



Staff Report to the Zoning Administrator

Application Number: **141180**

Applicant: On Air LLC (for Verizon)
Owner: County of Santa Cruz
APN: No APN Spec

Agenda Date: 1/16/15
Agenda Item #: 2
Time: After 9:00 a.m.

Project Description: Proposal to install a Verizon microcell wireless communication facility on an existing utility pole located within a County right of way and ground mount equipment shelter across the street from 1400 Emeline Street (APN 060-311-20) between North Plymouth and Highway 17. Project includes installation of two, two foot by 10-inch by 6-inch thick panel antennas mounted 37.5 feet above the ground on the existing 72 foot tall utility pole with 4 Remote Radio Units (RRUs) mounted below and a 6 foot by 12 foot ground equipment cabinet on the opposite (east) side of North Plymouth Street. Requires a Commercial Development Permit.

Location: Project located within a County right of way (North Plymouth Street) approximately 350 feet south of the intersection of North Plymouth Street and the entrance to 1400 Emeline Street.

Supervisory District: 1st District (District Supervisor: Leopold)

Permits Required: Commercial Development Permit

Staff Recommendation:

- Determine that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- Approval of Application 141180, based on the attached findings and conditions.

Exhibits

- | | |
|---|---|
| A. Categorical Exemption (CEQA determination) | F. Project narrative |
| B. Findings | G. RF Report |
| C. Conditions | H. Assessor's, Location, Zoning and General Plan Maps |
| D. Project plans | I. Comments & Correspondence |
| E. Visual simulations | |

Parcel Information

Parcel Size:	N/A
Existing Land Use - Parcel:	Public Utility
Existing Land Use - Surrounding:	Public Facility
Project Access:	N. Plymouth Street
Planning Area:	Carbonera
Land Use Designation:	P-F (Public Facilities)
Zone District:	P (Public Facilities/Institutional Designation)
Coastal Zone:	<input type="checkbox"/> Inside <input checked="" type="checkbox"/> Outside
Appealable to Calif. Coastal Comm.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Environmental Information

Geologic Hazards:	Not mapped/no physical evidence on site
Soils:	N/A
Fire Hazard:	Not a mapped constraint
Slopes:	N/A
Env. Sen. Habitat:	Not mapped
Grading:	No grading proposed
Tree Removal:	No trees proposed to be removed
Scenic:	Not a mapped resource
Drainage:	Existing drainage adequate
Archeology:	Not mapped

Services Information

Urban/Rural Services Line:	<input checked="" type="checkbox"/> Inside <input type="checkbox"/> Outside
Water Supply:	N/A
Sewage Disposal:	N/A
Fire District:	Scotts Valley Fire
Drainage District:	Outside Flood Control District

Project Setting and Purpose

The project is located within a County right of way (North Plymouth Street) which runs parallel to Highway 17 on the west side of APN 060-311-20 (1400 Emeline Street). This portion of Plymouth is sparsely developed with the exception of existing poles on one of which the proposed wireless facility is to be mounted.

As seen from Highway 17, the existing utility pole serves as a connection point for the main electrical service running along the east side of Highway 17. This pole is also a point at which electric service crosses the highway and drops from the main line to the east side of N. Plymouth Street.

Residential development situated within the City of Santa Cruz is located approximately 350 feet

to the south of the proposed facility. Additionally, a few residentially zoned parcels exist within 300 feet of the proposed facility to the west across Highway 17. As proposed, the size of the pole mounted equipment and ground mount equipment shelter will be similar to other equipment that is mounted on utility poles within the right of way and will be camouflaged from the surrounding land uses.

The purpose of the new facility is to strengthen the signal in the area where Highway 1 and Highway 17 meet. According to the applicant, the overall signal strength now serving this area is weak and, given the proliferation of smartphones with numerous applications, the signal becomes even weaker and more ineffective when many such devices are in use.

Zoning & General Plan Consistency

The proposed development is located within a county right of way which is zoned PF (Public Facilities), a zoning designation which allows commercial uses. The proposed wireless communication facility is permitted use within the zone district and the zoning is consistent with the site's Public Facilities General Plan designation. The project is located outside of the Coastal Zone.

Highway 17 is a designated scenic road in the General Plan. Development visible from scenic roads is required to protect significant public vistas "by minimizing disruption of landform and aesthetic character caused by grading operations, timber harvests, utility wires and poles, signs, inappropriate landscaping and structure design." This proposal will place all new lines underground. The above ground development consists of 1) the equipment cabinet and meter cabinet on the ground on the east side of Plymouth Street in an area not visible from Highway 17 and 2) the two, two foot by 10-inch by 6-inch thick panel antennas and the four Remote Radio Units all mounted on an existing utility pole, on the west side of Plymouth Street, which is visible from Highway 17. Existing wires crossing over the highway attach to the pole about half way up that portion of the pole that rises above the level of the highway and the proposed equipment would be attached to the pole below those wires. Given the proposed location of the equipment below the wires and the relatively small size of the equipment on the existing pole, the visual impact will be minimal.

Design Review

The proposed wireless communication facility complies with the requirements of the County Design Review Ordinance, in that the proposed project will be of an appropriate size and design to blend with the type of equipment normally mounted on utility poles to reduce the visual impact of the proposed development on surrounding land uses and the natural landscape.

Environmental Review

The proposed development qualifies for a Class 3 Categorical Exemption under the California Environmental Quality Act and is not subject to further environmental review.

Conclusion

As proposed and conditioned, the project is consistent with all applicable codes and policies of

the Zoning Ordinance and General Plan/LCP. Please see Exhibit "B" ("Findings") for a complete listing of findings and evidence related to the above discussion.

Staff Recommendation

- Determine that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- **APPROVAL** of Application Number **141180**, 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

Report Prepared By: Nathan MacBeth
Santa Cruz County Planning Department
701 Ocean Street, 4th Floor
Santa Cruz CA 95060
Phone Number: (831) 454-3118
E-mail: nathan.macbeth@santacruzcounty.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: 141180

Assessor Parcel Number: No APN Spec

Project Location: Project located within County right of way (N. Plymouth Drive)

Project Description: Install a new microcell wireless communication facility on an existing PG&E utility pole and ground mounted equipment shelter within a County right of way.

Person or Agency Proposing Project: Jay Gruendle, On Air LLC (for Verizon)

Contact Phone Number: (707) 933-9633

- 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:

Installation of a wireless facility in an area designated for public utilities.

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

Nathan MacBeth, Project Planner

Date: _____

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 in which wireless communications facilities are allowed 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. Given its size and the distance to any adjacent non-right-of-way properties, the proposed wireless communication facility will not deprive adjacent properties or the neighborhood of light, air, or open space.

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 wireless communication facility 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 Facilities) zone district as the primary use will continue to be that of a public right of way containing public utilities.

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 General Plan Public Facilities (P-F) land use designation .

A specific plan has not been adopted for this portion of the County.

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 wireless communication facility is to be constructed on an existing PG&E utility pole located within a County right of way. Upon installation of the proposed wireless facility, the site will likely require periodic maintenance. The occasional maintenance is not expected to adversely impact existing roads or intersections in the surrounding area because there will be no permanent staff at the site and the occasional maintenance will be performed by one worker with a utility truck or van which can be parked in the existing turnout immediately north of the equipment cabinet and meter cabinet.

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 facility is a common and typical wireless utility facility that will be located on an existing utility pole on an approximately 500 foot long portion of Plymouth Street where there are no land uses other than the street and existing utility poles and lines..

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 wireless communication facility will be of an appropriate scale and type of design consistent with utility pole mounted equipment found within rights of way and will not reduce or visually impact available open space in the surrounding area.

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 though the proposed facility is located in within a mapped scenic corridor (Highway 17) the proposed facility will be visually compatible with the type of equipment normally mounted on utility poles. Development visible from scenic roads is required to protect significant public vistas "by minimizing disruption of landform and aesthetic character caused by grading operations, timber harvests, utility wires and poles, signs, inappropriate landscaping and structure design." This proposal will place all new lines underground. The above ground development consists of 1) the equipment cabinet and meter cabinet on the ground on the east side of Plymouth Street in an area not visible from Highway 17 and 2) the two, two foot by 10-inch by 6-inch thick panel antennas and the four Remote Radio Units all mounted on an existing utility pole, on the west side of Plymouth Street, which is visible from Highway 17. Existing wires crossing over the highway attach to the pole about half way up that portion of the pole that rises above the level of the highway and the proposed equipment would be attached to the pole below those wires. Based on the location of the existing utility pole, visual simulations provided by the applicant, and existing vegetation, no impact to visual resources is expected. Based on visual simulations provided by the applicant, the proposed location of the equipment below the wires on the existing utility pole and the relatively small size of the equipment on the existing pole, and existing vegetation, the visual impact is expected to be minimal.

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 wireless facility is to be co-located on an existing utility pole located within a County right of way. The site of the proposed development is zoned PF (Public Facilities), which allows for wireless facilities. An alternatives analysis is not required due to the proposed co-location and the site not being located within a restricted or prohibited zone district as defined in the Wireless Communications Facility Ordinance.

Typically, propagation mapping is used to determine various gaps in a specific wireless carrier's coverage. In that the target area for increased coverage is so specific (intersection of Highway 1 and Highway 17) and the objective for the proposed site is to boost capacity rather than provide coverage, propagation mapping is not necessary to justify the new facility.

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 proposed wireless facility will be co-located on an existing utility pole located within a County right of way (North Plymouth Street) and is 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 location of the proposed wireless facility.

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 wireless communications facility will be located approximately 38 feet up an existing 72 foot tall utility pole and this elevation is too low to interfere with an 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 proposed wireless facility will operate at 29.7% of the general Maximum Exposure Limit established by the FCC. As conditioned, the project shall comply with all California PUC standards and requirements.

CONDITIONS OF APPROVAL

Exhibit D: Project Plans 7 sheets, prepared by One Design Group Inc, Dated 10/21/14

- I. This permit authorizes the installation of a microcell wireless communication facility on an existing PG&E utility pole and ground mounted equipment shelter within an county right of way. 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.
 - C. Obtain an Encroachment Permit from the Department of Public Works for all work performed in the County road right-of-way.
 - D. To ensure that the storage of hazardous materials on the site do 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.
 - E. 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. Identify color and finish of exterior materials for Planning Department approval. All colors and materials must be non-reflective and blend with the existing infrastructure and/ or provide camouflage. All color boards must be no larger than 8.5"w x 11"h x 1/16"
 2. Grading, drainage, and erosion control plans.
 3. All new electric and telecommunications lines shall be placed underground.

4. Details showing compliance with fire department requirements, including all requirements of the Urban Wildland Intermix Code, if applicable.
 - B. 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. To guarantee that the camouflaged tower remains in good visual condition and to ensure the continued provision of mitigation of the visual impact of the wireless communications facility, the applicant shall submit a maintenance program prior to building permit issuance which includes the following:
 1. A signed contract for maintenance with the company that provides the exterior finish and camouflage materials, for annual visual inspection and follow up repair, painting, and resurfacing as necessary.
 - D. Submit four copies of the approved Discretionary Permit with the Conditions of Approval attached. The Conditions of Approval shall be recorded prior to submittal, if applicable.
 - E. Meet all requirements of and pay drainage fees to the County Department of Public Works, Drainage. Drainage fees will be assessed on the net increase in impervious area.
 - F. Obtain an Environmental Health Clearance for this project from the County Department of Environmental Health Services.
- 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 Hazardous Materials Management Plan, if required, shall be approved by the County Department of Environmental Health Services.
 - D. 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 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.
- C. The use of temporary generators to power the wireless communication facility are not allowed.
- D. All noise generated from the approved use shall be contained on the property.
- E. 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 shall be installed as necessary to blend the wireless communication facility with the existing utilities infrastructure.
- F. The existing vegetative screening of the project site and facilities must be maintained throughout the duration of the approved use. Tree removals or excessive pruning which reduce the visual screening of the project site are not allowed. If visual screening is reduced due to natural causes, replacement trees will be required which provide adequate visual screening of the project site and facilities.
- G. 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.
- H. 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.

- I. 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.
- J. 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.
- K. Any modification in the type of equipment shall be reviewed and acted on by the Planning Department staff. The County may deny the modification or amend the approved conditions at that time, or the Planning Director may refer it for public hearing before the Zoning Administrator.
- L. The equipment cabinet area must be locked at all times except when authorized personnel are present. The antennas must not be accessible to the public.
- M. All site and security lighting shall be directed onto the lease site and away from adjacent properties. Light sources shall not be visible from adjacent properties. Building and security lighting shall be integrated into the building design and shall be operated with a manual on/off switch. The site shall be unlit except when authorized personnel are present at night.
- N. Transfer of Ownership: In the event that the original permittee sells its interest in the permitted wireless communications facility, the succeeding carrier shall assume all responsibilities concerning the project and shall be held responsible to the County for maintaining consistency with all project conditions of approval, including proof of liability insurance. Within 30-days of a transfer of ownership, the succeeding carrier shall provide a new contact name to the Planning Department.
- 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.
- E. Within 30 days of the issuance of this development approval, the Development Approval Holder shall record in the office of the Santa Cruz County Recorder an agreement which incorporates the provisions of this condition, or this development approval shall become null and void.

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: _____

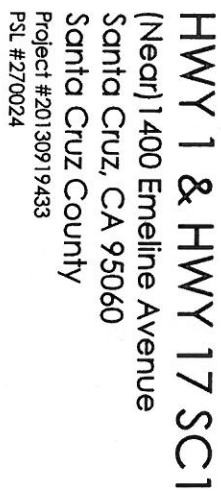
Effective Date: _____

Expiration Date: _____

Wanda Williams
Deputy Zoning Administrator

Nathan MacBeth
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.



VICINITY MAP

PROJECT TEAM

PROJECT DESCRIPTION

THIS IS AN UNMANNED TELECOMMUNICATIONS FACILITY FOR THE VERIZON NETWORK CONSISTING OF THE INSTALLATION AND OPERATION OF ANTENNAS AND ASSOCIATED EQUIPMENT.

1. INSTALL NEW 12' PANEL ANTENNAS ON POLE STANDOFF BRACKET
2. INSTALL NEW 41' RUSTS ON POLE STANDOFF BRACKET BELOW ANTENNAS
3. INSTALL NEW SMALL CELL POWER CABINET AND PEDestal METER ON CONC. SUBS BENEATH CELL AREA

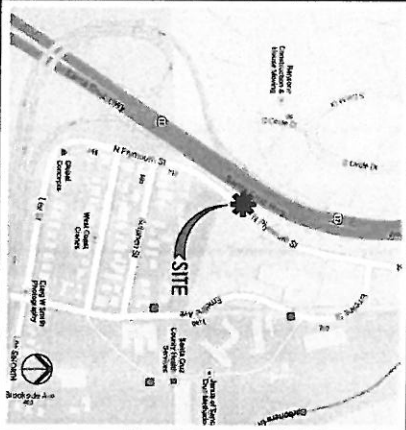
DRAWING INDEX

SHEET NO.:	SHEET TITLE
I-1	TITLE SHEET
C-1	SITE SURVEY
A-1	OVERALL SITE PLAN
A-2	ENLARGED SITE PLANS
A-3	ELEVATIONS
A-4	ELEVATIONS
A-5	EQUIPMENT SPECIFICATIONS

APPROVALS

2013 CALIFORNIA BUILDING CODE, TITLE 24 PART 2
2013 CALIFORNIA ADOPTED MECHANICAL CODE, TITLE 24 PART 1
2013 CALIFORNIA ELECTRICAL CODE, TITLE 24 PART 1
2013 CALIFORNIA FIRE ALARM CODE, TITLE 24 PART 4
2013 CALIFORNIA PLUMBING CODE, TITLE 24 PART 3
2013 CALIFORNIA BERRY CODE, TITLE 24 PART 6
2013 CALIFORNIA FIRE CODE, TITLE 24 PART 7
ASURUM-222C
2013 NFPA 101, LIFE SAFETY CODE
2013 NFPA 72, NATIONAL FIRE ALARM CODE
2013 NFPA 13, FIRE PROTECTION CODE
CITY/COUNTY ORDINANCES

DRIVING DIRECTIONS

[illegible]

HANDICAP REQUIREMENTS

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED IN ACCORDANCE WITH CALIFORNIA ADMINISTRATIVE STATE CODE PART 2, TITLE 24, CHAPTER 11B, SECTION 110318.



**UNDERGROUND
SERVICE ALERT
CALL TOLL FREE
1-800-327-2600**

ADMINISTRATIVE REQUIREMENTS

CONTRACTOR SHALL VERIFY ALL PLANS & [E] DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME IF USING 11"x17" PLOT. DRAWINGS WILL BE HALF SCALE



Verizon Wireless
2785 Michelson Drive
Suite 9
Walnut Creek, CA 94598

Client:

Vernie Design Group, Inc.
5100 Clayton Rd. B-1
Ste. 354
Concord, Ca 94521

100% Zoning Drawings

HWY 1 & HWY 17 SC1
(Near) 1400 Emeline Avenue
Santa Cruz, CA 95060
Santa Cruz County
PCL #270024

Sito

It is a violation of law for any person, unless they are acting under the direction of a licensed Professional Architect/Engineer, to offer this document.



Rev.	Date	Description
01	01/14/14	Issued Depts 50%
02	02/19/14	Issued Depts 100%
03	10/21/14	Issued Depts 100%

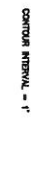
Date: 10/21/14 Job No.:
Scder: ASSHOWN CAD File:
Designed by: JS Checked by: R

GENERAL NOTES
LEGEND
ABBREVIATIONS

Sheet 1

Sheet No. : T-1

© V-One Design Group, Inc. 2014



Curtis C. Surveying | AZ 52345 | CA 874 | NV 77346
 602.313.5590 | curt@curtissurveying.com | www.curtissurveying.com

Curtis C. Surveying | AZ 52345 | CA 8714 | NV 29714 | UT 7730625
916.213.5510 | curt@curtissurveying.com | www.curtissurveying.com

VERIZON WIRELESS
2785 MITCHELL DRIVE, BLDG 9
WALNUT CREEK, CA. 94598

PLS 270024
HWY 1 & HWY 17 SC1
NEAR 1400 EMELINEAVE.
SANTA CRUZ, CA 95060

DRAWN: DATE: 01/08/14
JOB NO. 13029
SHEET NO.

1

Client: _____



na Design Group Inc.

Y-one Design Group, Inc.
5100 Clayton Rd. B-1
Ste. 354
Concord, Ca 94521

Project Architect:

100% Zoning Drawings

Drawing Phase:

HWY 1 & HWY 17 SCI
(Necol) 1400 Emefine Avenue
Santa Cruz, CA 95060
Santa Cruz County
PSL #270024

Site:

Professional Sect.

It is a violation of law for any person, unless they are acting under the direction of a licensed Professional Architect/Engineer, to offer this document.

ON AIR

 Medium Size Acquisition &
 Construction Management
 445 Park St., Suite 300, 171
 Marina, CA 94701
 Phone: 415/774-4411
 Fax: 415/774-7000

Rev.	Date	Description
01	01/16/14	Zoning Depts 90%
02	02/12/14	Zoning Depts 100%
03	10/21/14	Zoning Depts 100%

Project No.:

Date: 10/21/14 Job No.:

Scale: AS SHOWN **CAD File:**

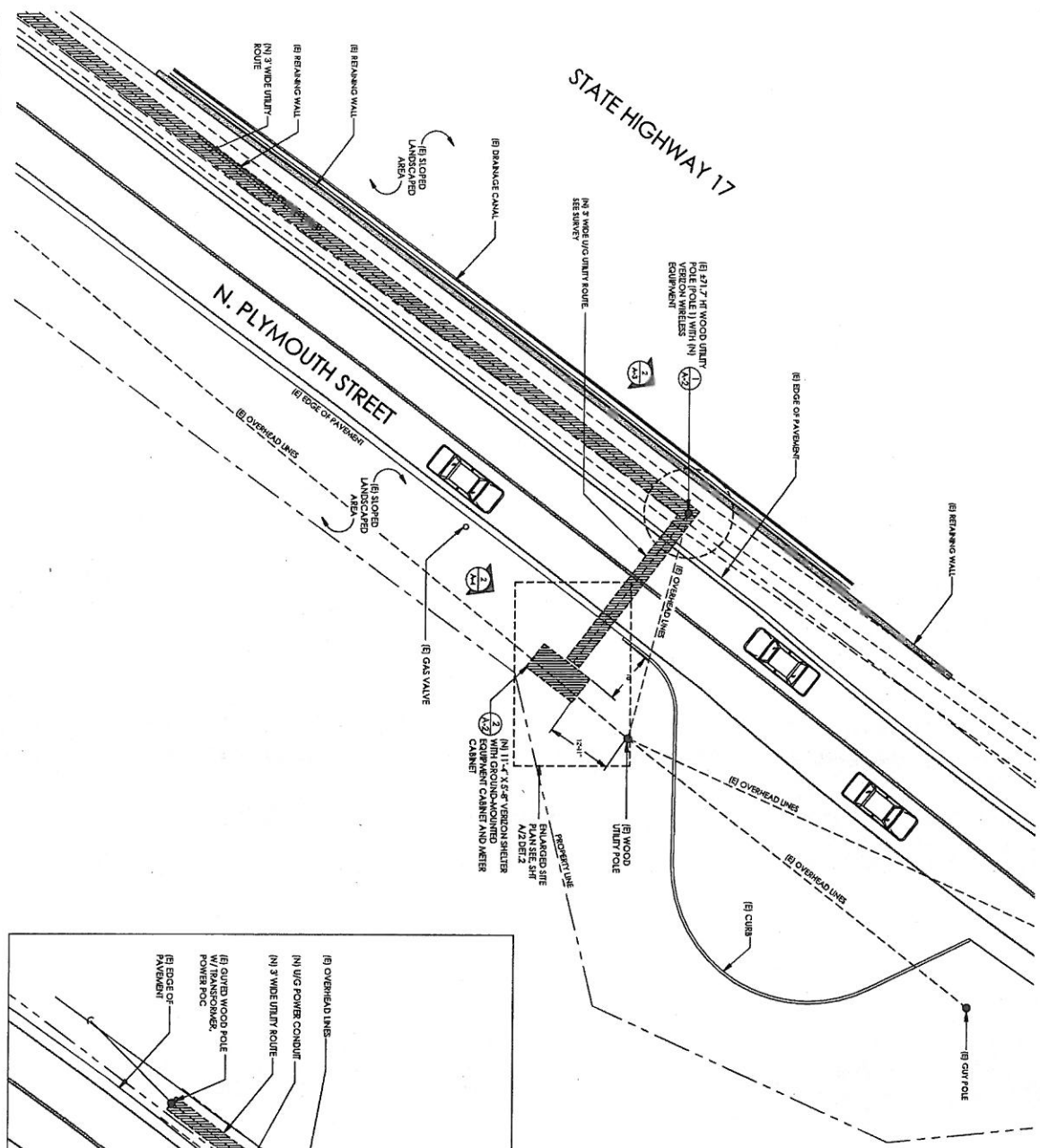
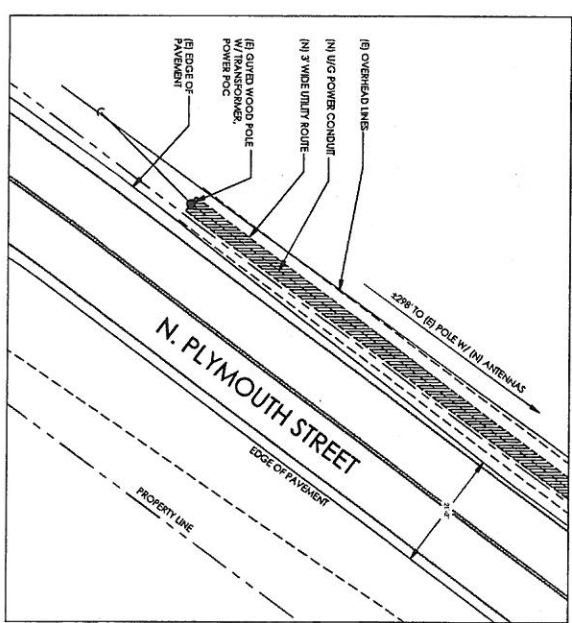
Designed By: JS Checked By: RS

OVERALL SITE
PLAN

Sheet Title:

1-A-1

© V-One Design Group, Inc. 2014

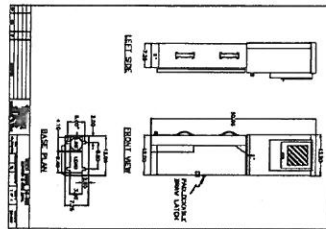


SEE PLAN B FOR UTILITY
POLE POWER POC

OVERALL SITE PLAN



© 2014 Core Design Group, Inc. 2014



PEDESTAL ELECTRIC METER

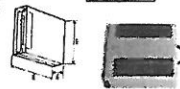
NEW GENERATION RADIO

Use to determine dimensions and weight of equipment.

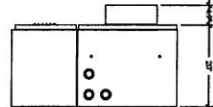
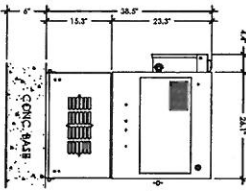
Preliminary Dimensions / Weight			
Product	Height (mm)	Depth (mm)	Weight (kg)
RUU511	445	445	25
RUU511	445	445	25

RUU511 Dimensions for comparison:

RUU511 weight = 25 kg



RUU UNIT

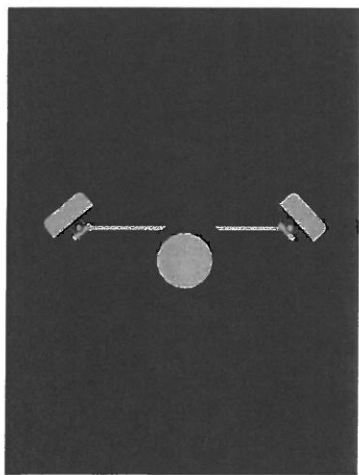
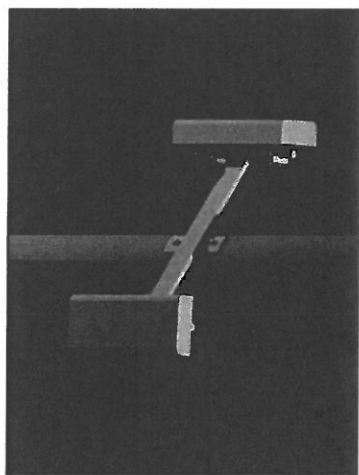
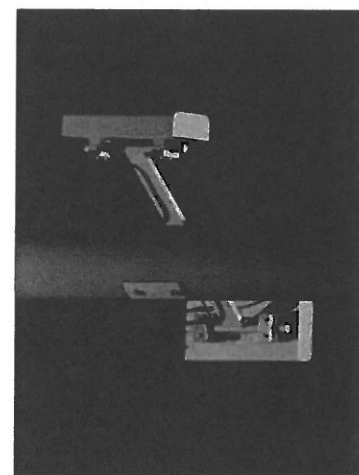


Charles CUBE-RL

- Wall/Pole/Pad Mount
- Equipment Compartment
 - 7 or 12 RU Configurations
 - Integrated power is optional
 - AC Load Center, GFI
 - Pad Lockable Door Latch
 - 550W RX
- Battery Compartment
 - 100AH VRLA or Ni-Cd
- Overall Dimensions
 - 39" H x 26" W x 20" D for 12 RU Configuration
- Cable Ingress/Egress
 - 1.75" / 2.5" Knockouts on side and bottom
- GR-487 Compliant



GROUND-MOUNTED SMALL CELL CABINET



ANTENNA MOUNTING BRACKET

EQUIPMENT SPECIFICATIONS

Verizon Wireless
 Verizon Wireless
 2735 West 9th Drive
 Walnut Creek, CA 94598

The Design Group Inc.
 The Design Group Inc.
 5100 Clayton Rd. #1
 Ste. 304
 Concord, CA 94521

Project Architect:

100% Zoning Drawings

Drawing Frame:

HWY 1 & HWY 17 SC1
 (Nasaj) 400 Embarcadero Avenue
 Santa Cruz, CA 95060
 Santa Cruz County
 Tel: 837-0051

Site:

Professional Seal:
 It is a violation of law for any person, other than the professional architect/engineer, to alter this document.

ON AIR
 100% Zoning Drawings
 100% Zoning Drawings
 100% Zoning Drawings

Rev.	Date	Description
01	10/27/14	Issued Draw 70%
02	10/27/14	Issued Draw 100%
03	10/27/14	Issued Draw 100%

Project No.:

Date: 10/27/14

Scale: AS SHOWN

Designed by: JS

Checked by: JS

Equipment Specifications

Sheet Title:

Sheet No.:

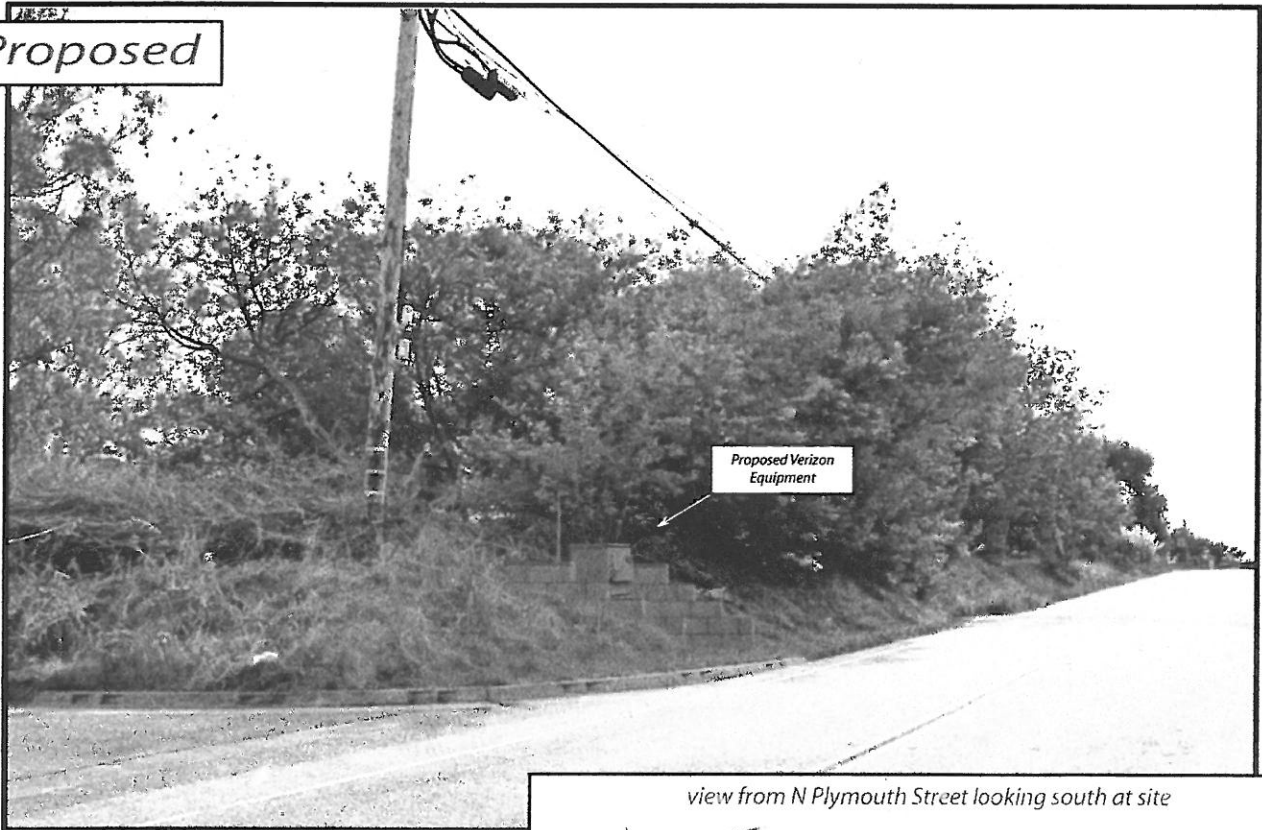
A-5

© The Design Group Inc. 2014

Existing



Proposed

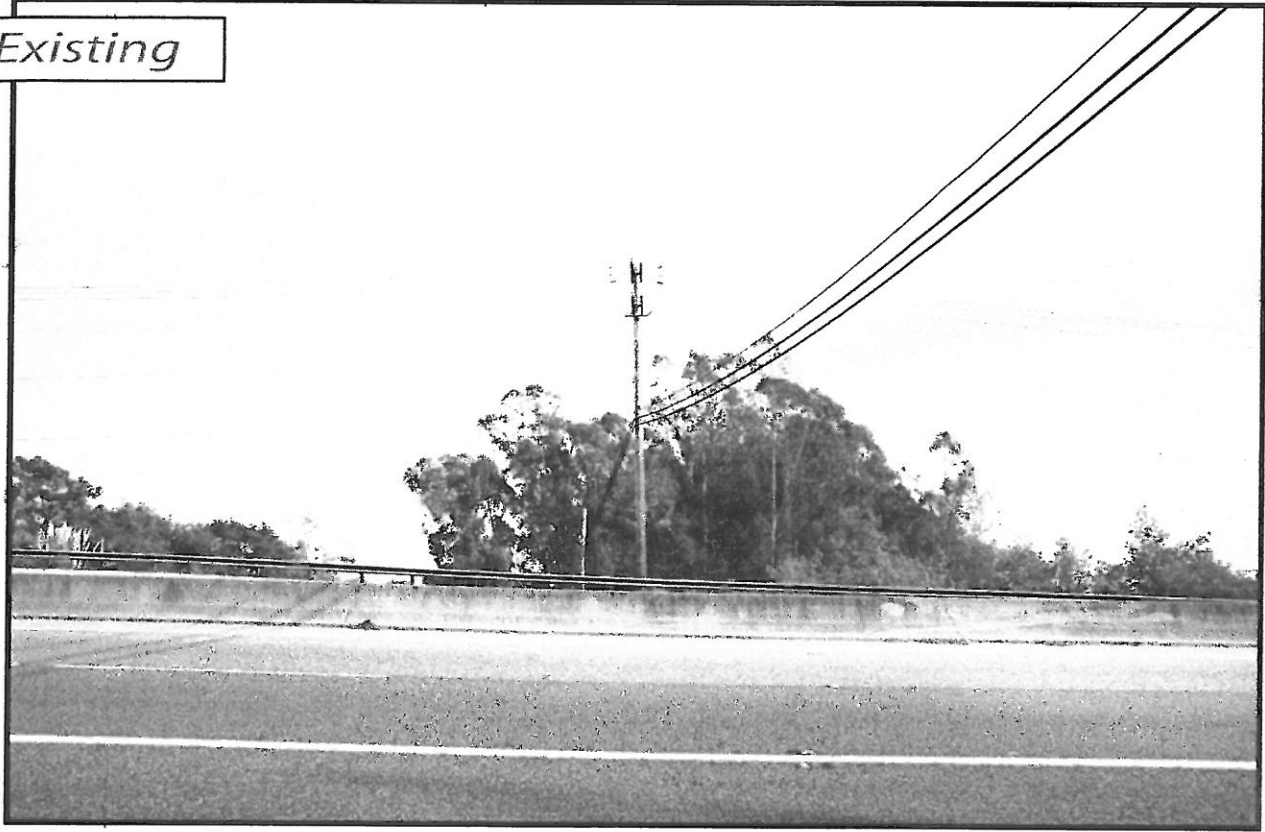


view from N Plymouth Street looking south at site



270024 Hwy1 & Hwy 17 SC1
1400 Emeline Avenue, Santa Cruz, CA

Existing



Proposed



view from Hwy 17 looking east at site

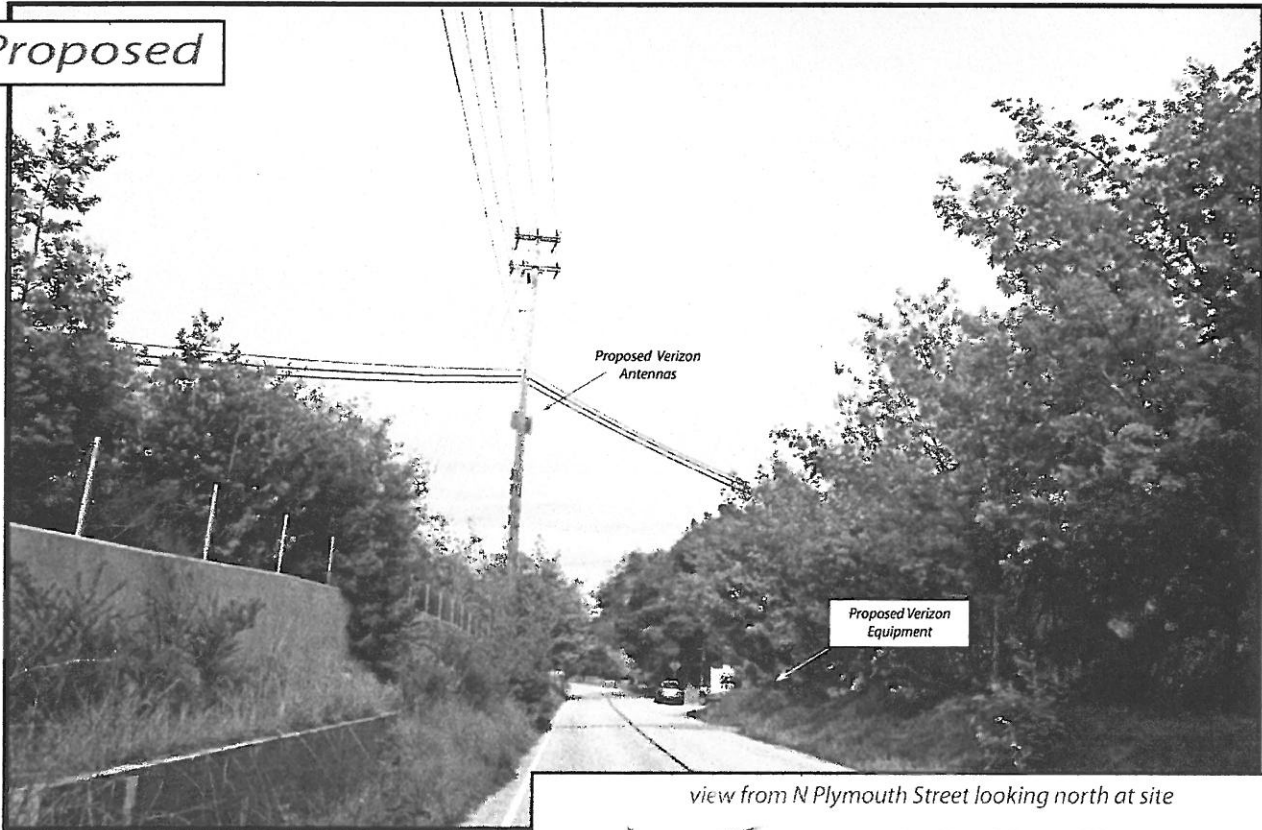


270024 Hwy1 & Hwy 17 SC1
1400 Emeline Avenue, Santa Cruz, CA

Existing



Proposed



view from N Plymouth Street looking north at site



270024 Hwy1 & Hwy 17 SC1
1400 Emeline Avenue, Santa Cruz, CA

PROJECT DESCRIPTION

Verizon Wireless "Hwy 1-Hwy 17"

Background Information

A new Verizon Wireless ("VZW") small cell facility is required to serve the general area where Highway 17 and Highway 1 meet. The geographic range for this facility is extremely small and not meant to cover a large area. Vehicular traffic along this corridor makes it a critical location for capacity offload.

The nearest Verizon Wireless macro facilities are:

1. "Delaveaga" (1.51 miles east)
2. "Harvey West" (0.77 miles southwest)
3. "Capitola Road & Soquel" (1.01 miles south)
4. "Brookdale" (1.00 mile north)

Small Cell Technology

This proposed facility is considered a "small cell" or microcell facility. Most jurisdictions are familiar with macro (or major) facilities, which can include as many as twelve antennas on a pole as tall as 150 feet. Macro facilities are meant to cover large geographic areas and are more appropriately sited in rural locations.

However, with the proliferation of smartphones and the many features they provide (web browsing, music and video streaming, messaging, email etc.), it is now important for wireless carriers to address this need for more network capacity. This is achieved by building smaller facilities (both in height and equipment) near areas of high demand, like shopping malls, music venues and in this case, along busier stretches of freeway.

Coverage Objective

Historically, we've been able to justify the need for new facilities with colorful maps indicating gaps in coverage. In this case, such a visual representation is not available. Small cells are capacity driven. They aren't meant to hand off to other

facilities. Instead, they are meant to reach a very specific target. The overall signal strength currently serving this particular area where Highway 17 and Highway 1 meet is weak at best. Could you make a call and send an email from the resort right now? Yes. But when multiple users start making calls, checking emails, posting to Facebook and browsing the web, the signal strength becomes that much weaker and ineffective. This small cell facility will provide a much-needed increase in coverage and capacity.

Alternatives Considered

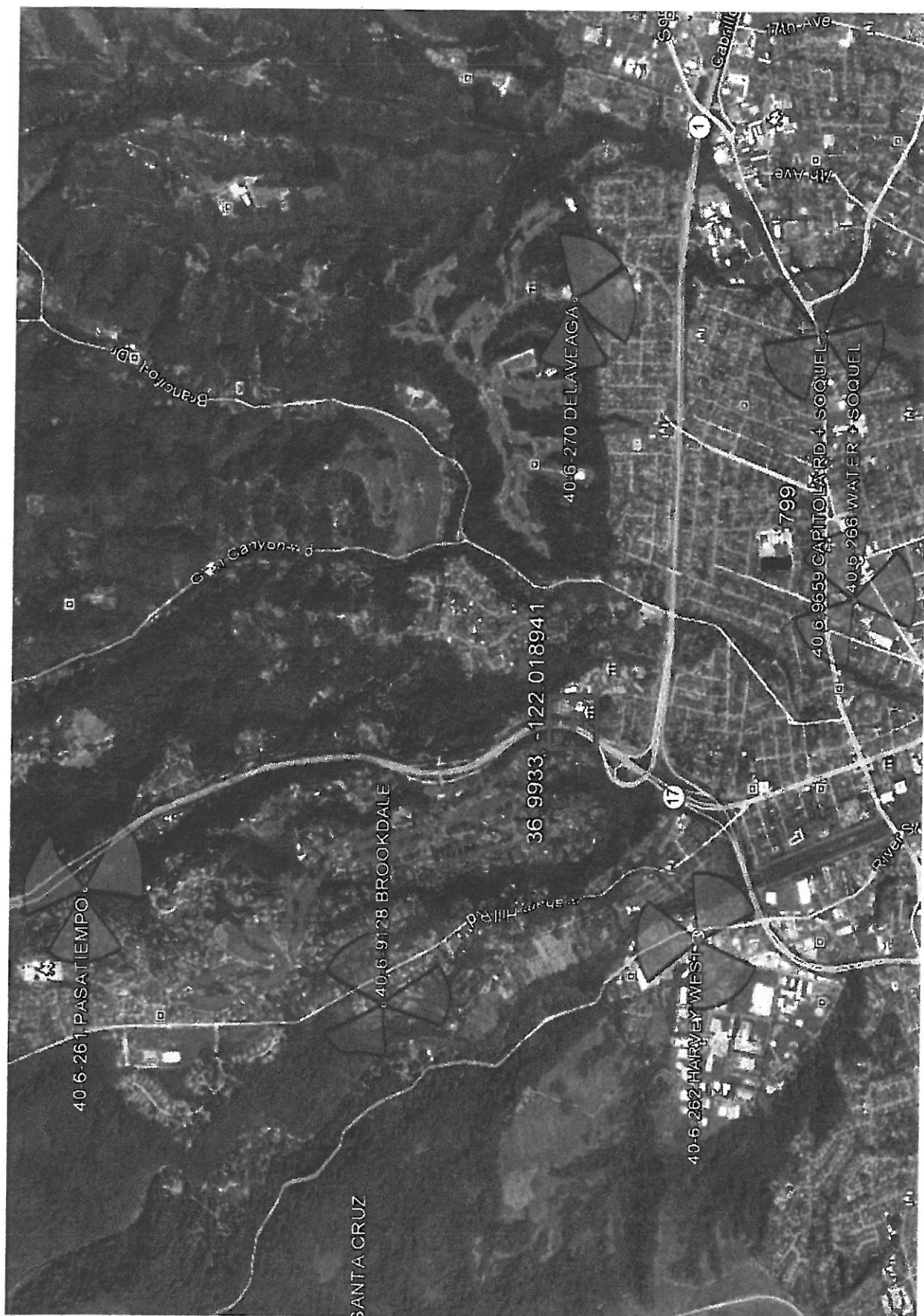
Since the intended coverage area is so finite, we don't have the luxury of looking at multiple locations to meet the need. We need to be as close to the highway intersection as possible.

The only other possibility for this site was the rooftop of 1400 Emeline Avenue. However, after a more careful investigation of the property, it was determined that we would not have had enough height to reach the portions of the highway that we are intending to cover.

Design

Our proposed site is located just northeast of the intersection of Sutphen Street and N. Plymouth Street, on an existing utility pole in the County's right-of-way. Equipment would include two (2) 2' panel antennas mounted at a centerline of 37.5' feet on a 72' wood pole. Four (4) RRUs will also be mounted on the pole. The ground equipment location will be located on the other side of the street – with a 6' x 12' lease area. Included in the ground space will be a 24" x 30" x 39" equipment cabinet and a 12" x 12" x 39" meter pedestal.

Existing Verizon Wireless Facilities



EXISTING NEARBY VERIZON WIRELESS FACILITIES

SITE NAME	PS ID	MILES	ADDRESS	LATITUDE	LONGITUDE
Harvey West	115315	0.78	1001 River St, Santa Cruz, CA 95060	36.987383	-122.030799
Water & Soquel	158590	1	132 Benito Ave, Santa Cruz, CA 95062	36.980111	-122.011414
Delaveaga	115305	1.25	401 Upper Park Rd, Santa Cruz, CA 95060	36.993283	-122.996629
Pasatiempo	158571	1.56	155 Firehouse Ln, Santa Cruz, CA 95060	37.015058	-122.026977

Human Exposure to RF Energy Compliance Report

Prepared for:
Jay Gruendle
On Air LLC

465 1st St. West, Ste. 101
Sonoma, CA 95476

707-933-9633 office
707-477-2782 cell

For the benefit of Verizon Wireless

Site Location: 270024
Hwy 1 & Hwy 17 SC1
(Near) 1400 Emeline Ave
Santa Cruz, CA 95060

Report Date: May 27, 2014



RF Compliance Services, Inc.
3628 24th Street
San Francisco, CA 94110

Prepared By
Chris Goldsmith
Chris@RadioFrequencyCompliance.com
415-948-6790

EXHIBIT G

Table of Contents

Introduction	1
Site Description.....	1
Compliance Summary	2
Mitigation, Signage, and Barrier Recommendations	2
Regulatory Framework.....	3
Predictive Modeling	5
Limitations	9
Engineering Statement	9
Appendix A: Radio Frequency Health and Safety Guidelines.....	10

Introduction

Radio Frequency Compliance Services, Inc., has been contracted to conduct a human exposure to radio frequency energy study for the benefit of Verizon Wireless. The Federal Communications Commission (FCC) requires licensees to ensure that people are not exposed to radiofrequency electromagnetic energy power densities in excess of the applicable maximum permitted exposure (MPE) limit.

This study uses data supplied by Verizon Wireless or its representatives to determine the human exposure to RF energy from the subject site.

The following documents were supplied by Verizon Wireless or its representatives. This information is considered to be correct and was used in the creation of this report:

1. Drawings – HWY 1 & HWY 17 SC1 100% ZDs 02-13-14
2. Power Statement – HWY 1 - HWY 17 SC1 EME Report Datasheet 5/14/14

Site Description

The subject site is Site Location: 270024, Hwy 1 & Hwy 17 SC1, which is near 1400 Emeline Ave, Santa Cruz, CA 95060. The proposed site is a new wireless facility mounted on an existing wooden utility pole with two antennas mounted at 36 feet above ground level.

There is a three story commercial building 240 feet to the West. There are two story residential buildings 340 feet to the West.



Verizon proposes to build a new wireless facility mounted on an existing wooden utility pole with two antennas mounted at 36 feet above ground level: an alpha sector orientated at 90 degrees and a beta sector orientated at 190 degrees.

Compliance Summary

This site COMPLIES with Radiofrequency Radiation Exposure Limits of 47 CFR § 1.1307(b)(3) and 1.1310.

Predicted power density of the Verizon proposed installation at ground level surrounding the site, the point of closest public access, is 29.7 % of the general public MPE limit.

Predicted power density of the Verizon proposed installation at the level of the road bed, approximately 26 feet above ground level, the point of closest public access, is 1.0 % of the general public MPE limit.

Mitigation, Signage, and Barrier Recommendations

No mitigation or barriers are required at this site.

RF Notice signs should be placed on the pole.

Regulatory Framework

The FCC requires licensees to ensure that persons are not exposed to radiofrequency electromagnetic energy power densities in excess of the applicable MPE limit. Applicable FCC rules are found at 47 CFR § 1.1307(b)(3) and 1.1310.

The FCC rules define two tiers of permissible exposure differentiated by the situation in which the exposure takes place and/or the status of the individuals who are subject to exposure.

The General Population / Uncontrolled Exposure Limit applies to human exposure to RF fields when the general public is 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 always fall under this category when exposure is not employment-related.¹

The Occupational/Controlled Exposure Limit applies to human exposure to RF fields when 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. These 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 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 action.²

The FCC's maximum permissible exposure (MPE) is defined as the rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with an acceptable safety factor levels.³

The FCC's MPE limits for the General Population/Uncontrolled and Occupational/Controlled environments are given in Table 1 and Table 2, respectively. Figure 1 is a graph of both MPEs as functions of frequency.

¹ Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields, OET Bulletin 65, Edition 97-01, August 1997, Page 3

² Ibid, Page 4

³ Ibid, Page 3

Table 1: MPE Limits for General Population/Uncontrolled Environment⁴

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time for 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

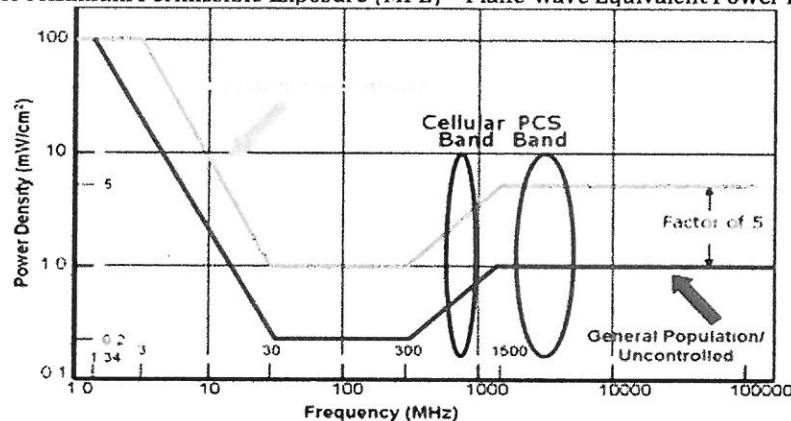
f = frequency in MHz * = Plane wave equivalent power density

Table 2: MPE Limits for Occupational/Controlled Environment⁵

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time for 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
30 – 300	61.4	0.163	1.0	6
300 – 1500	--	--	f/300	6
1500 – 100,000	--	--	5.0	6

f = frequency in MHz * = Plane wave equivalent power density

FCC Limits for Maximum Permissible Exposure (MPE) – Plane-wave Equivalent Power Density⁶



Maximum Permissible Exposure (MPE) is defined in OET 65 as being 100% of the exposure limit for the situation or tier of permissible exposure. Anyone may be granted safe access to areas less than or equal to 100% of the General Population MPE Limit. For persons who have been properly trained and meet the definition of being Occupational Personnel, access to areas at or below 100% of the Occupational MPE limit may be granted. Access to areas predicted to exceed 100% of the

⁴ Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields, OET Bulletin 65, Edition 97-01, August 1997, Page 67

⁵ Ibid, Page 67

⁶ Ibid, Page 68

Occupational MPE limit may be granted to persons properly trained and who use real-time power density measurement Personal Protective Equipment, such as a RF Personal Monitor.

FCC rules allow for access to areas that exceed of 100% of the applicable limit, if time-averaged exposure is not exceeded. This clause requires very carefully measured, consistent exposure and is difficult to incorporate into practical compliance policies. This report and any recommendations herein assume continuous exposure at or below the applicable MPE limit. Time average is not employed to determine compliance.

For any area in excess of 100% General Population MPE, access controls must be put in place and maintained to prevent the general population from gaining access. Occupational Personnel trained in RF safety and equipped with personal protective equipment designed for safe work in the vicinity of RF may be granted access, subject to other site security requirements. Access controls may be imposed by locked doors, physical barriers, or alarms to notify the individual and site management. Controls may include administrative policies and procedures requiring personal protective equipment, proof of RF training to obtain site access cards, presentation of appropriate RF awareness training certifications to security personnel or other measures designed to prevent uncontrolled access.

Following these FCC requirements, predictive modeling was performed to evaluate power density resulting from client transmitters as a percentage of the power density MPE limit applicable to their transmitters. If additional carriers and other wireless installations are identified and included, their technical and operating parameters have been assumed and are intended to be conservative and consistent with the higher range of operating parameters.

In field and on site measurements typically show power density values significantly lower than predicted values. The purpose of predictive analysis is to depict the worst case potential for exposure such that compliance with the analysis assures a high safety margin.

Predictive Modeling

The RoofView software program is used to calculate the predicted power density throughout the subject area in both the general public and occupational MPE in accordance with the FCC's OET bulletin 65 "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation" dated August 1997. Spatially averaged power density is plotted based on the percentage of the applicable standard, as noted in the plots below.

Site Location: 270024
Hwy 1 & Hwy 17 SC1
(Near) 1400 Emeline Ave
Santa Cruz, CA 95060

Antenna inventory and operating power

ID	Name	Freq	Power	Mfg	Model	X	Y	Z	Aper	Pt Dir
VZ1	A1	700.000000	73.0	AMPHENOL	QXW-632X634X-DP-EDIN	102.0	100.0	36.0	2.0	67;90
VZ1	A2	2100.000000	69.7	AMPHENOL	QXW-632X634X-DP-EDIN	102.0	100.0	36.0	2.0	61;90
VZ1	B1	700.000000	73.0	AMPHENOL	QXW-632X634X-DP-EDIN	98.0	100.0	36.0	2.0	67;190
VZ1	B2	2100.000000	69.7	AMPHENOL	QXW-632X634X-DP-EDIN	98.0	100.0	36.0	2.0	61;190

This table is extracted from RoofView for this project. Antenna and operating information for Verizon has been supplied by Verizon or its representatives. Operating information for co-located transmission facilities has been estimated based on generally accepted operating parameters.

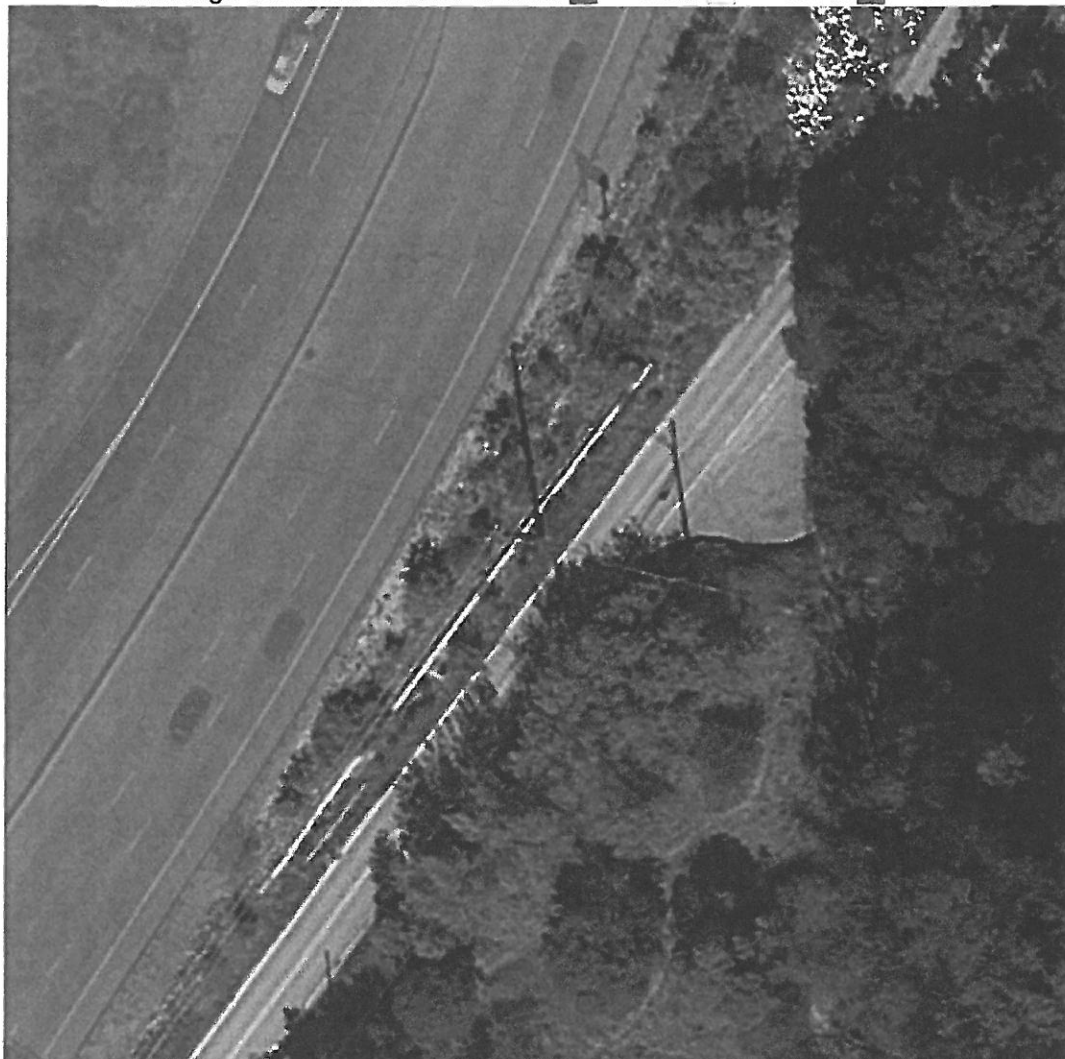
Antenna Z position is to the bottom of the aperture, not the center line
Power is the net power, in Watts, to the antenna
Pt Dir is th beam width in degrees and the orientation

Percentage General Public MPE Limit ■ ≤ 20% □ ≤ 100% ■ > 100%



Ground level with all antennas operating plotted with the **general public MPE limit**. All publically accessible areas around the subject site are within the general public limit. The maximum predicted power density at ground level is **29.7% of the general public MPE limit**.

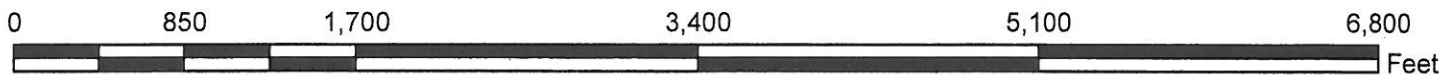
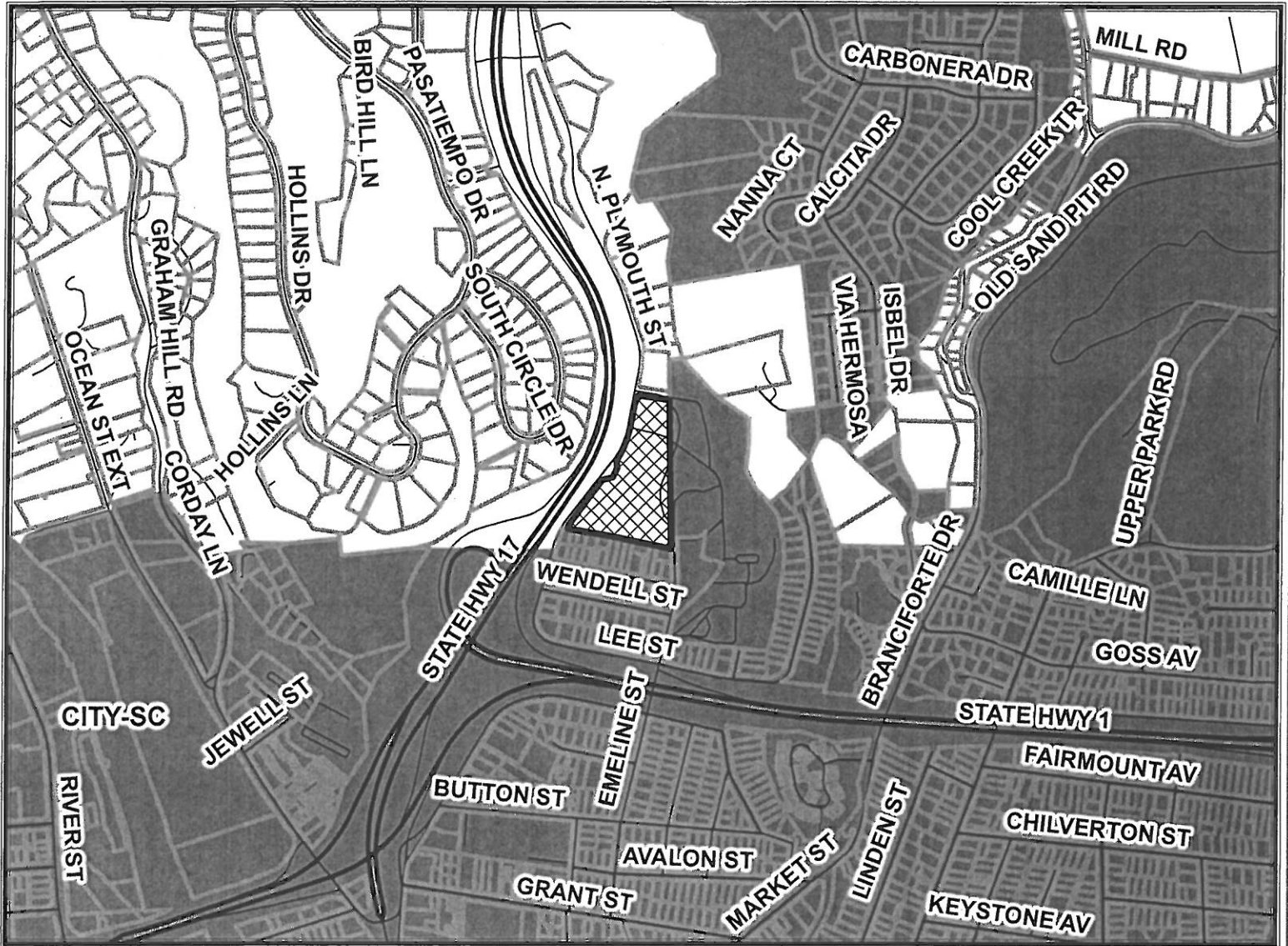
Percentage General Public MPE Limit ■ ≤ 20% ■ ≤ 100% ■ > 100%








Roadway level, approximately 26 above the level of the utility pole, with all antennas operating plotted with the **general public MPE limit**. All publically accessible areas are within the general public limit. The maximum predicted power density at the roadway level is **1.0% of the general public MPE limit**.



Location Map



LEGEND

-  APN: 060-311-20
-  Assessors Parcels
-  Street
-  State Highways
-  CITY OF SANTA CRUZ



Map Created by
County of Santa Cruz
Planning Department
October 2014



Zoning Map



LEGEND

-  APN: 060-311-20
-  Assessors Parcels
-  Street
-  State Highways
-  CITY OF SANTA CRUZ
-  PUBLIC FACILITY
-  RESIDENTIAL-SINGLE FAMILY
-  SPECIAL USE

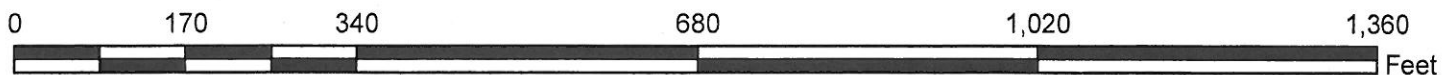
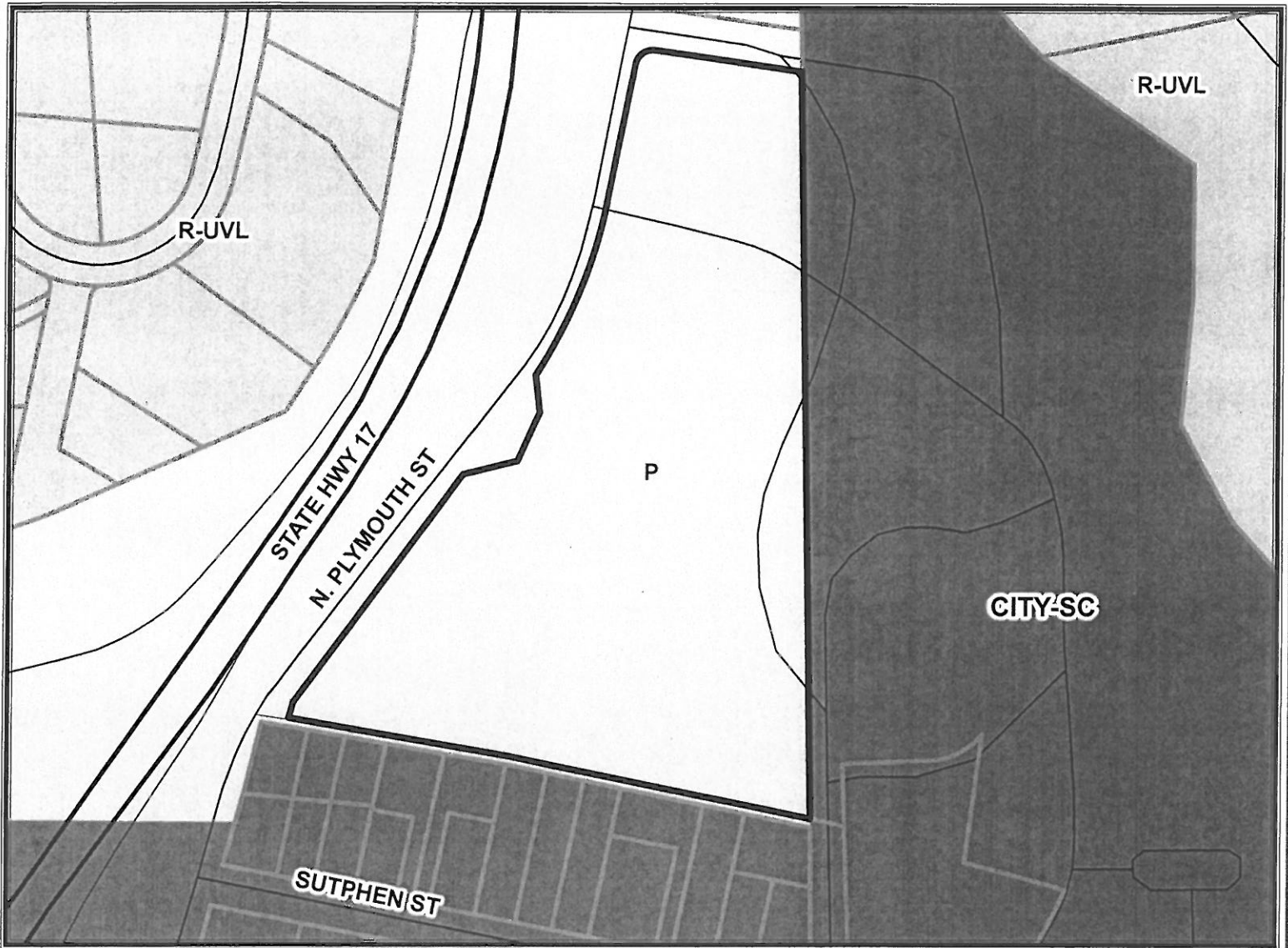


Map Created by
County of Santa Cruz
Planning Department
October 2014

EXHIBIT H

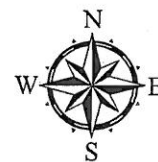


General Plan Designation Map



LEGEND

- APN: 060-311-20
- Assessors Parcels
- Street
- State Highways
- CITY OF SANTA CRUZ
- Public Facilities
- Residential - Urban Very Low Density



Map Created by
County of Santa Cruz
Planning Department
October 2014