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Staff Report to the Zoning Administrator

Application Number: 06-0352

Applicant: James Singleton, for Sprint Nextel
Owner: Pacific, Gas & Electric Company
APN: 025-013-36

Agenda Date: March 16,2007
Agenda Item: 4
Time: After 10:00 a.m.

Project Description: Proposal to remove six existing antennas and replace them with six new antennas and remove an existing equipment cabinet and replace it with a new equipment cabinet within the existing lease area beneath the PG&E tower.

Location: Property located on the west side of Houts Dr., approximately 1000 feet north of Soquel Drive in the Live *Oak* Planning Area (no situs).

Supervisoral District: First District (District **Supervisor:** Janet Beautz)

Permits Required: Amendment to Commercial Development Permit 05-0261

Staff Recommendation:

- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- Approval of Application 06-0352, based on the attached findings and conditions.

Exhibits

A.	Project plans	E.	Assessor's parcel map
B.	Findings	F.	Zoning map
C.	Conditions	G.	Comments & Correspondence
D.	Categorical Exemption (CEQA determination)		

Parcel Information

Parcel Size:	About 5 acres
Existing Land Use - Parcel:	Utility Facility: PG&E Substation
Existing Land Use - Surrounding:	Multi-family residential/senior care facility to the west, Single-family residential to the north and east, PG&E substation and Dominican Hospital to the south
Project Access:	Gravel driveway from Houts Drive
Planning Area:	Live *Oak*

Land Use Designation:	P-U (Public Facility, Public Utility)
Zone District:	PF (Public and Community Facilities)
Coastal Zone:	__ Inside X Outside
Appealable to Calif. Coastal Comm.	__ Yes X No

Environmental Information

Geologic Hazards:	Not mapped/no physical evidence on site
Soils:	No soils report required.
Fire Hazard:	Not a mapped constraint
Slopes:	N/A
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:	X Inside __ Outside
Water Supply:	City of Santa Cruz Water District
Sewage Disposal:	Santa Cruz County Sanitation District
Fire District:	Central Fire Protection District
Drainage District:	Zone 5

History

The existing Sprint Nextel antennas were installed in 1999 without a permit as the installation pre-dated the County's permit requirements for wireless communication facilities (see letter from signed by Michael Ferry, Exhibit G). Since this installation, Discretionary Permit 05-0261 was approved for the eo-location of a Metro PCS wireless communication facility.

Project Setting

The subject parcel is located in an area with a diverse range of uses, including: the Dominican Hospital complex and associated medical offices to the south, residential neighborhoods to the north and east, and a senior congregate facility to the immediate west.

The project site is a five-acre parcel currently used as a Pacific, Gas and Electric (PG&E) substation with a high-powered transmission line and associated transmission tower located in the northwest comer of the site. The wireless communication facility is located on this tower.

The current proposal is to replace the six existing Sprint Nextel antennas with six new antennas and replace an existing equipment cabinet with a new cabinet. No increase in height to the tower is proposed. Because this proposal is considered to be a "major modification" as defined in

County Code 13.10.660 (Regulations for the siting, design, and construction of wireless communication facilities), a discretionary permit is required.

Zoning & General Plan Consistency

The subject property is located in the PF (Public and Community Facilities) zone district, a designation which allows wireless communication facilities with a public hearing. The project is consistent with the site's (P) Public Facility General Plan designation. The proposed antennas and the associated equipment cabinet meet the applicable provisions of the County's Wireless Communication Ordinance.

Radio Frequency **(RF)** Exposure

The maximum ambient RF exposure level anywhere on the ground within 1,000 feet would be .32% of the applicable RF exposure levels established by the Federal Communications Commission (FCC). Beyond 1,000 feet the RF exposure is below .1% of the FCC exposure limit. For the roof or the second floor of any nearby building, the maximum calculated exposure level would be .62% of the public exposure limit.

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

Design Review

The proposed replacement antennas and equipment cabinet have been reviewed by the County's Urban Designer to evaluate their potential visual impacts. Given that this proposal is to replace existing antennas and an equipment cabinet which are located on or below an 87-foot tall transmission tower, the visual impact of this project will be negligible relative to the visual impact of the tower itself. The new equipment cabinet will be screened behind an eight-foot tall fence and the new antennas shall be painted to match the existing tower.

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 **06-0352,** 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:** Annette Olson
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Sprint

Together with NEXTEL

PROJECT NAME: **DOMINICAN HOSPITAL**

SITE NUMBER: **CA-4113-A**

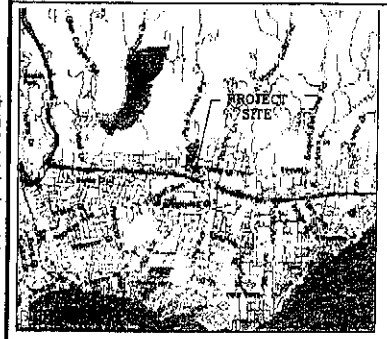
PROJECT TYPE: COLLOCATION OF ANTENNAS ON AN EXISTING TRANSMISSION TOWER AND ADDED GROUND EQUIPMENT IN EXISTING COMPOUND

PROJECT LOCATION: PAUL SWEET SUBSTATION
SANTA CRUZ, CA 95065

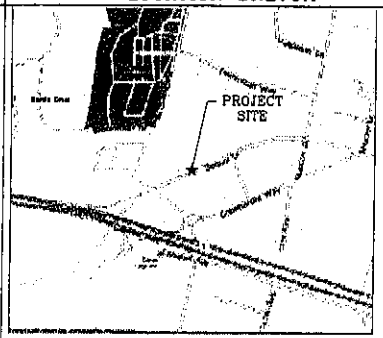
SITE OWNER NAME: PG&E/ SAP # 40598669

TOWER #: 15/130 GREEN VALLEY - PAUL SWEET 115 KV LINE

OVERVIEW MAP



LOCATION SKETCH



SITE INFORMATION

1. LATITUDE (NAD83): 36°59'38.12"N
2. LONGITUDE (NAD 83): 121°56'56.37"W
3. TYPE OF STRUCTURE: TRANSMISSION TOWER
4. GROUND ELEVATION: 174.0'
(A.M.S.L. IN FEET, NAVD 88)

ZONING DATA

1. APN: 025-013-15
2. SBE: 135-44-005B, PARCEL 1
3. ZONING CLASSIFICATION: PF
4. JURISDICTION: SANTA CRUZ COUNTY

LIST OF DRAWINGS

ARCHITECTURAL	ISSUE
T-1 COVER SHEET	B
A-1 SITE PLAN AND LEGAL DESCRIPTION	B
A-2 COMPOUND PLAN	B
A-3 ELEVATIONS	B

CONTACT INFORMATION

SITE ACQUISITION:	JAMES SINGLETON 925-362-9878
POWER COMPANY:	PG&E 925-866-3431
TELCO COMPANY:	SBC 945-824-8634
LAND OWNER:	PG&E 925-866-3431
CONSTRUCTION MANAGER:	RICH ROJITA 928-209-9248
CONSULTANT REPRESENTATIVE:	SCOTT STEDING MORRISON HERSHFIELD 925-413-6208

SITE DIRECTIONS

FROM IRVINE, CA, HEAD NORTHEAST FROM COMMERCE AND TURN LEFT AT EL CAMINO REAL. TRAVEL 0.5 MI. TURN LEFT AT JAMBOREE RD, TRAVEL 0.1 MI. AND TAKE THE I-5 NORTH RAMP. TRAVEL 43 MI. BEAR RIGHT ONTO THE CA-134 RAMP TO VENTURA. TRAVEL 0.4 MI. AND MERGE INTO CA-134 WEST. TRAVEL 4.6 MI. BEAR LEFT AT US-101 NORTH. TRAVEL 323 MI AND TAKE THE VIERRA CYN RD EXIT 336 TO MONTEREY PENINSULA (CA-156 W). TRAVEL 0.2 MI. TURN RIGHT AT CA-156, TRAVEL 5.1 MI AND TAKE THE CA-183 RAMP TO CASTROVILLE (CA-1 N).TRAVEL 0.3 MI. TURN RIGHT AT MERRITT ST. TRAVEL 1.0 MI THEN TURN RIGHT AT CA-1. TRAVEL 3.0 MI. CONTINUE ON SALINAS RD. TRAVEL 3.5 MI. THEN CONTINUE ON CA-1. TRAVEL 17 MI. TAKE THE EXIT TO SOQUEL DRIVE. TRAVEL 0.1 MI. THEN TAKE THE RAMP TO SOQUEL AVENUE/SOQUEL DRIVE AND TRAVEL 186 FT. BEAR LEFT AT COMMERCIAL WAY AND TRAVEL 0.1 MI. THEN TURN RIGHT AT SOQUEL DR. ONTO DOMINICAN OAKS DRIVEWAY. FOLLOW THE DRIVEWAY TO THE SERVICE ROAD NEXT TO THE DOMINICAN ED. CENTER BLDG. TAKE A LEFT AT THE SERVICE ROAD. THE SITE IS LOCATED AT THE END OF THE SERVICE ROAD.

APPROVALS

Construction Project Engineer	Date
RF Engineer	Date
Leasing	Date
Zoning	Date

No.	Date	Action
C		
B	04/17/08	ISSUED FOR ZONING
A	03/10/08	ISSUED FOR CLIENT REVIEW

MORRISON HERSHFIELD

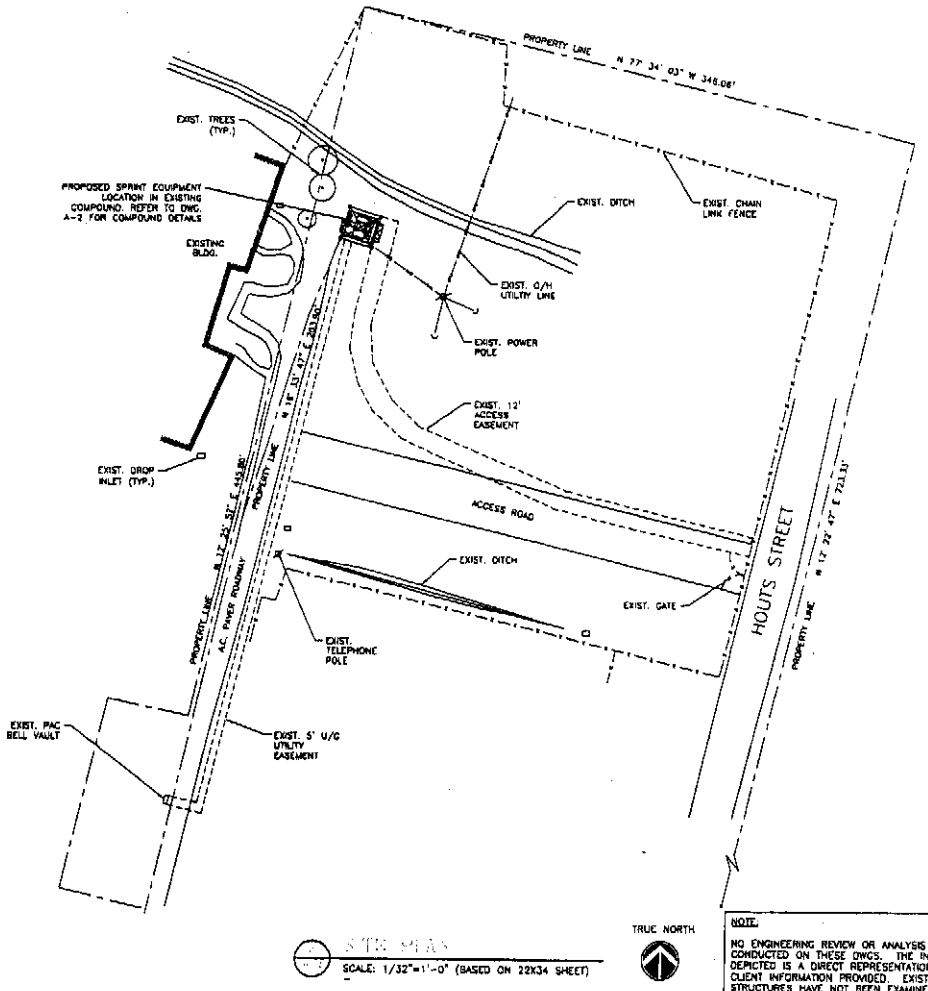
Client: Sprint Together with NEXTEL

Project: DOMINICAN HOSPITAL
CA-4113-A
PAUL SWEET SUBSTATION
SANTA CRUZ, CA 95065

Drawing Title: COVER SHEET

Project No.	9063023 CA-4113-A
Designer: APN	Date: 03/13/08
Drawn By: ERG	Checked By: LFS
PM Review: GB	Client Approval
Issue No.	Drawing No.
B	T-1

EXHIBIT A



SITE PLAN
SCALE: 1/32"=1'-0" (BASED ON 22X34 SHEET)

TRUE NORTH

NOTE:
NO ENGINEERING REVIEW OR ANALYSIS HAS BEEN CONDUCTED ON THESE DWGS. THE INFORMATION DEPICTED IS A DIRECT REPRESENTATION OF THE CLIENT INFORMATION PROVIDED. EXISTING STRUCTURES HAVE NOT BEEN EXAMINED TO ENSURE THAT THEY WILL ACCOMMODATE THE PROPOSED EQUIPMENT LOADING AND OR CONFIGURATION.

No.	Date	Action
C		
B	04/17/06	ISSUED FOR ZONING
A	03/10/06	ISSUED FOR CLIENT REVIEW

MORRISON HERSHFIELD

Client:
Sprint
Together with NEXTEL

Project:
DOMINICAN HOSPITAL
CA-4113-A
PAUL SWEET SUBSTATION
SANTA CRUZ, CA 95065

Drawing Title:
SITE PLAN
AND
LEGAL DESCRIPTION

Project No. 9063023 CA-4113-A	
Designer: APA	Date: 02/13/06
Drawn By: DPC	Checked By: LFX
PM Review: DB	Client Approval
Issue No. B	Drawing No. A-1

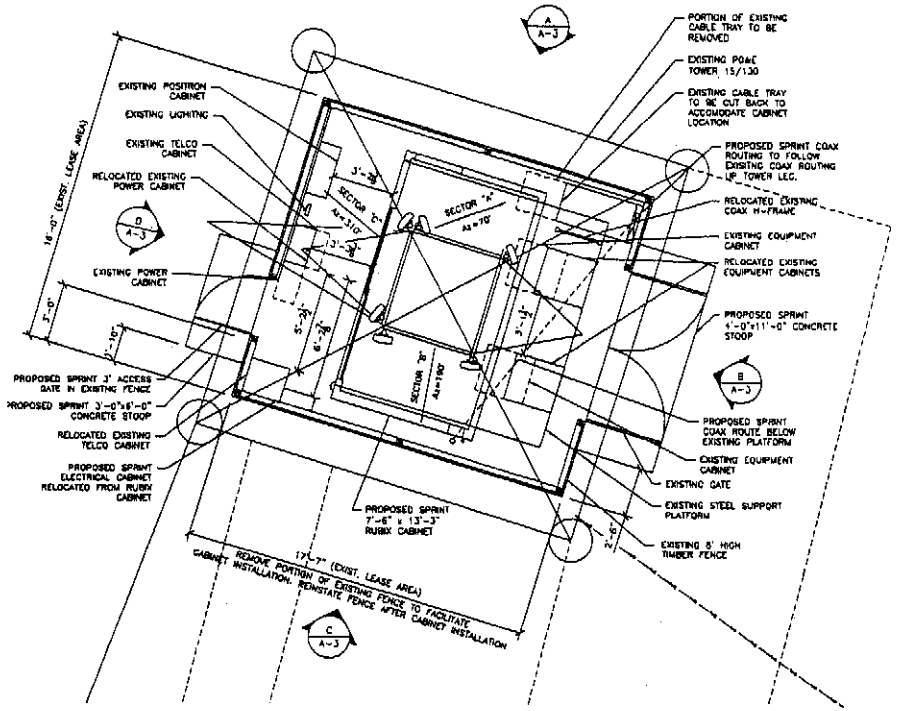
EXHIBIT D

COMPOUND NOTES

1. THE MINIMUM LOWEST FIRST FLOOR ELEVATION SHALL NOT BE LESS THAN 4" ABOVE CROWN OF ROAD OR THE FEDERAL AND/OR COUNTY FLOOD CRITERIA ELEVATION, WHICHEVER IS HIGHER. CONTRACTOR SHALL SUBMIT AN ELEVATION CERTIFICATE (IF REQUIRED BY THE JURISDICTION) UPON COMPLETION OF PROJECT.
2. WORK OUTSIDE OF THE PROPERTY LINE INCLUDED IN THIS SET OF DRAWINGS SHALL BE, BUT NOT LIMITED TO, DRIVEWAYS, SODDING TO ASPHALT LINE AND UTILITY CONNECTIONS.
3. EXISTING TREES WITHIN CONSTRUCTION FOOTPRINT SHALL BE REMOVED AND PROPERLY DISPOSED OF. CONTRACTOR SHALL PROCURE PERMIT PRIOR TO REMOVAL.
4. CONTRACTOR AND SUBCONTRACTORS SHALL VERIFY ALL UTILITY SERVICE CONNECTION LOCATIONS PRIOR TO SUBMITTING BID AND PROCEEDING WITH WORK. IT IS RECOMMENDED THAT THE CONTRACTOR VISIT THE SITE AND VERIFY ALL DIMENSIONS AND NOTES BEFORE SUBMITTING BID AND PROCEEDING WITH WORK.
5. BURY PHONE, AND ELECTRIC SERVICE NO LESS THAN 18" BELOW FINISH GRADE WITH 1'-0" RADIUS SAND BACK FILL AROUND PIPES. COORDINATE W/ ELECTRICAL DRAWINGS.
6. IN ORDER TO AVOID ANY CONFLICTS, CONTRACTOR SHALL COORDINATE ALL HIS PRACTICAL TRADES.

HANDICAP REQUIREMENTS:

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS NOT REQUIRED, IN ACCORDANCE WITH CALIFORNIA STATE ADMINISTRATIVE CODE, PART 2, TITLE 24, SECTION 11056.3.42, EXCEPTION 1.



COMPOUND PLAN
SCALE: 3/8"=1'-0" (BASED ON 22x34 SHEET)
SCALE: 1/4"=1'-0" (BASED ON 11x17 SHEET)

TRUE NORTH

NOTE:

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No	Date	Action
C		
B	04/17/08	ISSUED FOR ZONING
A	03/10/08	ISSUED FOR CLIENT REVIEW

MORRISON HERSHFIELD

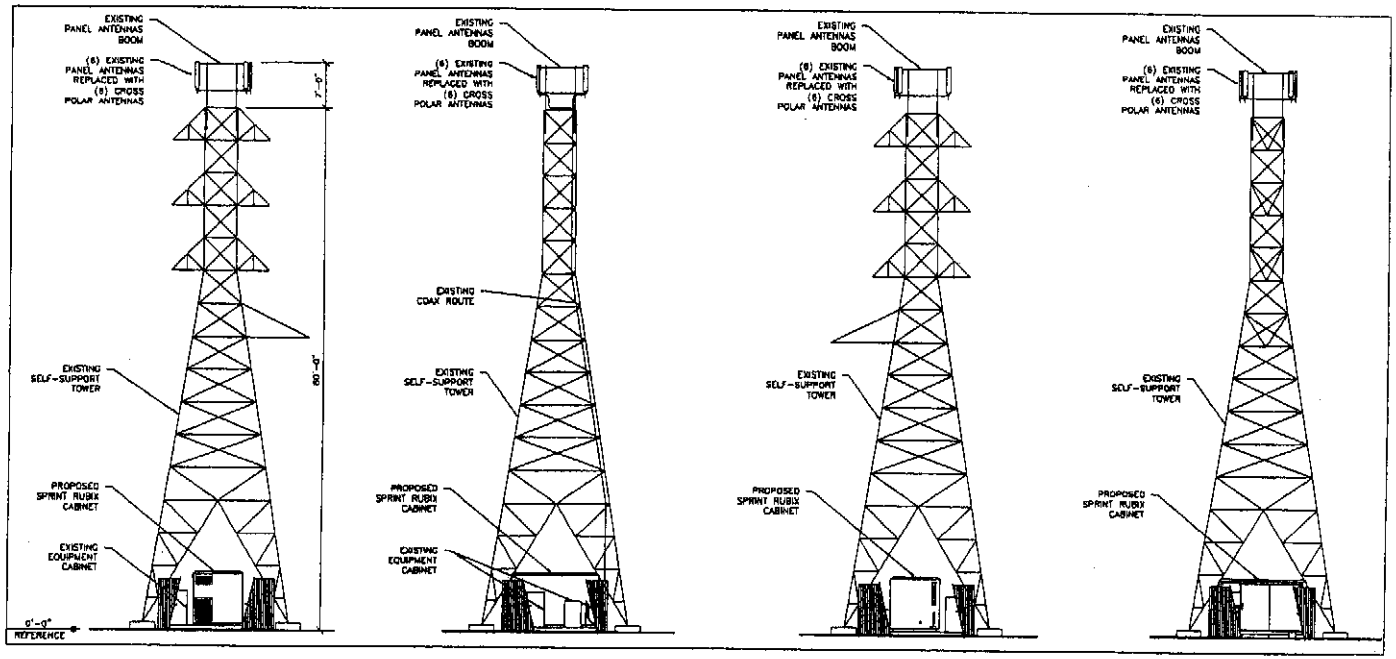
Client: Sprint
Together with NEXTEL

Project:
DOMINICAN HOSPITAL
CA-4113-A
PAUL SWEET SUBSTATION
SANTA CRUZ, CA 95065

Drawing Title:
COMPOUND PLAN

Project No: 9063023 CA-4113-A	
Designed: APA	Date: 03/13/08
Drawn By: ERG	Checked By: LFS
PM Review: DB	Client Approver
Issue No: B	Drawing No: A-2

EXHIBIT A



SCALE: 1/8"=1'-0" (BASED ON 22x34 SHEET)
SCALE: 1/16"=1'-0" (BASED ON 11x17 SHEET)

SCALE: 1/8"=1'-0" (BASED ON 22x34 SHEET)
SCALE: 1/16"=1'-0" (BASED ON 11x17 SHEET)

SCALE: 1/8"=1'-0" (BASED ON 22x34 SHEET)
SCALE: 1/16"=1'-0" (BASED ON 11x17 SHEET)

SCALE: 1/8"=1'-0" (BASED ON 22x34 SHEET)
SCALE: 1/16"=1'-0" (BASED ON 11x17 SHEET)

NOTE:

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No.	Date	Action
C		
B	04/17/08	ISSUED FOR ZONING
A	03/10/08	ISSUED FOR CLIENT REVIEW

MORRISON HERSHFIELD

Client: Sprint
Together with NEXTEL

Project:
DOMINICAN HOSPITAL
CA-4113-A
PAUL SWEET SUBSTATION
SANTA CRUZ, CA 95065

Drawing Title:
ELEVATIONS

Project No. 9083023 CA-4113-A	
Designer: APA	Date: 03/13/08
Drawn By: ERC	Checked By: LFS
PM Review: DB	Client Approval
Issue No. B	Drawing No. A-3

EXHIBIT A

Wireless Communication Facility Use Permit Findings

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

This finding can be made in that the proposed replacement antennas and equipment cabinet are to be sited on an existing transmission tower. The visual impact of this tower eclipses the negligible visual impact of the replacement antennas. In addition, the equipment cabinets will be screened behind an eight-foot tall locked fence and the antennas will be painted to match the existing tower. This proposal will not significantly affect any designated visual resources, environmentally sensitive resources or any other significant County resource as its visual impact will be negligible and it will be located in an area for which there are no known significant County resources.

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

This finding can be made in that the proposed site is not located in a prohibited or restricted area as set forth in Sections 13.10.661(b) and 13.10.661(c). **As** such, no alternative site analysis or alternative designs are required. Wireless communication facilities are an allowed use with the PF (Public and Community Facilities) zone district.

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

This finding can be made, as the project site is not the subject of any code compliance investigations. This application does not propose any alterations to the existing transmission facility beyond the installation of the Wireless communication facility as shown in Exhibit **A.**

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

This finding can be made, in that the proposed antennas will replace existing antennas and no increase in height is proposed. **As** such, the proposal will not create a hazard for aircraft in flight.

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

The **maximum** ambient RF exposure level anywhere on the ground **within** 1,000 feet would be .32% of the applicable RF exposure levels established by the Federal Communications Commission (FCC). For the roof or the second floor of any nearby building, the maximum calculated exposure level would be .62% 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.

The subject parcel is not located within the coastal zone.

Development Permit Findings

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

This finding *can* be made, as the proposed antennas will comply with all FCC standards and will not be visually obtrusive due to their location on top of an existing transmission tower. Construction will comply with prevailing building technology, the Uniform Building Code, and the County Building ordinance to insure the optimum in safety and the conservation of energy and resources. Existing security measures are in place to prevent people from climbing the transmission tower.

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 three proposed antennas and equipment cabinets comply with the provisions **of** Sections 13.10.660 through 13.10.668 of the County Code (Regulations for the siting, design, and construction of Wireless Communication Facilities), as detailed in the above findings. The facility **meets** all site standards of **the** PF (public and Community Facilities) zone district, including setbacks and height (as the transmission tower is an existing facility). Wireless Communication Facilities are encouraged on PF-zoned properties.

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 requirements specified for the Public Facility (P) land use designation in the County General Plan.

The proposed project complies with General Plan Policy 5.10.3 (protection of Public Vistas), as the antennas will be located **on** an existing PG&E transmission tower, and will not result in a significant degradation of the public viewshed as the antennas will be integrated into the structure of the tower. Furthermore, the antennas will be painted a light gray to match the color of the tower and existing antennas.

Noise from the proposed equipment cabinets will not exceed the **maximum** noise levels at the property line as specified in Policy 6.9b of the General Plan, **as** detailed in the submitted Noise Study (Exhibit I).

A specific plan **has** not been adopted for this portion of Live *Oak.*

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 adequate electrical utilities are available to the **site** (it is a PG&E substation) and the project proposes to replace existing equipment which does not currently overload utilities. Occasional inspections and regular maintenance will not generate a significant amount of traffic.

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, **as** the antennas will be integrated into the design of the transmission tower, and the equipment cabinets will be located **within** an eight-foot **high** wood fence to shield **them** from view of neighboring properties.

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, as the proposed location of the antennas on an existing transmission tower will be visually compatible with the site, as they will not be readily visible due to their coloration and location adjacent to existing antennas. The proposed equipment cabinets will be enclosed in **a** eight-foot high wood fence to shield them from view of neighboring properties.

Conditions of Approval

Exhibit **A:** **4** sheets by Morrison Hershfield dated 2/13/06; 2 sheets by Evans Survey & Engineering, dated **6/1/06.**

I. This permit authorizes the replacement of six antennas with six new antennas in the same location (no increase in height) and the replacement of an existing equipment cabinet with a new equipment cabinet. 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 off-site work performed in the County road right-of-way.

II. Prior to issuance of a Building Permit the applicant/owner shall:

A. Submit proof that these conditions have been recorded in the official records of the County of Santa Cruz (Office of the County Recorder).

B. 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 **finish** of exterior materials and color of roof covering for Planning Department approval. Any color boards must be in 8.5" **x** 11" format.

2. Details showing compliance with fire department requirements, including all requirements of the Urban Wildland Intermix Code, if applicable.

3. Show the location and wording of 12" **x 12"** bilingual signage notifymg the public that a wireless communication facility is located on the property.

C. 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.

EXHIBIT C

D. To insure that the wireless communication facility remains in good visual condition, the applicant shall submit a maintenance program prior to building permit issuance which includes the following:

1. **A** signed contract for maintenance with a company that provides for annual visual inspection and follow-up repair, painting and resurfacing as necessary for all parts of the proposal, including the fence surrounding the equipment cabinets.

E. Meet all requirements of and pay Zone 5 drainage fees to the County Department of Public Works, Drainage, if required. 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, if required.

G. Meet all requirements and pay any applicable plan check fee of the Central 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. The replacement antennas shall not be located any higher than the existing antennas, which are to be replaced.

B. All site improvements shown on the final approved Building Permit plans shall be installed.

C. All inspections required by the building permit shall be completed to the satisfaction of the County Building Official.

D. The project must comply with all recommendations of the approved soils reports.

E. 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. Noise: The project's noise level must be in compliance with General Plan policies

6.9.1 and 6.9.4. Should the noise level exceed the limits established in the General Plan policy 6.9.1 and 6.9.4, sound attenuation will be required to bring the project into compliance.

B. Additional Facilities: A Planning Department review that includes a public hearing shall be required for any future co-location at this wireless communications facility.

C. Hazard Posting: The NLER hazard zone will be posted with bilingual NIER hazard warning signage that also indicates the facility operator and a 24-hour emergency contact who is authorized by the applicant to act on behalf of the applicant regarding an emergency situation. In addition, a 12" x 12" sign notifymg the public that a wireless communication facility exists on site must be posted in an area readily visible by the public.

D. Access Control: 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.

E. Equipment Modification: Any modification in the type of equipment shall be reviewed and acted on by the Planning Department staff. The County may deny or modify the conditions at this time, or the Planning Director may refer it for public hearing before the Zoning Administrator.

F. Facility Maintenance: The facility shall be permanently maintained and replacement materials and/or paint shall be applied as necessary to maintain it.

G. NIER Report: Within **90** days of the commencement of normal operations, or within 90 days after any modification to power output of the facility, a report must be submitted documenting the non-ionizing electromagnetic radiation (NIER) emissions of the project in order to verify compliance with the FCC's NIER standards.

H. Lighting: 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.

I. Future Technologies: If future technological advances would allow for reduced visual impacts resulting from the proposed telecommunication facility, the applicant agrees through accepting the terms of this permit to 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 applicant agrees to 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

vegetation.

J. Future Studies: 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.

K. Major Modification to Power Output: Any future major modification that would increase the power output of the wireless communication facility, as defined in Section 13.10.660(d), shall require the submission of an affidavit by a professional engineer registered in the State of California that the proposed facility improvements will not result in RF exposure levels to the public in excess of FCC's NIER exposure standard. In addition, within ninety (90) days of commencement of operation of the modified facility, the applicant shall conduct RF exposure level monitoring of the site, utilizing the Monitoring Protocol, and shall submit a report to the Planning Department documenting the results of said monitoring.

L. Transfer of Ownership: In the event that the original permittee sells its interest in the wireless communication 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. A new contact name shall be provided by the succeeding carrier to the Planning Department within thirty days of transfer of interest of the facility.

M. Noncompliance: 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.

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, it officers, employees, and agents to attack, set aside, void, or annul this development approval of the COUNTY or any subsequent amendment of this development approval which is requested by the Development Approval Holder.

A. COUNTY shall promptly notify the Development Approval Holder of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. COUNTY shall cooperate fully in such defense. If COUNTY fails to notify the Development Approval Holder within sixty (60) days of any such claim, action, or proceeding, or fails to cooperate fully in the defense thereof, the Development Approval Holder shall not thereafter be responsible to

defend, indemnify, or hold harmless the COUNTY if such failure to notify or cooperate was significantly prejudicial to the Development Approval Holder.

B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:

1. COUNTY bears its own attorney's fees and costs; and

2. COUNTY defends the action in good faith.

C. Settlement. The Development Approval Holder shall not be required to pay or perform any settlement unless such Development Approval Holder has approved the settlement. When representing the County, the Development Approval Holder shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the County.

D. Successors Bound. "Development Approval Holder" shall include the applicant and the successor'(s) in interest, transferee(s), and assign(s) of the applicant.

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

Please note: This permit expires two years from the effective date on the expiration date listed below unless you obtain **the required permits and commence construction.**

Approval Date: _____

Effective Date: _____

Expiration Date: _____

Don Bussey	Annette Olson
Deputy Zoning Administrator	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.

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: 06-0352
Assessor Parcel Number: 025-013-36
Project Location: no situs

Project Description: Proposal to replace six existing antennas with six new antennas and replace an existing equipment cabinet with a new cabinet at an existing wireless communication facility.

Person or Agency Proposing Project: James Singleton, for Sprint Nextel

Contact Phone Number: (925) 362-9676

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 2 – Replacement or Reconstruction (Section 15302)

F. Reasons why the project is exempt:

Replacement of existing equipment on and below an existing tranmission tower.

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

Date: 2/7/07

Annette Olson, Project Planner

EXHIBIT D

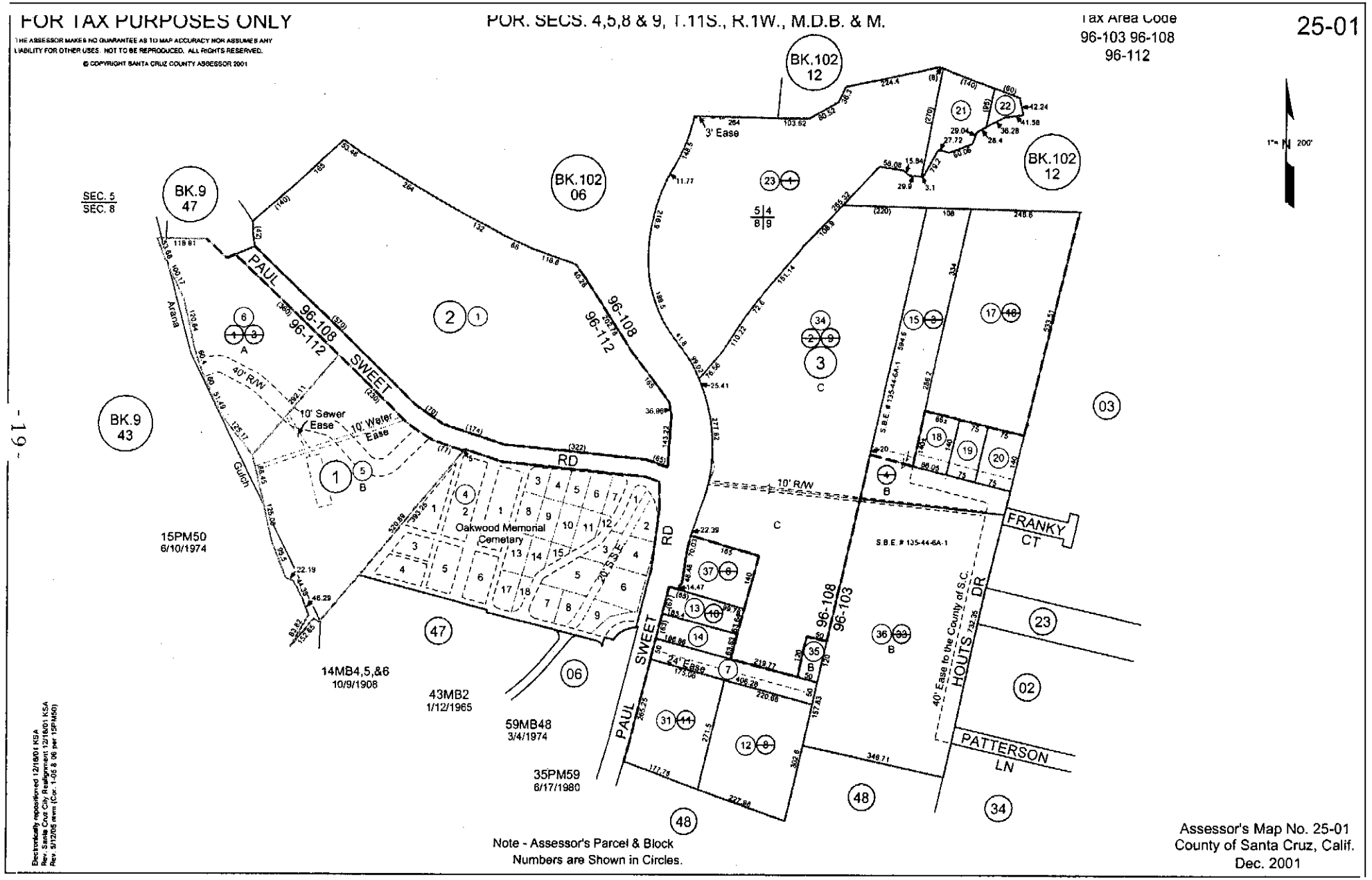
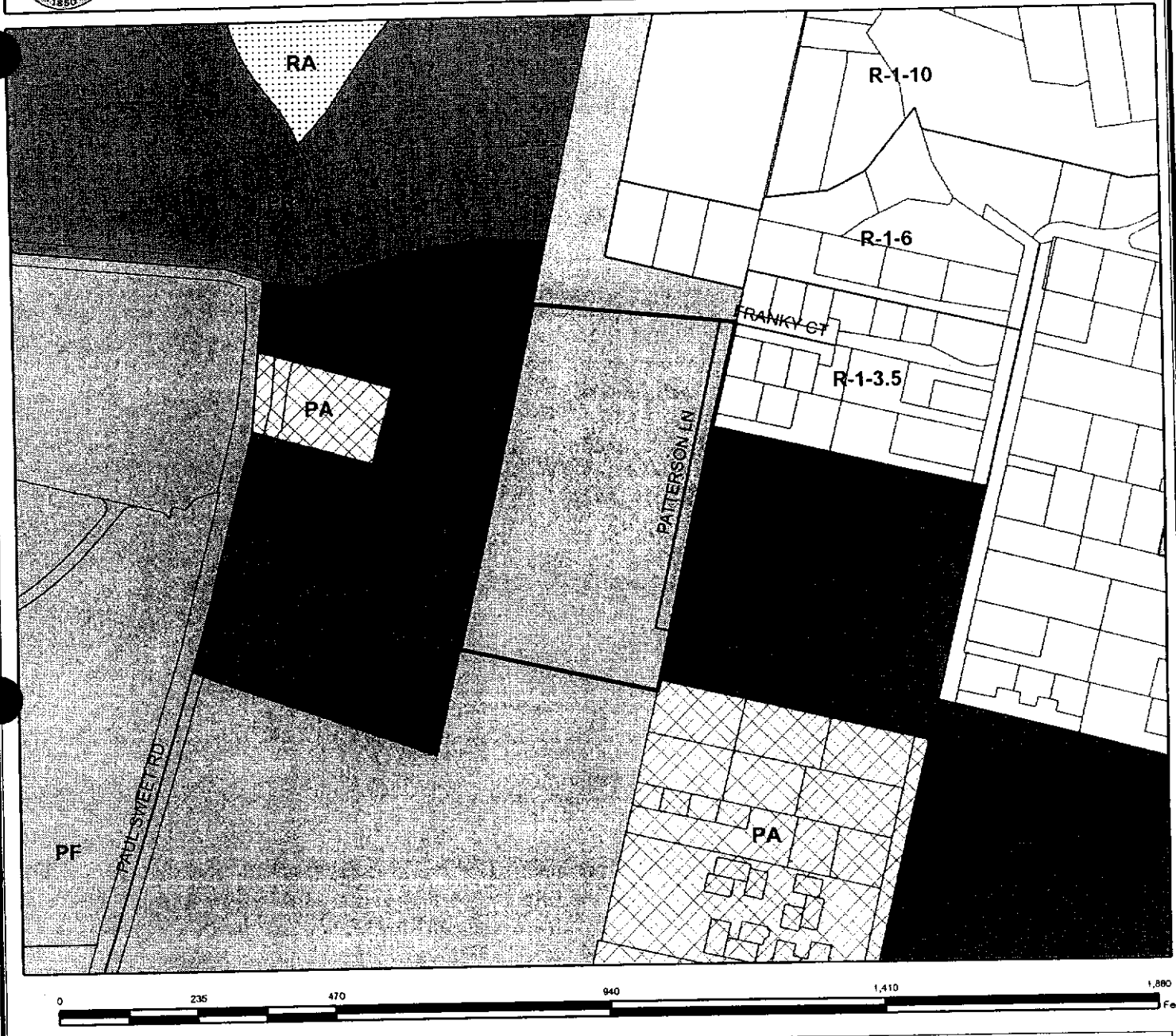

FOR TAX PURPOSES ONLY
THE ASSESSOR MAKES NO GUARANTEE AS TO MAP ACCURACY NOR ASSUMES ANY LIABILITY FOR OTHER USES. NOT TO BE REPRODUCED. ALL RIGHTS RESERVED.
© COPYRIGHT SANTA CRUZ COUNTY ASSESSOR 2001
POR. SECS. 4,5,8 & 9, T.11S., R.1W., M.D.B. & M.
Tax Area Code
96-103 96-108
96-112
25-01
1" = N 200'
BK.102 12
BK.102 06
BK.9 47
BK.9 43
SEC. 5
SEC. 8
PAUL SWEET RD
96-108
96-112
96-103
Arana Gulch
40' R/W
10' Sewer Ease
10' Water Ease
3' Ease
10' R/W
24' Ease
40' Ease to the County of S.C.
Oakwood Memorial Cemetery
FRANKY CT
HOUTS DR
PATTERSON LN
S.B.E. # 135-44-6A-1
15PM50
6/10/1974
14MB4,5,&6
10/9/1908
43MB2
1/12/1965
59MB48
3/4/1974
35PM59
6/17/1980
Note - Assessor's Parcel & Block Numbers are Shown in Circles.
Assessor's Map No. 25-01
County of Santa Cruz, Calif.
Dec. 2001
Electronically reconfirmed 12/18/01 KSA
Rev: Santa Cruz City Realignment 12/18/01 KSA
Rev: 5/12/05 revm (Cor. 1-05 & 96 per 15PM50)

EXHIBIT E

Zoning Map



Legend

- APN 025-013-36
- Assessors Parcels
- County Maintained Streets
- PUBLIC FACILITY (PF)
- PARK (PR)
- RESIDENTIAL-MULTIFAMILY (RM)
- COMMERCIAL-PROF OFFICE (PA)
- AGRICULTURE RESIDENTIAL (RA)
- RESIDENTIAL-SINGLE FAMILY (R-1)

N
W E
S

Map Created by
County of Santa Cruz
Planning Department
January 2007

EXHIBIT F

Decision 1

Whalen & Company, Inc.

3675 Mt. Diablo Blvd., Suite 360
Lafeyette, CA 94549
(925) 283-7700

January 26 1999

Michael S. Ferry, AICP
County of Santa Cruz
Planning Department
701 Ocean Street
Santa Cruz, CA 95060

RE: Sprint PCS Wireless Communication Facility
Site: FS22xc012, Dominican Hospital
PG&E transmission tower
SBE 135 44 6B-1, Tower #15/130

Dear Michael:

Sprint PCS is expanding its network in the Santa Cruz area. As you know, Sprint's first land use application was submitted to the County last week. In most cases, Sprint evaluates the use of existing structures for the installation of transmitting and receiving antennas.

On January 21, 1999, we spoke regarding the above-mentioned project to be located on an existing PG&E transmission tower, behind Dominican Hospital. I have attached a location map, site photographs, and a reduced site plan for your review. The proposed project will consist of mounting six (6) panel antennas to the top portion of the tower, and the installation of equipment cabinets at the base of the tower. Based on our conversation last week, it was my understanding that Sprint's proposed project on the subject PG&E transmission tower is exempt from zoning or land use permits. Because Sprint is required to demonstrate that all local permits have been complied for, your signature at the bottom of this letter will confirm that the above statement is true and correct.

Thank you for your consideration. Please feel free to call me at (408) 218-0061 to let me know when I may be able to pick-up this signed letter from you.

Sincerely,

Franklin Orozco
Project Manager

Michael S. Ferry, AICP
County of Santa Cruz
Planning Department

EXHIBIT G

COUNTY OF SANTA CRUZ | Planning Department

INTEROFFICE MEMO

APPLICATION NO: 060352

Date: July 20, 2006

To: Annette Olson, Project Planner

From: Larry Kasparowitz, Urban Designer

Re: Design Review for wireless communication facility at Dominican Hospital, Santa Cruz

No comments (co-location)

EXHIBIT G

CENTRAL
FIRE PROTECTION DISTRICT
of Santa Cruz County
Fire Prevention Division

930 17th Avenue, Santa Cruz, CA 95062
phone (831) 479-6843 fax (831) 479-6847

Date:	July 19, 2006
To:	Pacific Gas and Electric
Applicant:	**James Singleton**
From:	Tom Wiley
Subject:	**06-0352**
Address	**none**
APN:	025-013-15
OCC:	**2501315**
Permit:	20060216

We have reviewed plans for the above subject project. District requirements appear to have been met

Please ensure designer/architect reflects equivalent notes and requirements on velums as appropriate when submitting for Application for Building Permit.

Submit a check in the amount of $100.00 for this particular plan check, made payable to Central Fire Protection District. A $35.00 Late Fee may be added to your plan check fees if payment is not received within 30 days of the date of this Discretionary Letter. INVOICE MAILED TO APPLICANT. Please contact the Fire Prevention Secretary at (831) 479-6843 for total fees due for your project.

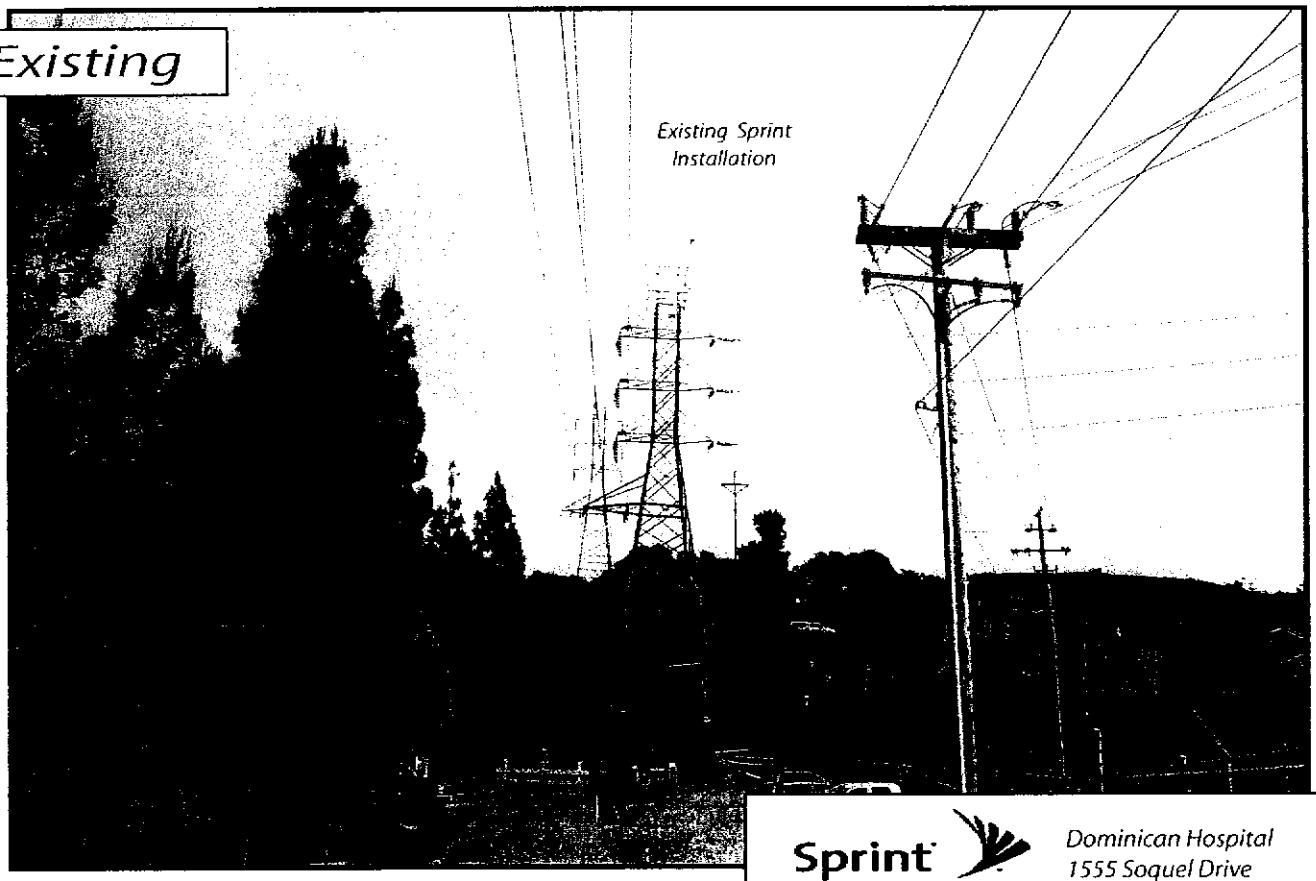
If you should have any questions regarding the plan check comments, please call me at (831) 479-6843 and leave a message, or email me at tomw@centralfpd.com. All other questions may be directed to Fire Prevention at (831)479-6843.

CC: File 8 County

As a condition of submittal of these plans, the submitter, designer and installer certify that these plans and details comply with applicable Specifications, Standards, Codes and Ordinances, agree that they are solely responsible for compliance with applicable Specifications, Standards, Codes and Ordinances, and further agree to correct any deficiencies noted by this review, subsequent review, inspection or other source. Further, the submitter, designer, and installer agrees to hold harmless from any and all alleged claims to have arisen from any compliance deficiencies, without prejudice, the reviewer and the Central FPD of Santa Cruz County.
2501315-071906

EXHIBIT G

r Existing



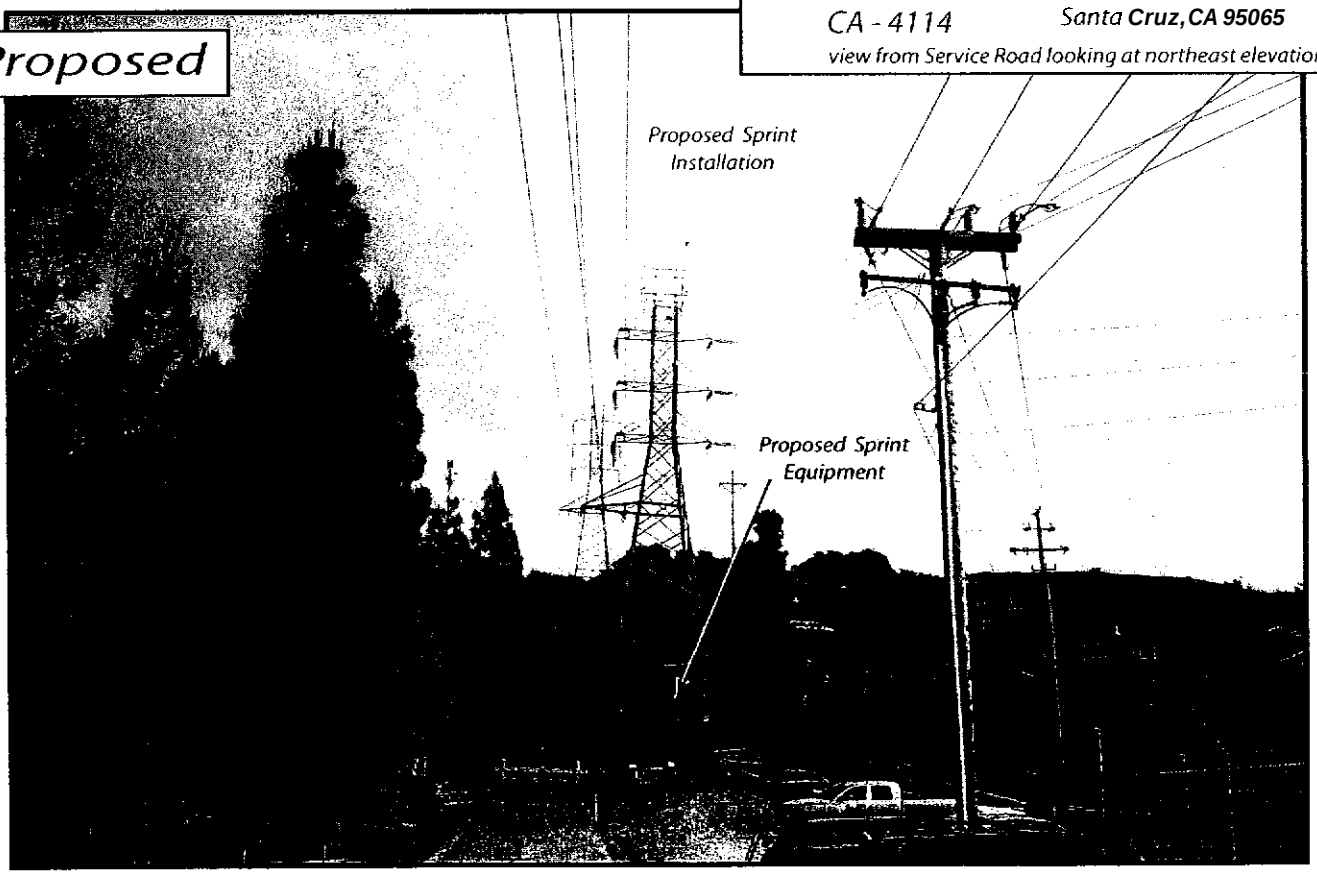
Sprint

Dominican Hospital
1555 Soquel Drive
Santa Cruz, CA 95065

CA - 4114

view from Service Road looking at northeast elevation

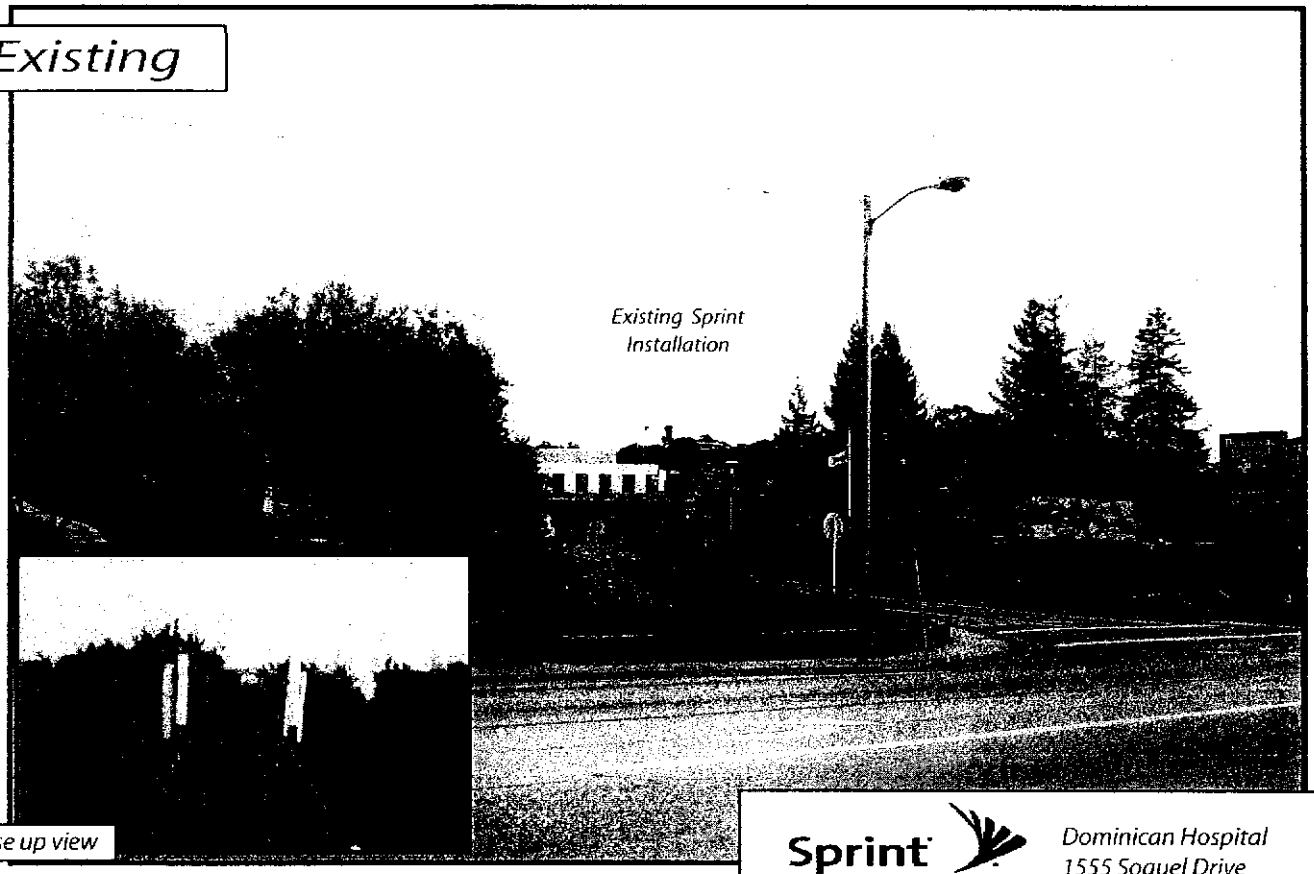
Proposed



AdvanceStar

EXHIBIT C

Existing



close up view

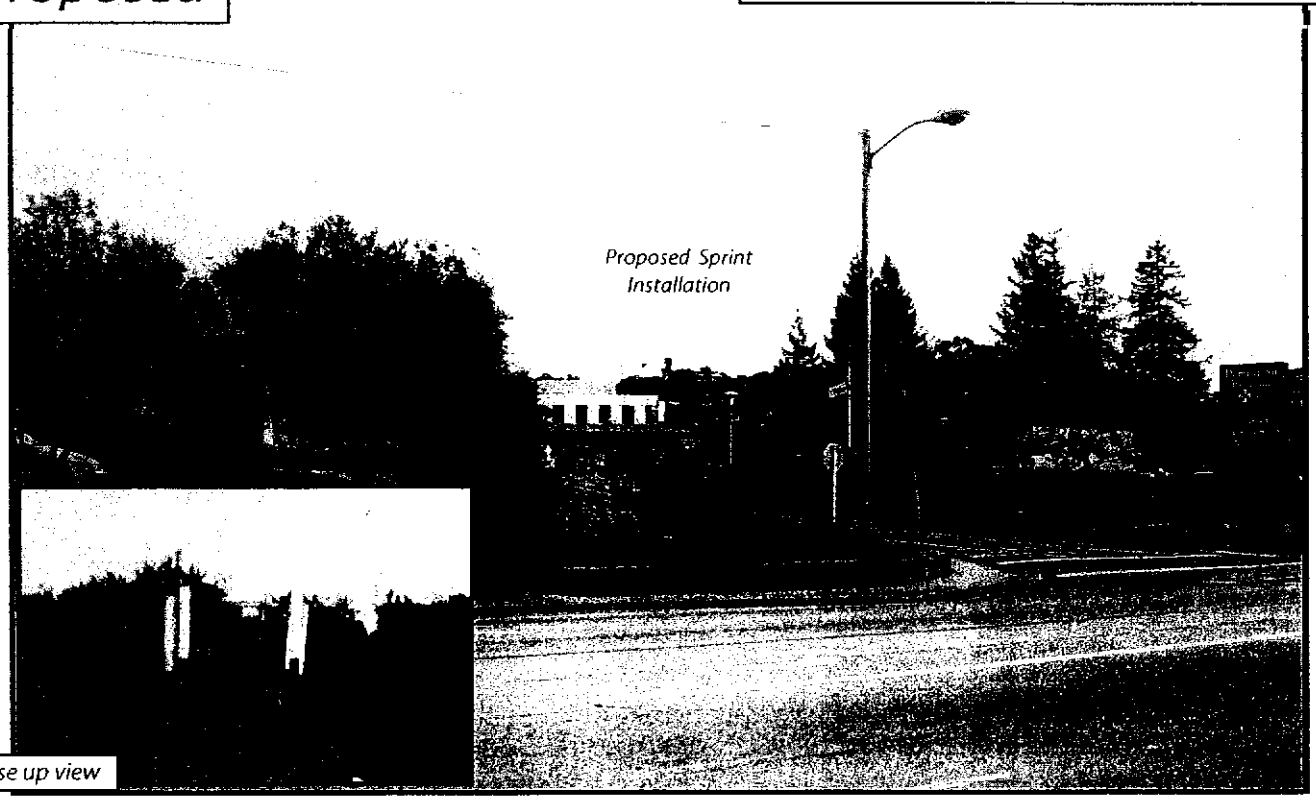
Sprint

CA-4174

Dominican Hospital
1555 Soquel Drive
Santa Cruz, CA 95065

view from Soquel Drive looking at north elevation

Proposed

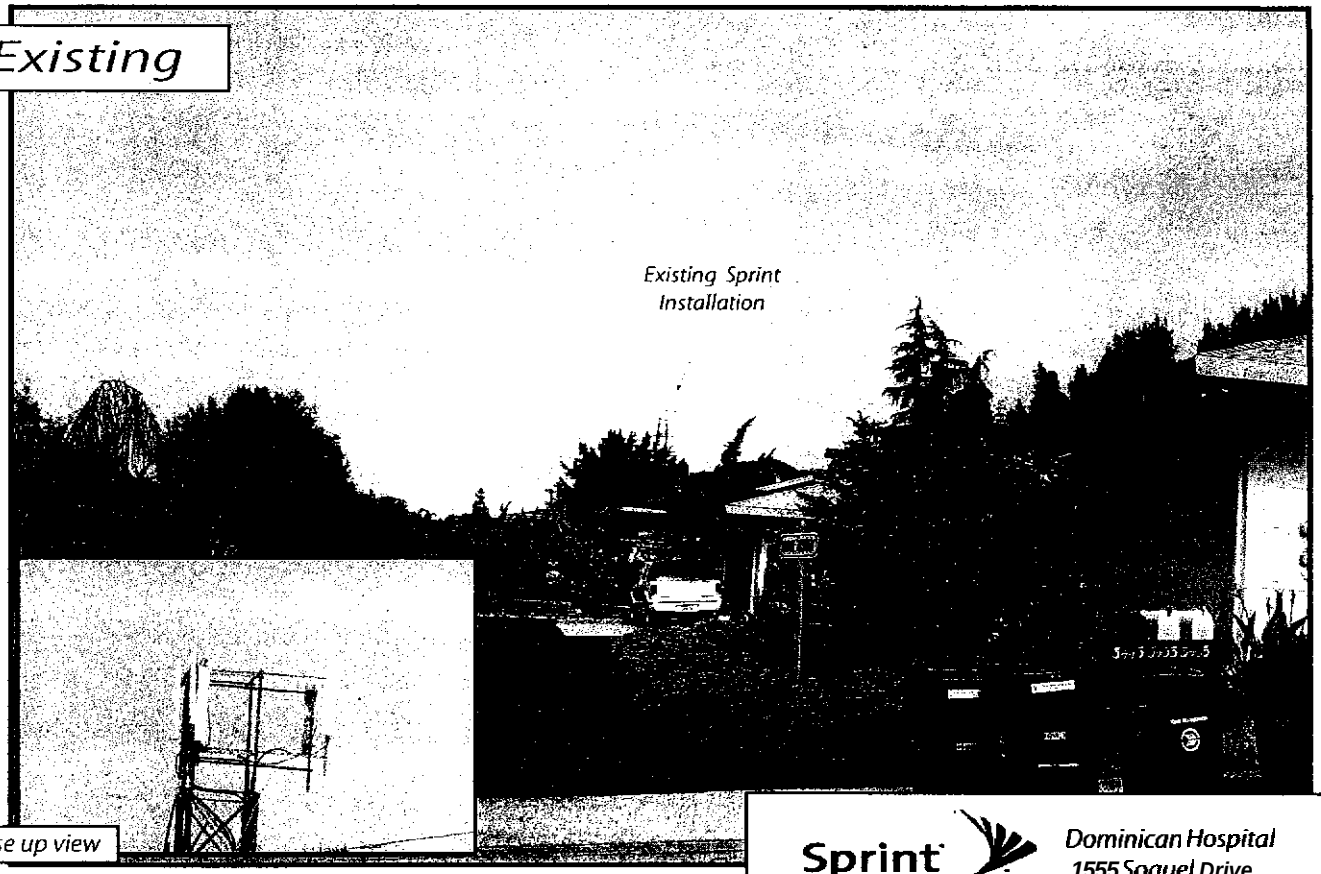


close up view

AdvanceSite

EXHIBIT G

Existing



close up view

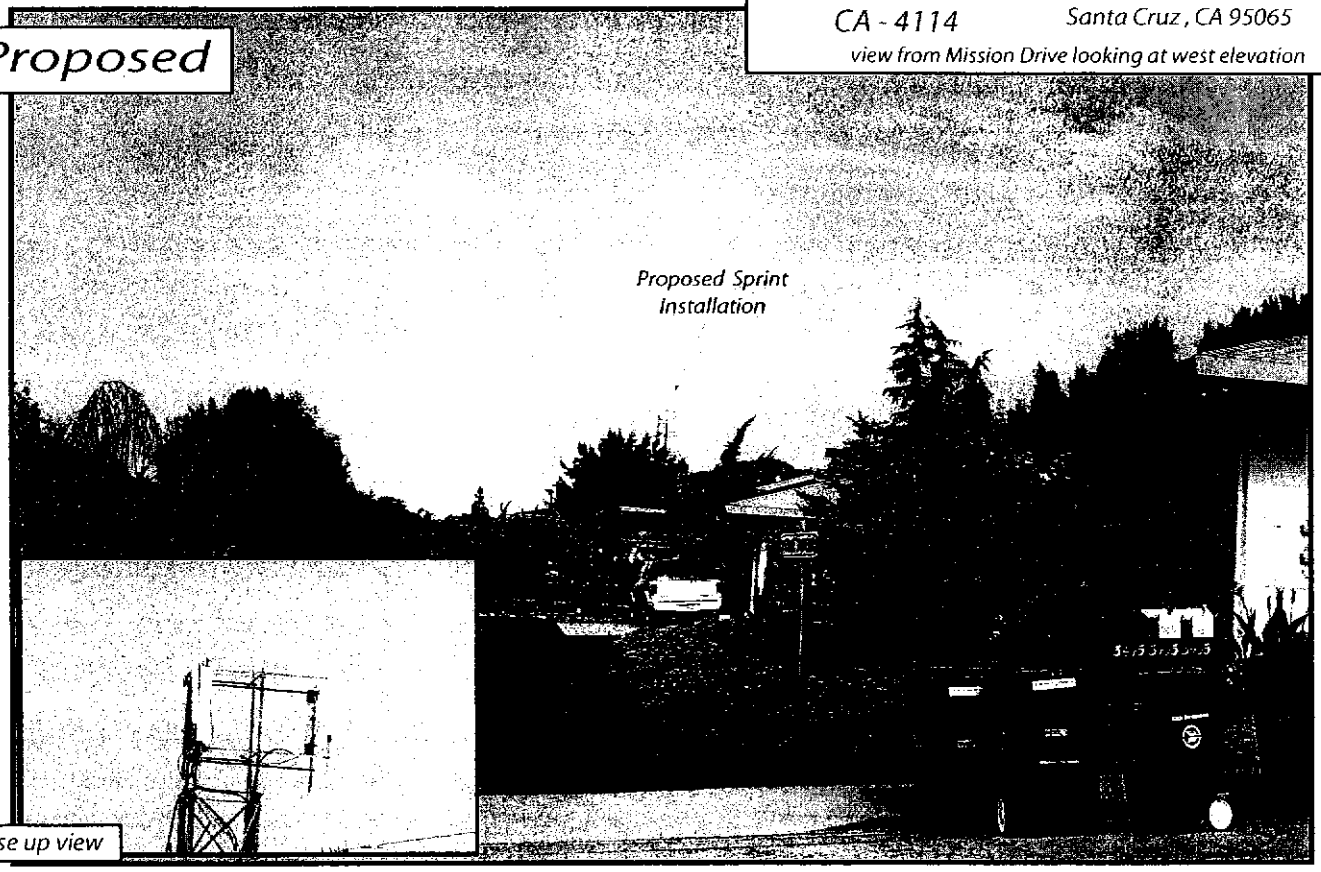
Sprint

CA - 4114

Dominican Hospital
1555 Soquel Drive
Santa Cruz, CA 95065

view from Mission Drive looking at west elevation

Proposed



close up view

AdvanceSite Solutions

EXHIBIT G

Sprint Nextel • Proposed SMR Base Station (Site No. CA4133-A)
1555 Soquel Drive • Santa Cruz, California

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, lnc., Consulting Engineers, has been retained on behalf of Sprint Nextel, a personal wireless telecommunications carrier, to evaluate the SMR base station (Site No. CA4133-A) proposed **to** be located at 1555 Soquel Drive in Santa Cruz, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Prevailing Exposure Standards

The U.S. Congress requires that the Federal Communications Commission ("FCC") evaluate its actions for possible significant impact on the environment. In Docket 93-62, effective October 15, 1997, the FCC adopted the human exposure limits for field strength and power density recommended in 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 Institute of Electrical and Electronics Engineers ("IEEE") Standard C95.1-1999, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, **3** kHz to 300 GHz," includes nearly identical exposure limits. 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 limit for exposures of unlimited duration to radio frequency energy for several personal wireless services are as follows:

Personal Wireless Service	Approx. Frequency	Occupational Limit	Public Limit
Personal Communication ("PCS")	1,950 MHz	5.00 mW/cm^2	1.00 mW/cm^2
Cellular Telephone	870	2.90	0.58
Specialized Mobile Radio	855	2.85	*0.57*
[most restrictive frequency range]	30–300	1.00	0.20

Power line frequencies (60 Hz) are well below the applicable range of these standards, and there is considered to be no compounding effect from simultaneous exposure to power line and radio frequency fields.

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 about

1 inch thick. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. 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 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 Sprint Nextel, including zoning drawings by Morrison Hershfield, dated March 10, 2006, that carrier presently has installed six EMS Model RV6518 directional panel PCS antennas on an existing 90-foot PG&E lattice tower, located at 1555 Soquel Drive in Santa Cruz. Sprint Nextel proposes to replace three of its existing antennas with three new EMS Model RR9011-00DBL directional SMR antennas. The proposed antennas would be mounted at an effective height of about 87 feet above ground and would he oriented with 3° downtilt toward 70°T, 190°T, and 310°T. The maximum effective radiated power in any direction would be 500 watts, representing ten channels operating simultaneously at 50 watts each. The existing Sprint Nextel PCS antennas are also mounted at an effective height of about 87 feet above ground and are oriented toward 90°T with 2° downtilt, 180°T with 6° downtilt, and 270°T with 2° downtilt. Those antennas are assumed *to* operate with a maximum effective radiated power in any direction of 1,500 watts.

Approved by the County of Santa Cruz for installation at the same height on the same tower are similar antennas for use by MetroPCS, another wireless telecommunications carrier. Metro reports that it will be using three EMS Model RR6518-000DPL directional panel antennas oriented toward 100°T with 2° downtilt, toward 190°T with 3° downtilt, and toward 285°T with **2**" downtilt, operating with a maximum effective radiated power in any direction of 1,890 watts, representing simultaneous operation of six channels at 315 watts each.

Study Results

The maximum ambient RF level within 1,000 feet at any ground level location due to the proposed Sprint Nextel SMR operation by itself is calculated to be 0.0018 mW/cm^2, which is 0.32% of the applicable public exposure limit. The maximum calculated cumulative level at ground within 1,000 feet for the simultaneous operation of all carriers is 0.53% of the public exposure limit; the maximum calculated cumulative level at the second-floor elevation of any nearby building would be 0.62% 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. Figure 3 attached provides the specific data required under Santa Cruz County Code Section 13.10.659(g)(2)(ix), for reporting the analysis of RF exposure conditions.

No Recommended Mitigation Measures

Since they are to be mounted on a PG&E tower, the Sprint Nextel and Metro antennas are not accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. It is presumed that PG&E already takes adequate precautions to ensure that there is no unauthorized access to its tower. To prevent exposures in excess of the occupational limit by authorized PG&E workers, it is expected that they will adhere to appropriate safety protocols adopted by that company.

Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that the SMR base station proposed by Sprint Nextel at 1555 Soquel Drive in Santa Cruz, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2007. This work has been carried out by him or 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, P.E.

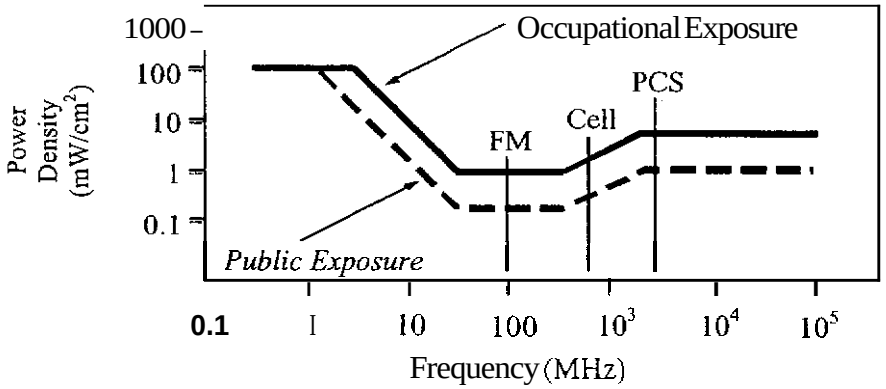
May 4,2006

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, which are nearly identical to the more recent Institute of Electrical and Electronics Engineers Standard C95.1-1999, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz." These limits apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

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

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



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

RFR.CALC™ Calculation Methodology

Assessment by Calculation of Compliance with FCC Exposure Guidelines

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

Near Field.

Prediction methods have been developed for the near field zone of panel (directional) and whip (omnidirectional) antennas, typical at wireless telecommunications cell sites. The near field zone is defined by the distance, D, from an antenna beyond which the manufacturer's published, far field antenna patterns will be fully formed; the near field may exist for increasing D until some or all of three conditions have been met:

$$1)\ D > \frac{2h^2}{\lambda} \qquad 2)\ D > 5h \qquad 3)\ D > 1.6\lambda$$

where h = aperture height of the antenna, in meters, and
λ = wavelength of the transmitted signal, in meters.

The FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) gives this formula for calculating power density in the near field zone about an individual RF source:

$$\text{power density}\quad S = \frac{180}{\theta_{BW}} \times \frac{0.1 \times P_{net}}{\pi \times D \times h}, \quad \text{in mW/cm}^2,$$

where θ_{BW} = half-power beamwidth of antenna, in degrees, and
P_{net} = net power input to the antenna, in watts

The factor of 0.1 in the numerator converts to the desired units of power density. This formula has been built into a proprietary program that calculates distances to FCC public and occupational limits.

Far Field.

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

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

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

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

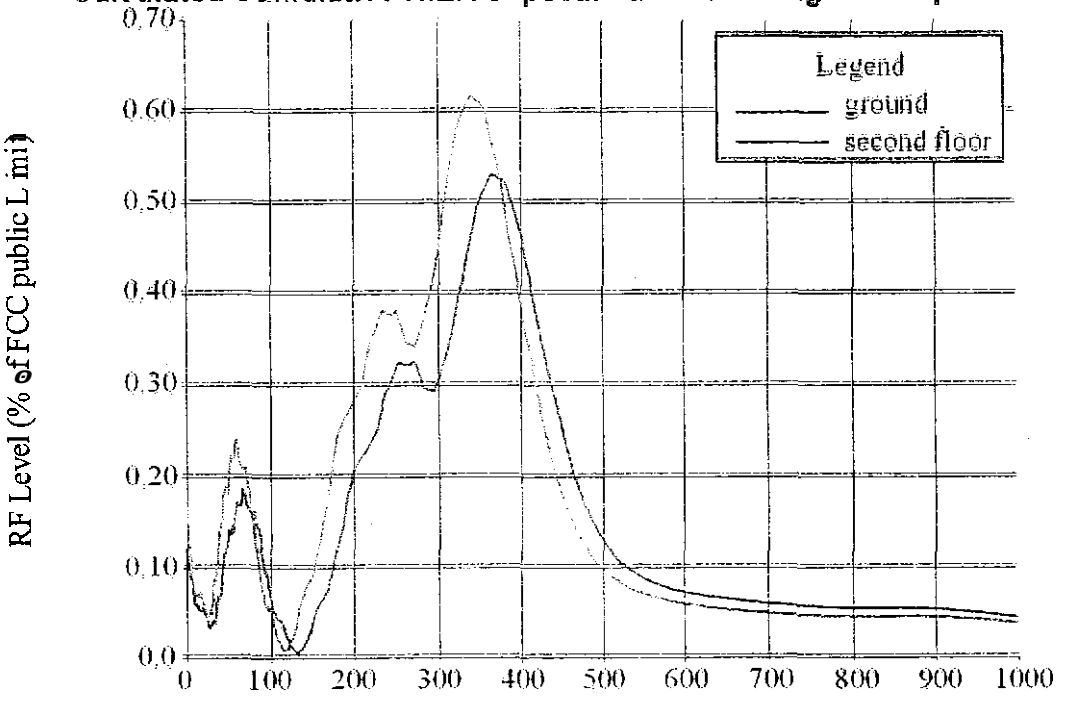
EXHIBIT

Sprint Nextel • Proposed SMR Base Station (Site No. CA-4133A)
1555 Soquel Drive • Santa Cruz, California

Compliance with Santa Cruz County Code §13.10.659(g)(2)(ix)

Compliance with the FCC's nonionizing electromagnetic radiation (NIER) standards or other applicable standards shall be demonstrated for any new wireless communication facility through submission, at the time of application for the necessary permit or entitlement, of NIER calculations specifying NIER levels in the area surrounding the proposed facility. Calculations shall be made of expected NIER exposure levels during peak operation periods at a range of distances from fifty (50) to one thousand (1,000) feet, taking into account cumulative NIER exposure levels from the proposed source in combination with all other existing NIER transmission sources within a one-mile radius. This should also include a plan to ensure that the public would be kept at a safe distance from any NIER transmission source associated with the proposed wireless communication facility, consistent with the NIER standards of the FCC, or any potential future superceding standards."

Calculated Cumulative NIER Exposure Levels during Peak Operation Periods



Distance (feet) in direction of maximum level

RF level (% limit) Distance (feet)	50	100	200	300	500	750	1,000
ground	0.14%	0.067%	0.21%	0.31%	**0.13%**	0.057%	0.045%
secondfloor	0.19%	*0.053%*	0.28%	0.47%	0.10%	0.046%	0.038%

Calculated using formulas in FCC Office of Engineering Technology Bulletin No. 65 (1997), considering terrain variations within 1,000 feet of site.

Maximum effectix-e radiated power (peal, operation) - 500 watts

Effective Sprint Nextel SMR antenna height above ground - **87** feet

Other sources nearby - Sprint Nextel PCS and MetroPCS

Other sources within one mile - No ***AM. FM.*** or TV broadcast stations
No two-way stations close enough to affect compliance

Plan for restricting public access - Antennas are mounted on a tall PG&E Tower

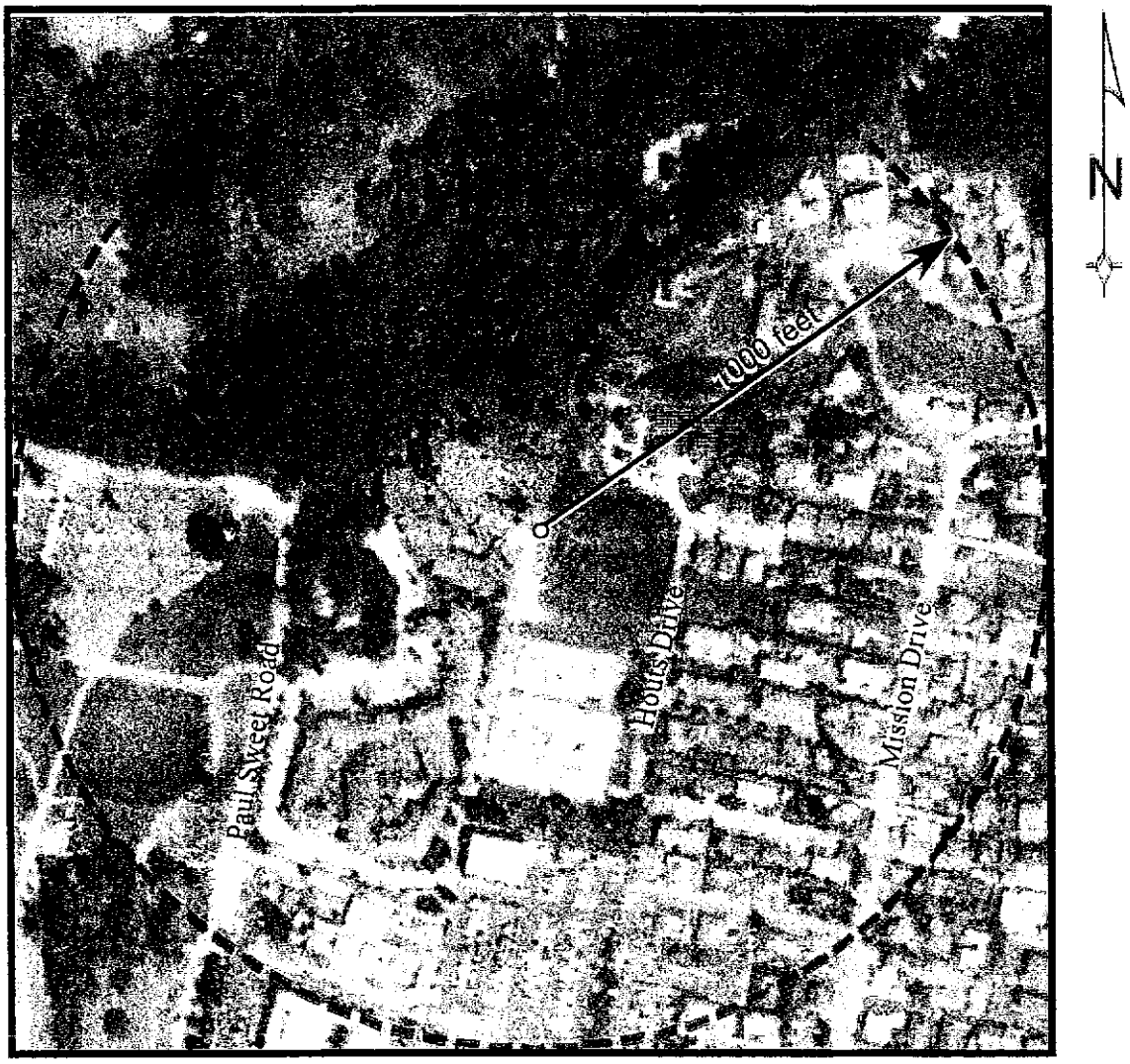
HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

NX4133595
Figure 3A

EXHIBIT G

Sprint Nextel • Proposed SMR Base Station (Site No. CA-4133A)
1555 Soquel Drive • Santa Cruz, California

Calculated NIER Exposure Levels
Within 1,000 Feet of Proposed Site
for Simultaneous Operation of Sprint Nextel and MetroPCS



Aerial photo from Terraserver

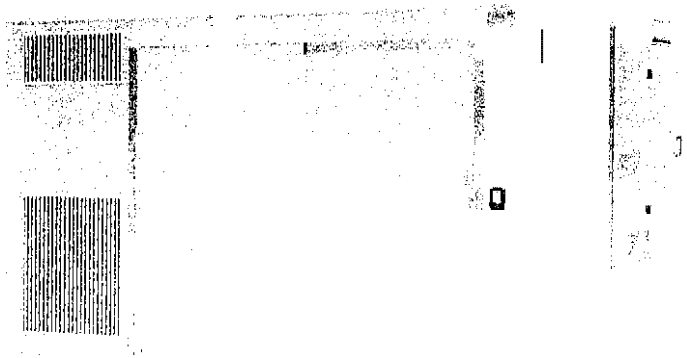
Legend
blank = less than 0.5% of FCC public limit (*i.e.*, more than 200 times below)
▒ = 0.5% and above near ground level (highest level is 0.53%)
▒ = 0.5% and above at 2nd floor level (highest level is 0.62%)

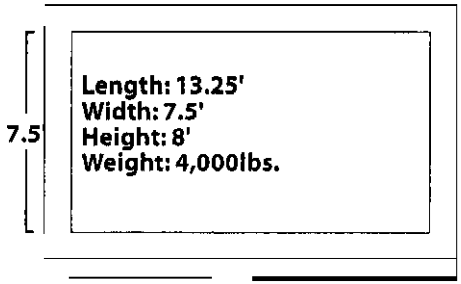
Calculated using formulas in FCC Office of Engineering Technology Bulletin No. 65 (1997) considering terrain variations within 1,000 feet of site. See text for further information.

HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

NX4133595
Figure 3B

EXHIBIT G





Infrastructure Solutions

CAPACITY:

BR Capacity: 48 (0.5 BR / SQFT)
(Higher Capacity Configurations Available)

HVAC: 2-5 Ton Marvair

MINIMUM LEASE AREA REQUIRED:

15.25L x 9.5W = 145 sq. ft.

Shelter Comparison

EXHIBIT G