

SECTION 1: EXECUTIVE SUMMARY

1.1 - Introduction

This Draft Program Environmental Impact Report (DEIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the construction and operation of the County of Riverside's Public Safety Enterprise Communication (PSEC) project (State Clearinghouse No. 2008021126).

The County of Riverside intends to implement a new public safety communication system to resolve radio coverage issues for public safety emergency responders. The County's fire and law enforcement agencies currently utilize approximately 20 communication sites to provide public safety voice and data transmission capabilities to assigned personnel in the field. As currently configured, the system provides coverage to only about 60 percent of the County and is at the end of its useful life. Population growth within the County, particularly in areas that have been traditionally only sparsely populated, necessitates the expansion of the radio coverage footprint. The current system is no longer adequate to meet the County's coverage and capacity needs. Additionally, due to increases in the County's radio voice and data usage, additional traffic-carrying capacity is required to meet the needs of emergency services personnel in the field. The proposed PSEC project is the expansion and upgrade of the system's capabilities and its associated infrastructure. This upgraded and expanded system will allow public safety officials to share information via voice and data on demand and in real time over all types of topography throughout the County.

The County encompasses approximately 7,400 square miles of diverse topography, from low-lying valleys lying below sea level to towering mountains approaching two miles in height. This varied topography can make it difficult for Sheriff and Fire Department personnel to communicate as mountains, and even rolling hills, can interfere with radio signals. As the population of Riverside County continues to grow at a rapid rate, the need for consistent and dependable communications for emergency services is imperative.

The County's Department of Facilities Management, in its capacity as both a real property manager and project manager, is interested in the acquisition of a number of sites throughout the County and approximately five in adjacent counties that are suitable for the development of new or upgraded voice and data transmission towers and related facilities. Developing the few sites in adjacent counties will provide the needed radio coverage at locations near the County boundary with adjacent jurisdictions. These sites are located in both populated and unpopulated areas – some already support communications equipment while others are currently vacant, raw land. The proposed action would add approximately 50 new sites to the already existing system of sites for a total of 70 sites. Exhibit 1-1 shows the approximate location of the new PSEC sites. Table 1-1 provides detailed information about each site.

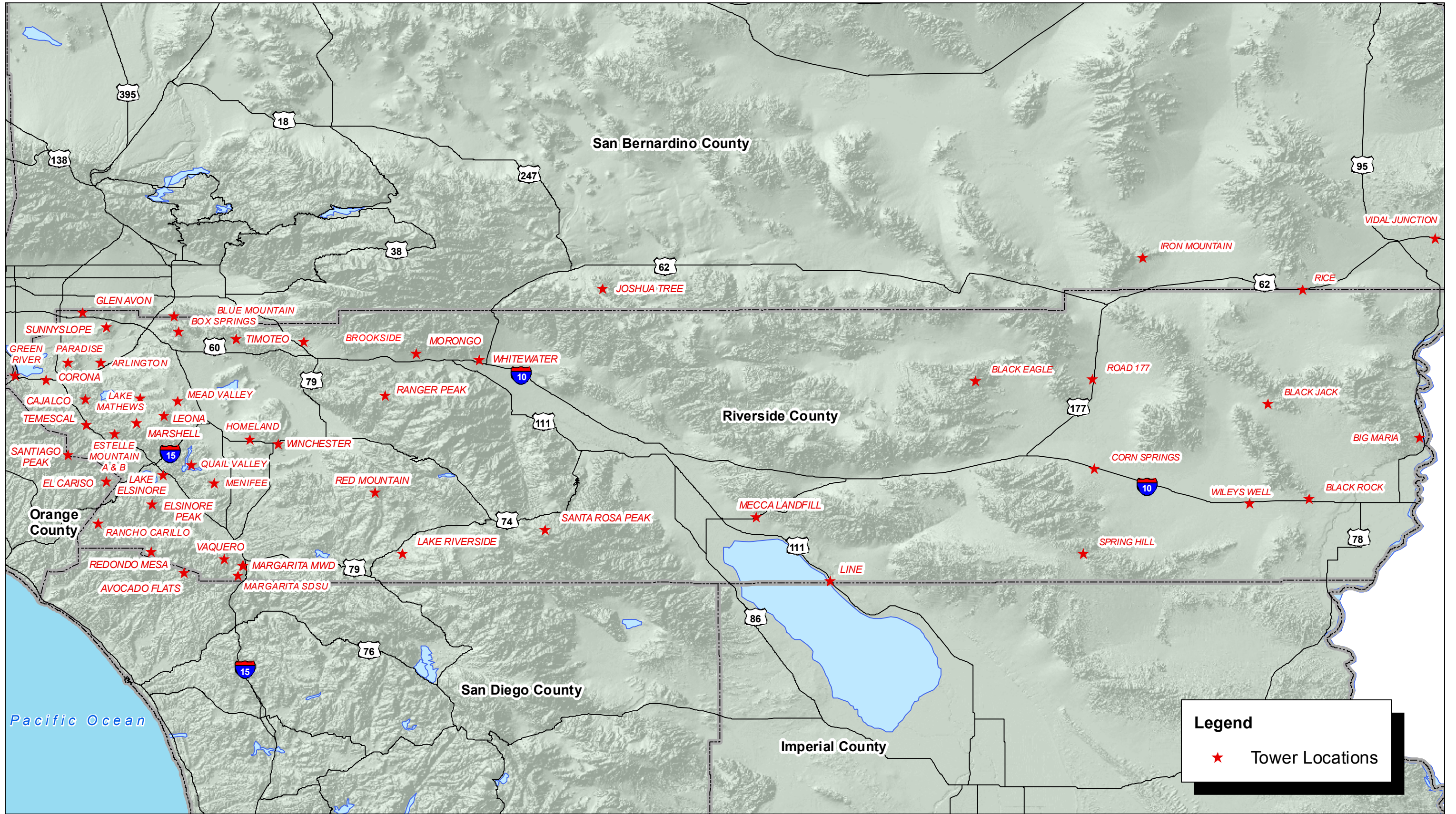
The Department of Facilities Management is preparing a programmatic environmental document for development of approximately 50 new sites and establishes standard construction and/or operations mitigation measures that would apply to the facilities developed on future sites with similar attributes. The documents comprising the Program EIR, including technical appendices, will assist the County in complying with CEQA for the PSEC project. Some of the sites are located on federal land, and in those cases, separate environmental assessments (EAs) in compliance with the National Environmental Policy Act (NEPA) will be conducted. Information contained in the Program EIR will be used to prepare the EAs. The federal agencies preparing the EAs include the U.S. Forest Service (USFS) and the Bureau of Land Management (BLM). Although some of the sites are located on federal land they are still evaluated in this Program EIR as part of the PSEC project.

The sites required to support the proposed new facilities are typically under 1 acre in size and would be fenced. A typical site is actually a 65-foot-by-65-foot area, or roughly 4,225 square feet. This is about half the size of a small residential subdivision lot. In some cases, property constraints may require the County to purchase larger sites within which to locate the proposed facilities. Each facility would consist of a tower and related equipment, such as an equipment shelter, heating, ventilation and air conditioning (HVAC), electronic equipment, 48-volt batteries, an emergency power generator, access road, and 120/240-volt AC power connection. On some sites the facilities may be co-located with other existing communications facilities or other County facilities such as fire stations.

1.2 - Purpose and Use of the Draft EIR

The Program EIR has been prepared in conformance with CEQA (California Public Resources Code, Section 21000 et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.), and is intended to serve as an informational document for the County Board of Supervisors, responsible agencies who will need to rely on the document as the basis for issuing a permit, interested organizations and the public regarding the construction of an expanded voice and data communication network for County public safety emergency service providers, including the County Sheriff and Fire departments.

The County has determined that an EIR should be prepared to assess the potential environmental effects of the project at both a program and project level, depending on the amount of information available at this time on each possible tower site and proposed facility. The programmatic aspect of the document also applies to potential effects that could occur in the future if the project is expanded or modified. Future actions, beyond those identified in the Project Description (Section 3) would require additional site level assessment to determine consistency with the analysis and mitigation provided in this EIR. The potential future actions would be subject to the mitigation measures and the performance criteria established in this EIR, or as determined in the subsequent environmental document if it is found that future actions could result in environmental impacts not foreseen in this Program EIR.



Legend

- ★ Tower Locations

Source: US Census Data and Riverside County



Michael Brandman Associates
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Exhibit 1-1
Site Location Map

Table 1-1: Site Location Information

Site Name	Assessors Parcel Number (APN) ¹	Latitude ²	Longitude ²	Elevation (feet) ³	Ownership ⁴	USGS Quadrangle	Township/Range/Section	Tower Height/Type (feet) ⁵	Shelter Size/Type (feet) ⁶
Arlington	145-120-002	33° 55' 04.2"	117° 27' 31.2"	746	County	Riverside West	3S 6W Sec. 12	80 SS	12 x 26 PF
Avocado Flats	101-280-20-00 (SDC)	33° 26' 57.2"	117° 16' 21.0"	1,426	BLM	Fallbrook	8S 4W Sec. 26	60 SS	12 x 26 PF
Big Maria	815-090-021	33° 45' 04.0"	114° 31' 27.1"	650	BLM	Big Maria Mts. SE	5S 23E Sec. 12	60 SS	24 x 26 PF
Black Eagle	701-370-008	33° 52' 33.2"	115° 31' 57.1"	1,668	PRV lease	Placer Canyon	3S 14E Sec. 29	80 SS	12 x 26 PF
Black Jack	809-190-002	33° 49' 34.7"	114° 51' 39.6"	980	BLM	Inca	4S 20E Sec. 15	60 SS	12 x 26 PF
Blue Mountain	1178-251-08 (SBC)	34° 01' 20.0"	117° 17' 46.5"	2,428	PRV lease	San Bernardino South	2S 4W Sec. 4	40 SS	12 x 26 BL
Box Springs	256-030-006	33° 57' 44.0"	117° 16' 51.2"	3,080	County	Riverside East	2S 4W Sec. 27	100 SS	12 x 34 PF
Brookside	407-170-010	33° 57' 48.7"	117° 00' 20.9"	2,584	County	El Casco	2S 1W Sec. 29	120 SS	12 x 26 PF
Cajalco	278-150-005	33° 50' 11.9"	117° 29' 34.3"	1,215	MWD lease	Lake Mathews	4S 6W Sec. 10	240 SS	12 x 26 PF
Corn Springs	810-181-001	33° 40' 53.0"	115° 14' 55.1"	723	BLM	Sidewinder Well	6S 17E Sec. 6	100 SS	12 x 34 PF
Corona	118-270-016	33° 52' 44.8"	117° 34' 48.0"	661	CNUSD lease	Corona North	3S 7W Sec. 25	80 SS	12 x 34 PF
El Cariso	125-120-12 (OC)	33° 38' 44.1"	117° 26' 39.0"	3,070	CNF	Alberhill	6S 5W Sec. 18	100 SS	12 x 26 PF
Elsinore Peak	382-090-004	33° 36' 08.2"	117° 20' 35.9"	3,557	CNF	Wildomar	6S 4W Sec. 31	120 SS	30 x 48 PF
Estelle Mountain (A)	391-040-005	33° 45' 37.5"	117° 26' 03.2"	2,220	BLM	Lake Mathews	5S 5W Sec. 6	100 SS	12 x 26 PF
Estelle Mountain (B)	391-040-005	33° 45' 41.0"	117° 26' 03.2"	2,280	BLM	Lake Mathews	5S 5W Sec. 6	100 SS	12 x 26 PF
Glen Avon	173-030-009	34° 01' 32.7"	117° 30' 11.0"	1,111	JCSD	Guasti	2S 6W Sec. 3	120 SS	12 x 26 PF
Green River	101-040-009	33° 53' 21.6"	117° 38' 58.7"	700	PRV	Prado Dam	3S 7W Sec. 19	160 SS	12 x 26 PF

Table 1-1 (Cont.): Site Location Information

Site Name	Assessors Parcel Number (APN) ¹	Latitude ²	Longitude ²	Elevation (feet) ³	Ownership ⁴	USGS Quadrangle	Township/Range/Section	Tower Height/Type (feet) ⁵	Shelter Size/Type (feet) ⁶
					purchase				
Homeland	457-340-027	33° 44' 50.0"	117° 07' 39.3"	1,594	County	Romoland	5S 2W Sec. 7	100 SS	12 x 26 PF
Iron Mountain	0643-221-07 (SBC)	34° 09' 03.9"	115° 08' 27.1"	1,920	MWD lease	Iron Mtns.	1N 17E Sec. 26	80 SS	12 x 26 PF
Joshua Tree	0589-091-11 (SBC)	34° 04' 52.9"	116° 20' 34.4"	4,893	PRV lease	Joshua Tree South	1S 6E Sec. 15	150 SS	12 x 20 PF
Lake Elsinore	373-121-002 to 373-121-007	33° 40' 04.0"	117° 19' 07.5"	1,558	PRV purchase	Lake Elsinore	6S 4W Sec. 8	150 SS	12 x 26 PF
Lake Mathews	285-120-030	33° 50' 19.3"	117° 22' 10.9"	1,494	MWD lease	Steele Peak	4S 5W Sec. 11	160 SS	12 x 26 PF
Lake Riverside	580-140-014	33° 29' 30.7"	116° 47' 16.0"	3,693	PRV lease	Aguanga	8S 2E Sec. 9	80 SS	12 x 26 PF
Leona	321-190-005	33° 47' 59.9"	117° 19' 06.1"	2,262	County	Steele Peak	4S 4W Sec. 29	200 SS	12 x 26 PF
Line	733-270-015	33° 25' 54.0"	115° 50' 08.2"	-199	PRV purchase	Durmid	8S 11E Sec. 33	330 GL	12 x 34 PF
Margarita (MWD)	922-210-011	33° 28' 46.7"	117° 08' 46.2"	1,070	MWD lease	Temecula	8S 3W Sec. 13	75 SS	12 x 26 PF
Margarita (SDSU)	922-220-013	33° 27' 58.1"	117° 08' 30.5"	1,600	SDSU lease	Temecula	8S 3W Sec. 24	75 SS	12 x 26 BL
Marshell	289-230-023	33° 47' 02.4"	117° 22' 43.4"	2,309	PRV lease	Lake Mathews	4S 5W Sec. 35	80 SS	12 x 26 PF
Mead Valley	318-180-060	33° 49' 56.7"	117° 17' 14.3"	1,670	County	Steele Peak	4S 4W Sec. 10	120 SS	12 x 26 PF
Mecca Landfill	727-242-012	33° 34' 19.2"	116° 00' 01.7"	45	County	Mecca	7S 9E Sec. 12	160 SS	12 x 26 PF
Menifee	360-290-016	33° 38' 57.3"	117° 12' 19.9"	1,651	County	Romoland	3W 6S Sec. 16	100 SS	12 x 26 PF

Table 1-1 (Cont.): Site Location Information

Site Name	Assessors Parcel Number (APN) ¹	Latitude ²	Longitude ²	Elevation (feet) ³	Ownership ⁴	USGS Quadrangle	Township/Range/Section	Tower Height/Type (feet) ⁵	Shelter Size/Type (feet) ⁶
Morongo	523-140-003	33° 55' 37.2"	116° 45' 13.6"	1,725	PRV purchase	Cabazon	3S 2E Sec. 11	80 SS	12 x 26 PF
Paradise	123-080-052	33° 55' 03.7"	117° 31' 53.5"	1,383	PRV purchase	Corona North	3S 6W Sec. 8	100 SS	12 x 26 BL
Quail Valley	351-111-002 and 351-111-003	33° 41' 23.9"	117° 15' 27.3"	1,609	PRV purchase	Lake Elsinore	5S 4W Sec. 35	60 SS	12 x 26 PF
Rancho Carrillo	901-030-007	33° 33' 35.0"	117° 27' 48.0"	2,490	CNF	Sitton Peak	7S 6W Sec.13	100 SS	12 x 26 PF
Ranger Peak	545-130-015	33° 50' 36.5"	116° 49' 30.6"	5,043	SBNF	Lake Fulmor	4S 1E Sec. 1	100 SS	12 x 34 PF
Red Mountain	569-050-013	33° 37' 46.1"	116° 50' 54.1"	4,507	SBNF	Blackburn Canyon	6S 1E Sec. 23	200 SS	12 x 37 BL
Redondo Mesa	932-060-052	33° 29' 46.5"	117° 20' 42.8"	2,784	RCWD	Fallbrook	8S 4W Sec. 7	100 SS	12 x 34 PF
Rice	801- 080- 003	34° 04' 45.2"	114° 47' 07.4"	916	BLM	Rice	1S 21E Sec. 21	200 SS	12 x 34 PF
Road 177	800-101-036	33° 52' 54.6"	115° 15' 07.7"	603	BLM	Coxcomb Mts.	3S 16E Sec. 25	100 SS	12 x 34 PF
Santa Rosa Peak	636-210-010	33° 32' 42.4"	116° 28' 09.9"	7,494	County	Toro Peak	7S 5E Sec. 21	80 SS	24 x 48 BL
Santiago Peak	290-170-012	33° 42' 41.9"	117° 31' 51.8"	5,601	CNF	Santiago Peak	5S 6W Sec. 29	60 SS	12 x 34 BL
Spring Hill	860-040-015	33° 29' 32.3"	115° 16' 22.3"	2,605	BLM	Augustine Pass	8S 16E Sec. 12	330 SS	12 x 34 BL
Sunnyslope	183-240-027	33° 59' 48.6"	117° 26' 42.7"	1,094	JCSD	Riverside West	2S 5W Sec. 18	100 SS	12 x 26 PF
Temescal	283-150-017	33° 46' 49.5"	117° 29' 26.5"	1,064	CNUSD	Lake Mathews	4S 6W Sec. 34	150 SS	12 x 34 PF
Timoteo	473-110-019	33° 58' 16.3"	117° 09' 34.5"	2,300	RCHCA	Sunnymead	2S 3W Sec. 26	100 SS	12 x 26 PF
Vaquero	939-110-002	33° 28' 51.1"	117° 11' 00"	1,955	RCWD	Temecula	8S 3W Sec. 15	120 SS	12 x 26 PF

Table 1-1 (Cont.): Site Location Information

Site Name	Assessors Parcel Number (APN) ¹	Latitude ²	Longitude ²	Elevation (feet) ³	Ownership ⁴	USGS Quadrangle	Township/Range/Section	Tower Height/Type (feet) ⁵	Shelter Size/Type (feet) ⁶
Vidal Junction	0647-321-19 & 20 (SBC)	34° 11' 37.3"	114° 29' 20.3"	941	BLM	Parker NW	1N 24E Sec. 8	170 SS	12 x 34 PF
Whitewater	516-130-011	33° 55' 26.2"	116° 37' 01.1"	1,726	BLM	Desert Hot Springs	3S 3E Sec. 12	100 SS	12 x 34 BL
Wileys Well	818-112-004	33° 36' 18.5"	114° 54' 09.3"	391	BLM	Hopkins Well	6S 20E Sec. 33	150 SS	12 x 26 PF
Winchester	465-050-019	33° 44' 10.0"	117° 03' 48.7"	2,031	PRV purchase	Winchester	5S 2W Sec. 14	140 SS	12 x 26 PF

Notes:

- 1 – Unless noted otherwise, all Assessor Parcel Numbers (APNs) are located within Riverside County (OC = Orange County; SBC = San Bernardino County; SDC = San Diego County)
- 2 – All coordinates utilize NAD83 datum
- 3 – Elevation (in feet) above mean sea level
- 4 – See abbreviation list to right for explanation of ownership abbreviations
- 5 – All towers are anticipated to be three-legged, self-supporting towers (SS), with the exception of Line and Spring Hill, which will be supported by guy lines (GL).
- 6 – BL = Block construction; PF = Prefabricated construction

Abbreviations:

- BLM = Bureau of Land Management
- CNF = Cleveland National Forest
- CNUSD = Corona-Norco Unified School District
- EMWD = Eastern Municipal Water District
- EVMWD = Elsinore Valley Municipal Water District
- CSD = Jurupa Community Services District
- MWD = Metropolitan Water District
- PRV = Privately-owned
- RCHCA = Riverside County Habitat Conservation Agency
- RCWD = Rancho California Water District
- SBC = San Bernardino County
- SBNF = San Bernardino National Forest
- SDC = San Diego County
- SDSU = San Diego State University

1.3 - Project Overview

1.3.1 - Introduction

The proposed PSEC project consists of the construction, operation, and maintenance of approximately 50 new telecommunication sites throughout the County and in adjacent counties to provide radio and data coverage throughout Riverside County without interruption. When combined with the 20 existing sites, radio coverage throughout the County will be improved from 60 percent to 95 percent coverage, making it more complete and reliable. The footprint of each site will typically be 65 feet by 65 feet (4,225 square feet), or about half the size of a small residential subdivision lot. Each site will be composed of four principal components: 1) tower; 2) equipment shelter; 3) access road; and 4) electrical power provision. Additional information about each of these components is provided below.

1.3.2 - Collocation

Collocation is a significant component of the PSEC project. This means that other governmental or quasi-governmental users often maintain a presence at PSEC sites. Besides County users, other users include other law enforcement and emergency service agencies, local governments, water districts, land management agencies, electrical utilities and other governmental or quasi-governmental organizations. Collocation allows for cost-sharing between agencies, as well as ease of maintenance. More importantly, collocation reduces the number of individual communication sites that would otherwise be required if each agency were to construct their own separate facilities.

The County is not proposing to collocate its facilities with non-governmental or commercial operators, since non-authorized individuals could gain access to vital public safety communication equipment if the equipment is located in the same space as a commercial user. For this reason, collocation at PSEC sites will only be available to other governmental, quasi-governmental, and public utility users. The County will not be collocating its equipment within facilities not under its direct control or not under the control of an appropriate governmental or quasi-governmental entity.

1.3.3 - Towers

Towers will be constructed using either a self-supporting, three-legged, lattice-type style or a guy-line-supported lattice-type style. All of the proposed towers will be of the self-supporting type, with the exception of the Line site, which will be constructed using guy-lines for support.

The County has investigated the feasibility of providing stealth-type concealment treatments for the tower sites and has concluded that the feasibility of stealth treatments for this project is unlikely. This is because unlike the smaller cellular phone towers, typical equipment includes several omni antennas, very high frequency (VHF) antennas, microwave dishes, lightning rods, and a grounding system. Each tower in the PSEC project will utilize one or more microwave dishes, and it may not be possible to mount and adequately disguise these units on a stealth structure. Additionally, the material used in the fabrication of the stealth treatments is flammable plastic. If a stealth tower were

to be located in a potential wildfire area, the radio facility could be made inoperative if the stealth treatment material caught fire. Obviously, a loss of communications to fire and other public safety personnel during a wildfire event presents a significant safety threat to both the public safety personnel and the general public. The County is investigating each of these issues to provide an adequate solution, but at this time the final results of that investigation are unknown. For this reason, the EIR does not present stealth treatment as a mitigation, since the feasibility of adequate implementation remains uncertain.

1.3.4 - Project Operation

The facilities will operate 24 hours a day, 7 days a week for the life of the site. The electronic equipment housed in the shelters will be cooled by wall-mounted air conditioning units. During warmer periods of the year, the cooling units will periodically be in operation 24 hours a day. Security lighting will be installed outside of each shelter within the chain link enclosure (usually on the exterior wall of the shelter), and will be controlled by means of a motion sensor to limit light pollution.

Most sites will be equipped with a propane-fueled standby generator. The generator will switch on automatically once per week and run for a period of 30 minutes. This will be done to ensure proper lubrication within the units as well as to test the units for proper operation. Each unit will be equipped with multiple sensors to report the unit's operational status. In the event of a problem, a technician will be automatically dispatched to provide repairs.

At sites equipped with primary electrical source generators (Spring Hill and Santa Rosa Peak sites only), these units will operate 24 hours a day, 7 days a week. The system at these sites will be composed of a dual generator system, with each generator operating for one week at a time and alternating between the two units. The primary electrical draw at communication sites is usually not the electronic equipment, but rather the air conditioning units required to maintain the electronics at a suitable temperature. The electrical current draw for air conditioning units in particular can be significant, and a constant supply of electricity is required. Thus, wind, solar generation and/or battery storage of electricity is not sufficient to supply the site's power needs and 24/7 generator operation is necessary.

Replenishment of the fuel required to power both standby and primary power generators will require periodic visits by a fuel truck. Fuel levels are monitored by a remote system, and when levels have dropped below set parameters, a fuel truck is dispatched to provide fuel. For standby units operating under the weekly test regime, refills will occur approximately every 2 years. A power outage requiring prolonged generator operation would require more frequent visits. For sites where generator power is the sole source of electricity, fuel truck visits will occur approximately every 6 months.

Besides fuel truck visits, maintenance activities at the sites would consist of monthly visits by technicians associated with each of the organizations having equipment at the site. The PSEC project will not only provide facilities for the County's radio equipment, but it will also provide common facilities for its cooperators (as described in Section 1.3.2). Therefore, the number of maintenance visits to a given site could vary, depending on the number of users with equipment at the facility. Regardless, the amount of activity at any given site once it is constructed and fully operational is expected to be minimal.

1.3.5 - Project Objectives

The following objectives have been established for the PSEC project, and will serve as the basis for considering the associated environmental impacts.

- 1) Provide appropriate and adequate voice and data communication coverage to County emergency services personnel and their cooperators over at least 95 percent of the County's land area.
- 2) Allow for interoperability between providers in a manner that assures adequate communication capability during emergency incidents (which include wildfires, earthquakes, large-scale releases of hazardous substances and other natural or man-made disasters) that cross jurisdictional boundaries or require multiple-agency cooperation.
- 3) Provide a secure voice and data communication network that is not dependent upon commercial facilities for its operation.
- 4) Allow for co-location of facilities with other governmental agencies and jurisdictions.
- 5) Develop the system with as minimal impact to the environment as possible while still meeting coverage needs and project objectives.
- 6) Develop the system cost-effectively and in a manner that provides the highest value and public service to the County and its citizens.
- 7) Design and construct the proposed voice and data communication system to assure operational capability by December 2010.

1.3.6 - Project Characteristics

Self-supporting Towers

Self-supporting towers will be constructed at nearly all of the locations. These towers will range from 40 feet to over 200 feet in height. A photograph and an architectural drawing showing a typical self-supporting tower are provided as Exhibits 1-2 and 1-3. A drawing of a typical site layout is provided as Exhibit 1-4. The structural members and bracing units of the towers will be constructed of galvanized steel with a silver-gray color tone. Communication equipment (antennas, microwave dishes, etc.) will be mounted to the towers. The towers may be marked or lit in accordance with Federal Aviation Administration (FAA) rules.

Each tower will be placed upon a concrete foundation, which could consist of either cast-in-place caissons or relatively shallow slab foundations designed to carry axial loads and moments of force applied by wind, seismic and other factors on the tower itself. Towers, foundations, and all other structures on each site will be designed by a licensed Professional Engineer and constructed to appropriate building codes. Since the tower structures are intended for use by public safety agencies, they will be designed with extra margins of safety to ensure they will withstand extreme winds and severe earthquakes without damage. Soil tests and other investigations will be performed at each site to determine the specific foundation requirements at each site. All towers and other structures will be subject to review by County engineers to ensure compliance with applicable standards and codes.

FAA regulations require that any tower over 200 feet in height or that is located near an airport or heliport be fitted with a beacon light at its apex and/or an alternating red and white paint scheme on the tower structure. Final determination of the requirements for each tower are at the discretion of the FAA. Both the lighting and the paint schemes are intended to provide against potential hazards to aircraft that might be operating in the area. There are approximately six sites where towers are proposed to exceed 200 feet above ground surface.

Guy-line Supported Towers

Guy-line supported towers will be built in the same manner and to the same specifications as self-supporting towers, but the height of these towers will require them to be supported by a series of guy-lines attached to the tower and then anchored to the ground. A photograph and an architectural drawing showing a typical guy-line tower are provided as Exhibits 1-5 and 1-6. Guy-line anchors will be cast concrete, and will typically be positioned approximately two-thirds the distance from the tower as the height of the tower. This distance could be lesser or greater depending on particular design or site constraints at the specific location. Three anchor points positioned around the tower are usually sufficient, but more anchor points could be required depending on site conditions and the height of the tower. Each anchor point shall be enclosed within a chain link fence to deter trespass.

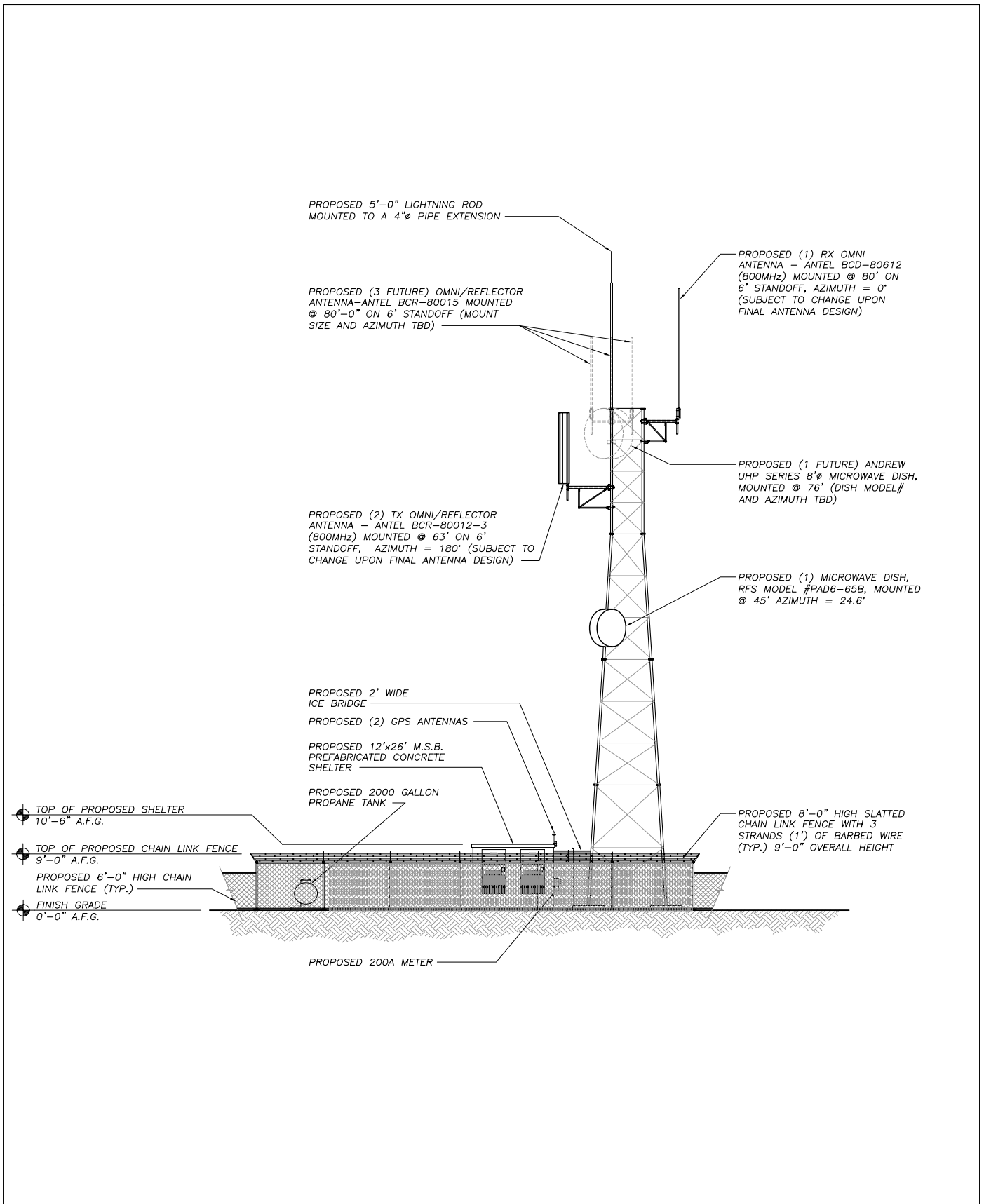
As with self-supporting towers, FAA regulations require that any tower over 200 feet in height be fitted with a beacon light at its apex and/or an alternating red and white paint scheme on the tower structure. Final determination of the requirements for each tower are at the discretion of the FAA. Both the lighting and the paint schemes are intended to provide against potential hazards to aircraft that might be operating in the area.

Equipment Shelters and Supporting Components

Each site will include one or more equipment shelters to house communication equipment and supporting components. Most shelters will be prefabricated industry standard units that will be constructed offsite and brought in by truck. Several sites will require the onsite construction of concrete block buildings rather than the placement of prefabricated units. This is due to difficulty of access to some sites created by narrow, winding roads that make transport of a prefabricated shelter infeasible.



Source: MBA, 2008



Source: MOTOROLA INC. 2008

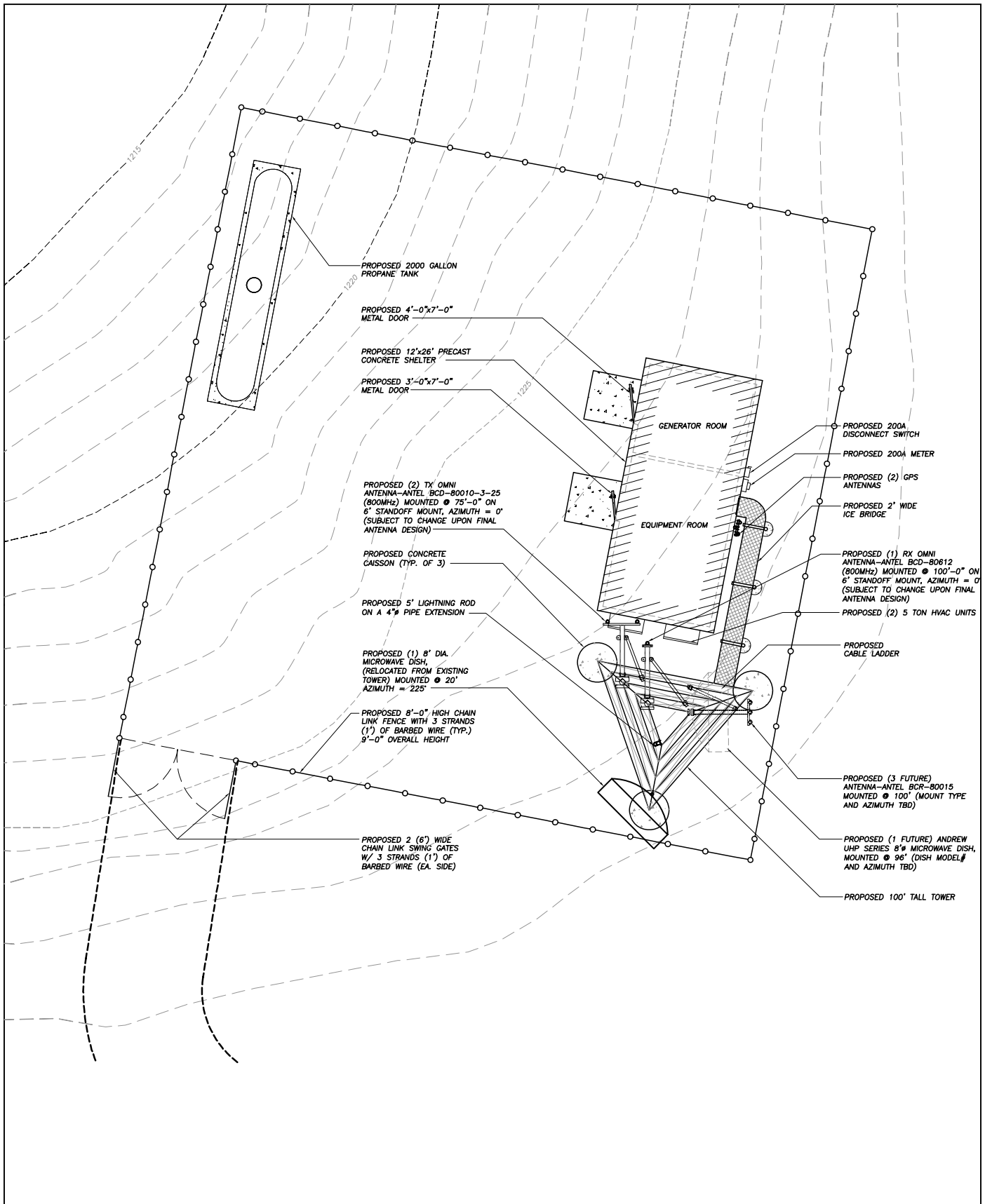


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Exhibit 1-3 Typical Self-Supporting Tower Drawing

COUNTY OF RIVERSIDE• PSEC PROJECT

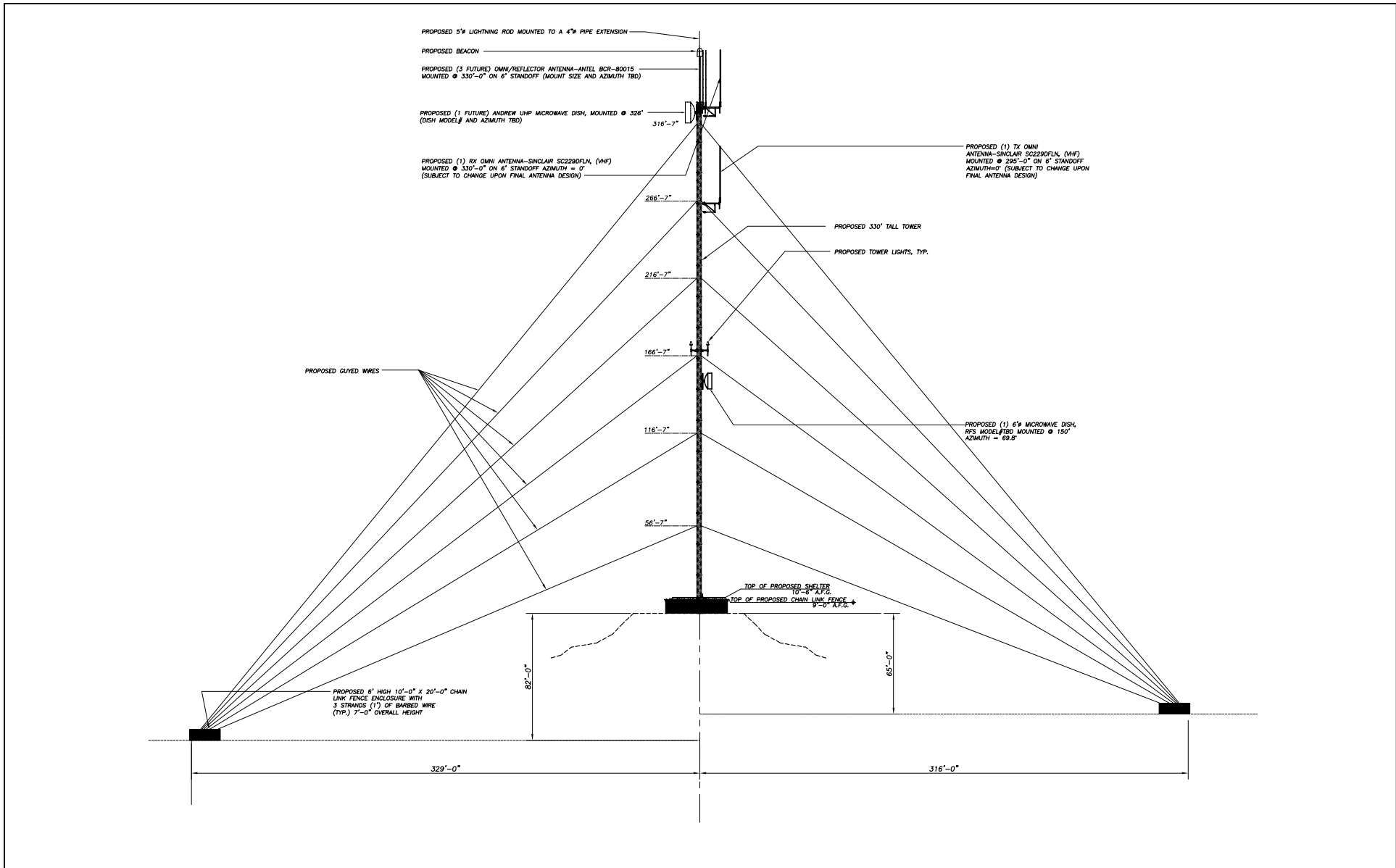


Source: MOTOROLA INC. 2008





Source: MBA, 2008



Source: MOTOROLA INC. 2008



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Exhibit 1-6 Typical Guy-Line Supported Tower Drawing

COUNTY OF RIVERSIDE • PSEC PROJECT

Shelters will be mounted or constructed on concrete foundations sized according to shelter dimensions, soils, and other design requirements. The structures will typically be divided into two compartments or rooms, with one room housing the communication equipment, and the other room housing a standby generator or a primary power generator, depending on the application (see discussion on generators, below). Besides the radio equipment and generator, the other principal component of the shelter will be an environmental control system (HVAC) to keep the interior of the shelter within the temperature range required for the operation of the electronic communication equipment inside.

For ground-level infrastructure, the County will evaluate the aesthetic environment of each site and will offer visual treatments that can be implemented with respect to equipment shelters and fencing. Some of the solutions that may be offered are block walls, painted buildings, customized gates and fencing, and other features. These treatments will serve to lessen the visual impacts of the facilities at ground level.

Generators

Standby Generators

With the exception of two of the proposed sites (Santa Rosa Peak and Spring Hill), electrical power will be provided via commercial power, and a generator at these sites will be for standby purposes only in the event of commercial power failure. Standby generators will be powered by propane, and will typically be comprised of a 56 horsepower (HP) internal combustion engine power unit driving a single-phase 35 kilowatt (KW) generator. Generators will be mounted inside the shelter, and will include a muffler on the power units and appropriate sound proofing within the walls of the shelter to minimize noise. Propane fuel will be provided from a tank (or tanks) mounted outside the shelter on concrete slabs. The propane tank(s) will be sized in a manner to allow for a constant generator run time of up to 168 hours (1 week) in the event of a long-term power failure. The typical size needed to meet this requirement is 2,000 gallons.

Generator-Only Sites

Distance from commercial power will require that two sites (Santa Rosa Peak and Spring Hill) be powered exclusively by generator power. Santa Rosa Peak is an existing County site that will be upgraded with a new tower and shelter. It is anticipated that the existing diesel-powered generators will remain in place following the upgrades. The system at this site is composed of a dual generator system, with each generator operating for 1 week at a time and alternating between the two units. Diesel fuel is housed in two 2,000-gallon, concrete bunker-style, aboveground fuel tanks within a spill containment area. Under normal operating conditions, fuel capacity is adequate to run the site for approximately 6 months between refills.

The Spring Hill site and any other new more remote sites that might be built requiring generator-only power will be propane-powered, and will likely utilize a dual-generator system that operates similarly to that employed at Santa Rosa Peak.

The County has investigated the use of solar power to provide power to these sites, but has determined that the provision of solar power is not feasible. The size of the solar panel arrays that would be required to generate sufficient power would be enormous, and would add significantly to the site footprint and the aesthetic impacts at the sites. The arrays would be vulnerable to vandalism and other damage, and would not be able to guarantee the reliability that is required for an emergency services communication system. For these reasons, the County is not proposing the use of solar power at these locations.

Fencing and Lighting

Typically, each tower and shelter will be enclosed within a chain link fence 8-feet in height, with three strands of barbed wire on the top for a total height of 9 feet. Fences in urban areas will harmonize with nearby buildings and fence systems. A gate will provide access for persons and vehicles into the site. A security light will be mounted to the outside of each shelter. The light will be connected to a motion sensor that will turn the light on when movement is detected.

Road Access

With the exception of the Paradise site, each of the proposed sites has a road leading directly to or immediately adjacent to the area where the tower and shelter will be located. Some of these roads are primitive and unimproved, and require a four-wheel-drive to access them. In these cases, appropriate improvements will need to be undertaken to make them accessible by construction and maintenance equipment. In cases where a road does not lead directly to the site and instead lies adjacent, a short spur road will be required to be constructed to provide access to the site. All roads are anticipated to be dirt only, unless particular site conditions requiring some form of hardening or additional improvement. Drainage will be constructed as needed on a case-by-case basis to prevent roads from washing out and to prevent unintentional environmental damage during the rainy season. The lengths of these roadways will vary from site to site, but should not exceed 100 feet in length. For specific road information at a particular site, see the individual site descriptions located in Appendix A.

The Paradise site is located adjacent to an existing FAA communication facility, but due to the nature of the topography in the area will require an access road approximately 500 feet in length to be constructed. The precise location of this alignment has not been determined. Before this site can be developed, additional survey and assessment work will be required along the finalized alignment to determine environmental impacts. Development of the access road will be required to abide by the mitigation and performance criteria established in this DEIR.

Three other sites (Blue Mountain, Spring Hill and Timoteo) have roadways leading to them, but these roads are in poor condition and will require substantial repair to make them useable. In the case of Timoteo there are three possible routes of access, and the final determination as to which route will be utilized has not been made. In these situations, development of the access roads will be required to abide by the mitigation and performance criteria established in this DEIR.

The Morongo site currently has a road leading to it, but that road meanders in and out of the existing access easement, and will be straightened to avoid trespass. The precise location of this alignment has not been determined. Before this site can be fully developed, additional survey and assessment work will be required along the finalized alignment to determine environmental impacts. Development of the access road will be required to abide by the mitigation and performance criteria established in this DEIR.

Commercial Electric Power Provision

It is anticipated that all but two of the proposed sites will be able to have commercial electrical power supplied to them. The two exceptions are Santa Rosa Peak and Spring Hill sites (see the discussion on generators, above, for a description of how power will be provided to these sites). Of the remaining sites, all but four sites (Black Eagle, Black Jack, Estelle Mountain, and Timoteo) have commercial power immediately adjacent, and provision of power to these sites will require a simple extension from existing sources. These short power runs will vary in length from 25 feet to 300 feet, and will be run either aboveground or belowground, depending upon site characteristics and the existing power delivery system in the area. For specific commercial power information at a particular site, see the individual site descriptions located in Appendix A.

The Black Eagle, Black Jack, Estelle Mountain, and Timoteo sites all will require power to be brought in from some distance. Table 1-2 describes the specific power line requirements at each of these sites.

Table 1-2: Power Line Requirements

Site Name	Distance to Commercial Power*
Black Eagle	5 miles
Black Jack	7 miles
Estelle Mountain	1.2 miles
Timoteo	2.5 miles
*Distance is calculated using the most likely route from an existing power source. Actual distances may vary depending upon the requirements of the electrical utility provider and access to available easements. Source: GRD, Inc.	

The specific routes for these power lines have not been determined and depends in part on avoidance of environmental impact as determined by site surveys. Two of the proposed sites (Black Jack and Estelle Mountain) are on lands under the jurisdiction of the BLM, and will require authorization for construction of the sites and the power lines. Before these power lines can be installed, additional survey and assessment work will be required along the finalized power alignment to determine

environmental impacts. Development of the power lines will be required to abide by the mitigation and performance criteria established in this DEIR.

Site Construction

Construction at each site will proceed in typical fashion, with site preparation and grading occurring first, followed by excavation for tower footings and shelter slabs. Depending on foundation design, auguring may be required for placement of caissons. Following placement of necessary foundations, the tower will be erected and the shelter and supporting components put in place. Prefabricated shelters will usually arrive on site with all of their internal components already installed. Sites requiring concrete block shelters will be constructed onsite using standard construction methods. Sites that are practically accessible by concrete trucks will have premixed concrete delivered directly to the site. Sites that are remote or otherwise inaccessible by concrete trucks will require a batch concrete mixing station to be located onsite with water hauled in using water trucks.

Equipment to be used onsite will vary according to site characteristics and the type of work to be done, but equipment will likely be confined to that listed in Table 1-3. All of the equipment listed in the table may not be necessary at each site, nor would it all be operating at the same time, but this list is presented as a worse case scenario.

Table 1-3: Construction Equipment

Equipment Type	Quantity	Horsepower
Drill Rig	1	291 hp
Tractors/Loaders/Backhoes	1	108 hp
Bulldozer	1	357 hp
Water Truck	1	189 hp
Cement/Mortar Mixers	2	10 hp
Crane	1	399 hp
Portable Generator	1	5 hp
Source: GRD, Inc., URBEMIS 2007.		

Each site is expected to take 60 to 120 days to construct. The actual time period will vary depending on difficulty of construction, the remoteness of the site, and other factors. The number of workers working at each site on any given day will typically vary from four to six.

1.4 - Environmental Impacts

1.4.1 - Issues Where No Impact Would Occur

Agricultural Resources

Williamson Act Lands: None of the proposed sites is under a Williamson Act Contract. Therefore, the project would not conflict in this regard and there would be no impact.

Geology and Soils

Septic Systems: Septic tanks or alternative waste water systems are not included in the project description. As no septic or wastewater disposal systems would be constructed with the project, there is no potential for adverse impact in this regard.

Hydrology and Water Quality

Groundwater Recharge: The provision of potable water wells or any “wet” utilities is not a component of any of the sites. Once operational, the sites will not consume any water. During construction, some water will be required for the mixing of concrete, etc. Water for this purpose will be brought in from offsite, usually by water truck. This use will be temporary and negligible. Therefore, there would be no impact to groundwater supplies or recharge.

Flood Zones: The project does not propose the placement of habitable structures on any of the project sites. Therefore, the project would have no impact in regards to placing housing within a flood zone. The majority of the towers are located on mountaintops, ridgelines, or in urban areas. None of the sites will be placed in flood zones. Even if a site were placed within a flood zone, the individual footprint of the project site and the structures contained thereon would be of such a small size that impeding or redirecting flood flows would remain very unlikely.

Other Hydrology: Similarly, the locations of the sites make the possibility of impacts from dam failure, seiche, tsunami, or mudflow very unlikely. Therefore, there will be no impact in this regard.

Mineral Resources

Loss of Availability of Known Mineral Resources or Loss of Mineral Resource Recovery Site: None of the project sites are located in areas designated as MRZ-2 on maps prepared by the State Department of Conservation. The majority of the tower sites are located on mountaintops or ridgelines, where the soil composition, depth-to-bedrock, and other factors make the sites unattractive for sand and gravel operations. In addition, none of the proposed sites are located in areas where other types of mineral resources extraction are actively occurring or have occurred in the past. The sole exception, the Black Eagle site, is located in a portion of the inactive Black Eagle Mine that was previously mined and the site is composed mainly of spoil material and tailings. The operator of the mine has indicated that placement of a tower at that location would not interfere with future mining operations if the mine were once again to become active. Therefore, no impact on the availability of mineral resources would occur.

Population and Housing

Housing Displacement/Replacement Housing: None of the project sites currently contain housing or habitable structures, and no one is currently living at any of the sites. No homes or persons will be displaced as a result of the proposed project.

Public Services

Fire Protection: Development of the tower sites and associated infrastructure will aid in the provision of fire services. Enhanced communication capabilities made possible by the new sites and facilities will be used to dispatch fire protection personnel and to provide for their support in the field. County fire personnel and their cooperators will be primary beneficiaries of the improved and expanded network. The project will provide a substantial benefit in the provision of these services. Therefore, no impact will occur.

Police Protection: Development of the tower sites and associated infrastructure will aid in the provision of police and law enforcement services. Enhanced communication capabilities made possible by the new sites and facilities will be used to dispatch law enforcement personnel and to provide for their support in the field. County law enforcement personnel and their cooperators will be primary beneficiaries of the improved and expanded network. The project will provide a substantial benefit in the provision of these services. Therefore, no impact will occur.

Schools: The proposed towers will not create new housing or businesses or promote significant or substantial population growth into an area. No addition of school-age children to an area will result from the proposed project. Therefore, additional school facilities will not be required as a result of the project.

One of the primary design objectives of the improved and expanded radio network is to provide radio coverage for law enforcement and fire personnel inside school buildings, allowing a faster and more efficient response to incidents occurring at school locations. An additional objective is to improve communications between local law enforcement personnel and school officials, increasing the safety and security of school children.

Recreation

Increased Use of Parks and Recreation Facilities: No permanent human population that might require recreational facilities will result from project implementation or be established at any of the project sites.

One of the primary design objectives of the improved and expanded radio network is to provide radio coverage for law enforcement and fire personnel within local, county state and federal parks, and to improve interoperability between local law enforcement, local fire and park personnel, allowing a faster and more efficient response to incidents occurring at park locations, and increasing the safety and security of park visitors.

Transportation

Parking Capacity: The parking requirements at each site will be negligible and parking will typically only be necessary for maintenance or technician crews arriving in perhaps a handful of vehicles at any given time. Space at each facility will be adequate to meet these requirements.

During construction, more vehicles may be present, but this will be a temporary situation and will not impinge on the parking needs of others. Therefore, no impact would occur.

Alternative Transportation: Policies relating to alternative transportation amenities typically apply to residential areas and places of business where the provision of these facilities is appropriate. The majority of the tower sites will be in areas where alternative transportation is neither available nor applicable. As a rule, persons accessing the sites will be required to arrive in individual vehicles that are specially equipped for the purpose (maintenance trucks, etc.). Therefore, this threshold is not particularly applicable to this project, and no impact will occur.

Utilities

Wastewater Treatment: Water and sewer facilities will not be necessary for construction and operation of the site. Therefore, these services will not be provided and no impact will occur.

Water or Wastewater Treatment Facilities: Construction and operation of the project sites will not require the use of water or wastewater facilities. Water used during construction will be brought in from offsite. Therefore, the proposed project will not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. Therefore no impact will occur.

Wastewater Treatment Capacity: The proposed project does not require the use of water or wastewater treatment facilities. Therefore, the proposed project will not result in impacts to any wastewater treatment provider. Therefore, no impact will occur.

1.4.2 - Impacts Found to be Less Than Significant

Agricultural Resources

Convert Farmland to Non-Agricultural Use: The majority of the towers are located on mountaintops, ridgelines, or in urban areas where site characteristics are not favorable for prime farmland. There is no existing agriculture on any of the project sites. The likelihood of any of the sites converting prime farmland to non-agricultural use is very low. However, if there were prime farmland on a particular site, the individual footprint of the project site would be such a small size (approximately 65 feet by 65 feet square) that agriculture could continue unimpeded. Therefore, given the low potential for prime farmland to be located within the project areas, potential impacts associated with the conversion of prime farmland are considered less than significant.

Air Quality

Odors: Land uses typically considered to be associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. The proposed project does not contain land uses typically associated with emitting objectionable odors. Diesel exhaust will be emitted during construction of the project, which is objectionable to some; however, emissions will disperse rapidly from the project site and therefore should not be at a level to induce a negative response. One

site (Santa Rosa Peak) will continue to operate on a diesel generator, however, that site is remote and would not affect sensitive receptors. Therefore this impact is considered less than significant.

Geology and Soils

Seismic Effects: No habitable structures are proposed as part of the project. However, in the unlikely event that a tower would collapse during an earthquake, it could present a hazard if it were to fall on nearby structures. Following standard practice, all towers will be constructed with a sufficient buffer or fall zone between it and any adjacent residential structures to allow for a complete tower collapse without the danger of the tower falling on a habitable residential structure. Since the tower structures are intended for use by public safety agencies, they will be designed with extra margins of safety to ensure they will withstand extreme winds and severe earthquakes without damage. The likelihood of a collapsing tower injuring or killing persons living in the area would be negligible. Therefore, impacts in this regard will be less than significant.

Site Grading and Erosion: Development of the proposed project would require excavation and grading, with varying amounts of soil disturbance. Soil erosion or loss of topsoil may occur in areas where soil is disturbed. However, because the individual tower sites are less than one acre each, the amount of grading and erosion caused would be less than significant with implementation of Best Management Practices (BMPs). The BMPs used during construction typically include gravel bags, silt fencing, and general housekeeping measures to contain sediment and excessive runoff.

Wind erosion can occur due to excavation and grading of the sites. Again, the small size of the individual sites make this concern less than significant, but there are BMPs that would be part of a required Fugitive Dust Control Plan and would serve to limit the amount of wind driven erosion by controlling fugitive dust. These BMPs include, among other things, wetting down the excavation and grading areas before, during, and after earth moving activities, stopping work during high wind events and when the opacity of dust reaches 20 percent. Where permitted, sites will be covered with a layer of geo-textile fabric and a layer of gravel to prevent wind erosion and fugitive dust after construction is completed.

Gravitational erosion can occur on sites with a steep slope. The maximum ratio for slope stability varies by soil type and moisture content, but is generally no more than 2-foot rise to 1-foot run. During the site selection process, the natural slope gradient of the sites was taken into consideration, as slope can be considered a constraint. Therefore, this concern is less than significant with regard to the proposed project.

Potential for Unstable Soils: As is standard practice for a project of this type, comprehensive boring and soils tests will be conducted prior to construction to determine the specific engineering properties associated with onsite soils. Using this information, appropriate foundations, footings, and other structural elements will be designed and constructed to meet the specific requirements identified at each site. All towers and other structures associated with the project will be built to

professional engineering standards that will meet or surpass the requirements of the Uniform Building Code (UBC). Regular inspection of the towers will be done to ensure the building materials maintain their integrity in interaction with the soil. Therefore, the likelihood of a tower being placed on a site with unstable soils would be less than significant.

Site Located Within Expansive Soils: Potential sites with expansive soils will be subject to more stringent engineering practices for footings and foundations. Sampling of each site will determine the specific engineering requirements of the individual sites. Over-excavation and compaction of the load bearing soil material, or similar corrective measures may be taken on the recommendation of the engineer based on the results of geotechnical exploration. The standardization of building codes and the high standards required for “critical” facilities make the potential for adverse impacts caused by soil or geologic processes less than significant.

Hazards and Hazardous Materials

Routine Use and Accident Conditions: Project construction activities may involve the use and transport of hazardous materials including fuels, oils, mechanical fluids, and other chemicals used during construction. However, transportation, storage, use, and disposal of hazardous materials used during construction activities are required to comply with applicable Federal, State, and local regulations. Compliance with these standard regulations will ensure that human health and the environment are not exposed to hazardous materials. Therefore, impacts in this regard will be less than significant.

During operation of the tower sites, the only potentially hazardous material that will be transported, stored, and used at the sites will be the propane used to run the onsite generators. Propane is a regulated material, and is subject to standard rules and regulations regarding its transport, storage, and use. Compliance with these standard regulations will ensure that potential impacts in this regard will be less than significant.

One site (Santa Rosa Peak) will use existing diesel fuel tanks that are already in use at the site. The diesel fuel will continue to be used to run the primary source generators at the site. The tanks are located above ground in concrete fuel bunkers. A concrete spill containment apron sufficient to contain any spills from the tanks surrounds the tanks. The concrete bunker construction of the tanks protects them from any fires that could occur in this forested area. Given these existing design elements, the site’s potential to create a hazard in regards to the transport, storage, and use of hazardous materials are less than significant.

Proximity to Schools: During operation of the tower sites, the only potentially hazardous material that will be transported, stored, and used at the sites will be the propane used to run the onsite generators. Propane is a regulated material, and is subject to standard rules and regulations regarding its transport, storage, and use. Compliance with these standard regulations will ensure that potential impacts in this regard will be less than significant.

Hazardous Materials Site Listing: The hazardous materials database search conducted for each of the project sites found no known existing hazardous conditions on the project sites. Even if there were existing hazardous materials on any of the sites, the type of uses planned for the sites (operation of communication towers) would not subject people to hazardous materials. No residential structures, schools, places of business, or other facilities that would house people will be present on any of the sites. In the unlikely event that hazardous materials were found at a site during construction, standard regulations are already in place that require reporting and cleanup of any contamination that is found. Given these considerations, impacts in this regard are less than significant.

Airports and Private Airstrips: Five of the proposed sites are located within two miles of either airports or private airstrips. According to Airport Compatibility Maps prepared by the County of Riverside's Airport Land Use Commission, none of the proposed sites lie within an airport's influence area. Federal and State regulations require that towers near airports be given special consideration. In accordance with Federal Aviation Regulations, Part 77 "Objects Affecting Navigable Airspace" a Notice of Proposed Construction or Alteration (Form 7460-1) is required by the FAA for towers in the vicinity of a public-use airport. Any facilities with the potential to create a hazard to aviation are required to undergo review by the FAA.

If the FAA determines it necessary, it may condition certain requirements for these sites, including enhanced-visibility paint schemes or special lighting. Sites are also required to comply with applicable airport land use plans, which govern the heights of structures within defined areas around airports. The purpose of this review is to ensure that the construction of new facilities will not create hazards to aviation. All towers that meet the criteria will be required to undergo this process prior to construction. Therefore, compliance with existing rules and regulations will result in an impact that is less than significant.

Emergency Plans: The proposed project does not contain any characteristics (e.g., permanent road closures) that would impair or otherwise interfere with emergency response, evacuation, or policies. Enhanced communication capabilities made possible by the new sites will be used to dispatch emergency services personnel and to provide for their support in the field. County emergency services personnel and their cooperators are the primary beneficiaries of the improved and expanded network.

Wildland Fires: A number of the tower sites are proposed in areas that are potentially subject to occasional impacts by wildland fire. Existing regulations require the maintenance of fuel modification zones and defensible space around any structure that is located in a fire-prone area. In addition, buildings and other structures must be constructed of materials that are, to the extent feasible, fire resistant. Equipment shelters at the sites will be of either concrete block construction built onsite or of prefabricated concrete. Roofing materials will be made from non-combustible materials such as steel or tin.

In the event of a wildland fire, the protection of critical facilities that are vital to public safety are given first priority. Emergency communication structures are in this category of critical facilities. If such a site is determined to be in danger, firefighting resources are immediately dispatched and every effort is made to save the structure. Roadways to these sites are maintained with the need for rapid access by on-ground firefighting personnel. Fire retardant-dropping aircraft are also deployed to add to the defensive perimeter around a site. The impact will be less than significant.

Radio Frequency Radiation: The Federal Communications Commission (FCC) regulates both public and occupational exposure levels, and has established thresholds for allowable Radio Frequency Radiation (RFR) exposure levels. The FCC has issued various guidelines and bulletins with specific recommendations for analyzing exposure. To assess the project's potential impact in this regard, the County commissioned an independent consultant to undertake a study of a typical tower site to determine the levels of potential exposure. The study assessed the proposed El Cariso site that is located in relatively close proximity (less than 250 feet) to residential structures. The study utilized several assumptions with the intent of providing the most conservative or "worse case" scenario of possible RFR exposure at the site. Calculations were made assuming that all channels would be operating simultaneously at maximum power. Weakening of the signal that would result from surrounding vegetation or buildings was ignored, since buildings can reduce signal strengths by a factor of 10 or more, depending on the type of construction material. The ground and other surfaces were assumed to be perfect reflectors (they are not), and the RF energy was assumed to overlap and interact additively at all locations (which they would not) thereby resulting in the calculation of the maximum potential exposure. In reality, the accumulations of these very conservative assumptions served to significantly overestimate the actual exposures likely to be measured at the site. These worse-case assumptions were incorporated, however, as a prudent approach to err on the side of safety.

Using this methodology, it was determined that the maximum public RFR exposure at the site is only 14.13 percent of the public safety standard. This maximum exposure is seven times lower than the FCC public exposure standards for these frequencies. The FCC standards, it should be noted, are themselves set at a level that is 50 times below a level that the majority of the scientific community believes may pose a health risk to human populations. Thus, the previously mentioned maximum public exposure from the site represents a "safety margin" from this threshold of potentially adverse health effects of more than 350 times.

Given the low levels of RFR fields that would be generated from the El Cariso facility, there is no scientific basis to conclude that harmful effects will result from the operation of any of the proposed facilities. Therefore, the evidence supports a finding of less than significant for this potential impact.

Hydrology

Water Quality Standards and Requirements: Development of the proposed project would require construction and grading of most project sites. Construction of the proposed project would require

the use of heavy equipment, such as bulldozers, backhoes, water pumps, and air compressors. Chemicals such as gasoline, diesel fuel, lubricating oil, hydraulic oil, lubricating grease, automatic transmission fluid, paints, solvents, glues, and other substances would be utilized during construction. An accidental release of any of these substances could degrade the water quality of the surface water runoff and add pollution into local waterways. Considering the small size of each of the project sites, the use of these materials will be minimal. The most likely runoff from the sites during construction would be from sediment created by soil disturbance.

Dischargers whose projects disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list Best Management Practices (BMPs) the discharger will use to protect storm water runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP. Implementation of these requirements will lessen the project's impacts in this regard to less than significant.

During the operational phase of the project, the pollutants associated with each site will be negligible. The only petroleum products would be associated with the propane-powered electrical generators installed at each site. Generators will be housed within the equipment shelters, and these shelter are designed to contain any fuel or oil leaks that could be produced by the generators. Propane tanks will be located outside of the equipment shelters. In the unlikely event of a leak in a propane tank, there would be no discharge to waterways since propane is a gas and would thus discharge into the atmosphere rather than to the ground. The 48-volt microwave batteries that will be used at each site contain an electrolyte consisting mostly of hydrochloric acid that is similar in composition to automotive batteries. These amounts are relatively small and the batteries are sealed to prevent leaks. Batteries will receive regular inspection and maintenance to prevent accidental leaks of the electrolyte. Battery cells will be replaced if they show any signs of a potential leak. Old or defective cells will be disposed of in accordance with applicable law. No other hazardous materials that could serve as a source of pollution will be housed on any site.

Once constructed, approximately 25 percent of the area of each site will be covered with impermeable surfaces (buildings, concrete tower footings, etc.). The rest of the area will be open ground. Most of the runoff from impermeable surfaces will be accommodated by and absorbed into the surrounding open ground. The amount that is not will be directed appropriately using swales or other features that are standard in engineering designs to reduce erosion. These features will direct flows in an appropriate manner towards surrounding drainageways, developed storm drain facilities, etc. Given the small size of each site and thus the small amount of water flow likely to be derived from each site, these standard engineering practices will be adequate to meet the drainage needs of each site. Therefore, impacts in this regard will be less than significant.

Drainage Pattern: Erosion or Siltation: Nearly all of the tower sites will be located on topographic highpoints and will thus be located away from drainages. Development of the sites would require construction and grading of most project sites. During construction, soil erosion could occur along project boundaries or in areas where temporary soil storage is required. These small quantities of erosion or siltation could have the potential to enter nearby drainages, thereby potentially increasing erosion or siltation on and offsite. However, and as stated previously, the proposed project will implement standard BMPs, adopted by the County to ensure the reduction of erosion or siltation on or offsite. Additionally, the individual footprint of the project site would be such a small size (approximately 65 feet by 65 feet square) that substantial alteration of existing drainage patterns and any increased possibility of flooding would remain very unlikely. Therefore, impacts in this regard will be less than significant.

Runoff Water, Drainage Systems and Water Quality: Once constructed, approximately 25 percent of the area of each site will be covered with impermeable surfaces (buildings, concrete tower footings, etc.). The rest of the area will be open ground. Most of the runoff from impermeable surfaces will be accommodated by and absorbed into the surrounding open ground. The amount that is not will be directed appropriately using swales or other features that are standard in engineering designs to reduce erosion. These features will direct flows in an appropriate manner towards surrounding drainageways, developed storm drain facilities, etc. Given the small size of each site and thus the small amount of water flow likely to be derived from each site, these standard engineering practices will be adequate to meet the drainage needs of each site. Therefore, impacts in this regard will be less than significant.

During the operational phase of the project, the pollutants associated with each site will be negligible. The only petroleum products would be associated with the propane-powered electrical generator installed at each site. Generators will be housed within the equipment shelters, and these shelters are designed to contain any fuel or oil leaks that could be produced by the generators. Propane tanks will be located outside of the equipment shelters. In the unlikely event of a leak in a propane tank, there would be no discharge to waterways since propane is a gas and would thus discharge into the atmosphere rather than to the ground. The 48-volt microwave batteries that will be used at each site contain an electrolyte consisting mostly of hydrochloric acid that is similar in composition to

automotive batteries. These amounts are relatively small and the batteries are sealed to prevent leaks. Batteries will receive regular inspection and maintenance to prevent accidental leaks of the electrolyte. Battery cells will be replaced if they show any signs of a potential leak. Old or defective cells will be disposed of in accordance with applicable law. No other hazardous materials that could serve as a source of pollution will be housed on any site. Therefore, impacts in this regard will be less than significant.

Land Use

Divide an Established Community: Each tower site will have a footprint that is relatively small and will consist of an approximately 65-foot-by-65-foot area, or 4,225 square feet. This area roughly equates to half the size of a small residential subdivision lot. The project areas are not linear in nature, nor do they possess the physical characteristics (size, shape or function) that could physically divide an established community. Therefore, the potential impact of any project site in regards to dividing an established community is less than significant.

Conflict with Applicable Plans, Policies or Regulations: Through its General Plan and other enabling documents, the County is authorized to undertake actions that provide for the general protection and welfare of the citizen's of the County. The provision of a reliable emergency services communication network is an action that is consistent with this function. In situations where the proposed action could conflict with adopted local ordinances, codes, or other regulations, the County enjoys primacy and sovereign immunity over these restrictions, so long as the purpose of the project is for what could reasonably be considered the greater good of the community. Therefore, the proposed project does not conflict with applicable plans, policies, or regulations, and the impact in this regard is less than significant.

Conflict with Conservation Plans: Some of the project sites are within the boundaries of a multiple species conservation plan (MSHCP). As a signatory to both the Western Riverside MSHCP and the Coachella Valley MSHCP, any County action that falls under the requirements or within the confines of either MSHCP planning area requires compliance with the applicable plan. As such, the County must abide by the conditions outlined in the MSHCPs. Where applicable, compliance with the MSHCP, including the payment of fees, will be undertaken as part of this project. See Section 4.4 for detailed information on specific requirements. Compliance with these requirements will result in an impact of less than significant.

Other sites are proposed in areas under the jurisdiction of federal land management agencies (e.g., BLM, USFS) or are in areas included within the Stephens Kangaroo Rat Habitat Conservation Plan (SKRHCP) or areas designated by the US Fish and Wildlife Service (USFWS) as Critical Habitat. Sites located within any of these areas will be required to comply with the conditions prescribed in those plans. These conditions may include, among other requirements, development review by the applicable agency to ensure plan compliance, project review under NEPA, payment of fees, and consultation with the USFWS under the terms of the Endangered Species Act (ESA). As required by

existing laws and regulations, full compliance with these conditions will be required before any site under the jurisdiction of these plans is developed. Compliance with these requirements will assure consistency with applicable conservation plans. Therefore, the project's impacts in this regard will be less than significant.

Noise

Noise Levels in Excess of Standards - Construction: The County Noise Ordinance provides a list of activities that are exempt from the Ordinance's requirements. For purposes of this project, those exemptions include noise produced by facilities owned or operated by or for a governmental agency, and noise generated in the construction of capital improvement projects of a governmental agency (Sections 2(a) and 2(b), respectively). These two exemptions have direct application to this project. The towers will be owned and operated by a governmental agency (the County), and will be part of capital improvement construction project being undertaken by the County. Therefore, the project is exempt from the requirements of the Noise Ordinance and the impact of the project will be less than significant.

Noise Levels in Excess of Standards - Operation: Once completed, the only noise generated at the sites will occur during the operation of onsite electrical generators. All of the sites but two (Santa Rosa Peak and Spring Hill) will be supplied with commercial power and will be equipped with a standby generator only. Under normal conditions, these standby units will operate for only 30 minutes per week as part of their testing and lubricating regime. During a prolonged power outage, of course, the units would be required to operate for the duration of the outage. The two sites that will require fulltime generator power (Santa Rosa Peak and Spring Hill) will house generators that will run 24 hours per day, 7 days per week. Both of these sites, however, are in extremely isolated portions of the County and are thus several miles from the nearest sensitive receptor.

Regardless of the type of generator at any given site, all of the generators will be located inside the equipment shelters. The generators will have mufflers, and the buildings will have walls of adequate thickness to provide a substantial amount of soundproofing. The noise level experienced outside one of these shelters during operation of a generator will be roughly equivalent to the noise that would be experienced by someone standing outside of a closed garage with a running automobile inside. This level of noise is not generally considered to be loud and would be less than significant.

Exemptions from the County Noise Ordinance also apply to the operational phases of a project, specifically the exemption that applies to facilities operated by or for a governmental agency. Therefore, impacts from the project in this regard will be less than significant.

Excessive Groundborne Vibration: With the exception of onsite generators, sources of vibration will not be located at the sites during the operational phase. Generators will be mounted on rubber, vibration-resistant cushions, so the vibration from the generators will be negligible. Activities during the construction phase, however, will produce some level of vibration.

Construction activities at each site will vary, but they will typically require at least one piece of large equipment to be operating at fairly regular intervals, especially during the earlier stages when grading and/or drilling will be taking place. A large bulldozer or a loaded truck can create ground vibration in excess of 80 vibration decibels (VdB) at 25 feet from the vibration source. However, the nearest sensitive receptor to any of the proposed sites is approximately 100 feet away (Arlington being the closest site). Vibration decreases the further away the receptor gets from the source. According to the Federal Transportation Agency's groundborne vibration criteria presented in Table 4.11-1 of the DEIR, the vibration threshold in residential settings for infrequent vibration events (less than 70 events per day) is 80 VdB.

Considering the distance of the nearest sensitive receptor to the potential vibration source (100 feet), the vibration experienced at that location would be well below 80 VdB. Further, impacts at the site of the closest sensitive receptor are unlikely to be sustained during the entire construction period, but rather only during the times that heavy construction equipment is operating. Construction on the sites will typically be restricted to daylight hours (7:00 a.m. to 7:00 p.m.), thus eliminating impacts during evening hours. Considering these findings, the impact of the project in regards to excessive vibration will be less than significant.

Permanent Increase in Noise Levels: See discussion above under Noise Levels in Excess of Standards.

Temporary Periodic Increase in Ambient Noise Levels: See discussion above under Noise Levels in Excess of Standards.

Airport Noise Levels: Five proposed project sites are located within 2 miles of an airport or private airstrip facility (Arlington, Corona, Green River, Sunnyslope, and Winchester). However, the tower sites themselves will not contain any habitable residential structures, so no one will reside at any of the project sites. Thus, no residents will be exposed to excessive noise from aircraft. Technicians will access the sites occasionally to service the equipment being operated at each site. These visits will typically be brief in duration and, regardless, workers will not be subjected to excessive noise from aircraft. Impacts in this regard are, therefore, less than significant.

Transportation

Traffic Increase: During the construction phase of the project, the County intends to construct four to six sites at a time. These sites could be reasonably close to one another, or they could be scattered across the County. The number of construction workers will typically range from four to six persons. Off-road construction equipment will be delivered to the site by truck, as will construction materials. Based on the activities described above, the number of trips to and from each site will probably not exceed 20 trips per day. If six sites were under construction at any given time, this would result in approximately 120 trips per day Countywide. Considering the millions of trips that are undertaken

within the County each day, the traffic generated by the project during the construction phase of the project will be negligible.

During the operational phase of the project, the number of trips to and from the sites will be even less than during the construction phase. The sites will typically be visited monthly by radio technicians representing each of the users at the site. Since the County will be providing other governmental users with the opportunity to collocate at the sites, there may be several users at a given site. The number of users at each site will vary, and there will be limits to the number of users that can use a single site based on space constraints on both the tower and in the equipment shelters. It is unlikely that these constraints will allow more than six users to maintain a presence at each site. If that were the case, then the number of monthly trips to and from each site will be approximately 12 trips per month. Countywide, this would result in approximately 600 vehicular trips per month. Again, this small number of trips would be negligible when considered against the tens of millions of vehicular trips undertaken each month within the County.

Level of Service Standards: The Level of Service (LOS) system used to denote roadway and intersection levels of congestion is not particularly applicable to the proposed project. The number of vehicular trips that will be generated by the proposed project is of such a small amount when measured against existing traffic conditions in any given area that an attempt to model the project's impact using LOS analysis would provide results that would not be particularly useful. Even using a worse case scenario, the amount of traffic that the project would contribute to even the worst LOS condition would be of such a negligible quantity that the exercise would be unproductive. Given these considerations, it must be determined that the project's impact in this regard would be less than significant.

Air Traffic Patterns: Five of the proposed sites are located within 2 miles of either airports or private airstrips: Arlington, Corona, Green River; Sunnyslope, and Winchester. Federal and State regulations require that towers near airports be given special consideration. In accordance with Federal Aviation Regulations, Part 77 "Objects Affecting Navigable Airspace" a Notice of Proposed Construction or Alteration (Form 7460-1) is required by the FAA for towers in the vicinity of a public-use airport. Any facilities with the potential to create a hazard to aviation are required to undergo review by the FAA. If it determines it necessary, the FAA may condition certain requirements for these sites, including enhanced-visibility paint schemes or special lighting. Sites are also required to comply with applicable airport land use plans, which govern the heights of structures within defined areas around airports. The purpose of this review is to ensure that the construction of new facilities will not create hazards to aviation. All towers that meet the criteria will be required to undergo this process prior to construction. Therefore, compliance with existing rules and regulations will result in a less than significant impact.

The project itself will not typically include the use of aircraft during its construction and operation. On an emergency basis, helicopters may be dispatched to provide expedited repairs to particular sites

during an outage or other occurrence, but this use will occur irregularly and would in any case be facilitated within standard aviation management guidelines. Therefore, the project's impact in regards to increased air traffic would be less than significant.

Hazards: Any access roads constructed for the project will be used for authorized vehicles only and will be designed and constructed to professional engineering standards for roadways of their type. Except during construction, all vehicles accessing the sites will be highway registered and therefore not an incompatible use. During the construction phase of the project, all off-road construction equipment will be brought to the sites by highway legal equipment haulers. Therefore, the project will not create hazards in this regard and the impact will be less than significant.

Emergency Access: This threshold is not particularly applicable to this project. Regardless, the tower sites are of such a small size and will generate such a small amount of traffic that construction and operation of the facilities would be extremely unlikely to create a hazardous situation in terms of emergency access. Therefore, the impact in this regard would be less than significant.

Utilities

Stormwater Drainage Facilities: Given the small size of each site, the provision of stormwater facilities is neither necessary nor required. Since only approximately 25 percent (about 1,000 square feet) of each site will be covered by impervious surfaces (equipment shelters, tower pads, etc.), any stormwater runoff from the sites will be readily accommodated by the surrounding land area. Therefore, the proposed project will not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, and will have a less than significant impact.

Water Supplies: Operation of the project sites will not require the use of water. Some water will be required during construction for mixing concrete, etc., and water for this purpose will be brought in from offsite. Therefore, the proposed project will not require new or expanded entitlements or resources to supply or serve the project sites. As such, impacts in this regard will be less than significant.

Landfill Capacity and Lawful Disposal of Solid Waste: During construction, some solid waste in the form of waste construction materials and other debris will be generated at each site. This material will be removed from the site and disposed of at an approved landfill facility in compliance with applicable rules and regulations. Once operational, the tower sites will generate only a negligible amount of solid waste. This waste will also be removed from the sites and disposed of accordingly.

1.4.3 - Impacts That Can Be Mitigated to Less Than Significant

Table 1-4 at the end of this section lists the impacts that can be mitigated to less than significant levels.

1.4.4 - Significant Impacts of the Project

Aesthetics

The proposed project represents a substantial change in the visual quality in approximately one half of the proposed sites and thus would result in an environmental impact that cannot be mitigated to a less than significant level for one or more of the reasons noted below. See Section 4.1, *Aesthetics*, for a detailed discussion of this issue.

- A tower will be located in a rural environment that currently does not contain any similar tower structures.
- A tower's location atop a prominent ridge will make it visible from a distance.
- Placement of a tower at some locations will introduce a visual element that is out of character with the existing visual environment and land use. There are currently no similar structures in the vicinity, and the overall character of the area could be considered natural and undisturbed. Therefore, placement of a tower at this location would constitute a substantial change to the existing visual environment.
- A proposed tower will be located in a rural conservation area and will introduce a visual element that is out of character with existing surroundings. The site would be prominently visible from an Eligible State Scenic Highway.
- A proposed tower will be located adjacent to an existing telecommunication tower or other similar infrastructure but the proposed tower will be substantially taller and more obtrusive than the existing cellular tower, and will thus be highly visible from an Eligible State Scenic Highway.
- A proposed tower will be located in a rural area that is noteworthy for its views of the San Jacinto and Santa Rosa Mountains to the east.
- A proposed tower will be located in the vicinity of a National Register Archaeological District, and placement of a tower in this area could be considered a significant impact.
- A proposed tower will be constructed in an area without similar visual elements. Though several water tanks are immediately adjacent, these structures are relatively low in stature, and the proposed tower would become a dominant visual element in the immediate area.
- A proposed tower will be constructed in a semi-rural neighborhood where similar structures (telecommunication towers, high-tension power lines, etc.) currently do not exist.
- A proposed tower would become a dominant visual element in the area, and would be especially visible from a Wilderness area.
- A proposed tower would be constructed to replace and expand an existing County facility on USFS land on a prominent ridge overlooking the southern San Jacinto Mountains. The historic Red Mountain USFS lookout tower lies approximately 100 feet to the north. The lookout

tower remains operational, and has been evaluated by an architectural historian and has been determined to be eligible for the National Register of Historic Places.

- Numerous project sites will include towers that are over 200 feet in height. The height of these towers requires a strobe light at its apex to mitigate for hazards to aviation thus introducing a prominent nighttime light source into the area that would be visible for many miles in all directions. Therefore, the placement of a light source at the site would present a significant change to the nighttime environment and would constitute a significant impact.

Cultural Resources

The proposed project will have a significant impact on cultural resources at two project sites for the reasons noted below. See Section 4.5, *Cultural Resources*, for a discussion of this issue. Detailed information is also contained in the Cultural Resources Assessment, provided with this Executive Summary and DEIR as Appendix C.

- Even with mitigation, the construction of the Margarita (MWD) facility will adversely impact the existing environmental setting of the National Register of Historic Places (NRHP) listed Murrieta Archaeological District by altering the viewshed of the district.
- The construction of the Spring Hill facility will adversely impact a prehistoric-age archaeological resource considered potentially eligible for listing in the NRHP.
- With implementation of prescribed mitigation, however, development impacts at all of the other proposed sites are considered less than significant.

1.4.5 - Growth-inducing, Irreversible, and Irretrievable Impacts

Growth Inducing Impacts

CEQA Section 15126 requires that an EIR discuss the ways in which a proposed project could directly or indirectly foster economic or population growth or the construction of additional housing. Direct growth-inducing impacts are generally associated with the provision of urban services and the extension of infrastructure to an undeveloped area. The extension of services and facilities to an individual area can reduce development constraints for other nearby areas and thus serve to induce further development in the vicinity. Indirect or secondary growth-inducing impacts consist of growth induced in the region by the additional demands for housing, employment, goods, and services associated with population increase caused by or attracted to new development.

The proposed communication tower sites are designed to serve the County of Riverside and provide additional emergency services to an existing population. The project is, in fact, necessitated in large part by the population growth that has already occurred. The project will not increase access to potentially developable properties. Development of the proposed project will not provide other infrastructure improvements (public roadways, water and sewer services, etc.) that would accommodate future growth. The tower sites represent a support service for existing development

and projected future growth in the County. The project is designed to accommodate this growth but is not in itself a growth-inducing project.

Irreversible or Irretrievable Environmental Impacts

CEQA Section 15126.2(c) requires that an EIR also describe any significant irreversible or irretrievable environmental changes that would be caused by a project. Construction of the proposed towers would involve activities that would entail the commitment of nonrenewable energy resources and natural resources such as lumber and other forest products, sand and gravel, asphalt, steel, copper, lead, other metals, and water. Construction of the proposed project is a long-term commitment of the land. It is improbable that the site would revert back to its original vacant state due to the large capital investment that would already have been committed. Though the small size of the sites certainly make it theoretically possible to abandon a site and restore it to its former condition, for all intents and purposes the project must be considered an irreversible change to the environment.

Operation of the voice and data towers would require further commitment of energy resources in the forms of electricity generated by fossil fuels, hydroelectric power, or nuclear energy. Propane gas and or diesel fuel will also be used at the sites to fuel generators. Increased motor vehicle travel to and from the project sites during routine maintenance would increase consumption of petroleum products. The energy and physical infrastructure maintenance commitments associated with the project would be long-term obligations. Therefore, the non-renewable nature of the resources used in the operation of the project can essentially be considered irretrievable.

1.5 - Alternatives to the Project

If a DEIR identifies one or more significant impacts, CEQA Guidelines Section 15126.6 requires consideration of alternatives to the proposed project in the DEIR.

This project is somewhat different from other types of projects in that radio towers have limited options insofar as to where they can be placed while still fulfilling their intended purpose. The physical characteristics of radio science place specific constraints on where a facility can be located while still meeting radio coverage needs. Radio waves cannot go through mountains, for example, and the strength of a signal decreases the further away one gets from a transmitter. Another consideration is the fact that radio networks are interconnected systems, meaning that each tower must be able to “see” other towers in a line-of-sight manner in order to transmit and receive signals to the rest of the network. In the case of radio, especially in an area as topographically diverse as Riverside County, there are few options in regards to tower placement if a particular area needs to be covered. This fact is particularly applicable to emergency services communication systems. In non-emergency networks (cellular telephones, etc.), a lack of coverage in a certain area is an inconvenience, whereas in an emergency services system, a lack of coverage could directly impact the ability of a provider to meet mission objectives (i.e., protection of life and property).

These facts make alternate site selection for public safety radio systems uniquely challenging. Nevertheless, the County went through a comprehensive site selection process with the goal of developing a system that provided the greatest level of radio coverage, while still minimizing impacts to the greatest extent possible. For most sites, candidate locations were chosen based on their ability to provide coverage to particular areas that had been identified as critical to meeting project objectives. Most final sites began with several candidates that were identified as possible locations from which coverage objectives could be met. Over 150 candidate locations were identified, from which approximately 50 final sites were ultimately to be selected. Multiple candidates were identified to allow for design flexibility should it be determined after further investigation that a specific location was not suitable. Reasons for a candidate's lack of suitability and subsequent rejection could include lack of suitable radio coverage, undesirable environmental impacts, acquisition or access constraints, cost, and other factors. Since these potential constraints could not be identified without further investigation, multiple candidates were identified for each site, with the understanding that many of the candidate locations would be dropped from consideration once a due-diligence investigation had been conducted. In this manner, the candidate that best met project objectives with the fewest constraints could be identified and ultimately selected. Table 6-1, in Section 6, lists the approximately 150 candidate sites and the County's reasons for rejecting two-thirds of the sites for development.

Following a rigorous constraints analysis and design process, final site selection was undertaken using the information provided by all participants. The first priority for any selected site was the provision of adequate radio coverage. During the site selection process, many otherwise suitable sites were rejected because they could not provide adequate coverage to specific areas. Other sites were rejected on environmental grounds, or because they could not be feasibly acquired, accessed, or constructed. The end result of the site selection process are the proposed site locations presented and analyzed in this DEIR.

1.5.1 - No Project Alternative

Under this alternative, the project would not be built and the County would continue to utilize its existing emergency services radio network into the foreseeable future. No new facilities would be built, and all of the environmental impacts identified in this DEIR would be avoided. The obvious disadvantage to this alternative would be that the citizens of the County would continue to be served by an emergency services communication network that currently does not provide adequate service to nearly 40 percent of the County. The safety and security of both the public safety personnel and the general public is significantly reduced in areas of poor or no radio coverage. While it is true that this alternative would avoid all of the significant impacts identified in the DEIR, it would not meet any of the objectives of the project. Not building the project would have significant and far-reaching repercussions for the County in regards to its ability to adequately protect its citizens.

1.5.2 - Alternate Locations Alternative

This alternative would build a comparable number of towers as the proposed project, but those towers would be in different locations than what has been proposed. The reasons for considering this alternative center around the possibility that the County may be able to select alternate sites than the ones proposed and thus minimize or eliminate some or all of the project's identified significant impacts. The County assessed over 150 candidate locations before it selected the 50 sites analyzed in this DEIR. In this sense, the County has already considered many alternative locations. Table 6-1 in Section 6 provides a listing of the number of candidates that were assessed for each site and the reason(s) for the rejection of candidates. At this point, the County believes it has conducted sufficient due-diligence in the site selection process. For many sites, the supply of available candidates has essentially been exhausted and the proposed locations are the best that are available given numerous site-specific constraints.

Still, it is theoretically possible that other candidates could be identified that could avoid some or all of the significant environmental effects of the project. However, it is likely that radio coverage in many areas would be compromised. In some cases, sites were specifically selected to provide radio coverage to a particular area that has proven problematic from a law enforcement or fire protection perspective. In some cases, there simply is no alternative to providing coverage to these areas. Selection of an alternate site would essentially render these critical areas uncovered.

Candidate sites were also rejected for other reasons besides coverage. Some candidates could have provided the needed coverage, but they simply were not accessible or acquirable. Other candidates were rejected because they would have impacted sensitive biological or cultural resources. Designated wilderness areas, for example, were all rejected from consideration.

Even if coverage issues could be resolved and the selection of alternate sites could be carried out while still meeting project objectives, the core challenge with this alternative is that the project's environmental effects would remain essentially unchanged. The project would still require the construction of wireless voice and data towers in areas where their aesthetic impacts would be significant. It is extremely unlikely that enough alternate sites could be identified that would lessen this impact to a less than significant level. Therefore, this alternative is not environmentally superior to the proposed project.

1.5.3 - Alternative Technologies Alternative

This alternative would abandon the project as currently designed and instead provide emergency communication services through alternative technology. These technologies could include the use of satellites or other services that would not require the use of land-based networks and thus avoid the significant environmental effects of the proposed project. The challenge with this alternative is that it is simply not possible with current technologies. While satellite communication sounds like an easy answer to communication challenges, the ability to offer these types of services in a reliable and safe manner is probably many years away. For instance, satellite coverage typically requires line-of-site

connectivity between the user and the satellite. For this reason, satellite communications do not work particularly well in buildings or in areas where physical obstructions block the line-of-site. This is particularly problematic for public safety personnel, who regularly work inside buildings and in situations where reliable communication is critical.

Satellite transmitters also present challenges in regards to the safety of users. Most persons view satellite technology based on experience with consumer electronics that utilize satellites, such as hand-held Global Positioning System (GPS) units or satellite television. The critical distinction with these products, however, is that they are *receiving* devices only. They themselves do not *transmit* a signal. The signal they receive is actually a very weak signal due to its distance from the transmitter (i.e., the satellite). For these devices to be able to transmit with sufficient strength to actually communicate with the satellite, the transmission signal from the device would need to be substantially higher than levels considered safe for a hand-held device. Even short-term exposure to these excessive levels of signal strength would have implications for the safety of emergency service providers.

If this alternative were at all feasible and safe, it would certainly be the environmentally superior alternative simply because it would meet all of the project's objectives while completely avoiding all of the environmental impacts of the proposed project. However, it is not possible at this time to implement this technology in an effective or safe manner. Perhaps in the future, this may be considered as a viable alternative, but at the present time it is not. Therefore, this alternative is not environmentally superior to the proposed project.

1.5.4 - Utilization of Existing Cellular Telephone Network Alternative

This alternative would require the County's emergency services providers to utilize existing commercial cellular telephone networks to communicate. The County would not need to build any towers under this alternative, and all of the impacts identified in this DEIR would be avoided.

The challenge with this alternative is that it simply would not provide the level of coverage and reliability that is required for an emergency services communication system. Anyone who has had experience with cellular telephones knows that coverage is inconsistent in many parts of the County and that reliability is far from certain. Buildings, topographic features, and other obstructions can block signals. Large portions of the County are not covered by commercial service and probably never will be due to the lack of consumer demand in more remote areas.

Cellular networks are also not capable of supporting the large quantities of data transmission that are required of an emergency services network. Most importantly, cellular networks do not provide instant, real-time communication. Typically, several seconds are required to obtain a signal (assuming a signal is available), and this type of delay is not acceptable in the emergency situations that providers are confronted with on a daily basis.

Additionally, commercial radio networks already carry a heavy traffic load, with the majority of calls being made by businesses and the general public. All these calls would be competing with the County's public safety personnel for air time, potentially preventing calls critical to the protection of life and property from being made at a crucial moment. It is a widely known fact that commercial networks become congested to the point of failure during emergencies or disasters. This is not a tolerable situation for public safety agencies.

1.5.5 - Taller Towers Alternative

This alternative would provide taller towers, but fewer of them. The reason for considering this alternative would be that taller towers can provide coverage to a larger area, and therefore fewer towers would be needed. This would have the effect of reducing the number of towers and thus the impacts associated with them.

For this alternative to actually reduce the number of towers, the towers would all need to be substantially taller than what is now proposed. A 330-foot guy-line supported tower approaches the upper limit of feasibility for construction in this area. For example, if it is assumed that if all of the towers were increased to 330-feet in height, the number of towers might be reduced from approximately 50 to less than 30. This reduction in numbers is an assumption, and is not the result of any technical analysis that has been undertaken by the County. The reason this analysis has not been done is because there are already known constraints associated with radio science that indicate that this alternative is not feasible.

Despite what could commonly be assumed, doubling the height of a tower does not necessarily provide twice the area of coverage. This could theoretically be the case if an area were totally flat and devoid of any topographic relief. This approach could work in flat areas of the country, but it is not effective in Riverside County. The County has extreme variances in topographic relief, ranging from 228 below sea level at the Salton Sea up to 10,804 feet above sea level at San Jacinto Peak. In between these extremes lies an enormous variety of terrain, some of which is very rugged and broken. The variations within this terrain create "shadows" in radio coverage when signals are blocked by topographic features. In these situations, a smaller tower, strategically placed, can reach those areas that would be in shadow from a larger tower. It typically takes several smaller towers to effectively cover areas that would otherwise be in shadow if only a single taller tower were used.

Taller towers can sometimes actually extend coverage into areas where their signals can cause interference with other users and jurisdictions. Towers must be sized carefully so that they will provide coverage to a desired area while avoiding "bleeding" excessive signal to areas where coverage is neither needed nor desired. The FCC regulates this type of interference, and taller towers can contribute to severe interference conditions in these situations.

In regards to aesthetic impacts, having fewer but taller towers could possibly reduce these impacts, but not in any meaningful sense. Taller towers can be seen from greater distances and tend to be

more intrusive. They require strobe lights and high-visibility paint schemes that add to the aesthetic impact. There is essentially no way to feasibly mitigate the impact of an extremely tall tower. Depending on their design, taller towers can also create greater areas of ground disturbance and can thus cause greater impacts to biological and cultural resources. Considering the greater aesthetic impact that would arise from taller towers, together with the technical constraints incumbent upon such a system, this alternative is not environmentally superior to the proposed project.

1.5.6 - Lower Towers Alternative

This alternative would provide greater numbers of towers of lower height to cover the same area. Under this alternative, the number of towers would increase by a substantial amount from what is proposed. The purpose of this alternative would be to lessen the aesthetic impacts of the project by using smaller towers exclusively. While the number of towers would actually increase, the idea would be that smaller towers would be less obtrusive and easier to conceal than taller towers.

This alternative could potentially lower the aesthetic impacts of the proposed project. Smaller towers are generally considered less visually obtrusive than taller towers, and if concealment technology for these towers were ever to become feasible, it could be possible to conceal these towers at some point in the future. However, while this approach could possibly reduce aesthetic impacts, it would also create additional impacts in other areas. More towers would create ground disturbance in more areas, and would also require more roads, more powerlines, and would consume more resources during construction and operation. The site-specific impacts associated with each tower would impact more people, since more towers would necessarily be located in areas where people could possibly be affected by them. The financial cost of the project would increase substantially, since more towers would mean more sites to acquire and more facilities to construct.

If only aesthetic impacts are considered and no other impacts are assessed, the construction of a greater number of towers of lower height could be considered “environmentally superior” to the proposed project. However, building more towers would increase other impacts, such as those associated with biological and cultural resources, air quality, and long-term commitment of resources. Therefore, on balance, this alternative is not considered environmentally superior to the proposed project.

1.5.7 – Environmentally Superior Alternative

When taken as a whole, none of the potential alternatives are environmentally superior to the proposed project because they would either not reduce one or more significant impacts of the project, would result in different or increased impacts compared to the proposed project, or would not achieve the objectives of the project to the same degree as the proposed project. This conclusion is supported by the extensive effort the County undertook to identify tower locations that would minimize the number of sites and related environmental impacts while maximizing service coverage. For these reasons, the proposed project is considered environmentally superior to other feasible potential network options.

1.6 - Areas of Controversy

1.6.1 - Areas of Controversy

Section 15123 (b) (2) of the CEQA Guidelines requires a discussion of “areas of controversy known to the Lead Agency including issues raised by agencies and the public.” Accordingly, the PSEC project requires several actions that could be considered controversial:

- Introduction of telecommunication structures into areas where such structures may be inconsistent with the existing visual setting (aesthetic impacts).
- The potential of telecommunication wireless voice and data sites to diminish the monetary value of adjacent properties.
- The potential for increased health risks associated with RFR for persons living and working in the vicinity of telecommunication wireless voice and data facilities.
- Introduction of telecommunication wireless voice and data structures into areas where such uses could negatively impact wildlife and habitat.

1.7 - Issues to be Resolved

1.7.1 - Issues to be Resolved

Section 15123 (b) (3) of the CEQA Guidelines requires a discussion of “issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects.” At the time of circulation of the Draft EIR, the following issues remained unresolved that could influence the ultimate configuration and outcome of the project:

- Nearly all of the sites have existing road access as well as availability of commercial power immediately adjacent. Some of the sites, however, will require the construction of new roads and/or powerlines. The designs for these improvements have not been finalized. Specific sites where these issues remain unresolved include Black Eagle, Black Jack, Estelle Mountain, Paradise, Spring Hill, and Timoteo. Additional information on these issues can be found in the individual site descriptions included in Appendix A of the DEIR. The intention at this point will be for those sites to undergo subsequent environmental review once these items have been finalized. The proposed actions would be subject to the mitigation measures and the performance criteria presented in the DEIR, or as determined in the subsequent environmental document if it is determined that construction of roads or power lines may result in environmental impacts not foreseen in the DEIR.
- Reviewers of the DEIR may notice that for two sites (Estelle Mountain and Margarita), two candidate locations are proposed. However, only one of the two candidates for each of these sites will ultimately be selected. At the time of publication of this DEIR, the final locations for

these sites had not been determined. For this reason, both candidates for each site are evaluated in this DEIR.

- The actual heights of the towers have not been finalized. The heights provided in the NOP and analyzed in the DEIR are those heights initially proposed by the project vendor in response to the County's Request for Proposals (RFP). Since that time, most of the sites have changed locations, and the elevation differences resulting from those moves as well as changes in coverage requirements may raise or lower a given tower's height.
- The feasibility and limits of stealth treatments for towers (disguises as trees, etc.) have not been determined. Stealth treatments have been utilized extensively for cellular telephone towers, but feasibility for two-way radio systems has not been established. Two-way systems utilize substantially different antennas that do not lend themselves well to placement in artificial tree-like structures. In addition, each tower in the PSEC project will utilize one or more microwave dishes, and it may not be possible to mount and adequately disguise these units on a stealth structure. The heights of many of the towers required for the PSEC project also place limitations on the use of stealth treatments. Stealth treatments on towers over 85 feet in height are typically not feasible. Additionally, the material used in the fabrication of the stealth treatments is flammable plastic. If a stealth tower were to be located in a potential wildfire area, the radio facility could be made inoperative if the stealth treatment material caught fire. Obviously, a loss of communications to fire and other public safety personnel during a wildfire event presents a significant safety threat to both the public safety personnel and the general public. The County is investigating each of these issues in hopes of finding an adequate solution, but at this time the final results of that investigation are unknown. For this reason, the DEIR will not present stealth treatments as mitigation, since the feasibility of adequate implementation remains uncertain. For further information on this subject, see Section 4.1-1, *Aesthetics*.

1.8 - Executive Summary Matrix

Table 1-4: Executive Summary Matrix of Environmental Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of significance after mitigation
SECTION 4.1 - AESTHETICS		
Approximately half of the proposed sites will introduce a significant new visual element that will conflict with the existing visual environment.	No feasible mitigation identified	Significant and unavoidable impact
SECTION 4.2 - AGRICULTURAL RESOURCES		
No significant impact identified	No mitigation required	Less than significant impact
SECTION 4.3 – AIR QUALITY		
Without mitigation, project impacts will exceed AQMD thresholds for particulate matter (PM ₁₀ and PM _{2.5}) .	MM AQ-1 All sites shall comply with the SCAQMD Rule 403 requirements, regardless of location.	Less than significant impact
Without mitigation, project impacts will exceed AQMD thresholds for particulate matter (PM ₁₀ and PM _{2.5}) .	MM AQ-2 During project construction, the developer shall require all contractors not to idle construction equipment onsite for more than five minutes.	Less than significant impact
Without mitigation, project impacts will exceed AQMD thresholds for particulate matter (PM ₁₀ and PM _{2.5}) .	MM AQ-3 During project construction, the workers should carpool to the greatest extent practical. Workers shall be informed in writing of this requirement. At a minimum, the workers shall leave their vehicles at a central location near the site so that fugitive dust generated by travel on dirt roads is limited.	Less than significant impact
Without mitigation, the project could exceed the regional significance thresholds during operation.	MM AQ-4 If the County wishes to develop additional sites in the future besides those assessed in this analysis, any additional full time generator sites shall be limited to one in the jurisdiction of the SCAQMD (South Coast Air Basin), three in the jurisdiction of the SCAQMD (Salton Sea Air Basin), and six in the jurisdiction of the MDAQMD.	Less than significant impact
Without mitigation, the project could expose sensitive receptors to substantial pollutant concentrations.	MM AQ-5 Any additional full time generators (besides the existing Santa Rosa Peak site) shall be propane fueled.	Less than significant impact
SECTION 4.4 – BIOLOGICAL RESOURCES		
Without mitigation, impacts to federally-listed sensitive species could occur.	MM BR-1a If a proposed site is located within a USFWS-designated Critical Habitat area for a federally listed species, but is located outside of	Less than significant impact

Table 1-4 (Cont.): Executive Summary Matrix of Environmental Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of significance after mitigation
	<p>an established Habitat Conservation Plan (HCP), then appropriate FESA consultation with the USFWS must be undertaken prior to site development. If suitable habitat for the species is present on or adjacent to the project, then focused surveys shall be undertaken to determine presence or absence of the listed species. This survey requirement may be avoided if the listed species' occupancy of the site is preemptively assumed.</p>	
<p>Without mitigation, impacts to federally-listed sensitive species could occur.</p>	<p>MM BR-1b If a proposed site is located in an area of close proximity to suitable habitat for a species listed under the FESA or CESA as threatened or endangered, then pre-construction surveys of the area shall be performed by a qualified and/or USFWS permitted biologist to determine presence or absence of the species in the area. If it is determined that no listed species are present in the area, then development may commence without further impediment. If it is determined that a listed species is present in the area, then appropriate avoidance measures shall be implemented to avoid inadvertent take of the listed species. Avoidance measures may include, but may not be limited to; 1) Postponement of construction until the species has vacated the area; 2) The installation of exclusion fencing or other barriers to assure that the species does not enter the construction area; or 3) other avoidance measures as recommended by the biologist.</p>	<p>Less than significant impact</p>
<p>If construction is proposed outside of the areas that were surveyed, inadvertent take of sensitive species could occur.</p>	<p>MM BR-1c If any construction related to the proposed project, such as access roads, is anticipated to occur outside of the area surveyed for the June 3, 2008 Habitat Assessment Report, then additional habitat assessments shall be conducted by a qualified biologist prior to development to evaluate potential impacts. If these expanded surveys find that sensitive biological resources are present in the area to be impacted, then appropriate measures consistent with applicable laws and policies in effect at the time of the survey shall be undertaken to avoid or mitigate identified impacts. If the expanded surveys do not find sensitive biological resources in the area to be impacted, then development may then commence unimpeded within the parameters of applicable laws and policies governing such development.</p>	<p>Less than significant impact</p>
<p>If the length of time between the date of survey and construction of a site becomes excessive, conditions at the site could change substantially and suitable habitat</p>	<p>MM BR-1d If the amount of time between the date of the habitat assessment survey, indicated in Table 3 of the June 3, 2008 Habitat Assessment Report, and the commencement of construction exceeds 18</p>	<p>Less than significant impact</p>

Table 1-4 (Cont.): Executive Summary Matrix of Environmental Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of significance after mitigation
for sensitive species could develop where previously there had been none.	months, a qualified biologist must determine if potential changes in conditions on the site warrant the initiation of additional survey work. If the determination is made that additional survey work is required, then surveys must be conducted by a qualified biologist prior to site development. If subsequent surveys find that sensitive biological resources have taken up occupancy of the site and may be impacted by development, then appropriate measures consistent with applicable laws and policies in effect at the time of the survey shall be undertaken prior to site development to avoid or mitigate identified impacts. If conditions at the site have not changed considerably and sensitive biological resources are not found, then development may commence unimpeded.	
Without the implementation of proper controls to prevent runoff during construction, runoff and sedimentation from the site could impact area drainages.	MM BR-2a Prior to the commencement of construction at any site, coverage must be obtained under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit 99-08-DWQ) from the appropriate RWQCB with jurisdiction over the site. As part of the permit process, a SWPPP must be developed that meets the requirements of the applicable RWQCB and lists BMPs that will be implemented to protect and control storm water runoff from the site.	Less than significant impact
If construction occurs during avian nesting season, nesting birds could be impacted.	MM BR-3a If construction of a proposed site has the potential to impact nesting birds during avian nesting season as indicated in the “Potential to Impact Nesting Birds” column of Table 14 of the June 3, 2008 Habitat Assessment Report, then one of the following must occur: 1) Construction should occur outside of the avian nesting season (approximately February 1 through August 31); 2) If construction must occur during the nesting season, then a pre-construction nesting bird survey of the site shall be conducted by a qualified biologist no more than thirty days prior to construction activities. If active nests are found onsite, then they must be avoided by an appropriate buffer until any young birds have fledged and the nest has completed its cycle, as determined by a qualified biologist. If construction occurs outside of the avian nesting period, then construction may commence without further impediment.	Less than significant impact
Without mitigation, impacts to migratory and resident birds could result from collisions with guy-wires.	MM BR-3b The use of towers utilizing permanent ground-anchored guy-wires should be avoided. If site constraints or other factors make the construction of a self-supporting tower infeasible and a guy-wire supported	Less than significant impact

Table 1-4 (Cont.): Executive Summary Matrix of Environmental Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of significance after mitigation
	tower is identified as the only practical alternative, then each of the following measures must be implemented: 1) the number of guy-wires must be limited to the minimum number necessary to meet the engineering requirements of the structure; 2) guy-wires shall be equipped with appropriate daytime visual markers (e.g., bird diverter devices) to lessen the potential for collision by birds with the guy-wires; 3) The services of a qualified professional shall be retained to develop specific requirements for the types of diverters, the spacing of the devices upon the wires, and other criteria necessary to minimize impacts to avian species.	
Without mitigation, impacts to migratory and resident birds could result from collisions with guy-wires.	MM BR-3c If a communication tower is proposed and is for whatever reason required to install and maintain aircraft warning lights, then the minimum amount of lighting required by the FAA shall be used. Where permissible by the FAA, only white strobe lights shall be used at night. These lights shall be up-shielded to minimize disruption to local residents, and shall be the minimum number, with minimum intensity and number of flashes per minute (i.e., the longest duration between flashes) allowed by the FAA. Unless specifically required by the FAA, the use of solid red or pulsating red warning lights shall be avoided at night.	Less than significant impact
Without mitigation, impacts to migratory and resident birds could result from collisions with tower structures.	MM BR-3d Security lighting or other nighttime lighting for on-ground facilities and equipment shall be down-shielded to keep light within the boundaries of the site and to minimize its potential attraction for birds.	Less than significant impact
Without mitigation, impacts to protected native desert plants could occur.	MM BR-4a If the installation of a communication tower facility has the potential to impact native desert plants protected under the California Desert Native Plants Act as identified in the “Potential to Impact CDNPA Listed Plants” column of Table 14 of the June 3, 2008 Habitat Assessment Report, then those plant specimens shall be avoided to the maximum extent feasible. If a listed plant cannot be avoided, then the appropriate removal permit must be obtained from the relevant official. Permits may be obtained from the Agricultural Commissioner or Sheriff of the relevant county.	Less than significant impact
Without a determination of consistency with the WRMSHCP, unauthorized impacts to sensitive species could occur.	MM BR-5a A consistency analysis shall be prepared for all sites governed by the WRMSHCP. This analysis may be presented as a master document that incorporates analysis for all of the sites rather than separate documents	Less than significant impact

Table 1-4 (Cont.): Executive Summary Matrix of Environmental Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of significance after mitigation
	<p>for each site. Regardless of the manner in which the analysis is presented, the development of each site must be found consistent with the WRMSHCP by the RCA and payment of the mandatory mitigation fee must be submitted prior to the site’s development. Payment of the fee and a determination of consistency with the requirements of the WRMSHCP is intended to provide full mitigation under CEQA, NEPA, CESA, and FESA for impacts to the species and habitats covered by the WRMSHCP.</p>	
<p>Without a determination of consistency with the WRMSHCP, unauthorized impacts to sensitive species could occur.</p>	<p>MM BR-5b If a site is located within a Criteria Cell as defined in the WRMSHCP, then the County shall enter into a HANS process with the Riverside County Environmental Planning Department (EPD) or the appropriate WRMSHCP participant. Once the HANS application is deemed complete, a HANS Criteria Determination Letter shall be issued. The application and letter must then be reviewed and accepted by the Regional Conservation Authority prior to site development.</p>	<p>Less than significant impact</p>
<p>If the conditions of the WRMSHCP are not followed, unauthorized impacts to sensitive species could occur.</p>	<p>MM BR-5c If a site is proposed to be located within an area that is governed by the WRMSHCP, and is also listed in the “Focused Surveys Required” column of Table 14 of the June 3, 2008 Habitat Assessment Report, then additional focused surveys must be conducted for those species according to established survey protocols. If the species is found to be present on the site, then the site shall be considered occupied suitable habitat, and, if it is not feasible to conserve at least 90 percent of the area, then the County must submit an analysis supporting a DBESP. The DBESP discussion shall list why avoidance is not possible, quantify unavoidable impacts, propose project design features and mitigation measures to reduce indirect effects, and demonstrate that the project would be biologically equivalent or superior to avoidance.</p>	<p>Less than significant impact</p>
<p>Without a determination of consistency with the CVMSHCP, unauthorized impacts to sensitive species could occur.</p>	<p>MM BR-5d A consistency analysis shall be prepared for all sites governed by the CVMSHCP. This analysis may be presented as a master document that incorporates analysis for all of the sites rather than separate documents for each site. Regardless of the manner in which the analysis is presented, the development of each site must be found consistent with the CVMSHCP by the CVAG and payment of the mandatory mitigation fee must be submitted prior to the site’s development. Payment of the fee and a determination of consistency with the requirements of the CVMSHCP are</p>	<p>Less than significant impact</p>

Table 1-4 (Cont.): Executive Summary Matrix of Environmental Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of significance after mitigation
	intended to provide full mitigation under CEQA, NEPA, CESA, and FESA for impacts to the species and habitats covered by the CVMSHCP.	
If the conditions of the CVMSHCP are not followed, unauthorized impacts to sensitive species could occur.	MM BR-5e If a site is proposed to be located within a conservation area as designated by the CVMSHCP, then the proposed development shall be reviewed under the appropriate review process in effect at the time of application. During the interim period prior to final MSHCP adoption, participants in this review are assumed to be the USFWS and the CDFG. Following the MSHCP’s adoption, the reviewing authority is assumed to be the CVCC. Regardless of the reviewing authority or process in effect at the time of application, appropriate review must take place and the specific direction of the reviewing authorities implemented prior to site development.	Less than significant impact
Without the implementation of all feasible avoidance measures, unnecessary take of species covered by the WRMSHCP and CVMSHCP could occur.	MM BR-5f If any federal or State listed threatened or endangered species are listed as potentially occurring upon any site and those species are covered under either the WRMSHCP or CVMSHCP, then all feasible avoidance measures will be implemented to ensure no take of the species occurs.	Less than significant impact
Without compliance with the SKRHCP, unauthorized impacts to Stephen’s kangaroo rat could occur.	MM BR-5g If a site is proposed to be located within a SKRHCP Fee Area, then the mandatory mitigation fee shall be paid. Payment of the fee is intended to provide full mitigation to Stephens’ kangaroo rat under CEQA, NEPA, CESA, and FESA through the SKRHCP.	Less than significant impact
Without compliance with the SKRHCP, unauthorized impacts to Stephen’s kangaroo rat could occur.	MM BR-5h If a site is proposed to be located within an SKR Reserve Area, then focused surveys for Stephens’ kangaroo rat shall be conducted to determine the occupancy status of the species on the site. If the species is determined to be present on the site, an area of suitable habitat, at a minimum replacement ratio of one to one and approved by both the CDFG and the USFWS, shall be purchased and managed as a reserve area.	Less than significant impact
Without compliance and consistency with applicable federal land management plans, conflicts with those plans could occur.	MM BR-5i If a site is proposed to be located on lands managed by an agency of the federal government, then development of the site must be reviewed by the agency prior to site development and found to be consistent with the agency’s applicable resource management plan.	Less than significant impact

Table 1-4 (Cont.): Executive Summary Matrix of Environmental Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of significance after mitigation
SECTION 4.5 – CULTURAL RESOURCES		
Without mitigation, ground disturbing activities outside of previously-surveyed areas could result in an impact to cultural resources.	MM CR-1a In the event that ground-disturbing activities extend beyond the limits of a 300-foot buffer from the surveyed site, then additional archaeological studies must be completed to determine whether historical properties or significant archaeological resources will be affected by the proposed construction plans. Ground disturbing activities may consist of, but are not limited to trenching for electrical power, creation of access roads, or access road improvements. The extent of these additional archaeological studies would be determined based upon the nature of the proposed construction plans beyond a 300-foot radius of the surveyed location. If these expanded surveys find that sensitive properties or resources are present in the area to be impacted, then appropriate measures consistent with applicable laws and policies in effect at the time of the survey shall be undertaken to avoid or mitigate identified impacts. If the expanded surveys do not find sensitive properties or resources in the area to be impacted, then development may then commence unimpeded within the parameters of applicable laws and policies governing such development.	Less than significant impact
Without monitoring during ground disturbing activities, impacts to below-ground cultural resources could occur.	MM CR-1b There is a moderate probability that subsurface cultural resources relating to either historical properties or significant archaeological resources will be unearthed during development-related ground disturbance. Therefore, at these sites an archaeological monitoring program shall be implemented during ground-disturbing activities. This monitoring program should commence with a meeting between the contracted archaeologist and the development crew. This meeting will serve to educate the crew on when monitoring activities should begin at the site. Full-time monitoring shall continue until the project archaeologist determines that the overall sensitivity of the area has been reduced from moderate to low, as a result of monitoring. Should the monitor determine that there are no cultural resources within the impacted areas, or should the sensitivity be reduced from moderate to low during monitoring, all monitoring may cease.	Less than significant impact
Without protection, cultural resource sites near the project area could be damaged.	MM CR-1c The CRHR eligible property (historical property) identified in Table 4.5-2 could be adversely impacted by the construction at this site.	Significant and unavoidable impact (Margarita (MWD) and Spring Hill

Table 1-4 (Cont.): Executive Summary Matrix of Environmental Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of significance after mitigation
	<p>For this reason, the site shall be protected for the purpose of complete avoidance during all ground-disturbing activities associated with construction. An archaeological monitor shall be present during ground disturbing activities to ensure that the resource will not be directly or indirectly impacted. This archaeological monitoring could be reduced or potentially eliminated if the boundaries of the site, as defined by a professional archaeologist, were fortified with temporary fencing to reduce the potential for impacts to the resource. Beyond the recommended archaeological monitoring for the purpose of protecting the site, no additional cultural resource mitigation is recommended prior to construction.</p> <p>If the site cannot be avoided during construction, then additional archaeological research must be conducted for the purposes of determining the NRHP and CRHR eligibility of potentially impacted resources. This additional work may include subsurface testing if appropriate, depending on the type of archaeological resource. The results of this additional work should be incorporated into updated DPR 523 Forms and be submitted to the appropriate Information Center. Any resources found to be eligible for listing on the NRHP or CRHR through these additional studies will require additional mitigation efforts.</p>	<p>sites only. All other sites will be mitigated to a less than significant impact.</p>
<p>Without mitigation, ground disturbing activities outside of previously surveyed areas could result in an impact to paleontological resources.</p>	<p>MM CR-2a In the event that ground-disturbing activities occur at sites identified in Table 4.5-3 of the DEIR as potentially significant extending beyond the limits of a 300-foot buffer from the identified site, then additional studies may need to be completed to determine whether paleontological resources, sites or unique geologic features will be affected by the proposed construction plans. Ground disturbing activities may consist of, but are not limited to trenching for electrical power, and creation of access roads or access road improvements. The extent of these additional studies shall be undertaken by a qualified individual, and would be determined based upon the nature of the proposed construction plans beyond a 300-foot radius of the identified and surveyed site. Should that determination conclude that additional study is necessary, then the reviews prescribed in Mitigation Measure CR-2b shall be undertaken. If the determination concludes that additional study is not necessary, then all</p>	<p>Less than significant impact</p>

Table 1-4 (Cont.): Executive Summary Matrix of Environmental Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of significance after mitigation
	mitigation efforts may cease.	
If ground disturbing activities are planned for an area outside of the area that was previously surveyed, impacts to below-ground cultural resources could occur. In these cases, additional study will be required.	MM CR-2b If required by the findings of Mitigation Measure CR-2a, then a Paleontological Literature Review and Records Check should be requested from an accredited institution, such as the Division of Geologic Sciences at the San Bernardino County Museum (SBCM), to determine whether there are any known paleontologic localities (sites) located within or near the project area. If the results of this review indicate that there are known localities within the project area, or within a 1-mile radius, and a qualified vertebrate paleontologist recommends a paleontological-monitoring program, then the program prescribed in Mitigation Measure CR-2c shall be implemented. If the results of this records check indicate that there are no known localities within the project area or within a 1-mile radius, and a qualified vertebrate paleontologist does not recommend a paleontological-monitoring program, then any and all additional mitigation efforts may cease.	Less than significant impact
Without monitoring during ground disturbing activities, impacts to below-ground paleontological resources could occur.	MM CR-2c If required by the findings of Mitigation Measure CR-2b, a paleontological-monitoring program shall be established and implemented. This monitoring plan should include monitoring in sediments assigned moderate, moderate to high, or high paleontologic sensitivity through the literature review and records check. This mitigation-monitoring program should commence with a meeting between the contracted paleontologist and the development crew. This meeting will serve to educate the crew on when monitoring activities should begin at the site. Full-time monitoring should commence at the modern ground surface, unless otherwise indicated by a qualified vertebrate paleontologist, and should continue until the project paleontologist determines that the overall sensitivity of the area has been reduced from high or moderate to low, as a result of mitigation monitoring. Should the monitor determine that there are no paleontological resources within the impacted areas, or should the sensitivity be reduced from high or moderate to low during monitoring, all monitoring may cease.	Less than significant impact
SECTION 4.6 – GEOLOGY AND SOILS		
No significant impacts identified	No mitigation required	Less than significant impact

Table 1-4 (Cont.): Executive Summary Matrix of Environmental Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of significance after mitigation
SECTION 4.7 – HAZARDS AND HAZARDOUS MATERIALS		
No significant impacts identified	No mitigation required	Less than significant impact
SECTION 4.8 – HYDROLOGY AND WATER QUALITY		
Without the implementation of proper controls to prevent runoff during construction, runoff and sedimentation from the site could impact area drainages.	MM HY-1a Prior to the commencement of construction at any site, coverage must be obtained under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit 99-08-DWQ) from the appropriate RWQCB with jurisdiction over the site. As part of the permit process, a SWPPP must be developed that meets the requirements of the applicable RWQCB and lists BMPs that will be implemented to protect and control storm water runoff from the site.	Less than significant impact
Without an adequate Emergency Response Plan (ERP) in place during project construction, mishaps and spills could impact area water supplies.	MM HY-1b Prior to commencing construction at any site, the County shall develop an ERP to provide for any contingencies that could arise during construction. The ERP may be applied to all sites, and should provide direction regarding specific actions to be taken in the event of spillage, leakage, or upset at any of the sites.	Less than significant impact
Without an adequate Emergency Response Plan (ERP) in place during project operation, mishaps and spills could impact area water supplies.	MM HY-1c Prior to commencing operations at any site, the County shall develop an ERP to provide for any contingencies that could arise during operation. The ERP may be applied to all sites, and should provide direction regarding specific actions to be taken in the event of spillage, leakage, or upset at any of the sites.	Less than significant impact
SECTION 4.9 – LAND USE AND PLANNING		
No significant impacts identified	No mitigation required	Less than significant impact
SECTION 4.10 – MINERAL RESOURCES		
No significant impacts identified	No mitigation required	No impact
SECTION 4.11 – NOISE		
No significant impacts identified	No mitigation required	Less than significant impact
SECTION 4.12 – POPULATION AND HOUSING		
No significant impacts identified	No mitigation required	No impact

Table 1-4 (Cont.): Executive Summary Matrix of Environmental Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of significance after mitigation
SECTION 4.13 – PUBLIC SERVICES		
No significant impacts identified	No mitigation required	No impact
SECTION 4.14 – RECREATION		
No significant impacts identified	No mitigation required	No impact
SECTION 4.15 - TRANSPORTATION		
No significant impacts identified	No mitigation required	Less than significant impact
SECTION 4.16 – UTILITIES		
No significant impacts identified	No mitigation required	Less than significant impact
SECTION 4.17 – CLIMATE CHANGE		
No significant impacts identified	No mitigation required	Less than significant impact

