Staff Report to the Zoning Administrator

Application Number: 131181

Applicant: Aaron Delao, On Air, LLC, for Verizon Wireless
Owner: Ben Lomond Fire District
APN: 077-102-12, 21

Agenda Date: 1/17/2014

Agenda Item #: 2
Time: After 9:00 a.m.

Project Description: Proposal to construct a new Verizon Wireless, roof mounted wireless communications facility. Antennas to be located within a faux extension to the existing hose drying tower at the Ben Lomond Fire Station (APN 077-102-12). Outdoor radio equipment and utility cabinets will be located on the adjacent parcel, Scarborough Ace Hardware (APN 077-102-21). Requires a commercial development permit amendment to Permit 82-220-PD and 98-0065 (Fire Station) and Permit 95-0591 (Scarborough Ace Hardware) and an Environmental Exemption under the California Environmental Quality Act.

Location: The property is located on the northwest corner of Highway 9 and Love Creek Road within Ben Lomond

Supervisorial District: 5 District (District Supervisor: McPherson)

Permits Required: Commercial Development Permit
Technical Reviews: Arborist Report

Staff Recommendation:

- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- Approval of Application 131181, based on the attached findings and conditions.

Exhibits

A.	Categorical Exemption (CEQA determination)		by Hammett & Edison, Inc., dated July 19, 2013
B.	Findings	G.	Visual Simulations
C.	Conditions	H.	Arborist Report, prepared by James P. Allen, dated November 12, 2013
D.	Project plans		
E.	Assessor's, Location, Zoning and General Plan Maps		
F.	Radio Frequency Report, prepared		

Parcel Information

Parcel Size:	19,035 square feet (Fire Station) and 1.3 acres (Scarborough Lumber)
Existing Land Use - Parcel:	Ben Lomond Fire Station and Scarborough Lumber
Existing Land Use - Surrounding:	C-1 and C-2 (neighborhood and community commercial) on all sides, R-1-15 (residential) across Love Creek Road to the east
Project Access:	Highway 9 and Love Creek Road
Planning Area:	San Lorenzo Valley
Land Use Designation:	P (Public Facility), C-C(Community Commercial)
Zone District:	PF (Public Facility), C-1 (Neighborhood Commercial)
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:	N/A
Fire Hazard:	Not a mapped constraint
Slopes:	N/A, the site is flat
Env. Sen. Habitat:	Not mapped/no physical evidence on site
Grading:	No grading proposed
Tree Removal:	No trees proposed to be removed
Scenic:	Not a mapped resource
Drainage:	No changes proposed to existing drainage
Archeology:	Not mapped/no physical evidence on site

Services Information

Urban/Rural Services Line:	_x_ Inside __ Outside
Water Supply:	San Lorenzo Valley Water District
Sewage Disposal:	Septic System
Fire District:	Ben Lomond Fire Protection District
Drainage District:	Zone 8

Project Setting/background

The Ben Lomond Fire Station is located on the northwest corner of Highway 9 and Love Creek Road with access via Highway 9 and Love Creek Road. The Scarborough Ace Hardware business is directly north and west of the fire station and has access via Highway 9 and an eastern entry on Love Creek Road.

The fire station contains an existing hose drying tower located at the center of the fire house. It is approximately 36 feet in height with four existing omni whip antennas of varying heights attached to the top of the tower that are used for firehouse emergency communication. These improvements were authorized under Permit 82-220-PD and Permit 98-0065. The applicant is proposing to construct an 8 foot hose tower addition to screen the installation of 9 proposed panel antennas located on the interior of the tower. The existing omni whip antennas will be relocated to the north edge of the tower upon completion of the improvements. The height of the proposed tower will be approximately 44 feet and the relocated whip antennas will be approximately 55'1" in height above the tower. Visual simulations are attached as Exhibit G.

The project includes an equipment shelter proposed on the Scarborough Ace Hardware storage yard portion of the site, adjacent to Oak Way/Love Creek Road, and adjacent to a group of three existing oak trees, 10 feet 5 inches dba (diameter at breast height), 8 feet 6 inches dba and 7 feet dba. These trees do not qualify as significant trees under the significant tree protection ordinance. However, an arborist report, prepared by James P. Allen, dated August 26, 2013 (Exhibit H) provides tree protection recommendations to ensure their continued health.

The equipment enclosure includes a proposed 30 kilowatt emergency generator.

Zoning & General Plan Consistency

Pursuant to County Code Section 13.10.661 (A) (Wireless Communications Ordinance), all new wireless communication facilities are required to obtain a commercial development permit with approval by the Zoning Administrator. The proposed project amends existing permits for each facility.

The subject property is a parcel of approximately 19,035 square feet (Ben Lomond Fire Station) and 1.3 acres (Scarborough Ace Hardware), located in the PF (Public Facility) and C-1 (Neighborhood Commercial) zone district, respectively, designations which allow commercial uses. The proposed wireless facility is an allowed use within the PF and C-1 zone district and the zoning is consistent with the site's (P) Public Facility and C-C (Community Commercial) General Plan designation. The proposed site is not located in a prohibited or restricted wireless area as set forth in Sections 13.10.661(B) and 13.10.661(C). Thus, an alternative site analysis or alternative designs are not required.

The proposed improvements will meet the site standards for each zone district, including the required 10 foot and 20 foot street side setback required of commercial properties located across the street from residentially zoned property as noted in the table below.

Setback Table			
	Front	Side	Rear
Ben Lomond Fire Station (PF zone district)			
Required	10'	10' in general, 20' across the street from residential	10'
Proposed	70' (front yard located along Highway 9)	42'	27'
Scarborough Lumber (C-1 zone district)			
Required	10	0' in general, 10' across street from residential	0
Proposed	N/A (No front yard located along Highway 9)	10'	43'

The height of the proposed tower will not exceed the allowed height enumerated in County Code Section 13.10.510(D) (2). This section allows antennas to exceed the 35 foot maximum height standard established by the zone district by an additional 25 feet. Furthermore, the proposed wireless facility complies with the requirements of the visual protection regulations of the Wireless Ordinance and the County Design Review Ordinance in that the proposed project has been designed to integrate the equipment into the building and to fully camouflage the antennas to ensure that visual impacts are minimized. Visual simulations (Exhibit G) are attached. In addition, the proposed equipment enclosure is located within the storage yard of the hardware store and appears to be an integral part of the facility, consistent with the permitted storage of materials and equipment, and is screened by the existing oak trees along the property line along Oak/Love Creek Road.

Recommended arborist report tree protection measures are included in the conditions of approval to ensure the health of the trees for screening of the proposed improvements. This includes the recommended pre-fabricated foundation system designed to protect the root zone of the trees, pruning and cabling of the largest oak tree, and tree protection fencing, etc.

The General Plan requires that new development conform to the Noise Element Land Use Compatibility Guidelines, which require that uses do not exceed 60 dBL dn (day/night average noise level) at the property line of residentially and commercially zoned property. The project is conditioned to comply with the general plan noise standard and provide noise buffering as necessary.

Radio Frequency (RF) Exposure

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

The antennas are not accessible to the general public due to their location on the tower so no mitigation measures are necessary to comply with the FCC public exposure guidelines. However, to prevent occupational exposures in excess of the FCC guidelines, no access within 11 feet directly in front of the antennas themselves, such as might occur during maintenance work on the tower is allowed. Thus, an automatic electric shutoff switch is recommended for maintenance as well as posting warning signs at the antennas and visible from below the angle of approach to personnel who might need to work within that distance. The proposed project is consistent with the FCC regulations as proposed and conditioned.

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

Environmental Review

The California Environmental Quality Act (CEQA) provides exemptions for classes of projects which do not have a significant effect on the environment. CEQA provides exemptions for existing facilities such as the fire station and lumber yard projects where there is limited expansion of the facility under Class One, Section 15301. A preliminary determination has been made that the project is exempt from the California Environmental Quality Act and a notice of exemption has been attached as Exhibit A.

Conclusion

As proposed and conditioned, the project is consistent with all applicable codes and policies of the Zoning Ordinance and General Plan/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 **131181,** 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: Sheila McDaniel
Santa Cruz County Planning Department
701 Ocean Street, 4th Floor
Santa Cruz CA 95060
Phone Number: (831) 454-2255
E-mail: sheila.mcdaniel@co.santa-cruz.ca.us

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: 131181
Assessor Parcel Number: 077-102-12, 21
Project Location: 9430 and 9470 Highway 9, Ben Lomond, CA 95005

Project Description: Proposal to construct a new Verizon Wireless, roof mounted wireless communications facility. Antennas to be located within a faux extension to the existing hose drying tower at the Ben Lomond Fire Station (APN 077-102-12). A radio equipment shelter will be located on the adjacent parcel, Scarborough Ace Hardware (APN 077-102-21). Requires a Commercial Development Permit amendment to Permit 82-220-PD and 98-0065 (Fire Station) and Permit 95-0591 (Scarborough Ace Hardware) and an Environmental Exemption under the California Environmental Quality Act.

Person or Agency Proposing Project: Aaron Delao, On Air, LLC, for Verizon Wireless

Contact Phone Number: (916) 792-8686

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

E. __X__ **Categorical Exemption**

Specify type: Class 1- Existing Facilities

F. Reasons why the project is exempt:

Minor changes to an existing fire station and hardware store with negligible change to the use.

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

_____ Date: _____
Sheila McDaniel, Project Planner

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 wireless communication antennas will be screened by the proposed hose tower extension and the proposed equipment enclosure will be screened from Oak Way by existing oak trees. The 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 as it appears as a commercial tower common to fire stations and hardware storage area, 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 Facility) and C-1 (Community Commercial) zone district.

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

This finding can be made, in that the existing fire station and Ace Hardware Store are permitted uses under Discretionary Permits 82-220-PD, 98-0065 and Permit 95-0591. The proposed projects are consistent with the permits authorized on these properties and the proposed project meets the rules and regulations pertaining to the zone districts in which they are located. The improvements meet the site standards, including, and without limitation, the setbacks, equipment height, etc.

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

This finding can be made, in that the proposed antennas will be located within a hose drying

tower with a maximum height of 55 feet, which complies with the height standard allowed for antennas pursuant to County Code Section 13.10.510(D) (2). As such, the proposal will not create a hazard for aircraft in flight.

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

This finding can be made, in that the maximum ambient radio frequency electromagnetic field exposure level anywhere on the ground will be 4.7% of the applicable radio frequency exposure levels established by the Federal Communications Commission (FCC). The maximum calculated cumulative level at the second-floor elevation of any nearby building would be 9.4% of the public exposure limit. Exposure levels may exceed the applicable occupational exposure limit on the roof to the subject building near the antennas. The antennas are not accessible to the public. However, to prevent occupational exposures to technical equipment specialists in excess of the Federal Communications Commission guidelines, no access within 11 feet directly in front of the Verizon antennas themselves may occur while the base station is in operation. The addition of warning signs and an automatic electric shut-off switch are included as conditions of approval to ensure occupational safety.

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

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

EXHIBIT B

Development Permit Findings

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

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

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

This finding can be made, in that the proposed location of the improvements on the fire station hose drying tower and lumber yard storage area and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the PF (Public Facility) zone district and C-1 (Neighborhood Commercial) zone district in that the proposed improvements meet all current site standards for the zone districts including setbacks, maximum antenna height, etc.

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

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

The proposed wireless project will not adversely impact the light, solar opportunities, air, and/or open space available to other structures or properties, and meets all current site and development standards for the zone district, in that the fire station hose tower extension tower and Scarborough Lumber wireless equipment enclosure will not adversely shade adjacent properties, and will meet current setbacks for the zone district.

The proposed wireless project will be properly proportioned to the parcel size and the character of the neighborhood as specified in General Plan Policy 8.6.1 (Maintaining a Relationship Between Structure and Parcel Sizes), in that the proposed tower extension and equipment shelter will comply with the site standards for the PF and C-1 zone district (including setbacks as conditioned, height, and number of stories) and will result in a structure consistent with a design that could be approved on any similarly sized commercial or public facility lot in the vicinity.

The project is located within the Ben Lomond Town Plan. The town plan encourages improved

traffic and pedestrian circulation improvements within Highway 9, which are beyond the limit of the project site and there is no nexus between the project and the encouraged improvements and thus improvements in the right-of-way have not been required. While the Town Plan does not specifically address retention of trees along Oak Way/Love Creek, the plan emphasizes tree protection along Highway 9. The proposed project does not remove any trees along Oak Way visible from Highway 9 and the project is conditioned to include tree protection measures, as recommended by the arborist report, to ensure their continued health.

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 fire station tower extension and the equipment shelter is to be constructed on existing developed lots. The expected level of traffic generated by the proposed project is not anticipated to affect the traffic volumes associated with these existing uses and thus will not adversely impact the existing roads or intersections in the surrounding area.

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

This finding can be made, in that the proposed tower extension and equipment shelter is located in a mixed neighborhood containing a variety of architectural styles, and the proposed improvements are consistent with the land use intensity and density of the neighborhood and will result in no appreciable change in the character of the area. Furthermore, the proposed tower will fully screen the proposed antennas so that they are not visible to the public. The proposed equipment shelter will be screened by existing oak trees located along the property line.

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

This finding can be made, in that the proposed improvements will be of an appropriate scale and type of design that will enhance the aesthetic qualities of the surrounding properties and will not reduce or visually impact available open space in the surrounding area. Furthermore, the proposed tower extension will fully screen the proposed antennas so they will not be visible to the public. The proposed equipment shelter will appear as an integral component of the existing Scarborough Ace Hardware storage area and will be screened from the street by existing oak trees.

EXHIBIT B

Conditions of Approval

Exhibit D: Project Plans, prepared by Foresight, dated 6/11/2013

I. This permit authorizes the construction of a new Verizon Wireless, roof mounted wireless communications facility. The antennas to be located within a faux extension to the existing hose drying tower at the Ben Lomond Fire Station (APN 077-102-12). A radio equipment shelter is proposed on the adjacent parcel, Scarborough Ace Hardware (APN 077-102-21). This approval does not confer legal status on any existing structure(s) or existing use(s) on the subject property that are not specifically authorized by this permit. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant/owner shall:

A. Sign, date, and return to the Planning Department one copy of the approval to indicate acceptance and agreement with the conditions thereof.

B. Obtain a Building Permit from the Santa Cruz County Building Official.

1. Any outstanding balance due to the Planning Department must be paid prior to making a Building Permit application. Applications for Building Permits will not be accepted or processed while there is an outstanding balance due.

C. Submit proof that these conditions have been recorded in the official records of the County of Santa Cruz (Office of the County Recorder) within 30 days from the effective date of this permit.

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

A. Submit final architectural plans for review and approval by the Planning Department. The final plans shall be in substantial compliance with the plans marked Exhibit D on file with the Planning Department. Any changes from the approved Exhibit D for this development permit on the plans submitted for the Building Permit must be clearly called out and labeled by standard architectural methods to indicate such changes. Any changes that are not properly called out and labeled will not be authorized by any Building Permit that is issued for the proposed development. The final plans shall include the following additional information:

1. One elevation shall indicate materials and colors as they were approved by this Discretionary Application. If specific materials and colors have not been approved with this Discretionary Application, in addition to showing the materials and colors on the elevation, the applicant shall supply a color and material board in 8 1/2" x 11" format for Planning Department review and approval.

2. Drainage plans, as necessary.

EXHIBIT C

3. Details showing compliance with Ben Lomond fire department requirements. If the proposed structure(s) are located within the State Responsibility Area (SRA) the requirements of the Wildland-Urban Interface code (WUI), California Building Code Chapter 7A, shall apply.

4. Details showing compliance with recommendations of the arborist report, prepared by James P. Allen, dated August 26, 2013.

5. Plans shall provide product specifications for the proposed 30 kw generator that confirm that the noise levels do not exceed 60 dB Ldn (residential/commercial standard) at the northern property line and at the east property line as required by the General Plan. Noise buffering shall be provided, as necessary.

B. Meet all requirements of and pay Zone 8 drainage fees to the County Department of Public Works, Stormwater Management. Drainage fees will be assessed on the net increase in impervious area.

C. Meet all requirements and pay any applicable plan check fee of the Ben Lomond Fire Protection District.

D. Submit a written statement signed by an authorized representative of the school district in which the project is located confirming payment in full of all applicable developer fees and other requirements lawfully imposed by the school district.

III. All construction shall be performed according to the approved plans for the Building Permit. Prior to final building inspection, the applicant/owner must meet the following conditions:

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

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

C. Pursuant to Sections 16.40.040 and 16.42.080 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.080, shall be observed.

IV. Operational Conditions

A. In the event that future County inspections of the subject property disclose

EXHIBIT C

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 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

EXHIBIT C

preparation permits, or accessory structures unless these are the primary subject of the development permit). Failure to exercise the building permit and to complete all of the construction under the building permit, resulting in the expiration of the building permit, will void the development permit, unless there are special circumstances as determined by the Planning Director.

Approval Date: _____

Effective Date: _____

Expiration Date: _____

Wanda Williams	Sheila McDaniel
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.

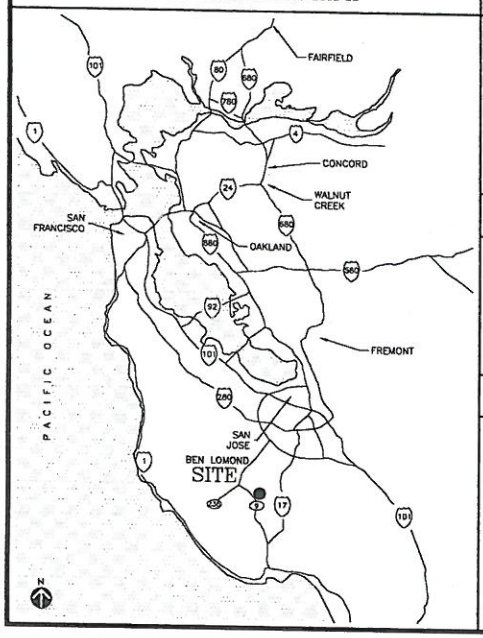
EXHIBIT C

verizonwireless
BEN LOMOND

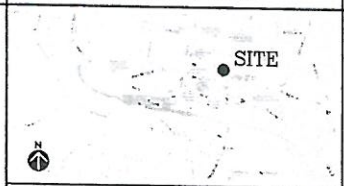
9430 HIGHWAY 9
BEN LOMOND, CA 95005

PS# 249607

LOCATION MAP



VICINITY MAP



SHEET INDEX

DRIVING DIRECTIONS

Head southwest on Mitchell Dr toward N Wiget Ln 0.5 mi
Turn left onto N Wiget Ln 0.3 mi
Turn right onto Ygnacio Valley Rd 3.0 mi
Turn left to merge onto I-680 S toward San Jose 33.6 mi
Take exit 12 for Mission Blvd/State Route 262 toward I-880 0.2 mi
Keep right at the fork, follow signs for Mission Blvd W and merge onto CA-262 S/Mission Blvd/State Route 262 S 1.0 mi
Keep left at the fork, follow signs for I-880 S/San Jose and merge onto I-880 S 12.9 mi
Continue onto State Hwy 17 S 22.9 mi
Take exit 3 for Mount Herman Road toward Felton/Big Basin 0.2 mi
Turn right onto Mt Hermon Rd 3.5 mi
Slight right onto Graham Hill Rd 0.2 mi
Take the 1st right onto CA-9 N/Hwy 9 2.9 mi
Destination will be on the right

CODE COMPLIANCE

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

1. CALIFORNIA ADMINISTRATIVE CODE (INCLUDING TITLES 24 & 25)
2. CALIFORNIA BUILDING CODE (CBC) 2010
3. CALIFORNIA MECHANICAL CODE (CMC) 2010
4. CALIFORNIA PLUMBING CODE (CPC) 2010
5. CALIFORNIA ELECTRIC CODE (CEC) 2010
6. COUNTY ORDINANCES

ACCESSIBILITY REQUIREMENTS:
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS ARE NOT REQUIRED IN ACCORDANCE WITH THE 2010 CALIFORNIA BUILDING CODE.

PROJECT DESCRIPTION

THE PROJECT INCLUDES THE INSTALLATION OF NINE (9) PANEL ANTENNAS (THREE (3) PER SECTOR) MOUNTED BEHIND A STEALTH EXTENTION TO AN EXISTING TOWER AT THE FIRE STATION (APN 077-102-20) AND ASSOCIATED UTILITY RUNS. INSTALLATION OF OUTDOOR EQUIPMENT WITH A ROOF AND A 30kw DIESEL POWERED GENERATOR WITH A 132 GAL FUEL TANK WITHIN A FENCED LEASE AREA ON APN 077-102-12 AND ASSOCIATED UTILITY RUNS.

SIGNATURES

VERIZON WIRELESS EQUIPMENT ENGINEER: SIGNATURE / DATE	VERIZON WIRELESS REAL-ESTATE: SIGNATURE / DATE
VERIZON WIRELESS CONSTRUCTION: SIGNATURE / DATE	VERIZON WIRELESS RF ENGINEER: SIGNATURE / DATE
PROPERTY OWNER: SIGNATURE / DATE	AGENT-LEASING: SIGNATURE / DATE
AGENT-CONSTRUCTION: SIGNATURE / DATE	AGENT-ZONING: SIGNATURE / DATE

PROJECT TEAM

ENGINEER: FORESIGHT LAND SURVEYING & CIVIL ENGINEERING
CONTACT: JIM SCHURICHT
PHONE: (925) 389-8180

OWNER: BEN LOMOND FIRE DISTRICT
9430 HWY 9, BEN LOMOND, CA 95005
JAMES, KAREN, A.L. & VICKIE SCARBOROUGH
9470 HWY 9, BEN LOMOND, CA 95005

APPLICANT: verizonwireless
2785 MITCHELL DRIVE
WALNUT CREEK, CA 94598

AGENT: ON AIR
485 FIRST ST. WEST, SUITE 101
SONOMA, CA 95476
PHONE: 707-933-9833
FAX: 707-257-7099
CONTACT: AARON DELAO
PHONE: (916) 792-8586

BUILDING/SITE DATA

APN NUMBER:	077-102-21,12
PSL NUMBER:	249607
OCCUPANCY TYPE:	UNOCCUPIED
CONSTRUCTION TYPE:	V-N
LAT/LONG	37°05'22.82"(NAD 83) 122°05'18.90"(NAD 83)

ON AIR
Wireless Site Acquisition & Construction Managment
485 First St. West, Suite 101
Sonoma, CA 95476
Phone: 707-933-9833
Fax: 707-257-7099

Foresight
Land Surveying & Civil Engineering
Jim Schuricht
ph 925-389-8180
email: foresight@comcast.net

REVISIONS

NO.	DATE	DESCRIPTION
1	8/16/12	ISSUED FOR REVIEW
2	9/12/12	VERIZON CHANGES
3	12/06/12	PROJECT DESCRIPTION
4	6/11/13	PROJECT DESCRIPTION
5	11/02/13	OUTDOOR EQUIPMENT

SITE ADDRESS:
9430 HWY 9
BEN LOMOND, CA 95005
APN: 077-102-21&12

PROPOSED EQUIPMENT INSTALLATION
BEN LOMOND
SITE No. 249607

VERIZON WIRELESS
2785 MITCHELL DR. SUITE 9
WALNUT CREEK, CA 94598

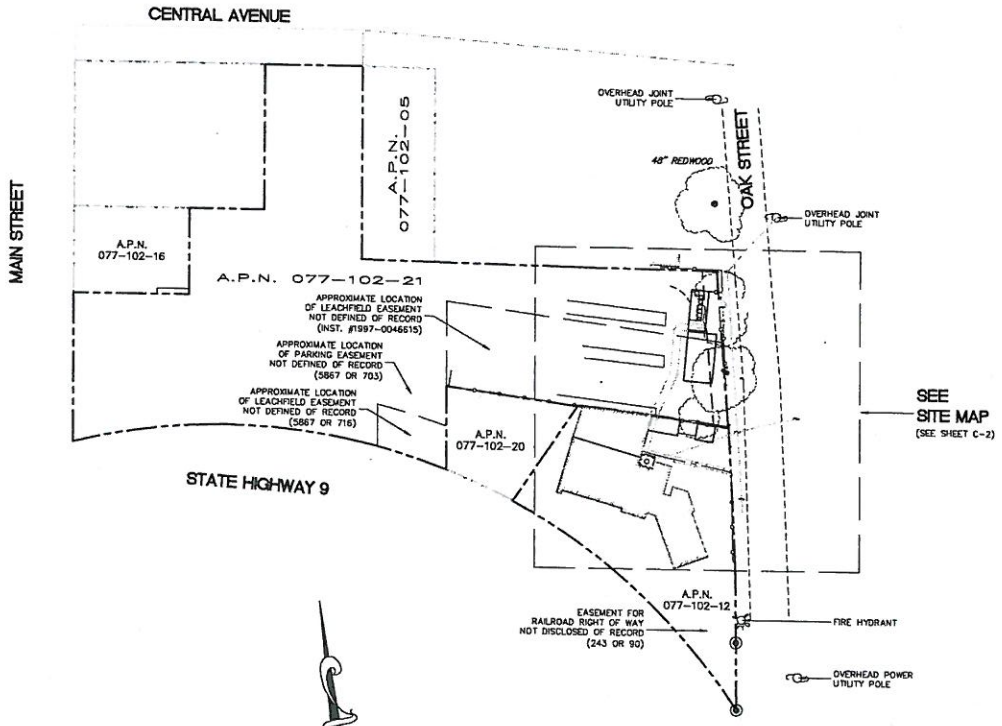
verizonwireless

DRAWN: DATE: 8/01/12
JOB NO. 1208
SHEET NO. T-1

EXHIBIT D

OVERALL SITE MAP

SCALE 1"=40'



GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

NOTES:

1. AN EASEMENT FOR RIGHT OF WAY FOR A RAILROAD 10 FEET IN WIDTH AND INCIDENTAL PURPOSES, RECORDED AS BOOK 243, PAGE 90 OF OFFICIAL RECORDS COULD NOT BE LOCATED OF RECORD.

2. AN EASEMENT SHOWN OR DEDICATED ON THE MAP FILED OR RECORDED NOVEMBER 15, 1887 AS VOLUME 10 AT PAGE 10 OF MAPS COULD NOT BE LOCATED OF RECORD.

3. AN EASEMENT CONTAINED IN THE DOCUMENT ENTITLED "PARKING EASEMENT AGREEMENT" RECORDED JUNE 28, 1996 AS BOOK 5867 AT PAGE 703 OF OFFICIAL RECORDS COULD NOT BE LOCATED OF RECORD.

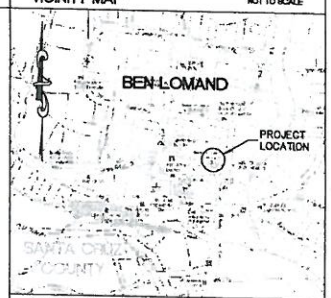
4. AN EASEMENT CONTAINED IN THE DOCUMENT ENTITLED "EASEMENT AGREEMENT" RECORDED JUNE 28, 1996 AS BOOK 5867 AT PAGE 716 OF OFFICIAL RECORDS COULD NOT BE LOCATED OF RECORD.

5. AN EASEMENT CONTAINED IN THE DOCUMENT ENTITLED "EASEMENT AGREEMENT" RECORDED OCTOBER 8, 1997 AS DOCUMENT NO. 1997-0046615 OF OFFICIAL RECORDS COULD NOT BE LOCATED OF RECORD.

EXHIBIT D

BOUNDARY SHOWN IS BASED ON RECORD INFORMATION AND FOUND MONUMENTATION.
THIS IS NOT A BOUNDARY SURVEY. PROPERTY LINES SHOWN ARE APPROXIMATE

VICINITY MAP NOT TO SCALE



GENERAL NOTES

PROPERTY INFORMATION

OWNER:	BEN LOMOND FIRE DISTRICT	JAMES MICHAEL, ET AL
ADDRESS:	9430 HIGHWAY 9 BEN LOMOND, CA 95005	P.O. BOX 486 BEN LOMOND, CA 95005
SITE:	BEN LOMOND 9430 HIGHWAY 9 BEN LOMOND, CA 95005	

ASSESSOR'S PARCEL NUMBER: 077-102-12 & 077-102-21

EXISTING GROUND ELEVATION: ELEV=334.4'±AMSL

LESSOR'S LEGAL DESCRIPTION

SEE SHEET C-2 FOR LESSOR'S LEGAL DESCRIPTION.

TITLE REPORT

TITLE REPORT WAS AVAILABLE AT THE TIME OF FIELD SURVEY. TITLE REPORT PROVIDED BY FIRST AMERICAN TITLE INSURANCE COMPANY TITLE REPORT FILE NUMBERS NCS-522612-SAC4 & NCS-552613-SAC4, DATED DECEMBER 20, 2011.

BASIS OF BEARING

BEARINGS SHOWN HEREON ARE BASED UPON U.S. STATE PLANE NAD83 COORDINATE SYSTEM *STATE PLANE COORDINATE* ZONE 3, DETERMINED BY GPS OBSERVATIONS.

BENCHMARK

ELEVATIONS BASED UPON GPS DERIVED ORTHOMETRIC HEIGHTS, APPLYING GEOID 99 SEPARATIONS (NAVD88).

FLOOD ELEVATION

FLOOD PLAIN ELEVATION OF PROJECT AREA IN ZONE X, AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON FEMA FIRM MAP COMMUNITY PANEL NUMBER 06087C0204E, DATED MAY 16, 2012.

SURVEY DATE

06/13/12

SURVEYOR'S NOTES

ALL EASEMENTS CONTAINED WITHIN SAID TITLE REPORT AFFECTING THE IMMEDIATE AREA SURROUNDING THE LEASE HAVE BEEN PLOTTED. SURVEYOR HAS NOT PERFORMED A SEARCH OF PUBLIC RECORDS TO DETERMINE ANY DEFECT IN TITLE ISSUED. THE BOUNDARY SHOWN HEREON IS PLOTTED FROM RECORD INFORMATION AND DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE PROPERTY.

UTILITY NOTES

SURVEYOR DOES NOT GUARANTEE THAT ALL UTILITIES ARE SHOWN OR THEIR LOCATIONS ARE ACCURATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND DEVELOPER TO CONTACT U.S.A. AND ANY OTHER INVOLVED AGENCIES TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. REMOVAL, RELOCATION AND/ OR REPLACEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.

LEGEND

———	PROPERTY LINE
- - - - -	EDGE OF PAVEMENT
-o-o-o-o-	FENCE LINE
- - - - -	OVERHEAD UTILITY LINE
◉	FOUND MONUMENT
AGL	ABOVE GROUND LEVEL
AMSL	ABOVE MEAN SEA LEVEL

Foresight
Land Surveying & Civil Engineering
Jim Schuricht
ph 925-389-8180
email: foresight@comcast.net

REVISIONS

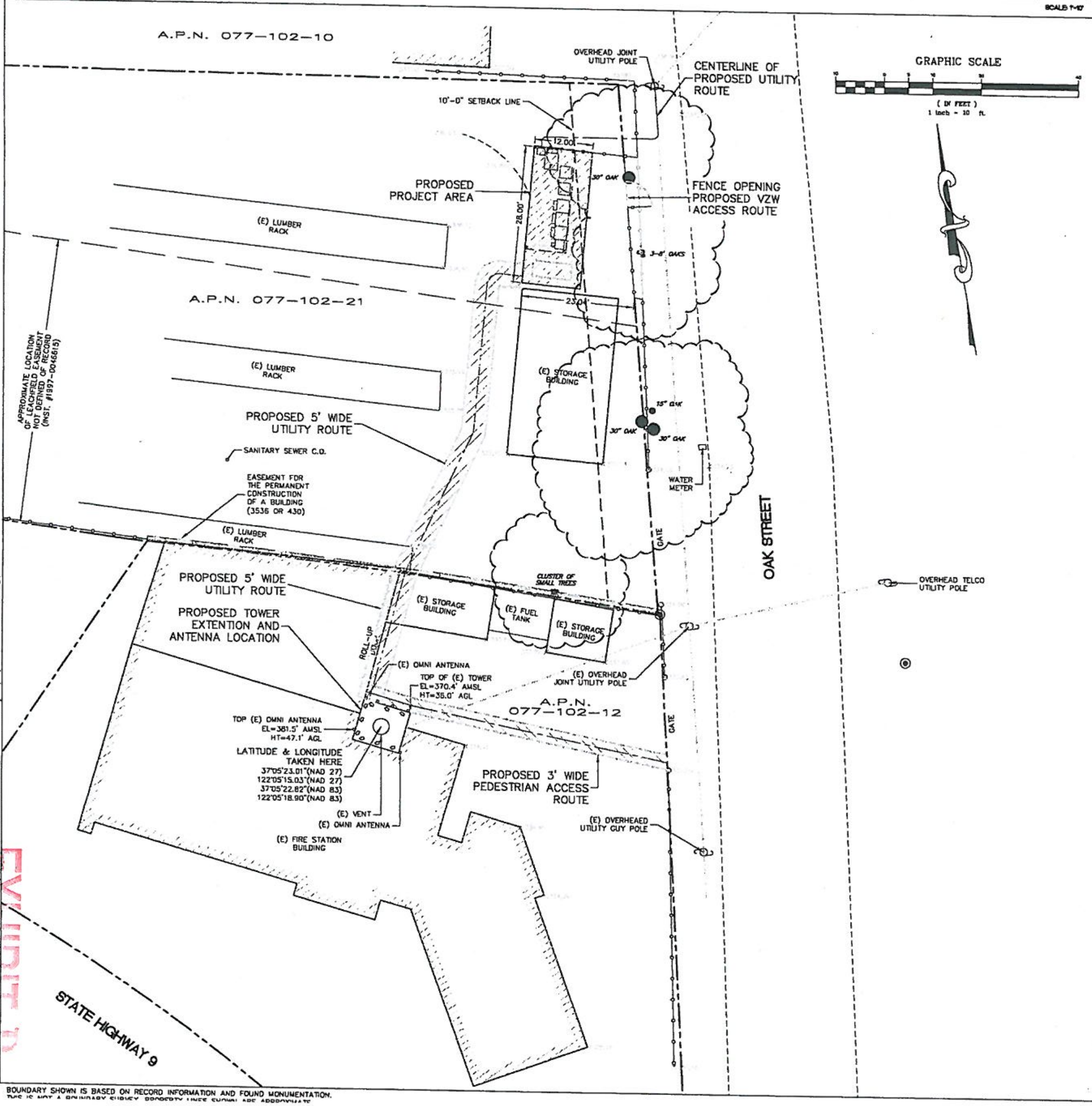
NO.	DATE	DESCRIPTION
1	06/28/12	ISSUED FOR REVIEW
2	07/11/12	REV. PER REDLINES
3	08/07/12	RELOCATE GENERATOR
4	08/16/12	REV. PER REDLINES
5	08/12/12	VERIZON COMMENTS
6	9/14/12	REV. PER REDLINES
7	12/06/12	REV. PER REDLINES
8	03/13/13	REV. PER REDLINES
9	06/11/13	REV. PER REDLINES
10	10/31/13	OUTDOOR EQUIP. CHANGE

PSL# 249607
BEN LOMOND
9430 HIGHWAY 9
BEN LOMOND, CA 95005

DRAWN: DATE: 06/30/13
JOB NO. 1208
SHEET NO.

C-1

OVERALL SITE MAP



BOUNDARY SHOWN IS BASED ON RECORD INFORMATION AND FOUND MONUMENTATION.

LESSOR'S LEGAL DESCRIPTION

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

PARCEL ONE:

BEGINNING AT THE INTERSECTION OF THE WEST LINE OF OAK AVENUE WITH THE NORTHEASTERLY LINE OF THE NEW STATE HIGHWAY RUNNING THROUGH THE TOWN OF BEN LOMOND; THENCE ALONG THE NORTHEASTERLY LINE OF SAID HIGHWAY, CURVING TO THE LEFT, NORTHWESTERLY TO AN IRON PIPE AT THE SOUTHERLY CORNER OF THE LAND CONVEYED TO FRANK HENFLING BY DEED RECORDED OCTOBER 26, 1938, IN VOLUME 359, OFFICIAL RECORDS, PAGE 259, RECORDS OF SANTA CRUZ COUNTY; THENCE ALONG THE SOUTHEASTERLY LINE OF SAID LAND OF HENFLING NORTH 43_ EAST 80.09 FEET TO AN IRON PIPE ON THE NORTHERLY LINE OF THE FORMER RIGHT OF WAY OF THE FELTON AND PESCADERO RAILROAD; THENCE ALONG SAID NORTHERLY LINE OF SAID FORMER RAILROAD RIGHT OF WAY, EASTERLY 106.20 FEET TO THE WEST LINE OF SAID OAK AVENUE; THENCE CROSSING SAID RAILROAD RIGHT OF WAY, SOUTHERLY 100 FEET, MORE OR LESS, TO THE INTERSECTION OF THE SOUTHERLY LINE OF SAID RAILROAD RIGHT OF WAY WITH THE WEST LINE OF OAK AVENUE; THENCE ALONG THE WEST LINE OF OAK AVENUE, SOUTH 8° 09' WEST 100.19 FEET TO THE POINT OF BEGINNING.

PARCEL TWO:

AN ALL PURPOSE EASEMENT ONE FOOT IN WIDTH THE SOUTHERN BOUNDARY OF WHICH IS DESCRIBED AS FOLLOWS, TO WIT:

BEGINNING AT AN IRON PIPE AT THE NORTHEASTERN TERMINUS OF THE COURSE DESCRIBED AS, "THENCE LEAVING SAID LAST MENTIONED BOUNDARY NORTH 43° 0' EAST 80.09 FEET TO AN IRON PIPE ON THE NORTHERLY BOUNDARY OF THE FORMER RIGHT OF WAY OF THE FELTON & PESCADERO RAILROAD" AS SAID COURSE IS SHOWN IN THE DEED CONVEYING LANDS TO FRANK G. HENFLING, DATED AUGUST 9, 1960 AND RECORDED AUGUST 26, 1960, IN VOLUME 1339, OF OFFICIAL RECORDS, AT PAGE 115, SANTA CRUZ COUNTY RECORDS. THENCE FROM SAID POINT OF BEGINNING ALONG SAID NORTHERN BOUNDARY OF THE FORMER RIGHT OF WAY OF THE FELTON AND PESCADERO RAILROAD EASTERLY CURVING TO THE RIGHT WITH A RADIUS OF 1485.68 FEET FROM A TANGENT BEARING SOUTH 75° 24' EAST THROUGH AN ANGLE OF 4° 05' 30" FOR A DISTANCE OF 106.10 FEET TO THE WESTERN BOUNDARY OF OAK STREET.

APN: 077 102-12

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

PARCEL ONE:

BEING A PORTION THE LANDS CONVEYED TO THE FRANK CHARLES HENFLING TRUST BY DEED DATED JANUARY 23, 1991 AND RECORDED JANUARY 23, 1991 IN VOLUME 4784 AT PAGE 915 OF OFFICIAL RECORDS OF SANTA CRUZ COUNTY. SAID PORTION DESCRIBED AS FOLLOWS:

BEGINNING AT AN IRON PIPE IN A FENCE FROM WHICH A SPIKE IN THE FENCE CORNER BEARS SOUTH 80° 08' EAST 11.55 FEET DISTANT AND THE NORTHEAST CORNER OF LOT 4 IN BLOCK 6 AS SAID BLOCK IS SHOWN AND DESIGNATED ON THE MAP ENTITLED "TOWN OF BEN LOMOND, SANTA CRUZ COUNTY, LAID OUT BY J. P. PIERCE, FILED FOR RECORD IN THE OFFICE OF THE COUNTY RECORDER ON NOVEMBER 15, 1887 IN VOLUME 10 OF MAPS AT PAGE 10, SANTA CRUZ COUNTY RECORDS, BEARS THE FOLLOWING COURSES AND DISTANCES: NORTH 80° 08' WEST 141.71 FEET AND NORTH 8° 49' EAST 133.5 FEET; THENCE FROM SAID POINT OF BEGINNING AND LEAVING SAID FENCE SOUTH 10° 23' WEST 95.1 FEET TO A 3/8 INCH IRON PIPE; THENCE SOUTH 73° 47' 00" EAST 9.98 FEET TO AN IRON PIPE ON THE NORTHERLY BOUNDARY OF THE FORMER RIGHT-OF-WAY OF THE FELTON & PESCADERO RAILROAD; THENCE RUNNING ALONG SAID LAST MENTIONED BOUNDARY EASTERLY CURVING TO THE RIGHT WITH A RADIUS OF 1,485.68 FEET FROM A TANGENT BEARING OF SOUTH 75° 24' EAST THROUGH AN ANGLE OF 4° 05' 30" FOR A DISTANCE OF 106.2 FEET TO AN IRON PIPE ON THE WESTERLY BOUNDARY OF OAK STREET; THENCE ALONG THE LAST MENTIONED BOUNDARY NORTH 4° 22' EAST 110.00 FEET TO A SPIKE IN THE CORNER OF A FENCE; THENCE LEAVING SAID OAK STREET AND RUNNING ALONG A FENCE LINE NORTH 80° 32' WEST 93.27 FEET TO A SPIKE IN THE CORNER OF A FENCE; THENCE NORTH 80° 08' WEST 11.55 FEET TO THE POINT OF BEGINNING.

PARCEL TWO:

BEING THE WESTERLY PORTION OF LAND CONVEYED TO FRANK HENFLING BY DEED DATED OCTOBER 11, 1938 AND RECORDED OCTOBER 26, 1938, IN VOLUME 359, PAGE 259, OFFICIAL RECORDS OF SANTA CRUZ COUNTY AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT AN IRON PIPE ON THE NORTHERLY LINE OF THE STATE HIGHWAY FROM WHICH POINT THE SOUTHWEST CORNER OF LOT 5, BLOCK 6, AS SAME IS SHOWN ON THAT CERTAIN MAP ENTITLED, "TOWN OF BEN LOMOND IN SANTA CRUZ COUNTY, LAID OUT BY J. P. PIERCE". FILED FOR RECORD IN THE OFFICE OF THE COUNTY RECORDER NOVEMBER 15TH, 1887 IN MAP BOOK 10, PAGE 10, SANTA CRUZ COUNTY RECORDS, BEARS NORTH 8° 49' EAST 32 FEET DISTANT; THENCE FROM SAID POINT OF BEGINNING NORTH 8° 49' EAST ALONG THE WESTERLY LINE OF SAID LOT 5, AND THE PRODUCED LINE THEREOF, 100 FEET TO A POINT; THENCE LEAVING SAID WESTERLY BOUNDARY SOUTH 80° 08' EAST 50 FEET TO THE EASTERLY LINE OF SAID LOT 5; THENCE SOUTHERLY ALONG THE EASTERLY LINE OF ABOVE MENTIONED LOT 5 AND THE PRODUCED LINE THEREOF, 150 FEET, MORE OR LESS, TO A POINT ON THE NORTHERLY LINE OF THE STATE HIGHWAY; THENCE ALONG SAID NORTHERLY LINE ON A CURVE TO THE LEFT, WITH A RADIUS OF 425 FEET THROUGH AN ANGLE OF 15° 08 1/2' FOR A DISTANCE OF 50 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

PARCEL THREE:

BEING A PORTION OF BLOCK 6, AS SAID BLOCK IS SHOWN AND DESIGNATED ON MAP ENTITLED, "TOWN OF BEN LOMOND IN SANTA CRUZ COUNTY, LAID OUT BY J. P. PIERCE", AND FILED FOR RECORD IN THE OFFICE OF THE COUNTY RECORDER ON NOVEMBER 15, 1882 IN MAP BOOK 10, PAGE 10, SANTA CRUZ COUNTY RECORDS AND MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT AN IRON PIPE ON THE EASTERLY BOUNDARY OF LOT 4 IN SAID ABOVE MENTIONED BLOCK 6 FROM WHICH THE NORTHEAST CORNER OF SAID LOT 4 BEARS NORTH 8° 49' EAST 133.50 FEET DISTANT; THENCE LEAVING SAID BOUNDARY AND RUNNING ALONG A FENCE LINE SOUTH 80° 8' EAST 141.71 FEET TO AN IRON PIPE IN SAID FENCE FROM WHICH A SPIKE IN A FENCE CORNER BEARS SOUTH 80° 08' EAST 11.55 FEET DISTANT; THENCE LEAVING SAID FENCE SOUTH 10° 23' WEST 95.10 FEET TO AN IRON PIPE; THENCE NORTH 73° 19' WEST 8.077 FEET TO AN IRON PIPE WHICH SHALL BE 10.00 FEET DISTANT AT RIGHT ANGLES FROM THE EASTERLY BOUNDARY OF LANDS DEEDED TO JOHN J. RYAN AND MARY JANE RYAN BY DEED RECORDED IN VOLUME 581, PAGE 287, OFFICIAL RECORDS OF SANTA CRUZ COUNTY; THENCE SOUTHERLY PARALLEL WITH AND 10 FEET DISTANT AT RIGHT ANGLES FROM SAID LAST MENTIONED BOUNDARY SOUTH 8° 49' WEST 57.31 FEET TO A STATION ON THE NORTHERLY BOUNDARY OF THE STATE HIGHWAY RIGHT OF WAY LEADING TO BOULDER CREEK; THENCE ALONG SAID LAST MENTIONED BOUNDARY WESTERLY CURVING TO THE LEFT WITH A RADIUS OF 425.00 FEET FROM A TANGENT BEARING NORTH 59° 56' WEST THROUGH AN ANGLE OF 1° 26' FOR A DISTANCE OF 10.63 FEET TO THE SOUTHEAST CORNER OF SAID LANDS DEEDED TO RYAN; THENCE LEAVING THE NORTHERLY BOUNDARY OF SAID HIGHWAY AND ALONG THE EASTERLY BOUNDARY OF SAID LANDS DEEDED TO RYAN NORTH 8° 49' EAST 113.85 FEET TO THE NORTHEAST CORNER OF SAID LANDS OF RYAN; THENCE ALONG THE NORTHERLY BOUNDARY OF SAID LANDS OF RYAN, NORTH 80° 08' WEST 50.00 FEET TO A 3/8 INCH IRON PIPE, SAID POINT BEING AT THE NORTHWEST CORNER OF SAID LANDS DEEDED TO RYAN ON THE EASTERLY BOUNDARY OF LOT 4 IN SAID BLOCK 6; THENCE ALONG THE EASTERLY BOUNDARY OF SAID LAST MENTIONED LOT 4, NORTH 8° 49' EAST 26.4 FEET TO THE POINT OF BEGINNING.

PARCEL FOUR:

BEING A PART OF THE LANDS CONVEYED TO RUSSELL E. HALL, ET UX, BY DEED RECORDED IN VOLUME 640, PAGE 428 OFFICIAL RECORDS OF SANTA CRUZ COUNTY, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A 1/2 INCH PIPE ON THE EASTERLY LINE OF MAIN STREET FROM WHICH THE NORTHWESTERLY CORNER OF SAID LANDS OF HALL BEARS NORTH 8 DEGREES 49' EAST 60 FEET DISTANT; THENCE FROM SAID POINT OF BEGINNING PARALLEL TO THE NORTHERLY LINE OF SAID LANDS SOUTH 81 DEGREES 11' EAST 80 FEET TO A POINT ON THE EASTERLY LINE THEREOF; THENCE ALONG THE EASTERLY LINE OF SAID LANDS OF HALL SOUTH 8 DEGREES 49' WEST 29.5 FEET TO AN ANGLE AND SOUTH 5 DEGREES 58' EAST 52.05 FEET TO THE SOUTHEASTERLY CORNER THEREOF ON THE NORTHERLY LINE OF THE STATE HIGHWAY LEADING FROM SANTA CRUZ TO BOULDER CREEK, FROM WHICH AN IRON PIPE BEARS NORTH 5 DEGREES 58' WEST 0.20 FEET DISTANT; THENCE ALONG THE NORTHERLY LINE OF SAID HIGHWAY, WESTERLY ON A CURVE TO THE LEFT WITH A RADIUS OF 425 FEET FROM A TANGENT BEARING NORTH 82 DEGREES 32' WEST THROUGH AN ANGLE OF 13 DEGREES 05' 20" FOR A DISTANCE OF 97.08 FEET TO THE INTERSECTION OF SAID HIGHWAY LINE WITH AFORESAID EASTERLY LINE OF MAIN STREET; THENCE ALONG LAST MENTIONED LINE NORTH 8 DEGREES 49' EAST 102.77 FEET TO THE POINT OF BEGINNING.

PARCEL FIVE:

AN ENCROACHMENT EASEMENT 4 FEET IN WIDTH, THE SOUTHERLY LINE OF WHICH IS DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEASTERLY CORNER OF ABOVE DESCRIBED PARCEL OF LAND; THENCE ALONG THE NORTHERLY LINE OF SAID DESCRIBED PARCEL NORTH 81 DEGREES 11' WEST 22 FEET TO A 1/2 INCH PIPE.

PARCEL SIX:

BEGINNING ON THE SOUTHERN SIDE OF CENTRAL AVENUE AS SAID AVENUE IS SHOWN AND DESIGNATED UPON THE MAP OF THE TOWN OF BEN LOMOND WHICH MAP IS FILED IN THE OFFICE OF THE COUNTY RECORDER NOVEMBER 15, 1887, IN MAP BOOK 5, AT PAGE 60, AND THEREAFTER RECOPIED IN MAP BOOK 10, PAGE 10, SANTA CRUZ COUNTY RECORDS, AT THE NORTHWEST CORNER OF LANDS NOW OR FORMERLY OF E. H. CHATHAM AND FROM WHICH THE SOUTHEASTERLY CORNER OF CENTRAL AVENUE AND MAIN STREET IS SHOWN ON SAID ABOVE MENTIONED MAP BEARS NORTH 81° 11' WEST 200 FEET DISTANT; THENCE RUNNING ALONG THE SOUTHERLY SIDE OF CENTRAL AVENUE NORTH 81° 11' WEST 68 FEET TO AN IRON PIPE; THENCE LEAVING SAID CENTRAL AVENUE AND PARALLEL WITH THE EASTERN LINE OF MAIN STREET SOUTH 08° 49' WEST 100 FEET TO AN IRON PIPE; THENCE PARALLEL WITH THE SOUTHERLY SIDE OF CENTRAL AVENUE NORTH 81° 11' WEST 52 FEET TO A STATION; THENCE PARALLEL WITH THE EASTERLY SIDE OF MAIN STREET SOUTH 08° 49' WEST 89.50 FEET TO AN IRON PIPE; THENCE SOUTH 5° 58' EAST 82.05 FEET TO A STATION ON THE NORTHERLY BOUNDARY OF THE STATE HIGHWAY LEADING FROM SANTA CRUZ TO BOULDER CREEK AND FROM WHICH AN IRON PIPE BEARS NORTH 05° 58' WEST 0.20 FEET DISTANT; THENCE EASTERLY ALONG THE NORTHERLY SIDE OF SAID STATE HIGHWAY CURVING TO THE RIGHT FROM A TANGENT BEARING SOUTH 82° 32' EAST WITH A RADIUS OF 423 FEET THROUGH AN ANGLE OF 14° 08' FOR A DISTANCE OF 104.84 FEET TO AN IRON PIPE STANDING AT THE SOUTHWEST CORNER OF LANDS NOW OR FORMERLY OF HENFLING; THENCE LEAVING SAID STATE HIGHWAY AND RUNNING ALONG THE WESTERLY BOUNDARY OF LANDS NOW OR FORMERLY OF HENFLING AND LANDS NOW OR FORMERLY OF E. H. CHATHAM, NORTH 08° 49' EAST 259.90 FEET TO THE PLACE OF BEGINNING.

APN: 077-102-21

Foresight
Land Surveying & Civil Engineering
Jim Schuricht
ph 925-389-8180
email: foresight@comcast.net

REVISIONS

NO.	DATE	DESCRIPTION
1	06/29/12	ISSUED FOR REVIEW
2	07/11/12	REV. PER REDLINES
3	08/07/12	RELOCATE GENERATOR
4	08/16/12	REV. PER REDLINES
5	09/12/12	VERIZON CHANGES
6	9/14/12	REV. PER REDLINES
7	12/06/12	REV. PER REDLINES
8	03/13/13	REV. PER REDLINES
9	06/11/13	REV. PER REDLINES
10	10/31/13	OUTDOOR EQUIP. CHANGE

PSL# 249607
BEN LOMOND
9430 HIGHWAY 9
BEN LOMOND, CA 95005

DRAWN:	DATE: 08/30/13
JOB NO.	1208
SHEET NO.	

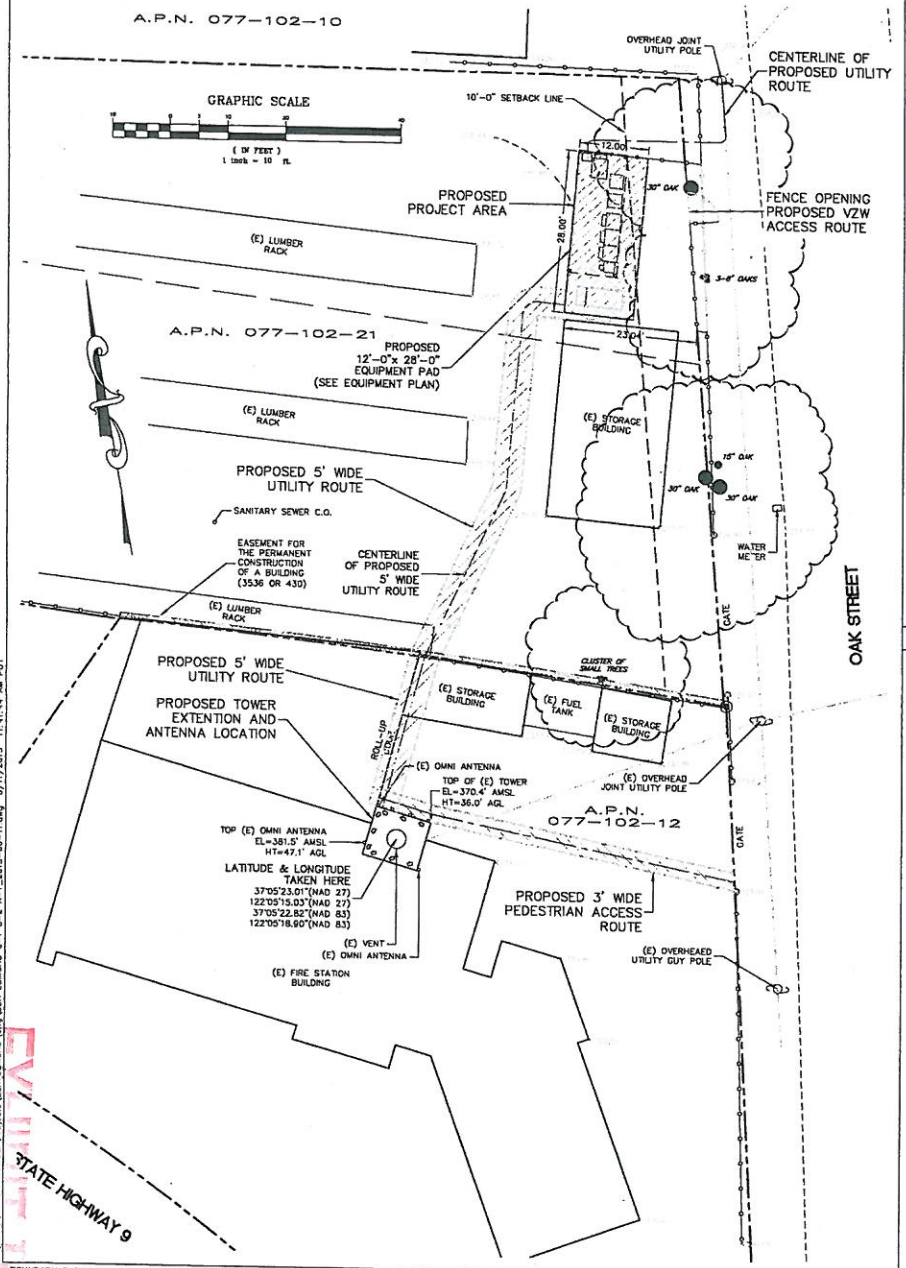
C-2

C:\Users\Trevor MacQuarrie\Projects\BEN LOMOND\dwg\BEN LOMOND C-1 C-2 A-1_2013-06-11.dwg 6/11/2013 11:41:44 AM PDT

EXHIBIT D

SITE PLAN

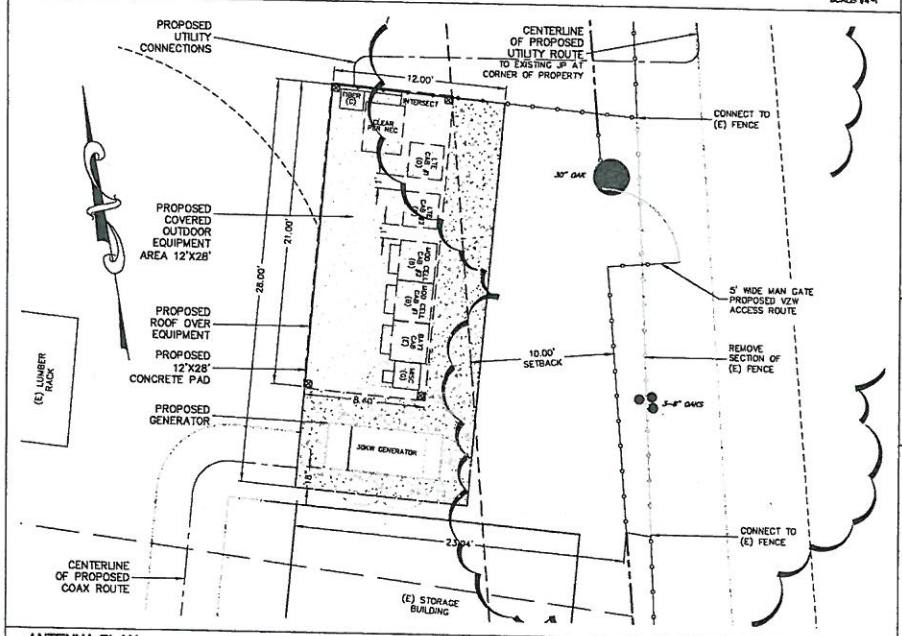
SCALE: 1"=10'



BOUNDARY SHOWN IS BASED ON RECORD INFORMATION AND FOUND MONUMENTATION.

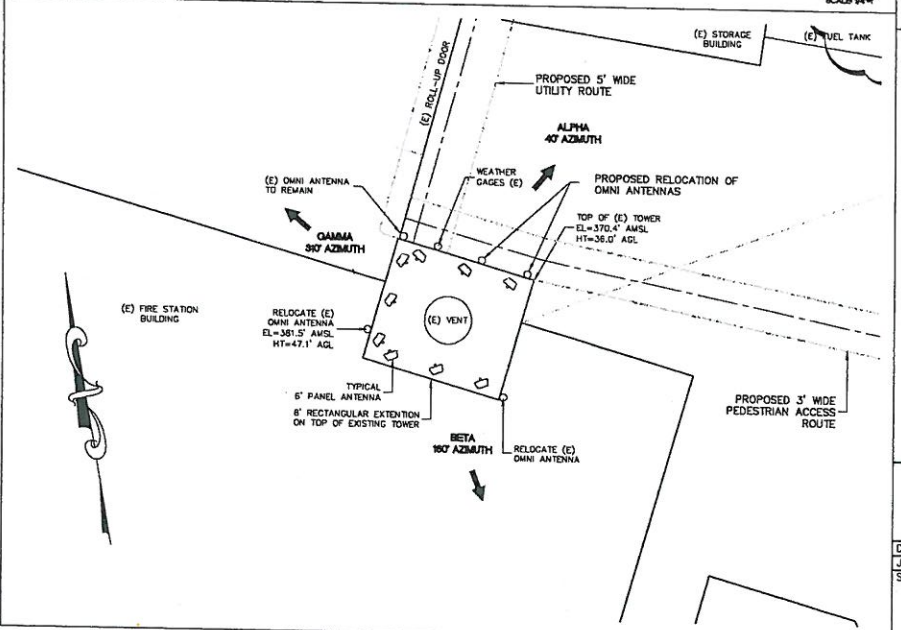
EQUIPMENT PLAN

SCALE: 1/4"=1'



ANTENNA PLAN

SCALE: 1/4"=1'



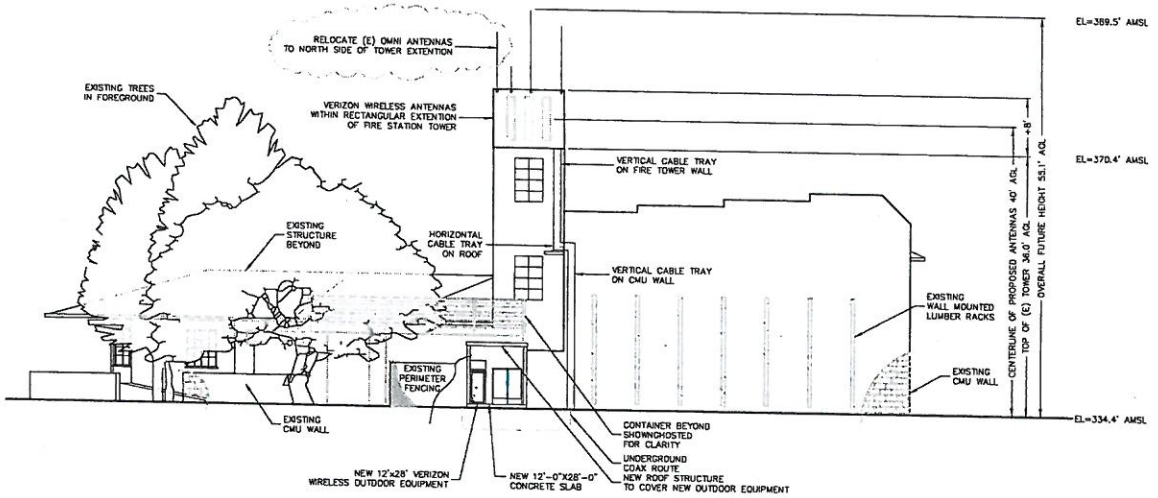
Foresight
Land Surveying & Civil Engineering
Jim Schuricht
ph 925-389-8180
email: foresight@comcast.net

REVISIONS

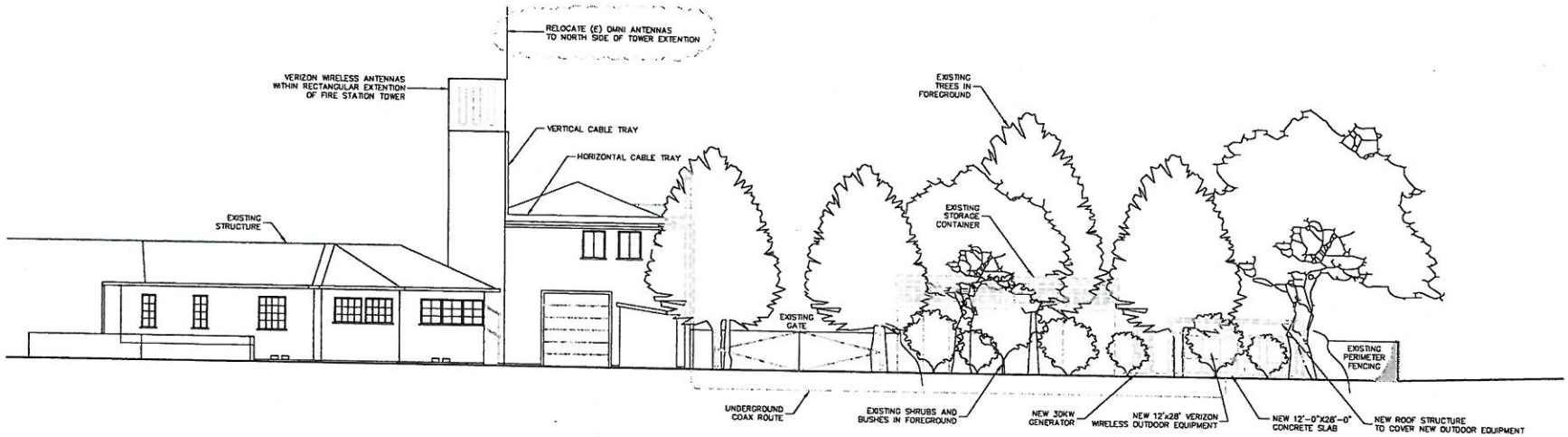
NO	DATE	DESCRIPTION
1	07/11/12	ISSUED FOR REVIEW
2	07/25/12	ADDED GENERATOR
3	08/07/12	RELOCATE GENERATOR
4	08/16/12	REV. PER REDLINES
5	9/14/12	REV. PER REDLINES
6	12/06/12	REV. PER REDLINES
7	03/13/13	REV. PER REDLINES
8	06/21/13	REV. PER REDLINES
9	08/30/13	RELOCATE OMNI ANTENNAS
10	10/31/13	OUTDOOR EQUIP. CHANGE

PSL# 249607
BEN LOMOND
9430 HIGHWAY 9
BEN LOMOND, CA 95005

DRAWN:	DATE: 08/30/13
JOB NO.	1208
SHEET NO.	A-1



NORTH ELEVATION
SCALE: 1/8"=1'-0"



EAST ELEVATION
SCALE: 1/8"=1'-0"

Foresight
Land Surveying & Civil Engineering
Jim Schuricht
ph 925-389-8180
email: foresight@comcast.net

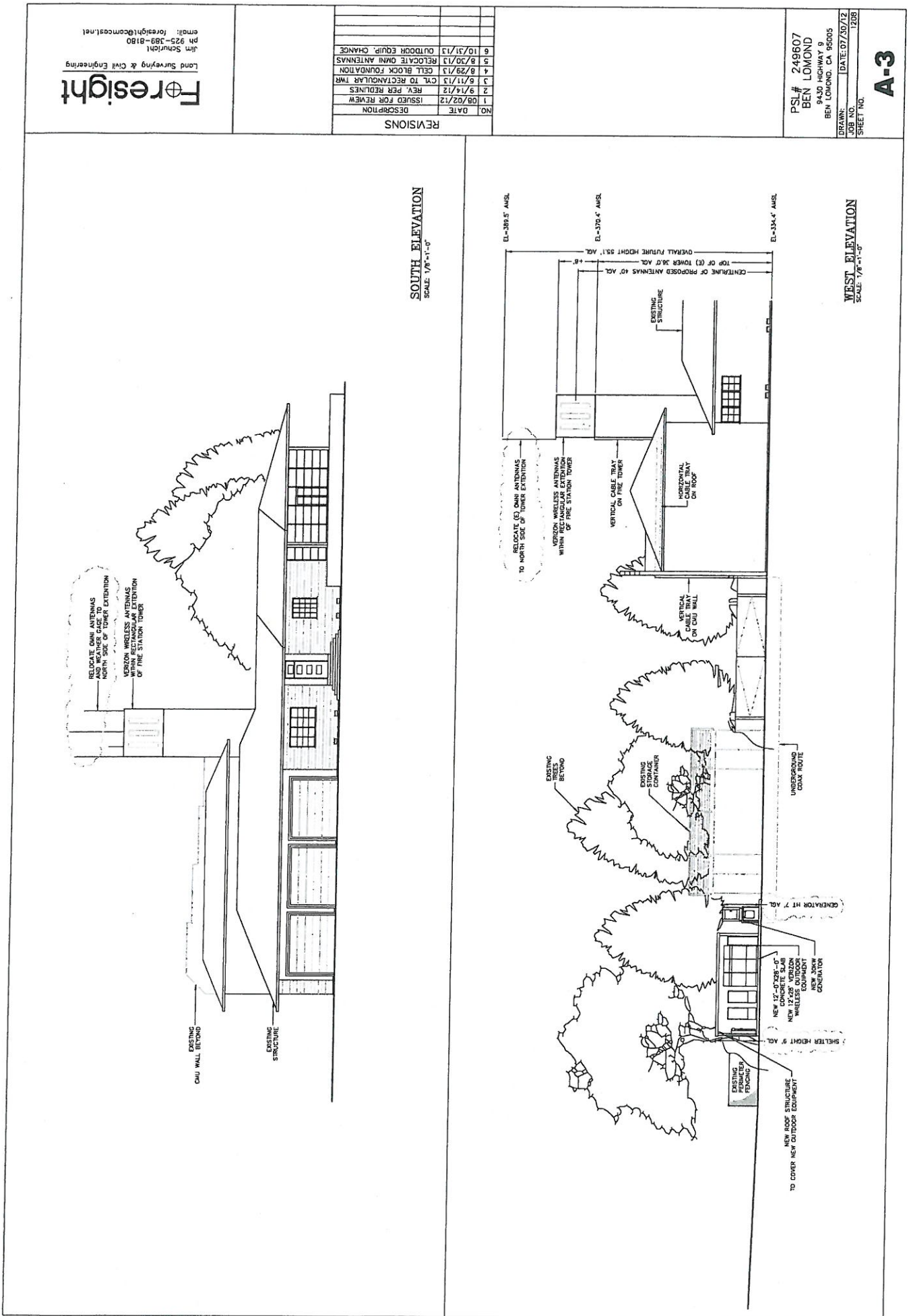
REVISIONS

NO.	DATE	DESCRIPTION
1	08/02/12	ISSUED FOR REVIEW
2	9/14/12	REV. PER REDLINES
3	6/11/13	CYL. TO RECTANGULAR TWR
4	8/28/13	CELL BLOCK FOUNDATIONS
5	8/30/13	RELOCATE OMNI ANTENNAS
6	10/31/13	OUTDOOR EQUIP. CHANGE

PSL# 249607
BEN LOMOND
9430 HIGHWAY 9
BEN LOMOND, CA 95005

DRAWN: DATE: 07/30/12
JOB NO. 1208
SHEET NO.
A-2

EXHIBIT D



REVISIONS		
NO	DATE	DESCRIPTION
1	08/02/12	ISSUED FOR REVIEW
2	9/14/12	REV. PER REDLINES
3	8/11/13	CTR. TO RECTANGULAR TWR
4	8/29/13	CELL BLOCK FOUNDATION
5	8/30/13	RELOCATE OMNI ANTENNAS
6	10/31/13	OUTDOOR EQUIP. CHANGE

PSL# 249607
BEN LOMOND
9430 HIGHWAY 9
BEN LOMOND, CA 95005

DRAWN: | DATE: 07/30/12
JOB NO. 1208
SHEET NO. **A-3**

Foresight
Land Surveying & Civil Engineering
Jim Schuricht
ph 925-389-8180
email: foresight@ccmcast.net

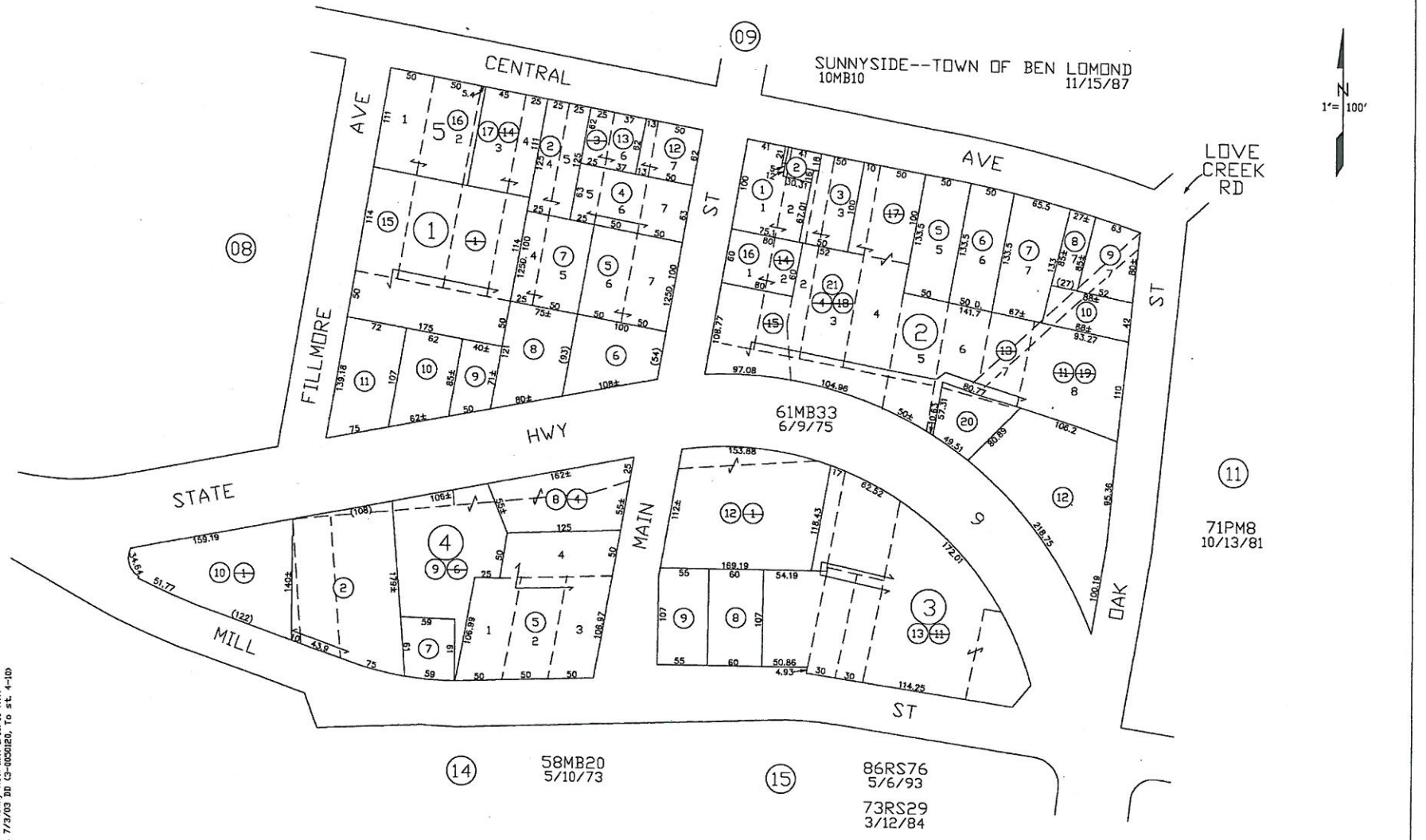
EXHIBIT D

FOR TAX PURPOSES ONLY

POR. S. 1/2 SEC. 4, T.10S., R.2W., M.D.B. & M.

Tax Area Code 90-031

77-10



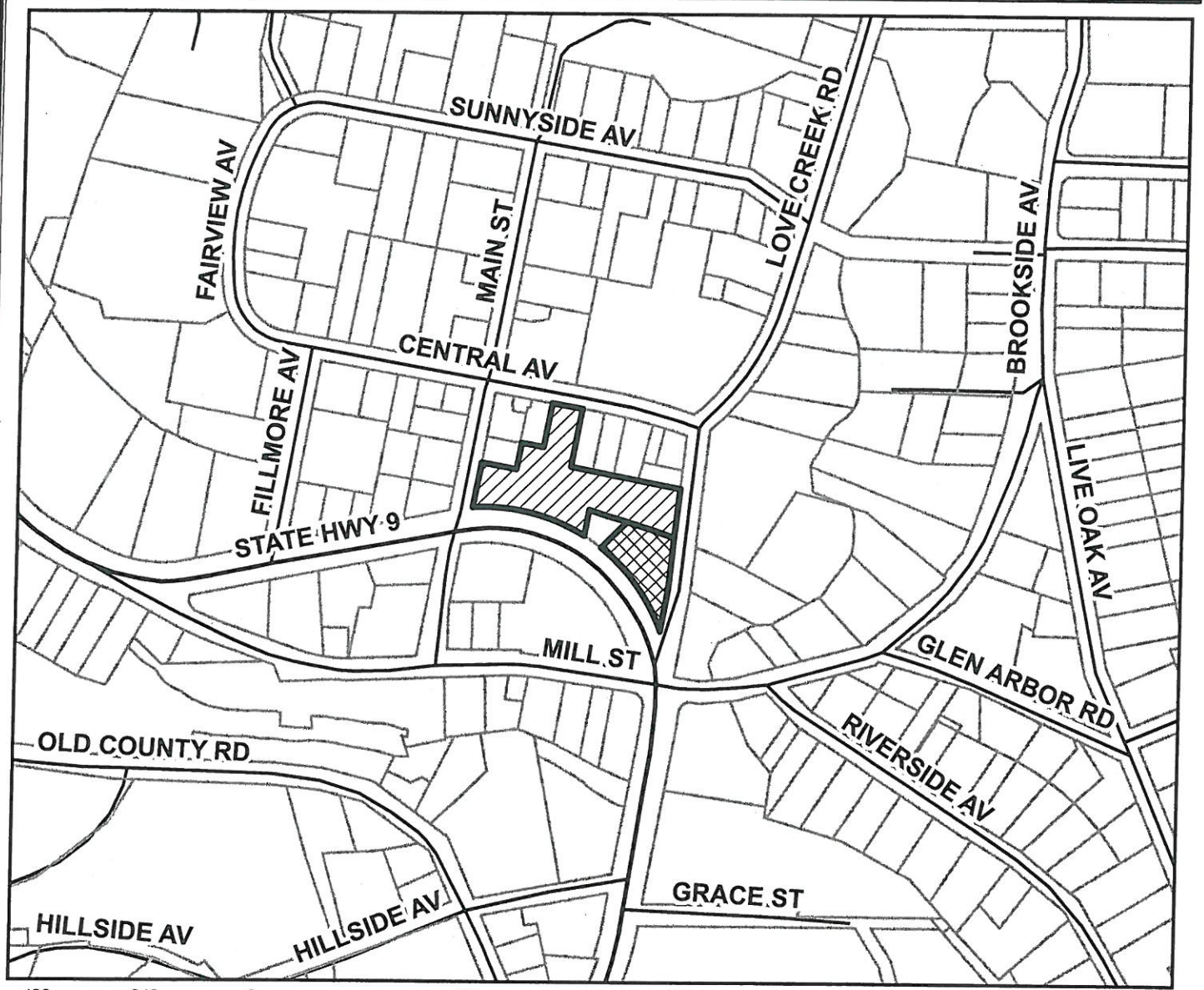
Electronically Redrawn 1/10/01 nvn
Rev. 7/3/03 DD (3-0050120, To st. 4-10)

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

Assessor's Map No. 77-10
County of Santa Cruz, Calif.
Jan., 2001

EXHIBIT E

Location Map



LEGEND

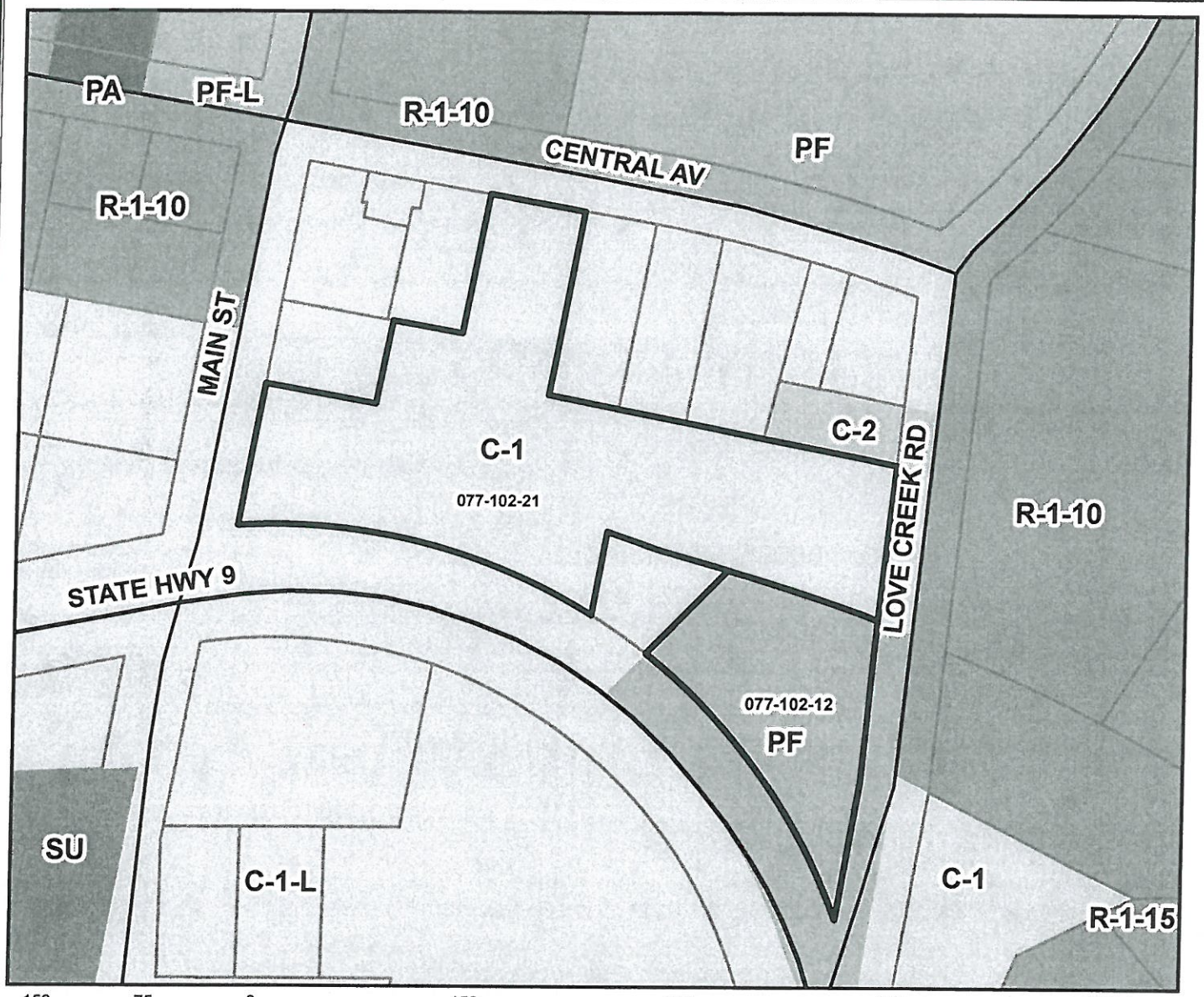
- APN: 077-102-21
- APN: 077-102-12
- Assessors Parcels
- Streets
- State Highways

N
W E
S

Map Created by
County of Santa Cruz
Planning Department
July 2013

EXHIBIT E

Zoning Map



LEGEND

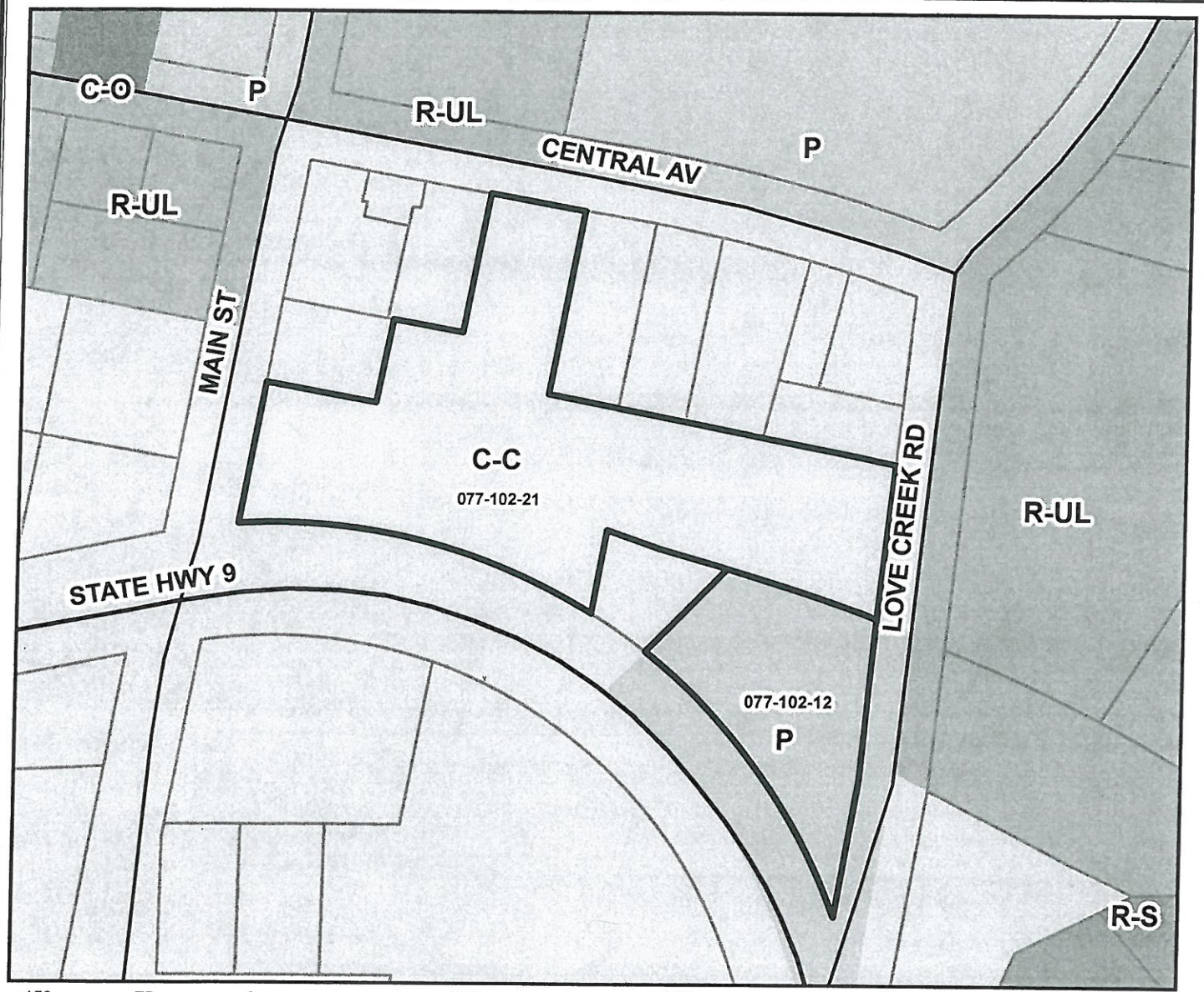
- APN: 077-102-21
- APN: 077-102-12
- Assessors Parcels
- Streets
- State Highways
- COMMERCIAL-NEIGHBORHOOD
- COMMERCIAL-COMMUNITY
- PUBLIC FACILITY
- RESIDENTIAL-SINGLE FAMILY
- SPECIAL USE
- COMMERCIAL-PROF OFFICE

N
W E
S

Map Created by
County of Santa Cruz
Planning Department
July 2013

EXHIBIT E

General Plan Designation Map



LEGEND

- APN: 077-102-21
- APN: 077-102-12
- Assessors Parcels
- Streets
- State Highways
- Commercial-Community
- Public Facilites
- Residential - Urban Low Density
- Residential-Suburban
- Commercial-Office

N
W E
S

Map Created by
County of Santa Cruz
Planning Department
July 2013

Verizon Wireless • Proposed Base Station (Site No. 249607 "Ben Lomond")
9430 Highway 9 • Ben Lomond, 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. 249607 "Ben Lomond") proposed to be located at 9430 Highway 9 in Ben Lomond, 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 training tower of the fire station located at 9430 Highway 9 in Ben Lomond. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standards

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

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5,000–80,000 MHz	5.00 mW/cm^2	1.00 mW/cm^2
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	2.40	0.48
[most restrictive frequency range]	30–300	1.00	0.20

General Facility Requirements

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

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

Computer Modeling Method

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

Site and Facility Description

Based upon information provided by Verizon, including zoning drawings by Foresight Land Surveying & Civil Engineering, dated June 11, 2013, it is proposed to install nine Andrew directional panel antennas – six Model HBXX-6517DS-VTM and three Model LNX-6514DS-VTM – within a new view screen enclosure above the training tower of the fire station located at 9430 Highway 9 in Ben Lomond. The antennas would be mounted with up to 6° downtilt at an effective height of about 40 feet above ground and would be oriented in identical groups of three toward 40°T, 160°T, and 310°T. The maximum effective radiated power in any direction would be 6,270 watts, representing simultaneous operation at 620 watts for AWS, 1,320 watts for PCS, 3,760 watts for cellular, and 620 watts for 700 MHz service. There are reported no other wireless telecommunications base stations at the site or nearby.

Study Results

For a person anywhere at ground, the maximum RF exposure level due to the proposed Verizon operation is calculated to be 0.026 mW/cm^2, which is 4.7% of the applicable public exposure limit. The maximum calculated level at the second-floor elevation of any nearby building* is 9.4% of the public exposure limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operation.

---

* Including the residences located at least 110 feet away, based on photographs from Google Maps.

Recommended Mitigation Measures

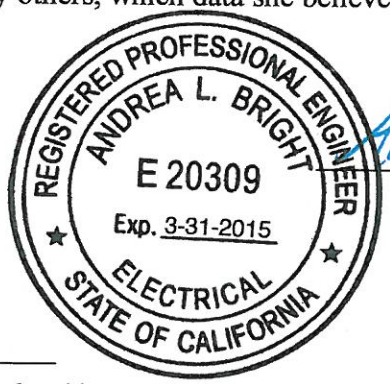
Due to their mounting locations, the Verizon antennas would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, no access within 11 feet directly in front of the antennas themselves, such as might occur during maintenance work on the tower, 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† at the antennas and/or on the tower below 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.

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 9430 Highway 9 in Ben Lomond, 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.

Authorship

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



Andrea L Bright

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

July 19, 2013

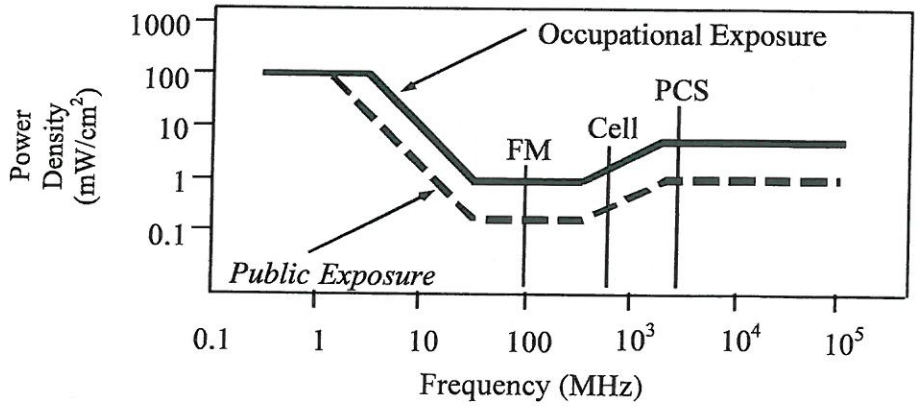
† Warning signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (*e.g.*, a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter, and guidance from the landlord, local zoning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

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	Electromagnetic Fields (f is frequency 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	$3.54\sqrt{f}$	*$1.59\sqrt{f}$*	$\sqrt{f}/106$	*$\sqrt{f}/238$*	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 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^2,

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^2,

where θ_{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
η = aperture efficiency (unitless, typically 0.5-0.8).

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

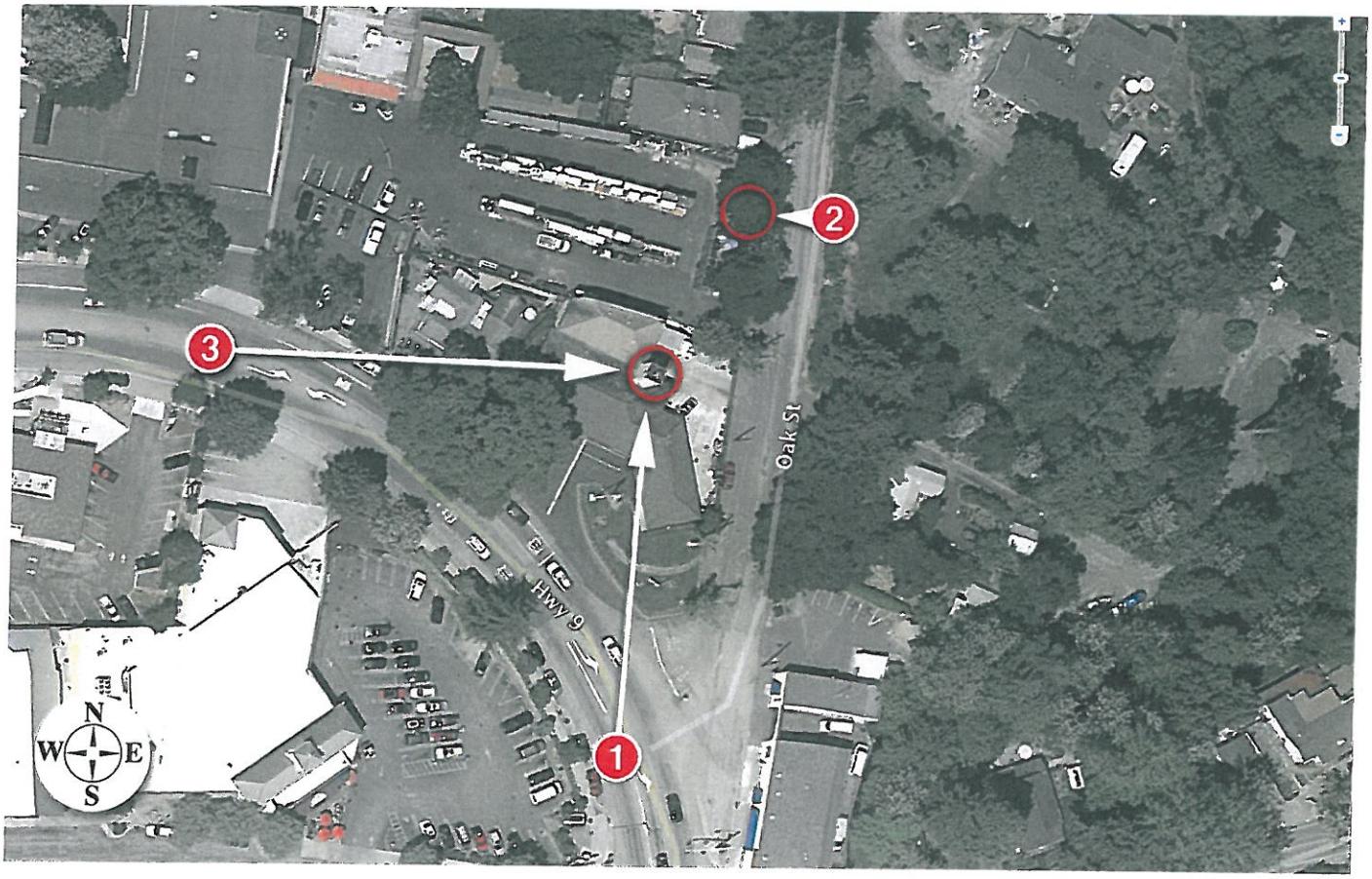
Far Field.

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

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

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.



verizon wireless

Ben Lomond **Site # 249607**

Aerial Map

9430 Highway 9
Ben Lomond, CA 95005

6/4/13

Applied Imagination 510 914-0500

EXHIBIT C

Existing

Proposed

verizonwireless | Ben Lomond | Site # 249607 | Looking North from Highway 9

9/3/13

9430 Highway 9
Ben Lomond, CA 95005

View #1

Applied Imagination 510 914-0500

Existing

Propos

proposed equipment

verizonwireless | Ben Lomond | Site # 249607 | Looking West from Oak Street

11/11/13

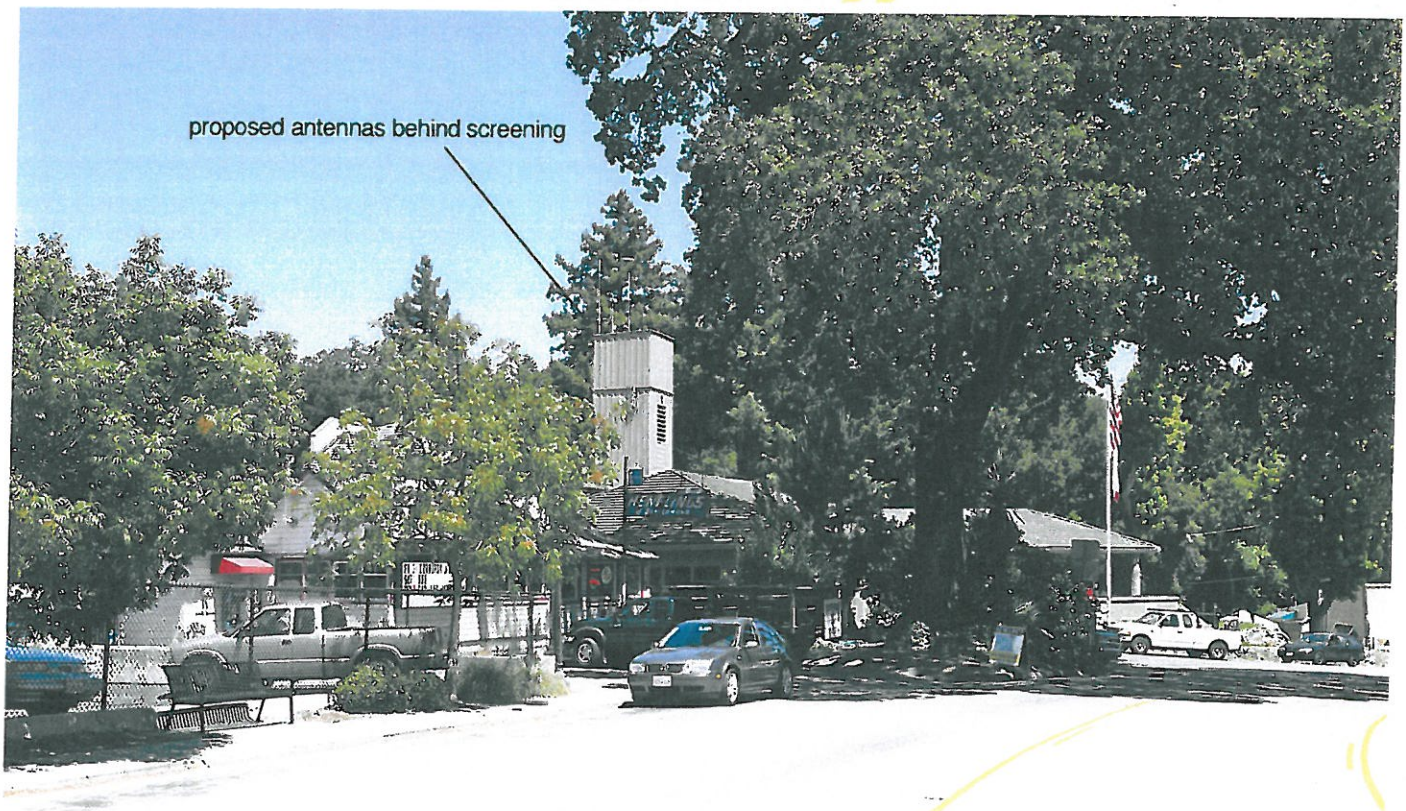
9430 Highway 9
Ben Lomond, CA 95005

View #2

Applied Imagination 510 914-0500

EX

Existing



Proposed

verizonwireless | Ben Lomond | Site # 249607 | Looking East from Highway 9

9/3/13 | 9430 Highway 9, Ben Lomond, CA 95005 | View #3

Applied Imagination 510 914-0500

James P. Allen & Associates

Dedicated to the Preservation of Trees

Verizon Wireless
9439 Highway 9, Ben Lomond, CA

PS# 249607

Tree Resource Analysis/ Construction Impact Assessment

Prepared for
Aaron Delao, Project Manager
ON AIR

Consulting Arborists
611 Mission Street
Santa Cruz, CA 95060
831.426.6603 office
831.460.1464 fax
jpallen@cruzio.com

EXHIBIT

ASSIGNMENT/SCOPE OF SERVICES

The construction of a rooftop cellular tower with ground equipment and associated utility runs is proposed at 9430 Highway 9 in Ben Lomond, APN 077-102-21 & 12.

The area proposed for construction of the ground equipment is populated with mature live oak trees. In order to construct the facility that insures tree health/stability, the safe use of the facilities and protects tree resources on this site during construction a Tree Resource Analysis/Construction Impact Assessment (CIA) has been requested by Aaron DeLao, Project Manager with On Air LLC. To complete this assignment the following tasks have been performed

- Locate, catalog and verify mapped locations of trees/tree groups greater than 6 inches in trunk diameter growing within 20 feet of the Limits of Disturbance
- Rate individual tree health/structure and preservation suitability as "good, fair or poor"
- Map Critical Root Zones of preserved trees
- Identify trees with active disease organisms or structural weakness that present risk to the redefined use of the site
- Review grading, construction, utility and landscape plans to determine potential impacts to trees
- Meet and Interact with the Project Design/Construction Team to identify alternative construction methods to decrease impacts to tree resources
- Provide recommendations for remedial treatments and maintenance to improve tree condition and decrease risk in preparation for construction
- Create tree preservation specifications including a protection fencing plan
- Prepare and submit a report documenting findings

BACKGROUND

Verizon Wireless proposes to install nine panel antennas to an existing tower at the Ben Lomond Fire Station, APN 077-102-20. An equipment shelter and generator will be constructed within a 20' by 30' fenced area on the neighboring Scarborough Lumber Yard, APN 077-102-12. A trench will be dug between the equipment shelter and fire station for connection of utility runs.

The project will impact the **Critical Root Zones** of two coast live oak *Quercus agrifolia* trees growing along Oak Street at the eastern boundary of the lumberyard. On August 15 I met with Aaron DeLao, Project Manager and Christian the Construction Manager. I inspected the two oak trees, reviewed the project plans and discussed the most appropriate construction methods to preserve tree health with Aaron and Christian. After meeting and conferring, plans were revised by Jim Schuricht of Foresight Civil Engineering to reflect my recommended construction methods. These plans dated August 19, 2013 were then provided for my review and approval. I was re-contacted by Aaron on November 4, 2013. He informed me that a design revision was necessary due to a 10-foot setback requirement. The revised alignment is further away from the tree but requires a 6-inch cut in order to provide a base for a 12-inch monolithic slab that will support the

facility's equipment. He requested I modify the previously prepared report dated 8-26-13 to reflect design changes and tree resource impacts. My findings are as follows.

EXISTING CONDITIONS

The area where the equipment shelter and generator pad will be constructed is currently used as a material storage area. Soils are dense and compacted from years of equipment operation and heavy objects being placed within the tree's Critical Root Zone.

The larger coast live oak measures 25.8 diameter inches. It is in a good state of **health** with fair **structure** and fair **suitability for preservation**. The tree divides into **codominant stems** at the height of four feet above grade as depicted by the red arrow, inset photo. The point of attachment is narrow with **included bark**. A **poor trunk/stem attachment** of this type is typically weak and prone to failure. The canopy is heavily weighted in the westerly direction over the proposed construction area as a result of the bowed trunk configuration and necessary utility line clearance pruning on the tree's east side.

The second coast live oak within the impact zone has three trunks measuring 10.5, 8.6 and 7 diameter inches at 4.5 feet above grade. This tree is in good health with fair structure and suitability for preservation.

Neither of the trees meet "Significant" criteria as defined by the *County of Santa Cruz Significant Tree Protection, Section 16.34.*

RECOMMENDED PROCEDURES

In order to decrease construction impacts, the foundation systems supporting the generator pad and equipment cabinets will be a monolithic slab extending 6 inches below natural grade within the trees' Critical Root Zone. This approach requires the minimum amount of excavation, to a depth of 6-inches below grade necessary for typical foundation construction. Since this area is heavily compacted with base rock type material, this excavation is not likely to damage woody and non-woody roots necessary for continued tree health and stability.

The larger coast live oak tree should be pruned and cabled by a qualified arborist in order to balance, stabilize and gain construction clearance. Long weighted branches growing in the westerly direction should be shortened to proper lateral growth. A Simple Direct

cable should be installed between the two weakly attached stems to provide additional support.

The two coast live oak trees are to be protected from inadvertent damage using **Temporary Tree Preservation Fencing and rice straw bales**. This temporary fencing is to be 48 inches in height and secured with metal stakes driven into the soil. Rice straw bales may be secured by driving metal or wooden stakes through the bales to a depth of 12 to 18 inches below natural soil grade. This barricade will prevent damage to the retained trees. Tree Preservation Zone fencing locations are documented on an attached map. Fencing and rice straw bales may be removed once construction is completed.

Project access will be limited to the lumberyard entry point during construction. The existing fence along Oak Way will remain in place through construction. There will be no project access allowed from Oak Way during construction. No storage of construction materials, debris, or excess soil will be allowed within the Tree Protection Zone. Driving/Parking of vehicles or construction equipment in this area is prohibited. Solvents or liquids of any type should be disposed of properly, never within this protected area.

In order to decrease root damage from the required foundation excavation, a Ditchwitch trencher shall be used to excavate at the final line of disturbance, indicated on the attached map. The utility trench connecting the equipment cabinets to the Fire Station may be dug using a backhoe or other traditional methods. Once each of these procedures is completed, damaged roots are to be pruned cleanly by skilled labor. Bark should adhere to the wood without tearing. Wood fibers should remain intact without shattering. The following tools should be used:

- Hand-pruners
- Loppers
- Handsaw
- Reciprocating saw
- Chainsaw

When completed, the pruned portions should be covered with burlap or similar material and kept moist.

After construction of these improvements has been completed, weed cloth will be applied to the existing grade with base rock overlay as the final surface covering.

Implementation of the above-described procedures will allow these trees maintain current levels of health and stability for many years.

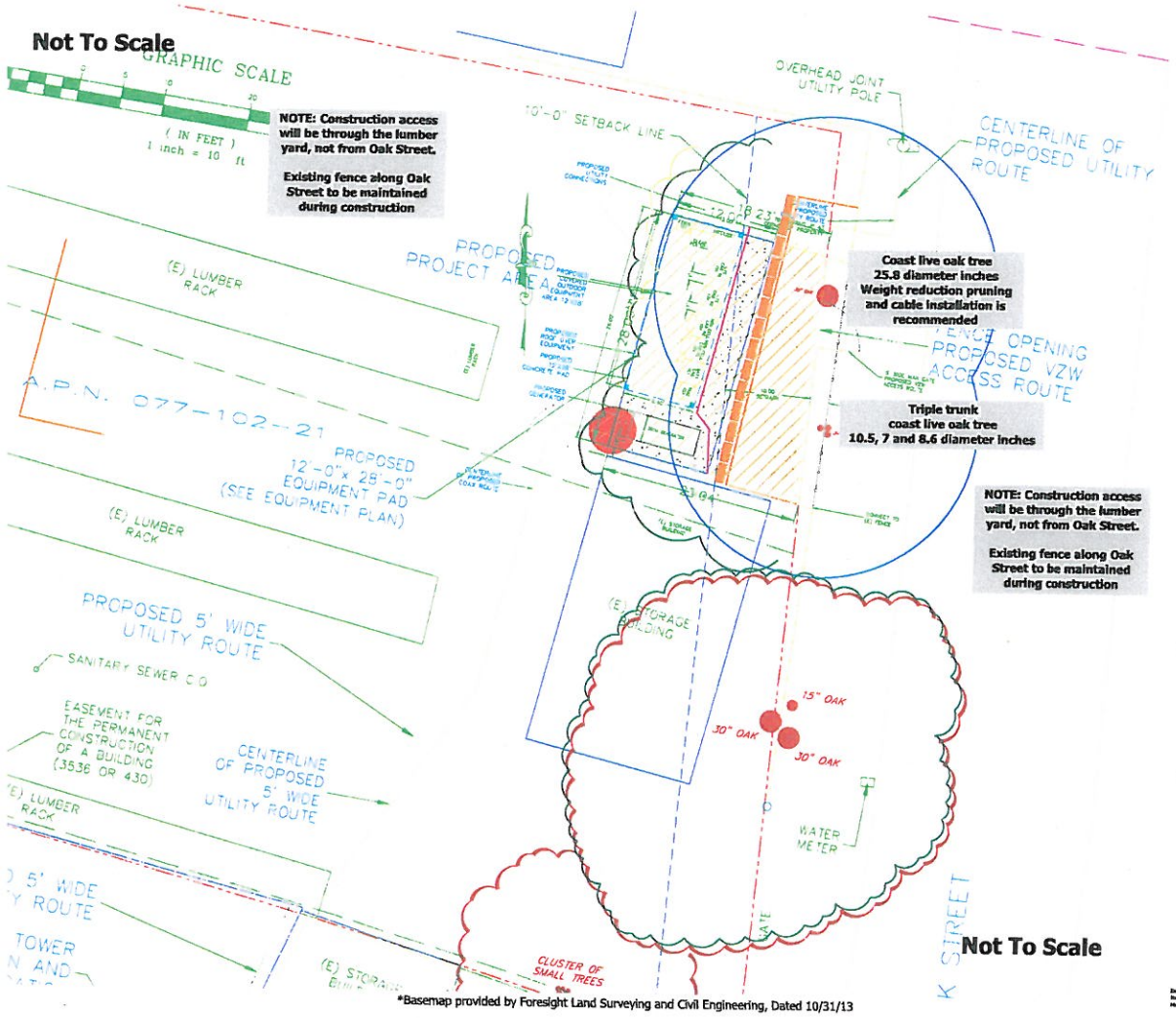
Questions regarding this report may be directed to my office.

Respectfully submitted,

James P. Allen
Registered Consulting Arborist #390

Terms in **bold** text are defined in the attached glossary

EXHIBIT



*Basemap provided by Foresight Land Surveying and Civil Engineering, Dated 10/31/13

Legend

- Surveyed tree location
- Critical Root Zone — Existing soil grade to remain undisturbed in this area
- Canopy extents
- Canopy Clearance Pruning may be necessary
- Special Treatment Area
  - Pre construction root pruning with Ditchwitch for foundation of equipment shelter and generator pad
  - Weed cloth will be appied the existing with base rock as final surface covering
- Post excavation root pruning
- Pre Construction root pruning using a Ditchwitch, or similar machine
- Tree Preservation Fencing with rice straw bales

NOTE: Existing fence along Oak Street to remain during construction. Project will be accesses through the lumber yard, not from Oak Street

Verizon Wireless PS# 249607
9430 Highway 9
Ben Lomond, CA 95005
APN 077-102-20 & 077-102-12

Tree Resource Evaluation/ Construction Impact Analysis

Location Map