Class I. This reroute is preferred over the original Modified Route D segment it would replace because of the decrease in permanent impacts from access roads. This reroute would have no effect on the biological analysis already conducted for the Modified Route D Alternative.

Figure 3-10. Modified Route D Alternative: Cameron Reroute

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3.3.5.3 Wilderness and Recreation Resources

The minor reroute beginning at MP MRD-9.6 would avoid Back Country Non-Motorized land use zone on CNF and would thus be preferred for Wilderness and Recreation impacts. Overall it would not require a significant change to analyses for the Modified Route D Alternative. As discussed in Section E.4.5 of the Draft EIR/EIS, Impact WR-2 (Presence of a transmission line or substation would permanently change the character of a recreation area, diminishing its recreational value) would remain significant and unmitigable (Class I) for the Modified Route D Alternative.

3.3.5.4 Conclusion

This reroute was suggested by SDG&E with input from the U.S. Forest Service, as well as the CPUC and BLM, to avoid back country non-motorized land use zones on the Cleveland National Forest. Construction of transmission lines is prohibited in BCNM zones. In addition, the reroute is preferred over the original Modified Route D segment it would replace because of the decrease in permanent impacts from access roads. Therefore, the Cameron Reroute has been found to be environmentally superior to the Modified Route D Alternative in this segment.

3.3.6 Pacific Crest Trail Reroute

3.3.6.1 Reroute Description and Rationale

This reroute was suggested by SDG&E, with input from the USFS, CPUC and BLM, to minimize impacts to its crossing of the Pacific Crest Trail (PCT). BLM and USFS are discussing further minor changes to this route to minimize effects on BLM land, however, impacts to the visual, wilderness and recreational resources related to the PCT would be significant and unmitigable (Class I) regardless.

As shown on Figure 3-11, the current reroute would diverge from the Modified Route D Alternative at MP MRD-11.7. The reroute would head southwest for 0.45 miles where it would cross the PCT and then would continue for another 0.15 miles before it would turn west. The route would travel west and west-northwest for approximately two miles, rejoining the original Modified Route D Alternative at MP MRD-14.

The reroute would move a segment of the Modified Route D Alternative from its original location, just south of the border of the Cleveland National Forest and BLM land in the Hauser area, south into the interior of BLM lands. SDG&E moved the route south, onto a parcel that is now in federal ownership, since it was donated to the BLM in 2005. The lands were donated to the BLM for wildlife habitat conservation and to support habitat linkages between Baja, Mexico and southern California. BLM accepted these lands under a donation agreement. The agreement specifically states that "BLM shall not construct roads, structures, and other improvements on the properties, except to the extent minimally necessary and consistent with the restoration and protection of the natural resources." The reroute designed by SDG&E also proposes a new road on the BLM lands west of the donated parcel. This road would support construction and maintenance of the transmission line and towers.

3.3.6.2 Biological Resources

The original segment of the Modified Route D Alternative would impact 3 sensitive vegetation communities (northern mixed chaparral, chamise chaparral, and southern mixed chaparral) and arroyo toad assumed occupied habitat. The Pacific Crest Trail Reroute includes one additional tower, one additional pull site,

and a greater total length of access roads. This reroute would result in greater impacts to the same types of sensitive vegetation communities; however, the significance level remains the same (Class I). Structure #238 and its associated pull sites of this reroute would result in similar impacts to arroyo toad assumed occupied habitat as the original Modified Route D segment it would replace (see Tower USFS1099 on Figure Ap.8J-34 and page E.4.2-17 of the Draft EIR/EIS). The significance level for arroyo toad impacts would remain as a Class II impact.

This reroute would result in a temporary impact to occupied least Bell's vireo habitat from the pull site located at its eastern end, which is adjacent to the original Modified Route D Alternative. Section E.4.2 in the Draft EIR/EIS discusses how the original Modified Route D Alternative would impact occupied least Bell's vireo habitat in this area (see pages E.4.2-13 through E.4.2-14 and Figure Ap.8J-34 of the Draft EIR/EIS). As with the overall Modified Route D Alternative, this reroute's impacts to occupied least Bell's vireo habitat would be significant but mitigable (Class II) with implementation of Mitigation Measures B-1a, B-1c, B-2a, and B-7e (see Appendix 12 of the Draft EIR/EIS for the full text of these mitigation measures). The reroute's impacts would be slightly greater because of the addition of the pull site at the reroute's eastern end within occupied least Bell's vireo habitat in Hauser Creek. These impacts to least Bell's vireo habitat are in addition to the impacts discussed in Section E.4.2 in the Draft EIR/EIS that would be caused by a tower and access road associated with the original Modified Route D Alternative. The original segment of the Modified Route D Alternative is biologically preferred over this reroute because it would result in fewer impacts to sensitive vegetation communities and fewer impacts to occupied least Bell's vireo habitat.

3.3.6.3 Visual Resources

The Pacific Crest Trail Reroute would eliminate two crossings of the PCT, which would reduce the occurrence of extended in-line views of the transmission line and overall structural prominence experienced along the PCT. The reroute would also utilize a southwest-northeast route orientation across a portion of Hauser Creek Canyon that would reduce the visual prominence of the canyon crossing when viewed from the PCT. Furthermore, by moving the route further to the south, view blockage of the mountains and ridges to the north would be reduced when traveling north on the PCT between MP MRD-12 and MRD-13. Although the reroute would separate the routes of the existing 69 kV wood-pole transmission line and the proposed steel-lattice 500 kV transmission line along this route segment, the reduction in PCT crossings and shift to a less visually prominent route would outweigh any sense of proliferation of utility lines that travelers on the PCT might experience. While the visual impact of the Pacific Crest Trail Reroute would still be significant (Class I), the impact would be less severe compared to the original Modified Route D Alternative.

3.3.6.4 Wilderness and Recreation Resources

Even with the reroute, the 500 kV steel towers would be visible to hikers along the PCT, especially where the line would cross the trail. Thus, visual resource and corona noise impacts would directly adversely affect the character of the PCT and would result in a significant and unmitigable impact (Class I). Although Impact WR-2 (Presence of a transmission line or substation would permanently change the character of a recreation area, diminishing its recreational value) would remain significant and unmitigable (Class I) for the Modified Route D Alternative, the Pacific Crest Trail Reroute is preferred from a wilderness and recreation standpoint because it would eliminate two crossings of the PCT by the Modified Route D Alternative.

3.3.6.5 Conclusion

This reroute was suggested by SDG&E, with input from the USFS, CPUC and BLM, and would reduce impacts to PCT by eliminating two crossings of the trail. Furthermore, by moving the route further to the south, view blockage of the mountains and ridges to the north would be reduced when traveling north on the PCT between MP MRD-12 and MRD-13. While the visual and wilderness and recreation impacts of the Pacific Crest Trail Reroute would still be significant (Class I), the impacts would be less severe compared to the original Modified Route D Alternative. Impacts to biological resources would be slightly greater with the reroute.

However, before a route in this area can be finalized, BLM and USFS will discuss further changes to this route to minimize effects on BLM land, and to avoid impacts to the donated parcel. BLM would like a further revision to accomplish several objectives: avoiding crossing the Pacific Crest Trail more than once, avoiding crossing the donated parcels on Hauser Mountain, and minimizing new road construction on BLM land. The final route will be included in the Final EIR/EIS.

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Figure 3-11. Modified Route D Alternative: PCT Reroute
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3.3.7 Western Modified Route D Alternative (MRDA) Reroute

3.3.7.1 Reroute Description and Rationale

This reroute was suggested by SDG&E after consultation with the U.S. Forest Service, CPUC, and BLM to minimize impacts to properties. The portion of the reroute around the Modified Route D Alternative Substation has been modified to fit updated substation civil and electrical engineering and to provide for increased separation between the incoming 500kV line and the outgoing 230kV line to accommodate future transmission expansion. It is included in the Recirculated Draft EIR/Supplemental Draft EIS because of its changed effect on both public and private land. As shown on Figure 3-12, the Western MRDA Reroute would parallel the Modified Route D Alternative, being alternately east or west of the alternative at various locations.

It would first diverge from the north side of Modified Route D Alternative at MP MRD-18.5, heading northwest for 0.4 miles, then west for 2.2 miles, and north for 1.5 miles before rejoining the alternative just north of MP MRD-23. The reroute would be separated from the Modified Route D Alternative by a maximum of 0.3 miles. At MP MRD-23.8 the reroute would jog west of the original alternative for two structures then return to the original alternative alignment. Beginning at MP MRD-25.7, it would again jog west of the original route for 2.7 miles and rejoin the alternative at MP MRD-28.5. From that point to MP MRD-31, the reroute and the alternative would be in close proximity. At MP MRD-31, the reroute would be located east of the original alternative until it would cross to its west and continue 0.2 miles into the alternative substation.

3.3.7.2 Biological Resources

The original segment of the Modified Route D Alternative would replace would impact nine sensitive vegetation communities (Diegan coastal sage scrub, coastal sage scrub-inland form, northern mixed chaparral, scrub oak chaparral, chamise chaparral, southern mixed chaparral, non-native grassland, coast live oak woodland, and southern coast live oak riparian forest) and one golden eagle nest area. In comparison to the original segment, the Western MRDA Reroute would require two additional towers, but eight fewer pull sites and fewer access roads because 29 of the towers would be constructed using helicopters. The significance level for impacts to sensitive vegetation remains the same (Class I). This reroute would impact the same golden eagle nest area affected by the original segment. The significance level would not change because it would be within 1,000 feet of the site, with a direct line of sight between the nest area and this reroute and construction would occur above the nest site in elevation (Class I). Similar to the BCD South Reroute (see Section 3.3.2.2), the USFS is requiring this portion of the Western MRDA Reroute to be constructed and maintained by helicopter.

This reroute is preferred over the original segment of the Modified Route D Alternative it would replace because it would result in fewer impacts to sensitive vegetation communities. This reroute would have no effect on the biological analysis already conducted for the Modified Route D Alternative.

3.3.7.3 Visual Resources

The Western MRDA Reroute would result in visual impacts similar to those already addressed for Modified Route D Alternative between MP MRD-18 and MP MRD-31. Between MP MRD-31 and MP MRD-32 the visual impact would be slightly greater with the reroute because the new east-west orientation would place transmission structures in more visible and prominent locations, though the impact classification (Class I) would not change. From MP MRD-32 to the Modified Route D Substation, the visual impact

would be similar to the original Modified Route D Alternative. Therefore, the reroute would not change the visual analysis already conducted for the Modified Route D Alternative in Section E.4.3 of the Draft EIR/EIS, though the reroute is less preferred for visual resources relative to the Modified Route D Alternative.

3.3.7.4 Cultural Resources

There is one cultural resource, CA-SDI-11605, present within the study corridors for both the Western MRDA Reroute and the original Modified Route D Alternative. Additional resources are present in each of these alignments, as well: CA-SDI-7920, a rock wall of unknown temporal or cultural affiliation, in the Western Reroute, and CA-SDI-8445, a single bedrock mortar with a mano recorded 80 meters away, in the original alternative route. Both CA-SDI-7920 and CA-SDI-8445 are potentially eligible for NRHP or CRHR listing; however, insufficient data are available to make a final determination. Although the sites are in close proximity and so the cultural resources setting would be similar, approximately 25 percent of the original Modified Route D Alternative alignment has been intensively surveyed for cultural resources, compared to 10 percent of the reroute, suggesting there may be a greater potential for encountering additional cultural resources during survey of the reroute than during completion of the survey of the original alternative route. Therefore, the Western MRDA Reroute is slightly preferred for cultural resources.

3.3.7.5 Conclusion

This reroute was suggested by SDG&E after consultation with the U.S. Forest Service, CPUC, and BLM to minimize impacts to properties and to fit updated substation civil and electrical engineering to accommodate future transmission expansion. Although between MP MRD-31 and MP MRD-32 the visual impact would be slightly greater, it would also be preferred for biological and cultural resources. Overall the Western MRDA Reroute has been found to be environmentally superior to the original Modified Route D Alternative.

3.3.8 Star Valley Option Revision

3.3.8.1 Revision Description and Rationale

This reroute was suggested by SDG&E in an effort to reduce visual impacts to residences, and it is included in the Recirculated Draft EIR/EIS because it would affect new private landowners. The outgoing 230 kV line was modified leaving the Modified Route D Substation Alternative to accommodate future transmission expansion. As shown on Figure 3-13, the reroute would extend in nearly a straight line between the Modified Route D Substation Alternative to a point where the Star Valley Option turns due north. It would replace with a straight alignment a portion of the Star Valley Option that has two dog legs in its alignment. The reroute would exit the Modified Route D Substation and travel west to the south side of the original route for 0.75 miles. Although in a straight line, because of a dogleg in the option, the reroute would fall to the north of the option alignment for one structure. The revised route would cross to the south of the original option at MP SVO-0.9. The reroute would then continue northwest for another 1.3 additional miles before rejoining the Star Valley Option at MP SVO-2.3.

Figure 3-12. Modified Route D Alternative: Western Reroute

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Figure 3-13. Modified Route D Alternative: Star Valley Option Revision

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3.3.8.2 Biological Resources

The original segment of the Star Valley Option impacted four sensitive vegetation communities (Diegan coastal sage scrub-inland form, northern mixed chaparral, chamise chaparral, and southern coast live oak riparian forest), arroyo toad assumed occupied habitat, and one golden eagle nest area. Although the Star Valley Option Revision would require construction of one additional tower and one additional pull site and 3 of the 13 towers would require larger temporary construction/maintenance pads as compared to the original segment, this reroute would result in fewer impacts to sensitive vegetation communities and fewer impacts to arroyo toad assumed occupied upland habitat because fewer access roads would be needed (7 of the 13 towers would be constructed by helicopter). As with the original Star Valley Option, this reroute remains approximately 1,500 feet from the golden eagle nest area and there would be direct line of sight between the nest site and this reroute. Therefore, this reroute would result in similar impacts to the golden eagle nest area. Overall, the significance level would remain the same for each of these impacts (Class I for sensitive vegetation, Class II for arroyo toad, and Class I for golden eagle).

Least Bell's vireo and southwestern willow flycatcher (*Empidonax traillii extimus*) were assumed to be present where the original segment and where the reroute would cross the Sweetwater River. As with the original segment (see pages E.4.2-26 and E.4.2-27 of the Draft EIR/EIS), the reroute would not impact least Bell's vireo or southwestern willow flycatcher assumed occupied habitat; the significance level would remain as a Class II impact for both species because of the potential for indirect noise impacts if construction were to occur during the breeding season of either species.

This reroute is preferred over the original segment of the Star Valley Option it would replace because it would result in fewer impacts to sensitive vegetation communities and fewer impacts to assumed occupied arroyo toad habitat. This reroute would have no effect on the biological analysis already conducted for the Star Valley Option.

3.3.8.3 Visual Resources

Although a portion of the revised route (between MP SVO-1 and SVO-2) would be less visible to residents located along Star Valley Road, the overall visual impact of the route would not substantially differ from the original route and the significant and unmitigable impact classification (Class I) would not change. Therefore, the Star Valley Option Revision would be similar to the visual analysis already conducted for the Star Valley Option in Section E.4.3 of the Draft EIR/EIS.

3.3.8.4 Cultural Resources

One cultural resource, PH-10-31-A, is present within the study corridors for both the Star Valley Option Revision and the original Modified Route D Alternative: Star Valley Option. A second resource, PH-11-08, is also present within the original Star Valley Option. Although the sites are in close proximity and so the cultural resources setting would be similar, approximately 60 percent of the original option has been intensively surveyed for cultural resources, compared to only 15 percent of the reroute. This suggests that there is a greater potential for encountering additional unknown cultural resources during complete survey of the reroute. Despite the greater number of known resources within the original option segment (two versus one), there is a greater probability of encountering additional cultural resources during remaining survey of the Star Valley Option Revision. As a result, the original Star Valley Option appears slightly environmentally preferable over the Star Valley Option Revision for cultural resources.

3.3.8.5 Conclusion

The Star Valley Option Revision would result in fewer impacts to sensitive vegetation communities and fewer impacts to arroyo toad assumed occupied upland habitat. It would also slightly reduce visual impacts to nearby residences along Star Valley Road. Therefore the Star Valley Option Revision has been found to be environmentally superior to the original Star Valley Option.