NEGATIVE DECLARATION

FILE: PD15-0005/S14-0012

PROJECT NAME: Verizon Wireless Communication Facility Auburn Lake Trails Monopine

NAME OF APPLICANT: Cellco Partnership, D/B/A Verizon Wireless, C/O Complete Wireless Consulting

ASSESSOR'S PARCEL NO.: 071-032-46-100 **SECTION:** 16N **T:** 12E **R:** 9E

LOCATION: 1930 State Highway 193, approximately 300 feet east of the intersection of State Highway 193 and Sweetwater Trail and approximately 0.51 miles southeast of State Highway 193 in the Cool Area.

☐ **GENERAL PLAN AMENDMENT:** **FROM:** **TO:**

☐ **REZONING:** **FROM:** **TO:**

☐ **TENTATIVE PARCEL MAP** ☐ **SUBDIVISION TO SPLIT** **ACRES INTO** **LOTS**
SUBDIVISION (NAME):

☒ **DEVELOPMENT PLAN AND SPECIAL USE PERMIT TO ALLOW:** Installation of a wireless telecommunication facility consisting of a 82-foot monopine tower and six antennas with nine remote radio heads and two surge protectors mounted at 70 feet, outdoor equipment cabinets, a standby diesel generator, and related ground equipment on a 12- by 26-foot concrete slab, all within a 50-by 50-foot lease area enclosed with six-foot tall chain link fence.

☐ **OTHER:**

REASONS THE PROJECT WILL NOT HAVE A SIGNIFICANT ENVIRONMENTAL IMPACT:

☒ **NO SIGNIFICANT ENVIRONMENTAL CONCERNS WERE IDENTIFIED DURING THE INITIAL STUDY.**

☐ **MITIGATION HAS BEEN IDENTIFIED WHICH WOULD REDUCE POTENTIALLY SIGNIFICANT IMPACTS.**

☐ **OTHER:**

In accordance with the authority and criteria contained in the California Environmental Quality Act (CEQA), State Guidelines, and El Dorado County Guidelines for the Implementation of CEQA, the County Environmental Agent analyzed the project and determined that the project will not have a significant impact on the environment. Based on this finding, the Development Services Division hereby prepares this NEGATIVE DECLARATION. A period of thirty (30) days from the date of filing this negative declaration will be provided to enable public review of the project specifications and this document prior to action on the project by COUNTY OF EL DORADO. A copy of the project specifications is on file at the County of El Dorado Planning Services, 2850 Fairlane Court, Placerville, CA 95667.

This Negative Declaration was adopted by the Planning Commission on November 12, 2015.

_____

Executive Secretary

EXHIBIT K

EL DORADO COUNTY PLANNING SERVICES
2850 FAIRLANE COURT
PLACERVILLE, CA 95667

INITIAL STUDY
ENVIRONMENTAL CHECKLIST

Project Title: PD15-0005/S14-0012 Verizon Wireless Communication Facility Auburn Lake Trails Monopine

Lead Agency Name and Address: El Dorado County, 2850 Fairlane Court; Placerville, CA 95667

Contact Person: Rob Peters, Associate Planner | **Phone Number:** (530) 621-6644

Project Applicant's Name and Address: Cellco Partnership, D/B/A Verizon Wireless,
C/O Complete Wireless Consulting
2009 V Street, Sacramento, CA 95815

Project Agent's Name and Address: Jenny Blocker, 2009 V Street, Sacramento, CA 95815

Project Engineer's Name and Address: MST Architects, 1520 River Park Drive, Sacramento, CA 95815

Project Location: 1930 State Highway 193, approximately 300 feet east of the intersection of State Highway 193 and Sweetwater Trail and approximately 0.51 miles southeast of State Highway 193 in the Cool Area.

Assessor's Parcel Number: 071-032-46 **Acres:** 45.03 acres

Section: 16 **T:** 12N **R:** 9E

Zoning: Estate Residential-Planned Development (RE-10-PD)

General Plan Designation: Rural Residential (RR)

Description of Project: Development Plan and Special use permit request to allow the construction of a wireless communications facility consisting of an 82-foot monopine tower and six antennas with nine remote radio heads and two surge protectors mounted at 70 feet, up to four outdoor equipment cabinets, a 30kw standby diesel generator, and related ground equipment on a 12- by 26-foot concrete slab, all within a 50- by 50-foot lease area enclosed with six-foot tall chain link fence with tan slats and three rows of barbed wire on top. Access to the site would be provided by a 15-foot wide, approximately 2,000-foot long non-exclusive Verizon Wireless access and utility easement off the existing driveway located off of State Route 193. The proposed access driveway would be graveled with paved portions on all grades greater than 16 percent, and would include three turnouts. The request also includes allowance of a temporary wireless site during construction of the wireless facility consisting of a utility trailer with a mast and three antennas that would be raised to the height of the proposed permanent antennas.

Surrounding Land Uses and Setting:

	Zoning	General Plan	Land Use/Improvements
Site	RE-10-PD	RR	Single-family residence and accessory structures
North	RE-10, RE-5	RR-IBC, LDR-IBC	Vacant land, Single-family residence
South	RE-10-PD	RR	Vacant land
East	RE-10	RR-IBC	Single-family residence
West	RE-10-PD	RR	Vacant Land

Briefly Describe the Environmental Setting: The site is located on a 45-acre parcel, with an average elevation of approximately 1,600-feet above sea level. There is a residential dwelling, associated accessory structures, and two small man-made ponds located on the southern half of the lot approximately 900 feet southwest of the proposed lease area. The proposed lease area is located on a steep knoll in the northeast corner of the lot at an approximate elevation of 1,770 feet above sea level. The proposed lease area contains no trees. However, oak and pine trees exist in close proximity. The remainder of the lot is characterized by sparse to moderate cover of oaks, pines, shrubs, and grasses. The closest off-site residences are located between approximately 650 feet northeast and 920 feet southwest of the proposed tower and lease area location.

Other Public Agencies Whose Approval is Required (e.g., permits, financing approval, or participation agreement)

1. Transportation Division: Review of Conditions of Approval.
2. El Dorado County Environmental Management: Review of Conditions of Approval.
3. El Dorado County Fire Protection District: Review and approval of Building Permit.
4. Building Services: Review and approval of Grading and Building Permits.
5. Air Quality Management District: Review and approval of Asbestos Dust Mitigation Plan.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

	Aesthetics		Agriculture and Forestry Resources		Air Quality
	Biological Resources		Cultural Resources		Geology / Soils
	Greenhouse Gas Emissions		Hazards & Hazardous Materials		Hydrology / Water Quality
	Land Use / Planning		Mineral Resources		Noise
	Population / Housing		Public Services		Recreation
	Transportation/Traffic		Tribal Cultural Resources		Utilities / Service Systems
	Mandatory Findings of Significance				

DETERMINATION

On the basis of this initial evaluation:

☒ I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

☐ I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

☐ I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect: 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards; and 2) has been addressed by Mitigation Measures based on the earlier analysis as described in attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects: a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION, pursuant to applicable standards; and b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or Mitigation Measures that are imposed upon the proposed project, nothing further is required.

Signature: _____ Date: 9/30/15
Printed Name: Robert Peters, Associate Planner For: El Dorado County

Signature: _____ Date: 09/30/15
Printed Name: Tiffany Schmid, Principal Planner For: El Dorado County

PROJECT DESCRIPTION

Introduction

This Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts resulting from the proposed project. The project would allow the construction of a wireless telecommunications facility.

Project Description

In accordance with Sections 130.04.030(B) (Development Plan in a PD Combining Zone) and 130.14.210(D)(5a) (New Towers and Monopoles) of the County of El Dorado Code of Ordinances and applicable standards under Sections 130.70.110 and 130.14.210.E-J, this Development Plan and Special Use Permit request would allow the construction of a wireless telecommunications facility consisting of an 82-foot monopine tower and six Verizon Wireless antennas with nine remote radio heads and two surge protectors mounted at the 70 feet, up to four outdoor equipment cabinets, a 30 kw standby diesel generator, and related ground equipment on a 12- by 26-foot concrete slab, all within a 50- by 50-foot lease area enclosed with a six-foot tall chain link fence with tan slats and three rows of barbed wire on top. The wireless facility has been designed as a monopine with foliage that matches the existing surrounding vegetation and would be painted to simulate a natural brown bark. The antennas are proposed be mounted at 70 feet and covered with pine needle socks. The top of the pole would be 77 feet above ground level with foliage extending another five feet to an overall structure height of 82 feet. The facility has been designed to accommodate future co-location by other carriers. The highest available height for future co-location would be at the approximately 63-foot centerline and additional space is available within the proposed lease area for future ground mounted equipment. The applicants are also requesting allowance of a temporary wireless site during construction of the wireless facility consisting of a utility trailer with a mast and three antennas that would be raised to the height of the proposed permanent antennas.

Access to the site would be provided by a 15-foot wide, approximately 2,000-foot long non-exclusive Verizon Wireless access and utility easement off the existing driveway located off of State Route 193. This proposed on-site access road terminates at the proposed facility with a hammerhead design to accommodate vehicular turnaround. Due to the overall length and steepness of the proposed gravel access road, the El Dorado County Fire Protection District has required paved portions on all grades greater than 16 percent, and would include three turnouts. An additional ten-foot Verizon Wireless utility easement extends to the west from the proposed 15-foot access and utility easement to connect to an existing utility pole. A number of oak trees and other vegetation are located along the road and adjacent to the proposed lease area in the northeaster portion of the site. However, no trees are proposed for removal as part of the wireless facility construction or operation.

Project Location and Surrounding Land Uses

The project site is located in the Cool area just east of the Cool Rural Center identified within the El Dorado County General Plan. Undeveloped rural residential lots surround the project site to the northwest, west, and south, and rural residences are located immediately to the northeast and east.

Project Characteristics

1. Transportation/Circulation/Parking

Access to the proposed equipment cabinets and tower would be provided by a 15-foot wide, non-exclusive Verizon Wireless access and utility easement off the existing driveway. The access road terminates at the proposed facility with hammerhead design to accommodate vehicular turnaround and three turnouts to meet Fire Safe standards. The site does not include a parking space.

2. Utilities and Infrastructure

Verizon Wireless proposes to utilize the current feeds at the existing J-pole with transformer, power, and telecommunications point of contact located approximately 600 feet away, east of the proposed tower site. The connections will be made underground via boring. No other utilities will be required to operate the site.

3. Construction Considerations

Minor lease area site construction, grading, and extension of existing utilities will be required for the project. Grading would include interior site preparation including surface grading, tower and equipment foundations and concrete flooring, and overall site surfacing preparation. An approximately 2,000-foot gravel/partially paved driveway will be installed. The telecommunications line and power will be installed within the proposed utilities easement. All of these activities will take approximately 60 days. Verizon Wireless will have personnel on site daily during this construction period.

Project Schedule and Approvals

This Initial Study is being circulated for public and agency review for a 30-day period. Written comments on the Initial Study should be submitted to the project planner indicated in the Summary section, above. Following the close of the written comment period, the Initial Study will be considered by the Lead Agency in a public meeting and will be certified if it is determined to be in compliance with CEQA. The Lead Agency will also determine whether to approve the project.

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. If the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is a fair argument that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of Mitigation Measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the Mitigation Measures, and briefly explain how they reduce the effect to a less than significant level.

5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:

   a. Earlier Analysis Used. Identify and state where they are available for review.

   b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c. Mitigation Measures. For effects that are "Less Than Significant With Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9. The explanation of each issue should identify:

   a. the significance criteria or threshold, if any, used to evaluate each question; and
   b. the mitigation measure identified, if any, to reduce the impact to less than significant.

ENVIRONMENTAL IMPACTS

I. AESTHETICS. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?			X	
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c. Substantially degrade the existing visual character quality of the site and its surroundings?			X	
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Discussion: A substantial adverse effect to Visual Resources would result in the introduction of physical features that are not characteristic of the surrounding development, substantially change the natural landscape, or obstruct an identified public scenic vista.

a. **Scenic Vista:** The project site is located in a rural region surrounded by vacant residential lands and large-lot single-family residences. No scenic vistas, as designated by the county General Plan, are located in the vicinity of the site (El Dorado County, 2003, p. 5.3-3 through 5.3-5). However, views from the surrounding roads or residences to the site could be considered scenic vistas. The proposed stealth components of the project would camouflage the tower and appear to be a pine tree from areas with a direct line-of-site to the facility. Other views of the area would be unobstructed by the facility and surrounding trees in the area would block the view of the monopine from certain vantage points. Similarly, the ground equipment lease area would be blocked from view and fenced, and would therefore have no impacts on any official or unofficial scenic vistas. The impact would be less that significant and no mitigation measures are required.

b. **Scenic Resources:** The project site is not visible from an officially designated State Scenic Highway or county-designated scenic highway, or any roadway that is part of a corridor protection program (CalTrans, 2013). There are no views of the site from public parks or scenic vistas. Though there are many trees in the project vicinity, there are no trees or historic buildings that have been identified by the County as contributing to exceptional aesthetic value at the project site. There would be no impact and no mitigation is required.

c. **Visual Character:** Due to the elevation of the proposed project site and surrounding vegetation, the proposed fencing and ground equipment is unlikely to be visible from some surrounding areas. The proposed outdoor equipment cabinets would be located at the base of the tower within the fenced 50- by 50-foot lease area. The site plans and photo simulations show the tower and ground equipment to be designed to meet the wireless communications facilities standards of Zoning Ordinance Section 130.14.210.

The tower itself would be visible from some points in the surrounding area, including the residential areas to the southeast and southwest. The tower is designed as a monopine to camouflage the facility components and to blend in with the surrounding landscape. The antennas would be covered with false pine tree branches, pine needle socks would be placed over the antennas and microwave dishes, and the tower pole would be painted to resemble a pine tree. The fencing surrounding the lease area is also designed to blend with the visual character of the area. With these design features, the facility will not degrade the existing visual character and quality of the site and its surroundings. The impacts to visual character would be less than significant.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

d. **Light and Glare:** The proposed project includes only one hooded and downward tilting security light and all components of the facility would be constructed from non-reflective materials. The project has been conditioned to ensure that lights are compliant with Section 130.14.170 of the Zoning Ordinance, and be required to be fully shielded. Therefore there impacts to aesthetics due to light and glare would be less than significant and no mitigation is required.

FINDING: As conditioned and with adherence to El Dorado County Code of Ordinances (County Code), for this Aesthetics category, impacts would be anticipated to be less than significant.

II. AGRICULTURE AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forrest Protocols adopted by the California Air Resources Board. Would the project:				
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Locally Important Farmland (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?			X	
b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?				X
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d. Result in the loss of forest land or conversion of forest land to non-forest use?				X
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

Discussion: A substantial adverse effect to Agricultural Resources would occur if:

- There is a conversion of choice agricultural land to nonagricultural use, or impairment of the agricultural productivity of agricultural land;
- The amount of agricultural land in the County is substantially reduced; or
- Agricultural uses are subjected to impacts from adjacent incompatible land uses.

a. **Conversion of Agricultural Land:** The site is not located within an area designated for agriculture, an agricultural zone, or an Agricultural District. Review of the soil data for El Dorado County developed under the Farmland Mapping and Monitoring Program indicates that the project lease area site contains Auburn very rocky silt loam, 2

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

to 30 percent slopes (AxD) on the western portion of the site; Auburn very rocky silt loam, 30 to 50 percent slopes (AxE) on the eastern and southern portions of the site; and Boomer very rocky loam, 30 to 50 percent slopes (BkE) on the northeast corner of the site. These soil types are not classified as unique, soils of local importance, prime farmland, or statewide important farmland. Wireless communication facilities are permitted in all zone districts, subject to the applicable standards and permitting requirements, so the project would not conflict with existing zoning regulations for agricultural use. The property is not within an area that is under Williamson Act Contract and would not affect any properties under a Williamson Act Contract. There would be no impact.

b. **Zoning and Williamson Act:** The project site is not located within a Williamson Act Contract, would not conflict with existing zoning for agricultural use, and would not affect any properties under a Williamson Act Contract. There would be no impact.

c-d. **Loss of Forest land or Conversion of Forest land:** The site is not designated as Timberland Preserve Zone (TPZ) or other forestland according to the General Plan and Zoning Ordinance. The project site does not support significant forested areas. No conversion of forest or timber lands would occur as a result of the project. No trees are proposed for removal as part of the project. There would be no impact.

e. **Conversion of Prime Farmland or Forest Land:** The proposed facility characteristics and scale are such that there would be no change to the existing environment that would result in the conversion of farmland, agricultural land, or forestland. There would be no impact.

FINDING: For this "Agriculture" category, the thresholds of significance have not been exceeded and no impacts would be anticipated to result from the project.

III. AIR QUALITY. *Would the project:*				
a. Conflict with or obstruct implementation of the applicable air quality plan?			**X**	
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			**X**	
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			**X**	
d. Expose sensitive receptors to substantial pollutant concentrations?				**X**
e. Create objectionable odors affecting a substantial number of people?				**X**

Discussion: According to the El Dorado County Air Quality Management District (AQMD) Guide to Air Quality Assessment (2002) substantial adverse effect on air quality would occur if:

- Emissions of ROG and No_x will result in construction or operation emissions greater than 82lbs/day (Table 3.2);
- Emissions of PM_{10}, CO, SO_2 and No_x, as a result of construction or operation emissions, will result in ambient pollutant concentrations in excess of the applicable National or State Ambient Air Quality Standard (AAQS). Special standards for ozone, CO, and visibility apply in the Lake Tahoe Air Basin portion of the County; or

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

- Emissions of toxic air contaminants cause cancer risk greater than 1 in 1 million (10 in 1 million if best available control technology for toxics is used) or a non-cancer Hazard Index greater than 1. In addition, the project must demonstrate compliance with all applicable District, State and U.S. EPA regulations governing toxic and hazardous emissions.

a. **Air Quality Plan:** El Dorado County has adopted the Rules and Regulations of the El Dorado County Air Quality Management District (AQMD, 2000) establishing rules and standards for the reduction of stationary source air pollutants (ROG/VOC, NOx, and O3). The EDC/State Clean Air Act Plan has set a schedule for implementing and funding transportation contract measures to limit mobile source emissions. The project would not conflict with or obstruct implementation of either plan. Any activities associated with the grading and construction of this project would pose a less than significant impact on air quality because the AQMD would require that the project implement an Asbestos Dust Mitigation Plan (DMP) during grading and construction activities. Such a plan would address grading measures and operation of equipment to minimize and reduce the level of defined particulate matter exposure and/or emissions below a level of significance. Therefore, the potential impacts of the project would be anticipated to be less than significant.

b, c. **Air Quality Standards and Cumulative Impacts:** The El Dorado County AQMD reviewed the application materials for this project and determined that by implementing typical conditions including Rules 223 and 223.2 (Asbestos Dust Mitigation Plan), Rule 224 (Asphalt Paving Materials), Rule 215 (Architectural Coating), and 501 and 523 (New Paint Source), which are included in the project permit, the project would have a less than significant impact in this category. The conditions would be implemented, reviewed, and approved by the AQMD prior to and concurrently with the grading, improvement, and/or building permit approvals. With full review for consistency with General Plan Policies, impacts would be anticipated to be less than significant.

The project would create air quality impacts which may contribute to an existing or projected air quality violation during construction. Construction activities associated with the project include grading and site improvements for utilities, driveway, mono-pine installation, graveling, and associated on-site activities. Construction related activities would generate PM10 dust emissions that could exceed either the state or federal ambient air quality standards for PM10. However, existing regulations implemented at issuance of building and grading permits would ensure that any construction related PM10 dust emissions would be reduced to acceptable levels. Adherence to the limitations of construction and to the Asbestos Dust Mitigation Plan would ensure impacts are less than significant.

Operational air quality impacts would be minor, and would be anticipated to cause an insignificant contribution to existing or projected air quality violations. This would be a less-than-significant impact.

d. **Sensitive Receptors:** The CEQA Guidelines (14 CCR 15000) identify sensitive receptors as facilities that house or attract children, the elderly, people with illnesses, or others that are especially sensitive to the effects of air pollutants. Hospitals, schools, and convalescent hospitals are examples of sensitive receptors. No sources of substantial pollutant concentrations will be emitted by the cell tower facility, and no sensitive receptors are near the proposed facility. There would be no impact.

e. **Objectionable Odors:** Table 3-1 of the Guide to Air Quality Assessment (AQMD, 2002) does not list the proposed cellular communications facility use as a use known to create objectionable odors. There would be no impact.

FINDING: The proposed project would not affect the implementation of regional air quality regulations or management plans. The project would result in small increases in emissions due to construction and operation; however existing regulations would reduce these impacts to a less-than-significant level. As conditioned and with adherence to County Code,

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

the proposed project would not be anticipated to cause substantial adverse effects to air quality, nor exceed established significance thresholds for air quality impacts.

IV. BIOLOGICAL RESOURCES. *Would the project:*				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Discussion: A substantial adverse effect on Biological Resources would occur if the implementation of the project would:

- Substantially reduce or diminish habitat for native fish, wildlife or plants;
- Cause a fish or wildlife population to drop below self-sustaining levels;
- Threaten to eliminate a native plant or animal community;
- Reduce the number or restrict the range of a rare or endangered plant or animal;
- Substantially affect a rare or endangered species of animal or plant or the habitat of the species; or
- Interfere substantially with the movement of any resident or migratory fish or wildlife species.

a. **Special Status Species and Sensitive Natural Communities**: Review of the County Geographic Information System (GIS) soil data demonstrates the project site would not be located on lands shown to contain Serpentine Rock or Gabbro soils that contain certain rare plants. Further, the project site is not located within a Rare Plant Mitigation area. The project is not located within a sensitive natural community of the county, state, or federal agency, including but not limited to an Ecological Preserve or U.S. Fish and Wildlife Service (USFWS) Recovery Plan boundaries. Search of the California Natural Diversity database did not identify any State or federally listed special-status species within close proximity of the project site. Due to its small footprint, the proposed project is

not anticipated to have a significant impact on any special-status species. Impacts are anticipated to be less than significant.

b, c. **Riparian Habitat, Wetlands, Potentially Jurisdictional Waters of the U.S.:** The project parcel contains two small man-made pond features adjacent to the existing residence in the southcentral portion of the site. The proposed project site lease area is in the northeast corner of the 45 acre site approximately 210 feet higher in elevation and over 900 feet northeast of the existing pond features. No significant impacts to wetlands or riparian habitat are anticipated by the construction and operation of the wireless communications facility at the site. Impacts are anticipated to be less than significant.

d. **Migration Corridors**: The 50- by 50-foot lease area would not impact any established migration corridors. Impacts would be anticipated to be less than significant.

e. **Local Biological Resources Policies:** Local protection of biological resources includes protection of rare plants, avoidance of riparian areas, and mitigation of impacted oak woodlands. The 50- by 50-foot lease area is not located adjacent to any riparian areas and does not include any areas of rare plants. Construction would require trenching within the utilities lease area. No protected oak or other trees are proposed for removal. Impacts would be anticipated to be less than significant.

f. **Adopted Plans**: This project, as designed, does not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. There would be no impact.

FINDING: This site is not located within the USFWS Recovery Plan boundaries. The lot contains an existing, fully developed residence and supporting infrastructure and accessory structures. The project proposes a relatively small footprint of impact in an isolated area of the 45-acre site. No significant impacts to biological resources beyond the pre-project levels would be anticipated. Impacts would be anticipated to be less than significant.

V. CULTURAL RESOURCES. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?			X	
b. Cause a substantial adverse change in the significance of archaeological resource pursuant to Section 15064.5?			X	
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
d. Disturb any human remains, including those interred outside of formal cemeteries?			X	

Discussion: In general, significant impacts are those that diminish the integrity, research potential, or other characteristics that make a historical or cultural resource significant or important. A substantial adverse effect on Cultural Resources would occur if the implementation of the project would:

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

- Disrupt, alter, or adversely affect a prehistoric or historic archaeological site or property that is historically or cultural significant to a community or ethnic or social group; or a paleontological site except as a part of a scientific study;
- Affect a landmark of cultural/historical importance;
- Conflict with established recreational, educational, religious or scientific uses of the area; or
- Conflict with adopted environmental plans and goals of the community where it is located.

a-c. **Archaeological Resource, Historic Resource, Paleontological Resource**: A record search was conducted by the California Historical Resources Information System (CHRIS), North Central Information Center on November 4, 2014 (Hallam, 2014). The results indicated that there is a low potential for locating significant prehistoric or historic cultural resources. No archaeological sites, features, or artifacts were identified, nor were any known paleontological sites or known fossil strata/locales. Additionally, standard conditions of approval are included for this project to protect sub-surface historical, cultural, or archeological sites or materials in the event that such materials are discovered during earth disturbances and grading activities on the site. Impacts are anticipated to be less than significant.

d. **Human Remains:** There is a low likelihood of human remains discovery on the project site. Standard conditions of approval would apply during all grading activities to address accidental discovery of human remains. Impacts will be less than significant.

FINDING: No significant cultural resources have been identified on the project site. Standard conditions of approval would apply in the event of accidental discovery during project construction. This project would be anticipated to have a less than significant impact within the "Cultural Resources" category.

VI. GEOLOGY AND SOILS. *Would the project:*				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				**X**
ii) Strong seismic ground shaking?			**X**	
iii) Seismic-related ground failure, including liquefaction?				**X**
iv) Landslides?				**X**
b. Result in substantial soil erosion or the loss of topsoil?			**X**	
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			**X**	
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial risks to life or property?			**X**	

VI. GEOLOGY AND SOILS. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

Discussion: A substantial adverse effect on Geologic Resources would occur if the implementation of the project would:

- Allow substantial development of structures or features in areas susceptible to seismically induced hazards such as groundshaking, liquefaction, seiche, and/or slope failure where the risk to people and property resulting from earthquakes could not be reduced through engineering and construction measures in accordance with regulations, codes, and professional standards;
- Allow substantial development in areas subject to landslides, slope failure, erosion, subsidence, settlement, and/or expansive soils where the risk to people and property resulting from such geologic hazards could not be reduced through engineering and construction measures in accordance with regulations, codes, and professional standards; or
- Allow substantial grading and construction activities in areas of known soil instability, steep slopes, or shallow depth to bedrock where such activities could result in accelerated erosion and sedimentation or exposure of people, property, and/or wildlife to hazardous conditions (e.g., blasting) that could not be mitigated through engineering and construction measures in accordance with regulations, codes, and professional standards.

a. **Seismic Hazards:**
i) According to the California Department of Conservation Division of Mines and Geology, there are no Alquist-Priolo fault zones within El Dorado County (DOC, 2007). The nearest such faults are located in Alpine and Butte Counties. There would be no impact.

ii) The potential for seismic ground shaking in the project area would be considered remote for the reason stated in Section i) above. Any potential impacts due to seismic impacts would be addressed through compliance with the Uniform Building Code (UBC). All structures would be built to meet the construction standards of the UBC for the appropriate seismic zone. Impacts would be less than significant.

iii) El Dorado County is considered an area with low potential for seismic activity. There are no landslide, liquefaction, or fault zones (DOC, 2007). There would be no impact.

iv) All grading activities onsite would be required to comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance. There would be no impact.

b. **Soil Erosion:** The site contains Auburn very rocky silt loam, 2 to 30 percent slopes (AxD) on the western portion of the site; Auburn very rocky silt loam, 30 to 50 percent slopes (AxE) on the eastern and southern portions of the site; and Boomer very rocky loam, 30 to 50 percent slopes (BkE) on the northeast corner of the site. These soil types have a slight to moderate, moderate to high, and slight to moderate erosion hazard, respectively. There would be the potential for erosion, changes in topography, and unstable soil conditions, however, these concerns would be addressed during the grading permit process. All grading activities exceeding 250 cubic yards of graded material or grading completed for the purpose of supporting a structure must meet the provisions contained in the Grading, Erosion, and Sediment Control, County Code Chapter 110.14. This ordinance is designed to limit erosion, control the loss of topsoil and sediment, limit surface runoff, and ensure stable soil and site conditions for the intended use in compliance with the El Dorado County General Plan. All grading activities onsite would comply with the El

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Dorado County Grading, Erosion Control and Sediment Ordinance including the implementation of pre- and post-construction Best Management Practices (BMPs). Impacts would be less than significant.

c. **Geologic Hazards:** Based on the Seismic Hazards Mapping Program administered by the California Geological Survey, no portion of El Dorado County is located in a Seismic Hazard Zone, or those areas prone to liquefaction and earthquake-induced landslides (DOC, 2013). Therefore, El Dorado County is not considered to be at risk from liquefaction hazards. Lateral spreading is typically associated with areas experiencing liquefaction. Because liquefaction hazards are not present in El Dorado County, the county is not at risk for lateral spreading. All grading activities would comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance. Impacts would be less than significant.

d. **Expansive Soils:** Expansive soils are those that greatly increase in volume when they absorb water and shrink when they dry out. When buildings are placed on expansive soils, foundations may rise each wet season and fall each dry season. This movement may result in cracking foundations, distortion of structures, and warping of doors and windows. The central portion of the county has a moderate expansiveness rating while the eastern and western portions have a low rating. Linear extensibility is used to determine the shrink-swell potential of soils. Pursuant to the Soil Report for El Dorado County, Auburn very rocky silt loam, 2 to 30 percent slopes (AxD); Auburn very rocky silt loam, 30 to 50 percent slopes (AxE); and Boomer very rocky loam, 30 to 50 percent slopes (BkE) are reported to have low to moderate shrink-swell potential (USDA, 1974). No structures for human occupancy would be constructed as part of the proposed project. Prior to construction, a grading plan will be required to be approved in accordance with the El Dorado County Grading, Erosion Control and Sediment Ordinance. Impacts would be less than significant.

e. **Septic Capability:** The project would not require the installation or use of a septic system. There would be no impact.

FINDING: A review of the soils and geologic conditions on the project site determined that the project would not result in a substantial adverse effect. All grading activities would be required to comply with the El Dorado County Grading, Erosion Control and Sediment Ordinance which would address potential impacts related to soil erosion, landslides and other geologic impacts. Future development would be required to comply with the UBC which would address potential seismic related impacts. For this Geology and Soils category, impacts would be less than significant.

VII. GREENHOUSE GAS EMISSIONS. *Would the project:*				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

a-b. **Generate Greenhouse Gas Emissions and Policy:**

Background/Science

Cumulative greenhouse gases (GHG) emissions are believed to contribute to an increased greenhouse effect and global climate change, which may result in sea level rise, changes in precipitation, habitat, temperature, wildfires, air pollution levels, and changes in the frequency and intensity of weather-related events. While criteria pollutants and toxic air contaminants are pollutants of regional and local concern (see Section III. Air Quality above); GHG are global pollutants. The primary land-use related GHG are carbon dioxide (CO_2), methane (CH_4) and nitrous oxides (N_2O). The individual

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

pollutant's ability to retain infrared radiation represents its "global warming potential" and is expressed in terms of CO_2 equivalents; therefore CO_2 is the benchmark having a global warming potential of 1. Methane has a global warming potential of 21 and thus has a 21 times greater global warming effect per metric ton of CH_4 than CO_2. Nitrous Oxide has a global warming potential of 310. Emissions are expressed in annual metric tons of CO_2 equivalent units of measure (i.e., $MTCO_2e/yr$). The three other main GHG are Hydroflourocarbons, Perflourocarbons, and Sulfur Hexaflouride. While these compounds have significantly higher global warming potentials (ranging in the thousands), all three typically are not a concern in land-use development projects and are usually only used in specific industrial processes.

GHG Sources

The primary man-made source of CO_2 is the burning of fossil fuels; the two largest sources being coal burning to produce electricity and petroleum burning in combustion engines. The primary sources of man-made CH_4 are natural gas systems losses (during production, processing, storage, transmission and distribution), enteric fermentation (digestion from livestock) and landfill off-gassing. The primary source of man-made N_2O is agricultural soil management (fertilizers), with fossil fuel combustion a very distant second. In El Dorado County, the primary source of GHG is fossil fuel combustion mainly in the transportation sector (estimated at 70% of countywide GHG emissions). A distant second are residential sources (approximately 20%), and commercial/industrial sources are third (approximately 7%). The remaining sources are waste/landfill (approximately 3%) and agricultural (<1%).

Regulation

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the *California Climate Solutions Act of 2006* (Stats. 2006, ch. 488) (Health & Safety Code, § 38500 et seq.). AB 32 requires a statewide GHG emissions reduction to 1990 levels by the year 2020. AB 32 requires the California Air Resources Board (CARB) to implement and enforce the statewide cap. When AB 32 was signed, California's annual GHG emissions were estimated at 600 million metric tons of CO_2 equivalent ($MMTCO_2e$) while 1990 levels were estimated at 427 $MMTCO_2e$. Setting 427 $MMTCO_2e$ as the emissions target for 2020, current (2006) GHG emissions levels must be reduced by 29%. CARB adopted the AB 32 Scoping Plan[1] in December 2008 establishing various actions the state would implement to achieve this reduction. The Scoping Plan recommends a community-wide GHG reduction goal for local governments of 15%.

In June 2008, the California Governor's Office of Planning and Research's (OPR) issued a Technical Advisory[2] providing interim guidance regarding a proposed project's GHG emissions and contribution to global climate change. In the absence of adopted local or statewide thresholds, OPR recommends the following approach for analyzing GHG emissions: Identify and quantify the project's GHG emissions, assess the significance of the impact on climate change; and if the impact is found to be significant, identify alternatives and/or Mitigation Measures that would reduce the impact to less-than-significant levels.[3]

Analysis Methodology

El Dorado County Air Quality Management District (EDCAQMD) prefers the use of the California Emissions Estimator Model (CalEEMod) for quantification of project-related GHG and criteria pollutant emissions. CalEEMod is a statewide model providing a uniform GHG analysis platform for government agencies, land use planners, and environmental professionals. It quantifies direct emissions from construction and operation (including vehicle use), and indirect emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The software incorporates the most

[1] AB 32 Scoping Plan: http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf
[2] OPR Technical Advisory: CEQA and Climate Change: http://opr.ca.gov/docs/june08-ceqa.pdf
[3] California Energy Commission. 2006. *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004.* (Staff Final Report). http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-SF.PDF

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

recent vehicle emission factors from the Emission Factors (EMFAC) model provided by CARB, and average trip generation factors published by the Institute of Transportation Engineers (ITE). The model uses and quantifies mitigation measures reduction benefits found in the California Air Pollution Control Officers Association's (CAPCOA) document *Quantifying Greenhouse Gas Mitigation Measures*[4], and is accepted by CARB.

Impact Significance Criteria

CEQA does not provide clear direction on addressing climate change. It requires lead agencies identify project GHG emissions impacts and their "significance," but is not clear what constitutes a "significant" impact. As stated above, GHG impacts are inherently cumulative, and since no single project could cause global climate change, the CEQA test is if impacts are "cumulatively considerable." Not all projects emitting GHG contribute significantly to climate change. CEQA authorizes reliance on previously approved plans (i.e., a Climate Action Plan (CAP), etc.) and mitigation programs adequately analyzing and mitigating GHG emissions to a less than significant level. "Tiering" from such a programmatic-level document is the preferred method to address GHG emissions. El Dorado County does not have an adopted CAP or similar program-level document; therefore, the project's GHG emissions must be addressed at the project-level.

Unlike thresholds of significance established for criteria air pollutants in EDCAQMD's *Guide to Air Quality Assessment* (February 2002) ("CEQA Guide"),[5] the District has not adopted GHG emissions thresholds for land use development projects. In the absence of County adopted thresholds, EDCAQMD recommends using the adopted thresholds of other lead agencies which are based on consistency with the goals of AB 32. Since climate change is a global problem and the location of the individual source of GHG emissions is somewhat irrelevant, it's appropriate to use thresholds established by other jurisdictions as a basis for impact significance determinations. Projects exceeding these thresholds would have a potentially significant impact and be required to mitigate those impacts to a less than significant level. Until the County adopts a CAP consistent with CEQA Guidelines Section 15183.5, and/or establishes GHG thresholds, the County will follow an interim approach to evaluating GHG emissions utilizing significance criteria adopted by the San Luis Obispo Air Pollution Control District (SLOAPCD) to determine the significance of GHG emissions.

These thresholds are summarized below:

Significance Determination Thresholds	
GHG Emission Source Category	**Operational Emissions**
Non-stationary Sources	1,150 $MTCO_2e$/yr OR 4.9 MT CO_2e/SP/yr
Stationary Sources	10,000 $MTCO_2e$/yr

SP = service population, which is resident population plus employee population of the project

Projects below screening levels identified in **Table 1-1** of SLOAPCD's *CEQA Air Quality Handbook*[6] are estimated to emit less than the applicable threshold. No further GHG analysis would be required.

The proposed project would generate GHG emissions primarily a result of facility construction in the form of construction equipment exhaust. The proposed project anticipates a construction period of approximately 60 days. During this time, a

[4] CAPCOA Guide (August 2010): http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf
[5] EDCAQMD CEQA Guide: http://edcgov.us/Government/AirQualityManagement/Guide_to_Air_Quality_Assessment.aspx
[6] SLOAPCD CEQA Guide: http://www.slocleanair.org/images/cms/upload/files/CEQA_Handbook_2012_v1.pdf

small net increase in GHG emissions would result from various construction activities. Construction-related GHG emissions would be associated with engine exhaust from heavy-duty construction equipment, transport trucks hauling materials, and worker commute trips. Construction-related traffic would be spread over the duration of the construction schedule and therefore, would be minimal on a daily basis. After completion of construction, all construction emissions would cease. Operation of the facility would not require the use of water or require a substantial amount of electricity. The project would be required to incorporate modern construction and design features that reduce energy consumption to the extent feasible. Implementation of these features would help reduce potential GHG emissions resulting from the development of the proposed project. The project would generate some GHG emissions as a result of infrequent maintenance vehicle trips and back-up generator operations.

According to the SLOAPCD Screening Table, the most accurate applicable screening level is 82,000 square feet for general light industry. The proposed project is a wireless telecommunications facility with a square footage of 2,500 square feet total lease area. Based on this equivalency, the GHG emissions from this project are estimated at less than 1,150 metric tons/year, thus, no further analysis for GHG emissions impact is required. Therefore, the proposed project would have a less than significant impact.

Because construction-related emissions would be temporary and below the minimum standard for reporting requirements under AB 32, the proposed project's GHG emissions would have a negligible cumulative contribution towards statewide and global GHG emissions. The proposed project would not conflict with the objectives of AB 32 or any other applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions. Impacts would be less than significant.

FINDING: The project would result in less than significant impacts to greenhouse gas emissions because of the project's size and inclusion of design features to address the emissions of greenhouse gases. For this "Greenhouse Gas Emissions" category, there would be no significant adverse environmental effect as a result of the project.

VIII. HAZARDS AND HAZARDOUS MATERIALS. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X

VIII. HAZARDS AND HAZARDOUS MATERIALS. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	

Discussion: A substantial adverse effect due to hazards or hazardous materials would occur if implementation of the project would:

- Expose people and property to hazards associated with the use, storage, transport, and disposal of hazardous materials where the risk of such exposure could not be reduced through implementation of Federal, State, and local laws and regulations;
- Expose people and property to risks associated with wildland fires where such risks could not be reduced through implementation of proper fuel management techniques, buffers and landscape setbacks, structural design features, and emergency access; or
- Expose people to safety hazards as a result of former on-site mining operations.

a, b. **Hazardous Materials:** The Federal Communication Commission (FCC) prohibits local governments from denying a wireless facility project based on concerns about the dangers of exposure to radio frequency or electromagnetic fields (EMF). This is due to inconclusive evidence about the health risk of exposure to radio frequency EMF.

The Telecommunications Act of 1996 became effective on February 8, 1996. This act preserves the authority of the State or local government over decisions regarding the placement, construction, and modifications of personal wireless services, subject to two limitations. Section 704(7)B(iii) requires any denials to be in writing and supported by "substantial evidence." Section 704(7)B(iv) prohibits denial on the basis of radio frequency emissions if those emissions are compliant with Federal regulations.

The American National Standards Institute and the Institute of Electrical and Electronics Engineers (IEEE) have published a standard called ANSI/IEEE C95.1-1992, which until recently set recommended maximum power density levels for radio frequency (RF) energy originating from communications sites and other sources. The Federal Communications Commission (FCC) has also produced its own guidelines, which are more stringent and supersede the ANSI standard. The FCC rules categorically exclude certain transmitting facilities from routine evaluations for compliance with the RF emission guidelines if it can be determined that it is unlikely to cause workers or the general public to become exposed to emission that exceed the guidelines. The following table represents the FCC limits for both occupational and general population exposures to different radio frequencies:

Frequency Range (F) (MHz)	Limits for Occupational Exposure (mW/cm^2)*	Limits for General Public Exposure (mW/cm^2)
0.3-1.34	100	100
1.34-3.0	100	$180/F^2$
3.0—30	$900/F^2$	$180/F^2$
30-300	1.0	0.2
300-1,500	F/300	F/1500
1,500-100,000	5.0	1.0

*mW/cm^2=Milliwatt per square Centimeter

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

The RF analysis prepared by Hammett & Edison, Inc. dated November 4, 2014 found that for accessible areas at ground level, the maximum predicted power density level is 0.0086 mW/cm², which is 1.1 percent of the FCC General Public exposure limits, and the maximum calculated level at the second-floor elevation of the nearest residence, located off-site approximately 670 feet away, is 0.13 percent of the public exposure limit (Hammett, 2014). The report validates the figures based on the FCC Regulations for measurements identifying quantitative standards for human exposure limits based on radio frequency emissions. Therefore, the risk of release of hazardous materials or emissions to the public is remote.

The project would not be anticipated to introduce, transport, store, or dispose of hazardous materials in such quantities that would create a hazard to people or the environment. The El Dorado County Environmental Management Division has conditioned the project to require a Hazardous Materials Business Plan for the storage of the reportable quantities of hazardous materials for the backup power generator. Adherence to the Hazardous Materials Business Plan would ensure impacts are less than significant.

The site is located in an area of naturally occurring asbestos (El Dorado County, 2005). The AQMD reviewed the application materials for this project and determined that by implementing typical conditions including Rules 223 and 223.2 (Asbestos Dust Mitigation Plan), which are included in the project permit, the project would have a less than significant impact in this category. The conditions would be implemented, reviewed, and approved by the AQMD prior to and concurrently with the grading, improvement, and/or building permit approvals. Adherence to the limitations of construction and to the Asbestos Dust Mitigation Plan would ensure impacts are less than significant

c. **Hazardous Materials near Schools:** No school sites exist near the project location. There would be no impact to schools.

d. **Hazardous Sites:** The project site is not included on a list of hazardous materials sites pursuant to Government Code section 65962.5 (DTSC, 2015). There would be no impact with the approval of the proposed project.

e. **Aircraft Hazards:** According to the El Dorado County Zoning Map, the project site is not within any airport safety zone or airport land use plan area. There would be no impact.

f. **Private Airstrips:** There are no private airstrips in the vicinity of the project site. There would be no impact.

g. **Emergency Plan:** The proposed project consists of installation of ground equipment and a wireless telecommunications facility which would not necessitate alterations to any street and would generate less than two vehicle trips per month. The project was reviewed by the El Dorado County Fire Protection District and the Transportation Division. The project would not physically interfere with the implementation of the County adopted emergency response and/or evacuation plan for the project area. There would be no impact.

h. **Wildfire Hazards:** The project site is in an area of high hazard for wildland fire pursuant to Figure 5.8-4 of the 2004 General Plan Draft EIR. The El Dorado County Fire Protection District provided comments and conditions of approval, which are to be incorporated into the permit approvals. Implementation of the Fire District standards and California Building Codes would reduce the impacts of wildland fire to a less than significant level.

FINDING: The project would not be anticipated to expose the area to significant hazards relating to the use, storage, transport, or disposal of hazardous materials. Any proposed future use of hazardous materials would be subject to review and

approval of a Hazardous Materials Business Plan issued by the Environmental Management. For this "Hazards and Hazardous Materials" category, impacts would be less than significant.

IX. HYDROLOGY AND WATER QUALITY. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?			X	
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or -off-site?			X	
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
f. Otherwise substantially degrade water quality?			X	
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j. Inundation by seiche, tsunami, or mudflow?				X

Discussion: A substantial adverse effect on Hydrology and Water Quality would occur if the implementation of the project would:

- Expose residents to flood hazards by being located within the 100-year floodplain as defined by the Federal Emergency Management Agency;
- Cause substantial change in the rate and amount of surface runoff leaving the project site ultimately causing a substantial change in the amount of water in a stream, river or other waterway;
- Substantially interfere with groundwater recharge;

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

- Cause degradation of water quality (temperature, dissolved oxygen, turbidity and/or other typical stormwater pollutants) in the project area; or
- Cause degradation of groundwater quality in the vicinity of the project site.

a. **Water Quality Standards:** Erosion control would be required as part of the future building and grading permit. Adherence to County Code would not increase the level of sediment significantly above the current stormwater discharge levels. Operation of the proposed project would not involve any uses that would generate wastewater. Stormwater runoff from potential development would be directed to an engineered drainage system and would contain water quality protection features in accordance with a potential National Pollutant Discharge Elimination System (NPDES) stormwater permit, as deemed applicable. The project would not be anticipated to violate water quality standards. Impacts would be less than significant.

b. **Groundwater Supplies:** The project is not anticipated to affect potential groundwater supplies above pre-project levels. The project is of limited size and will not require water use for operation. There would be no impact.

c-f. **Drainage Patterns:** A grading permit through Development Services would be required to address grading, and erosion and sediment control at the lease area and for development of the access road. Project related construction activities would be required to adhere to the El Dorado County Grading, Erosion Control and Sediment Ordinance. This includes the use of Best Management Practices (BMPs) to minimize degradation of water quality during construction. Impacts would be less than significant.

g-j. **Flood-related Hazards:** The project site is not located within any mapped 100-year flood areas and would not result in the construction of any structures that would impede or redirect flood flows (FEMA, 2008). No dams which would result in potential hazards related to dam failures are located in the project area. The risk of exposure to seiche, tsunami, or mudflows would be remote. There would be no impact.

FINDING: The proposed project would require a site improvement and grading permit through the Development Services Division Building Services that would address any potentially applicable erosion and sediment control. No significant hydrological impacts are expected with the development of the project either directly or indirectly. For this "Hydrology" category, impacts are anticipated to be less than significant.

X. LAND USE PLANNING. *Would the project:*				
a. Physically divide an established community?				X
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Discussion: A substantial adverse effect on Land Use would occur if the implementation of the project would:

- Result in the conversion of Prime Farmland as defined by the State Department of Conservation;

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

- Result in conversion of land that either contains choice soils or which the County Agricultural Commission has identified as suitable for sustained grazing, provided that such lands were not assigned urban or other nonagricultural use in the Land Use Map;
- Result in conversion of undeveloped open space to more intensive land uses;
- Result in a use substantially incompatible with the existing surrounding land uses; or
- Conflict with adopted environmental plans, policies, and goals of the community.

a. **Established Community:** The adjoining parcels are designated for residential and associated agricultural land uses. The project would provide improved wireless cellular telecommunications within the Cool/Auburn Lake Trails area. No new roadways, land divisions, rail lines, bridges or other improvements which would physically divide an established community are proposed. There would be no impact.

b. **Land Use Consistency:** The parcel is zoned Estate Residential (RE-10). Zoning Ordinance section 130.14.210.5.b permits wireless communication facilities in residential zone districts with approval of a Special Use Permit by the Planning Commission, pursuant to the development standards of 130.14.210.F. These standards include screening, compliance with setbacks, and proper maintenance. The applicant has provided a project narrative explaining the project details, potential benefits to the community, and site selection. The applicant has designed the wireless telecommunications facility in compliance with County regulations, addressing aesthetics and health and safety concerns. The application is complete and complies with zoning and wireless facilities regulations. As conditioned, impacts would be less than significant.

c. **Habitat Conservation Plan:** The proposed project is not located in an area covered by a Habitat Conservation Plan or a Natural Community Conservation Plan. There would be no impact.

FINDING: The proposed use of the land would be consistent with the Zoning Ordinance and General Plan with the issuance of a Special Use Permit. There would be no significant impact to land use goals or standards resulting from the project. As conditioned, and with adherence to County Code, no significant impacts would be expected for the "Land Use Planning" category.

XI. MINERAL RESOURCES. *Would the project:*				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				**X**
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				**X**

Discussion: A substantial adverse effect on Mineral Resources would occur if the implementation of the project would:

- Result in obstruction of access to, and extraction of mineral resources classified MRZ-2x, or result in land use compatibility conflicts with mineral extraction operations.

a, b. **Mineral Resources:** The project site has not been delineated in the El Dorado County General Plan as a locally important mineral resource recovery site (2003, Exhibits 5.9-6 and 5.9-7). Review of the California Department of Conservation Geologic Map data showed that the project site is not within a mineral resource zone district. The project would construct the telecommunications facility within a 50- by 50-foot lease area. Because of the relatively

small project footprint size, and the absence of any known important mineral resources, the proposed project is not anticipated to impact important mineral resources. No impacts are anticipated.

FINDING: No impacts to energy and mineral resources are expected with the development of the wireless telecommunications facility either directly or indirectly. For this "Mineral Resources" category, there would be no impacts.

XII. NOISE. *Would the project result in:*	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise level?				X
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Discussion: A substantial adverse effect due to Noise would occur if the implementation of the project would:

- Result in short-term construction noise that creates noise exposures to surrounding noise sensitive land uses in excess of 60 decibel (dB) Community Noise Level Equivalent (CNEL);
- Result in long-term operational noise that creates noise exposures in excess of 60 dB CNEL at the adjoining property line of a noise sensitive land use and the background noise level is increased by 3dB, or more; or
- Results in noise levels inconsistent with the performance standards contained in Table 6-1 and Table 6-2 in the El Dorado County General Plan.

a. **Noise Exposures:** The proposed project will not expose people to noise levels in excess of standards established in the General Plan or Zoning Ordinance. Short-term construction-related noise impacts are anticipated to occur weekdays only and would be required to comply with grading and construction permitting requirements and the noise performance standards contained in the General Plan. Noise would also result from the operation of the outdoor equipment cabinets and a 30 KW stand-by generator within the equipment shelter. According to Table 6-2 of the General Plan, non-transportation noise is limited to a time-averaged level of 50dB and maximum of 60dB in rural areas at a point 100 feet away from the residence during daytime (7am to 7pm), and time-averaged level of 45 and 40 dB and maximum of 55 and 50 dB at in the evening and night respectively (7pm to 10pm and 10pm to 7am) (p. 117). The maximum noise level from the equipment cabinets is 66.0 dB when measured at a distance of 5 feet, according to the sound level evaluation for this site and proposed equipment. The predicted noise levels of the

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

equipment cabinets would be 26 dBA at the nearest residence approximately 650 feet away, satisfying the most restrictive nighttime noise standards (Bollard, 2015; Attachment 4). The generator is only used during daytime hours for testing and maintenance and extended power outages. The predicted noise level of the generator at the nearest residence is 48 dB, which is below the maximum and average county limits for rural areas for daytime noise standards (Bollard, 2015; Attachment 4). A standard condition limiting the days and time of generator maintenance will further lessen this impact. The noise associated with the project would be less than significant.

b. **Groundborne Shaking:** The project may generate ground borne vibration or shaking events during project construction, which is anticipated to take approximately 60 days. These potential impacts would be limited to project construction. Impacts are anticipated to be less than significant.

c. **Permanent Noise Increases:** Routine maintenance visits would occur approximately twice a month. The vehicle noise from the addition of the maintenance visits would not be measurable and would not exceed the noise standards contained in the General Plan. The impacts would be considered less than significant.

d. **Short Term Noise:** Short-term construction-related noise impacts associated with excavation, grading, and construction activities would occur as part of the project. Construction of the facility would consist of grading, gravelling, and paving of the access driveway to the lease area, minimal grading and graveling for the lease area, setting the tower, placing ground equipment and concrete slabs within the lease area, and installing perimeter fencing. These activities are anticipated to occur over an approximately 60-day period during daylight hours and would not involve extensive use of heavy equipment that would be a substantial source of noise or vibration at the residence. El Dorado County requires that all construction vehicles and equipment, fixed or mobile, be equipped with properly maintained and functioning mufflers. All construction and grading operations would be required to comply with the noise performance standards contained in the General Plan. According to Table 6-5 of the General Plan, nontransportation construction noise is limited to a time-averaged level of 70dB and maximum of 75dB from 7am to 7pm (p. 118). Impacts would be less than significant.

e-f. **Aircraft Noise:** There are no airstrips or airports within the project vicinity. There would be no impact.

FINDING: As conditioned, and with adherence to County Code, no significant direct or indirect impacts to noise levels are expected with the development of the wireless telecommunications facility. For this "Noise" category, the thresholds of significance would not be exceeded.

XIII. **POPULATION AND HOUSING.** *Would the project:*				
a. Induce substantial population growth in an area, either directly (i.e., by proposing new homes and businesses) or indirectly (i.e., through extension of roads or other infrastructure)?				X
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Discussion: A substantial adverse effect on Population and Housing would occur if the implementation of the project would:

- Create substantial growth or concentration in population;

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

- Create a more substantial imbalance in the County's current jobs to housing ratio; or
- Conflict with adopted goals and policies set forth in applicable planning documents.

a-c. **Population Growth, Housing Displacement, and Replacement Housing:** The proposed project will not produce any housing, employment areas, roads or other infrastructure. The facility will require monthly maintenance and will be accessed by an access drive extending from the existing residential driveway. No housing or people would be displaced as a result of the proposed project, therefore there would be no impact.

FINDING: The project would not displace housing. There would be no potential for a significant impact due to substantial growth with the communications facility either directly or indirectly. For this "Population and Housing" category, the thresholds of significance would not be anticipated to be exceeded.

XIV. **PUBLIC SERVICES.** *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*				
a. Fire protection?			X	
b. Police protection?				X
c. Schools?				X
d. Parks?				X
e. Other government services?				X

Discussion: A substantial adverse effect on Public Services would occur if the implementation of the project would:

- Substantially increase or expand the demand for fire protection and emergency medical services without increasing staffing and equipment to meet the Department's/District's goal of 1.5 firefighters per 1,000 residents and 2 firefighters per 1,000 residents, respectively;
- Substantially increase or expand the demand for public law enforcement protection without increasing staffing and equipment to maintain the Sheriff's Department goal of one sworn officer per 1,000 residents;
- Substantially increase the public school student population exceeding current school capacity without also including provisions to adequately accommodate the increased demand in services;
- Place a demand for library services in excess of available resources;
- Substantially increase the local population without dedicating a minimum of 5 acres of developed parklands for every 1,000 residents; or
- Be inconsistent with County adopted goals, objectives or policies.

a. **Fire Protection:** The parcel is within the El Dorado County Fire Protection District service area. The new, unoccupied facility would represent a minimal increase in the demand for structural fire protection at the project site. The Fire District responded with recommendations for the project, which will be incorporated as project conditions of approval. Impacts would be less than significant.

b. **Police Protection:** Police services would continue to be provided by the El Dorado County Sheriff's Department. The facility will not be staffed and will be enclosed by a six-foot fence with three rows of barbed wire within private residential property. No new or expanded law enforcement services would be required. There would be no impact.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

c-e. **Schools, Parks and Government Services:** There are no components of operating the proposed project that would include any permanent population-related increases that would substantially contribute to increased demand on schools, parks, or other governmental services that could, in turn, result in the need for new or expanded facilities. There would be no impact.

FINDING: As discussed above, there would be no significant impacts to public services as a result of a wireless communication facility. For this "Public Services" category, impacts are anticipated to be less than significant.

XV. RECREATION.				
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				**X**
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				**X**

Discussion: A substantial adverse effect on Recreational Resources would occur if the implementation of the project would:

- Substantially increase the local population without dedicating a minimum of 5 acres of developed parklands for every 1,000 residents; or
- Substantially increase the use of neighborhood or regional parks in the area such that substantial physical deterioration of the facility would occur.

a, b. **Parks and Recreational Services:** The project does not include any increase in permanent population that would contribute to increased demand on recreation facilities or contribute to increased use of existing facilities. There would be no impact.

FINDING: As discussed above, there would be no significant impacts to recreation as a result of a wireless communication facility.

XVI. TRANSPORTATION/TRAFFIC. *Would the project:*				
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			**X**	
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?				**X**
c. Result in a change in air traffic patterns, including either an increase in traffic				**X**

XVI. TRANSPORTATION/TRAFFIC. *Would the project:*	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
levels or a change in location that results in substantial safety risks?				
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e. Result in inadequate emergency access?			X	
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X

Discussion: The Transportation and Circulation Policies contained in the County General Plan establish a framework for review of thresholds of significance and identification of potential impacts of new development on the County's road system. These policies are enforced by the application of the Transportation Impact Study (TIS) Guidelines, the County Design and Improvements Standards Manual, and the County Encroachment Ordinance, with review of individual development projects by the Transportation and Long Range Planning Divisions of the Community Development Agency. A substantial adverse effect on Traffic would occur if the implementation of the project would:

- Result in an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system;
- Generate traffic volumes which cause violations of adopted level of service standards (project and cumulative); or
- Result in, or worsen, Level of Service (LOS) F traffic congestion during weekday, peak-hour periods on any highway, road, interchange or intersection in the unincorporated areas of the county as a result of a residential development project of 5 or more units.

a. **Traffic Increases:** No substantial traffic increases would result from the proposed project, as the only added trips would result from monthly maintenance visits and temporary construction related traffic. Comments concerning the proposed facility were received from the Transportation Division and do not indicate that the LOS would be significantly impacted by the proposed project. Access to the site would be from the existing driveway to the property and the proposed on-site driveway. Impacts would be less than significant.

b. **Levels of Service Standards:** The LOS established by the County would not be exceeded by the project, nor would the surrounding road circulation system be impacted. There would be no impact.

c. **Air Traffic:** The site is not located near an airport. The 82-foot tall tower is similar in height to some of the trees in the area and would not create an air traffic hazard. There would be no impact.

d. **Design Hazards:** The design and location of the project is not anticipated to create any significant hazards. The Transportation Division analysis identified no issues for the project, and Transportation Division conditions of approval have been incorporated into the permit approval. Impacts would be less than significant.

e. **Emergency Access:** The project would not result in inadequate emergency access. The project was reviewed by the Transportation Division and the El Dorado County Fire Protection District to ensure that adequate access would be provided to meet County Fire Safe and County Design Improvement Standards Manual. With the inclusion of the Transportation Division and Fire District's standard and project specific conditions, impacts would be less than significant.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

f. **Alternative Transportation:** The project would not conflict with adopted plans, polices or programs relating to alternative transportation. There would be no impact.

FINDING: As discussed above, no significant traffic impacts are expected with the wireless telecommunications facility either directly or indirectly. For this "Transportation/Traffic" category, the thresholds of significance would not be exceeded and impacts are anticipated to be less than significant.

XVII. TRIBAL CULTURAL RESOURCES. *Would the project:*				
a. Cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Section 21074?				**X**

Discussion:

In general, significant impacts are those that diminish the integrity, research potential, or other characteristics that make a Tribal Cultural Resource (TCR) significant or important. To be considered a TCR, a resource must be either: (1) listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or: (2) a resource that the lead agency chooses, in its discretion, to treat as a TCR and meets the criteria for listing in the state register of historic resources pursuant to the criteria set forth in Public Resources Code Section 5024.1(c). A substantial adverse change to a TCR would occur if the implementation of the project would:

- Disrupt, alter, or adversely affect a TCR such that the significance of the resource would be materially impaired

a. **Tribal Cultural Resources.** At the time this project was deemed complete and CEQA was initiated, the County had not received any requests for consultation under AB52 by a California Native American Tribe. Further, the geographic area of the project site is not known to contain any TCRs.

FINDING: No significant TCRs are known to exist on the project site. As a result, the proposed project would not cause a substantial adverse change to a TCR and there would be no impact.

XVIII. UTILITIES AND SERVICE SYSTEMS. *Would the project:*				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				**X**
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				**X**
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			**X**	
d. Have sufficient water supplies available to serve the project from existing				**X**

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. UTILITIES AND SERVICE SYSTEMS. *Would the project:*				
entitlements and resources, or are new or expanded entitlements needed?				
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
g. Comply with federal, state, and local statutes and regulations related to solid waste?				X

Discussion: A substantial adverse effect on Utilities and Service Systems would occur if the implementation of the project would:

- Breach published national, state, or local standards relating to solid waste or litter control;
- Substantially increase the demand for potable water in excess of available supplies or distribution capacity without also including provisions to adequately accommodate the increased demand, or is unable to provide an adequate on-site water supply, including treatment, storage and distribution;
- Substantially increase the demand for the public collection, treatment, and disposal of wastewater without also including provisions to adequately accommodate the increased demand, or is unable to provide for adequate on-site wastewater system; or
- Result in demand for expansion of power or telecommunications service facilities without also including provisions to adequately accommodate the increased or expanded demand.

a. **Wastewater Requirements:** This project will have no use of water, associated plumbing, or wastewater systems. Construction and operation of the project would not involve discharges of untreated domestic wastewater that would violate water quality control board requirements. There would be no impact.

b. **Construction of New/Expansion of Existing Wastewater Treatment Facilities:** As mentioned above, this facility would not involve the use of water or the generation of wastewater. No new or expanded wastewater treatment facilities would be required for the proposed wireless communication monopine. There would be no impact.

c. **Construction of New/Expansion of Existing Stormwater Drainage Facilities:** A drainage report is required to be submitted at the time of grading permit application. All required drainage facilities for the project would be built in conformance with the County of El Dorado Drainage Manual, as determined by Development Services standards, during the grading and building permit processes. If the project creates more than 5,000 square feet of impervious surface, the project is required to comply with Phase II Small MS4 General Permit 2013-0001-DWQ, which would require incorporation of site design measure, source control measures, and low impact development design standards, as applicable. Stormwater runoff is anticipated to be minimal. Impacts would be considered less than significant.

d. **Sufficient Water Supply:** As mentioned above, the proposed project would not require the use of water for operation, so no new entitlements would be needed. There would be no impact.

e. **Adequate Capacity:** The project does not involve the treatment of wastewater for operation. There would be no need to determine whether or not there would be adequate capacity. There would be no impact.

f, g. **Solid Waste Disposal and Solid Waste Requirements:** Operation and continued maintenance of the cell tower and ground equipment shelter would not generate solid waste or affect recycling goals. There would be no impact.

FINDING: No significant utility and service system impacts would be expected with the wireless telecommunications facility either directly or indirectly. For this "Utilities and Service Systems" category, the thresholds of significance would not be exceeded.

XIX. MANDATORY FINDINGS OF SIGNIFICANCE. *Does the project:*	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?			X	
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

Discussion:

a. No substantial evidence contained in the project record has been found that would indicate that this project would have the potential to significantly degrade the quality of the environment when using thresholds pre-established as benchmarks. These benchmarks are established by General Plan Policies, the Grading, Erosion, and Sediment Control Ordinance, Drainage Manual, and in Zoning Ordinance Sections 130.70.100 and 130.14.210. As conditioned, and with adherence to County permit requirements, this project would not be anticipated to have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of California history or pre-history. Any impacts from the project would be anticipated to be less than significant due to the design of the project and required standards that would be implemented by any required project specific improvements on the property.

b. The project would not involve development or changes in land use that would result in an excessive increase in population growth. Impacts due to increased demand for public services associated with the project would be offset by the payment of fees as required by service providers to extend the necessary infrastructure services. The project would not be anticipated to contribute substantially to increased traffic in the area and the project would not require an increase in the wastewater treatment capacity of the County. Due to the small size of the proposed project, types of activities proposed, and site-specific environmental conditions, which have been disclosed in the Project Description and analyzed in Items I through XVIII, there would be no significant impacts anticipated related to agriculture resources, air quality, biological resources, cultural resources, geology/soils, hazards/hazardous

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

materials, hydrology/water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, traffic/transportation, tribal cultural resources, or utilities/service systems that would combine with similar effects such that the project's contribution would be cumulatively considerable. For these issue areas, either no impacts, or less than significant impacts would be anticipated. By conforming to Zoning Ordinance regulations as well as the inherent visual screening provided by the design of a mono-pine wireless communications tower, the visual impacts of the project would be less than significant. The cumulative contribution to the viewshed would be less than significant.

As outlined and discussed in this document, as conditioned and with compliance with County Codes, this project would be anticipated to have a less than significant project-related environmental effect which would cause substantial adverse effects on human beings, either directly or indirectly. Based on the analysis in this study, it has been determined that the project would have less than significant cumulative impacts.

c. Based on the discussion contained in this document, no potentially significant impacts to human beings are anticipated to occur with respect to potential project impacts. The project would include standard conditions of approval required for screening and buffering the ground equipment and monopine wireless communication tower with an appearance substantially consistent with the existing surrounding vegetation. Adherence to these standard conditions would be expected to reduce potential impacts to a less than significant level. As discussed in the Noise section, short term noise increases in the project area as a result of project construction and operation would be reduced by standard Conditions of Approval regarding hours and days of construction and operation. Any future development of the project by any potential future carriers would require environmental review through the Special Use Permit revision process. As conditioned, and with adherence to County Code, impacts are anticipated to be less than significant.

INITIAL STUDY ATTACHMENTS

Attachment 1 .....Location Map
Attachment 2 .....Site Plan, Sheet A1.1
Attachment 3 .....*RF Exposure Study*, Hammet and Edison, Inc., San Francisco, CA, November 4, 2015
Attachment 4 .....*Environmental Noise Analysis Auburn Lake Trains Cellular Facility*. Bollard Acoustical Consultants, Inc., Loomis, CA. September 28, 2014.

SUPPORTING INFORMATION SOURCE LIST

Bollard, P. (2015, September 28). *Environmental Noise Analysis Auburn Lake Trails Cellular Facility.* Loomis, CA: Bollard Acoustical Consultants, Inc.

California Department of Conservation. (2008). *Farmland Mapping and Monitoring Program: El Dorado County Important Farmland 2008*. Available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2008/eld08.pdf.

California Department of Toxic Substances Control (DTSC). (2015). *DTSC's Hazardous Waste and Substances Site List - Site Cleanup (Cortese List)*. Retrieved September 14, 2015 from http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm.

California Energy Commission. (2006). *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004, Staff Final Report*. Publication CEC-600-2006-013-SF.

California Department of Transportation (CalTrans). (2013). *California Scenic Highway Program, Officially Designated State Scenic Highways*. Retrieved September 14, 2015 from http://www.dot.ca.gov/hq/LandArch/scenic/schwy.htm.

California Geological Survey. (2007). Alquist-Priolo Earthquake Fault Zone Maps. Retrieved September 14, 2015 from http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm.

California Geological Survey. (2013). Seismic Hazards Zonation Program. Retrieved September 14, 2015 from http://www.conservation.ca.gov/cgs/shzp/Pages/affected.aspx.

California Code of Regulations. *Guidelines for Implementation of the California Environmental Quality Act.* Title 14, Section 15000, et seq. 14 CCR 15000

El Dorado County. (2003). *El Dorado County General Plan Draft Environmental Impact Report*. State Clearinghouse No. 2001082030. Placerville, CA: El Dorado County Planning Services.

El Dorado County. (2004, July 19). *El Dorado County General Plan: A Plan for Managed Growth and Open Roads; A Plan for Quality Neighborhoods and Traffic Relief.* Placerville, CA: El Dorado County Planning Services.

El Dorado County. (2005, July 21). Asbestos Review Areas, Western Slope, El Dorado County, California. Available at: < http://www.edcgov.us/Government/AirQualityManagement/Asbestos.aspx>.

El Dorado County Air Quality Management District (AQMD). (2000). *Rules and Regulations of the El Dorado County Air Quality Management District.* Retrieved September 14, 2015 from http://www.arb.ca.gov/DRDB/ED/CURHTML/R101.HTM.

El Dorado County Air Quality Management District (AQMD). (2002). *Guide to Air Quality Assessment: Determining the Significance of Air Quality Impacts Under the California Environmental Quality Act*. Retrieved September 14, 2015 from http://www.edcgov.us/Government/AirQualityManagement/Guide_to_Air_Quality_Assessment.aspx.\

El Dorado County Geographic Information System (GIS) Data. Placerville, CA: Esri ArcGIS. Available: El Dorado County controlled access data GISDATA\LIBRARIES.

Federal Emergency Management Agency (FEMA). (2008). FEMA Map Service Center, Current FEMA Issued Flood Maps: El Dorado County, California, unincorporated area, no. 06017C1025E. Available at: http://map1.msc.fema.gov/idms/IntraView.cgi?KEY=94926033&IFIT=1.

Governor's Office of Planning and Research (OPR). (2008, June 19). *Technical advisory: CEQA and climate change: Addressing climate change through California Environmental Quality Act Review*. Available at: Sacramento, CA. http://www.opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf.

Hallam, N. (2014, November 4). *Records Search Results for Auburn Lake Trails Site*. Sacramento, CA: California Historical Resources Information System (CHRIS), North Central Information Center.

Hammett, W. (2014, November 4). *Verizon Wireless Proposed Base Station (Site No. 285385 "Auburn Lake Trails") 1930 State Highway 193, Cool, California, Statement of Hammett & Edison, Inc., Consulting Engineers*. San Francisco, CA: Hammett & Edison, Inc., Consulting Engineers.

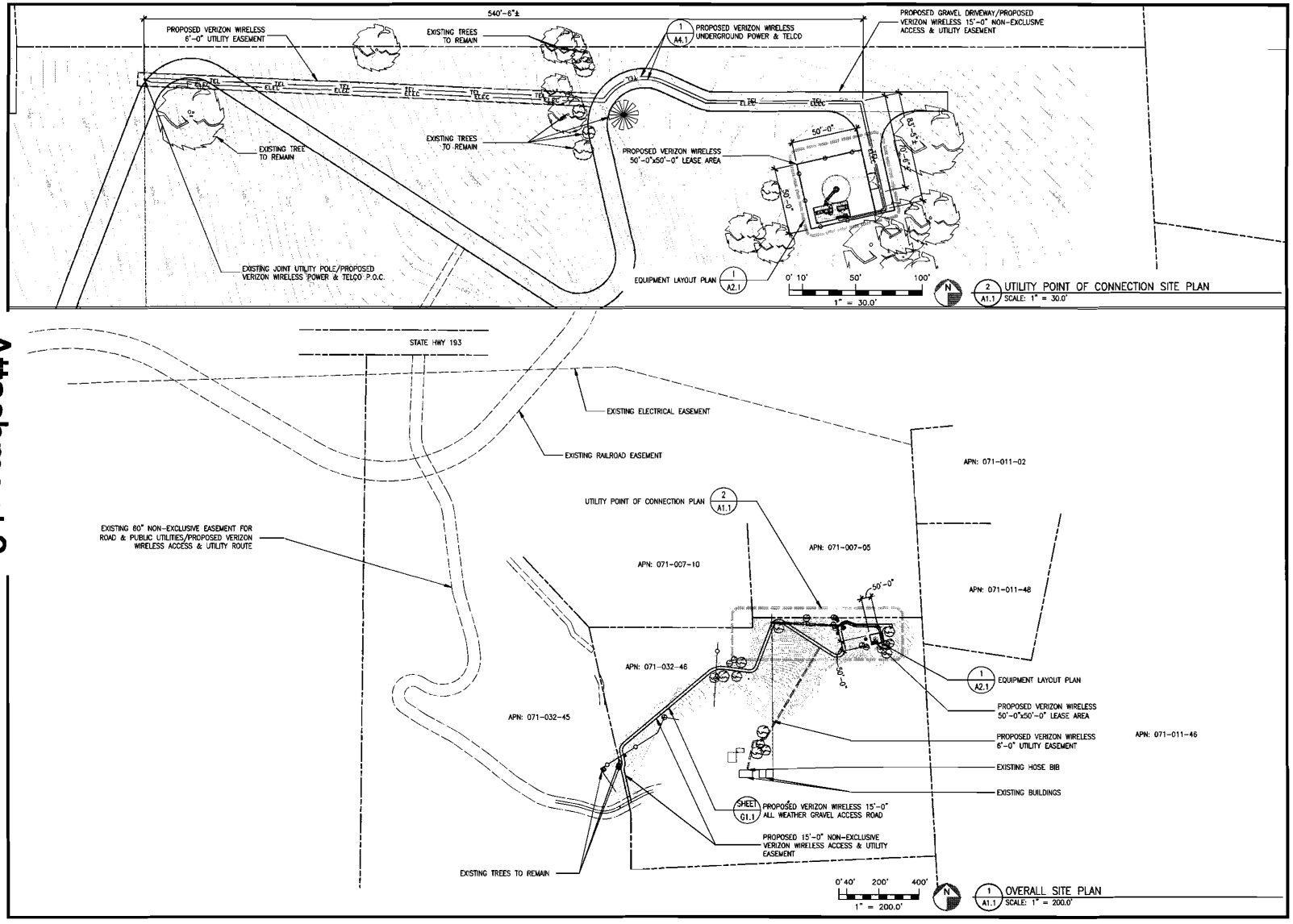
United States Department of Agriculture (USDA) Soil Conservation Service and Soil Service. (1974). *Soil Survey of El Dorado Area, California.* Retrieved September 14, 2015 from http://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/california/el_doradoCA1974/EDA.pdf

File No. PD15-0005/S14-0012
Location Map
Attachment 1

N W E S

0 500 1,000 1,500 2,000 Feet

Attachment 2



MST ARCHITECTS
1329 River Park Drive, Sacramento, CA 95815
916-345-7540
www.mstarchitects.com

COMPLETE Wireless Consulting, Inc.

AUBURN LAKE TRAILS
1930 STATE HIGHWAY 193
COOL, CA 95614

verizon WIRELESS

SHEET TITLE: OVERALL SITE PLAN

LICENSED ARCHITECT
No. C-28321
Exp. 08-15
STATE OF CALIFORNIA

Revisions:
1 --
2 --
3 --
4 --
5 --

File: 162.1283A11.dwg
Drawn By: AME
Checked By: TST
Scale: AS NOTED
Date: 08/18/2015

Job No. 162.1283

A1.1

Verizon Wireless • Proposed Base Station (Site No. 285385 "Auburn Lake Trails")
1930 State Highway 193 • Cool, California

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of Verizon Wireless, a personal wireless telecommunications carrier, to evaluate the base station (Site No. 285385 "Auburn Lake Trails") proposed to be located at 1930 State Highway 193 in Cool, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Executive Summary

Verizon proposes to install directional panel antennas on a tall pole to be located at 1930 State Highway 193 in Cool. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standards

The U.S. Congress requires that the Federal Communications Commission ("FCC") evaluate its actions for possible significant impact on the environment. A summary of the FCC's exposure limits is shown in Figure 1. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. The most restrictive FCC limit for exposures of unlimited duration to radio frequency energy for several personal wireless services are as follows:

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5,000–80,000 MHz	5.00 mW/cm^2	1.00 mW/cm^2
BRS (Broadband Radio)	2,600	5.00	1.00
WCS (Wireless Communication)	2,300	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.40	0.48
[most restrictive frequency range]	30–300	1.00	0.20

General Facility Requirements

Base stations typically consist of two distinct parts: the electronic transceivers (also called "radios" or "channels") that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are often located at ground level and are connected to the antennas by coaxial cables. A small antenna for reception of GPS signals is also required, mounted with a clear view of the sky. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the

antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

Computer Modeling Method

The FCC provides direction for determining compliance in its Office of Engineering and Technology Bulletin No. 65, "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation," dated August 1997. Figure 2 attached describes the calculation methodologies, reflecting the facts that a directional antenna's radiation pattern is not fully formed at locations very close by (the "near-field" effect) and that at greater distances the power level from an energy source decreases with the square of the distance from it (the "inverse square law"). The conservative nature of this method for evaluating exposure conditions has been verified by numerous field tests.

Site and Facility Description

Based upon information provided by Verizon, including zoning drawings by MST Architects, Inc., dated October 6, 2014, it is proposed to install six Andrew Model SBNH-1D8585B directional panel antennas on a new 77-foot steel pole, configured to resemble a pine tree, to be sited on the hilltop in the northeast corner of the property located at 1930 State Highway 193 in Cool. The antennas would be mounted with up to 4° downtilt at an effective height of about 70 feet above ground and would be oriented in pairs toward 60°T, 180°T, and 300°T, to provide service in all directions. The maximum effective radiated power in any direction would be 8,380 watts, representing simultaneous operation at 3,710 watts for AWS, 3,380 watts for PCS, and 1,290 watts for 700 MHz service; no operation is proposed in the cellular band. There are reported no other wireless telecommunications base stations at the site or nearby.

Study Results

For a person anywhere at ground, the maximum RF exposure level due to the proposed Verizon operation is calculated to be 0.0086 mW/cm^2, which is 1.1% of the applicable public exposure limit. The maximum calculated level at the second-floor elevation of any nearby building* is 0.13% of the public exposure limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operation.

* Located about 670 feet away, based on photographs from Google Maps.

No Recommended Mitigation Measures

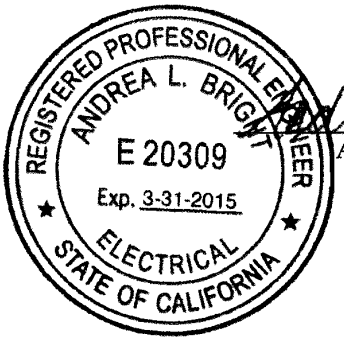
Due to their mounting locations, the Verizon antennas would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. It is presumed that Verizon will, as an FCC licensee, take adequate steps to ensure that its employees or contractors receive appropriate training and comply with FCC occupational exposure guidelines whenever work is required near the antennas themselves.

Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the base station proposed by Verizon Wireless at 1930 State Highway 193 in Cool, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration No. E-20309, which expires on March 31, 2015. This work has been carried out under her direction, and all statements are true and correct of her own knowledge except, where noted, when data has been supplied by others, which data she believes to be correct.



Andrea L. Bright, P.E.
707/996-5200

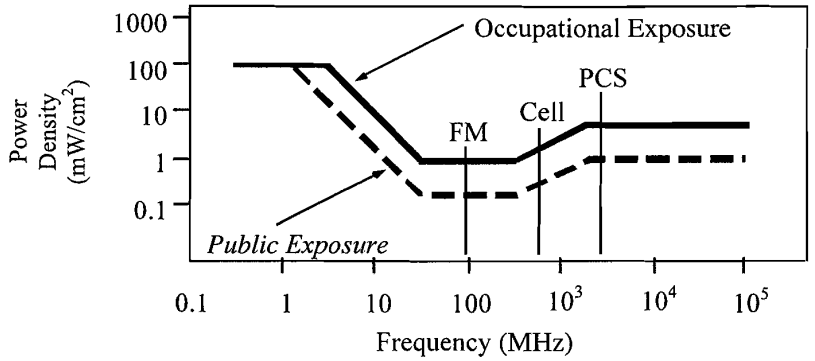
November 4, 2014

FCC Radio Frequency Protection Guide

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The FCC adopted the limits from Report No. 86, "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements ("NCRP"). Separate limits apply for occupational and public exposure conditions, with the latter limits generally five times more restrictive. The more recent standard, developed by the Institute of Electrical and Electronics Engineers and approved as American National Standard ANSI/IEEE C95.1-2006, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," includes similar limits. These limits apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

As shown in the table and chart below, separate limits apply for occupational and public exposure conditions, with the latter limits (in *italics* and/or dashed) up to five times more restrictive:

Frequency	Electromagnetic Fields (f is frequency of emission in MHz)					
Applicable Range (MHz)	Electric Field Strength (V/m)		Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm^2)	
0.3 – 1.34	614	*614*	1.63	*1.63*	100	*100*
1.34 – 3.0	614	*823.8/f*	1.63	*2.19/f*	100	*180/f^2*
3.0 – 30	1842/ f	*823.8/f*	4.89/ f	*2.19/f*	900/ f^2	*180/f^2*
30 – 300	61.4	*27.5*	0.163	*0.0729*	1.0	*0.2*
300 – 1,500	$3.54\sqrt{f}$	*$1.59\sqrt{f}$*	$\sqrt{f}/106$	*$\sqrt{f}/238$*	f/300	*f/1500*
1,500 – 100,000	137	*61.4*	0.364	*0.163*	5.0	*1.0*



Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits, and higher levels also are allowed for exposures to small areas, such that the spatially averaged levels do not exceed the limits. However, neither of these allowances is incorporated in the conservative calculation formulas in the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) for projecting field levels. Hammett & Edison has built those formulas into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radio sources. The program allows for the description of buildings and uneven terrain, if required to obtain more accurate projections.

RFR.CALC™ Calculation Methodology

Assessment by Calculation of Compliance with FCC Exposure Guidelines

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The maximum permissible exposure limits adopted by the FCC (see Figure 1) apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits.

Near Field.

Prediction methods have been developed for the near field zone of panel (directional) and whip (omnidirectional) antennas, typical at wireless telecommunications base stations, as well as dish (aperture) antennas, typically used for microwave links. The antenna patterns are not fully formed in the near field at these antennas, and the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) gives suitable formulas for calculating power density within such zones.

For a panel or whip antenna, power density $S = \frac{180}{\theta_{BW}} \times \frac{0.1 \times P_{net}}{\pi \times D \times h}$, in mW/cm^2,

and for an aperture antenna, maximum power density $S_{max} = \frac{0.1 \times 16 \times \eta \times P_{net}}{\pi \times h^2}$, in mW/cm^2,

where θ_{BW} = half-power beamwidth of the antenna, in degrees, and
P_{net} = net power input to the antenna, in watts,
D = distance from antenna, in meters,
h = aperture height of the antenna, in meters, and
η = aperture efficiency (unitless, typically 0.5-0.8).

The factor of 0.1 in the numerators converts to the desired units of power density.

Far Field.

OET-65 gives this formula for calculating power density in the far field of an individual RF source:

$$\text{power density } S = \frac{2.56 \times 1.64 \times 100 \times RFF^2 \times ERP}{4 \times \pi \times D^2}, \text{ in } mW/cm^2,$$

where ERP = total ERP (all polarizations), in kilowatts,
RFF = relative field factor at the direction to the actual point of calculation, and
D = distance from the center of radiation to the point of calculation, in meters.

The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 (1.6 x 1.6 = 2.56). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired units of power density. This formula has been built into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radiation sources. The program also allows for the description of uneven terrain in the vicinity, to obtain more accurate projections.

Environmental Noise Analysis

Auburn Lake Trails Cellular Facility

El Dorado County, California

BAC Job # 2014-280

Prepared For:

Complete Wireless Consulting

Attn: Ms. Kim Le
2009 V Street
Sacramento, CA 95818

Prepared By:

Bollard Acoustical Consultants, Inc.

Paul Bollard, President

September 28, 2015

BOLLARD
Acoustical Consultants

Attachment 4

3551 Bankhead Road • Loomis, CA 95650 • Phone: (916) 663-0500 • Fax: (916) 663-0501 • BACNOISE.COM

Introduction

The Auburn Lake Trails Verizon Wireless Unmanned Telecommunications Facility Project (project) proposes the installation of antenna sectors mounted on an proposed monopine, outdoor equipment cabinets, and an emergency diesel standby generator inside a fenced area located at 1930 State Highway 193, Cool (El Dorado County), California. The outdoor equipment cabinets and the emergency diesel standby generator have been identified as primary noise sources associated with the project. Please see Figure 1 for the general site location. The studied site design is dated September 2, 2015.

Bollard Acoustical Consultants, Inc. has been contracted by Complete Wireless Consulting, Inc. to complete an environmental noise assessment regarding the proposed project cellular equipment operations. Specifically, the following addresses daily noise production and exposure associated with operation of the project emergency generator and outdoor equipment cabinets.

Please refer to Appendix A for definitions of acoustical terminology used in this report. Appendix B illustrates common noise levels associated with various sources.

Criteria for Acceptable Noise Exposure

El Dorado County General Plan Noise Element

The El Dorado County General Plan Noise Element establishes noise level criteria for acceptable noise exposure at rural residential uses due to non-transportation noise sources.

Table 1
Performance Standards for Non-Transportation Noise Sources – Rural Areas
El Dorado County Noise Element

Noise Level Descriptor	Daytime (7am - 7pm)	Evening (7pm - 10pm)	Nighttime (10pm - 7am)
Hourly L_{eq}, dB	50 dB	45 dB	40 dB
Maximum Level L_{max}, dB	60 dB	55 dB	50 dB

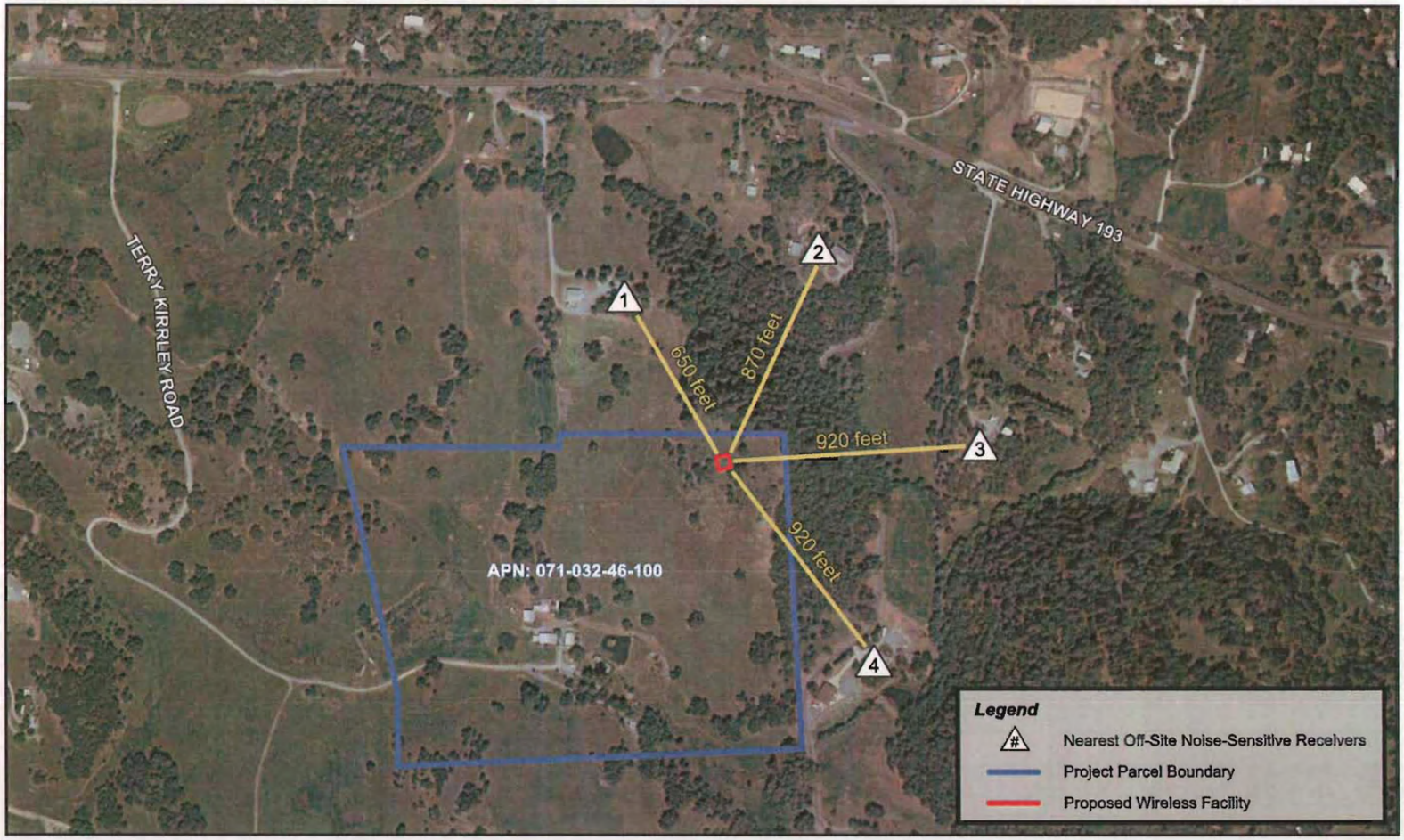
Source: El Dorado County General Plan

For rural-residential land uses, such as those nearest to the project site, the County's noise element requires that the noise standards presented above be applied at a point 100 feet away from the residence.

Figure 1

Auburn Lake Trails Cellular Facility - Cool (El Dorado County), California

Project Area and Nearest Noise-Sensitive Receivers



Project Noise Generation

As discussed previously, there are two project noise sources which are considered in this evaluation; the equipment cabinet cooling systems and the emergency generator. The evaluation of potential noise impacts associated with the operation of each noise source is evaluated separately as follows:

Equipment Cabinet Noise Sources and Reference Noise Levels

The project proposes the installation of four equipment cabinets within the lease area illustrated on Figure 1. Specifically, the cabinets assumed for the project are as follows: two Ericsson eNB RBS6101, one Charles Industries 48V Power Plant and one miscellaneous cabinet cooled by a McLean Model T-20 air conditioner. The cabinets and their respective reference noise levels are provided below in Table 2. The manufacturer's noise level data specification sheets for the proposed equipment cabinets are provided as Appendix C.

Table 2
Reference Noise Level Data of Proposed Equipment Cabinets

Equipment	Number of Cabinets	Reference Noise Level, dB	Reference Distance, feet
Ericsson eNB RBS6101	2	53	5
Charles Industries 48V Power Plant	1	60	5
McLean T-20	1	66	5

Notes: Manufacturer specification sheets provided as Appendix C.

Generator Noise Sources and Reference Noise Levels

A Generac Industrial Power Systems Model SD030 is proposed for use at this facility to maintain cellular service during emergency power outages. The site plans indicate that the generator, located within the same lease area as the equipment cabinets, will be equipped with the Level 2 Acoustic Enclosure resulting in a reference noise level of 68 dB at 23 feet. The manufacturer's noise level data specification sheet for the proposed generator is provided as Appendix D.

The generator which is proposed at this site would only operate during emergencies (power outages) and brief daytime periods for periodic maintenance/lubrication. According to the project applicant, testing of the generator would occur twice per month, during daytime hours, for a duration of approximately 15 minutes. The emergency generator would only operate at night during power outages. It is expected that nighttime operation of the project emergency generator would be exempt from the County's exterior noise exposure criteria due to the need for continuous cellular service provided by the project equipment.

Predicted Facility Noise Levels at Nearby Sensitive Receptors

As indicated in Figure 1, the project equipment maintains a separation of 650-920 feet from the noise-sensitive land uses identified as receivers 1-4. Assuming standard spherical spreading loss (-6 dB per doubling of distance), project-equipment noise exposure at the closest receivers was calculated and the results of those calculations are presented in Table 3. As required by the El Dorado County General Plan, the predicted equipment noise levels presented below in Table 3 were applied at a point 100 feet away from the existing residences.

Table 3
Summary of Project-Related Noise Exposure at Nearest Residences
Auburn Lake Trails Verizon Wireless Telecommunications Facility Project

Nearest Receiver[1]	Distance from Cellular Equipment (feet)	Predicted Noise Levels (dBA)	
		Cabinets (L_{eq})	Generator (L_{max})
1	650	26	40
2	870	23	38
3	920	23	37
4	920	23	37

Notes:

[1] Receiver locations can be seen in Figure 1.

Because the cooling fans of the proposed equipment cabinets could potentially be in operation during nighttime hours, the operation of the equipment cabinets would be subject to the County's nighttime noise level standard of 40 dB L_{eq}. As shown above in Table 3, the predicted equipment cabinet noise levels of 23-26 dB L_{eq} at the nearest noise-sensitive receiver locations would satisfy the El Dorado County 40 dB L_{eq} nighttime noise level standard. As a result, no additional noise mitigation measures would be warranted for this aspect of the project.

Because the project generator would only operate during daytime hours for brief periods required for testing and maintenance, the operation of the generator would be subject to the County's daytime noise level standard of 60 dB L_{max}. As shown above in Table 3, the predicted generator noise levels of 37-40 dB L_{max} would satisfy the El Dorado County 60 dB L_{max} daytime noise level standard. As a result, no additional noise mitigation measures would be warranted for this aspect of the project.

Conclusions

Based on the equipment noise level data and analyses presented above, project-related equipment noise exposure is expected to satisfy the applicable El Dorado County noise exposure limits at the closest residential receivers. As a result, no additional noise mitigation measures would be warranted for this project.

This concludes our environmental noise assessment for the proposed Auburn Lake Trails Cellular Facility in El Dorado County, California. Please contact BAC at (916) 663-0500 or paulb@bacnoise.com with any questions or requests for additional information.

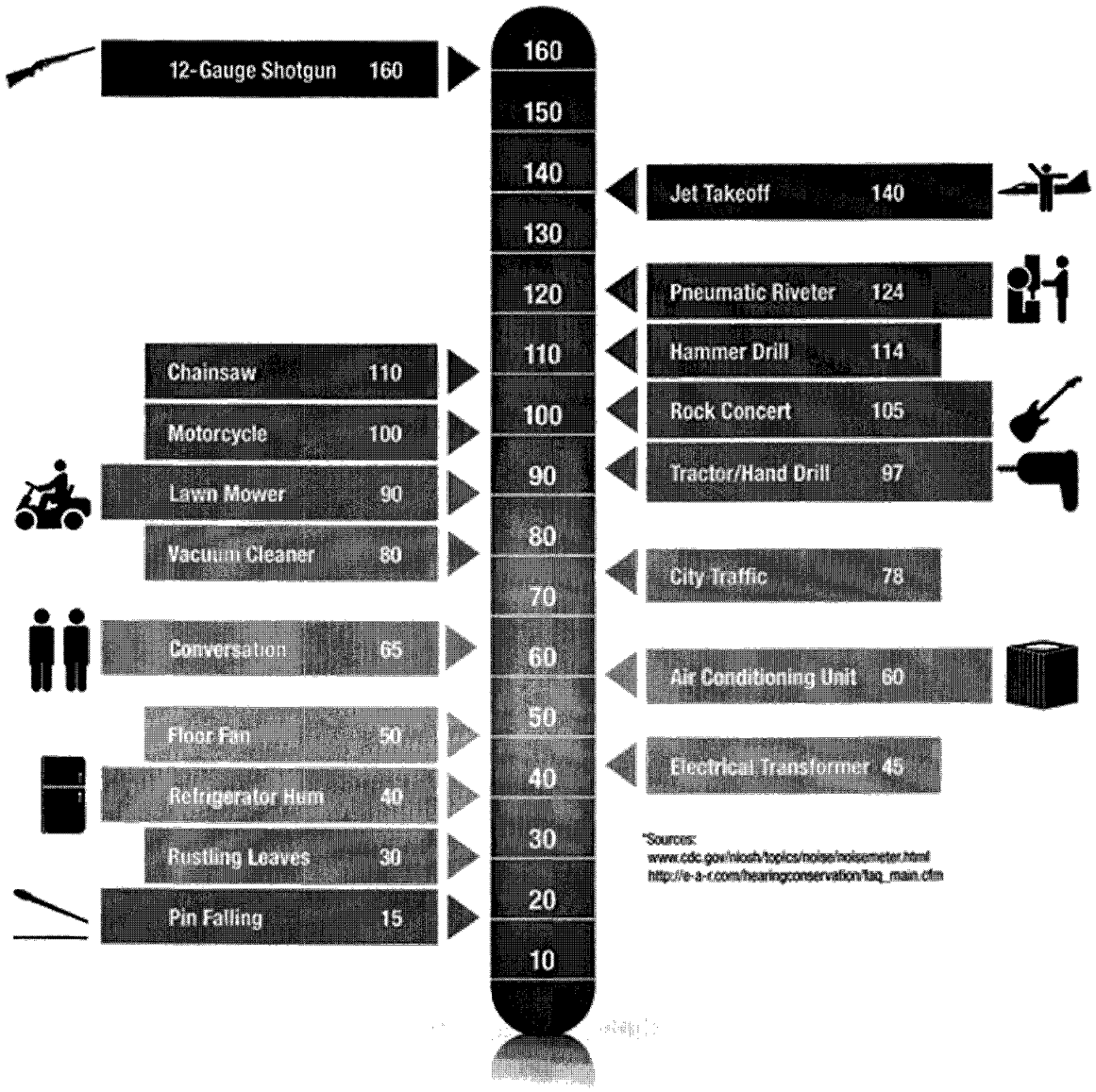
Appendix A

Acoustical Terminology

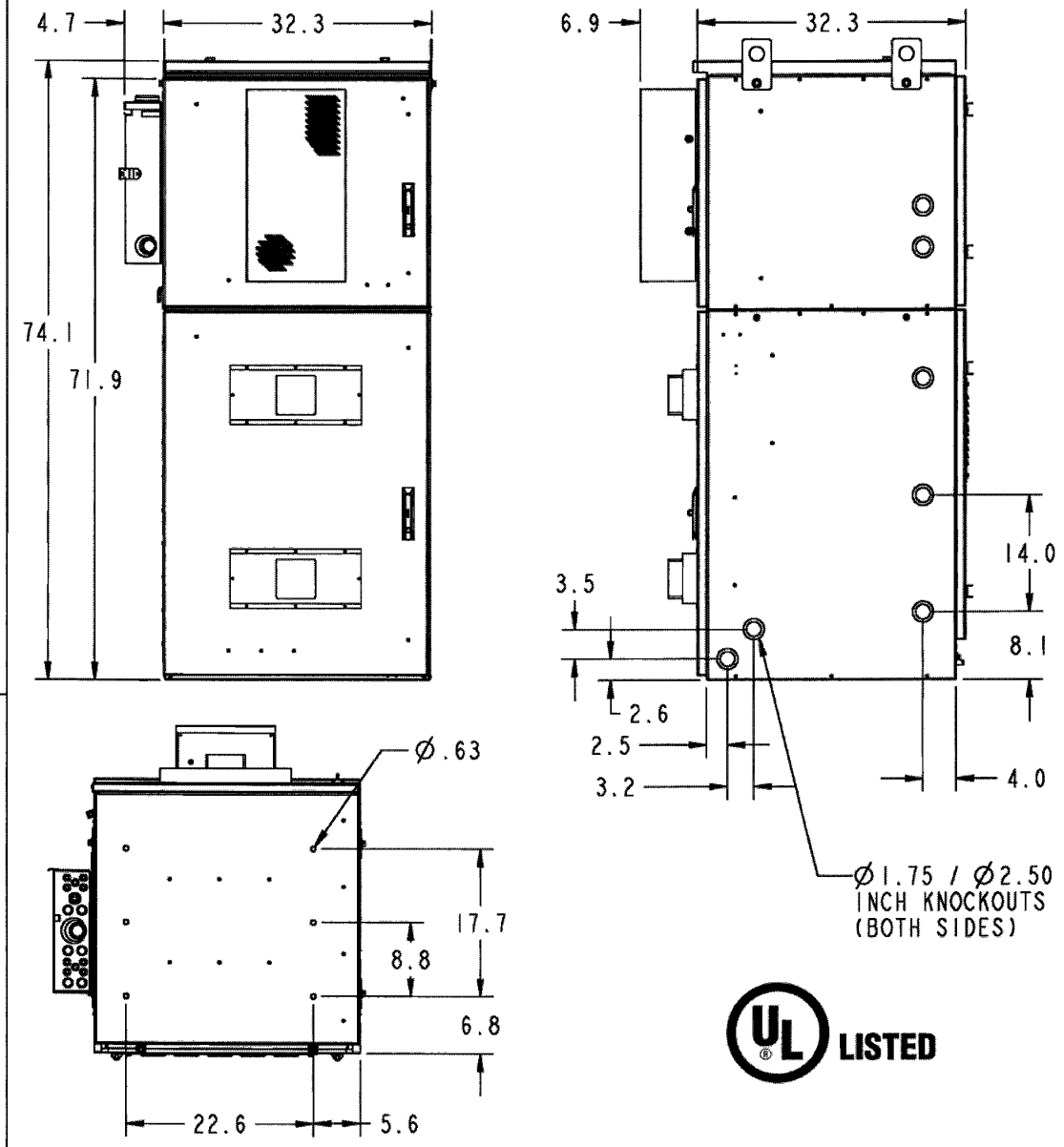
Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Masking	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
Noise	Unwanted sound.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the Maximum level, which is the highest RMS level.
RT_{60}	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
SEL	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy of the event into a 1-s time period.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.

Appendix B

Typical A-Weighted Sound Levels of Common Noise Sources



Appendix C-1



UL LISTED

WEIGHT WITH BATTERIES:
2296 LBS.
NorthStar NSB-170FT batteries at 128 lbs each, Qty 12

WEIGHT WITHOUT BATTERIES:
760 LBS.

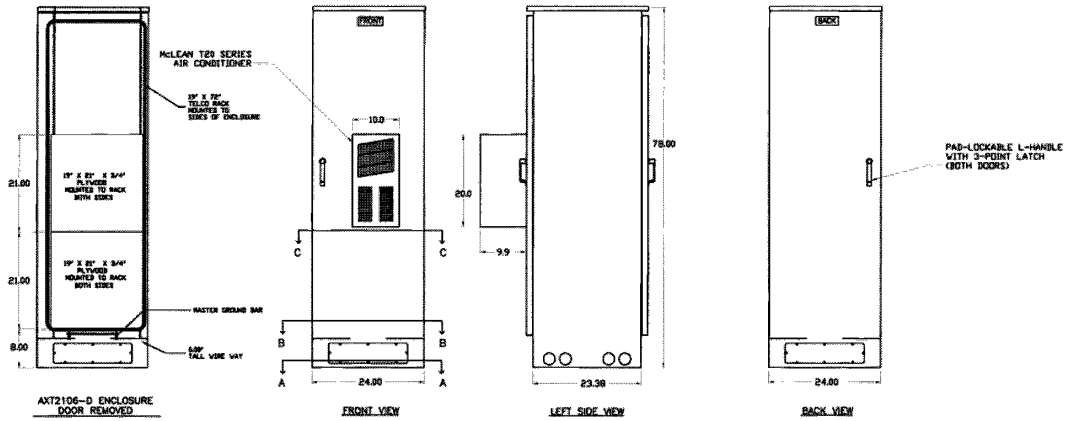
MAX NOISE LEVEL:
55-60dB

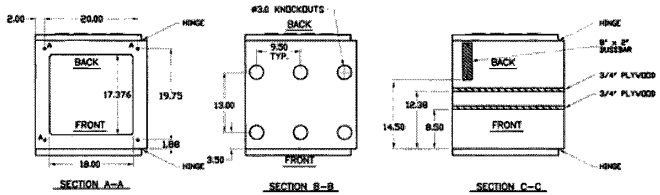
CHARLES PART #
CUBE-SS4C215XC1

Charles Industries Ltd.
Telecommunications Group
Charles Center, 5600 Apollo Drive
Rolling Meadows, IL 60008
Telephone: 847-806-6300

Verizon Wireless
Large Site Support Enclosure

REV.	DESCRIPTION	DATE	APPROVED
000	INITIAL RELEASE	06/09/2011	J.S.
	A.C. DETAILS ADDED TO NOTES	05/01/2014	J.S.





NOTES:
1. PRODUCT SPECIFICATIONS SUBJECT TO CHANGE
2. ENCLOSURE IS TYPE 3R, RAINPROOF
3. ENCLOSURE IS ALUMINUM, WELDED CONSTRUCTION WITH POWDER COATED FINISH
4. WEIGHT ≈ 300-lb
5. AIR CONDITIONER MODEL: McCLEAN #T200216G150 , NOISE LEVEL AT A DISTANCE OF 1.5M = 66 dB (A)

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES
FRACTIONAL ± 1/16
ANGULAR MACH ±0.5° BEND± 2°
XXX ± 0.007
XX ± 0.03
X ± 0.1
THIRD ANGLE PROJECTION
MATERIAL
FINISH
APPLICATION
DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	J.GESSELE	
CHECKED		
ENG APPR.	J.GESSELE	
MFG APPR.		
Q.A.		
COMMENTS:		

pantrol 800-261-3505 www.pantrol.com

TITLE: AXT WITH T20

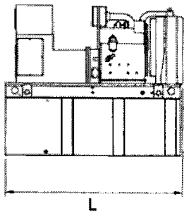
SIZE	DWG. NO.	REV
B	T1134689AD2P000	000

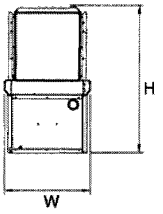
SCALE: - SHEET 1 OF 1

Appendix D

GENERAC | INDUSTRIAL POWER

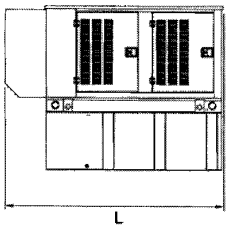
SD030 dimensions, weights and sound levels

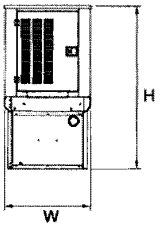




OPEN SET

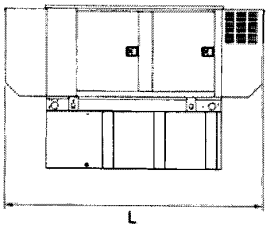
RUN TIME HOURS	USABLE CAPACITY (GAL)	L	W	H	WT	dBA*
NO TANK	-	76	38	46	2060	82
20	54	76	38	59	2540	
48	132	76	38	71	2770	
77	211	76	38	83	2979	
109	300	93	38	87	3042	

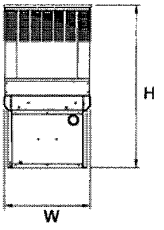




STANDARD ENCLOSURE

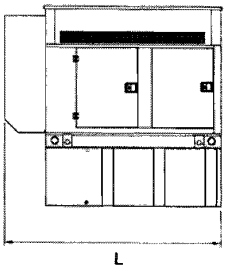
RUN TIME HOURS	USABLE CAPACITY (GAL)	L	W	H	WT	dBA*
NO TANK	-	95	38	50	2362	77
20	54	95	38	63	2842	
48	132	95	38	75	3072	
77	211	95	38	87	3281	
109	300	95	38	91	3344	

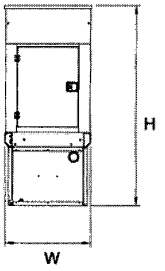




LEVEL 1 ACOUSTIC ENCLOSURE

RUN TIME HOURS	USABLE CAPACITY (GAL)	L	W	H	WT	dBA*
NO TANK	-	113	38	50	2515	70
20	54	113	38	63	2995	
48	132	113	38	75	3225	
77	211	113	38	87	3434	
109	300	113	38	91	3497	





LEVEL 2 ACOUSTIC ENCLOSURE

RUN TIME HOURS	USABLE CAPACITY (GAL)	L	W	H	WT	dBA*
NO TANK	-	95	38	62	2520	68
20	54	95	38	75	3000	
48	132	95	38	87	3230	
77	211	95	38	99	3439	
109	300	95	38	103	3502	

*All measurements are approximate and for estimation purposes only. Weights are without fuel in tank. Sound levels measured at 23ft (7m) and does not account for ambient site conditions.

Tank Options

○	MDEQ	OPT
○	Florida DERM/DEP	OPT
○	Chicago Fire Code	OPT
○	IFC Certification	CALL
○	ULC	CALL

Other Custom Options Available from your Generac Industrial Power Dealer

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.

Generac Power Systems, Inc. • S45 W29290 HWY. 59, Waukesha, WI 53189 • generac.com