County of Calaveras
Department of Planning

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Initial Study / Mitigated Negative Declaration
Review Period: November 10, 2025 through December 10, 2025

Initial Study ENVIRONMENTAL CHECKLIST

For: New Cingular Wireless PCS, LLC / AT&T
Administrative Use Permit 2024-044
Assessor's Parcel No. 054-011-014

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INTRODUCTION

1. **Project Title**
   2024-044 Administrative Use Permit
   for New Cingular Wireless PCS, LLC / AT&T

2. **Lead Agency Name and Address**
   Calaveras County Planning Department
   891 Mountain Ranch Road
   San Andreas, CA 95249

3. **Contact Person**
   Katherine Stefani, Senior Planner
   209-754-6394

4. **Project Location** *See Figure 1*
   409 Jackson Street
   Copperopolis, CA 95228

5. **Assessor's Parcel Number** *See Figure 2*
   APN 054-011-014

6. **Project Sponsor's Name and Address**
   Centerline Communication – Aaron DeLaO
   6101 Passiflora Lane
   Orangevale, CA 95662

7. **General Plan Designation**
   Community Center (CC)

8. **Zoning**
   Single Family Residential (R1)

9. **Project Description**
   An Administrative Use Permit (AUP) to install a new unmanned 90-foot (') broadleaf tree telecommunication tower and supporting ground equipment, including a back-up generator, in the R1 zone. The project is being processed under the previous zoning code effective at the time the application was submitted in June of 2024. A large portion of the equipment will be contained within the 16' by 31' lease area and enclosed by a 6' wood fence. One transformer located 2' northwest of the lease area on a 4' 4" by 4' 2" concrete pad, one parking space parallel to Jackson Street, and a 3-foot-wide access path going from the parking space to the lease area are also proposed. There is also a proposed 10-foot-wide easement for an underground power conduit that will extend approximately 580' along Jackson

Street, northwest from the lease area to an existing utility pole. See Figures 3 through 7.

10. **Surrounding Land Uses and Setting**

Location	General Plan Designation	Zoning	Land Use
North	Community Center	R1	Single Family Residential
South	Community Center/ Rural Transition B/ Rural Residential/ Resource Production	R1/ RA/ PS/ AP	Cemetery/Single Family Residential
East	Community Center	R1/ R2/ C2/ PS	Residential/Commercial/ Public Service
West	Community Center/Rural Transition B/ Resource Production	PS/RR/RA/AP	Cemetery

11. Other public agencies whose approval is required: **NONE**

12. Have California Native American Tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code §21080.3.1? **NO**

    If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.? **NO**

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

DETERMINATION (To be completed by Lead Agency):

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 original scope of the proposed project **COULD** have had a potentially significant effect on the environment, there **WILL NOT** be a significant effect because revisions/mitigations to the project have been made by or agreed to by the applicant. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

☐ I find that the proposed project **MAY** have a potentially significant effect on the environment and an **ENVIRONMENTAL IMPACT REPORT** or its functional equivalent will be prepared.

☐ I find that the proposed project **MAY** have a potentially significant impact on the environment. However, at least one impact has been adequately analyzed in an earlier document, pursuant to applicable legal standards, and has been addressed by mitigation measures based on the earlier analysis, as described in the report's attachments. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the impacts not sufficiently addressed in previous documents.

☐ I find that, although the proposed project could have had a significant effect on the environment, because all potentially significant effects have been adequately analyzed in an earlier EIR or Negative Declaration, pursuant to applicable standards, and have been avoided or mitigated, pursuant to an earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, all impacts have been avoided or mitigated to a less-than-significant level and no further action is required.



Katherine Stefani
Project Planner

11/3/2025
Date

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. Once the lead agency has determined that a particular physical impact may occur, then 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 substantial evidence 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 (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
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 Measures 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 significance

Environmental Impact Analysis

This Initial Study has been prepared for Administrative Use Permit 2024-044 – New Cingular Wireless PCS, LLC/AT&T. The application proposes to construct a new unmanned 90-foot (ft.) broadleaf tree monopole with twelve (12) antennas, three ground mounted cabinets within a prefabricated shelter, and associated small equipment. A 30-kilowatt back-up generator is also proposed. The facility equipment will be contained within a 16 ft. by 31 ft. lease area, surrounded by a 6-foot wood fence. One transformer located 2 feet northwest of the lease area on a 4' 4" by 4' 2" concrete pad, one parking space parallel to Jackson Street, and a 3-foot-wide access path from the parking space to the lease area are also proposed. The lease area is to be located at least 30 feet from the nearest property boundary and approximately 40 feet from Jackson Street. An underground power conduit is proposed to travel approximately 580 feet northwest in a 10-foot-wide easement that would be trenched along Jackson Street to an existing wood utility pole.

The project is proposed on an approximately 4.4-acre residentially zoned parcel located at 409 Jackson Street in Copperopolis. Current development on the subject parcel includes a single-family residence and a few sheds located on the northern portion of the parcel. Access is proposed from Jackson Street, an existing county-maintained road. A 3-foot-wide access path will be created from Jackson Street as the primary means of accessing the facility. The lease area is proposed to be approximately 270 feet from the nearest residence on the subject parcel, and approximately 300 feet from the second closest residence to the west, off the subject parcel.

The project is being processed under the previous zoning code effective at the time the application was submitted in June of 2024. The subject parcel has a General Plan land use designation of Community Center (CC) and is zoned Single-Family Residential (R1). Stealth telecommunication facilities are a conditional use in the R1 zone, requiring approval of an Administrative Use Permit (AUP), pursuant to §17.24.030 – Conditional Uses of the previous code. The project requires an environmental impact analysis and site-specific studies to examine the project site and associated impact. Several studies were submitted as part of this application: a Biological Resources Impact Analysis, Cultural Resource Assessment, Noise Compliance Report, and Electromagnetic Energy (EME) Exposure Report. Each study is discussed further in the relevant environmental impact category.



Figure 1 – Project Location in Copperopolis, Calaveras County

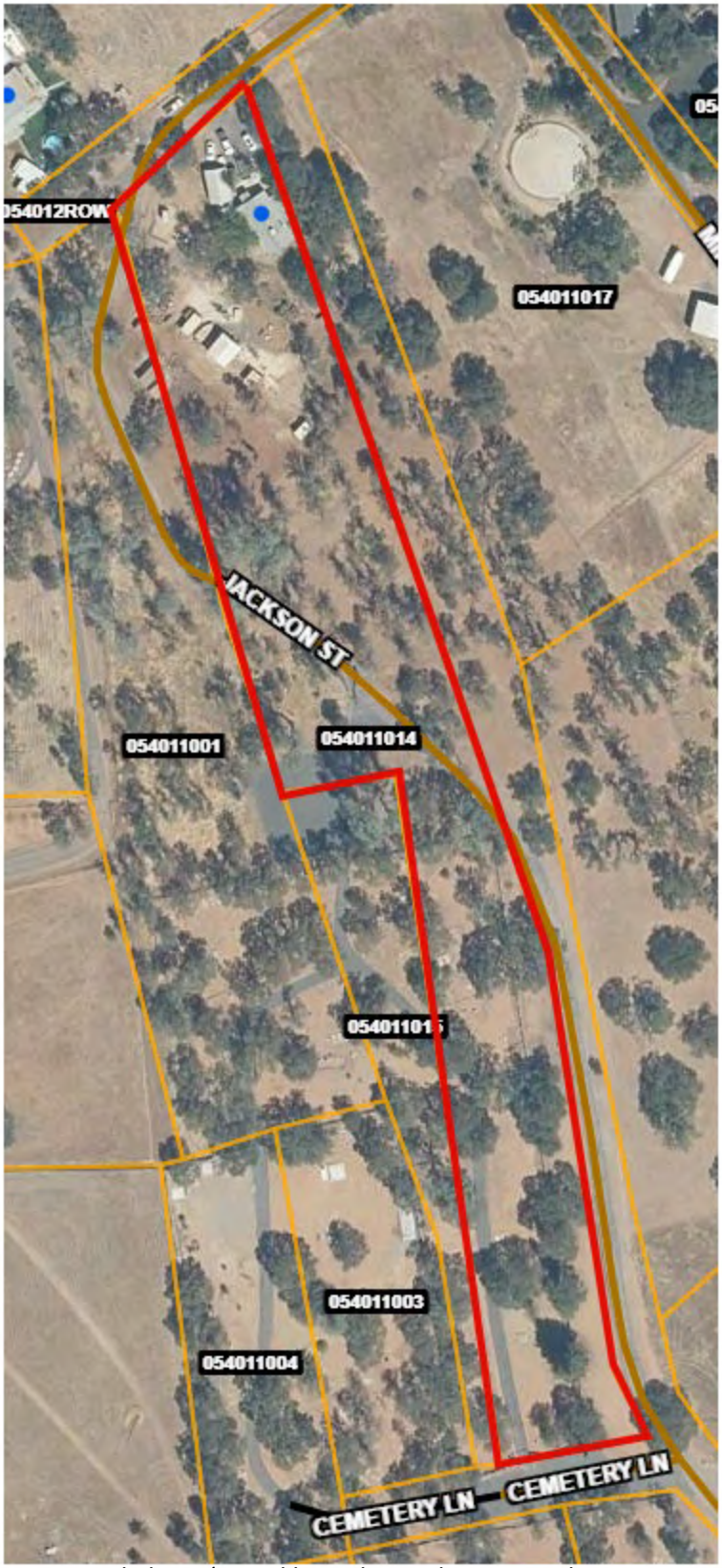

Figure 2 – Aerial Photo (Parcel boundaries shown in red are approximate)

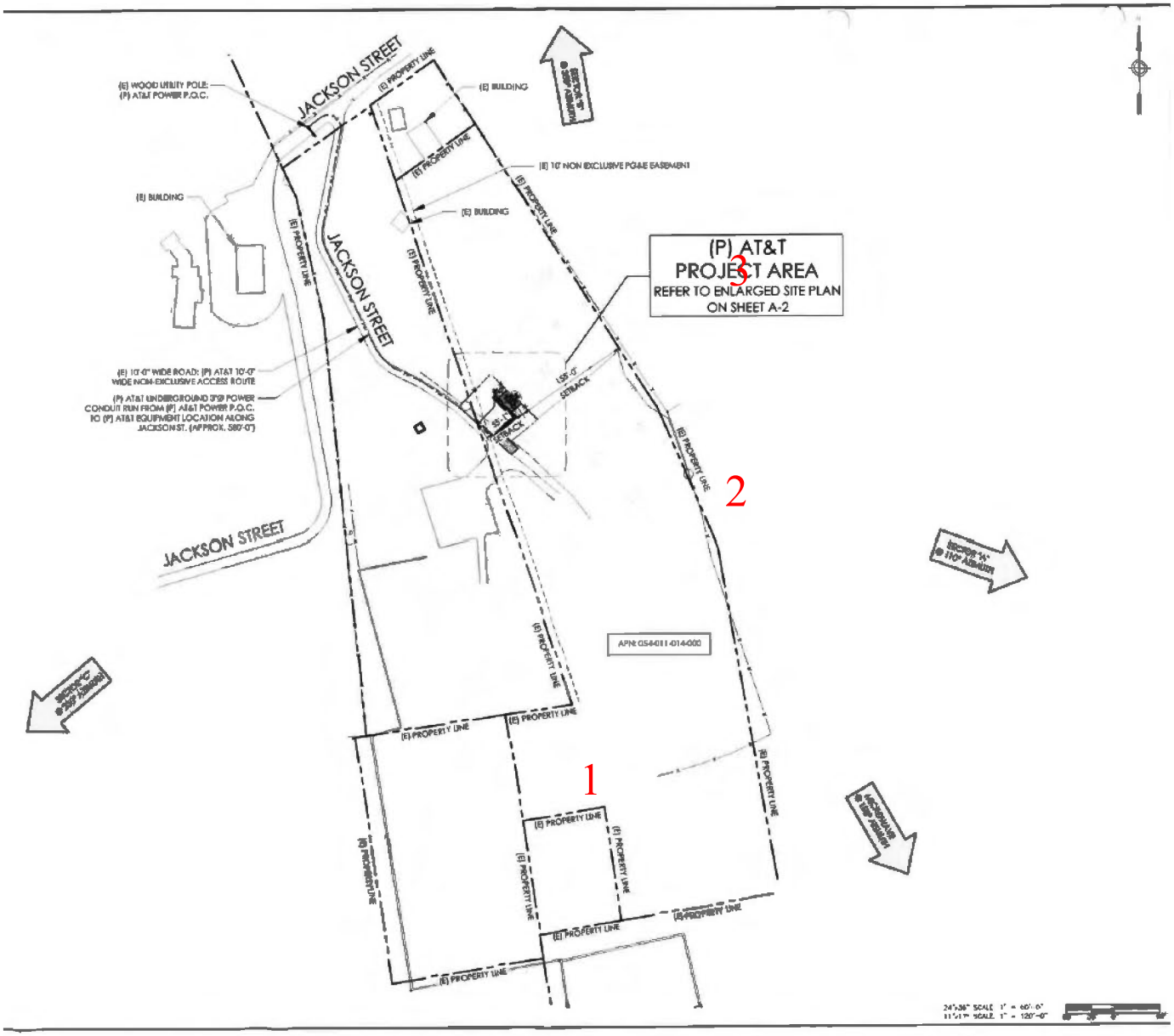

Figure 3 – Telecommunication Facility Site Plan

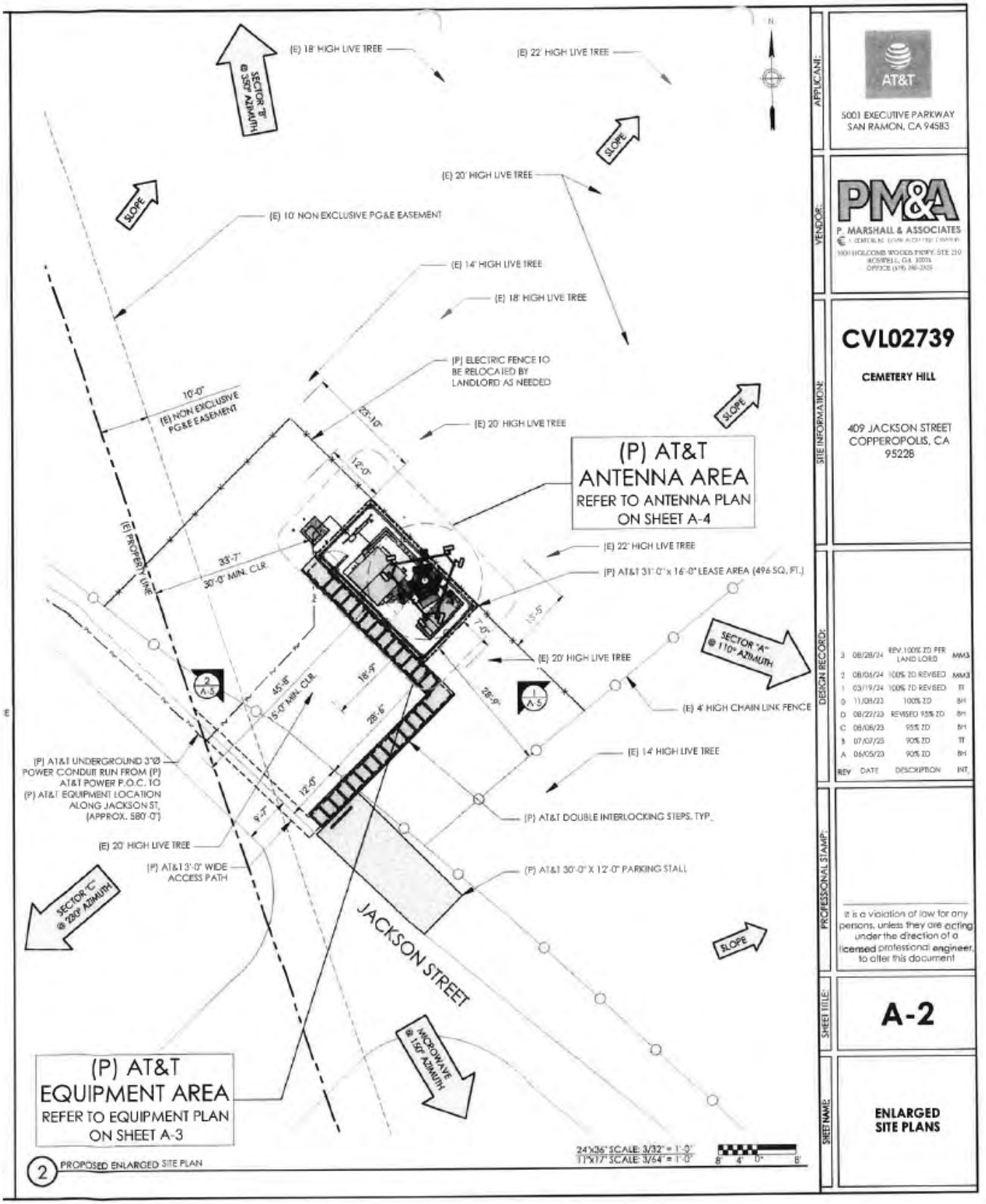

Figure 4 – Telecommunication Enlarged Site Plan

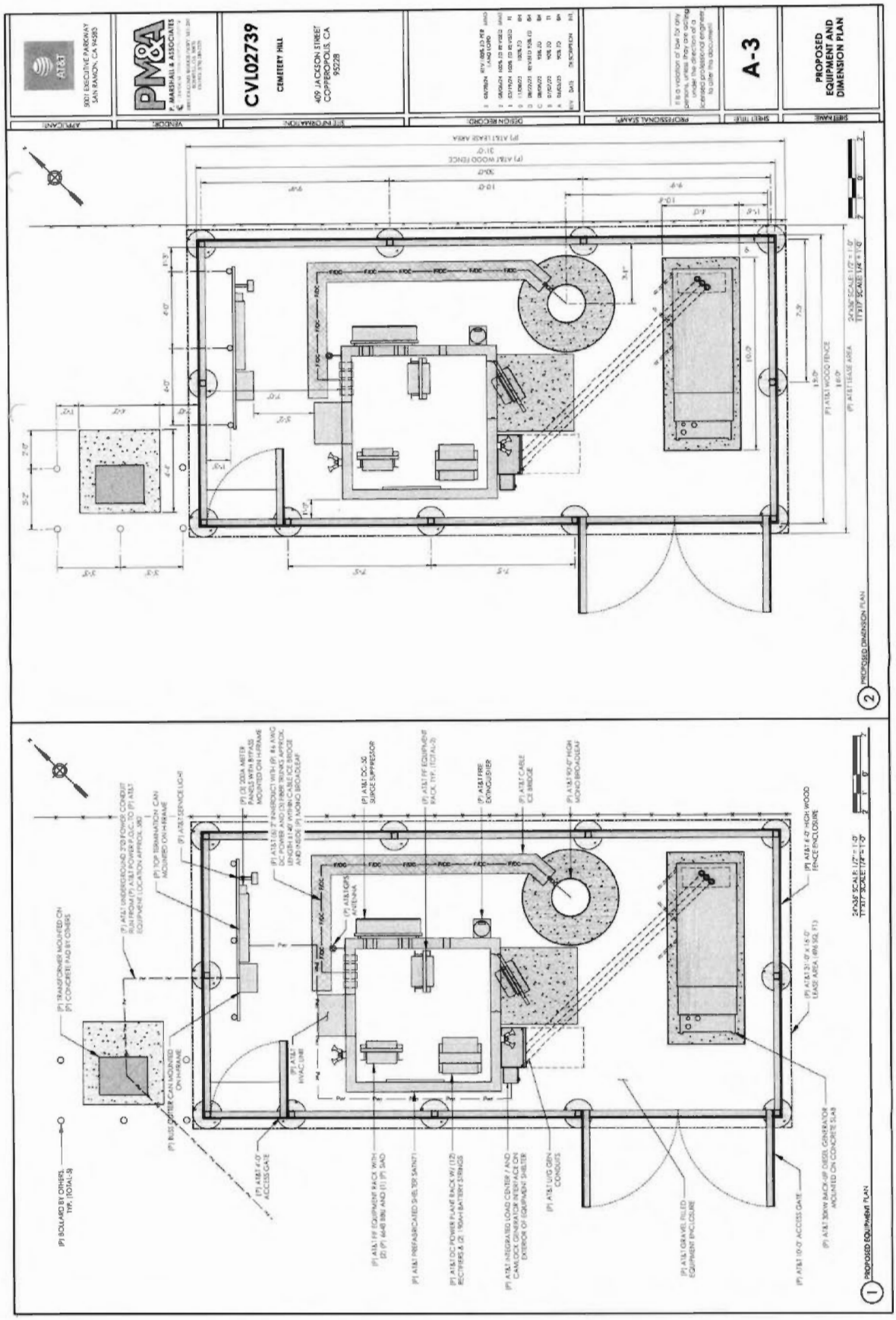

Figure 5 – Proposed Equipment and Dimension Plan

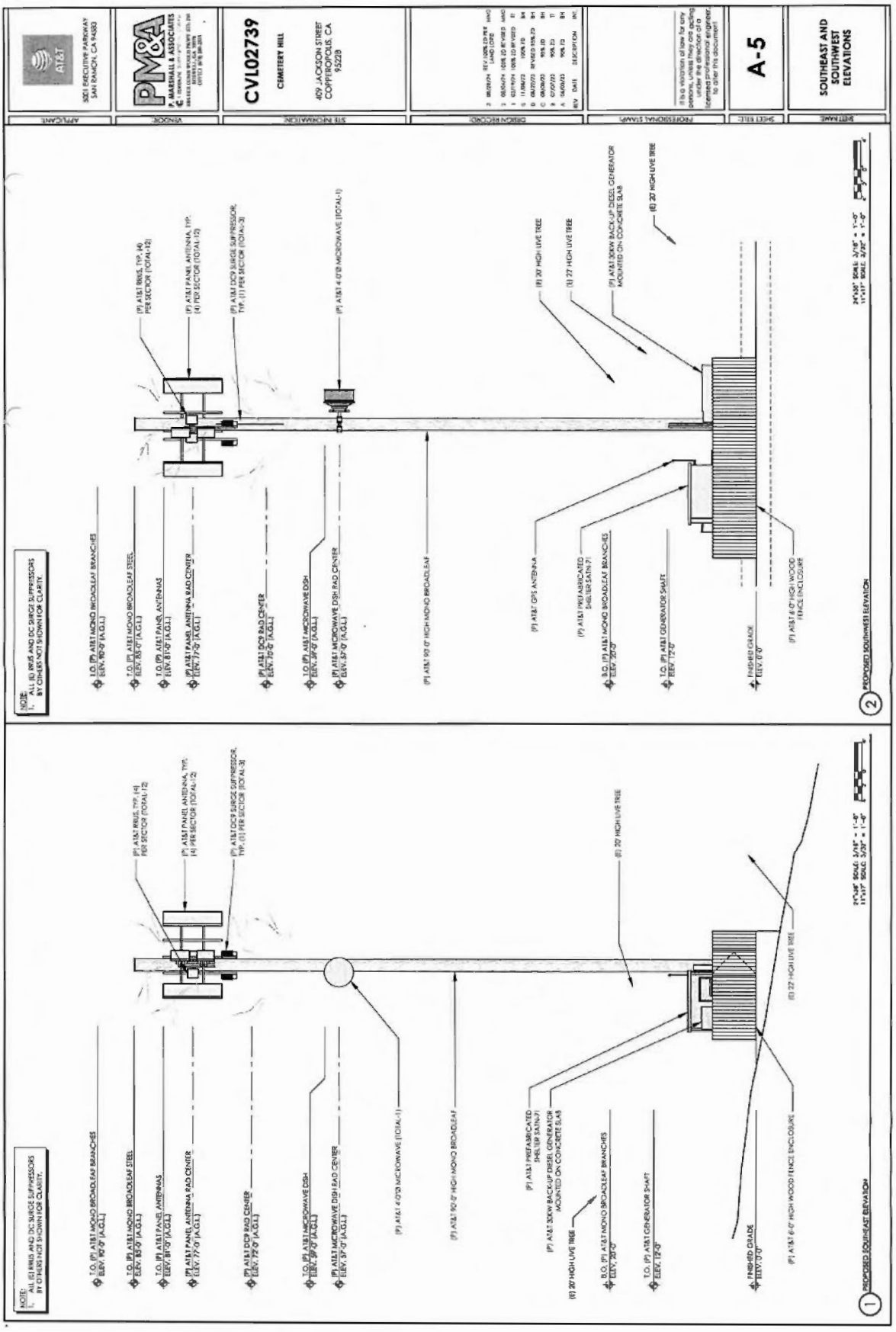

Figure 6 – Southwest and Southeast Elevations

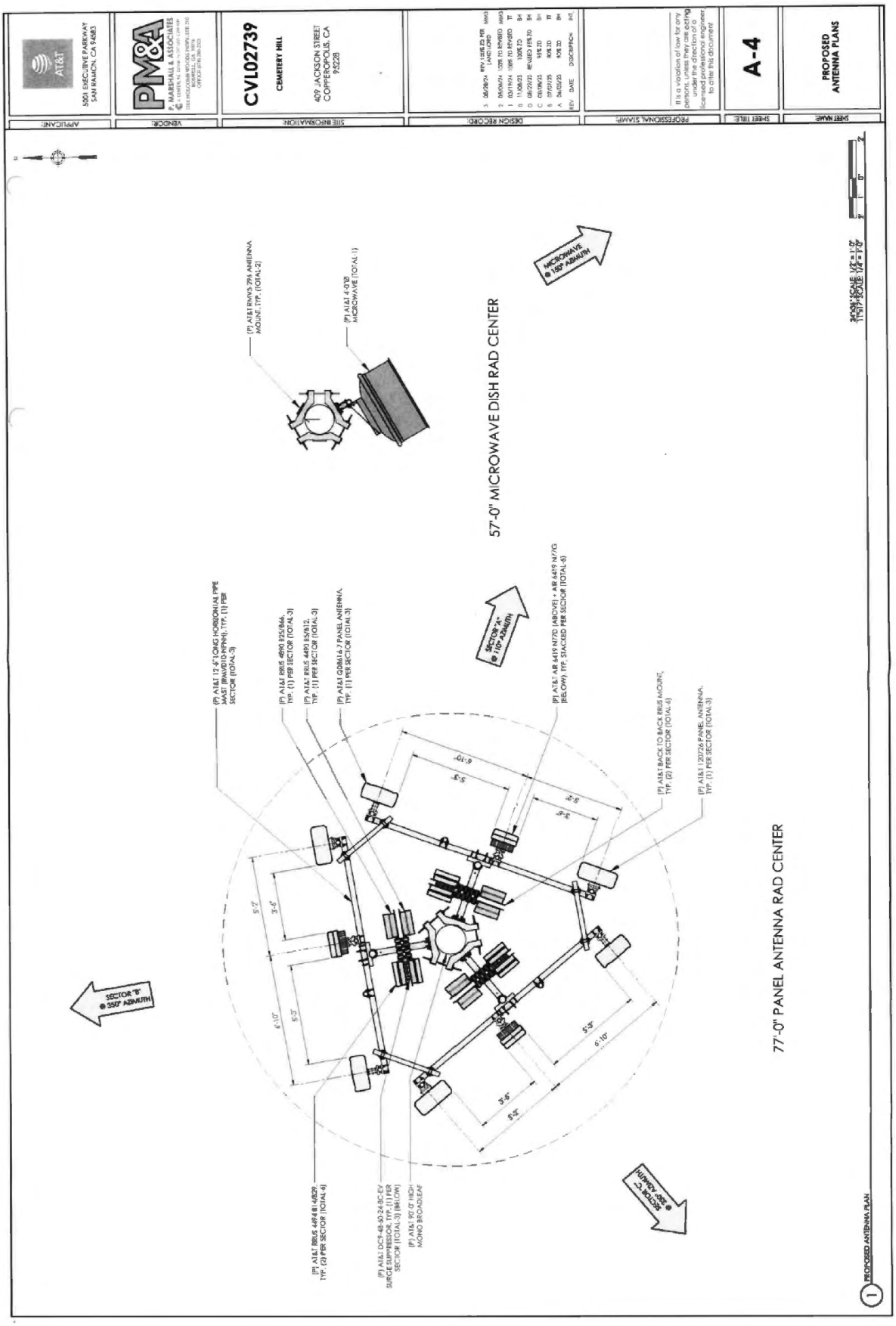

Figure 7 – Proposed Antenna Plan

I. AESTHETICS

Except as provided in Public Resources Code §21099, would the project:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

a) **Less Than Significant Impact** – A scenic vista is an area that is designated, signed, and accessible to the public for the express purposes of viewing and sightseeing. The County General Plan's Conservation and Open Space Element notes that the County's scenic resources are some of its most valued assets and include forests, rolling hills, ranches, agricultural land, historic landscapes, oak woodlands, rock formations and other unique topographical features, river corridors, lakes, and streams. The proposed Project site is located in a rural residential area within the community of Copperopolis. The surrounding area is largely residential, with a cemetery immediately west and commercial development further east. This area of the county is not designated as a scenic vista by the County General Plan, and while there are oaks onsite, the Biological Resource Impact Assessment states that no trees are expected to be removed as part of this project. The tower would use stealth construction to appear as a broadleaf tree (see Figure 8 below). Therefore, there will be a less than significant impact on a scenic vista.

b) **No Impact** – The proposed Project site is not located within view of a state scenic highway. The site is located approximately 800 feet from State Route 4 (SR 4); however, the nearest officially designated portion of SR 4 is the Ebbetts Pass National Scenic Byway, located approximately 26 miles east of the site in Arnold. The nearest Eligible State Scenic Highway is State Route 49 (SR 49), located approximately 9 miles east of the site. As the proposed site is not visible from any state scenic highways, there will be no impact to resources within a scenic highway.

c) **Less Than Significant Impact** – The subject parcel and surrounding area is a non-urbanized, rural residential area. The proposed Project site will be at least 30 feet from the nearest property line and

approximately 40 feet from the edge of Jackson Street, a public road. To maintain the area's character and aesthetic, the telecommunication facility will be constructed to appear as a broadleaf tree to blend in with the surrounding landscape (see Figure 8 below). The facility site will also be fenced with a 6-foot-high wooden fence, screening most of the associated accessory equipment from view apart from one transformer. Additionally, due to the design as a broadleaf tree, the proposed tower will not substantially degrade public views from other public vantage points including Main Street and Reeds Turnpike (see Figures 9 through 11 below). The site also does not contain any unique visual features that would be adversely affected by the proposed Project. Therefore, due to the design of the tower and screening of the site, there would be a less than significant impact on the existing visual character of the subject parcel and the surrounding area.

d) **No Impact** – Pursuant to Title 47, Sections 17.7 and 17.21, of the Federal Aviation Administration (FAA) code of regulations, telecommunication towers that are less than 200 feet (') in height above the ground do not require FAA notification and therefore no lighting or painting is required. The proposed tower is 90' high, with antennas to be attached at 81' or lower. The development plans for the proposed Project show a utility light located within the lease area. The light will be shielded and not be mounted higher than the 6-foot wooden fence. Therefore, the proposed Project would not create new sources of substantial lighting or glare that would generate a significant impact.

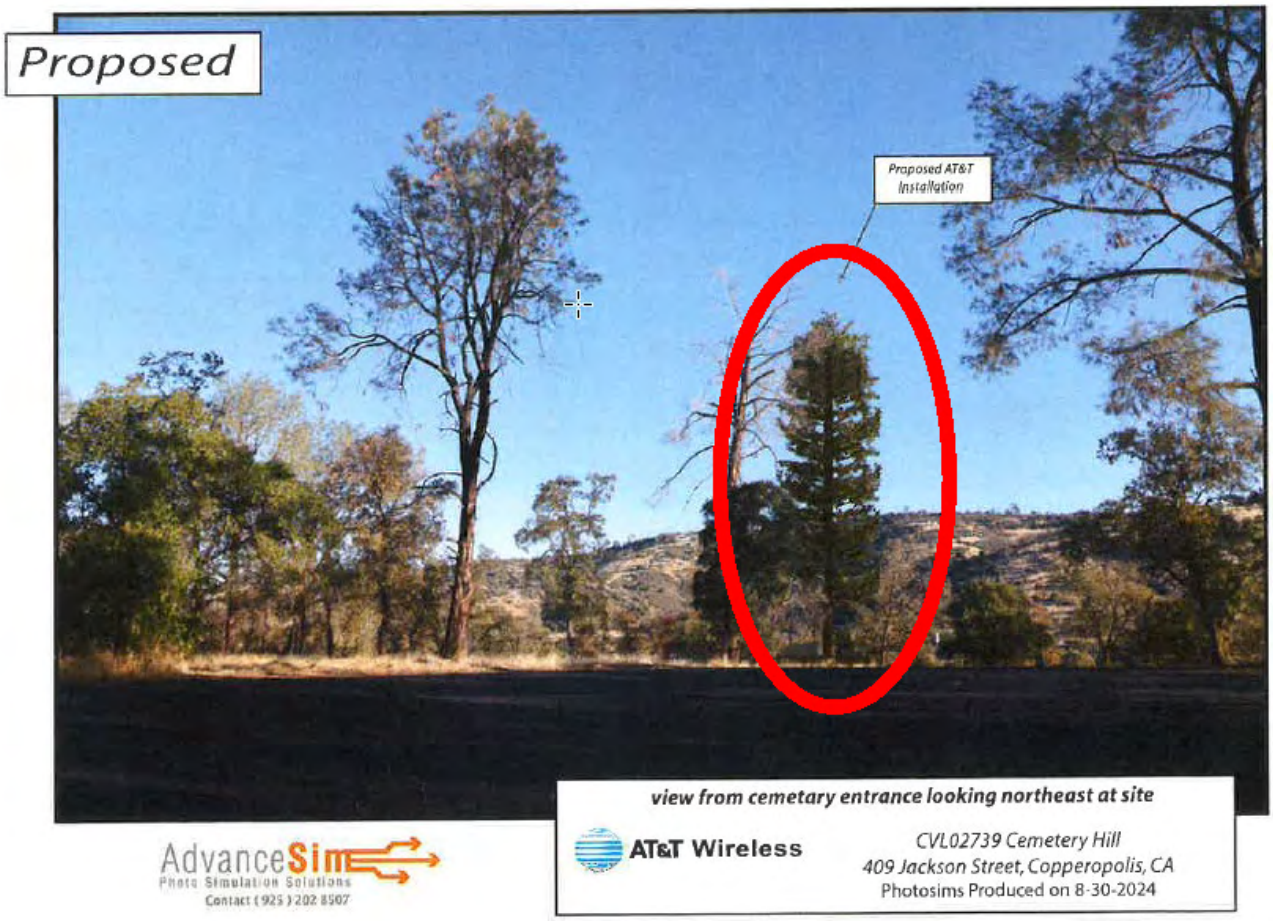

Figure 8 – Simulation of the proposed telecommunication facility looking northeast from the cemetery entrance

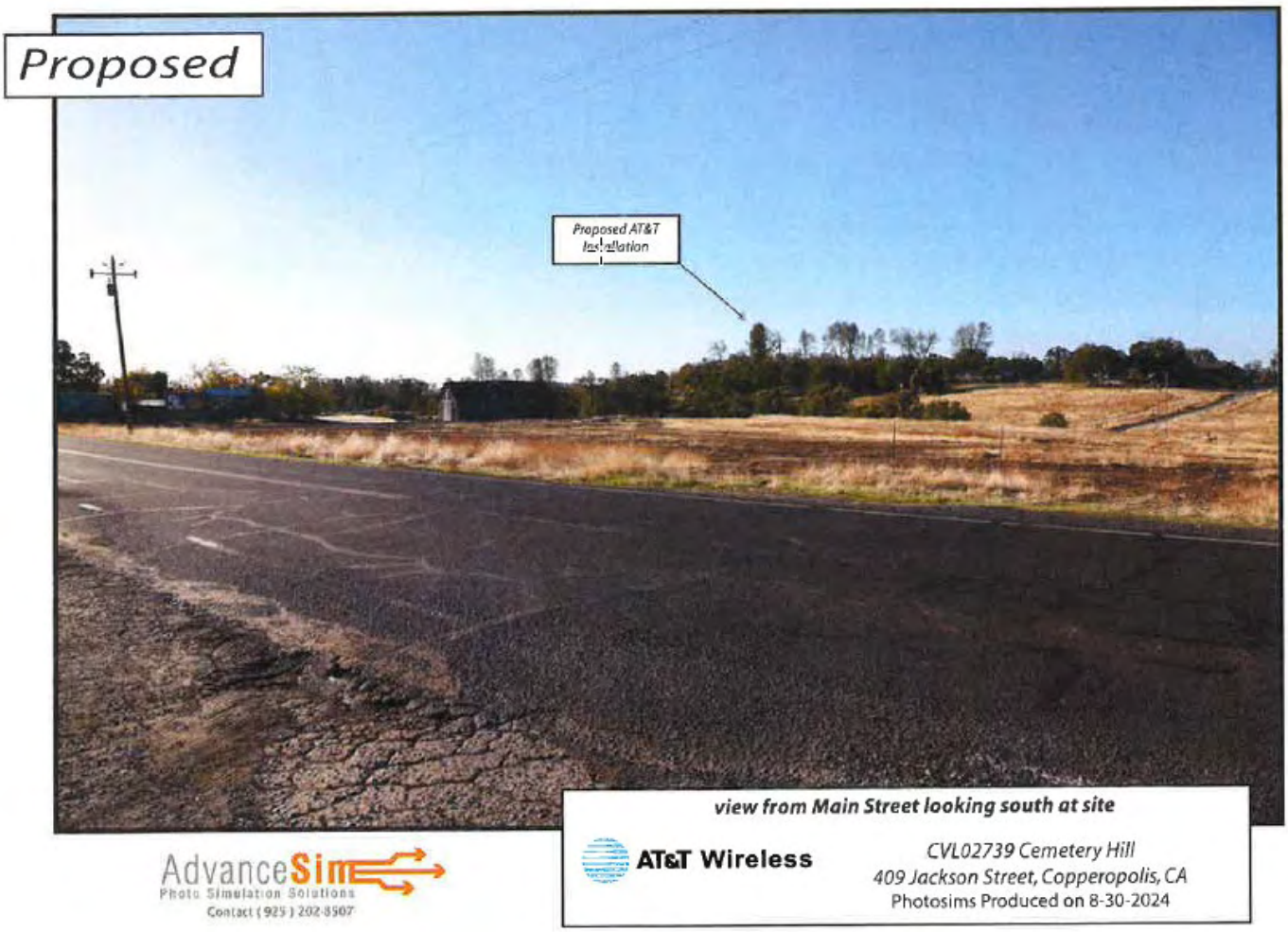

Figure 9 – Simulation of proposed telecommunication facility from Main Street (south)



Figure 10 – Simulation of proposed telecommunication facility from Main Street (southeast)



Figure 11 – Simulation of proposed telecommunication facility from Reeds Turnpike (northwest)

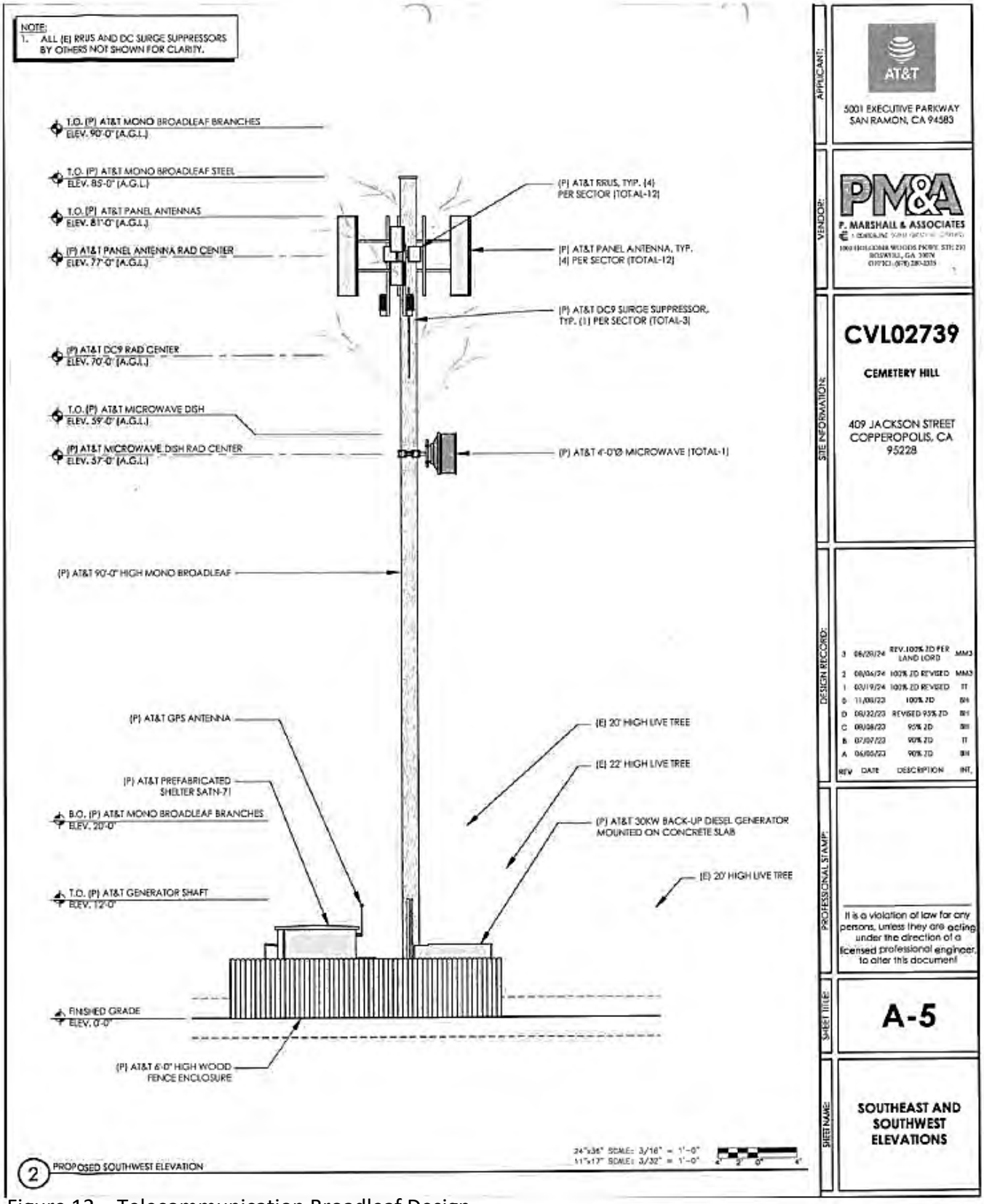

Figure 12 – Telecommunication Broadleaf Design

II. AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies my refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. 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 the 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 Forest Protocols adopted by the California Air Resources Board.

Would the project:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
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))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a-e) **No Impact** – The subject parcel is designated by the County General Plan as Community Center, which is not classified as high capability agriculture, and there are no agricultural activities occurring on the parcel. The California Department of Conservation's Important Farmland Finder map categorizes the subject property as "Grazing Land," defined as "Land on which the existing vegetation is suited to the grazing of livestock. This category is used only in California and was developed in

cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities." This indicates this area, including the subject parcel, is not a prime farmland, unique farmland, or farmland of Statewide importance. No prime farmland will be converted as a result of this Project. The subject parcel is also not restricted by a Williamson Act Contract (WAC), and the closest parcel under a WAC is approximately 900 feet west. Therefore, the proposed Project would not impact farmland or land within a Williamson Act Contract.

The County's General Plan and Zoning Ordinance also do not consider the project site to be high capability timberland or a timber production zone. Furthermore, there are no parcels zoned Timber Production within the vicinity of the proposed project site. Therefore, the proposed Project would not result in loss or conversion of forest land to a non-forest use. Thus, the proposed Project will not result in a conversion of farmland or forest land and there is no impact.

III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

a-b) **Less Than Significant Impact** – The proposed Project is located in the Mountain Counties Air Basin (MCAB) and is under the jurisdiction of the Calaveras County Air Pollution Control District (CCAPCD). CCAPCD manages the County's air quality through education and enforcement of CCAPCD rules and California Air Resources Board (CARB) measures and regulations. Although the County has experienced relatively good air quality, it has been classified as a non-attainment area for the State and Federal ozone standards (1-hour and 8-hour) and particulate matter standards (PM_{10}). The primary source of ozone precursors (i.e., ROG and NOx) is mobile sources, including cars, trucks, buses, construction equipment, and agricultural equipment. Common sources of particulate matter pollution in the County include residential, development, and land management related activities such as woodstoves, windblown dust and/or diesel from construction activities, and forestry management burning.

Emissions that could be created by the proposed Project would largely result from temporary construction activities, the temporary and intermittent use of the back-up generator, and vehicle trips for monthly maintenance, which is expected to occur every two months. Neither the average number of daily trips for the Project operations nor the construction activities are substantial or prolonged enough to create emissions that would violate applicable air quality standards or substantially contribute to an existing or projected air quality violation. The proposed Project would be subject to the applicable CCAPCD rules and, therefore, the proposed Project would have a less than significant impact related to the potential to conflict with or obstruct implementation of the applicable air quality plan, or to 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.

c) **Less Than Significant Impact** – Sensitive receptors are those individuals within the population that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptors include children, the elderly, and those with pre-existing serious health problems affected by air quality, and sensitive receptor locations include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residences.

The closest sensitive receptor to the project site is a residence on the same parcel, approximately 270 feet away from the lease area. The expected number of maintenance trips for the tower is once every two months, which would not exceed the 7.5 average daily trips a single-family residence can generate before it's considered significant. A back-up generator is also proposed as part of this project but will only be used in case of power outages to maintain service to the coverage area. The permitting process would include compliance with air quality, building, fire, noise standards and plans. The proposed Project does not entail the use of environmental contaminants that would expose sensitive receptors to substantial pollutant concentrations. Therefore, the proposed Project will have a less than significant impact on sensitive receptors.

d) **Less Than Significant Impact** – Odors or other emissions due to the construction and operation of the proposed telecommunication facility with one back-up generator are temporary and intermittent. These activities would have a less significant impact on the surrounding area.

IV. BIOLOGICAL RESOURCES

Would the project:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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 Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
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 Wildlife or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
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?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a) **Less Than Significant Impact with Mitigation** – A Biological Resources Impact Analysis (BRIA) prepared by Environmental Assessment Specialists, Inc. (EAS) was conducted on February 12, 2024, for the proposed Project (Appendix A). The subject parcel is within an area of critical habitat listed on the California Natural Diversity Database. According to the report, five (5) sensitive or special status plant species, six (6) sensitive or special status wildlife species, and one (1) sensitive plant community are known to be on or near the subject parcel: Chinese Camp brodiaea (*Brodiaea pallida*), Ewan's larkspur (*Delphinium hansenii* ssp. *ewanianum*), Forked hare-leaf (*Lagophylla dichotoma*), Tongue-leaf copper moss (*Scopelophila cataractae*), Tuolumne button-celery (*Eryngium pinnatisectum*), American badger (*Taxidea taxus*), Great blue heron (*Aredea herodias*), Great egret (*Ardea alba*), North American porcupine (*Erethzon dorsatum*), Tricolored blackbird (*Agelaius tricolor*), Western pond turtle (*Actinemys marmorata*), and a Northern hardpan vernal pool. The report found that the listed plant and wildlife species had a low likelihood of occurring on site due to insufficient habitat, in part because of previous site disturbance. The areas of the proposed telecommunication facility, trenching route, access road, and equipment compound installation were observed on foot for the above listed wildlife and plant species and sensitive communities, and none were observed. A Bat Roosting Evaluation by Caldwell Compliance dated October 29, 2024 found no evidence of bats roosting on or within 60 feet of the project footprint (Appendix B). No further focused studies were recommended. However, the California Department of Fish and Wildlife (CDFW) submitted comments with concerns regarding the potential project impacts to special-status species and the CDFW recommended Mitigation Measures BR-1 and BR-2 are below.

Mitigation Measure BR-1 (Biological Resources): American Badger Preconstruction Survey
The project proponent shall retain a qualified biologist to conduct an American badger preconstruction survey within 3 calendar days prior to the initiation of any ground-disturbing

or vegetations removing activities within suitable habitat for American badger. If no American badger individuals and/or burrows are found during the preconstruction survey, the biologist shall document the findings in a letter report to Calaveras County, and no further mitigation shall be required. If individuals and/or burrows are found, the project proponent shall consult with Calaveras County and CDFW, and a qualified biologist to determine an appropriate no disturbance buffer to avoid impacts to the den. No ground-disturbing or vegetation removing activities may occur until the appropriate buffer is established. If impacts cannot be avoided, den excavation and exclusion implementation shall take place during the non-breeding season (typically September 1 through January 1) in consultation with CDFW. No ground-disturbing or vegetation removing activities may occur until the appropriate mitigation is completed and reported to the Calaveras County Planning Department.

Mitigation Measure BR-2 (Biological Resources): Special-Status Plant Surveys

Prior to initiating ground-disturbing or vegetation removing activities, a qualified biologist shall survey the project site for special-status plant species (if surveys have not already been completed that year). Surveys shall be conducted during the appropriate time(s) of year, when the special-status plant species with the potential to be present on-site are at their most apparent and identifiable point. Regardless of whether special status plants are found, a memo detailing the findings must be submitted to Calaveras County. If special-status plants are found, a qualified biologist shall prepare a plan to avoid or minimize and mitigate impacts to the species and submit it for review and approval by Calaveras County. Project proponent shall not initiate project activities until the avoidance, minimization, and/or mitigation plan has been approved in writing by Calaveras County.

With adherence to the above mitigation measures, the proposed Project will have a less than significant impact on the above listed special status species.

b-c) **No Impact** – There are no creeks, wetlands, or riparian habitats located on the subject parcel. The nearest watercourse is Copper Creek, an intermittent stream which is located approximately 400 feet to the east of the subject parcel. The nearest wetland is approximately 800 feet west of the project site. Therefore, the project will not have an impact on these resources.

d) **Less Than Significant Impact with Mitigation** – The BRIA determined that no avian nests or activity was observed during the study of the site on February 12, 2024. However, the trees in the surrounding area provide suitable nesting habitat for several avian species protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) (16 U.S.C., § 703-712). According to the CDFW, suitable foraging and nesting habitat for birds and birds of prey is present on and adjacent to the Project site. Ground disturbance and other construction activities could result in the take of migratory native bird species, including but not limited to ground nesting species such as Killdeer (Charadrius vociferus), Northern Harrier (Circus hudsonius), California Quail (Callipepla californica), and Western Meadowlark (Sturnella neglecta). Therefore, the CDFW recommends installation of the proposed tower to be outside the nesting season generally extending from early February through September including yearly variability due to weather conditions. With the following mitigation measure requiring a study if project-related activities occur during nesting season, the Project will have a less than significant impact.

Mitigation Measure BR-3 (Biological Resources): Nesting Bird Survey
If project-related activities are scheduled between February 1 to August 31 (the typical nesting season), a focused survey for nests shall be conducted by a qualified biologist within no greater than fifteen (15) calendar days prior to the beginning of ground-disturbing or vegetation removing activities. The qualified biologist shall survey a minimum radius of 500-feet for migratory birds and 1/2-mile for raptors around the Project area that can be accessed by the project proponent. The results of the survey shall be provided to Calaveras County for review upon completion. If no active nests are found, project activities may proceed as scheduled. If an active nest is found, active nests should be avoided, and a no disturbance or destruction buffer shall be determined and established by a qualified biologist. The buffer shall be kept in place until after the breeding nesting season or the qualified biologist confirms the young have fledged, are foraging independently, and the nest is no longer active for the season. The extent of these buffers shall be determined by the qualified biologist and will depend on the species present, the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. If a lapse in project-related work of fourteen (14) calendar days or longer occurs, the qualified biologist shall complete another focused survey before Project work can be reinitiated.

e) **Less Than Significant Impact with Mitigation –** The BRIA states that several mature valley oak trees (Quecus lobata) and blue oak trees (Quercus douglasii) occur within the immediate vicinity of the proposed lease area and the utility line trench route and access road. The BRIA states that no trees are expected to be removed as a part of the proposed Project. However, work may occur in the drip line of the oaks and the BRIA recommends minimizing ground disturbance in the drip line to the greatest extent possible. Therefore, the proposed Project has been conditioned in accordance with the Calaveras County General Plan regarding oak woodlands and incorporates BRIA recommendations for avoidance, including digging trench routes by hand rather than with heavy equipment or power tools when working in the drip line. The proposed Project will have a less than significant impact with implementation of this mitigation measure.

Mitigation Measure BR-4 (Biological Resources): Implementation Measure COS-4D Oak Woodland of Calaveras County General Plan
Before any ground-disturbing or vegetation removing activities, the oak woodlands on the project site shall be mapped by a certified arborist and the extent of woodland canopy proposed to be removed as a result of the proposed project shall be identified. A copy of the mapped area shall be provided to Calaveras County upon completion. If avoidance is utilized for all or part of the mitigation, the oak woodland to be avoided by the project shall be protected by identifying the dripline of the oak woodland canopy to be preserved on all construction plans and by implementation of best management practices or

other measures recommended by the certified arborist to prevent damage to the woodland to be preserved. Work in the dripline of any oaks must be done by hand rather than with power tools or heavy equipment.

Mitigation consistent with the provisions of PRC 21083.4, other than avoidance, shall be applied at a ratio of 1:1 to 2:1. The ratio and the type(s) of mitigation chosen shall be informed by the recommendations of the certified arborist with respect to providing similar habitat functions and values as the woodland habitat removed as part of the project.

If mitigation consisting of replacement planting, transplanting and/or identification of off-site mitigation through acquisition of a conservation easement is utilized, it shall be applied based on the recommendations of the certified arborist that the replacement habitat will provide similar habitat functions and values as the woodland habitat removed as a part of the project. Mitigation shall take place in Calaveras County.

f) **No Impact** – The project site is not located within the boundaries of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plant. Therefore, the proposed Project would not conflict with any local policies, ordinances, or plans protecting biological resources. No impact will occur.

V. CULTURAL RESOURCES

Would the project:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

a-c) **Less Than Significant Impact with Mitigation** – A Cultural Resources Assessment (CRA) was conducted by Environmental Assessment Specialists, Inc. beginning on January 16, 2024 (Appendix C). The investigation found no significant cultural or historic resources within the direct Area of Potential Effects (APE), the area where the telecommunication facility would be built including 580 feet of proposed underground power conduit along Jackson Street. The indirect APE, the area within a one-half mile radius of the proposed facility, was also researched. There were 14 cultural resources recorded in this radius. Additionally, of 12 area-specific survey reports are on file with Central California Information Center, none included the project area, suggesting the project area has not been previously surveyed for cultural resources. A pedestrian survey of the project area, including the proposed utility easement, was also performed by a qualified archaeologist which yielded no cultural resources.

Furthermore, sixteen Native American tribal members were contacted by NAHC as part of the study, and no responses were received. The pedestrian survey of the area of disturbance did not identify any pre-contact or historic-age cultural resources. Future development would be required to comply with the required procedures of conduct following the accidental discovery of human remains as mandated in the Health and Safety Code Section 7050.5, Public Resources Code Section 5097.98, and the California Code of Regulations Section 15064.5(e) (CEQA). Based on the results of the CRA, no further studies or archaeological work were recommended. Therefore, no impact to historical or archaeological resources is expected.

In the event of accidental discovery of human remains, the procedures pursuant to Title 14 section 15064.5 of CA Code of Regulations should be followed. As stated, there is no evidence of cultural resources in the project area; therefore, no impact to historical, cultural, or archaeological resources are expected to occur. However, Section 7050.5 of the California Health and Safety Code states that if human remains are found during construction activities, all operations are to cease until the County coroner has determined that the remains are not subject to the provisions of law concerning investigation of the circumstances in the manner provided in Section 5097.98 of the Public Resources Code. The potential exists to possibly uncover previously unidentified resources; therefore, it is concluded that there is a less than significant impact with the mitigation measure incorporated.

Mitigation Measure CR-1 (Cultural Resources): Discovery of Cultural Resources
In accordance with PRC Section 21082 and Section 15064.5 of the CEQA Guidelines and [36 CFR 800] of Section 106 of the NHPA, if buried cultural resources are discovered during construction, operations shall stop in the immediate vicinity of the find and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The archaeologist shall make recommendations to the lead agency concerning appropriate measures that will be implemented to protect the resources, including but not limited to excavation and evaluation of the finds, consistent with Section 15064.5 of the CEQA Guidelines and 36 CFR 800. Cultural resources could consist of but are not limited to stone, bone, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites. In accordance with PRC Section 21082 and Section 15064.5 of the CEQA Guidelines, no further grading or construction activity shall occur within 50 feet of the discovery until the lead agency approves the measures to protect these resources. In addition, reasonable efforts to avoid, minimize, or mitigate adverse effects to the property will be taken and the State Historic Preservation Officer (SHPO) and Indian tribes with concerns about the property, and the Advisory Council on Historic Preservation (Council) will be notified within 48 hours in compliance with 36 CFR 800.13(b)(3).

Mitigation Measure CR-2 (Cultural Resources): Discovery of Human Remains
In the event of an accidental discovery or recognition of any human remains, Public Resource Code (PRC) Section 5097.98 must be followed. In this instance, once project-related earthmoving begins and if there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains, and any associated grave goods as provided in PRC Section 5097.98, or

2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the project area in a location not subject to further subsurface disturbance:
    - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission;
    - The descendent identified fails to make a recommendation; or,
    - The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

VI. ENERGY

Would the project:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

a) **Less Than Significant Impact –** The proposed telecommunication facility will use electric power from the grid. Pacific Gas & Electric (PG&E) was notified of the proposed Project and provided a response stating that the Project did not appear to directly interfere with existing PG&E facilities. According to the Alternative Site Analysis (Appendix D), this location was chosen because of the existing access and power for the proposed site. An existing AT&T wireless telecommunication site is being decommissioned, and this tower would replace the coverage being lost. The proposed Project would provide wireless service to an underserved area, and therefore, the operation of the telecommunication facility would not represent a wasteful, inefficient, or unnecessary consumption of energy resources. The proposed telecommunication facility will be built to all

applicable energy codes, to prevent energy waste and unnecessary consumption. Therefore, the project will have a less than significant impact on energy resources.

b) **No Impact –** Calaveras County has not adopted a local renewable energy or energy efficient plan. All new construction must comply with adopted State and federal regulations and plans must be certified by a licensed engineer in order to comply. Therefore, the project will not have an impact on renewable energy nor energy efficiency.

VII. GEOLOGY AND SOILS

Would the project:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Directly or indirectly cause 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.	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☐	☐	☐	☒
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv. Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

DISCUSSION

a) **No Impact** – Calaveras County lies within the Sierra Block, an area of historically low seismicity. Though ground shaking from earthquakes with epicenters located elsewhere have been felt, no major earthquakes have been recorded within the County. The closest known source of large earthquakes is the Sierra Frontal Fault System along the eastern margin of the Sierra Nevada, which includes the Carson Valley Fault. This fault is located east of the County and has been evaluated as capable of generating earthquakes of up to magnitude 7.0. However, the risk of surface rupture is not considered sufficient to restrict the development found in the County. The parcel and surrounding area were checked for faults using the "EQ Zapp: California Earthquake Hazards Zone Application" online map. No local faults are noted on the map. Sites in Calaveras County with liquefaction potential would be those on alluvial deposits having groundwater and sand or silt layers of uniform grain sizes within about 30 feet of the surface. Such conditions are not found on the subject parcel and are generally not present in the County. Due to geology and slope, the risk of substantial adverse effects due to landslides is minimal (See Discussion b-c below). Therefore, no impact would occur.

b-c) **Less than Significant Impact** – The areas of landslide concern are those that include high elevations with steep ravines and gulches associated with river and stream channels. Located at approximately 1,030 feet in elevation, the parcel has no ravines or gulches associated with rivers or stream channels. According to the USDA Natural Resources Conservation Service soils maps, the subject parcel contains soil classified as "Loafercreek-Gopheridge complex 15 to 30 percent slopes and well drained." Furthermore, the site is described to have 20 to 39 inches to paralithic bed rock and 20-29 inches to lithic bedrock, further enhancing stability. The parcel slopes gently down to the northeast and is vegetated, which increases the stability of the soil, creating less probability of erosion. If erosion of soils were to occur, the risk of loss, injury or death is low because the development potential is limited. The use of best management practices to reduce the risk of erosion is a requirement of all grading and building in the County. Based on the stable soil types and shallow bedrock in this soil type, the Project will have a less than significant impact regarding soil erosion, topsoil, and instability.

d) **Less Than Significant Impact** – According to the USDA National Cooperative Soil Survey, Loafercreek-Gopheridge complex are described as "moderately deep, well drained soils that formed in colluvium and residuum from metavolcanic rocks, mainly greenschist." These soils are not considered expansive soils, and the proposed Project will have a less than significant impact.

e) **No Impact** – Installation of an unmanned telecommunication facility will not create an increased need or use of septic tanks or alternative wastewater disposal systems. Therefore, no impact would occur.

f) **No Impact** – There are no known unique paleontological resources or sites or unique geologic features on or near the subject parcel. Therefore, no impact would occur.

VIII. GREENHOUSE GAS EMISSIONS

POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT

Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

a) **Less than Significant Impact** – Construction emissions will largely be limited to the construction employees travelling to the site, creation, construction, and installation of proposed improvements. The occasional use of the back-up generator would contribute to emissions, but the generator will be used infrequently and only temporarily. The proposed Project does not involve a site modification or operational usage that meets criteria for emissions generating uses. Although the telecommunication facility would generate periodic vehicular trips for management and maintenance, the proposed Project would fall below the CCAPCD thresholds. Future construction would be required to comply with the updated Title 24 of the California Code of Regulations established by the Energy Commission. Therefore, the amount of greenhouse gas emissions produced by the proposed Project would be less than significant.

b) **No Impact** – Calaveras County has not yet adopted a plan, policy, or ordinance for the purposes of reducing greenhouse gas emissions. All new construction must comply with adopted State and Federal Regulations. Because the proposed Project is not creating a direct source of long-term emissions, and the indirect source is expected to be reduced over time, the proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Therefore, no impact would occur.

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
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?				
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 or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

a) **Less Than Significant Impact** – The Environmental Health Department requires a Hazardous Materials Business Plan to be put in place if hazardous materials are stored or handled in quantities that equal or exceed 55 gallons for liquid, 500 pounds for solids, or 200 cubic feet for gases. All applicable Federal, State, and County regulations will apply to all hazardous materials that may be used or stored on the subject parcel in the future, such as the diesel for the back-up generator. The proposed Project will not involve the regular transport of hazardous materials. Therefore, assuming proper storage and use of any hazardous materials in compliance with existing regulations, the potential for significant impacts from these materials is less than significant.

Although cell towers emit radio frequency (RF) emissions, Federal law preempts local decisions about telecommunication towers such as this one based on direct or indirect environmental impacts from radio frequency (RF) emissions, assuming the provider is in compliance with the Federal Communication Commission's RF guidelines. This is further discussed in Section, XXI Mandatory Findings of Significance with reference to the electromagnetic energy (EME) exposure report (Appendix F) that was submitted as part of this application. This Project, as designed, would meet these RF guidelines.

b) **Less Than Significant Impact** – Hazardous materials such as diesel, maintenance fluids, and paints will be used onsite during construction. Should they be stored onsite, these materials would be stored in secure locations to reduce the potential for upset or accident conditions. Assuming proper storage and use of these materials, the potential for significant impacts from these materials is less than significant.

c) **Less Than Significant Impact** – The Copperopolis Elementary School is approximately one-quarter mile from the project site. However, the only hazardous material permanently onsite is the diesel used in the back-up generator. The emissions from the generator will be minimal and therefore will not create a significant impact to the school.

As stated in Section IX(a) above, local decisions based on the direct and indirect environmental impacts from radio frequency (RF) emissions produced by telecommunication facilities, assuming the provider is in compliance with the Federal Communication Commission's RF guidelines, are

preempted by Federal law. This is further discussed in Section, XXI Mandatory Findings of Significance with reference to the RF study that was submitted as part of this application. With the telecommunications facility being in substantial conformance with the Federal Communication Commission's RF guidelines, the impacts to the school will be less than significant.

d) **No Impact** – Based on a search of the California Department of Toxic Substances Control database, the project site does not contain any known EPA National Priority List sites, State response sites, voluntary cleanup sites, or any school cleanup sites. No impact would occur as the project site is not on any known list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

e) **No Impact** – The subject parcel is not within an airport land use plan or within 2 miles of a public airport or public use airport. Therefore, no impact will occur.

f) **No Impact** – There is no adopted emergency response plan or emergency evacuation plan specifically involving the parcel in question. Jackson Street would provide emergency access as necessary, and the proposed Project does not impede any traffic circulation or alter any roads. The Public Works Department reviewed the project and recommended a commercial encroachment permit as a condition of approval. Therefore, there will be no impact to any adopted emergency response plan or emergency evacuation plan.

g) **Less than Significant Impact** – According to the California Department of Forestry and Fire Protection's (CalFire) Hazard Severity Zone Map, the project site is located within a State Responsibility Area (SRA) for fire protection and is classified as a Very High Fire Hazard Severity Zone. The California Department of Forestry (CalFire) is the primary emergency response agency responsible for fire suppression and prevention at this site. The proposed Project would be required to comply with current CalFire and California Building Code requirements for fire safety. The project does not propose uses or activities that would increase exposure of people and/or structures to significant loss, injury, or death involving wildland fires. Therefore, the potential to increase the risk for death and injury due to a wildfire is less than significant.

X. HYDROLOGY AND WATER QUALITY

Would the project:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☐	☒
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
(i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or offsite;	☐	☐	☒	☐
(iii) 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; or	☐	☐	☒	☐
(iv) impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

a) **No Impact** – The proposed telecommunication facility will not cause any waste discharge or similar effluent that would cause a degradation of ground water quality. All construction and operation of uses on the parcel are subject to all applicable codes, policies, and regulations regarding waste discharge and water quality. Therefore, no impacts would occur.

b) **No Impact** – The proposed telecommunication facility is within the Calaveras County Water District's service area for water but does not propose to use any water for operation of the telecommunication facility. For this reason, the proposed Project will not use, and therefore not decrease, groundwater supplies. The proposed Project would add a minor amount of impervious surface area to the project site for the yard, but this amount will have no significant impact on groundwater recharge. Therefore, there will be no impact on groundwater supplies or recharge.

c) **Less Than Significant Impact –** There are no bodies of water, waterways, or flood zones on the project site. The 16-foot by 31-foot lease area and associated improvements of the proposed Project would not substantially alter the existing drainage patterns of the site or surrounding area. As the proposed Project would be a minor physical change to the site, it would not result in an impact to, or substantially alter, the drainage pattern on site or cause a significant increase in erosion or siltation on or off the project site. Compliance with applicable codes, policies, and regulations regarding waste discharge and water quality is required and will ensure that project operations would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Compliance with the County Road Ordinance (Chapter 12.02), Encroachment Ordinance (Ch 12.08), Storm Water Quality Ordinance (13.01), and the Grading & Draining Ordinance (15.05) is required in order to prevent substantial impacts to

erosion and pollution of water due to construction. These regulations are enforced by the Public Works and Building Departments during the grading and building permit processes. Compliance with these regulations and the small-scale of this project ensures there will not be substantial erosion, siltation or runoff that would impact the site or area off-site. Therefore, there will be a less than significant impact.

d) **No Impact** – The subject parcel is not located in a flood hazard, tsunami, or seiche zone, and would not be at risk of releasing pollutants due to inundation. Therefore, no impact would occur.

e) **No Impact** – The subject parcel is not located with the Eastern San Joaquin Groundwater Sustainability boundary. It also does not include development that would impede or redirect flood flows. The proposed Project will not obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, no impact would occur.

XI. LAND USE AND PLANNING

Would the project:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Physically divide an established community?	☐	☐	☐	☒
b) Couse a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

a-b) **No Impact** – The proposed Project would not result in the division of an established community as all development will be limited to the subject parcel and trenching along an existing road. No new roads will be constructed. The subject parcel is zoned R1 and does not have an Environmental Protection overlay zone. The proposed Project would comply with the Calaveras County General Plan, the Calaveras County Zoning Ordinance, applicable County Code sections, and all other applicable regulations. There are no habitat conservation plans or natural community conservation plans applicable to the property. There are also no special design review or aesthetic requirements in place for the proposed site. Following approval and validation of the use permit, the project would not conflict with applicable land use plans, policies, regulations, or surrounding uses. Therefore, there will be no impact.

XII. MINERAL RESOURCES

Would the project:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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?	☐	☐	☐	☒
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?

a-b) **No Impact** –The project site is not located within the County's Mineral Extraction (ME) Overlay, nor is the subject parcel designated as Resource Production (RP) or Working Lands (WL), which are land use designations for areas within the County known to contain mineral resources. The project site is also not within or adjacent to any active mining operations. Thus, the proposed Project would not result in the loss of availability of any known mineral resources of value to the region or result in the loss of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, no impact would occur.

XIII. NOISE

Would the project result in:	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Generation of a substantial, temporary, or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or 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 levels?	☐	☐	☐	☒

a-b) **Less than Significant Impact** – The proposed Project would result in a temporary increase in noise levels due to grading and construction, as well as the intermittent use of a back-up generator. Pursuant to Chapter 9.02 Noise Control in County Code, the normally acceptable standards of outdoor noise levels for residential land use types are 60 dB between 7:00 a.m. and 10:00 p.m., and 50 dB between 10:00 p.m. and 7:00 a.m. Additionally, sound from construction activities, provided that all construction is in or adjacent to residential areas, shall be limited to the daytime hours between 7:00 a.m. and 6:00 p.m., unless otherwise subject to conditions in a valid discretionary land use permit that addresses construction noise associated with the project.

A noise study was conducted on January 14, 2025, by J5 Infrastructure Partners (Appendix E) to determine if the telecommunication facility will comply with the County's noise ordinance. The study analyzed the noise levels produced by the back-up generator and HVAC units. The study anticipates the noise at the closest property line (the west property line), approximately 60 feet away, would be 22.83 dB when accounting for the wood fence around the lease area. The report found that the anticipated noise level of the HVAC units and emergency generator will be lower

than the maximum nighttime levels of 50 dBA and the maximum daytime noise levels of 60 dBA of Calaveras County Code § 9.02.030 with the installation of the proposed wood fence. Furthermore, the proposed Project would not generate excessive groundborne vibration or groundborne noise levels. Therefore, when constructed in compliance with the submitted development plans, there is a less than significant impact.

c) **No Impact** – The subject parcel is approximately 1.75 miles from a private airstrip located northwest of Highway 4. However, the proposed Project is to construct an unmanned telecommunication facility with a projection of maintenance every two months. Therefore, no residents or workers will be exposed to excessive noise levels, and there will be no impact.

XIV. POPULATION AND HOUSING

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a-b) No Impact – The establishment of a telecommunication facility would not induce permanent population growth either directly or indirectly. No improvements such as road extensions or housing are proposed. No new businesses are opening, and the facility is only expected to be visited by one or two employees approximately once a month for maintenance. Moreover, the project does not propose any new services that would induce substantial population growth or displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, no impact would occur.

XV. PUBLIC SERVICES

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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:				
Fire protection?	☐	☐	☐	☒

Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

a) **No Impact**– Public services are currently provided to the project area and the additional demand placed on existing services as a result of the proposed Project would be minimal. The proposed telecommunication facility does not significantly increase the need for public services, physically impact, or require new or expanded government facilities. Operation of the telecommunication facility does not require increased fire or police services. This will be an unmanned facility which one or two employees will come to approximately once a month for maintenance. The project does not propose the creation of more housing, recreational facilities, or businesses, so additional public facilities or services will not be needed to support the operation of this project. Therefore, no impact would occur.

XVI. RECREATION

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

a-b) **No Impact** – The proposed Project does not include recreation facilities or require the construction or expansion of such facilities. The addition of a telecommunication facility will not substantially accelerate the deterioration of any existing parks or other recreational facilities because the project would not increase the housing stock or population in the County. Therefore, no impact would occur.

XVII. TRANSPORTATION

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☐	☒
b) Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?	☐	☐	☒	☐

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☒	☐

a) **No Impact** – The proposed construction of a telecommunications facility would use the existing infrastructure, taking access off Jackson Street, a county-maintained road. The proposed Project would not generate a significant amount of new traffic as it is not a public use and expected traffic to the site is approximately once every two months for maintenance. On the property, a private access path for the telecommunication facility will be added for use by the leaseholder. The proposed Project does not require a traffic study, or access to transit, bicycle or pedestrian facilities. The Public Works Department conditioned the project to obtain a commercial encroachment permit which would be required to comply with County code. The proposed Project would also be required to comply with fire and road standards and will therefore not conflict with any plans, ordinances, or policies pertaining to transportation. Thus, the proposed Project would have less than significant impacts.

b) **Less than Significant Impact –** Although the Calaveras County Council of Governments (CCOG) previously prepared SB 743 vehicle miles traveled (VMT) implementation guidelines, no CEQA thresholds have been adopted at this time. The Governor's Office of Planning and Research and the California Natural Resources Agency has certified and adopted changes to the CEQA Guidelines that identify Vehicle Miles Traveled (VMT) as the most appropriate metric to evaluate a project's transportation impacts. The Technical Advisory on Evaluating Transportation Impacts in CEQA, states that "absent substantial evidence indicating that a project would generate a potentially significant level of VMT, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less than significant transportation impact." The proposed telecommunication facility is permitted in the R1 zone with the approval of an Administrative Use Permit (AUP). There are no high-volume transit stops in this rural residential subdivision. The unmanned facility is expected to be maintained approximately once every two months and is not expected to generate additional traffic as it is not open to the public. The proposed Project would not result in a significant change to the current vehicle miles traveled attributable to the current use. Therefore, in conjunction with the Technical Advisory mentioned above, the project is expected to have a less than significant impact.

c) **No Impact** – The subject parcel takes access via Jackson Street, a county-maintained road. There are no known hazardous design features existing and none are proposed. The proposed Project will not require road modifications or improvements beyond the commercial encroachment the Public Works Department has recommended as a condition of approval for the AUP. Therefore, the project will have no impact.

d) **Less Than Significant Impact** – The site plan shows the telecommunication facility lease area approximately 40' from Jackson Street and that a parking space is proposed adjacent to Jackson Street, off the road itself. All roads in the area would remain open and there will be adequate space for emergency response providers to access the site and to pass by on Jackson Street unimpeded. Local and State emergency services, including the Copperopolis Fire Protection District, have been

notified of the proposed Project. No response was provided from emergency service providers, including the fire district. Permitting procedures from the land use departments will ensure adequate emergency access; therefore, the proposed Project will have a less than significant impact.

XVIII. TRIBAL CULTURAL RESOURCES

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

a-b) **Less Than Signification Impact with Mitigation** – As discussed in Section V. Cultural Resources, a Cultural Resource Assessment was conducted by Environmental Assessment Specialists, Inc. in January of 2024 (Appendix C). There are no known cultural or historic resources within the Project site.

As part of the processing of the project application, County staff-initiated consultation with tribes that have requested formal notification of proposed projects within their geographic area of traditional and cultural affiliation per AB 52 Notification Request, Public Resources Code Section 21080.3(b). The Calaveras Band of Miwuk Indians, the California Valley Miwok Tribe, and the Ione Band of Miwok Indians, Buena Vista Rancheria, and Washoe Tribe of Nevada and California have been notified of this project. The California Valley Miwok Tribe responded with no comment or concern regarding the project. No other responses were received from the tribes.

However, should accidental discovery of any cultural artifacts or human remains occur during construction, the project will be halted, and tribes will be contacted. In the case of human remains, the County Coroner will be contacted. If any site excavation occurs in the future and any artifacts uncovered, the project would be subject to laws governing the accidental discovery. Therefore, the Project will have a less than significant impact with mitigations incorporated.

Discovery of Tribal Cultural Resources

In accordance with State and Federal Laws if any potentially prehistoric, protohistoric, and/or historic cultural resources are accidentally encountered during future excavation of the site, all work shall cease in the area of the find pending an examination of the site and materials by a qualified archaeologist.

Mitigation Measure TCR-1 (Tribal Cultural Resources): Tribal Cultural Awareness Training
All personnel upon entering the project site are to undergo tribal cultural awareness training by, at minimum, reviewing and concurring to the corresponding Conditions of Approval and Mitigation Measures requiring personnel to stop work and notify the lead agency and tribes in the event of discovery of Tribal cultural resources.

Mitigation Measure TCR-2 (Tribal Cultural Resources): Discovery of Tribal Resources
In the event that any prehistoric or historic subsurface cultural (including Tribal) resources are discovered during ground disturbing activities, all work within 100 feet of the resources shall be halted and the applicant/operator shall consult with the County and a qualified archaeologist (as approved by the County) and corresponding tribal representative to assess the significance of the find per CEQA Guidelines Section 15064.5. The qualified archaeologist shall determine the nature of the find, evaluate its significance, and, if necessary, suggest preservation or mitigation measures. Appropriate mitigation measures, based on recommendations listed in the archaeological survey report and tribal representative, will be determined by the Calaveras County Planning & Community Development Services Agency. Work may proceed on other parts of the project site while mitigation for historical resources, unique archaeological resources, and/or tribal resources is carried out. All significant cultural materials recovered shall be, at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, tribal representative, and documented according to current professional standards.

XIX. UTILITIES AND SERVICE SYSTEMS

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒
c) 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?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☒
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

a-e) **No Impact** – The proposed Project will not require the construction of additional infrastructure beyond the telecommunication facility itself. There is adequate power near the site and sufficient drainage, being on a minor hillside with well-draining soils. No new natural gas, water, or wastewater utilities are proposed, nor will they be needed onsite as it is an unmanned facility. Permitting procedures from the land use departments will ensure proper installation of the facilities pursuant to local and State standards. Operation of the proposed Project would not generate demand for utilities requiring the relocation or construction of new or expanded facilities. The operation of the proposed telecommunication facility would not generate solid waste. Therefore, no impact would occur.

XX. WILDFIRE

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

a) **No Impact** – The Calaveras County Emergency Operations Plan (EOP) outlines the functions, responsibilities, and regional risk assessments of Calaveras County for large scale emergencies such as wildland fires, hazardous materials incidents, flooding, and dam failure. The EOP addresses the planned response to extraordinary emergency situations and establishes a flexible, all hazards, emergency management organization required to facilitate the response to, and provide for short-term recovery activities related to any significant emergency or disaster affecting Calaveras County. The project does not propose activities that would substantially impair an adopted emergency response plan or emergency evacuation plan. All roads in the area would remain open. The project site is located on private property with adequate access to county roads. The proposed Project would not interfere with adjacent roadways that may be used for emergency response or evacuation. The proposed Project would not prohibit subsequent plans from being established or prevent the goals and objectives of existing plans from being carried out. Therefore, no impact would occur.

b) **No Impact** – The telecommunication facility does not propose significant changes to the existing landscape, proposing minimal grading and an encroachment permit for access to the parcel. The facility will be unmanned, so there will be no occupants at risk of exposure to pollutants or uncontrolled spread of a wildfire. Therefore, no impact would occur.

c) **Less Than Significant Impact** – The proposed telecommunications facility will be accessed from an existing, county-maintained roadway, Jackson Street. The road meets fire access requirements allowing for emergency vehicles at the site, and the Public Works Department has required that a commercial encroachment permit be obtained. Approximately 580 feet of power conduit will be run along Jackson Street, but it will be trenched underground, reducing the risk of fire. Therefore, there will be no impact.

d) **Less Than Significant Impact** – The telecommunications facility will utilize an existing county-maintained road. The proposed Project requires the installation of a 496 square foot lease area with the tower and associated equipment, a transformer on a concrete pad, a 3-foot walkway, one parking space, and 580 feet of power conduit to be trenched to the northwest. However, as discussed in Section X, these activities will not create risks of flooding, landslides, or post-fire slope instability. Water quality standards would be upheld through the Public Works and Building Departments during the grading and building permit processes. The proposed Project would not alter any existing roads or impede traffic. The installation of this telecommunications facility would not significantly alter drainage patterns, cause slope instability or expose people or structures to risks associated with these impacts including post-fire events. Therefore, impacts will be less than significant.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT IMPACT WITH MITIGATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
a) Does the project have the potential to substantially 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, substantially 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?				
b) Does the project 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)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

a) **Less Than Significant Impact with Mitigation** – Based on the information and analysis provided throughout this Initial Study, implementation of the proposed Project as mitigated would not substantially degrade the quality of the environment and would not 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 rare or endangered plants or animals, or eliminate important examples of California history or prehistory. As discussed in the biological resources section of this document, any impacts to sensitive plant and wildlife species such as the American badger and oak woodlands would be reduced to a level of less than significant with mitigation. Mitigation protocols for the Migratory Bird Treaty Act are required during certain months when constructing the proposed residential addition. The site does not contain any wetlands or water features with characteristics for habitat of species or rare plant life.

No historic or prehistoric resources are anticipated to be affected by the proposed Project, nor will the proposed Project eliminate important examples of the major periods of California history or prehistory. However, should cultural resources be found, state regulations and protocols must be followed, which would reduce any impacts to less than significant.

b) **Less Than Significant Impact** – The proposed telecommunications facility would not create a cumulative impact to any of the items discussed above. The proposed use is permitted in the Single-Family Residential zone with approval of an Administrative Use Permit; therefore, the proposed Project is consistent with the General Plan and Zoning Code. Potential air quality, greenhouse gas emissions, hydrology and traffic associated impacts, including potential cumulative impacts, are discussed in their respective sections above. As discussed above, the air quality impacts of the generator are minimal enough to not contribute to a cumulatively significant impact even though the site is located in a non-attainment area. The analysis determined that all potential impacts were less than significant and would not contribute significantly to cumulative impacts. With the imposition of standard and project specific conditions of approval, the project does not result in a significant contribution to cumulatively considerable impacts.

c) **Less Than Significant Impact** – Aspects of this project which have the potential to have a substantial adverse effect on human beings or the environment have been discussed in this document. The impacts of the project have been concluded to be less than significant. The project as proposed will also not have substantial adverse effects on human beings that are not captured by the already discussed Appendix G criteria, either directly or indirectly. Therefore, there will be a less than significant impact.

Federal law preempts local decisions about telecommunication towers such as this one from direct or indirect environmental effects of radio frequency (RF) emissions, assuming that the provider is in compliance with the Federal Communication Commission's RF guidelines. An Electromagnetic Energy (EME) Exposure Report prepared by OSC Engineering, dated November 27, 2023, was submitted to examine potential impacts to public health and the environment as part of this application (Appendix F). The study found that 2.5% of the Maximum Permissible Exposure level permitted will be present at ground level, complying with FCC guidelines for RF exposure. The telecommunications tower uses Radio Frequency Emissions determined to be safe within the guidelines of the 1996 Telecommunications Act and the Federal Communications Commission (FCC). Because of FCC-determined frequencies, antennas require line-of-sight connections and so are developed to be at a considerable height, pointed towards the horizon, with little energy wasted towards the ground or sky.

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APPENDIX A

BIOLOGICAL RESOURCE IMPACT ANALYSIS

Biological Resources Impact Analysis
CVL02739, Cemetery Hill
Copperopolis, Calaveras County, California

Prepared for:

AT&T Mobility, LLC
5005 Executive Parkway
San Ramon, CA 94583

Prepared by:

Contact: Kyle Workman, Project Ecologist

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March 25, 2024

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SECTION 1:
INTRODUCTION

This report contains the findings of a Biological Resources Impact Analysis conducted by Environmental Assessment Specialists, Inc. (EAS) on a proposed AT&T Mobility, LLC (AT&T) cellular facility, CVL02739 (Cemetery Hill), in Calaveras County, California. The project site is generally located north of State Route 120, south of State Route 4, east of State Route 99, and west of State Route 49, and is depicted on the Copperopolis, California U.S. Geological Survey (USGS) 7.5-minute topographic map.

AT&T proposes the installation of a new unmanned telecommunications facility at this location. Proposed is the installation of panel antennas mounted near the top of a new 85-foot tall mono-broadleaf. A new equipment shelter and generator will be placed on concrete slabs near the base of the mono-broadleaf. The equipment shelter, generator, and mono-broadleaf will be contained within a 15-foot by 28-foot lease area and surrounded by a wood fence enclosure. Trenching for electrical and fiber utility lines will travel approximately 750-feet northwest from the equipment location to an existing wood utility pole located at Jackson Street.

The project site was surveyed on February 12, 2024 by qualified EAS biologist Kyle Workman. The biological resources within the site are described in terms of plant communities and jurisdictional drainage features. A literature review provided information regarding sensitive plant and wildlife species potentially occurring within the project site and immediate vicinity. Based on current site conditions and suitable habitat requirements of sensitive species, this report provides an assessment of the sensitive resources found on the site and analyzes the biological significance of the site in view of federal, state, and local laws and policies.

SECTION 2:
METHODOLOGY

2.1 - BIOLOGICAL RESOURCES

Data regarding biological resources on the project site were obtained through a literature review that included data on biological resources in the project vicinity and applicable reference materials provided by AT&T.

Sensitive biological resources present, or potentially present, onsite were identified through a literature review using the following resources: California Department of Fish and Wildlife (CDFW 2024), California Natural Diversity Data Base (CNDDB 2024), and the California Native Plant Society (Tibor 2001 and CNPSEI 2024). For the purpose of this report, "sensitive" or "special status" species are those plant or wildlife species that are federally and/or state listed species, proposed for listing, candidate species and CDFW Species of Special Concern.

An initial review indicated that the project site is located within previously disturbed areas associated with a rural residential development. Kyle Workman conducted the biological resources field survey to document existing conditions and to determine potential impacts to sensitive biological resources based on current site plans. The survey was conducted on foot making note of biological resources, such as plant and wildlife species, on field data sheets. These data sheets are included in Appendix A. Special attention was paid to plant communities to determine the presence or potential occurrence of any sensitive species that may occur on the project site.

SECTION 3:
EXISTING CONDITIONS

3.1 - SITE DESCRIPTION

The biological assessment survey of the project site was conducted on February 12, 2024. Weather conditions included a temperature of approximately 57 degrees Fahrenheit, winds of 1 to 2 miles per hour, and clear skies. The site is specifically located at private rural residential property at 409 Jackson Street, Copperopolis, California. Land use adjacent to the site generally consists of undeveloped open space and scattered rural residential development. Previous disturbances on the site include the development and ongoing maintenance of the rural residential property and livestock grazing.

AT&T proposes the installation of a new unmanned telecommunications facility at this location. Proposed is the installation of panel antennas mounted near the top of a new 85-foot tall mono-broadleaf. A new equipment shelter and generator will be placed on concrete slabs near the base of the mono-broadleaf. The equipment shelter, generator, and mono-broadleaf will be contained within a 15-foot by 28-foot lease area and surrounded by a wood fence enclosure. Trenching for electrical and fiber utility lines will travel approximately 750-feet northwest from the equipment location to an existing wood utility pole located at Jackson Street.

3.2 - VEGETATION

The project site is located within a previously disturbed area associated with the rural residential property and livestock grazing. The proposed lease area will be developed within a clearing and an oak woodland surrounds the site. Vegetation onsite primarily consists of non-native grasses and ruderal (weedy) species. Native oak trees (*Quercus* sp.) and shrubs occur within the immediate vicinity of the project site but no trees are expected to be removed during the installation of the proposed facility. A complete list of plant species observed on or in the vicinity of the project site can be found in Appendix A: Field Data Sheets.

3.3 - GENERAL WILDLIFE

The project site and surrounding area provide habitat for wildlife species that commonly occur in non-native grassland and oak woodland communities. No amphibian, reptilian, or mammalian species were observed or detected during the field survey. Avian species observed/detected include:

- Western scrub jay (*Aphelocoma californica californica*)
- Acorn woodpecker (*Melanerpes formicivorus*)
- Dark-eyed junco (*Junco hyemalis*)

Other wildlife species expected to occur onsite include side-blotched lizard (*Uta stansburinia*), lesser goldfinch (*Carduelis psaltrina*) and desert cottontail (*Sylvilagus audubonii*).

3.4 - SENSITIVE BIOLOGICAL RESOURCES

Special Status Species

Special status species are native species that have been accorded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

The U.S. Fish and Wildlife Service (USFWS) administers the federal Endangered Species Act (ESA). The ESA provides a process for listing species as either threatened or endangered, and methods of protecting listed species. The ESA defines as "endangered" any plant or animal species that is in danger of extinction throughout all or a significant portion of its range. A "threatened" species is a species that is likely to become endangered in the foreseeable future. A "proposed" species is one that has been officially proposed by USFWS for addition to the federal threatened and endangered species list.

Section 9 of the ESA prohibits "take" of threatened or endangered species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. Take can include disturbance to habitats used by a threatened or endangered species during any portion of its life history. The presence of any federally threatened or endangered species that is in a project area generally imposes severe constraints on development, particularly if development would result in take of the species or its habitat. Under the regulations of the ESA, the USFWS may authorize take when it is incidental to, but not the purpose of, an otherwise lawful act.

The California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act (CESA). The State of California considers an "endangered" species one whose prospects of survival and reproduction are in immediate jeopardy, a "threatened" species is one present in such

small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management, and a "rare" species is one present in such small numbers throughout its range that it may become endangered if its present environment worsens. The term "rare" species applies to California native plants. State threatened and endangered species are fully protected against take, as defined above. "Species of special concern" is an informal designation used by CDFW for some declining wildlife species that are not state candidates. This designation does not provide legal protection, but signifies that these species are recognized as sensitive by CDFW.

The California Native Plant Society (CNPS) has developed an inventory of California's sensitive plant species (Tibor 2001). This inventory summarizes information on the distribution, rarity, and endangerment of California's vascular plants. The inventory is divided into four lists based on the rarity of the species. In addition, the CNPS provides an inventory of plant communities that are considered sensitive by the state and federal resource agencies, academic institutions, and various conservation groups. Determination of the level of sensitivity is based on the number and size of remaining occurrences as well as recognized threats.

Sensitive habitats are natural communities that support concentrations of sensitive plant or wildlife species, are of relatively limited distribution, or are of particular value to wildlife (CNDDB 2024). Sensitive habitats are not afforded legal protection unless they support protected species, except for wetland habitats, which cannot be filled without authorization from the U.S. Army Corps of Engineers (USACE) and CDFW.

The following discussion describes the special-status plants, wildlife, and habitats that have been afforded special recognition by federal, state, or local resource agencies or organizations and are known to occur in the region of the project site. Sources used for the classification of sensitive resources are as follows:

- Plants - California Department of Fish and Wildlife (CDFW 2024), California Natural Diversity Data Base (CNDDB 2024), and California Native Plant Society (Tibor 2001 and CNPSEI 2024)
- Habitats - CNDDB (2024), Holland (1986)
- Wildlife - CDFW (2024), CNDDB (2024)

A review of the CNDDB and the CNPS Electronic Inventory of Rare and Endangered Vascular Plants resulted in a list of 5 sensitive plant species, 6 sensitive wildlife species, and 1 sensitive plant community that occur within the Copperopolis, California USGS topographic quadrangle.

The sensitive plant species include:

- Chinese Camp brodiaea (*Brodiaea pallida*)
- Ewan's larkspur (*Delphinium hansenii* ssp. *ewanianum*)
- Forked hare-leaf (*Lagophylla dichotoma*)
- Tongue-leaf copper moss (*Scopelophila cataractae*)
- Tuolumne button-celery (*Eryngium pinnatisectum*)

Proposed development will be contained within previously disturbed areas associated with the rural residential development and livestock grazing. This disturbance includes excavation, backfilling, and compaction activities resulting from previous construction and maintenance activities. Evidence of surface disturbance on and in the immediate vicinity of the site has greatly reduced the potential for sensitive plant species to occupy the area. Therefore, none of the above-listed sensitive plant species are anticipated to occur onsite, and the proposed project is not anticipated to result in any impacts to sensitive plant species. No further action is recommended with regard to sensitive plant species.

The sensitive wildlife species include:

- American badger (*Taxidea taxus*)
- Great blue heron (*Aredea herodias*)
- Great egret (*Ardea alba*)
- North American porcupine (*Erethzon dorsatum*)
- Tricolored blackbird (*Agelaius tricolor*)
- Western pond turtle (*Actinemys marmorata*)

Proposed development will be contained within previously disturbed areas associated with the residential development and livestock grazing. No portions of the proposed development footprint contain the important habitat suitability elements for any of the above-listed sensitive wildlife species; none are likely to occur within the proposed development footprint itself. Therefore, no direct impacts are anticipated to result to any sensitive wildlife species and their habitat from implementation of the proposed project.

The sensitive plant communities include:

- Northern hardpan vernal pool

No sensitive plant communities occur on the project site.

3.5 - JURISDICTIONAL AREAS

The USACE regulates discharges of dredged or fill material into waters of the United States. These waters include wetlands and non-wetland bodies of water that meet specific criteria. USACE regulatory jurisdiction pursuant to Section 404 of the federal Clean Water Act is founded on a connection or nexus between the water body in question and interstate commerce. This connection may be direct through a tributary system, linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the USACE regulations.

Waters of the U.S.

USACE jurisdiction over non-tidal waters of the United States extends laterally to the ordinary high water mark (OHWM) or beyond the OHWM to the limit of any adjacent wetlands, if present (33 CFR 328.4). The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area" [33 CFR 329.11(a)(1)]. Jurisdiction typically extends upstream to the point where the OHWM is no longer perceptible. Recently, the federal courts have restricted USACE jurisdiction over waters that are not directly connected to traditional navigable waters (isolated waters), thereby increasing the focus on clearly establishing the physical connection between the subject water body(ies) as a tributary to traditional navigable waters or otherwise by directly establishing the nexus with interstate commerce.

During the biological assessment survey, the site was evaluated according to the guidelines provided in the USACE 1987 Manual (i.e. Environmental Laboratory, 1987). Waters of the U.S. were absent from the site; no water bodies having a perceptible OHWM were identified on site or adjacent to the site.

Wetlands

The USACE and EPA define "wetlands" as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions." In order to be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific set of mandatory wetland criteria that must be satisfied in order for that particular wetland characteristic to be met. Several parameters may be analyzed to determine whether the criteria are satisfied.

The project site and surrounding area contain plant species commonly found in oak woodland communities. No hydrophytic plant species were observed on the project site; therefore, it was not necessary to examine the other two wetland criteria (hydrology and soils), since all three criteria must be met where wetlands are present. No jurisdictional wetlands will be impacted by the installation of the proposed facility.

3.6 - NESTING BIRDS

The Migratory Bird Treaty Act (MBTA) protects all common wild birds found in the United States except the house sparrow, starling, feral pigeon, and resident Wildlife birds such as pheasant, grouse, quail, and wild turkey. Resident Wildlife birds are managed separately by each state. The MBTA makes it unlawful for anyone to kill, capture, collect, possess, buy, sell, trade, ship, import, or export any migratory bird including feathers, parts, nests, or eggs.

California Fish and Game (CFG) Code 3503 makes it illegal to destroy any birds' nest or any birds' eggs that are protected under the MBTA. CFG Code 3503.5 further protects all birds in the orders *Falconiformes* and *Strigiformes* (birds of prey, such as hawks and owls) and their eggs and nests from any form of take.

No avian nests or nesting activity were observed during the field survey. The trees located within the immediate vicinity of the project site provide suitable avian nesting habitat.

SECTION 4:
SENSITIVE BIOLOGICAL RESOURCES IMPACT ANALYSIS

4.1 - SENSITIVE PLANT AND WILDLIFE SPECIES

- **Sensitive Plant Species:** The project site contains no suitable habitat for any sensitive plant species. Therefore, no sensitive plant species have a moderate or high potential to occur onsite and focused surveys are not recommended.

- **Sensitive Wildlife Species:** The project site contains no suitable habitat for any sensitive wildlife species. Therefore, no sensitive wildlife species have a moderate or high potential to occur onsite and focused surveys are not recommended.

- **Sensitive Plant Communities:** No sensitive plant communities occur on the project site; none will be impacted by the proposed development.

4.2 - JURISDICTIONAL AREAS

No potentially jurisdictional waters or wetlands are present on or in the vicinity of the project site. Therefore, installation of the proposed facility will not impact any jurisdictional areas.

4.3 - NESTING BIRDS

The trees and shrubs located within the immediate vicinity of the project site provide suitable nesting habitat for several avian species. Additionally, although not considered natural nesting habitat, the existing facility provides suitable nest sites. Therefore, pursuant to the MBTA and CFG Code, installation of the proposed facility should be conducted outside the nesting season. The nesting season generally extends from February 1 through September 30.

If facility installation must occur during the nesting season, a qualified biologist should conduct a nesting bird survey to identify any potential nesting activity. If active nests are observed, construction activity must be prohibited within a 500-foot (~160-meter) buffer around the nest until the nestlings have fledged. All construction activity within the vicinity of active nests must be conducted in the presence of a qualified biological monitor. Construction activity may encroach into the buffer area at the discretion of the biological monitor.

4.4 - COUNTY OF CALAVERAS OAK WOODLANDS ORDINANCE

Several mature valley oak trees (*Quecus lobata*) and blue oak trees (*Quercus douglasii*) occur within the immediate vicinity of the proposed lease area and throughout the utility line trench route and access road. No trees will be removed during the construction of the proposed facility; however, some work will occur within the drip lines associated with the oak trees. In order to avoid potential impacts to these trees, EAS recommends minimizing ground disturbance within the drip lines to the greatest extent possible. This includes digging trench routes with a hand shovel rather than heavy equipment when working within the drip lines of the trees and avoiding over compacting the soils. As an alternative, utility line trenching can be rerouted along Jackson Street in order to avoid potential impacts to the oak woodland.

SECTION 5:
REFERENCES

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Appendix A: Field Data Sheets and Site Photographs

Field Notes – CVL02739

Date: February 12, 2024

Location: Copperopolis, Calveras County, California

Time: 5:50 pm to 6:30 pm

Weather Conditions: 1 to 2 mile per hour winds, clear skies with a temperature of 57 degrees

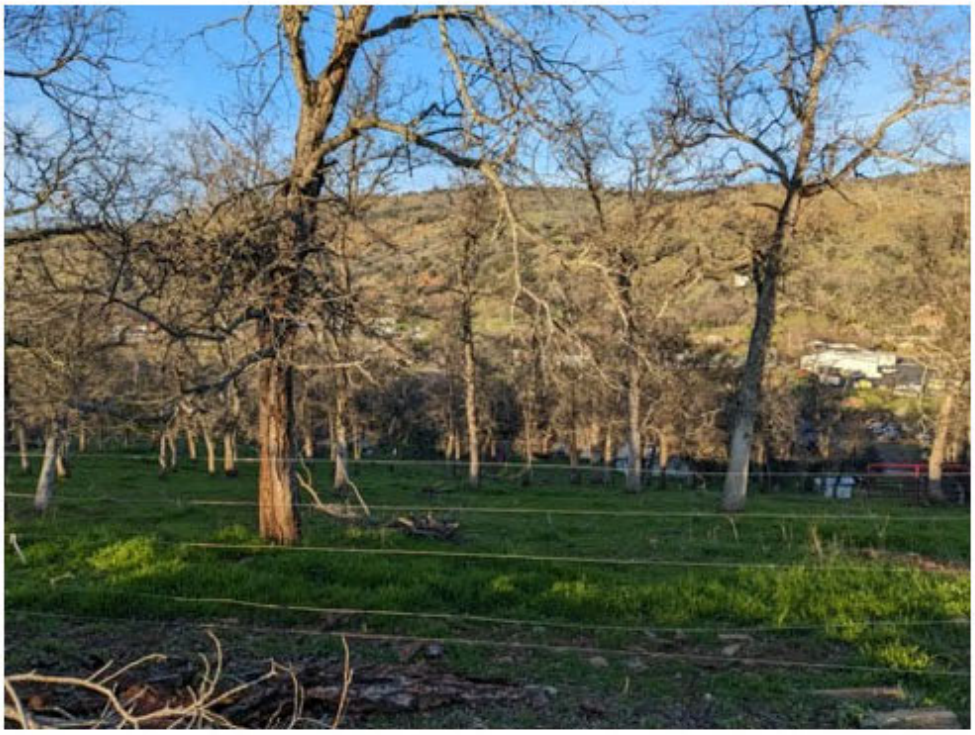
Plant Community/Site description: Site will be located within a fallow field at a rural residential property. An oak woodland surrounds the entire site. The site will be developed within a clearing and no oak trees will be removed. Evidence of livestock grazing was observed on and within the vicinity of the site. The existing access road travels through the oak woodland and trenching may impact the drip lines of several trees.

Wildlife Species Observed:

Dark-eyed junco (*Junco hyemalis*)
western scrub jay (*Aphelocoma californica californica*)
Acorn woodpecker (*Melanerpes formicivorus*)

Plant Species Observed:

pine tree (*Pinus* sp.)
brome grass (*Bromus* sp.)
valley oak
blue oak
Miner's lettuce (*Claytonia perfoliate*)



View of project site facing east.



View of project site facing north.



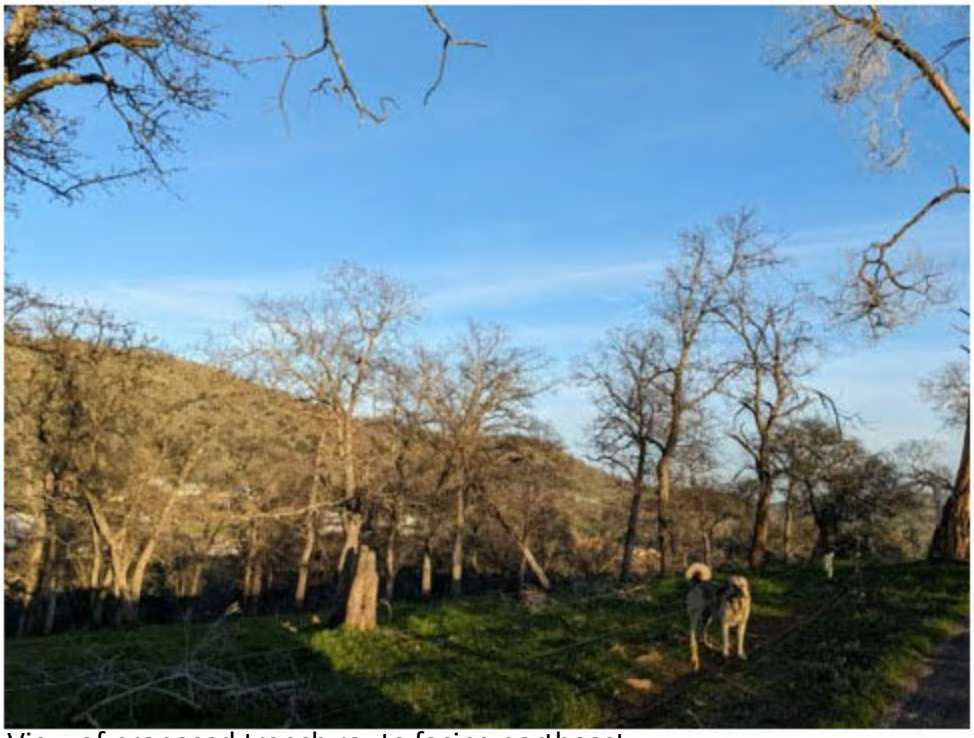
View of project site facing south.



View of potential utility line trench route along Jackson Street.



View of utility point-of-connection facing southeast.



View of proposed trench route facing northeast.



View of proposed trench route facing east.



View of proposed trench route facing northeast.



North facing view from the project site.



South facing view from the project site.



West facing view from the project site.

KYLE D. WORKMAN, BIOLOGIST

OVERVIEW

- Bachelor's degree Environmental Science and Ecology – Western State College of Colorado

Kyle Workman is a project biologist with range of project experience in the environmental field. Mr. Workman has inventoried plants and wildlife and has conducted biological assessments and restoration monitoring surveys for various projects throughout the western United States and Hawaii. He has experience in water quality analysis, nest search techniques, habitat analyses, and has conducted research on aquatic insects.

RELATED EXPERIENCE

NEPA Compliance/Telecommunication Facilities. Assisting a variety of telecommunication providers throughout Arizona, California, Hawaii, Idaho, Nevada, New Mexico, Oregon, Utah and Washington in complying with the National Environmental Policy Act (NEPA) for the implementation of cellular communication facilities. This project includes the preparation of NEPA compliance documents in accordance with the Federal Communication Commissions regulations pertaining to telecommunication facilities, in particular, biological surveys, including focused sensitive species surveys and wetland delineations and permitting, construction monitoring, and arborist surveys. Reports are prepared associated with field surveys, reviews and project compliance include biological resources assessment reports, nesting bird survey letters, and focused plant and wildlife survey reports. Regularly prepare budgets and scopes of work for clients.

Section 7 consultations. Routinely conduct informal and formal section 7 consultation for proposed projects located within USFWS designated Critical Habitat. Work has involved effects analyses of projects, appropriate mitigation measures, and concurrence letters. Consultation has resulted in the approval of numerous projects located within Critical Habitat for sensitive species, which include California red-legged frog, Alameda whipsnake, California gnatcatcher, desert tortoise, and delta smelt.

Biological Resources Impact Analysis. Conducted biological assessments for various clients in Southern California. Field surveys involved inventorying plant and wildlife species, vegetation mapping, sensitive species habitat assessments, and jurisdictional drainage feature evaluations. Biological Resources Survey Reports are prepared to discuss the findings of the biological assessments.

Western Riverside County Multiple Habitat Conservation Plan (MSHCP) Consistency Analysis. Conducted habitat assessments throughout Riverside County, CA, with particular emphasis on sensitive plant and wildlife species including burrowing owl, least Bell's vireo, San Miguel savory, and many-stemmed dudleya. Field surveys and reports also include Riverine/Riparian analysis and urban/wildlands interface analysis as described by the MSHCP. Prepared various reports including MSHCP Consistency Analysis Reports, focused survey reports for burrowing owl, least Bell's vireo, and San Miguel savory, and Determination of Biological Equivalency or Superior Preservation Reports.

Habitat Restoration, Enhancement, and Conservation. Assisted numerous clients in management and monitoring of multiple restoration projects. Responsibilities have included inventorying native and non-native plant species, conducting monthly, quarterly, and annual monitoring surveys analyzing wildlife use, making recommendations for remedial measures necessary to achieve performance standards, and preparing various monitoring reports.

Biological Monitoring and Compliance. Assisted numerous clients throughout Southern California during all aspects of construction. This project included ongoing monitoring for compliance with USFWS, CDFG, and USACE rules and regulations for the project site and included erosion control monitoring and permit compliance. The assessment included monitoring all aspects of ground disturbing activity including tree removal, vegetation grubbing, and mass grading. The effort also involved inventorying plant and wildlife species. Has included leading weekly training sessions for construction personnel to inform them of biological issues.

Burrowing owl focused surveys. Conducted numerous focused surveys for burrowing owls for a variety of clients and projects in San Bernardino, Orange, and Riverside Counties. Surveys involved data collection on burrowing owl numbers, behavior, locations, occupied burrows, and sign. Coordinated a project that involved the passive relocation of burrowing owls and mitigation through the construction and monitoring of artificial burrows. The effort involved agency coordination, budgeting and scoping the work effort, organizing client meetings, and assigning work efforts to appropriate staff. Reports were prepared to document findings.

Desert tortoise focused surveys. Conducted numerous focused protocol surveys for desert tortoise for various projects in San Bernardino, Kern and Riverside Counties. Surveys involved data collection on suitable tortoise habitat, potential burrow locations and the documentation of findings in focused survey reports.

Least Bell's vireo focused surveys. Conducted numerous focused protocol surveys for least Bell's vireo for projects in Riverside County. Located numerous territories at various project sites and documented findings in focused surveyed reports.

PROFESSIONAL TRAINING

CNPS Vegetation and Habitat Rapid Assessment Workshop 8/05
Construction Storm Water Compliance Workshop 9/05
Desert Tortoise Handling Workshop and Certification 11/06
Basic Wetland Delineation Training - Portland State University 3/08

APPENDIX B

BAT ROOSTING EVALUATION

October 29, 2024

Mr. Craig Bunger
Centerline Communications
23 Mauchly, Suite 100
Irvine, California 92618
cbunger@clinellc.com
Phone: (415) 971-3509

Re: ROOSTING BAT EVALUATION
AT&T Site CVL02739 - "CEMETERY HILL"
409 JACKSON STREET
COPPEROPOLIS, CALIFORNIA 95228

Dear Mr. Bunger,

Caldwell Compliance is pleased to provide the attached roosting bat evaluation to meet the requirements of the County of Calaveras, Department of Planning, for the proposed AT&T Wireless Services (AT&T) project site located at 409 Jackson Street, Copperopolis, Calaveras County, California (the "property").

Proposed Project
The proposed project involves the installation of a new 90-foot tall mono broadleaf tower on the property. Antenna mounts, panel antennas, remote radio units (RRUs), and a microwave dish will be installed on the proposed tower. Equipment will be installed on a new concrete pad within a new 30-foot by 15-foot fenced enclosure. Approximately 580 feet of trenching in an existing roadway will be required to connect power to the proposed telecommunications site. The proposed AT&T plans are included in Appendix A.

Regulatory Requirements
In a letter issued by the County to Centerline Communications, dated September 30, 2024, the County requested the following for the proposed project:

- **COS-4P Bat Roosting**: For development subject to a discretionary entitlement and environmental review under CEQA, a pre-project survey shall be conducted by a qualified biologist to determine if special status bat species are using the site. Should special status bat species be found present on-site, feasible mitigation, such as installing exclusionary devices at the instruction of a qualified biologist and/or construction of replacement roost structures, including bat houses, other structures, or crevices incorporated into bridge design, shall be required prior to the removal of potential bat roosting sites. Replacement roost structures shall be monitored to document bat use.

The County letter is included in Appendix B.

Roosting Bat Evaluation
In response to the request from the County of Calaveras, Department of Planning, a reconnaissance level survey of all woody vegetation and structures within 60 feet of all ground disturbance that would be associated with the proposed project and potentially support roosting bats was completed on October 16, 2024. In addition, other potential sources of available information related to roosting bats in the project vicinity were researched.

The conclusions of this survey were as follows:

"The reconnaissance level survey for evidence of roosting bats on or immediately adjacent to the project footprint (i.e., within 60 feet or less) found no evidence of natural micro-habitat that could be or has been used by roosting bats (e.g., tree cavities or flaking bark). In addition, no entrances to the interior of adjacent buildings that could be used by roosting bats were observed. The landowner also confirmed the above finding as he has not found any visual or olfactory evidence of bats on or in these buildings (e.g., accumulated guano, urine stains, body oil rubs, or the smell of urine). No other structure/habitat that could support roosting bats was found on or near the project site."

Conclusions
Based on the roosting bat survey included in Appendix C, "no available data was found during the research conducted for potential bat roosts in the project vicinity."

We appreciate the opportunity to provide services on this project. Should you have any questions or if we can be of further assistance, please contact Jill Knudson via electronic mail at jillknudson@caldwellcompliance.com.

Sincerely,

Holly D. Moore

Holly D. Moore
Caldwell Compliance

Attachments:
Appendix A - AT&T Plans
Appendix B - County Requirements
Appendix C - Roosting Bat Evaluation



Appendix A

AT&T Plans

AT&T

RFID#: 5475704
USID #: 323958
FA #: 15786762
LTE1C CELL SITE

REPLACEMENT
PTN#: 3701A169GY
PACE#: MRSFR096393

LTE 2C
PTN#: 3701A18J3P
PACE#: MRSFR102089

5G NR 1DR-2
PTN#: 3701A18J4M
PACE#: MRSFR102099

LTE 5C
PTN#: 3701A18J4S
PACE#: MRSFR102098

LTE 4C
PTN#: 3701A18J4Q
PACE#: MRSFR102096

LTE 3C
PTN#: 3701A18J4K
PACE#: MRSFR102090

SITE NUMBER: CVL02739
SITE NAME: CEMETERY HILL
SITE TYPE: C-WIC/MONO-BROADLEAF
ADDRESS: 409 JACKSON STREET COPPEROPOLIS, CA 95228

PROJECT TEAM

APPLICANT / LESSEE:

NEW CINGULAR WIRELESS PCS, LLC
5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

RFDS VERSION: 1.0
DATE CREATED: 10/11/2022
DATE UPDATED: 03/22/2023

SITE ACQUISITION MANAGER:

CENTERLINE COMMUNICATIONS
CONTACT: AARON DE LA O
EMAIL: adelao@clinellc.com
CELL: (916) 792-8686

CONSTRUCTION MANAGER:

QUALTEK WIRELESS
CONTACT: ROBERT FLYNT
EMAIL: RFLYNT@QUALTEKWIRELESS.COM
PH: (916) 768-9699

A&E MANAGER:

PM&A
CONTACT: STEVEN M. RAMON
EMAIL: sramon@pmass.com
PH: (949) 247-7767 ext 158

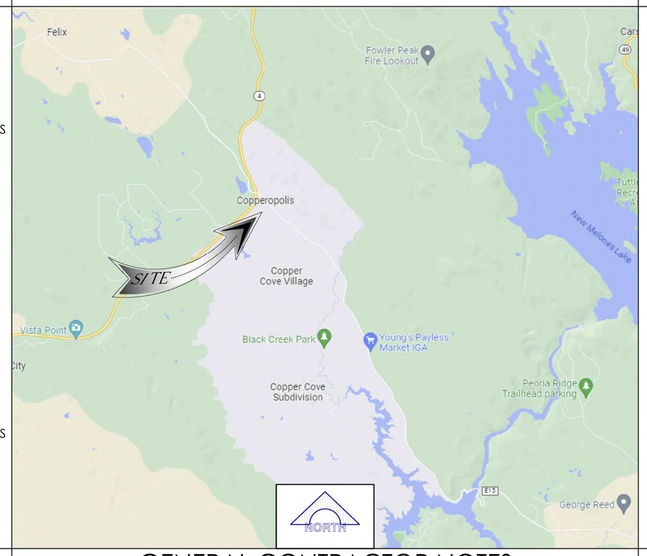
RF ENGINEER:

STEPHEN NELSON
RAN DESIGN ENGINEER
EMAIL: sn149s@att.com

PLANNING MANAGER:

CENTERLINE COMMUNICATIONS
CONTACT: AARON DE LA O
EMAIL: adelao@clinellc.com
PH: (916) 792-8686

VICINITY MAP



CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. CALIFORNIA BUILDING STANDARDS CODE: 2022 TRIENNIAL EDITION OF TITLE 24, WITH AN EFFECTIVE DATE OF JANUARY 1, 2023.
   PART 1 - CALIFORNIA ADMINISTRATIVE CODE
   PART 2 - CALIFORNIA BUILDING CODE, BASED ON THE 2021 INTERNATIONAL BUILDING CODE
   PART 2.5 - CALIFORNIA RESIDENTIAL CODE, BASED ON THE 2021 INTERNATIONAL RESIDENTIAL CODE
   PART 3 - CALIFORNIA ELECTRICAL CODE, BASED ON THE 2020 NATIONAL ELECTRICAL CODE
   PART 4 - CALIFORNIA MECHANICAL CODE, BASED ON THE 2021 UNIFORM MECHANICAL CODE
   PART 5 - CALIFORNIA PLUMBING CODE, BASED ON THE 2021 UNIFORM PLUMBING CODE
   PART 6 - CALIFORNIA ENERGY CODE
   PART 7 - VACANT
   PART 8 - CALIFORNIA HISTORICAL BUILDING CODE
   PART 9 - CALIFORNIA FIRE CODE, BASED ON THE 2021 INTERNATIONAL FIRE CODE
   PART 10 - CALIFORNIA EXISTING BUILDING CODE, BASED ON THE 2021 INTERNATIONAL EXISTING BUILDING CODE
   PART 11 - CALIFORNIA GREEN BUILDING STANDARDS CODE (CGBSC; ALSO KNOWN AS CALGREEN)
   PART 12 - CALIFORNIA REFERENCED STANDARDS CODE
2. ANSI/TIA-222 (REV H)
3. 2021 NFPA 101, LIFE SAFETY CODE
4. 2022 NFPA 72, NATIONAL FIRE ALARM AND SIGNALING CODE
5. 2022 NFPA 13, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS

PROJECT DESCRIPTION

INSTALLATION OF AN UNMANNED TELECOMMUNICATIONS FACILITY, CONSISTING OF THE FOLLOWING:

ANTENNA SOW:

- INSTALL (1) NEW 90'-0" HIGH MONO BROADLEAF
- INSTALL (2) ANTENNA MOUNTS, TYP. (1) PER RAD
- INSTALL (1) 4'-0"Ø MICROWAVE ANTENNA
- INSTALL (6) 120826 PANEL ANTENNAS, TYP. 3 PER SECTOR
- INSTALL (3) AIR6419 N77G PANEL ANTENNAS, TYP. 1 PER SECTOR
- INSTALL (3) AIR6419 N77D PANEL ANTENNAS, TYP. 1 PER SECTOR
- INSTALL (3) RRUS 4490 B5/B12 BEHIND ANTENNAS, TYP. 1 PER SECTOR
- INSTALL (3) RRUS 4890 B25/B66 BEHIND ANTENNAS, TYP. 1 PER SECTOR
- INSTALL (3) RRUS 2012 B29 BEHIND ANTENNAS, TYP. 1 PER SECTOR
- INSTALL (3) RRUS 4478 B14 BEHIND ANTENNAS, TYP. 1 PER SECTOR
- INSTALL (3) DC9 SURGE SUPPRESSORS BEHIND ANTENNAS, TYP. 1 PER SECTOR
- INSTALL (6) RRU BACK TO BACK MOUNTS, TYP. 2 PER SECTOR
- INSTALL (9) #6 AWG DC POWER TRUNKS
- INSTALL (3) FIBER TRUNKS

EQUIPMENT SOW:

- INSTALL (1) NEW 30'-0" x15'-0"x 6'-0" HIGH WOOD FENCE
- INSTALL (1) H-FRAME
- INSTALL (1) BUSS GUTTER ON H-FRAME
- INSTALL (1) TOP TERMINAL CAN ON H-FRAME
- INSTALL (3) 200A METER WITH BYPASS ON H-FRAME
- INSTALL (1) 30kW GENERATOR ON CELLBLOCKS
- INSTALL (1) SATN 71 PREFABRICATED SHETLER
- INSTALL (1) VERTIV 7100 DCPP RACK WITHIN SHELTER
- INSTALL (11) RECTIFIERS WITHIN DCPP
- INSTALL (2) 190AH BATTERY STRINGS WITHIN DCPP
- INSTALL (2) FIF EQUIPMENT RACKS WITHIN SHELTER
- INSTALL (2) 6651 BBU WITHIN FIF EQUIPMENT RACK
- INSTALL (1) SIAD WITHIN FIF EQUIPMENT RACK
- INSTALL (1) 200A INTEGRATED LOAD CENTER PANEL
- INSTALL (1) DC 50 SURGE SUPPRESSOR ON SHELTER EXTERIOR
- INSTALL (1) GPS ANTENNA ON SHELTER EXTERIOR
- INSTALL (1) 3'Ø UNDERGROUND POWER CONDUIT FROM P.O.C. TO EQUIPMENT LOCATION APPROX. 580'
- INSTALL (1) NEW CABLE ICE BRIDGE
- INSTALL (1) NEW PG&E TRANSFORMER
- INSTALL (1) NEW CONCRETE PAD FOR PG&E TRANSFORMER
- INSTALL (5) NEW BOLLARDS
- INSTALL (1) NEW ELECTRIC FENCE FOR LANDLORD
- INSTALL NEW DRIVING AISLE AND PARKING STALL

SHEET INDEX

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C-1	SITE SURVEY	2
C-2	SITE SURVEY	2
A-1	OVERALL SITE PLAN	3
A-2	ENLARGED SITE PLANS	3
A-2.1	COMPOUND PLAN	3
A-3	PROPOSED EQUIPMENT AND DIMENSION PLAN	3
A-4	PROPOSED ANTENNA PLAN	3
A-4.1	RF SCHEDULE	3
A-5	NORTH AND EAST ELEVATIONS	3
E-1	ELECTRICAL NOTES	3
E-2	ELECTRICAL SITE PLAN	3
E-3	SINGLE LINE DIAGRAM AND PANEL SCHEDULE	3

SITE INFORMATION

PROPERTY OWNER:
ROBERT AND MEGAN SINGLETON
LL CONTACT: (209) 728-7771
EMAIL: MEGANDUNC90@GMAIL.COM

POWER AGENCY:
PG&E

TELEPHONE AGENCY:
TBD

JURISDICTION:	CALAVERAS COUNTY
A.P.N.:	054-011-001-000
CURRENT ZONING:	R-1
EXISTING USE:	MULTIUSE
PROPOSED USE:	MULTIUSE, COMMUNICATIONS FACILITY
LATITUDE (NAD 83):	37.977972° 37° 58' 40.70" N
LONGITUDE (NAD 83):	-120.642866° 120° 38' 34.32" W
OCCUPANCY GROUPS:	N/A
CONSTRUCTION TYPE:	TBD
STORIES:	N/A
AREA OF WORK:	EQUIPMENT LEASE AREA 468.50 SQ. FT.

ACCESSIBILITY REQUIREMENTS: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION; ACCESSIBILITY IS NOT REQUIRED PER CFC2022, SECTION 1207 (LIMITED ACCESS SPACE)

GENERAL CONTRACTOR NOTES

DO NOT SCALE DRAWINGS

THESE PLANS ARE FORMATTED TO BE FULL SIZE AT 24" X 36". CONTRACTORS SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME.

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

STATEMENTS

STRUCTURAL ANALYSIS IS NOT WITHIN THE SCOPE OF WORK CONTAINED IN THIS DRAWINGS SET. FOR ANALYSIS OF EXISTING AND/OR PROPOSED COMPONENTS, REFER TO STRUCTURAL ANALYSIS PROVIDED UNDER SEPARATE COVER.

ANTENNA MOUNT ANALYSIS IS NOT WITHIN THE SCOPE OF WORK CONTAINED IN THIS DRAWING SET. FOR ANALYSIS OF MOUNT TO SUPPORT EXISTING AND/OR PROPOSED COMPONENTS, REFER TO ANTENNA MOUNT STRUCTURAL ANALYSIS PROVIDED UNDER SEPARATE COVER.

DRIVING DIRECTIONS

FROM: AT&T CORPORATE OFFICES
5005 EXECUTIVE PKWY
SAN RAMON, CA 94583

TO: 409 JACKSON STREET
COPPEROPOLIS, CA 95228

DIGALERT
800-227-2600
Call 2 Full Working Days In Advance

APPLICANT:
AT&T
5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

VENDOR:
PM&A
P. MARSHALL & ASSOCIATES
A CENTERLINE COMMUNICATIONS COMPANY
1000 HOLCOMB WOODS PKWY. STE 210
ROSWELL, GA 30076
OFFICE (678) 280-2325

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CVL02739
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409 JACKSON STREET
COPPEROPOLIS, CA 95228

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0	11/08/23	100% ZD	BH
D	08/22/23	REVISED 95% ZD	BH
C	08/08/23	95% ZD	BH
B	07/07/23	90% ZD	TT
A	06/05/23	90% ZD	BH

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It is a violation of law for any persons, unless they are acting under the direction of a licensed professional engineer, to alter this document

SHEET TITLE:
T-1

SHEET NAME:
TITLE SHEET

GENERAL CONSTRUCTION NOTES:

1. PLANS ARE INTENDED TO BE DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
2. THE CONTRACTOR SHALL OBTAIN, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
3. CONTRACTOR SHALL CONTACT USA (UNDERGROUND SERVICE ALERT) AT (800) 227-2600, FOR UTILITY LOCATIONS, 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION, SITE WORK OR CONSTRUCTION.
4. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE, OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CBC / UBC'S REQUIREMENTS REGARDING EARTHQUAKE RESISTANCE, FOR, BUT NOT LIMITED TO, PIPING, LIGHT FIXTURES, CEILING GRID, INTERIOR PARTITIONS, AND MECHANICAL EQUIPMENT. ALL WORK MUST COMPLY WITH LOCAL EARTHQUAKE CODES AND REGULATIONS.
6. REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLOT OF SURVEY DRAWINGS, SHALL NOT BE USED TO IDENTIFY OR ESTABLISH BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR SHALL RELY SOLELY ON THE PLOT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND SHALL NOTIFY THE ARCHITECT / ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE CIVIL SURVEY. THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT / ENGINEER.
7. THE BUILDING DEPARTMENT ISSUING THE PERMITS SHALL BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORK, OR AS OTHERWISE STIPULATED BY THE CODE ENFORCEMENT OFFICIAL HAVING JURISDICTION.
8. DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.
9. ALL EXISTING UTILITIES, FACILITIES, CONDITIONS, AND THEIR DIMENSIONS SHOWN ON THE PLAN HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ARCHITECT / ENGINEER AND THE OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR THE ACCURACY OF THE INFORMATION SHOWN ON THE PLANS, OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTORS SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.
10. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, BOTH HORIZONTAL AND VERTICALLY, PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHOULD BE IMMEDIATELY REPORTED TO THE ARCHITECT / ENGINEER FOR RESOLUTION AND INSTRUCTION, AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT / ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT HIS/HER OWN RISK AND EXPENSE.
11. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK.
12. ANY DRAIN AND/OR FIELD TILE ENCOUNTERED / DISTURBED DURING CONSTRUCTION SHALL BE RETURNED TO IT'S ORIGINAL CONDITION PRIOR TO COMPLETION OF WORK. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON "AS-BUILT" DRAWINGS BY GENERAL CONTRACTOR, AND ISSUED TO THE ARCHITECT / ENGINEER AT COMPLETION OF PROJECT.
13. ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.

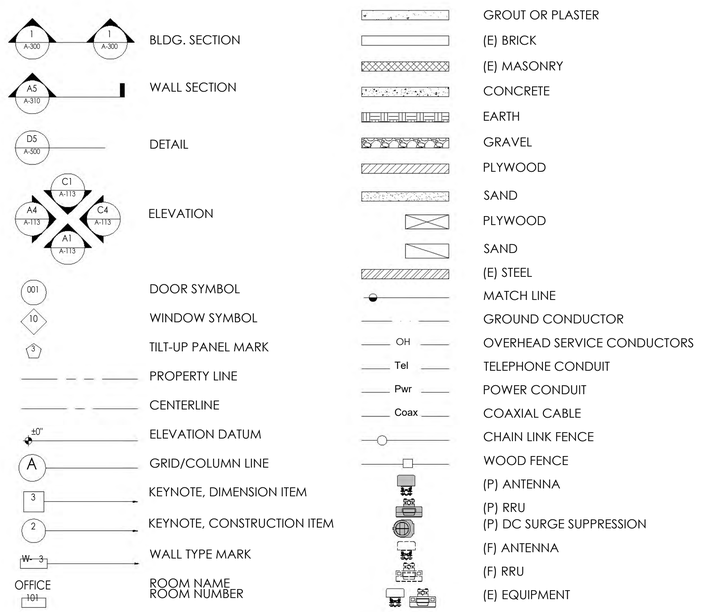
APPLICABLE CODES, REGULATIONS AND STANDARDS:

1. SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION.
2. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
3. SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:
   - 3.1. AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
   - 3.2. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION
   - 3.3. TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G, STRUCTURAL STANDARD FOR STRUCTURAL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES
   - 3.4. INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRICAL EQUIPMENT.
   - 3.5. IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")
   - 3.6. TIA 607 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS TELCORDIA GR-63 NETWORK
   - 3.7. EQUIPMENT-BUILDING SYSTEM (NEBS): PHYSICAL PROTECTION
   - 3.8. TELCORDIA GR-347 CENTRAL OFFICE POWER WIRING
   - 3.9. TELCORDIA GR-1275 GENERAL INSTALLATION REQUIREMENTS
   - 3.10. TELCORDIA GR-1503 COAXIAL CABLE CONNECTIONS
   - 3.11. ANY AND ALL OTHER LOCAL & STATE LAWS AND REGULATIONS
   - 3.12. FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS:

A.B.	ANCHOR BOLT	FDN.	FOUNDATION	SCH.	SCHEDULE
ABV.	ABOVE	F.O.C.	FACE OF CONCRETE	SHT.	SHEET
ACCA	ANTENNA CABLE COVER ASSEMBLY	F.O.M.	FACE OF MASONRY	SIM.	SIMILAR
ADD'L	ADDITIONAL	F.O.S.	FACE OF STUD	SPEC.	SPECIFICATIONS
A.F.F.	ABOVE FINISHED FLOOR	F.O.W.	FACE OF WALL	SQ.	SQUARE
A.F.G.	ABOVE FINISHED GRADE	F.S.	FINISH SURFACE	S.S.	STAINLESS STEEL
ALUM.	ALUMINUM	FT.(')	FOOT (FEET)	STD.	STANDARD
ALT.	ALTERNATE	FTG.	FOOTING	STL.	STEEL
ANT.	ANTENNA	G.	GROWTH (CABINET)	STRUC.	STRUCTURAL
APPRX.	APPROXIMATE(LY)	GA.	GAUGE	TEMP.	TEMPORARY
ARCH.	ARCHITECT(URAL)	GI.	GALVANIZE(D)	THK.	THICK(NESS)
AWG.	AMERICAN WIRE GAUGE	G.F.I.	GROUND FAULT CIRCUIT INTERRUPTER	T.N.	TOE NAIL
BLDG.	BUILDING	GLB. (GLU-LAM)	GLUE LAMINATED BEAM	T.O.A.	TOP OF ANTENNA
BLK.	BLOCK	GPS	GLOBAL POSITIONING SYSTEM	T.O.C.	TOP OF CURB
BLKG.	BLOCKING	GRND.	GROUND	T.O.F.	TOP OF FOUNDATION
BM.	BEAM	HDR.	HEADER	T.O.P.	TOP OF PLATE (PARAPET)
B.N.	BOUNDARY NAILING	HGR.	HANGER	T.O.S.	TOP OF STEEL
BTCW.	BARE TINNED COPPER WIRE	HT.	HEIGHT	T.O.W.	TOP OF WALL
B.O.F.	BOTTOM OF FOOTING	ICGB.	ISOLATED COPPER GROUND BUS	TYP.	TYPICAL
B/U	BACK-UP CABINET	IN. (")	INCH(ES)	U.G.	UNDER GROUND
CAB.	CABINET	INT.	INTERIOR	U.L.	UNDERWRITERS LABORATORY
CANT.	CANTILEVER(ED)	LB.(#)	POUND(S)	U.N.O.	UNLESS NOTED OTHERWISE
C.I.P.	CAST IN PLACE	L.B.	LAG BOLTS	V.I.F.	VERIFY IN FIELD
CLG.	CEILING	L.F.	LINEAR FEET (FOOT)	W	WIDE (WIDTH)
CLR.	CLEAR	L.	LONG(ITUDINAL)	w/	WITH
COL.	COLUMN	MAS.	MASONRY	WD.	WOOD
CONC.	CONCRETE	MAX.	MAXIMUM	W.P.	WEATHERPROOF
CONN.	CONNECTION(OR)	M.B.	MACHINE BOLT	WT.	WEIGHT
CONST.	CONSTRUCTION	MECH.	MECHANICAL	℄	CENTERLINE
CONT.	CONTINUOUS	MFR.	MANUFACTURER	P	PLATE, PROPERTY LINE
d	PENNY (NAILS)	MIN.	MINIMUM		
DBL.	DOUBLE	MISC.	MISCELLANEOUS		
DEPT.	DEPARTMENT	MTL.	METAL		
D.F.	DOUGLAS FIR	(N)	NEW		
DIA.	DIAMETER	NO.(#)	NUMBER		
DIAG.	DIAGONAL	N.T.S.	NOT TO SCALE		
DIM.	DIMENSION	O.C.	ON CENTER		
DWG.	DRAWING(S)	OPNG.	OPENING		
DWL.	DOWEL(S)	P/C	PRECAST CONCRETE		
EA.	EACH	PCS	PERSONAL COMMUNICATION SERVICES		
EL.	ELEVATION	PLY.	PLYWOOD		
ELEC.	ELECTRICAL	PPC	POWER PROTECTION CABINET		
ELEV.	ELEVATOR	PRC	PRIMARY RADIO CABINET		
EMT.	ELECTRICAL METALLIC TUBING	P.S.F.	POUNDS PER SQUARE FOOT		
E.N.	EDGE NAIL	P.S.I.	POUNDS PER SQUARE INCH		
ENG.	ENGINEER	P.T.	PRESSURE TREATED		
EQ.	EQUAL	PWR.	POWER (CABINET)		
EXP.	EXPANSION	QTY.	QUANTITY		
EXST.(E)	EXISTING	RAD.(R)	RADIUS		
EXT.	EXTERIOR	REF.	REFERENCE		
FAB.	FABRICATION(OR)	REINF.	REINFORCEMENT(ING)		
F.F.	FINISH FLOOR	REQ'D/	REQUIRED		
F.G.	FINISH GRADE	RGS.	RIGID GALVANIZED STEEL		
FIN.	FINISH(ED)				
FLR.	FLOOR				

SYMBOLS LEGEND:



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5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

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1000 HOLCOMB WOODS PKWY. STE 210
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OFFICE (678) 280-2325

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GENERAL NOTES

COMPLIANCE WITH CFC 2022 SECTION 1207 - OUTDOOR BATTERY SYSTEMS

1207.4 GENERAL INSTALLATIONS REQUIREMENTS

1207.4.1 ELECTRICAL DISCONNECTS:
IN ACCORDANCE WITH SECTION 1207.4.1, THE ESS IS UNDER THE EXCLUSIVE CONTROL OF A COMMUNICATIONS FACILITY AND WILL HAVE ELECTRICAL DISCONNECT SIGNAGE IN ACCORDANCE WITH NFPA 76. SEE EMERGENCY SHUT DOWN AND BACK UP BATTERY DISCONNECT SIGNAGE ON SITE SIGNAGE SHEET IN THIS DRAWING SET.

1207.4.2 WORKING CLEARANCES:
IN ACCORDANCE WITH SECTION 1207.4.2, THE ESS WILL MAINTAIN PROPER WORKING CLEARANCES AS PRESCRIBED BY THE CALIFORNIA ELECTRICAL CODE AND THE MANUFACTURER'S INSTRUCTIONS.

1207.4.4 SEISMIC AND STRUCTURAL DESIGN:
IN ACCORDANCE WITH SECTION 1207.4.4, THE ESS WILL NOT EXCEED THE FLOOR LOADING LIMITATION OF THE BUILDING, REFERENCE PASSING STRUCTURAL ANALYSIS REPORT UNDER SEPARATE COVER.

1207.4.5 VEHICLE IMPACT PROTECTION:
THE ESS CABINETS ARE LOCATED IN AN UNOCCUPIED AND UNMANNED OUTDOOR TELECOMMUNICATIONS FACILITY AND IS NOT SUBJECT TO IMPACT BY VEHICLES. SHOULD THE ESS BE SUBJECT TO POTENTIAL IMPACT BY VEHICLES, IMPACT PROTECTION SHALL BE IN PLACE IN ACCORDANCE WITH SECTION 312.

1207.4.6 COMBUSTIBLE STORAGE:
IN ACCORDANCE WITH SECTION 1207.4.6, NO COMBUSTIBLE MATERIALS WILL BE STORED WITHIN 3' OF THE BATTERY CABINETS.

1207.4.7 TOXIC AND HIGHLY TOXIC GASES:
THE ESS BATTERY CABINET IS LOCATED OUTDOORS AND IS NATURALLY VENTILATED, NO EXHAUST SYSTEM IS REQUIRED.

1207.4.8 SIGNAGE:
IN ACCORDANCE WITH SECTION 1207.4.8, HAZARD SIGNAGE WILL BE PLACED AT THE BATTERY STORAGE SYSTEM INDICATING "DANGER", "LEAD ACID BATTERIES", "CORROSIVE LIQUIDS", ENERGIZED ELECTRICAL CIRCUITS", "NO SMOKING". SEE SITE SIGNAGE SHEET IN THIS DRAWING SET.

1207.4.9 SECURITY OF INSTALLATIONS:
IN ACCORDANCE WITH SECTION 1207.4.9, THE BATTERY CABINETS AND ENCLOSURES WILL BE LOCKED AND SECURED AGAINST UNAUTHORIZED ENTRY.

1207.4.10 OCCUPIED WORK CENTERS:
THE TELECOMMUNICATIONS FACILITY AND IT'S ESS IS UNMANNED AND NOT OCCUPIED BY ANY PERSONNEL OTHER THAN THOSE DIRECTLY INVOLVED IN ITS MAINTENANCE.

1207.4.11 OPEN RACK INSTALLATIONS:
THE TELECOMMUNICATIONS FACILITY/CABINETS ARE LOCKED AND ONLY AUTHORIZED PERSONNEL HAVE ACCESS TO THE FACILITY AND ESS.

1207.4.12 WALK-IN UNITS:
WALK-IN UNITS SHALL BE ENTERED ONLY FOR INSPECTION, MAINTENANCE AND REPAIR OF ESS UNITS AND ANCILLARY EQUIPMENT, AND ARE NOT OCCUPIED FOR ANY OTHER PURPOSES.

1207.8.3 CLEARANCE TO EXPOSURES:
IN ACCORDANCE WITH SECTION 1207.8.3, THE ESS IS IN A WEATHERPROOF ENCLOSURE CONSTRUCTED OF NONCOMBUSTIBLE MATERIALS AND IS AT LEAST 10' FROM ANY LOT LINES, PUBLIC WAYS, BUILDINGS, STORED COMBUSTIBLE MATERIALS, HAZARDOUS MATERIALS, HIGH-PILED STOCK, OR OTHER EXPOSURE HAZARDS.

1207.5.5 FIRE SUPPRESSION SYSTEMS
THE ESS IS FOR A LEAD-ACID BATTERY SYSTEMS UNDER THE EXCLUSIVE CONTROL OF A COMMUNICATIONS UTILITY THAT OPERATE AT LESS THAN 50 VAC AND 60 VDC. ADDITIONALLY, THE ESS IS LOCATED OUTDOORS AND DOES NOT REQUIRE AN AUTOMATIC FIRE SUPPRESSION SYSTEM.

1207.5.5.1WATER-REACTIVE SYSTEMS:
THE ESS IS A VALVE REGULATED LEAD ACID (VRLA) BATTERY SYSTEM THAT DOES NOT UTILIZE WATER-REACTIVE MATERIALS.

1207.5.2 MAXIMUM ALLOWABLE QUANTITIES:
THE ESS IS A VALVE REGULATED LEAD ACID (VRLA) BATTERY SYSTEM AND PER TABLE 1207.5 THE MAXIMUM ALLOWABLE QUANTITY IS "UNLIMITED".

1207.5.8 MEANS OF EGRESS SEPARATION:
IN ACCORDANCE WITH SECTION 1207.5.8, THE ESS IS LOCATED A MINIMUM OF 10' AWAY FROM ANY MEANS OF EGRESS AND DOES NOT OBSTRUCT OR IMPEDE SAFE EGRESS UNDER FIRE CONDITIONS.

1207.5.1 SIZE AND SEPARATION:
PER EXCEPTION 1 IN SECTION 1207.5.1, THE ESS IS A LEAD-ACID BATTERY SYSTEM WHICH IS UNDER THE EXCLUSIVE CONTROL OF A COMMUNICATIONS UTILITY AND IS IN COMPLIANCE WITH NFPA 76.

1207.6.1 EXHAUST VENTILATION:
THE CABINETS CONTAINING BATTERIES ARE OUTDOORS AND MEET VENTILATION REQUIREMENTS. THE ESS IS ALSO UNDER THE EXCLUSIVE CONTROL OF A COMMUNICATIONS UTILITY AND IS UNDER THE 1,000 GALLON THRESHOLD NOTED IN SECTION 1207.6.2.3.

1207.6.2 SPILL CONTROL AND NEUTRALIZATION:
IN COMPLIANCE WITH SECTION 1207.6.2 OF THE 2022 CALIFORNIA FIRE CODE, A SPILL CONTAINMENT SYSTEM KIT WILL BE STORED AT THE LEASE AREA. THE ESS IS ALSO UNDER THE EXCLUSIVE CONTROL OF A COMMUNICATIONS UTILITY AND IS UNDER THE 1,000 GALLON THRESHOLD NOTED IN SECTION 1207.6.2.3.

1207.6.2.1 SPILL CONTROL:
THE ESS IS STORED IN CABINETS WHICH COME EQUIPPED WITH SPILL CONTROL TRAYS WHICH ARE CAPABLE OF CONTAINING MORE THAN THE SINGLE LARGEST BATTERY OR VESSEL STORED IN THE CABINET. THE ESS IS ALSO UNDER THE EXCLUSIVE CONTROL OF A COMMUNICATIONS UTILITY AND IS UNDER THE 1,000 GALLON THRESHOLD NOTED IN SECTION 1207.6.2.3.

1207.6.2.2 NEUTRALIZATION:
SEE RESPONSE FOR SECTION 1207.6.2 ABOVE, A SPILL CONTAINMENT SYSTEM KIT WILL BE STORED AT THE LEASE AREA. THE ESS IS ALSO UNDER THE EXCLUSIVE CONTROL OF A COMMUNICATIONS UTILITY AND IS UNDER THE 1,000 GALLON THRESHOLD NOTED IN SECTION 1207.6.2.3.

1207.6.4 SAFETY CAPS:
IN ACCORDANCE WITH SECTION 1207.6.4, THE PROPOSED BATTERIES SHALL BE EQUIPPED WITH SELF-RESEALING FLAME ARRESTING CAPS.

1207.6.5 THERMAL RUNAWAY:
IN ACCORDANCE WITH SECTION 1207.6.5, THE CABINETS CONTAINING BATTERIES SHALL CONTAIN THERMAL RUNAWAY MANAGEMENT.

1207.5.7 VEGETATION CONTROL:
IN ACCORDANCE WITH SECTION 1207.5.7, THE OUTDOOR ESS SHALL BE CLEARED OF COMBUSTIBLE VEGETATION AREAS WITHIN 10' ON EACH SIDE OF THE OUTDOOR ESS CABINETS. EXCEPTION FOR SINGLE SPECIMENS OF TREES, SHRUBBERY OR CULTIVATED GROUND COVER SUCH AS GREEN GRASS, IVY, SUCCULENTS OR SIMILAR PLANTS USED AS GROUND COVER PROVIDED THAT THEY DO NOT FORM A MEANS OF READILY TRANSMITTING FIRE.

Container	5-Gallon D.O.T.	20-Gallon D.O.T.	Lockable Rolling Cart with Organizers	55-Gallon D.O.T.
ENVIROGUARD Global Compliance Solutions				
Tyvek body coveralls	1	2	2	2
Headgear/face shield	1	2	2	2
Goggles	1	2	2	2
Rubber Gloves	1	2	2	2
pH test Kit	1	1	1	1
Duct Tape	1	1	1	1
Absorbent wipes	10	20	15	20
Hazmat disposal bags	2	2	2	3
Disposable respirator	1	2	2	2
Emergency response guidebook	1	1	1	1
NeutraSorb	5 lbs.	10 lbs.	5 lbs.	(4x) 10 lbs.
Neutralizing & absorbing Pads	3	3	5	6
SOCs		2		7
Scoop		1	1	1
Brush		1 brush	1	1 broom with collapsible handle
pH7			1 qt. bottle	16 oz. bottle.
Squeegee				1 with collapsible handle

Spill Clean-Up Kits | Neutralizing Products | Cabinet Kits

5-Gallon Spill Clean-up Kit

Kit Includes

- 5-Gallon D.O.T. container
- 1 pair of Tyvek body coveralls
- 1 headgear/face shield
- 1 pair of goggles
- 1 pair of rubber gloves
- 1 roll of duct tape, 1 pH test kit
- 3 neutralizing & absorbing pads
- 10 absorbent wipes
- 2 hazmat disposal bags
- 1 disposable respirator
- 1 emergency response guidebook
- 5 lbs. NeutraSorb (acid absorbent & neutralizer)



Part Number

- SCK-5 - Also available for NiCd (SCK-5-K) applications

Regulations In Compliance With

- Fire Codes
- Building Codes
- OSHA 1920.178

Specifications

- Height: 14.5"
- Diameter: 11.25"

APPLICANT:

AT&T

5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

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409 JACKSON STREET
COPPEROPOLIS, CA
95228

DESIGN RECORD:

REV	DATE	DESCRIPTION	INT.
3	08/15/24	REV.100% ZD PER LAND LORD	SMR
2	08/06/24	100% ZD REVISED	MM3
1	03/19/24	100% ZD REVISED	TT
0	11/08/23	100% ZD	BH
D	08/22/23	REVISED 95% ZD	BH
C	08/08/23	95% ZD	BH
B	07/07/23	90% ZD	TT
A	06/05/23	90% ZD	BH

PROFESSIONAL STAMP:

It is a violation of law for any persons, unless they are acting under the direction of a licensed professional engineer, to alter this document

SHEET TITLE:

GN-2

SHEET NAME:

CFC 2022 SECTION 1207 COMPLIANCE

NOTES

APN: 054-011-001-000
OWNER: CATHOLIC CEMETERY

THIS DRAWING DOES NOT REPRESENT A BOUNDARY SURVEY OF ANY PARCEL OF LAND, NOR DOES IT IMPLY OR INFER THAT A BOUNDARY SURVEY WAS PERFORMED. THIS IS A SPECIALIZED TOPOGRAPHIC MAP WITH PROPERTY AND EASEMENTS BEING A GRAPHIC DEPICTION BASED ON INFORMATION GATHERED FROM VARIOUS SOURCES OF RECORD AND AVAILABLE MONUMENTATION. PROPERTY LINES AND LINES OF TITLE WERE NEITHER INVESTIGATED NOR SURVEYED AND SHALL BE CONSIDERED APPROXIMATE ONLY. NO PROPERTY MONUMENTS WERE SET.

THE EASEMENTS (IF ANY) THAT APPEAR ON THIS MAP HAVE BEEN PLOTTED BASED SOLELY ON INFORMATION CONTAINED IN THE PRELIMINARY TITLE REPORT BY: FIRST AMERICAN TITLE INSURANCE COMPANY, FILE NO. 6908345, DATED SEPTEMBER 02, 2022 . WITHIN SAID TITLE REPORT THERE ARE SIX (6) EXCEPTIONS LISTED, ZERO (0) OF WHICH ARE EASEMENTS AND CAN NOT BE PLOTTED.

THE UNDERGROUND UTILITIES (IF ANY) THAT APPEAR ON THIS MAP HAVE BEEN LOCATED BY FIELD OBSERVATION. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES STATE THAT THEY ARE LOCATED AS ALAURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.

THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD RATE MAP FOR COMMUNITY NO. 060633, PANEL NO. 0650E, DATED DECEMBER 17, 2010 SHOWS THAT THE LOCATION OF THIS SITE FALLS WITHIN ZONE 'X', AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

THE LATITUDE AND LONGITUDE AT THE LOCATION AS SHOWN WAS DETERMINED BY GPS OBSERVATIONS.

LAT. XX° XX' XX.XX" N. NAD 83
LONG. XXX° XX' XX.XX" W. NAD 83
ELEV. XX.X' NAVD 88 (BASIS OF DRAWING)

The information shown above meets or exceeds the requirements set forth in FAA order 8260.19D for 1-A aLAuracy (± 20' horizontally and ± 3' vertically). The horizontal datum (coordinates) are expressed as degrees, minutes and seconds, to the nearest hundredth of a second. The vertical datum (heights) are expressed in feet and decimals thereof and are determined to the nearest 0.1 foot.

LESSOR'S PROPERTY LEGAL DESCRIPTION PER TITLE REPORT:

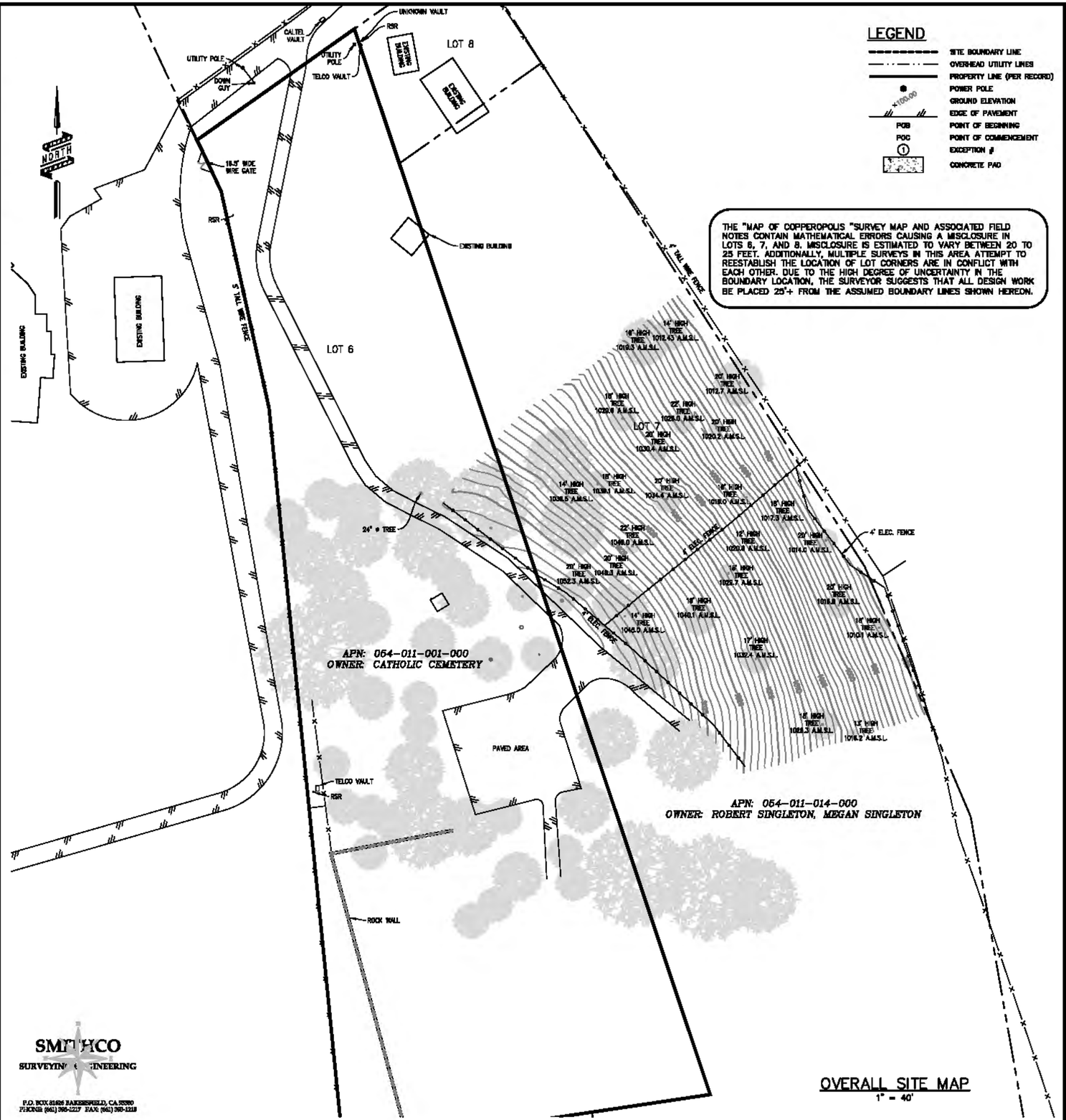
REAL PROPERTY IN THE UNINCORPORATED AREA OF THE COUNTY OF CALAVERAS, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

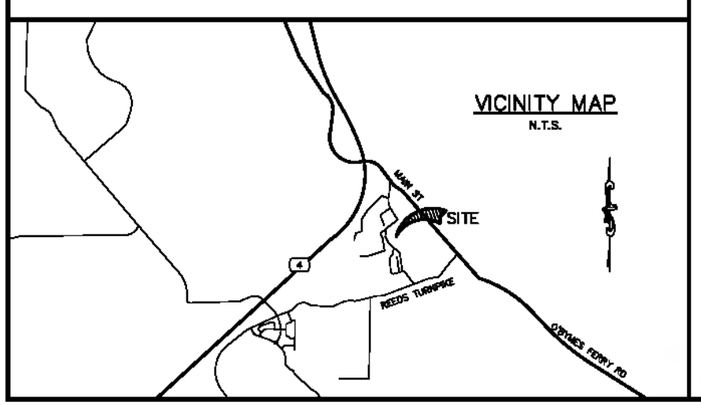
LOT 7 AND 8 OF BLOCK 8 OF THE TOWNSITE OF COPPEROPOLIS, CALAVERAS COUNTY.

EXCEPTING THEREFROM ALL THAT PORTION OF SAID LOT 7 LYING BETWEEN THE I.O.O.F. CEMETERY AND THE CATHOLIC CEMETERY, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF THE I.O.O.F. CEMETERY AND EXTENDING 137 FEET, MORE OR LESS, TO OR NEAR THE SOUTHEAST CORNER OF THE CATHOLIC CEMETERY; THENCE ALONG THE LINE, OR PARALLEL TO THE LINE, OF THE CATHOLIC CEMETERY 108 FEET; THENCE TO THE NORTHWEST CORNER OF THE I.O.O.F. CEMETERY A DISTANCE OF 137 FEET; THENCE ALONG THE NORTH LINE OF THE I.O.O.F. CEMETERY 108 FEET TO THE POINT OF BEGINNING.

APN: 054-011-014-000





SMITHCO
SURVEYING & ENGINEERING
P.O. BOX 81626 BAKERSFIELD, CA 93380
PHONE (661) 366-1217 FAX (661) 366-1218

AT&T

J5 INFRASTRUCTURE PARTNERS

23 MAUCHLY #110,
IRVINE, CA 92618

ALL DRAWINGS AND WRITTEN MATERIAL CONTAINED HEREIN ARE THE PROPERTY OF THE SURVEYOR AND MAY NOT BE DUPLICATED, USED, OR DISCLOSED WITHOUT THE WRITTEN CONSENT OF THE SURVEYOR.

DRAWN BY:	CHECKED BY:	APPROVED BY:
CJ	DA	---

RFDS REV #: ---

SUBMITTALS

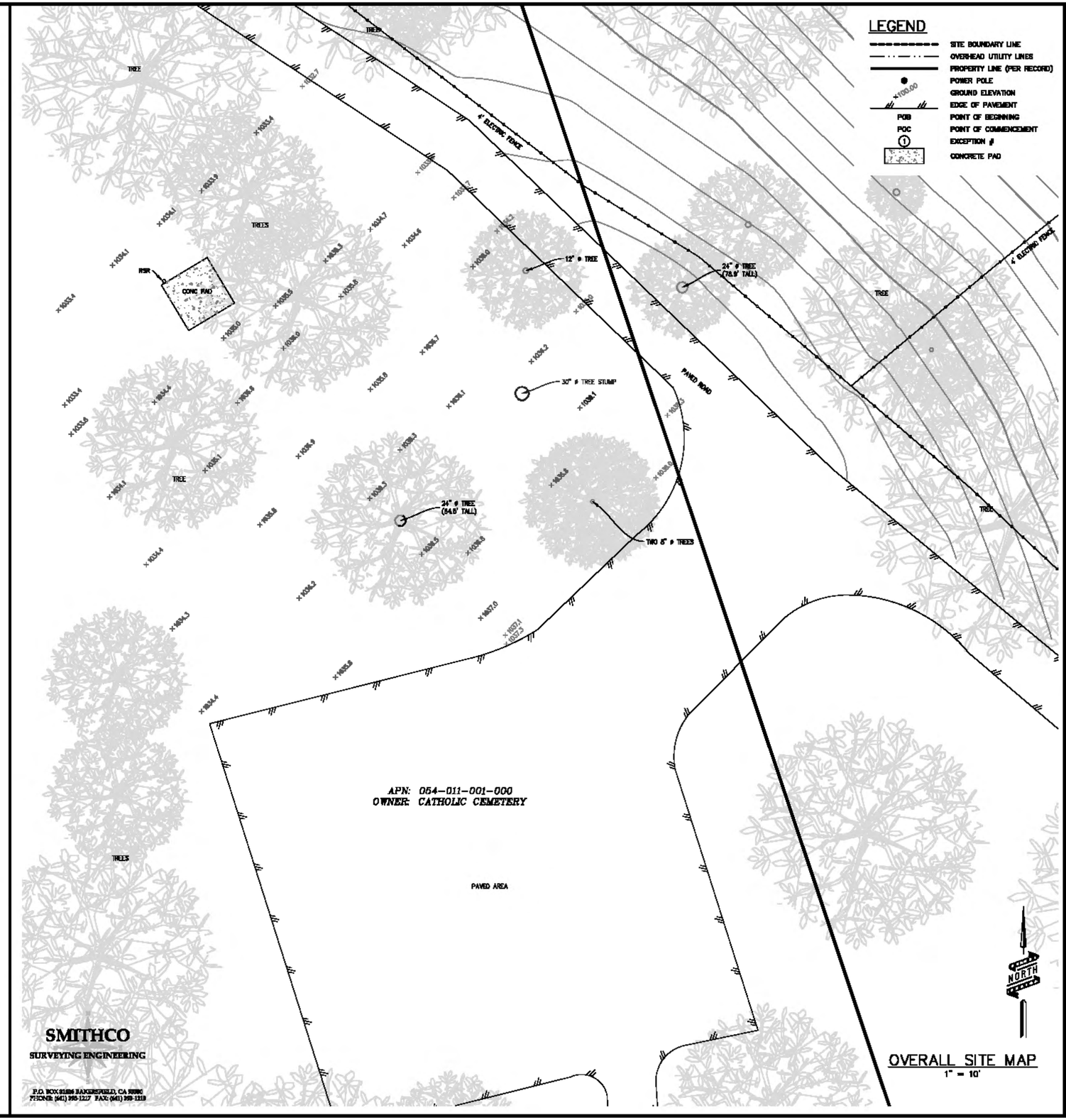
REV	DATE	DESCRIPTION	BY
0	10/10/22	PRELIMINARY ISSUE	DA
1	01/27/23	UPDATE	LA
2	02/23/23	REVISION	CJ

J5 PROJECT NUMBER
X-XXXXXX

DISH WIRELESS L.L.C.
PROJECT INFORMATION
CVL02739 CEMETERY HILL
409 JACKSON ST.
COPPEROPOLIS, CA 95228

SHEET TITLE
SITE SURVEY

SHEET NUMBER
C-1



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PHONE (661) 395-1217 FAX (661) 395-1219

AT&T

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23 MAUCHLY #110,
IRVINE, CA 92618

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DRAWN BY:	CHECKED BY:	APPROVED BY:
CJ	DA	---

RFDS REV #: ---

SUBMITTALS

REV	DATE	DESCRIPTION	BY
0	10/10/22	PRELIMINARY ISSUE	CJ
1	04/07/23	UPDATE	DA
2	05/03/23	REVISION	CJ

J5 PROJECT NUMBER

X-XXXXXX

DISH WIRELESS L.L.C.
PROJECT INFORMATION

CVL02739 CEMETERY HILL
409 JACKSON ST.
COPPEROPOLIS, CA 95228

SHEET TITLE

SITE
SURVEY

SHEET NUMBER

C-2

THIS IS NOT A SITE SURVEY

ALL PROPERTY BOUNDARIES, ORIENTATION OF TRUE NORTH AND STREET HALF-WIDTHS HAVE BEEN OBTAINED FROM A TAX PARCEL MAP AND EXISTING DRAWINGS AND ARE APPROXIMATE.



1 OVERALL SITE PLAN

24"x36" SCALE: 1" = 60'-0"
11"x17" SCALE: 1" = 120'-0"
60' 30' 0" 60'

APPLICANT:

AT&T

5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

VENDOR:

PM&A
P. MARSHALL & ASSOCIATES
CENTERLINE COMMUNICATIONS COMPANY
1000 HOLCOMB WOODS PKWY. STE 210
ROSWELL, GA 30076
OFFICE (678) 280-2325

SITE INFORMATION:

CVL02739

CEMETERY HILL

409 JACKSON STREET
COPPEROPOLIS, CA
95228

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D	08/22/23	REVISED 95% ZD	BH
C	08/08/23	95% ZD	BH
B	07/07/23	90% ZD	TT
A	06/05/23	90% ZD	BH

PROFESSIONAL STAMP:

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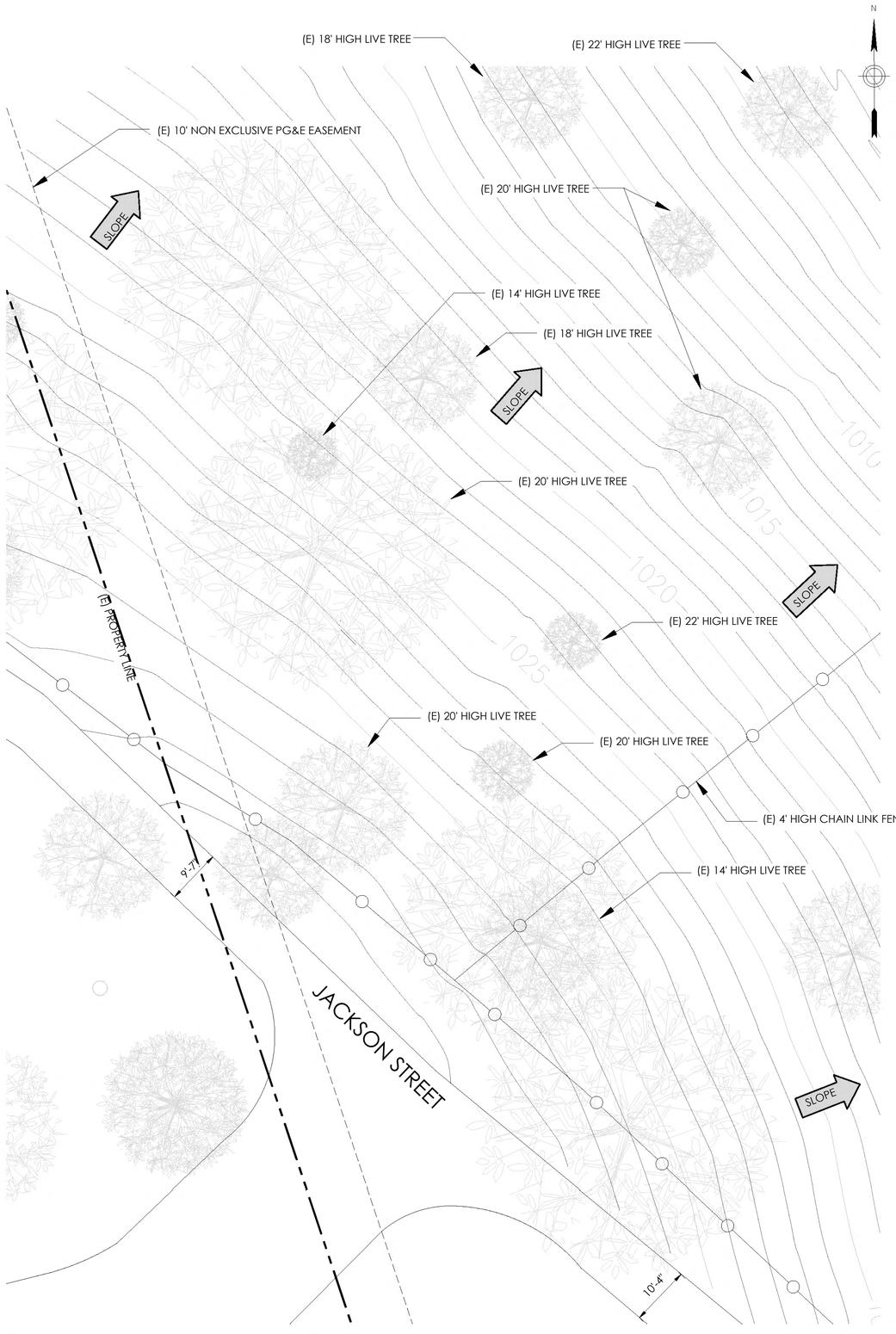
SHEET TITLE:

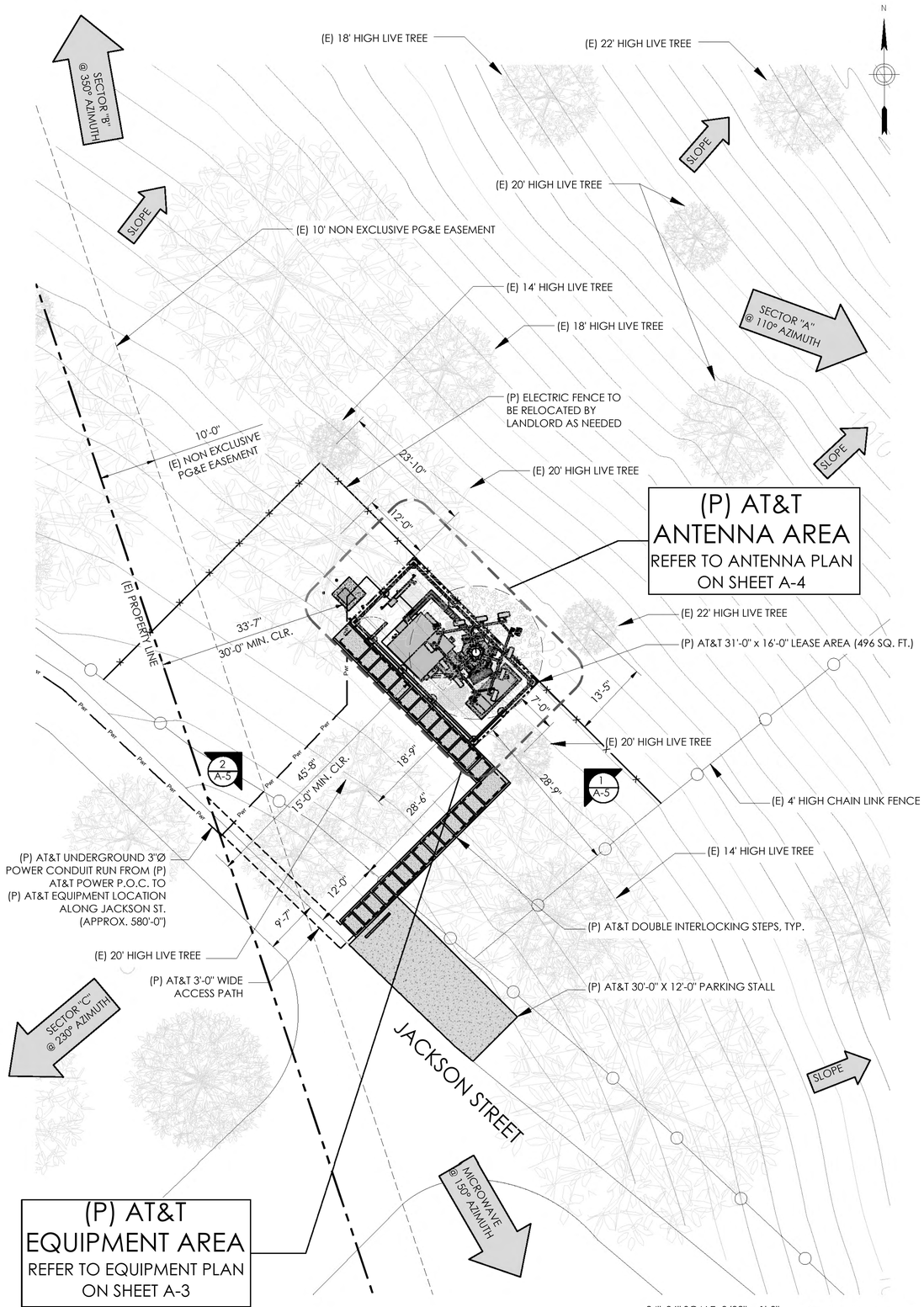
A-1

SHEET NAME:

OVERALL SITE PLAN



1 EXISTING ENLARGED SITE PLAN



2 PROPOSED ENLARGED SITE PLAN

APPLICANT:

AT&T

5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

VENDOR:

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D	08/22/23	REVISED 95% ZD	BH
C	08/08/23	95% ZD	BH
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A	06/05/23	90% ZD	BH

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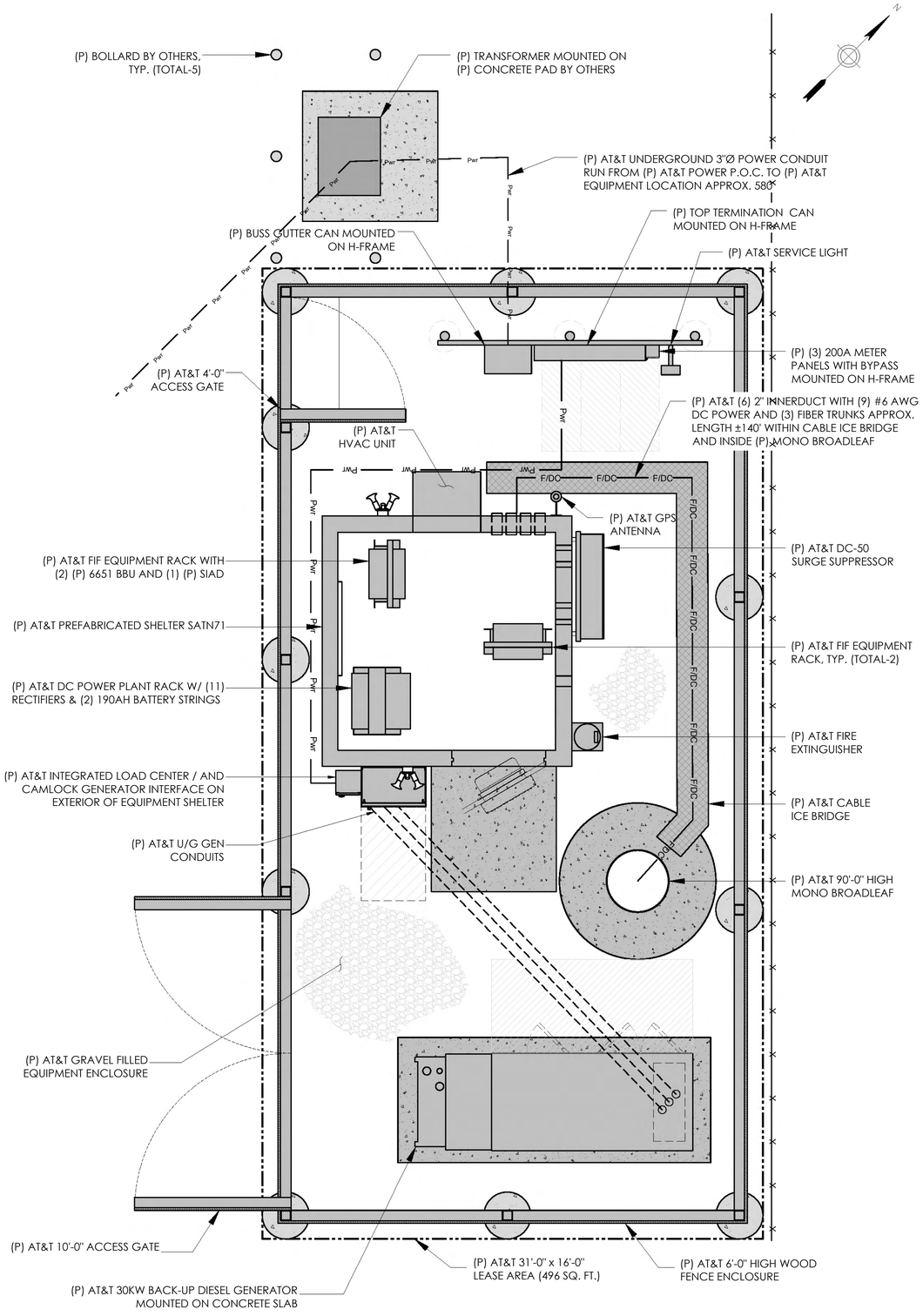
SHEET TITLE:

A-2

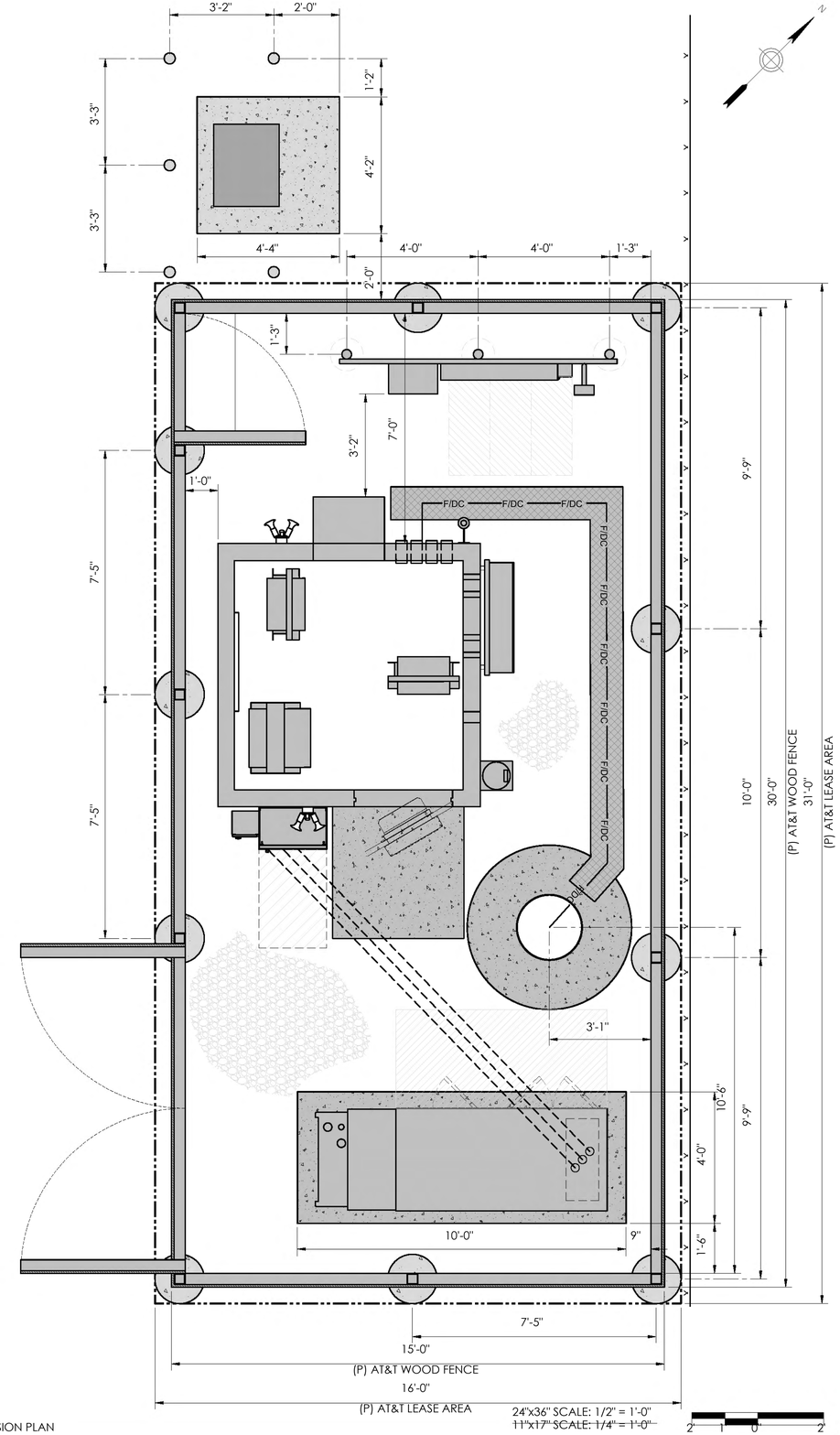
SHEET NAME:

ENLARGED SITE PLANS



1 PROPOSED EQUIPMENT PLAN

24"x36" SCALE: 1/2" = 1'-0"
~~11"x17" SCALE: 1/4" = 1'-0"~~
2' 1' 0" 2'



2 PROPOSED DIMENSION PLAN

24"x36" SCALE: 1/2" = 1'-0"
~~11"x17" SCALE: 1/4" = 1'-0"~~
2' 1' 0" 2'

APPLICANT:

AT&T

5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

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D	08/22/23	REVISED 95% ZD	BH
C	08/08/23	95% ZD	BH
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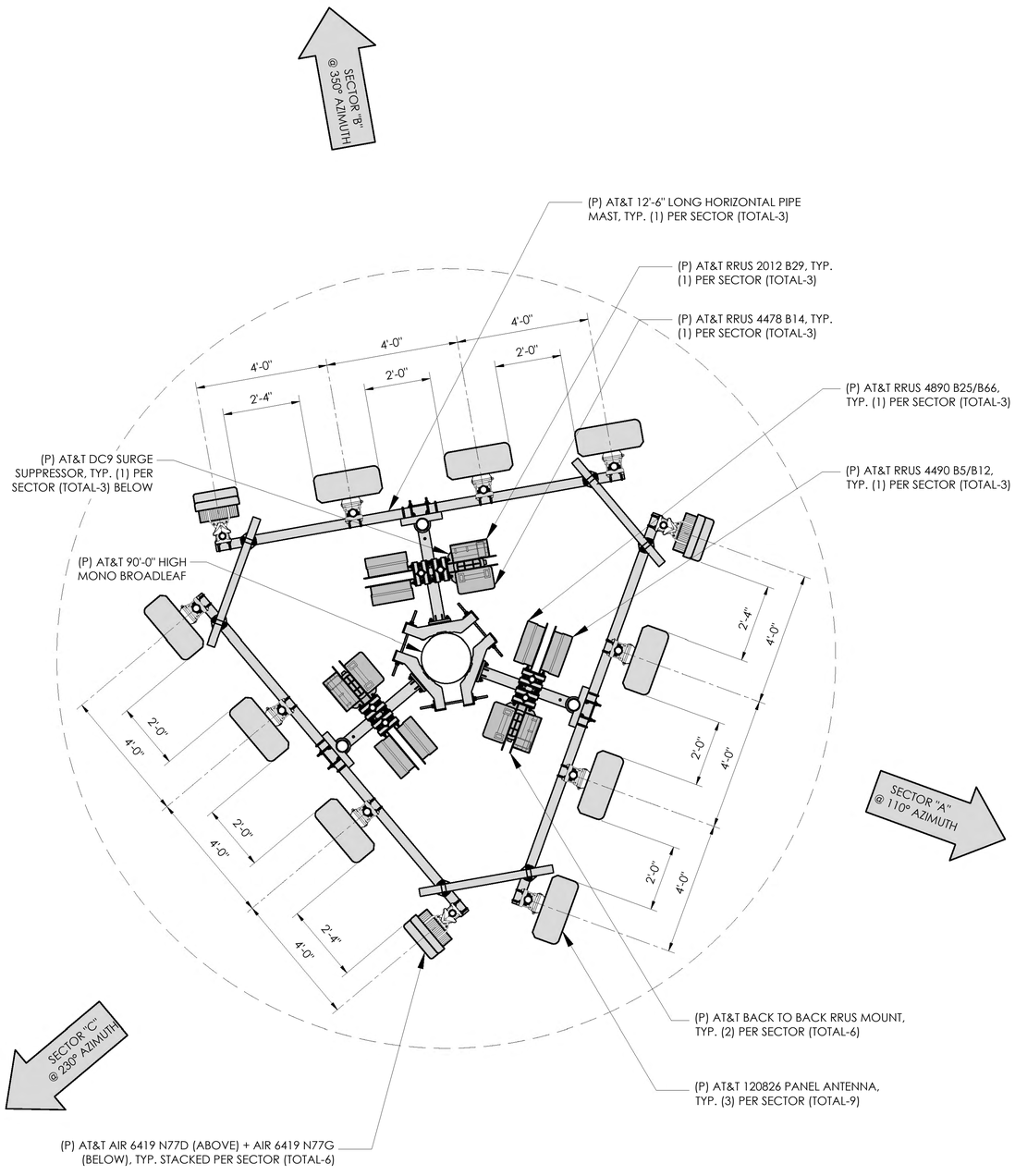
SHEET TITLE:

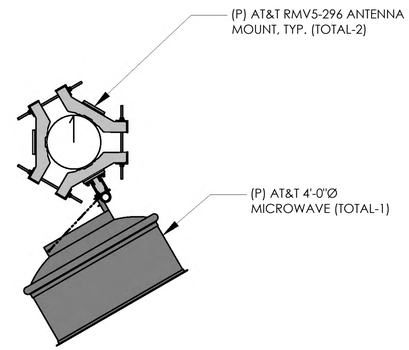
A-3

SHEET NAME:

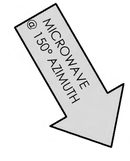
PROPOSED EQUIPMENT AND DIMENSION PLAN



76'-0" PANEL ANTENNA RAD CENTER



57'-0" MICROWAVE DISH RAD CENTER



1 PROPOSED ANTENNA PLAN

24"x36" SCALE: 1/2" = 1'-0"
11"x17" SCALE: 1/4" = 1'-0"

2' 1' 0" 2'

N

APPLICANT:

AT&T

5001 EXECUTIVE PARKWAY
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D	08/22/23	REVISED 95% ZD	BH
C	08/08/23	95% ZD	BH
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A	06/05/23	90% ZD	BH

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SHEET TITLE:

A-4

SHEET NAME:

PROPOSED ANTENNA PLANS

NOTES TO CONTRACTOR:

1. CONTRACTOR IS TO REFER TO AT&T'S MOST CURRENT RADIO FREQUENCY DATA SHEET (RFDS) PRIOR TO CONSTRUCTION.
2. CABLE LENGTHS WERE DETERMINED BASED ON VISUAL INSPECTION DURING SITE-WALK. CONTRACTOR TO VERIFY ACTUAL LENGTH DURING PRE-CONSTRUCTION WALK.
3. CONTRACTOR TO VERIFY PORTS HAVE SUFFICIENT ROOM.

NOTE:

(E) ANTENNA AZIMUTHS ARE ESTIMATED AND ARE TO BE VERIFIED BY RF.

Position	Antenna		RRUS		Additional Antenna Location		Line Information	
							Coax Cables	Power/Fiber
	Type	Technology	Type	Location	Azmiuth	Rad Center	Final	Final
ALPHA								
1	120826 CELLMAX	LTE 700 5G 850 LTE 1900 5G 1900	(1) RRUS 4490 B5/B12 (1) RRUS 4890 B25/B66	TOP TOP	110	76'-0"	N/A	(3) #6 AWG DC POWER TRUNKS (1) FIBER TRUNK
2	120826 CELLMAX	LTE FNET LTE AWS 5G AWS	(1) RRUS 4478 B14	TOP	110	76'-0"		
3	120826 CELLMAX	LTE 700	(1) RRUS 2012 B29	TOP	110	76'-0"		
4	AIR6419 N77D + AIR6419 N77G ERICSSON	5G CBAND DoD	N/A	N/A	110	76'-0"		
BETA								
1	120826 CELLMAX	LTE 700 5G 850 LTE 1900 5G 1900	(1) RRUS 4490 B5/B12 (1) RRUS 4890 B25/B66	TOP TOP	350	76'-0"	N/A	(3) #6 AWG DC POWER TRUNKS (1) FIBER TRUNK
2	120826 CELLMAX	LTE FNET LTE AWS 5G AWS	(1) RRUS 4478 B14	TOP	350	76'-0"		
3	120826 CELLMAX	LTE 700	(1) RRUS 2012 B29	TOP	350	76'-0"		
4	AIR6419 N77D + AIR6419 N77G ERICSSON	5G CBAND DoD	N/A	N/A	350	76'-0"		
GAMMA								
1	120826 CELLMAX	LTE 700 5G 850 LTE 1900 5G 1900	(1) RRUS 4490 B5/B12 (1) RRUS 4890 B25/B66	TOP TOP	230	76'-0"	N/A	(3) #6 AWG DC POWER TRUNKS (1) FIBER TRUNK
2	120826 CELLMAX	LTE FNET LTE AWS 5G AWS	(1) RRUS 4478 B14	TOP	230	76'-0"		
3	120826 CELLMAX	LTE 700	(1) RRUS 2012 B29	TOP	230	76'-0"		
4	AIR6419 N77D + AIR6419 N77G ERICSSON	5G CBAND DoD	N/A	N/A	230	76'-0"		
MICROWAVE								
1	4'-0" MICROWAVE COMMSCOPE				150	57'-0"	(1) 2" INNERDUCT + (1) EW-63 + (1) EW-90	N/A

1 RF SCHEDULE

APPLICANT:

AT&T

5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

VENDOR:

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P. MARSHALL & ASSOCIATES
A CENTERLINE COMMUNICATIONS COMPANY
1000 HOLCOMB WOODS PKWY. STE 210
ROSWELL, GA 30076
OFFICE (678) 280-2325

SITE INFORMATION:

CVL02739

CEMETERY HILL

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D	08/22/23	REVISED 95% ZD	BH
C	08/08/23	95% ZD	BH
B	07/07/23	90% ZD	TT
A	06/05/23	90% ZD	BH

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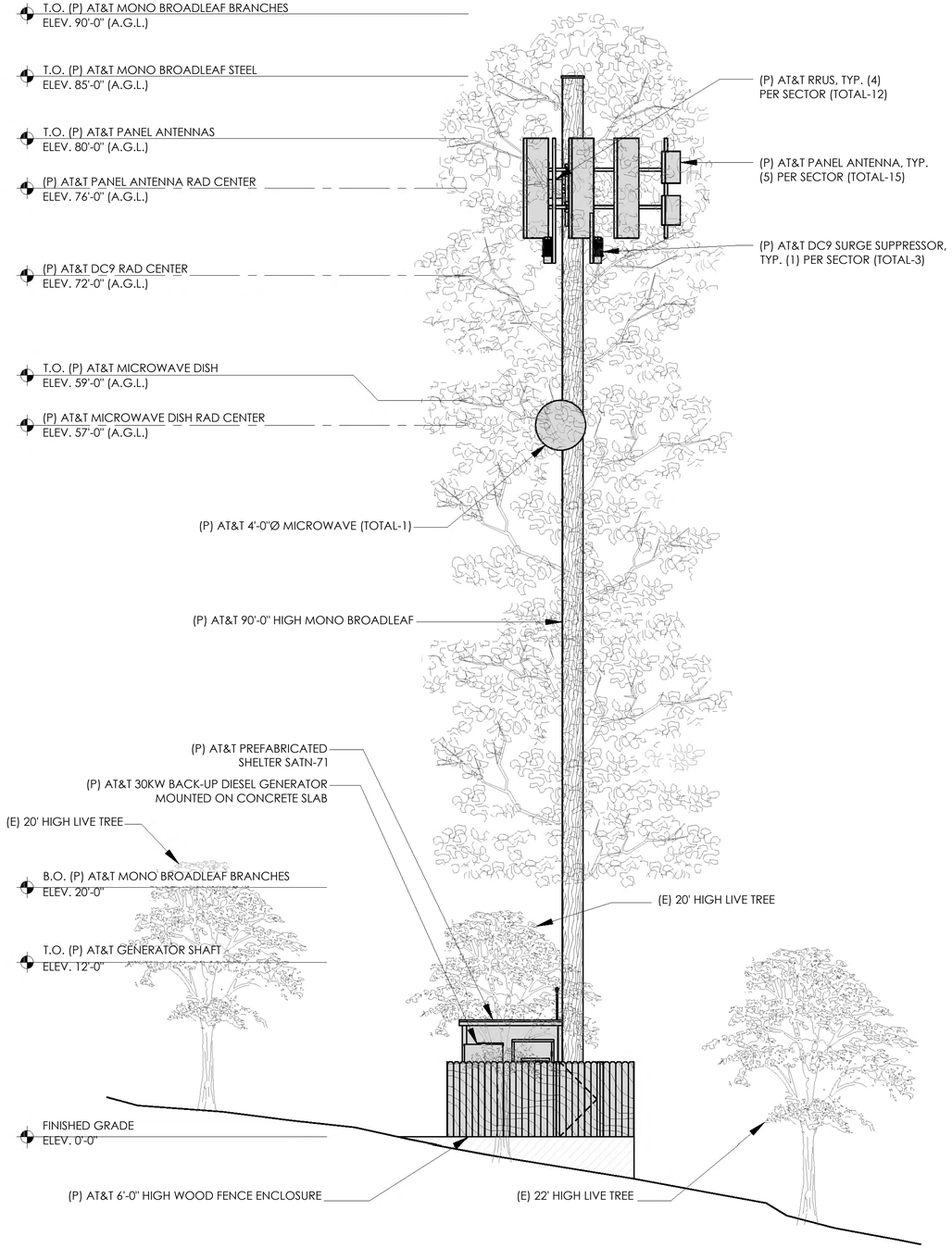
SHEET TITLE:

A-4.1

SHEET NAME:

RF SCHEDULE

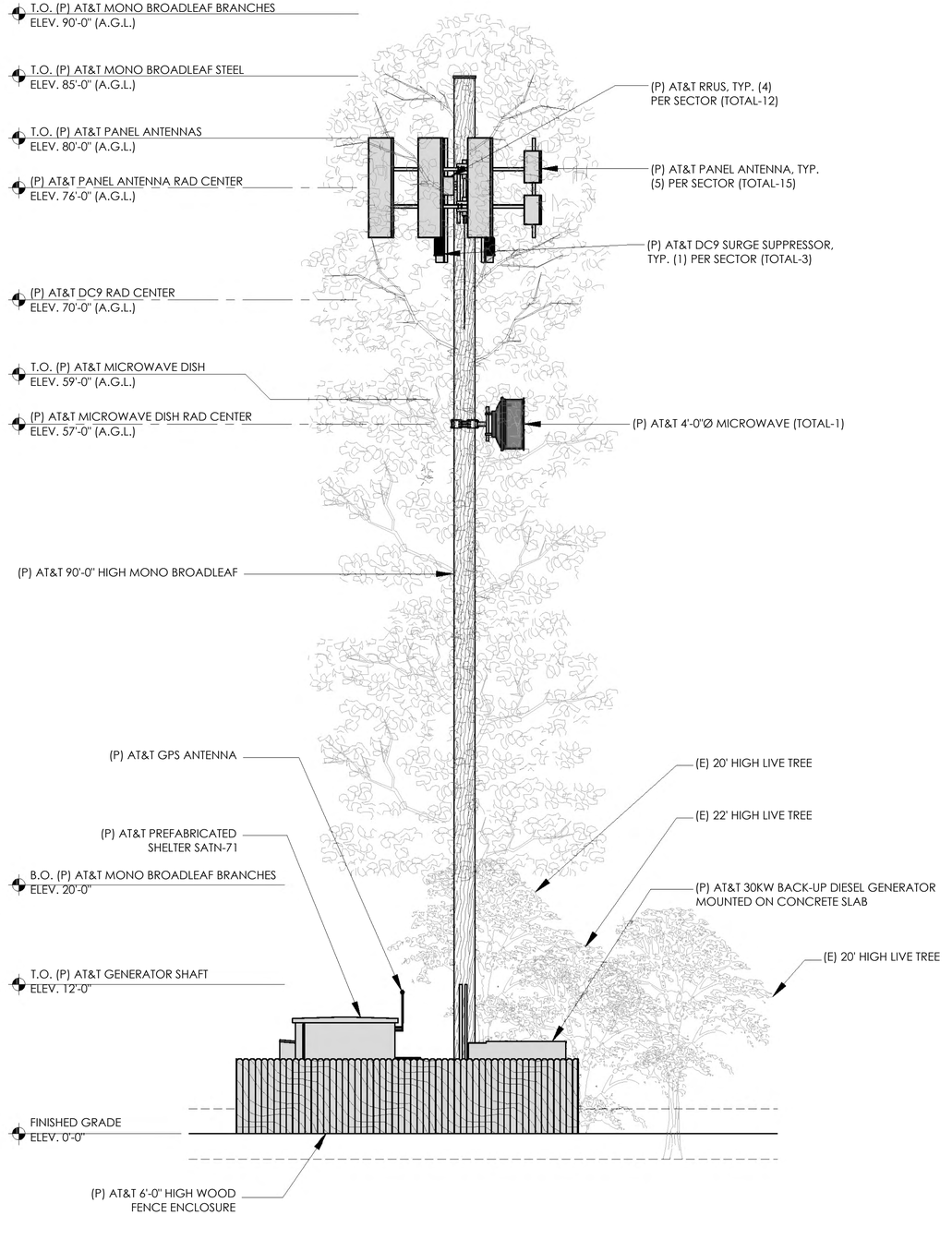
NOTE:
1. ALL (E) RRUS AND DC SURGE SUPPRESSORS BY OTHERS NOT SHOWN FOR CLARITY.



1 PROPOSED SOUTHEAST ELEVATION

24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"
4' 2' 0" 4'

NOTE:
1. ALL (E) RRUS AND DC SURGE SUPPRESSORS BY OTHERS NOT SHOWN FOR CLARITY.



2 PROPOSED SOUTHWEST ELEVATION

24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"
4' 2' 0" 4'

APPLICANT:

AT&T

5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

VENDOR:

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D	08/22/23	REVISED 95% ZD	BH
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SHEET TITLE:

A-5

SHEET NAME:

SOUTHEAST AND SOUTHWEST ELEVATIONS

ELECTRICAL INSTALLATION METHODS:

1. THIS INSTALLATION SHALL COMPLY WITH THE CURRENTLY ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE AND WITH UTILITY COMPANY AND LOCAL CODE REQUIREMENTS.

2. INSTALL SUFFICIENT LENGTHS OF LFMC INCLUDING ALL CONDUIT FITTINGS (NUTS, REDUCING BUSHINGS, ELBOWS, COUPLINGS, ETC) NECESSARY FOR CONNECTION FROM IMC OR PVC CONDUIT TO THE INTERIOR OF THE BTS CABINET.

3. POWER, CONTROL AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG AND LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90°C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED.

4. CUT, COIL AND TAPE A 3 FOOT PIGTAIL FROM END OF LFMC FOR TERMINATING BY BTS EQUIPMENT MANUFACTURER.

5. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG AND LARGER), 600V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90°C (WET AND DRY) OPERATION, LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED.

6. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS OR BELOW GRADE SHALL BE SINGLE CONDUCTOR #2 AWG SOLID, TINNED, COPPER CABLE.

7. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC. CABLE (#14 AWG AND LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B, STRANDED COPPER CABLE RATED FOR 90°C (WET OR DRY) OPERATION, WITH OUTER JACKET LISTED OR LABELED FOR THE LOCATION USED.

8. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.

9. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

10. NEW RACEWAY OR CABLE TRAY SHALL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

11. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP STYLE, COMPRESSION, WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C.

12. EACH END OF EVERY POWER, GROUNDING AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR CODED INSULATION OR ELECTRICAL TAPE. THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA AND MATCH EXISTING INSTALLATION REQUIREMENTS.

13. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMINATED PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (PANELBOARD AND CIRCUIT IDENTIFICATION).

14. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.

15. RIGID NONMETALLIC CONDUIT (PVC SCHEDULE 40 OR PVC SCHEDULE 80) SHALL BE USED UNDERGROUND, DIRECT BURIED IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.

16. ALL CONDUIT RUN ABOVE GROUND OR EXPOSED SHALL BE EMT, LFMC, IMC OR RIGID STEEL.

17. ELECTRICAL METALLIC TUBING (EMT) SHALL BE USED FOR INDOOR AND ROOFTOP LOCATIONS.

18. LIQUID TIGHT FLEXIBLE METALLIC CONDUIT SHALL BE USED INDOORS AND OUTDOORS WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.

19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.

20. CABINETS, BOXES AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.

21. CABINETS, BOXES AND WIREWAYS SHALL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

22. PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.

23. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC. THE SITE SPECIFIC LIGHTNING PROTECTION CODE AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.

24. ALL ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.

25. PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.

26. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION SIZED IN ACCORDANCE WITH THE NEC SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.

27. EACH INDOOR BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH SUPPLEMENTAL EQUIPMENT GROUND WIRES #6 OR LARGER.

28. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.

29. APPROVED ANTIOXIDANT COATINGS (I.E. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.

30. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.

31. SURFACES TO BE CONNECTED TO GROUND CONDUCTORS SHALL BE CLEANED TO A BRIGHT SURFACE AT ALL CONNECTIONS.

32. EXPOSED GROUND CONNECTIONS SHALL BE MADE WITH COMPRESSION CONNECTORS WHICH ARE THEN BOLTED TO EQUIPMENT USING STAINLESS STEEL HARDWARE. INSTALLATION TORQUE SHALL BE PER MANUFACTURER'S REQUIREMENTS.

33. DC POWER CABLES SHALL BE COBRA COP-FLEX 2000, FLEXIBLE CLASS B OR APPROVED EQUAL.

PRODUCTS:

1. ALL MATERIALS SHALL BE NEW, CONFORMING WITH NEC, ANSI, NEMA, AND THEY SHALL BE U.L. LISTED AND LABELED.

2. CONDUIT:

   A) ELECTRICAL METALLIC TUBING SHALL U.L. LABEL, FITTINGS SHALL BE COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS AND ROOFTOPS.

   B) FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE "JAKE" OR "SQUEEZE" TYPE. SEAL TIGHT FLEXIBLE CONDUIT. ALL CONDUIT EXCESS OF SIX FEET IN LENGTH SHALL HAVE FULL SIZE GROUND WIRE.

   C) CONDUIT RUNS MAY BE SURFACE MOUNTED IN CEILING OR WALLS UNLESS INDICATED OTHERWISE. CONDUIT INDICATED SHALL RUN PARALLEL OR AT RIGHT ANGLES TO CEILING, FLOOR OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH ARCHITECT PRIOR TO INSTALLING.

   D) ALL UNDERGROUND CONDUITS SHALL BE PVC SCHEDULE 40 (UNLESS NOTED OTHERWISE) AT A MINIMUM DEPTH OF 24" BELOW GRADE

   E) ALL CONDUIT ONLY (C.O.) SHALL HAVE PULL ROPE.

   F) CONDUITS RUN ON ROOFS SHALL BE INSTALLED ON DURA-BLOK ROOFTOP SUPPORTS BY COOPER B-LINE.

   G) *RIGID SHALL BE USED IN LOCATIONS OF POTENTIAL DAMAGE AND/OR CRUSH. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS, RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.

3. ALL WIRE AND CABLE SHALL BE COPPER, 600 VOLT, #12 AWG MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED. TYPE THHN INSULATION USED UNLESS CONDUCTORS INSTALLED IN CONDUIT EXPOSED TO WEATHER, IN WHICH CASE TYPE THWN INSULATION SHALL BE USED.

4. PROVIDE GALVANIZED COATED STEEL BOXES AND ACCESSORIES SIZED PER CODE TO ACCOMMODATE ALL DEVICES AND WIRING.

5. DUPLEX RECEPTACLES SHALL BE SPECIFICATION GRADE WITH WHITE FINISH (UNLESS NOTED BY ENGINEER), 20 AMP, 125 VOLT, THREE WIRE GROUNDING TYPE, NEMA 5-20R. MOUNT RECEPTACLE AT +12" ABOVE FINISHED FLOOR UNLESS OTHERWISE INDICATED ON DRAWINGS OR IN DETAILS. WEATHERPROOF RECEPTACLES SHALL BE GROUND FAULT INTERRUPTER TYPE WITH SIERRA #WPD-8 LIFT COVERPLATES.

6. TOGGLE SWITCHES SHALL BE 20 AMP, 120 VOLT AC, SPECIFICATION GRADE WHITE (UNLESS NOTED OTHERWISE) FINISH. MOUNT SWITCHES AT +48" ABOVE FINISHED FLOOR.

7. PANELBOARDS SHALL BE DEAD FRONT SAFETY TYPE WITH ANTI-BURN SOLDERLESS COMPRESSION APPROVED FOR COPPER CONDUCTORS, COPPER BUS BARS, FULL SIZED NEUTRAL BUS, GROUND BUS AND EQUIPPED WITH QUICK-MAKE QUICK-BREAK BOLT-IN TYPE THERMAL MAGNETIC CIRCUIT BREAKERS. MOUNT TOP OF THE PANELBOARDS AT 6'-3" ABOVE FINISHED FLOOR. PROVIDE TYPE WRITTEN CIRCUIT DIRECTORY.

8. ALL CIRCUIT BREAKERS, MAGNETIC STARTERS AND OTHER ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THAN MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED.

9. GROUND RODS SHALL BE COPPER CLAD STEEL, 5/8" ROUND AND 10' LONG. COPPERWELD OR APPROVED EQUAL.

GROUNDING NOTES:

1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION REQUIREMENTS AND CONSTRUCTION ACCORDING TO SITE CONDITIONS.

2. ALL GROUNDING CONDUCTORS: #2 AWG SOLID BARE TINNED COPPER WIRE UNLESS OTHERWISE NOTED.

3. GROUND BAR LOCATED IN BASE OF EQUIPMENT WILL BE PROVIDED, FURNISHED AND INSTALLED BY THE VENDOR.

4. ALL BELOW GRADE CONNECTIONS: EXOTHERMIC WELD TYPE, ABOVE GRADE CONNECTIONS: EXOTHERMIC WELD TYPE.

5. GROUND RING SHALL BE LOCATED A MINIMUM OF 24" BELOW GRADE OR 6" MINIMUM BELOW THE FROST LINE.

6. INSTALL GROUND CONDUCTORS AND GROUND ROD MINIMUM OF 1'-0" FROM EQUIPMENT CONCRETE SLAB, SPREAD FOOTING, OR FENCE.

7. EXOTHERMIC WELD GROUND CONNECTION TO FENCE POST: TREAT WITH A COLD GALVANIZED SPRAY.

8. GROUND BARS:
   A) EQUIPMENT GROUND BUS BAR (EGB) LOCATED AT THE BOTTOM OF ANTENNA POLE/MAST FOR MAKING GROUNDING JUMPER CONNECTIONS TO COAX FEEDER CABLES SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. JUMPERS (FURNISHED BY OWNERS) SHALL BE INSTALLED AND CONNECTED BY ELECTRICAL CONTRACTOR.

9. ALL GROUNDING INSTALLATIONS AND CONNECTIONS SHALL BE MADE BY ELECTRICAL CONTRACTOR.

10. OBSERVE N.E.C. AND LOCAL UTILITY REQUIREMENTS FOR ELECTRICAL SERVICE GROUNDING.

11. GROUNDING ATTACHMENT TO TOWER SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS OR AT GROUNDING POINTS PROVIDED (2 MINIMUM).

12. IF EQUIPMENT IS IN A C.L. FENCE ENCLOSURE, GROUND ONLY CORNER POSTS AND SUPPORT POSTS OF GATE. IF CHAIN LINK LID IS USED, THEN GROUND LID ALSO.

13. GROUNDING AT PPC CABINET SHALL BE VERTICALLY INSTALLED.

14. ALL GROUNDING FOR ANTENNAS SHALL BE CONNECTED SO THAT IT WILL BY-PASS MAIN BUSS BAR.

15. ALL EMT RUNS SHALL BE GROUNDED AND HAVE A BUSHING, NO PVC ABOVE GROUND.

16. USE SEPARATE HOLES FOR GROUNDING AT BUSS BAR. NO "DOUBLE-UP" OF LUGS.

17. POWER AND TELCO CABINETS SHALL BE GROUNDED (BONDED) TOGETHER.

18. NO LB'S ALLOWED ON GROUNDING.

19. PROVIDE STAINLESS STEEL CLAMP AND BRASS TAGS ON COAX AT ANTENNAS AND DOGHOUSE.

20 ALL ELECTRICAL AND GROUNDING AT THE CELL SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER SPECIFICATION.

21 IF THE AC PANEL IN THE POWER CABINET IS WIRED AS SERVICE ENTRANCE, THE AC SERVICE GROUND CONDUCTOR SHALL BE CONNECTED TO GROUND ELECTRODE SYSTEM. WHEN THE AC PANEL IN THE POWER CABINET IS CONSIDERED A SUB-PANEL, THE GROUND WIRE SHALL BE INSTALLED IN THE AC POWER CONDUIT. THE INSTALLATION SHALL BE PER LOCAL AND NATIONAL ELECTRIC CODE (NFPA-70).

22 EXOTHERMIC WELDING IS RECOMMENDED FOR GROUNDING CONNECTION WHERE PRACTICAL. OTHERWISE, THE CONNECTION SHALL BE MADE USING COMPRESSION TYPE-2 HOLES. LONG BARREL LUGS OR DOUBLE CRIMP CLAMP "C" CLAMP. THE COPPER CABLES SHALL BE COATED WITH ANTIOXIDANT (COPPER SHIELD) BEFORE MAKING THE CONNECTIONS. THE MANUFACTURER'S TORQUING RECOMMENDATIONS ON THE BOLT ASSEMBLY TO SECURE CONNECTIONS SHALL BE FOLLOWED.

23 THE ANTENNA CABLES SHALL BE GROUNDED AT THE TOP AND BOTTOM OF THE VERTICAL RUN FOR LIGHTING PROTECTION. THE ANTENNA CABLE SHIELD SHALL BE BONDED TO A COPPER GROUND BUSS AT THE LOWER MOST POINT OF A VERTICAL RUN JUST BEFORE IT BEGINS TO BEND TOWARD THE HORIZONTAL PLANE. WIRE RUNS TO GROUND SHALL BE KEPT AS STRAIGHT AND SHORT AS POSSIBLE. ANTENNA CABLE SHIELD SHALL BE GROUNDED JUST BEFORE ENTERING THE CELL CABINET. ANY ANTENNA CABLES OVER 200 FEET IN LENGTH SHALL ALSO BE EQUIPPED WITH ADDITIONAL GROUNDING AT MID-POINT.

24 ALL GROUNDING CONDUCTORS INSIDE THE BUILDING SHALL BE RUN IN CONDUIT RACEWAY SYSTEM, AND SHALL BE INSTALLED AS STRAIGHT AS PRACTICAL WITH MINOR BENDS TO AVOID OBSTRUCTIONS. THE BENDING RADIUS OF ANY #2 GROUNDING CONDUCTOR IS 8". PVC RACEWAY MAY BE FLEXIBLE OR RIGID PER THE FIELD CONDITIONS. GROUNDING CONDUCTORS SHALL NOT MAKE CONTACT WITH ANY METALLIC CONDUITS, SURFACES OR EQUIPMENT.

25 PROVIDE PVC SLEEVES WHERE GROUNDING CONDUCTORS PASS THROUGH THE BUILDING WALLS AND /OR CEILINGS.

26. INSTALL GROUND BUSHINGS ON ALL METALLIC CONDUITS AND BOND TO THE EQUIPMENT GROUND BUSS IN THE PANEL BOARD.

27 GROUND ANTENNA BASES, FRAMES, CABLE RACKS AND OTHER METALLIC COMPONENTS WITH #2 GROUNDING CONDUCTORS AND CONNECT TO INSULATED SURFACE MOUNTED GROUND BARS. CONNECTION DETAILS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS FOR GROUNDING.

28. ALL PROPOSED GROUNDING CONDUCTORS SHALL BE ROUTED AND CONNECTED TO THE MAIN GROUND BAR OR EXISTING GROUND RING.

29. THE CONTRACTOR SHALL PROVIDE A COMPLETE, AND APPROVED GROUNDING SYSTEM INCLUDING ELECTRODES, ELECTRODE CONDUCTOR, BONDING CONDUCTORS, AND EQUIPMENT CONDUCTORS AS REQUIRED BY ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.

30. CONDUITS CONNECTED TO EQUIPMENT AND DEVICES SHALL BE METALLICALLY JOINED TOGETHER TO PROVIDE EFFECTIVE ELECTRICAL CONTINUITY.

31. FEEDERS AND BRANCH CIRCUIT WIRING INSTALLED IN A NONMETALLIC CONDUIT SHALL INCLUDE A CODE SIZED GROUNDING CONDUCTOR HAVING GREEN INSULATION. THE GROUND CONDUCTOR SHALL BE PROPERLY CONNECTED AT BOTH ENDS TO MAINTAIN ELECTRICAL CONTINUITY.

32. REFER TO GROUND BUS DETAILS. PROVIDE NEW GROUND SYSTEM COMPLETE WITH CONDUCTORS, GROUND ROD AND DESCRIBED TERMINATIONS.

33. ALL GROUNDING CONDUCTORS SHALL BE SOLID TINNED COPPER AND ANNEALED #2 UNLESS NOTED OTHERWISE.

34. ALL NON-DIRECT BURIED TELEPHONE EQUIPMENT GROUND CONDUCTORS SHALL BE #2 STRANDED THHN (GREEN) INSULATION.

35. ALL GROUND CONNECTIONS SHALL BE MADE WITH "HYGROUND" COMPRESSION SYSTEM BURNDY CONNECTORS EXCEPT WHERE NOTED OTHERWISE.

36. PAINT AT ALL GROUND CONNECTIONS SHALL BE REMOVED.

37. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE OWNER FOR FUTURE INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE. SUBMIT TEST REPORTS AND FURNISH TO SMART SMR ONE COMPLETE SET OF PRINTS SHOWING "INSTALLED WORK".

38. #2 STRANDED THHN WITH WATER CLAMPS AT EVERY 25' MOUNTED ON CONDUITS AT ROOFTOP LOCATIONS

APPLICANT:

AT&T

5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

VENDOR:

P. MARSHALL & ASSOCIATES
A CENTERLINE COMMUNICATIONS COMPANY
1000 HOLCOMB WOODS PKWY. STE 210
ROSWELL, GA 30076
OFFICE (678) 280-2325

SITE INFORMATION:

CVL02739

CEMETERY HILL

409 JACKSON STREET
COPPEROPOLIS, CA
95228

DESIGN RECORD:

REV	DATE	DESCRIPTION	INT.
3	08/15/24	REV.100% ZD PER LAND LORD	SMR
2	08/06/24	100% ZD REVISED	MM3
1	03/19/24	100% ZD REVISED	TT
0	11/08/23	100% ZD	BH
D	08/22/23	REVISED 95% ZD	BH
C	08/08/23	95% ZD	BH
B	07/07/23	90% ZD	TT
A	06/05/23	90% ZD	BH

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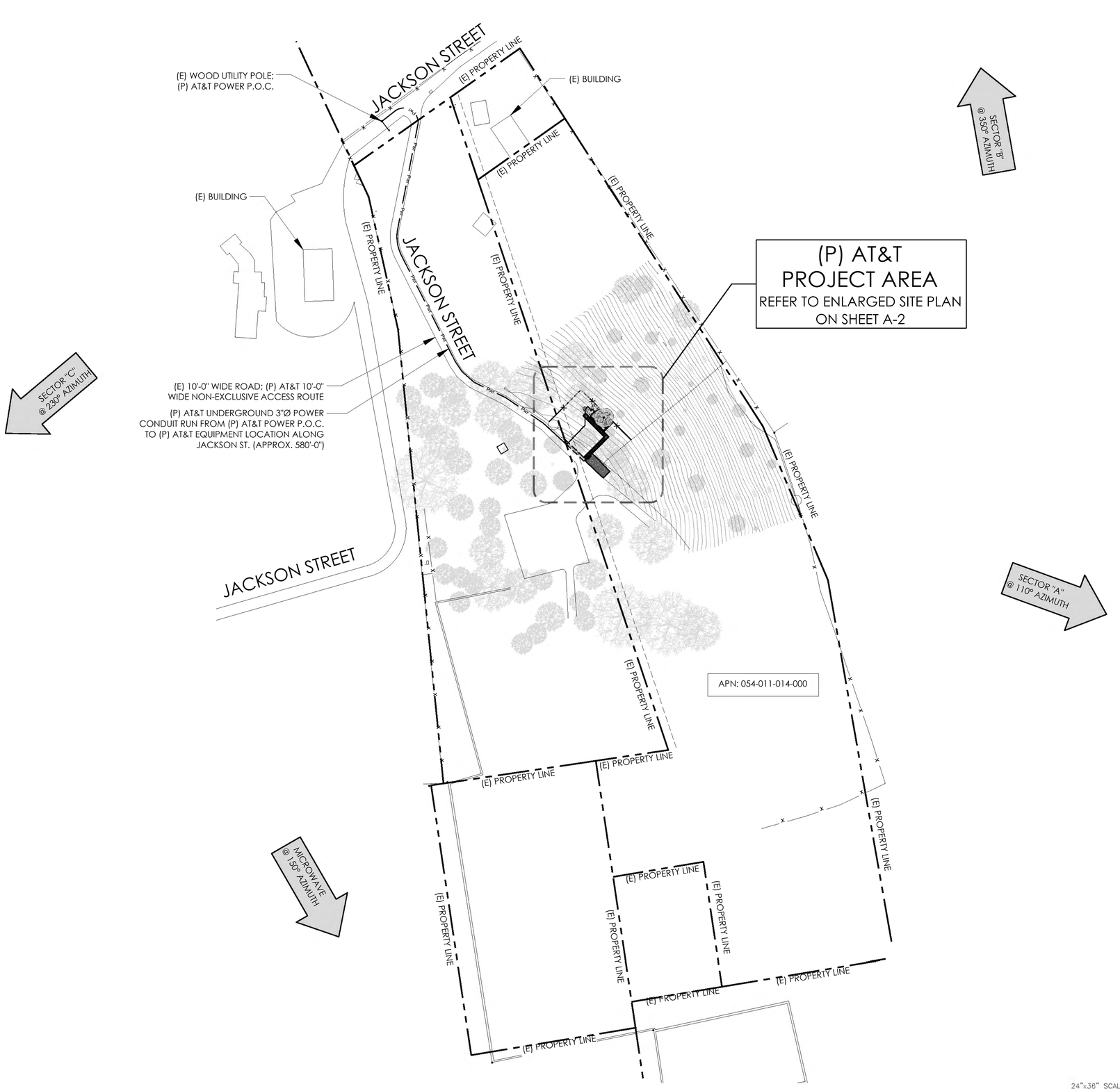
SHEET TITLE:

E-1

SHEET NAME:

ELECTRICAL & GROUNDING NOTES



1 ELECTRICAL SITE PLAN
N.T.S.

24"x36" SCALE: 1" = 60'-0"
11"x17" SCALE: 1" = 120'-0"
60' 30' 0" 60'

APPLICANT:

AT&T

5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

VENDOR:

PM&A
P. MARSHALL & ASSOCIATES
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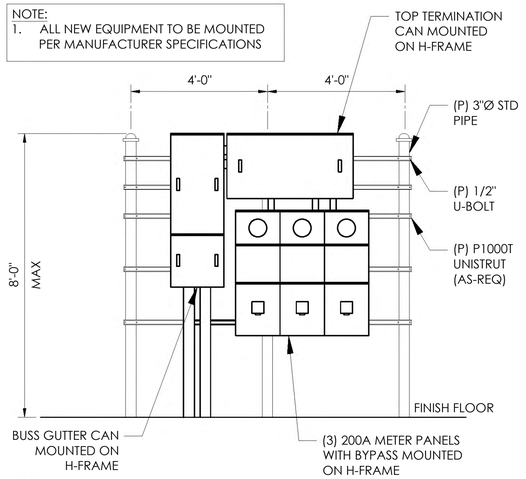
SHEET TITLE:

E-2

SHEET NAME:

ELECTRICAL SITE PLAN

NOTE:
1. ALL NEW EQUIPMENT TO BE MOUNTED PER MANUFACTURER SPECIFICATIONS



1 H-FRAME DETAIL
N.T.S.

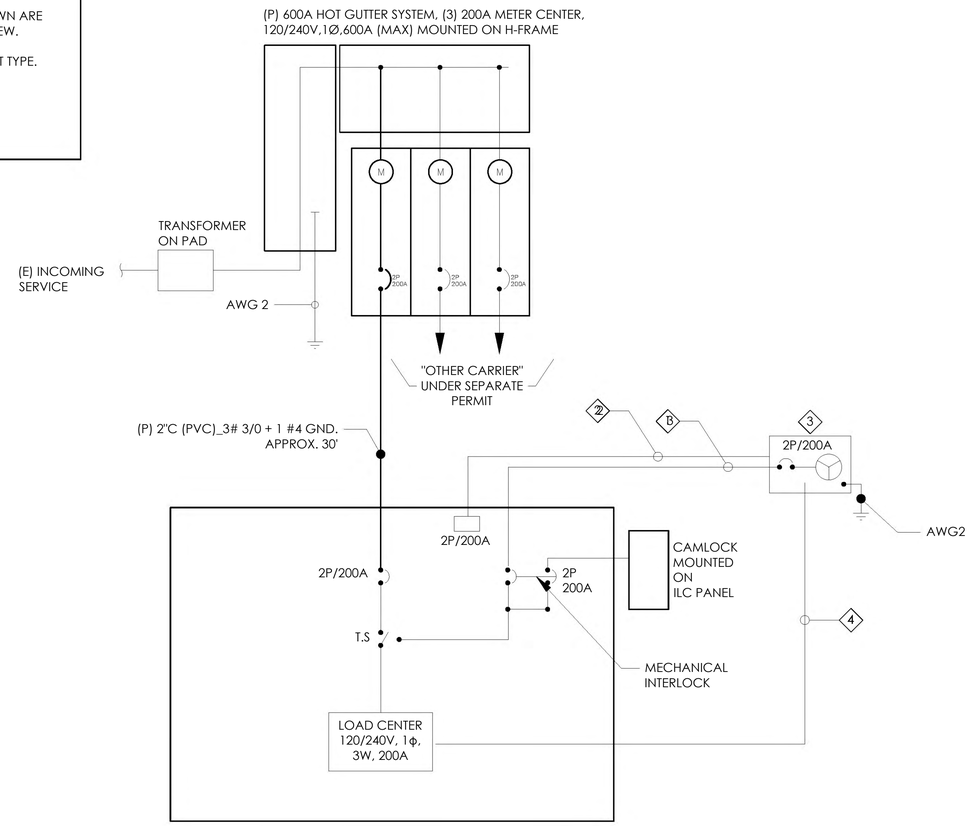
NOTES:

1. ALL WORK TO CONFORM TO N.E.C. LATEST STATE ADOPTED EDITION.
2. LABEL SERVICE DISCONNECT WITH A RED TAG.
3. SWITCH LEG CONDUCTORS SHALL BE THE SAME COLOR AS CIRCUIT CONDUCTORS.
4. PULL ONE GROUND CONDUCTOR PER FLEXIBLE NONMETALLIC CONDUIT. FOR ALL OTHER CIRCUITS PULL A SEPARATE CONDUCTOR.
5. ALL GFCI RECEPTACLES TO HAVE A DEDICATED GROUND WIRE.
6. EQUIPMENT TERMINATION LUGS AND CONDUCTORS ARE RATED AT A MINIMUM OF 75°C.
7. THE MAIN SWITCHBOARD SHALL BE LEGIBLY MARKED IN THE FIELD WITH THE MAXIMUM AVAILABLE FAULT CURRENT. THE FIELD MARKING(S) SHALL INCLUDE THE DATE THE FAULT-CURRENT CALCULATION WAS PERFORMED. CEC 110.24(A).
8. ARC FLASH HAZARD DISCONNECT SHALL BE PROVIDED IN ACCORDANCE WITH CEC 110.16.
9. THE MAIN SERVICE DISCONNECT SHALL BE MARKED PERMANENTLY CEC 230.70(B).
10. SWITCHBOARDS, SWITCHGEAR, AND PANELBOARDS SHALL HAVE THE AVAILABLE FAULT CURRENT AND THE DATE THE CALCULATION WAS PERFORMED SHALL BE FIELD MARKED ON THE ENCLOSURE AT THE POINT OF SUPPLY. THE MARKING SHALL COMPLY WITH 110.21(B)(3). CEC 408.6.
11. PROVIDE A PLAQUE OR DIRECTORY PER CEC 700.7(A) OR 702.7(A).

NOTE:
ALL BREAKERS AND PANELS SHOWN ARE EXISTING UNLESS NOTED AS (P) NEW.

SEE SPECIFICATION FOR CONDUIT TYPE.

LEGEND:
MI = MECHANICAL INTERLOCK
RU = RELAY TO MONITOR UTILITY POWER
RG = RELAY TO MONITOR GENERATOR POWER



INTEGRATED LOAD CENTER (ILC)
(POWER PANEL 'A') MOUNTED ON SHELTER AT LEASE AREA.
INCLUDES AUTOMATIC TRANSFER SWITCH. REFER TO PANEL SCHEDULE.

NOTES:
1. THIS PANEL IS PROVIDED AND INSTALLED BY VAULT MANUFACTURER
2. LIGHTING, DUPLEX RECEPTACLE, G.F.I ARE DESIGNED AND INSTALLED BY VAULT MANUFACTURER.

VOLTAGE: 120/240V, 1-PHASE, 3W, 200A, 42 KAIC — MOUNTING: SURFACE
MAIN CB: 2P/200A — NEMA: 3R
ILC Panel — LOCATION: @ LEASE AREA

VOLT AMPS PHASE A	VOLT AMPS PHASE B	DESCRIPTION	POLE	BKR	CKT	A B	CKT	BKR	POLE	DESCRIPTION	VOLT AMPS PHASE A	VOLT AMPS PHASE B
2150		RECTIFIERS 01&02	2	30	1		2	30	2	RECTIFIERS 03&04	2150	
	2150	VERTIV 7100			3		4			VERTIV 7100		2150
2150		RECTIFIERS 05&06	2	30	5		6	30	2	RECTIFIERS 07&08	2150	
	2150	VERTIV 7100			7		8			VERTIV 7100		2150
2150		RECTIFIERS 09&10	2	30	9		10	30	2	RECTIFIERS 11&12	2150	
	2150	VERTIV 7100			11		12			VERTIV 7100		2150
2150		RECTIFIERS 13&14	2	30	13		14	30	2	RECTIFIERS 15&16	2150	
	2150	VERTIV 7100			15		16			VERTIV 7100		2150
360		BATTERY CHARGER	1	20	17		18	20	1	LIGHT & RECEPTACLE	560	
	480	BATTERY HEATER	1	20	19		20	20	1	GFCI		180
1400		HVAC	2	25	21		22	30	2	SURGE SUPPRESSOR		
	1400	-			23		24			SPACE		
		SPACE			25		26			SPACE		
		SPACE			27		28			SPACE		
		SPACE			29		30			SPACE		
10360	10480	VA/LINE									9160	8780

PHASE A = 19520 VA — PHASE B = 19260 VA

CONNECTED LOAD: 38780 VA

CONNECTED AMPS: 162 A

2 AC PANEL SCHEDULE
N.T.S.

KEY NOTES:

1. (P) 2"C _ (3)#3/0 + (1)#4 GND, APPROX - 30FT.
2. (P) 1"C _ (2)#16 FOR START/STOP GENERATOR, AND (1) CAT 5 CABLE FOR ALARM & MONITOR. REFER TO SHELTER DRAWINGS PROVIDED BY SHELTER MANUFACTURER FOR DETAILED WIRING CONNECTION
3. (P) GENERATOR 120/240V, 1ϕ 30KW, FURNISHED W/ DIS. CB, LOCKABLE IN THE OPEN POSITION.
4. (P) 3/4"C _ (4)#12 + (2)#12 GND. FOR BATTERY CHARGER AND BLOCK HEATER

1 SINGLE-LINE DIAGRAM (SLD)
N.T.S.

APPLICANT:
AT&T
5001 EXECUTIVE PARKWAY
SAN RAMON, CA 94583

VENDOR:
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SHEET TITLE:
E-3

SHEET NAME:
SINGLE LINE DIAGRAM AND PANEL SCHEDULE



Appendix B

County Requirements

County of Calaveras
Department of Planning

Peter Maurer, Interim Planning Director
Phone (209) 754-6394 Fax (209) 754-6540
***website:* https://planning.calaverasgov.us/**

9/30/2024

Aaron DeLaO
Project Representative
Centerline Communications
6101 Passiflora Lane
Orangevale CA, 95662

RE: Notice of Incomplete Application
AUP 2024-044
409 Jackson Street, Copperopolis, CA
APN 054-011-014

Dear Mr. DeLaO,

The Calaveras County Planning Department received the above referenced application on June 21, 2024, requesting a wireless tower facility at 409 Jackson Street, Copperopolis. The parcel is zoned Single Family Residential (R1). Upon review of the information provided in the application package, and in compliance with Govt. Code Section 65943 (the State's Permit Streamlining Act), the Department has deemed your application incomplete for the following reasons:

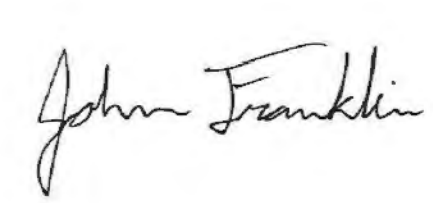
1. The following General Plan implementation measures must be met through the biological study.
    - COS-4P Bat Roosting For development subject to a discretionary entitlement and environmental review under CEQA, a pre-project survey shall be conducted by a qualified biologist to determine if special status bat species are using the site. Should special status bat species be found present on-site, feasible mitigation, such as installing exclusionary devices at the instruction of a qualified biologist and/or construction of replacement roost structures, including bat houses, other structures, or crevices incorporated into bridge design, shall be required prior to the removal of potential bat roosting sites. Replacement roost structures shall be monitored to document bat use.

Upon receipt of the identified materials in this letter, the Planning Department will once again review the application for completeness. If the application is deemed complete,

planning staff will begin processing the application, which includes internal routing of the application for comments from other County Departments, and preparation of the staff report, and any relevant CEQA documentation. Upon sending this letter the shot clock will have paused. The applicant(s) will be notified upon completion of the review and of the outcome of the permitting process.

If you should have any questions regarding the items listed in this letter, or other matters related to this application, please don't hesitate to contact me by telephone at (209) 754-6394, or by electronic mail at Jfranklin@calaverascounty.gov

Sincerely,



John Franklin, Planner II

Appendix C

Roosting Bat Evaluation

TECHNICAL MEMORANDUM

TO: Holly Moore, Caldwell Compliance

FROM: Michael Bumgardner, Bumgardner Biological Consulting

SUBJECT: Cemetery Hill - Copperopilis Wireless Tower Facility Roosting Bat Evaluation

DATE: 10/21/2022

Introduction

The proposed Cemetery Hill Wireless Tower Facility (i.e., proposed project) involves the replacement of existing telecommunications infrastructure that currently ends at a wooden power pole in the road right-of-way (ROW) in the "switch back" at 509 Jackson Street (Copperopilis). The proposed project would start at the existing wooden power pole (i.e., point of connection) and power conduit would be undergrounded to the nearest portion of the road ROW. It would then follow underground in or immediately adjacent to the existing asphalt of Jackson Street for 580 feet. The power conduit would then exit Jackson Street at a right angle to the northeast whereby there would be an approximately 51-foot setback from Jackson Street for all other associated telecommunications infrastructure.

The Calaveras County Planning Department (Department) received an application for an administrative use permit (AUP) for the proposed project on June 21, 2024 requesting approval for a wireless tower facility at 409 Jackson Street, Copperopolis. The parcel is zoned Single Family Residential (R1). Upon review of the information provided in the application package, and in compliance with Government Code Section 65943 (State Permit Streamlining Act), the Department deemed the application incomplete for the following reasons:

1. The following General Plan implementation measure must be met through biological study.

   COS-4P Bat Roosting

   For development subject to a discretionary entitlement and environmental review under CEQA, a pre-project survey shall be conducted by a qualified biologist to determine if special status bat species are using the site. Should special status bat species be found present on-site, feasible mitigation, such as installing exclusionary devices at the instruction of a qualified biologist and/or construction of replacement roost structures, including bat houses, other structures, or crevices incorporated into bridge design, shall be required prior to the removal of potential bat roosting sites. Replacement roost structures shall be monitored to document bat use.

Hence, I conducted a reconnaissance level survey of all woody vegetation and structures within 60 feet of all ground disturbance that would be associated with the proposed project and potentially support roosting bats. The survey was conducted on October 16, 2024. In addition, other potential sources of available information related to roosting bats in the project vicinity were researched.

This technical memorandum presents the results of the above survey and research efforts and describes the current baseline conditions for potential bat roosting habitat.

Existing Data Review

A four-quadrangle CNDDB/Rarefind 5 report was generated for the project site and vicinity (i.e., query of the USGS 7.5-minute topographic quadrangle in which the project site is found as well as the next nearest topographic quadrangles, viz. Copperopolis and the adjacent Salt Spring Valley, Angels Camp, and New Melones Dam quads). The reduced area for the CNDDB query (i.e., four-quad query versus nine-quad query) is based on the small footprint and reach of the project. The California Natural Diversity Data Base (CNDDB) contains records for special-status species, as well as sensitive natural communities, which have been reported to the California Department of Fish and Wildlife (CDFW). A Rarefind 5 report for the project site is typically provided as an attachment to the technical memorandum. However, only two bat species (6 occurrences) were generated as a result of the query. Therefore, the Rarefind 5 report is not included as an attachment to this technical memorandum. Rather, each of the two species identified in the Rarefind 5 report were then evaluated in terms of their likelihood of occurrence within and immediately adjacent to the project site (i.e., draft likelihood of occurrence analysis). This draft analysis considered the known distribution and habitat requirements of the species such that one of the following findings was prepared:

- Known to Occur – species has previously been documented within or immediately adjacent to the project site.
- High Potential – species has not been documented within or immediately adjacent to the project site but should be expected on more than 50% of visits to suitable habitat in the project site during the appropriate season and time of day.
- Moderate Potential – species has not been documented within or immediately adjacent to the project site but should be expected on less than 50% of visits to suitable habitat in the project site during the appropriate season and time of day.
- Low Potential – species has not been documented within or immediately adjacent to the project site nor is it likely to occur on the project site, but its presence cannot be completely discounted due to incomplete information on the taxon's distribution or habitat requirements.
- No Potential – species does not occur within the project site due to the lack of required habitat features for the species or the known range of the species is well defined and does not include the project site.

Other sources of information on special-status bats in California were subsequently reviewed given that the CNDDB is not inclusive of all special-status species that may occur in an area. This review was based on the professional experience of the author within the region and elsewhere in California, but also included review of other published sources of information on special-status bats in California. These latter sources include the following:

- Mammalian Species of Special Concern in California (Williams 1986).
- Terrestrial Mammal Species of Special Concern in California (unfinished 1998 update) (Bolster 1998).
- Mammals of the Pacific States: California, Oregon, and Washington (Ingles 1978).
- Inventory & Monitoring Protocols - Bats - California State Parks - iMap Bats Protocol Table (https://www.parks.ca.gov/pages/734/files/imap%20bats%20protocol%20table%20.pdf)
- Western Bat Working Group website (http://wbwg.org/western-bat-species/).

The draft likelihood of occurrence analysis was used to develop a "focus list" of species for which potentially suitable roosting habitat exists on the project site. The final likelihood of occurrence analysis was then prepared to include any additional species not addressed by the Rarefind 5 report, but for which evidence (i.e., roost sites) was recorded during the subsequent reconnaissance level survey of the project site and review of the other sources of information on special-status species that occur in the project vicinity. Species that are known or expected to occur in the vicinity of the project site were then further evaluated in this technical memorandum.

Survey Results

The only distinct vegetation type on and adjacent to the project site is blue oak – foothill pine woodland with the dominant woody species being blue oak (*Quercus douglasii*). It should be noted that blue oaks do not have the type of structure or bark that allows for the creation of tree cavities or flaking bark (i.e., micro-habitat that can be used as a roost site by bats). This is unlike Ponderosa pine woodland/forest that occurs at slightly higher elevation. This latter vegetation type contains old Ponderosa pines (*Pinus ponderosa*) that often have attached but flaking bark, as well as old California black oaks (*Quercus kelloggii*) that also have flaking bark. This latter vegetation type does not occur at or near the project site. Nonetheless, all mature trees on and within a minimum of 60 feet from the project footprint were "glassed" with Nikon Monarch 7 binoculars and no cavities, flaking bark, or other potential sign/evidence of roosting bats were observed on any of the trees.

The only other structures/habitat that occurs within 60 feet of the project footprint are man-made residential dwellings and various outbuildings on private lands that are adjacent to where power conduit would be placed underground in Jackson Street. Though no evidence of roosting bats (e.g., accumulated guano, urine stains, or body oil rubs) was observed while "glassing" these buildings, it should be noted that this was not unexpected. A brief discussion with the landowner

resulted in no recall of bats being seen at or near the onsite buildings. Nor was any other evidence (e.g., accumulated guano, urine stains, body oil rubs, or the smell of urine) noticed by the landowner. Hence, there is no available evidence to suggest that bats, of any species, roost within 60 feet of the proposed project footprint.

Conclusions and Recommendations

The reconnaissance level survey for evidence of roosting bats on or immediately adjacent to the project footprint (i.e., within 60 feet or less) found no evidence of natural micro-habitat that could be or has been used by roosting bats (e.g., tree cavities or flaking bark). In addition, no entrances to the interior of adjacent buildings that could be used by roosting bats were observed. The landowner also confirmed the above finding as he has not found any visual or olfactory evidence of bats on or in these buildings (e.g., accumulated guano, urine stains, body oil rubs, or the smell of urine). No other structure/habitat that could support roosting bats was found on or near the project site.

Lastly, only two species of bats (6 occurrences) have been recorded in the CNDDB within the nearest four USGS 7.5-minute quadrangles (western mastiff bat [*Eumops perotis californicus*] and pallid bat [*Antrozous pallidus*]). There is no suitable habitat for western mastiff bat onsite given that the species is a large bat that requires a "free fall" of six feet or more to launch from its roost site (typically a vertical cliff face, high building, tree, or tunnel) (Table 1). No such habitat occurs on the project site. Pallid bat roosts are more diverse and can be found in caves, crevices, mines, and occasionally in hollow trees and buildings (Table 1). Though other bat species undoubtedly occur in the project vicinity, there are no bat records in the CNDDB within less than seven miles of the proposed project. Though little is known about the foraging distance of the western mastiff bat, the pallid bat is known to forage/hunt up to three miles from day roosts. Therefore, no available data was found during the research conducted for potential bat roosts in the project vicinity.

Should additional information regarding roosting bats that occur in the vicinity of the proposed project be needed, please do not hesitate to contact me (916-638-7368 or 916-812-2540).

TABLE 1

SPECIAL-STATUS BAT SPECIES RECORDED OR POTENTIALLY OCCURRING WITHIN THE VICINITY OF THE CEMETERY HILL WIRELESS TOWER PROJECT, COPPEROPILUS

Genus/Species	Common Name	Status Federal/CA/Other	Habitats and Seasonal Distribution in California	Likelihood of Occurrence on Project Site
		MAMMALS		
Antrozous pallidus	pallid bat	none/CSC/none	This species is found as a resident in all desert, grassland, shrub, woodland, and forest habitats from sea level to approximately 6,000 feet. Day roosts are typically found in buildings, bridges, rocky outcrops, mines, caves, and trees. Night roosts are generally provided by bridges, mines, and caves. Nighttime hunting is typically conducted within 1 to 3 miles of the daytime roost.	**No Potential.** No suitable day or night roosts for the species occur on or immediately adjacent to the project site. Therefore, it has no potential to occur on the project site.
Eumops perotis californicus	western mastiff bat	none/CSC/none	This subspecies is found as an uncommon resident in southern California, but also occurs along the lower west slope of the Sierra Nevada and in the interior Coast Ranges as far north as the Tumey Hills (eastern San Benito County). Roosts are typically found in crevices in cliff faces, cracks in boulders, or occasionally in buildings (particularly where the roost allows for a large vertical drop when launching into flight). It should be noted that the length of the vertical drop varies between 6 and 20 feet within different studies of the taxon.	**No Potential.** No suitable day or night roosts for the species occur on or immediately adjacent to the project site. Therefore, it has no potential to occur on the project site.

TABLE 1

SPECIAL-STATUS BAT SPECIES RECORDED OR POTENTIALLY OCCURRING WITHIN THE VICINITY OF THE CEMETERY HILL WIRELESS TOWER PROJECT, COPPEROPILUS

Genus/Species	Common Name	Status Federal/CA/Other	Habitats and Seasonal Distribution in California	Likelihood of Occurrence on Project Site

FEDERAL

FE	Federally listed as Endangered
FT	Federally listed as Threatened
FPE	Federally proposed as Endangered
FPT	Federally proposed as Threatened
FC	Federal Candidate Species (former Category 1 candidates)
BCC	U.S. Fish and Wildlife Service designated "Birds of Conservation Concern" 2008

STATE

SE	State listed as Endangered
ST	State listed as Threatened
SR	State listed as Rare
CFP	California Department of Fish and Game designated "Fully Protected"
CSC	California Department of Fish and Game designated "Species of Special Concern"
SA	California Department of Fish and Game designated "Special Animal"

OTHER

CNPS List 1A	Plants presumed extinct in California
CNPS List 1B	Plants that are rare, threatened, or endangered in California and elsewhere
CNPS List 2	Plants that are rare, threatened, or endangered in California, but are more common elsewhere
CNPS List 3	Plants about which we need more information – a review list
CNPS List 4	Plants of limited distribution – a watch list
CNPS Threat Rank 0.1	Seriously threatened in California (high degree/immediacy of threat)
CNPS Threat Rank 0.2	Fairly threatened in California (moderate degree/immediacy of threat)
CNPS Threat Rank 0.3	Not very threatened in California (low degree/immediacy of threats or no current threats known)

LIKELIHOOD OF OCCURRENCE DEFINITIONS

Known to Occur	Taxon was observed within or immediately adjacent to the project site or has previously been documented within or immediately adjacent to the project site.
High Potential	Taxon has not been documented within or immediately adjacent to the project site, but should be expected on more than 50% of visits to suitable habitat on and near the project site during the appropriate season and time of day.
Moderate Potential	Taxon has not been documented within or immediately adjacent to the project site, but should be expected on less than 50% of visits to suitable habitat on and near the project site during the appropriate season and time of day.
Low Potential	Taxon has not been documented within or immediately adjacent to the project site nor is it likely to occur on or near the project site, but its presence cannot be completely discounted due to incomplete information on the taxon's distribution or habitat requirements.
No Potential	Taxon does not occur within or immediately adjacent to the project site due to the lack of required habitat features for the taxon, or the known range of the taxon is well defined and does not include the project vicinity.

APPENDIX C

CULTURAL RESOURCE ASSESSMENT
[NOT ATTACHED]

CULTURAL RESOURCE ASSESSMENT NOT ATTACHED

CONFIDENTIAL

APPENDIX D

ALTERNATIVE SITE ANALYSIS

AT&T MOBILITY
ALTERNATIVE SITE ANALYSIS
And Required Findings
CVL02739 aka Cemetery Hill

May 29, 2025

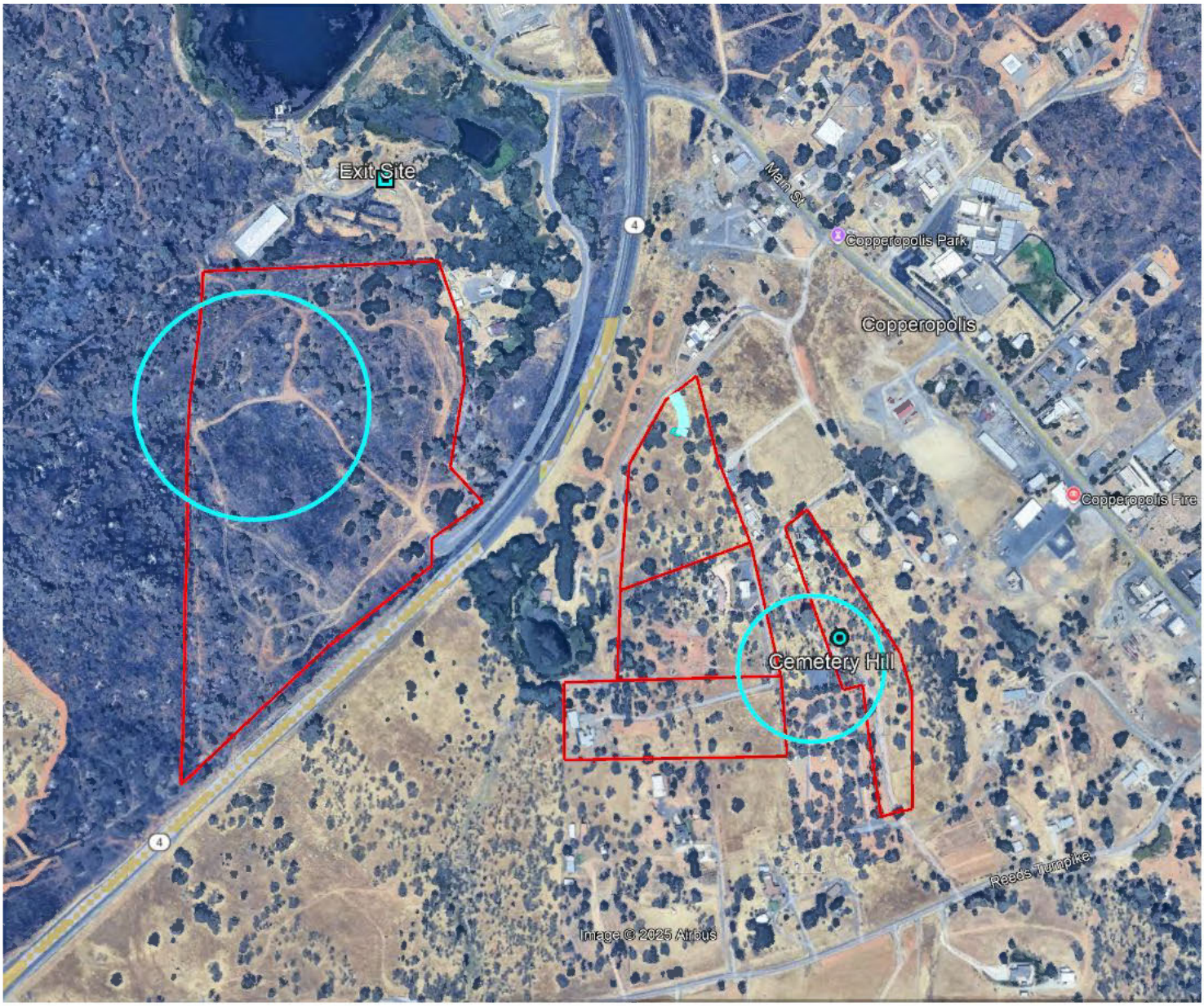
Proposed Site Address:
409 Jackson Street
Copperopolis, CA 95228
APN: 054-011-001-000



Background:

AT&T's existing site is located on a PG&E lattice tower located on APN 054-014-020. The Master Lease Agreement (MLA) between AT&T and PG&E allows for PG&E to terminate a contract at-will. This is because allowing wireless installation on its towers is secondary to its primary mission of delivering electricity in a safe manner. The fires in recent years have led to an effort by PG&E to decommission high voltage carrying lattice towers in favor of undergrounding or replacing the aging infrastructure with newer poles. PG&E gave AT&T a termination notice indicating their intent to decommission the tower that AT&T is on. To mitigate the potential outage and damage to the overall network, AT&T issued the search rings below for the establishment of a new replacement facility. The other PG&E lattice towers are thus disqualified along with the exit site tower.

The Search Ring(s)



Search Ring Investigation:

When an existing site is scheduled to be decommissioned it leaves a hole in the network that needs to be filled with a replacement site that duplicates the coverage of the exit site as closely as possible. Being a utility lattice tower the exit site had AT&T's antennas at level over 100' above ground level. With no tall buildings suitable for a rooftop installation and no utility poles available for leasing the search was directed to high ground as the best possibility of providing the needed coverage.

The terrain in the search rings is hilly with CA-4 as a primary objective. The position of the site should be one that could shoot coverage north up CA-4 as well as southwest toward Town Square. Other objectives include the old town Copperopolis and along Main Street toward the southeast.

Other Candidates considered:

*	APN	Address	Reason for Disqualification
A	054-014-021	384 Highway 4	Lack of coverage north up CA-4
B	054-014-036	131 Highway 4	Low ground and lack of coverage along Main Street
C	054-014-038	444 Jackson Street	Lack of coverage along Main Street
D	054-014-039	462 Jackson Street	Lack of coverage along Main Street
E	All other PG&E lattice towers		Planned or potential decommissioning

Required Findings requested by email on 5/28/25:

1. The applicant has made good faith and reasonable efforts to locate the proposed facility on a support structure other than a new ground-mounted antenna, monopole, or lattice tower or to accomplish co-location.

PG&E's planned replacement of their lattice towers in the area effectively disqualifies all their lattice towers. There are no tall buildings such as a hotel, casino, office building, etc. All buildings in the area are either one or two stories tall and would not be able to provide adequate coverage. For these reasons the only feasible solution is a raw land new build site. As a bonus, the proposed installation is a collocatable installation.

2. The proposed site results in fewer or less severe environmental impacts than any feasible alternative site.

Environmental assessments were only done on the subject site. However, all the disqualified sites mentioned above would have required access roads to be built leading to the sites. One would have required over 1,000' of new access improvement including a hammerhead. The PG&E lattice towers on the hillside above Main Street would have required similar roadways. The subject site required no roadway improvements at all, instead we have a parallel parking site and a short 3' wide walkway for access. The subject site's equipment area is only 496 square feet. The proposed site's environmental impact is limited by its size. All other sites would have involved exponentially larger ground improvement area due to the access requirements.

Summary:

An exhaustive search was conducted to find a site for the relocated facility that best suits the needs of the network, public safety and enjoyment, and would have the least environmental and visual impact as possible.

APPENDIX E

NOISE STUDY

23 Mauchly, Suite 110, Irvine, CA 92618

Noise Study

January 14, 2025

Site: CVL02739 (Cemetery Hill)
Type: C-WIC/ MONO-Broadleaf
Address: 409 Jackson Street, Copperopolis, CA 95228
County: Calaveras County
Lat/Long: 37° 58’ 40.7" N, 120° 38’ 34.32" W (37.977972, -120.642866)



SIGNED: 2025/01/14
EXPIRES: 2025/09/30

J5 Infrastructure Partners (J5IP) is pleased to submit this noise study to AT&T. The purpose of this study is to calculate noise levels produced by the proposed equipment

This study calculated noise levels at four locations:

- Sound Source
  - Location: At 23’ away from the proposed equipment
  - Anticipated Noise: 61 decibels
- Sound Receiver 1
  - Location: 60’-0” West of the proposed equipment at the property line (when taking into consideration the proposed wood fence)
  - Anticipated Noise: 22.83 decibels
- Sound Receiver 2
  - Location: 431’-6” North of the proposed equipment at the property line
  - Anticipated Noise: 35.13 decibels
- Sound Receiver 3
  - Location: 160’-5” East of the proposed equipment at the property line
  - Anticipated Noise: 43.73 decibels
- Sound Receiver 4
  - Location: 692’-11” South of the proposed equipment at the property line
  - Anticipated Noise: 31.02 decibels

Please refer to the following pages for source/receiver locations and for noise level calculations.

This analysis is based off third party data and assumes satisfactory installation of proposed components. If existing conditions vary from what is shown in this report, or if assumptions made within this analysis are inaccurate, please notify our office in writing.

It has been our pleasure to be of service to you in this matter. Please contact us should you have any specific questions, require further clarification, or if we can be of further service.

Sincerely,

J5 Infrastructure Partners, Inc.

Description of Element	Demand-Capacity Ratio	Result	Notes
Noise Output at Sound Receiver 1	**22.83 dB < 50 dB**	**PASS**	**Sound Receiver 1 is at the nearest property line and therefore the controlling condition The results reflected are when *taking into consideration the installation of the proposed wood fence.***

Overview of Project Area:

The purpose of this study is to calculate noise levels produced by the installation of the following equipment:

- (P) Panel Antennas (do not generate noise)
- (P) RRU Units (do not generate noise)
- (P) Transformer (does not generate noise)
- (P) Meter (does not generate noise)
- (P) Service Light (does not generate noise)
- (P) Buss Gutter (does not generate noise)
- (P) Integrated Load Center (does not generate noise)
- (P) DC50 (does not generate noise)
- (P) HVAC Units (generates noise)
- (P) Generator (generates noise)

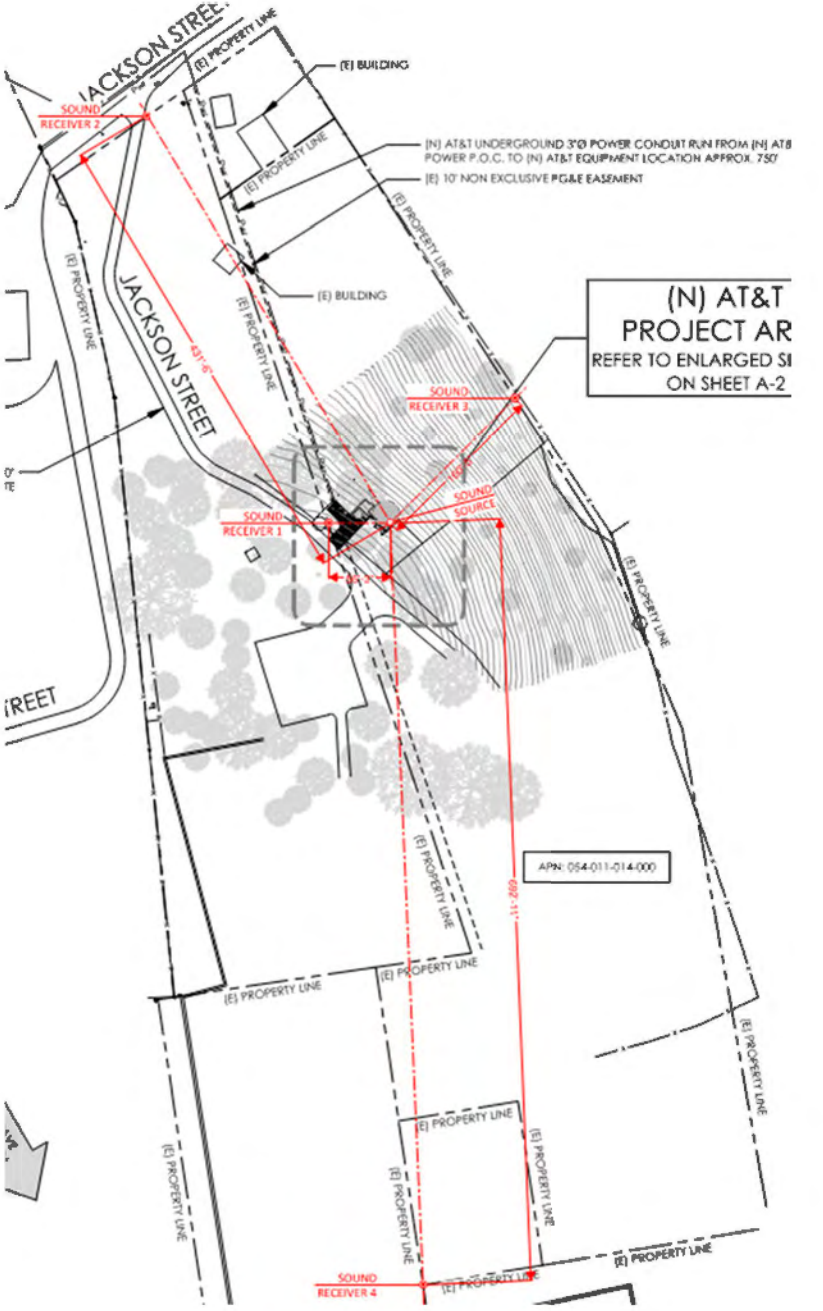


Figure 1: Overall Site Plan

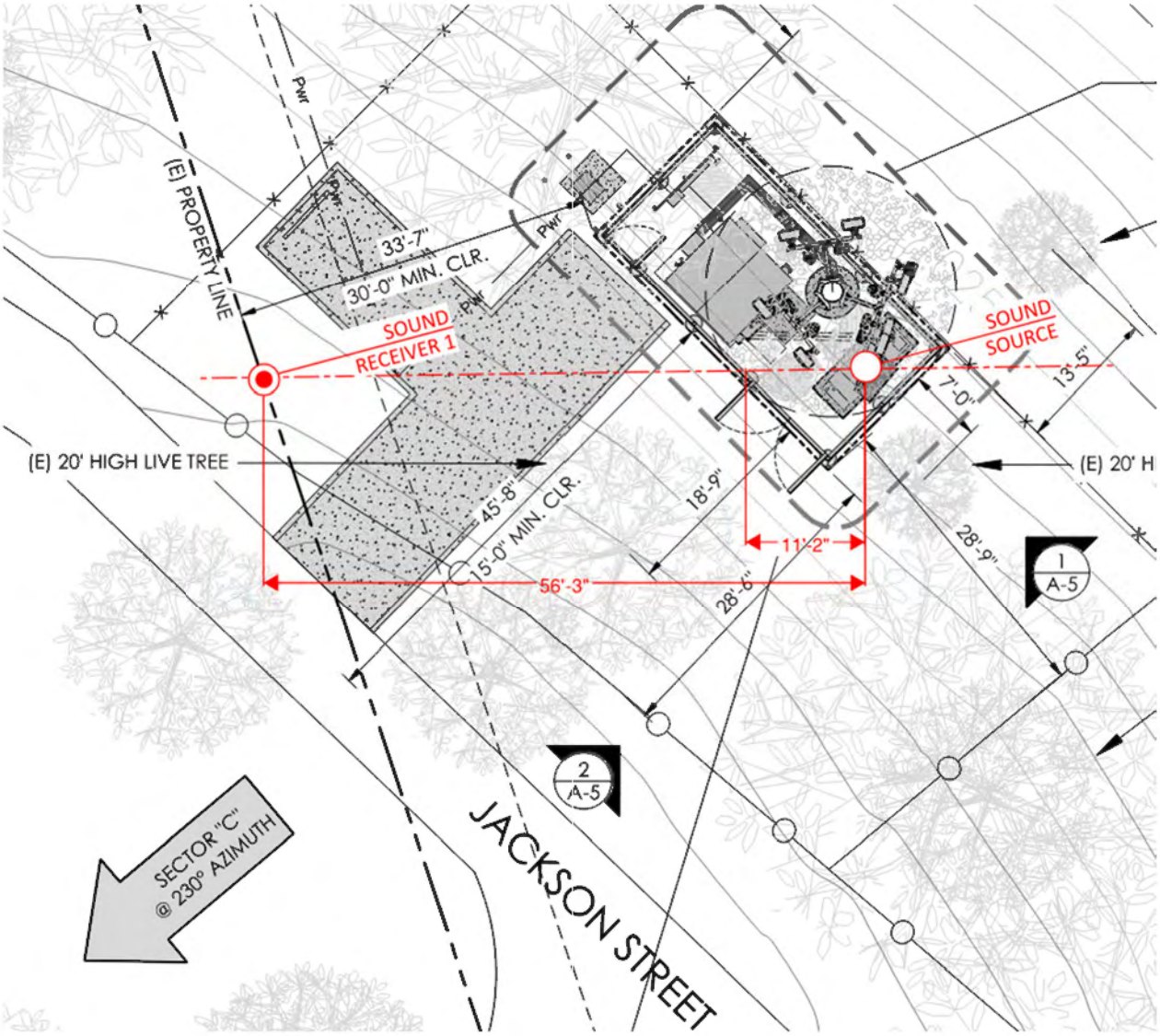


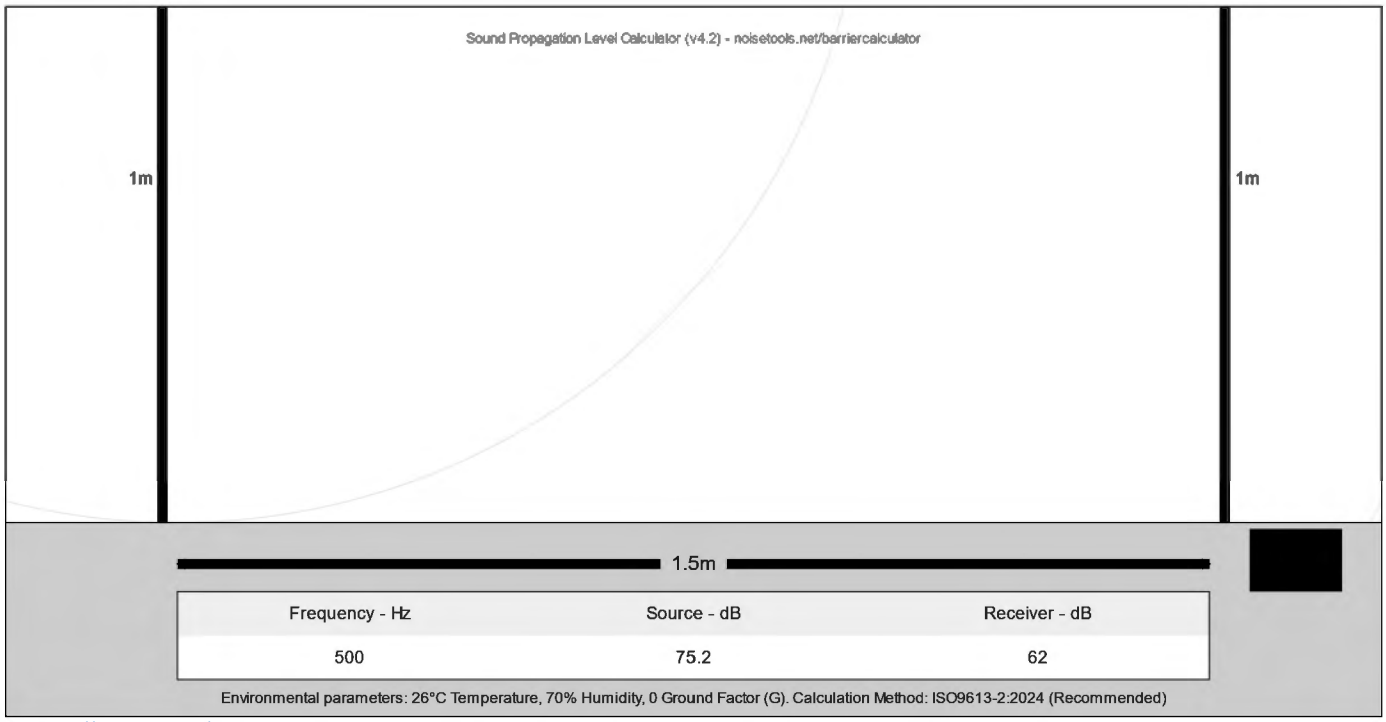
Figure 2: Enlarged Plan View of Equipment in Relation to Wood Fence and Nearest Property Line

Noise Output Calculations:

Converting Rated Load Sound Ouput to Congruent Distances:

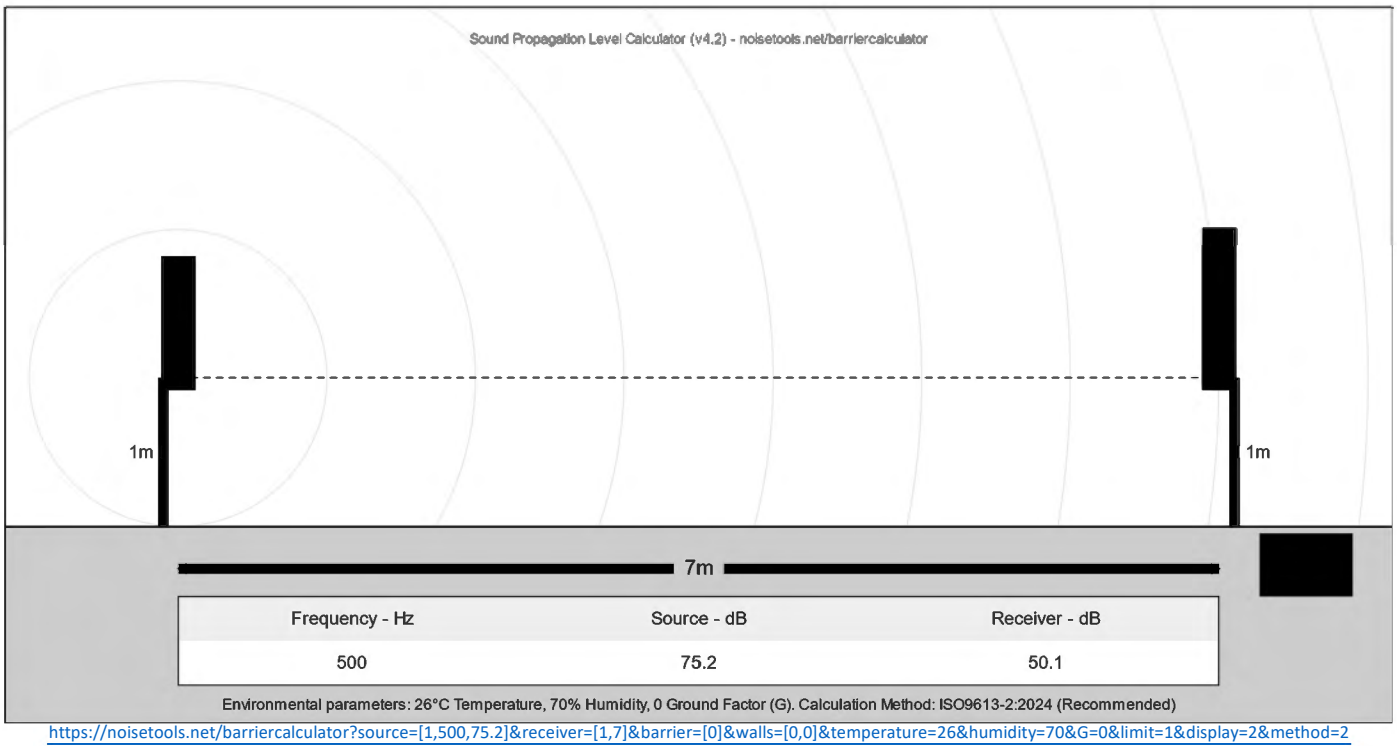
The rated load sound output for the HVAC Units per their manufacturer specifications was given at a distance of 5ft away. The rated load sound output for the Generator per the manufacturer specifications was given at a distance of 23 ft away. For consistancy with the following calculations the HVAC Units rated load sound output was converted to be congruent with the Generator.

Below are calculations for the source noise level for the HVAC Units as well as their rated load sound output at 23ft away.



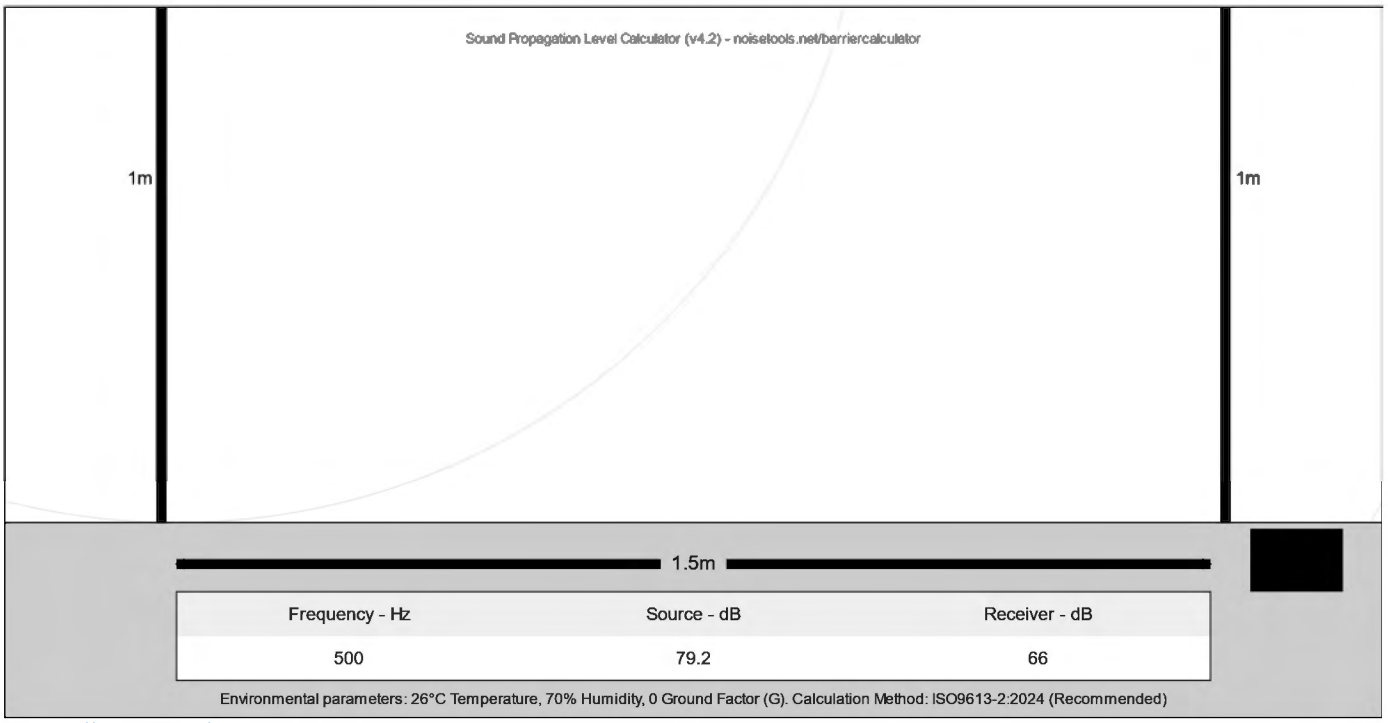
https://noisetools.net/barriercalculator?source=[1,500,75.2]&receiver=[1,1.5]&barrier=[0]&walls=[0,0]&temperature=26&humidity=70&G=0&limit=1&display=2&method=2

Figure 3: Source Noise Level for the Marvair ECUA18 HVAC Unit



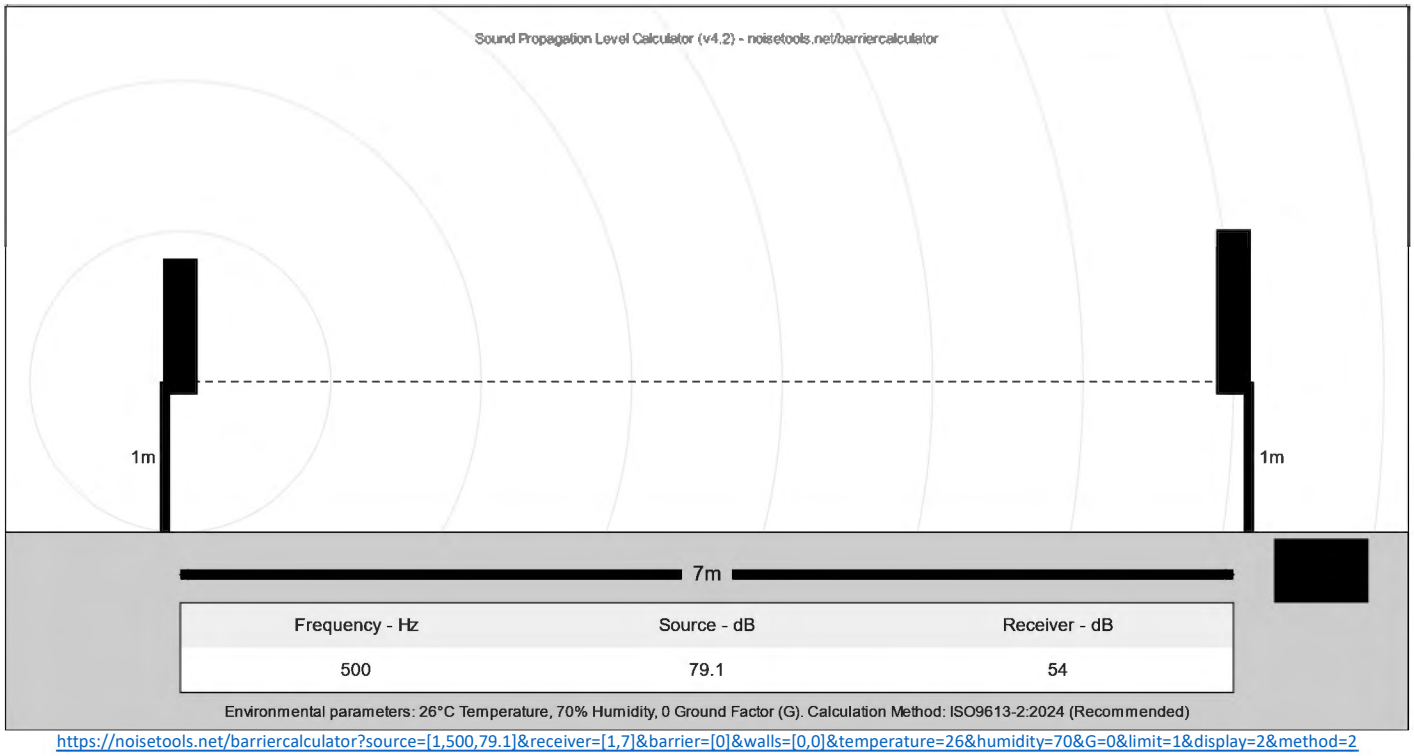
https://noisetools.net/barriercalculator?source=[1,500,75.2]&receiver=[1,7]&barrier=[0]&walls=[0,0]&temperature=26&humidity=70&G=0&limit=1&display=2&method=2

Figure 4: Rated Load Sound Output for the Marvair ECUA18 HVAC Unit at 23 ft



https://noisetools.net/barriercalculator?source=[1,500,79.2]&receiver=[1,1.5]&barrier=[0]&walls=[0,0]&temperature=26&humidity=70&G=0&limit=1&display=2&method=2

Figure 5: Source Noise Level for the Marvair DAC2000 HVAC Unit

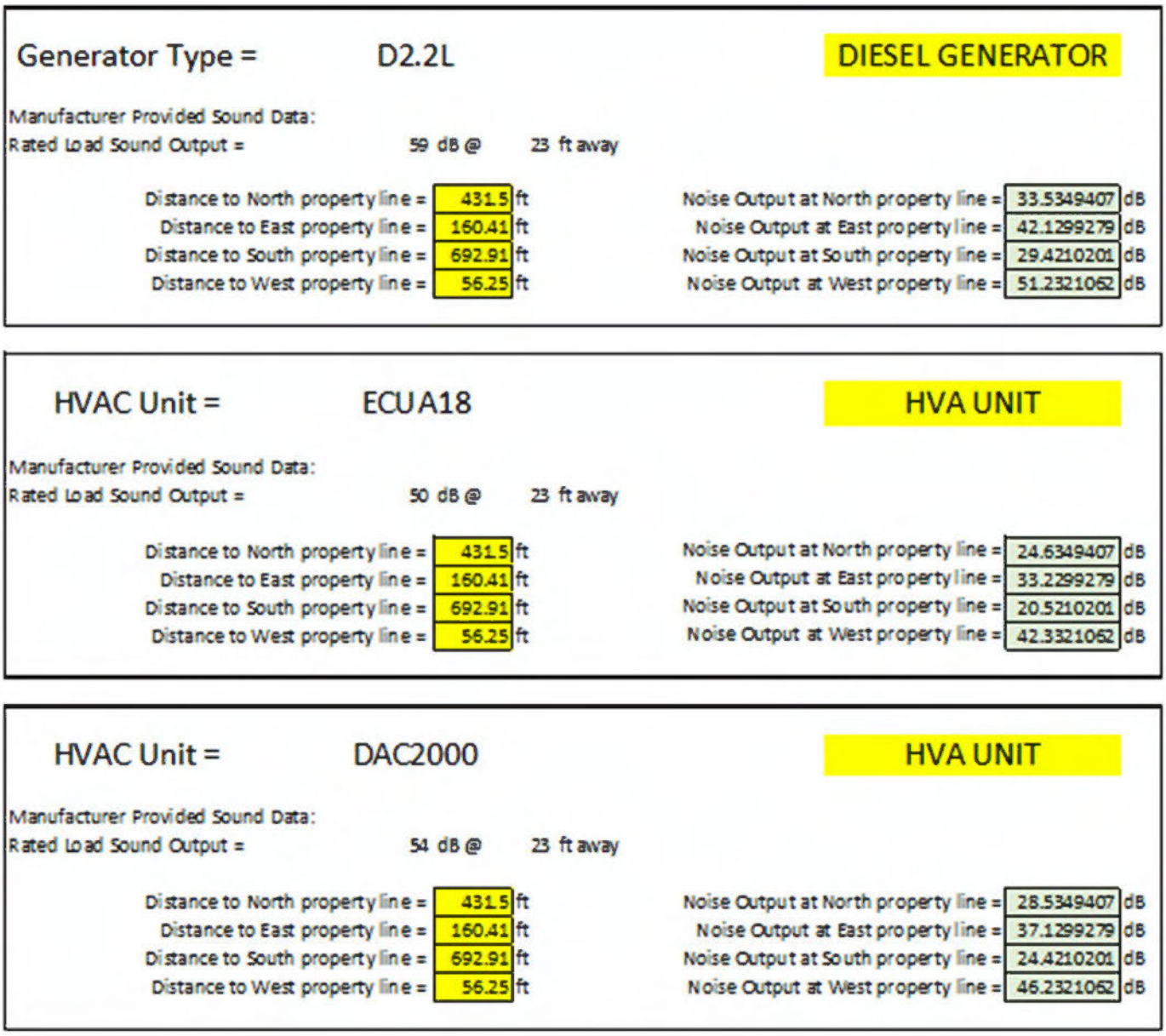


https://noisetools.net/barriercalculator?source=[1,500,79.1]&receiver=[1,7]&barrier=[0]&walls=[0,0]&temperature=26&humidity=70&G=0&limit=1&display=2&method=2

Figure 6: Rated Load Sound Output for the Marvair DAC2000 HVAC Unit at 23 ft

Calculating the Noise Output Per Proposed Equipment at Congruent Distances:

Below are calculations for the source noise level for the HVAC Units and Generator at each sound receiver.



Generator Type =	D2.2L	DIESEL GENERATOR			
Manufacturer Provided Sound Data:					
Rated Load Sound Output =	59 dB @	23 ft away			
Distance to North property line =	431.5	ft	Noise Output at North property line =	33.5349407	dB
Distance to East property line =	160.41	ft	Noise Output at East property line =	42.1299279	dB
Distance to South property line =	692.91	ft	Noise Output at South property line =	29.4210201	dB
Distance to West property line =	56.25	ft	Noise Output at West property line =	51.2321062	dB

HVAC Unit =	ECUA18	HVA UNIT			
Manufacturer Provided Sound Data:					
Rated Load Sound Output =	50 dB @	23 ft away			
Distance to North property line =	431.5	ft	Noise Output at North property line =	24.6349407	dB
Distance to East property line =	160.41	ft	Noise Output at East property line =	33.2299279	dB
Distance to South property line =	692.91	ft	Noise Output at South property line =	20.5210201	dB
Distance to West property line =	56.25	ft	Noise Output at West property line =	42.3321062	dB

HVAC Unit =	DAC2000	HVA UNIT			
Manufacturer Provided Sound Data:					
Rated Load Sound Output =	54 dB @	23 ft away			
Distance to North property line =	431.5	ft	Noise Output at North property line =	28.5349407	dB
Distance to East property line =	160.41	ft	Noise Output at East property line =	37.1299279	dB
Distance to South property line =	692.91	ft	Noise Output at South property line =	24.4210201	dB
Distance to West property line =	56.25	ft	Noise Output at West property line =	46.2321062	dB

Figure 8: Individual Noise Outputs for Equipment at All Sound Receivers

Combining Multiple Noise Outputs:

In order to get a more accurate noise output for the entirety of the scope of work for this site, the HVAC Units and the Generator noise outputs were combined. Below are calculations for the combining of the noise output (See Appendix C for additional calculations).

First Combine the two HVAC Unit noise output:

$$L_A \; and \; L_B = 10log_{10}\left(10^{\frac{L_A}{10}} + 10^{\frac{L_B}{10}}\right) dB$$

$$L_A \; and \; L_B = 55.5 \; dB$$

Where:

$$L_A = 50 \; dB$$
$$L_B = 54 \; dB$$

Repeating this by adding the Generator noise ouput:

$$L_A \; and \; L_B = 10log_{10}\left(10^{\frac{L_A}{10}} + 10^{\frac{L_B}{10}}\right) dB$$

$$L_A \; and \; L_B = 60.6 \; dB$$

Where:

$$L_A = 59 \; dB$$
$$L_B = 55.5 \; dB$$

Combined Equipment

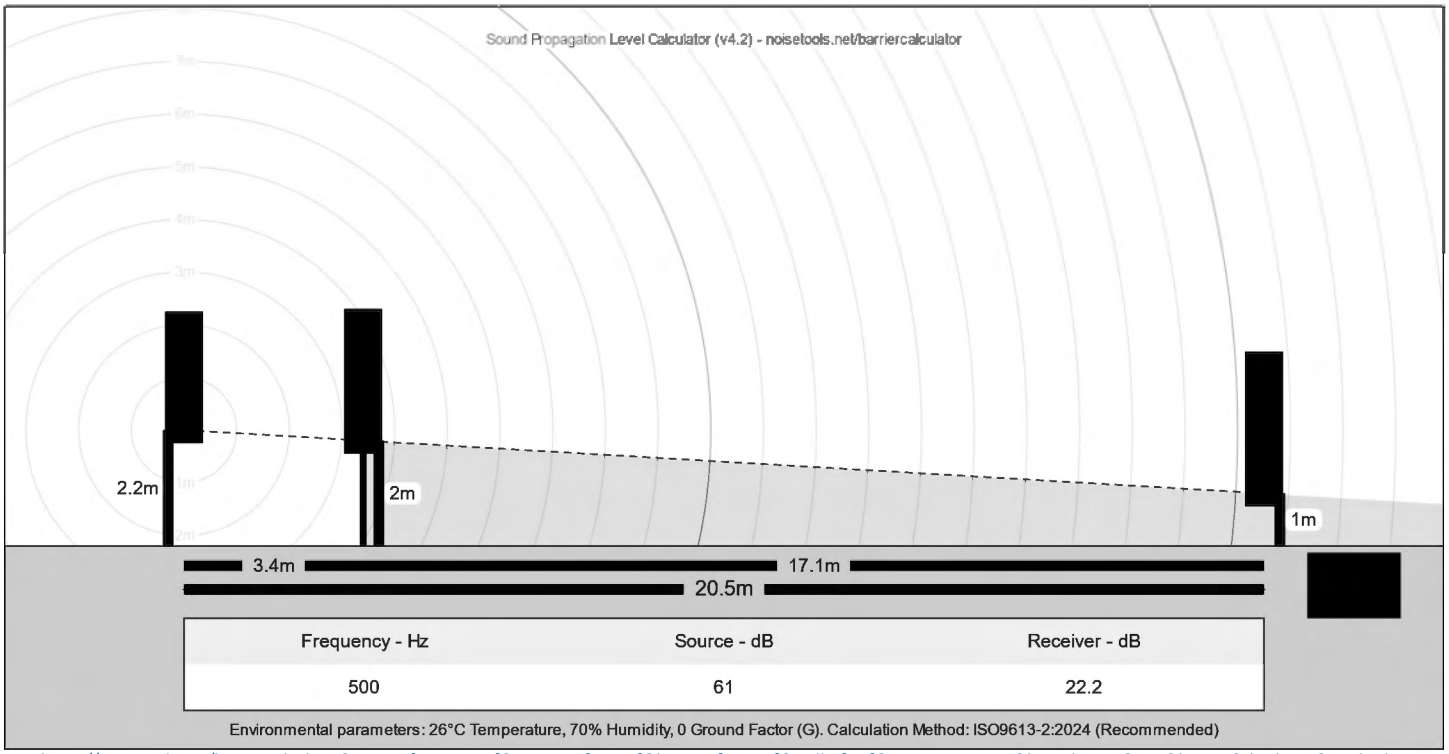
Manufacturer Provided Sound Data:
Rated Load Sound Output = 61 dB @ 23 ft away

Distance to North property line =	431.5	ft	Noise Output at North property line =	35.1349407 dB
Distance to East property line =	160.41	ft	Noise Output at East property line =	43.7299279 dB
Distance to South property line =	692.91	ft	Noise Output at South property line =	31.0210201 dB
Distance to West property line =	56.25	ft	Noise Output at West property line =	52.8321062 dB

Figure 9: Combined Noise Outputs at All Sound Receivers

The combined noise levels at the property lines are within the acceptable noise levels during the day, 55dB as laid out by the County of Calaveras, CA noise ordinance. However at night the acceptable noise levels drop to 50dB and the combined noise levels at the property lines exceed this limit. The above calculations do not consider noise dampening cuased by the proposed wood fence enclosure. See below for the calculations of the noise dampening caused by the wood fence enclosure.

Noise Dampening Caused by Wood Fence Enclosure:



https://noisetools.net/barriercalculator?source=[2.2,500,61]&receiver=[1,20.5]&barrier=[1,2,3.4]&walls=[0,0]&temperature=26&humidity=70&G=0&limit=1&display=2&method=2

Figure 10: Noise Levels at Nearest Property Line When Taking into Consideration Wood Fence

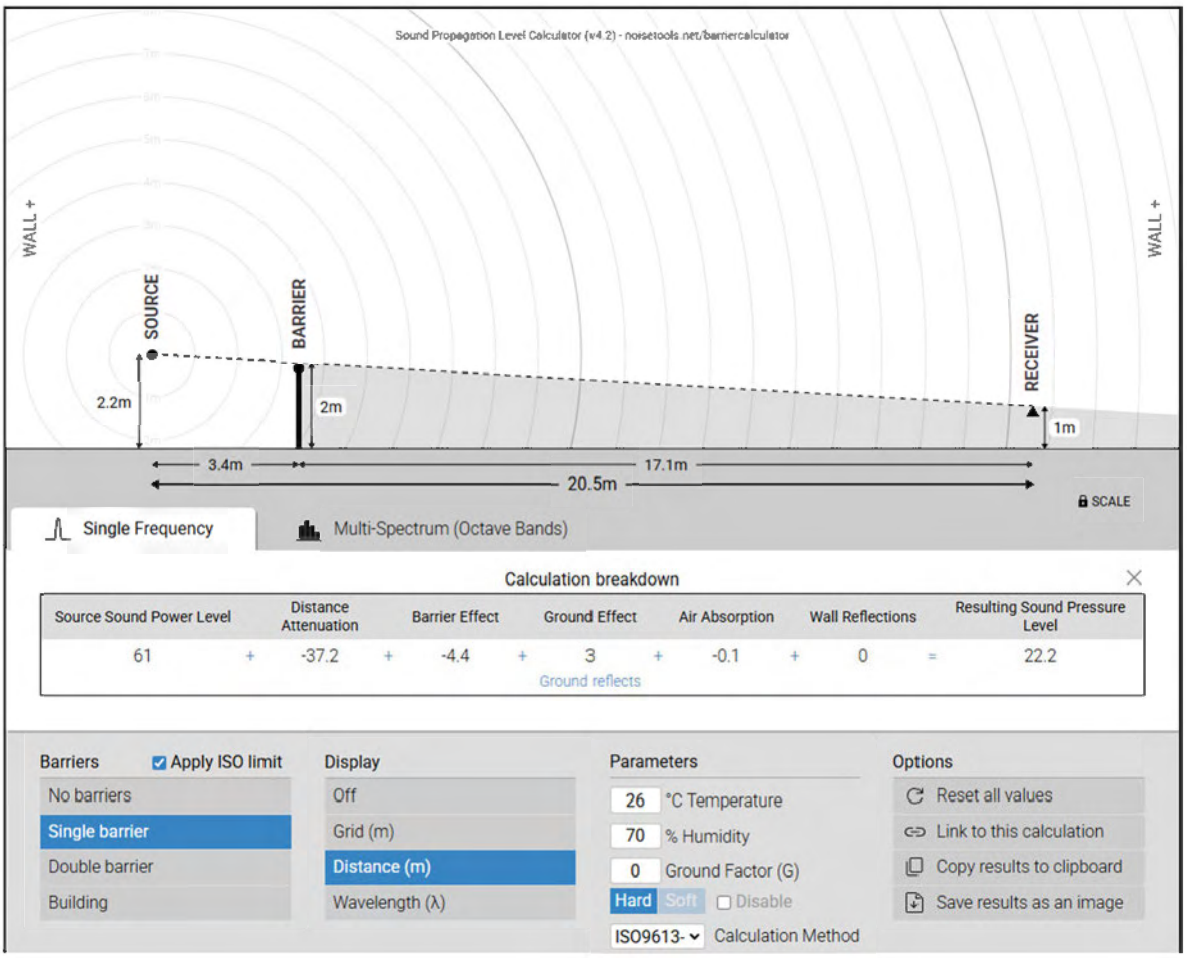


Figure 11: Noise Levels at Nearest Property Line When Taking into Consideration Wood Fence

The above calculations use an average of reduction of 5dB per single barrier at eye level with a source and receiver. The above calculation however does not take into consideration the barrier material. A wood wall will block or absorb about 30dB. The following calculation was performed:

The noise output level at the nearest property line (Sound Receiver 1) is 56.88dB.

52.83dB – 30dB = 22.83dB.

When taking into consideration the wood fences the noise levels at the nearest property line are 22.83 dB. This noise level is below 55 dB during the day and 50dB at night as specified by the County of Calaveras noise ordinance.

Results and Conclusion:

As per Figure 9: Combined Noise Outputs at All Sound Receivers, at the nearest property line, Sound Receiver 1, the noise output is at the peak noise level of 52.83dB which is still less than the acceptable noise level of 55dB during the day but above the acceptable noise level of 50dB during the night. When taking into consideration the noise dampening caused by the proposed wood fence enclosure the noise level at Sound Receiver 1 drops down to 22.83 dB which is still below the 55dB during the day and 50dB during the night as specified by the County of Calaveras noise ordinance. **Therefore the noise levels at all property lines are deemed acceptable with the installation of the proposed wood fence enclosure.**

Glossary of Terms:

A-Weighted Sound Level: The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

Ambient or Background Noise Level: The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Decibel (dB): A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

dB(A): A-weighted sound level (see definition above).

Equivalent Sound Level (LEQ): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time varying noise level. The energy average noise level during the sample period.

Field Sound Transmission Class (FSTC): The field sound transmission class (FSTC) rating is used for in situ wall and floor/ceiling sound isolation performance assessment. The standard requires the measurement of sound transmission loss and includes required procedure to show that the FSTC rating, as it has been determined by the test procedure, was not influenced by flanking of sound around the partition intended to be tested. Sound transmission class and FSTC ratings are intended by standard to be equivalent; however, practical experience indicates that FSTC ratings tend to be up to five ratings points less than laboratory-measured STC ratings.

Day-Night Level (LDN or DNL): LDN is the average noise level over a 24-hour period. The noise between the hours of 10PM to 7AM is artificially increased by 10 dB. This noise is weighted to take into account the decrease in community background noise of 10 dB during this period.

Noise: Any unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound...".

Noise Isolation Class (NIC): The noise isolation class (NIC) rating is similar to STC and FSTC. However, the standard STC rating contour is applied to the one-third octave band noise reduction measured in a field situation, rather than the transmission losses measured in the field. No correction to the measured noise reduction data is made to account for partition size, receiving room absorption, or sound flanking. Like the STC and FSTC ratings, the field measured NIC rating of a noise reduction spectrum is equal to the value of the contour crossing at 500 Hz. In the absences of sound flanking, the NIC is generally within five points of the laboratory STC rating for typical building partition constructions. The NIC rating is used to assess the sound isolation performance of in situ partition construction, especially complicated ones that involve multiple sound transmission paths that are not suited for laboratory testing. The NIC rating is often used in lieu of STC and FSTC.

Normalized Noise Isolation Class (NNIC): The normalized noise isolation class (NNIC) is the same as the NIC rating except the receiving room absorption is normalized to correspond to a 0.5-s reverberation time.

Sound Level (Noise Level): The weighted sound pressure level obtained by use of a sound level meter having a standard frequency-filter for attenuating part of the sound spectrum.

Sound Level Meter: An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

Sound Transmission Class (STC): To quantify STC, a Transmission Loss (TL) measurement is performed in a laboratory over a range of 16 third-octave bands between 125 – 4,000 Hertz (Hz). The average human voice creates sound within the 125 – 4,000 Hz 1/3rd octave bands.

STC is a single-number rating given to a particular material or assembly. The STC rating measures the ability of a material or an assembly to resist airborne sound transfer over the specified frequencies (see ASTM International Classification E413 and E90). In general, a higher STC rating corresponds with a greater reduction of noise transmitting through a partition.

STC is highly dependent on the construction of the partition. The STC of a partition can be increased by: adding mass, increasing or adding air space, adding absorptive materials within the assembly. The STC rating does not assess low frequency sound transfer (e.g. sounds less than 125 Hz). Special consideration must be given to spaces where the noise transfer concern has lower frequencies than speech, such as mechanical equipment and or/or music. The STC rating is a lab test that does not take into consideration weak points, penetrations, or flanking paths.

Even with a high STC rating, any penetration, air-gap, or “flanking path can seriously degrade the isolation quality of a wall. Flanking paths are the means for sound to transfer from one space to another other than through the wall. Sound can flank over, under, or around a wall. Sound can also travel through common ductwork, plumbing or corridors. Noise will travel between spaces at the weakest points. Typically, there is no reason to spend money or effort to improve the walls until all weak points are controlled first.

Appendix A

County of Calaveras, CA Noise Ordinance

7. Noise Element

Introduction

The Noise Element is intended to maintain the rural atmosphere that attracts visitors, residents, and businesses to Calaveras County while establishing consistent and predictable noise standards for new development. The Noise Element provides a framework for addressing potential noise conflicts between existing and proposed new land uses and serves as a guide for compliance with California's noise insulation standards.

The Noise Element is closely related to the Land Use and Circulation Elements and to a lesser degree the Housing, Resource Production, and Conservation and Open Space Elements. The primary objective of the Noise Element is to identify noise sources and minimize exposure of residents, visitors, and businesses to excessive noise. Noise contours and thresholds will assist the County in determining the appropriate location for noise sensitive uses. Noise standards set forth in Tables N-2 and N-3 apply only to discretionary entitlements for new projects or substantial expansions of existing uses.

Organization of the Noise Element

Background and Setting, Associated Plans and Documents

Goals and Policies

Implementation Programs

Glossary of Noise-Related Terminology

Background[1] and Setting, Associated Plans and Documents

Sound may be thought of as pressure waves traveling through air (or water or other mediums) that the human ear can detect. Perceptions of sound and noise are highly subjective—one person's music may be another's noise.

If sound were measured simply as pressure, it would require a very large and awkward range of numbers. To avoid this, the decibel (dB) scale was devised. The decibel scale uses the threshold of human hearing as a point of reference defined as 0 dB. Other sound pressures are compared to this reference. A million-fold increase in pressure is expressed as 120 dB.

The decibel scale also is logarithmic, not linear. Therefore, an increase of 3 dB represents a doubling of sound energy. An increase of 10 dB is a ten-fold increase in sound energy and is generally perceived as twice as loud. For example, if a single fans makes noise at 50dB, then two fans would double the energy

[1] Sources:

j.c. brennan & associations consultants in acoustics. November 27, 2013. Calaveras Council of Governments *Background Noise Measurements* Calaveras County, CA. General Plan Noise Background Report, Appendix B.

Harris, Miller & Hanson, Inc. *Basic Noise Concepts*, Chapter 2. Sacramento, CA. www.hmmh.com/cmsdocuments/FTA_Ch_02.pdf

and increasing the noise level to 53dB. A 10dB increase in noise would require ten fans, and would result in an overall level of 60dB.

Sound is typically measured as an A-weighted sound level (dBA). "A-weighting" is the adjustment made to a sound meter so that the output more closely matches how the human ear perceives sound. A-weighting discounts the low frequencies below 1000 Hz and the high frequencies above 1000 Hz. The lower and higher the frequencies, the more the A-weighting network adjusts the sounds downward to reflect the human ear response. The A-weighted sound level is the standard tool for environmental noise assessment. All noise levels reported in this Element are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted. The dBA levels of commonly occurring noises and their effects on human health are illustrated in the following table:

Table N-1

Typical Noise Levels		
Common Outdoor Activities	**Noise Level (dBA)**	**Common Indoor Activities** ***Effects on Humans***
Shotgun firing (close proximity)	--130--	Pain threshold
Thunderclap	--120--	
	--110--	Rock band ***Regular exposure over 1 minute risks permanent hearing loss***
Jet fly-over at 1,000 ft. Garbage truck	--100--	***No more than 15 minute exposure recommended***
Gas lawn mower at 3 ft.	--90--	
Diesel truck at 50 ft. at 50 mph	--80--	Food blender at 3 ft. Garbage disposal at 3 ft. ***Annoying, interferes with conversation***
Noisy urban area, daytime Gas lawn mower at 100 ft.	--70--	Vacuum cleaner at 10 ft. ***Telephone use is difficult*** ***Over a 24-hour period, a Leq of 70 dBA will result in some hearing loss (US EPA)***
Commercial area Heavy traffic at 300 ft.	--60--	Normal speech at 3 ft.
Quiet urban daytime	--50--	Large business office Dishwasher in the next room
Quiet urban nighttime	--40--	Theater, large conference room (background) Humming refrigerator
Quiet suburban nighttime	--30--	Library Whisper
Quiet rural nighttime Rustling leaves	--20--	Bedroom at night, concert hall (background)
	--10--	Broadcast/recording studio
Lowest threshold of human hearing	--0--	Lowest threshold of human hearing

Sources:
Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol, November, 2009.

Melville C. Branch and R. Dale Beland, *Outdoor Noise in the Metropolitan Environment*, 1970.

Environmental Protection Agency, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (EPA/ONAC 550/74-004), March, 1974.

Community noise is commonly described in terms of ambient noise level—the all-encompassing noise level associated with a given environment (i.e., the pre-project community noise level). The common tool to measure the ambient noise level is the average, or equivalent, sound level, Leq, measured over a period of time (e.g., 5 minutes, one hour). Leq is the foundation of the noise descriptor, Ldn, and shows very good correlation with the community response to noise (i.e., Multiple Leq measurements taken over a 24-hour period are used to generate the Ldn).

The day/night average level (Ldn) is based on the average noise level over a 24-hour day, with a +10 decibel weighting applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.). The nighttime "penalty" is applied because people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

The Community Noise Equivalent Level (CNEL) is nearly the same as Ldn, except that CNEL also includes a weighting factor of 3 for evening hours (7:00 p.m. to 10:00 p.m.)

Pursuant to state law this general plan noise element is based on CNEL/Ldn.

The health effects of noise on people are the primary consideration of a noise element. The effect of noise on humans can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise (such as noise measured in conjunction with a proposed new development) generally produces effects in the first two categories. Workers in industrial plants can experience noise in the last category, although project-related noise can infrequently be associated with the third category.

There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of an individual or community to noise, but tolerance levels tend to be based on an individual's past experiences with noise. Therefore, an important way of predicting human reaction to a new noise environment (i.e., post-project) is to compare it with the existing environment (pre-project) to which the community has adapted—the ambient noise level. In general, the more a new noise exceeds the previously existing noise level, the less acceptable the new noise will be judged by those hearing it.

With regard to increases in A-weighted noise levels, in general:

- A 1 dBA change cannot be perceived except in a controlled laboratory
- A 3 dBA change is a just-perceivable difference
- A 5 dBA change is required before a noticeable change in human response is expected
- A 10 dBA change is subjectively heard as approximately doubling in loudness and can cause an adverse response.

Stationary sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6± dBA per doubling of distance from the source, depending on environmental conditions (e.g., atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

The above guidelines are greatly influenced by the context (background noise) in which they occur as shown in recent studies from the Federal Interagency Committee on Noise (FICON). For example, if a 3 dB increase is viewed as a doubling of energy, in the context of traffic, it may be viewed as a doubling of traffic.

Primary noise sources in Calaveras County are roadway traffic, airports and heliports, industrial uses and other stationary sources. Vehicular traffic on local roads and state highways is the most common noise source in Calaveras County. The location and baseline noise levels measured for many of the County's stationary noise sources, roads, and highways are included in the General Plan Noise Background Report, Appendix B. Projected (future) noise levels are included in the general plan environmental impact report. These noise levels are expressed both numerically, and on noise contour maps. A noise contour map identifying the noise level at the centerline of the road is shown on Figure N-1. The purpose of the noise contour map is to assist planners in determining when the potential may exist for a proposed land use to be incompatible with existing or projected noise levels based on the noise standards established in this element (and in conjunction with a discretionary entitlement).

Both transportation-related noise sources, and intermittent and occasional noise from vehicles and outdoor recreational activities are addressed through the County's Noise Element policies and noise level criteria. The County's Noise Ordinance (Chapter 9.02 of the Calaveras County Code) is generally a tool for responding to annoyance complaints or nuisance noises. However, it also addresses intermittent noise sources. It is important that the Noise Element criteria and the Noise Ordinance do not conflict. Therefore, there is a policy in the Noise Element which requires an update of the Noise Ordinance which is consistent with the Noise Element of the General Plan. The Noise Ordinance enforces responses to complaints received by the County Sheriff's department related to isolated incidents (e.g., amplified music, loud party). Violations of the ordinance are infractions or misdemeanors. In contrast, the standards established in the general plan Noise Element are intended to be proactive and applied over a broader landscape to encourage compatibility between broad categories of land uses (e.g., a proposed shopping center next to an existing residential subdivision).

Agricultural activities can also be a source of noise. The County recognizes that noise may be produced from normal agricultural operations but establishes, through its right to farm ordinance, that adjacent land uses should be prepared to accept such noise as a natural result of living in or near agricultural lands. Noise sources not analyzed, as they are inapplicable in Calaveras County, include: railroads, military installations and their associated aircraft operations. Noise sensitive land uses in Calaveras County include residential development, schools, hospitals, convalescent homes, places of worship, and libraries.

State law does not mandate the specific dBA levels for various land uses that must be included in a general plan. However, guidance for establishing general plan noise elements and standards is provided from multiple sources including: the California Office of Planning and Research's (OPR) *Guidelines for the Preparation and Content of Noise Elements of the General Plan*, the Federal Highway Administration/Caltrans, the U.S. Dpt. of Housing and Urban Development, the U.S. Environmental Protection Agency, and the Federal Aviation Administration, amongst others. This element was produced based upon a review of all of these sources, the County's General Plan Noise Background Report (2013), and noise elements of other jurisdictions in California.

Associated Plans and Documents

The County maintains the following text, maps and diagrams analyzing the current and projected noise levels that were used in preparing the Noise Element. Text, maps and diagrams are updated on a regular basis and current versions are available at the Calaveras County Planning Department at Mountain Ranch Road, San Andreas, CA 95249, unless otherwise noted.

- j.c. brennan & associations consultants in acoustics. November 27, 2013. Calaveras Council of Governments *Background Noise Measurements* Calaveras County, CA. General Plan Technical Background Report, Noise - Appendix B (http://planning.calaverasgov.us/GP-Update)
- Transportation Related Noise: Maps identifying noise levels generated along highways primary arterials and major local streets with existing noise levels and, where applicable, projected noise levels stated in dB/Ldn (General Plan Technical Background Report, Appendix B)
- Non-Transportation Related Noise: Maps identifying noise levels generated by stationary noise sources (e.g., airports, heliports, industrial sites, and other ground stationary noise sources) with existing noise levels and, where applicable, projected noise levels stated in dB/Ldn (General Plan Technical Background Report, Appendix B)
- State Department of Health Services Office of Noise Control /State Office of Planning and Research Noise Criteria and Guidelines
- California Noise Insulation Standards - [California Title 24 Noise Standards. Cal. Adm. Code Title 24, Chap. 2-35 http://ccr.oal.ca.gov/]
- Housing and Urban Development Noise Standards - (HUD Circular 1390.2)
- Caltrans/Federal Highways Administration Noise Standards [23 CFR Chapter 1, Part 772, Section 772.19]
- Calaveras County Code Chapter 9.02, Noise Control

Airport Land Use Compatibility Plan (ALUCP). Prepared by the Calaveras County Airport Land Use Commission, the ALUCP establishes noise standards for development in and around the Calaveras County Airport. The ALUCP is updated periodically. The current version of the ALUCP is available on the Calaveras County website and at the Calaveras County Planning Department.

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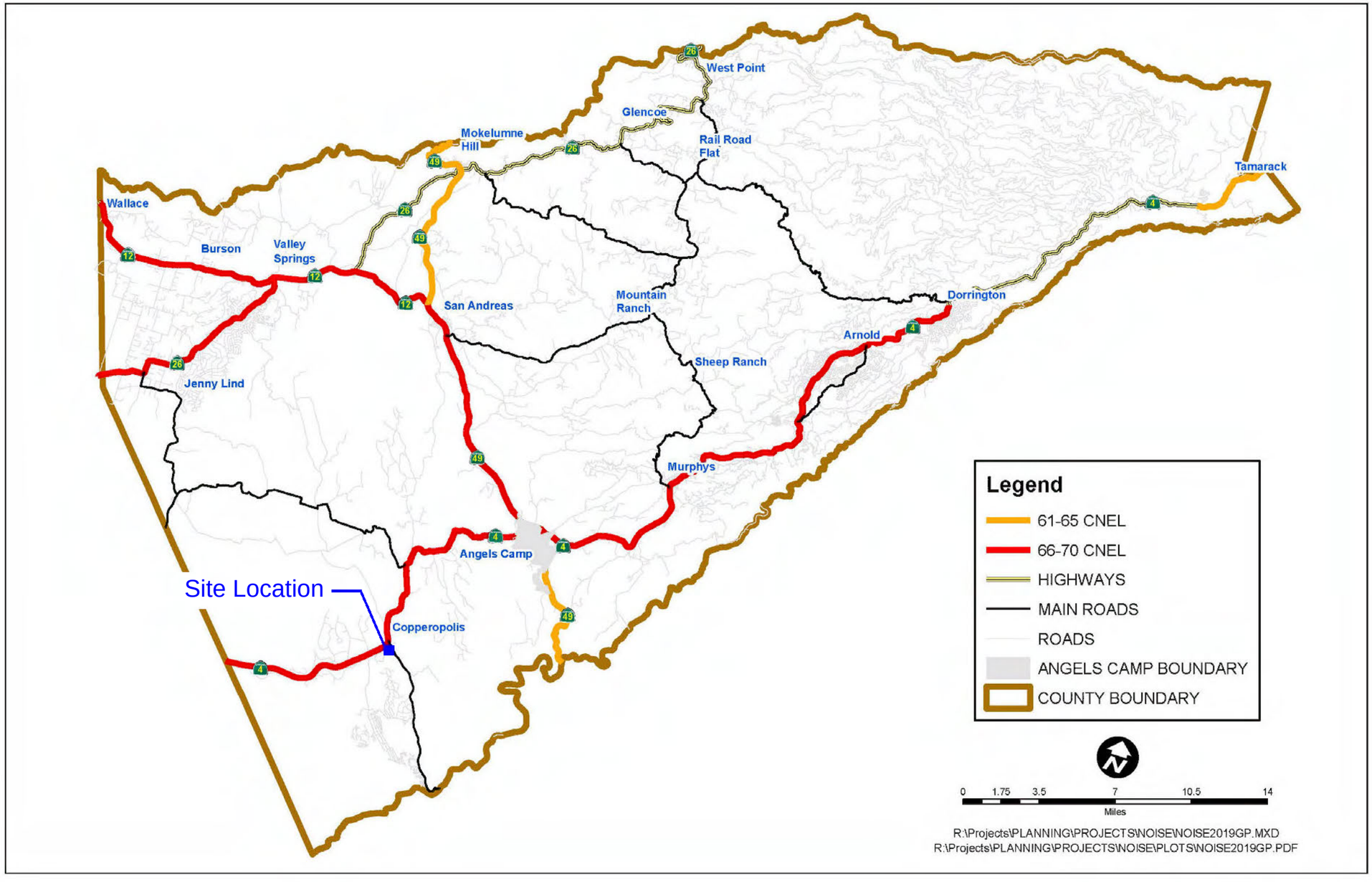
Figure N-1: Highway Noise Contours



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Goals and Policies

Goal

N-1 Noise levels consistent with the County's rural atmosphere and that maintain compatibility between differing land uses, and protect the health and well-being of residents, visitors and businesses.

Policies

N 1.1 Locate and design sensitive noise-receiving land uses so they are not exposed to noise levels exceeding noise standards set forth in Tables N-2 and N-3. (IM N-1B and N-1E)

N 1.2 Evaluate the potential impacts of noise on and from existing and planned land uses and public and private transportation facilities during the development review process using noise thresholds set forth in Tables N-2 and N-3. (IM N-1C and N-1E)

N 1.3 Determine that a potentially significant adverse noise-related impact exists when a non-transportation related project (excluding temporary initial construction noise) has the potential to increase the overall ambient noise levels at the receiving land use by 3 dB or more when the ambient noise levels exceed the standards in Table Noise-2. (IM N-1E)

N 1.4 Determine that a potentially significant adverse noise-related impact exists when a project generating transportation noise (excluding temporary initial construction noise) has the potential to do one or more of the following:

- Where existing traffic noise levels are less than 60 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +5 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant; and
- Where existing traffic noise levels range between 60 and 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +3 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant; and
- Where existing traffic noise levels are greater than 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a + 1.5 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant. (IM N-1C and N-1E)

N 1.5 Design and orient noise-sensitive land uses proposed adjacent to existing transportation noise sources to incorporate noise reduction techniques so that the new noise-sensitive development will not be affected by noise that exceeds the limits in Table N-2. (IM N-1B, N-1D and N-1E)

N 1.6 Design and locate new roads creating transportation noise sources so that existing noise-sensitive land uses will not be exposed to noise levels that exceed the standards shown in Table N-2 or Policy N 1.4. (IMN-1B, N-1C and N-1E)

N 1.7 New development of noise sensitive land uses adjacent to existing stationary noise sources or land designated on the General Plan Land Use Maps as industrial or resource production lands shall be designed to avoid exposure to noise levels in excess of those in Table N-3. (IM N-1B and N-1E)

N 1.8 Single event impulsive noise shall not exceed a peak linear overpressure of 122 dB, or a C-weighted Sound Exposure Level (SEL) of 98 dBC. The cumulative noise level from impulsive sounds such as gunshots and blasting shall not exceed 60 dB LC_{dn} or CNELC on any given day. These standards shall be applied at the property line of a receiving land use. (IM N-1A)

N 1.9 Minimize noise-sensitive development in identified high noise areas surrounding the Calaveras County Airport and ensure that potential new property owners are made aware of existing and anticipated noise levels associated with the airport. (IM N-1D)

N 1.10 Integrate the goals, policies and programs of the Calaveras County Airport Land Use Compatibility Plan in planning decisions as necessary to insure compatibility between noise-generating and noise-sensitive land uses. (IM N-1D)

N 1.11 Continue to maintain a County noise ordinance that addresses, at a minimum, the protection of public health, safety, and welfare relative to noise; establishes maximum noise generation levels for new noise sources and receptors; addresses construction noise; identifies exemptions from noise standards, establishes standard practices for reducing noise levels from Transportation Noise Sources and commonly occurring Non-Transportation Noise Sources, and referencing the Right-to-Farm Ordinance. (IM N-1A, N-1B and N-1D)

N 1.12 Recognize the right of legally pre-existing noise-generating operations to continue operating. (IM N-1A)

N 1.13 Applicants for development projects that are likely to produce excessive noise that may affect noise sensitive land uses shall provide to the County an acoustic analysis which shall be incorporated into the project review process. (IM N-1E)

N 1.14 Limit the use of heavy-duty vibration-generating construction equipment, such as vibratory rollers, within close proximity of existing buildings, particularly buildings of weak structural integrity and/or historical significance to ensure that groundborne vibration shall not exceed 0.2 in/sec PPV at the nearest sensitive receptor. For construction projects where vibration-intensive activities are anticipated, a designated person shall be responsible for registering and investigating claims of excessive vibration. The contact information of such person shall be clearly posted on the construction site. (IM N-1D)

Table N-2
Noise Exposure Levels for Sensitive Land Uses adjacent to Existing Transportation Noise Sources (other than Aviation-Related Noise Sources)[a]

Noise Sensitive Land Use	Outdoor Activity Areas[b]	Interior Spaces[c]	
	L_{dn}/CNEL, dB	L_{dn}/CNEL, dB	L_{eq}, dB[d]
Residential[e]	60[f]	45	--
Transient Lodging[g]	65[h]	45	--
Hospitals, Nursing Homes	60[f]	45	--
Theaters, Auditoriums, Music Halls	--	--	45
Churches, Meeting Halls,	60[f]	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

a This table applies to noise exposure levels resulting from a transportation noise source other than an aircraft. Aircraft related noise exposure is governed by the ALUCP. For existing receiving land uses, consideration shall be given to the noise exposures from new transportation noise sources during the design and approval of the new transportation project. In the case of existing transportation noise sources, projects or consideration of land use changes involving noise-sensitive land uses shall address the noise exposure environment and use these standards as thresholds. Evaluations of existing transportation noise sources shall include an analysis of projected future noise levels based on future estimated traffic levels for the transportation noise source.

b An outdoor activity area is a location outside of the immediate structure where formal or informal activities are likely to happen. For example, anywhere on a residential property could be an outdoor activity area, while the outdoor activity area for a school could be a playground or sporting fields, and for a hospital could be an exterior patio or exercise area. Where the location of an outdoor activity area is unknown, the exterior noise level standard shall be applied at the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes or similar land uses, a common area such as a pool or recreation area may be designated as the outdoor activity area.

c In a high noise environment, special construction techniques may be necessary to reduce the interior noise level to the standard.

d As determined for a typical worst-case hour during periods of use.

e The County can impose noise level standards which are up to 5 dB less than those specified in this table where existing ambient noise levels are substantially lower than the thresholds established in this table. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

f Where it is not feasible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

g Transient lodging includes overnight accommodations usually intended for occupancy by visitors or other short-term paying customers (e.g., hotels, motels or homeless shelters). Transient lodging, for the purpose of this application, excludes bed and breakfast establishments located in rural areas, campgrounds or at guest ranches. In the case of hotel/motel facilities or other transient lodging, where outdoor activity areas such as pool areas are not be included in the project design, only the interior noise level criterion will apply.

h Where it is not feasible to reduce noise in outdoor activity areas to 65 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 70 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Table N-3
Maximum Allowable Noise Exposure from Stationary Noise Sources to Noise Sensitive Land Uses (Outdoor Activity Area)[a,b]

Noise Level Descriptor	Daytime (7 a.m. – 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly L_{eq}, dB[c]	55	45

a The County can impose noise level standards which are up to 5 dB less than those specified in this table where existing ambient noise levels are substantially lower than the thresholds established in this table. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

b An outdoor activity area is a location outside of the immediate structure where formal or informal activities are likely to happen. For example, anywhere on a residential property could be an outdoor activity area, while the outdoor activity area for a school could be a playground or sporting fields, and for a hospital could be an exterior patio or exercise area. Where the location of an outdoor activity area is unknown, the exterior noise level standard shall be applied at the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes or similar land uses, a common area such as a pool or recreation area may be designated as the outdoor activity area.

c Each of the noise levels specified above shall be lowered by five dB for simple tone noises (e.g., noises consisting primarily of speech or music), or for recurring impulsive noises (e.g., humming sounds, outdoor speaker systems). Note that the noise levels provided are hourly averages (Leq) and are not 24-hour weighted averages (CNEL, Ldn)

Stationary noise sources typically of concern include, but are not limited to: Commercial HVAC systems, cooling towers/evaporative condensers, pump stations, lift stations, emergency generators, boilers, steam valves, steam turbines, generators, fans, air compressors, heavy equipment, conveyor systems, transformers, pile drivers, grinders, drill rigs, gas or diesel motors, welders, cutting equipment, outdoor speakers, blowers.

Uses that may typically produce noise sources described above include industrial facilities, pump stations, truck operations, tire shops, auto maintenance shops, metal fabricating shops, shopping centers, drive-up windows, car washes, loading docs, public works projects, batch plants, bottling and canning plants, recycling centers, electric generating stations, race tracks, landfills, mining, sand and gravel operations and athletic fields.

Maximum allowable noise used in this analysis

Implementation Program

N-1A **County Noise Ordinance**

Update Calaveras County Code Chapter 9.02 (Noise Ordinance) to implement the policies of the general plan noise element and include applicable state and federal standards.

Implements: Policies N-1.8, N 1.11, N 1.12
Responsible Entity: Planning Department

N-1B **Noise Reduction Strategies (Discretionary Projects)**

Prepare an approved list of noise reduction strategies that are intended to be normally acceptable to the County to mitigate potentially significant adverse noise impacts pursuant to CEQA. Include provisions for allowing, when appropriate, deviations and alternative strategies proposed by qualified professionals. When it is deemed necessary under the circumstances of any particular case, the Planning Commission and/or the Board of Supervisors may change or disapprove the application of any of these strategies. This program is intended to facilitate project review and provide predictability for applicants and the public. When appropriate noise reduction strategies shall:

- Include noise-reducing design techniques for new development along roadways
- Address special events and temporary land uses (e.g., concerts, festivals), which may temporarily exceed the maximum allowable decibel level (e.g., establishing maximum levels of amplification for sound systems).

Implements: Policies N 1.1, N 1.5, N 1.6, N 1.7and N 1.11
Responsible Entity: Planning Department

N-1C **Transportation-Related Noise**

Cooperate with Caltrans and the Calaveras County Council of Governments to evaluate truck route plans and continue to gather input from local communities and businesses to minimize noise from truck travel through residential and visitor-serving centers.

Implements: Policies N-1.2, N1.4 and N 1.6
Responsible Entity: Public Works

N-1D **Best Management Practices (Ministerial Projects)**

Make noise-management standards and best management practices for new construction/remodeling available on the County website and at the public counter of the Building or Planning Department. Reference and/or provide a link to the County's noise ordinance.

Implements: Policies N 1.5, N 1.9, N 1.10, N 1.11 and N 1.14
Responsible Entity: Building Department, Planning Department

N-1E **Acoustic Analysis**

When an acoustic analysis is required for a development project the analysis shall be prepared by a qualified professional and include the following:

- Ambient noise level measurements of existing conditions;
- Anticipated noise levels generated by the project;
- Recommended measures to achieve compliance with noise standards set forth in Tables N-2 and N-3
- Estimate of noise levels after the mitigation measures have been implemented
- Noise monitoring program

Implements: Policies N 1.1, N 1.2, N 1.3, N 1.4, N 1.5, N 1.6, N 1.7 and N 1.13
Responsible Entity: Planning Department

Glossary of Noise-Related Terminology

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.

A-Weighting
A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.

Community Noise Equivalent Level (CNEL)
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.

Day-Night Average Sound Level (Ldn)
Similar to CNEL, but without evening weighting.

Decibel, dB
A unit of measurement describing the amplitude of sound based on air pressure.

Decibel, A-Weighted, dBA
A unit of measurement describing the amplitude of sound based on air pressure adjusted to more closely match how the human ear perceives sound.

Equivalent Sound Level (L_{eq})
Equivalent or energy-averaged sound level.

Hourly L_{eq}
See Equivalent Sound Level (L_{eq}).

L_{dn}
See "Day-Night Average Sound Level."

Noise Contour
Lines drawn about a noise source indicating equal levels of noise exposure. CNEL and Ldn are the metrics used to describe the noise level and to establish land use planning criteria for noise.

Noise Sensitive Land Use
Land uses sensitive to excess noise, including residential land uses, libraries, museums, places of worship, convalescent homes and facilities, child-care facilities (in residential homes), educational facilities, and hospitals. Transient lodging establishments considered noise sensitive land uses include: hotels, motels and homeless shelters; but exclude bed and breakfast establishments located in rural areas, campgrounds or at guest ranches. Noise Sensitive Land Uses may include certain types of passive recreational parks and open space. Noise Sensitive Land Uses are the same as Sensitive Noise Receptors.

Non-Transportation Noise Source
Land uses that generate noise from a defined space, location, or point (i.e., the noise source does not move from location to location such as along a roadway) including, but not limited to: industrial operations, pump stations, trucking operations, tire shops, auto maintenance shops, metal fabricating shops, shopping centers, drive-up windows, car washes, loading docks, public works projects, batch

plants, bottling and canning plants, recycling centers, electric generating stations, race tracks, landfills, mining or sand and gravel operations, and athletic fields. Also known as Fixed or Stationary Noise Source.

Sensitive Noise Receptor
See Noise Sensitive Land Use.

Sound Exposure Level (SEL)
A rating, in decibels, of a discrete event, such as an aircraft flyover or train passing by, that compresses the total sound energy into a one-second event.

Stationary Noise Source
See Non-Transportation Noise Sources.

Transportation Noise Source
For the purposes of the Noise Element, transportation noise sources are defined as traffic on public roadways, railroad line operations (should these become applicable) and aircraft in flight.

Appendix B

Manufactures Cut Sheet

SD030 | 2.2L | 30 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

Standby Power Rating
30 kW, 38 kVA, 60 Hz

Prime Power Rating*
27 kW, 34 kVA, 60 Hz

*Assembled in the USA using domestic and foreign parts

*EPA Certified Prime ratings are not available in the US or its Territories

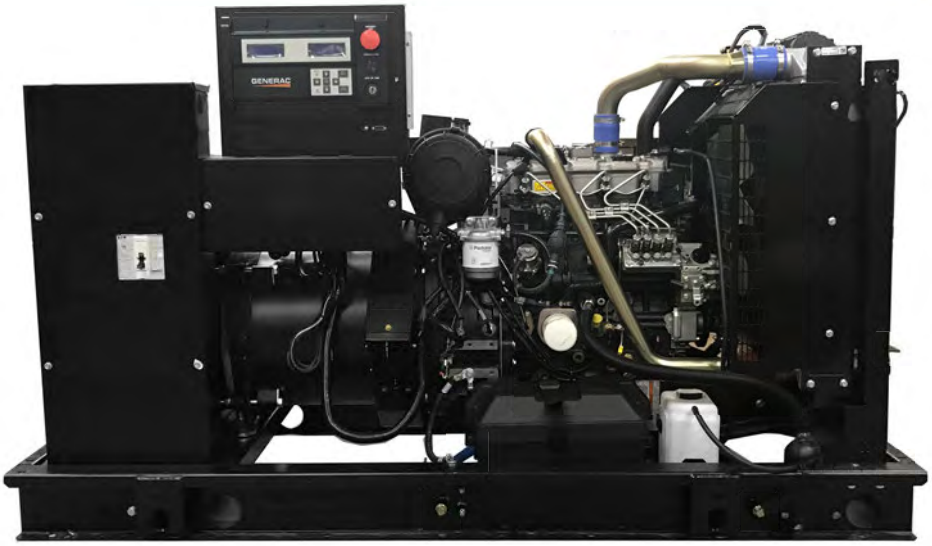


Image used for illustration purposes only

Codes and Standards

Not all codes and standards apply to all configurations. Contact factory for details.

UL2200, UL508, UL489, UL142

CSA C22.2

BS5514 and DIN 6271

SAE J1349

NFPA 37, 70, 99, 110

NEC700, 701, 702, 708

ISO 3046, 7637, 8528, 9001

NEMA ICS10, MG1, 250, ICS6, AB1

ANSI C62.41

Powering Ahead

For over 50 years, Generac has provided innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial applications under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

SD030 | 2.2L | 30 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

STANDARD FEATURES

ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Critical Silencer (Enclosed Unit Only)
- Engine Coolant Heater

Fuel System

- Fuel Lockoff Solenoid
- Primary Fuel Filter

Cooling System

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- Radiator Drain Extension
- 50/50 Ethylene Glycol Antifreeze

Electrical System

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM

- UL2200 GENprotect™
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Brushless Excitation
- Sealed Bearing
- Rotor Dynamically Spin Balanced
- Amortisseur Winding (3-Phase Only)
- Full Load Capacity Alternator
- Protective Thermal Switch

GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- 1 Year Limited Warranty (Prime Rated Units)
- Silencer Mounted in the Discharge Hood (Enclosed Unit Only)

ENCLOSURE (If Selected)

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuation Enclosures)
- Gasketed Doors
- Stamped Air-Intake Louvers
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

FUEL TANKS (If Selected)

- UL 142/ULC S601
- Double Wall
- Normal and Emergency Vents
- Sloped Top
- Sloped Bottom
- Factory Pressure Tested
- Rupture Basin Alarm
- Fuel Level
- Check Valve In Supply and Return Lines
- RhinoCoat™ - Textured Polyester Powder Coat Paint
- Stainless Steel Hardware

CONTROL SYSTEM



Digital H Control Panel- Dual 4x20 Display

Program Functions

- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable Logic Controller
- RS-232/485 Communications
- All Phase Sensing Digital Voltage Regulator
- 2-Wire Start Capability
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/Sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)
- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus® Protocol
- Predictive Maintenance Algorithm
- Sealed Boards
- Password Parameter Adjustment Protection
- Single Point Ground
- 16 Channel Remote Trending
- 0.2 msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

Full System Status Display

- Power Output (kW)
- Power Factor
- kW Hours, Total, and Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency

Alarms and Warnings

- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Overspeed
- Battery Voltage
- Alarms and Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During Alarms and Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

SD030 | 2.2L | 30 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

CONFIGURABLE OPTIONS

ENGINE SYSTEM

- ○ Oil Heater
- ○ Critical Silencer (Open Set Only)
- ○ Radiator Stone Guard
- ○ Level 1 Fan and Belt Guards (Open Set Only)

FUEL SYSTEM

- ○ NPT Flexible Fuel Line

ELECTRICAL SYSTEM

- ○ 10A UL Listed Battery Charger
- ○ Battery Warmer

ALTERNATOR SYSTEM

- ○ Alternator Upsizing
- ○ Anti-Condensation Heater
- ○ Tropical Coating
- ○ Permanent Magnet Excitation

GENERATOR SET

- ○ Extended Factory Testing
- ○ 8 Position Load Center
- ○ Pad Vibration Isolation

CIRCUIT BREAKER OPTIONS

- ○ Main Line Circuit Breaker
- ○ 2nd Main Line Circuit Breaker
- ○ Shunt Trip and Auxiliary Contact
- ○ Electronic Trip Breakers

ENCLOSURE

- ○ Weather Protected Enclosure
- ○ Level 1 Sound Attenuation
- ○ Level 2 Sound Attenuation
- ○ Level 2 Sound Attenuation with Motorized Dampers
- ○ Steel Enclosure
- ○ Aluminum Enclosure
- ○ Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- ○ AC/DC Enclosure Lighting Kit
- ○ Door Alarm Switch
- ○ Enclosure Heater
- ○ Damper Alarm Contacts

WARRANTY (Standby Gensets Only)

- ○ 2 Year Extended Limited Warranty
- ○ 5 Year Limited Warranty
- ○ 5 Year Extended Limited Warranty
- ○ 7 Year Extended Limited Warranty
- ○ 10 Year Extended Limited Warranty

CONTROL SYSTEM

- ○ NFPA 110 Compliant 21-Light Remote Annunciator
- ○ Remote Relay Assembly (8 or 16)
- ○ Oil Temperature Indication and Alarm
- ○ Remote E-Stop (Break Glass-Type, Surface Mount)
- ○ Remote E-Stop (Red Mushroom-Type, Surface Mount)
- ○ Remote E-Stop (Red Mushroom-Type, Flush Mount)
- ○ 100 dB Alarm Horn
- ○ Ground Fault Annunciation
- ○ 120V GFCI and 240V Outlets
- ○ Remote Communication - Modem
- ○ 10A Engine Run Relay

FUEL TANKS (Size On Last Page)

- ○ 8 in (203.2 mm) Fill Extension
- ○ 13 in (330.2 mm) Fill Extension
- ○ 19 in (482.6 mm) Fill Extension
- ○ Overfill Protection Valve
- ○ 5 Gallon Spill Box Return Hose
- ○ 5 Gallon Spill Box
- ○ Tank Risers
- ○ Fuel Level Switch and Alarm
- ○ 12' Vent System
- ○ Fire Rated Stainless Steel Fuel Hose

ENGINEERED OPTIONS

ENGINE SYSTEM

- ○ Coolant Heater Isolation Ball Valves
- ○ Fluid Containment Pan

CONTROL SYSTEM

- ○ Spare Inputs (x4) / Outputs (x4)
- ○ Battery Disconnect Switch

ALTERNATOR SYSTEM

- ○ 3rd Breaker System

GENERATOR SET

- ○ Special Testing

FUEL TANKS

- ○ UL2085 Tank
- ○ Stainless Steel Tanks
- ○ Special Fuel Tanks
- ○ Vent Extensions

SD030 | 2.2L | 30 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Perkins
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Reference	See Emission Data Sheet
Cylinder #	4
Type	In-Line
Displacement - in^3 (L)	135 (2.22)
Bore - in (mm)	3.3 (84)
Stroke - in (mm)	3.9 (100)
Compression Ratio	23.3:1
Intake Air Method	Turbocharged
Cylinder Head	Cast Iron
Piston Type	Aluminum
Crankshaft Type	Forged Steel

Engine Governing

Governor	Electronic Isochronous
Frequency Regulation (Steady State)	±0.5%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full-Flow
Crankcase Capacity - qt (L)	11.2 (10.6)

Cooling System

Cooling System Type	Closed Recovery
Water Pump Type	Pre-Lubed, Self Sealing
Fan Type	Pusher
Fan Speed - RPM	1,980
Fan Diameter - in (mm)	18 (457)

Fuel System

Fuel Type	Ultra Low Sulfur Diesel Fuel #2
Fuel Specifications	ASTM
Fuel Filtering (Microns)	5
Fuel Inject Pump	Distribution Injection Pump
Fuel Pump Type	Engine Driven Gear
Injector Type	Mechanical
Fuel Supply Line - in (mm)	0.31 (7.9) ID
Fuel Return Line - in (mm)	0.2 (4.8) ID

Engine Electrical System

System Voltage	12 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	12 VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	K0035124Y21
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5% (3-Phase)
Telephone Interference Factor (TIF)	< 50

Standard Excitation	Brushless
Bearings	Single Sealed
Coupling	Direct via Flexible Disc
Load Capacity - Standby	100%
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.25%

SD030 | 2.2L | 30 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

OPERATING DATA

POWER RATINGS

		Standby
Single-Phase 120/240 VAC @1.0pf	30 kW	Amps: 125
Three-Phase 120/208 VAC @0.8pf	30 kW	Amps: 104
Three-Phase 120/240 VAC @0.8pf	30 kW	Amps: 90
Three-Phase 277/480 VAC @0.8pf	30 kW	Amps: 45
Three-Phase 346/600 VAC @0.8pf	30 kW	Amps: 36

MOTOR STARTING CAPABILITIES (skVA)

skVA vs. Voltage Dip

277/480 VAC	30%	208/240 VAC	30%
K0035124Y21	61	K0035124Y21	46
K0040124Y21	76	K0040124Y21	58
K0050124Y21	98	K0050124Y21	75

FUEL CONSUMPTION RATES*

Fuel Pump Lift- ft (m)
3 (1)

Total Fuel Pump Flow (Combustion + Return) - gph (Lph)
16.6 (63)

Diesel - gph (Lph)

Percent Load	Standby
25%	1.0 (3.7)
50%	1.4 (5.2)
75%	2.0 (7.5)
100%	2.8 (10.5)

* Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

		Standby
Coolant Flow	gpm (Lpm)	14.9 (56.2)
Coolant System Capacity	gal (L)	2.5 (9.5)
Heat Rejection to Coolant	BTU/hr (kW)	128,638 (136)
Inlet Air	scfm (m^3/hr)	2,800 (4,757)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0199280SSD	
Maximum Radiator Backpressure	in H_2O (kPa)	0.5 (0.12)

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power scfm (m^3/min)	88 (2.5)

ENGINE

		Standby
Rated Engine Speed	RPM	1,800
Horsepower at Rated kW**	hp	49
Piston Speed	ft/min (m/min)	1,181 (360)
BMEP	psi (kPa)	159 (1,096)

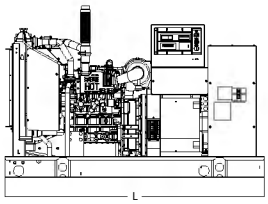
EXHAUST

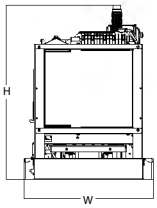
		Standby
Exhaust Flow (Rated Output)	scfm (m^3/min)	296.6 (8.4)
Max. Allowable Backpressure (Post Turbocharger)	inHg (kPa)	1.5 (5.1)
Exhaust Temp (Rated Output)	°F (°C)	892 (478)

** Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.
Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528, and DIN6271 standards.
Standby - See Bulletin 0187500SSB
Prime - See Bulletin 0187510SSB

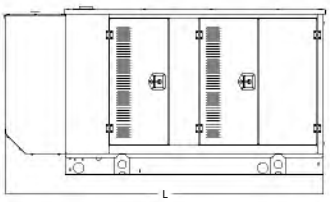
DIMENSIONS AND WEIGHTS*

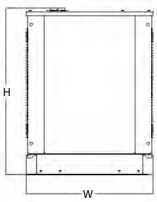




OPEN SET (Includes Exhaust Flex)

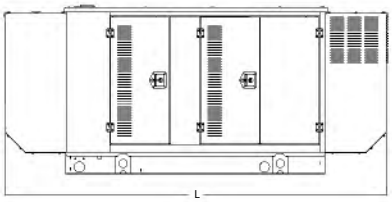
Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)
No Tank	-	76.0 (1,930) x 37.4 (950) x 44.8 (1,138)	1,641 (745)
19	54 (204)	76.0 (1,930) x 37.4 (950) x 57.8 (1,468)	2,121 (963)
47	132 (501)	76.0 (1,930) x 37.4 (950) x 69.8 (1,773)	2,351 (1,067)
75	211 (799)	76.0 (1,930) x 37.4 (950) x 81.8 (2,078)	2,560 (1,162)
107	300 (1,136)	92.9 (2,360) x 37.4 (950) x 81.8 (2,078)	2,623 (1,190)

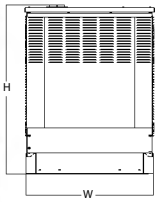




WEATHER PROTECTED ENCLOSURE

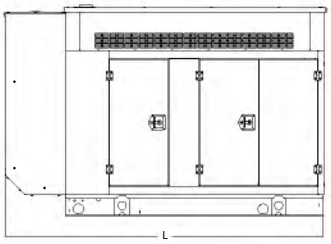
Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	94.8 (2,409) x 38.0 (965) x 49.5 (1,258)	372 (170)	241 (110)
19	54 (204)	94.8 (2,409) x 38.0 (965) x 62.5 (1,588)		
47	132 (501)	94.8 (2,409) x 38.0 (965) x 74.5 (1,893)		
75	211 (799)	94.8 (2,409) x 38.0 (965) x 86.5 (2,198)		
107	300 (1,136)	94.8 (2,409) x 38.0 (965) x 86.5 (2,198)		

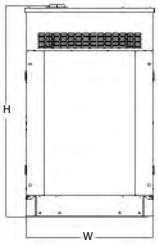




LEVEL 1 ACOUSTIC ENCLOSURE

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	112.5 (2,857) x 38.0 (965) x 49.5 (1,258)	505 (230)	338 (154)
19	54 (204)	112.5 (2,857) x 38.0 (965) x 62.5 (1,582)		
47	132 (501)	112.5 (2,857) x 38.0 (965) x 74.5 (1,893)		
75	211 (799)	112.5 (2,857) x 38.0 (965) x 86.5 (2,198)		
107	300 (1,136)	112.5 (2,857) x 38.0 (965) x 86.5 (2,198)		





LEVEL 2 ACOUSTIC ENCLOSURE

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	94.8 (2,407) x 38.0 (965) x 61.1 (1,551)	510 (232)	341 (155)
19	54 (204)	94.8 (2,407) x 38.0 (965) x 74.1 (1,881)		
47	132 (501)	94.8 (2,407) x 38.0 (965) x 86.1 (2,186)		
75	211 (799)	94.8 (2,407) x 38.0 (965) x 98.1 (2,491)		
107	300 (1,136)	94.8 (2,407) x 38.0 (965) x 98.1 (2,491)		

* All measurements are approximate and for estimation purposes only. Specification characteristics may change without notice. Please contact a Generac Power Systems Industrial Dealer for detailed installation drawings.

Generac Power Systems, Inc. | P.O. Box 8 | Waukesha, WI 53189

P: (262) 544-4811

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Part No. 10000024842

Rev. B 08/27/18

Appendix C

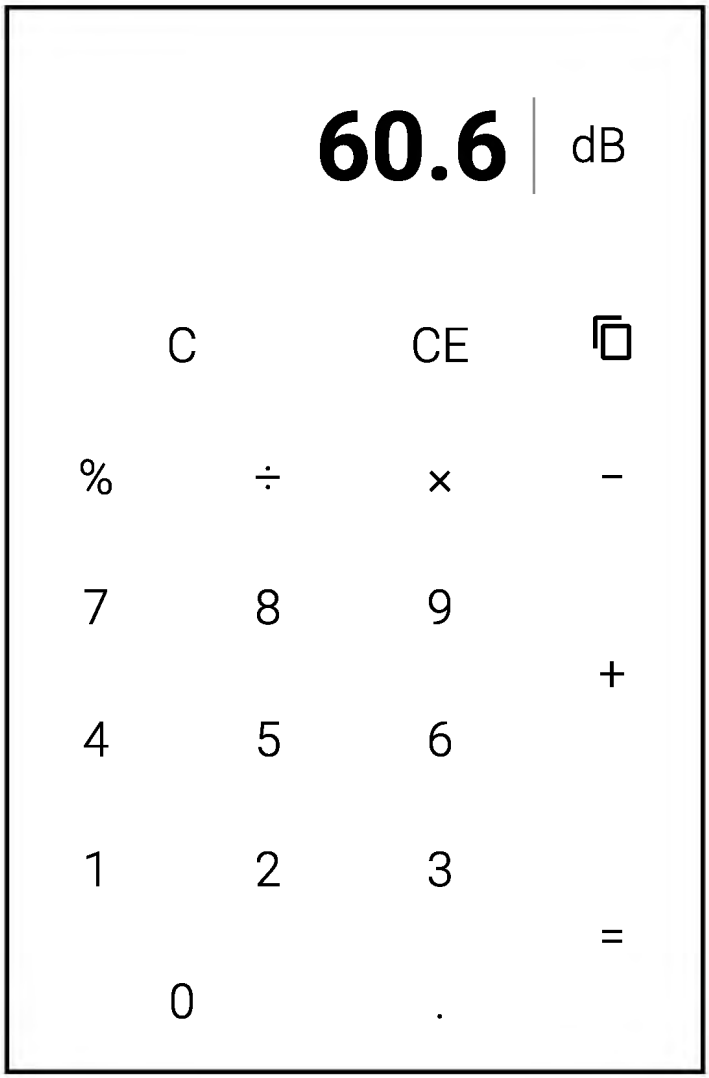
Additional Caluclations and Resources

NOISE TOOLS.NET

Sound level calculators that work in your browser.

Free to use

Decibel Calculator



Calculations

Combining HVAC Units + Generator

$$10 \times \text{Log}_{10}(10^{55.5/10} + 10^{59/10})$$

55.5dB + 59dB = **60.6dB**

Combining HVAC Units

$$10 \times \text{Log}_{10}(10^{50/10} + 10^{54/10})$$

50dB + 54dB = **55.5dB**

Perform arithmetic on sound levels

Decibels are logarithmic therefore the values are converted back to linear before performing any mathematical operations like addition, subtraction, multiplication and division.

Use the calculator to see this in action with the full formula provided with the result.

Decibel add and subtract + −

Enter the decibel values as you would with a standard calculator.

Decibel multiply and divide × ÷

Enter the decibel value first and then enter the factor to multiply or divide by second.

Calculate percentage of a decibel %

As with multiplication, enter the decibel value first and then enter the percentage value second.

Tips to use

- The keyboard numeric keypad is supported (ESC to clear)
- Click entries under "Calculations" to reload the results
- Copy your result to the clipboard with

OK

APPENDIX F

ELECTROMAGNETIC ENERGY (EME) EXPOSURE REPORT

ELECTROMAGNETIC ENERGY (EME) EXPOSURE REPORT



Site Name:	**Cemetery Hill**
Site ID:	**CVL02739**
USID:	**323958**
FA Location:	**15786762**
Site Type:	**Stealth Pole-External Array**
Location:	**222 Jackson St. Copperopolis, CA 95228**
Latitude (NAD83):	**37.9778850**
Longitude (NAD83):	**-120.6433960**
Report Completed:	**November 27, 2023**
AT&T M-RFSC	**Otto Olah**

Prepared By:

OSC ENGINEERING

Prepared for: AT&T Mobility
c/o J5 Infrastructure
1150 Ballena Boulevard
Suite #259
Alameda, CA 94501

Site Compliance Conclusion

The AT&T site located at 222 Jackson St., Copperopolis, CA 95228 will comply with FCC Guidelines.

Executive Summary

Occupational Safety & Compliance Engineering (OSC Engineering) has been contracted by J5 Infrastructure, Inc. to conduct an RF (radio frequency) computer simulated analysis. The Federal Communications Commission (FCC) has set limits on RF energy exposed to humans on a wireless cell site. The FCC has also mandated that all RF wireless sites must be in compliance with the FCC limits and a compliance check should be performed routinely to ensure site compliance. Per AT&T Policy simulations are performed at 75% duty cycle other than UTMS (100%) or as noted. RoofMaster software was utilized in the creation of this report.

OSC Engineering uses the FCC OET-65 as well as AT&T Standards to make recommendations based on results and information gathered from drawings and Radio Frequency Data Sheets. Included in this analysis is an Ericsson AIR (TDD) power reduction factor (0.32) of the maximum to account for spatial distribution of served users, as recommended by AT&T, based on the United Nations International Telecommunication Union ITU-T Series K, Supplement 16 (20 May 2019).

A site-specific compliance plan is recommended for each transmitting site. This report serves as a single piece of the overall compliance plan.

Site Overview and Description

- The antennas are mounted on a Mono-Tree
- The AT&T site consists of four (4) sectors with a total of sixteen (16) antennas
- The site is within a fenced in area, access to the site is via a gate
- The site is not co-located



Compliance Results of the Proposed Site (theoretical simulation)

A result over 100% does not make a site out of compliance with FCC guidelines. For results over 100% of the FCC Limit, further remediation is required to consider the site compliant per FCC Guidelines. See the report page entitled *RECOMMENDATIONS* for compliance actions required for FCC and AT&T Compliance. Areas exceeding the FCC Limit are demarcated with barriers and appropriate signage. Areas outside of the demarcated areas are below the FCC Limits (under 100% GP). The remediation actions bring the site into compliance. Results are given in terms of the FCC General Population. Please see the page entitled *FCC MPE Limits (from OET-65)* for further information. On-site measurements may yield different results, as antennas do not always operate at full capacity.

Maximum simulated RF Exposure Level from (Ground Level):
2.5 % FCC General Population MPE Limit

Antenna Inventory

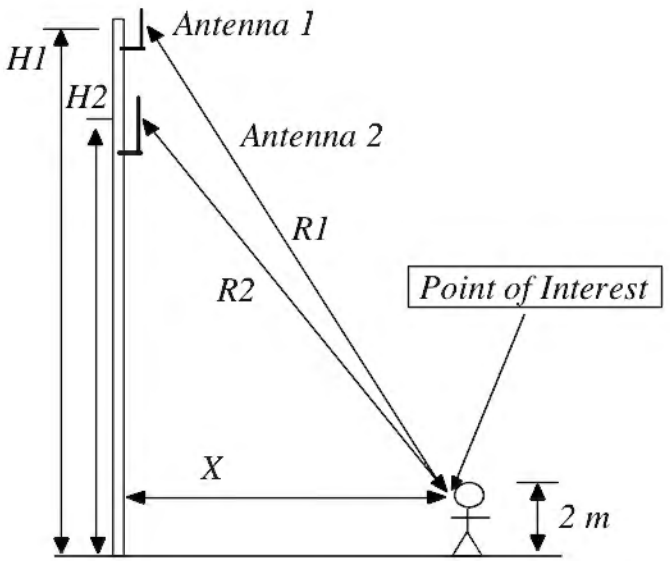
All technical data and specifications shown below are collected from drawings and/or documents provided by the client, as well as from online databases and/or a visit to this facility. Unknown wireless transmitting antennas are simulated using conservative values when information is not available.

Antenna	Operator	Frequency (MHz)	Antenna Type	Antenna Make	Antenna Model	Azimuth (°T)	Ground (Z) (ft)
A1	AT&T LTE	700	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	110	72.98
A1	AT&T 5G	850	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	110	72.98
A1	AT&T LTE / 5G	1900	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	110	72.98
A2	AT&T LTE	700	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	110	72.98
A2	AT&T LTE / 5G AWS	2100	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	110	72.98
A3	AT&T LTE	700	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	110	62.98
A4	AT&T 5G CBAND	3400	Panel	Ericsson	AIR6419	110	63.44
A4	AT&T 5G DoD	3400	Panel	Ericsson	AIR6419	110	68.00
B1	AT&T LTE	700	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	350	72.98
B1	AT&T 5G	850	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	350	72.98
B1	AT&T LTE / 5G	1900	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	350	72.98
B2	AT&T LTE	700	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	350	72.98
B2	AT&T LTE / 5G AWS	2100	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	350	72.98
B3	AT&T LTE	700	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	350	62.98
B4	AT&T 5G CBAND	3400	Panel	Ericsson	AIR6419	350	63.44
B4	AT&T 5G DoD	3400	Panel	Ericsson	AIR6419	350	68.00
C1	AT&T LTE	700	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	230	72.98
C1	AT&T 5G	850	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	230	72.98
C1	AT&T LTE / 5G	1900	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	230	72.98
C2	AT&T LTE	700	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	230	72.98
C2	AT&T LTE / 5G AWS	2100	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	230	72.98
C3	AT&T LTE	700	Panel	CELLMAX	CMA-UBTULBULBHHP/6517/17/21/21	230	62.98
C4	AT&T 5G CBAND	3400	Panel	Ericsson	AIR6419	230	63.44
C4	AT&T 5G DoD	3400	Panel	Ericsson	AIR6419	230	68.00
L1	AT&T Dish	10000	Dish	Unknown	Unknown	150	64.50

FCC Regulations and Guidelines from OET 65

When considering the contributions to field strength or power density from other RF sources, care should be taken to ensure that such variables as reflection and re-radiation are considered. In cases involving very complex sites predictions of RF fields may not be possible, and a measurement survey may be necessary The process for determining compliance for other situations can be similarly accomplished using the techniques described in this section and in Supplement A to this bulletin that deals with radio and television broadcast operations. However, as mentioned above, at very complex sites measurements may be necessary.

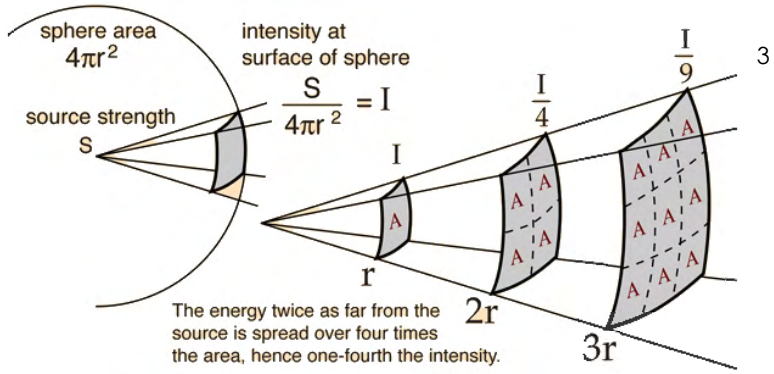
In the simple example shown in the below diagram, it is desired to determine the power density at a given location **X** meters from the base of a tower on which are mounted two antennas. One antenna is a CMRS antenna with several channels, and the other is an FM broadcast antenna. The system parameters that must be known are the total ERP for each antenna and the operating frequencies (to determine which MPE limits apply). The heights above ground level for each antenna, **H1** and **H2,** must be known in order to calculate the distances, **R1**and **R2**, from the antennas to the point of interest. [1]



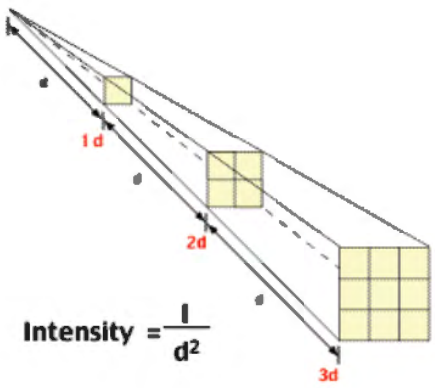
[1] OET Bulletin 65, Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields, Page 37- 38

Inverse Square Law

The inverse-square law, in physics, is any physical law stating that a specified physical quantity or intensity is inversely proportional to the square of the distance from the source of that physical quantity. The fundamental cause for this can be understood as geometric dilution corresponding to point-source radiation into three-dimensional space
The inverse-square law generally applies when some force, energy, or other conserved quantity is evenly radiated outward from a point source in three-dimensional space. Since the surface area of a sphere (which is $4\pi r^2$) is proportional to the square of the radius, as the emitted radiation gets farther from the source, it is spread out over an area that is increasing in proportion to the square of the distance from the source.[2]



[3]



[4]

$$\frac{I_1}{I_2} = \frac{D_2^{\,2}}{D_1^{\,2}}$$

Where:
I_1 = Intensity 1 at D_1
I_2 = Intensity 2 at D_2
D_1 = Distance 1 from source
D_2 = Distance 2 from source

[2] https://en.wikipedia.org/wiki/Inverse-square_law
[3] http://hyperphysics.phy-astr.gsu.edu/hbase/Forces/isq.html
[4] https://www.nde-ed.org/GeneralResources/Formula/RTFormula/InverseSquare/InverseSquareLaw.htm

Result: Surrounding Building(s)

The surrounding buildings will be below FCC MPE Limits for the General Population



Certification

The undersigned is a Professional Engineer, holding a California Registration No. 19677

Reviewed and approved by:



John Bachoua, PE

Date: November 27, 2023

The engineering and design of all related structures as well as the impact of the antennas on the structural integrity of the design are specifically excluded from this report's scope of work. This report's scope of work is limited to an evaluation of the Electromagnetic Energy (EME) RF emissions field generated by the antennas listed in this report. When client and others have supplied data, it is assumed to be correct.

FCC MPE Limits (from OET-65)

Occupational/controlled[5] exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means. As discussed later, the occupational/controlled exposure limits also apply to amateur radio operators and members of their immediate household.

General population/uncontrolled[6] exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

[5] OET-65 "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields pg. 9.
[6] OET-65 "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields pg. 9.

Limits for Maximum Permissible Exposure (MPE)[7]

"The FCC Exposure limits are based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The most restrictive limits occur in the frequency range of 30-300MHz where whole-body absorption of RF energy by human beings is most efficient. At other frequencies whole-body absorption is less efficient, and, consequently, the MPE limits are less restrictive."[8]

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
32-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population /Uncontrolled Exposure

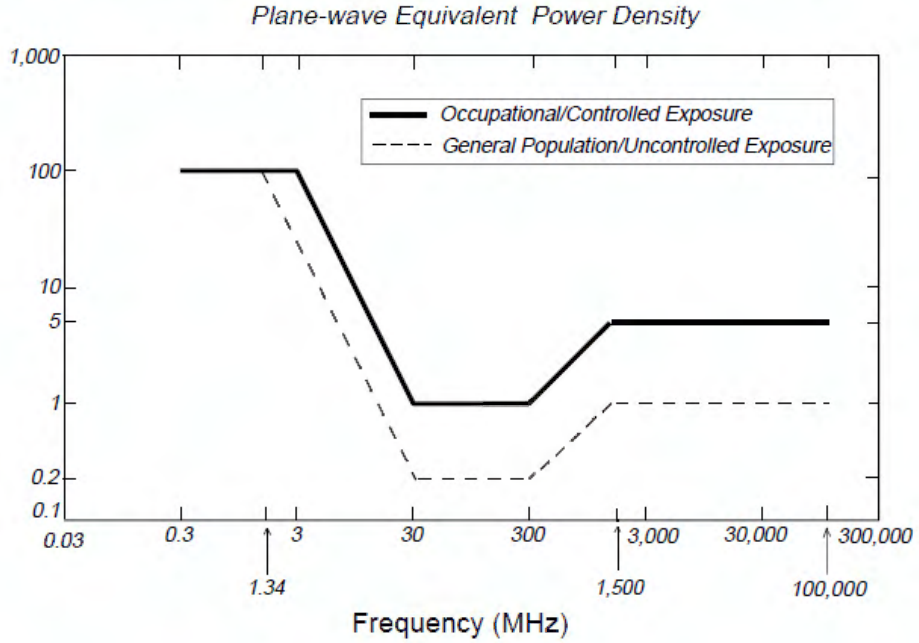
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f= Frequency in MHz *Plane-wave equivalent power density

[7] OET-65 "FCC Guidelines Table 1 pg. 72.
[8] OET-65 "FCC Guidelines for Evaluating Exposure to RF Emissions", pg. 8

Limits for Maximum Permissible Exposure (MPE) continued[9]

Figure 1. *FCC Limits for Maximum Permissible Exposure (MPE)*



"MPE Limits are defined in terms of power density (units of milliwatts per centimeter squared: mW/cm^2), electric field strength (units of volts per meter: V/m) and magnetic field strength (units of amperes per meter: A/m). In the far-field of a transmitting antenna, where the electric field vector (E), the magnetic field vector (H), and the direction of propagation can be considered to be all mutually orthogonal ("[plane-wave" conditions], these quantities are related by the following equation:

$$S = \frac{E^2}{3770} = 37.7H^2$$

where: S = power density (mW/cm^2)
E = electric field strength (V/m)
H = magnetic field strength (A/m)

[9] OET-65 "FCC Guidelines Table 1 pg. 72.

Limitations

OSC Engineering completed this report based on information and data provided by the client and/or on-site data collection. The data provided by the client is assumed to be accurate. This report is completed by OSC Engineering to determine whether the wireless communications facility complies with the Federal Communications Commission (FCC) Radio Frequency (RF) Safety Guidelines. The Office of Engineering and Technology (OET-65) ***Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Radiation*** has been prepared to provide assistance in determining whether proposed or existing transmitting facilities, operations or devices comply with limits for human exposure to radiofrequency (RF) fields adopted by the Federal Communications Commission (FCC)[10]. As the site is being upgraded and changed this report will become obsolete. A statistical factor reducing the actual power of the antenna system to 0.32 of maximum theoretical power is used to account for spatial distribution of users, network utilization, time division duplexing, and scheduling time. AT&T recommends the use of this factor based on a combination of guidance from its antenna system manufacturers, supporting international industry standards, industry publications, and its extensive experience. Use of this document will not hold OSC Engineering Inc. nor it's employees liable legally or otherwise. This report shall not be used as a determination as to what is safe or unsafe on a given site: only for what is compliant per the FCC standards outlined in the OET-65. All workers or other people accessing any transmitting site should have proper EME awareness training. This includes, but is not limited to, obeying posted signage, keeping a minimum distance from antennas, watching EME awareness videos and formal classroom training.

[10] OET-65 "FCC Guidelines for Evaluating Exposure to RF Emissions", pg. 1

AT&T Antenna Shut-Down Protocol

AT&T provides Lockout/Tagout (LOTO) procedures in Section 9.4[11] (9.4.1- 9.4.9) in the ND-00059. These procedures are to be followed in the event of anyone who needs access at or in the vicinity of transmitting AT&T antennas. Contact AT&T when accessing the rooftop near the transmitting antennas. Below is information regarding when to contact an AT&T representative.

9.4.7 Maintenance work being performed near transmitting antennas

Whenever anyone is working within close proximity to the transmitting antenna(s), the antenna sector, multiple sectors, or entire cell site may need to be shut down to ensure compliance with the applicable FCC MPE limit. This work may include but is not limited to structural repairs, painting or non-RF equipment services by AT&T personnel/contractors or the owner of a tower, water tank, rooftop, or other low-centerline sites. The particular method of energy control will depend on the scope of work (e.g., duration, impact to the antenna or transmission cabling, etc.) and potential for RF levels to exceed the FCC MPE limits for General Population/Uncontrolled environments

9.4.8 AT&T Employees and Contractors

AT&T employees and contractors performing work on AT&T cell sites must be trained in RF awareness and must exercise control over their exposure to ensure compliance with the FCC MPE limit for Occupational/Controlled Environments ("Occupational MPE Limit").

The rule of staying at least 3 feet from antennas is no longer always adequate to prevent exposure above the Occupational MPE Limit. That general rule was applied early in the development of cellular when omni-directional antennas were primarily used and later when wide-beamwidth antennas were used. That application was then appropriate for the Occupational exposure category. However, the current prevalence of antennas with 60- and 70- degree horizontal half-power beamwidths at urban and suburban GSM and UMTS/HSDPA sites raises some question about the continued reliability of the 3-foot rule. Antennas with low bottom-tip heights and total input powers around 70-80 W can produce exposure levels exceeding the Occupational MPE Limits at 4 feet, and these levels can be augmented by emissions of co-located operators. Therefore, AT&T employees and contractors should apply the above general work procedures and use an RF personal monitor to assess exposure levels within the work vicinity.

9.4.9 Other Incidental Workers

All other incidental workers who are not trained in RF safety are considered general public and subject to the FCC MPE limits for General Population/Uncontrolled Environments. In such instance, the M-RFSC (primary contact) or R-RFSC (secondary contact) must refer to the Mobility RF site survey plan to assess the potential RF exposure levels associated with the antenna system. If capable of exceeding the FCC General Population/Uncontrolled MPE limit, then local sector/site shutdown is necessary. The FE/FT must also follow the local shutdown procedure and use their RF personal monitor as a screening tool for verification, as necessary.

[11] ND-00059_Rev_5.1 "Lockout/Tagout (LOTO) Procedures" Page 45.

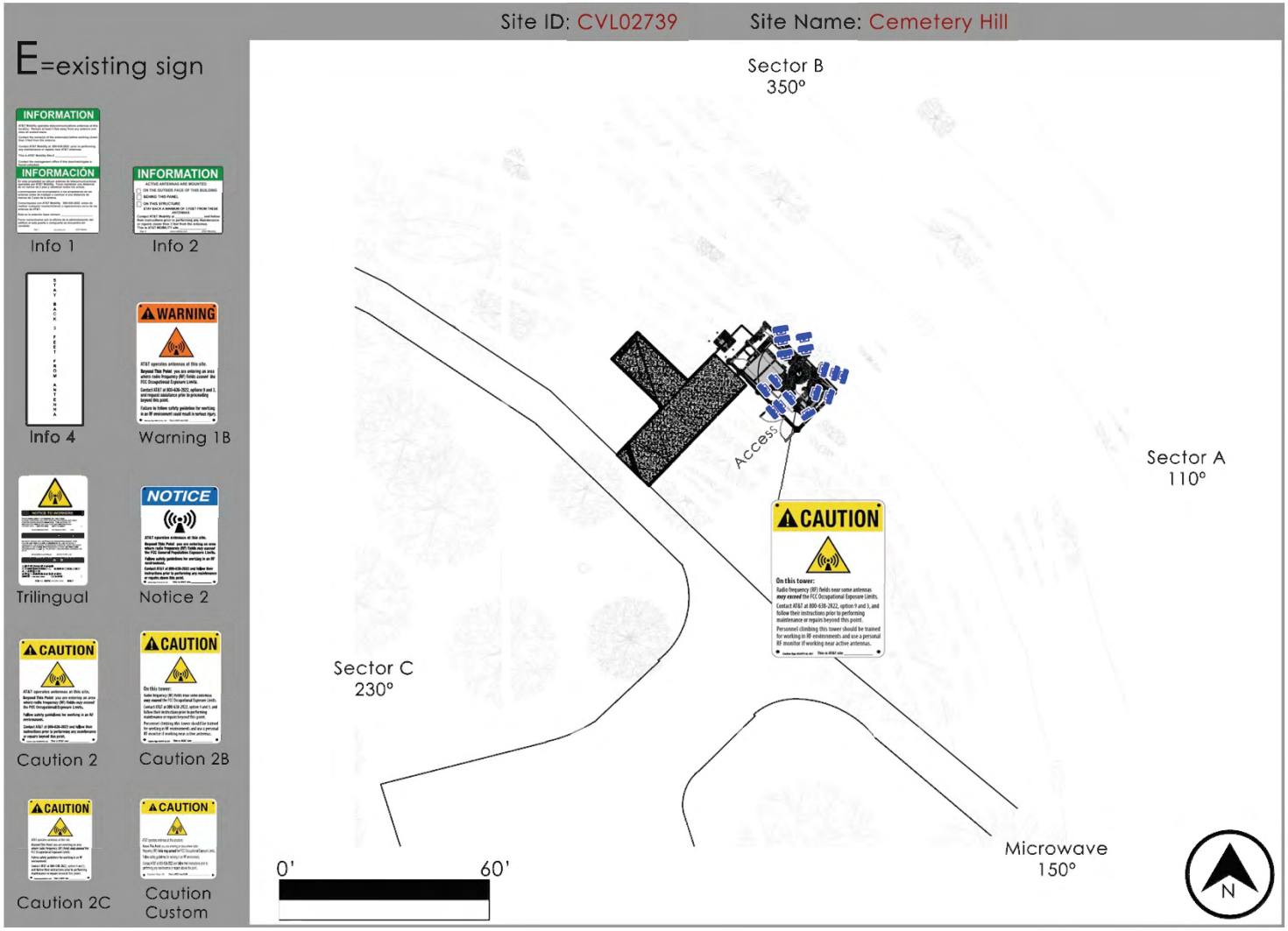
RECOMMENDATIONSJ

- **AT&T Access Point(s):**
  To be installed: Caution Sign 2B (Tower) @ base of monopole

- **AT&T Sector A**
  No signage or barrier action required

- **AT&T Sector B**
  No signage or barrier action required

- **AT&T Sector C**
  No signage or barrier action required



If work is being performed in the vicinity of the transmitting antennas, site shut-down procedures must be followed. See page entitled AT&T Antenna Shut-down protocol for further information.