



COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT

701 OCEAN STREET - 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131

June 19, 2020

Planning Commission
County of Santa Cruz
701 Ocean Street
Santa Cruz, CA 95060

Agenda Date: July 8, 2020
Item: #6

Subject: Appeal of the Zoning Administrator denial of application 171213: Proposal to construct a new 65-foot tall mono-eucalyptus wireless communication facility (WCF) for Verizon with an initial installation of nine panel antennas and nine remote radio units (RRUs). Associated equipment to be located within a 784 square foot, 8-foot high fenced enclosure including two equipment cabinets, a utility H-Frame, a 7-foot tall Verizon cable ice bridge, an emergency generator, and a 132-gallon diesel fuel tank on a 50 square foot concrete pad, located in the A (Agriculture) zone district at 682 Buena Vista Drive.

Members of the Commission:

On July 26, 2017, Application 171213 for a Commercial Development Permit was filed to construct an 85-foot tall mono-eucalyptus wireless communication facility (WCF), later reduced to 65 feet at the request of staff, and associated equipment. On November 16, 2018, the Zoning Administrator denied Application 171213 because the proposed project did not comply with County Code Section 13.10.662(D) in that a mock-up illustrating the proposed tower was not provided, and additionally the Zoning Administrator expressed concerns regarding airport safety issues raised by the Watsonville Pilot's Association. The Finding for Denial illustrates how development permit required finding #2 could not be made (Exhibit 1B). The hearing was well-attended by members of the public, all of whom voiced opposition to the proposed project due to visual and health impacts. Attached is the Zoning Administrator staff report, including project plans, findings and recommended conditions of approval (Exhibit 1K).

On November 29, 2018, a letter of appeal was submitted by Melanie Sengupta of Mackenzie & Albritton LLP, a San Francisco law firm on behalf of Verizon Wireless. The appeal letter challenges the finding for denial of the proposed project, specifically the requirement for an on-site visual demonstration structure (mock-up), and further states that the finding for denial was incorrect and contains two misstatements: (a) the project is not consistent with all pertinent County ordinances and (b) that the applicant declined an option to toll the shot clock to continue the application to allow erection of a mock-up (Exhibit 1A).

Finding for Denial

Development Permit Finding #2 states:

"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 could not be made since an on-site visual demonstration structure (mock-up) was not provided as required by SCCC section 13.10.662(D). Only the Planning Director or his/her designee may release an applicant from this requirement, which must be based upon a written finding that an on-site visual mock-up is not necessary.

Appeal Issues

1. The appellant asserts that for an on-site visual demonstration structure (mock-up), the project planner released them of the code requirement. On August 17, 2018, Verizon did receive a letter from planning staff requiring public notification signage on the property as a final item before being deemed complete. This indicated to Verizon that an on-site visual mock-up was not required since the only item left to complete the application was the installation of a sign on the subject site. Further, the requirement for an on-site visual mock-up was discussed with senior staff, and it was decided it was not required. However, a written finding was not created to release the applicant from this requirement.
2. The appellant asserts that the Zoning Administrator was incorrect when stating that “the applicant declined an option of tolling the shot clock and continuing the item to allow erection of an on-site visual mock-up.” The appellant asserts the applicant (agent for Verizon Wireless) did not decline tolling the shot clock to continue the item in order to erect a mock-up illustrating the proposed WCF. The appellant claims the Zoning Administrator concluded the hearing and issued the denial without giving the applicant an opportunity to address this option.

The archived audio file for this hearing documents that the agent for the applicant, Verizon Wireless, was asked by the Zoning Administrator if they would be willing to extend the tolling agreement and put up a mock-up illustrating the proposed WCF. The applicant responded by first stating that the code does not require a mock-up and that he was concerned the shot clock would run out if the meeting were continued. The agent for Verizon Wireless further stated he was unsure if his client would be amenable to continuing the hearing and “their position on it.” The applicant instead suggested to approve the project and require Verizon Wireless, as a condition of approval, to put up a mock-up prior to building permit submittal. The purpose of the mock-up is to determine the visual impact of the project prior to making a decision on the proposed project; therefore, the Zoning Administrator denied the project based on the applicant not agreeing to toll the clock to continue the item and provide a mock-up at the project site.

In anticipation of the July 8th hearing, the applicant installed a mock-up of the tower which will be in place for review by the public and Planning Commissioners prior to the hearing. The mock-up is a 65-foot vertical pole that illustrates the overall height and location of the proposed tower on the southeast corner of the parcel, which is located approximately 600 feet north of Buena Vista Drive off a one lane road. The mock-up is visible from Buena Vista Drive where the one lane road intersects it. The applicant provided photo simulations that show the mock-up from four different locations around the parcel (Exhibit 1J). The mock-up illustrates visual impacts consistent with the photo simulations prepared for the project.

Airport Safety Issue

The Watsonville Pilot's Association expressed concern over the height of the proposed project and requested the Zoning Administrator deny the proposed project until the County amend the General Plan and County Code to incorporate the requirements of the California Airport Land Use Planning Handbook. Bill Parkin of Wittwer/Parkin, attorneys at law, submitted a letter, dated November 14, 2018, expressing this opposition to the proposed project on behalf of the Watsonville Pilot's Association (Exhibit 1E). The General Plan and County Code were amended to incorporate the requirements of the California Airport Land Use Planning Handbook by the Board of Supervisors in September 2019 and certified by the California Coastal Commission in December 2019. Prior to these amendments, staff was already implementing the requirements of the handbook to proposed projects such as this one and, in Verizon's case, they had already obtained clearance from the Federal Aviation Administration (FAA) for the tower when it was originally proposed to be 85 feet tall with added conditions of approval to place lighting on the top of the tower (Exhibit 1D). Verizon obtained clearance from the FAA for the revised height of 65 feet, a height that does not require lighting (Exhibit 1C).

Site Standards

County Code Section 13.10.663(A)(9) (General development/performance standards for wireless communication facilities) requires that proposed wireless facilities provide a minimum of five times the tower height or 300 feet, whichever is greater, to the nearest residentially zoned property. Based on a tower height of 65 feet, the proposed tower is required to provide a minimum of 325-foot setback from the nearest residentially zoned property located west and southeast of the subject site. The proposed tower is approximately 680 feet east of property zoned Special Use and approximately 1,550 feet northwest of property zoned single-family residential. All setbacks comply with the minimum 325-foot standard.

The proposed mono-eucalyptus is 65 feet in height with the antennas located approximately 62 feet high. The height of the proposed tower will not exceed the allowed height allowed by County Code Section 13.10.510(D)(2). This section allows a maximum height of 90 feet for wireless communication facilities located within the Agriculture zone district, as explained in the Administrative Practice Guideline WFC-01. The lowest point of the faux leaves of the mono-eucalyptus is set at approximately 25-foot elevation, similar to existing eucalyptus trees in the vicinity.

Timing of Planning Commission Hearing

County Code Section 18.10.330(B) states that when an appeal letter is received from a decision or action at a Level V hearing, a hearing shall be scheduled before the Planning Commission no more than 60 calendar days from the date of receipt of the notice of appeal. The appellant and applicant, Verizon Wireless, requested the hearing not be set until the County amended the General Plan and County Code to incorporate the requirements of the California Airport Land Use Planning Handbook, which was underway. The General Plan and Code were subsequently amended as of December of last year.

Since then, the applicant requested to postpone the appeal hearing until after the final determination of another appealed Verizon application, believing that the outcome of the Board of Supervisors' decision could have implications for this application. That project, application

171365, was approved by the Board on June 16, 2020, and this appeal was scheduled for the June 8, 2020 hearing, the next available Planning Commission meeting.

Conclusion

In their appeal letter, the applicant/appellant requests the opportunity to provide an on-site visual mock-up of the proposed tower at the subject parcel, subject to review by the Planning Commission. Since this is what the Zoning Administrator requested, staff is supportive of providing the mock-up and further concludes that the proposed project is consistent with all applicable codes and policies of the Zoning Ordinance and General Plan/LCP.

Pursuant to SCCC Section 18.10.330(D), the Planning Commission, in addition to continuing the application, may:

- 1) Deny the application,
- 2) Approve the application,
- 3) Approve the application with modifications subject to such conditions as it deems advisable.

Staff Recommendation

Staff recommends that the Planning Commission determine that the project is exempt from further environmental review under the California Environmental Quality Act and approve Application 171213 based on the Zoning Administrator findings (Exhibit 1K).

Sincerely,

Elizabeth Cramblet
Project Planner
Development Review

Reviewed By: Annette Olson
Annette Olson
Principal Planner
Development Review

Exhibits:

- 1A. Appeal Letter submitted by Mackenzie & Albritton LLP, dated November 28, 2018
- 1B. Zoning Administrator Finding for Denial, dated November 20, 2018
- 1C. FAA letter, dated April 11, 2019
- 1D. FAA letter, dated July 26, 2017

- 1E. Letter by Wittwer/Parkin, attorneys for WPA, dated November 14, 2018
- 1F. Letter by County Counsel to Wittwer/Parkin, dated November 16, 2018
- 1G. Letter by Wittwer/Parkin, attorneys for WPA, dated December 17, 2018
- 1H. Updated project description by Verizon
- 1I. Coverage Maps
- 1J. Photo simulations of proposed tower and photos of the mock-up
- 1K. Zoning Administrator Staff Report, dated November 16, 2018, including findings and conditions of approval

MACKENZIE & ALBRITTON LLP

155 SANSOME STREET, SUITE 800
SAN FRANCISCO, CALIFORNIA 94104

TELEPHONE 415/288-4000
FACSIMILE 415/288-4010

November 28, 2018

VIA EMAIL AND HAND DELIVERY

Kathleen Malloy
Planning Director
County of Santa Cruz
701 Ocean Street, 4th Floor
Santa Cruz, California 95060

Re: Appeal of Zoning Administrator Denial of Verizon Wireless Facility at
682 Buena Vista Drive, Application No. 171213

Dear Ms. Malloy:

Pursuant to Santa Cruz County Municipal Code Section 18.10.330, our client, GTE Mobilnet of California Limited Partnership dba Verizon Wireless ("Verizon Wireless") appeals the Zoning Administrator's November 16, 2018 denial of an application for a commercial development permit and over-height fence certification to allow a new 65-foot monopole wireless facility at 682 Buena Vista Drive (the "Denial"). We request that you stay our appeal until February 1, 2018, to allow Verizon Wireless and J5 the opportunity to prepare an on-site visual demonstration structure (i.e., a mock-up), pursuant to the Zoning Administrator's request. We further request that you allow the Zoning Administrator the opportunity to rehear the Denial and receive additional requested information. In the alternative, we request that you direct the Zoning Administrator to amend its Memorandum regarding the Denial, dated November 20, 2018 and attached as Exhibit A, to clarify that the denial is made without prejudice pursuant to SCMC Section 18.10.135.

This appeal challenges the denial of a permit application for a commercial development permit and over-height fence certification (the "Application"), which requests authority for Verizon Wireless's consultant, J5 Infrastructure Partners ("J5"), to construct a new wireless communications facility, disguised as a 65-foot eucalyptus tree (the "Facility"). The Facility also includes associated equipment within a 784 square-foot, 8-foot high fenced area. It has been carefully designed to avoid any significant adverse impacts, including safety and aesthetic impacts. It complies with all applicable regulations.

The Zoning Administrator's written denial is not supported by substantial evidence. Rather, it is riddled with misstatements. The Denial states that the development permit finding that the Facility "will be consistent with all pertinent County

ordinances and the purpose of the zone district in which the site is located” could not be made here. Specifically, the Denial contends that an on-site visual demonstration structure was required by County Code Section 13.10.662(D). However, Project Planner Elizabeth Cramblet conferred with her supervisor and colleagues and advised J5 that a mock-up was not required for the Facility. She confirmed that Planning’s view was that a mock-up was not required for the Facility before the Zoning Administrator at the November 16, 2018 hearing, and Verizon Wireless and J5 reasonably relied on Ms. Cramblet’s statements. Verizon Wireless and J5 reasonably believed that the Planning Director or her designee had released them from this requirement.

The Planning Department’s actions confirm that a mock-up was not required. Indeed, Zoning Administrator Steven Guiney himself, in his previous capacity as Principal Planner, sent J5 letter dated August 17, 2018, stating that the application was complete, barring the public notification signage. See Exhibit B. It explicitly states: “One additional item remains before the application can be deemed complete. This application is subject to the requirement for early neighborhood notification. . . .” The letter makes no mention of a mock-up. Furthermore, had the application truly been incomplete, the County presumably would not have scheduled a hearing before the Zoning Administrator.

The second misstatement contained within the Denial was that “the applicant declined an option of tolling the shot-clock and continuing the item to allow erection of the mock-up.” J5 did not decline tolling the shot-clock and continuing the item. The Zoning Administrator concluded the hearing and issued the Denial without giving J5 an opportunity to address the issue of the mock-up after it was brought to J5’s attention that Ms. Cramblet did not get Planning Director release from a mock-up. Had the Zoning Administrator allowed J5 to respond, it would have agreed to toll the federal shot clock and continue the hearing to allow for the preparation of a mock-up.

For these same reasons, the Denial violates the Telecommunications Act’s requirement that any denial of a request to construct a wireless communications facility be based on substantial evidence in the record. The Denial violates other portions of the Telecommunications Act, including its “effective prohibition” and “unreasonable discrimination” clauses.

Consequently, we request that you stay Verizon Wireless’s appeal to allow for the preparation of a mock-up and direct the Zoning Administrator to rehear the Denial or place the appeal before the Planning Commission. Alternatively, the City should amend the Denial to be without prejudice, so that Verizon Wireless and J5 can re-apply and construct a mock-up. Verizon Wireless will enter into a tolling agreement to extend any state and federal statutes of limitations applicable to the Application. Please feel free to contact us to discuss further.

Kathleen Malloy
County of Santa Cruz
November 28, 2018
Page 3 of 3

Very truly yours,

A handwritten signature in dark ink, appearing to read 'Melanie Sengupta', with a long horizontal flourish extending to the right.

Melanie Sengupta

cc: Elizabeth Cramblet
Steven Guiney
T. Brooke Miller

EXHIBIT 1A



Memorandum

Application Number: 171213

Date: November 20, 2013

RE: Finding for Denial for Application #171213
APN: 049-171-17, 682 Buena Vista Drive

Project Description: Proposal to construct a new 65-foot tall mono-eucalyptus wireless communication facility (WCF) for Verizon with an initial installation of 9 panel antennas, and 9 remote radio units (RRUs). Associated equipment would be located within a 784 square foot, 8-foot high fenced enclosure including two equipment cabinets, a utility H-Frame, a 7-foot tall Verizon cable ice bridge, a generator, and a 132-gallon diesel fuel tank on a 50 square foot concrete pad. The project site is located in the A (Agriculture) zone district.

Location: Property located on the north side of Buena Vista Drive approximately 650 feet northwest of Buena Vista Drive at 682 Buena Vista Drive.

Permits Required: Requires a Commercial Development Permit and Over-Height Fence Certification.

This application was denied at the November 16, 2013 Zoning Administrator Hearing based on the following Development Permit Findings.

A handwritten signature in cursive script, reading "Steven Guiney".

Steven Guiney, AICP
Deputy Zoning Administrator

You have the right to appeal this decision pursuant to Section 18.10.330 of the County Code. To appeal, submit the required fee for administrative appeals and a written notice of appeal with the Planning Department not later than the fourteenth calendar day after the day on which the act or determination appealed from was made. The appeal letter and fee must be received by the Planning Department no later than 5:00 p.m., Friday November 30, 2013.

County of Santa Cruz Planning Department
701 Ocean Street, 4th Floor, Santa Cruz CA 95060

Development Permit Findings

1. 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 cannot be made, in that no on-site visual demonstration structure (i.e., a mock-up) was provided as is required by Santa Cruz County Code (SCCC) Section 13.10.562(D). That section requires a mock-up for all proposed wireless communication facilities, except for co-located and microcell facilities that do not represent a major modification to visual impact as defined in SCCC 13.10.660(D), unless the Planning Director or his/her designee releases an applicant from that requirement. The release must be based upon a written finding that in the specific case involved a mock-up is not necessary to process or decide on the application and would not serve as effective public notice of the proposed facility. Here, there was no written finding releasing the applicant from the requirement to provide a mock-up, the Zoning Administrator was not convinced that a mock-up was not required to make a decision on the application and to provide effective public notice, and the applicant declined an option of tolling the shot-clock and continuing the item to allow erection of the mock-up.

EXHIBIT B

From: Steven Gulney Steven.Gulney@santacruzcounty.us &
Subject: 171213 Complete letter.doc
Date: August 20, 2018 at 10:18 AM
To: Brian Moore bmoore@J51P.Com



171213
Compl...ter.doc

EXHIBIT 1A



COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT

701 OCEAN STREET - 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123

KATHLEEN MOLLOY, PLANNING DIRECTOR

August 17, 2018

Brian Moore
1150 Ballena Blvd. Suite 259
Alameda, CA 94501

Subject: **Complete Application – Public Notification Signage Required**
Application #: 171213; Assessor's Parcel #: 049-171-17
Owner: William and Margaret Henry Trustees

Dear Brian Moore:

On August 10, 2018, you submitted additional information in support of your application for a development permit with the County of Santa Cruz. As of this time, the reviewing agencies and Planning Department staff have completed their review of the materials that you have submitted. This letter is to inform you of the status of your application.

One additional item remains before the application can be deemed complete. This application is subject to the requirement for early neighborhood notification. Under the provisions set out in County Code you are now required to erect a sign on the property in accordance with the *Guidelines for Neighborhood Notification*. Your project planner, Elizabeth Cramblet, is scheduled to return to work on September 4th. Shortly thereafter she will contact you with specific language that must be included on the sign and additional directions regarding sign placement and she will subsequently schedule your application for hearing.

You can contact Elizabeth on or after September 4th at: (831) 454-3027, or e-mail: Elizabeth.Cramblet@santacruzcounty.us. Should you have questions in the meantime, you can contact me at: (831) 454-3182 or email steven.guiney@santacruzcounty.us.

Sincerely,

Steven Guiney AICP
Principal Planner
Development Review
Santa Cruz County Planning Department

EXHIBIT 1A



Memorandum

Application Number: **171213**

Date: November 20, 2018

RE: Finding for Denial for Application #171213

APN: 049-171-17, 682 Buena Vista Drive

Project Description: Proposal to construct a new 65-foot tall mono-eucalyptus wireless communication facility (WCF) for Verizon with an initial installation of 9 panel antennas, and 9 remote radio units (RRUs). Associated equipment would be located within a 784 square foot, 8-foot high fenced enclosure including two equipment cabinets, a utility H-Frame, a 7-foot tall Verizon cable ice bridge, a generator, and a 132-gallon diesel fuel tank on a 50 square foot concrete pad. The project site is located in the A (Agriculture) zone district.

Location: Property located on the north side of Buena Vista Drive approximately 650 feet northwest of Buena Vista Drive at 682 Buena Vista Drive.

Permits Required: Requires a Commercial Development Permit and Over-Height Fence Certification.

This application was denied at the November 16, 2018 Zoning Administrator Hearing based on the following Development Permit Findings.

A handwritten signature in cursive script that reads "Steven Guiney".

Steven Guiney, AICP
Deputy Zoning Administrator

You have the right to appeal this decision pursuant to Section 18.10.330 of the County Code. To appeal, submit the required fee for administrative appeals and a written notice of appeal with the Planning Department not later than the fourteenth calendar day after the day on which the act or determination appealed from was made. The appeal letter and fee must be received by the Planning Department no later than 5:00 p.m., Friday November 30, 2018.

County of Santa Cruz Planning Department
701 Ocean Street, 4th Floor, Santa Cruz CA 95060

EXHIBIT 1B

Development Permit Findings

1. 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 cannot be made, in that no on-site visual demonstration structure (i.e., a mock-up) was provided as is required by Santa Cruz County Code (SCCC) Section 13.10.662(D). That section requires a mock-up for all proposed wireless communication facilities, except for co-located and microcell facilities that do not represent a major modification to visual impact as defined in SCCC 13.10.660(D), unless the Planning Director or his/her designee releases an applicant from that requirement. The release must be based upon a written finding that in the specific case involved a mock-up is not necessary to process or decide on the application and would not serve as effective public notice of the proposed facility. Here, there was no written finding releasing the applicant from the requirement to provide a mock-up, the Zoning Administrator was not convinced that a mock-up was not required to make a decision on the application and to provide effective public notice, and the applicant declined an option of tolling the shot-clock and continuing the item to allow erection of the mock-up.



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2018-AWP-11899-OE

Issued Date: 04/11/2019

Regulatory
GTE Mobilnet of California Limited Partnership
5055 North Point Pkwy
NP2NE Network Engineering
Alpharetta, GA 30022

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Monopole OLD ADOBE RD - A (2062053)
Location:	Watsonville, CA
Latitude:	36-56-29.67N NAD 83
Longitude:	121-48-15.50W
Heights:	194 feet site elevation (SE) 65 feet above ground level (AGL) 259 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does exceed obstruction standards but would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- ☒ At least 10 days prior to start of construction (7460-2, Part 1)
☒ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

See attachment for additional condition(s) or information.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 2.

This determination expires on 10/11/2020 unless:

- the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- extended, revised, or terminated by the issuing office.
- the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within

6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (424) 405-7643, or karen.mcdonald@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-AWP-11899-OE.

Signature Control No: 369635163-402447229

(EBO)

Karen McDonald
Specialist

Attachment(s)
Additional Information
Frequency Data
Map(s)

cc: FCC

Additional information for ASN 2018-AWP-11899-OE

At a distance of 1.0 nautical miles from transmitter site spurious emissions signal levels from proposed transmitters must be less than -104 dBm in the 108-137, 225-400 MHz frequency bands. At a distance of 13.5 nautical miles from the site emissions from the 2496-2690 MHz transmitters must be less than -155 dBm in the 2700-3100 MHz Airport Surveillance Radar frequency band. ///

At 259 AMSL 1A, Watsonville Muni (WVI) Watsonville, CA. Obstacle penetrates RWY 27 Initial Climb Area (ICA) 18 feet. Qualifies as low, close-in penetration with climb gradient termination altitude 200 feet or less above DER, requiring TAKE-OFF MINIMUM AND (OBSTACLE) DEPARTURE PROCEDURES, NOTE: RWY 27, monopole 3148 feet from departure end of runway, 655 feet right of centerline, 65 AGL, 259 AMSL

Frequency Data for ASN 2018-AWP-11899-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
6	7	GHz	55	dBW
6	7	GHz	42	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
17.7	19.7	GHz	42	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
806	901	MHz	500	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W





Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2017-AWP-5243-OE

Issued Date: 07/26/2017

Regulatory
GTE Mobilnet of California Limited Partnership
5055 North Point Pkwy
NP2NE Network Engineering
Alpharetta, GA 30022

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Monopole OLD ADOBE RD
Location:	Watsonville, CA
Latitude:	36-56-29.59N NAD 83
Longitude:	121-48-15.46W
Heights:	194 feet site elevation (SE) 85 feet above ground level (AGL) 279 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities. Therefore, pursuant to the authority delegated to me, it is hereby determined that the structure would not be a hazard to air navigation provided the following condition(s) is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 L Change 1, Obstruction Marking and Lighting, red lights - Chapters 4,5(Red),&12.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- ☒ At least 10 days prior to start of construction (7460-2, Part 1)
☒ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

See attachment for additional condition(s) or information.

To coordinate frequency activation and verify that no interference is caused to FAA facilities, prior to beginning any transmission from the site you must contact Mr. John Hepsen at 480-775-1026.

This determination expires on 01/26/2019 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is subject to review if an interested party files a petition that is received by the FAA on or before August 25, 2017. In the event a petition for review is filed, it must contain a full statement of the basis upon which it is made and be submitted to the Manager, Airspace Policy & Regulation, Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591.

This determination becomes final on September 04, 2017 unless a petition is timely filed. In which case, this determination will not become final pending disposition of the petition. Interested parties will be notified of the grant of any review. For any questions regarding your petition, please contact Airspace Regulations & ATC Procedures Group via telephone -- 202-267-8783 - or facsimile 202-267-9328.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

This aeronautical study considered and analyzed the impact on existing and proposed arrival, departure, and en route procedures for aircraft operating under both visual flight rules and instrument flight rules; the impact on all existing and planned public-use airports, military airports and aeronautical facilities; and the cumulative impact resulting from the studied structure when combined with the impact of other existing or proposed structures. The study disclosed that the described structure would have no substantial adverse effect on air navigation.

An account of the study findings, aeronautical objections received by the FAA during the study (if any), and the basis for the FAA's decision in this matter can be found on the following page(s).

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact Robert van Haastert, at (907) 271-5863, or robert.van.haastert@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2017-AWP-5243-OE.

Signature Control No: 332399057-339146520

(DNH)

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Frequency Data

Map(s)

cc: FCC

Additional information for ASN 2017-AWP-5243-OE

Narrative for 2017-AWP-5243-OE

Abbreviations

VFR - Visual Flight Rules	AGL - Above Ground Level	RWY - runway
IFR - Instrument Flight Rules	MSL - Mean Sea Level	nm - nautical mile
DA - Decision Altitude	MDA - Minimum Decent Altitude	ft - feet

DER - Departure End of Runway

Part 77 - Title 14 CFR Part 77, Safe, Efficient Use and Preservation of the Navigable Airspace

1. LOCATION OF PROPOSED CONSTRUCTION

This proposal is for a 85 AGL / 279 MSL monopole which would be approximately 3,208 west of RWY 09 threshold at Watsonville Municipal (WVI) Airport, CA. The WVI elevation is 163 MSL. This monopole would be located at 682 Buena Vista Drive, Watsonville, CA .

2. OBSTRUCTION STANDARDS EXCEEDED

Section 77.17(a)(3) - This structure causes less than the required obstacle clearance within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area resulting in increases to an IFR terminal minimum altitude. This structure will penetrate the RWY 27 40:1 departure surface in the initial climb area (ICA) by 38 feet.

3. EFFECT ON AERONAUTICAL OPERATIONS

a. The impact on arrival, departure, and en route procedures for aircraft operating under VFR follows: None.

FAA Findings

There are no effects on any existing or proposed arrival, departure, or en route VFR operations.

This structure would not exceed the traffic pattern airspace.

There are no physical or electromagnetic effects on the operation of air navigation and communications facilities.

There are no effects on any airspace and routes used by the military.

The WVI Airport Master Record can be viewed/downloaded at <http://www.gcr1.com/5010web/airport.cfm?Site=WVI>. It states there are 327 single-engine, 19 multi-engine, seven (7) jet and 16 helicopter aircraft based there with 60,000 total operations for the 12 months ending 8 March 2017 (latest information).

b. The impact on arrival, departure, and en route procedures for aircraft operating under IFR follows: This structure would require a new NOTE to be added to the published WVI RWY 27 Take-off Minimums and (Obstacle) Departure Procedures. The new Note will read: Monopole 3144 feet from DER, 648 feet right of centerline, 85 AGL/279 MSL

The current WVI RWY 27 Take-off Minimums and (Obstacle) Departure Procedures can be viewed/downloaded at [http://aeronav.faa.gov/d-tp/1708/sw2to.pdf#nameddest=\(WVI\)](http://aeronav.faa.gov/d-tp/1708/sw2to.pdf#nameddest=(WVI)) and is extracted here.

WATSONVILLE MUNI (WVI)

DEPARTURE PROCEDURE: Use WATSONVILLE DEPARTURE.

Take-Off Minimums

RWY 27: 500-3 with minimum climb of 210 ft/nm to 700 or standard with a minimum climb of 425 ft/nm

Notes:

Trees beginning 35 feet from DER, left and right of centerline, up to 70 AGL/615 MSL.

Rising terrain 1.1 nm from DER, 907 feet left of centerline, up to 499 MSL.

Multiple vegetation 1.4 nm from DER, 1313 feet left of centerline, up 519 MSL.

Fence 85 feet from DER, 431 feet right of centerline, 7 AGL/177 MSL.

Fence 1.4 nm from DER, 2230 feet left of centerline, 4 AGL/437 MSL.

Vehicles on road, 203 feet from DER, 452 feet right of centerline, up to 15 AGL

Multiple poles 1064 feet from DER, 433 feet left of centerline, 44 AGL/486 MSL.

Multiple towers 1.9 nm from DER, /400 MSL.

Multiple buildings beginning 584 feet from DER, left and right of centerline, up to 21 AGL/438 MSL 1372 feet left of centerline, 63 AGL/557 MSL.

Stack 1477 feet from DER, 638 feet right of centerline, 19 AGL/201MSL.

c. The impact on all planned public-use airports and aeronautical facilities follow: The FAA Western Service Area (WSA) Spectrum Engineering Branch has determined a possible adverse Electromagnetic Interference (EMI) effect exists for the FAA facilities in the Watsonville area.

WSA Spectrum Engineering Branch identified the following: At a distance of 6,100 feet from transmitter site spurious emissions signal levels from proposed transmitters must be less than -104 dBm in the 108-137, 225-400 MHz frequency bands.

d. The cumulative impact resulting from the proposed construction or alteration of a structure when combined with the impact of other existing or proposed structures follows: None.

4. CIRCULATION AND COMMENTS RECEIVED

The proposal was not circularized for public comment due to the results of an internal FAA evaluation. This does not affect the public's right to petition for review determinations regarding structures, which exceed the subject obstruction standards.

5. DETERMINATION - NO HAZARD TO AIR NAVIGATION

It is determined that the proposed construction would not have a substantial adverse effect on the safe and efficient use of navigable airspace by aircraft.

6. BASIS FOR DECISION

The proposed structure would exceed the WVI RWY 27 ICA by 38 feet, however, the only impact to the RWY 27 IFR departures is to add a new Note to the Take-off Minimums and (Obstacle) Departure procedures.

Adding a new Note is considered a minor action. No VFR issues could be identified and the VFR traffic pattern airspace is not impacted. The incorporation of obstruction marking and lighting would provide additional pilot conspicuity for VFR and IFR aircraft approaching the RWY 09 threshold.

7. CONDITIONS

The proposed structure shall be marked with red obstruction lights as outlined in chapters 4, 5(Red), and 12, of the Advisory Circular AC 70/7460-1L. The advisory circular can be viewed or downloaded at http://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_70_7460-1L_Change_1_Obstruction_Marking_and_Lighting_10062016.pdf

The proponent is required to notify the FAA ten days prior to construction to initiate adding the required Note to the Take-off Minimums and (Obstacle) Departure Procedures. This can be accomplished by filing a

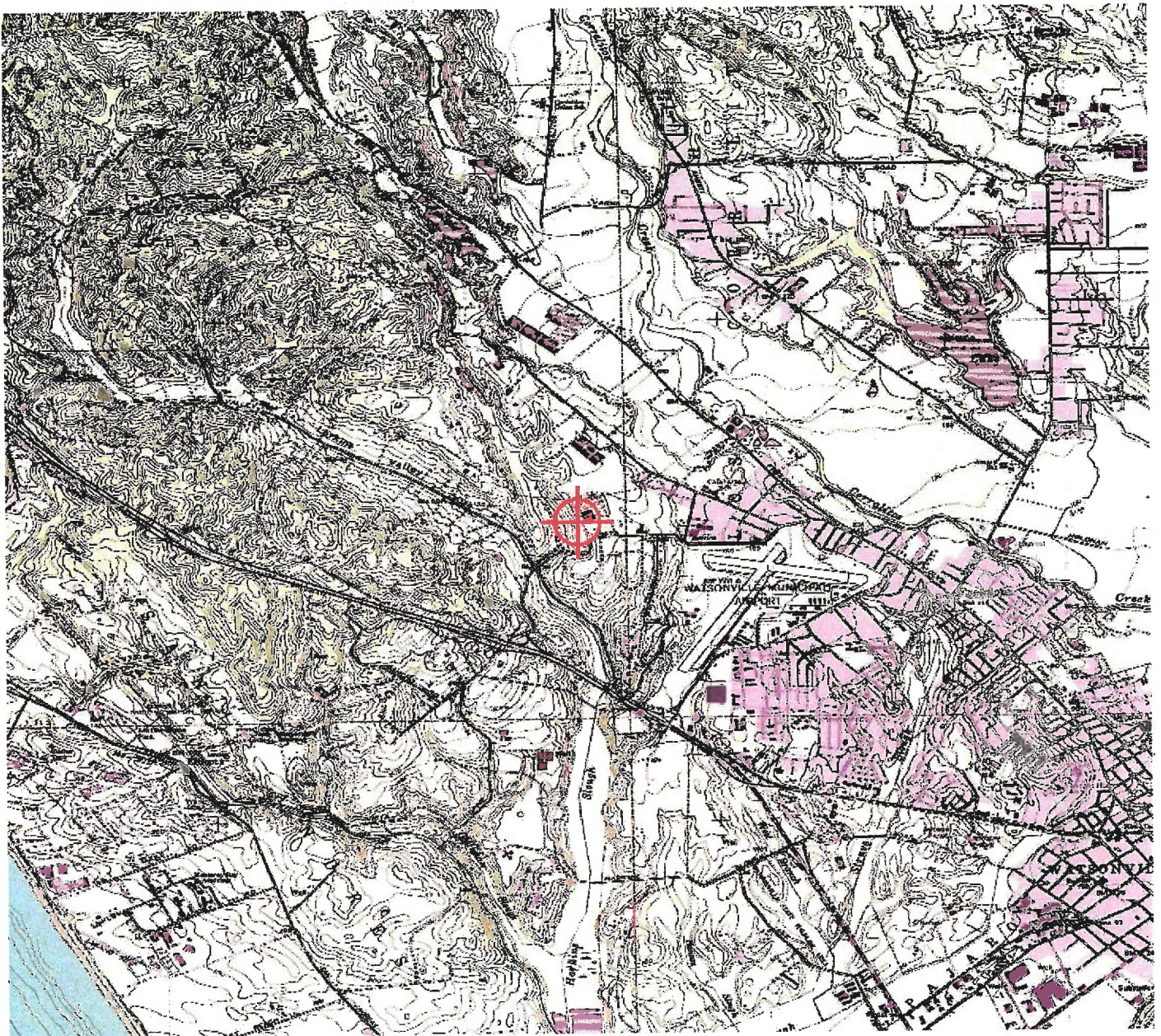
Supplemental Notice (7460-2 Form), Part 1, on-line at <https://oeaaa.faa.gov/oeaaa>. Detailed instructions are available under the Instructions link.

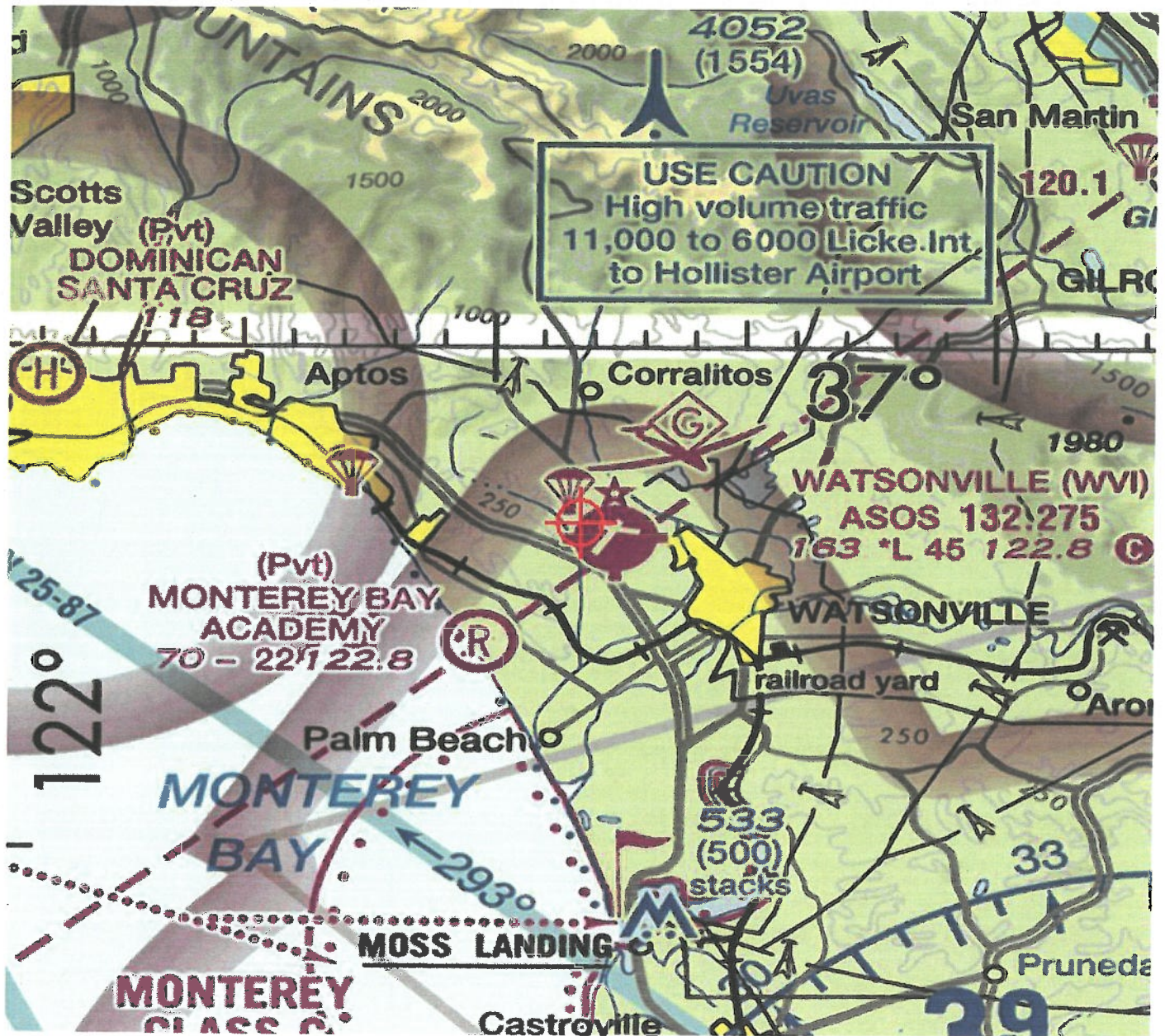
Within five days after the structure reaches its greatest height, proponent is required to file a FAA form 7460-2, Actual Construction notification, at the OE/AAA website (<https://oeaaa.faa.gov/oeaaa>). This Actual Construction notification will be the source document detailing the site location, site elevation, structure height, and date structure was built for the FAA to map the structure on aeronautical charts and update the national obstruction database.

-X-

Frequency Data for ASN 2017-AWP-5243-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
698	806	MHz	1000	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W





November 14, 2018

VIA HAND DELIVERY

Zoning Administrator
County of Santa Cruz
701 Ocean St., Room 400
Santa Cruz, CA 95060

**Re: Proposed Cell Phone Tower, 682 Buena Vista Dr., Watsonville, Application
No. 171213 (Agenda Item No. 5)**

Dear Zoning Administrator:

This law firm represents the Watsonville Pilots Association ("WPA"). WPA is dedicated to protecting the environment, the safety of pilots and the public on the ground in the area around the Watsonville Airport ("Airport"). The Zoning Administrator will consider, *inter alia*, approval of a Commercial Development Permit, Over-Height Fence Certification, and California Environmental Quality Act exemption for a new 65-foot-tall mono-eucalyptus wireless communications facility, as well as a 132-gallon fuel tank to be sited at 682 Buena Vista Drive, Application Number 171213 ("Project").

For the reasons stated below, the Zoning Administrator must deny the Project. The County cannot approve the Project until it amends its General Plan in a manner consistent with the California Airport Land Use Planning Handbook. Further, the Project Applicant has not consulted with the Federal Aviation Administration ("FAA") and Watsonville Airport Manager, as required by law. Finally, the proposed siting of the Project in Airport Safety Zone 6 poses a potential safety hazard to pilots and members of the public, especially considering proposed reductions in the minimum landing approach heights in relation to the airport. Approval of the Project poses a unique and substantial danger to pilots, passengers of aircraft, and the public.

A. The County Cannot Approve Development Within the Airport Influence Area

To approve the Project, the Zoning Administrator must make a finding that the Project is consistent with the County General Plan. The County's General Plan is currently noncompliant with state law and the decision in *Watsonville Pilots Association v. City of Watsonville* (2010) 183 Cal.App.4th 1059 [hereinafter "*Watsonville Pilots Association*"]. The County cannot approve any development within the Airport Influence Area until it has incorporated the California Airport Land Use Planning Handbook ("Handbook") into mandatory provisions in its General Plan. The County has not yet incorporated the Handbook into its General Plan and, thus, cannot make this finding in the affirmative.

WITTWER PARKIN LLP / 147 S. RIVER ST., STE. 221 / SANTA CRUZ, CA / 95060 / 831.429.4055

WWW.WITTWERPARKIN.COM / LAWOFFICE@WITTWERPARKIN.COM

EXHIBIT 1E

Zoning Administrator

Re: Application No. 171213, Proposed Cell Tower at 682 Buena Vista Dr.

November 14, 2018

Page 2

State law establishes Airport Safety Zones around airports and makes compliance mandatory as to the Airport. (Pub. Util. Code § 21670.1(d), (e); *Watsonville Pilots Association*, *supra*, 183 Cal.App.4th at 1071.) The Airport is in a “no-procedure” county, meaning the County “has neither established an [Airport Land Use Commission] nor adopted a no-issues resolution and an alternative procedure.” (*Watsonville Pilots Association*, 183 Cal.App.4th at 1071; Pub. Util. Code § 21670.1(d), (e).) Accordingly, “the [C]ounty and each affected city must ‘adopt the elements’ that ‘[i]ncorporate[]’ the ‘criteria’ in the Handbook. (Pub. Util. Code, § 21670.1, subds. (d), (e).)” (*Watsonville Pilots Association*, 183 Cal.App.4th at 1071.) To date, the County has not incorporated the Handbook into its General Plan, and, thus, does not comply with the State Aeronautics Act or the court’s decision in *Watsonville Pilots Association*.

The Project cannot be approved until the County’s General Plan complies with state law and controlling caselaw. Caselaw makes it clear that because the General Plan is inadequate, no permits or any other land use approvals relevant to this inadequacy may be authorized by the County in the Airport Influence Area at this time, especially in an area that was the subject of the litigation in *Watsonville Pilots Association*. (See *Camp v. Board of Supervisors* (1981) 123 Cal.App.3d 334, 353 (stating that because a subdivision map was approved “at a time when there existed no adequate general plan, the Board . . . could not have legally found the subdivision consistent with the requisite general plan and thus that approval was unlawful and must be set aside.”); see also *Neighborhood Action Group v. County of Calaveras* (1984) 156 Cal.App.3d 1176, 1184-1185 (stating that a conditional use permit issued under an invalid general plan is thereby itself invalid, to the extent that the “permitted use implicates a defective policy or standard in the general plan,” continuing on to state that “the scope of authority of the agency to enact a general plan and zoning ordinances and to apply them is governed by the requirements of state law. A permit action taken without compliance with the hierarchy of land use laws is *ultra vires* as to any defect implicated by the uses sought by the permit.” (emphasis added)); *Friends of “B” Street v. City of Hayward* (1980) 106 Cal.App.3d 988, 998 (“City approval of a proposed subdivision, construction of public improvements, and private sale of subdivided lots may be enjoined for lack of consistency of the subdivision map with the general plan.”).)

For the above reasons, the County must deny the Project.

B. The FAA Must Be Consulted Prior to Project Approval

The Project Applicant has not consulted with the FAA or the Airport Manager, as required by law. Prior to proceeding with the Project, a Project “Sponsor” must notify the FAA of the proposed construction to ensure the FAA is aware of this construction and is given the opportunity to determine whether the Project may pose a safety hazard. (49 U.S.C. § 44718; 14 C.F.R., part 77.)

The duty to consult with the FAA is triggered when the height of a project falls above a height wedge, measured from the nearest airport runway. (14 C.F.R. § 77.9.) For the

EXHIBIT 1E

Zoning Administrator

Re: Application No. 171213, Proposed Cell Tower at 682 Buena Vista Dr.

November 14, 2018

Page 3

Watsonville Airport, this consultation is triggered for construction projects above a height of “100 to 1 for a horizontal distance of 20,000 ft. from the nearest point of the nearest runway, with its longest runway of more than 3,200 ft. in actual length . . .” (14 C.F.R. § 77.9(b)(1).) The Airport has two runways, both of which are more than 3,200 feet in length. The Project is proposed to be sited within 3,400 feet of one of the runways. Thus, any construction above 34 feet in height triggers the duty to consult with the FAA. The Project proposes construction of a 65-foot-tall antenna. Based on information provided by the applicant, the Project would actually install the cell tower “71 feet above ground,” which is over twice the height needed to trigger FAA consultation. (Staff Report, Agenda Item No. 5, Nov. 16, 2018 Zoning Administrator Hearing (“Staff Report”), p. 42.)

The Sponsor must submit a request for consultation “at least 45 days before the start date of the proposed construction or alteration or the date an application for a construction permit is filed, whichever is earliest.” (14 C.F.R. § 77.7(b).) Persons who fail to consult with the FAA, as required by law, are subject to a civil penalty of \$1,000 per day until the FAA receives the request for consultation. (49 U.S.C. § 46301(a).) The County lists the Project application date as July 26, 2017, meaning the requirement to consult was triggered at least as of June 11, 2017. More than 500 days have elapsed since the requirement to consult was triggered.

The Project cannot be approved unless a Sponsor properly and timely consults with the FAA. Failure to do so poses a safety risk and violates the Federal Aeronautics Act. WPA is not aware of any such consultation taking place.

C. The Airport Manager Must Be Consulted Prior to Project Approval

The Project must also be denied because the Airport Manager has not been consulted, as required by the Santa Cruz County Code (“County Code”). Section 13.10.663(A)(6) reads, in full:

Aviation Safety. No wireless communication facility shall be installed within the safety zone or runway protection zone of any airport, airstrip or helipad within Santa Cruz County unless the airport owner/operator indicates that it will not adversely affect the operation of the airport, airstrip or helipad. In addition, no wireless communication facility shall be installed at a location where special painting or lighting will be required by the FAA regulations unless the applicant has demonstrated to the Planning Director that the proposed location is the only technically feasible location for the provision of personal wireless services as required by the FCC.

The Project is proposed to be sited in Safety Zone 6. It appears that this required consultation has not occurred. There is no evidence that the Airport Manager has found that the siting of the Project “will not adversely affect the operation of the [A]irport,” as required prior to Project approval. (County Code § 13.10.663(A)(6).) Further, because the Project Applicant has failed to conduct the required consultation, the County cannot determine whether the FAA or

Zoning Administrator

Re: Application No. 171213, Proposed Cell Tower at 682 Buena Vista Dr.

November 14, 2018

Page 4

Airport Manager would require special painting or lighting due to the location of the tower. Thus, it cannot be demonstrated “that the proposed location is the only technically feasible location for the provision of personal wireless services . . .” (County Code § 13.10.663.)

The Project must be denied because required consultation has not occurred.

D. The Proposed Siting of the Project Poses a Safety Hazard

The County should not approve the Project in its proposed location because doing so will pose a safety hazard to pilots and the public, as the proposed location risks interfering with Airport takeoff and landing.

The County may deny the Project if its location poses safety concerns. (47 U.S.C. § 253 (permitting state to impose “requirements necessary to . . . protect the public safety and welfare . . .”).) Specifically, in relation to wireless facility construction found within the Airport Influence Area, the County Code states, “Wireless communication facilities shall comply with all applicable criteria from the Federal Aviation Administration (FAA) and shall comply with adopted airport safety regulations for Watsonville Municipal Airport (Chapter 13.12 SCCC).” (County Code § 13.10.661(E).) To approve the Project, the Zoning Administrator must also find “[t]hat the proposed wireless communication facility as conditioned will not create a hazard for aircraft in flight.” (County Code § 13.10.665(D).)

The only reference in the Staff Report regarding potential of the Project to cause airport hazards was in reference to this finding, in which the County reasoned the Project would not cause a safety hazard because it is far enough away from the airport. (Staff Report, p. 10.) However, this determination was not made in reference to any applicable FAA criteria, consultation requirements, or airport safety regulations. The Project is clearly not “a sufficient distance” from the airport to eliminate hazards, as the Project falls within an Airport Safety Zone and triggers FAA and Airport Manager hazard consultation. Because the required consultation has not occurred, the County cannot determine whether the Project complies with adopted airport safety regulations or all applicable FAA criteria, as the entities responsible for making these expert determinations have not reviewed the Project. (County Code § 13.10.661(E).) Further, as the County may be aware, the Airport has plans to significantly lower the minimum landing and takeoff “approach” heights, for the purpose of increasing landing and takeoff safety. The location and height of the Project risks preventing the Airport from obtaining these proposed minimums. Failure to obtain the desired lower approach heights would result in decreased approach safety, both for pilots and the public.

Even absent current efforts at reducing approach minimums, the location and height of the Project poses a distinct safety hazard to pilots and the public. At 65 feet tall, the Project would be by far the tallest structure in the approach path of the east-west runway. The siting of a 132-gallon diesel fuel tank also poses safety hazards, as ignition of this tank could blind pilots, or it could ignite in the event of a failed takeoff or landing. Accordingly, the height and location of

Zoning Administrator

Re: Application No. 171213, Proposed Cell Tower at 682 Buena Vista Dr.

November 14, 2018

Page 5

the Project could force pilots to avoid certain approaches and/or increase their take-off and landing angles, both of which would decrease airport safety.

E. Shot Clock Tolling

The County indicates the "shot clock" for the Project will expire on November 21, 2018. WPA requests that if the Project is approved, that the County toll the shot clock for the Project pending any potential appeal of the decision of the Zoning Administrator from interested parties.

F. Conclusion

For the above reasons, WPA respectfully requests that the Zoning Administrator deny approval of the Project.

Very truly yours,
WITTWER PARKIN LLP



William P. Parkin

cc: Kathy Molloy (via email)
Elizabeth Cramblet, Planner (via email)
David Carlson, Resource Planner (via email)



COUNTY OF SANTA CRUZ

OFFICE OF THE COUNTY COUNSEL

701 OCEAN STREET, SUITE 505, SANTA CRUZ, CA 95060-4068 (831) 454-2040 FAX: (831) 454-2115

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November 16, 2018

William P. Parkin
Wittwer Parkin LLP
147 River St. Ste. 221
Santa Cruz, CA 95060
Via email to: wparkin@wittwerparkin.com

Re: Application No. 171213

Dear Mr. Parkin:

This letter responds on behalf of the County of Santa Cruz ("County") to your correspondence of November 14, 2018, relating to the above-referenced Project. Your correspondence alleges the Zoning Administrator must deny the Project because (1) the County has not yet amended its General Plan to incorporate the California Airport Land Use Planning Handbook; (2) you believe the applicant has not consulted with the Federal Aviation Administration (FAA) and Airport Manager regarding the Project; and (3) you believe the proposed siting of the Project constitutes a potential safety hazard.

Specifically, you allege "The County cannot approve any development within the Airport Influence Area until it has incorporated the California Airport Land Use Planning Handbook ('Handbook') into mandatory provisions in its General Plan." This is not an accurate statement of law, nor is it supported by the case law you cite.¹

First, to challenge a land use approval, it is not sufficient to simply allege a General Plan is defective, and such a claim as to the County's General Plan is time-barred. A challenge to a land use decision on the basis that a General Plan is inadequate must be brought in the context of an action "[t]o attack, review, set aside, void, or annul the decision of a legislative body to adopt or

¹ Watsonville Pilots is inapposite, as it involved a challenge to the adoption of a General Plan and related EIR. This item does not amend the General Plan. Camp v. Board of Supervisors is also inapposite, as it involved enforcement of an injunction issued upon a ruling that a General Plan was inadequate. No such ruling or injunction has been issued. Friends of Hayward involved an appeal from a determination of the trial court that it could not enjoin a project for being inconsistent with the general plan, and does not hold that land use permits cannot be approved where a general plan is alleged to be inadequate.

amend a general or specific plan.” (*Garat v. City of Riverside* (1991) 2 Cal. App. 4th 259, 289.) Moreover, an attack on “a general plan or mandatory element thereof on the basis that it is inadequate” is subject to the statute of limitations set forth in section 65009, subdivision (c) (currently 90 days). (*Ibid.*) Accordingly, in *Beresford Neighborhood Assn. v. City of San Mateo*, (1989) 207 Cal. App. 3d 1180, allegations that the city’s actions on a development project were void because “various elements” of the city’s general plan were “inadequate” were held to be time-barred under Government Code section 65009, subdivision (c)(1). (*Id.* at p. 1186.)

Second, the extent to which a land use approval can be challenged on the basis of a defect in the General Plan is strictly limited to the approved use’s implication of defective policies or standards in the general plan. As the court stated in *Neighborhood Action Group v. County of Calaveras*, (1984) 156 Cal. App. 3d 1176, cited in your correspondence, “In order to tender an issue reaching the validity of the general plan, the complaint must allege facts showing the permitted use implicates a defective policy or standard in the general plan.” (*Id.* at pp. 1187-1188.)

Your correspondence fails to demonstrate how the County’s proposed approval of the Project implicates defective policies or standards in the County’s General Plan. The County is currently in process to update the General Plan Safety Element to specifically include the Handbook requirements and, as a matter of practice, presently complies with the strictest requirements of the Handbook with respect to development approvals. Nothing in your correspondence demonstrates how the Project actually conflicts with any requirements of the Handbook. Thus, you have failed to allege facts showing the proposed use implicates any defective policy or standard in the County’s current General Plan.

Moreover, the County can find the Project consistent with its existing General Plan on the basis of the following provision:

3.18.1 Prevention of Airspace Obstructions

Prevent the construction, erection, or operation of any object that obstructs the airspace required for the flight of aircraft landing or taking off, that interferes with radio transmissions next to the airport, or which emits a steady or flashing light, except as needed for airport operations.

Accordingly, the County may approve the Project.


You further allege that the Project Applicant has not consulted with the FAA or Airport Manager as required by law. In fact, the Project Applicant has consulted with the FAA regarding the Project, with a proposed height of 85 feet (as currently proposed, height would be reduced to 65 feet and therefore poses even less potential hazard). As set forth in the attached letter, the FAA concluded that “the structure would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities.” As the FAA has made these determinations, there is no need for consultation with the airport operator.

Moreover, as the FAA has determined that the proposed construction would not have a substantial adverse effect on the safe and efficient use of navigable airspace by aircraft, there is no basis for your allegations that the Project poses a safety hazard.

Accordingly, the Zoning Administrator may proceed with acting on the Project as proposed.

Very truly yours,

DANA McRAE, COUNTY COUNSEL

By 
T. BROOKE MILLER
ASSISTANT COUNTY COUNSEL

Attachment

Cc (via e-mail): Nicholas Whipps, Wittwer Parkin
Kathy Molloy, Planning Director
Elizabeth Cramblet, Project Planner

December 17, 2018

VIA EMAIL

Ms. Kathleen Molloy
Planning Director
County of Santa Cruz
701 Ocean Street, 4th Floor
Santa Cruz, CA 95060
Kathy.Molloy@santacruzcounty.us

**Re: GTE Mobilnet Appeal of Zoning Administrator Denial of Verizon Wireless
Cell Phone Tower at 682 Buena Vista Drive, Application No. 171213**

Dear Ms. Molloy:

This law firm represents the Watsonville Pilots Association ("WPA") regarding the above-referenced matter. WPA is dedicated to protecting the environment, the safety of pilots and the public on the ground in the area around the Watsonville Airport.

On November 16, 2018, WPA appeared before the Zoning Administrator to urge denial of an application by GTE Mobilnet for a Commercial Development Permit, Over-Height Fence Certification, and California Environmental Quality Act exemption for a new 65-foot-tall mono-eucalyptus wireless communications facility, as well as a 132-gallon fuel tank, to be sited at 682 Buena Vista Drive, Application Number 171213 ("Project"). On November 28, 2018, GTE Mobilnet appealed the Zoning Administrator's denial of its application requesting, *inter alia*, that the Zoning Administrator "rehear" this application and "amend" his Memorandum commemorating his reasons for the denial.

WPA is deeply concerned about GTE Mobilnet's requests, which, if granted, would unlawfully provide special treatment to GTE Mobilnet, and violate WPA's and the public's due process rights. There simply is no procedure in the Santa Cruz County Code to grant GTE Mobilnet a rehearing before the Zoning Administrator, or to seek an "amendment" of his final determination on the Project application. GTE Mobilnet's exclusive remedy is to appeal the matter to the Planning Commission.

**1. Providing GTE Mobilnet the Relief It Requests Would Constitute an Abuse of
Process and Violate WPA's Due Process Rights**

At the November 16, 2018 hearing, the Zoning Administrator properly denied the Project application, basing this determination on the failure of GTE Mobilnet to comply with County

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EXHIBIT 1G

Kathleen Molloy, Planning Director

Re: GTE Mobilnet Appeal of Zoning Administrator Denial of Application No. 171213

December 17, 2018

Page 2

Code Section 13.10.662(D), regarding the mandatory duty to install on-site “mock-ups” of Project structures, as well as the significant unmitigable airport safety concerns raised by WPA. In addition, as mentioned by WPA in its comments, the County is unauthorized to permit *any* construction within the Airport Influence Area until it lawfully adopts the California Airport Land Use Planning Handbook into its General Plan. (*Watsonville Pilots Association v. City of Watsonville* (2010) 183 Cal.App.4th 1059.)

In other words, WPA and other members of the public *prevailed* at the Zoning Administrator hearing. However, GTE Mobilnet, without citation to a County Code provision that would apply, now requests a second bite at the apple. Indeed, the *only* remedy afforded to GTE Mobilnet, or anyone else similarly situated, is an appeal to the Planning Commission. The November 20, 2018 Zoning Administrator Memorandum clearly states this:

You have the right to appeal this decision pursuant to Section 18.10.330 of the County Code. To appeal, submit the required fee for administrative appeals and a written notice of appeal with the Planning Department not later than the fourteenth day after the day on which the act of determination appealed from was made.

Simply put, there is no provision permitting a “rehearing” or “amendment” of the Zoning Administrator’s determination. GTE Mobilnet is asking for relief that the County cannot grant. Allowing this novel procedure would unnecessarily cloud an otherwise unambiguous process.

Critically, allowing either a rehearing or amendment of the Zoning Administrator’s determination would violate WPA’s due process rights. It would be an abuse of process to allow a rehearing and potential revision of the Zoning Administrator’s determination under these circumstances. Allowing such a procedure would thwart the normal appeal procedure, potentially requiring WPA to become the appellant and pay the necessary appeal fees, although the Zoning Administrator has already rendered a decision favorable to the public and WPA.

The same is true for GTE Mobilnet’s request that the Zoning Administrator amend his November 20, 2018 Memorandum to state that this denial was “without prejudice.” Pursuant to County Code Section 18.10.135:

In all cases where an approving body has made a final determination for denial of an application for a permit, or other approval, a new application for the same or substantially the same project on the same property shall not be filed within one year from the date of denial without the prior consent of the original approving body, unless the approving body makes a determination that the denial is “without prejudice” at the time of issuing findings for denial.

To allow a revision to the Zoning Administrator’s final determination unlawfully changes the substantive and procedural outcome of the hearing before the Zoning Administrator. Again, GTE Mobilnet’s sole recourse is through an appeal to the Planning Commission. It would be

Kathleen Molloy, Planning Director

Re: GTE Mobilnet Appeal of Zoning Administrator Denial of Application No. 171213

December 17, 2018

Page 3

unlawful and a further violation of WPA's due process rights to allow this revision only for GTE Mobilnet, and no County Code provision allows the County to do so.

2. The Reasoning Provided by GTE Mobilnet in Support of Its Appeal Is Inaccurate

As a final point, in providing support for its appeal, GTE Mobilnet incorrectly claims that it did not "decline[] an option of tolling the shot-clock and continuing the item to allow erection of the mock-up" required by County Code section 13.10.662(D). This is untrue. At the hearing, the Zoning Administrator directly asked the representative for GTE Mobilnet if erecting the mock-up "is something that [GTE Mobilnet] would be willing to do, to continue and toll the shot clock." The representative for GTE Mobilnet *expressly* rejected the offer for a continuance, offering instead to "put[] up a mock-up prior to submitting to building and incorporating this as a condition of approval" However, the County Code clearly requires this be done *prior* to Project approval: "At minimum, the on-site demonstration structure *shall be in place prior to the first public hearing to consider project approval*, on at least two weekend days and two weekdays between the hours of 8:00 a.m. to 6:00 p.m., for a minimum of 10 hours each day." (County Code § 13.10.662(D) (emphasis added).)

Further, while GTE Mobilnet claims it "reasonably relied" on County staff's determination that the Project application was complete to not erect the mock-up of the cell tower, this is inapposite. As mentioned above, GTE Mobilnet was required to erect the mock-up "on at least two weekend days and two weekdays" prior to the first public hearing to consider project approval. (County Code § 13.10.662(D).) The application was deemed complete well before the requirement to erect the mock-up was triggered. It was only necessary to install the mock-up a couple of weeks before the Zoning Administrator hearing. GTE Mobilnet admitted this was not done. While GTE Mobilnet attempts to place the blame on statements from staff regarding the necessity to install mock-ups, the primary, and only, authority regarding this requirement is the County Code. GTE Mobilnet does not claim there is any ambiguity in the County Code, and it further admitted at the Zoning Administrator hearing, and tacitly in its appeal letter, that it never received written findings from Planning Director exempting GTE Mobilnet from this requirement. (See County Code § 13.10.662(D).) This fault is GTE Mobilnet's and GTE Mobilnet's alone. Its application was properly denied on these grounds, as well as all others.

For the above reasons, GTE Mobilnet's request for a rehearing of the November 16, 2018 Zoning Administrator determination or any amendment of the November 20, 2018 Memorandum must be denied.

Thank you for your consideration of these comments.

Kathleen Molloy, Planning Director

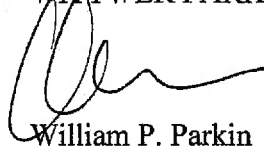
Re: GTE Mobilnet Appeal of Zoning Administrator Denial of Application No. 171213

December 17, 2018

Page 4

Very truly yours,

WITWER PARKIN LLP

A handwritten signature in black ink, appearing to read 'William P. Parkin', is written over the printed name.

William P. Parkin

cc: Elizabeth Cramblet, Planner
Steven Guiney, Zoning Administrator
T. Brooke Miller, Esq.
Melanie Sengupta, Esq.



VZW Wireless

Site Name: Old Adobe Road

Site Address: 682 Buena Vista Drive, Watsonville CA

Site APN: 049-171-17-000

Project Description/Site Selection Process

Project Description

Verizon Wireless ("Applicant") proposes to establish and operate an unmanned wireless telecommunications facility on the parcel located at 682 Buena Vista Drive in Watsonville, CA (APN 049-171-17-000).

Structure Type: Stealth – Mono Eucalyptus with Equipment shelter
Structure Height: 65' (feet AGL).
Lease area dimensions: 28' x 28'

The Scope of work includes the following installations:

- a. 65' Mono Eucalyptus with 3 sectors consisting of 9 panel antennas (3 antennas per sector).
- b. Outdoor equipment concrete pad, to be located within the lease area.
- c. 9 remote radio units (RRUs)
- d. 30 kw generator

The proposed site is strategically chosen to greatly improve data, internet, and voice coverage for the commercial and residential area to the North, East, West, and South of the location. It fills a gap in an area with challenging topography and provides coverage for those with limited services in the area.

Site Selection Process

The site proposed on 682 Buena Vista Drive is the only remaining viable candidate in the area to achieve the focused coverage objective.

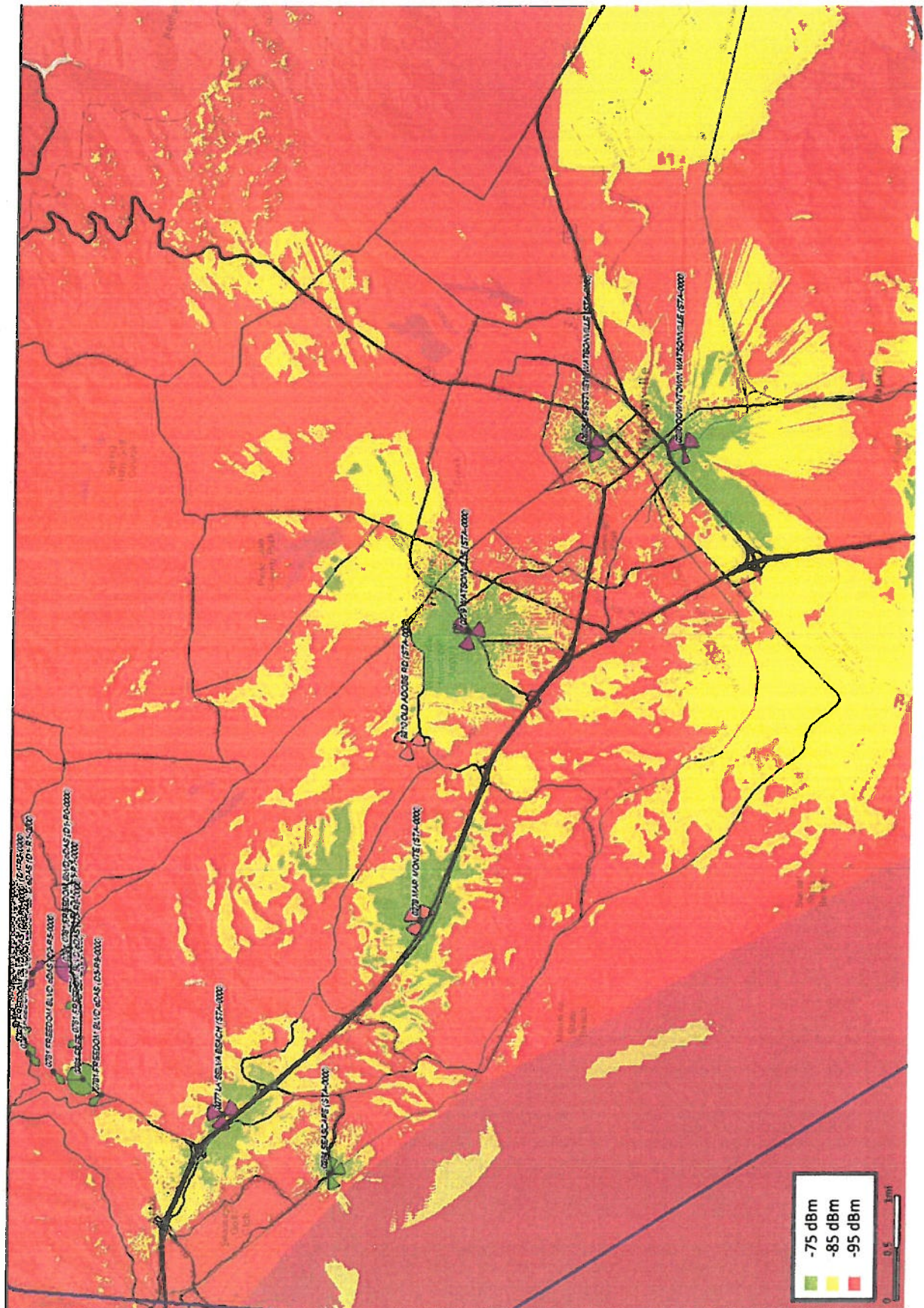
No other candidate was viable in the search area that will meet all of the leasing, zoning, engineering, and other construction requirements. An exhaustive search was performed in 2014 for candidates. The area was re-scrubbed for additional candidates after the landlord for the first location candidate withdrew from consideration.

Applicant identified potential candidates on private property parcels in the area and possible PG&E collocations. The PG&E collocations were excluded from consideration as PG&E confirmed that the Applicant cannot collocate the proposed facility on either of the two wooden poles in a 2-legged configuration in the area near the subject parcel (roughly the same height as the proposed Mono Eucalyptus). The wood PG&E facilities are structurally designed to support only the weight of PG&E conductors and not additional attachments.

Of the private property parcels vetted, all but two were excluded on the basis that they have poor visibility and cannot meet the coverage objective.

The first viable location/candidate was identified in 2014, 688 Buena Vista Drive, Watsonville, CA. The owner had agreed to terms with Verizon Wireless on October 8th, 2014 but withdrew his parcel from consideration after several months.

This led to the identification of Henry parcel, 682 Buena Vista Drive, as the only remaining viable candidate.



Ex.D

EXHIBIT 11

EX. E

SANTA CRUZ COUNTY CELL TOWER LOCATIONS

South County

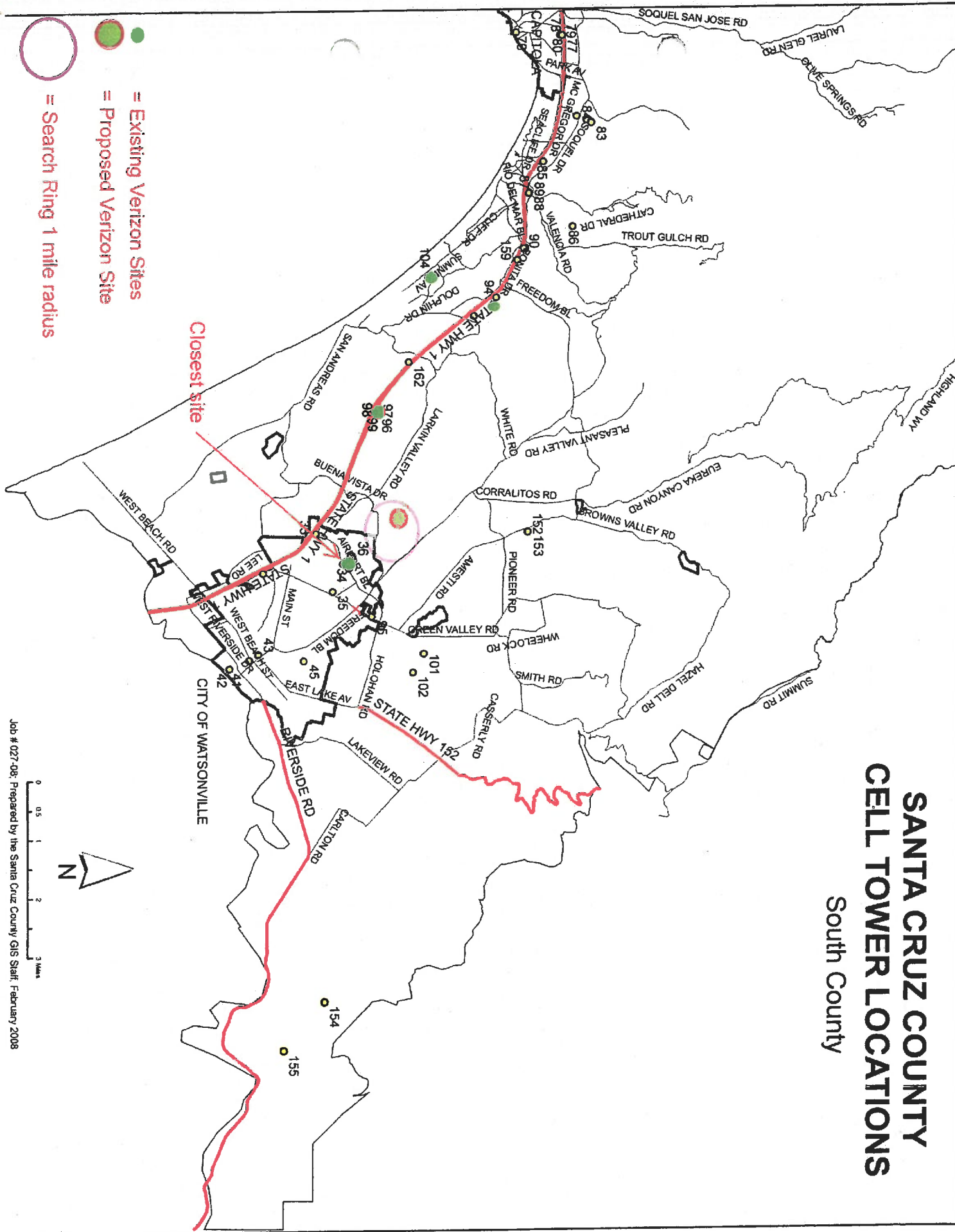
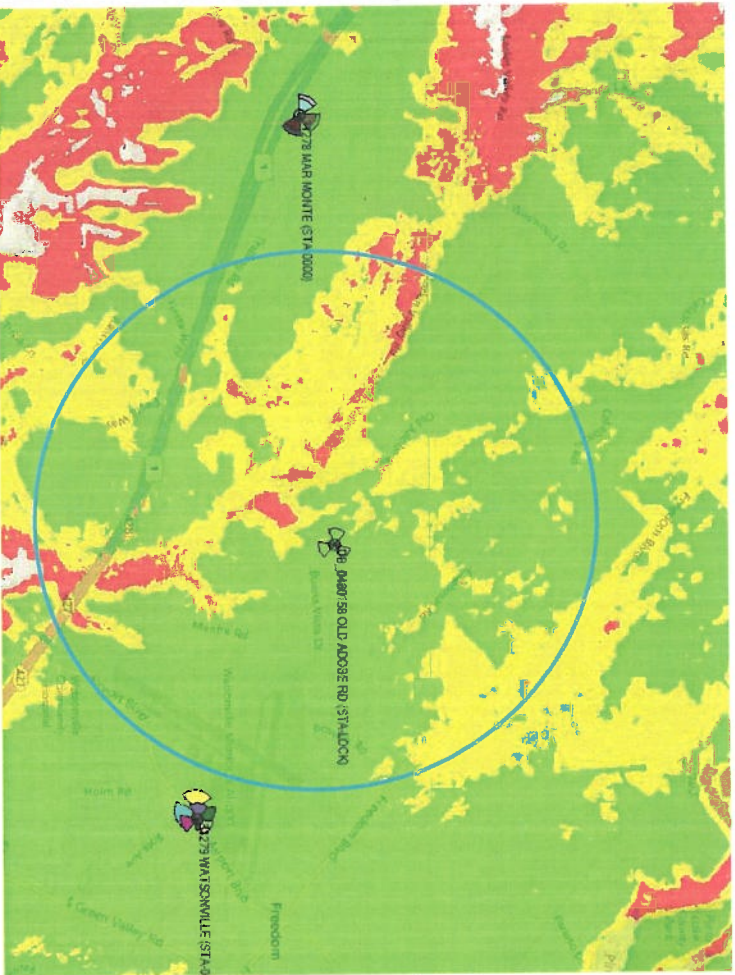


EXHIBIT 11

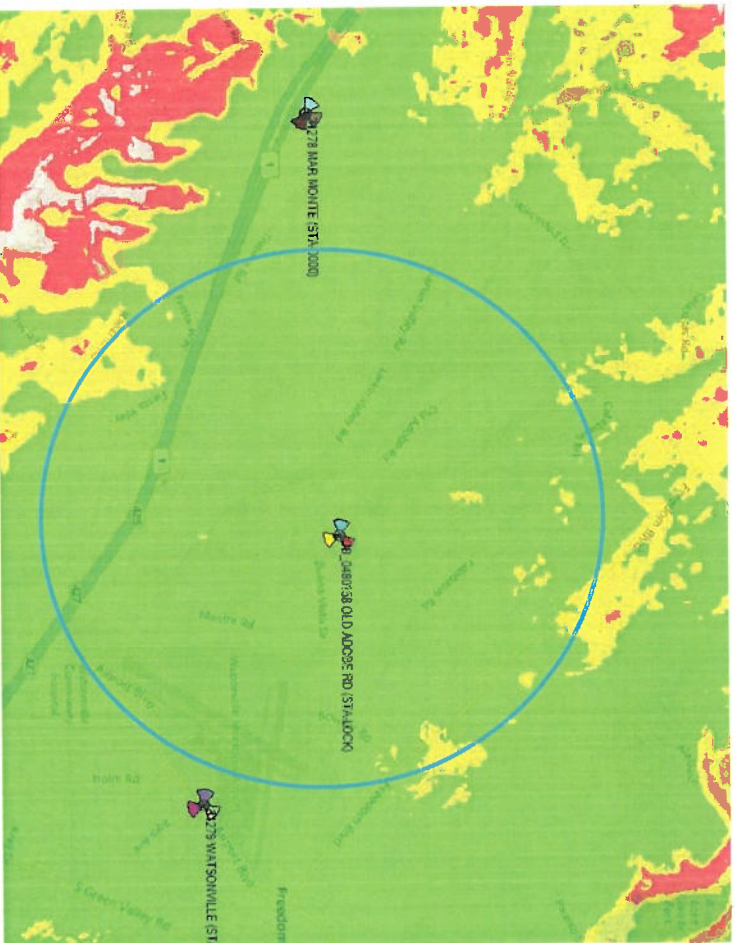


Coverage:

Existing 700 MHz VoLTE Coverage Map



Proposed 700 MHz VoLTE Coverage Map



The above maps shows the existing coverage quality for the area with the existing coverage on the left and the coverage with the proposed cell on the right. Good coverage is shown in green, marginal coverage is shown in yellow, and poor coverage is shown in red. This level of coverage is based on the new 4G voice service used in the latest phones which requires stronger signal than the old technology. This site fills in several weak service zones in Northwest Watsonville. The area to be improved by this project is circled.

Green=Good In-Building, **Yellow**= Good In-Vehicle, **Red**=Good on-Street.



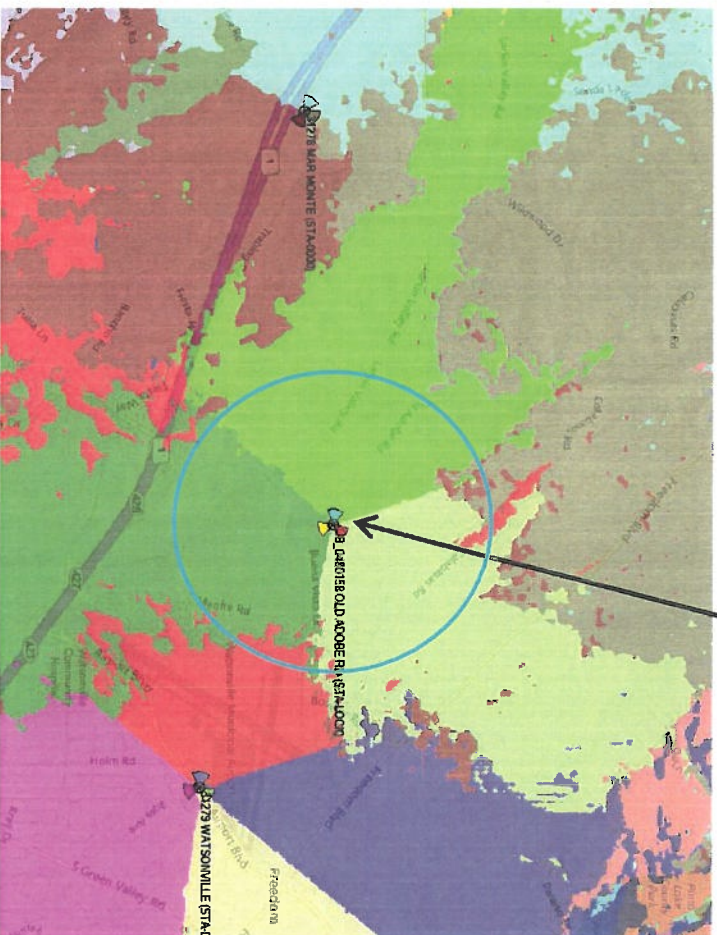
Serving Sector Maps:

Proposed Site

Best Server without Old Adobe Road



Best Server with Old Adobe Road

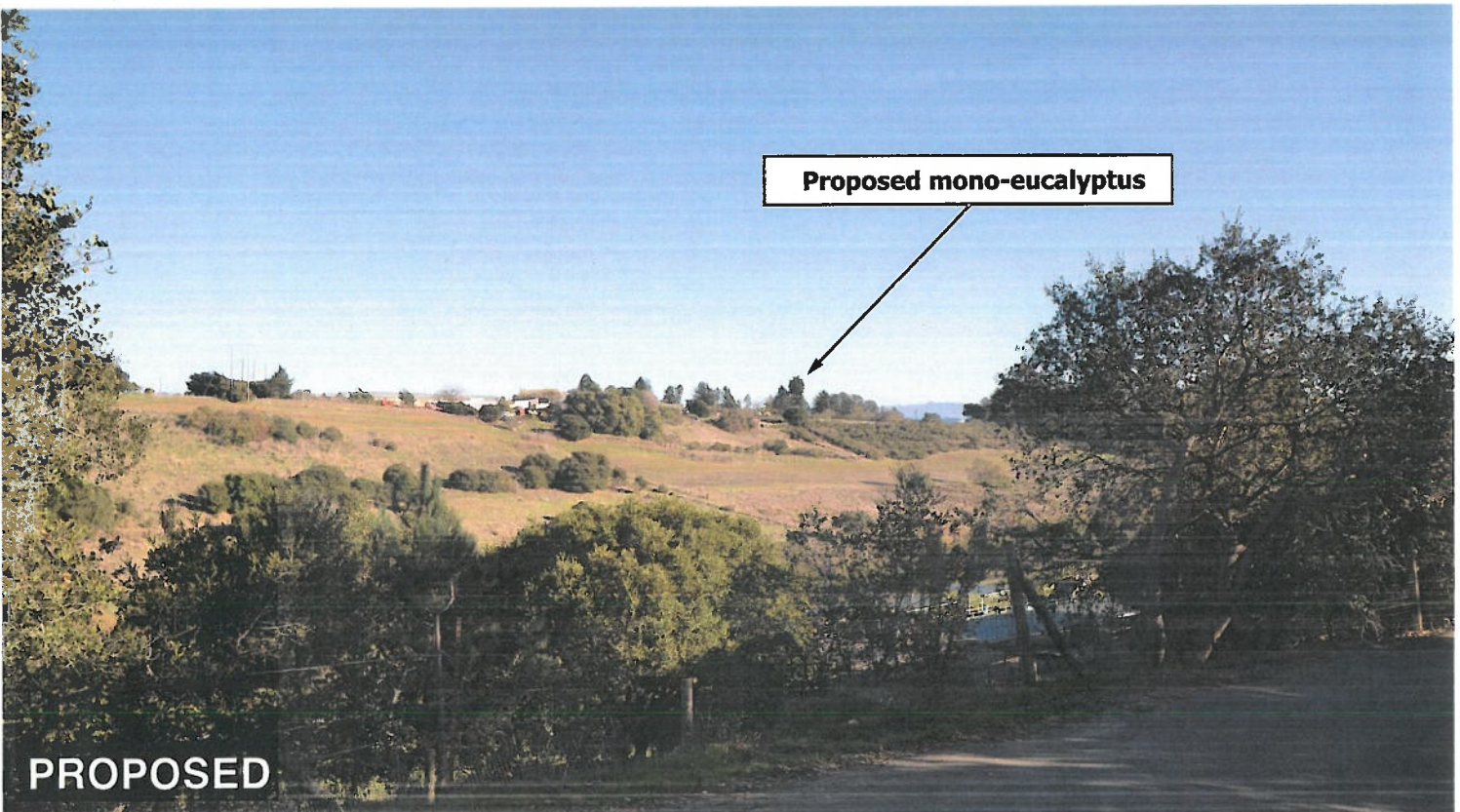


The plots above show the best servers or sectors that cover this area with each sector shown in a different color. The left map shows what sectors currently cover this area with the overloaded sector showing in red. The right map show the area this new site will cover in shades of green. This project will improve service by providing necessary capacity to support the growth we are seeing in 4G data traffic. The green area around the proposed site will see much better service. If the site is not built the area in red on the left map will see data speeds and new 4G voice service start to quickly degrade.



EXISTING

Install (9) panel antennas, (9) RRUS on an 65' mono-eucalyptus

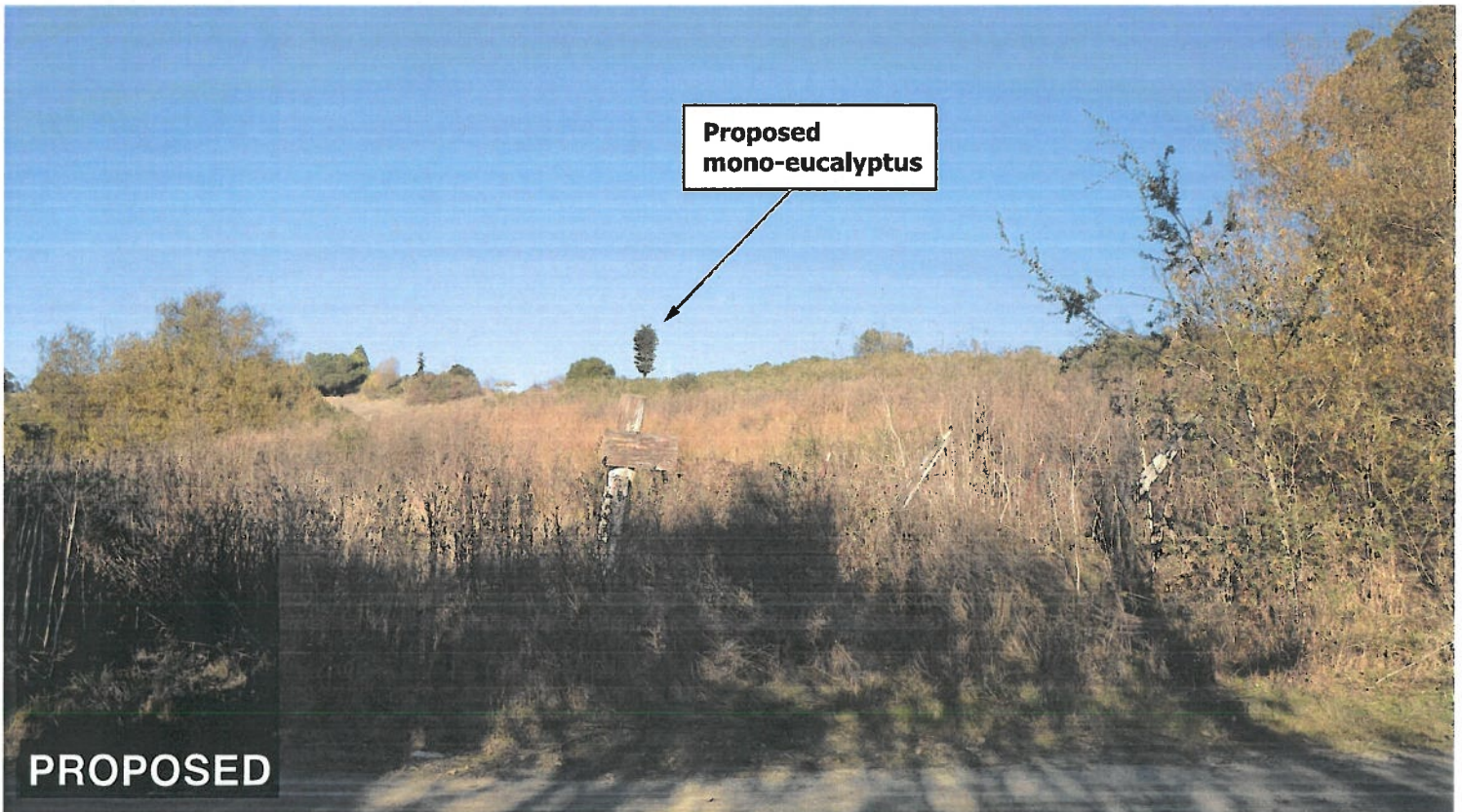


Proposed mono-eucalyptus

PROPOSED



Install (9) panel antennas, (9) RRUS on an 65' mono-eucalyptus





EXISTING

Install (9) panel antennas, (9) RRUS on an 65' mono-eucalyptus



**Proposed
mono-eucalyptus**

PROPOSED



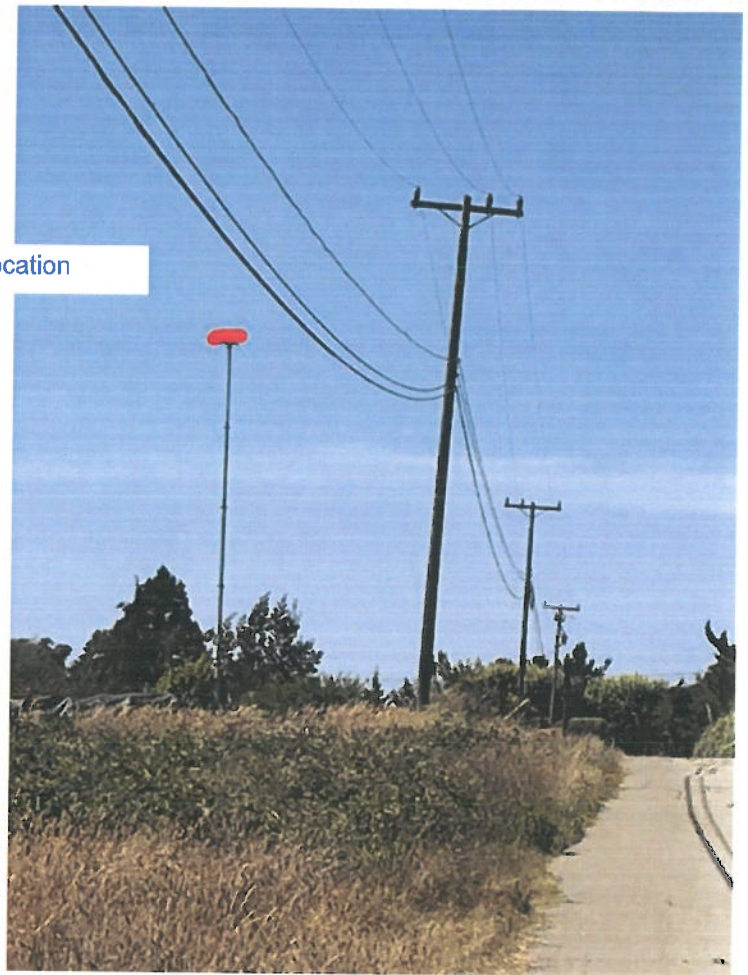
Install (9) panel antennas, (9) RRUS on an 65' mono-eucalyptus







View at site location



 65' MOCKUP INSTALLED 6/18/20



Old Adobe Rd
682 Buena Vista Rd
Watsonville CA 95076
 6/18/20
EXHIBIT 1J



View 2



View 1

65' MOCKUP INSTALLED 6/18/20




Old Adobe Rd
682 Buena Vista Rd
Watsonville CA 95076
 6/18/20
EXHIBIT 1J



View 1



65' MOCKUP INSTALLED 6/18/20



Old Adobe Rd
682 Buena Vista Rd
Watsonville CA 95076

6/18/20
EXHIBIT 1J

View 4



View 3



View 1



65' MOCKUP INSTALLED 6/18/20



Old Adobe Rd
682 Buena Vista Rd
Watsonville CA 95076

6/18/20

EXHIBIT 1J



OVERVIEW MAP OF MOCKUP AND VIEWING LOCATIONS



65' MOCKUP INSTALLED 6/18/20

View Chart



Old Adobe Rd
682 Buena Vista Rd
Watsonville CA 95076

6/18/20

EXHIBIT 1J

Staff Report

Application Number 171213

EXHIBIT 1K



Staff Report to the Zoning Administrator

Application Number: **171213**

Applicant: Brian Moore

Owner: Stephen Henry

APN: 049-171-17

Site Address: 682 Buena Vista Drive, Watsonville

Agenda Date: November 16, 2018

Agenda Item #:

Time: After 9:00 a.m.

Project Description: Proposal to construct a new 65-foot tall mono-eucalyptus wireless communication facility (WCF) for Verizon with an initial installation of 9 panel antennas, and 9 remote radio units (RRUs). Associated equipment would be located within a 784 square foot, 8-foot high fenced enclosure including two equipment cabinets, a utility H-Frame, a 7-foot tall Verizon cable ice bridge, a generator, and a 132-gallon diesel fuel tank on a 50 square foot concrete pad. The project site is located in the A (Agriculture) zone district.

Location: Property located on the north side of Buena Vista Drive approximately 650 feet northwest of Buena Vista Drive at 682 Buena Vista Drive.

Permits Required: Requires a Commercial Development Permit and Over-Height Fence Certification.

Supervisory District: District 2 (District Supervisor: Zach Friend)

Staff Recommendation:

- Determine that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- Approval of Application 171213, based on the attached findings and conditions.

Subject Description & Setting

The proposed mono-eucalyptus pole and associated equipment would be located on the southeast corner of the parcel, approximately 650 feet from Buena Vista Drive. The parcel is currently developed with a single-family dwelling and accessory structures. The zoning of adjacent parcels north, west, and south of the project site is Agriculture, with CA (Commercial Agriculture) parcels on the east side of the site. All adjacent parcels are developed with single family homes. The closest residence is approximately 220 feet north of the proposed WCF, which is a single-family home located on the subject parcel. The terrain of the site is relatively flat where the proposed equipment within the 8-foot high fence enclosure will be placed. A Commercial Development Permit is required because per Section 13.10.661(A) of the County Code, all new wireless communication facilities shall be subject to a Commercial Development Permit.

Zoning & General Plan Consistency

The subject property is a parcel of approximately 2.8 acres, located in the A (Agriculture) zone district, a designation which allows wireless communication facility uses. The proposed wireless communication facility (WCF) is a principal permitted use within the zone district subject to approval by the Zoning Administrator, and the zoning is consistent with the site's AG (Agriculture) General Plan designation.

Design Review

The proposed WCF complies with the requirements of the County Design Review Ordinance, in that the proposed project has been designed to resemble a eucalyptus tree to reduce the visual impact of the proposed development. The color of the proposed foliage for the faux eucalyptus tree (mono-eucalyptus) will be chosen to blend with other eucalyptus trees in the vicinity. The pole will be textured and colored to resemble natural eucalyptus bark. The proposed tower will blend into the natural landscape; therefore, it will not have a significant visual impact on surrounding land uses.

Visual Analysis

The area surrounding the project site is rural with many mature trees, including eucalyptus, pine, oak and fruit trees. The project site is approximately 600 feet north of Buena Vista Drive off a one lane road that dead ends at the parcel just beyond the existing residence. This 'one lane road' off Buena Vista Drive is elevated above the roads to the west that are parallel to the road such as Old Adobe Road and Larkin Valley Road. There are a couple of rows of mature trees along these roads that will reduce the visibility of the new WCF tower. There are groups of mature trees and a large group of commercial buildings east of the proposed WCF tower that will reduce visibility from neighborhoods along the north and southeastern side of the subject site. As shown by the submitted visual simulation views that show the site both with and without the proposed WCF tower, the mono-eucalyptus will be visible from a particular spot on Buena Vista Drive looking northeast towards parcel 049-171-17. However, the tower will be made of faux materials to simulate a eucalyptus tree greatly reducing the visibility of the antennas and associated equipment on the tower. The visual simulations show the proposed mono-eucalyptus will blend in well with the existing rural backdrop, thus the project will not significantly impact views. The proposed fence enclosure that would surround the proposed WCF would be screened and softened by landscape plantings that will include hardy, fast growing drought tolerant species that are suitable to the site.

Radio Frequency Emissions

A radio frequency (RF) radiation emissions calculation report has been submitted for this project by a qualified consulting engineer. The proposed facility is calculated to result in a maximum ambient RF level of 2.8% of the applicable public exposure limit at ground level, and .44% of the public exposure limit at the second-floor elevation of any nearby building (located at least 100 feet away, based on photographs from Google Maps). The maximum calculated level at the second-floor elevation of any nearby residence is .33% of the public exposure limit (located at least 220 feet away, based on photographs from Google Maps).

Environmental Review

Staff has determined that the proposed project is categorically exempt from the requirements of the California Environmental Quality Act (CEQA) because it qualifies as "New Construction or Conversion of Small Structures" (Class 3, Section 15303) and "Minor Alterations to Land" (Class 4, Section 15304). The CEQA Categorical Exemption form is attached as Exhibit A.

Federal "Shock Clock" Ruling November 18, 2009

On November 18, 2009, the Federal Communication Commission adopted and released its Declaratory Ruling concerning provisions in 47 U.S.C. Section 253 and 332(c)(7), regarding state and local review of wireless facility siting applications. This Declaratory Ruling provides that a "reasonable period of time" to review and take action on a new wireless telecommunications facility shall not exceed 150 days. This timeframe commenced upon application submittal, and accounted for a deemed incomplete determination period of time. Accordingly, the County must take action on Application No. 171213 no later than November 21, 2018, unless a mutual extension of time is agreed to by the County and applicant.

Conclusion

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

Staff Recommendation

- Determine that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- **APPROVAL** of Application Number 171213, 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: Elizabeth Cramblet
Santa Cruz County Planning Department
701 Ocean Street, 4th Floor
Santa Cruz CA 95060
Phone Number: (831) 454-3027
E-mail: elizabeth.cramblet@santacruzcounty.us

Exhibits

- A. Categorical Exemption (CEQA determination)
- B. Findings
- C. Conditions
- D. Project plans
- E. Assessor's, Location, Zoning and General Plan Maps
- F. Photo Simulations
- G. Project Description and Support Statement
- H. Radio Frequency Radiation Emissions Report
- I. Comments & Correspondence

Parcel Information

Services Information

Urban/Rural Services Line: ☐ Inside ☒ Outside
Water Supply: Well
Sewage Disposal: Septic
Fire District: Pajaro Valley Fire District
Drainage District: Existing drainage adequate

Parcel Information

Parcel Size: 2.85 Acres
Existing Land Use - Parcel: Agriculture
Existing Land Use - Surrounding: Agriculture/Commercial Agriculture
Project Access: Buena Vista Drive
Planning Area: Pajaro Valley
Land Use Designation: AG (Agriculture)
Zone District: A (Agriculture)
Coastal Zone: ☐ Inside ☒ Outside
Appealable to Calif. Coastal ☐ Yes ☒ No
Comm.

Technical Reviews: N/A

Environmental Information

Geologic Hazards: Not mapped/no physical evidence on site
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: Apple trees
Scenic: Not a mapped resource
Archeology: Yes

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: 171213

Assessor Parcel Number: 049-171-17

Project Location: 682 Buena Vista Drive

Project Description: Proposal to construct a new 65-foot tall mono-eucalyptus wireless communication facility (WCF) with 9 panel antennas, 9 remote radio units (RRUs) and associated equipment, located within a 784 square foot fenced enclosure with 2 equipment cabinets, a utility H-Frame, a 7-foot tall Verizon cable ice bridge, a generator, and a 132-gallon diesel fuel tank on a 50 square foot concrete pad, located in the A (Agriculture) district.

Person or Agency Proposing Project: Brian Moore for Verizon Wireless

Contact Phone Number: (510) 480-5574

- 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 3 – New Construction or Conversion of Small Structures (Section 15303)
Class 4 – Minor Alterations to Land (Section 15304)

F. Reasons why the project is exempt:

Construction of a wireless communication facility disguised as a 64-foot tall faux eucalyptus tree is not anticipated to generate any environmental impacts, and minor digging and grading where the surface is restored.

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

Elizabeth Cramblet, Project Planner

Date: _____

EXHIBIT A

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 a zone district that permits wireless communication facility (WCF) uses and allows fence heights up to 8' with an Over Height Fence Certification. The project 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 ensure the optimum in safety and the conservation of energy and resources. The proposed WCF and redwood fence will not deprive adjacent properties or the neighborhood of light, air, or open space, in that the structure meets all current setbacks that ensure access to these amenities.

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

This finding can be made, in that the proposed location of the WCF and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the A (Agriculture) zone district, as the primary uses of the property will remain agricultural and residential, with the proposed WCF being ancillary to these uses, and because the WCF use will meet all current site standards for the zone district. The proposed redwood fence will conform with the required setbacks of the zone district.

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 WCF use is consistent with the use and density requirements specified for the Rural Residential (AG) land use designation in the County General Plan.

The proposed WCF 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 WCF will not adversely shade adjacent properties and the development will meet current setbacks for the zone district. Most of the proposed ground equipment within the fence enclosure will not be seen minimizing the visual impact to neighbors.

The proposed WCF 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 WCF will be of a similar size to surrounding mature trees and will also comply with the site standards for the AG zone district (including setbacks, lot coverage) and will comply with the maximum height limit allowed for a free standing WCF in the AG zone district, to result in a structure consistent with a design that could be approved on any similarly sized lot in the vicinity.

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

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

This finding can be made, in that the proposed WCF and redwood fence are to be constructed on an existing 2.85-acre residential parcel and will not overload utilities in the area. Once all construction at the site has been completed, additional traffic is not anticipated as a result of the proposed WCF project, thus the project will not adversely impact 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 structure is located in a rural area containing dense vegetation and many stands of tall, mature trees. The bottom portion of the tower and much of the ground equipment within the redwood fence will not be visible with the help of the 8' redwood fence. Therefore the proposed faux eucalyptus tree (mono-eucalyptus) tower WCF and redwood fence, located close to other mature trees with similar heights, will be consistent with that context of the site and will blend in seamlessly with the surrounding 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, in that the proposed 65-foot tall mono-eucalyptus WCF will be of an appropriate scale and type of design that will complement the aesthetic qualities of the surrounding properties and will not reduce or visually impact available open space in the surrounding area. The redwood fence will blend in with the rural character of the surrounding neighborhood.

Wireless Communication Facility Use Permit Findings

1. That 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.

The subject property is not located within an area that has been designated as a scenic resource in the County General Plan; therefore, the proposed WCF will not significantly affect any designated visual resources. The area surrounding the project site and the subject parcel contains many mature trees including pines, eucalyptus, oaks and redwoods, and the proposed WCF has been designed to resemble a eucalyptus tree, so as to blend with the natural environment and reduce the visual impact of the proposed development. The color of the proposed foliage for the proposed mono-eucalyptus will be similar to eucalyptus in the area and the pole will be textured and colored to resemble natural eucalyptus bark. Therefore the proposed tower will blend into the natural landscape and not have a significant visual impact on surrounding land uses. The proposed fenced enclosure and equipment cabinets will be screened and softened by proposed landscape plantings that will include hardy, fast growing drought tolerant species that are suitable to the site.

The parcel is not mapped within a sensitive habitat. The proposed WCF will be located in an area of existing open lawn; therefore, it will not impact any sensitive habitat resources. Further, the proposed WCF will not negatively impact other County resources, including open space or community character resources. Finally, there are no other environmentally equivalent and/or superior and technically feasible alternatives to the proposed faux eucalyptus tree tower design that would result in less visual and/or other resource impacts.

2. That 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 WCF will not be located in a prohibited or restricted area. The WCF will initially include 9 antennas mounted upon a faux eucalyptus tree that will blend in with the mature trees on the same parcel and 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 8.66), or agriculture (i.e. will not displace viable agricultural land), open space, or community character resources. Future colocations that include additional antennas for additional carriers will all be located lower in the canopy of the

eucalyptus than the proposed Verizon antennas. Moreover, as shown in the applicant's alternative analysis, there are no other environmentally equivalent and/or superior and technically feasible alternatives to the faux eucalyptus tree design (including alternative locations and/or designs) with less visual and/or other resource impacts.

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 residential-related use of the subject property is in compliance with the requirements of the A (Agriculture) zone district and AG (Agriculture) General Plan designations, in which it is located, and that there are no outstanding or unpaid zoning violation abatement costs.

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 WCF will be located a sufficient distance from Watsonville Airport (approximately one-half mile) and will be of a height (65 feet) too low to interfere with aircraft in flight.

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

This finding can be made, in that the maximum ambient RF levels at ground level of the proposed WCF facility are calculated to be no more than 2.8% of the applicable FCC public exposure limit at ground level, and .44% of the public exposure limit at the second-floor elevation of any nearby building. The maximum calculated level at the second-floor elevation of any nearby residence is .33% of the public exposure limit (located at least 220 feet away, based on photographs from Google Maps).

6. The proposed wireless communication facilities as conditioned are consistent with all applicable requirements of the Local Coastal Program (LCP).

This finding is not applicable, in that the proposed WCF is located outside the Coastal Zone and is therefore not subject to the LCP.

Conditions of Approval

Exhibit D: Project plans, 14 sheets, prepared by J5 Infrastructure, dated 8/7/2018.

- I. This permit authorizes the construction of a 65-foot tall mono-eucalyptus wireless communication facility as indicated on the approved Exhibit "D" for this permit. 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. Obtain an Encroachment Permit from the Department of Public Works for all off-site work performed in the County road right-of-way.
 - D. Submit proof that these conditions have been recorded in the official records of the County of Santa Cruz (Office of the County Recorder) within 30 days from the effective date of this permit.
- II. Prior to issuance of a Building Permit the applicant/owner shall:
 - A. Submit final architectural plans for review and approval by the Planning Department. The final plans shall be in substantial compliance with the plans marked Exhibit "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. A copy of the text of these conditions of approval incorporated into the full size sheets of the architectural plan set.
 2. Plans shall indicate that the maximum height of the structure, including all portions of any antenna or other equipment mounted on the tower and including all "branches" or other camouflage features, shall not exceed 65 feet as measured from the existing garage at the base of the tower. The proposed camouflage branches shall extend above the level of all antennas

etc. to the same extent as shown on Exhibit D. 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 sheet in 8 1/2" x 11" format for Planning Department review and approval.

3. One elevation shall indicate proposed materials and colors. In addition to showing the materials and colors on the elevation, the applicant shall supply a revised color and material sheet in 8 1/2" x 11" format for Planning Department review and approval that complies with the following: The mono-eucalyptus pole shall be finished with either the standard or aged eucalyptus bark finish as preferred. Foliage shall be chosen to blend with the foliage in surrounding eucalyptus trees, and panel antennas shall be concealed using foliage covered socks.
 4. The applicant shall submit the appropriate form(s) to the Federal Aviation Administration (FAA) which include the proposal of the 65' wireless communication facility (WCF) and its associated equipment for their review and comments and approval or denial prior to building permit issuance. Form(s) should include FAA Form 7460-1 and 2 if applicable. The applicant shall send a copy of any comments or conditions administered by the FAA regarding the proposed WCF in addition to documentation allowing its construction at the proposed site to the Planning Department. No building permit will be issued until documentation from the FAA allows this use and structure.
 5. Grading, drainage, and erosion control plans.
 6. The building plans must include detailed elevations and cross-sections and the topography of the project site which clearly depict the total height of the proposed structure. Maximum height is 65 feet.
 7. Details showing compliance with fire department requirements. If the proposed structure(s) are located within the State Responsibility Area (SRA) the requirements of the Wildland-Urban Interface code (WUI), California Building Code Chapter 7A, shall apply.
 8. A landscape plan shall be included to show plantings to screen the proposed fence enclosure. A minimum of 18 plants around the perimeter will be required. The plan must include details of ground preparation and the required maintenance to ensure survival of the plants.
- B. Meet all requirements of the County Department of Public Works, Stormwater Management. If drainage fees are required these will be assessed on the net increase in impervious area. Permit conditions are as follows:
1. A drainage review will be required at the building application stage. The current drainage review fee is \$470.00. Projects are required to maintain

predevelopment runoff rates where feasible. Mitigating measures should be used on-site to limit increases in post-development runoff leaving the site. Best Management Practices should be employed within the development to meet this goal as much as possible. Such measures include pervious or semi-pervious pavements, runoff surface spreading, discharging roof and driveway runoff into landscaping, etc.

2. Please provide a tabulation table for the proposed impervious areas. Please note – a drainage fee will be assessed on the net increase in impervious area (i.e. roofs, paved areas, patios, walways, driveway, etc.). The fees are currently \$1.27 per square foot. A 50% credit is given when you use semi-pervious pavement such as pavers, baserock, pea gravel, porous concrete. Contact Gerry Vargas if you have any questions about the above comments: Email: dpw105@santacruzcounty.us. Counter (Monday-Friday) 8-12pm. Phone: 831-454-2160.
 - C. Obtain an Environmental Health Clearance for this project from the County Department of Environmental Health Services. Due to a locked gate, the EH staff could not inspect the sewage disposal system for the property. Compliance with Environmental Health requirements are not yet determined. The owner applies for the Discretionary and Building Permits at own risk. The discretionary permit is complete. Questions may be directed to Cheryl Wong at (831) 454-2022.
 - D. Meet all requirements of the Environmental Planning section of the Planning Department.
 - E. Meet all requirements and pay any applicable plan check fee of the County Fire Protection District.
 - F. Submit 3 copies of a soils report prepared and stamped by a licensed Geotechnical Engineer.
- III. All construction shall be performed according to the approved plans for the Building Permit. Prior to final building inspection, the applicant/owner must meet the following conditions:
- A. All site improvements shown on the final approved Building Permit plans shall be installed.
 - B. All inspections required by the building permit shall be completed to the satisfaction of the County Building Official.
 - C. The project must comply with all recommendations of the approved soils reports.
 - D. 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. All replacement antennas and other equipment mounted on the tower shall comply with the maximum height set out in II.A.2 (above) unless a increased height is approved subject to a Variance.
- B. All future co-locations on the approved mono-eucalyptus WCF facility shall be located as shown on Attachment D, below the currently proposed antennas, and shall not result in a further increase in height without the approval of the Planning Department in accordance with the Santa Cruz County Code. Future co-locations on the mono-eucalyptus pole must maintain the same or greater level of camouflage as approved by this permit. All ground mounted equipment shall be located within the approved fenced and landscaped enclosure. All required permits as set out in County Code shall also be obtained.
- C. The foliage on the mono-eucalyptus shall be maintained in good condition and if damaged by wind, weather or other reason, shall be replaced in-kind to retain the appearance of a natural tree to the greatest extent possible.
- D. All landscape screening around the fenced enclosure shall be maintained in good condition. All dead plants shall be replaced in kind or with a similar large-scale, hardy, drought-tolerant, non-invasive species.
- E. All maintenance activities associated with the WCF, including tests to the generator, shall be between the hours of 8:00 a.m. and 5:00 p.m. weekdays and shall not occur on any holiday.
- F. No light shall be added at the top of the mono-eucalyptus unless evidence is submitted, in writing, to show that this is a Federal Aviation Authority (FAA) requirement.
- G. 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, its officers, employees, and agents to attack, set aside, void, or annul this development approval of the COUNTY or any subsequent amendment of this development approval which is requested by the Development

Approval Holder.

- A. COUNTY shall promptly notify the Development Approval Holder of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. COUNTY shall cooperate fully in such defense. If COUNTY fails to notify the Development Approval Holder within sixty (60) days of any such claim, action, or proceeding, or fails to cooperate fully in the defense thereof, the Development Approval Holder shall not thereafter be responsible to defend, indemnify, or hold harmless the COUNTY if such failure to notify or cooperate was significantly prejudicial to the Development Approval Holder.
- B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:
 - 1. COUNTY bears its own attorney's fees and costs; and
 - 2. COUNTY defends the action in good faith.
- C. Settlement. The Development Approval Holder shall not be required to pay or perform any settlement unless such Development Approval Holder has approved the settlement. When representing the County, the Development Approval Holder shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the County.
- D. Successors Bound. "Development Approval Holder" shall include the applicant and the successor(s) in interest, transferee(s), and assign(s) of the applicant.

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

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

Application #: 171213
APN: 049-171-17
Owner: Stephen Henry

Approval Date: _____

Effective Date: _____

Expiration Date: _____

Steven Guiney, AICP
Deputy Zoning Administrator

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.

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DEVELOPMENT:

5 Infrastructure

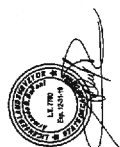
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CONSULTANT:

CALVADA

SURVEYING, INC.
1111 Jenkins Ct., Suite 205, Concord, CA 97380
Phone: 951-260-8990 Fax: 951-260-9748
Toll Free: 800-CALVADA www.calvada.com

JOB NO. 10110



LICENSE:

REVISIONS	DATE / BY	DESCRIPTION
3	07/09/18 DG	CLIENT COMMENTS
4	12/09/18 GSM	UPDATED DESIGN
5	02/10/17 JC	UPDATED DESIGN
6	01/15/18 JC	UPDATED DESIGN

1

SITE NAME
OLD ADOBE ROAD

82 BUENA VISTA DR.,
ATSONVILLE GA, 35078
SANTA CRUZ COUNTY

ALUMINUM VINYL CO.

TOPOGRAPHIC SURVEY

○

TABLE 1 OF 1

THE BASIS OF BEARING FOR THIS SURVEY IS THE CALIFORNIA COORDINATES SYSTEM (CCT 83). PAGE 3. END

THE BASIS OF BEARING FOR THIS SURVEY IS THE CALIFORNIA COORDINATES SYSTEM (CCT 83). PAGE 3. END

THE CALIFORNIA SPATIAL REFERENCE CENTER COAST 7215', ELEVATION = 250.79 FEET (NAD 83)

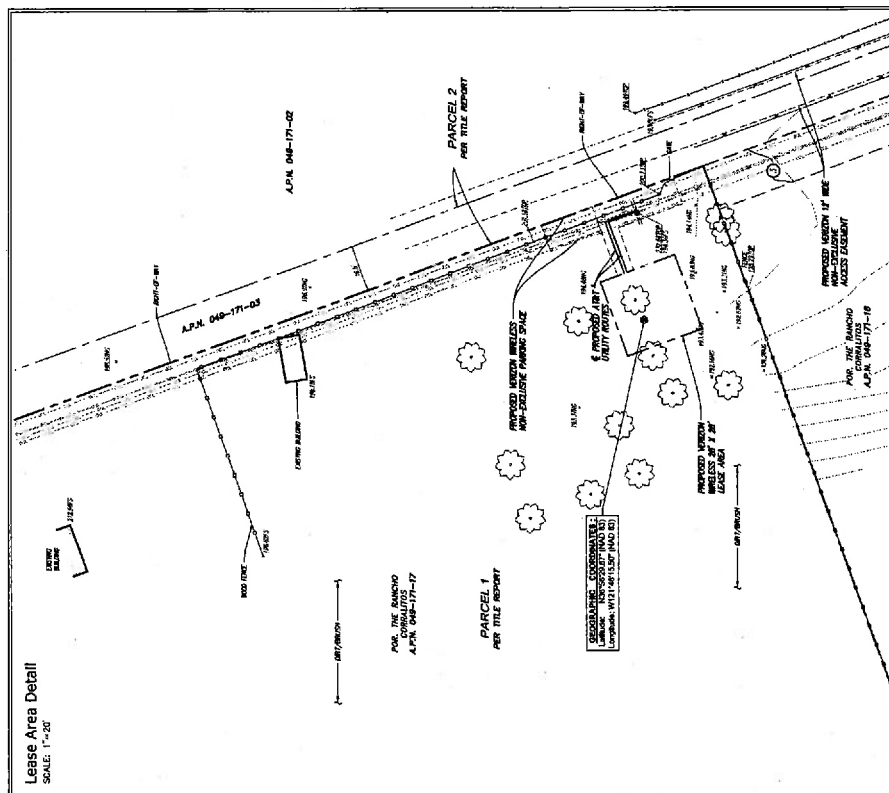
THE CALIFORNIA SPATIAL REFERENCE CENTER COAST 7215', ELEVATION = 250.79 FEET (NAD 83)

DECEMBER 1, 2005

• 2571 99 JAN 2010 11 28 AM EST

ELEVATION = 101.0 FEET ABOVE MEAN SEA LEVEL

040-17A-17

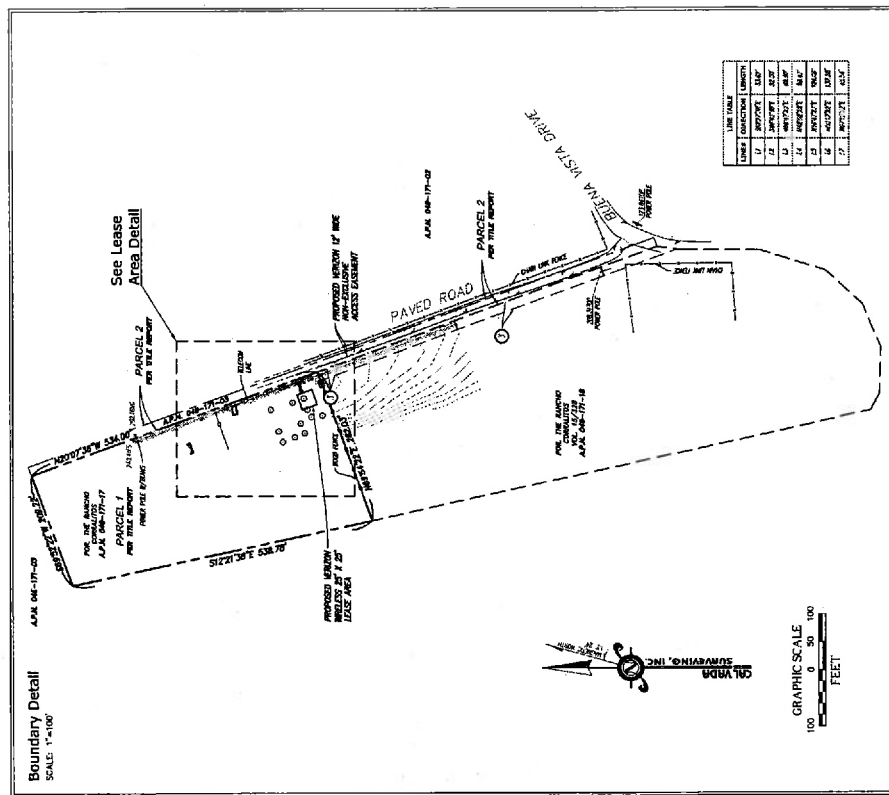
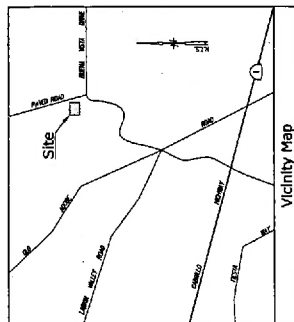


PREPARED BY: FIRST AMERICAN TITLE COMPANY

PREPARED BY: FIRST AMERICAN TITLE COMPANY

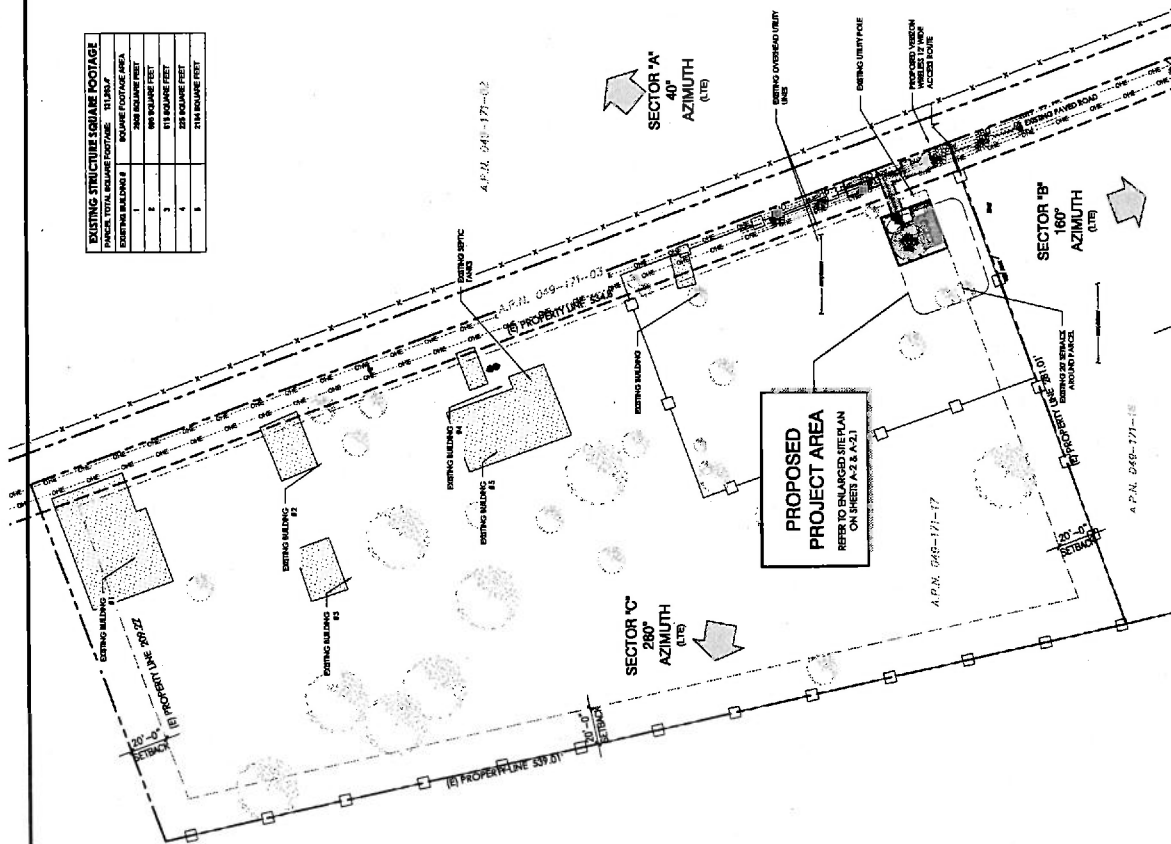
LEGAL PROPERTY IN THE CITY OF WATSONVILLE, COUNTY OF SANTA CRUZ, STATE OF CALIFORNIA, DESCRIBED AS

NO COPY
SMITH



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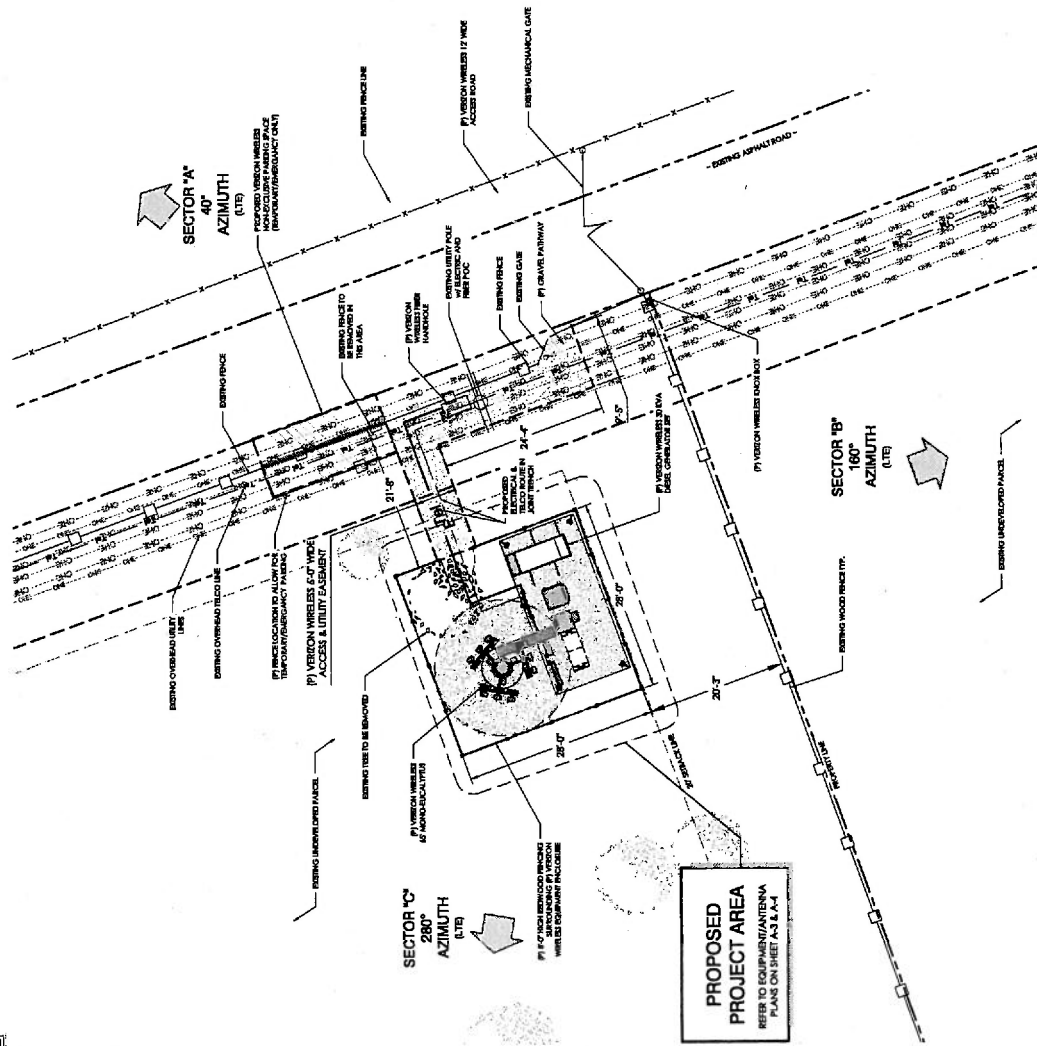
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EXISTING BUILDING #	SQUARE FOOTAGE AREA
1	2400 SQUARE FEET
2	900 SQUARE FEET
3	1115 SQUARE FEET
4	225 SQUARE FEET
5	2154 SQUARE FEET



NOTES:

1. NO GRADING OR PERMANENT CONSTRUCTION SHALL OCCUR WITHIN ONE LINE OF TREES THAT ARE TO REMAIN WITHOUT AFOREST APPROVAL.
2. PRIOR TO CONSTRUCTION, GENERAL CONTRACTOR TO CONTACT DISAULT TO HAVE ONE EXISTING UNDERGROUND UTILITY. IN THE EVENT OF CONFLICTS, CONTRACTOR TO BE RESPONSIBLE.

THIS IS NOT A SITE SURVEY



THIS IS NOT A SITE SURVEY

ALL PROPERTY BOUNDARIES, ORIENTATION OF TRUE NORTH AND STREET HALF-WIDTHS HAVE BEEN OBTAINED FROM A TAX PARCEL.

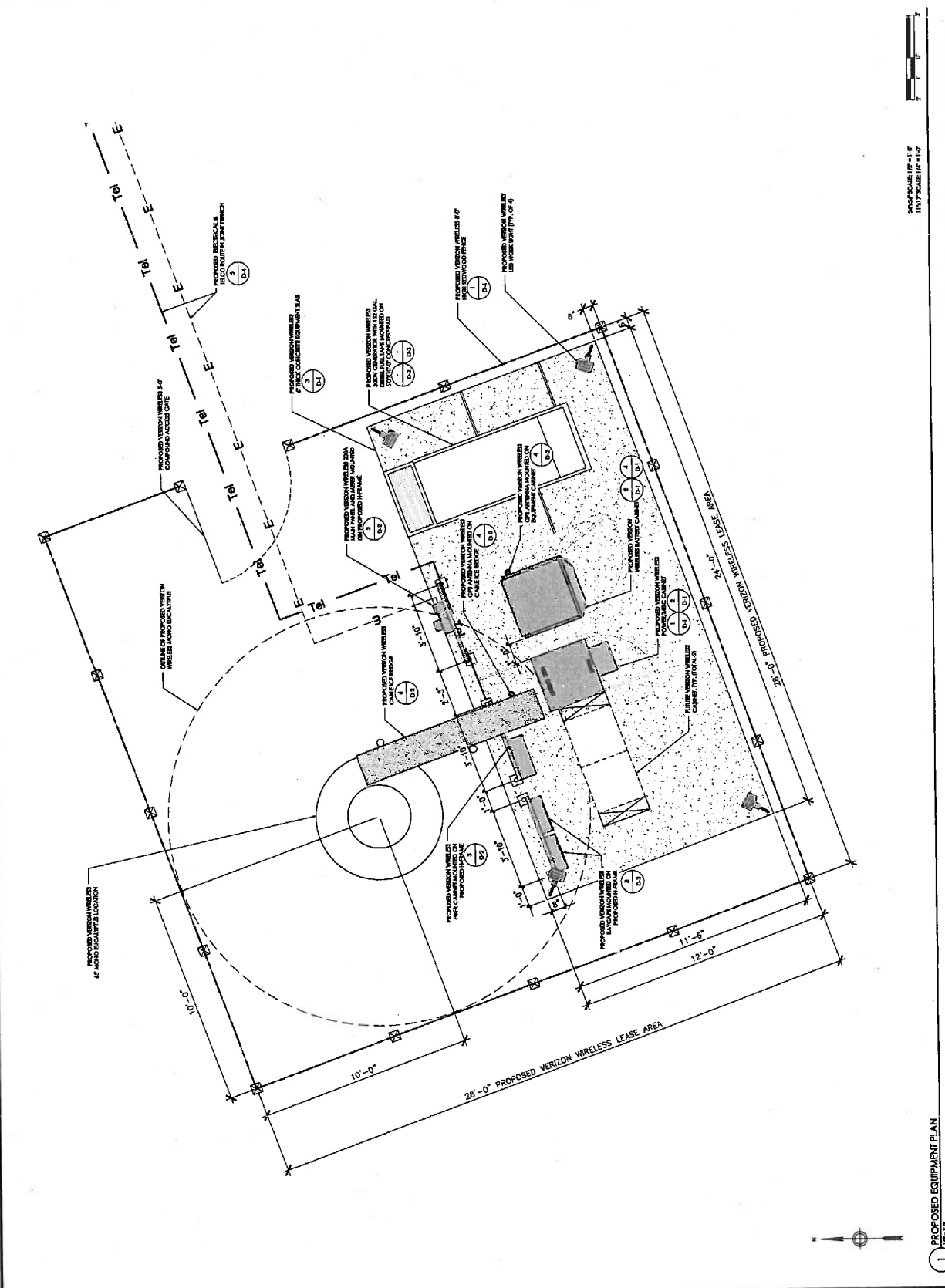
NOTE:

1. NO TRADING OR PERMANENT CONSTRUCTION SHALL OCCUR WITHIN THE LINES OF TREES THAT ARE TO REMAIN WITHOUT ARBORIST APPROVAL.
2. PRIOR TO CONSTRUCTION, GENERAL CONTRACTOR TO CONDUCT INQUIRY TO MAKE OUT EXISTING UNDERGROUND UTILITIES. IN THE EVENT OF CONFLICT, CONTRACTOR TO MAINTAIN.

**PROPOSED
PROJECT AREA**

1 PROPOSED ENLARGED SITE PLAN
1/8"=1'-0"

PREPARED FOR verizon 3785 MITCHELL LN. WATSONVILLE, CALIFORNIA 95076	VENDOR: INFRASTRUCTURE 42555 - 00 - 00 - 00 - 00 - 00 - 00 - 00	SITE NO.: OLD ADOBE ROAD	SITE NAME: OLD ADOBE ROAD DRAWN BY: AJH CHECKED BY: JMM	<table border="1"> <tr><td>1</td><td>RECEIVER</td><td>RECEIVER COMMENTS</td></tr> <tr><td>2</td><td>RECEIVER</td><td>RECEIVER COMMENTS</td></tr> <tr><td>3</td><td>RECEIVER</td><td>RECEIVER COMMENTS</td></tr> <tr><td>4</td><td>RECEIVER</td><td>RECEIVER COMMENTS</td></tr> <tr><td>5</td><td>RECEIVER</td><td>RECEIVER COMMENTS</td></tr> <tr><td>6</td><td>RECEIVER</td><td>RECEIVER COMMENTS</td></tr> <tr><td>7</td><td>RECEIVER</td><td>RECEIVER COMMENTS</td></tr> <tr><td>8</td><td>RECEIVER</td><td>RECEIVER COMMENTS</td></tr> <tr><td>9</td><td>RECEIVER</td><td>RECEIVER COMMENTS</td></tr> <tr><td>10</td><td>RECEIVER</td><td>RECEIVER COMMENTS</td></tr> <tr><td>11</td><td>RECEIVER</td><td>RECEIVER COMMENTS</td></tr> <tr><td>12</td><td>RECEIVER</td><td>RECEIVER COMMENTS</td></tr> <tr><td>13</td><td>RECEIVER</td><td>RECEIVER 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PREPARED FOR

verizon

VERIZON WIRELESS
WALNUT CREEK, CALIFORNIA 94598

VeriDOC

15 INFRASTRUCTURE

AC - DC - 6 - 18 - 19 - 17 - 17

SHEET

OLD ADOBE ROAD

SITE NAME: OLD ADOBE ROAD

DRAWN BY: AJ

CHECKED BY: JANA

1	REVISION	DATE	DESCRIPTION
2	REVISION	DATE	DESCRIPTION
3	REVISION	DATE	DESCRIPTION
4	REVISION	DATE	DESCRIPTION
5	REVISION	DATE	DESCRIPTION
6	REVISION	DATE	DESCRIPTION
7	REVISION	DATE	DESCRIPTION
8	REVISION	DATE	DESCRIPTION
9	REVISION	DATE	DESCRIPTION
10	REVISION	DATE	DESCRIPTION

DATE: 10/10/12

TIME: 10:00 AM

LOCATION: 482 BUENA VISTA DRIVE
WATSONVILLE, CA 95076

OLD ADOBE ROAD

LOCATION CODE: 264538

SHEET TITLE:

PROPOSED ANTENNA PLAN AND DETAILS

SHEET NUMBER:

A-4

PROPOSED RF SCHEDULE

SECTOR	ANTENNA MODEL NO.	ANTENNA HGT (FEET)	ANTENNA SWAY (FEET)	ANTENNA DOWNTILT (DEGREES)	ANTENNA AZIMUTH (DEGREES)	ANTENNA LENGTH (FEET)	ANTENNA WEIGHT (POUNDS)	ANTENNA COUNT
A1	2 PANEL ANTENNA	30'	25'	0	150	150'	150'	1
A2	2 PANEL ANTENNA	30'	25'	0	150	150'	150'	1
A3	2 PANEL ANTENNA	30'	25'	0	150	150'	150'	1
B1	2 PANEL ANTENNA	30'	25'	0	150	150'	150'	1
B2	2 PANEL ANTENNA	30'	25'	0	150	150'	150'	1
B3	2 PANEL ANTENNA	30'	25'	0	150	150'	150'	1
C1	2 PANEL ANTENNA	30'	25'	0	150	150'	150'	1
C2	2 PANEL ANTENNA	30'	25'	0	150	150'	150'	1
C3	2 PANEL ANTENNA	30'	25'	0	150	150'	150'	1
D1	2 PANEL ANTENNA	30'	25'	0	150	150'	150'	1

2 PROPOSED RF SCHEDULE

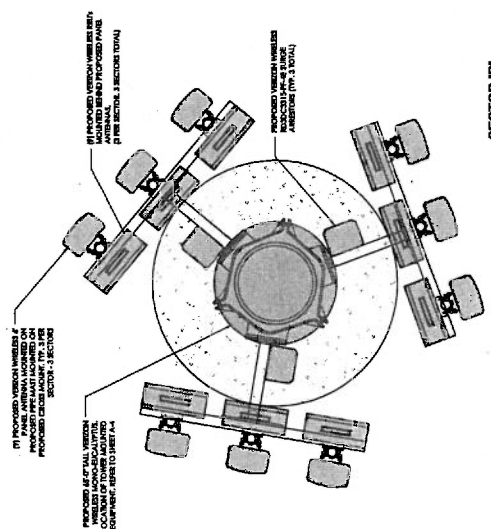
NOTES:

- ALL VERIZON WIRELESS ANTENNAS AND COMPONENTS TO BE INSTALLED TO MATCH (H) HORIZONTAL TYPE.
- IN VERIZON WIRELESS PANE ANTENNAS TO BE INSTALLED TO MATCH (H) HORIZONTAL TYPE.

SECTOR 'A'

40°

AZIMUTH (LTS)



SECTOR 'B'

180°

AZIMUTH (LTS)

SECTOR 'C'

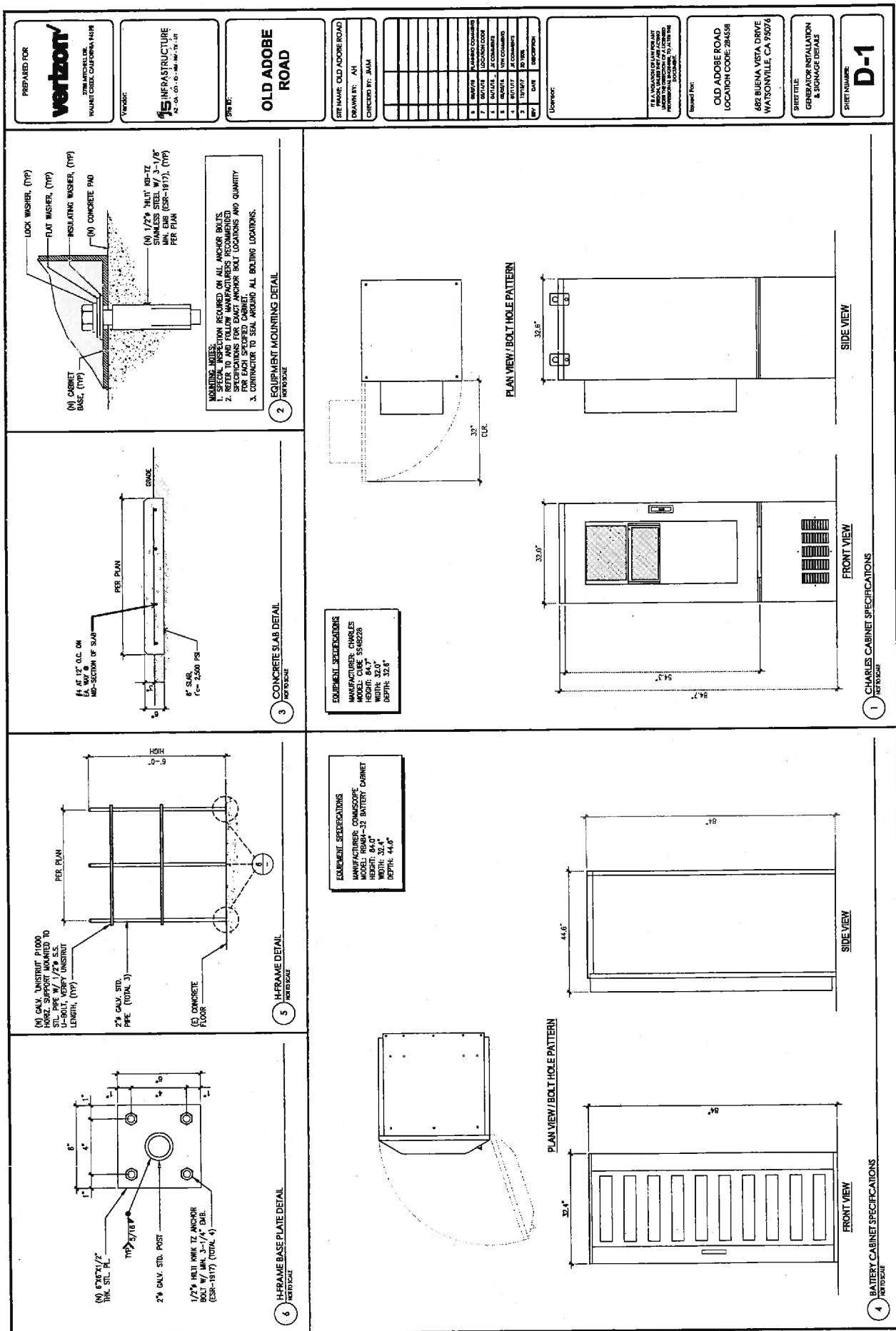
280°

AZIMUTH (LTS)

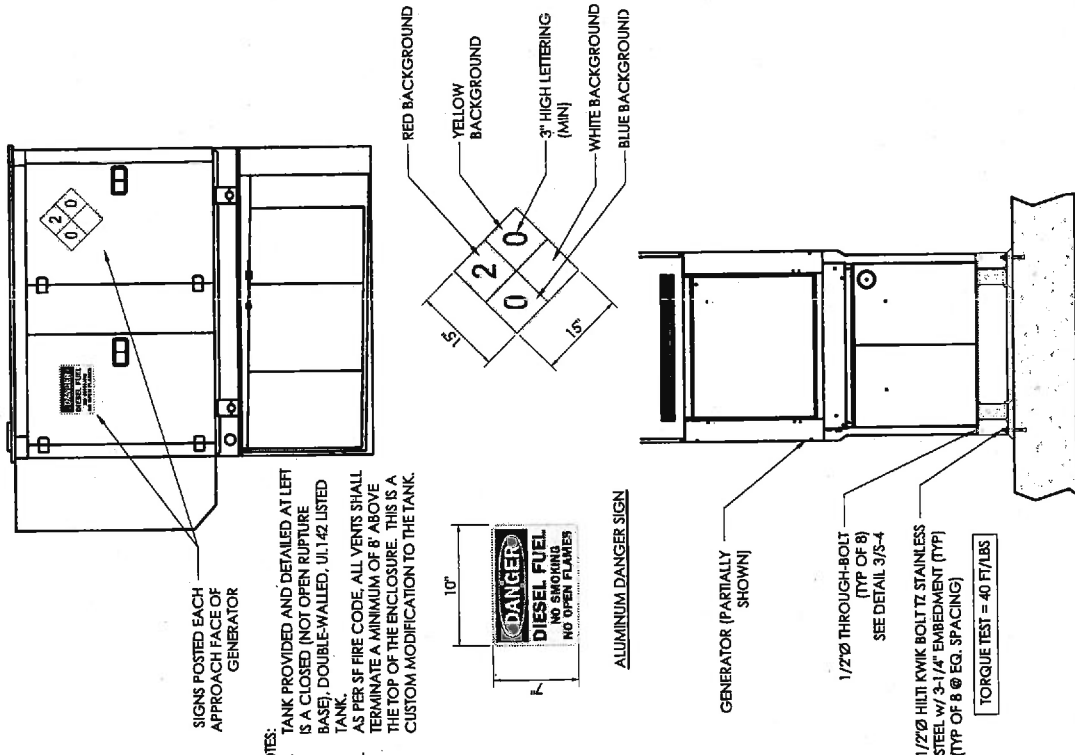
SCALE: 1/4" = 1'-0"

1/4" = 1'-0"

1 PROPOSED ANTENNA PLAN



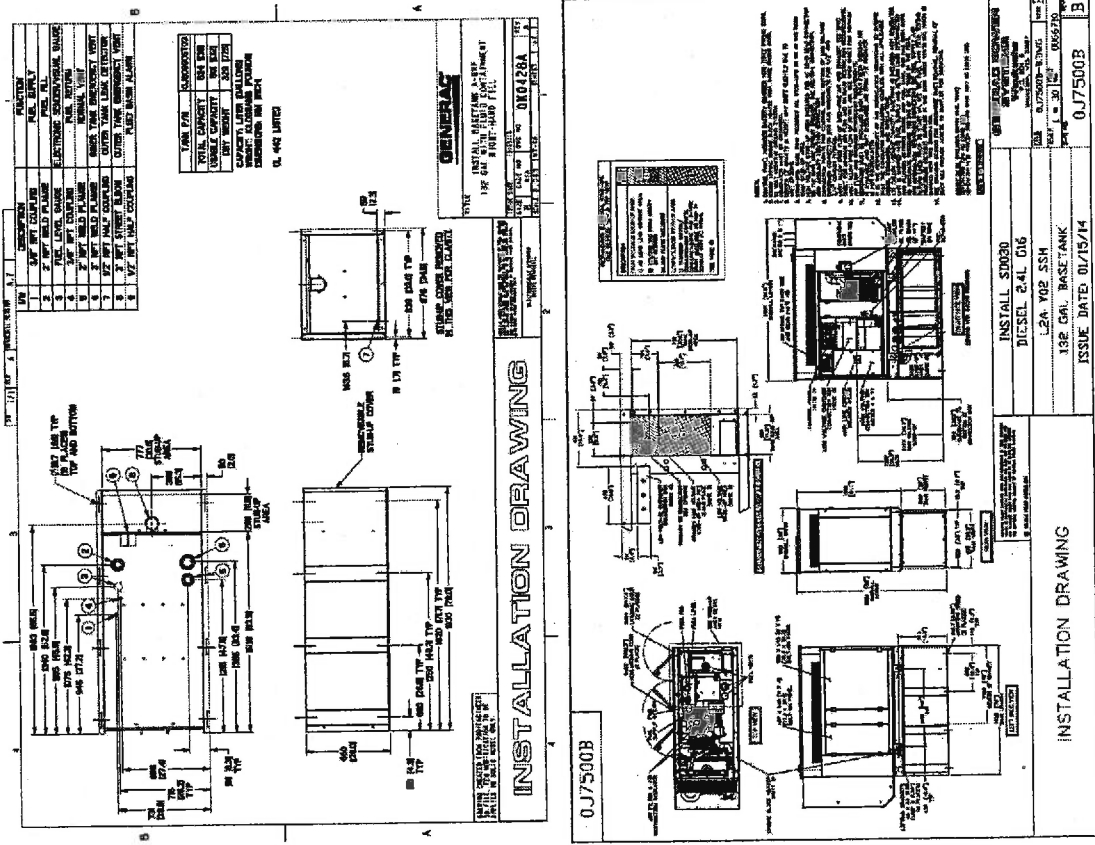
PREPARED FOR verizon 2700 MICHELLE DR. WALNUT CREEK, CALIFORNIA 94596	VEHICLE 15 INFRASTRUCTURE A-2-01-02 0-14-14-15-17	DATE OLD ADOBE ROAD	SE NAME OLD ADOBE ROAD DRAWN BY: AH CHECKED BY: JMM	REVISIONS 1. 01/17/14 2. 01/17/14 3. 01/17/14 4. 01/17/14 5. 01/17/14 6. 01/17/14 7. 01/17/14 8. 01/17/14 9. 01/17/14 10. 01/17/14 11. 01/17/14 12. 01/17/14 13. 01/17/14 14. 01/17/14 15. 01/17/14 16. 01/17/14 17. 01/17/14 18. 01/17/14 19. 01/17/14 20. 01/17/14 21. 01/17/14 22. 01/17/14 23. 01/17/14 24. 01/17/14 25. 01/17/14 26. 01/17/14 27. 01/17/14 28. 01/17/14 29. 01/17/14 30. 01/17/14 31. 01/17/14 32. 01/17/14 33. 01/17/14 34. 01/17/14 35. 01/17/14 36. 01/17/14 37. 01/17/14 38. 01/17/14 39. 01/17/14 40. 01/17/14 41. 01/17/14 42. 01/17/14 43. 01/17/14 44. 01/17/14 45. 01/17/14 46. 01/17/14 47. 01/17/14 48. 01/17/14 49. 01/17/14 50. 01/17/14 51. 01/17/14 52. 01/17/14 53. 01/17/14 54. 01/17/14 55. 01/17/14 56. 01/17/14 57. 01/17/14 58. 01/17/14 59. 01/17/14 60. 01/17/14 61. 01/17/14 62. 01/17/14 63. 01/17/14 64. 01/17/14 65. 01/17/14 66. 01/17/14 67. 01/17/14 68. 01/17/14 69. 01/17/14 70. 01/17/14 71. 01/17/14 72. 01/17/14 73. 01/17/14 74. 01/17/14 75. 01/17/14 76. 01/17/14 77. 01/17/14 78. 01/17/14 79. 01/17/14 80. 01/17/14 81. 01/17/14 82. 01/17/14 83. 01/17/14 84. 01/17/14 85. 01/17/14 86. 01/17/14 87. 01/17/14 88. 01/17/14 89. 01/17/14 90. 01/17/14 91. 01/17/14 92. 01/17/14 93. 01/17/14 94. 01/17/14 95. 01/17/14 96. 01/17/14 97. 01/17/14 98. 01/17/14 99. 01/17/14 100. 01/17/14	ISSUED FOR OLD ADOBE ROAD LOCATION CODE: 24558 480 BUENA VISTA DRIVE WATSONVILLE, CA 95076	SHEET TITLE GENERATOR INSTALLATION & LAYOUT DETAIL	SHEET NUMBER D-2
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NOTES:

- NFPA 704 DIAMOND SHALL BE ATTACHED ONTO ALL SIDES OF GENERATOR
- SPECIAL INSPECTION [ICC ESR#1917] IS REQ'D FOR ANCHOR

2 DETAIL
1/2" THROUGH-BOLT



1 GENERATOR INSTALLATION DETAILS
1/2" THROUGH-BOLT

Electronically drawn 1/31/97 KSA
 Rev. 1/31/97 KSA (Street Name)
 Rev. 5/29/97 GG (Cor. Pg. ref 47)
 Rev. 5/27/98 (TCA CONSOLIDATION) rw
 Rev. 1/10/99 GG (Remove assent. 1-58 & 59)
 Rev. 6/4/01 mvm (changed page refs.)
 Rev. 2/25/02 mvm (sf. name)
 Rev. 12/31/02 mvm (cor. sf. names)
 Rev. 5/31/06 mvm (59PM26 split 1-64 & 65)
 Rev. 8/6/07 TD (corr. to scarlet ct. rw)

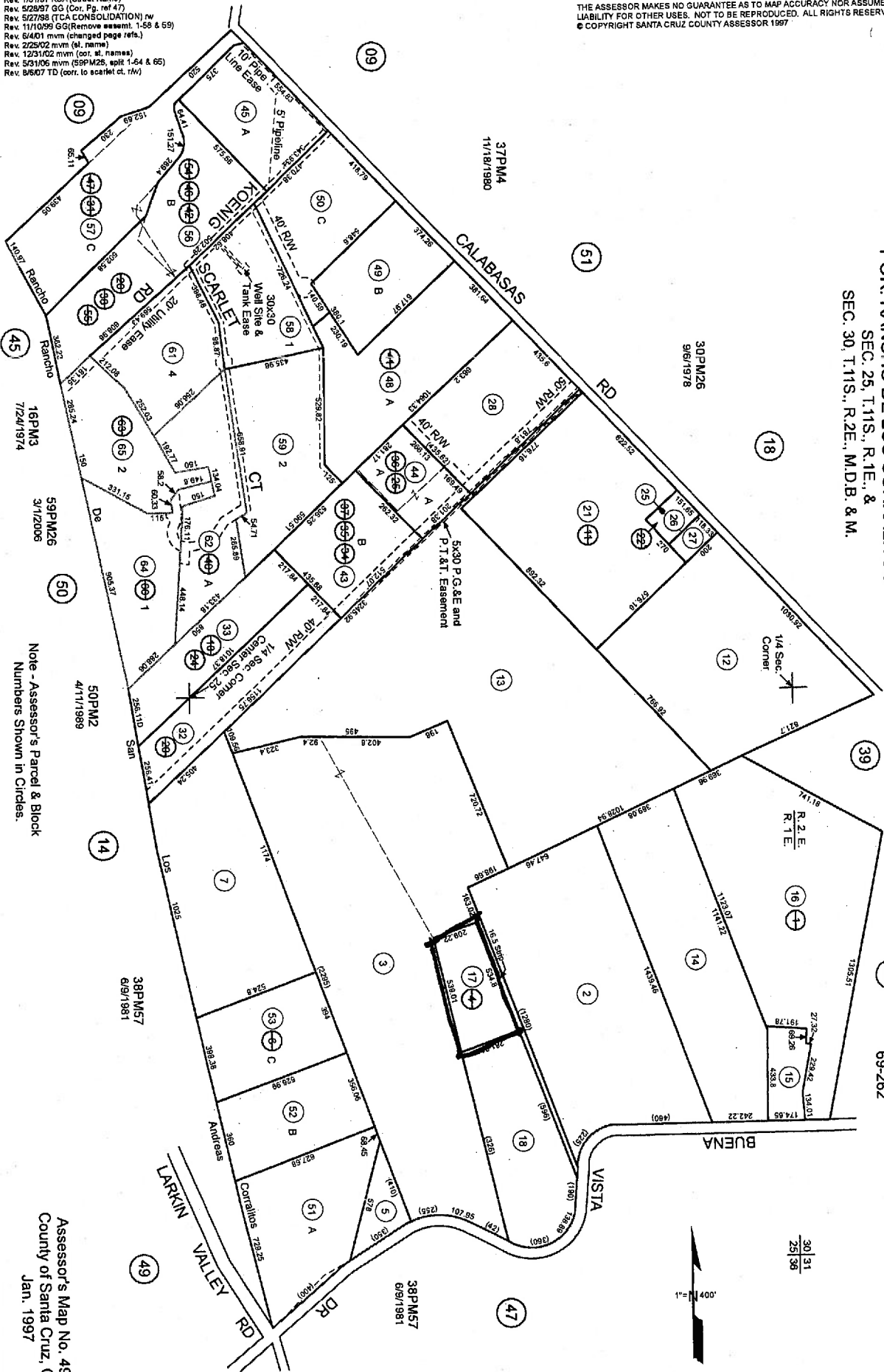
FOR TAX PURPOSES ONLY

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POR. RANCHO DE LOS CORRALITOS
 SEC. 25, T.11S., R.1E., &
 SEC. 30, T.11S., R.2E., M.D.B. & M.

Tax Area Code
 69-262

49-17



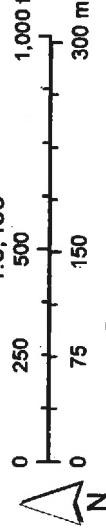
Note - Assessor's Parcel & Block
 Numbers Shown in Circles.

Assessor's Map No. 49-17
 County of Santa Cruz, Calif.
 Jan. 1997

Parcel Location Map (049-171-17)



1:5,435

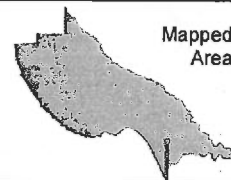


- Streets**
- Alley
 - Business Route
 - Driveway
 - Levee
 - Major Road
 - Ramp
 - State Highway
 - Street
 - Unnamed

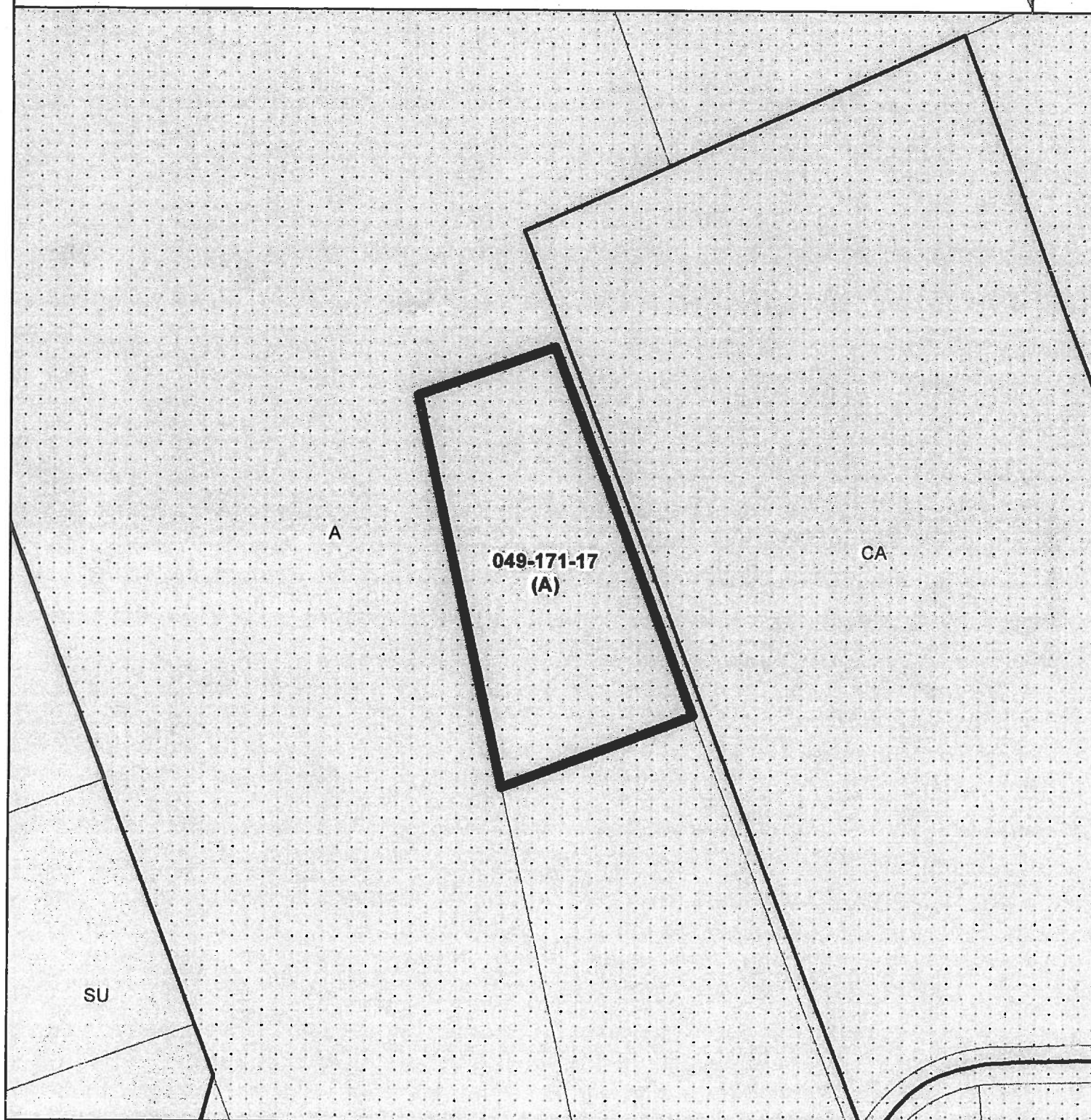


SANTA CRUZ COUNTY PLANNING DEPARTMENT

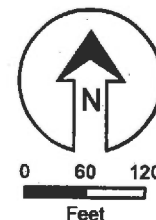
Parcel Zoning Map



Mapped
Area

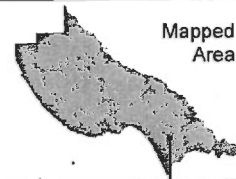


- A Agriculture
- CA Commercial Agriculture
- SU Special Use





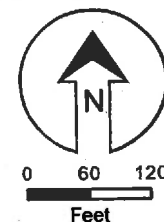
Parcel General Plan Map



Mapped
Area



AG Agricultural



EX. B



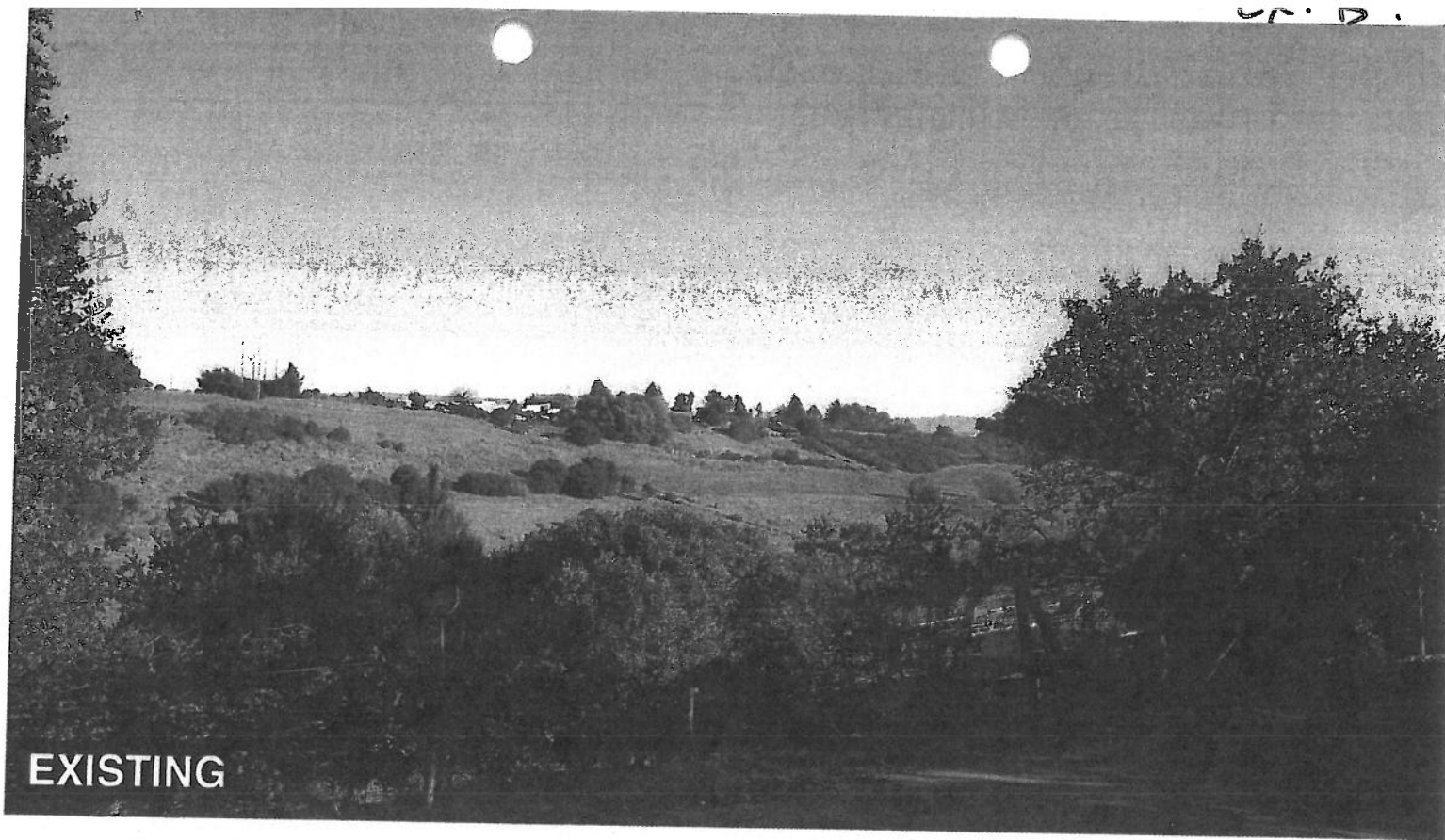
View Chart

EXHIBIT

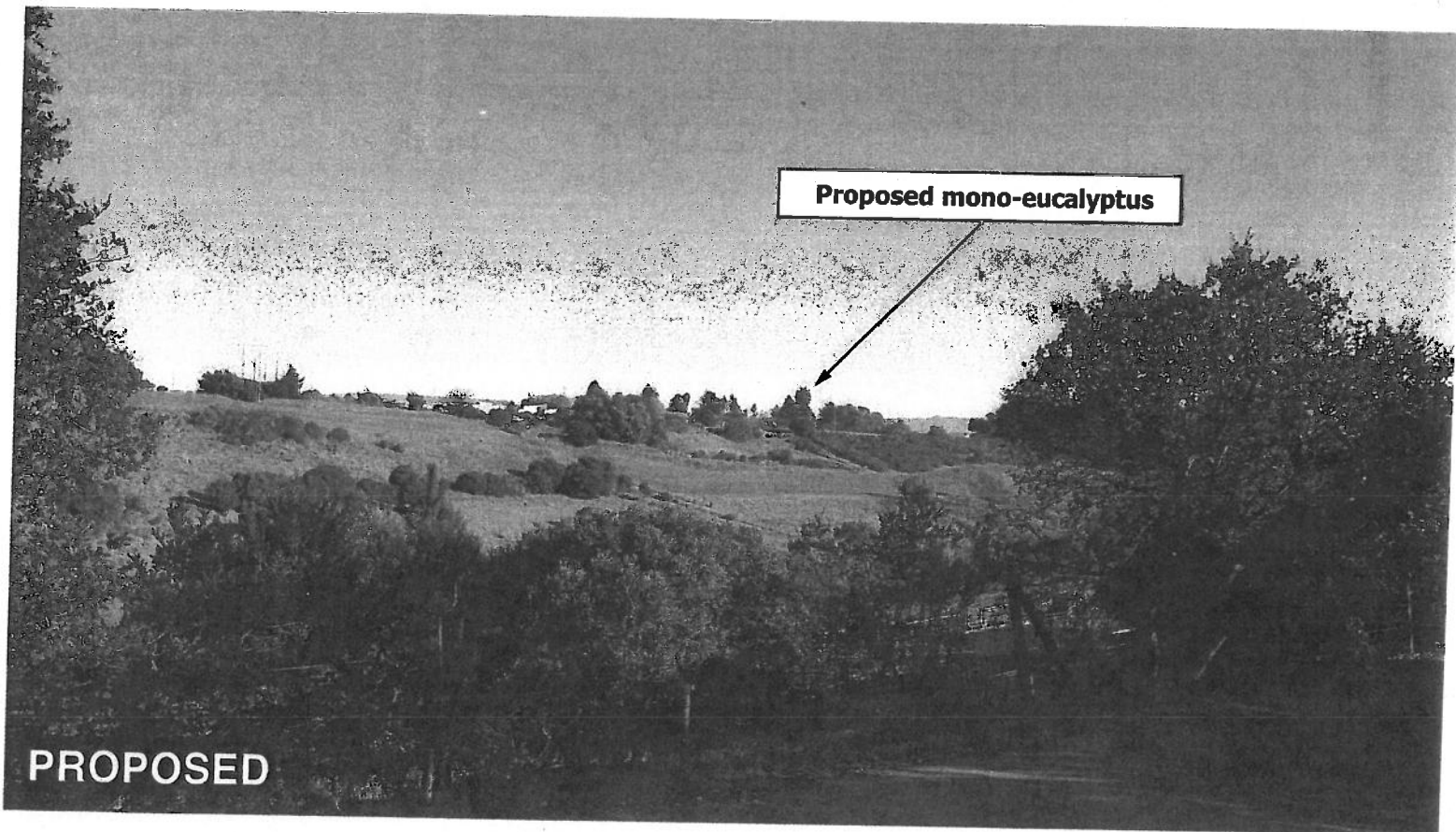


Old Adobe Rd
682 Buena Vista Rd
Watsonville CA 95076
12/7/17

57.12.1



Install (9) panel antennas, (9) RRUS on an 65' mono-eucalyptus



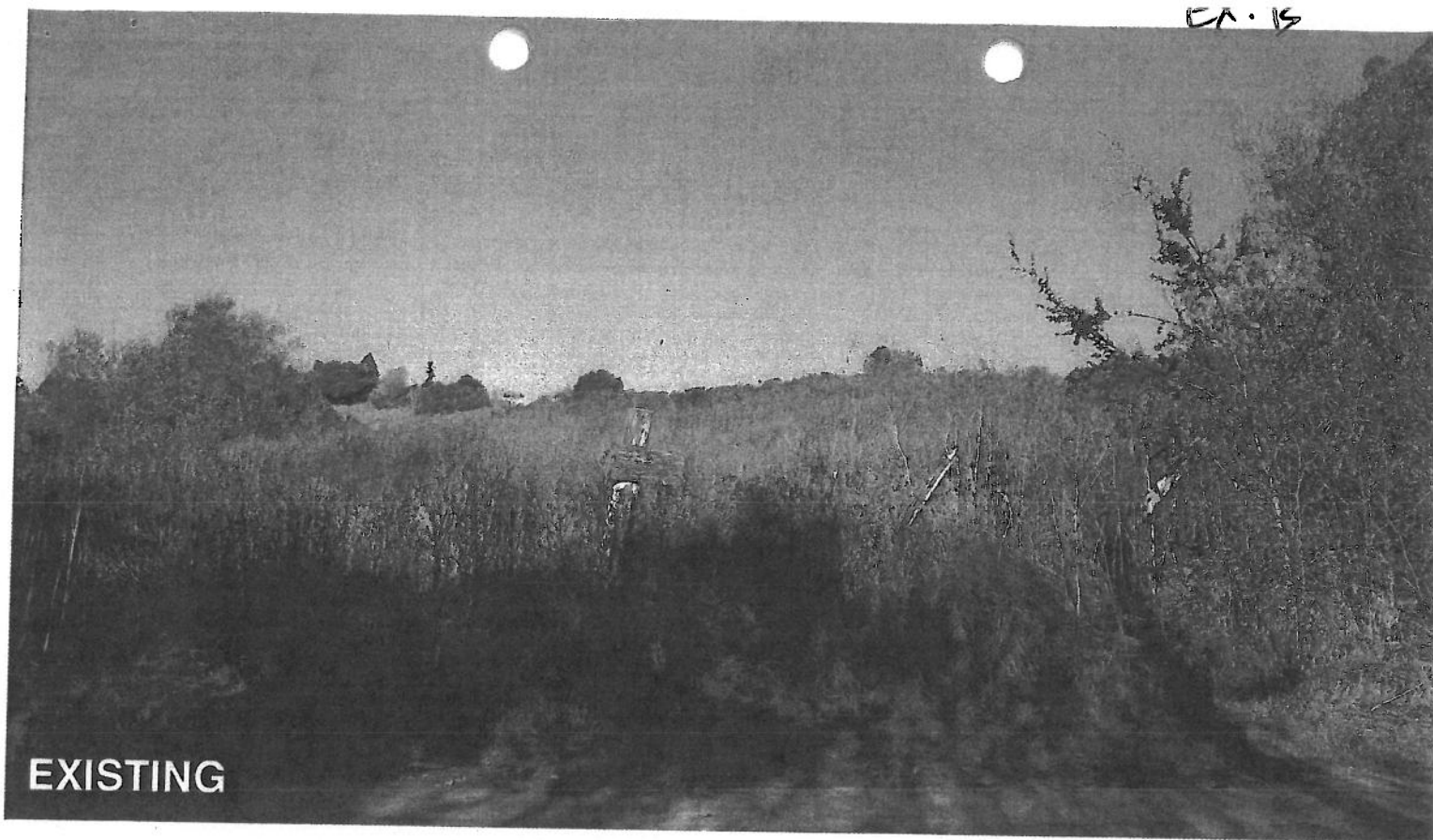
View 1 of 4

EXHIBIT F

94

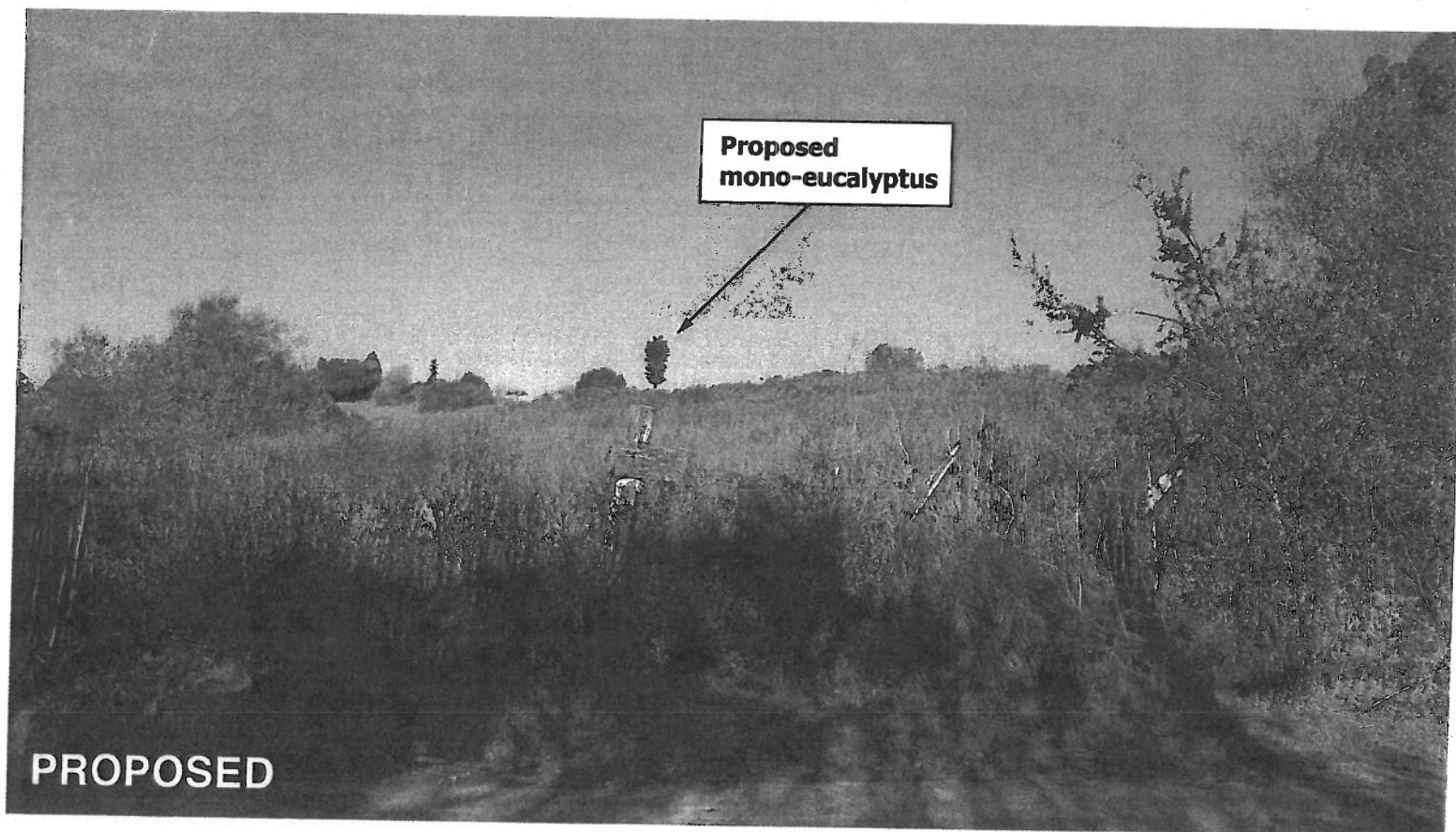


Old Adobe Rd
682 Buena Vista Rd
Watsonville CA 95076
12/7/17



EXISTING

Install (9) panel antennas, (9) RRUS on an 65' mono-eucalyptus



Proposed
mono-eucalyptus

PROPOSED

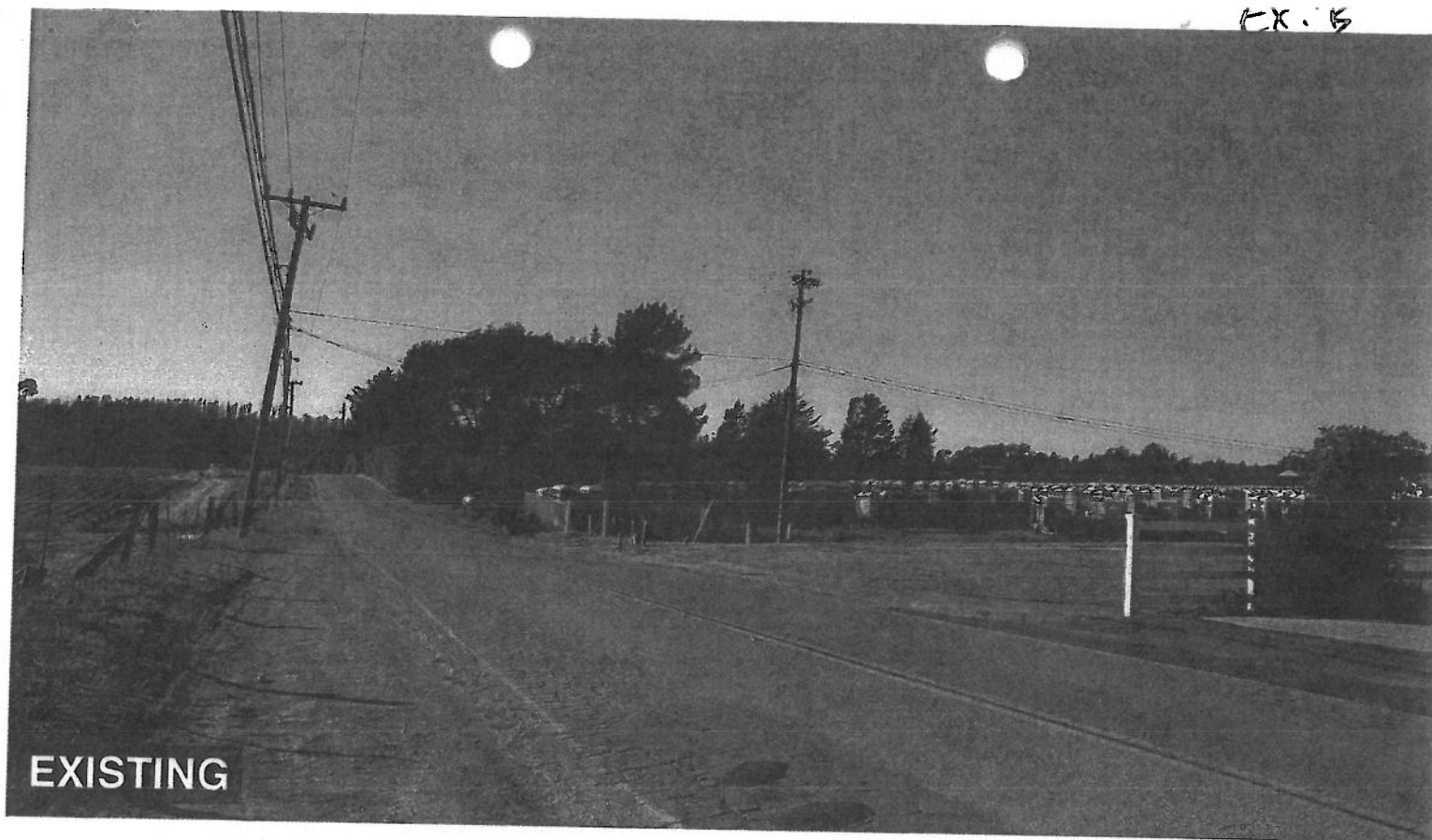


View 2 of 4

EXHIBIT F

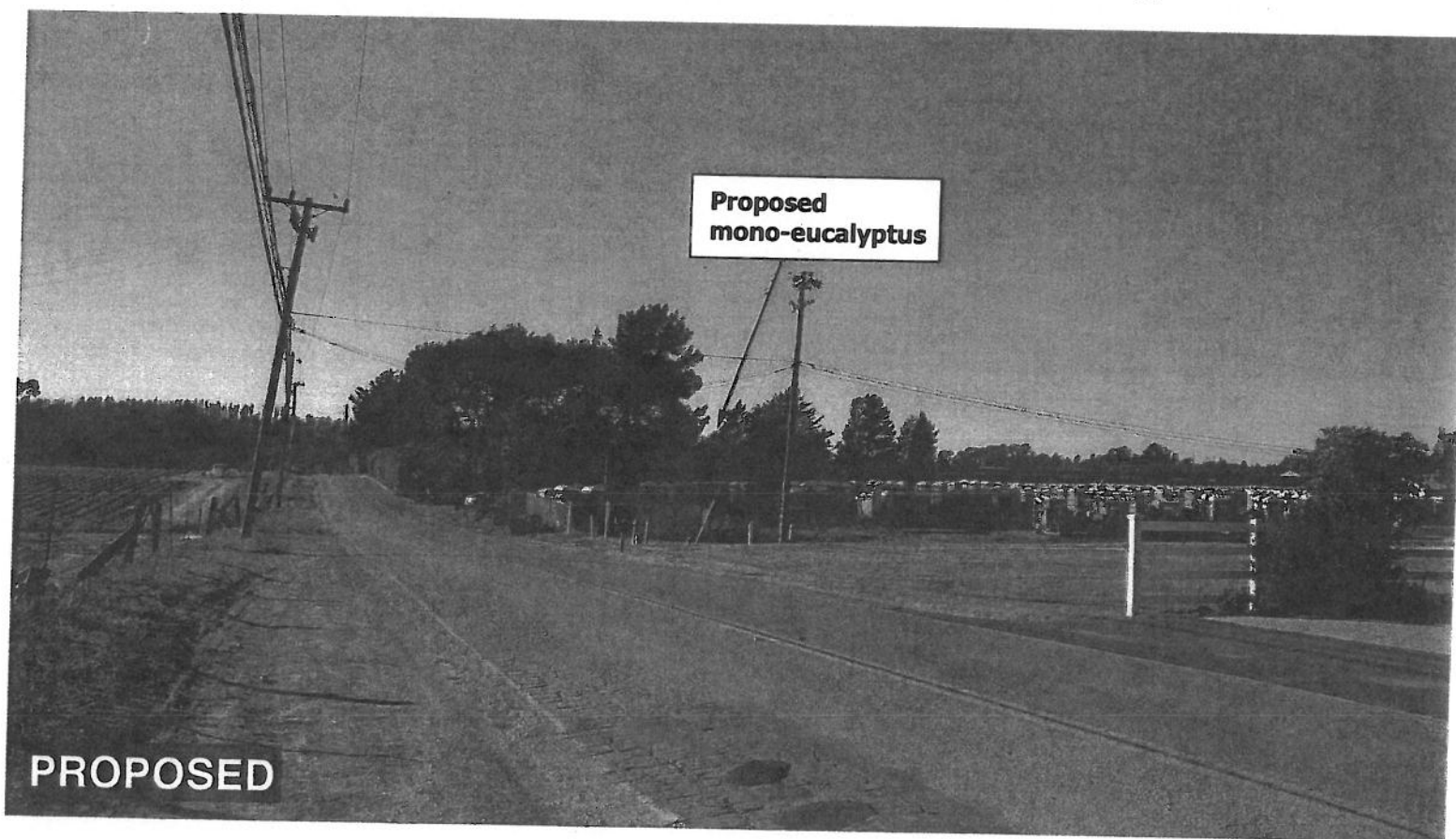


Old Adobe Rd
682 Buena Vista Rd
Watsonville CA 95076
12/7/17



EXISTING

Install (9) panel antennas, (9) RRUS on an 65' mono-eucalyptus

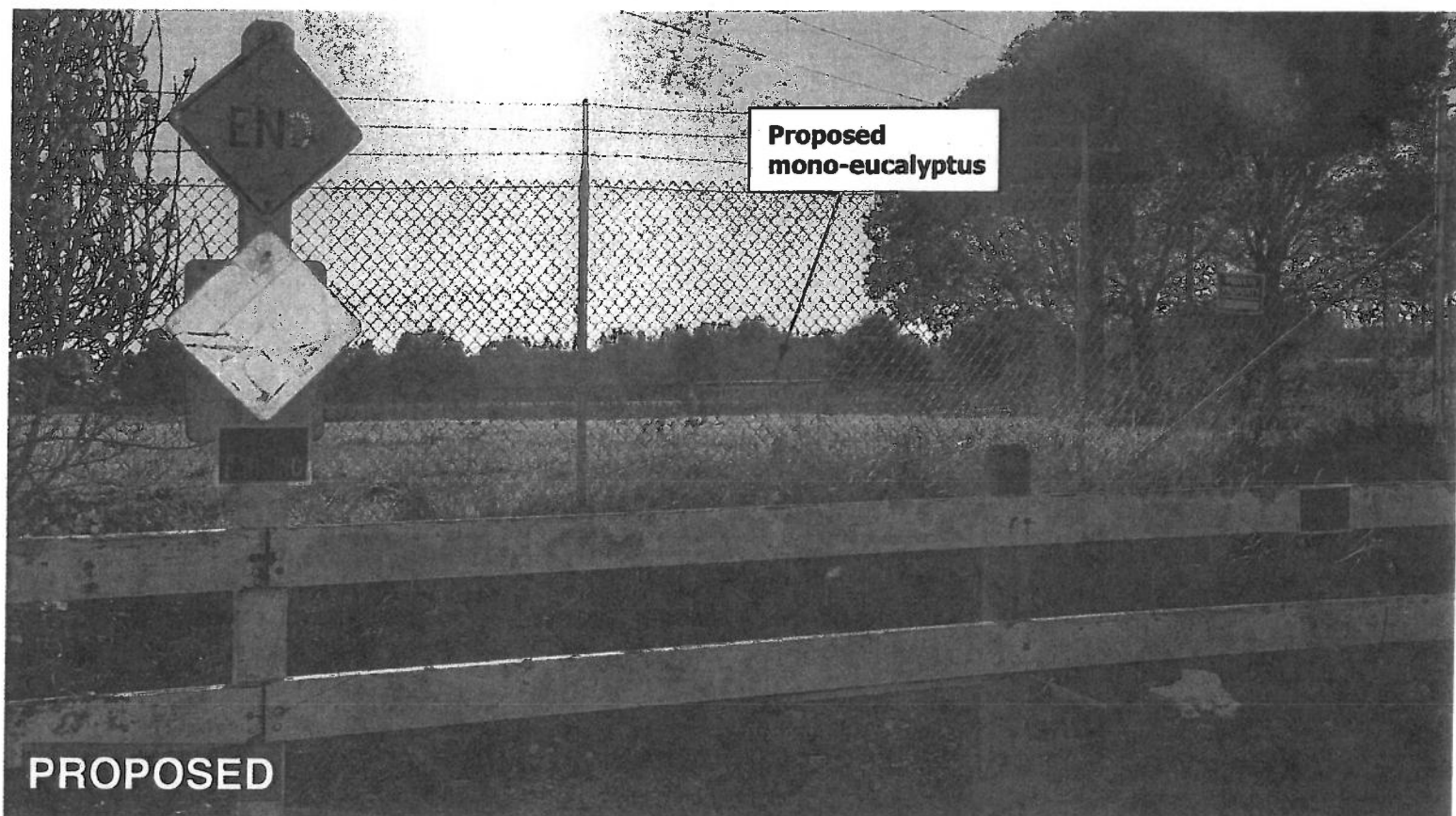


**Proposed
mono-eucalyptus**

PROPOSED



Install (9) panel antennas, (9) RRUS on an 65' mono-eucalyptus



Verizon Wireless

Site Name: Old Adobe Rd.

Site Address: 628 Buena Vista Dr., Watsonville, CA

APN: 682 049-171-17-000

Project Description / Site Selection Process

PROJECT DESCRIPTION

Verizon Wireless ("Applicant") proposes to establish and operate an unmanned wireless telecommunications facility on the parcel located at 628 Buena Vista Dr., Watsonville, CA / APN 0148-200-610. Structure Type: Stealth – Mono Pine with equipment shelter. Structure Height: 85' feet (AGL). The leased area is 28' x 28' where the Stealth Mono Pine and Equipment shelter will be located.

The scope of work consists of the following:

- Installation of an 85' mono-pine with 3 sectors consisting of 9 panel antennas with 3 antennas per sector
- Installation of an outdoor equipment concrete pad within a 28' x 28' lease area
- Installation of 9 Remote Radio Units (RRU's) with an A2 unit
- Installation of a 30 kw generator

The proposed site will greatly improve internet and voice coverage for commercial and residential areas to the North, East, West, and South of 682 Buena Vista Dr., Watsonville, CA. The RF objective is to improve coverage along Buena Vista Drive in Watsonville.

This site is part of a larger infill project designed to improve internet connectivity and voice coverage in rural areas that are predominately reliant on dial-up connections. The proposed site will bring connectivity up to at least 10 Megabits per second for fixed-wireless Internet service which represents a tremendous leap in terms of speed and reliant connectivity.

SITE SELECTION PROCESS

No other candidate was viable in the search area that met will all the leasing, zoning, engineering, and construction requirements. Applicant originally identified 6 potential candidates within 1 mile of the Center of the Search Ring. However, due to visibility concerns, RF eliminated 3 of the candidates. In addition, two PG&E collocations were not considered since macrocell sites were not feasible at either pole. The remaining candidate, Candidate 1, was no longer responsive and Verizon decided to drop the candidate. As a result Applicant re-scrubbed the search ring and identified the following single candidate.

E-9

**Verizon Wireless • Proposed Base Station (Site No. 284558 "Old Adobe Road")
682 Buena Vista Drive • Watsonville, 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. 284558 "Old Adobe Road") proposed to be located at 682 Buena Vista Drive in Watsonville, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Executive Summary

Verizon proposes to install directional panel antennas on a tall steel pole, configured to resemble a pine tree, to be sited at 682 Buena Vista Drive in Watsonville. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standards

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

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5–80 GHz	5.00 mW/cm ²	1.00 mW/cm ²
WiFi (and unlicensed uses)	2–6	5.00	1.00
BRS (Broadband Radio)	2,600 MHz	5.00	1.00
WCS (Wireless Communication)	2,300	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.40	0.48
[most restrictive frequency range]	30–300	1.00	0.20

General Facility Requirements

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

**Verizon Wireless • Proposed Base Station (Site No. 284558 "Old Adobe Road")
682 Buena Vista Drive • Watsonville, California**

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 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 L.D.Strobel Co. Inc., dated December 2, 2016, it is proposed to install nine JMA Wireless Model X7CQAP-FRO-860-VR0 directional panel antennas on a new 75-foot steel pole, configured to resemble a pine tree, to be sited near the southeast corner of the 3-acre parcel located at 682 Buena Vista Drive in Watsonville. The antennas would employ no downtilt, would be mounted at an effective height of about 71 feet above ground, and would be oriented in groups of three toward 40°T, 160°T, and 280°T, to provide service in all directions. The maximum effective radiated power in any direction would be 13,760 watts, representing simultaneous operation at 6,240 watts for AWS, 5,360 watts for PCS, and 2,160 watts for 700 MHz service; no operation on cellular frequencies is presently proposed from this site. 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 0.028 mW/cm², which is 2.8% of the applicable public exposure limit. The maximum calculated level at the second-floor elevation of any nearby building* is 0.44% of the public exposure limit. The maximum calculated level at the second-floor elevation of any nearby residence† is 0.33% of the public exposure limit. It should be noted that these results include several

* Located at least 100 feet away, based on photographs from Google Maps.

† Located at least 220 feet away, based on photographs from Google Maps.



**Verizon Wireless • Proposed Base Station (Site No. 284558 "Old Adobe Road")
682 Buena Vista Drive • Watsonville, California**

"worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operation.

No Recommended Mitigation Measures

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

Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the base station proposed by Verizon Wireless at 682 Buena Vista Drive in Watsonville, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2017. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.



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

707/996-5200

May 12, 2017



HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

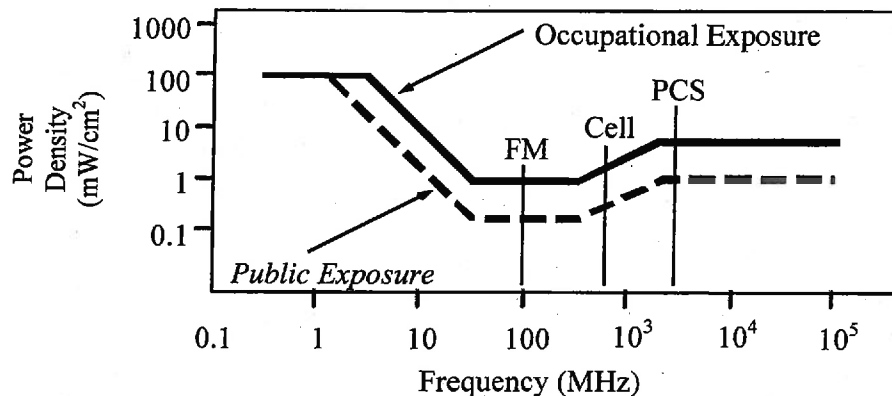
J8KJ
Page 3 of 3

FCC Radio Frequency Protection Guide

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

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

Frequency Applicable Range (MHz)	Electromagnetic Fields (f is frequency of emission in MHz)					
	Electric Field Strength (V/m)		Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm ²)	
0.3 – 1.34	614	<i>614</i>	1.63	<i>1.63</i>	100	<i>100</i>
1.34 – 3.0	614	<i>823.8/f</i>	1.63	<i>2.19/f</i>	100	<i>180/f²</i>
3.0 – 30	1842/f	<i>823.8/f</i>	4.89/f	<i>2.19/f</i>	900/f ²	<i>180/f²</i>
30 – 300	61.4	<i>27.5</i>	0.163	<i>0.0729</i>	1.0	<i>0.2</i>
300 – 1,500	3.54√f	<i>1.59√f</i>	√f/106	<i>√f/238</i>	f/300	<i>f/1500</i>
1,500 – 100,000	137	<i>61.4</i>	0.364	<i>0.163</i>	5.0	<i>1.0</i>



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



HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

FCC Guidelines
Figure 1

RFR.CALC™ Calculation Methodology

Assessment by Calculation of Compliance with FCC Exposure Guidelines

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

Near Field.

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

For a panel or whip antenna, power density $S = \frac{180}{\theta_{BW}} \times \frac{0.1 \times P_{net}}{\pi \times D \times h}$, in mW/cm²,

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/cm²,

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:

power density $S = \frac{2.56 \times 1.64 \times 100 \times RFF^2 \times ERP}{4 \times \pi \times D^2}$, in mW/cm²,

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

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

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

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



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Methodology
Figure 2