Chapter 3
Project Description

Project Location

The Hollister 115 kV Power Line Reconductoring Project (proposed project) includes replacing the conductors (reconductoring) on two segments of the 115 kV electric power line system near Hollister and San Juan Bautista, the Hollister Tower Segment and the Hollister Pole Segment. An approximately 1.3-mile section of the Hollister Pole Segment will be relocated out of the San Benito River floodplain (the existing river alignment) to a new river crossing, with structures located on dry banks above the river (the Proposed River Crossing).

The Hollister Tower Segment, a 7-mile section of the double-circuit Moss Landing-Salinas-Soledad 115kV power line, begins at the Lagunitas Switches near the intersection of Crazy Horse Road and San Juan Grade Road in Monterey County, and extends northerly to Anzar Junction,[1] which is approximately 1.5 miles northwest of the City of San Juan Bautista in San Benito County (Figure 3-1). The Hollister Tower Segment traverses a series of steep hills with various vegetative covers, including low-lying grasses, shrubs, and trees.

The Hollister Pole Segment, a 9-mile section of the Hollister No. 1 115 kV power line that will be rebuilt as a double-circuit line, begins near Anzar Junction, at the north end of the Hollister Tower Segment, located approximately 1.5 miles northwest of San Juan Bautista, in San Benito County. The Hollister Pole Segment extends easterly to the Hollister Substation, located north of the City of Hollister and approximately 0.25 mile west of San Felipe Road. The Hollister Pole Segment traverses the San Andreas Rift Zone before entering the San Juan Valley. The line continues easterly through agricultural fields before crossing the San Benito River and entering the Flint Hills. The line continues in the Flint Hills for several miles, then traverses agricultural fields and crosses the Union Pacific Railroad before reaching the Hollister Substation.

[1] The intersection of the Hollister Tower Segment and the Hollister Pole Segment is a point approximately 200 feet from Anzar Junction (a junction in the Watsonville-Salinas 60 kV power line that generally runs parallel with the Hollister Tower Segment from Lagunitas Switches to Anzar Junction). Because the intersection between project line segments is close to Anzar Junction and there are no other identifying features in the immediate area, this document uses Anzar Junction, for ease of reference, to provide a general dividing point.

For the purposes of this assessment, the *project study area* is defined as land within an approximately 500-foot corridor of the existing and proposed project segments. The project study area is located within unincorporated areas of San Benito and Monterey Counties and within the sphere of influence of the Cities of Hollister and San Juan Bautista.

Table 4.9-1 in Section 4.9, Land Use, provides a summary of existing land use, general plan designations, and zoning designation for each parcel within 500 feet of the Hollister Substation, Hollister Tower Segment, and Hollister Pole Segment (including the Proposed River Crossing). Figures 4.9-1 and 4.9-2 illustrate existing land uses along the project route.

Existing Electric Power System

Both the communities of Hollister and San Juan Bautista are currently served by the Hollister Substation. In the existing power line system configuration, the Hollister Substation is supplied by two power lines, the Hollister Nos. 1 and 2 115 kV lines, which begin at the Lagunitas Switches as part of the Moss Landing – Salinas – Soledad 115kV tower line for approximately 7 miles (the Hollister Tower Segment) before splitting and extending in different directions to Hollister Substation. Near Anzar Junction, the Hollister No. 1 pole line (the Hollister Pole Segment) heads due east to Hollister Substation. The Hollister No. 2 line continues to the north, then turns east and then south to reach the Hollister Substation (Figure 3-1). In the event of an outage on either 115 kV line, all of the Hollister load is served from the remaining line. Figures 3-2 thru 3-19 illustrate the existing system.

The conductors on the Hollister Tower Segment and the Hollister Pole Segment are comprised of 2/0 and 3/0 copper.

Proposed Project

This project proposes to replace the existing towers with new lattice steel towers on the Hollister Tower Segment and to replace the existing wood poles on the Hollister Pole Segment with a combination of tubular steel poles (TSPs) and light-duty steel (LDS) poles. The existing single-circuit 115 kV power line within the Hollister Pole Segment will be rebuilt as a double-circuit 115 kV power line to improve reliability, address current projected growth, and add needed capacity to the surrounding areas. The Proposed River Crossing will remove the power line from the San Benito River floodplain (the existing river alignment).

The preliminary proposed tower and pole locations are illustrated in Figures 3-2 through 3-19. These figures show the preliminary proposed numbers, locations, and acres of staging areas and pull sites for the Hollister Tower and Hollister Pole Segments, and existing and proposed access roads. As shown in the figures, the replacement towers and poles would be within approximately 10 feet of the

existing structures and in the centerline of the right-of-way, except for six towers that will be placed from 30 to 100 feet from the existing structure.

The Hollister Tower Segment of the proposed project consists of replacing the conductor and approximately 37 of the 39 towers located in the same alignment described above. The existing tower segment of the project consists of six conductors (wires) supported by 39 four-legged, double-circuit towers averaging 82 feet in height. The existing towers are constructed of dull, galvanized, lattice steel angle members connected by steel bolts. The towers are constructed on concrete footings. The towers to be removed (refer to "Tower Removal and Installation") will be replaced with new towers that are similar in size and design.

The Hollister Pole Segment of the project will be reconstructed as a double-circuit power line in its current alignment, except for the Proposed River Crossing. The existing pole segment consists of 3/0 and 2/0 copper conductors supported by approximately 159 wood poles and approximately five LDS poles. These poles range in height from approximately 60 to 90 feet. Each pole is set directly into the ground. The replacement LDS poles and TSPs are rusted brown or "weathered" in appearance. Most of the existing poles will be removed, as described under "Pole Removal and Installation."

Approximately 17 poles are currently located in the floodplain of the San Benito River, and approximately 9 additional poles are located in adjacent agricultural areas. To reduce impacts to the river floodplain area and increase the safety and reliability of this section due to its location, the Proposed River Crossing will be relocated approximately 3,000 feet to the north of the existing river alignment and will span the San Benito River channel from bank to bank above the ordinary high water mark. To span the river and keep the new power line out of the floodplain, two engineered (approximately 92-foot) TSPs will be installed above and back from each bank of the river channel (Figures 3-2 and 3-3).

In addition to the two reconstructed segments, a minor upgrade to the Hollister Substation will be required. The upgrade includes relocating two existing poles on the substation property, updating relay settings, and changing the 115 kV bus conductors.

Project Components

Power Lines

Both circuits of the existing double-circuit 115 kV power line within the Hollister Tower Segment will be replaced with a 477 kcmil (circular wire gauge size = 1, 000 circular mils) steel-supported aluminum conductor (SSAC) conductor that is approximately 0.846 inch in diameter. The existing single-circuit 115 kV power line within the Hollister Pole Segment will be reconstructed as a double-circuit 115 kV power line, also utilizing a 477 kcmil SSAC conductor for each circuit. The minimum ground to conductor clearance is 30 feet.

Towers/Poles

The Hollister Tower Segment will be constructed with new towers that are similar in design to the existing towers. The two typical designs for these towers are shown in Figure 3-20. Approximately 37 towers will be replaced along the existing alignment, and approximately two towers will be retained. The span length between towers will range from approximately 51 to 1,847 feet, with an average span of approximately 850 feet. Each tower is built on four drilled pier concrete footings. The dimension of each footing is dependent on variables such as topography, tower height, span length, and soil properties. On average, a typical footing has an aboveground projection of approximately 3 feet.

The existing lattice steel towers will be dismantled and removed. A crane or helicopter will be used to take down the tower and remove it from the project area. Where removal could otherwise cause extensive environmental impacts, towers will be partially dismantled, with the bases left behind. Tower footings will be cut down to below ground level or left depending on the environmental sensitivity of the site.

The Hollister Pole Segment will be reconstructed using a combination of both TSPs and LDS poles. Approximately 159 existing wood poles will be replaced with approximately 164 new steel poles. The poles will be rusted brown in appearance; they range from approximately 70 to 95 feet in height and from approximately 2 to 6 feet in diameter at the base. The typical design for each type of pole is shown in Figure 3-21. Span lengths between the poles will range from approximately 94 to 935 feet, but the average span will be approximately 295 feet. TSPs will be used at angle and dead-end poles where a stronger structure is needed. This structure is a prefabricated steel top and bottom section. The bottom section is bolted to a poured-in-place concrete foundation. A heavy crane is used to install the TSPs, both top and bottom sections. LDS poles can be installed without the use of a heavy crane.

As noted, approximately17 wood poles are located in the floodplain of the San Benito River (the existing river alignment) (Figures 3-13 and 3-14). These existing wood poles in the floodplain will be "topped" (i.e., shortened by removing the existing power line and cutting down the excess length to the level of the lower distribution line), allowing the existing distribution line to continue to serve nearby customers. Approximately four additional wood poles that are located in the agricultural field west of the river will be topped in a similar manner. Approximately 10 poles will be removed from this segment as part of the project. Approximately 22 new steel poles (both TSPs [4] and LDS poles [18]) will be installed to accommodate the Proposed River Crossing, which is approximately 3,000 feet north of the existing river alignment.

Pole locations will be sited to minimize impacts to environmentally sensitive areas. At each pole location, the work area will be flagged by PG&E and/or the environmental monitor prior to construction. For pole installations near wetlands, riparian habitat, or special-status plant or wildlife habitat, a biological monitor (a trained professional biologist) will approve the type and placement of environmental protections and will monitor the area during construction

activities. Work areas around transmission poles generally will not require grading or surfacing.

As noted, the average span length for the Hollister Tower Segment is approximately 850 feet, and the average span length for the Hollister Pole Segment is approximately 295 feet. No other infrastructure or facilities are co-located on the Hollister Tower Segment. Approximately 7 miles of one distribution circuit is co-located (underbuild) on the Hollister Pole Segment. No other third party facilities are co-located on these power lines.

Substations

A minor upgrade to the Hollister Substation will be required. The upgrade includes relocating two existing poles on the substation property, updating relay settings, and changing the 115 kV bus conductors.

Easement Requirements

PG&E currently owns easements along the entire project route except for the approximately 1.3-mile portion of the Proposed River Crossing. The proposed realignment will traverse agricultural fields, span the San Benito River, and cross open grazing lands in the Flint Hills. Relocation of this portion will require acquisition of easements. For land that PG&E does not own, PG&E will negotiate easements and other property rights with private landowners for permanent or temporary use.

Access

Access Roads

Several classes of roads will be used for the project. Road classes, miles, and acres are listed in Table 3-1 and shown in Figures 3-2 through 3-19. Approximately 7.94 miles of existing roads will be used for the project that will not require any substantial upgrades prior to project construction. In addition, approximately 2.4 miles of existing roads will be upgraded and utilized to access project features. Approximately 0.39 mile of new permanent access roads will be constructed as part of the project. Some areas will be accessed over land without a need for preparation or grooming of a road. Overland travel will occur on approximately 5.92 mile of gently sloping grassy areas and rangeland; these areas will not require preparation or surfacing.

Table 3-1. Access Routes

Type of Access	Approximate Estimated Miles
Existing dirt and paved roads	9.17
Existing roads to be improved	1.59
New permanent road	0.36
Overland travel	5.92
Total	**17.04**

Both private and public roads will be accessed. As noted, the Hollister Tower Segment traverses a series of steep hills with various vegetative covers, including low-lying grasses, shrubs, and trees. Along this alignment, access via public roads is limited. One access point to the project area is at the intersection of the power line and State Route (SR) 156, on the northerly portion of the segment. Other access points are private dirt roads on large ranch properties adjacent to San Juan Grade Road.

PG&E has existing rights to private roads located in the existing alignment. If necessary, PG&E will acquire new rights in portions of the Proposed River Crossing. PG&E has selected access road routes that minimize environmental impacts and, where possible, take advantage of existing topography to minimize the need for grading. Typical access roads will be approximately 15 feet wide, widening to nearly 30 feet at corners. Most unpaved access roads will not require surfacing.

Traffic Control

PG&E will implement best management practices (BMPs) regarding traffic. Encroachment permits will be obtained from the California Department of Transportation (Caltrans) and San Benito County for crossing jurisdictional roads, highways, and freeways. If required by Caltrans or San Benito County as part of the permit, PG&E will prepare a Traffic Control Plan according to the Caltrans *Highway Design Manual* requirements.

Traffic control may be required for work along SR 156, San Justo Road, the San Juan Highway, and local access roadways adjacent to the construction sites. Occasionally, it may be necessary to temporarily close one lane of traffic. Appropriate traffic control and safety measures will be implemented, as required by Caltrans and San Benito County.

Helicopter Access

Helicopters will be used to install towers in locations where overland access is not possible or access is difficult due to topography and vegetation. Towers 18 and 25 are expected to be installed entirely by helicopter. An excavator is expected to drive to Towers 17, 19, 20, and 24 to install the foundations; and the towers are expected to be installed by helicopter. Helicopters will be used to remove and deliver tower sections, materials, equipment, concrete, and workers to these tower locations and to other locations where conventional access is difficult or as otherwise warranted. Preliminary locations for temporary helicopter landing zones (and staging areas) are shown in Figures 3-2 through 3-19. An area of approximately 200 by 200 feet is required for helicopter clearance. Helicopters of varying size will use the temporary landing zones to pick up and drop off crew and materials, and to stage and refuel. These areas will be sprayed with water as needed for fugitive dust control.

As required by the Federal Aviation Administration (FAA), PG&E will require the helicopter vendor to develop and implement a Helicopter Lift Plan (see APM HAZ-3 [Develop and implement a Helicopter Lift Plan] in Section 4.7, "Hazards and Hazardous Materials").

Vegetation Clearing and Tree Removal

Vegetation Clearing

Vegetation clearing is part of an ongoing annual maintenance activity on the existing lines, and will not change after project construction. A Consulting Utility Forester performs an annual inspection of the project facilities. The inspection takes approximately 2 weeks to complete, and the tree trimming work generated by the inspection generally is completed within 60–90 days. Weather can affect the time between inspection and completion of clearing. The area between the Lagunitas Switches and the Anzar Switch (Hollister Tower Segment) cannot be worked in during rains, and roads must be allowed drying time after a rain event. Vegetation clearing in the area between the Anzar Switch and the Hollister Substation (Hollister Pole Segment) is not similarly restricted by weather because of the existence of all-season roads. Barring rain, the average time to complete tree trimming is approximately 30 days.

Tree Removal

Although approximately 136 trees will be removed along the Hollister Tower Segment, the diameter at breast height (dbh) of the vast majority of these trees is from 0 to 12 inches. Approximately 85–90 percent of these trees are coastal live oaks, with approximately 90 percent having a dbh of 0-12 inches. Other trees include valley oak, oak, bay, and live oak, respectively, in order of their

occurrence. The dbh of approximately 30 trees is 12 to 24 inches, and the dbh of approximately six trees is within the 24- to 36-inch range.

For the Hollister Pole Segment, three coastal live oaks, one black walnut, and one fruit tree will be removed in the Anzar Switch area. Aside from trimming, no other tree work is anticipated along the Hollister Pole Segment. All trees along Buena Vista Road are across the road and are highly maintained by distribution inspections (due to the distribution underbuild that is present). The orchards that parallel the power line, between Poles 20/08 and 21/17, are set back from the line right-of-way and are trimmed.

PG&E vegetation management policy prohibits removal of trees from riparian areas without acquiring the appropriate permits. If trimming is required, the trim is not to exceed 10 percent of the total tree.

Construction Methods

This section describes construction methods to be used for both segments of the proposed project. It addresses lay down areas and helicopter landing zones (collectively referred to as *staging areas*), pull and tension sites (also referred to as *pull sites*), access roads, traffic control, helicopter access, tree removal and vegetation clearing, erosion and sediment control and pollution prevention, and cleanup and post-construction restoration. The section also discusses construction methods for power line construction, substation construction, the construction workforce and equipment, and the construction schedule.

Grading

Grading will be carried out by a contractor with all required environmental protection in place, and an environmental monitor will be present during grading activity. If grading takes place near wetlands, riparian habitat, or special-status plant or wildlife habitat, a biological monitor (a trained professional biologist) will approve the type and placement of environmental protections and will be present during these grading activities (see APM 3 [Retain an environmental monitor onsite during construction activities near sensitive habitat] in Section 4.4, “Biological Resources”).

Table 3-2 includes preliminary estimates of project earthwork requirements.

Table 3-3 shows preliminary estimates of project soil and concrete requirements.

Table 3-2. Preliminary Estimates of Project Earthwork Requirements

Construction Phase	Estimated Maximum Daily Grading (acres)	Estimated Total (acres)	Estimated Maximum Daily Excavation (cubic yards)	Estimated Total Excavation (cubic yards)
Hollister Tower Segment				
Establish staging area Road construction	2	45	0	0
Tower installation Transmission line reconductoring	1	2	10	10
Hollister Pole Segment				
Establish staging area Road construction	2	40		
Pole installation Transmission line reconductoring	4	6	10	50
Hollister Substation construction	N/A	N/A	N/A	N/A

Table 3-3. Preliminary Estimates of Project Soil and Concrete Requirements

Construction Phase	Estimated Maximum Daily Exported Soil (cubic yards)	Estimated Maximum Daily Imported Concrete (cubic yards)	Estimated Total Exported Soil (cubic yards)	Estimated Total Imported Concrete (cubic yards)
Hollister Tower Segment				
Establish staging area Road construction	Utilized and spread at the project site	0	Utilized and spread at the project site	0
Tower installation Transmission line reconductoring	Utilized and spread at the project site	100	Utilized and spread at the project site	1,000
Hollister Pole Segment				
Establish staging area Road construction	Utilized and spread at the project site	0	Utilized and spread at the project site	0
Tower installation Transmission line reconductoring	Utilized and spread at the project site	200	Utilized and spread at the project site	460
Hollister Substation construction	N/A	N/A	N/A	N/A

Erosion and Sediment Control and Pollution Prevention during Construction

PG&E will prepare a Storm Water Pollution Prevention Plan (SWPPP) for the entire project, and workers will receive written and tailboard instructions on the plan (see APM HYDRO-1 [Prepare and implement a Storm Water Pollution Prevention Plan] in Section 4.8, "Hydrology and Water Quality"). Implementation of the SWPPP will prevent construction-related erosion and sediments from entering nearby waterways. As part of the SWPPP, PG&E will develop and implement a Spill Prevention Control and Countermeasure Plan (SPCCP) (see APM HYDRO-2 [Develop and implement a Spill Prevention Control and Countermeasure Plan] in Section 4.8, "Hydrology and Water Quality"). The SPCCP will be completed and included in the SWPPP before any construction activities begin. PG&E will routinely inspect the construction areas to verify that the control measures specified in the SWPPP are properly implemented and maintained.

Construction of Hollister Tower and Pole Segments

Staging Areas and Pull Sites

Prior to project construction, staging areas and pull sites will be established along the alignment. Along the Hollister Tower Segment, approximately five staging areas and approximately seven pull sites will be established. For the Hollister Pole Segment, approximately six staging areas and approximately 12 pull sites will be established.

Table 3-4 provides the estimated acreages of disturbance from project-related activities. Table 3-5 identifies the preliminary proposed numbers, locations, and acres of staging areas and pull sites for the Hollister Tower and Hollister Pole Segments. These areas are illustrated in Figures 3-2 through 3-19.

Table 3-4. Estimates of Approximate Temporary and Permanent Disturbance

Project Activity	Approximate Temporary Disturbance[a] (acres)	Approximate Permanent Disturbance[b] (acres)
Replacing towers and poles		
Hollister Tower Segment (37 towers)	1.84	0.33
Hollister Pole Segment (142 poles)	5.84	0.11
Subtotal towers and poles	*7.68*	*0.44*
Construction areas (includes lay down [staging] areas, pull sites, and helicopter landing zones, tower removal work areas and work area overland travel route)		
Hollister Tower Segment	35.42	5.1
Hollister Pole Segment	36.6	0.0
Subtotal construction areas	*72.02*	*5.1*
Access roads	*3.76*	*4.28*
Project total	**83.46**	**9.82**

Note: Estimated disturbance acreages are based on the following assumptions: temporary disturbance for the Hollister Tower Segment is 2,500 square feet per tower, and permanent disturbance is 400 square feet per tower. Temporary disturbance for the Hollister Pole Segment is 1,600 square feet, and permanent disturbance is 30 square feet per pole. Because the majority of towers and poles already exist and are being replaced in kind, the only new permanent disturbance is associated with the Proposed River Crossing.

[a] Temporary disturbance represents construction activities associated with installation and removal of towers and poles.

[b] Permanent disturbance represents the overall footprint area under each tower; limited access remains under each tower (e.g., for cattle grazing).

[c] Table 3-5 contains the details of the acreage to be temporarily disturbed by construction areas.

[d] Table 3-1 shows preliminary estimates of access routes.

Table 3-5. Preliminary Proposed Staging Areas for the Hollister Tower and Pole Segments

Site Identification	Type of Site	Approximate Area (acres)[a]	Preliminary Proposed Location[b]
Hollister Tower Segment			
TP-1	Tower pull site	0.34	Between Towers 37/231B and 37/232
TP-2	Tower pull site	0.31	Centered on Tower 0/04
TLZ-1	Tower landing zone and lay down area	5.02	West of Tower 0/05
TP-3	Tower pull site	0.34	South of Tower 0/06
TP-4	Tower pull site	0.34	Between Towers 0/07 and 0/07
TLZ-2	Landing zone and lay down area	5.02	Southwest of Tower 2/16
TP-5	Tower pull site	0.68	Between Towers 3/21 and 3/22
TLZ-3	Landing zone and lay down area	5.02	East of Tower 3/22
TLZ-4	Landing zone and lay down area	5.0	West of area between Towers 5/32 and 5/33
TLZ-5	Landing zone and lay down area and pull site	5.0	West of and centered on Tower 5/35
TP-6	Tower pull site and landing zone and lay down area	0.69	West of and centered on Tower 5/35
TP-7	Tower pull site	0.33	Centered on Towers 6/40B and 6/40A
Subtotal Hollister Tower Segment		*28.12*	
Hollister Pole Segment			
PLZ-1	Pole landing zone and lay down area	5.37	South of Pole 13/04
PP-1	Pole pull site	0.34	South of Pole 13/04
PP-2	Pole pull site	0.34	East of Pole 13/05
PLZ-2	Pole landing zone and lay down area	5.0	South of Pole 13/19
PP-3	Pole pull site	0.34	South west of Pole 14/09
PP-4	Pole pull site	0.34	East of Pole 14/09
PP-5	Pole pull site	0.26	Northwest of Pole 15/01
PP-6	Pole pull site	0.38	Northeast of Pole 15/01
PP-7	Pole pull site	0.34	West of Pole 16/01 on new alignment

Table 3-5. Preliminary Proposed Staging Areas for the Hollister Tower and Pole Segments (continued)

Site Identification	Type of Site	Approximate Area (acres)[a]	Preliminary Proposed Location[b]
Hollister Pole Segment (continued)			
PP-8	Pole pull site	0.34	East of Pole 16/01 on old alignment
PLZ-3	Pole landing zone and lay down area	4.98	Northeast of Pole 16/01 – end of Proposed River Crossing segment
PLZ-4	Pole landing zone and lay down area	4.9	North of Poles 18/16 and 18/17
PP-9	Pole pull site	0.53	Between Poles 18/17 and 19/00.
PP-10	Pole pull site	0.35	East of Poles 20/03 and 20/05
PLZ-5	Pole landing zone and lay down area	4.94	South of Poles 20/17 and 20/18
PP-11	Pole pull site	0.26	East of Pole 22/02
PP-12	Pole pull site	0.32	West of Pole 22/05
PLZ-6	Pole landing zone and lay down area	5.0	East of Hollister Substation – end of alignment
Subtotal Hollister Pole Segment		*34.3*	
Total project		**62.45**	

[a] Represents temporary disturbance.

[b] Refer to Figures 3-2 through 3-19 for preliminary proposed locations of towers and poles.

Prior to power line construction, approximately 11 staging areas of approximately 5 acres each will be prepared to provide space for materials delivery, storage, and preparation; equipment storage; and crew parking. Several portable stations for concrete cleanup will be placed along the alignment within staging areas, as needed.

PG&E will negotiate leases with private landowners for the temporary use of these areas (see APM AG-1 [Compensate for reduced agricultural production and loss of use] in Section 4.2, "Agriculture").

Because staging areas will be located away from general public access, no fencing of work areas is proposed. No electrical service is required for staging areas.

All pull sites, helicopter landing areas, and staging areas will be set back at least 50 feet from existing water bodies to avoid disturbing riparian vegetation or other trees located near the banks of the San Benito River and other drainages (see APM BIO-4 [Set back staging areas from waterbodies to avoid impacts on riparian habitat] in Section 4.4, "Biological Resources").

Construction of Power Line

Construction of the project will include installation of lattice steel towers, TSPs, and LDS poles; installation of temporary wood poles; removal of the existing wood poles and conductor; topping of some existing wood poles; installation/removal of safety structures at road crossings; and stringing new conductor for the 115 kV circuits. The existing 115 kV conductor will be removed and replaced with a 477 kcmil SSAC conductor. In addition, the Proposed River Crossing will require acquisition and preparation of easements and establishment of staging areas and pull sites prior to construction.

Pull and Tension Sites

To replace or install a length of conductor, a pull site is needed at one end and a tension site is needed at the other; pull and tension sites are temporary. They vary in size depending on the existing terrain for the activity and whether the site will be a pull or a tension site; typically, an approximately 100- by 300-foot area is adequate. Pull sites require a puller, crew truck, and aerial lift truck; tension sites require a tensioner, crew truck, reel dolly, aerial lift, and truck to move the reel dolly. The old conductor will be removed and placed on a collapsible reel. The reel will be transported from the site on a flatbed truck to an authorized recovery facility.

Tower Removal and Installation

The construction process will begin by removing the old conductor. Then the towers will be dismantled. Project construction will involve removal of approximately 37 existing towers and installation of approximately 37 new towers, as shown in Table 3-6.

The tops of the exposed foundations will be broken up and removed. Old foundation holes will be filled with existing soil excavated from the new tower foundations.

New foundation footings will be augured in place. New rebar cages will be placed in the newly drilled hole, and concrete will be poured at foundation locations. The new towers then will be erected and bolted together.

Once all new towers have been constructed, the line insulators will be installed on each tower. Then the rollers will be connected, and sock line will be flown in via helicopter. Once this assembly is completed, the new conductor will be pulled.

Table 3-6. Existing and Preliminary Proposed New Towers and Poles

Structure	Existing Structure Type	Approximate Number of Existing	Approximate Number to Be Removed[a]	Proposed Structure Type	Approximate Number to Be Installed
Hollister Tower Segment					
Tower	Lattice steel towers	39	37	Lattice steel tower	37
Hollister Pole Segment					
Pole	Wood pole	159	159	Light-duty steel (LDS) poles	135
Pole	---	---	----	Tubular steel poles (TSPs)	29
Total		**198**	**196**		**201**

[a] Approximately 17 poles currently in the San Benito River floodplain and four poles in an adjacent agricultural area will be topped, but the distribution line will be left in place to continue to serve local customers. Approximately 10 poles will be removed from this segment. The Proposed River Crossing involves installation of 18 new LDS poles and four new TSPs.

Pole Removal and Installation

Project construction will involve removal of approximately 159 existing wood poles, topping of approximately 17 wood poles, and installation of approximately 164 new steel poles.

Pole Removal

The wood poles that need to be replaced or eliminated will be removed by a line crew, which will access each pole site with a line truck and trailer or a boom truck. Existing wood poles will be loosened from the ground with a hydraulic jack, removed from their holes using a line truck or boom truck, and transported from the site on the trailer or boom truck. If the hole will not be reused, a backhoe and dump truck will backfill the hole with native soil from project construction activities (e.g., pole excavations). The surface will be seeded with an appropriate revegetation seed mix (if required).

Top Removal

As defined earlier, top removal or topping involves removal of the transmission portion of an existing pole while retaining the height necessary to carry existing distribution lines. Seventeen of the existing poles in the San Benito River floodplain and four poles in an adjacent agricultural area will be topped. These wood poles will not be removed because they will continue to carry the lower distribution line that provides service to local customers.

Poles to be topped will be accessed by a pole crew on foot and, where feasible, by a line truck and trailer or a boom truck. The walk-in crew will climb the pole and cut off the top. The top then will be removed, either by hand or by helicopter. If use of a line truck or boom truck is feasible, the truck will be used to hold the top of the pole in place, a chainsaw will be used to cut the pole, and the top section will be removed and disposed of.

Pole Installation

Installation of TSPs involves these steps: staking the pole location; flagging the work area; installing silt fencing (if required); preparing the crane pad (if required); excavating the hole; installing forms, rebar, and anchor bolts; pouring concrete; removing forms; placing gravel around and grooming the base area; installing the new pole; removing the old conductor and stringing the new conductor; removing the old wood pole; and spreading the excess soil onsite and trucking other construction materials offsite for disposal.

Installation of wood poles and LDS poles involves these steps: staking the pole location, flagging the work area, implementing BMPs if required, excavating, installing the pole, backfilling, transferring wire and equipment, removing the old conductor and stringing the new conductor, removing the old pole, and backfilling.

PG&E will temporarily install approximately two wood poles (shoe-flys) at each angle of the existing Hollister Pole Segment to accommodate replacement of the existing wood pole with a new TSP.

While the Hollister Tower Segment and the Hollister Pole Segment are being constructed, the existing Watsonville–Salinas 60 kV power line, which parallels the Hollister Tower Segment northerly to the Hollister Pole Segment, will be temporarily upgraded to 115 kV and serve as the 115 kV feed to the Hollister Substation. To connect the Watsonville–Salinas 60 kV power line to the 115 kV system, PG&E will temporarily install three wood poles at the southerly end and one wood pole at the northerly end of the Hollister Tower Segment.

Pole locations will be sited to both maximize spans and avoid environmentally sensitive areas. At each pole location, the work area will be flagged by PG&E and the environmental monitor prior to construction. For pole installations near wetlands, riparian habitat, or special-status plant or wildlife habitat, a biological monitor (a trained professional biologist) will approve the type and placement of environmental protections and will monitor the area during construction activities (see APM BIO-3 in Section 4.4, “Biological Resources”).

An approximately 50-foot radius around each pole will be required for a work area. Some work areas may require removal of vegetation and installation of silt fencing (e.g., during the wet season, if required). Work areas around poles generally will not require grading or surfacing. The approximately 16 pull sites will require preparation. Temporary crane pads will need to be built if the terrain

will not allow for safe operation of a crane. The size of the pad will vary based on the terrain.

LDS poles supporting straight spans are set directly into the soil. LDS poles may be set to a depth of approximately 7 to 12 feet below grade.

All angle poles are TSPs, which eliminate the need for wire down guys. All TSPs will have concrete pier foundations that are approximately 5 to 7 feet in diameter and from approximately 15 to 30 feet deep. The use of TSPs eliminates visual clutter at the structure locations, decreases the damage potential to the pole by eliminating the opportunity for contacts with the guys during agricultural and farming operations, and decreases the potential for bird strikes.

Drilling and excavation of holes for temporary wood poles, LDS poles, and TSPs will use a hole auger, backhoe, dump truck, and crew truck—all of which will access pole locations via existing paved and dirt roads where available and over land where roads do not exist. A hole auger consists of an auger mounted on a heavy truck chassis or piece of track equipment that will be used to drill holes.

A boom truck consisting of a small crane mounted on a flatbed truck will be used to haul foundation forms, anchor bolts, rebar, and pole structures to the TSP locations. The boom truck also will be used to place foundation forms, anchor bolts, and rebar in place prior to pouring of concrete for the foundation—and to remove the forms following completion of the foundation.

A concrete truck consisting of a four-wheel drive mixer capable of delivering 8 yards of concrete will be used to deliver and pour concrete for the TSP foundations. Concrete trucks will not be washed out at pole locations; cleaning pits will be established at staging areas throughout the project area to minimize time between the concrete pour and truck cleanout. All cleaning pit locations will be approved by an environmental monitor. These pits will include dike walls and tarping, which will allow washed materials to be properly contained and disposed of. A backhoe will be used to place gravel around the TSP foundation after formwork has been removed and to groom the area immediately surrounding all pole installations.

A crane will be used to place TSPs on the foundations. The line truck will be used to place the LDS and temporary wood poles in the excavated hole and to remove the old wood pole. Aerial lift trucks will be used to install, transfer, and remove conductors. Crew trucks will be used to transport the crew, their hand tools, and other minor materials to and from pole locations. Crew trucks will be used to minimize the number of vehicles accessing each site and to reduce vehicle-related impacts.

Helicopter Installation

Installation of some poles or towers may require the use of a helicopter and special construction techniques. Typically, an excavator will be used to auger the foundations; in cases where an excavator cannot access the site, a crew will walk

in the auger. Excavated soils, foundation forms, concrete, TSPs, and miscellaneous tools and materials will be transported in or out by helicopter, as required. The crews may drive on existing roads to a nearby location, park, and walk the remainder of the way to some sites. Helicopters may transport some construction workers to remote sites.

Conductor/Cable Installation

All of the old conductors (power line wires) will be removed, and new conductors will be installed. Prior to stringing conductors, temporary clearance structures will be installed at road crossings and other locations where the new conductors could otherwise come into contact with electrical or communication facilities, other power lines, or vehicular traffic during installation. The temporary structures will be installed across SR 156, San Juan Highway, San Justo Road, and the Union Pacific Railroad crossing.

The temporary structures consist of a wood pole with a frame at the top that resembles a "Y" or "H" that are placed on each side of the road or power line being crossed. Foundations and grading are not required. Methods for installation and removal of clearance structures are similar to those described for wood poles. As noted, these structures prevent the conductor from being lowered or falling into traffic or onto another power line. Netting is installed between the two Y-frame structures as needed to avoid contact between the new conductor and an existing facility.

Traffic control will be provided where necessary during installation and removal of these temporary clearance structures, and as specified in Caltrans and San Benito County encroachment permits.

Replacement of Existing Conductor

To replace an existing conductor with a new conductor, the existing conductor will first be detached from its support structure and temporarily lifted. Rollers then will be installed at the conductor's attachment point, and the conductor will be placed onto the rollers. Installation of rollers and detachment of the existing conductor will require one aerial lift of the conductors by either a boom truck or a helicopter.

Once rollers are in place for the entire section of conductor being replaced, the existing conductor will be pulled out of place. A pulling (sock) line will be attached to the existing conductor, which then will be used to pull the new conductor into place. Removal of the existing conductor and installation of the new conductor will require establishment of pull and tension sites. Equipment at the pull sites will pull the conductor onto a reel, where it will be collected for salvage. Equipment at the tension site will feed new conductor along the rollers previously installed at each structure while maintaining tension in the line so that it does not sag to the ground. Once the new conductor is in place, the rollers will be removed, and the new conductor will be attached to the structures.

Installation of New Conductor

Prior to the installation of a new conductor, rollers will be installed at vacant positions on new structures using one helicopter lift. The helicopter then will be used to install a pulling (sock) line in the rollers. Once installed, the sock line will be used to pull the new conductor into place. When the conductor has been pulled through the rollers, an aerial lift typically is used to remove the rollers and attach the conductor to the structures.

Construction of Substation

Modifications at the Hollister Substation will be performed completely on PG&E property. Materials and equipment will be stored on PG&E property. Each substation work crew will use a crew truck that will be located within the existing substation yard.

Cleanup and Post-Construction Restoration

Crews will be required to maintain clean work areas as they proceed along the line, and they will be instructed that no debris may be left behind at any stage of the project. The cleanup and restoration process will include reseeding disturbed areas as specified in the SWPPP, primarily at crane pad locations. In some cases, as specified in leases with property owners, the land may be left alone for nature to take its course.

Project-generated refuse, spoil, and trash will kept onsite with compliant containers and disposal processes or transported to the nearest service center. Oil and treated wood project storage onsite require site secondary containment, managed storage, and labeling with manifested disposal/recycling processing. Insulators will be stored separately and recovered. Steel, wire, and hardware [requires set-up project recovery processes] please re-phrase in English – will be recycled? Sorted and disposed of somewhere?].

Upon completion of the project, the areas will be left as specified in the individual lease agreements. The site layouts will be approved by the project's environmental monitor, and work crew activities will follow all PG&E environmental guidelines.

Construction Workforce and Equipment

Project construction will require an excavation crew, light-duty helicopter crew, heavy-duty helicopter crew, pole crew, line crew, substation crew, and environmental monitor. Table 3-7 describes the role of each crew.

Table 3-7. Crews Expected To Be Required during Project Construction

Crew	Role
Road	The road crew will be a contract crew to PG&E responsible for development of the access roads, crane pads, and gates. In addition, the road crew will perform post-construction road cleanup activities.
Site preparation	The site preparation crew will be a contract crew to PG&E responsible for development of the landing zones and staging areas, pull and tension sites, compliance with the Stormwater Pollution Prevention Plan, and other best management practices (BMPs). In addition, the site preparation crew will perform post-construction site cleanup activities.
Light-duty helicopter	The light-duty helicopter crew will be a contract crew to PG&E responsible for Federal Aviation Administration (FAA) permits, the helicopter (including maintenance and refueling), transporting work crews and materials to pole and tower sites, and removal and installation of the sock line, as needed.
Heavy-duty helicopter	The heavy-duty helicopter crew will be a contract crew to PG&E responsible for FAA permits, the helicopter (including maintenance and refueling), transporting new poles and towers to pole and tower sites, and installation of poles and towers using a sky crane, as needed.
Tower	The tower crew (either a PG&E or contract crew) will be responsible for the excavation contractor, the heavy-duty helicopter contractor, and the light-duty helicopter contractor; will partner with the line crew in development of pole and tower-related staging areas and installation of foundations, tubular steel poles, and towers.
Line	The line crew (either a PG&E or contract crew) will be responsible for managing a light-duty helicopter crew and will partner with the tower crew in development of tower staging areas, development of pole- and line-related staging areas, establishment of pull and tension sites, installation of rollers and crossbeams, contract removal/installation of the sock line, installation of light-duty steel poles and temporary wood poles, and installation of new conductor.
Substation	The substation crew (either a PG&E or contract crew) will be responsible for all substation site activity.
Environmental and biological monitors	The environmental monitor will be a contractor to PG&E responsible for inspection of all project construction activity, including inspection of work sites prior to the start of construction activity, monitoring of activities and cleanup, preparing and submitting California Public Utilities Commission (CPUC) compliance reports, and otherwise ensuring compliance with the CPUC Permit to Construct. If warranted, a qualified biological monitor will be utilized in areas with sensitive biological resources.

Table 3-8 identifies preliminary estimates of construction workers for each project component.

Table 3-8. Preliminary Estimates of Construction Workers

Construction Phase	Estimated Maximum Daily Workers
Hollister Tower Segment	23
Establish staging area Road construction	5
Tower installation Transmission line reconductoring	23
Hollister Pole Segment	23
Establish staging area Road construction	5
Tower installation Transmission line reconductoring	23
Hollister Substation construction	10

Table 3-9 shows equipment expected to be used during project construction, and Table 3-10 provides preliminary estimates of construction equipment usage. Table 4.15-4 in Section 4.15, "Transportation and Traffic," contains estimates for construction-generated traffic from trucks and worker vehicles.

Construction Schedule

Construction of the power line segments is assumed to occur linearly along each segment. The Hollister Pole Segment is expected to be constructed at a progression rate of 900 feet per week, and the Hollister Tower Segment is expected to be constructed at a progression rate of 660 feet per week. Because construction will progress quickly, construction activities are not expected to take place near an existing residence for more than a few days.

Construction typically would take place between 6:30 a.m. and 5 p.m. Nighttime construction is not anticipated, except for certain construction procedures that cannot be interrupted because of safety considerations or to take advantage of line clearances during off-peak hours. It is anticipated that construction crews will work concurrently.

Table 3-9. Equipment Expected To Be Used during Project Construction

Type of Equipment	Use
■ Aerial lifts	■ Remove old conductor and install new
■ Backhoe	■ Excavate foundations, spoil removal, backfill
■ Boom truck	■ Erect structures
■ Low Drill	■ Erect structures
■ Concrete mixer truck	■ Haul concrete
■ Crane	■ Erect structures
■ Crew-cab truck/pick-ups	■ Transport personnel, tools, and materials
■ Dump truck	■ Haul material
■ Equipment/tool vans	■ Tool storage and transportation
■ Grooming/grading equipment:	■ Road construction and crane pads:
❑ Dozer	❑ Move/compact soils
❑ Water truck	❑ Compact soils and control dust
❑ Grader	❑ Properly pitch road for run-off
❑ Rock transport	❑ Deliver road base for access roads, staging areas, and pull sites
❑ Roller	❑ Compact road and surfaces
■ Helicopters (light and heavy duty)	■ Erect poles and towers, install sock line, haul materials, equipment, and people
■ Hole auger	■ Excavate holes
■ Hydraulic jack	■ Remove wood poles
■ Line truck and trailer	■ Haul conductor, poles, equipment, materials, and people, and to install pole/conductor
■ Materials storage units	■ Store material/tools
■ Mobile offices	■ Supervision and clerical office
■ Puller	■ Install conductor
■ Reel dolly	■ Install and move conductor
■ Tensioner	■ Install conductor

Table 3-10. Preliminary Estimates of Project Construction Equipment and Usage

Construction Phase	Equipment Type	Approximate Hours/Day	Approximate Days/Year
Hollister Tower Segment			
Establish staging area Road construction	Light truck, pick-up truck, water truck	10	N/A
Tower installation Transmission line reconductoring	Grader/cat, helicopters, line trucks, pull rigs, pick-up trucks, tension device, fuel trucks, water trucks, line dolly, cranes, rewind trailers, bucket truck, cement mixer, hole digger, light truck, flat bed truck, fork lift, backhoe, dump truck, vibrating compactor.	10	180
Hollister Pole Segment			
Establish staging area Road construction	Light truck, pick-up truck, water truck	10	N/A
Tower installation Transmission line reconductoring	Grader/cat, helicopters, line trucks, pull rigs, pick-up trucks, tension device, fuel trucks, water trucks, line dolly, cranes, rewind trailers, bucket truck, cement mixer, hole digger, light truck, flat bed truck, fork lift, backhoe, dump truck, vibrating compactor	10	180
Hollister Substation construction	Bucket truck, pick-up truck, line truck	10	20

Table 3-11 provides a preliminary project construction schedule. The construction period for the power line is expected to be initiated in September 2010 and take approximately 12 months for the Hollister Pole Segment, and to be initiated in October 2010 and take approximately 13 months for the Hollister Tower Segment. Construction at the Hollister Substation is expected to take approximately 1 month. Because of the critical electrical load carried by these power lines, construction may be limited to cooler weather when electrical demand is lower, thus limiting the construction schedule.

Table 3-11. Preliminary Project Construction Schedule

Construction Phase	Length	Year	Approximate Duration (months)	Approximate Progression Rate (feet/month)
Hollister Tower Segment	7 miles	2010		
Establish staging area Road construction			1 week per area	
Tower installation Transmission line reconductoring			13	660 (assume 56 weeks)
Hollister Pole Segment	9 miles	2010		
Establish staging area Road construction			1 week per area	
Pole installation Transmission line reconductoring			12	900 (assume 52 weeks)
Hollister Substation construction		2010	1	

Note: The construction work plan may be adjusted as necessary to accommodate any restrictions (such as rain events) related to sensitive biological resources, as directed by the U.S. Fish and Wildlife Service.

Operations and Maintenance

General System Monitoring and Control

Monitoring and control will not change as a result of the proposed project. Substation and power line monitoring and control devices will be installed per PG&E design standards and connected to the existing telecommunication and protection schemes at the Hollister Substation. As is currently the case, the transmission systems at this substation will be monitored 24 hours a day, 7 days a week by system operators at the Moss Landing Substation.

Facility Inspection

Facility inspections will not change as a result of the proposed project. The regular inspection of power lines, instrumentation, and control and support systems is critical for safe, efficient, and reliable operation of electric power line facilities. Early identification of items needing maintenance, repair, or replacement will ensure continued safe operation of the reconstructed facilities and continued reliable service.

The current process involves three types of inspections: ground inspections, aerial inspections, and climbing if ground inspections indicate a need. The frequency of inspection varies, depending on factors such as the age of the

system, structure type, vegetation conditions, and other factors. For the proposed project power lines, it is generally assumed that PG&E "maintenance troublemen" will inspect all structures from the ground annually for corrosion, misalignment, deterioration, and foundation failures. In addition, ground inspection will occur on selected lines to check the condition of hardware, insulators, and conductors. Inspection will include checking conductors and fixtures for corrosion, breaks, broken insulators, and failing splices.

PG&E will conduct inspections by driving to the poles in a pick-up truck where feasible. Maintenance troublemen will use an all-terrain vehicle or go by foot where needed to minimize surface disturbance and in certain areas where access is difficult. Aerial inspection using helicopters may be conducted if needed. Any specific access requirements that may result from right-of-way negotiations with property owners will be documented and provided to the maintenance troublemen, with instructions to comply with these access requirements during inspection and maintenance. For more detail, please refer to the *Overhead Line Inspection Guideline* (PG&E 1998).

Maintenance Procedures

Maintenance procedures will not change as a result of the proposed project. Maintenance of the power line is generally on an as-needed basis, when the troublemen discover something needing repair or in response to an emergency. A benefit of using mostly lattice steel towers, TSPs, and LDS poles for this project is that they generally require less maintenance than wood poles.

Consistent with current practice, the PG&E vegetation management inspector will inspect and document vegetation conditions annually. Where needed, vegetation inspections may be conducted more frequently. To maintain appropriate clearance under the power line, vegetation removal will be performed on an annual basis or as needed.

Equipment modifications at the Hollister Substation are not expected to change existing maintenance procedures. Maintenance on the equipment is performed as needed. Because the power line and substation modifications are not expected to require additional employees for operation and maintenance, the project will not generate additional traffic.

Applicant-Proposed Measures

Applicant-proposed measures (APMs) have been incorporated into the project design that will be implemented to avoid or minimize impacts. These APMs are included in the respective resource section. A complete list of APMs is found in Chapter 5, "Applicant's Proposed Measures."

Implementation of the proposed APMs will ensure that all potential project-related impacts will be avoided or less than significant.

Electric and Magnetic Fields Summary

Recognizing that there is public interest and concern regarding potential health effects from exposure to electric and magnetic fields (EMF) from power line lines, this document provides some general background information regarding EMF associated with electric utility facilities in Appendix E. However, EMF is not addressed here as an environmental impact under CEQA. The CPUC has repeatedly recognized that EMF is not an environmental impact to be analyzed in the context of CEQA because (1) there is no agreement among scientists that EMF does create a potential health risk; and (2) there are no defined or adopted CEQA standards for defining health risk from EMF. See, for example, CPUC Decision No. 04-07-027 (Jul. 16, 2004); Delta DPA Capacity Increase Substation Project Final Mitigated Negative Declaration and Supporting Initial Study (November 2006), A.05-06-022, Section B.1.14.1, page B-31, adopted in Decision 07-03-009 (March 1, 2007).

Alternatives

CEQA does not require a review of alternatives[2] where, as here, the proposed project will result in no significant environmental impacts after mitigation. (See Atlantic-Del Mar Reinforcement Project, A.01-07-004, Assigned Commissioner's Ruling dated 10-16-02.) As required by General Order 131-D, Section IX.B.1(c), a brief discussion of the reasons for selecting the power line route and a comparison with other routes is included in the application.

References

Pacific Gas & Electric Company. 1998. *Overhead Line Inspection Guideline*.

[2] CEQA defines a "feasible alternative" as one that would attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. Economic viability is also taken into account when determining the feasibility of alternatives. (CEQA Guidelines, California Code of Regulations, Title 14, Section 15126.6.)