



## Staff Report to the Zoning Administrator

Application Number: **131223**

**Applicant:** Tom Derkas  
**Owner:** Pacific Gas & Electric Company  
**APN:** 051-091-03

**Agenda Date:** 12/20/2013  
**Agenda Item #:** 5  
**Time:** After 9:00 a.m.

**Project Description:** Proposal to construct a new 85 foot tall monopine wireless communication facility with associated ground mounted equipment at an existing PG&E substation. Requires a Commercial Development Permit.

**Location:** Property is located on the west side of Minto Road approximately 1,000 feet east of GreenValley Road.

**Supervisory District:** 4<sup>th</sup> District (District Supervisor: Caput)

**Permits Required:** Commercial Development Permit  
**Technical Reviews:** None

### Staff Recommendation:

- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- Approval of Application 131223, based on the attached findings and conditions.

### Exhibits

- |   |   |
|---|---|
| A. Categorical Exemption (CEQA determination) | F. General Plan Maps  |
| B. Findings                                   | F. Radio Frequency Report, prepared by Hammett & Edison, Inc., October 16, 2013 |
| C. Conditions                                 | G. Visual Simulations   |
| D. Project plans                              |   |
| E. Assessor's, Location, Zoning and           |   |

### Parcel Information

Parcel Size:	8.8 acres
Existing Land Use - Parcel:	PG&E substation
Existing Land Use - Surrounding:	North-Residential, South-Agriculture, West-Vacant, East-Agriculture
Project Access:	Minto Road (40 foot right-of-way)
Planning Area:	Pajaro Valley

Land Use Designation: P (Public Facility)  
Zone District: PF (Public Facility)  
Coastal Zone: ☐ Inside ☒ Outside  
Appealable to Calif. Coastal ☐ Yes ☒ No  
Comm.

### Environmental Information

Geologic Hazards: County Fault Zone, State Fault Zone  
Soils: Soils Report required prior to building permit issuance to address structural engineering required for site specific geologic and soils conditions.  
Fire Hazard: Not a mapped constraint  
Slopes: N/A, site is flat  
Env. Sen. Habitat: Not mapped/no physical evidence on site  
Grading: No grading proposed  
Tree Removal: No trees proposed to be removed  
Scenic: Not a mapped resource  
Drainage: Existing drainage adequate  
Archeology: Mapped archaeological resources; a previous archaeological resource review confirmed that absence of resources. However, a presence/absence review for this specific location is required prior building permit approval.

### Services Information

Urban/Rural Services Line: ☒ Inside ☐ Outside  
Water Supply: Watsonville water  
Sewage Disposal: Freedom Sanitation District  
Fire District: Pajaro Valley Fire Protection District  
Drainage District: Flood Zone 7

### History

The subject property contains a PG&E substation with an existing 95 foot Electric lattice tower with attached wireless antennas authorized under Permits 05-0362 and 07-0008.

**05-0362** - Proposal to construct 12 additional feet to an existing 83.8-foot PG&E lattice tower, construct 3 panel antennas on top of the proposed 12-foot extension, construct 3 ground equipment cabinets located at the base of the PG&E lattice tower and construct a 6-foot tall redwood fence enclosure at the base of the PG&E tower.

**07-0008** - Proposal to co-locate (six additional antennas) a Wireless Communication Facility on an existing PG&E lattice tower.

### **Zoning & General Plan Consistency**

Pursuant to County Code Section 13.10.661 (a) (Wireless Communications Ordinance), all new wireless communication facilities are required to obtain a commercial development permit with approval by the Zoning Administrator.

The subject property is a parcel of approximately 8.8 acres, located in the PF (Public Facility) zone district, a designation which allows commercial uses. The proposed wireless facility is an allowed use within the PF zone district and the zoning is consistent with the site's (P) Public Facility General Plan designation. The proposed site is not located in a prohibited or restricted wireless area as set forth in Sections 13.10.661(B) and 13.10.661(C). Thus, an alternative site analysis or alternative designs are not required.

The wireless ordinance (section 13.10.661. F) requires that wireless facilities be located in the least visually obtrusive location that is technically feasible. Preference was given to location of the proposed antennas on the existing 95 foot tall PG&E lattice structure located to the north of the proposed project site. Currently, T-Mobile and MetroPCS are located on the top portion of the PG&E tower. The proposed antennas were suggested to be located where space is available on the tower, at approximately the 50 foot elevation. The AT&T radio frequency engineer reviewed the proposed location and confirmed that a minimum of 80 foot tower height would be required for this particular site. The 85 foot Wireless height limit established by the zoning ordinance prohibits an additional increase in the tower height in the absence of a variance. As a result, a 95 foot tall tower is not recommended for the proposed wireless project as it would require additional height beyond that allowed without a variance and would create additional visual impacts.

The proposed monopine is situated adjacent to Minto Road. All PF zone district setbacks are required to be 10 feet, with exception of the rear yard setback located on the north side of the property adjacent to residential zoning, which is required to be 20 feet. The project meets all required setbacks.

<b>Setback Table</b>			
	Front	Side	Rear
Minto Road Wireless Facility (PF zone district)			
Required	10'	10'	10' (20 feet to residential zoning)
Proposed	100+	10'	200 +

The height of the proposed tower will not exceed the allowed height enumerated in County Code Section 13.10.510(D) (2). This section allows a maximum height of 85 feet for wireless facilities located within the Public Facility zone district, as required by the wireless facility policy interpretation WFC-01.

The proposed wireless facility complies with the requirements of the visual protection regulations of the Wireless Ordinance and the County Design Review Ordinance in that the proposed project has been designed to integrate the equipment onto a monopine, also known as an artificial pine tree, as it is situated adjacent to an existing 42 foot tall pine tree located approximately 20 feet to the northwest of the proposed facility. The proposed monopine camouflages the proposed wireless antennas within the canopy of the pine tree and minimizes visual impacts of the proposed wireless equipment, meeting the ordinance objective to reduce visual impacts as much as technically feasible.

Visual simulations (Exhibit G) are attached that provide an image of the existing and proposed appearance of the project site. The simulation shows a color difference between the existing pine and proposed monopine. At staff's request, the applicant provided two color samples of the monopine branches to ensure that the proposed color matches the adjacent pine tree as much as feasible. One sample is a solid green and other sample is two tones, green and brown. The color sample selected by staff is the variegated (two color) sample and is available for review as necessary. This color provides a more muted and natural color and is similar to the natural pine as pines include tufts of brown needles as well as green. This color scheme should blend the monopine with the existing pine tree. The proposed equipment enclosure is also conditioned to require landscape screening of the proposed site fencing to ensure that the equipment is screened from view. The screening plants are required to be irrigated until they are established.

### **Radio Frequency (RF) Exposure**

County Code Section 13.10.661 (D) requires compliance with the Federal Communications Commission (FCC) rules, regulations and standards by requiring that facilities comply with the emissions standards set forth by the FCC. A non-ionizing electromagnetic radiation (NIER) report is attached as Exhibit F. The report concludes that the maximum cumulative level at the ground will be 4.7 percent of the applicable radio frequency exposure levels established by the Federal Communications Commission (FCC). The maximum RF levels at the second floor elevation are calculated to be 9.4 percent of the most restrictive applicable limit.

The antennas are not accessible to the general public due to their location on the tower so no mitigation measures are necessary to comply with the FCC public exposure guidelines. Occupational safety measures are conditioned to be provided in compliance with the FCC occupational exposure guidelines for work required near the antennas. The proposed project is consistent with the FCC regulations as proposed and conditioned.

Section 47 USC 332(c)(7)(iv) of the Telecommunications Act of 1996 forbids jurisdictions from regulating the placement, construction, or modification of Wireless Communications Facilities based on the environmental effects of RF emissions if these emissions comply with FCC standards. The RF emissions of the proposed wireless communication facility comply with FCC standards.

### **Environmental Review**

The California Environmental Quality Act (CEQA) provides exemptions for classes of projects which do not have a significant effect on the environment. Commercial structures not exceeding 10,000 square feet and not involving the use of significant amounts of hazardous substances and

not located in a sensitive habitat are exempt per Section 15303, Class 3. The project proposes an approximately 300 square foot pad and a monopine and is not located within a mapped sensitive habitat. A preliminary determination has been made that the project is exempt from the California Environmental Quality Act and a notice of exemption has been attached as Exhibit A.

## **Conclusion**

As proposed and conditioned, the project is consistent with all applicable codes and policies of the Zoning Ordinance and General Plan. Please see Exhibit "B" ("Findings") for a complete listing of findings and evidence related to the above discussion.

## **Staff Recommendation**

- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- **APPROVAL** of Application Number **131223**, based on the attached findings and conditions.

**Supplementary reports and information referred to in this report are on file and available for viewing at the Santa Cruz County Planning Department, and are hereby made a part of the administrative record for the proposed project.**

**The County Code and General Plan, as well as hearing agendas and additional information are available online at: [www.co.santa-cruz.ca.us](http://www.co.santa-cruz.ca.us)**

Report Prepared By: Sheila McDaniel  
Santa Cruz County Planning Department  
701 Ocean Street, 4th Floor  
Santa Cruz CA 95060  
Phone Number: (831) 454-2255  
E-mail: [sheila.mcdaniel@co.santa-cruz.ca.us](mailto:sheila.mcdaniel@co.santa-cruz.ca.us)

# CALIFORNIA ENVIRONMENTAL QUALITY ACT

## NOTICE OF EXEMPTION

The Santa Cruz County Planning Department has reviewed the project described below and has determined that it is exempt from the provisions of CEQA as specified in Sections 15061 - 15332 of CEQA for the reason(s) which have been specified in this document.

Application Number: 131223

Assessor Parcel Number: 051-091-03

Project Location: Property is located on the west side of Minto Road approximately 1,000 feet east of GreenValley Road.

**Project Description: Proposal to construct a new 85 foot tall monopine wireless communication facility with associated ground mounted equipment at an existing PG&E substation. Requires a Commercial Development Permit**

**Person or Agency Proposing Project: Tom Derkas**

**Contact Phone Number: (925) 202-3333**

- A. ☐ The proposed activity is not a project under CEQA Guidelines Section 15378.  
B. ☐ The proposed activity is not subject to CEQA as specified under CEQA Guidelines Section 15060 (c).  
C. ☐ **Ministerial Project** involving only the use of fixed standards or objective measurements without personal judgment.  
D. ☐ **Statutory Exemption** other than a Ministerial Project (CEQA Guidelines Section 15260 to 15285).  
E. ☒ **Categorical Exemption**

Specify type: Class 3 - New Construction or Conversion of Small Structures (Section 15303)

**F. Reasons why the project is exempt:**

Commercial structures not exceeding 10,000 square feet and not involving the use of significant amounts of hazardous substances and not located in a sensitive habitat. The project proposes an approximately 300 square foot pad and a monopine and is not located within a mapped sensitive habitat.

In addition, none of the conditions described in Section 15300.2 apply to this project.

\_\_\_\_\_  
Sheila McDaniel, Project Planner

Date: \_\_\_\_\_

## **Wireless Communication Facility Use Permit Findings**

1. The development of the proposed wireless communications facility as conditioned will not significantly affect any designated visual resources, environmentally sensitive habitat resources (as defined in the Santa Cruz County General Plan/LCP Sections 5.1, 5.10, and 8.6.6.), and/or other significant County resources, including agricultural, open space, and community character resources; or there are no other environmentally equivalent and/or superior and technically feasible alternatives to the proposed wireless communications facility as conditioned (including alternative locations and/or designs) with less visual and/or other resource impacts and the proposed facility has been modified by condition and/or project design to minimize and mitigate its visual and other resource impacts.

This finding can be made in that the proposed wireless communication facility and equipment are not proposed within a designated visual resource area, environmentally sensitive habitat resource area, or other significant county resource area. Furthermore, consideration was given to location of the proposed equipment on the existing 95 foot tall PG&E lattice tower north of the proposed location, but this tower already includes antenna equipment at the elevation required by the proposed facility and cannot be increased in height to accommodate additional wireless antennas due to the maximum height allowed within the Public Facility zone district. The project provides a design intended to camouflage the proposed antennas as a pine tree and thus additional alternative designs are not required. The project is conditioned to maintain the paint color matching with the pine tree adjacent to the proposed monopine, and landscape screening along the proposed fenced equipment area.

The project is not located within the Coastal Zone.

2. The site is adequate for the development of the proposed wireless communications facility and, for sites located in one of the prohibited and/or restricted areas set forth in Sections 13.10.661(B) and 13.10.661 (C), that the applicant has demonstrated that there are not environmentally equivalent or superior and technically feasible: (1) alternative sites outside the prohibited and restricted areas; and/or (2) alternative designs for the proposed facility as conditioned.

This finding can be made in that the proposed site is not located in a prohibited or restricted area as set forth in Sections 13.10.661(B) and 13.10.661(C). As such, no alternative site analysis is required. Consideration was given to location of the proposed equipment on the existing 95 foot tall PG&E lattice tower north of the proposed location, but this tower already includes antenna equipment at the elevation required by the proposed facility and cannot be increased in height to accommodate additional wireless antennas due to the maximum 85 foot height allowed within the Public Facility zone district. The project provides a design intended to camouflage the proposed antennas as a pine tree and thus additional alternative designs are not required. Wireless communication facilities are an allowed use with the PF (Public Facility) and zone district.

3. The subject property upon which the wireless communications facility is to be built is in compliance with all rules and regulations pertaining to zoning uses, subdivisions and any other applicable provisions of this title (County Code 13.10.660) and that all zoning violation abatement costs, if any, have been paid.

This finding can be made, in that the existing utility is exempt from County Zoning and Building Regulations under Government Code Section 53091. The existing wireless facilities are in compliance with the requirements of the zone district and General Plan designation, in which it is located.

No zoning violation abatement fees are applicable to the subject property.

4. The proposed wireless communication facility as conditioned will not create a hazard for aircraft in flight.

This finding can be made, in that the proposed antennas will be located on a proposed 85 foot tall monopine, which complies with the height standard allowed for antennas pursuant to County Code Section 13.10.510(D) (2) and the wireless facility policy interpretation WFC-01. As such, the proposal will not create a hazard for aircraft in flight.

5. The proposed wireless communication facility as conditioned is in compliance with all FCC and California PUC standards and requirements.

This finding can be made, in that the maximum ambient radio frequency electromagnetic field exposure level anywhere on the ground will be .37% of the applicable radio frequency exposure levels established by the Federal Communications Commission (FCC). The maximum calculated cumulative level at the ground level is .70% of the public exposure limit. The maximum calculated cumulative level at the second floor elevation of any nearby building would be .92% of the public exposure limit. Plans are required to provide warning signs and an automatic shut-off value as conditions of approval to ensure occupational safety.

6. For wireless communication facilities in the coastal zone, the proposed wireless communication facility as conditioned is consistent with the all applicable requirements of the Local Coastal Program.

The proposed wireless communication facility is not located within the coastal zone.



## **Development Permit Findings**

1. That the proposed location of the project and the conditions under which it would be operated or maintained will not be detrimental to the health, safety, or welfare of persons residing or working in the neighborhood or the general public, and will not result in inefficient or wasteful use of energy, and will not be materially injurious to properties or improvements in the vicinity.

This finding can be made, in that the project is located in an area designated for commercial uses and is not encumbered by physical constraints to development. Construction will comply with prevailing building technology, the California Building Code, and the County Building ordinance to insure the optimum in safety and the conservation of energy and resources. The proposed improvements will not deprive adjacent properties or the neighborhood of light, air, or open space, in that the structure will meet all current setbacks that ensure access to these amenities.

2. That the proposed location of the project and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the zone district in which the site is located.

This finding can be made, in that the proposed location of the improvements and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the PF (Public Facility) zone district in that the proposed improvements meet all current site standards for the zone district including setbacks, maximum antenna height, etc.

3. That the proposed use is consistent with all elements of the County General Plan and with any specific plan which has been adopted for the area.

This finding can be made, in that the proposed commercial use is consistent with the use and density requirements specified for the Public Facility (P) land use designation in the County General Plan.

The proposed wireless project will not adversely impact the light, solar opportunities, air, and/or open space available to other structures or properties, and meets all current site and development standards for the zone district.

The proposed wireless project will be properly proportioned to the parcel size and the character of the neighborhood as specified in General Plan Policy 8.6.1 (Maintaining a Relationship Between Structure and Parcel Sizes), in that the proposed monopine and equipment shelter will comply with the site standards for the PF zone district (including setbacks, height, and number of stories) and will result in a structure consistent with a design that could be approved on any similarly sized public facility lot in the vicinity.

The project is not located within a special community or town plan.

4. That the proposed use will not overload utilities and will not generate more than the acceptable level of traffic on the streets in the vicinity.

This finding can be made, in that the proposed monopine and equipment shelter is to be constructed on an existing developed lot. The expected level of traffic generated by the proposed project is not anticipated to affect the traffic volumes associated with these existing uses and thus will not adversely impact the existing roads or intersections in the surrounding area.

5. That the proposed project will complement and harmonize with the existing and proposed land uses in the vicinity and will be compatible with the physical design aspects, land use intensities, and dwelling unit densities of the neighborhood.

This finding can be made, in that the proposed monopine and equipment shelter is located in a mixed neighborhood containing a variety of architectural styles, and the proposed improvements are consistent with the land use intensity and density of the neighborhood and will result in no appreciable change in the character of the area because the proposed monopine design will fully screen the proposed antennas so that visual impacts are minimized. The proposed equipment shelter will be screened by required landscaping around the edge of the proposed enclosure.

6. The proposed development project is consistent with the Design Standards and Guidelines (sections 13.11.070 through 13.11.076), and any other applicable requirements of this chapter.

This finding can be made, in that the proposed improvements will be of an appropriate scale and type of design that will minimize visual impacts to surrounding properties and open space in the surrounding area by provision of a monopine located adjacent to an existing pine tree. The proposed equipment shelter will be screened from the street by required landscaping.

## Conditions of Approval

Exhibit D: Project Plans, Sheets A-0, C-1, A-1, A-2, A-3, A-4.2, A-5, prepared by Borges Architectural Group, dated 7/23/2013

- I. This permit authorizes the construction of a new 85 foot tall monopine wireless communication facility with associated ground mounted equipment at an existing PG&E substation. This approval does not confer legal status on any existing structure(s) or existing use(s) on the subject property that are not specifically authorized by this permit. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant/owner shall:
  - A. Sign, date, and return to the Planning Department one copy of the approval to indicate acceptance and agreement with the conditions thereof.
  - B. Obtain a Building Permit from the Santa Cruz County Building Official.
    1. Any outstanding balance due to the Planning Department must be paid prior to making a Building Permit application. Applications for Building Permits will not be accepted or processed while there is an outstanding balance due.
  - C. Submit proof that these conditions have been recorded in the official records of the County of Santa Cruz (Office of the County Recorder) within 30 days from the effective date of this permit.
  - D. The applicant shall obtain approval from the California Public Utilities Commission and the Federal Communications Commission to install and operate this facility.
- II. Prior to issuance of a Building Permit the applicant/owner shall:
  - A. Submit final architectural plans for review and approval by the Planning Department. The final plans shall be in substantial compliance with the plans marked Exhibit "D" on file with the Planning Department. Any changes from the approved Exhibit "D" for this development permit on the plans submitted for the Building Permit must be clearly called out and labeled by standard architectural methods to indicate such changes. Any changes that are not properly called out and labeled will not be authorized by any Building Permit that is issued for the proposed development. The final plans shall include the following additional information:
    1. One elevation shall indicate the monopine material and needle and trunk color. The monopine color shall match the color sample on file in the Planning Department.
    2. Grading, drainage, and erosion control plans, as required by Environmental Planning.

3. Details showing compliance with fire department requirements. If the proposed structure(s) are located within the State Responsibility Area (SRA) the requirements of the Wildland-Urban Interface code (WUI), California Building Code Chapter 7A, shall apply.
  4. Plans shall include landscaping to screen the fenced enclosure from surrounding properties. Vines planted along the base of the fence are acceptable. Plans shall include a temporary watering system until plants are established.
  5. Plans shall provide product specifications for the proposed 50 kw generator that confirm that the noise levels do not exceed 70 dB Ldn (agriculture standard) at the eastern property line and 60 dB Ldn (residential standard) at the north property line as required by the General Plan.
  6. Meet all requirements of and pay Zone 7 drainage fees to the County Department of Public Works, Storm water Management. Drainage fees will be assessed on the net increase in impervious area.
  7. All new electric and telecommunications lines shall be placed underground.
  8. Construction details of the access pathway/ road and the method of installation for the equipment platform. Tree protection measures for protection of the Monterey Pine must be clearly delineated on the plans for the access pathway/ road and the construction of the equipment platform.
  9. A lighting plan. All lighting must be manual and must not be visible from neighboring properties.
  10. Details showing compliance with the FCC occupational exposure guidelines and safety measures.
- B. Obtain an Environmental Health Clearance for this project from the County Department of Environmental Health Services. To ensure that the storage of hazardous materials on the site does not result in adverse environmental impacts, the applicant shall submit a Hazardous Materials Management Plan for review and approval by the County Department of Environmental Health Services, if required.
- C. Meet all requirements and pay any applicable plan check fee of the Pajaro Valley Fire Protection District.
- D. Submit 3 copies of a soils report prepared and stamped by a licensed Geotechnical Engineer. The soils report shall be reviewed and approved by Environmental Planning.

- E. Pay the current fees for Child Care mitigation for proposed building footprint area. Currently, these fees are \$.23 per square foot.
  - F. Pay the current fees for Roadside and Transportation improvements. Currently, these fees are, respectively, \$300.00 and \$300.00 per trip end, as required by the Public Works Department.
  - G. Submit a written statement signed by an authorized representative of the school district in which the project is located confirming payment in full of all applicable developer fees and other requirements lawfully imposed by the school district.
- III. All construction shall be performed according to the approved plans for the Building Permit. Prior to final building inspection, the applicant/owner must meet the following conditions:
- A. All site improvements shown on the final approved Building Permit plans shall be installed.
  - B. All inspections required by the building permit shall be completed to the satisfaction of the County Building Official.
  - C. The project must comply with all recommendations of the approved soils reports.
  - D. The wireless communication facility may not be connected to a power source or operated until a final inspection and clearance from the Santa Cruz County Planning Department has been received.
  - E. Pursuant to Sections 16.40.040 and 16.42.080 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.080, shall be observed.
- IV. Operational Conditions
- A. In the event that future County inspections of the subject property disclose noncompliance with any Conditions of this approval or any violation of the County Code, the owner shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including permit revocation.
  - B. The exterior finish and materials of the wireless communication facility must be maintained on an annual basis to continue to blend with the existing utilities infrastructure. Additional paint and/or replacement materials, including

- replacement branches, shall be installed as necessary to blend the wireless communication facility with the existing utilities infrastructure, including the existing adjacent pine tree.
- C. The operator of the wireless communication facility must submit within 90 days of commencement of normal operations (or within 90 days of any major modification of power output of the facility) a written report to the Santa Cruz County Planning Department documenting the measurements and findings with respect to compliance with the established Federal Communications Commission (FCC) Non-Ionizing Electromagnetic Radiation (NEIR) exposure standard. The wireless communication facility must remain in continued compliance with the NEIR standard established by the FCC at all times. Failure to submit required reports or to remain in continued compliance with the NEIR standard established by the FCC will be a violation of the terms of this permit.
- D. If, in the future, the pole based utilities are relocated underground at this location, the operator of the wireless communication facility must abandon the facility and be responsible for the removal of all permanent structures and the restoration of the site as needed to re-establish the area consistent with the character of the surrounding natural landscape.
- E. If, as a result of future scientific studies and alterations of industry-wide standards resulting from those studies, substantial evidence is presented to Santa Cruz County that radio frequency transmissions may pose a hazard to human health and/or safety, the Santa Cruz County Planning Department shall set a public hearing and in its sole discretion, may revoke or modify the conditions of this permit.
- F. If future technological advances would allow for reduced visual impacts resulting from the proposed telecommunication facility, the operator of the wireless communication facility must make those modifications which would allow for reduced visual impact of the proposed facility as part of the normal replacement schedule. If, in the future, the facility is no longer needed, the operator of the wireless communication facility must abandon the facility and be responsible for the removal of all permanent structures and the restoration of the site as needed to re-establish the area consistent with the character of the surrounding natural landscape.
- V. As a condition of this development approval, the holder of this development approval ("Development Approval Holder"), is required to defend, indemnify, and hold harmless the COUNTY, its officers, employees, and agents, from and against any claim (including attorneys' fees), against the COUNTY, its officers, employees, and agents to attack, set aside, void, or annul this development approval of the COUNTY or any subsequent amendment of this development approval which is requested by the Development Approval Holder.
- A. COUNTY shall promptly notify the Development Approval Holder of any claim, action, or proceeding against which the COUNTY seeks to be defended,

indemnified, or held harmless. COUNTY shall cooperate fully in such defense. If COUNTY fails to notify the Development Approval Holder within sixty (60) days of any such claim, action, or proceeding, or fails to cooperate fully in the defense thereof, the Development Approval Holder shall not thereafter be responsible to defend, indemnify, or hold harmless the COUNTY if such failure to notify or cooperate was significantly prejudicial to the Development Approval Holder.

- B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:
1. COUNTY bears its own attorney's fees and costs; and
  2. COUNTY defends the action in good faith.
- C. Settlement. The Development Approval Holder shall not be required to pay or perform any settlement unless such Development Approval Holder has approved the settlement. When representing the County, the Development Approval Holder shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the County.
- D. Successors Bound. "Development Approval Holder" shall include the applicant and the successor(s) in interest, transferee(s), and assign(s) of the applicant.

---

Minor variations to this permit which do not affect the overall concept or density may be approved by the Planning Director at the request of the applicant or staff in accordance with Chapter 18.10 of the County Code.

**Please note: This permit expires three years from the effective date listed below unless a building permit (or permits) is obtained for the primary structure described in the development permit (does not include demolition, temporary power pole or other site preparation permits, or accessory structures unless these are the primary subject of the development permit). Failure to exercise the building permit and to complete all of the construction under the building permit, resulting in the expiration of the building permit, will void the development permit, unless there are special circumstances as determined by the Planning Director.**

Approval Date: \_\_\_\_\_

Effective Date: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

Application #: 131223  
APN: 051-091-03  
Owner: Pacific Gas & Electric Company

---

Wanda Williams  
Deputy Zoning Administrator

---

Sheila McDaniel  
Project Planner

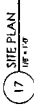
---

Appeals: Any property owner, or other person aggrieved, or any other person whose interests are adversely affected by any act or determination of the Zoning Administrator, may appeal the act or determination to the Planning Commission in accordance with chapter 18.10 of the Santa Cruz County Code.









PREPARED FOR  
**at&t**  
3400 Camino Ramon, SUITE 100  
San Ramon, California 94583

Vendor:

Consultant:

**Borges**  
ARCHITECTS  
1400 UNIVERSITY AVENUE  
SUITE 100  
SAN RAMON, CA 94583  
TEL: 925.376.1100  
WWW.BORGESARCHITECTS.COM

ALIAS: CC01373P  
PROJECT NO: 12091.3  
DRAWN BY: JWM  
CHECKED BY: A.O.L.

NO.	DATE	DESCRIPTION
1	07/29/13	ISSUE TO SUBMITTAL
2	07/16/13	ISSUE TO SUBMITTAL
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

License:

FOR A VARIATION OF THIS OR ANY OTHER CONTRACT, THE CLIENT SHALL SIGN AND DATE THE VARIATION. THE VARIATION SHALL BE ATTACHED TO THE ORIGINAL CONTRACT. THE VARIATION SHALL BE SIGNED BY THE CLIENT AND THE ARCHITECT.

Issued For:  
**07/29/13**  
100% 2D Submittal

THIS IS THE  
EQUIPMENT SHELTER  
LAYOUT WITH  
GENERATOR PLAN

SHEET NUMBER:  
**A-2**

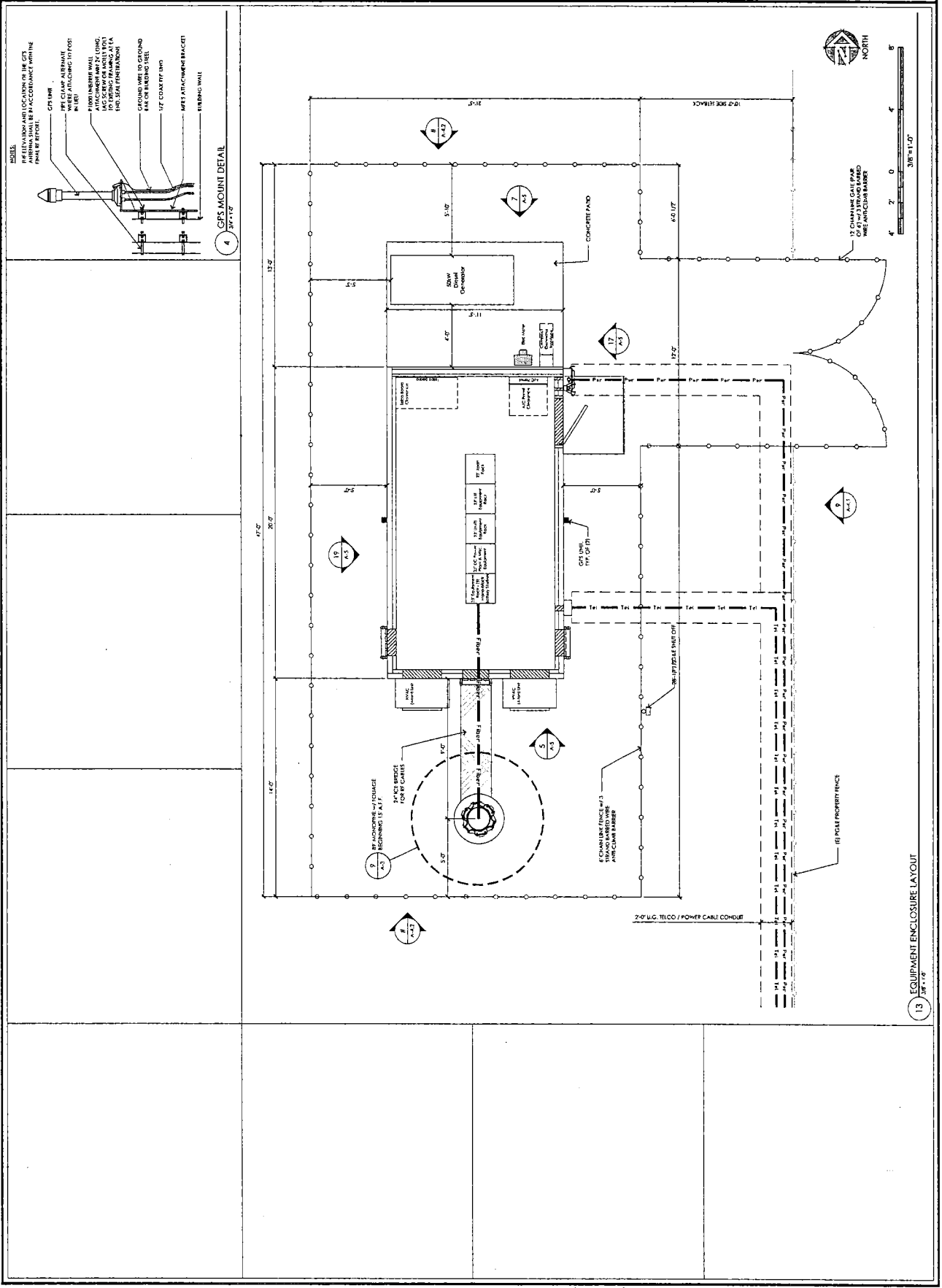


EXHIBIT D

[illegible]





PREPARED FOR  
**at&t**  
3400 Camino Ramon, #100  
San Ramon, California 94583

Vendor:

Consultant:

**Borges**  
ARCHITECT  
10000 N. 1st Street, Suite 100  
San Ramon, CA 94583  
Tel: (925) 391-1111  
Fax: (925) 391-1112  
www.borgesarchitect.com

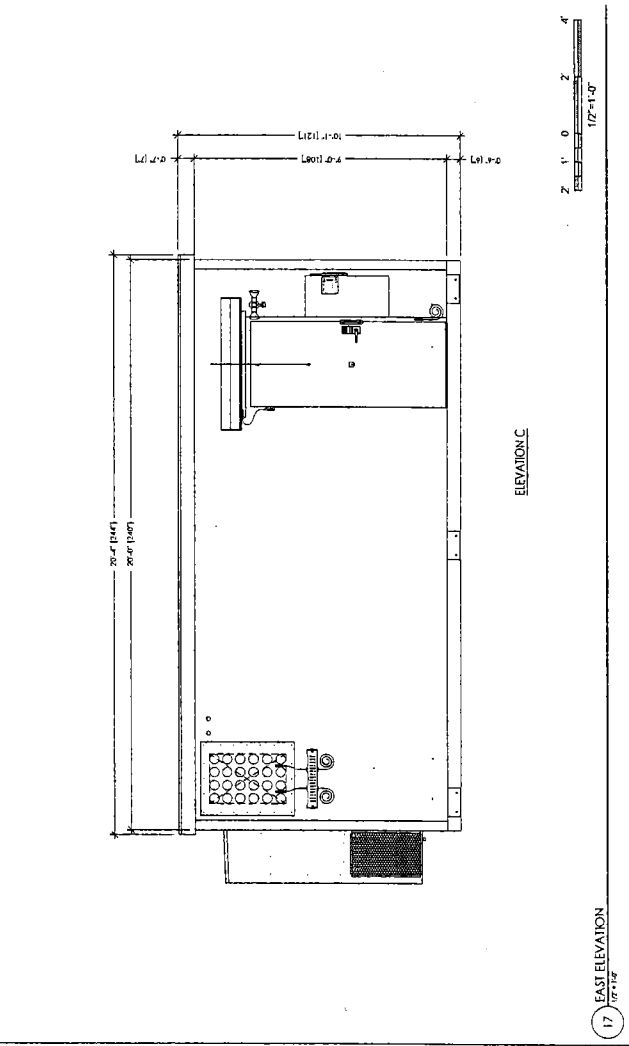
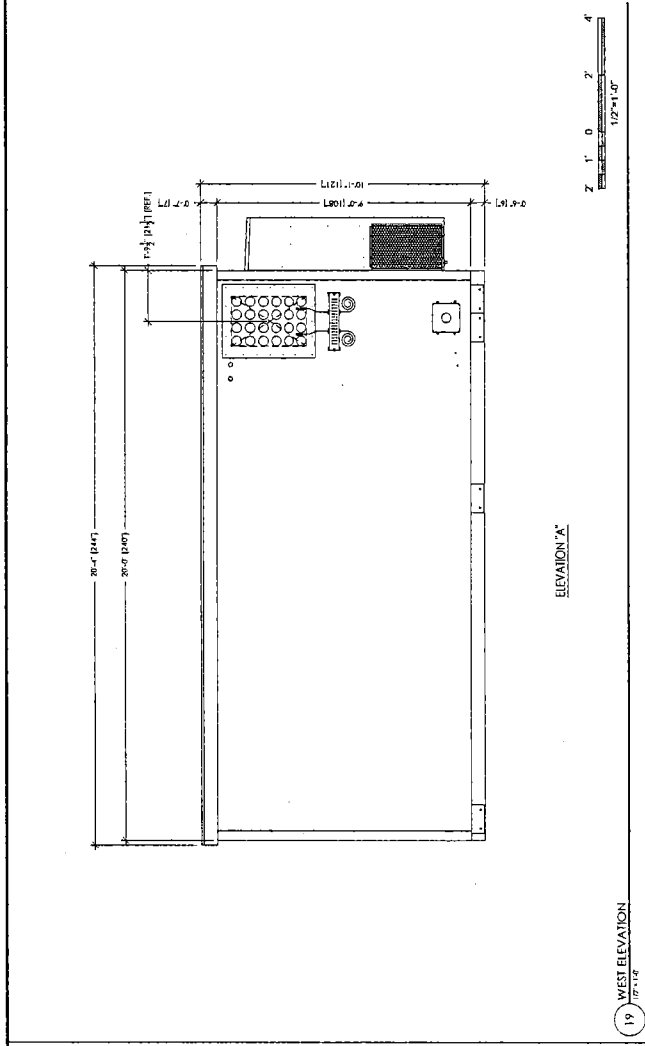
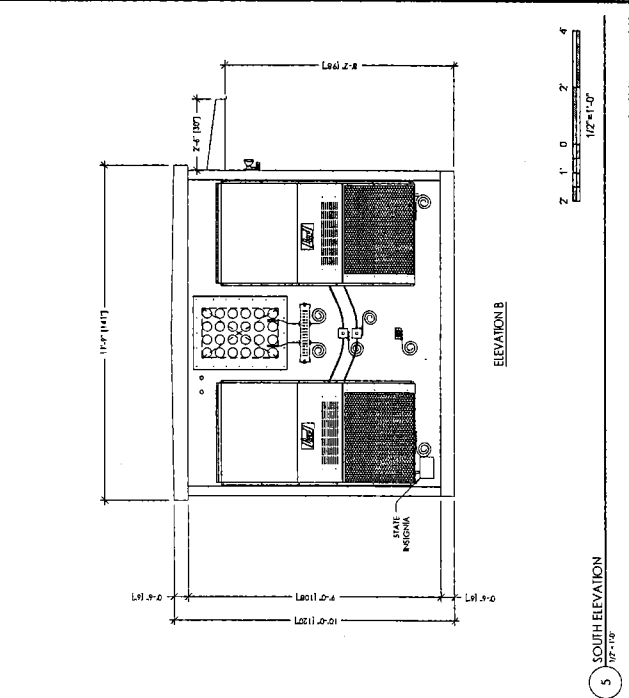
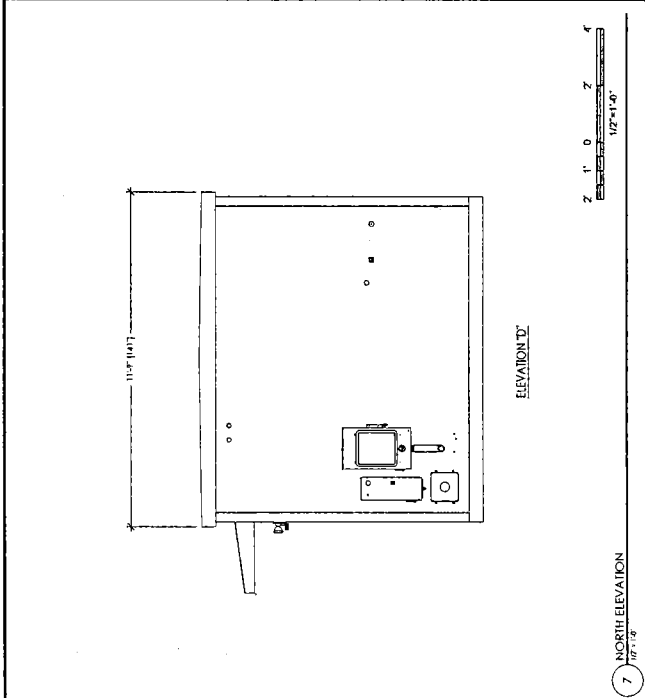
ALTERNATE NO: CC03/29  
PROJECT NO: 12081-3  
DRAWN BY: JVA  
CHECKED BY: A.O.L.

REV	DATE	DESCRIPTION
1	07/29/13	100% ZD SUBMITTAL
2	07/16/13	90% ZD SUBMITTAL

100% ZD SUBMITTAL  
100% ZD SUBMITTAL

07/29/13  
100% ZD SUBMITTAL

SHEET NAME:  
**A-5**





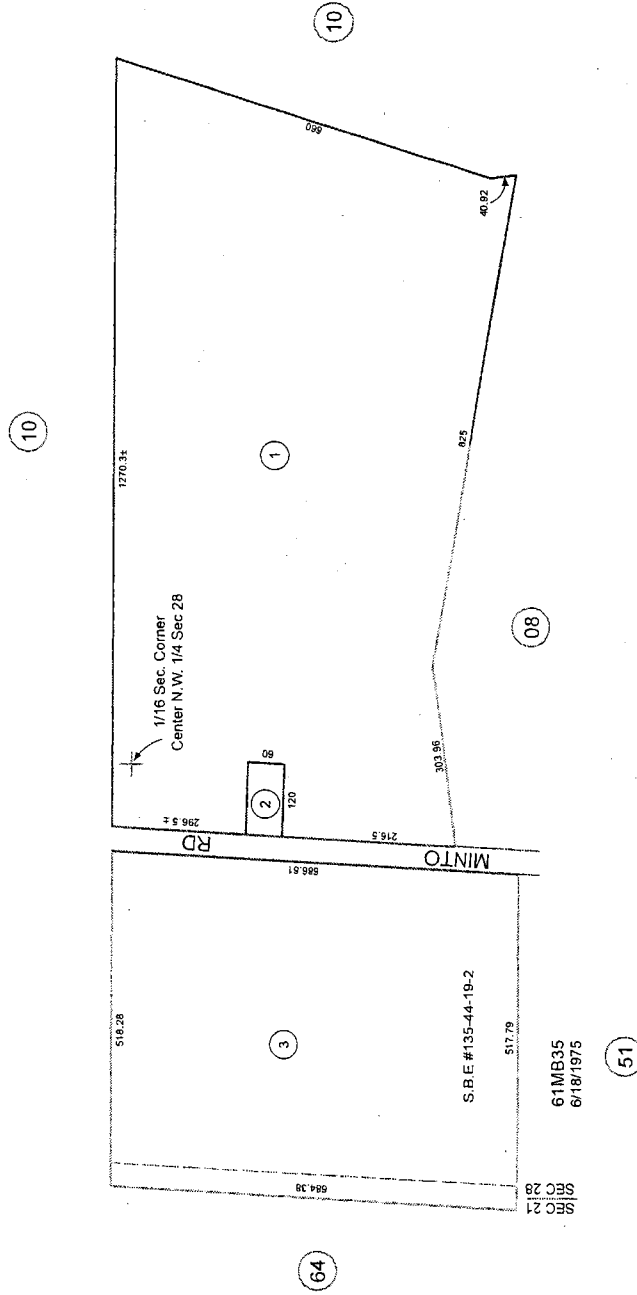
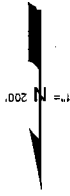
**FOR TAX PURPOSES ONLY**

THE ASSESSOR MAKES NO GUARANTEE AS TO MAP ACCURACY NOR ASSUMES ANY LIABILITY FOR OTHER USES. NOT TO BE REPRODUCED. ALL RIGHTS RESERVED.  
© COPYRIGHT SANTA CRUZ COUNTY ASSESSOR 1987

**POR RANCHO DE LOS CORRALITOS**  
N.W. 1/4 SEC. 28, T.11S., R.2E., M.D.B & M.

Tax Area Code  
69-258

51-09



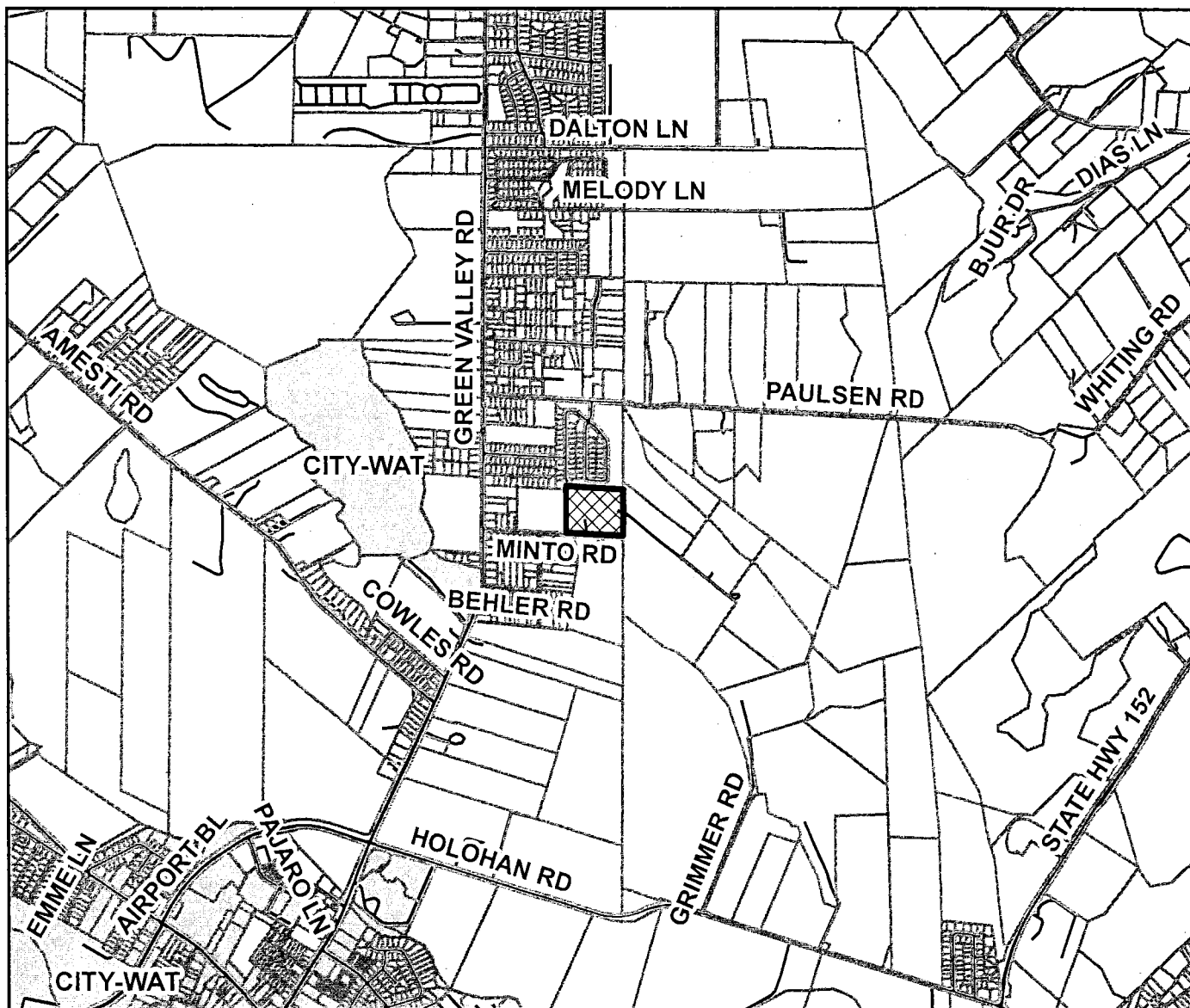
Electronically drawn 10/23/97 CB  
Rev 4/9/98 CB (Tax Consideration)  
Rev 10/2/99 CB (Rev of 4/9/98)  
Rev 6/6/01 mmm (changed page refs.)  
Rev 9/30/08 CB (Spatial Adjustment)

Note - Assessor's Parcel & Block  
Numbers Shown in Circles.






Assessor's Map No. 51-09  
County of Santa Cruz, Calif.  
Sept. 1966

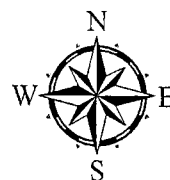


# Location Map



## LEGEND

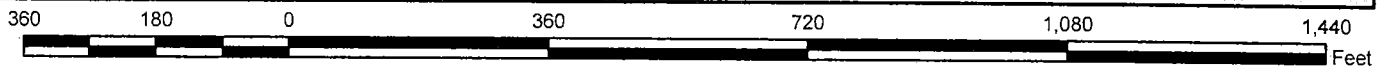
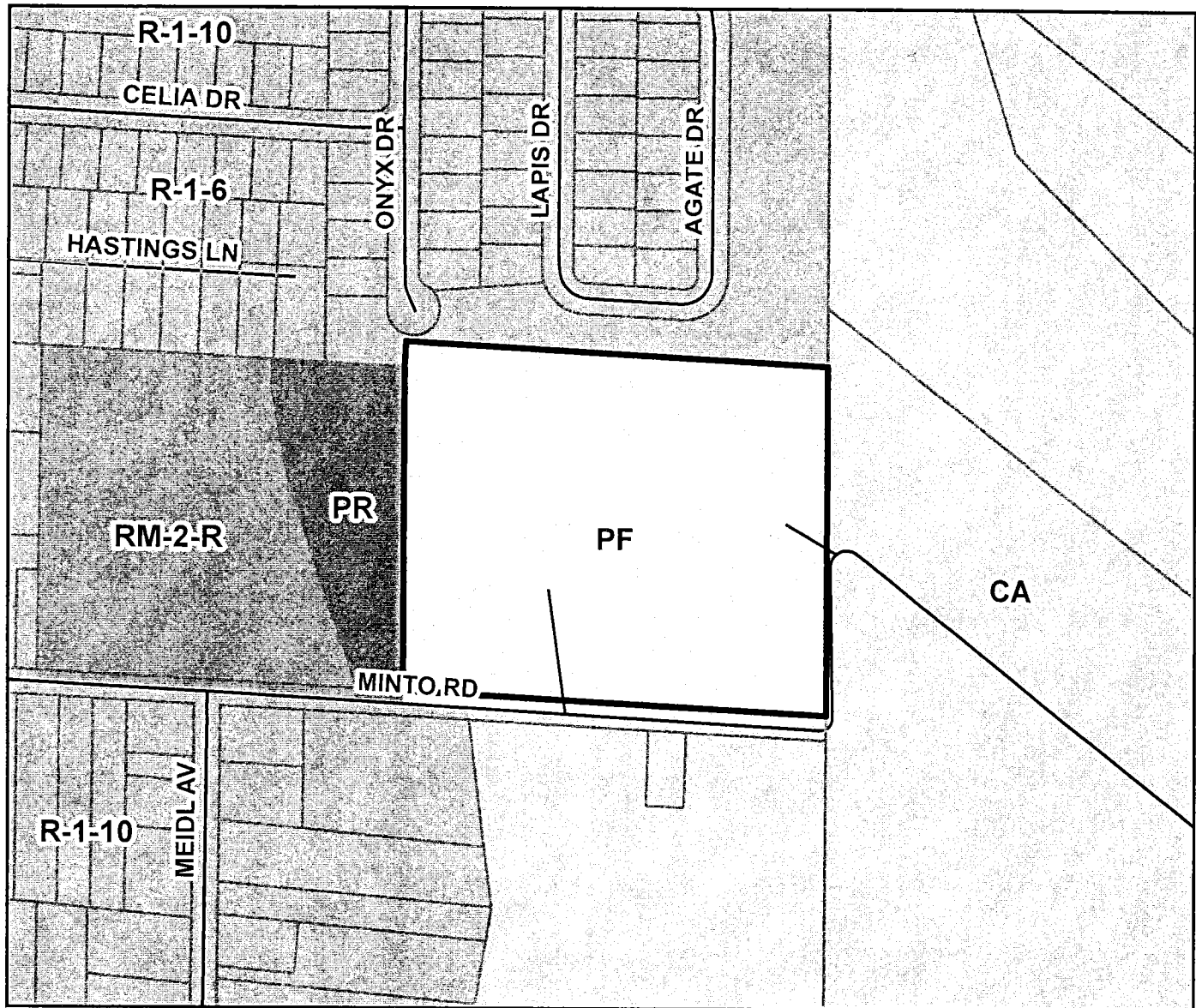
-  APN: 051-091-03
-  Assessors Parcels
-  Streets
-  State Highways
-  WATSONVILLE



Map Created by  
County of Santa Cruz  
Planning Department  
August 2013

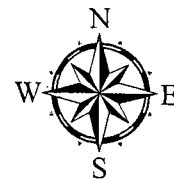


# Zoning Map



## LEGEND

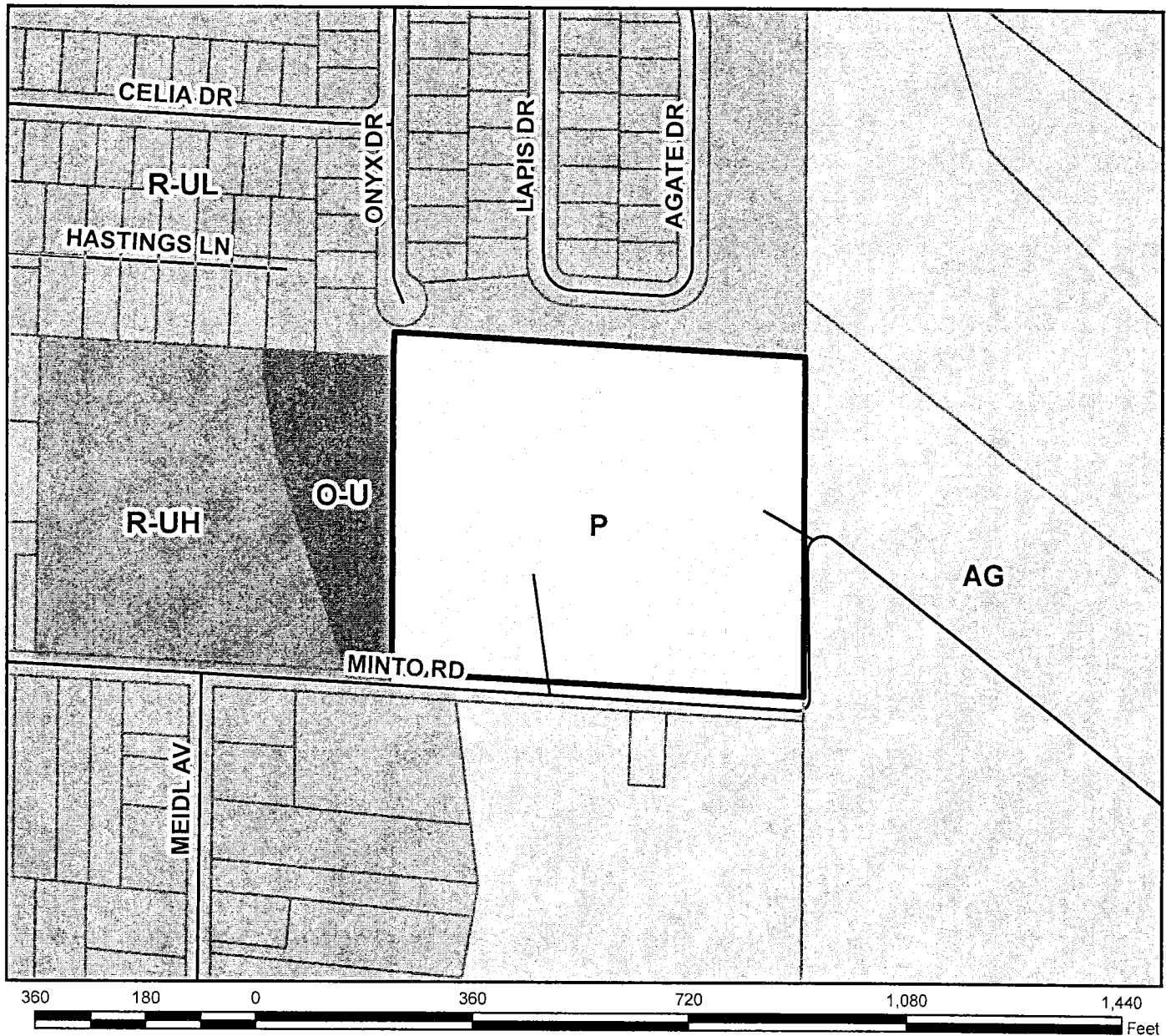
- APN: 051-091-03
- Assessors Parcels
- Streets
- PUBLIC FACILITY
- AGRICULTURE COMMERCIAL
- RESIDENTIAL-SINGLE FAMILY
- RESIDENTIAL-MULTI FAMILY
- PARK



Map Created by  
County of Santa Cruz  
Planning Department  
August 2013

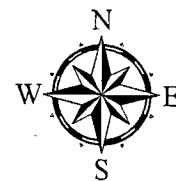


# General Plan Designation Map



## LEGEND

- APN: 051-091-03
- Assessors Parcels
- Streets
- Public Facilities
- Agriculture
- Residential - Urban Low Density
- Residential - Urban High Density
- Urban Open Space



Map Created by  
County of Santa Cruz  
Planning Department  
August 2013

**AT&T Mobility • Proposed Base Station (Site No. CCU3739)  
90 Minto Road • Watsonville, California**

**Statement of Hammett & Edison, Inc., Consulting Engineers**

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of AT&T Mobility, a personal wireless telecommunications carrier, to evaluate the base station (Site No. CCU3739) proposed to be located at 90 Minto Road in Watsonville, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

**Executive Summary**

AT&T proposes to install directional panel antennas on a tall steel pole to be located at 90 Minto Road in Watsonville. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

**Prevailing Exposure Standards**

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

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

**General Facility Requirements**

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

**AT&T Mobility • Proposed Base Station (Site No. CCU3739)**  
**90 Minto Road • Watsonville, California**

very little energy wasted toward the sky or the ground. This means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

**Computer Modeling Method**

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

**Site and Facility Description**

Based upon information provided by AT&T, including zoning drawings by Borges Architectural Group, Inc., dated June 24, 2013, it is proposed to install twelve Andrew Model SBNH-1D6565C directional panel antennas on a new 80-foot steel pole to be sited next to the PG&E substation located at 90 Minto Road in Watsonville. The antennas would be mounted with up to 4° downtilt at an effective height of about 80 feet above ground and would be oriented in groups of four at about 120° spacing, to provide service in all directions. The maximum effective radiated power in any direction would be 8,300 watts, representing simultaneous operation at 5,980 watts for PCS, 1,000 watts for cellular, and 1,320 watts for 700 MHz service.

Presently located on a PG&E lattice tower, about 250 feet to the northwest, are similar antennas for use by MetroPCS and T-Mobile. For the limited purpose of this study, the transmitting facilities of those carriers are assumed to be as follows:

Operator	Service	Maximum ERP	Antenna Model	Downtilt	Height
T-Mobile	AWS	3,300 watts	Ericsson AIR21	4°	84½ ft
	PCS	2,200			
MetroPCS	AWS	1,000	Kathrein 742-213	4	92
	PCS	2,000			

**Study Results**

For a person anywhere at ground, the maximum RF exposure level due to the proposed AT&T operation by itself is calculated to be 0.0022 mW/cm<sup>2</sup>, which is 0.37% of the applicable public exposure limit. The maximum calculated cumulative level at ground, for the simultaneous operation of all three carriers, is 0.70% of the public exposure limit. The maximum calculated cumulative level

**AT&T Mobility • Proposed Base Station (Site No. CCU3739)  
90 Minto Road • Watsonville, California**

at the second-floor elevation of any nearby building would be 0.92% of the public exposure limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operation.

**No Recommended Mitigation Measures**

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

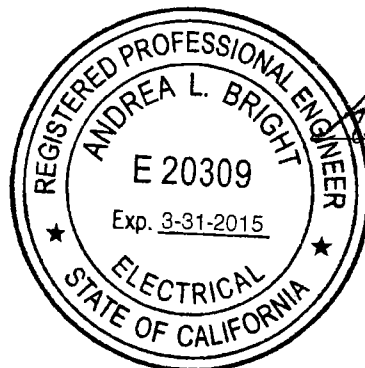
**Conclusion**

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the base station proposed by AT&T Mobility at 90 Minto Road in Watsonville, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations.

**Authorship**

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

October 16, 2013



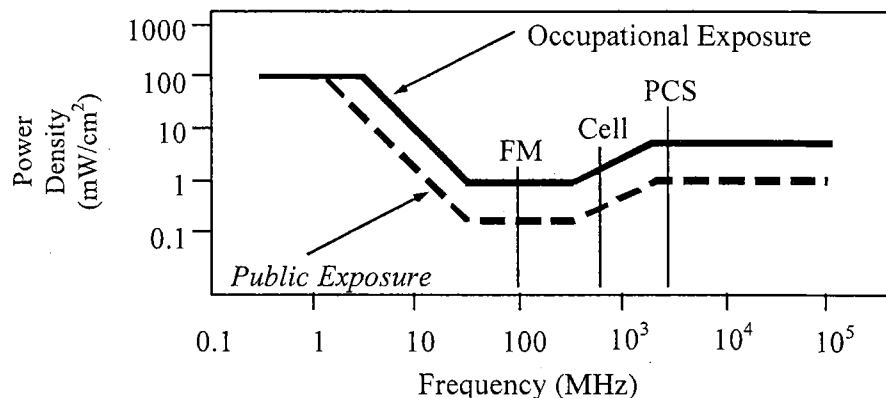
*Andrea L. Bright*  
Andrea L. Bright, P.E.  
707/996-5200

## FCC Radio Frequency Protection Guide

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

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

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



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



**HAMMETT & EDISON, INC.**  
CONSULTING ENGINEERS  
SAN FRANCISCO

FCC Guidelines  
Figure 1



## RFR.CALC™ Calculation Methodology

### Assessment by Calculation of Compliance with FCC Exposure Guidelines

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

#### Near Field.

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

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

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

where  $\theta_{BW}$  = half-power beamwidth of the antenna, in degrees, and

$P_{net}$  = net power input to the antenna, in watts,

$D$  = distance from antenna, in meters,

$h$  = aperture height of the antenna, in meters, and

$\eta$  = aperture efficiency (unitless, typically 0.5-0.8).

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

#### Far Field.

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

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

where ERP = total ERP (all polarizations), in kilowatts,

RFF = relative field factor at the direction to the actual point of calculation, and

$D$  = distance from the center of radiation to the point of calculation, in meters.

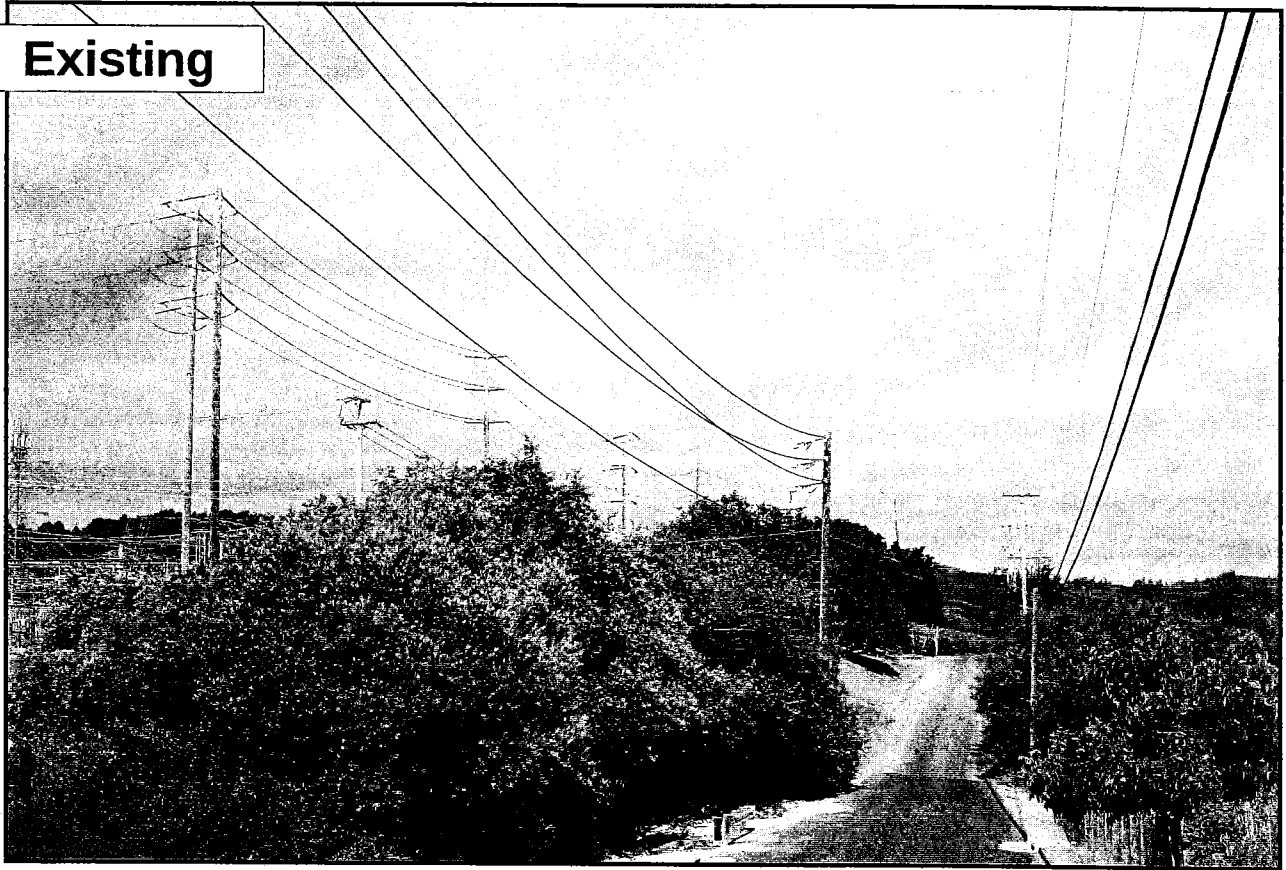
The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 ( $1.6 \times 1.6 = 2.56$ ). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired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



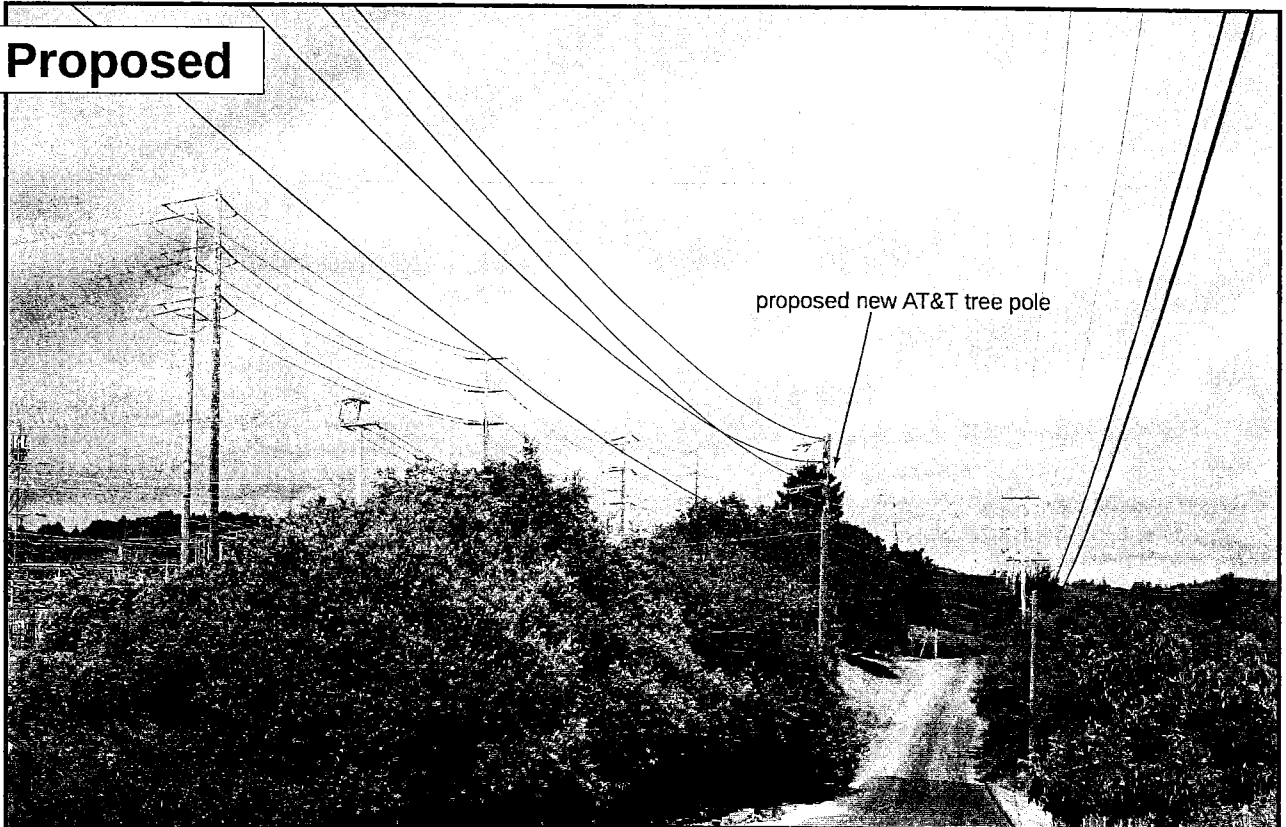
**HAMMETT & EDISON, INC.**  
CONSULTING ENGINEERS  
SAN FRANCISCO

Methodology  
Figure 2

## Existing



## Proposed



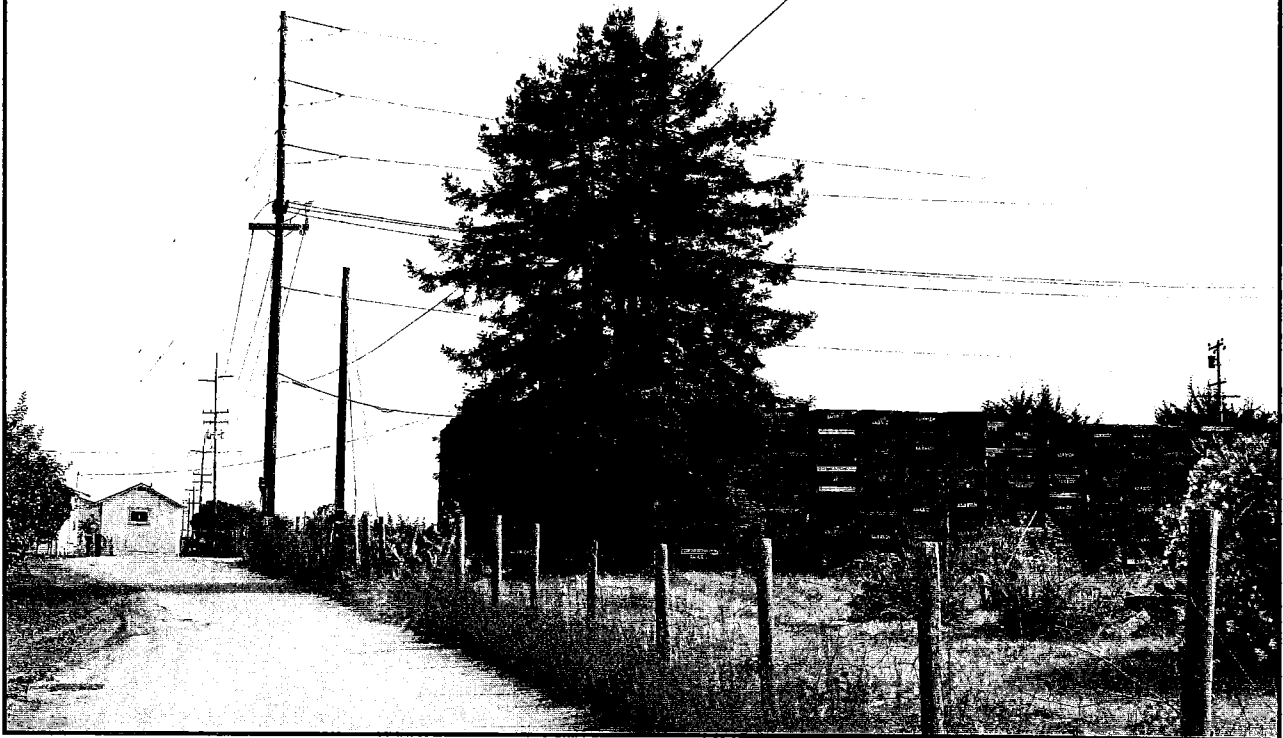
*Photo simulation as seen looking east from Minto Road*

Prepared by: **WW** 07.24.2013  
 WW Design & Consulting, Inc.  
 1854 Caroliers Court  
 Walnut Creek, CA 94598  
 info@photosims.com

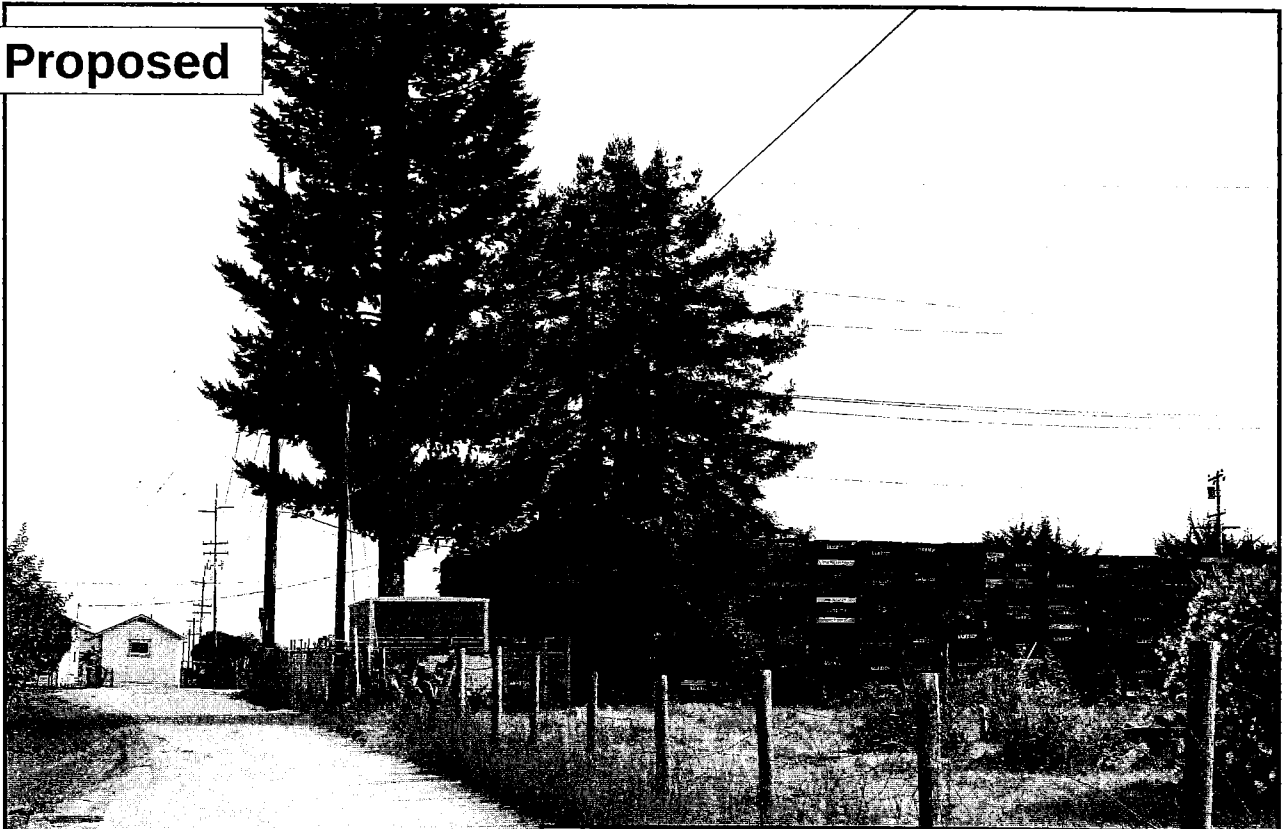


**CCU3739 PG&E Watsonville**  
 90 Minto Road, Watsonville, CA 95076

## Existing



## Proposed



*Photo simulation as seen looking south from Minto Road*

Prepared by: **WW** 07.24.2013  
 WW Design & Consulting, Inc.  
 1654 Candelerio Court  
 Walnut Creek, CA 94598  
 info@photosims.com



**CCU3739 PG&E Watsonville**  
 90 Minto Road, Watsonville, CA 95076