



## Staff Report to the Zoning Administrator

Application Number: **111376**

**Applicant:** Verizon Wireless C/O Tricia Knight

**Agenda Date:** 7/20/12

**Owner:** Michael Cobbler, Trustee

**Agenda Item #:** 2

**APN:** 054-083-06

**Time:** After 9:00 a.m.

**Project Description:** Proposal to install a new co-located wireless communications facility including 8 rooftop mounted antennas and a new equipment shelter on the site with an existing wireless communications facility. Requires Coastal Development Permit.

**Location:** Property located on the north side of the intersection of Seascape Boulevard and Sumner Avenue in Aptos. (Seascape Shopping Center)

**Supervisory District:** 2nd District (District Supervisor: Ellen Pirie)

**Permits Required:** Coastal 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 111376, based on the attached findings and conditions.

### Exhibits

- |   |                                    |
|---|------------------------------------|
| A. Project plans                              | F. General Plan Maps               |
| B. Findings                                   | F. Radio Frequency Emissions Study |
| C. Conditions                                 | G. Comments & Correspondence       |
| D. Categorical Exemption (CEQA determination) | H. Visual Simulations              |
| E. Assessor's, Location, Zoning and           |                                    |

### Parcel Information

Parcel Size:	4 acres
Existing Land Use - Parcel:	Seascape Shopping Center
Existing Land Use - Surrounding:	North: Residential
	South: Parks and Recreation Open Space

County of Santa Cruz Planning Department  
701 Ocean Street, 4<sup>th</sup> Floor, Santa Cruz CA 95060

	East: Parks and Recreation (Seascape Swim and Racquet Club)
	West: Visitor Accommodation (Seascape Resort)
Project Access:	Seascape Boulevard (75 foot right-of-way)
Planning Area:	Aptos
Land Use Designation:	C-N, O-U (Neighborhood Commercial, Urban Open Space)
Zone District:	C-1, PR (Neighborhood Commercial, Parks and Recreation)
Coastal Zone:	<input checked="" type="checkbox"/> Inside <input type="checkbox"/> Outside
Appealable to Calif. Coastal Commission	<input checked="" type="checkbox"/> Yes <input 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, site is fully developed with a shopping center, site is relatively 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:	Not mapped/no physical evidence on site

### Services Information

Urban/Rural Services Line:	<input checked="" type="checkbox"/> Inside <input type="checkbox"/> Outside
Water Supply:	Soquel Creek Water District
Sewage Disposal:	Santa Cruz Sanitation
Fire District:	Aptos La Selva Fire Protection District
Drainage District:	Flood Zone 6

### History

Commercial Development Permit 87-1156 authorized the original development of Seascape Village, a neighborhood commercial complex with a variety of stores, offices and restaurants. The existing cell site in its current location within Seascape Village was approved under Commercial Development Permits 98-0063 and 101075. The facility currently includes 9 roof-mounted panel antennas within a rooftop enclosure matching the existing building and a ground-level cabinet enclosure containing 5 cabinets.

### Project Setting

The project parcel is within a neighborhood commercial shopping center/office complex comprised of seven 2-story buildings of consistent architectural style that are separated and

surrounded by landscaped parking areas. The site contains an existing ground-level equipment enclosure located behind one of the existing commercial buildings and is largely screened from view by a wood fence, landscaping.

The approximately 4-acre parcel has an unusual shape, with a long thin projection outside the shopping center that is zoned for park and open space uses. While the parcel has split zoning and General Plan designations (Neighborhood Commercial and Parks, Recreation and Open Space), the project is entirely within the Seascape Village shopping center that is within the Neighborhood Commercial portion of the parcel.

### **Analysis**

The applicant proposes to add an additional 8 rooftop mounted antennas within the existing rooftop enclosure, thus increasing the antennas to 17 in total. The project includes the removal and replacement of an existing and unnecessary garbage enclosure, as determined by Waste Management, with a proposed equipment enclosure. One existing parking space will be removed by the proposed enclosure located at the rear of the facility. Adequate parking exists for this shopping center.

The current application includes an analysis by Hammett and Edison, Inc., dated May 27, 2011, that evaluates the maximum potential radiation exposure from the facility, pursuant to FCC-specific guidelines. The maximum ambient emissions exposure level that could result from the simultaneous operation of the proposed new equipment and existing equipment at ground level is conservatively calculated to be 4.3 percent of the most restrictive applicable limit. The maximum calculated cumulative level at the second-floor elevation of any nearby building would be 8.3 percent of the public exposure limit.

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

The subject property is a parcel of approximately 4.08 acres, located in the C-1, PR (Neighborhood Commercial, Parks and Recreation, and Open Space) zone district, a designation that allows commercial uses. The proposed additional antennas and equipment enclosure is a permitted use within the zone district and the zoning is consistent with the site's (C-N, O-U) Neighborhood Commercial, Urban Open Space General Plan designation.

### **Local Coastal Program Consistency**

The proposed antennas and equipment enclosure is in conformance with the County's certified Local Coastal Program, in that the antenna structures and equipment enclosure are sited and designed to be visually compatible, in scale with, and integrated with the character of the surrounding neighborhood. The antennas will be screened from view by panels that blend in color and finish with the rest of the existing structure on which they are located. The proposed ground-level equipment enclosure will replace an existing garbage enclosure and will be largely screened by existing landscaping and by its location behind the existing office/commercial building where it will be located. The design submitted is consistent with the existing architectural style of Seascape Village. The project site is not located between the shoreline and the first public road and is not identified as a priority acquisition site in the County's Local Coastal Program. Consequently, the proposed project will not interfere with public access to the

## **Design Review**

The proposed addition complies with the requirements of the County Design Review Ordinance, in that the proposed project will incorporate site and architectural design features such as colors and materials that match the existing structure to screen the antennas and to reduce the visual impact of the proposed development on surrounding land uses and the natural landscape.

## **Environmental Review**

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 D. The project qualifies for a Class 1 exemption since the proposed project involves co-location of a wireless facility at an existing wireless communication facility.

## **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**

- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- **APPROVAL** of Application Number 111376, 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)**

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Santa Cruz CA 95060  
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E-mail: [sheila.mcdaniel@co.santa-cruz.ca.us](mailto:sheila.mcdaniel@co.santa-cruz.ca.us)



**PSL# 205070**  
**SEASCAPE**  
2 SEASCAPE VILLAGE #19  
APTOS, CA 95003

REV	DATE	DESCRIPTION	BY
0	07/14/11	90% ZONING	JE
1	03/01/11	95% ZONING	PMS
2	03/22/11	REV. 95% ZONING	OM
3	04/18/11	100% ZONING	OM
4	06/02/11	REV. 100% ZONING	J.R.
5	01/31/12	REV. 100% ZONING	OM
6	02/07/12	REV. 100% ZONING	OM



**PROPRIETARY INFORMATION**  
THE INFORMATION CONTAINED IN THIS SET OF  
DRAWINGS IS PROPRIETARY & CONFIDENTIAL TO  
VENTECOL WINDTIZ



85 MITCHELL DRIVE, BLDG 9  
WALNUT CREEK, CA 94598

**811**  
Know what's below.  
Call before you dig.

CONTRACTOR TO CALL TO  
VERIFY UTILITIES AT  
LEAST TWO WORKING  
DAYS PRIOR TO DIGGING

CALL 811  
WWW.CALL811.COM

[illegible]

PSL # 205070  
SEASCAPE  
SEASCAPE VILLAGE #  
APTOS, CA 95003

**SHEET TITLE:**

**TITLE SHEET**

4

**DO NOT SCALE DRAWINGS IF NOT FULL-SIZE (44-30)**

SAC WIRELESS SIGNATURE BLOCK		
REQUIRE	SIGNATURE	DATE
WIRE ACQUISITION		
PLANNER		
COMPLETION		
LAND 200		

APPLICANT/LESSEE  
✓  
W&J/T/James  
2755 MITCHELL DRIVE, BLDG B  
WALLACE CREEK, CA 90660  
CONTACT: JIM CHAMPA  
TELEPHONE: (818) 794-8339

ASSIGNOR'S PARCEL NUMBER  
R21-46405

LEGAL DESCRIPTION  
R21-46405  
R21-46405

PROPERTY OWNER:  
WAC RENTALS  
2500 WILSON ROAD  
BUELLTON, CA 94927  
CONTACT: RITA L. CHAMPA  
PHONE: (818) 794-8339

PROPERTY OWNER:  
WAC RENTALS, T. COLLIER  
THAYER  
1777 S. INACORN AVE  
GAINESVILLE, CA 9086

PROPERTY INFORMATION  
SITE NUMBER: 214 29093  
SITE ADDRESS: 15846005 VILLAGE #16  
APN: 017-01-001

COORDINATES  
LAT.: 36° 07' 36.3" N (360 33)  
LONG.: 121° 50' 00.0" W (360 33)  
ECLA.: 102.8 (PAVED RD) GRADE OF DRAINAGE  
ECLA.: 102.8 (PAVED RD) GRADE OF DRAINAGE

CONSTRUCTION INFORMATION  
AREA OF CONSTRUCTION:  
14'-0" x 31'-0" (EAST AREA 8' X 8')

FOUNDATION:  
BAYTA CRATE COUNTRY

TYPE OF CONSTRUCTION:  
V/A

TYPE OF CONSTRUCTION:  
FACILITY IS UNARMED AND MOTOR VEHICLE  
PROHIBITION. TRANSPORTED ACCORDING TO REGULATIONS.

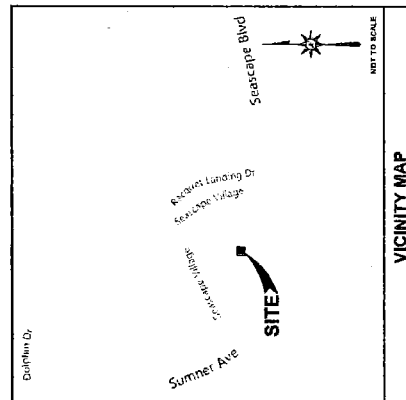
MAJOR REQUIREMENTS:

**PROJECT SUMMARY**

**ALL WORK AND MATERIALS SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADAPTED BY THE LOCAL ADOPTED ORDINANCES. THE CONTRACTOR SHALL VERIFY THAT ALL APPLICABLE CODES MEET OR EXCEED THE REQUIREMENTS OF THE SPECIFICATIONS. ANY CODES NOT LISTED BELOW BUT WHICH MAY APPLY TO THIS PROJECT SHALL BE IDENTIFIED BY THE CONTRACTOR AND SUBMITTED FOR REVIEW AND APPROVAL BY THE CITY ENGINEER PRIOR TO COMMENCEMENT OF WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.**

- 6. 2018 CALIFORNIA MECHANICAL CODE
- 7. 2018 CALIFORNIA ELECTRICAL CODE
- 8. 2019 CALIFORNIA PLUMBING CODE
- 9. 2018 CALIFORNIA FIRE ALARM & SIGNALING CODE
- 10. 2018 CALIFORNIA IRRIGATION CODE
- 11. 2018 CALIFORNIA LANDSCAPE ARCHITECTURE CODE
- 12. 2018 CALIFORNIA PAVING CODE
- 13. 2018 CALIFORNIA PUBLIC WORKS CODE
- 14. 2018 CALIFORNIA TRAFFIC CONTROL CODE
- 15. 2018 CALIFORNIA UTILITIES CODE
- 16. 2018 CALIFORNIA WASTE MANAGEMENT CODE
- 17. 2018 CALIFORNIA WATER SUPPLY CODE
- 18. 2018 CALIFORNIA WEATHER-RESISTIVE BARRIER CODE
- 19. 2018 CALIFORNIA WOOD PRESERVATION CODE
- 20. 2018 CALIFORNIA YARD SIGNAGE CODE

**CODE COMPLIANCE**

[illegible]

THIS PROJECT WILL CONSIST OF:	PROJECT DESCRIPTION
-NEW VERIZON WIRELESS ANTENNAS.	
-TOTAL OF (3) ANTENNAE MOUNTED BEHIND METEORUS STREET WALL.	
-RELOCATION OF EXISTING POWER AND CABLES TO BE PULLED FROM LOCATION ON THE SAME PROPERTY.	
-RELOCATION OF EXISTING TRASH ENCLOSURE	

**BITE ACQUISITION**  
JAY D. HODGIN, M.D.  
VICE PRESIDENT  
1000 UNIVERSITY AVENUE  
SANTA BARBARA, CA 93101  
TEL: 805.962.4799

**PLANNING**  
TEK CONSULTING INC.  
10000 WILSON AVENUE SUITE 200  
12125 SHELLEY RD  
CHINO VALLEY, CA 91709  
TEL: 909.438.1100  
TEL: 909.438.1221  
TEK-CONSULTING@NET  
TEL: 909.438.1200

**ARCHITECT:**  
RAC PROJECTS  
2445 AVENUE NICHOLAS SUITE 418  
SAN ANTONIO, TX 78204  
CONTACT: NESTOR POPOVICH  
TEL: 214.343.1240  
FAX: 214.343.1248

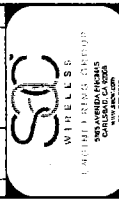
**SURVEYOR**  
RAC PROJECTS  
2445 AVENUE NICHOLAS SUITE 418  
P.O. BOX 4422  
SAN ANTONIO, TX 78204  
TEL: 214.343.1240  
TEL: 214.343.1248

**UTILITY COORDINATOR:**  
RAC PROJECTS  
2445 AVENUE NICHOLAS SUITE 418  
P.O. BOX 4422  
SAN ANTONIO, TX 78204  
TEL: 214.343.1240  
TEL: 214.343.1248

**PROJECT TEAM**

VERIZON SIGNATURE BLOCK		SIGNATURE	DATE
DIRECTOR	BITE ACQUISITION		
	CONSTRUCTION		
	PLANS		
	MICROWAVE		
	TELECOM		
	EQUIPMENT		
	PROJECT ADMINISTRATION		
	NO ADMINISTRATION		

REV	DATE	DESCRIPTION	BY
1	07/17/11	ISSUE 205070	JL
2	07/17/11	ISSUE 205070	JL
3	07/17/11	ISSUE 205070	JL
4	07/17/11	ISSUE 205070	JL
5	07/17/11	ISSUE 205070	JL
6	07/17/11	ISSUE 205070	JL
7	07/17/11	ISSUE 205070	JL
8	07/17/11	ISSUE 205070	JL
9	07/17/11	ISSUE 205070	JL



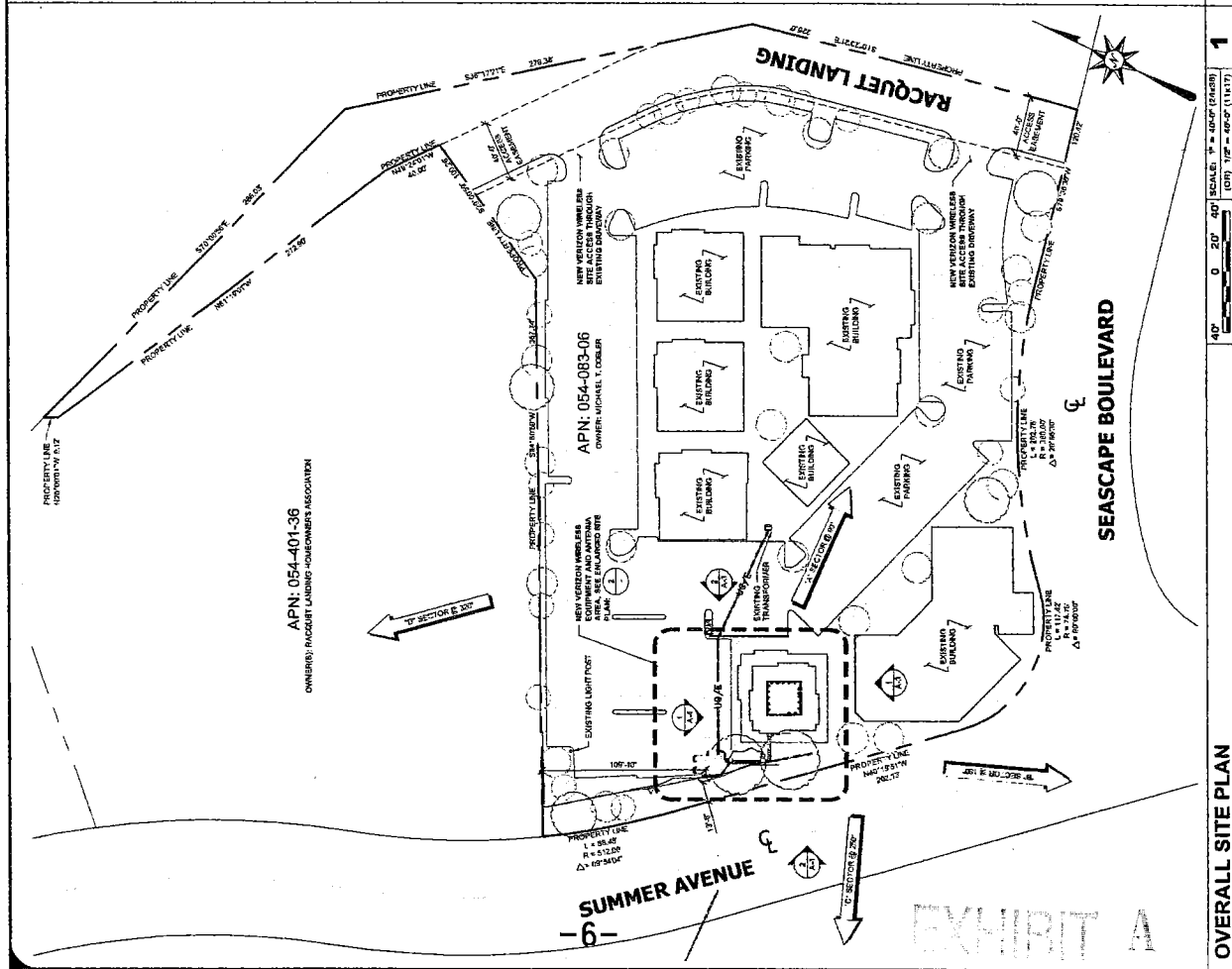
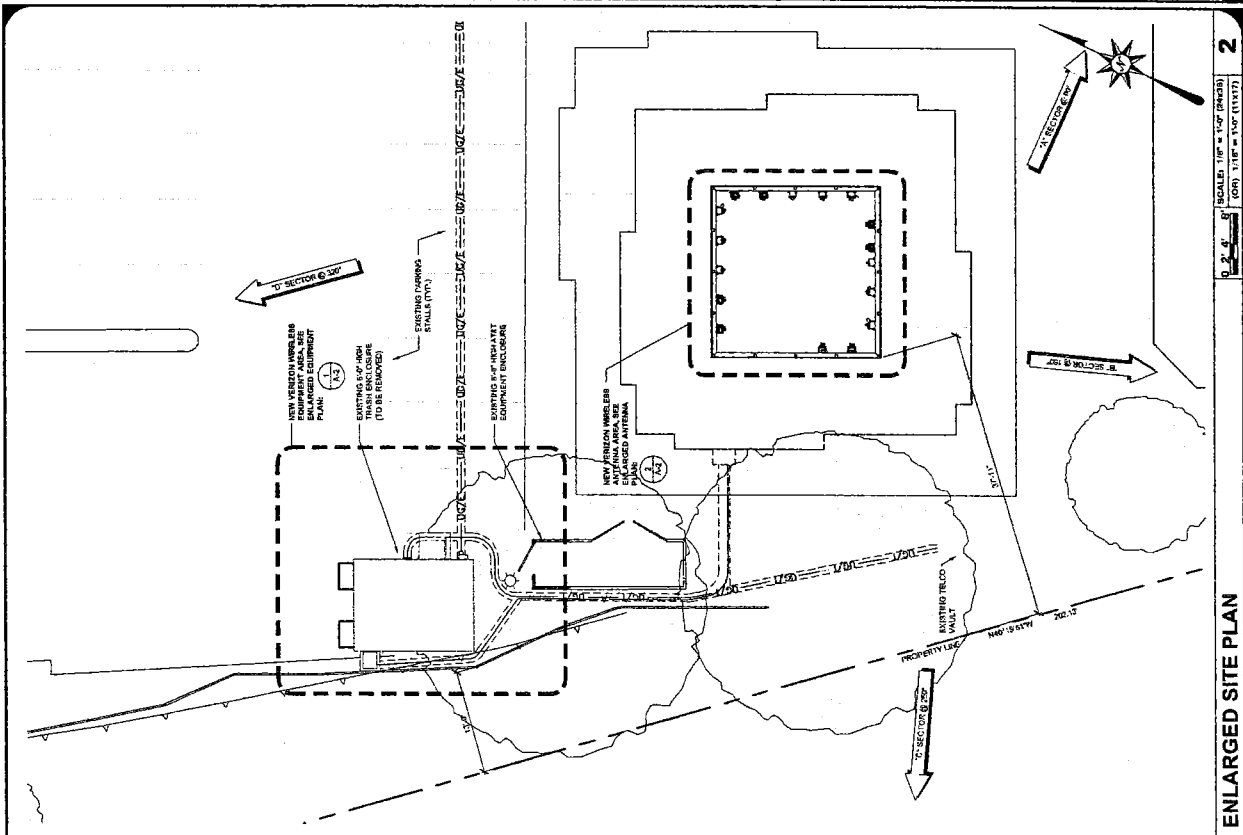
**PROPRIETARY INFORMATION**  
 SEASCAPE VILLAGE #19  
 APTOS, CA 95003  
 2785 MITCHELL DRIVE, BLDG 9  
 WALNUT CREEK, CA 94598

**verizon wireless**

**SEASCAPE**  
**PSL # 205070**

**SEASCAPE VILLAGE #19**  
**APTOS, CA 95003**

**SHEET TITLE:**  
**OVERALL & ENLARGED SITE PLAN**  
**A-1**



**ENLARGED SITE PLAN**  
**2**  
 SCALE: 1" = 40' (1:1600)  
 0 20 40  
 1" = 40'

**OVERALL SITE PLAN**  
**1**  
 SCALE: 1" = 400' (1:16000)  
 0 20 40  
 1" = 400'

EXHIBIT A

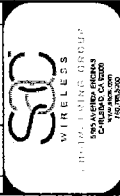








ISSUE STATUS	
REV	DESCRIPTION
1	07/15/11 NEW VERIZON WIRELESS
2	07/15/11 NEW VERIZON WIRELESS
3	07/15/11 NEW VERIZON WIRELESS
4	07/15/11 NEW VERIZON WIRELESS
5	07/15/11 NEW VERIZON WIRELESS
6	07/15/11 NEW VERIZON WIRELESS
7	07/15/11 NEW VERIZON WIRELESS
8	07/15/11 NEW VERIZON WIRELESS
9	07/15/11 NEW VERIZON WIRELESS
10	07/15/11 NEW VERIZON WIRELESS



PROPRIETARY INFORMATION  
THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF VERIZON WIRELESS  
AND IS NOT TO BE DISCLOSED OR REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF VERIZON WIRELESS

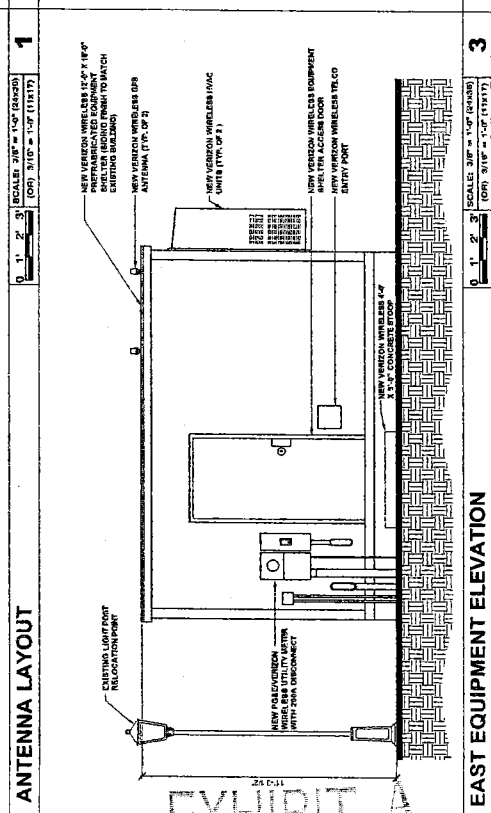
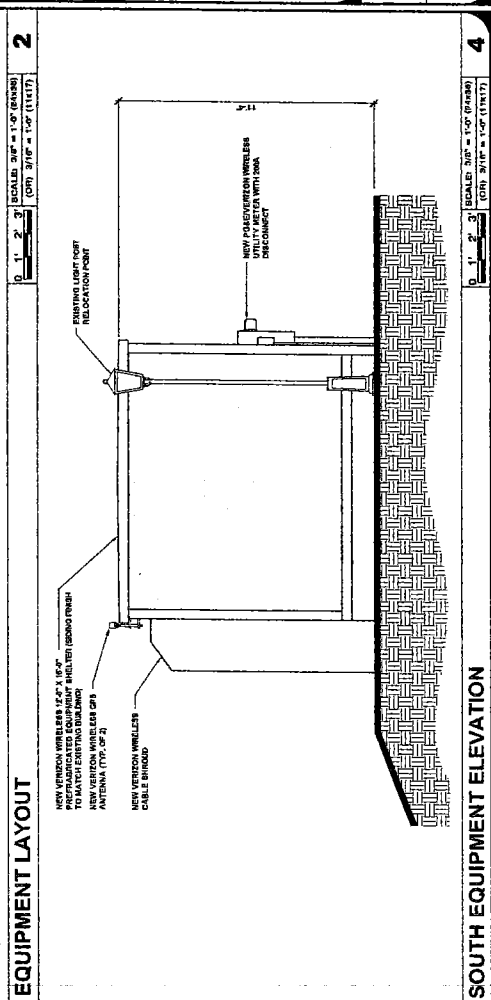
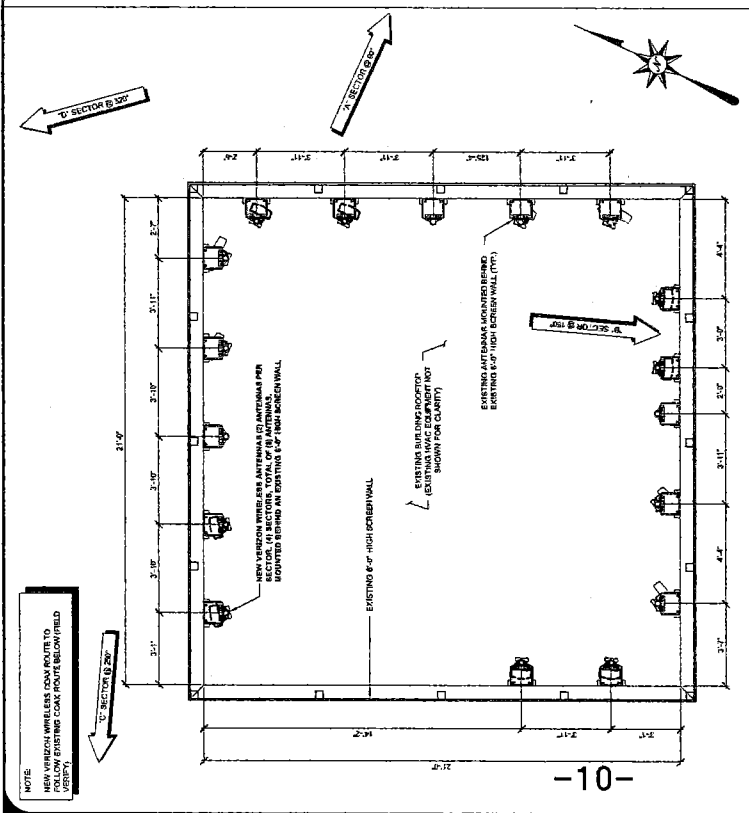
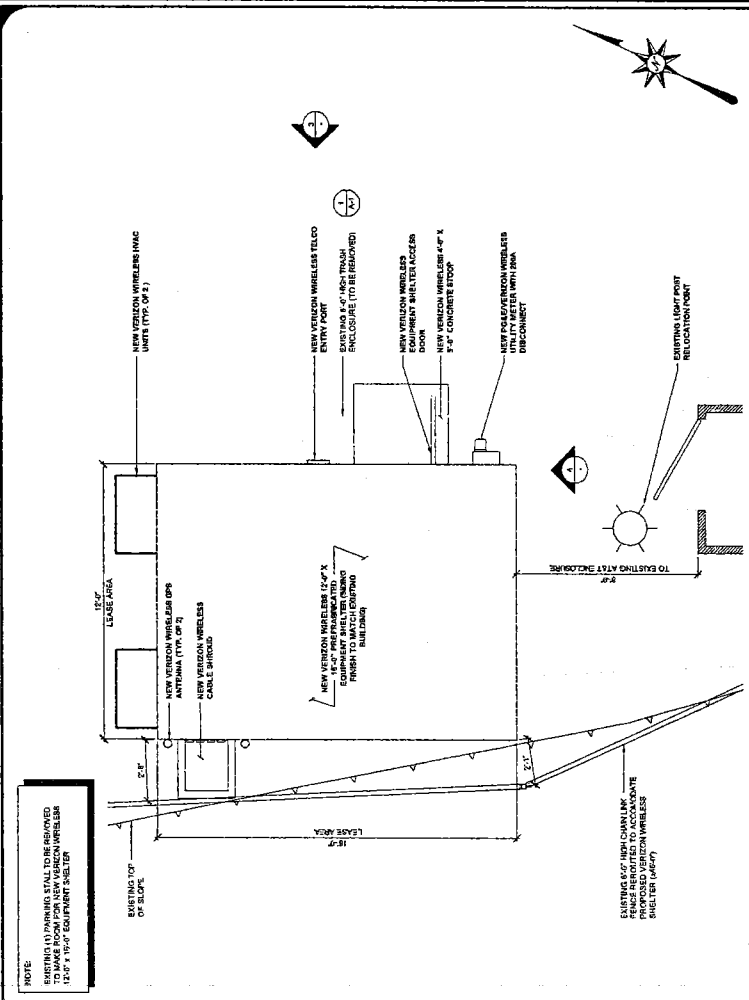
**verizon wireless**  
2785 MITCHELL DRIVE, BLDG 9  
WALNUT CREEK, CA 94598

**SEASCAPE**  
APTOS, CA 95003

**PSL # 205070**  
**SEASCAPE**  
APTOS, CA 95003

**SHEET TITLE:**  
**ANTENNA, EQUIPMENT**  
**LAYOUT & ELEVATION**  
**DETAILS**

**A-5**



**EXHIBIT A**

## Coastal Development Permit Findings

1. That the project is a use allowed in one of the basic zone districts, other than the Special Use (SU) district, listed in section 13.10.170(d) as consistent with the General Plan and Local Coastal Program LUP designation.

This finding can be made, in that the property is zoned C-1, PR (Neighborhood Commercial, Parks and Recreation and Open Space), and C-1 is a designation which allows Wireless Facility uses. The proposed co-location is a principal permitted use within the zone district, and the zoning is consistent with the site's (C-N, O-U) Neighborhood Commercial, Urban Open Space General Plan designation. While the parcel has split zoning and General Plan designations (Neighborhood Commercial and Public Resource zoning), the project is entirely within the Seascape Shopping Village shopping center and is contained within the Neighborhood Commercial portion of the parcel.

2. That the project does not conflict with any existing easement or development restrictions such as public access, utility, or open space easements.

This finding can be made, in that the proposal does not conflict with any existing easement or development restriction such as public access, utility, or open space easements as no such easements or restrictions are known to encumber the project site.

3. That the project is consistent with the design criteria and special use standards and conditions of this chapter pursuant to section 13.20.130 et seq.

This finding can be made, in that the development is consistent with the surrounding neighborhood in terms of architectural style; the site is surrounded by lots developed to an urban density; the colors will be natural in appearance and complementary to the site; and the development site is not on a prominent ridge, beach, or bluff top.

4. That the project conforms with the public access, recreation, and visitor-serving policies, standards and maps of the General Plan and Local Coastal Program land use plan, specifically Chapter 2: figure 2.5 and Chapter 7, and, as to any development between and nearest public road and the sea or the shoreline of any body of water located within the coastal zone, such development is in conformity with the public access and public recreation policies of Chapter 3 of the Coastal Act commencing with section 30200.

This finding can be made, in that the project site is not located between the shoreline and the first public road. Consequently, the addition will not interfere with public access to the beach, ocean, or any nearby body of water. Further, the project site is not identified as a priority acquisition site in the County Local Coastal Program.

5. That the proposed development is in conformity with the certified local coastal program.

This finding can be made, in that the additional antennas are proposed within the existing equipment shelter located on the rooftop and the proposed equipment is located within a ground equipment shelter designed to match the existing building siding and finish color. As a result, the proposed project is designed to be visually compatible, in scale with, and integrated with the

Application #: 111376

APN: 054-083-06

Owner: Michael Cobbler, Trustee

character of the surrounding neighborhood. Additionally, Wireless Facility uses are allowed in the C-1, PR (Neighborhood Commercial, Parks and Recreation) zone district of the area, as well as the General Plan and Local Coastal Program land use designation. Developed parcels in the area contain a variety of commercial, open space and multi-family uses, and the design submitted is consistent with the existing architectural styles and site design.

## **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 existing cellular wireless communication facility is located within a shopping center on the rooftop of a commercial building, and the equipment cabinet is proposed within a proposed enclosure located behind the commercial building to reduce visibility of the site and the footprint of the facility. The equipment enclosure replaces an existing trash enclosure that is not needed for the commercial center, as determined by waste management standards. The installation of this equipment enclosure will not impact visual or sensitive habitat resources, in that the facility is designed to match the building in exterior finish materials and color, and the project is not located within a biotic resource area.

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 additional antennas and the equipment building and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the C-1, PR (Neighborhood Commercial, Parks and Recreation) zone district as the primary use of the property will meet all current site standards for the zone district. The site is not located in one of the prohibited and/or restricted areas set forth in County Code Sections 13.10.661 (b) and 13.10.661 (c). Furthermore, the proposed co-located antennas and equipment enclosure will have no visual impacts as the antennas will be located behind an existing rooftop equipment enclosure and equipment cabinet enclosure is designed to match accessory ground equipment enclosures typical of all commercial uses and are designed to match the commercial building in materials and color.

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 Wireless Facility use is consistent with the use and density requirements specified for the Neighborhood Commercial, Urban Open Space (C-N, O-U) land use designation in the County General Plan.

The proposed co-located antennas and equipment shelter 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 as specified in General Plan Policy 8.5.2 (Commercial Compatibility with other uses), in that the additional cell tower antennas and equipment shelter will not adversely shade adjacent properties, and will meet current setbacks for the zone district that ensure access to light, air, and open space in the neighborhood.

The proposed cell tower antennas and equipment will be properly proportioned to the parcel size

and the character of the neighborhood and the proposed antennas and equipment enclosure will comply with the site standards for the C-1, PR zone district (including setbacks and height).

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 additional antennas and equipment cabinet is to be constructed within an existing cellular communications facility on an existing developed commercial lot. It is not anticipated that the project would have any impact on traffic levels in the vicinity.

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 additional antennas will be located on an existing rooftop cellular communication facility and the equipment enclosure will be located in place of an existing garbage enclosure located behind the existing building and screened by existing site fencing and landscaping. The proposed additional antennas and equipment enclosure will not impact land use intensity and density of the neighborhood.

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 additional antennas and equipment enclosure will be of an appropriate scale and type of design that will enhance the aesthetic qualities of the surrounding properties 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 the additional wireless communication antennas will be located within an existing wireless communication facility within an existing shopping center on the rooftop of a commercial building. The proposed equipment enclosure will replace an existing garbage enclosure located behind the commercial building and is fenced and screened by existing landscaping, which reduces the visibility of the site to surrounding properties. The proposed additional antennas and equipment will not impact visual or sensitive habitat resources and is not located within an identified biotic resource area.

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 antennas are proposed on an existing rooftop of a commercial building for an existing wireless communications facility that was approved under Commercial Development Permit 98-0063. The site is not located in one of the prohibited and/or restricted areas set forth in County Code Sections 13.10.661 (b) and 13.10.661 (c).

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 project site is located within a property located in the C-1 (Neighborhood Commercial) zone district, a designation that allows commercial uses. The proposed antennas and equipment enclosure are a permitted use within the zone district and the zoning is consistent with the site's (C-N) Neighborhood Commercial General Plan designation.

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 wireless communications facility is located on an existing rooftop of a commercial building, which is approximately 35 feet in height, 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 maximum ambient RF levels at ground level due to the existing wireless communications facilities and the proposed operation are calculated is 4.3 percent of the most restrictive applicable limit. The maximum calculated cumulative level at the second-floor elevation of any nearby building would be 8.3 percent of the public exposure limit.

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.

This finding can be made, the proposed modifications to the wireless communications facility are designed and located in a manner that will minimize potential impacts to scenic and biotic resources, and that the construction of the proposed facility improvements will not impede access to the beach or other recreational resources.



## Conditions of Approval

Exhibit A: Plan sheet T-1, A-1, A-2, A-3, A-4, and A-5, prepared by SAC Wireless Engineering Group, dated 2/1/12  
Plan Sheet C-1 and C-2, prepared by SAC Wireless Engineering Group, dated 6/21/11

- I. This permit authorizes the installation of a new co-located wireless communications facility including 8 rooftop mounted antennas and a new equipment shelter on the site with an existing wireless communications facility. 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 Demolition Permit from the Santa Cruz County Building Official.
  - C. 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.
  - D. 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.
- 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 "A" on file with the Planning Department. Any changes from the approved Exhibit "A" 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 on the plans.
    2. Details showing compliance with the fire department requirements.
    3. The building plans must include a roof plan and a surveyed contour map

of the ground surface, superimposed and extended to allow height measurement of all features. Spot elevations shall be provided at points on the structure that have the greatest difference between ground surface and the highest portion of the structure above. This requirement is in addition to the standard requirement of detailed elevations and cross-sections and the topography of the project site which clearly depict the total height of the proposed structure. Maximum height is 28 feet.

4. Details showing compliance with fire department requirements. The proposed structure(s) are located within the State Responsibility Area (SRA) and the requirements of the Wildland-Urban Interface code (WUI), California Building Code Chapter 7A, shall apply.
  - B. 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.
  - C. Meet all requirements of and pay Zone 6 drainage fees to the County Department of Public Works, Storm water Management. Drainage fees will be assessed on the net increase in impervious area.
  - D. Meet all requirements and pay any applicable plan check fee of the Aptos/La Selva Fire Protection 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. Pursuant to Sections 16.40.040 and 16.42.100 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 16.42.100, 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. All noise generated from the approved use shall be contained on the property.
  - C. 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.
  - D. The use of temporary generators to power the wireless communication facility is not allowed.
  - 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 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.
- 
- G. 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.
  - H. 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.
  - I. 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.

- J. 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.
  - K. The access road shall be permanently maintained to allow access to emergency vehicles at all times. Any obstruction of the access road, as a result of neglect or lack of maintenance, will be in violation of the conditions of this permit.
  - L. The equipment cabinet area must be locked at all times except when authorized personnel are present. The antennas shall not be accessible to the public.
  - M. All site, building, security and landscape 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.

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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, and to obtain final inspection, 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: \_\_\_\_\_

\_\_\_\_\_  
Steven Guiney, AICP  
Deputy Zoning Administrator

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

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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.

# 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: 111376

Assessor Parcel Number: 054-083-06

Project Location: 2 Seascope Village (Seascope Shopping Center)

**Project Description:** Proposal to install a new co-located wireless communications facility including 8 rooftop mounted antennas and a new equipment shelter on the site with an existing wireless communications facility. Requires Coastal Development Permit.

**Person or Agency Proposing Project:** Verizon Wireless C/O Tricia Knight

**Contact Phone Number:** 805 448-4221

- 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).

Specify type: \_\_\_\_\_

E.   X   **Categorical Exemption**

Specify type: Class 1 - Existing Facilities (Section 15301)

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

Addition to an existing wireless facility

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

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

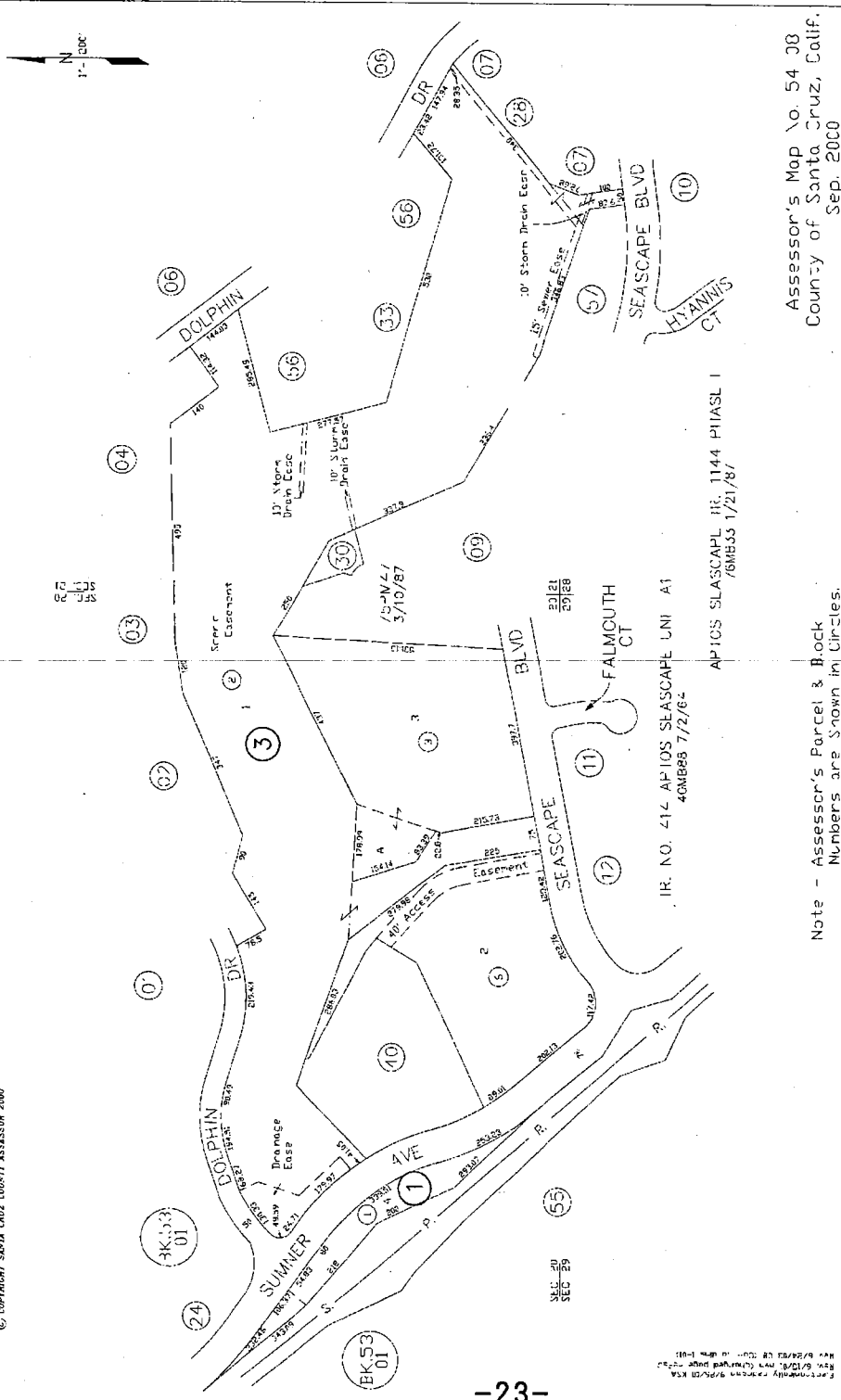
Date: \_\_\_\_\_

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P.R. APTOS RANCHE  
SECS. 20 & 21, T.11S., R.1E., M.D.B. & M.

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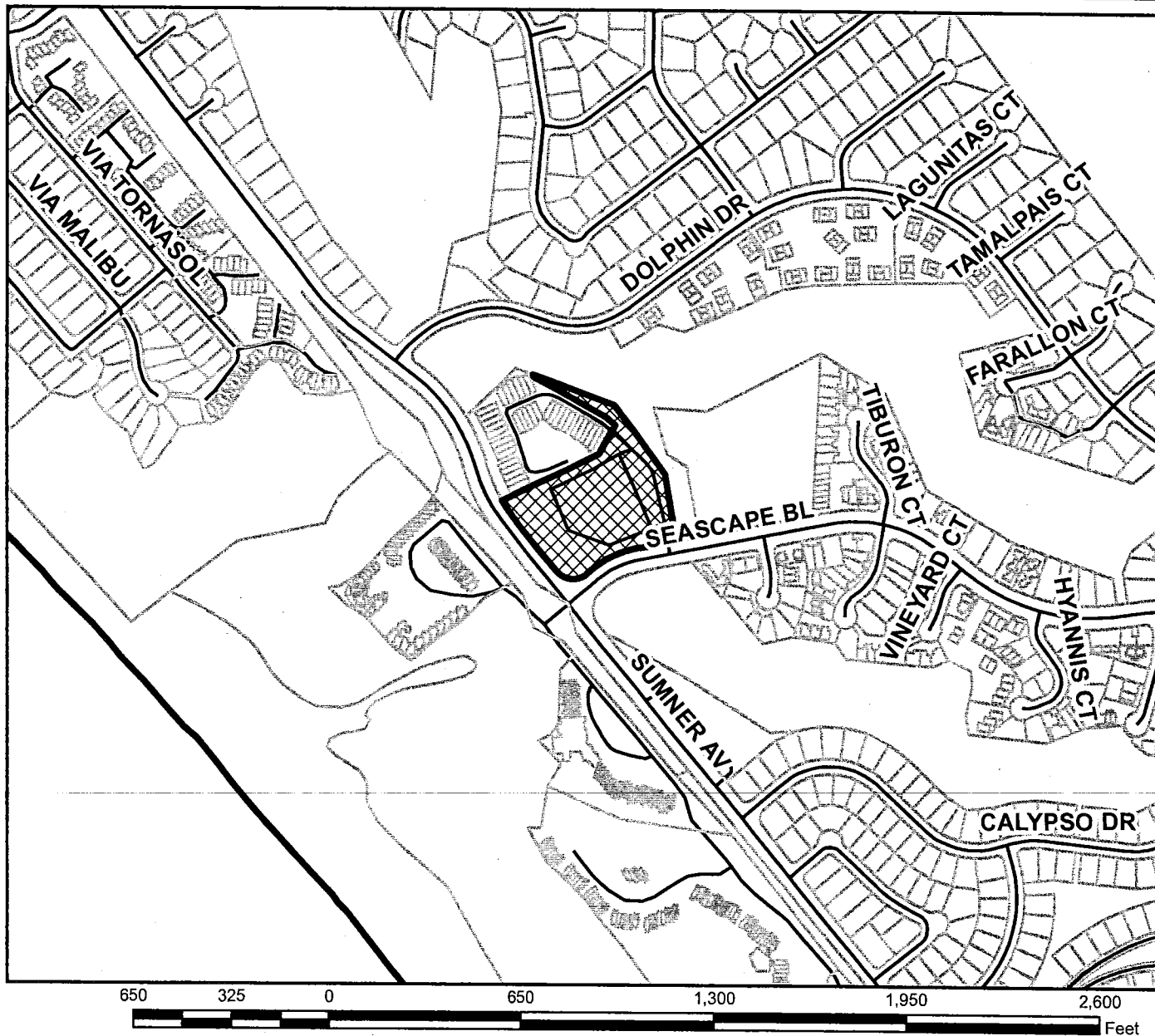


Assessor's Map No. 54-38  
County of Santa Cruz, Calif.  
Sep. 2000





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

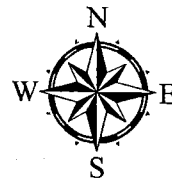


# Location Map



## LEGEND

-  APN: 054-083-06
-  Assessors Parcels
-  Streets
-  County Boundary

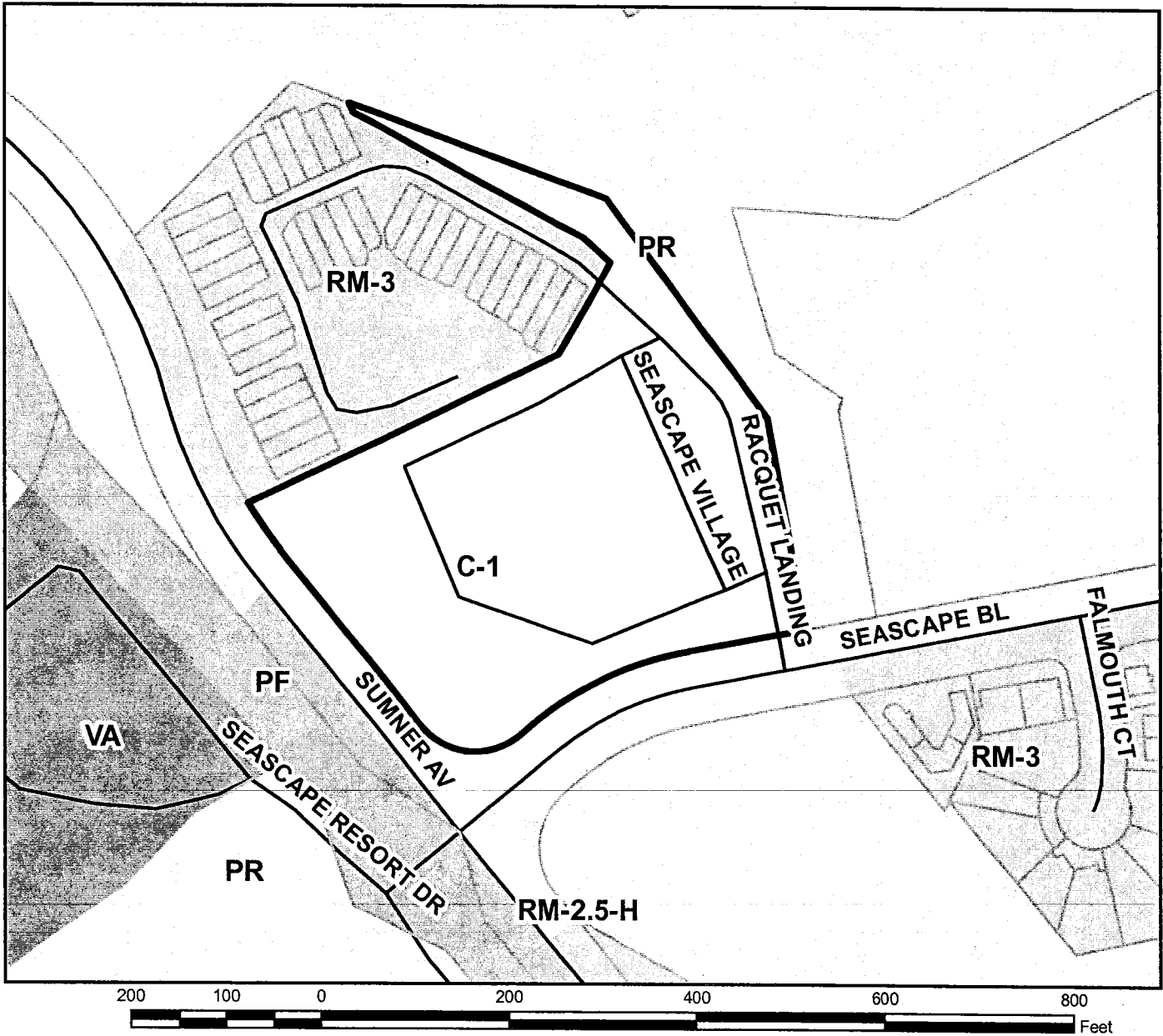


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County of Santa Cruz  
Planning Department  
November 2011



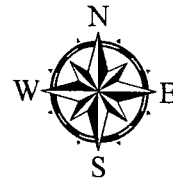


# Zoning Map



## LEGEND

- APN: 054-083-06
- Assessors Parcels
- Streets
- COMMERCIAL-NEIGHBORHOOD
- PARK
- RESIDENTIAL-MULTI FAMILY
- PUBLIC FACILITY
- COMMERCIAL-VISITOR ACCOM.

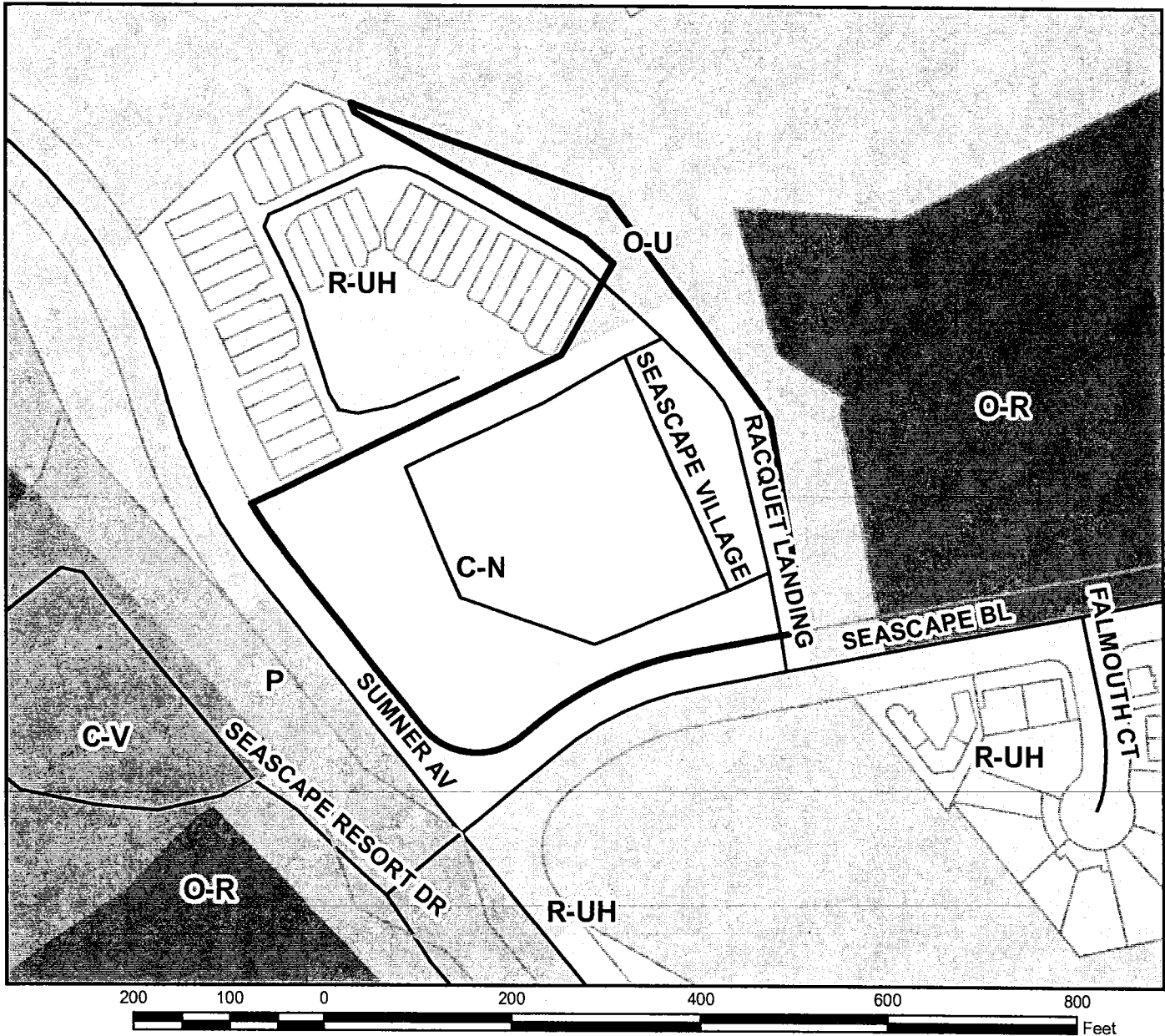


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November 2011

EXHIBIT E

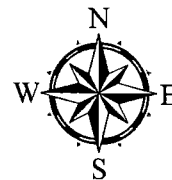


# General Plan Designation Map



## LEGEND

- APN: 054-083-06
- Assessors Parcels
- Streets
- Commercial-Neighborhood
- Urban Open Space
- Residential - Urban High Density
- Commercial-Visitor Accom.
- Parks and Recreation
- Public Facilities



Map Created by  
County of Santa Cruz  
Planning Department  
November 2011

**Verizon Wireless • Proposed Base Station (Site No. 205070 “Seascape”)  
2 Seascape Village • Aptos, California**

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

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of Verizon Wireless, a personal wireless telecommunications carrier, to evaluate the base station (Site No. 205070 “Seascape”) proposed to be located at 2 Seascape Village in Aptos, California, for compliance with appropriate guidelines limiting human exposure to radio frequency (“RF”) electromagnetic fields.

**Executive Summary**

Verizon proposes to install directional panel antennas above the roof of the two-story commercial building located at 2 Seascape Village in Aptos. The proposed operation will, together with the existing base station at the site, 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
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	2.35	0.47
[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



**Verizon Wireless • Proposed Base Station (Site No. 205070 "Seascape")  
2 Seascape Village • Aptos, California**

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

**Computer Modeling Method**

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

**Site and Facility Description**

Based upon information provided by Verizon, including zoning drawings by SAC Wireless, dated April 18, 2011, it is proposed to install eight directional panel antennas – two Antel Model BXA-70063-4CF, two Antel Model BXA-70040-4CF, two Andrew Model DBXNH-6565A-VTM, and two Andrew Model DBXCP-4545A-VTM – within the existing view screen enclosure above the roof of the two-story commercial building located at 2 Seascape Village in Aptos. The antennas would be mounted with up to 6° downtilt at an effective height of about 32½ feet above ground, 2½ feet above the roof, and would be oriented in pairs toward 90°T, 160°T, 250°T, and 320°T. The maximum effective radiated power in any direction would be 1,510 watts, representing simultaneous operation at 600 watts for PCS, 370 watts for cellular, and 540 watts for 700 MHz service.

Presently located within the view screen enclosure are similar antennas for use by AT&T Mobility. For the limited purpose of this study, the transmitting facilities of that carrier are assumed to be as follows:

Operator	Service	Maximum ERP	Antenna Model	Downtilt	Height
AT&T	PCS	1,500 watts	Kathrein 742-264	2°	34 ft
	Cellular	1,500			

**Study Results**

For a person anywhere at ground, the maximum RF exposure level due to the proposed Verizon operation by itself is calculated to be 0.013 mW/cm<sup>2</sup>, which is 2.6% of the applicable public exposure



**HAMMETT & EDISON, INC.**  
CONSULTING ENGINEERS  
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**Verizon Wireless • Proposed Base Station (Site No. 205070 "Seascape")  
2 Seascape Village • Aptos, California**

limit. The maximum calculated cumulative level at ground, for the simultaneous operation of both carriers, is 4.3% of the public exposure limit. The maximum calculated cumulative level at the second-floor elevation of any nearby building\* would be 8.3% 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. Levels may exceed the applicable public exposure limit on the roof of the subject building, near the antennas.

**Recommended Mitigation Measures**

Due to their mounting locations, the Verizon antennas would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, no access within 7 feet directly in front of the Verizon antennas, such as might occur during maintenance work on the roof, should be allowed while the base station is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. Posting explanatory warning signs† on the enclosure in front of the antennas, such that the signs would be readily visible from any angle of approach to persons who might need to work within that distance, would be sufficient to meet FCC-adopted guidelines. Similar measures should already be in place for the other carrier at the site; the applicable keep-back distance for that carrier has not been determined as part of this study.

**Conclusion**

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the base station proposed by Verizon Wireless at 2 Seascape Village in Aptos, 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. Posting explanatory signs is recommended to establish compliance with occupational exposure limitations.

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\* Including the residences located at least 150 feet away.

† Warning signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (e.g., a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter, and guidance from the landlord, local zoning or health authority, or appropriate professionals may be required.



**Verizon Wireless • Proposed Base Station (Site No. 205070 "Seascape")  
2 Seascape Village • Aptos, California**

**Authorship**

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2013. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.



*William F. Hammett*  
William F. Hammett, P.E.

707/996-5200

May 27, 2011



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

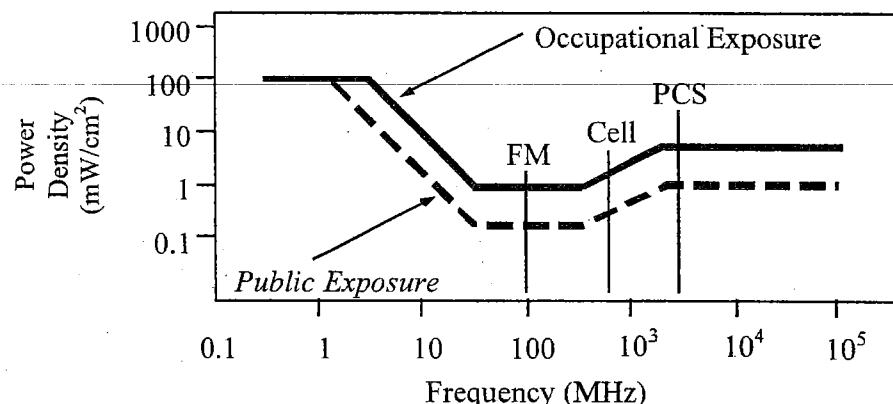
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Page 4 of 4

## 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.

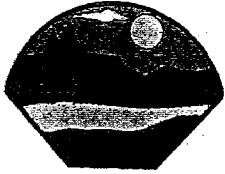
The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 ( $1.6 \times 1.6 = 2.56$ ). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired 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





## Aptos/La Selva Fire Protection District

6934 Soquel Drive • Aptos, CA 95003  
Phone # 831-685-6690 • Fax # 831-685-6699

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November 29, 2011

Planning Department  
County of Santa Cruz  
Attention: Randall Adams  
701 Ocean Street  
Santa Cruz, CA 95060

Subject: APN: 054-083-06 / Appl #111376  
19 Seascape Village

Dear Mr. Adams:

Aptos/La Selva Fire Department has reviewed the plans for the above cited project and has no objections as presented.

A plan review fee of \$50.00 is due and payable to the Aptos/La Selva Fire Department **PRIOR TO APPROVAL** of building application. Reminder: the enclosed Permit/Service Fees form must be submitted to the Aptos/La Selva Fire Department at time of payment.

- Any other requirements will be addressed in the Building Permit phase.
- ~~Plan check is based upon plans submitted to this office. Any changes or alterations shall be re-submitted for review prior to construction.~~

Sincerely,

*Carol Walburn, Deputy Fire Marshal  
for Jim Dias*

Jim Dias, Fire Marshal  
Fire Prevention Division  
Aptos/La Selva Fire Protection District

Cc: Michael Cobler  
1777 S. Bascom Avenue Ste D  
Campbell, CA 95008

Cc: Verizon Wireless  
Attn: Tricia Knight  
123 Seaciff Drive  
Pismo, CA 93449

## Randall Adams

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**From:** Eliece Horton [elieceh@yahoo.com]  
**Sent:** Friday, March 16, 2012 1:15 PM  
**To:** Randall Adams  
**Cc:** Ellen Pirie; tricianight@charter.net; Julie Anna Kellman  
**Subject:** PLEASE STOP 8 Cell Phone Antennas proposed for Seascape Village

Dear Mr. Adams,

RE: Verizons Application #11376

As a family with young children, who are frequent customers of the businesses at Seascape Village, I am writing to express my concern regarding Electromagnetic Radiation that will be emitted from the proposed 8 cell phone antennas on the Seascape Village property. I understand that due to the Telecommunications Act of 1996, the application can not be denied for health reasons, even though International studies have linked electromagnetic radiation to substantially higher risks of leukemia, brain cancer, DNA damage, reproductive disorders, depression, attention disorders, sleep disturbances and behavioral changes. Children are more vulnerable because they have thinner skulls and their brains are still developing. There is a high concentration of families with young children in this area. Our family will no longer feel safe patronizing the businesses of Seascape Village if these antennas are put in place. Ask yourself, who wants to sit outside on the patio of Palapas right next to 8 cellphone antennas? No one I know. As a Seascape Homeowner, I do not want to see the businesses of Seascape Village hurt by these antennas.

**R E C Y C L E: Ride your Bike again Today!**  
**Eliece Horton**

**Sheila McDaniel**

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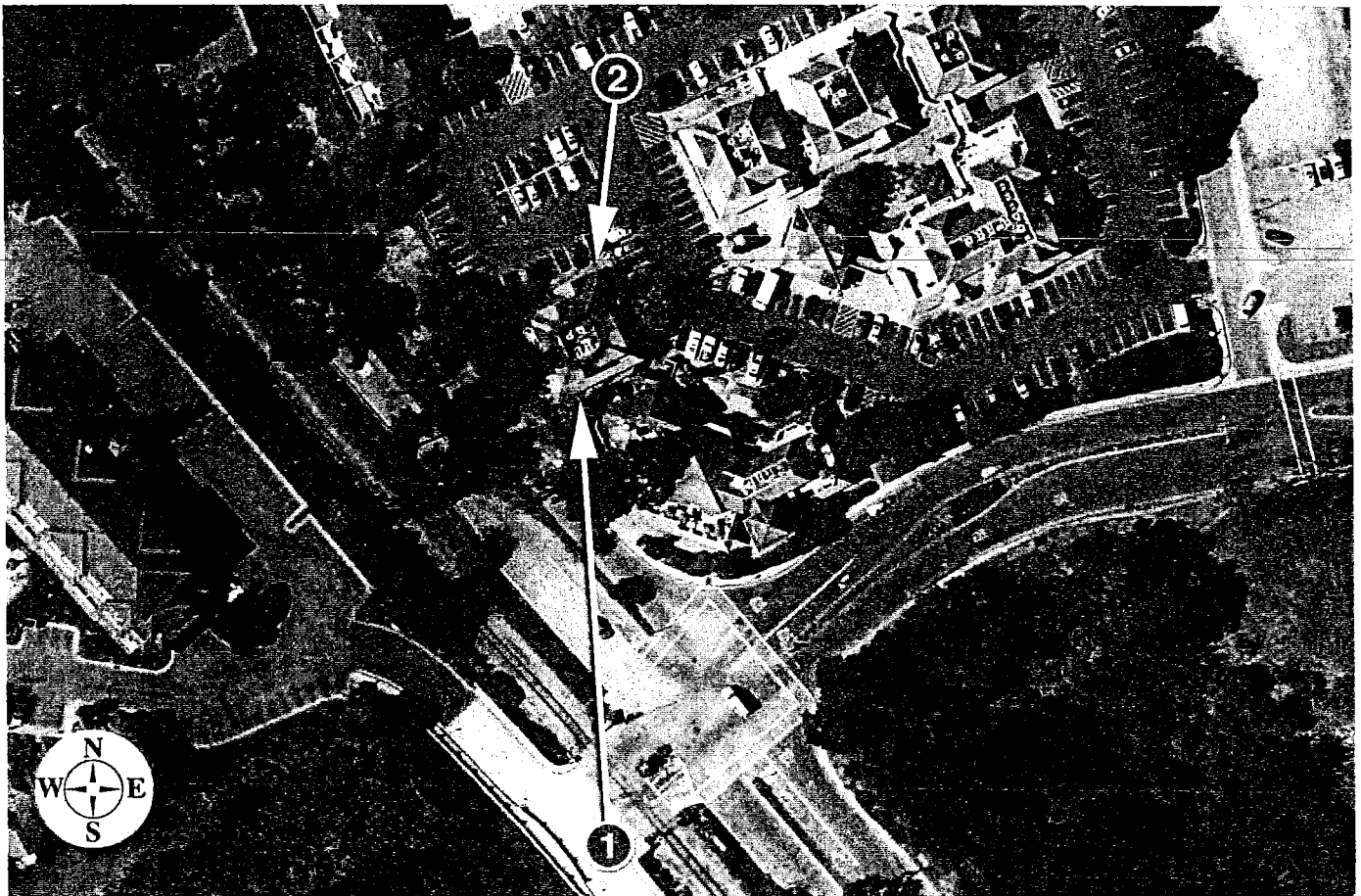
**From:** Randall Adams  
**Sent:** Monday, May 14, 2012 11:59 AM  
**To:** Sheila McDaniel  
**Subject:** FW: VERIZON #11376 PERMIT FOR TOWER AT SEASCAPE

**From:** SALLY BURKE [mailto:sally\_b@att.net]  
**Sent:** Monday, May 14, 2012 11:56 AM  
**To:** Randall Adams  
**Cc:** TRICIAKNIGHT@CHARTER.NET  
**Subject:** VERIZON #11376 PERMIT FOR TOWER AT SEASCAPE

We are owners of a condo at Racquet Landing near the Seascape shopping center where the proposed Verizon cell tower is to be located. We strongly oppose this installation! Please do not let a cell tower disrupt our peaceful setting. I am sure they can find a more suitable location AWAY from the view of homeowners and people visiting that shopping center. What a way to disfigure such a beautiful place!

Please vote NO and not allow this to happen.

Thank you,  
Ed and Sally Burke  
381 Racquet Landing  
Aptos, CA



Seascape Village

Site # SF1434

Aerial Map

7/28/10

2 Seascape Village #19  
Aptos, CA 95003

-36-

Applied Imagination 510 914-0500

EXHIBIT H



Seascape Village

Site # SF1434

Looking North from Summer Avenue

8/25/10

2 Seascape Village #19  
Aptos, CA 95003

-37-

View #1  
Applied Imagination 510 811 9500  
**EXHIBIT H**

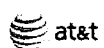


**Existing**



proposed antennas behind screening

**Proposed**



**Seascape Village**

**Site # SF1434**

**Looking South from Parking Lot**

8/25/10

2 Seascape Village #19  
Aptos, CA 95003

**View #2**